STATE OF OHIO
DEPARTMENT OF HIGHWAYS

F-674(12)

FED. RD DIVISION	STATE	PROJECT	
2	OHIO	F-674(12)	

1/225

ROSS COUNTY
ROS-35-25.05

ROS-35-25.05

SCIOTO, SPRINGFIELD & LIBERTY TOWNSHIPS

ROSS COUNTY

GRADE SEPARATION WITH THE CHESAPEAKE AND OHIO RAILWAY

DESIGN DESIGNATION

Current A.D.T. (1964)	4,580
Design Year A.D.T. (1990)	13,110
D.H.V.	1,704
D. (directional distribution)	60-40
T. (percent B&C Trucks)	24.5%
V. (design speed)	70 M.P.H.

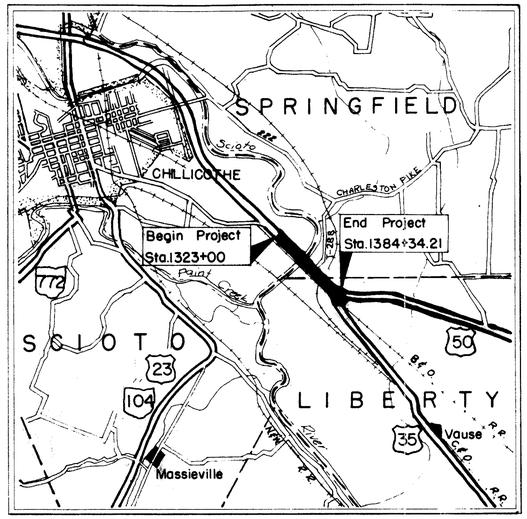
CONVENTIONAL SIGNS

County Line
Township Line
Section Line
Corporation Line ——— or ———
Fence Line (existing) —×—×— (proposed) —×—×—
Center Line 352 353
Trees , Stumps , (to be removed)
Utility Poles: Telephone , Power , Light

Limited Access (only) ——— LA ———
Right of Way (only) ——— RW ———
Limited Access & Right of Way ——— LA&RW ———
Existing Right of Way
Property Line —℄— (in existing fence) —×—℄—×—
Railroad
Guardrail (existing) —o—o—o— (proposed) ———

INDEX OF SHEETS

Sheet Nos. 129, 139, & 153 revised 7-18-69 EBL



LOCATION MAP

SCALE OF MILES
1 0 1 2 3

Portion to be improved
State Roads
Other Roads

SCALES

Plan 50' 0 50'
Profile: Horizontal 50' 0 50'
Profile: Vertical 5'a10' 0 5'a10'

LINE DATA

Begin Project	Sta 1323+00 E.B.		
End Project	Sta 1384+34.21 E.B.		
Net Length of Project			6,134.21 Lin. Ft. or 1.161 Mile
Add for Equation:			
Sta.1320+01.02 Bk. = Sta.1319+97.50 Ahd.	W.B.	(+)	3.52 Lin. Ft.
Add for Approaches:			
U.S.R. 35	Sta.1301+00 to Sta.1323+00	W.B.	2,200.00 Lin. Ft.
Lick Run Road	Sta. 15+00 to Sta. 33+43.66		1,843.66 Lin. Ft.
Athens Road	Sta. 136+00.29 to Sta. 147+97.62		1,197.33 Lin. Ft.
	Sta. 157+00.00 to Sta. 191+35.48		3,435.48 Lin. Ft.
Temp. Conn.	Sta. 84+58 to Sta. 99+50		1,492.00 Lin. Ft.
Total Length of Approaches			10,171.99 Lin. Ft. or 1.927 Mile
Total Length of Work			16,306.20 Lin. Ft. or 3.088 Mile

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.

1969 SPECIFICATIONS

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

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

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

Approved W. Lowell Rausch
Date 9-6-68 Division Deputy Director

Approved C.H. Alkoater
Date 5-5-69 Engineer of Bridges

Approved R.E. Catlin
Date 5-6-69 Engineer of Location & Design

Approved George J. Thornyon
Date 5-6-69 Deputy Director of Design & Construction

Approved T.H. Board
Date 5-16-69 Deputy Director of Right of Way

Approved Thomas M. Major
Date 5-15-69 Deputy Director of Planning & Programming

Approved R.W. Wilson
Date 5-19-69 First Assistant Director

Approved P.E. Masheter
Date 5-19-69 Director of Highways

SUPPLEMENTAL PRINTS OF STANDARD CONSTRUCTION DRAWINGS

BP-5	6-1-65	BP-1	6-1-65	GR-6	7-15-68
BP-6	6-1-65	BP-2	12-1-68	BR-1-65	11-24-65
FAC1-1	9-15-67	BP-3	12-1-68	SD-1-65	11-8-65
FAC1-2	6-1-65	BP-4	12-1-68	AS-1-67	1-11-68
GR-1	1-1-67	BP-7	1-1-66	FSB-1-62	1-15-63
HW-E	6-1-65	CB-2-2A&B	6-1-65	F-1	3-10-69
I-2A	12-1-68			F-3	3-10-69
MC-1	10-1-67	CB-3	6-1-65	L-1	6-1-65
MC-5	6-1-65	CB-5	6-6-68	MC-3	11-1-68
MC-4	6-1-65	CB-8	6-6-68		
MC-6	6-1-65	GR-2A	1-1-67	CB-6	6-1-65
MC-7	12-1-68	GR-2B	2-15-68		
MH-1	12-1-68	GR-5	1-15-68		

SUPPLEMENTAL SPECIFICATIONS

1001	1-1-69
801	1-1-69
808	1-1-69
811	1-1-69
815	1-1-69
816	1-1-69
825	1-1-69
809	1-1-69
810	1-1-69
927	1-1-69
806	1-1-69

DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
BUREAU OF PUBLIC ROADS
APPROVED:

DIVISION ENGINEER DATE

Project: Ross County ROS-35-25.05
Date of Letting 19 , Contract No.

LD 0300
12-29-67

FED. RD DIVISION	STATE	PROJECT	
2	OHIO	F-674(12)	

2
225

ROSS COUNTY
ROS-35-25.05

SCALE IN FEET
0 400 800 1200 1600

SCHEMATIC PLAN

TYPICAL SECTION SCHEDULE

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	F-674 (12)	

3 / 225

ROSS COUNTY
ROS-35-25.05

STATION TO STATION	SEE SHEET NUMBER	DESCRIPTION
U.S.R. 35 EASTBOUND		
1323+00 to 1336+60	4	Typical Section A
1336+60 to 1336+86.34	31	Feather Area
1336+86.34 to 1350+17.50	—	Existing Kilgore Bridge (No Work)
1350+17.50 to 1350+27.00	11	Detail See Sheet No. 11
1350+27.00 to 1350+55.61	5	Typical Section C
1350+55.61 to 1360+88.39	5	Typical Section D
1360+88.39 to 1365+23.74	4	Typical Section B
1365+23.74 to 1382+94.22	6	Typical Section E
1382+94.22 to 1384+34.21	6	Typical Section E
U.S.R. 35 WESTBOUND		
1323+00 to 1336+83.99	4	Typical Section A
1336+83.99 to 1337+08.99	13	Approach Slab
1337+08.99 to 1349+94.69		Bridge
1349+94.69 to 1350+19.69	13	Approach Slab
1350+19.69 to 1351+56.39 (Back)	5	Typical Section C
1351+71.43 (Ahead) to 1363+70.76	5	Typical Section D
1363+70.76 to 1365+86.38	4	Typical Section B
1365+86.38 to 1384+45.38	6	Typical Section E
RAMP C		
60+53.84 to 62+75	92	Detail
62+75 to 69+76.40	7	Typical Section F
69+76.40 to 72+93.98	7	Typical Section G
72+93.98 to 79+26.72	93	Detail
ATHENS ROAD		
136+00.29 to 142+10	84	Detail (Ramp B Exit)
142+10 to 142+25	84	Detail (Ramp B Exit) Feather Area
142+25 to 147+97.62	86	Detail (Lick Run Rd. & Athens Rd.)
147+97.62 to 157+00		No Work
157+00 to 158+00	66	Feather Area
158+00 to 165+88.28	8	Typical Section I
165+88.28 to 166+33.17	8	Typical Section H
166+33.17 to 166+58.17	13	Approach Slab
166+58.17 to 169+11.85		Bridge
166+11.85 to 169+36.85	13	Approach Slab
169+36.85 to 169+98.09	8	Typical Section H
169+98.09 to 181+26.72	8	Typical Section I
181+26.72 to 182+02.85	8	Typical Section H
182+02.85 to 187+91.50	8	Typical Section I
187+91.50 to 191+25.48	86	Detail
191+25.48 to 191+35.48	86	Feather Area
LICK RUN ROAD		
15+00 to 16+29.38	9	Typical Section J
16+29.38 to 20+76.69	9	Typical Section K
20+76.69 to 22+38.77	9	Typical Section J
22+38.77 to 27+31.66	9	Typical Section K
27+31.66 to 28+48.13	9	Typical Section J
28+48.13 to 28+73.13	13	Approach Slab
28+73.13 to 30+75.75		Bridge
30+75.75 to 31+00.75	13	Approach Slab
31+00.75 to 31+07.38	9	Typical Section J
31+07.38 to 31+99.09	9	Typical Section K
31+99.09 to 33+43.66	85	Detail (Lick Run Rd. & Athens Rd.
TEMPORARY CONNECTION		
82+71.00 to 92+47.10	9	Typical Section L
92+47.10 to 94+00	55	Detail

LEGEND

①	310	Subbase, Grading A as per plan.
②	304	4" Aggregate Base
③	301	3" Bituminous Aggregate Base 702.01 (85-100); or 702.09 AT-10
④	409	Sealcoat Cover Aggregate using 0.008 cu. Yd. No. 8 Aggregate per Sq. Yd. and 0.3 Gal. Sealcoat Bituminous Material per Sq. Yd. (See Note in Proposal)
⑤	605	6" Shallow Pipe Underdrains
⑥	Special	Drainage Connection, using #28 Aggregate (See Note in Proposal)
⑦	451	9" Reinforced Portland Cement Concrete Pavement.
⑧	612	4" Concrete Median as per plan
⑨	609	Concrete Curb, Std. Type 2-9.
⑩	609	Combination Curb and Gutter, Std. Type 2.
⑪	310	Subbase, thickness as shown
⑫	408	Bituminous Prime Coat 702.05 RT 2 or 3 applied at the rate of 0.40 gal. per sq. yd.
⑬	304	6" Aggregate Base
⑭	404	1½" Asphalt Concrete (85-100)
⑮	605	Aggregate Drains
⑯		Not Used
⑰	659	Seeding and Mulching
⑱	609	Concrete Curb, - Std. Type 6.
⑲		Granular Material, as per plan (See Note on Sheet No. 18)
⑳	402	3" Asphalt Concrete (85-100)
㉑	609	Concrete Curb, Std. Type 7.
㉒	609	Concrete Curb, Std. Type 8.
㉓	402	2" Asphalt Concrete (85-100)
㉔	402	3" Asphalt Concrete (85-100)
㉕	407	Tack Coat, 702.04 MS-2 or RS-1; or 702.02 RC-70 or RC-250 applied at the rate of 0.10 gal. per Sq. Yd.

SEQUENCE OF CONSTRUCTION OPERATIONS

Sequence of operations (1) install pipe underdrain on outside shoulder. Installation of shallow underdrain in median may be deferred until 451 is placed, (2)* place subbase out to outside edge of underdrain or to one foot beyond edge of pavement where no underdrain is present. (3) construct 451 (4) remove subbase and any contaminated backfill over drain and replace with No. 8 aggregate as shown by ⑥, (5) complete shoulder construction.

* Payment shall be made for all subbase placed in this operation.

ELMER S. BARRETT ASSOCIATES
CONSULTING ENGINEERS
249 S. PAINT ST. CHILLICOTHE, OHIO

TYPICAL SECTION SCHEDULE AND PAVEMENT LEGEND

SCALE DATE

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
			MGZ			

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	F-674 (12)	

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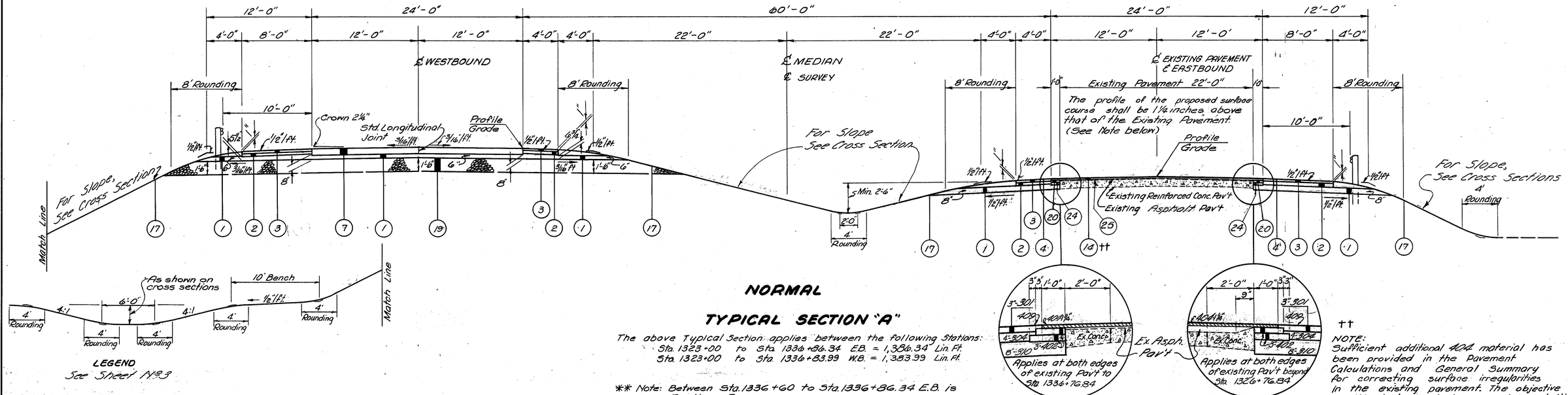
225

ROSS COUNTY
ROS-35-25.05

TYPICAL SECTIONS
TYPE-451



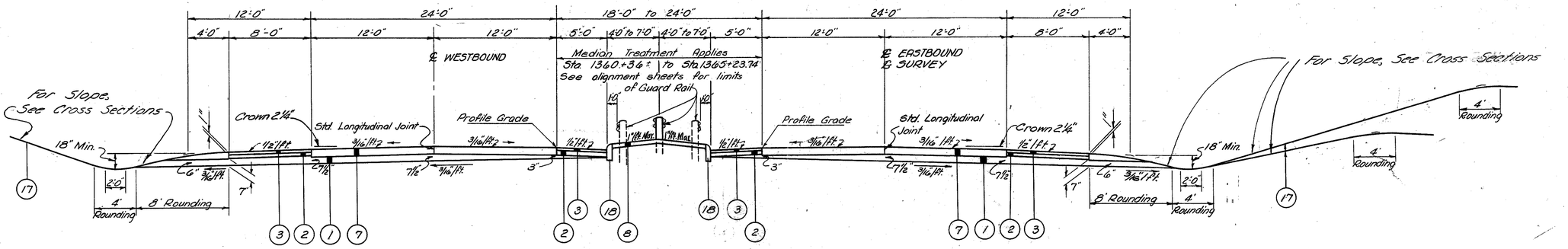
NORMAL

TYPICAL SECTION "A"

The above Typical Section applies between the following Stations:
Sta. 1323+00 to Sta. 1336+86.34 E.B. = 1,386.34 Lin. Ft.
Sta. 1323+00 to Sta. 1336+83.99 W.B. = 1,383.99 Lin. Ft.

** Note: Between Sta. 1336+60 to Sta. 1336+86.34 E.B. is Feather Area.

†† NOTE: Sufficient additional 404 material has been provided in the Pavement Calculations and General Summary for correcting surface irregularities in the existing pavement. The objective in this instance is to correct irregularities rather than to obtain strict conformity to a 3/16" /ft. crown slope.



NORMAL NARROW MEDIAN
TYPICAL SECTION "B"

The above Typical Section applies between the following stations:
Sta. 1360+88.39 to Sta. 1365+23.74 E.B. = 435.35 Lin. Ft.
Sta. 1363+70.76 to Sta. 1365+86.38 W.B. = 215.62 Lin. Ft.

Note: Median uniform width of 18'-0" E/P to E/P.
Sta. 1363+70.76 to Sta. 1365+23.74

ELMER S. BARRETT ASSOCIATES
CONSULTING ENGINEERS
249 S. PAINT ST. CHILLICOTHE, OHIO

TYPICAL SECTIONS
U.S.R. 35

SCALE			DATE			
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
R.W.B.	R.W.B.	L.K.M.	W.G.			

TYPICAL SECTIONS

TYPE-451

FED. RD. DIVISION	STATE	PROJECT	
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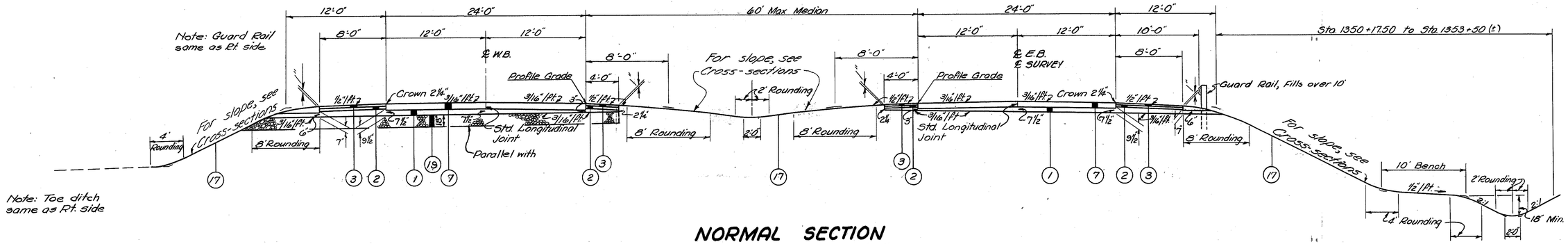
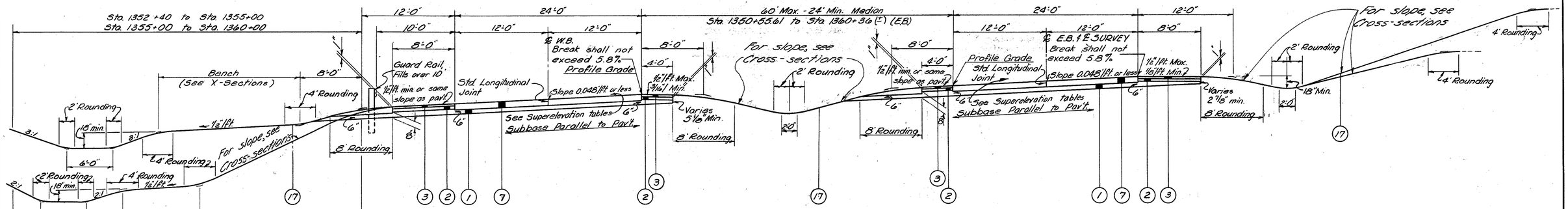
ROSS COUNTY
ROS-35-25.05



NORMAL SECTION
TYPICAL SECTION "C"

The above Typical Section applies between the following stations:
Sta. 1350+27.00 to Sta. 1350+55.61 (Eastbound) = 28.61 L.F.
Sta. 1350+19.69 to Sta. 1351+56.99 Back (Westbound) = 137.30 L.F.



SUPERELEVATED SECTION
TYPICAL SECTION "D"

The above Typical Section applies between the following stations:
Sta. 1350+55.61 to Sta. 1360+88.39 (Eastbound) = 1,032.78 L.F.
Sta. 1351+71.43 Ahead to Sta. 1363+70.76 (Westbound) = 1,199.33 L.F.

Note:
For Legend, See Sheet No 3

ELMER S. BARRETT ASSOCIATES
CONSULTING ENGINEERS
249 S. PAINT ST. CHILLICOTHE, OHIO

TYPICAL SECTIONS
U.S.R. 35

SCALE		DATE				
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
R.W.G.	R.W.G.	L.L.F.	T.W.J.			

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	F-674 (12)	

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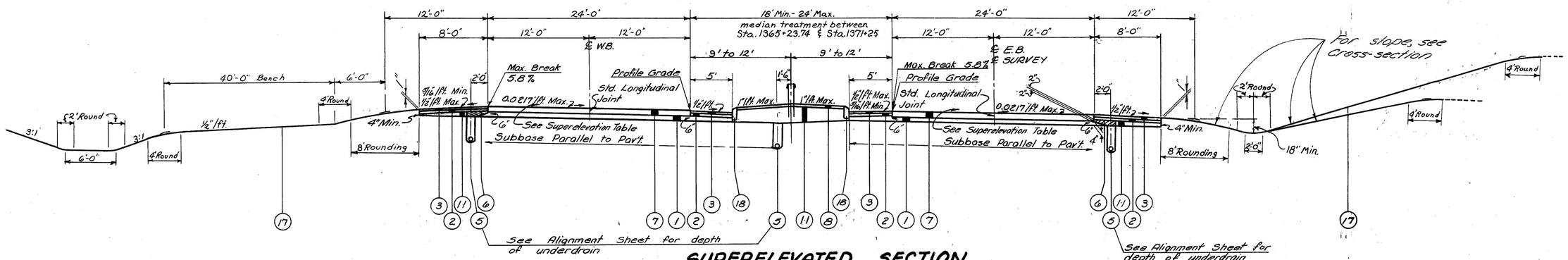
ROSS COUNTY
ROS-35-25.05

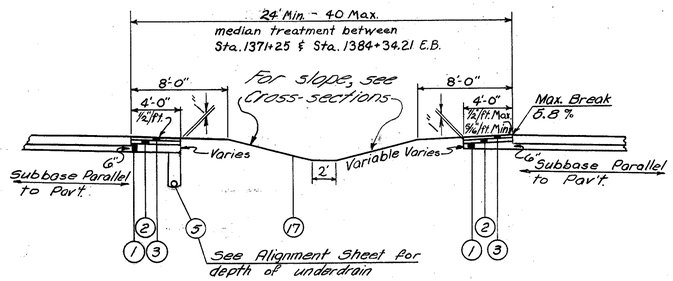
TYPICAL SECTIONS
TYPE-451



SUPERELEVATED SECTION
TYPICAL SECTION "E"

The above Typical Section applies between the following stations=

Sta. 1365+86.38	to	1384+45.38	West Bound	= 1,859.00 Lin. Ft.
Sta. 1365+23.74	to	1382+94.22	East Bound	= 1,770.48 Lin. Ft.
Sta. 1382+94.22	to	1384+34.21	East Bound	= 139.99 Lin. Ft.



PART SECTION

Note:
For Legend, See Sheet No 3

ELMER S. BARRETT ASSOCIATES
CONSULTING ENGINEERS
249 S. PAINT ST. CHILLICOTHE, OHIO

TYPICAL SECTIONS
U.S.R. 35

SCALE DATE

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
R.W.G.	R.W.G.	L.L.F.				

TYPICAL SECTIONS

TYPE 451

FED. RD. DIVISION	STATE	PROJECT	
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ROSS COUNTY
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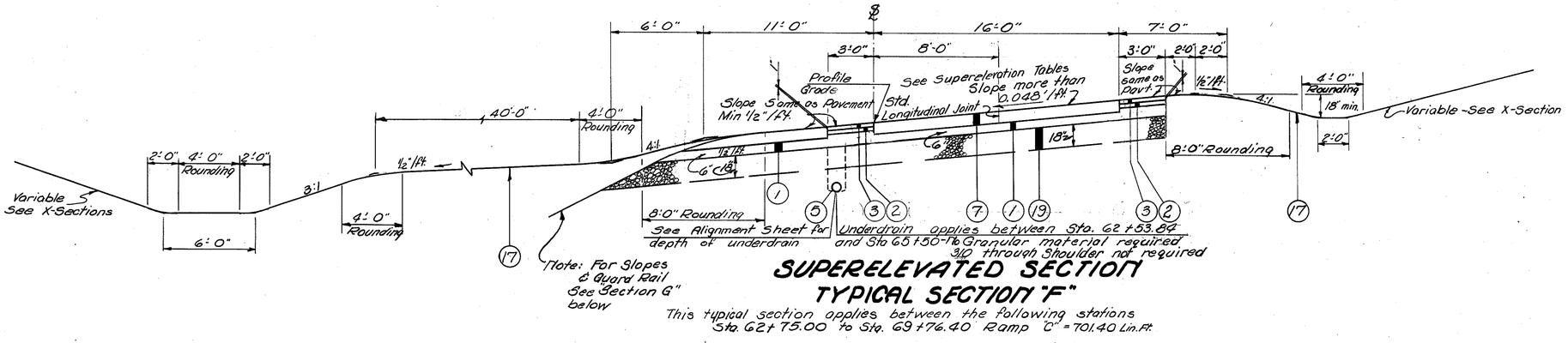
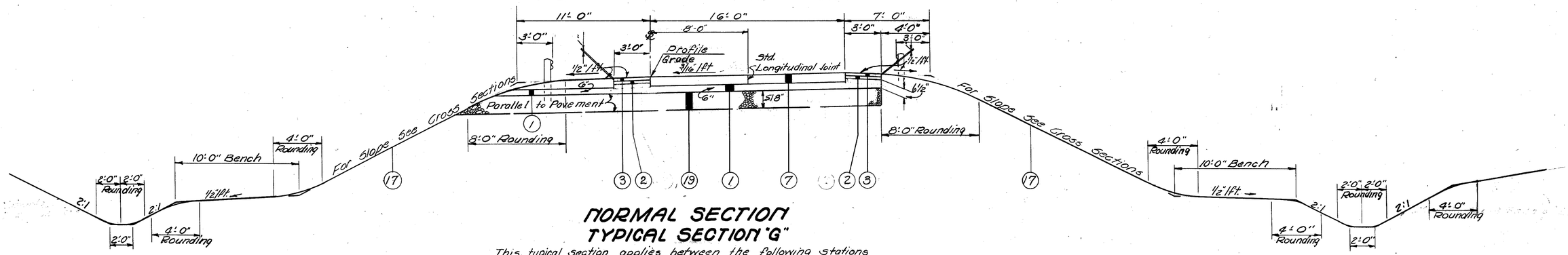


SUPERELEVATED SECTION
TYPICAL SECTION "F"

This typical section applies between the following stations
Sta. 62+75.00 to Sta. 69+76.40 Ramp "C" = 701.40 Lin. Ft.



NORMAL SECTION
TYPICAL SECTION "G"

This typical section applies between the following Stations
Sta. 69+76.40 to Sta. 72+93.98 Ramp "C" = 317.58 Lin. Ft.

LEGEND

See Sheet No 3

ELMER S. BARRETT ASSOCIATES
CONSULTING ENGINEERS
249 S. PAINT ST. CHILLICOTHE, OHIO

RAMP TYPICAL SECTIONS

SCALE		DATE				
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
R.W.G.	R.W.G.	P.J.M.	[illegible]			

TYPICAL SECTIONS

TYPE 451

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	F-674 (12)	

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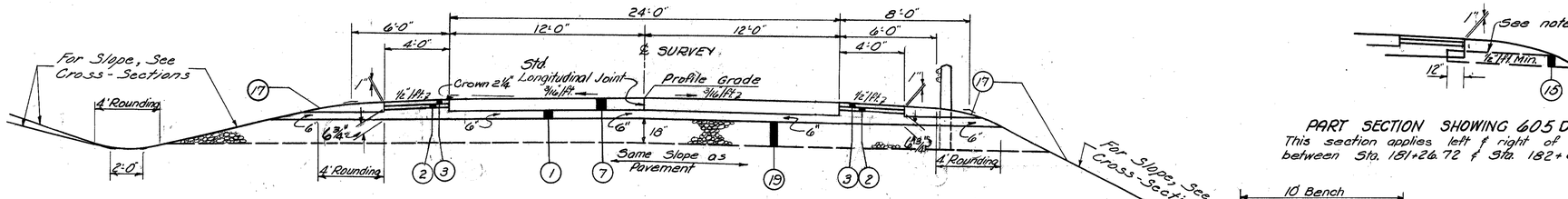
ROSS COUNTY
ROS -35- 25.05

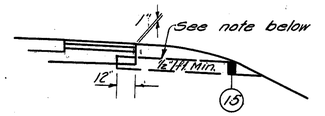


NORMAL
TYPICAL SECTION "H"

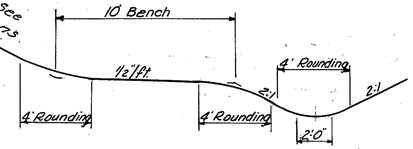
The above Typical Section applies between the following stations:

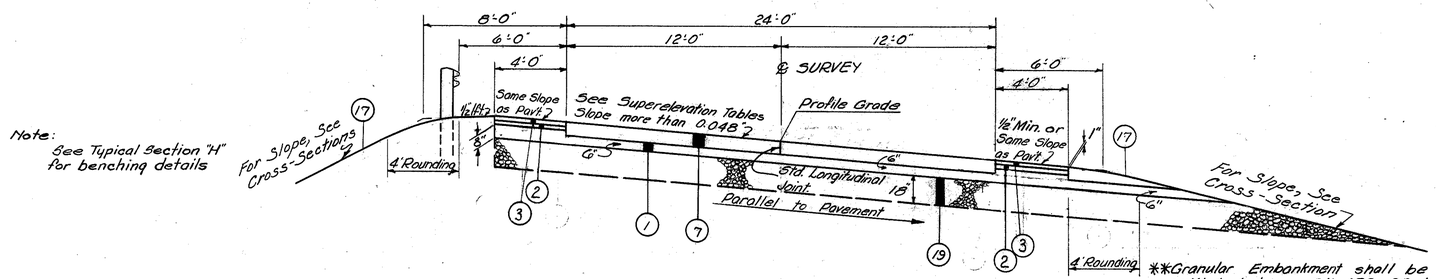
Sta. 165+88.28	to	Sta. 166+33.17	= 44.89 Lin. Ft.
Sta. 169+36.85	to	Sta. 169+98.09	= 61.24 Lin. Ft.
† Sta. 181+26.72	to	Sta. 182+02.85	= 76.13 Lin. Ft.
		Total	= 182.26 Lin. Ft.

† Granular Embankment shall be omitted between Sta. 181+26.72 to Sta. 182+02.85 See Part Section



PART SECTION SHOWING 605 DETAILS
This section applies left & right of centerline between Sta. 181+26.72 & Sta. 182+02.85



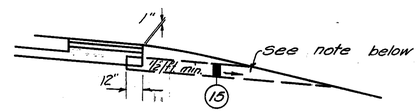


SUPERELEVATED SECTION
TYPICAL SECTION "I"

The above Typical Section applies between the following stations:

Sta. 158+00.00	to	Sta. 165+88.28	= 788.28 Lin. Ft.
* Sta. 169+98.09	to	Sta. 181+26.72	= 1,128.63 Lin. Ft.
** Sta. 182+02.85	to	Sta. 187+91.50	= 588.65 Lin. Ft.
		Total	= 2,505.56 Lin. Ft.

** Granular Embankment shall be omitted between Sta. 158+00 to Sta 159+50 & Sta. 175+75 to Sta. 181+26.72 & Sta. 182+02.85 to Sta. 187+91.50. See Part Section.



PART SECTION SHOWING 605 DETAILS
This section applies between Sta. 158+00 to Sta. 159+50 & Sta. 175+75 to Sta. 181+26.72 & Sta. 182+02.85 to Sta. 187+91.50

* Sta. 174+05.46 to Sta. 179+26.72 (Variable width) Shown on Sht. No. 93

LEGEND - SEE SHEET No. 3

NOTE:
ITEM 605 AGGREGATE DRAINS
605 Aggregate drains shall be placed under the shoulder on each side of the normal crowned sections at all transverse joints and midway between each transverse joint, but the maximum spacing between aggregate drains shall not exceed thirty (30) feet. On superelevated sections the aggregate drains shall be placed same as above except only on the low side.

ELMER S. BARRETT ASSOCIATES
CONSULTING ENGINEERS
249 S. PAINT ST. CHILLICOTHE, OHIO

TYPICAL SECTION ATHENS ROAD

SCALE DATE

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
R.W.G.	R.W.G.	W.G.L. C.L.F.	W.G.L.			

TYPICAL SECTIONS

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	F-674(12)	

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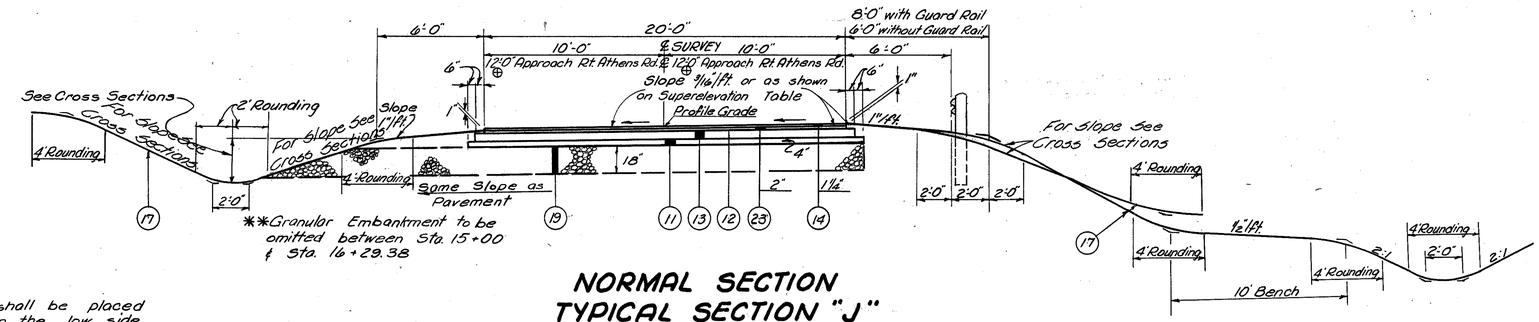
ROSS COUNTY
ROS-35-25.05



**Granular Embankment to be omitted between Sta. 15+00 & Sta. 16+29.38

NOTE:

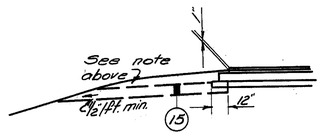
600 Aggregate drain shall be placed under the shoulder on the low side at intervals of twenty-five (25) feet.

NORMAL SECTION
TYPICAL SECTION "J"

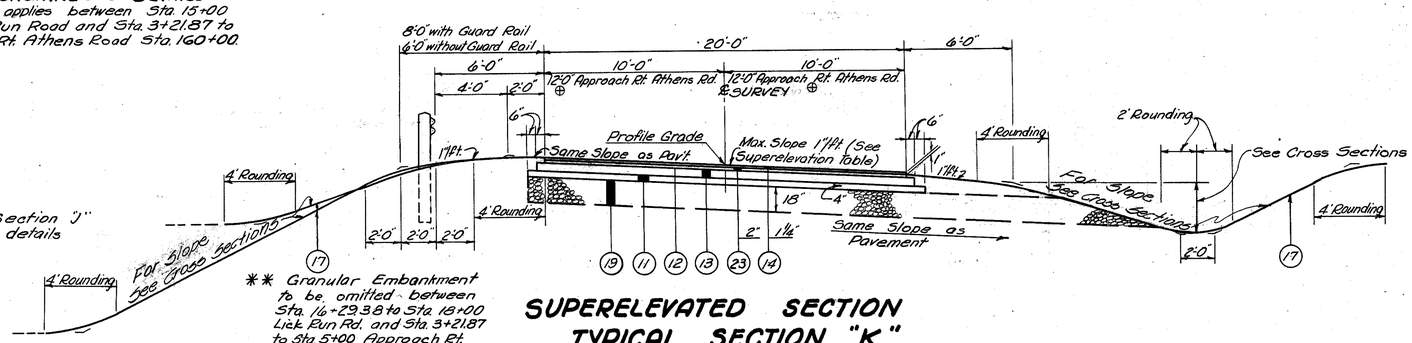
The above Typical Section applies between the following stations:

**Lick Run Road	Sta. 15+00	to	Sta. 16+29.38	=	129.38 L.F.
Lick Run Road	Sta. 20+76.69	to	Sta. 22+38.77	=	162.08 L.F.
Lick Run Road	Sta. 27+31.66	to	Sta. 28+48.13	=	116.47 L.F.
Lick Run Road	Sta. 31+00.75	to	Sta. 31+07.38	=	6.63 L.F.
⊕ Approach Rt. Athens Road Sta. 160+00	Sta. 1+74.30	to	Sta. 3+21.87	=	147.57 L.F.
				Total =	562.13 L.F.

LEGEND
See Sheet No. 3



PART SECTION SHOWING 608 DETAILS
This part section applies between Sta. 15+00 to Sta. 18+00 Lick Run Road and Sta. 3+21.87 to Sta. 5+00 Approach Rt. Athens Road Sta. 160+00.

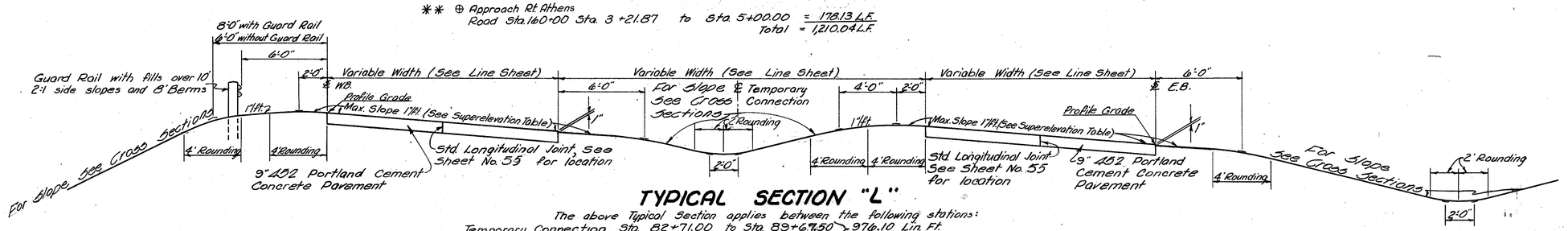


** Granular Embankment to be omitted between Sta. 16+29.38 to Sta. 18+00 Lick Run Rd. and Sta. 3+21.87 to Sta. 5+00 Approach Rt. Athens Rd. Sta. 160+00.

SUPERELEVATED SECTION
TYPICAL SECTION "K"

The above Typical Section applies between the following stations:

** Lick Run Road	Sta. 16+29.38	to	Sta. 20+76.69	=	447.31 L.F.
Lick Run Road	Sta. 22+38.77	to	Sta. 27+31.66	=	492.89 L.F.
Lick Run Road	Sta. 31+07.38	to	Sta. 31+99.09	=	91.71 L.F.
** ⊕ Approach Rt. Athens Road	Sta. 160+00 Sta. 3+21.87	to	Sta. 5+00.00	=	178.13 L.F.
				Total =	1,210.04 L.F.



TYPICAL SECTION "L"

The above Typical Section applies between the following stations:
Temporary Connection Sta. 82+71.00 to Sta. 89+67.50 } 976.10 Lin. Ft.
Note: Sta. 89+67.50 to Sta. 92+47.10 }
Some pavement and berms with a median.
The pavement slope is straight between the profile grades of Westbound and Eastbound.

ELMER S. BARRETT ASSOCIATES
CONSULTING ENGINEERS
249 S. PAINT ST. CHILLICOTHE, OHIO

TYPICAL SECTIONS LICK RUN RD., APPROACH RT. ATHENS RD. STA. 160+00 & TEMPORARY CONNECTION

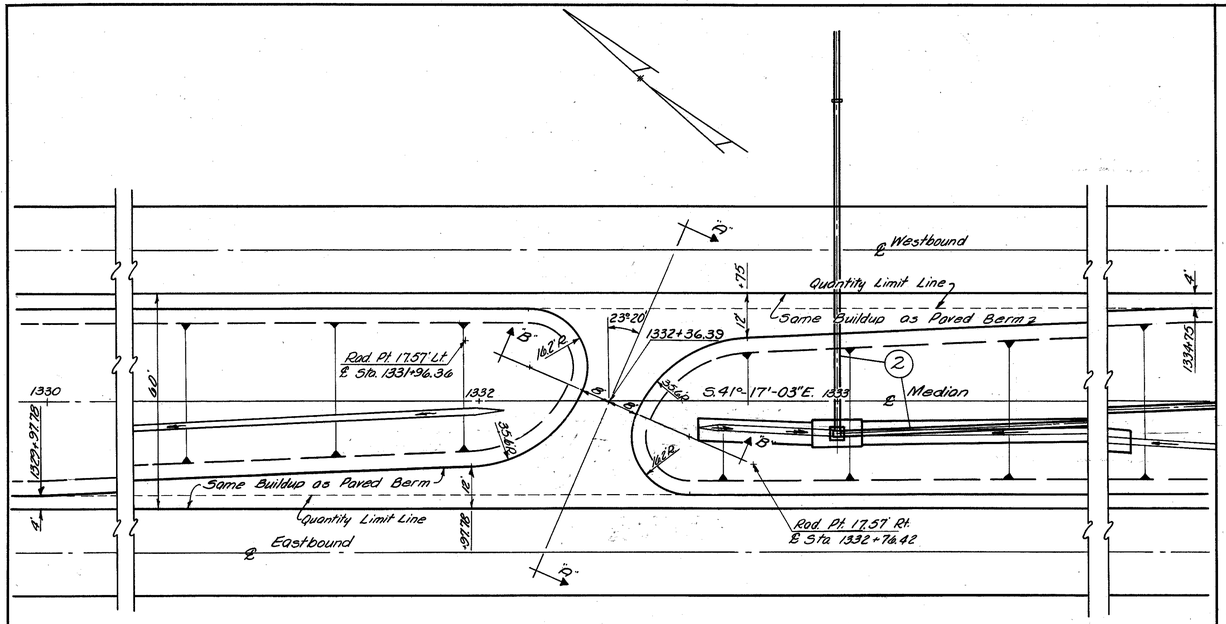
SCALE DATE

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
R.W.G.	R.W.G.	L.L.F.	W.E.B.			

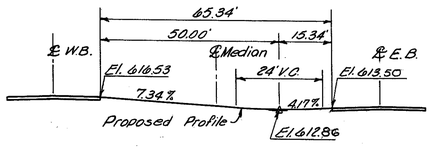
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	F-674 (12)	

10
225

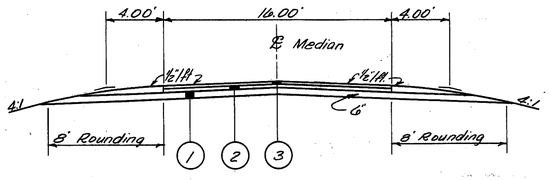
ROSS COUNTY
ROS-35-25.05



PLAN
U-TURN MEDIAN OPENING



SECTION "A-A"

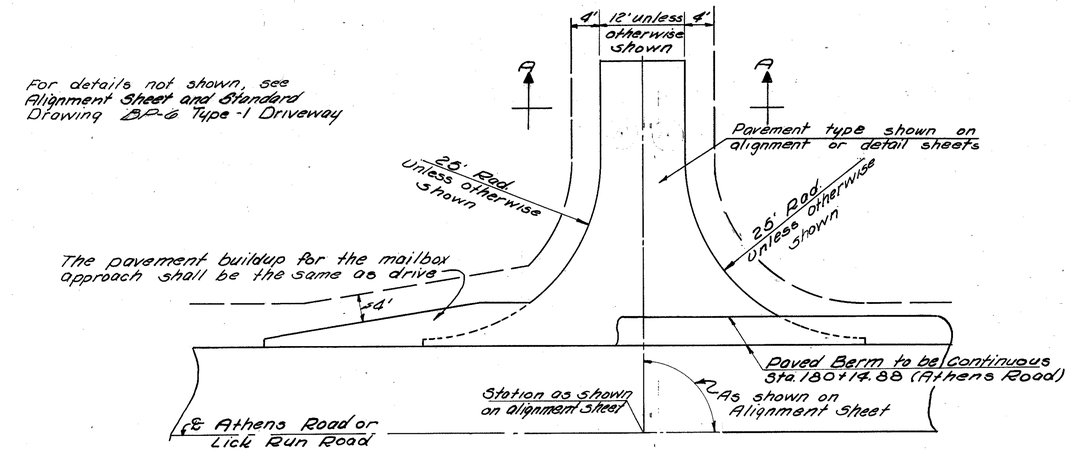


SECTION "B"-"B"

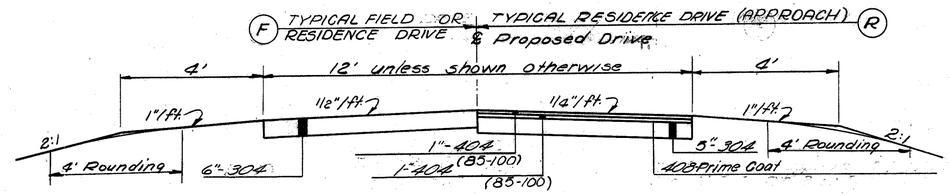
ESTIMATED QUANTITIES

LEGEND NO.	ITEM NO.	DESCRIPTION	QUANTITY	UNIT
1	310	Subbase, Grading A or B, as per plan	65.8	Cu. Yds.
2	304	4" Aggregate Base	362.7	Sq. Yds.
3	301	3" Bituminous Aggregate Base	362.7	Sq. Yds.

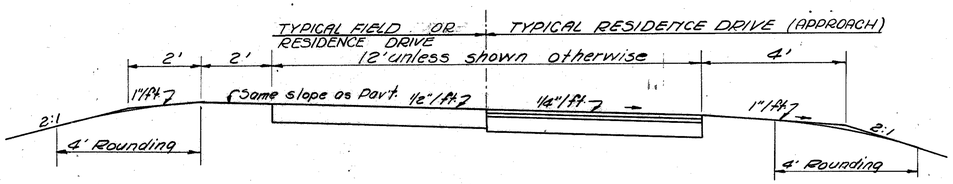
Quantities carried to Sheet No. 21



PLAN
Typical Proposed Drive and Mailbox Approach



TYPICAL (NORMAL) SECTION A-A



TYPICAL (SUPERELEVATED) SECTION A-A

This detail applies at the following locations

LICK RUN ROAD

(F)(R) Lt. ℄ Sta. 20+89

(F) Lt. ℄ Sta. 24+00

ATHENS ROAD

(F)(R) Rt. ℄ Sta. 147+50

(R) Lt. ℄ Sta. 177+15 (Ex. U.S.R. 50)

(F) Lt. ℄ Sta. 180+14.88

(R) Lt. ℄ Sta. 190+41.50

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TYPICAL DETAILS PROPOSED DRIVES

SCALE DATE

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
		P.J.M.	W.B.S.			

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	F-674 (12)	

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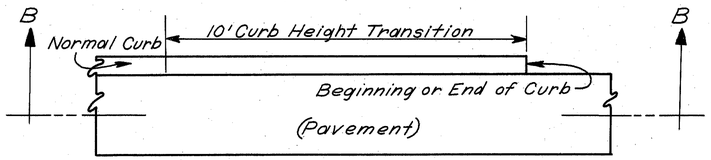
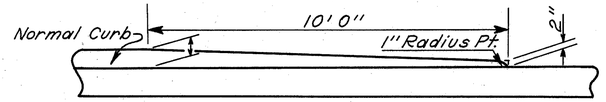
ROS-35-25.05

TYPICAL DETAILS



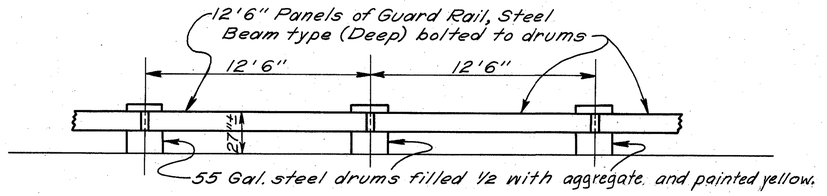
PLAN



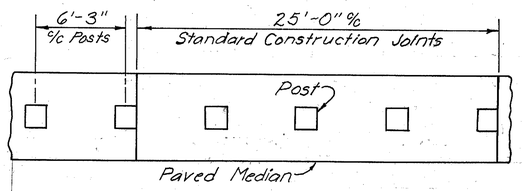
SECTION B-B

CURB HEIGHT TRANSITION

This Detail applies at the beginning and end of all curbs unless otherwise shown.



TEMPORARY GUARD RAIL DETAIL



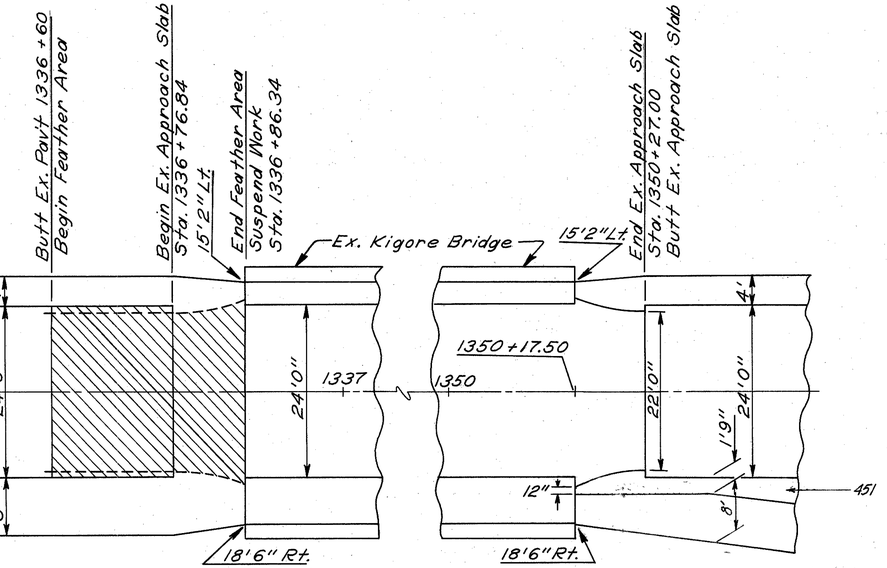
NOTES:

In lieu of the spacing requirements of Standard Drawing MC-6 expansion and contraction joints shall be provided in the concrete median as required hereon whenever guardrail is specified. ¼" expansion joints, 705.03, shall be provided at each construction joint, at each end of each inlet and approximately 20 feet and 60 feet beyond each approach slab, cost included with 612 for payment.

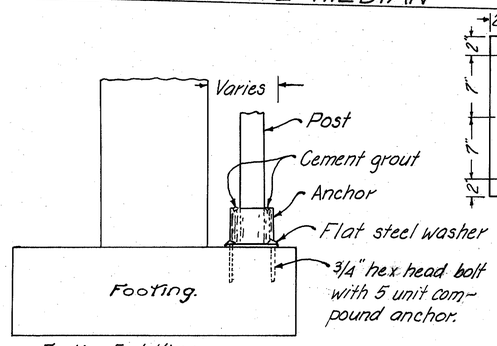
Contraction joints shall conform with details shown on Standard Drawing BP-4, 305 Base, except that spacing shall be 25'. Joint opening shall not extend below surface of shoulder paving. Circular or square openings may be cast in the median paving so that guardrail posts may be installed later. Maximum dimensions for openings shall be 18" diameter or 18" Square. Removing space shall be filled with 1:3 grout or Class C Concrete.

For square-sawed wood posts ¼" 705.03 expansion joint material shall be used on all four sides for depth of median. When steel posts are used a coating of an oil such as S.A.E. 140 or other bond breaking material shall be applied to the depth of median prior to placing the concrete. Payment shall be included in 612.

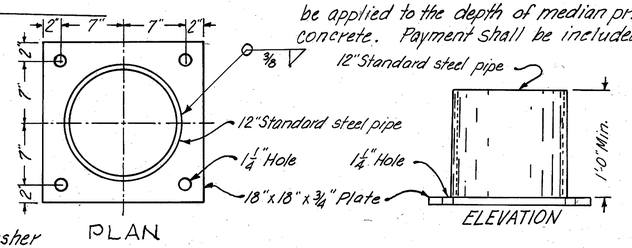
JOINT DETAIL AT GUARD RAIL POSTS IN 612 CONCRETE MEDIAN



APPROACH SLAB DETAILS EXISTING KILGORE BRIDGE



Footing End View.



FOOTING ANCHOR

NOTES: General:- Design details shown hereon shall govern the construction of guardrail at structures and piers unless otherwise shown on the plans. Footing Anchor:- To be used where posts are over footings and less than 3 feet of earth is provided above the top of footing. Cost of anchor bolts, cement grout, etc. is included in cost of guardrail.

REVISIONS		
Drawn	Traced	Checked
N-R	JBH 5-17-68	

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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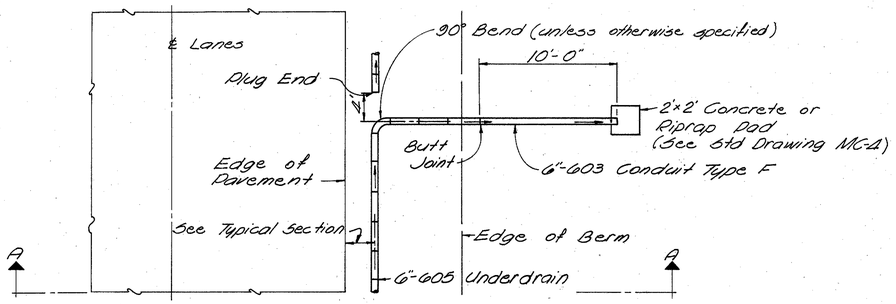
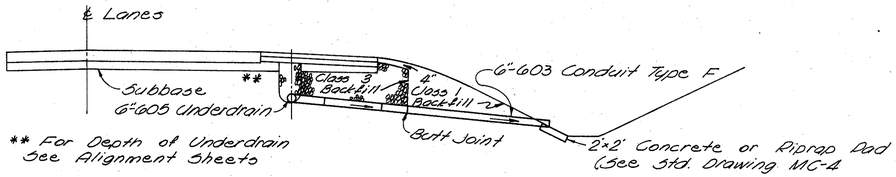
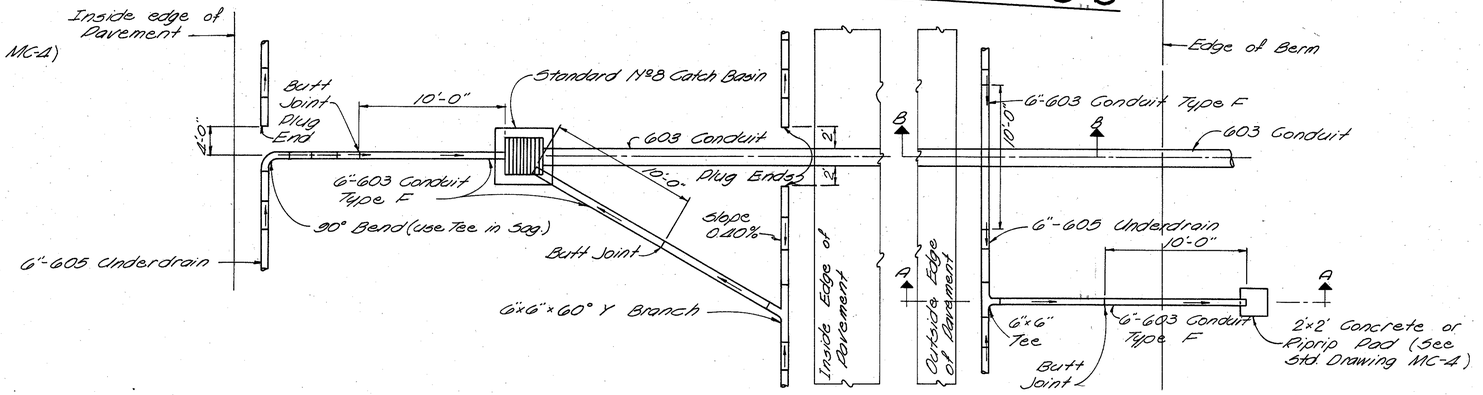
* When the depth between the top of the 603 Conduit and the bottom of the 6"-605 Underdrain is 3'-0" or less, use 10'-0" of 6"-603 Conduit Type F as shown, in lieu of the 605-6" Underdrain.



PLAN 1
(Showing 90° Bend Connections)



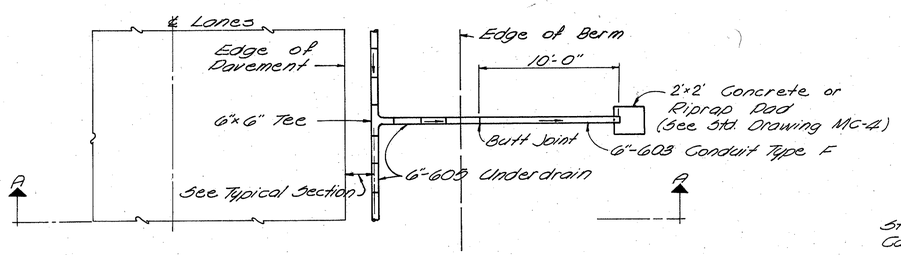
** For Depth of Underdrain See Alignment Sheets



PLAN 3
(Showing Outlet into Catch Basin)

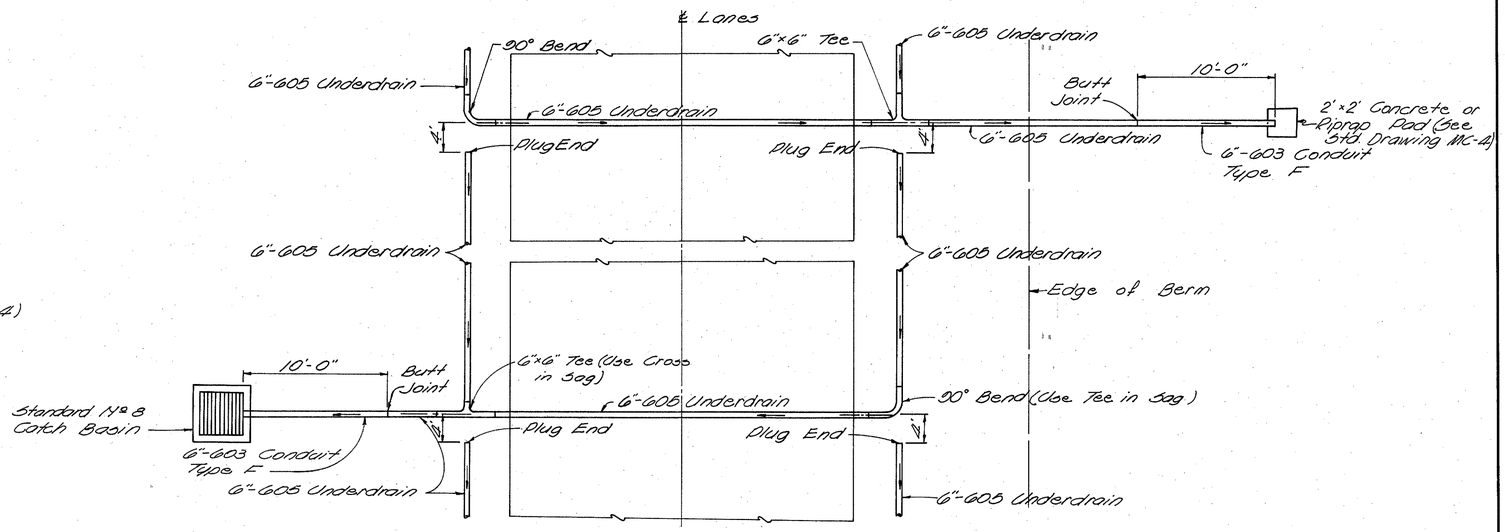
TYPICAL UNDERDRAIN OUTLET

SECTION A-A



PLAN 2
(Showing Tee Connections)

TYPICAL UNDERDRAIN OUTLET



PLAN 4
(Showing Outlet Crossing Pavement)

TYPICAL UNDERDRAIN OUTLET

Drawn	Revised
J.C.E.	R.C.T.

TYPICAL DRAINAGE DETAILS

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	F-674(12)	

13
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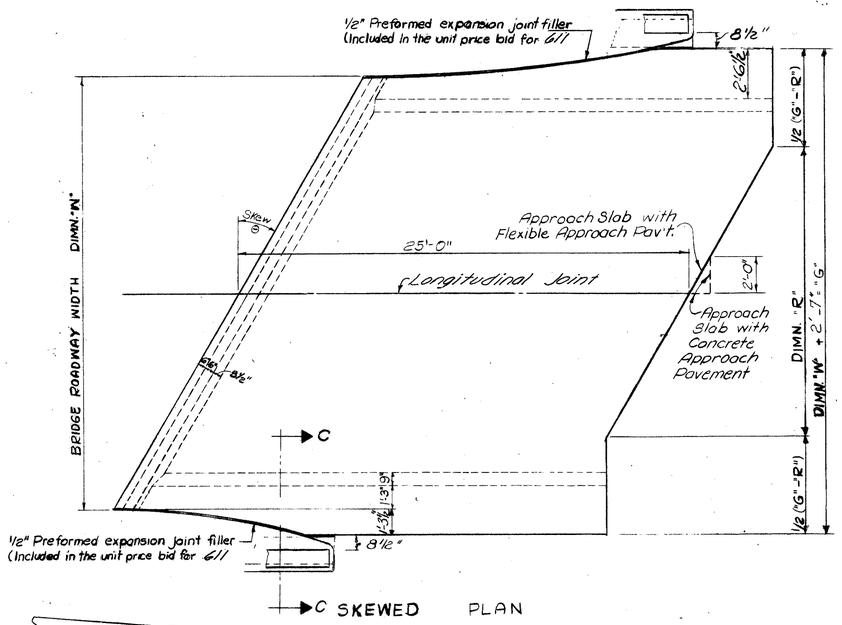
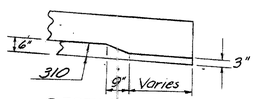
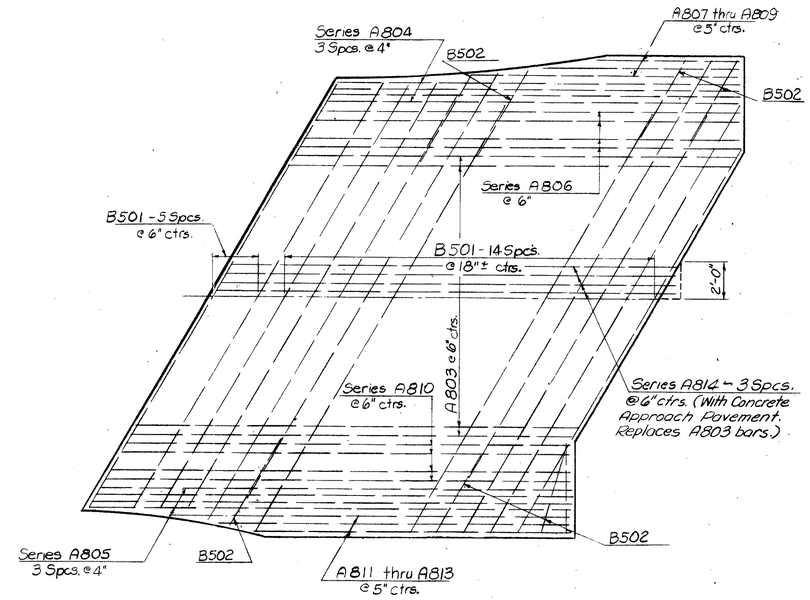
ROSS COUNTY
ROS-35-25.05





SECTION C-C



SKEWED REINFORCING STEEL

REDUCED ROADWAY WIDTH BRIDGE APPROACH SLABS

REINFORCING STEEL (ONE APPROACH SLAB)
REDUCED ROADWAY WIDTH BRIDGES

BRIDGE NUMBER	A803		Series A804			Series A805			Series A806			*A807		*A808		*A809		Series A810			*A811		*A812		*A813		*B501		*B502		Series A814			BENDING DIAGRAM
	No Reqd.	Lgth.	No. Reqd.	Increment	Lgth.	No. Reqd.	Increment	Lgth.	No. Reqd.	Increment	Lgth.	No. Reqd.	Lgth.	No. Reqd.	Lgth.	No. Reqd.	Lgth.	No. Reqd.	Increment	Lgth.	No. Reqd.	Lgth.	No. Reqd.	Lgth.	No. Reqd.	Lgth.	No. Reqd.	Lgth.	No. Reqd.	Lgth.	No. Reqd.	Increment	Lgth.	
ROS-35-2580	32	25'-7"	15 Spcs. @ 4 bars	2 5/16	23'-6" to 30'-11"	15 Spcs. of 4 bars	2 5/16	27'5" to 27'10"	15 Spcs. of 5 bars	3 1/2"	26'-9" to 25'-6"	1	16'-8"	1	14'-7"	1	13'-3"	15 Spcs. of 5 bars	3 1/2"	25'-10" to 27'-0"	1	23'-10"	1	22'-0"	1	20'-9"	21	27'-3"	13	5'-7"	—	—	—	
ROS-35-2619	36	25'-7"	15 Spcs. @ 3 bars	3"	22'-9" To 29'-6"	15 Spcs. of 4 bars	3"	27'-9" To 28'-6"	15 Spcs. of 5 bars	4 5/8"	23'-10" to 25'-6"	1	11'-10"	1	10'-0"	1	8'-10"	15 Spcs. of 5 bars	4 5/8"	25'-10" TO 27'-4"	1	24'-0"	1	21'-11"	1	20'-9"	21	34'-9"	13	6'-2"	15 Spcs. of 4 bars	4 5/8"	20'-9" to 28'-1"	

A803
A804, A805, A806, A810 & A814
21'-6"½ Varies

* Straight bars

APPROACH SLABS-REDUCED ROADWAY WIDTH BRIDGES

BRIDGE NUMBER	NUMBER APPROACH SLABS REQUIRED	SKEW	APPROACH SLAB WIDTHS		ESTIMATED QUANTITIES				
			DIMN "R"	DIMN "W"	611 Sq. Yds.	310 Cu. Yds.	310 as Earth Grading Cu. Yds.	301 3" Sq. Yds.	304 4" Sq. Yds.	409 Sq. Yds.
ROS-35-2580	2	30° LF	28'-0"	16'-0"	145	24				
ROS-35-2619	2	37°30"	28'-0"	20'-0"	164		27			
ROS-35-2582L	2	(See Sheet No. 14)			135		47	45.0	45.0	45.0
TOTAL					445	24	74	45.0	45.0	45.0

Total Carried to Sheet No. 21

ELMER S BARRETT ASSOCIATES
Consulting Engineers
245-249 S. Paint Street Chillicothe, Ohio

SUPPLEMENTAL APPROACH SLAB DETAILS
(USE WITH STANDARD DRAWING AS-1-67)

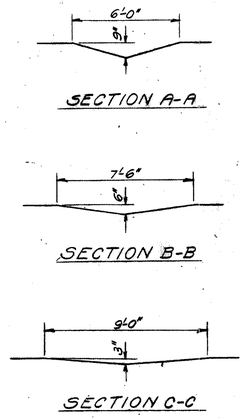
SCALE DATE

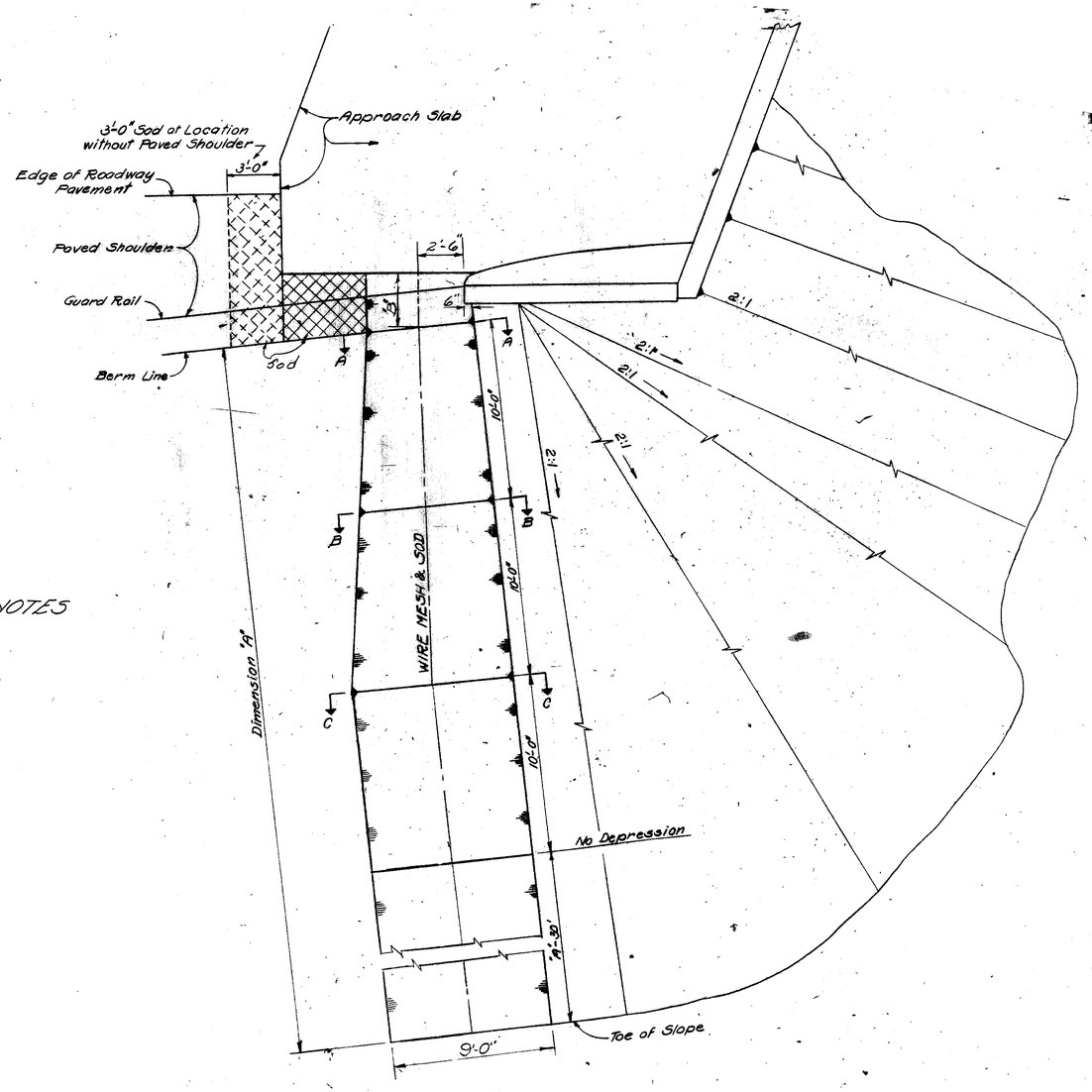
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
	M.J.C. B.J.H.		M.J.			

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	F-674(12)	

14
225

ROSS COUNTY
ROS-35-25.05



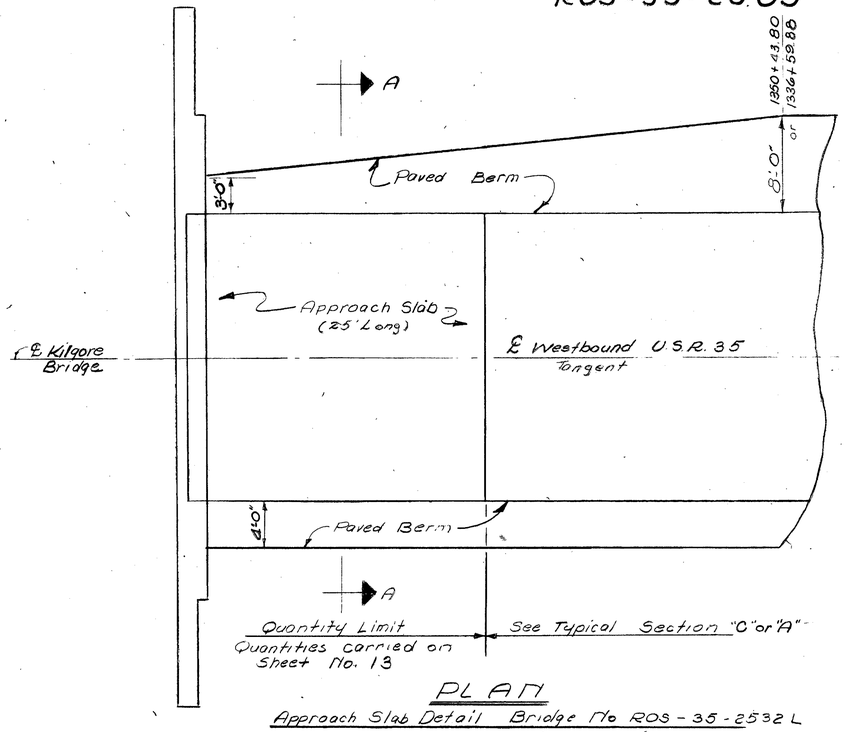


PLAN

REDUCED ROADWAY WIDTH STRUCTURES

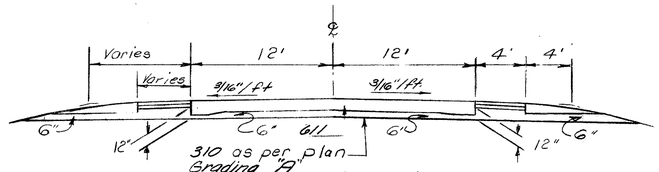
NOTES

See Std. Dwg. MC-7.



PLAN

Approach Slab Detail Bridge No ROS-35-2532 L



For details not shown see standard Drawing AS-1-67

Paved Berm buildup same as Typical Section "C" or "A"

SECTION "A"-"A"

SPECIAL BERM AND SLOPE PROTECTION

BRIDGE NUMBER	STATION	SIDE	SOD DIMENSIONS DIMN. "A"	SOD DIMENSIONS DIMN. "B"	ESTIMATED QUANTITY ITEM 660 SQ. YD.
ROS-35-2619	166+30.47	Left	40'0"	2'-10"	48
	166+57.19	Right	39'-0"	2'-10"	48
	169+12.83	Left	38'-6"	2'-10"	47
	169+39.55	Right	39'-6"	2'-10"	47
ROS-35-2580	30+79.35	Right	18'0"	2'-10"	17
TOTAL					207

ELMER S. BARRETT ASSOCIATES
Consulting Engineers
245-249 S. Paint Street Chillicothe, Ohio

SUPPLEMENTAL APPROACH SLAB DETAILS
(USE WITH STANDARD DRAWING AS-1-67)
AND
SPECIAL BERM AND SLOPE PROTECTION

SCALE DATE

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
	RWG PJM		TWL			

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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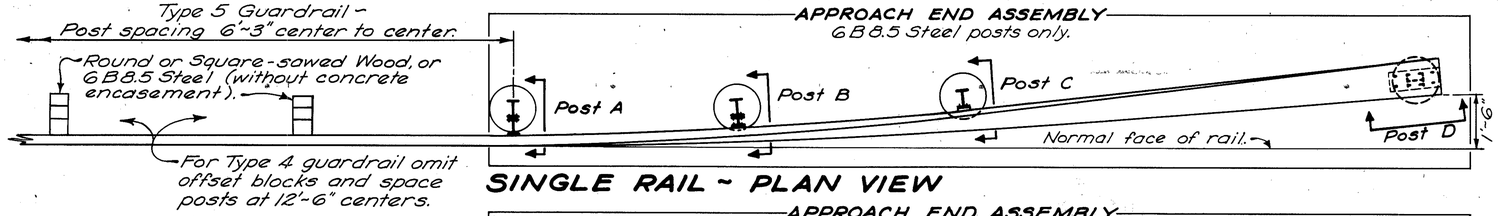
R05-35-25.05

NOTES

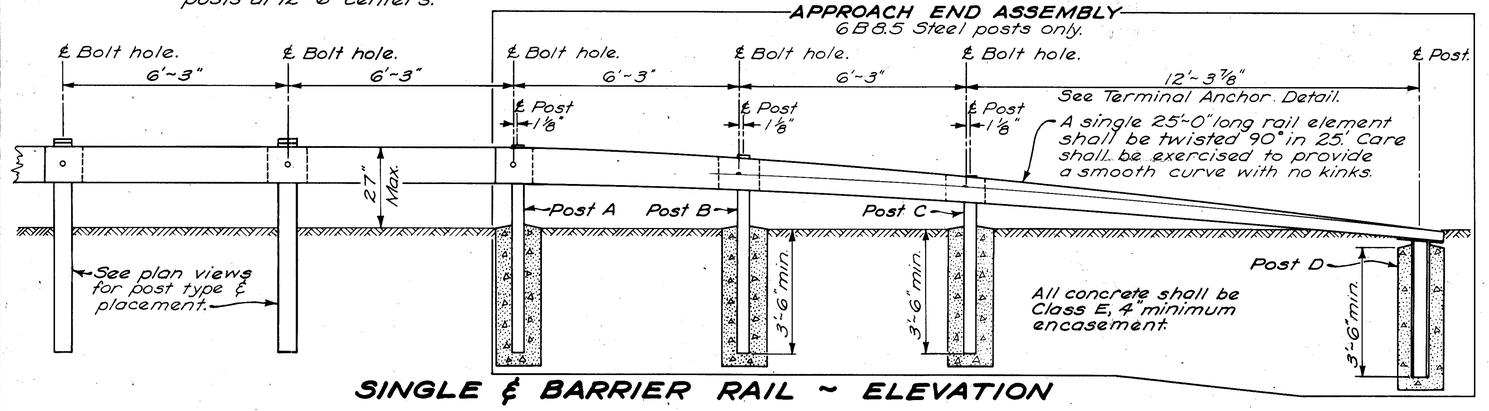
For details not shown, see Standard Drawings GR-2A and GR-2B.

All steel parts shall be galvanized in accordance with ASTM A123, A153 or A525, whichever may apply.

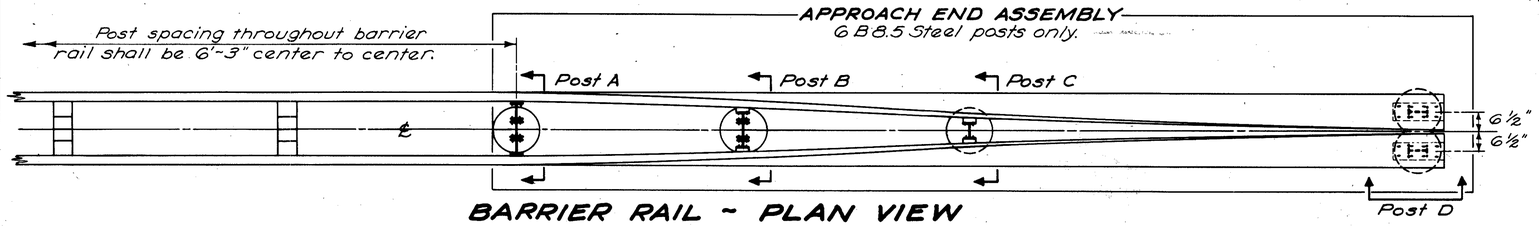
This drawing shall govern where a conflict arises.



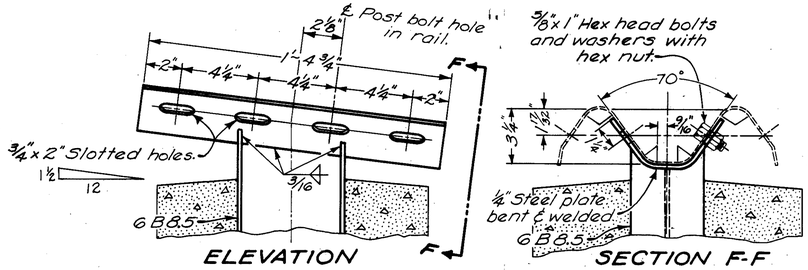
SINGLE RAIL ~ PLAN VIEW



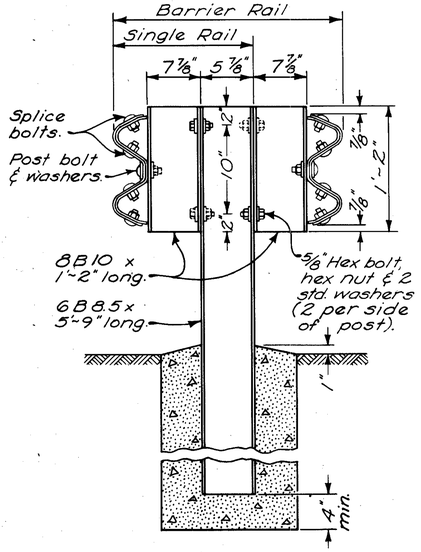
SINGLE & BARRIER RAIL ~ ELEVATION



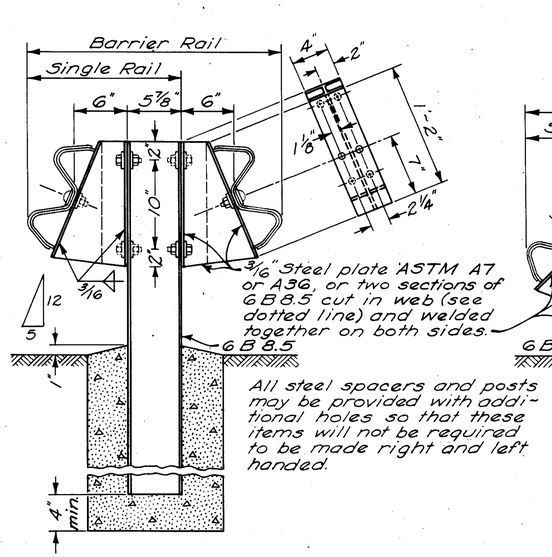
BARRIER RAIL ~ PLAN VIEW



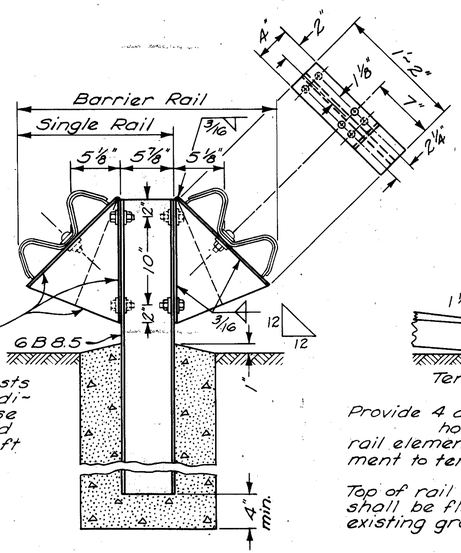
TERMINAL ANCHOR DETAIL



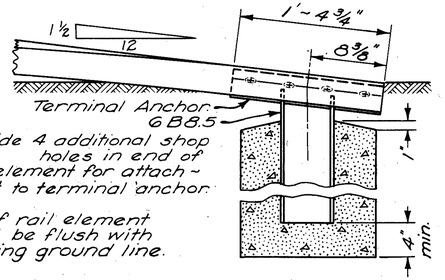
POST A



POST B



POST C



POST D

GR-4: GUARD RAIL ~ APPROACH END ASSEMBLY Rev. 2-15-68

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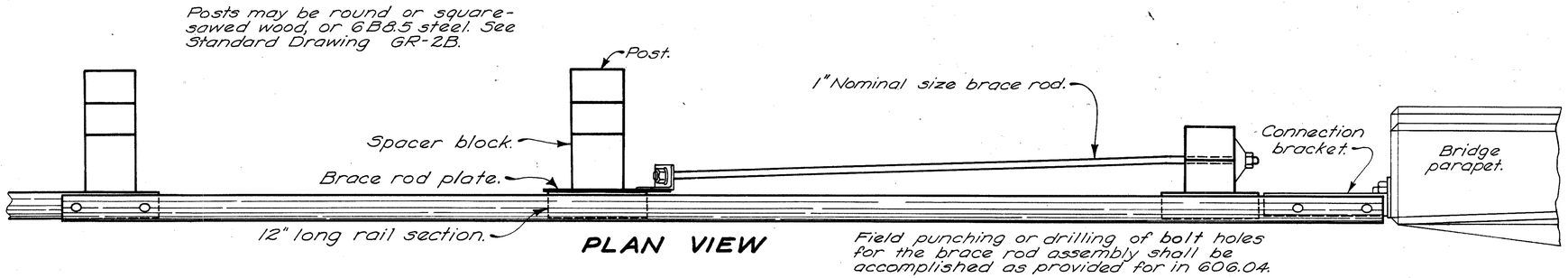
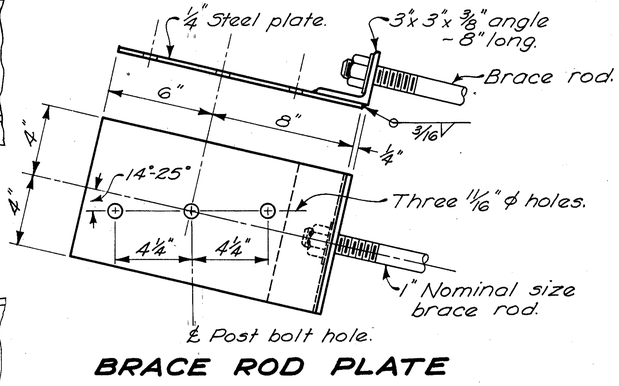
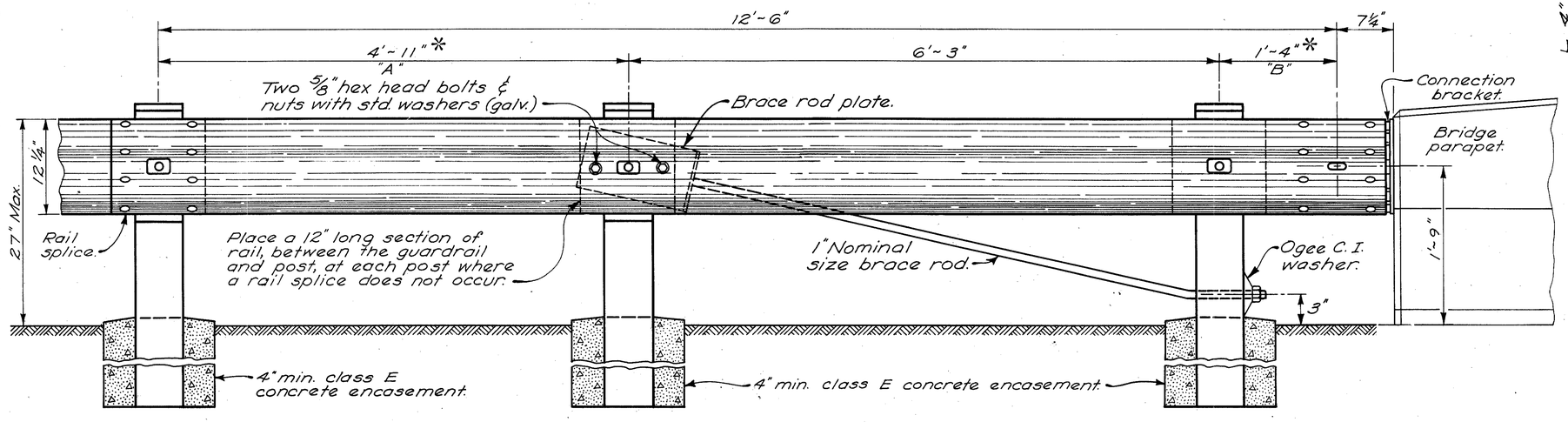


PLAN VIEW

Field punching or drilling of bolt holes for the brace rod assembly shall be accomplished as provided for in 606.04.



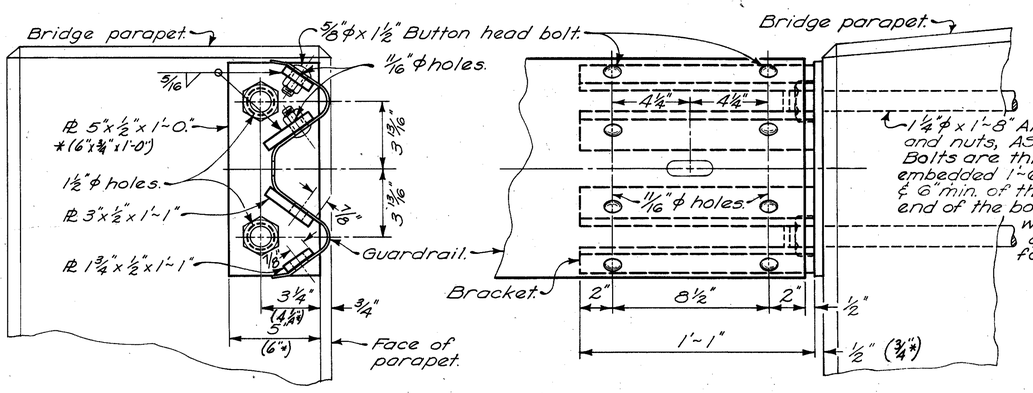
BRACE ROD PLATE



ELEVATION

GUARDRAIL TERMINAL AT BRIDGE

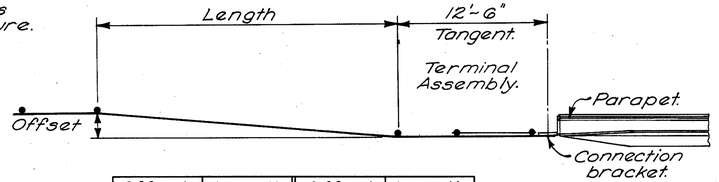
* Dimension "A" shall decrease as dimension "B" increases to accommodate interference by the bridge substructure.



CONNECTION BRACKET DETAIL

GUARDRAIL ~ BRIDGE CONNECTION

The connection bracket shall be galvanized after welding and shall be included with guardrail for payment.

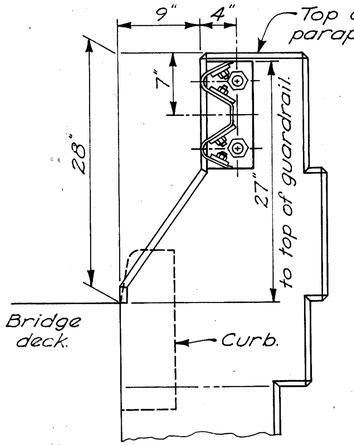


Offset	Length	Offset	Length
1'-0"	25.00'	5'-0"	100.00'
2'-0"	50.00'	6'-0"	100.00'
4'-0"	100.00'	7'-0"	100.00'

GUARDRAIL OFFSET DETAIL

* Bridge Terminal Assembly, As Per Plan (Existing Parapets)

Same as detail except use dimensions Marked * . Anchor bolts shall be embedded with a non-shrinking grout approved by the Engineer. The dowel holes in the existing parapet shall be in accordance with 510. Payment for all the above shall be included in the unit price bid for Item 606, Bridge Terminal Assembly, as per plan.



PARAPET APPROACH

For uncurbed approaches, guardrail shall be set 27" above ground line at face of rail. For curbed approaches guardrail shall be located 27" above gutter line and 9" behind the face of curb.

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GR-3 : BRIDGE TERMINAL ASSEMBLY

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MAINTAINING TRAFFIC ITEM 614

The following is a suggested sequence of construction operations that would facilitate the required traffic movements during construction of this project.

Stage I

Two-way traffic for U.S.R. 35 and 50 shall remain on the present route during construction of the Westbound Lanes between Station 1323 and Station 1384+49.38 and during construction of the Eastbound Lanes between Station 1356 and Station 1384+34.21. This traffic shall continue to remain on the present route during construction of Ramp "C" and Athens Road.

Stage II

The U.S.R. 50 (Eastbound) traffic shall be routed over the Existing Pavement and Athens Road and the U.S.R. 50 (Westbound) traffic shall be routed over Athens Road, Ramp "C" and Proposed U.S.R. 50 Westbound Lanes ® during construction of the Temporary Connection to Existing U.S.R. 35. ® (or 2 way USR-50 traffic may be routed over the existing pavement and Athens Rd)

Stage III

When the above has been completed the U.S.R. 35 (Two-way) traffic and the U.S.R. 50 (Westbound only) traffic shall be routed over the proposed facility during construction of the U.S.R. 35 Eastbound Lanes between Station 1323 and Station 1356 and during construction of Ramp "B".

Two-way traffic shall be maintained for Lick Run Road. This shall be accomplished by utilizing the existing pavement during construction of proposed Lick Run Road. One-way traffic may be maintained during construction of the approach to the existing pavement. Temporary roadways or part-width construction will be required at several locations while the proposed pavement and fills are made with the existing pavement.

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

The contractor shall at all times arrange his operations so as to keep traffic inconvenience to a minimum.

An estimated amount of 410 Traffic Compacted Surface Type A or B for maintaining traffic and 616 Calcium Chloride, furnished and applied, have been provided in the General Summary for Maintenance of Traffic. This material shall be applied at the locations and in the amounts requested by the Engineer.

The hardness and soundness requirements of the specifications shall be waived on all of the 410 material used for the maintenance of traffic.

Payment for all of the above operations outlined in this traffic note, including construction, maintenance and subsequent removal, where required, except 410 Traffic Compacted Surface Type A or B and 616 Calcium Chloride shall be included in Item 614 Maintaining Traffic.

ITEM 310 SUBBASE, GRADING A AS PER PLAN

The material furnished for this item shall meet the requirements of Grading A of 310.02 except that not more than 10 percent of the material shall pass a N° 200 sieve after all operations of placement and compaction have been completed.

LOCATION OF GUARDRAIL

The location of guardrail runs shown in these plans are subject to adjustment to assure that the planned installation will afford maximum protection for traffic.

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FIELD OFFICE

The Contractor shall provide a minimum of 400 Sq. Ft. of floor space for the field office and in addition to the requirements of Item 619, shall provide and maintain sanitary provisions as per 107.06. All the above is included in the lump sum price bid for Item 619, Field Office.

ROUNDING OF CORNERS SHOWN ON CROSS SECTIONS

The rounded corners shown on Standard Drawing MC-1, apply to all cross sections, even though otherwise shown on these plans.

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 does not guarantee 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.

Materials shall not be ordered unless requested by the Engineer.

EROSION CONTROL AT BRIDGES

Sodded channels shall be provided at ends of bridges where required by the plans. Cost of all work necessary to complete the item shall be included in the unit price bid per square yard for 660 sodding for special berm and slope protection, as per plan.

SEEDING

Quantities for seeding are calculated for the soil areas between lines ten (10) feet outside the work limits, as shown on the cross sections, or to the right-of-way line if such line is less than ten (10) feet from the work limits. This method of measurement was used to calculate the quantities of 659 for USR 35, Ramps, and Athens Road.

Quantities for seeding are calculated for the soil areas between the work limits, as shown on the cross sections. This method of measurement was used to calculate the quantities of 659 for Lick Run Road, All Drives and Approaches, and Temporary Pavements.

All areas surrounded by Ramps or Proposed Pavement shall be seeded

Recently cultivated areas or areas with no vegetation located within the right-of-way but beyond the limits prescribed for 659 seeding and mulching shall, at the direction of the Engineer, be seeded in accordance with 659.

CONSTRUCTION LAYOUT STAKES

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

CONTRACTOR'S MAINTENANCE RESPONSIBILITY

On this project, the Contractor's responsibility for maintenance of the existing pavement per Item 614 shall be limited to those portions of the existing pavement lying within the proposed work limits.

FEDERAL AID CONSTRUCTION IDENTIFICATION SIGN

The contractor shall furnish, erect, maintain and subsequently remove Federal Aid construction identification signs at each of the following approximate locations:

1. One on the right of the existing pavement USR 35 Station 1319+50
2. One on the left of the existing USR 35 pavement-south of the existing structure over the B&O. R.R (Approximate Station 1011+68 on Temporary Connection Extended.)
3. One on the left of the existing USR 50 pavement (Athens Road Station 1911+35)

Sign details shall be as specified on Standard Drawing FACI-1, "Code M-54(2)-96(2)".

The signs shall be erected in accordance with Standard Drawing FACI-1. Additional requirements shall be in accordance with notes in the proposal.

REMOVAL OF EXISTING PIPE

The removal of all existing pipe drains which would normally be removed in various excavation items shall be included for payment in the unit price bid for the respective excavation items, unless otherwise itemized in the plans.

REMOVAL OF TREES AND STUMPS

All trees and stumps specifically marked for removal within the construction limits of this project shall be removed under the lump sum price bid for 201 Clearing and Grubbing, except that those trees for which protection and preservation work is indicated elsewhere in these plans shall not be removed.

The following is an approximate estimate of the number of trees and stumps to be removed.

SIZE	Nº TREES	Nº STUMPS
18"	138	55
30"	116	108
48"	29	16
60"	0	0
	283	179

The above estimate is approximate and the State of Ohio reserves the right to order the removal of additional trees and 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 sum price bid for 201 Clearing and Grubbing.

PAVEMENT REMOVAL OUTSIDE NORMAL CONSTRUCTION LIMITS

After the existing pavement as indicated on the plans has been removed, the old roadway shall be graded to the level of the surrounding ground, the old ditches filled and the disturbed areas sloped to drain and left in a neat condition ready for seeding. Seeding shall be measured and paid for in accordance with 659 Seeding and Mulching. Payment for all other work required shall be included in the unit price bid for 202, Existing Pavement Removed and Disposed of.

ITEM 203 PROOF ROLLING

An estimated quantity for this item has been provided in the general summary for use in proof rolling of subgrade for the mainline and ramp pavements, and for paved shoulders, in accordance with Supplemental Specification 801.

SANITARY FLOW INTO HIGHWAY DRAINAGE SYSTEMS

This plan makes no provisions for connecting, nor shall the Engineer or Contractor connect, any existing or new drainage into the highway drainage system when such drains carry flow from any plumbing fixtures including floor drains and sink drains or drains from livestock lots or barns or polluted water of any kind.

Existing pipe carrying flow which comes within the category outlined above shall be plugged with Class C concrete at the right-of-way line. Payment for said plugging shall be included in the unit price bid for 203 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 Drawings and the Specifications.

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, wether required by the plans, arising from permissible use of optional materials, or encountered in connection to existing facilities, the joint shall be sealed by means of a Class "C" 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.

TRENCH FOR WIDENING

Trench excavation for base widening shall be performed only on one side of the pavement at a time. The open trench shall be adequately maintained and protected with temporary guide markers or barricades at all times. Placement of proposed subbase and base material shall follow as closely as possible behind the excavation operations. The length of widening trench which is open at any one time shall be held to a minimum and shall at all times be subject to approval of the Engineer.

GRANULAR MATERIAL (As Per Plan)

The upper portion of the embankment down to a plane 18 inches below the bottom of the subbase shall be composed of granular material.

Material furnished for this item shall be as defined in 203.02 except that at least 75 per cent by weight of the grains or particles shall be retained on a No. 200 Sieve.

The cost of furnishing the granular material shall be included in the unit price bid for Item 203 Embankment.

PAVEMENT CALCULATIONS

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Stations Locations Calculations Etc.		304 Aggregate 4" Base	301 Bituminous Aggregate 3" Base	402 Asphalt Concrete (35-100)	402 Asphalt Concrete (36-100)	600 Standard Type G Concrete Curb	612 4" Concrete Median	310 Subbase Grading A as per Plan	310 Subbase	407 Tack Coat Applied @ rate of 0.10 gal/S.Y.	409 Seal Coat Cover Aggregate No. 8 Applied @ rate of 0.008 C.Y./S.Y.	409 Seal Coat Bituminous Matl. Applied @ rate of 0.3 gal/S.Y.	424 Asphaltic Concrete (88-100)	451 9" Reinforced Portland Cement Concrete Pavement	
U.S.R. 35		Cu.Yds.	Cu.Yds.	Cu.Yds.	Cu.Yds.	Lin.Ft.	Sq.Yds.	Cu.Yds.	Cu.Yds.	Sq.Yds.	Sq.Yds.	Sq.Yds.	Cu.Yds.	Sq.Yds.	
Concrete Pavement															
1323+00 to 1336+83.99 (W.B.) =	1,383.99 Lin.Ft.														
1350+19.69 to 1351+56.99 (W.B.) =	137.30 " "														
1351+71.43 to 1384+45.38 (W.B.) =	3,273.95 " "														
1350+27.00 to 1384+34.21 (E.B.) =	3,407.21 " "														
	8,202.45 Lin.Ft.														
8,202.45 x 24 ÷ 9 = 21,873.20 Sq.Yds.														21,873.2	
Additional 404 Material for Irregularities													25.7		
1323+00 to 1336+86.34 (E.B.) =	1,386.34 Lin.Ft.														
1386.34 x 24' x 1.25/12 ÷ 27 =	128.36 Cu.Yds.												128.4		
1386.34 x 2.5' x 3/12 ÷ 27 =	32.09 Cu.Yds.			32.1											
1,386.34 x 3' x 3/12 ÷ 27 =	38.51 Cu.Yds.				38.5										
1,386.34 x 22' x 1/9 =	3,388.83 Sq.Yds.									3388.8					
8' Paved Berms															
1323+00 to 1336+86.34 (E.B.) =	1,386.34 Lin.Ft.														
1356+92.20 to 1383+58 (E.B.) =	2,665.80 " "														
1323+00 to 1336+83.99 (W.B.) =	1,383.99 " "														
1350+19.69 to 1351+56.99 (W.B.) =	137.30 " "														
1351+71.43 to 1364+50 (W.B.) =	1,278.57 " "														
1376+71.00 to 1384+45.38 (W.B.) =	774.38 " "														
1,386.34 - (64 x 1/2 x 8)] ÷ 9 = 1204 Sq.Yds	7,626.38 Lin.Ft.										1204	1204			
[7626.38 x 8 - (64 x 1/2 x 8)] x 3/12 x 1/27) - (1,386.34 x 3/12 x 4.75/12 x 1/27) = 560.7 Cu.Yds.			560.7												
[7626.38 x 8 - (64 x 1/2 x 8)] x 4/12 x 1/27 - [1,386.34 (3/12 x 4/12 + 2.75/12 x 3/12) x 1/27] = 742.77 Cu.Yds.		742.8													
4' Median Paved Berms															
1323+00 to 1336+86.34 (E.B.) =	1,386.34 Lin.Ft.														
1360+17.50 to 1360+36 (E.B.) =	1.018.50 " "														
1371+25 to 1384+34.21 (E.B.) =	1,309.21 " "														
1328+00 to 1336+83.99 (W.B.) =	1385.99 " "														
1350+19.69 to 1351+56.99 (W.B.) =	137.30 " "														
1351+71.43 to 1360+36 (W.B.) =	864.57 " "														
1371+29 to 1382+85 (W.B.) =	1,156.00 " "														
	7,255.91 Lin.Ft.														
1,386.3 x 4' ÷ 9 =	616 Sq.Yds.										616	616			
(7,255.91 x 4 x 3/12 x 1/27) - (1,386.34 x 3/12 x 1.75/12 x 1/27) =	266.87 Cu.Yds.		266.9												
(7,255.91 x 4' x 3/12 x 1/27) - [1,386.34 (3/12 x 3/12 + 2.75/12 x 3/12) x 1/27] =	351.06 Cu.Yds.	351.1													
5' Median Paved Berms															
1360+36 to 1371+25 (E.B.) =	1,089.00 Lin.Ft.														
1360+36 to 1371+29 (W.B.) =	1,093.00 Lin.Ft.														
	2,182.00 Lin.Ft.														
2,182.00 x 5 ÷ 9 =	1,212.22 Sq.Yds.														
2,182.00 x 5 x 3/12 x 1/27 =	101.02 Cu.Yds.		101.0												
2,182.00 x 5 x 4/12 x 1/27 =	134.68 Cu.Yds.	134.7													
2,182.00 + 44.00 =	2.226.00 Lin.Ft.					2226.0									
Median Pavement															
(1,091 x 9.75 (Average Width) + 154 sq) ÷ 9 =	1,199.03 Sq.Yds.						1199.0								
Subbase Grading A															
Under 451															
8,202.45 x 24 x 6.04" (Average Depth) x 1/12 x 1/27 =	3,669.80 Cu.Yds.														
Under 402															
1,386.34' x 2' x 7.75" x 1/12 x 1/27 =	66.30 Cu.Yds.														
Under 8' Paved Berms															
5,017.74' x 8' x 7.50" (Average Depth) x 1/12 x 1/27 =	929.20 Cu.Yds.														
Under 4' Median Paved Berms															
7,255.91' x 4' x 7.28" (Average Depth) x 1/12 x 1/27 =	652.10 Cu.Yds.														
Under 5' Median Paved Berms															
2,182.00' x 5' x 6.27" (Average Depth) x 1/12 x 1/27 =	211.10 Cu.Yds.														
Through Shoulders															
3459.57 x 13.05' (Average Width) x 6" x 1/12 x 1/27 =	836.06 Cu.Yds.														
1,386.34' x 12.875' (Avg. Width) x 8" x 1/12 x 1/27 =	440.72 Cu.Yds.														
Subbase - Under Median Pavement | Total Subbase Grading A =	6805.3 Cu.Yds.							6805.3							
1/27 [601.26 x 10' (Average Width) x 17.70" (Average Depth) x 1/12 =	328.50 Cu.Yds.														
Under 8' Paved Berm															
[2,608.64 - (64.00 x 1/2)] x 8' x 7.30" (Average Depth) x 1/12 x 1/27 =	502.60 Cu.Yds.								831.1						
Total Subbase =	831.10 Cu.Yds.														
Sub Totals (Carried to Sheet No. 20)		1,228.6	928.6	32.1	38.5	2226	1,199.0	6805.3	831.1	3388.8	1820	1820	154.1	21,873.2	

PAVEMENT CALCULATIONS

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Stations Locations Calculations Etc.	304 Aggregate Base 4"	304 Aggregate Base 6"	301 Bituminous Aggregate Base 5"	301 Bituminous Aggregate Base 3"	402 Asphalt Concrete (SS-100)	402 Asphalt Concrete (SS-100)		605 Aggregate Drains					608 Standard Type G Concrete Curb		612 4" Concrete Median Type I	310 Subbase Grading A as per Plan	310 Subbase				407 Tack Coat Applied @ rate of 0.10 gal/SY	408 Prime Coat Applied @ rate of 0.40 gal/SY	409 Seal Coat Cover Aggregate (#8) Applied @ rate of 25 lbs/SY	409 Seal Coat Bituminous Mat'l. Applied @ rate of 0.3 gal/SY	411 Asphalt Concrete (SS-100)	452 9" Plain Reinforced Cement Concrete Pavement	451 9" Reinforced Portland Cement Concrete Pavement			
	Cu.Yds	Sq.Yds.	Cu.Yds.	Sq.Yds	Cu.Yds.	Cu.Yds.		Lin.Ft.					Lin.Ft.		Sq.Yds	Cu.Yds.	Cu.Yds.				Sq.Yds	Sq.Yds.	Sq.Yds.	Sq.Yds.	Cu.Yds	Sq.Yds.	Sq.Yds.			
SUB TOTALS from Sheet No. 1	1,228.6		928.6		32.1	38.5							2226		1,199.0	6805.3	831.1				3,388.8		1820	1820	154.1		21,873.2			
RAMP C																													
451 Concrete Pavement																													
62+75.00 to 72+93.98 = 1018.98 Lin. Ft																													
1018.98 x 16 x 1/9 = 1,811.52 Sq Yds																											1,811.5		
3' Paved Berm																													
Lt & 1018.98 x 3' x 1/9 = 339.66 Sq. Yds.																													
Rt & (1018.98 - 52.5') x 3 x 1/9 = 322.16 Sq. Yds.																													
661.82 Sq. Yds.				661.8																									
661.82 x 4/36 = 73.55 Cu. Yds	73.6																												
Subbase																													
Under 451																													
1018.98' x 16 x 6" x 1/12 x 1/27 = 301.92 Cu. Yds.																													
Under Paved Berm																													
701.40' x 6' x 8" x 1/12 x 1/27 = 103.91 Cu Yds																													
317.58' x 3' x 7.50" (Ave. depth) x 1/12 x 1/27 = 22.05																													
(317.58 - 52.5') x 3' x 7.25" (Ave. depth) x 1/12 x 1/27 = 17.19																													
Through Shoulder																													
722.82 x 13.40 (Ave. Width) x 6" x 1/12 x 1/27 = 179.37																													
625.04 Cu. Yds.																625.0													
ATHENS ROAD																													
451 Concrete Pavement																													
158+00 to 166+33.17 833.17 Lin. Ft.																													
169+36.85 to 174+05.46 468.61																													
179+66.78 to 187+31.80 864.78																													
2166.56 Lin. Ft.																													
2166.56 x 24 x 1/9 = 5777.49 Sq. Yds.																											5777.5		
4' Paved Berms																													
Lt & (1984.30 - 36.7') x 4' x 1/9 = 865.60 Sq. Yds.																													
Rt & (1984.30 - 1180 - 126.0') x 4' x 1/9 = 773.46																													
Rt & Lt & 182.26 x 4 x 2 x 1/9 = 162.01																													
1,801.07 Sq. Yds.				1801.1																									
1,801.07 x 4/36 = 200.12 Cu. Yds.	200.1																												
Subbase Under 451																													
5777.49' x 6" x 1/36 = 962.92 Cu. Yds.																													
Under 4' Paved Berms																													
(1,997.6' + 1740.3') x 4' x 8" x 1/12 x 1/27 = 361.24 Cu Yds																													
182.26' x 8' x (8" + 6.75") x 1/12 x 1/12 x 1/27 = 32.99 Cu. Yds																													
Through Shoulder																													
(638.28 + 407.37 + 444.89 + 61.29) 27 x 85 (Ave length) x 6" x 1/12 x 1/27 =																													
198.00 Cu Yds																													
1558.15 Cu Yds																1,558.2													
605 Aggregate Drains																													
1014.7.3 x 1/30 = 34 ea. 34 x 14 (Ave length) = 476 Lin Ft								476																					
LICK RUN ROAD & APPROACH RT. STA 160+00 ATHENS ROAD																													
Bituminous Pavement																													
[325.70 x 24 + 1,446.47 x 20] x 1/9 (408) = 4,082.91 Sq Yds.																						4,082.9							
[325.70 x 24 + 1,446.47 x 20] x 1.25" x 1/12 x 1/27 (402) = 141.77 Cu Yds.																									141.8				
[325.70 x 24 + 1,446.47 x 20] x 2" x 1/12 x 1/27 (402) = 226.83 Cu Yds					226.8																								
[325.70 x 25 + 1,446.47 x 21] x 1/9 (304) = 4,279.82 Sq Yds		4,279.8																											
[325.70 x 26 + 1,446.47 x 22] x 4" x 1/12 x 1/27 (310) = 497.41 Cu Yds																	497.4												
605 Aggregate Drains 15+00 to 18+00 Lick Run																													
3+21.87 to 5+00 Approach Rt.								190																					
478.13 x 1/25 = 19 ea. 19 x 10' (Ave. Length) = 190 Lin Ft																													
TEMPORARY CONNECTION																													
452 Concrete Pavement																													
28,600 sq ft. x 1/9 = 3,177.8 Sq Yds.																											3,177.8		
Sub Total carried to sheet No 2	1,502.3	4,279.8	928.6	2462.9	258.9	38.5		666					2,226		1,199.0	8,988.5	1,328.5				3,388.8	4,082.9	1820	1820	295.9	3,177.8	29,462.2			

PAVEMENT CALCULATIONS

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	F-674(12)	

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ROSS COUNTY
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STATIONS LOCATIONS CALCULATIONS ETC.	See Sheet Number	304 Aggregate Base 4"	304 Aggregate Base 6"	304 Aggregate Base		301 Bituminous Aggregate Base 3"	301 Bituminous Aggregate Base		611 Reinforced Concrete 13" Approach Slabs	605 Aggregate Drains	609 Standard Type 2 Combined Curb and Gutter	609 Standard Type 2-9 Concrete Curb	609 Standard Type 6 Concrete Curb	609 Standard Type 8 Concrete Curb	612 4" Concrete Median Standard Type 1	310 Subbase Gradings As per plan	310 Subbase	402 Asphalt Concrete (35-100)	402 Asphalt Concrete (80-100)		407 Tack Coat Applied @ rate of 0.10 gal./sy.	408 Bituminous Prime Coat Applied @ rate of 0.40 gal./sy.	409 1st. Coat Cover Aggregate 1A or 8 Applied @ 0.008 cy./sy.	409 Seal Coat Bit. Mat'l. Applied @ rate of 0.3 gal./sy.	404 Asphalt Concrete (35-100)	452 9" Plain Portland Cement Concrete Pavement	451 9" Reinforced Portland Cement Concrete Pavement	
		Sq. Yds.	Sq. Yds.	Cu. Yds.		Sq. Yds.	Cu. Yds.		Sq. Yds.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Sq. Yds.	Cu. Yds.	Cu. Yds.	Cu. Yds.	Cu. Yds.		Sq. Yds.	Sq. Yds.	Sq. Yds.	Sq. Yds.	Cu. Yds.	Sq. Yds.	Sq. Yds.
SUB TOTALS from Sheet No. 20			4,279.8	1,502.3		2,462.9	928.6			666			2,226		1,199.0	8,988.5	1,328.5	38.5	258.0		3,388.8	4,082.9	1820	1820	295.9	3,177.8	29,462.2
APPROACH SLABS																											
Bridge Nos. R05-35-2532-L ; -2580-2619	13	45.0				45.0			445.0							74.0	24.0						45.0	45.0			
TEMPORARY CONNECTION																											
Sta. 92+47.10 to Sta. 94+00	55			40.3														13.4	6.7			161.0			6.7		
TEMPORARY APPROACH 35-50	61			10.3														3.0	3.3			115.6			3.3	365.9	
Turn-around	61			10.1																		73.0			4.1		
ATHENS ROAD																											
Residence Drive Rt. Sta. 140+00 to Sta. 147+50	65		103.0	186.7																		103.2			5.7		
Sta. 157+00 to Sta. 158+00	60	55.6				55.6										13.9		9.3							7.8		
Lt. & Sta. 180 + 14.88 & Rt. of Approach	60		174.9																								
Ramp B Exit Detail Sta. 1350+17.50 USR 35 to Sta. 142+25 Athens Road	84	739.9				739.9					292					593										1610.9	
Intersection Lick Run Road and Athens Road																											
Sta. 142+25 to Sta. 147+97.62	85			136.1		165				190	452				40.0	36.7	99.0		38.5			679.9	165.0	165.0	25.3		
Sta. 187+91.50 to Sta. 191+35.48	86			150.8			18.6			120									71.4		463.3	459.5	223.0	223.0	37.3		
Residence Drive Left Sta. 190+41.5	86			12.5																		90.0			5.0		
RAMP "C"																											
Exit Details	93	614.2				614.2				135						547.9										2361.3	
Entrance Details	92	1,402.5				1227.1						223				377.5	243.3									1770.5	
Cross Cover	93	57.9				57.9										54.2										184.1	
LICK RUN ROAD																											
Sta. 15+00 to Sta. 26+00	94		504.6	30.0																		80.8			11.6		
Sta. 26+00 to Sta. 33+43.66	95		388.0																								
PROPOSED CONNECTION TO EXISTING LICK RUN ROAD	101			35.9													25.2	15.8			80	215.1			9.9		
APPROACH RIGHT Sta. 160+00 Athens Road	102			121.3													83.3		30.2		92	706.0			27.6		
APPROACH RIGHT Sta. 185+67.0 Athens Road	105		650.7														75.4		34.6			622.7			21.6		
CULVERT DETAILS																											
Sta. 18+98.93 Detail #23	118			4.1																		30			1.7		
U-TURN MEDIAN OPENING																											
Sta. 1332+36.39	10	362.7				362.7	362.7									65.8											
Field Drive Lt. Sta. 1337+62	123-E		116																								
SUB TOTALS		3,219.9	6,217.0	2240.4		5893.2	5730.2	947.2	445.0	1,111.0	744		2,226	223	1,239.0	10,751.5	1,878.9	80.0	452.6		4,024.1	7,419.7	2253.0	2253.0	467.2	3,543.7	35,389.0
Conversions		357.8 CY.	1,036.1 CY.	2240.4		491.1 CY.	4779 CY.	947.2 CY.															18.1 CY.	675.9 Gal.			
TOTAL			3634 Cu Yds.				1425 Cu Yds.		445 SY.	1111 L.F.	744 L.F.		2226 L.F.	223 L.F.	1239 SY.	10,752 CY.	1,879 CY.		533 Cu Yds.		403 Gal.	2,968 Gal.	18 C.Y.	676 Gal.	465 CY.	3,544 SY.	35,389.0

SUB-SUMMARY OF QUANTITIES

FED. RD. DIVISION	STATE	PROJECT	
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STRUCTURES 20' & UNDER

See Sheet No	Structure No	Station	Lane	Side	601		602	604								660	603																								
					D.R.C.P.	Riprap using Rein. Conc. Slope Paving	Concrete Masonry	Std. 2-2.6 Catch Basin	Std. 2-4.6 Inlet	Std. 2-4.8 Inlet	Std. 1403 Catch Basin	Std. 1405 Catch Basin	Std. 1408 Catch Basin	Std. 1418 Catch Basin (Not as per plan)	Catch Basin Spec. Sump		Sodding	12" B-B	12" C-B	12" F	12" D	12" A-B 707.05	15" A-B 706.02 or 706.03	18" D	18" D 706.02 or 706.03	2' B-B	24" D 707.01	24" B-B	24" C-B 706.02 C.III or 707.13	27" A 706.02 or 706.03		27" B-B	27" C-B	36" B-B	54" A-B 706.02 Class III	30"x.8" D Cross Arch II 706.04	54" Type A 706.02 C1983 Z Under FT Railroad R/R				
					C.Yd.	S.Yd.	C.Yd.	Each								S.Yd.	Lin. Ft.																								
30	1	1327+00	W.B.	Lt. Rt.			0.23																																	
106	2	1333+10-1333+10 to 1335+66	Med.	Lt. Rt.	3		0.23	1					1			121	92	260	30																					
123-G	3	103+00 ℄		Lt.																																				
107	4	1352+68.50	W.B.	℄	1		0.23	1					1			165	116	110							130															
46	5	1354+00	E.B.	Rt.			0.23																																	
108	6	1357+27.2	E.B:W.B.	Lt. Rt.	1		0.41					2	1			247	60							74		113													
109	7	28+35 (Lick Run Rd.)		Lt. Rt.			1.92																																	
40	8	1362+50	W.B.	Lt. Rt.			0.23																																	
110	9	1364± (C&O R.R.)		Lt.			1.92																																	
111	10	1365+23.72	E.B:W.B.	Lt. Rt.	6		0.41		1	1		1				100										166													
52	11	1373+02.2	W.B.	Lt. Rt.			0.23																																	
52	12	60+64.2 (Ramp "C")		Lt. Rt.			0.23																																	
112	13	66+00 (Ramp "C")		Lt. Rt.	5	14	1.53							1																										
113	14	1380+00	W.B.	Lt. Rt.			0.52															100																		
54	15	1382+10	W.B.	Lt. Rt.			0.23																																	
114	16	166+92 (Athens Rd.)		Lt. Rt.			0.82																					142												
115	17	168+75 (Athens Rd.)		Lt. Rt.			0.82																					134												
116	18	1386+00	E.B.	Lt.									1		1		80				110																			
91	19	73+00 (Ramp "C")		Lt. Rt.			0.23																																	
117	20	180+42.88 (Athens Rd.)		Lt.			1.60																																30		
117	21	190+42.5 (Athens Rd.)		Lt.			0.60																	52															
118	22	19+00 (Lick Run Rd.)		Lt. Rt.			0.94																																	
118	23	18+98.93 (Lick Run Rd.)		Lt. Rt.			0.47																																	
119	24	20+89 (Lick Run Rd.)		Lt.			0.60																																	
119	25	0+90 (Lick Run Rd.)		Lt.			0.23				1						65																							
120	26	139+23 to 145+00 (Athens Rd.)		Rt.			0.23	1										577		32																				
		Total			16	14	15.91	3	1	1	1	3	4	1	1		633	431	962	30	32	110	100	66	52	74	130	279	276	140		171	78	138	152	30	140		
		Use					15.9																																	

COMPACTED SUBGRADE

Surface Calculations	203 Subgrade Compaction Sq. Yd.	203 Proof Rolling Hours
452 Surface	3544	1.8
451 Surface	35,205	17.6
Paved Shoulder	17,270	8.6
404 Surface	8,116	
611 Approach Slab	445	.2
612 Median Nose	1230	.6
Std. Comb. C & G Type 2	206	
Std. Curb Type 6	123	
Std. Curb Type 8	24	
Total	66172	28.8

659 ~ COMMERCIAL FERTILIZER

191,510 (659) + 9792 (660) = 201,302 Sq. Yd.

201,302 × 9 × 20/1000 × 1/2000 = 18.12 Tons

659 ~ AGRICULTURAL LIMING

201,302 × 9 × 100/1000 × 1/2000 = 90.59 Tons

SUB-SUMMARY OF QUANTITIES

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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TYPE 39 FENCE

FROM	TO	LIN. FT.
E.P. 108' Rt. 1350+00 E.B.	C.P. 98' Rt. 1354+00 E.B.	400
C.P. 98' Rt. 1354+00 E.B.	C.P. 38' Rt. 1356+50 "B"	41
C.P. 38' Rt. 1356+50 "B"	I.P. 42' Rt. 1360+38 "B"	403
I.P. 42' Rt. 1360+38 "B"	I.P. 27' Rt. 1361+00 "B"	25
I.P. 27' Rt. 1361+00 "B"	E.P. 36' Rt. 1364+07 "B"	307
E.P. 198' Lt. 1350+00 E.B.	I.P. 198' Lt. 1352+56 E.B.	256
I.P. 198' Lt. 1352+56 E.B.	I.P. 213' Lt. 1356+37 E.B.	361
I.P. 213' Lt. 1356+37 E.B.	E.P. 101' Lt. 1360+18 E.B.	365
E.P. 183' Lt. 1361+83 E.B.	E.P. 183' Lt. 1363+38 E.B.	155
E.P. 183' Lt. 1364+41 E.B.	I.P. 196' Lt. 1370+37 E.B.	660
I.P. 196' Lt. 1370+37 E.B.	I.P. 223' Lt. 1377+00 E.B.	633
I.P. 223' Lt. 1377+00 E.B.	I.P. 263' Lt. 1370+00 E.B.	215
I.P. 105' Lt. 65+37 "C"	I.P. 110' Lt. 69+37 "C"	412
I.P. 110' Lt. 69+37 "C"	I.P. 91' Lt. 74+00 "C"	411
I.P. 91' Lt. 74+00 "C"	I.P. 71' Lt. 79+00 "C"	516
I.P. 71' Lt. 79+00 "C"	E.P. 44' Lt. 79+98 "C"	103
E.P. 83' Rt. 1365+33 E.B.	I.P. 90' Rt. 1370+69 E.B.	531
I.P. 90' Rt. 1370+69 E.B.	I.P. 63' Rt. 1376+00 E.B.	531
I.P. 63' Rt. 1376+00 E.B.	C.P. 83' Rt. 1380+02 E.B.	307
C.P. 83' Rt. 1380+02 E.B.	C.P. 132' Lt. 1380+02 E.B.	47
C.P. 132' Lt. 1380+02 E.B.	I.P. 321' Rt. 1378+32 E.B.	256
I.P. 321' Rt. 1378+32 E.B.	E.P. 40' Lt. 150+02 A.R.	477
E.P. 81' Rt. 1403+53 A.R.	I.P. 153' Rt. 1382+94 E.B.	206
I.P. 153' Rt. 1382+94 E.B.	C.P. 62' Rt. 1384+00 E.B.	142
C.P. 62' Rt. 1384+00 E.B.	C.P. 178' Rt. 1385+34 E.B.	160
C.P. 178' Rt. 1385+34 E.B.	C.P. 183' Rt. 1386+78 E.B.	155
C.P. 183' Rt. 1386+78 E.B.	E.P. 215' Rt. 1387+27 E.B.	49
E.P. 141' Rt. 1389+04 E.B.	C.P. 126' Lt. 1390+02 E.B.	10
C.P. 126' Rt. 1390+02 E.B.	C.P. 48' Rt. 1389+78 E.B.	125
C.P. 48' Rt. 1389+78 E.B.	E.P. 279' Lt. 1392+30 E.B.	453
E.P. 307' Lt. 1391+72 E.B.	I.P. 351' Lt. 1391+00 E.B.	87
I.P. 351' Lt. 1391+00 E.B.	C.P. 568' Lt. 1387+00 E.B.	900
C.P. 568' Lt. 1387+00 E.B.	I.P. 48' Rt. 177+00 A.R.	95
I.P. 48' Rt. 177+00 A.R.	E.P. 63' Rt. 180+11 A.R.	297
Total		9814

For fence plan, see R/W Sheets

E.P. - End Post Assembly
C.P. - Corner Post Assembly
I.P. - Intermediate Post Assembly
E.B. - Eastbound & U.S. 35
"B" - Ramp "B"
"C" - Ramp "C"
A.R. - Athens Road

FED. RD. DIVISION	STATE	PROJECT	
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GENERAL SUMMARY

ITEM	SHEET NUMBER																																								ITEM	QUANT	UNIT	DESCRIPTION
	14	17	18	22	29	30	31	32	33	34	35	36	55	64	65	66	67	68	69	70	87	88	94	95	123-E	123-F	61	102		121	122		213		22-A	28-A			1221	Y005				
																																												ROADWAY
201			Lump																																				Lump		201	Lump	Lump	Clearing and Grubbing
202									19					400	246																								665		202	665	Lin.Ft.	Pipe Removed, 24" & Under
202						975			855					985	662																								3477		202	3477	Sq.Yd.	Existing Pavement Removed & Disposed of
202														1	4																								5		202	5	Each	Catch Basin Removed or Abandoned
202						54																																	54		202	54	Each	Removal and Disposal of Existing Traffic Divider and Replace Pavement as per plan
203						3197	2445	257	51012	52422	14295	2018	762		4096	949	1609	2299	7654		3356	795	1654	427		54043	18	201		62698	56826								323033		203	323033	Cu.Yd.	Excavation not including Embankment Construction as per plan
203						32168	49974	1506	19149	2922	965	1058	26914		739	915	32514	23537	575		10419	16135	16292	10145		43923	4868	4278											298996		203	298996	Cu.Yd.	Embankment As Per Plan
203				66172																																			66172		203	66,172	Sq.Yd.	Subgrade Compaction
203				29																																			29		203	29	Hour	Proof Rolling
410		2175																																					2175		410	2,175	Cu.Yd.	Traffic Compacted Surface Type A-or-B
604																																	66						66		604	66	Each	Centerline Reference Monument
606							2		1				1																										4		606	4	Each	Bridge Terminal Assembly, As Per Plan.
606																							1074.1	725.9															1800		606	1800	Lin.Ft.	Guard Rail, Type 4
606					100	1400	1525		1025	1500			725				888	412																		25			7600		606	7600	Lin.Ft.	Guard Rail, Type 5
606							75		100	592.5	120		100																										987.5		606	987.5	Lin.Ft.	Guard Rail, Type 5 Barrier Design
606											563	437																											1000		606	1,000	Lin.Ft.	Temporary Beam Rail
606									2	1			2										1													1			7		606	7	Each	Anchor Assembly
606					1		1		3	3	1		1				2	2					3	2															19		606	19	Each	Approach End Assembly
606							1		2								4							4															11		606	11	Each	Bridge Terminal Assembly
607																																			9814				9814		607	9814	Lin.Ft.	Fence, Type 39
616		44																																					44		616	44	Ton	Calcium chloride
																																												EROSION CONTROL
601																									8464															8464	601	8464	Cu.Yd.	Rock Channel Protection, Type A
601				16		9			192	81	2	2									3	1		31																337	601	337	Cu.Yd.	Rock Channel Protection Type B
601				14																																				14	601	14	Sq.Yd.	Riprap, using 6" Reinf. Conc. Slab
601										20																														20	601	20	Lin.Ft.	Paved Gutter, Type 1 (modified as per plan)
659						13846	14461	452	20664	15836	14962	6239	12159		9451	3509	13250	10051	10768		11281	7729	10788	5487		5472	1935	3170												194510	659	191,510	Sq.Yd.	Seeding and Mulching
659				18.1																																				18.1	659	18.1	Ton	Commercial Fertilizer (12-12-12)
659				90.6																																				90.6	659	90.6	Ton	Agricultural Liming
660				633		100			1627	1361	1100	436	388		148		37	691	859	28	1447	356	374																	9585	660	9,585	Sq.Yd.	Sodding
660	207																																							207	660	207	Sq.Yd.	Sodding for Special Berm and Slope Protection, as per plan
																																												DRAINAGE
602				15.9																																			15.9		602	15.9	Cu.Yd.	Concrete Masonry
603									10	50	38	60		6							10																		174		603	174	Lin.Ft.	6" Conduit, Type F
603												160																											160		603	160	Lin.Ft.	6" Conduit, Type B
603				431		117				110	124										81	108																	971		603	971	Lin.Ft.	12" Conduit, Type B
603				962					28																														990		603	990	Lin.Ft.	12" Conduit, Type C
603				110																																			110		603	110	Lin.Ft.	12" Conduit, Type A 707.05
603				30																																			30		603	30	Lin.Ft.	12" Conduit, Type F
603				32																			48																80		603	80	Lin.Ft.	12" Conduit, Type D
603				100																																			100		603	100	Lin.Ft.	15" Conduit, Type A 706.01, 706.02 or 706.08
603				66																																			66		603	66	Lin.Ft.	18" Conduit, Type D
603				52																																			52		603	52	Lin.Ft.	18" Conduit, Type D 706.01, 706.02 or 706.08
603				74																																			74		603	74	Lin.Ft.	21" Conduit, Type B
603				279																																			279		603	279	Lin.Ft.	24" Conduit, Type B
603				276																																			276		603	276	Lin.Ft.	24" Conduit, Type C, 706.02 Class III or 707.13
603				36																																			36		603	36	Lin.Ft.	24" Conduit, Type D
603				171																																			171		603	171	Lin.Ft.	27" Conduit, Type B
603				78																																			78		603	78	Lin.Ft.	27" Conduit, Type C
603				140																																			140		603	140	Lin.Ft.	27" Conduit, Type A 706.02 or 706.08

FED. RD. DIVISION	STATE	PROJECT	
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GENERAL SUMMARY

ITEM	SHEET NUMBER									
	21	22	30	33	34	35	36	64	87	88
603		138								
603		152								
603		140								
603		50								
604		3								1
604		1		1						
604		3								
604		4	1		1	1	1			
604		1								
604		1			1					
604		1								
604		1								
604									1	
605	1111									
605				287	2544	2923	1312	288	536	
301	1425									
304	3634									
310	10752									
310	1879									
402	533									
404	465									
407	403									
408	2968									
409	676									
409	18									
401	35389									
452	3544									
609	2226									
609	223									
609	744									
611	445									
612	1239									
Spec.										
614										

ITEM	QUANT	UNIT	DESCRIPTION
7221	V005		
			DRAINAGE (Cont.)
138	603	138	Lin.Ft. 36" Conduit Type B
152	603	152	Lin.Ft. 54" Conduit Type A 706.02 Class IV
140	603	140	Lin.Ft. 54" Conduit Type A, 706.02 Class II Under Railroad
50	603	50	Lin.Ft. 30"x19" Conduit Type D Class HE-II 706.04
4	604	4	Each Standard Nº 2-2-B Catch Basin
2	604	2	Each Standard Nº 3 Catch Basin
3	604	3	Each Standard Nº 5 Catch Basin
8	604	8	Each Standard Nº 8 Catch Basin
1	604	1	Each Standard Nº 8 Catch Basin (modified as per plan)
2	604	2	Each Standard Nº 2-A-6 Inlet
1	604	1	Each Standard Nº 2-A-8 Inlet
1	604	1	Each Catch Basin Special Sump
1	604	1	Each Standard Nº 6 Catch Basin
1111	605	1,111	Lin.Ft. Aggregate Drains
7960	605	7,960	Lin.Ft. 6" Shallow Pipe Underdrains
			PAVEMENT
1425	301	1425	Cu.Yd. Bituminous Aggregate Base: 702.01 (85-100) or 702.09 RT-10
3634	304	3634	Cu.Yd. Aggregate Base
10752	310	10,752	Cu.Yd. Subbase, Grading A, as per plan
1879	310	1879	Cu.Yd. Subbase,
533	402	533	Cu.Yd. Asphalt Concrete (85-100)
465	404	465	Cu.Yd. Asphalt Concrete (85-100)
403	407	403	Gals. Tack Coat: 702.04, MS-2 or RS-1, or 702.02, RC-70 or RC-250
2968	408	2,968	Gals. Prime Coat: 702.09, RT-2 or RT-3
676	409	676	Gals Seal Coat bituminous material as per plan
18	409	18	Cu.Yd. Seal Coat Cover Aggregate Nº 8
35389	401	35,389	Sq.Yd. 9" Reinforced Portland Cement Concrete Pavement
3544	452	3,544	Sq.Yd. 9" Plain Portland Cement Concrete Pavement
2226	609	2,226	Lin.Ft. Curb, Standard Type 6
223	609	223	Lin.Ft. Curb, Standard Type 8
744	609	744	Lin.Ft. Combination Curb & Gutter Standard Type 2
445	611	445	Sq.Yd. Reinforced Concrete Approach Slabs (T-13")
1239	612	1239	Sq.Yd. 4" Concrete Median, As Per Plan
744	Spec.	744	Cu.Yd. Drainage Connection using Nº 8 Aggregate
			TRAFFIC CONTROL
			For Quantities, See Sheet Nº 198
			STRUCTURES OVER 20 FT. SPAN
			Bridge Nº ROS-35 - 2532L For Quantities See Sheet Nº 126
			Bridge Nº ROS-35 - 2580 For Quantities See Sheet Nº 142
			Bridge Nº Ros-35 2584 For Quantities See Sheet Nº 151
			Bridge Nº Ros 35 - 2619 For Quantities See Sheet Nº 164
Lump	619	Lump	Lump Field Office
Lump		Lump	Lump Construction Layout Stakes
Lump	614	Lump	Lump Maintaining Traffic

SUPERELEVATION TABLES

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	F-674 (12)	

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ROSS COUNTY
ROS - 35 - 25.05

EASTBOUND

STATION	SUPER ELEV. OUTSIDE EDGE	PROFILE AND LEFT EDGE 12' Lt. ℄	CENTER LINE E.B.	RIGHT EDGE 12' Rt. ℄
1350+27.00	Butt	Existing	Pavement	
+50.00	.17	619.42	619.60	619.59
T.S. +55.61	.19	619.48	619.62	619.62
+75.61	.29	619.49	619.68	619.78
+95.61	.33	619.55	619.75	619.94
1351+15.61	.48	619.61	619.85	620.09
+35.61	.58	619.66	619.95	620.24
+55.61	.68	619.72	620.06	620.40
+75.61	.77	619.78	620.17	620.55
+95.61	.87	619.84	620.28	620.71
1352+15.61	.97	619.90	620.38	620.87
+35.61	1.06	619.95	620.48	621.01
S.C. +55.61	1.15	620.01	620.59	621.16
+75.00	1.16	620.07	620.65	621.23
1353+00		620.14	620.72	621.30
+25		620.22	620.80	621.38
+50		620.31	620.89	621.47
+75		620.42	621.00	621.58
1354+00		620.53	621.11	621.69
+25		620.66	621.24	621.82
+50		620.81	621.39	621.97
+75		620.96	621.54	622.12
1355+00		621.13	621.71	622.29
+25		621.31	621.89	622.47
+50		621.48	622.06	622.64
+75		621.66	622.24	622.82
1356+00		621.83	622.41	622.99
+25		622.01	622.59	623.17
+50		622.18	622.76	623.34
+75		622.36	622.94	623.52
1357+00		622.53	623.11	623.69
+25		622.71	623.29	623.87
+50		622.88	623.46	624.04
+75		623.06	623.64	624.22
1358+00		623.23	623.81	624.39
+25		623.41	623.99	624.57
+50		623.58	624.16	624.74
+75	1.16	623.76	624.34	624.92
C.S. +88.39	1.15	623.85	624.42	625.00
1359+08.39	1.06	623.99	624.52	625.05
+28.39	.97	624.13	624.61	625.10
+48.39	.87	624.27	624.71	625.14
+68.39	.77	624.41	624.80	625.18
+88.39	.68	624.55	624.89	625.23
1360+08.39	.58	624.69	624.98	625.27
+28.39	.48	624.83	625.07	625.31
+48.39	.39	624.97	625.17	625.36
+68.39	.29	625.11	625.30	625.40
S.T. +88.39	.19	625.25	625.44	625.44
1361+00	.16	625.33	625.52	625.49
+25	.11	625.51	625.70	625.62
+50	.05	625.68	625.87	625.73
+75	0	625.86	626.05	625.86
1364+00	0	627.32	627.51	627.32
+25	.09	627.45	627.55	627.36
+50	.18	627.58	627.59	627.40
+75	.26	627.70	627.63	627.44
1365+00	.36	627.82	627.68	627.46
+25	.44	627.93	627.71	627.49
+50	.49	628.03	627.79	627.54
+75	.52	628.13	627.87	627.61
1366+00	.52	628.22	627.96	627.70
+25	.52	628.30	628.04	627.78

EASTBOUND

STATION	SUPER ELEV. OUTSIDE EDGE	PROFILE AND LEFT EDGE 12' Lt. ℄	CENTER LINE E.B.	RIGHT EDGE 12' Rt. ℄
1366+50	.52	628.38	628.12	627.86
+75		628.46	628.20	627.94
1367+00		628.53	628.27	628.01
+25		628.61	628.35	628.09
+50		628.68	628.42	628.16
+75		628.76	628.50	628.24
1368+00		628.83	628.57	628.31
+25		628.91	628.65	628.39
+50		628.98	628.72	628.46
+75		629.06	628.80	628.54
1369+00		629.13	628.87	628.61
+25		629.21	628.95	628.69
+50		629.28	629.02	628.76
+75		629.36	629.10	628.84
1370+00		629.43	629.17	628.91
+25		629.51	629.25	628.99
+50		629.58	629.32	629.06
+75		629.66	629.40	629.14
1371+00		629.73	629.47	629.21
+25		629.81	629.55	629.29
+50		629.88	629.62	629.36
+75		629.96	629.70	629.44
1372+00		630.03	629.77	629.51
+25		630.11	629.85	629.59
+50		630.18	629.92	629.66
+75		630.26	630.00	629.74
1373+00		630.33	630.07	629.81
+25		630.41	630.15	629.89
+50		630.48	630.22	629.96
+75		630.56	630.30	630.04
1374+00		630.63	630.37	630.11
+25		630.71	630.45	630.19
+50		630.78	630.52	630.26
+75		630.86	630.60	630.34
1375+00		630.93	630.67	630.41
+25		631.00	630.74	630.48
+50		631.06	630.80	630.54
+75		631.11	630.85	630.59
1376+00		631.16	630.90	630.64
+25		631.19	630.93	630.67
+50		631.21	630.95	630.69
+75		631.22	630.96	630.70
1377+00		631.23	630.97	630.71
+25		631.22	630.96	630.70
+50		631.21	630.95	630.69
+75		631.19	630.93	630.67
1378+00		631.16	630.90	630.64
+25		631.11	630.85	630.39
+50		631.06	630.80	630.54
+75		631.00	630.74	630.48
1379+00		630.93	630.67	630.41
+25		630.86	630.60	630.34
+50		630.78	630.52	630.26
+75		630.71	630.45	630.19
1380+00		630.63	630.37	630.11
+25		630.56	630.30	630.04
+50		630.48	630.22	629.96
+75		630.41	630.15	629.89
1381+00		630.33	630.07	629.81
+25		630.26	630.00	629.74
+50		630.18	629.92	629.66
+75		630.11	629.85	629.59
1382+00		630.03	629.77	629.51
+25	.52	629.96	629.70	629.44
+50	.50	629.88	629.63	629.38
+75	.44	629.81	629.59	629.37

EASTBOUND

STATION	SUPER ELEV. OUTSIDE EDGE	PROFILE AND LEFT EDGE 12' Lt. ℄	CENTER LINE E.B.	RIGHT EDGE 12' Rt. ℄
1383+00	.35	629.73	629.57	629.38
+25	.26	629.66	629.59	629.40
+50	.18	629.60	629.61	629.42
+75	.09	629.55	629.65	629.46
1384+00	0	629.52	629.71	629.52

WESTBOUND

STATION	SUPER ELEV. OUTSIDE EDGE	LEFT EDGE 12' Lt. ℄	CENTER LINE W.B.	PROFILE AND RIGHT EDGE 12' Rt. ℄
1350+75	0	618.43	618.62	618.43
1351+00	.06	618.24	618.43	618.30
+25	.12	618.06	618.25	618.18
+50	.17	617.88	618.07	618.05
T.S. +56.99 BK.				
T.S. " +71.43 Ah.	.20	617.81	618.00	618.02
+91.43	.29	617.63	617.82	617.92
1352+11.43	.37	617.45	617.65	617.82
+31.43	.46	617.28	617.51	617.74
+51.43	.53	617.14	617.41	617.67
+71.43	.60	617.02	617.32	617.62
+91.43	.67	616.91	617.25	617.58
1353+11.43	.75	616.81	617.19	617.56
+31.43	.82	616.73	617.14	617.55
+51.43	.89	616.67	617.12	617.56
S.C. +71.43	0.96	616.63	617.11	617.59
+75		616.63	617.11	617.59
1354+00		616.69	617.17	617.65
+25		616.77	617.25	617.73
+50		616.83	617.36	617.84
+75		617.00	617.48	617.96
1355+00		617.15	617.63	618.11
+25		617.33	617.81	618.29
+50		617.53	618.01	618.49
+75		617.75	618.23	618.71
1356+00		618.00	618.48	618.96
+25		618.26	618.74	619.22
+50		618.52	619.00	619.48
+75		618.78	619.26	619.74
1357+00		619.04	619.52	620.00
+25		619.30	619.78	620.26
+50		619.56	620.04	620.52
+75		619.82	620.30	620.78
1358+00		620.08	620.56	621.04
+25		620.34	620.82	621.30
+50		620.60	621.08	621.56
+75		620.85	621.33	621.81
1359+00		621.11	621.59	622.07
+25		621.37	621.85	622.33
+50		621.63	622.11	622.59
+75		621.89	622.37	622.85
1360+00		622.15	622.63	623.11
+25		622.41	622.89	623.37
+50		622.67	623.15	623.63
+75		622.93	623.41	623.89
1361+00		623.19	623.67	624.15
+25		623.45	623.93	624.41
+50	0.96	623.71	624.19	624.67
C.S. +70.76	.94	623.94	624.41	624.88
+90.76	.89	624.20	624.65	625.09
1362+10.76	.82	624.48	624.89	625.30
+30.76	.75	624.76	625.14	625.51

WESTBOUND

STATION	SUPER ELEV. OUTSIDE EDGE	LEFT EDGE 12' Lt. ℄	CENTER LINE W.B.	PROFILE AND RIGHT EDGE 12' Rt. ℄
1362+50.76	.67	625.04	625.38	625.71
+70.76	.60	625.32	625.62	625.92
+90.76	.53	625.59	625.86	626.12
1363+10.76	.46	625.84	626.07	626.30
+30.76	.38	626.10	626.30	626.48
+50.76	.29	626.37	626.56	626.66
S.T. +70.76	.22	626.61	626.81	626.83
+75	.18	626.67	626.86	626.85
1364+00	.12	626.93	627.12	627.05
+25	.06	627.18	627.37	627.24
+50	0	627.41	627.60	627.41
+75	0	627.57	627.76	627.57
1365+00	.09	627.81	627.91	627.72
+25	.20	628.06	628.05	627.86
+50	.26	628.25	628.18	627.99
+75	.35	628.45	628.30	628.10
1366+00	.44	628.65	628.43	628.21
+25	.51	628.81	628.55	628.30
+50	.52	628.90	628.64	628.38
+75		628.98	628.72	628.46
1367+00		629.05	628.79	628.53
+25		629.13	628.87	628.61
+50		629.20	628.94	628.68
+75		629.28	629.02	628.76
1368+00		629.35	629.09	628.83
+25		629.43	629.17	628.91
+50		629.50	629.24	628.98
+75		629.58	629.32	629.06
1369+00		629.65	629.39	629.13
+25		629.73	629.47	629.21
+50		629.80	629.54	629.28
+75		629.88	629.62	629.36
1370+00		629.95	629.69	629.43
+25		630.03	629.77	629.51
+50		630.10	629.84	629.58
+75		630.18	629.92	629.66
1371+00		630.25	629.99	629.73
+25		630.33	630.07	629.81
+50		630.40	630.14	629.88
+75		630.48	630.22	629.96
1372+00		630.55	630.29	630.03
+25		630.63	630.37	630.11
+50		630.70	630.44	630.18
+75		630.78	630.52	630.26
1373+00		630.85	630.59	630.33
+25		630.93	630.67	630.41
+50		631.00	630.74	630.48
+75		631.08	630.82	630.56
1374+00		631.15	630.89	630.63
+25		631.23	630.97	630.71
+50		631.30	631.04	630.78
+75		631.38	631.12	630.86
1375+00		631.45	631.19	630.93
+25		631.53	631.27	631.01
+50		631.60	631.34	631.08
+75		631.68	631.42	631.16
1376+00		631.75	631.49	631.23
+25		631.82	631.56	631.30
+50		631.90	631.64	631.38
+75		631.96	631.70	631.44
1377+00		632.01	631.75	631.49
+25		632.05	631.79	631.53
+50		632.08	631.82	631.56
+75		632.11	631.85	631.59
1378+00		632.12	631.86	631.60
+25	.52	632.13	631.87	631.61

WESTBOUND

STATION	SUPER ELEV. OUTSIDE EDGE	LEFT EDGE 12' Lt. ℄	CENTER LINE W.B.	PROFILE AND RIGHT EDGE 12' Rt. ℄
1378+50	.52	632.12	631.86	631.60
+75		632.11	631.85	631.59
1379+00		632.08	631.82	631.56
+25		632.05	631.79	631.53
+50		632.01	631.75	631.49
+75		631.96	631.70	631.44
1380+00		631.90	631.64	631.38
+25		631.82	631.56	631.30
+50		631.75	631.49	631.23
+75		631.67	631.41	631.15
1381+00		631.60	631.34	631.08
+25		631.52	631.26	631.00
+50		631.45	631.19	630.93
+75		631.37	631.11	630.85
1382+00		631.30	631.04	630.78
+25		631.22	630.96	630.70
+50		631.15	630.89	630.63
+75		631.07	630.81	630.55
1383+00		631.00	630.74	630.48
+25		630.92	630.66	630.40
+50		630.85	630.59	630.33
+75	.52	630.77	630.51	630.25
1384+00	.50	630.68	630.44	630.18
+25	.44	630.55	630.33	630.11
P.T. 1384+45.38	(W.B.) Back = 1384+34.2		(E.B. # W.B.) Ahead	
+50	.32	630.35	630.22	630.03
+75	.24	630.21	630.16	629.97
1385+00	.16	630.09	630.12	629.93
+25	.08	629.98	630.09	629.90
+50	0	629.89	630.08	629.89

FED. RD. DIVISION	STATE	PROJECT	
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SUPERELEVATION TABLES

ROSS COUNTY
ROS-35-25.05

RAMP "C"

STATION	DIST. Lt. & WEST-BOUND	ELEVAT-ION	DIST. Lt. & WEST-BOUND	ELEVAT-ION
1364+50	12.00	627.41		
+75	12.63	627.56		
1365+00	13.25	627.80		
+25	13.88	628.06		
+50	14.50	628.26		
+75	15.13	628.49		
1366+00	15.75	628.72		
+25	16.38	628.89		
+50	17.00	629.01		
+75	17.63	629.10		
1367+00	18.25	629.19		
+25	18.88	629.28		
+50	19.50	629.36		
+75	20.13	629.46		
1368+00	20.75	629.54		
+25	21.38	629.63		
+50	22.00	629.72		
+75	22.63	629.81		
1369+00	23.25	629.89		
+25	23.88	629.99		
+50	24.50	630.07		
+75	25.13	630.17		
1370+00	25.75	630.25		
+10.	26.00		14.00	
+25	26.38	630.34	14.38	630.08
+50	27.00	630.43	15.00	630.17
+75	27.63	630.52	15.63	630.26
1371+00	28.25	630.60	16.25	630.34
+25	28.88	630.70	16.88	630.44
+50	29.50	630.78	17.50	630.52
+75	30.13	630.87	18.13	630.61
1372+00	30.75	630.94	18.75	630.70
+25	31.38	630.99	19.38	630.77
+50	32.00	631.01	20.00	630.82
+75	32.63	631.04	20.63	630.89
1373+00	33.25	631.05	21.25	630.94
+25	33.88	631.07	21.88	630.99
+50	34.50	631.07	22.50	631.03
+75	35.13	631.08	23.13	631.08
1374+00	35.75	631.08	23.75	631.11
+25	36.38	631.08	24.38	631.15
1374+50 =	37.00	631.04	25.00	631.17
60+53.84				

RAMP "C"

STATION	PROFILE LEFT EDGE	8' Rt &	RIGHT SURVEY LINE	ELEVAT-ION	RIGHT SURVEY LINE	ELEVAT-ION
1374+50 =						
60+53.84	631.04	631.12	14.00	631.19		
+73.84	630.98	631.11	14.40	631.22		
+93.84	630.91	631.10	14.80	631.27		
61+13.84	630.84	631.09	15.20	631.32		
+33.84	630.76	631.07	15.60	631.37		
+53.84	630.69	631.06	14.00	631.34	16.00	631.43
+73.84	630.61	631.04	14.40	631.38	16.60	631.50
+93.84	630.54	631.03	14.80	631.44	17.20	631.59
62+13.84	630.47	631.02	15.20	631.51	17.80	631.69
+33.84	630.39	630.99	15.60	631.57	18.40	631.78
+53.84	630.32	630.96	16.00	631.59	19.00	631.84
+75.00	630.24	630.91		631.57		
63+00	630.15	630.82		631.48		
+25	630.10	630.77		631.43		
+50	630.13	630.80		631.47		
+75	630.24	630.91		631.57		
64+00	630.43	631.10		631.76		
+25	630.71	631.38		632.04		
+50	631.06	631.73		632.39		
+75	631.50	632.17		632.83		
65+00	632.02	632.69		633.35		
+25	632.58	633.25		633.91		
+50	633.14	633.81		634.47		
+75	633.70	634.37		635.03		
66+00	634.26	634.93	16.00	635.59		
+25	634.82	635.49	16.00	636.15		
+50	635.38	636.05		636.71		
+75	635.94	636.61		637.27		
67+00	636.50	637.17		637.83		
+25	637.06	637.73		638.39		
+50	637.62	638.29		638.95		
+75	638.18	638.83		639.49		
+76.40	638.21	638.86		639.52		
+96.40	638.66	639.27		639.88		
68+16.40	639.11	639.67		640.24		
+36.40	639.56	640.07		640.59		
+56.40	640.00	640.47		640.94		
+76.40	640.45	640.87		641.29		
+96.40	640.90	641.27		641.64		
69+16.40	641.35	641.67		642.00		
+36.40	641.80	642.07		642.35		
+56.40	642.24	642.47		642.70		
+76.40	642.69	642.87		643.05		
70+00	643.22	643.35		643.48		
+25	643.78	643.90		644.03		
+50	644.34	644.46		644.59		
+75	644.86	644.98		645.11		
71+00	645.29	645.41		645.54		
+25	645.64	645.76		645.89		
+50	645.91	646.03		646.16		
+75	646.09	646.21		646.34		
72+00	646.19	646.31	16.00	646.44		
+25	646.21	646.30		646.39		
+50	646.14	646.20		646.26		
+75	645.99	646.01		646.04		
+93.98	645.82	645.82		645.82		
73+13.98	645.58	645.52		645.46		
+33.98	645.30	645.18		645.05		
+53.98	644.96	644.77		644.57		
+73.98	644.60	644.35		644.10		
+93.98	644.25	643.94		643.63		
74+00	644.14	643.81	16.00	643.48		
74+13.98	643.89		8.56	643.49	16.27	643.13
+33.98	643.54		9.36	643.03	16.67	642.63
+53.98	643.18		10.16	642.54	17.07	642.11

STATION	PROFILE LEFT EDGE	DIST. Rt. SURVEY LINE	ELEVAT-ION	DIST. Rt. SURVEY LINE	ELEVAT-ION	DIST. Rt. SURVEY LINE	ELEVAT-ION
74+73.98	642.82	10.96	642.05			17.47	641.60
+93.98	642.48	11.76	641.57			17.87	641.09
75+00.73	642.38	12.00	641.45			18.00	640.98
+00.73	642.38	12.00	641.45	21.00	640.75		
+25	642.01		641.05	21.00	640.34		
+50	641.69		640.72	21.00	639.99		
+75	641.42		640.42				
76+00	641.21		640.21				
+25	641.04		640.04				
+50	640.92		639.92				
+75	640.86		639.86				
77+00	640.82		639.82				
+25	640.78		639.78				
+50	640.74		639.74				
+75	640.70		639.70				
78+00	640.68	12.00	639.68				
+25	640.69						
+50	640.73						
+75	640.81						
79+00	640.90						
+26.72	641.01						

See Athens Road Superelevation Table

TEMPORARY CONNECTION

WESTBOUND PROFILE LEFT EDGE	WESTBOUND ELEV-ION 8' Rt. &	WESTBOUND DIST. Rt. SURVEY LINE	WESTBOUND ELEVAT-ION	STATION EASTBOUND or WESTBOUND	EASTBOUND ELEVAT-ION	EASTBOUND DIST. Lt. SURVEY LINE	EASTBOUND ELEVAT-ION 8' Lt. &	EASTBOUND PROFILE RIGHT EDGE
				83+00				629.36
Rt. Edge U.S. 35 WB	630.02	16.0'	629.85	+60				
630.08	629.88		629.67	+75				
629.90	629.64		629.37	84+00				629.13
629.93	629.61		629.29	+25				629.05
630.00	629.62		629.24	+50				628.96
				+54	629.49	18.00'	629.22	628.95
630.18	629.70		629.26	+75	629.55	17.58'	629.20	628.91
630.34	629.85		629.35	85+00	629.71	17.08'	629.31	628.95
630.61	630.06		629.50	+25	629.92	16.58'	629.47	629.05
630.96	630.35		629.74	+50	630.23	16.08'	629.73	629.24
				+54		16.00'		
631.38	630.71		630.04	+75	630.61		630.06	629.50
631.86	631.19		630.52	86+00	631.07		630.46	629.85
632.42	631.75		631.08	+25	631.60		630.93	630.26
633.05	632.38		631.71	+50	632.10		631.43	630.76
633.75	633.08		632.41	+75	632.67		632.00	631.33
634.51	633.84		633.17	87+00	633.33		632.66	631.99
635.35	634.68		634.01	+25	634.05		633.38	632.71
636.26	635.59		634.92	+50	634.86		634.19	633.52
637.24	636.57		635.90	+75	635.74		635.07	634.40
638.29	637.62		636.95	88+00	636.71		636.04	635.37
639.41	638.74		638.07	+25	637.74		637.07	636.40
640.57	639.90		639.28	+50	638.86		638.19	637.52
		16.0'		+65				
				+70		16.00'		
641.72	641.05	16.2'	640.36	+75	640.00	15.9'	639.34	638.67
642.88	642.21	16.7'	641.48	89+00	641.10	15.4'	640.49	639.83
644.03	643.86	17.2'	642.59	+25	642.19	14.9'	641.63	640.98
645.19	644.52	17.7'	643.71	+50	643.29	14.4'	642.78	642.14
645.88	645.25	18.0'	644.47	89+65WB =				
				89+70EB	644.16	14.0'	643.69	643.06

TEMPORARY CONNECTION & RAMP "C" SUPERELEVATION TABLES

SUPERELEVATION TABLES

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	F-674 (12)	

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ROSS COUNTY
ROS -35- 25.05

LICK RUN ROAD

STATION	SUPER ELEV.	LEFT EDGE 10'Lt ℄	PROFILE AND CENTER LINE	RIGHT EDGE 10'Rt ℄
15+00		613.47	613.90	613.34
+25	-.16 -.04	613.59	613.75	613.71
+50	-.16 +.08	613.44	613.60	613.68
+75	0.20	613.25	613.45	613.65
16+00	0.32	612.98	613.30	613.62
+25	0.44	612.75	613.19	613.63
+50	0.57	612.57	613.14	613.71
+75	0.70	612.47	613.17	613.87
17+00	0.80	612.48	613.28	614.08
+25	0.83	612.62	613.45	614.28
+50		612.86	613.69	614.52
+75		613.18	614.01	614.84
18+00		613.57	614.40	615.23
+25		614.03	614.86	615.69
+50		614.56	615.39	616.22
+75		615.17	616.00	616.83
19+00		615.85	616.68	617.51
+25		616.59	617.42	618.25
+50		617.41	618.24	619.07
+75	0.83	618.31	619.14	619.97
20+00	0.81	619.29	620.10	620.91
+25	0.72	620.38	621.10	621.82
+50	0.60	621.50	622.10	622.70
+75	0.48	622.62	623.10	623.58
21+00	0.36	623.74	624.10	624.46
+25	0.24	624.86	625.10	625.34
+50	0.12	625.98	626.10	626.22
+75	0.00	627.10	627.10	627.10
22+00	0.12	628.22	628.10	627.98
+25	0.25	629.35	629.10	628.85
+50	0.38	630.48	630.10	629.72
+75	0.51	631.61	631.10	630.59
23+00	0.60	632.70	632.10	631.50
+25	0.64	633.74	633.10	632.46
+50		634.74	634.10	633.46
+75		635.74	635.10	634.46
24+00		636.74	636.10	635.46
+25		637.74	637.10	636.46
+50		638.74	638.10	637.46
+75		639.74	639.10	638.46
25+00		640.70	640.06	639.42
+25		641.59	640.95	640.31
+50		642.40	641.76	641.12
+75		643.14	642.50	641.86
26+00		643.80	643.16	642.52
+25		644.39	643.75	643.11
+50	0.64	644.90	644.26	643.62
+75	0.61	645.31	644.70	644.09
27+00	0.55	645.61	645.06	644.51
+25	0.45	645.80	645.35	644.90
+50	0.35	645.91	645.56	645.21
+75	0.25	645.95	645.70	645.45
28+00	0.20	645.96	645.76	645.56
+25	0.16	645.91	645.75	645.59
+50		645.82	645.66	645.50
+75		645.66	645.50	645.34
29+00		645.42	645.26	645.10
+25		645.11	644.95	644.79
+50		644.72	644.56	644.40
+75		644.26	644.10	643.94
30+00		643.72	643.56	643.40
+25		643.11	642.95	642.79
+50		642.42	642.26	642.10
+75		641.66	641.50	641.34
31+00	0.16	640.82	640.66	640.50
+25	0.26	640.01	639.75	639.49

LICK RUN ROAD

STATION	SUPER ELEV.	LEFT EDGE 10'Lt ℄	PROFILE AND CENTER LINE	RIGHT EDGE 10'Rt ℄
31+50	0.36	639.12	638.76	638.40
+75	0.45	638.15	637.70	637.25
32+00	0.55	637.11	636.56	636.01

RAMP "B" ATHENS ROAD

STATION	Dist Rt ℄ Edge	Rt. Edge
1350+17.50	12.00	619.34
+25	12.90	619.39
+50	15.90	619.55
+55.61	16.57	619.57
+75.61	18.97	619.70
+95.61	21.37	619.84
1351+15.61	23.77	619.96
+17.50	24.00	619.98
+35.61		620.15
+55.61		620.36
+75.61		620.56
+95.61		620.77
1352+15.61		620.98
+35.61		621.17
+55.61		621.37
+75		621.44
1353+00		621.51
+25		621.59
+50		621.68
1353+73.51	24.00	621.78
=136+00.29		

STATION	23'Lt ℄	12'Lt ℄	℄
136+25			621.90
+50			622.02
+75		622.01	622.14
137+00		622.20	622.26
+25		622.42	622.38
+50		622.62	622.50
+75	622.70	622.76	622.62
138+00	623.07	622.92	622.76

STATION	Dist Lt ℄	Elevation	Dist Lt ℄	Elevation	Center Lt	℄ Elevation
138+17.53	21'	623.25	18'	623.22	623.10	622.90
+25	20.85	623.34	17.85	623.29	623.18	622.97
+50	20.35	623.80	17.35	623.72	623.55	623.28
+75	19.85	624.33	16.85	624.23	624.00	623.68
139+00	19.35	624.95	16.35	624.83	624.52	624.16
+17.53	19.00	625.33	16.00	625.21	624.88	624.55
+25			16.00	625.40	625.06	624.73
+50			16.00	626.07	625.73	625.40
+75			16.00	626.81	626.48	626.15
140+00			16.00	627.63	627.30	626.97
+25			16.00	628.34	628.07	627.79
+50			16.00	628.98	628.76	628.54
+75			16.00	629.52	629.34	629.22
141+00			16.00	630.08	629.95	629.83
+25			16.00	630.60	630.47	630.36
+50			16.00	631.08	630.95	630.83
+75			16.00	631.48	631.35	631.23
142+00			16.00	631.80	631.67	631.55

ATHENS ROAD

STATION	LEFT EDGE 12'Lt ℄	PROFILE AND CENTER LINE	RIGHT EDGE 12'Rt ℄
157+00		632.44	
+25		632.90	
+50		633.43	
+75		632.51	
158+00	631.65	632.65	633.65
+25	631.85	632.85	633.85
+50	632.10	633.10	634.10
+75	632.41	633.41	634.41
159+00	632.78	633.78	634.78
+25	633.21	634.21	635.21
+50	633.69	634.69	635.69
+75	634.23	635.23	636.23
160+00	634.83	635.83	636.83
+25	635.46	636.46	637.46
+50	636.08	637.08	638.08
+75	636.70	637.70	638.70
161+00	637.33	638.33	639.33
+25	637.96	638.96	639.96
+50	638.58	639.58	640.58
+75	639.20	640.20	641.20
162+00	639.83	640.83	641.83
+25	640.46	641.46	642.46
+50	641.08	642.08	643.08
+75	641.70	642.70	643.70
+88.28	642.04	643.04	644.04
163+03.28	642.46	643.41	644.36
+18.28	642.89	643.79	644.69
+33.28	643.31	644.16	645.01
+48.28	643.73	644.53	645.33
+63.28	644.14	644.89	645.64
+78.28	644.53	645.23	645.93
+93.28	644.91	645.56	646.21
164+08.28	645.28	645.88	646.48
+23.28	645.64	646.19	646.74
+38.28	645.99	646.49	646.99
+53.28	646.32	646.77	647.22
+68.28	646.64	647.04	647.44
+83.28	646.95	647.30	647.65
+98.28	647.24	647.54	647.84
165+13.28	647.52	647.77	648.02
+28.28	647.79	647.99	648.19
+43.28	648.01	648.20	648.35
+58.28	648.21	648.40	648.50
+73.28	648.39	648.58	648.63
+88.28	648.56	648.75	648.75
166+00	648.68	648.87	648.84
+25	648.92	649.11	649.02
+50	649.13	649.32	649.16
169+50.00	648.95	649.07	648.88
+75	648.76	648.82	648.63
+98.09	648.56	648.56	648.37
170+18.09	648.42	648.32	648.13
+38.09	648.25	648.05	647.85
+58.09	649.05	647.75	647.45
+78.09	647.84	647.44	647.04
+98.09	647.60	647.10	646.60
171+18.09	647.34	646.74	646.14
+38.09	647.06	646.36	645.66
+58.09	646.76	645.96	645.16
+78.09	646.43	645.53	644.63
+98.09	646.09	645.09	644.09
172+00	646.04	645.04	644.04
+25	645.45	644.45	643.45
+50	644.82	643.82	642.82
+75	644.20	643.20	642.20

ATHENS ROAD

STATION	LEFT EDGE 12'Lt ℄	PROFILE AND CENTER LINE	RIGHT EDGE 12'Rt ℄
173+00	643.57	642.57	641.57
+25	642.95	641.95	640.95
+50	642.35	641.35	640.35
+75	641.82	640.82	639.82
174+00	641.34	640.34	639.34
+25	640.93	639.93	638.93
+50	640.58	639.58	638.58
+75	640.28	639.28	638.28
175+00	640.06	639.06	638.06
+25	639.88	638.88	637.88
+50	639.77	638.77	637.77
+75	639.72	638.72	637.72
176+00	639.73	638.73	637.73
+25	639.80	638.80	637.80
+50		638.90	637.90
+75		639.00	638.00
177+00		639.10	638.10
+25		639.20	638.20
+50		639.30	638.30
+75		639.40	638.40
178+00		639.50	638.50
+25		639.60	638.60
+50		639.70	638.70
+75		639.80	638.80
179+00		639.90	638.90
+25		640.00	639.00
+26.72	641.01	640.01	639.01
+46.72	640.99	640.09	639.19
+66.72	640.97	640.17	639.37
+86.72	640.95	640.25	639.55
180+06.72	640.93	640.33	639.73
+26.72	640.91	640.41	639.91
+46.72	640.90	640.50	640.10
+66.72	649.88	640.58	640.22
+86.72	640.86	640.66	640.46
181+06.72	640.84	640.74	640.55
+26.72	640.82	640.82	640.63
+50	640.84	640.90	640.77
+75	640.88	641.00	641.93
182+00	640.92	641.10	641.09
+02.85	640.92	641.11	641.11
+22.85	641.00	641.19	641.29
+42.85	641.07	641.27	641.47
+62.85	641.05	641.35	641.65
+82.85	641.03	641.43	641.83
183+02.85	641.01	641.51	642.01
+22.85	641.01	641.61	642.21
+42.85	641.04	641.74	642.44
+62.85	641.10	641.90	642.70
+82.85	641.19	642.09	642.99
184+02.85	641.31	642.31	643.31
+25	641.59	642.59	643.59
+50	641.95	642.95	643.95
+75	642.36	643.36	644.36
185+00	642.81	643.81	644.81
+25	643.29	644.29	645.29
+50	643.77	644.77	645.77
+75	644.24	645.24	646.24
186+00	644.72	645.72	646.72
+25	645.20	646.20	647.20
+50	645.68	646.68	647.68
+75	646.15	647.15	648.15
187+00	646.63	647.63	648.63
+25	647.13	648.13	649.13
+50	647.66	648.66	649.66
+75	648.23	649.23	650.23

See Ramp "B" Superelevation Tables Sheet No. 25

ATHENS ROAD

STATION	LEFT EDGE 12' Lt ℄	PROFILE AND CENTER LINE	RIGHT EDGE 12'Rt ℄
188+00	648.83	649.83	650.83

See Sheet No. 85 For Station 188+00 To 191+35.48

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	F-674(12)	

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225

ROSS COUNTY
ROS-35-25.05

Begin Cross Sections Sta 15+00

RIVER

SCIOTO

MATCH LINE

Ex. Lick Run Rd.

Lick Run Road

Field Drive

EQUATION
STA. 1354+99 BACK =
T.S. 1351+71.48 AHEAD

To Chillicothe

1340+00

1360+00

1370+00

60+53.84
Ramp "C"

BEGIN RAMP "C"
CROSS SECTIONS
STA. 63+13

RAMP "C"

U.S.R. 35 Westbound

U.S.R. 35 Eastbound

C.&O. RR

RESUME CROSS SECTIONS STA. 1343+75

RAMP "B"

BEGIN CROSS SECTIONS
STA. 139+25

140+00

RESIDENCE DRIVE

END CROSS SECTIONS
STA. 33+00

SUSPEND CROSS SECTIONS - STA. 113+00

RESUME CROSS SECTIONS STA. 157+00

160+00

ATHENS ROAD

END RAMP "C"
CROSS SECTIONS
STA. 15+00

180+00

200+00

ATHENS ROAD

To Athens

END CROSS SECTIONS
STA. 191+50

Ex. U.S.R. 50

Future Prop. Ramp "E"

120+00

BEGIN TEMP. CONN.
CROSS SECTIONS
STA. 83+00

Future Proposed U.S.R. 35 & 50

130+00

Temporary Connection

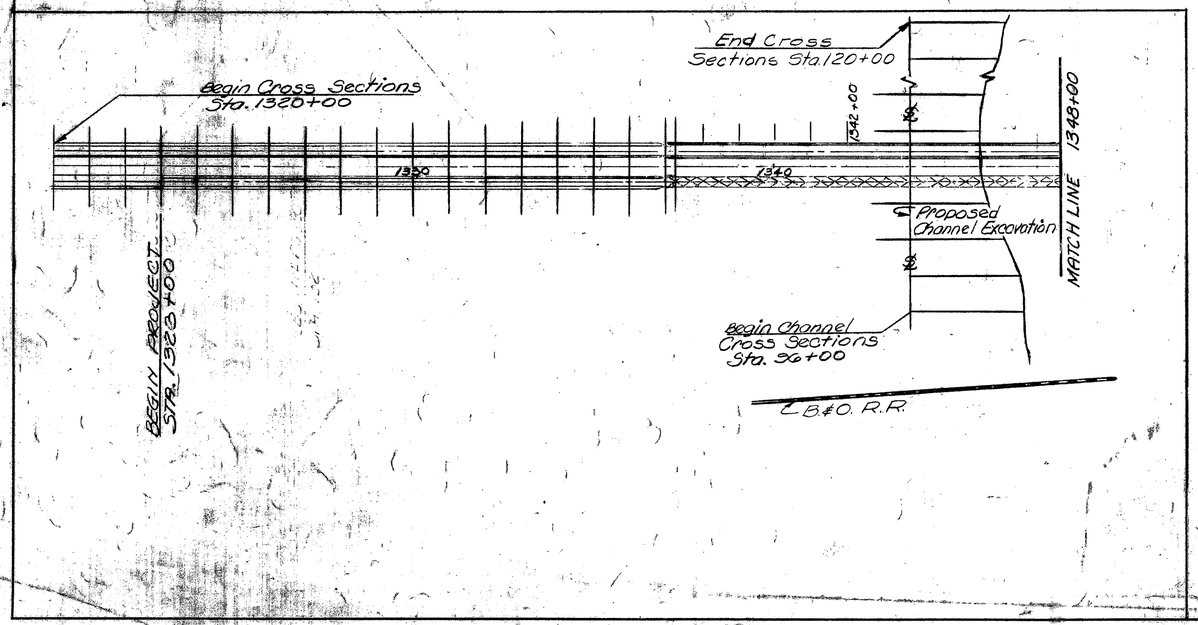
END CROSS SECTIONS
STA. 1385+00

END CROSS SECTIONS
STA. 35+00

B&O RR

Ex. U.S.R. 35

To Jackson



ELMER S. BARRETT ASSOCIATES
CONSULTING ENGINEERS
249 S. PAINT ST. CHILLICOTHE, OHIO

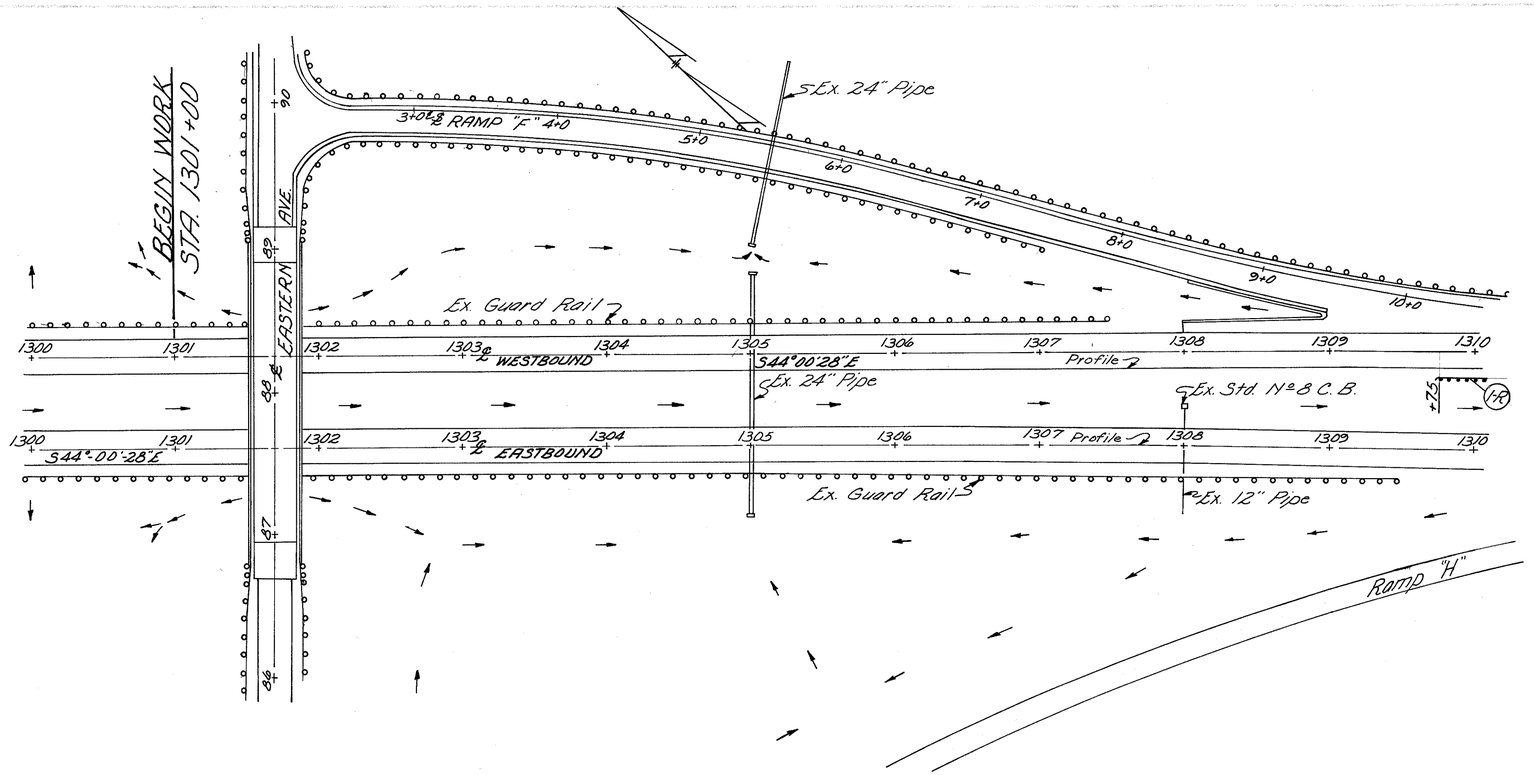
CROSS SECTION LAYOUT PLAN

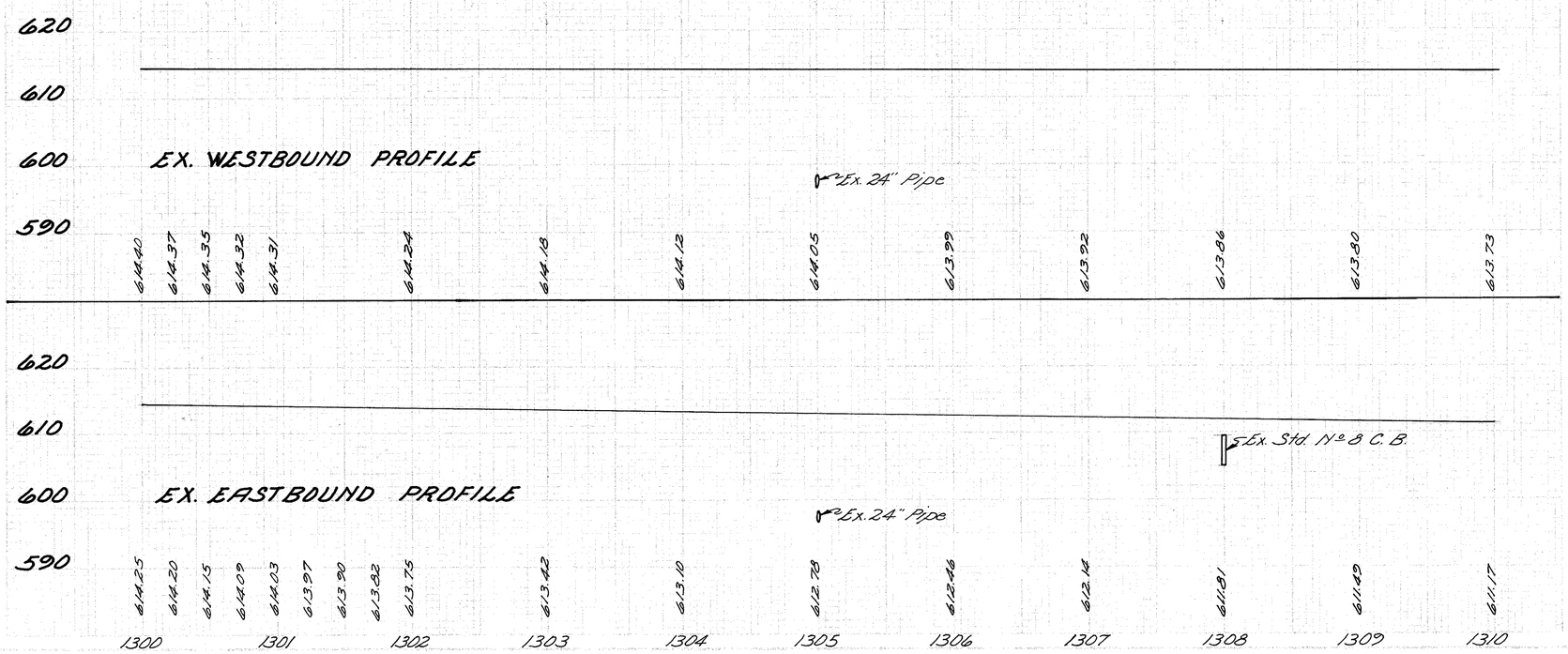
SCALE 0 100 200 300

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
			Hdg.			

ROSS COUNTY
ROS-35-25.05

28-A
225





606 Guard Anchor Assembly
Type 5 Aff. Each 1
2.5

1-R 1309+75 to 1310+00 (W.B.) Rt

2.5 1

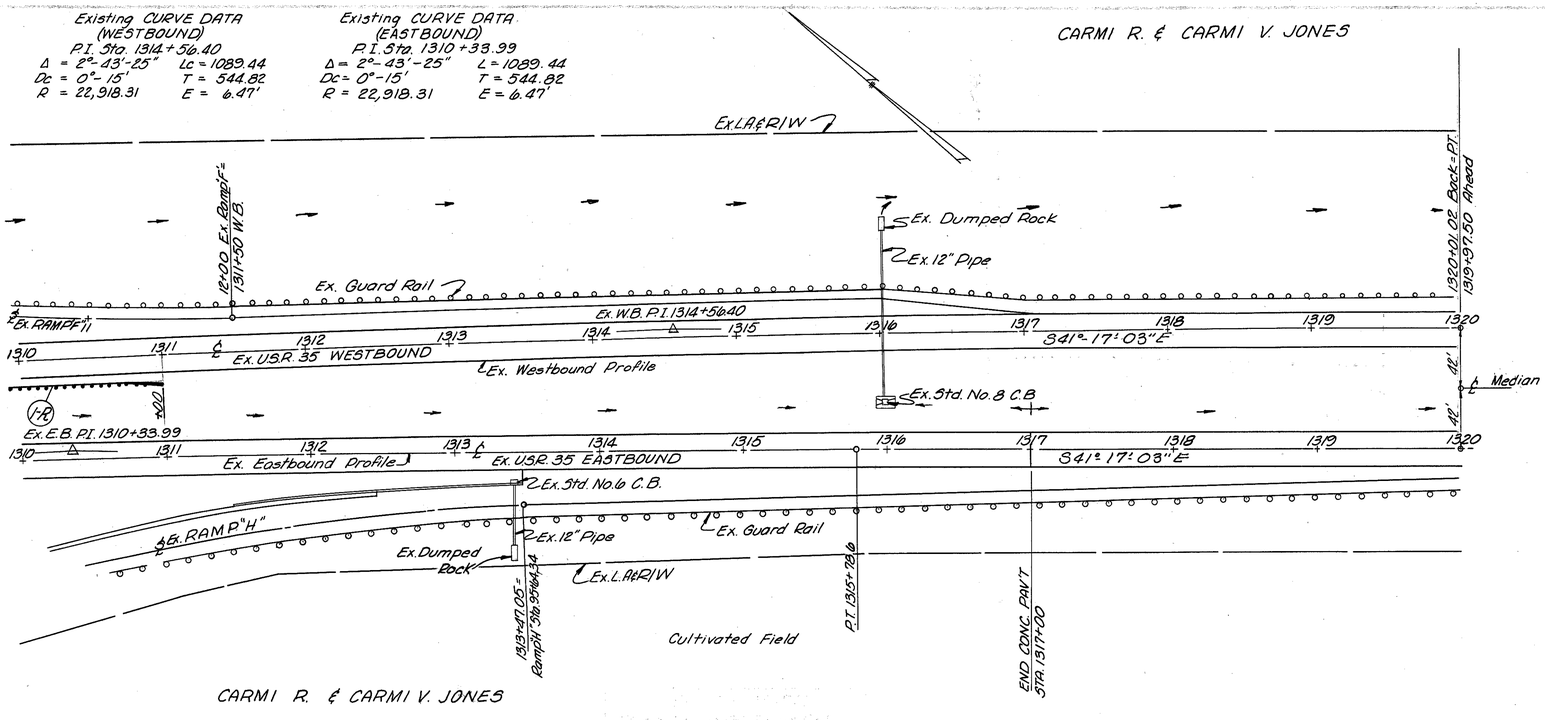
STA. 1300+00 TO STA. 1310+00

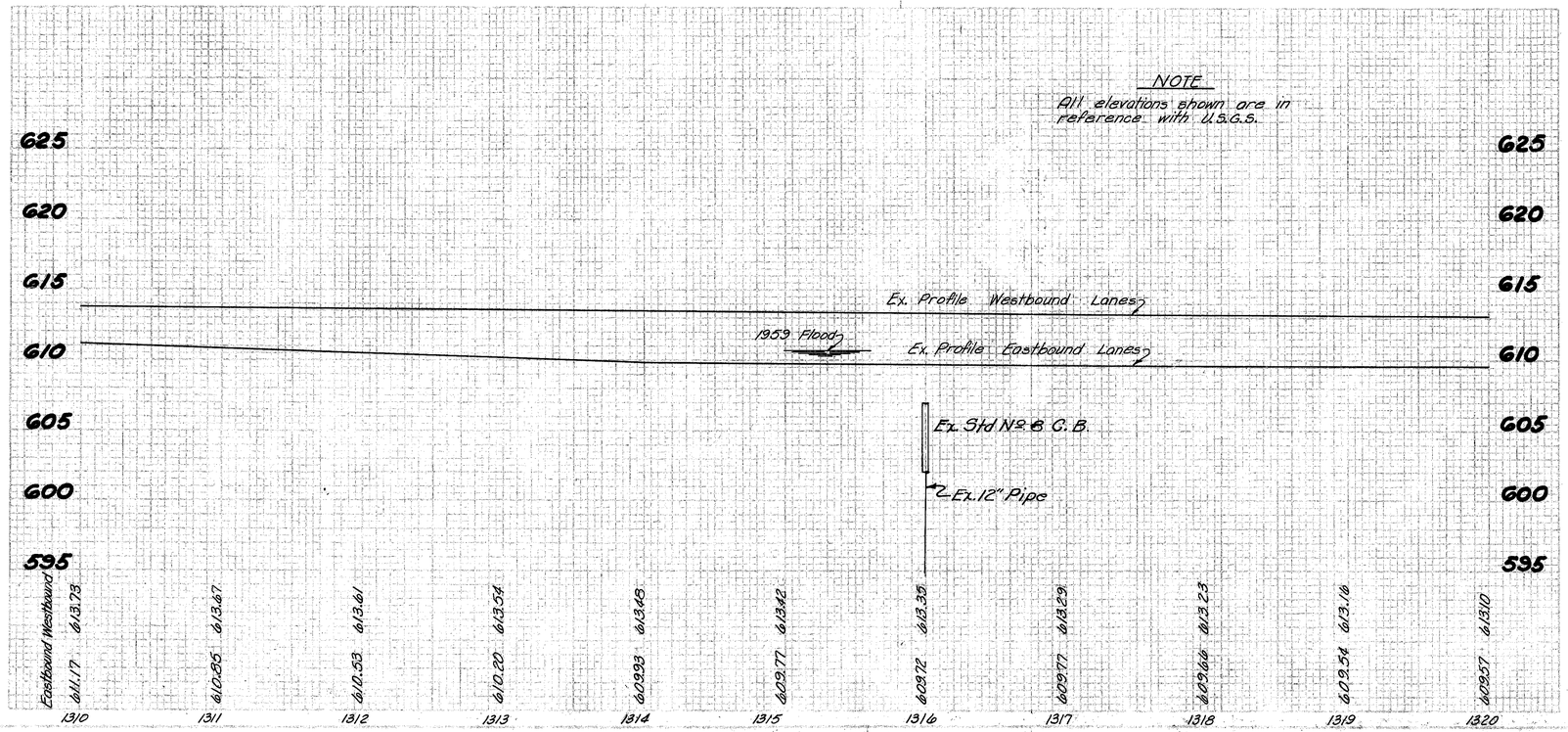
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	F-674(12)	

29
225

Existing CURVE DATA (WESTBOUND)
P.I. Sta. 1314+56.40
Δ = 2°-43'-25" Lc = 1089.44
Dc = 0°-15' T = 544.82
R = 22,918.31 E = 6.47'

Existing CURVE DATA (EASTBOUND)
P.I. Sta. 1310+33.99
Δ = 2°-43'-25" L = 1089.44
Dc = 0°-15' T = 544.82
R = 22,918.31 E = 6.47'

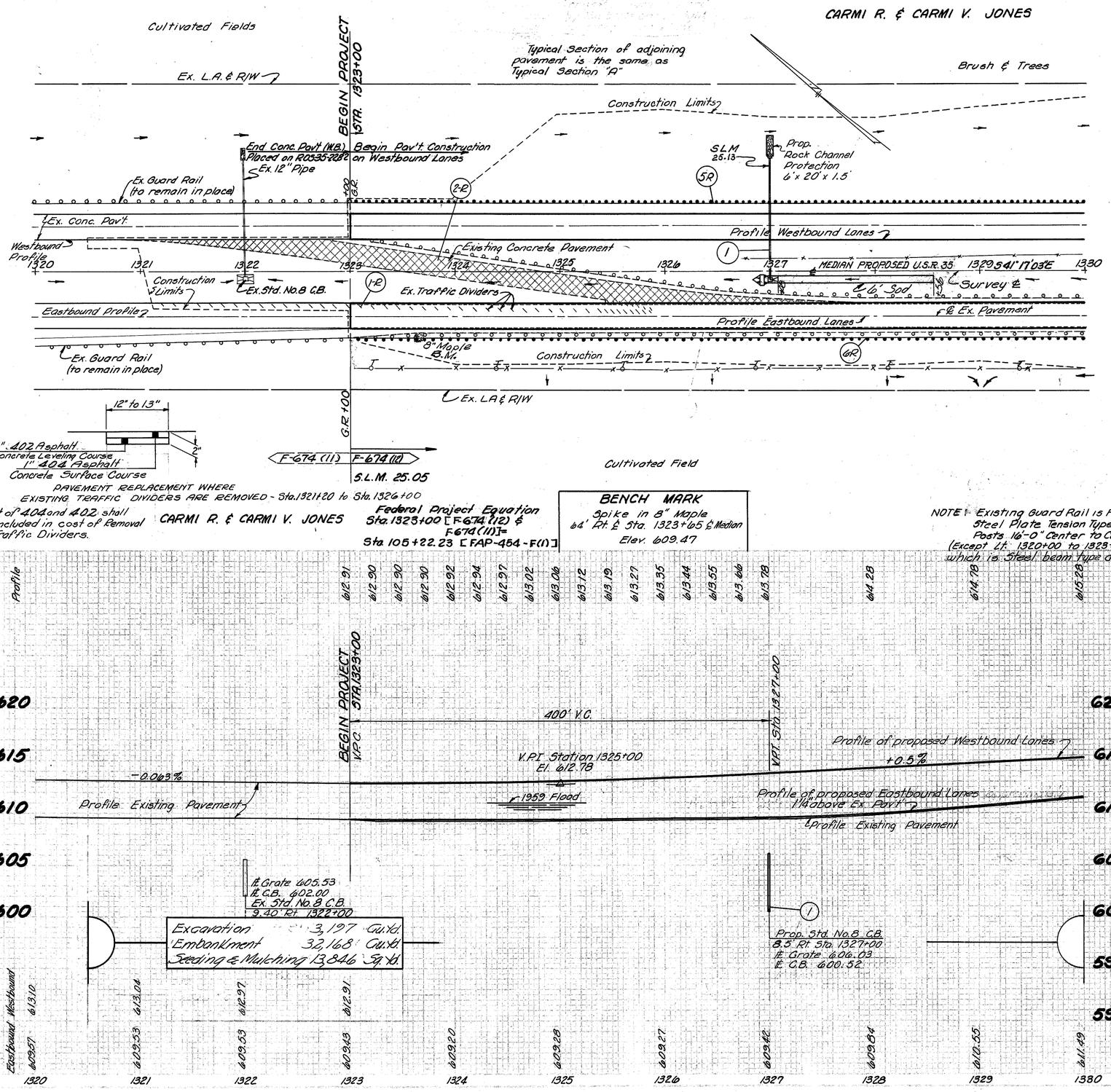




ROADWAY ~ QUANTITIES

Reference No.	Station to Station	Side	606 Approach End Assembly	606 Guard Rail Type 5
			Lin. Ft. Each	Lin. Ft.
I-R	1310+00 to 1311+00 (W.B.)	Rt.	1	100
		TOTAL	1	100

ROSS COUNTY
ROS-35-25.05



PAVEMENT REPLACEMENT WHERE EXISTING TRAFFIC DIVIDERS ARE REMOVED - Sta. 1321+20 to Sta. 1326+00

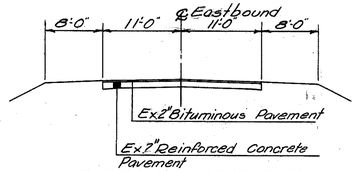
Cost of 404 and 402 shall be included in cost of Removal of Traffic Dividers.

CARMI R. & CARMI V. JONES

Federal Project Equation
Sta. 1323+00 [F-674(12) & F-674(11)] =
Sta 105+22.23 [FAP-454-F(1)]

BENCH MARK
Spike in 8" Maple
64' Rt. & Sta. 1323+65 ℄ Median
Elev. 609.47

NOTE: Existing Guard Rail is Flexible Steel Plate Tension Type with Posts 16'-0" Center to Center. (Except Lt. 1320+00 to 1323+00 which is Steel beam type deep)



EXISTING PAVEMENT TYPICAL SECTION

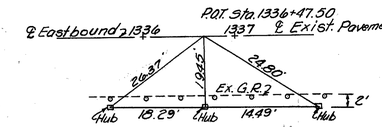
ROADWAY - QUANTITIES - DRAINAGE

Item	Description	Unit	Station to Station	Side	See Sheet Number	Reference or Structure No.	Total
600	Rock Channel Protection	Sq. Yds.	1321+20 to 1324+00	Rt.	1	1-R	100
600	Sodding	Sq. Yds.	1320+95 to 1327+29	Lt. & Rt.	1	2-R	100
601	Catch Basin Standard No. 8	Each	1 Set Used	Rt.	1	3-R	1
602	Concrete Masonry	Cu. Yds.	0.23 Set Used	Rt.	1	4-R	0.23
603	12" Conduit Type B & Bedding	Lin. Ft.	117	Rt.	1	5-R	117
202	Existing Pavement Removed and Disposed of. Removal & Disposal of Ex. Traffic Dividers & Replace 1'4 Lts per plan	Each	54	Lt. & Rt.	1	6-R	54
202		Sq. Yds.	975		1		975
606	Guard Rail Type 5	Lin. Ft.	700	Lt.	1		700
			700	Rt.	1		700
			1327+00		1		Total 1400

* Carried to Structure Box, Sheet No. 22

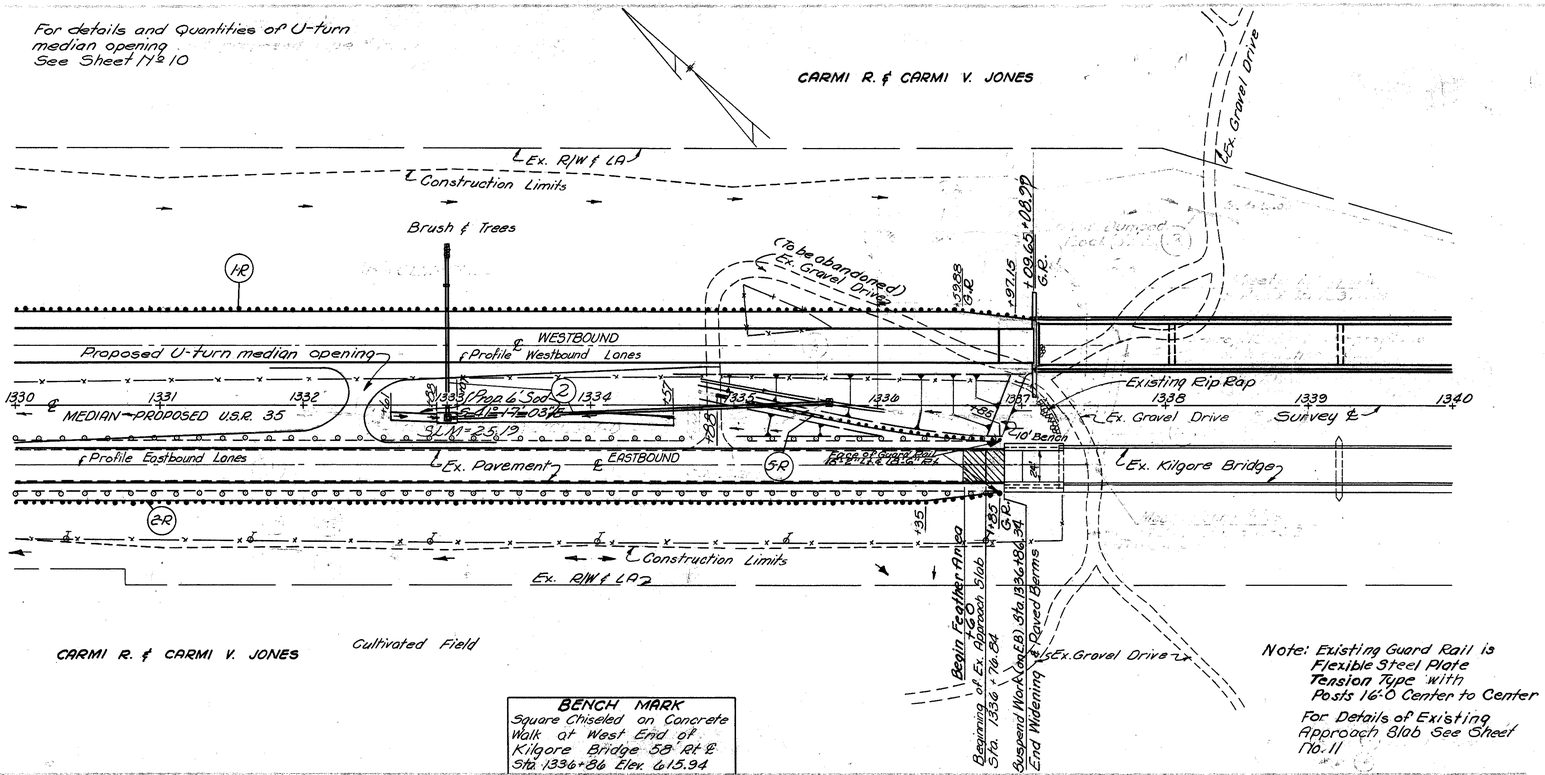
STA. 1320+00 TO STA. 1330+00 & MEDIAN

ROSS COUNTY
ROS-35-25.05



REFERENCE POINT

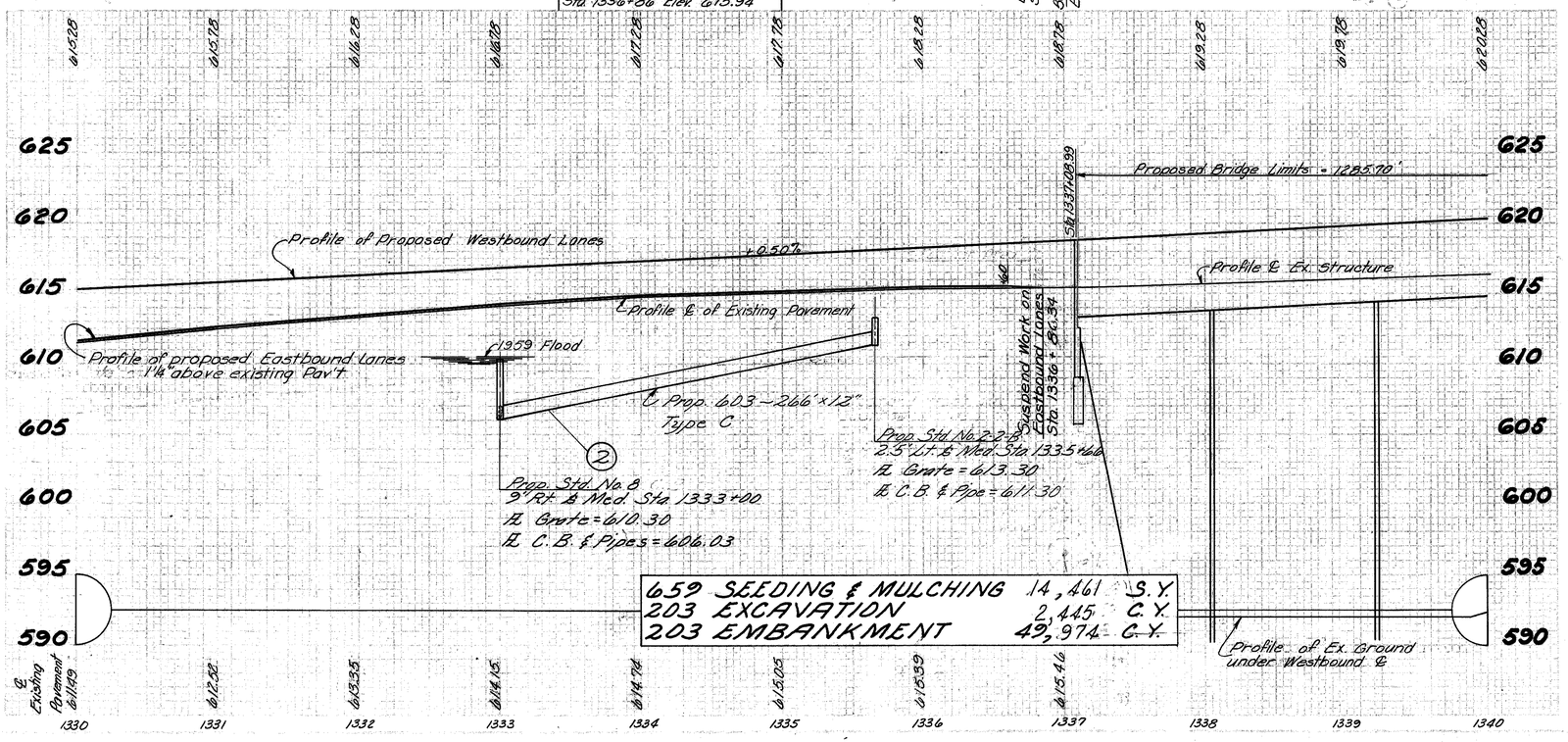
For details and Quantities of U-turn median opening See Sheet No. 10



BENCH MARK
Square Chiseled on Concrete Walk at West End of Kilgore Bridge 58' Rt. ℄ Sta. 1336+86 Elev. 615.94

Note: Existing Guard Rail is Flexible Steel Plate Tension Type with Posts 16'-0 Center to Center

For Details of Existing Approach Slab See Sheet No. 11



659 SEEDING & MULCHING	14,461	S.Y.
203 EXCAVATION	2,445	C.Y.
203 EMBANKMENT	42,974	C.Y.

ROADWAY - QUANTITIES - DRAINAGE

Item		Unit	Total	See Sheet Number	Reference or Structure No.	Station to Station		
606	Bridge Terminal Assembly, as per plan	Each	1	8	1-R	1330+00 to 1337+09.65	Lt.	
					2-R	1330+00 to 1336+85	Rt.	
606	Bridge Terminal Assembly	Each	1	7	3-R	Not Listing		
					4-R	Not Listing		
606	Approach End Assembly	Each	1	4	5-R	1334+88 to 1336+85	Lt. & Rt.	
606	Guard Rail Type 5	Lin. Ft.	1525		2	1333+00 - 1335+66	Lt. & Rt.	
							Lt.	712.5
							Rt.	687.5
606	Guard Rail Type 5 Barrier Design	Lin. Ft.	75					
	Side							
	Total							

* Carried to Sht. No. 21

STA. 1330 TO STA. 1340

DIV. NO.	STATE	PROJECT	
2	OHIO	F-674 (12)	—

32
225

ROSS COUNTY
ROS-35-25.05

Scioto River Channel Excavation
See Sheet No. 121 & 122

Wooded Area

CARMI R. & CARMI V. JONES

Wooded Area

Ex. R/W & LA?

Wooded Area

RIVER

L.A. & R.W.

Wooded Area

* Prop. 18" Sadd.

Ex. R/W & LA?

Wooded Area

Wooded Area

Wooded Area

CARMI R. & CARMI V. JONES

SCIOTO

Wooded Area

L.A. & R.W.

1340 1341 1342 1343 1344 1345 1346 1347 1348 1349 1350

℄ MEDIAN PROPOSED U.S.R. 35

100+00 BK = Sta. 1343+60

541°17'03" E

SURVEY ℄

Ex. Kilgore Bridge

90°

+102 +101 +98

BENCH MARK
Top of Steel Piling North Edge of East Abutment of Ex. Kilgore Bridge 20' Lt. Sta. 1349+75 (E.B.) Elev. 597.93

EXISTING BRIDGE DATA (Nº 208-35-2532)
TYPE: Continuous Steel Truss Bridge with Concrete Floor and Substructure
SPANS: 2 Units @ 195'-234'-195' ℄ Bearings 1250' ℄ End Pins
ROADWAY: 24' Plus 1 - 4'6" Sidewalk on Right
LOADING: H-15-33
SKEW: None
WEARING SURFACE: 3½" Monolithic Concrete
APPROACH SLAB: 25' Long
CONDITION: Good
DISPOSITION: To Remain in Place

PROPOSED BRIDGE DATA
BRIDGE NO. ROS-35-2532 L
TYPE: Welded Hinged Girder with Concrete Deck and Substructure.
SPANS: 93.6'-3@117'-126'-140'-126'-3@117'-93.6'
ROADWAY: 33'-0" ℄ of 6" Curbs
SKEW: 0°-00'
LOAD FREQUENCY: CF-2000 (57)
WEARING SURFACE: 1" Monolithic Concrete
APPROACH SLABS: AS-1-67 (25' Long)
RAILING: Aluminum Rail and Supports with Concrete Parapet
ALIGNMENT: Tangent

* Note: Quantity Carried on Sheet No. 33.

Westbound
620.28 620.47 620.53 620.64 620.75 620.85 620.93 621.01 621.07 621.13 621.17 621.21 621.24 621.25 621.26 621.25 621.24 621.21 621.18 621.14 621.08 621.02 620.94 620.86 620.76 620.66 620.55 620.47 620.30 619.80 619.30 618.80

625 620 615 610 605 600 595 590

626' V.C.

Proposed Bridge Limits = 1285.70

+0.5% -0.5%

V.P.I. Sta. 1343+51.84
Elev. 622.04

V.P.C. 1340+38.84

V.P.T. 1348+64.84

+0.30%

Profile ℄ Ex. Bridge (E.B.)

Sta. 1349+64.69

Profile of Existing Ground Under Westbound ℄

1342+30

1348+79

Excavation	0 Cu. Yd.
Embankment	0 Cu. Yd.
Seeding & Mulching	0 Sq. Yd.

Excavation	257 Cu. Yd.
Embankment	1,506 Cu. Yd.
Seeding & Mulching	452 Sq. Yd.

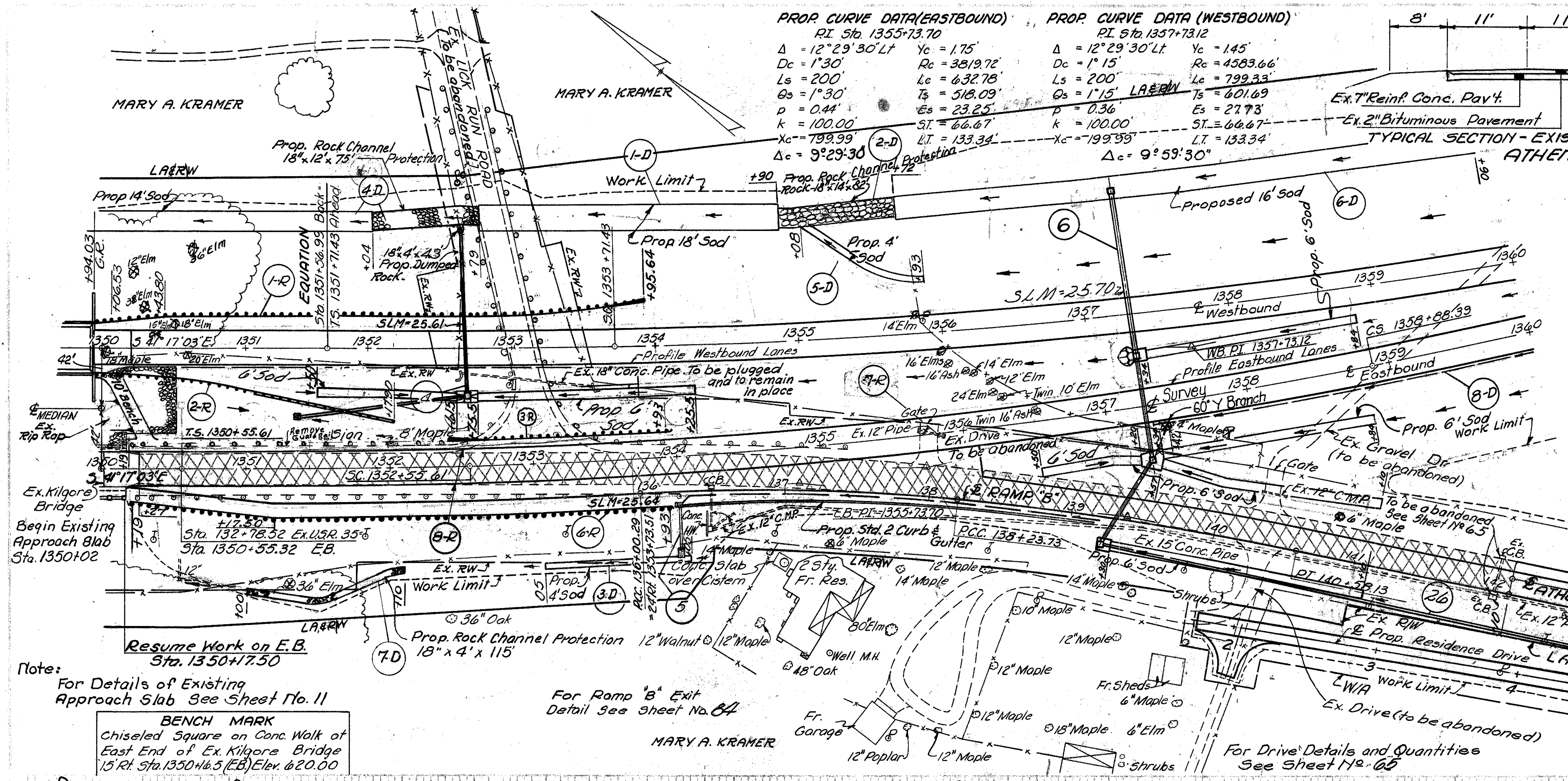
1340 1341 1342 1343 1344 1345 1346 1347 1348 1349 1350

STA. 1340+00 TO STA. 1350+00 MEDIAN

ROSS COUNTY
ROS-35-25.05

F674(12)

33
225



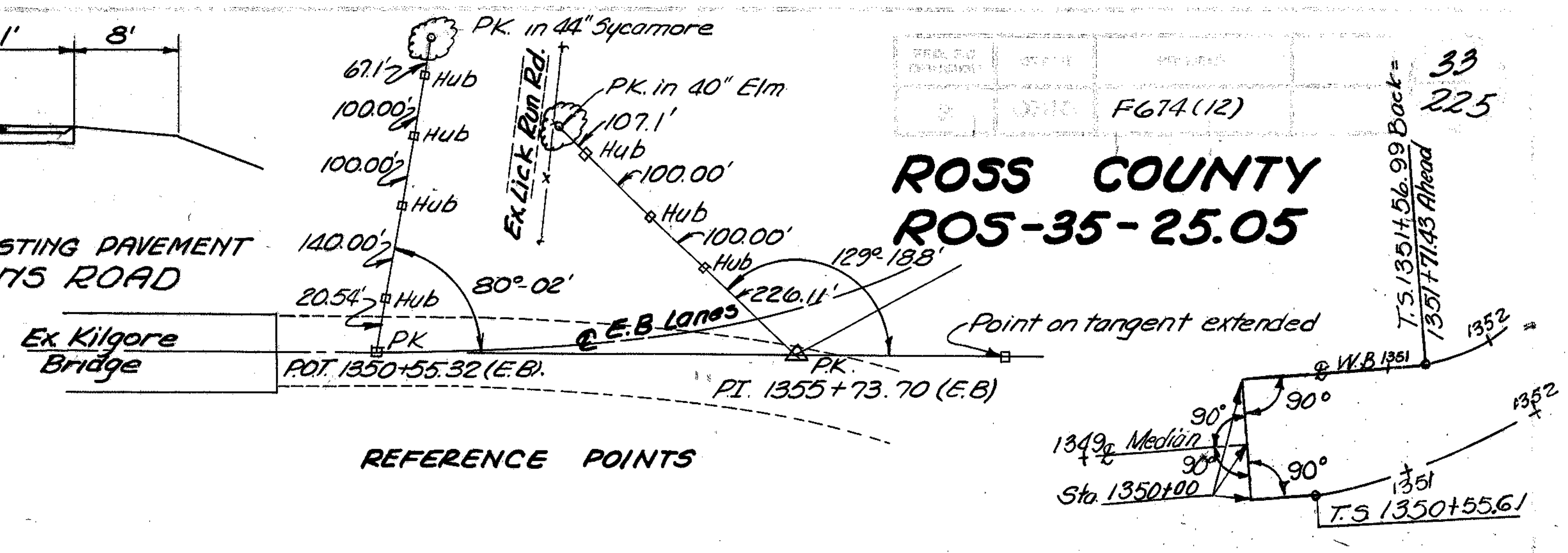
PROP. CURVE DATA (EASTBOUND)
P.I. Sta. 1355+73.70
Δ = 12°29'30" Lt.
Dc = 1°30'
Ls = 200'
θs = 1°30'
p = 0.44'
k = 100.00'
Xc = 199.99'
Δc = 9°29'30"
Yc = 1.75'
Rc = 3819.72'
Lc = 632.78'
Ts = 518.09'
Es = 23.25'
ST. = 66.67'
LT. = 133.34'

PROP. CURVE DATA (WESTBOUND)
P.I. Sta. 1357+73.12
Δ = 12°29'30" Lt.
Dc = 1°15'
Ls = 200'
θs = 1°15'
p = 0.36'
k = 100.00'
Xc = 199.99'
Δc = 9°59'30"
Yc = 1.45'
Rc = 4583.66'
Lc = 799.33'
Ts = 601.69
Es = 27.73'
ST. = 66.67'
LT. = 133.34'

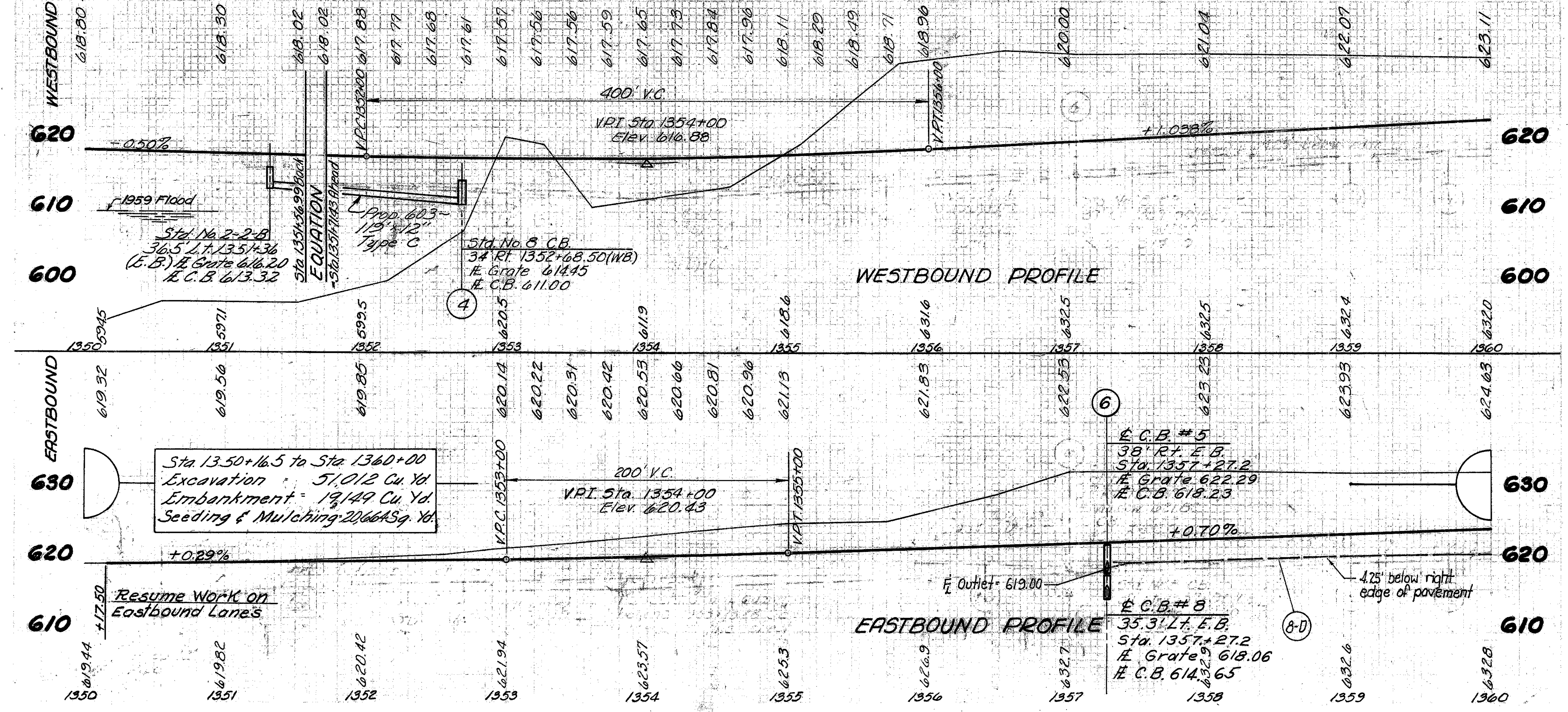
8' 11' 11' 8'
Ex. 7" Reinf. Conc. Pav't.
Ex. 2" Bituminous Pavement
TYPICAL SECTION - EXISTING PAVEMENT
ATHENS ROAD

Note:
For Details of Existing Approach Slab See Sheet No. 11

BENCH MARK
Chiseled Square on Conc. Walk at East End of Ex. Kilgore Bridge 15' Rt. Sta. 1350+16.5 (EB) Elev. 620.00



REFERENCE POINTS



Sta. 1350+16.5 to Sta. 1360+00
Excavation 51,012 Cu. Yd.
Embankment 19,149 Cu. Yd.
Seeding & Mulching 20,664 Sq. Yd.

ROADWAY ~ QUANTITIES ~ DRAINAGE

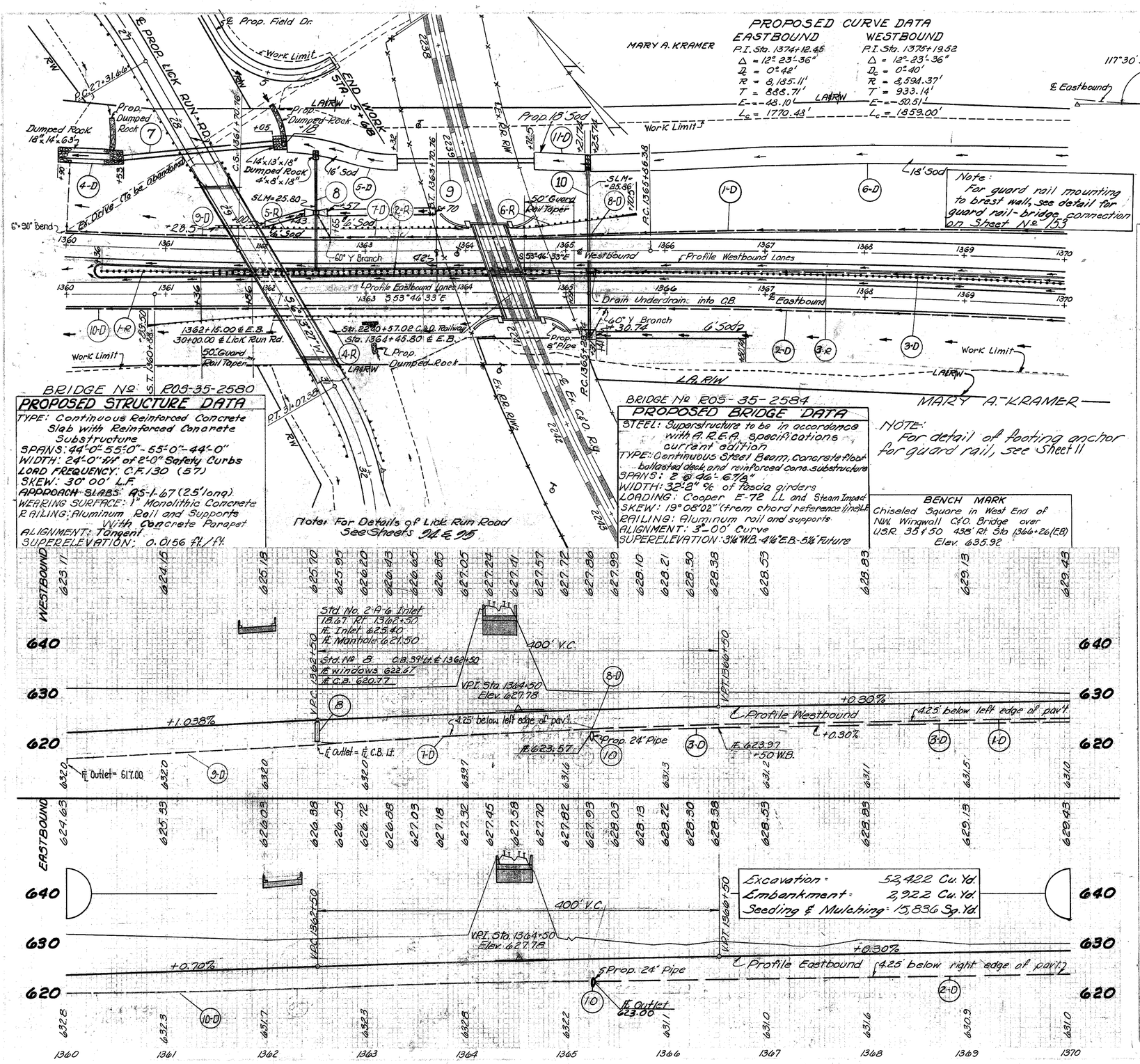
Item	Description	Unit	1-R	2-R	3-R	4-R	5-R	6-R	7-R	8-R	7-D	8-D	1-D	2-D	3-D	4-D	5-D	6-D	4	5	6	26	TOTAL
660	Sodding	Sq. Yds.											422		45	382	46	732					1,627
601	Rock Channel Protection	Cu. Yds.									34			85		67		3		3			192
606	Bridge Terminal Assembly As Per Plan	Each						1															1
604	Catch Basin Std. No. 3	Each																		1			1
602	Concrete Masonry	Cu. Yds.																		0.23			*0.23
603	6" Conduit Type F	Lin. Ft.										10											10
	Pipe Special 6"x60° Y Branch											1											
605	6" Shallow Pipe Underdrain	Lin. Ft.										287											287
603	12" Conduit C-B	Lin. Ft.																		28			28
606	Bridge Terminal Assembly	Each	1	1																			2
202	Exist. Pav't. Removed & Disposed of	Sq. Yds.								855													855
606	Guard Rail Type 5	Lin. Ft.	387.50	112.50	150.00			375.00															1025.00
606	Guard Rail Type 5 Barrier Design	Lin. Ft.		100.00																			100.00
606	Approach End Assembly	Each	1	1	1																		3
606	Anchor Assembly	Each			1			1															2
202	Pipe Removed 24" & Under	Lin. Ft.							19														19
	Side		Lt.	Rt.	Lt.			Rt.	Lt.&Rt.	Lt.&Rt.	Rt.	Rt.	Lt.	Lt.	Rt.	Lt.	Lt.	Lt.	Lt.	Rt.	Lt.&Rt.	Rt.	
	Station to Station		1349+94.03 to 1353+25.64 (W.B.)	1349+94.03 to 1352+17.90 (W.B.)	1352+43 to 1353+93 (E.B.)	Not Used	Not Used	1350+19 to 1353+93	1355+69 to 1355+87	1350+17.50 to 1353+73.51	1351+00 to 1352+10 (E.B.)	1357+31 to 1360+00 (E.B.)	1352+79 to 1354+90	1354+90 to 1355+72 (WB)	1353+05 to 1354+05 (E.B.)	1349+58 to 1352+79 (W.B.)	1355+08 to 1355+93 (WB)	1355+72 to 1359+90 (WB)	1351+36 to 1352+68.5 (W.B.)	1354+00 (E.B.)	1357+00 (E.B.)	139+23 to 145+00 (Athens Rd.)	TOTAL
	See Sheet Number																		107	46	108	120	
	Reference or Structure No.		1-R	2-R	3-R	4-R	5-R	6-R	7-R	8-R	7-D	8-D	1-D	2-D	3-D	4-D	5-D	6-D	4	5	6	26	

* Carried to Structure Box, Sheet No. 22

STA. 1350+00 TO STA. 1360+00

F-674(12)

ROSS COUNTY
ROS-35-25.05



ROADWAY ~ DRAINAGE ~ QUANTITIES

Item	Description	Unit	Reference or Structure No.	See Sheet Number	Station to Station	Total
601	Paved Gutter Type-I modified as per plan	Lin. Ft.				2,544.50
601	Rock Channel Protection	Cu. Yds.	1-R	100	1360+36 E.B. to 1361+36 E.B.	20
601			2-R	40	1361+36 E.B. to 1365+09 E.B.	81
604	Standard No. 8 C.B.	Each	3-R	8	1365+09 E.B. to 1370+00 E.B.	1
604	Inlet Std. No. 2-A Length = 6'	Each	4-R	1	1360+33.5 E.B. to 1364+33.5 E.B.	1
606	Sodding	Sq. Yds.	5-R	9	1361+28.5 W.B. to 1364+03.5 W.B.	1361
608	Pipe Special for Underdrain 6" x 90° Bend 6" x 60° Y Branch	Each	6-R	10	1364+45.5 W.B. to 1365+70.5 W.B.	1
609	Concrete Masonry	Cu. Yds.				0.23
610	12" Conduit Type B Bedding	Lin. Ft.				110
605	6" Conduit Type F	Lin.				10
605	6" Shallow Pipe Underdrain	Lin. Ft.				2,544.50
606	Anchor Assembly	Each				1
606	Approach End Assembly	Each				1
606	Guard Rail Type 5	Lin. Ft.				750
606	Guard Rail Type 5 Special Design	Lin. Ft.				100
	Side					592.5 1600 3 1

Item	Description	Unit	1-R	2-R	3-R	4-R	5-R	6-R	9-D	10-D	1-D	2-D	3-D	4-D	5-D	6-D	7-D	8-D	9	10	Total
601	Rock Channel Protection	Cu. Yds.	20	81	1	1	1	1													104
604	Standard No. 8 C.B.	Each																			
604	Inlet Std. No. 2-A Length = 6'	Each				1															1
606	Sodding	Sq. Yds.																			
608	Pipe Special for Underdrain 6" x 90° Bend 6" x 60° Y Branch	Each																			
609	Concrete Masonry	Cu. Yds.																			
610	12" Conduit Type B Bedding	Lin. Ft.	110	0.23																	0.23
605	6" Conduit Type F	Lin.																			
605	6" Shallow Pipe Underdrain	Lin. Ft.							306	10											316
									520												520
606	Anchor Assembly	Each																			
606	Approach End Assembly	Each																			
606	Guard Rail Type 5	Lin. Ft.																			
606	Guard Rail Type 5 Special Design	Lin. Ft.																			
	Side																				
	Station to Station		1360+00 to 1362+46	1360+00 to 1365+20	1362+72.5 to 1370+00 (WB)	1362+72.5 to 1370+00 (EB)	1363+05 to 1370+00 (WB)	1363+05 to 1370+00 (EB)	1360+00 to 1360+55 (WB)	1360+90 to 1363+32 (WB)	1362+05 to 1363+32 (EB)	1362+54 to 1365+19	1365+19 to 1365+29	1365+29 to 1370+00	1365+28 to 1370+00 (EB)	1365+30 to 1370+00 (WB)	1362+05 to 1363+43.70	1362+54 to 1365+19	1365+19 to 1365+29	1365+23.74 (E.B.)	
	See Sheet Number		100	40	8	1	9	10													
	Reference or Structure No.		1-R	2-R	3-R	4-R	5-R	6-R	9-D	10-D	1-D	2-D	3-D	4-D	5-D	6-D	7-D	8-D	9	10	

* Carried to Structure Box, Sheet No. 22

STA. 1360+00 TO STA. 1370+00

DIST. NO.	STATE	PROJECT	
2	OHIO	F-674(12)	

35
225

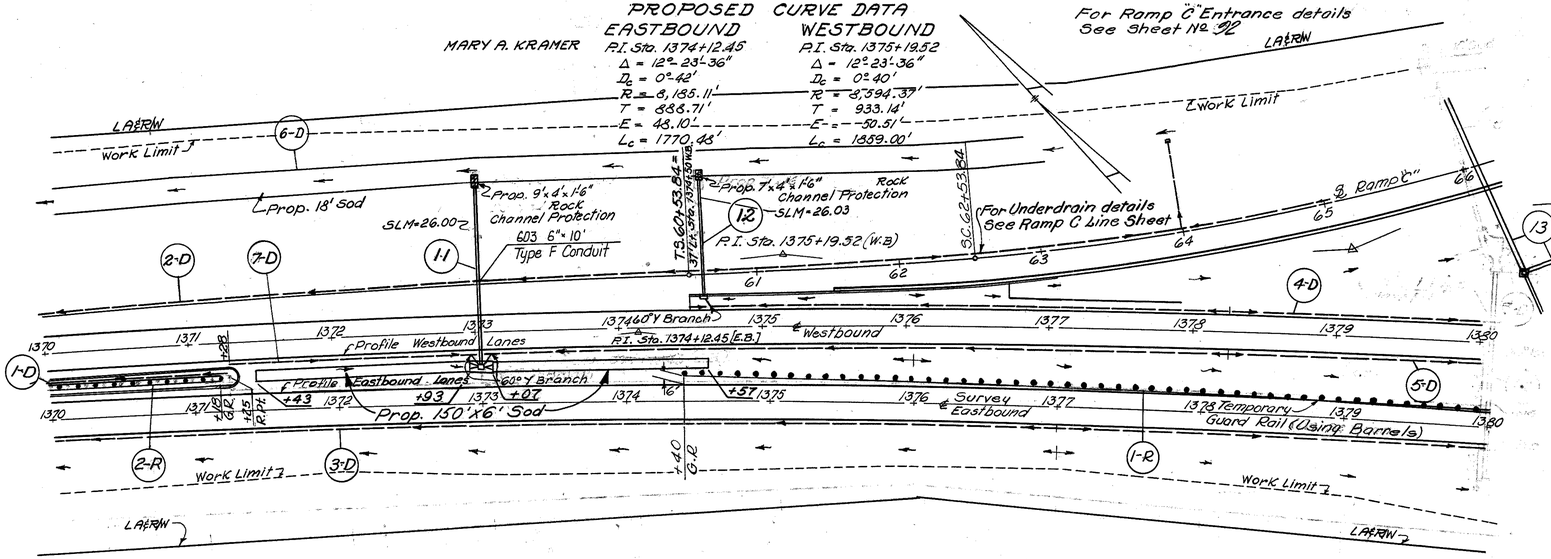
ROSS COUNTY
ROS-35-25.05

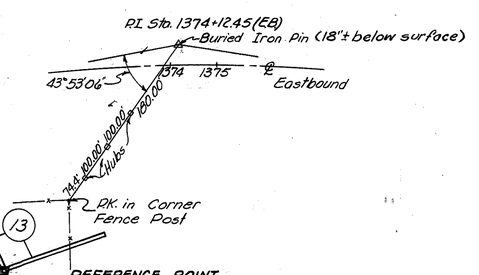
MARY A. KRAMER

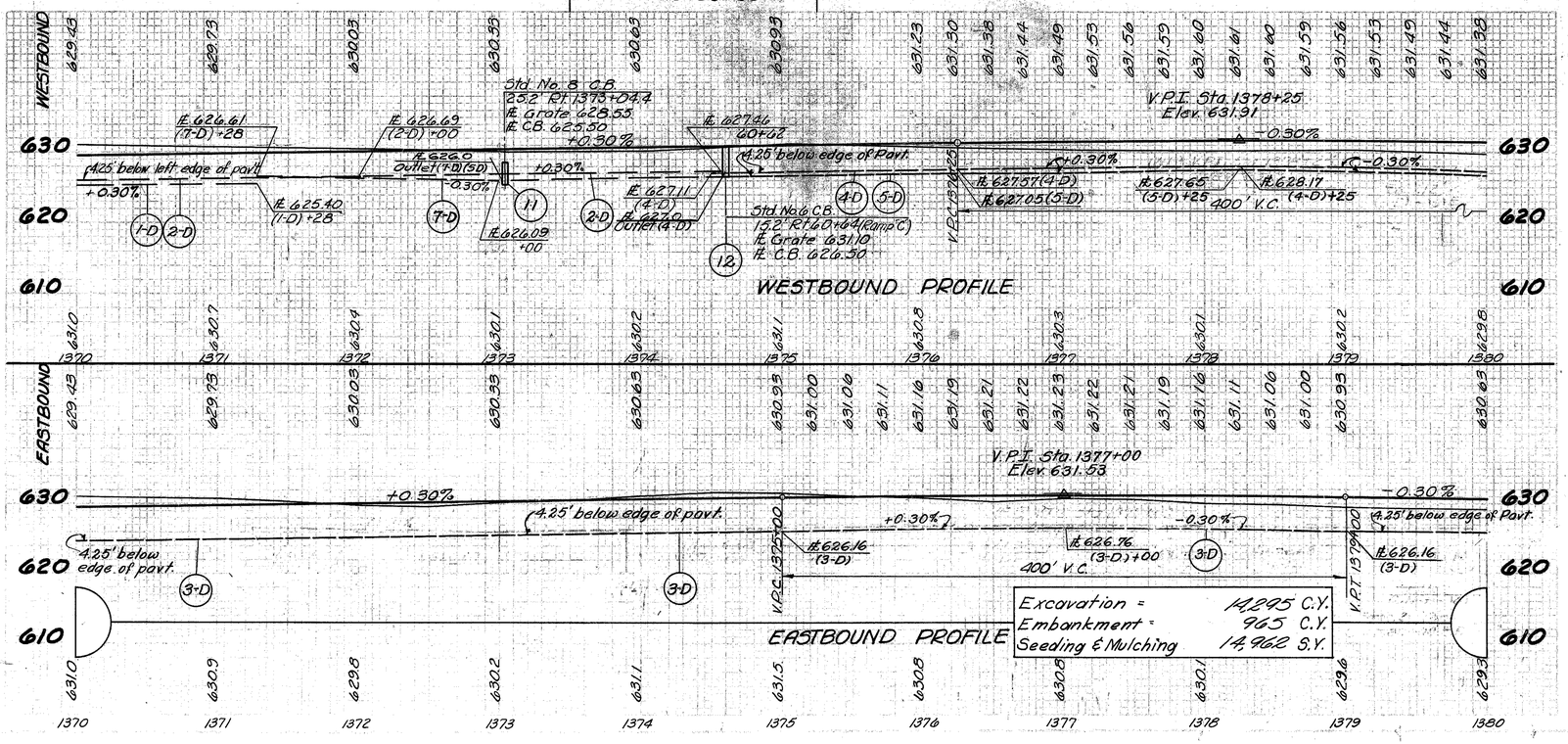
PROPOSED CURVE DATA

EASTBOUND	WESTBOUND
P.I. Sta. 1374+12.45	P.I. Sta. 1375+19.52
Δ = 12° 23' 36"	Δ = 12° 23' 36"
D_c = 0° 42'	D_c = 0° 40'
R = 8,185.11'	R = 8,594.37'
T = 886.71'	T = 933.14'
E = 48.10'	E = 50.51'
L_c = 1770.48'	L_c = 1859.00'

For Ramp C Entrance details See Sheet No. 92







ROADWAY - QUANTITIES

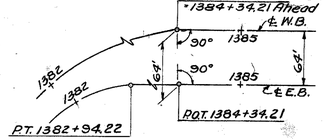
Station to Station	See Sheet Number	Reference or Structure No.	Side	606 Approach End Assembly (Each)	606 Temporary Guard Rail (Lin.Ft.)	606 Guard Rail Type 6 Barrier Design (Lin.Ft.)	603 6" Conduit Type F (Lin.Ft.)	605 6" Shallow Pipe Underdrain (Lin.Ft.)
1370+00 to 1371+28 (W.B.)	52	1-D	Rt.			120		128
1370+40 to 60+64 Ramp C	52	2-D	Lt. & Rt.					448
1370+00 to 1380+00 E.B.	52	3-D	Lt. & Rt.					1000
1374+50 to 1380+00 W.B.	52	4-D	Lt.				10	550
1373+07 to 1380+00 W.B.	52	5-D	Rt.				8	693
1370+00 to 1374+50 (W.B.)	52	6-D	Lt.				10	
1371+28 to 1378+02 W.B.	52	7-D	Rt.				10	174
1378+25 (W.B.)	52	11	Lt. & Rt.					
60+64 (Ramp C)	52	12	Lt. & Rt.					
66+00 (Ramp C)	1/2	13	Lt. & Rt.					
Total				1	563	120	38	2993

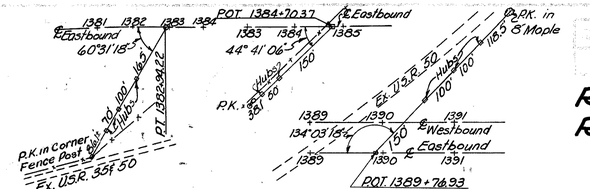
* Carried to Structure Box, Sheet No. 22

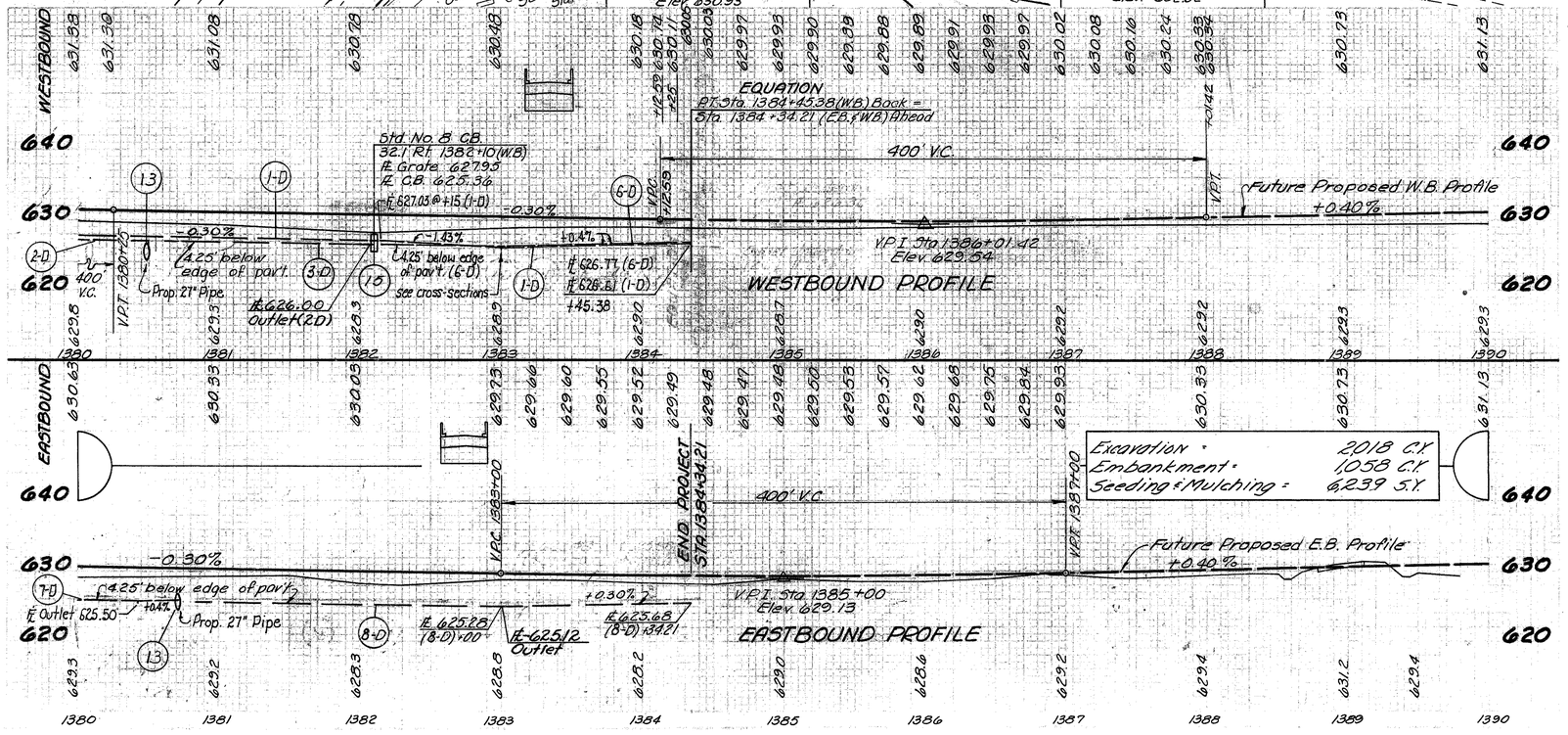
DRAINAGE - QUANTITIES

600	Sodding	Sq.Yds.					900	200	100
601	Rock Channel Protection	Cu.Yds.						2	2
603	12" ϕ Conduit Type B with Class B Bedding	Lin.Ft.						124	124
604	Catch Basin Std. No. 8	Each						1	1
	Pipe Special for Underdrains: 6"x60° Y Branch						1 / 1 / 1		
622	Concrete Masonry	Cu.Yds.						0.23	0.23

STA. 1370+00 TO STA. 1380+00







BRIDGE Nº ROS-35-2619

F-674(12)

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225

ROSS COUNTY
ROS-35-25.05

PROPOSED STRUCTURE DATA

TYPE: Continuous Steel Beam with Concrete Deck and Substructure
SPAN: 51'-73'-73'-51'
ROADWAY: 28' f/f 2'-0" Safety Curbs
LOAD FREQUENCY: C.F. 400 (57)
SKEW: 37°-30' R.F.
WEARING SURFACE: 1" Monolithic Concrete
APPROACH SLABS: AS-1-67 [25' long] Special
RAILING: Aluminum Rail and Supports and Concrete Parapet
ALIGNMENT: Tangent

PROPOSED CURVE DATA

EASTBOUND	WESTBOUND
P.I. Sta. 1374+12.45	P.I. Sta. 1375+19.52
Δ = 12°23'-36"	Δ = 12°23'-36"
D_c = 0°42'	D_c = 0°40'
R = 8,185.11'	R = 8,594.37'
T = 888.71'	T = 933.14'
E = 48.10'	E = 50.51'
L_c = 1770.48'	L_c = 1859.00'

Excavation = 2018 C.Y.
Embankment = 1,058 C.Y.
Seeding & Mulching = 6,239 S.Y.

ROADWAY ~ QUANTITIES ~ DRAINAGE

Reference or Structure No.	See Sheet Number	Station to Station	Side	660 Sodding (Sq. Yds.)	604 Catch Basin Std. No. 8 (Each)	Pipe Specials for Underdrains 6"×60° Y Branch	Pipe Specials for Underdrains 6" Cross	Pipe Specials for Underdrains 6"×6" Tee	Pipe Specials for Underdrains 6"×90° Bend	601 Rock Channel Protection (Cu. Yds.)	602 Concrete Masonry (Cu. Yds.)	603 Pipe Underdrains 6" Conduit Type B with Class B Bedding (Lin. Ft.)	603 Pipe Underdrains 6" Conduit Type F (Lin. Ft.)	605 Pipe Underdrains 6" Shallow Pipe Underdrain (Lin. Ft.)	606 Temporary Guard Rail (Lin. Ft.)
1-R		1380+00 to 1384+35	Lt. & Rt.												437
1-D		1380+00 to 1384+45 (W.B.)	Lt.				1					70	30	425	
2-D		1380+00 to 1380+50 (W.B.)	Rt.						1					50	
3-D		1380+61 to 1382+06 (W.B.)	Rt.			1							10	154	
4-D		1381+14 to 1383+20 (W.B.)	Lt.	276											
5-D		1382+83 to 1383+50 (E.B.)	Rt.	61											
6-D		1382+14 to 1384+45 (W.B.)	Rt.					1						231	
7-D		1380+00 to 1380+72 (E.B.)	Rt.				1					90	10	72	
8-D		1380+83 to 1384+34 (E.B.)	Rt.					1					10	380	
13	112	1380+48.6 (W.B.)	Lt. & Rt.	99	1					2	0.23				
15	54	1382+10 (W.B.)	Lt.												
16	114	166+73.5 (Athens Rd.)	Lt. & Rt.												
17	116	169+00.9 (Athens Rd.)	Lt. & Rt.												
18		1386+00 (E.B)	Lt.												
		Total		436	1					2	*0.23	160	60	1312	437

* Carried to Structure Box, Sheet Nº 22

STA. 1380+00 TO STA. 1390+00

FED. ROAD DIVISION	STATE	PROJECT	
5	OHIO	F-674(12)	

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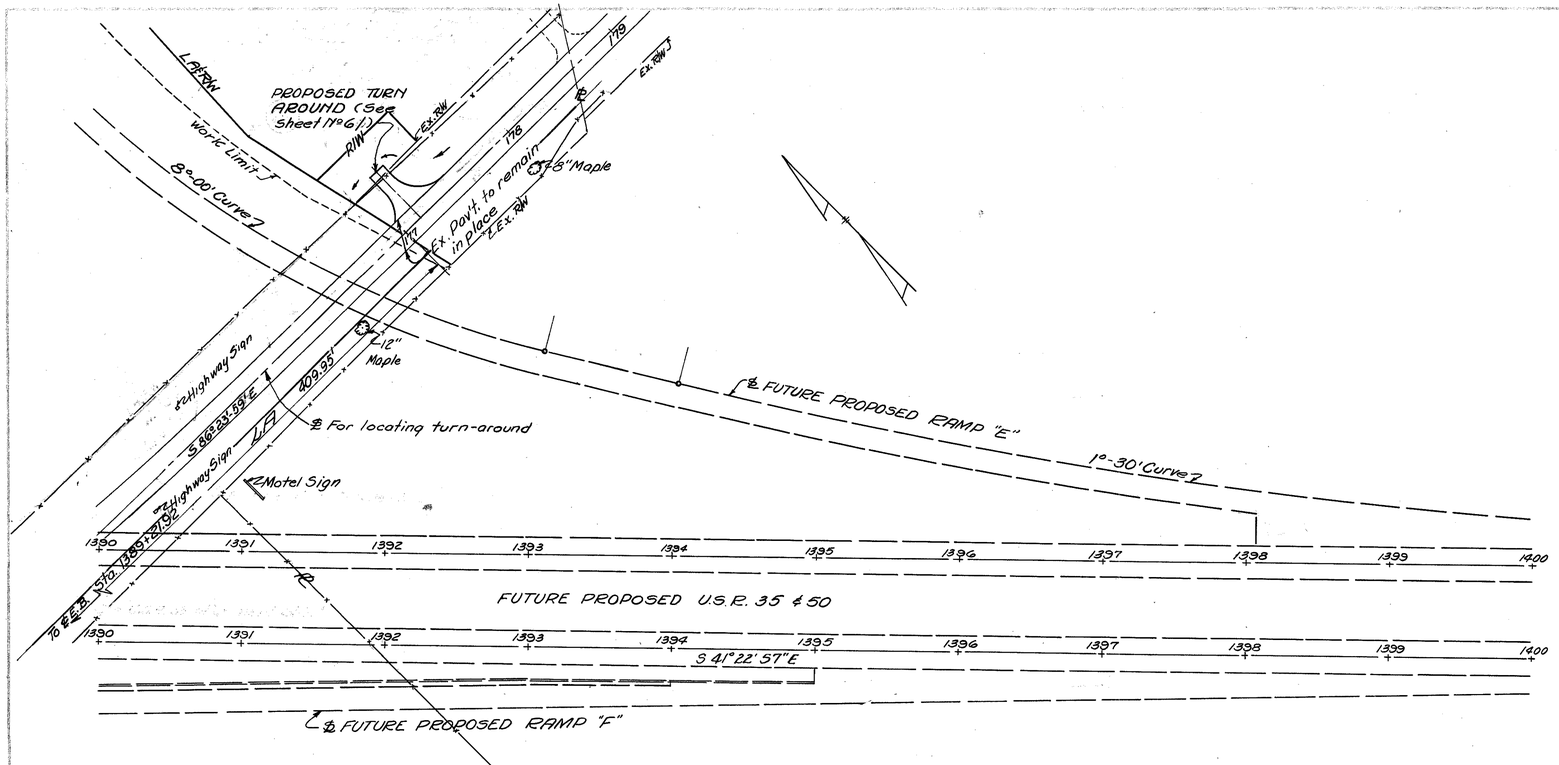
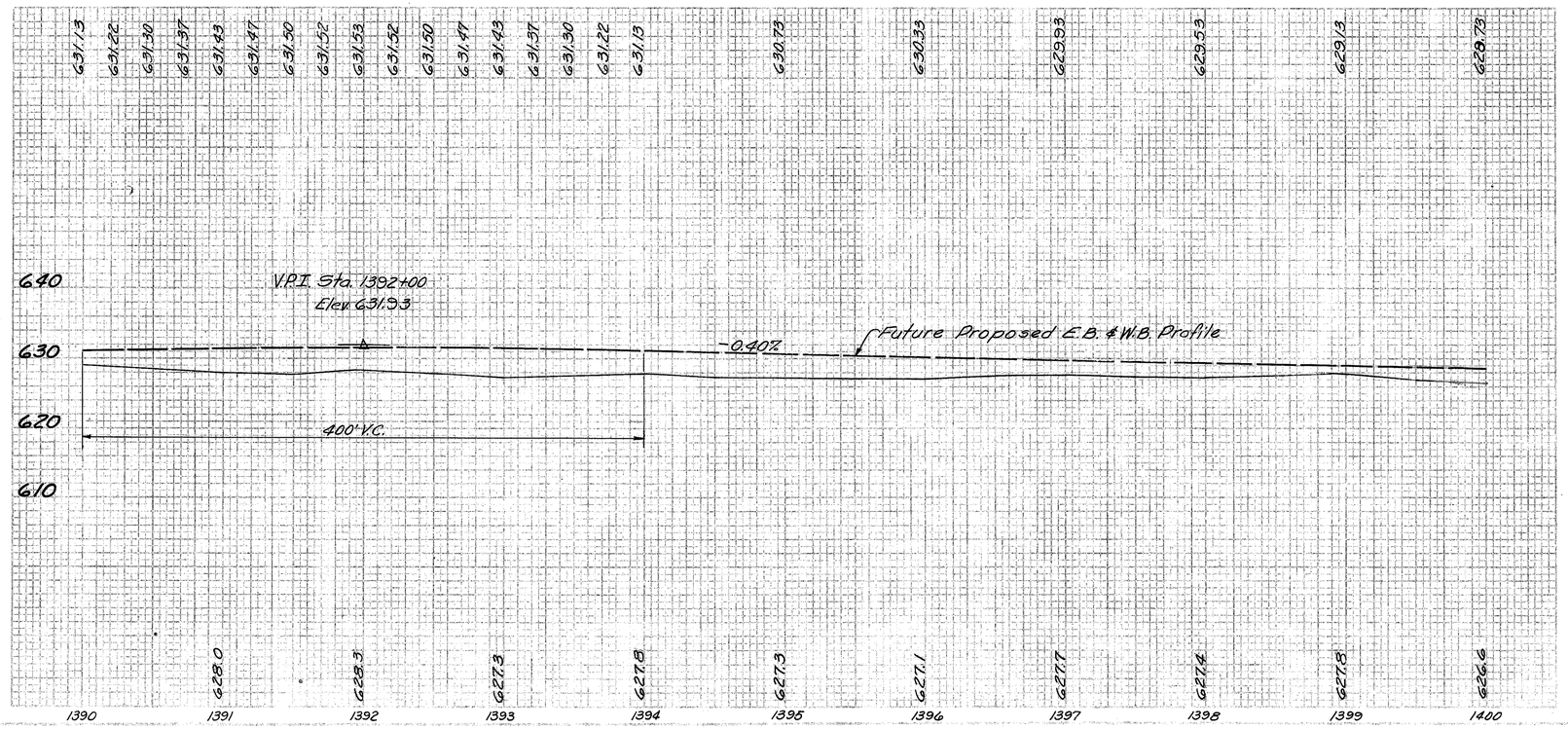
225

ROSS COUNTY
ROS - 35 - 25.05





ROADWAY ~ QUANTITIES ~ DRAINAGE

Side	Station to Station	See Sheet Number	Reference or Structure No.

STA. 1390 +00 TO STA. 1400 +00

SHEETING	
END WIDTH	CU. YDS.
0	

TOT. NO. PROJECTS	STATE	PROJECT	
2	OHIO	F-674(12)	

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ROSS COUNTY
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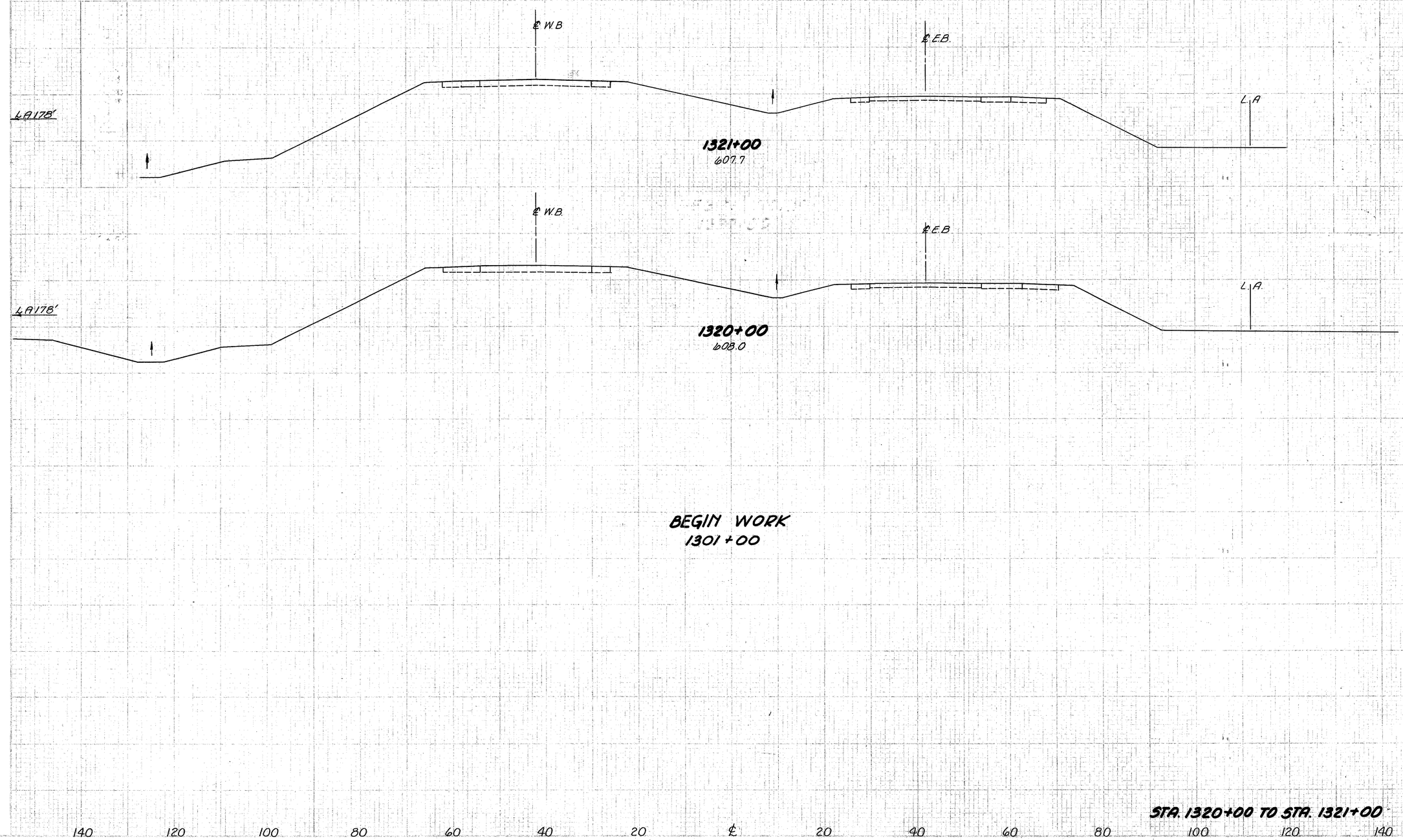
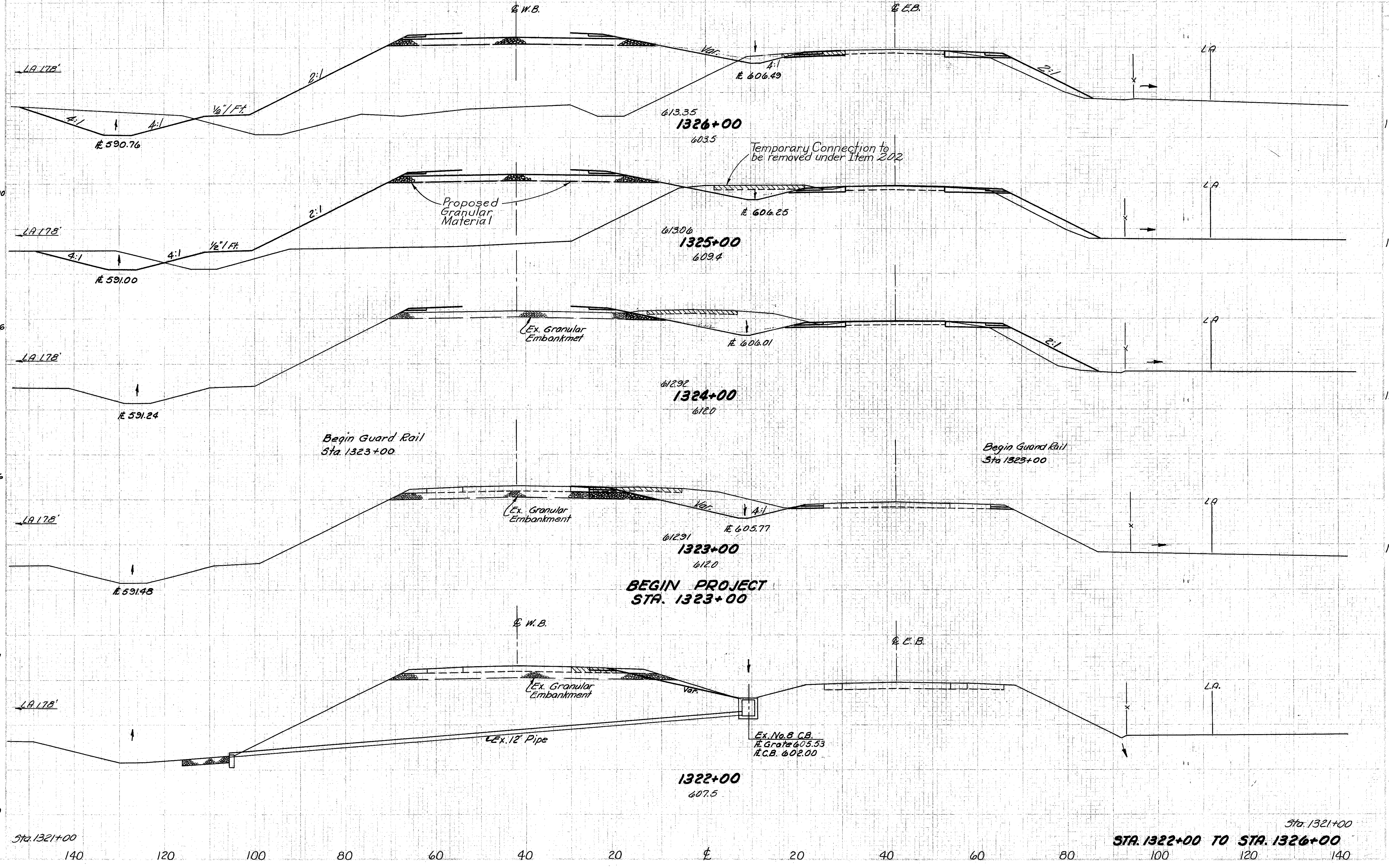
END AREA		VOLUME	
CUT	FILL	CUT	FILL
0		0	0



FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	F-674(12)	

ROSS COUNTY
ROS-35-25.05



	END AREA		VOLUME	
	CUT	FILL	CUT	FILL
1326+00	139	1445		
			493	4824
1325+00	127	1160		
			481	2289
1324+00	133	76		
			522	194
1323+00	149	29		
			322	59
1322+00	25	3		
			46	6
1321+00	0	0		

STA. 1322+00 TO STA. 1326+00

FED. ROAD DESIGNATION	STATE	PROJECT	
0	OHIO	F-674(12)	

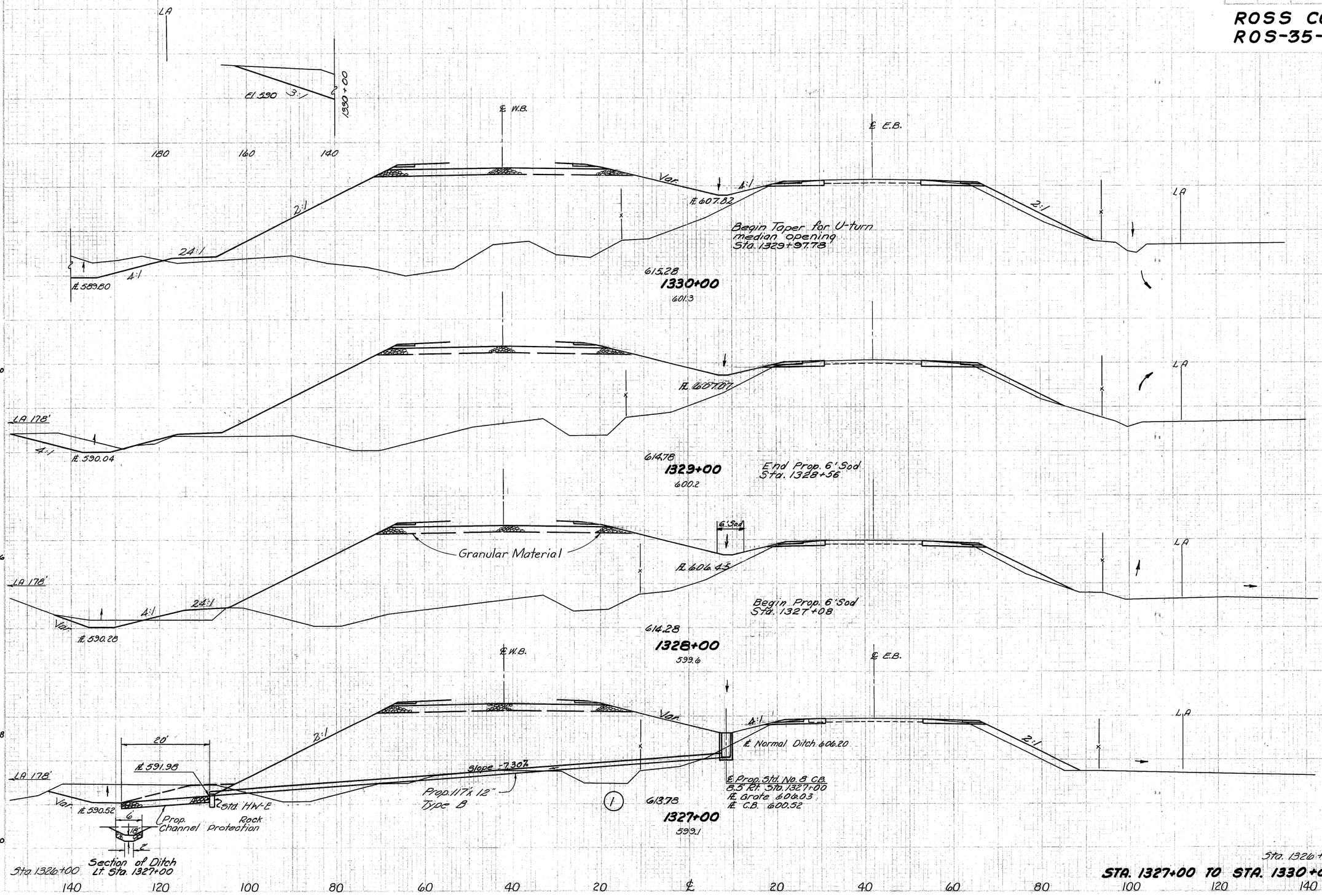
40
225

ROSS COUNTY
ROS-35-25.05

SECTIONS

END WIDTH	END FILL
216	2,300
198	2,156
190	2,128
193	2,150
194	

END AREA		VOLUME	
CUT	FILL	CUT	FILL
		151	1797
		411	6587
		71	1760
		211	6457
		43	1727
		267	6137
		101	1587
		444	5615
		139	1445



PROJECT			
2	OHIO	F-674(12)	

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225

ROSS COUNTY
ROS-35-25.05

End Taper for U-Turn
Median Opening
Sta. 1334+75

End Prop. 6' Sod @
Sta 1334+57

℄ W.B.

℄ E.B.

6' Sod

Var.

4:1

℄ 611.00

Prop. 603-266' × 12" Type C

2:1

L.A.

206

2:1

24:1

3:1

4:1

℄ 588.84

617.28
1334+00
602.3

125' L.A.

70 1849

Begin Prop. 6' Sod @
Sta 1333+07

2,300

372 6869

L.A.

208

Granular Material

℄ 610.60

(2) See Detail of Prop. Structure

End Prop. 6' Sod @
Sta 1332+93
See Sheet No. 106

616.78
1333+00
603.7

125' L.A.

131 1860

℄ 589.08

U-Turn Median Opening
Sta. 1332+36.39
See Sheet No. 10

Begin Prop. 6' Sod @
Sta 1332+61

Add for U-turn median opening

110
4746931

2,311

L.A.

208

℄ 610.00

125' L.A.

616.28
1332+00
602.7

125 1883

℄ 589.32

℄ W.B.

℄ E.B.

4376948

2,328

L.A.

211

Var.

4:1

2:1

℄ 609.00

2:1

125' L.A.

615.78
1331+00
601.8

111 1869

3:1

24:1

4:1

℄ 589.56

4856789

2,372

Sta. 1330+00

151 1797

216

Sta. 1330+00

STA. 1331+00 TO STA. 1334+00

180 160 140 120 100 80 60 40 20 ℄ 20 40 60 80 100

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	F-674(12)	

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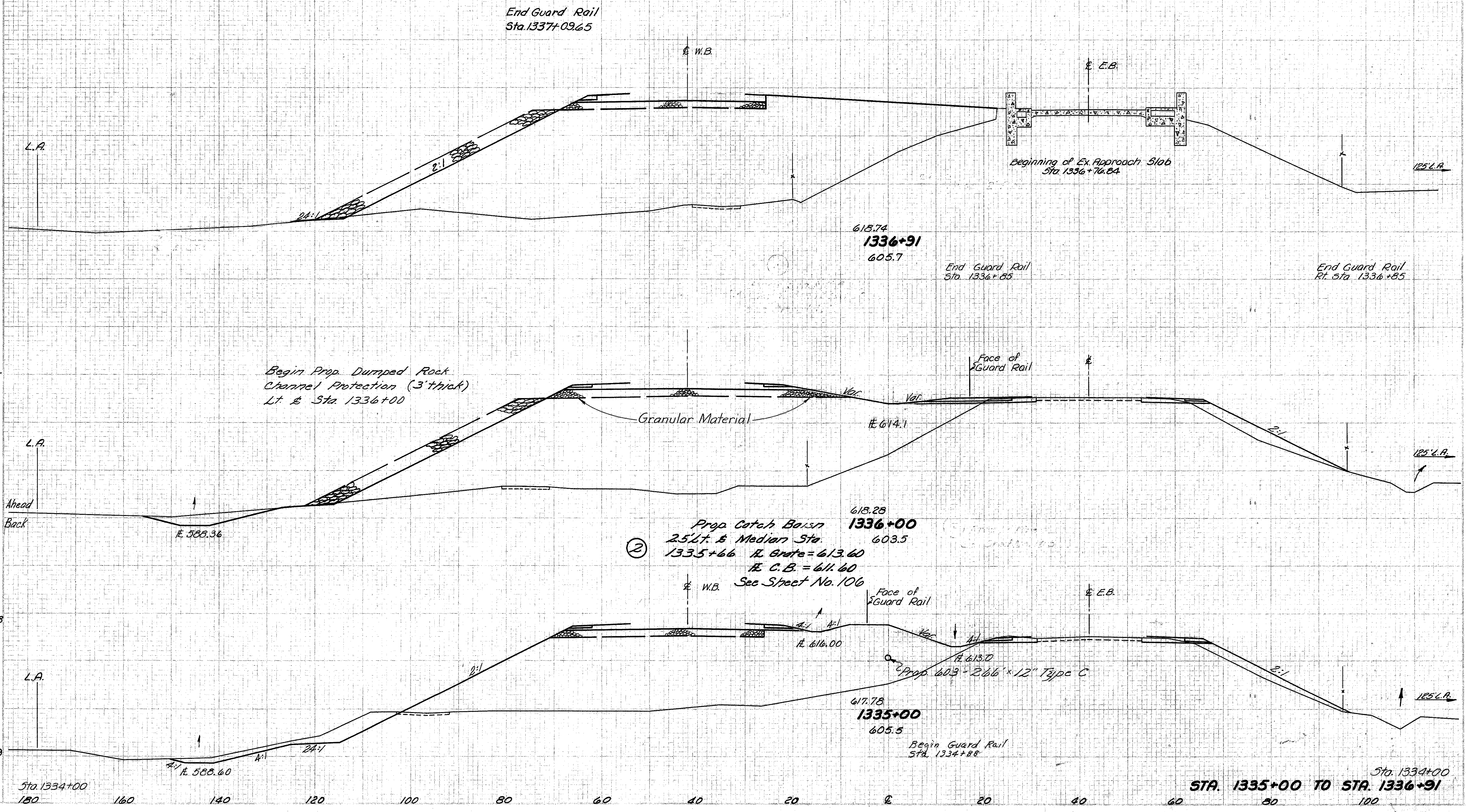
ROSS COUNTY
ROS-35-25.05

SEEDING	
END WIDTH	SQ. YDS.
50	
	545
58 195	
	2,228
206	
	2,289
206	

END AREA		VOLUME	
CUT	FILL	CUT	FILL
	2090		
		105	6892
57	2000		
		274	6509
91	1515		
		298	6250
70	1849		



STA. 1335+00 TO STA. 1336+91

SECTIONS	
ROAD WIDTH	SB. TYP.

FED. AID DIVISION	STATE	PROJECT		
2	OHIO	F-674(12)		

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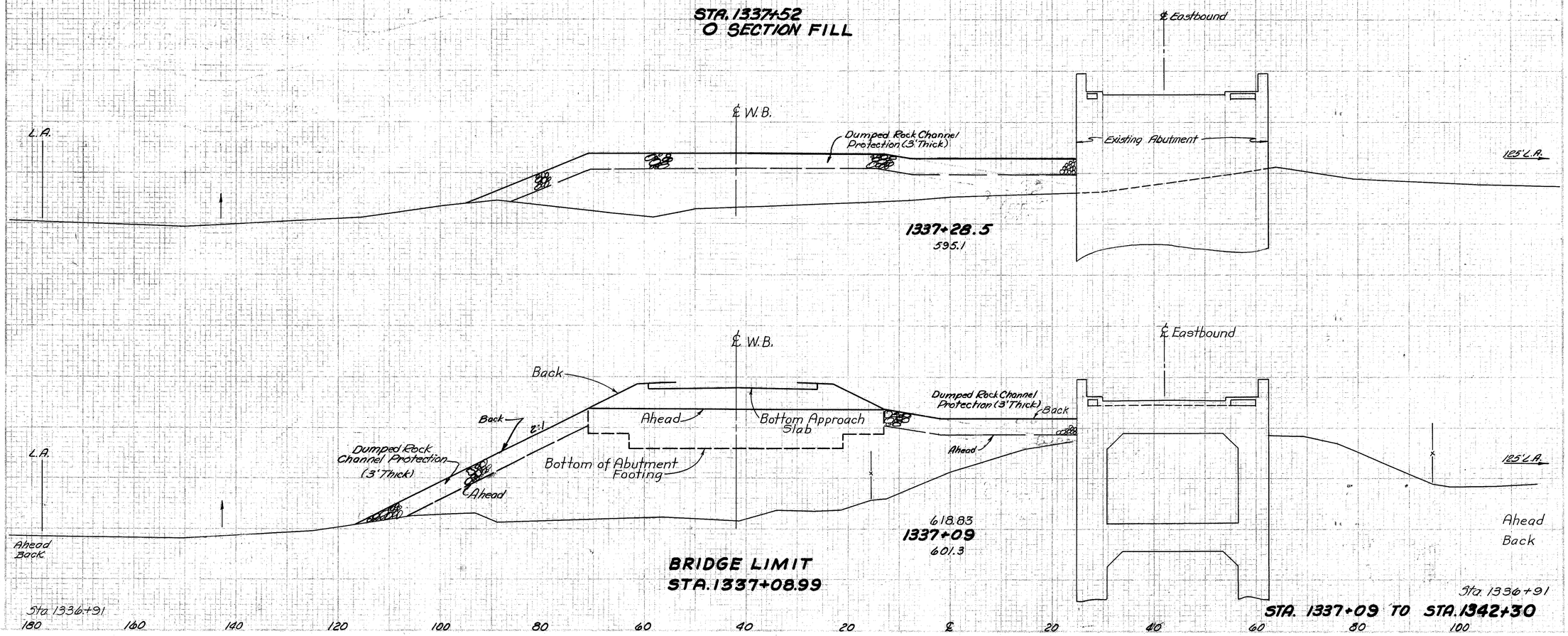
ROSS COUNTY
ROS-35-25.05

ROAD AREA		VOLUME	
CUT	FILL	CUT	FILL

STA. 1337+52
0 SECTION FILL



	0 304
	0 699
	0 917
Ahead	0 1839
Back	0 2276
	0 1455
	0 2090

0
38
88
50
180 160 140 120 100 80 60 40 20 ℄ 20 40 60 80 100

FED. ROAD PROJECT	STATE	PROJECT	
2	OHIO	F-674(12)	

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ROSS COUNTY
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MEETING	
END WIDTH	SQ. FOOT.
139	
176	
137	
155	
142 41	
99	
48	
198	

END AREA		VOLUME	
CUT	FILL	CUT	FILL
		89	1876
		32	806
		62	1910
		30	692
		64	686
		72	406
		40	128
		Sta 1349+58 54	0
			128
		AHEAD 102	1830
		BACK 102	1411

Resume Work on E.B.
Sta. 1350+17.50

Begin Guard Rail
Sta 1350+19

℄ W.B.

Face of Guard Rail

Approach Slab

Bottom Approach Slab

Granular Material

Existing Riprap

Existing Sheet Steel Piling

1350+16.5
619.4

L.A. 200

14' Sod

℄ 591.66

L.A. 110'

Bottom Approach Slab

Existing Riprap

1350+05
619.4

L.A. 200

14' Sod

℄ 591.54

L.A. 110'

Ahead

Rock Channel Protection (3' Thick)

Back

Bottom Approach Slab

Rock Channel Protection (3' Thick)

Ahead

2:1

Ahead

Back

Bottom Abutment Footing

Back

1340+95
619.4

L.A. 200

14' Sod

1½" I Ft.

Ahead
Back

℄ 591.44

AHEAD
BACK
L.A. 110'

BRIDGE LIMIT
STA. 1349+94.69 (W.B.)

Begin Guard Rail
Sta 1349+94.03

Begin Guard Rail
Sta 1349+94.03

℄ W.B.

Rock Channel Protection (3' Thick)

1349+75
619.3

L.A. 200'

14' Sod

2:1

2:1

Ahead
Back (in Ditch)

℄ 591.24

Add for Ditch
1348+79 to
1349+58

Begin 14' Sod Sta 1349+58

0.0 Section Ditch Sta. 1348+79 ℄ 590.0

L.A. 110'

1348+79

Add For Ditch STA 1348+79 to 1349+58

STA 1349+58 BEGIN FILL

STA. 1349+75 TO STA. 1350+16.5

180 160 140 120 100 80 60 40 20 ℄ E.B. 20 40 60 80 100

CONT. NO.	STATE	PROJECT	
2	OHIO	F-674(12)	45 225

ROSS COUNTY
ROS-35-25.05

CUM STATIONS	CUM DIST.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
201	1233			170	867
198	1133			326	2396
210	2162			147	1460
201	733			191	3211
139				58	2008
				287	6563
				106	1735
				140	2596
				89	1876

Begin 18' Sod
End 12' Rock Channel Protection
Lt. W.B. Sta. 1352+79 W.B.

℄ W.B.

Begin Prop. 6' Sod
Sta. 1352+75.5 (W.B.)

Prop. Std. No. 8 C.B.
34' Rt. ℄ W.B.
Sta. 1352+68.50
℄ Grate = 614.75
℄ C.B. = 611.00
℄ Normal Ditch 614.75

L.A. 200
12'
18"
2:1
2:1
6:1
8:1
6:1
6:1
½"/1'
2:1
L.A.
½"/1'
2:1
2:1
℄ 606.0
℄ 607.7

Prop. 603 - 119' × 12" Type C

End Prop. 6' Sod
Sta. 1352+61.5 (W.B.)

End Guard Rail
Sta. 1352+17.90 (W.B.)

620.01
1352+55.61
620.9

Face of Guard Rail

End 4' Dumped Rock
Rt. E.B. Sta. 1352+10

℄ W.B.
6' Sod
6:1
6:1
℄ Granular Material
℄ 615.80
2:1
L.A.
℄ 607.4

619.85
1352+00
620.4

L.A. 200
12'
18"
2:1
2:1
℄ 594.5

Begin 12' Rock Channel Protection
Lt. W.B. Sta. 1352+08 W.B.
End 14' Sod

℄ W.B.
6' Sod
4:1
Face of Guard Rail
6:1
℄ 616.3
4:1
℄ 617.0

Begin Prop. 6' Sod
Sta. 1351+50

℄ Prop. 603 - 116' × 12" Type C

PROP. STD. No. 2-2-B
C.B. 36.5' LT (E.B.)
STA. 13.51+36
℄ GRATE 616.2
℄ C.B. 613.32
SEE SHEET No. 107 ④

619.70
1351+50
620.0

L.A.
½"/1'
2:1
2:1
℄ 598.0

L.A. 200
14' Sod
2:1
2:1
℄ 593.0

Face of Guard Rail
℄ W.B.
Var.
℄ 616.6 Var.

Begin 4' Dumped Rock
Rt. E.B. Sta. 1351+00

2:1
2:1

619.43
1350+55.32
619.6

L.A. 200'
14' Sod
2:1
2:1
℄ 592.05

L.A. 110'

Sta. 1350+16.5

℄ E.B.

STA. 1350+55.32 TO STA. 1352+55.61

Sta. 1350+16.5

180 160 140 120 100 80 60 40 20 20 40 60 80 100

SECTION	
SIDE WIDTH	SIDE SLOPE

FED. OR DIVISION	STATE	PROJECT	
2	OHIO	F-674(12)	

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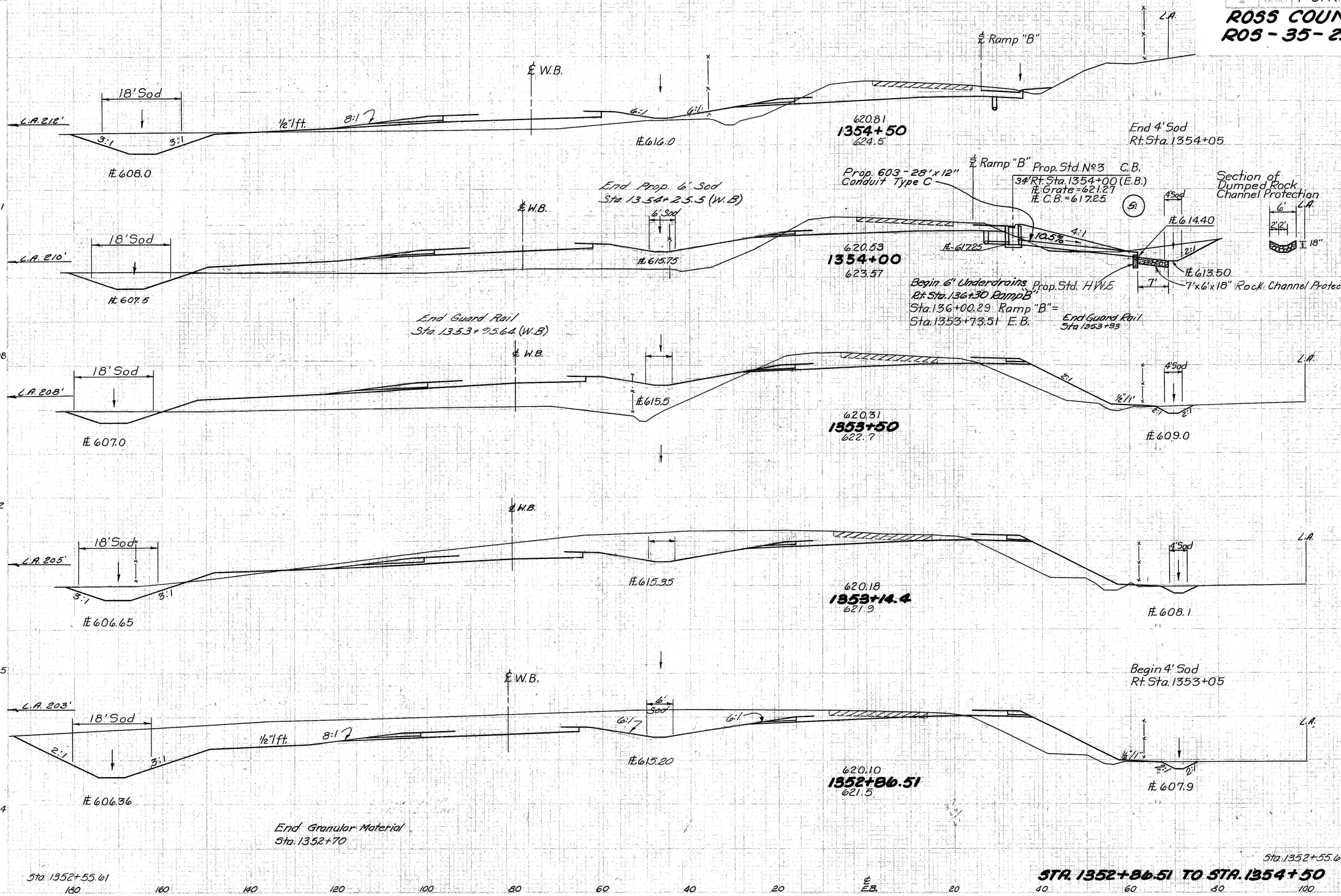
ROSS COUNTY
ROS-35-25.05

END AREA		VOLUME	
CUT	FILL	CUT	FILL



SEC. NO. DIVISION	STATE	PROJECT	
2	OHIO	F-674(12)	

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ROSS COUNTY
ROS-35-25.05

BEGINS	
END WIDTH	DIA. PIPE
159	
230	
1167	
190	
1478	
151	
1180	
144	
808	
147	

END AREA		VOLUME	
CUT	FILL	CUT	FILL

NOTE: For Ramp "B" Earthwork See Sheet Nº 71

NOTE: For Details on Proposed Drainage Pipe & Catch Basins See Sheet Nº 100

L.A. 214'
2:1
16' Sod
3:1
½"/ft.
6:1
8:1
℄ W.B.
Ahead
Back
℄ 613.0
Begin 6' Sod
1357+34 (EB)
℄ 619.0
622.53
1357+00
632.7
Begin 6' Sod
Sta. 1357+34
End 6' Sod
Sta. 1357+20
Quantity Limit
Ahead
Back
Back
Sod
8:1
Var.
℄ 622.4
℄ Ramp "B"
Sta. 139+23
L.A. 123'
Prop. Std. No. 5 C.B.
19' Rt. Sta. 139+23
℄ Ramp B "Athens Rd."
℄ Grate 622.69
℄ C.B. 619.86
6
Ahead 2320 12
Sta 1357+00
Back 2572 12
5330 28
L.A. 215'
16' Sod
℄
6:1
6:1
℄ 612.5
℄ 618.25
622.18
1356+50
629.6
6
Sod
8:1
Var.
℄ 622.6
Begin 6' Sod
Sta. 1356+50
℄ Ramp "B"
L.A.
3181 18
End 4' Sod
Lt. W. B. Sta. 1355+93
L.A. 215'
14' D.R.
2:1
3:1
½"/ft.
6:1
8:1
4' Sod
℄
℄ 617.50
621.63
1355+72
625.6
℄ 611.72
18"
Begin 16' Sod
Sta. 1355+72
End Rock Channel Protection
℄
L.A.
7660 43
2121 12
Begin 4' Sod
Lt. W. B. Sta. 1355+08
℄ W.B.
14' D.R.
L.A. 214'
3:1
2:1
2:1
3:1
½"/ft.
8:1
6:1
6:1
℄ 608.5
℄ 616.79
621.13
1355+00
625.3
℄ Ramp "B"
L.A.
3508 41
510 19
Begin Rock Channel Protection
Sta. 1354+90
End 18' Sod
695 222
Sta. 1354+50
241 220
Sta. 1354+50
180 160 140 120 100 80 60 40 20
℄ E.B.
20 40 60 80 100

STA. 1355+00 TO STA. 1357+00

STA. 1362+15 (E.B.) = STA. 30+00 LICK RUN ROAD

FED. OR. DIVISION | STATE | PROJECT
F-674(12)

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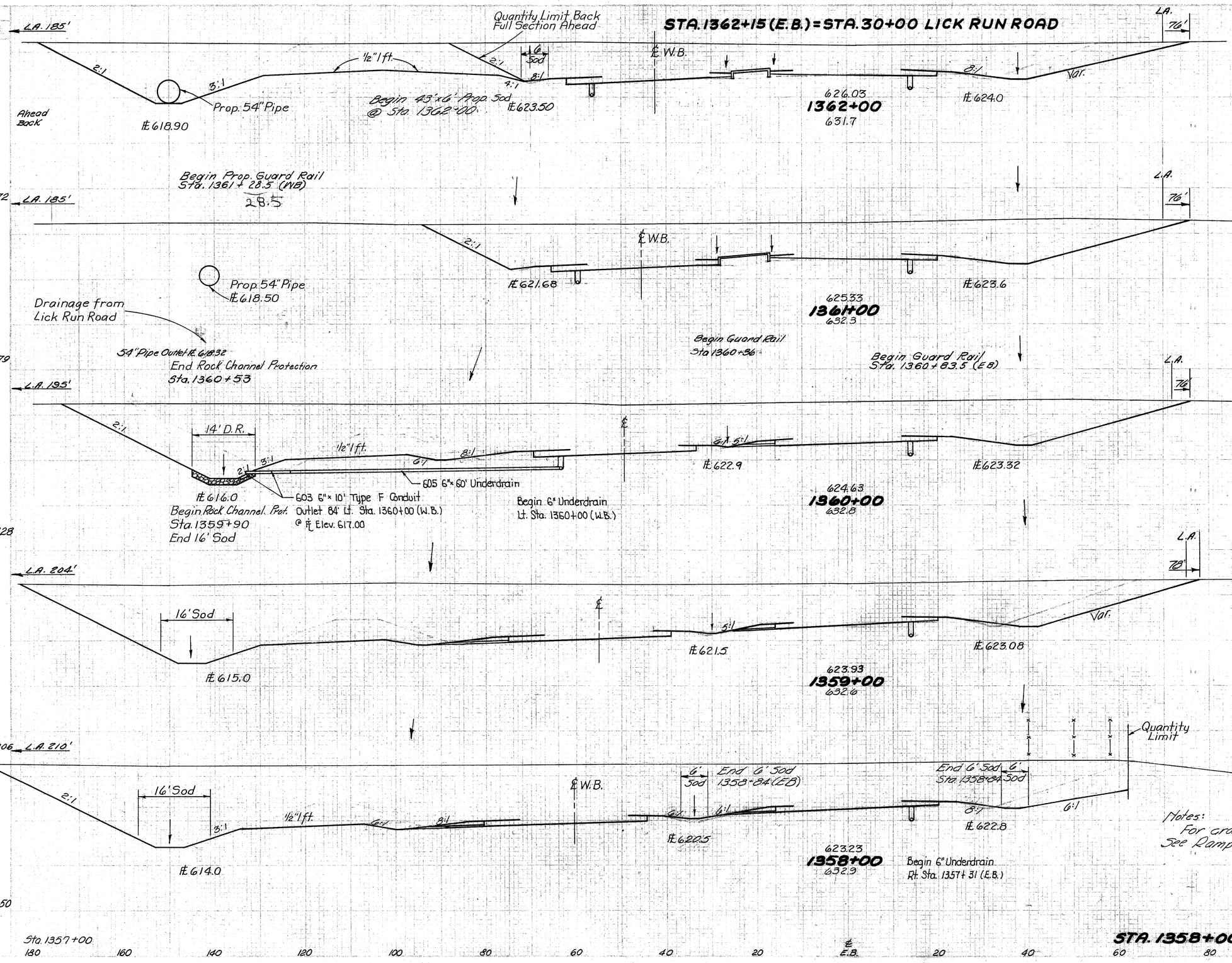
ROSS COUNTY
ROS-35-25.05



	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
AHEAD 1795 0				
BACK 1045 0				
			4380	0
			1320	0
			3485	0
Sta. 1360+50			2444	0
			4526	4
			2444	4
			9582	28
			2730	11
			10649	43
			3020	12
			9890	44
Sta. 1357+00			2320	12

STA. 1358+00 TO STA. 1362+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	F-674(12)	

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ROSS COUNTY
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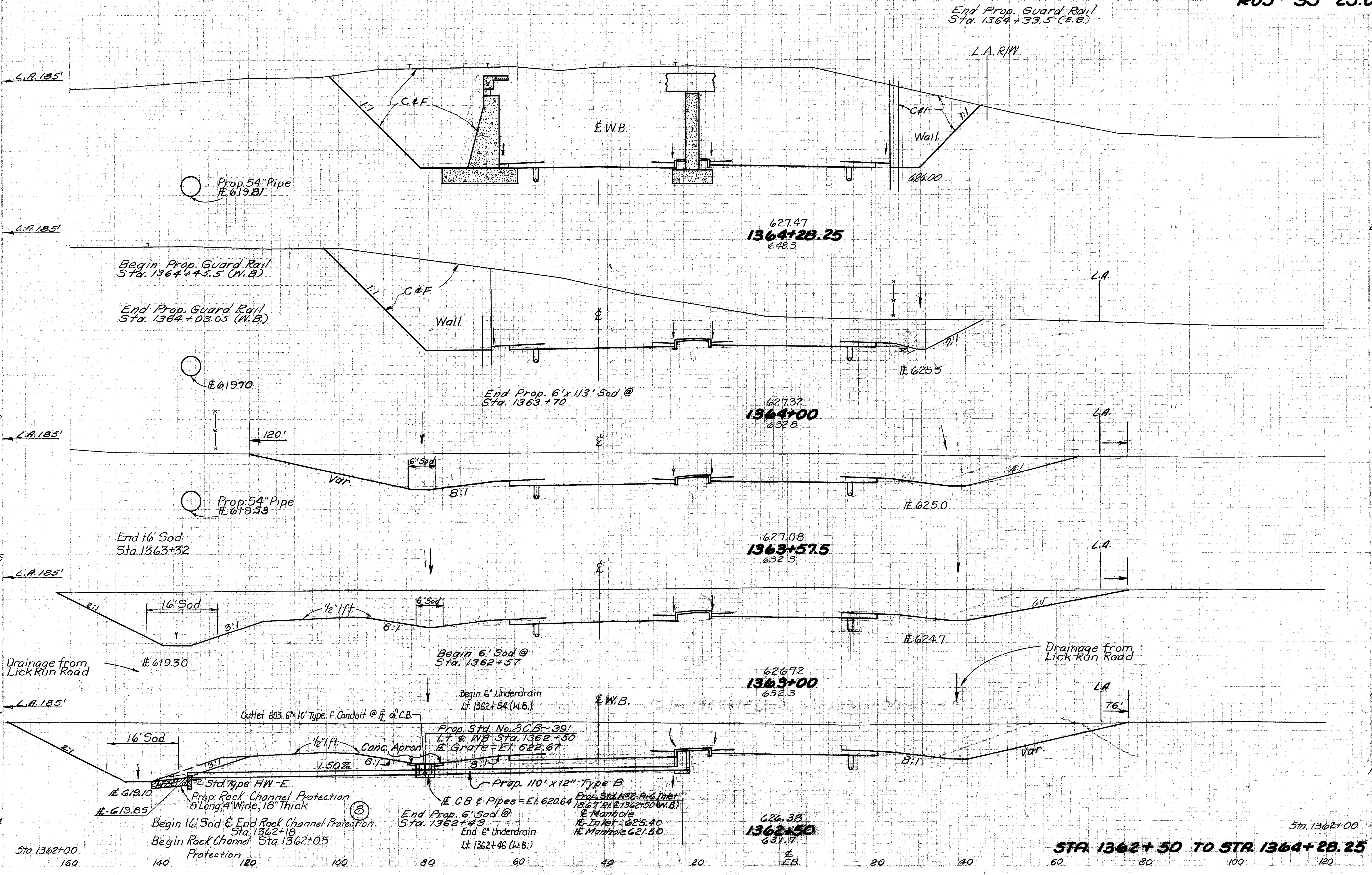
STA. 1364+45.80 (E.B.) = STA. 2240+57.02 C. & O. RAILWAY



SEEDING END WIDTH	SEEDING SQ. YDS.
5	
	69
40	
	372
118	
	875
156	
	917
174	
	1114
227	

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
2702	732		
		2219	659
1539	528		
		2013	421
1019	7		
		2752	15
1565	7		
		3074	13
1755	7		
		3287	13
1795	0		

STA. 1362+50 TO STA. 1364+28.25

ROSS COUNTY
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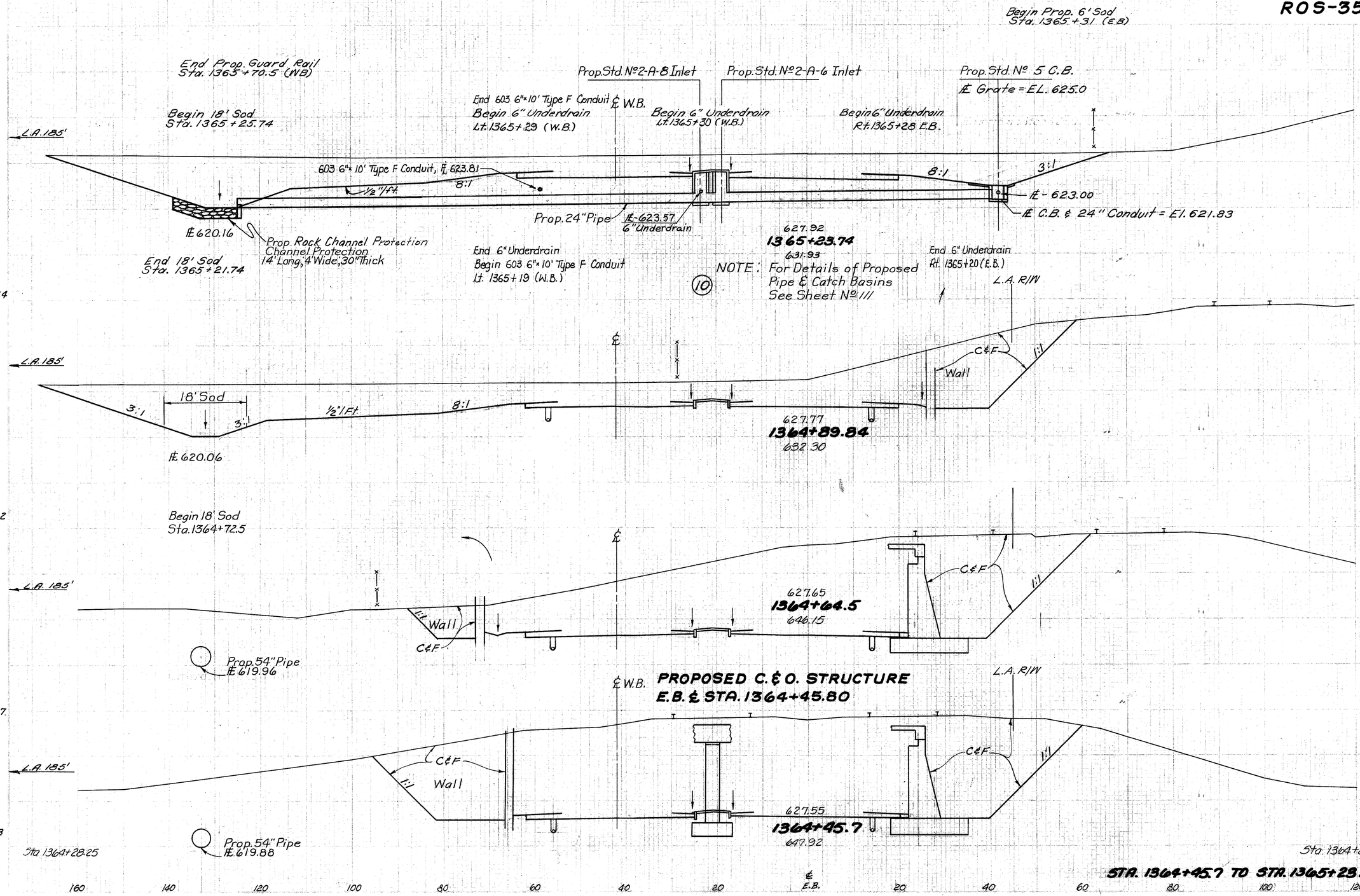

FED. AID PROJECT	STATE	PROJECT	
2	OHIO	F-674(12)	

51
225

ROSS COUNTY
ROS-35-25.05

END AREA		VOLUME	
CUT	FILL	CUT	FILL

L.A. 196'

1370+00

180 170

18'Sod

3:1 3:1 1½"/Ft 8:1

℄ W.B.

L.A. R/W

8:1 6:1

152 ℄ 621.30

629.43
1370+00
631.03

℄ 626.5

917 0

169.4

L.A. 196'

18'Sod

℄

153 ℄ 621.06

629.13
1369+00
630.89

℄ 626.2

986 0

3524 0

177.8

L.A. 195'

18'Sod

℄

167 ℄ 620.82

628.83
1368+00
631.62

℄ 625.9

1184 0

4019 0

183.3

L.A. 191'

18'Sod

℄

163 ℄ 620.58

628.53
1367+00
630.98

℄ 625.6

End Prop. 6'x150' Sod
@ Sta. 1366+80.74

1127 0

4280 0

177.8

L.A. 188'

18'Sod

3:1 3:1 1½"/Ft 8:1

℄ W.B.

6'Sod

L.A. R/W

8:1 6:1

157 ℄ 620.34

628.22
1366+00
631.13

℄ 625.3

1155 0

4226 0

129.4

Sta. 1365+23.74

149

3467 10

Sta. 1365+23.74 1300 7

160 140 120 100 80 60 40 20 ℄ E.B. 20 40 60 80 100 120

STA. 1366+00 TO STA. 1370+00

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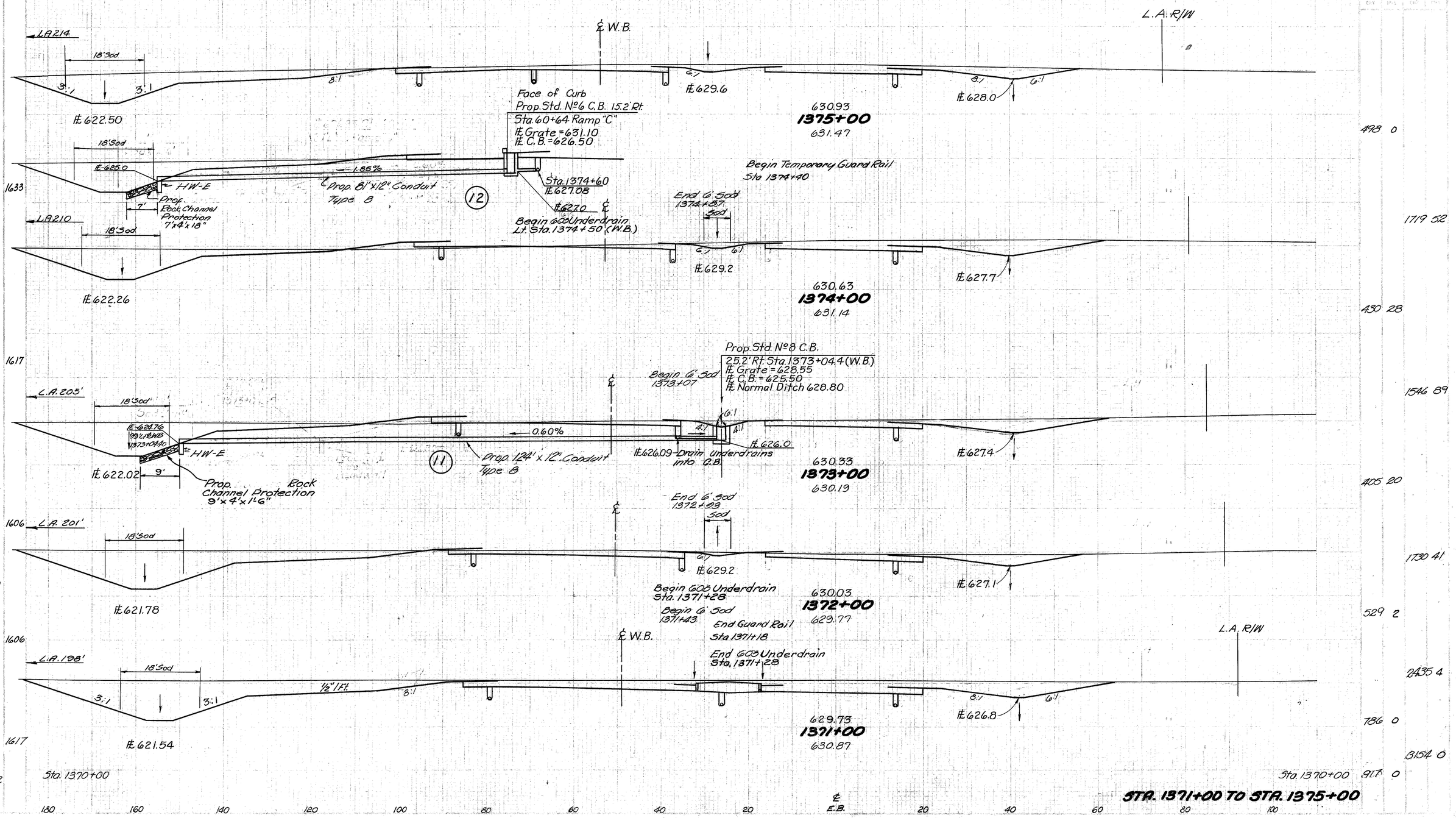

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End 605' 6" Pipe Underdrain
Rt. of E.B. Sta. 1380+72
℄ 625.85

Outlet 55' Rt. E.B. Sta. 1380+43
℄ 625.50

End 605' 6" Pipe Underdrain
Rt. of W.B. Sta. 1380+50
℄ 626.98

Rt. of E.B. Sta. 1380+43
℄ 625.73

603' 6"x 90' Type B Conduit @ Class B Bedding

603' 6"x 10' Type F Conduit

PART-SECTION SHOWING UNDERDRAIN OUTLET DETAILS

Begin 6' Sod
L.A.E.B. Sta. 1380+42
℄ Normal Ditch 629.4

℄ W.B.

L.A. R/W

6:1 6:1 8:1 6:1

℄ 629.00

℄ 627.13

℄ 625.9

Quantity Limit

630.63
1380+00
629.25

128

100 71

NOTE: For Details of 27" Pipe
See Sheet Nº 112

1393

℄ Ramp "C"

℄

6:1 8:1 8:1 6:1

℄ 629.2

℄ 629.6

℄ 626.6

Quantity Limit

For Cross Section
Ext. See Sht. Nº 80

630.93
1379+00
629.58

112

315 202

70 38

1144

℄ Ramp "C"

℄

6:1 8:1

℄ 630.6

℄ 629.8

℄ 627.6

Quantity Limit

631.16
1378+00
630.12

293 198

94

Drainage From Ramp "C"

LA 225

18'Sod

3:1

1377+00

200 180

88 69

285 237

1017

℄ Ramp "C"

℄

18'Sod

6:1 8:1

8:1

℄ 631.0

℄ 630.0

℄ 628.6

Quantity Limit Ahead

Ahead 66 59
Back 310 67

631.23
1377+00
630.82

89
164

℄ 622.98

Ahead
Back

LA 219

1376+00

200 180

1756

℄ Ramp "C"

℄ W.B.

L.A. R/W

18'Sod

1/2" / Ft.

3:1 3:1 8:1

6:1 6:1 8:1 6:1

℄ 630.2

℄ 628.3

1235 133

152

℄ 622.74

631.16
1376+00
630.76

357 5

1583 9

1633

142

Sta. 1375+00

Sta. 1375+00

498 0

180 160 140 120 100 80 60 40 20 ℄ E.B. 20 40 60 80 100

STA. 1376+00 TO STA. 1380+00

SHEET NO.	STATE	PROJECT	
2	OHIO	F-674(12)	

54
225

ROSS COUNTY
ROS-35-25.05

END AREA		VOLUME	
CUT	FILL	CUT	FILL

℄ W.B.

LA154

1385+00
628.56

End Guard Rail
Sta. 1384+35

END PROJECT STA. 1384+34.21

For Cross Section Extensions
See Sheet 1 No. 78

See Temporary Connection
Cross Sections

2:1

4:1

Temporary U.S.R.35
Westbound

Temporary U.S.R.35
Eastbound

See Temporary Connection
Ahead
Back

79

Prop. 24" Pipe

17

℄ 628.5

℄ 626.47

℄ 626.63

8:1

6:1

℄ 626.5

629.52
1384+00
628.17

See Temporary
Connection Ahead
Back

50 26

End 8' Sod
Rt. Sta. 1383+50

End 12' Sod
Lt. W.B. Sta. 1383+20

End 6' Sod
Lt. E.B. Sta. 1383+57

1328

Outlet 64.5 Lt. W.B. 1383+00
@ ℄ 625.80

12' Sod

603 6"x 10' Type 'F' Conduit

8:1

6:1

℄ 625.54

603 6"x 70' Type B Conduit
with Class B Bedding

℄ 626.07

℄ 626.23

℄ 629.2

6' Sod

Begin 605 6" Pipe Underdrain
Rt. of W.B. Sta. 1382+14

Prop. Std. No. 8 C.B.
Sta. 1382+10.0 W.B. 32.1' Rt
℄ Grate = 627.95
℄ C.B. = 625.36
℄ Normal Ditch = 628.2

629.73
1383+00
628.77

℄ 625.23

605 6"x 29' Pipe Underdrain

603 6"x 10' Type F Conduit

℄ 625.12

8' Sod

Drainage from Athens Road
LA164

Begin 8' Sod Rt. Sta. 1382+83

398 130

165 44

160

1522

STA. 1382+72.43 (E.B.) = STA. 167+44.84 ATHENS ROAD

12' Sod

℄ 624.96

℄ Outlet =
EL. 624.98

6'

6:1

HW-E
Rock Channel
Protection 4'x 6'x 18"

Prop. 603-96' x 12" Type B

15

0.40%

Prop. 6"x 9' Underdrain

℄ 626.38

603 6"x 10'
Type F

Outlet Underdrain
into C.B. ℄ 626.00

8:1

Begin 6' Sod
Lt. E.B. Sta. 1382+08

630.03
1382+00
628.27

16

Prop.
24" Pipe

420 315

114

62 126

1656

Begin Prop. 12' Sod
Sta. 1381+14 (WB)

Hdwl. - 64.3' Lt. WBL & Sta. 1382+10.0

℄ W.B.

End 605 6" Pipe Underdrain
Rt. of W.B. Sta. 1382+06

End 6' Sod
Lt. E.B. Sta. 1381+93

Drainage from Athens Road

565 357

184

4:1

8:1

6:1

℄ 624.54

℄ 628.8

℄ 624.64

630.33
1381+00
629.24

Begin 605 6" Pipe Underdrain
Rt. of W.B. Sta. 1381+61

Begin 605 6" Pipe Underdrain
Rt. of W.B. Sta. 1380+83

243 67

1738

635.256

128

Sta. 1380+00

Sta. 1380+00 100 71

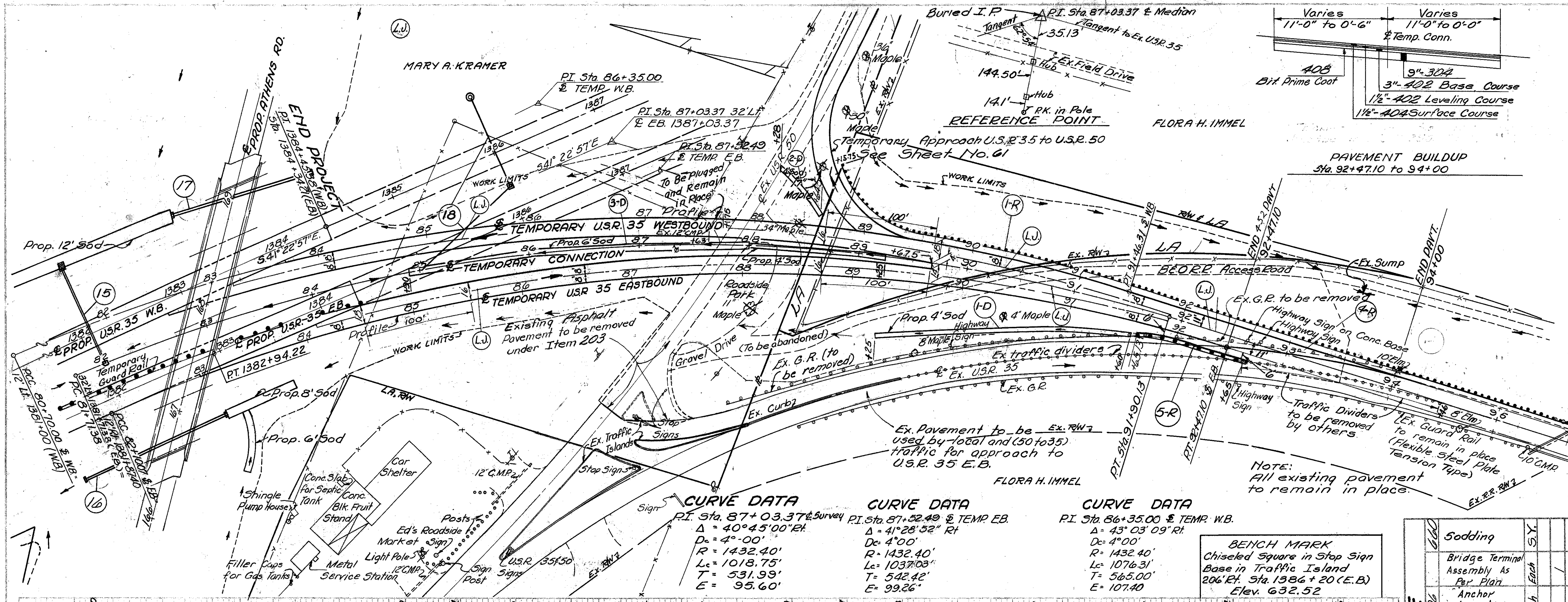
STA. 1381+00 TO STA. 1384+34.21

180 160 140 120 100 80 60 40 20 ℄ E.B. 20 40 60 80 100

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	F-674(12)	

55
225

ROSS COUNTY
ROS-35-25.05



Varies 11'-0" to 0'-6"
Varies 11'-0" to 0'-0"
℄ Temp. Conn.
408 Bit. Prime Coat
9"-304
3"-402 Base Course
1½"-402 Leveling Course
1½"-404 Surface Course

PAVEMENT BUILDUP
Sta. 92+47.10 to 94+00

Existing Bridge № ROS-35-263
EXISTING BRIDGE DATA
TYPE: Concrete Bridge with Continuous Steel Beam
SPAN: 54'-62'-54' C/C Bearings
ROADWAY: 24' plus two 3' Sidewalks
LOADING: H-15-33
SKEW: 45° LF.
WEARING SURFACE: 1" Monolithic Concrete
CONDITION: GOOD
DISPOSITION: To Remain in Place

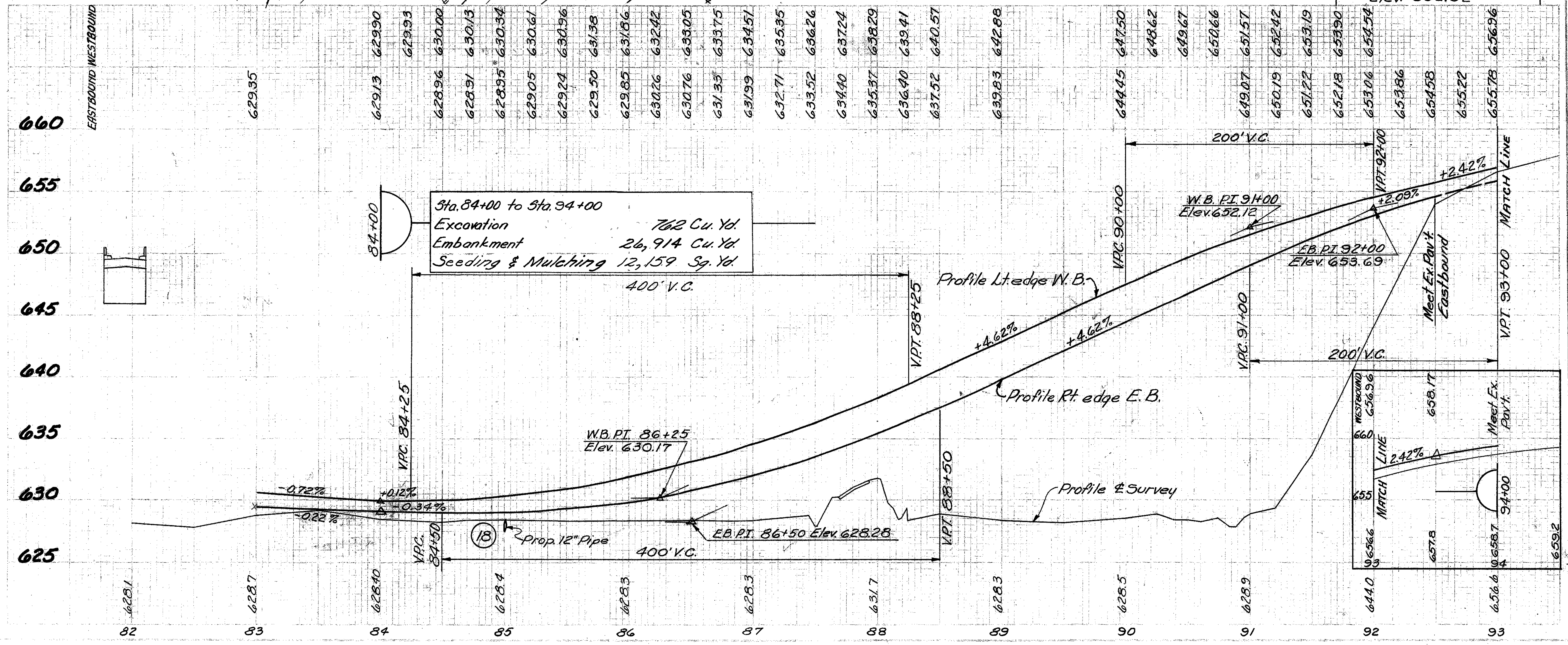
NOTE:
All existing pavement to remain in place.

CURVE DATA
P.I. Sta. 87+03.37 ℄ Survey
Δ = 40°45'00" Rt.
Dc = 4°-00'
R = 1432.40'
Lc = 1018.75'
T = 531.99'
E = 95.60'

CURVE DATA
P.I. Sta. 87+52.49 ℄ TEMP. EB.
Δ = 41°28'52" Rt
Dc = 4°00'
R = 1432.40'
Lc = 1037.03'
T = 542.42'
E = 99.26'

CURVE DATA
P.I. Sta. 86+35.00 ℄ TEMP. W.B.
Δ = 43°03'09" Rt.
Dc = 4°00'
R = 1432.40'
Lc = 1076.31'
T = 565.00'
E = 107.40

BENCH MARK
Chiseled Square in Stop Sign Base in Traffic Island
206' Rt. Sta. 1386+20 (E.B.)
Elev. 632.52



Sta. 84+00 to Sta. 94+00
Excavation 762 Cu. Yd.
Embankment 26,914 Cu. Yd.
Seeding & Mulching 12,159 Sq. Yd.

ROADWAY ~ QUANTITIES ~ DRAINAGE

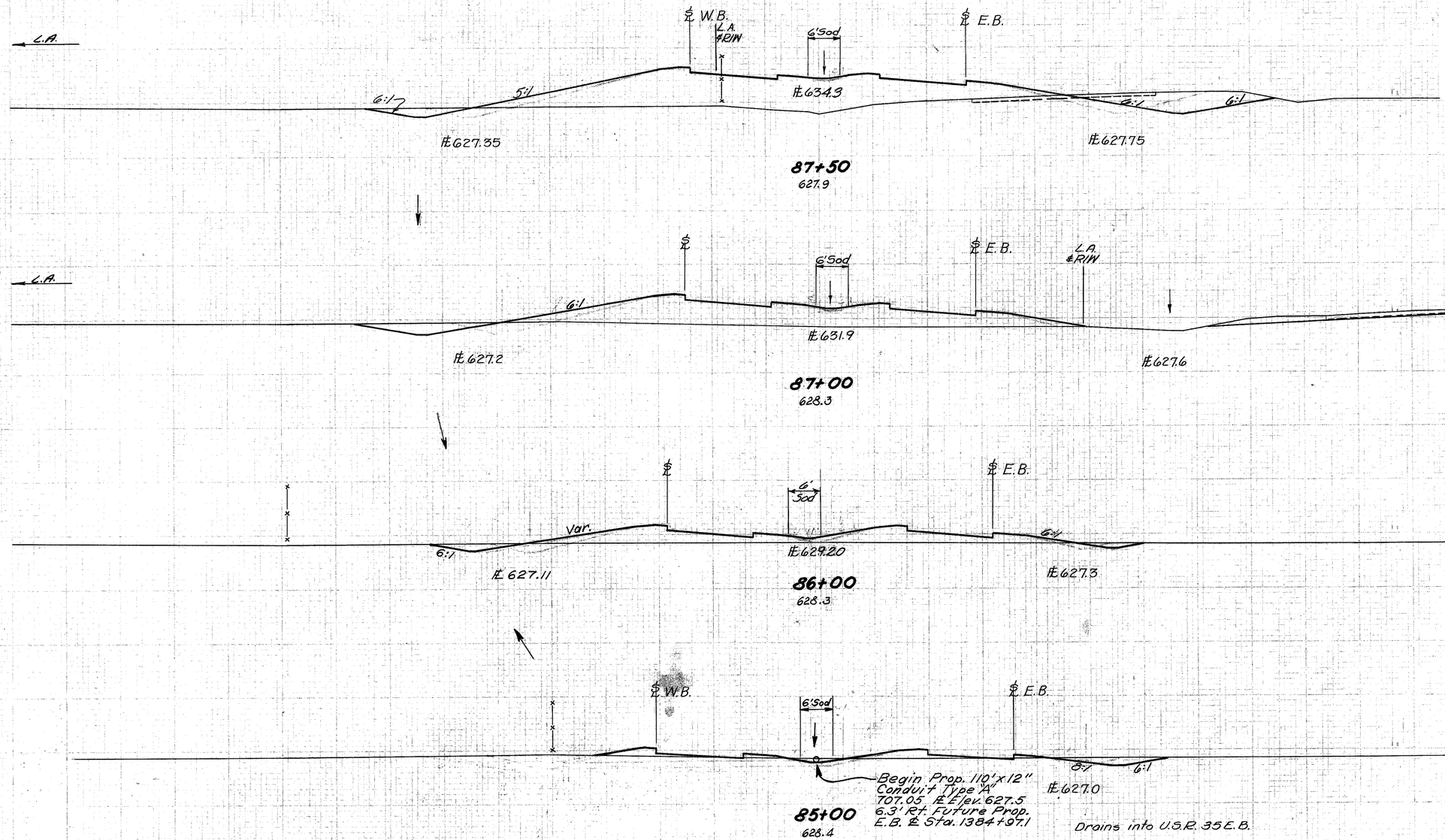
Reference or Structure No	See Sheet Number	Station to Station	Side	304 Aggregate Base C.Y.	402 Asphalt Concrete (85-100) C.Y.	408 Bituminous Prime Coat @ 0.40 Gal. per Sq. Yd. S.Y.	404 Asphalt Concrete (85-100) C.Y.	606 Guard Rail Type 5 Lin. Ft.	606 Approach End Assembly Each	606 Guard Rail Type 5 Barrier Design Lin. Ft.	402 Asphalt Concrete (85-100) Leveling Course Cu. Yds.	606 Anchor Assembly Each	Bridge Terminal Assembly As Per Plan Each	660 Sodding S.Y.
1-R		1+15.73 (Approach) to 95+67	Lt.					725				1	1	
2R		Not Used												
3R		Not Used												
4-R		92+47.10 to 94+00	Lt.+Rt.	40.3	13.4	161	6.7				6.7			
5-R		91+65.13 to 92+65	Rt						1	100		1		
1-D		89+25 to 91+60	Rt.											105
2-D		88+28 to 88+64.5	Lt.											21
3-D		84+90 to 89+25	℄											262
15	54	1382+10 (W.B.)	Lt.											
16	114	166+73.5 (Athens Rd.)	Lt.+Rt.											
17	115	169+00.9 (Athens Rd.)	Lt.+Rt.											
18	116	1386+00 (E.B.)	Lt.											
		TOTAL		*40.3	*13.4	*161	*6.7	725	1	100	*6.7	2	1	388

* Carried to Sht. № 21

TEMPORARY CONNECTION

FED. AID DIVISION	STATE	PROJECT		SHEET NO.
2	OHIO	F-674(12)		50 225

ROSS COUNTY
ROS-35-25.05



	SUB AREA		ROADWAY	
	CUT	FILL	CUT	FILL
136			100	470
661			165	731
102			78	320
1,122			176	896
100			17	164
961			69	369
73			20	35
844			130	113
79				

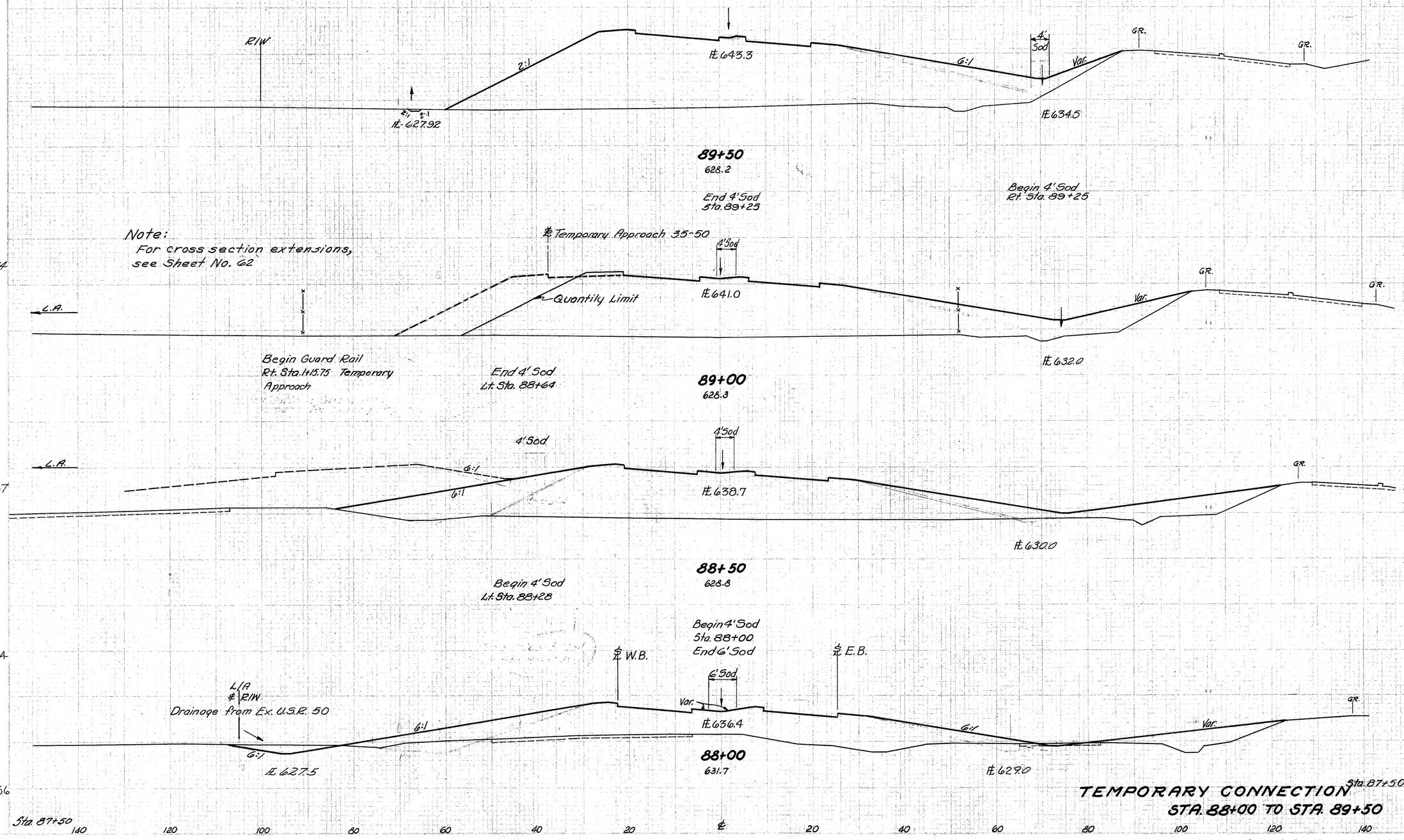
Sta. 84+00 50 26

TEMPORARY CONNECTION
STA. 85+00 TO STA. 87+50

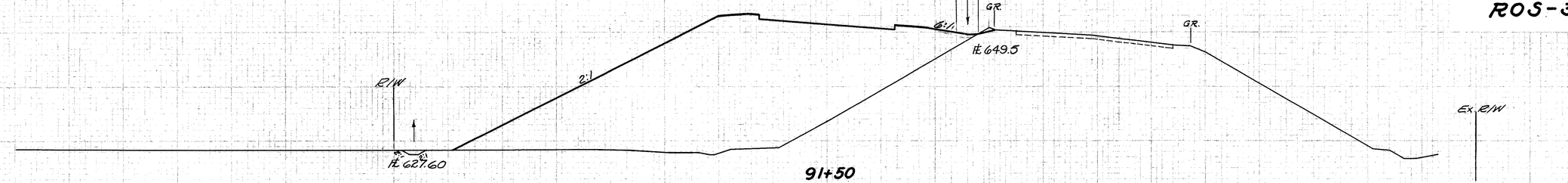
SHEETS		STATE	PROJECT		57
2	OHIO	F-674(12)			225

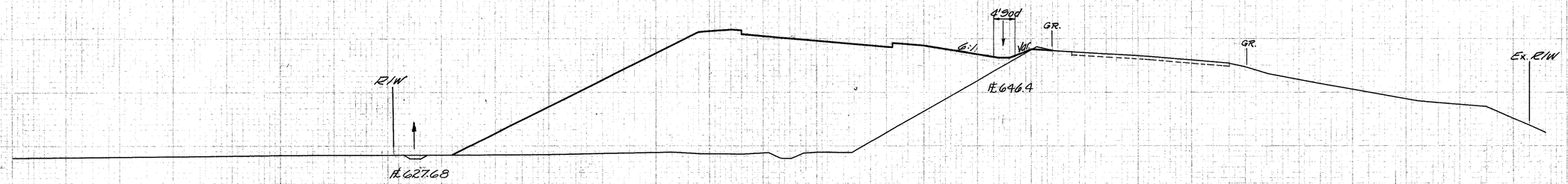
ROSS COUNTY
ROS-35-25.05

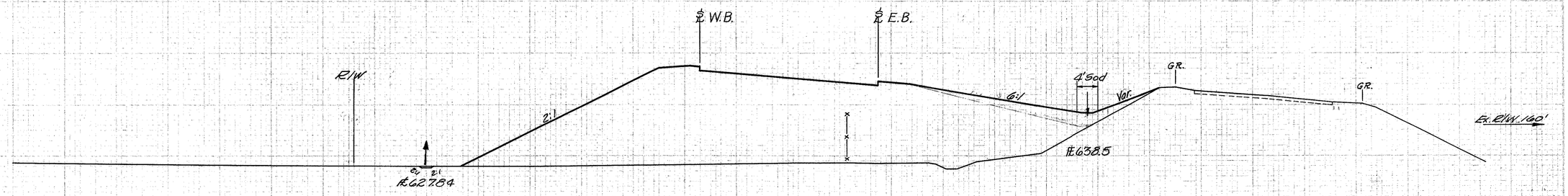
		END AREA		VOLUME	
		CUT	FILL	CUT	FILL
138				1	1520
794				1	2648
148				0	1340
94.7				0	2,431
193				0	1,286
1,114				23	1908
208				25	775
956				117	1154
136				100	470



TEMPORARY CONNECTION
STA. 88+00 TO STA. 89+50







FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	F-674(12)	

58
225

ROSS COUNTY
ROS-35-25.05

TEMPORARY CONNECTION
STA. 90+00 TO STA. 91+50

Station	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
91+50	3	1,330		
			5	2,611
91+00	2	1,490		
			3	2,815
90+50	1	1,550		
			2	2,935
90+00	1	1,620		
			2	2,907
Sta. 89+50	1	1,520		

SEC. NO.	STATE	PROJECT	
2	OHIO	F-674(12)	

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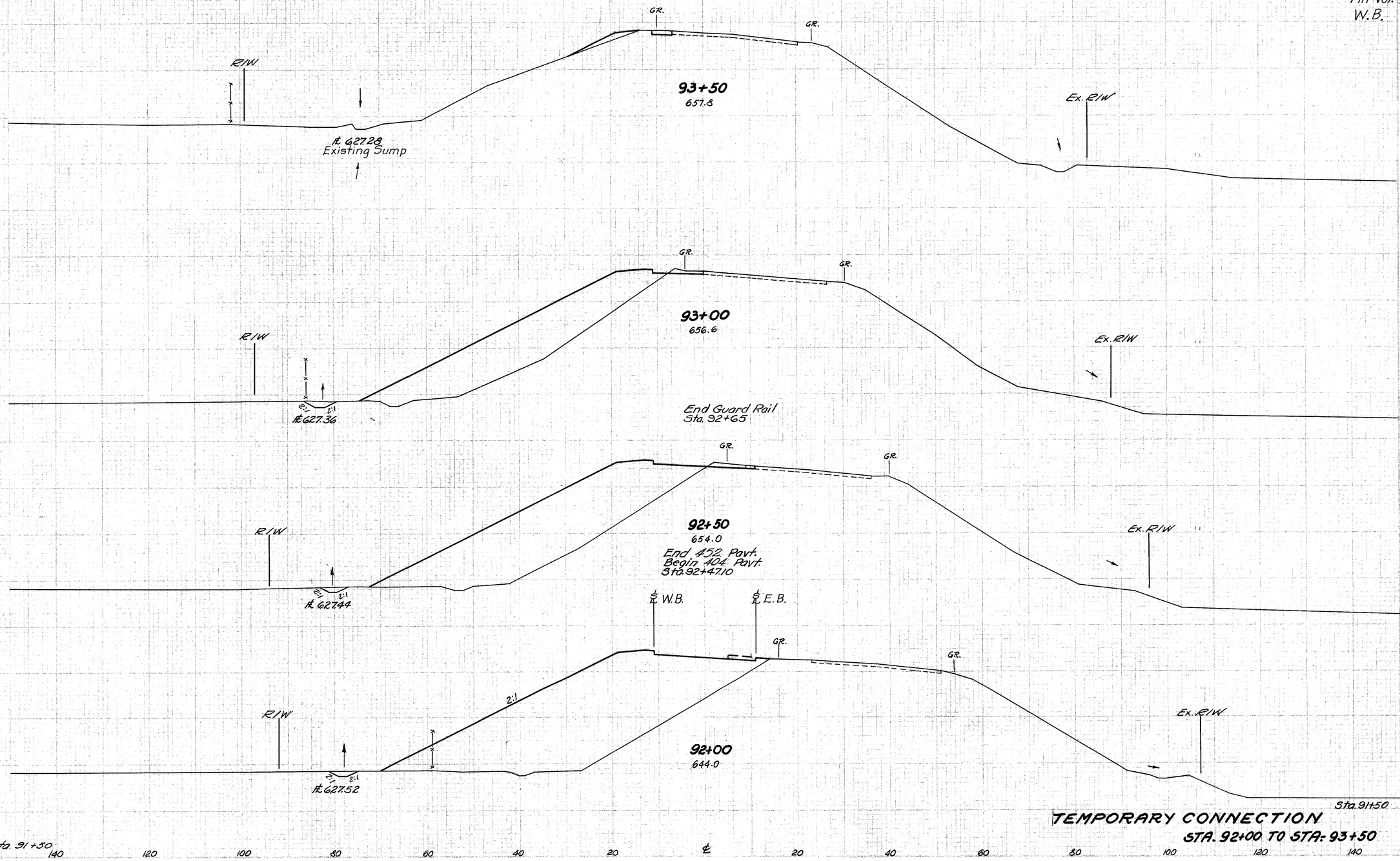
225

ROSS COUNTY
ROS-35-25.05

Fill Vol.
W.B.

SECTIONS		END AREA		VOLUME	
CUT	FILL	CUT	FILL	CUT	FILL
38		4	11		
	386			16	483
101		13	511		
	553			24	1127
98		13	706		
	539			17	1,599
96		5	1021		
	544			7	2,177
		3	1,330		



TEMPORARY CONNECTION
STA. 92+00 TO STA. 93+50

FED. ROAD DIVISION	STATE	PROJECT	
2	OHIO	F-674(12)	

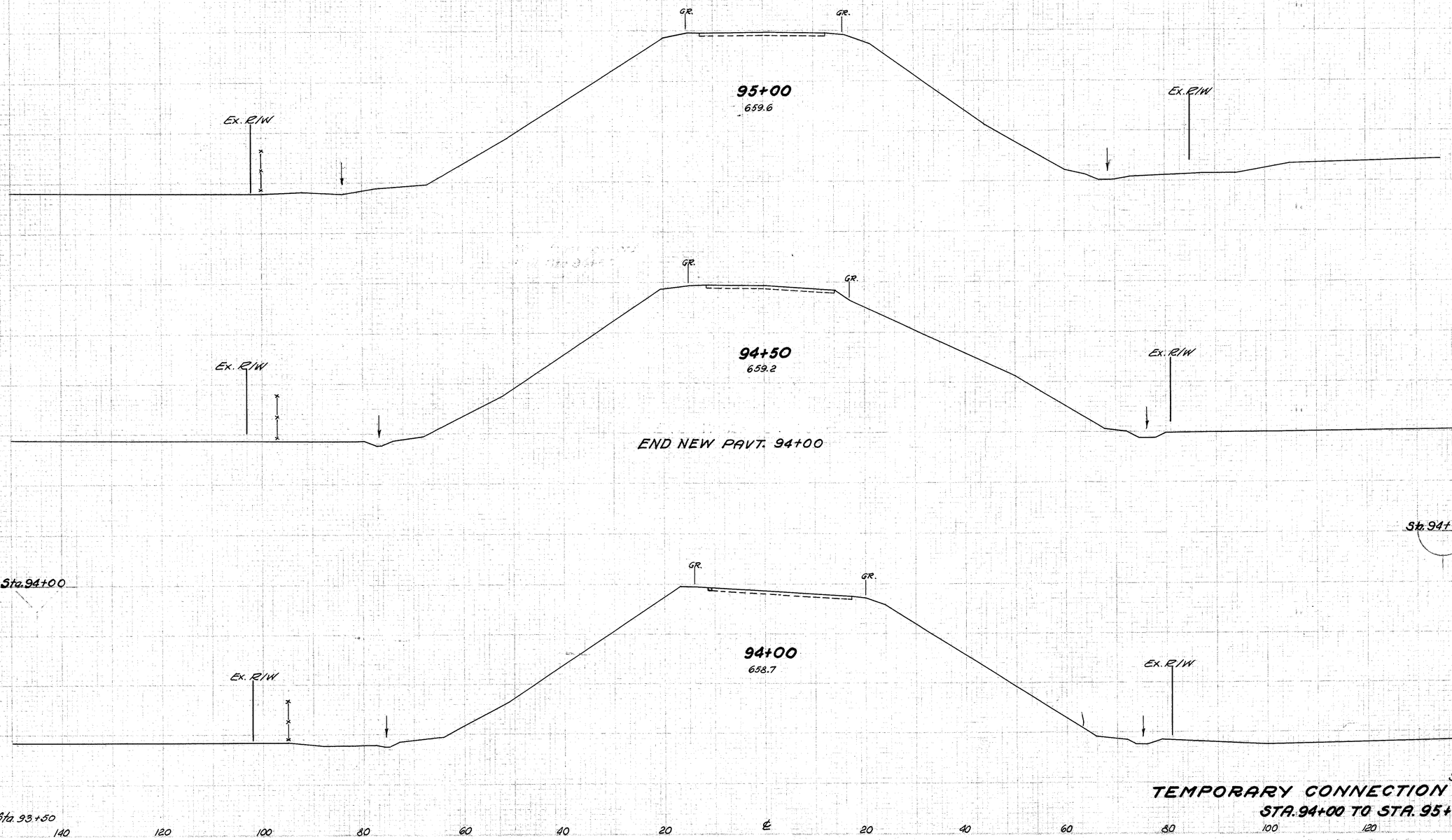
60
225

ROSS COUNTY
ROS-35-25.05

(SIGN ERECTION)
END WORK STA. 101+68

End Guard Rail
Lt. Sta. 95+67

	END AREA		VOLUME	
	CUT	FILL	CUT	FILL
Fill Vol. W.B.				



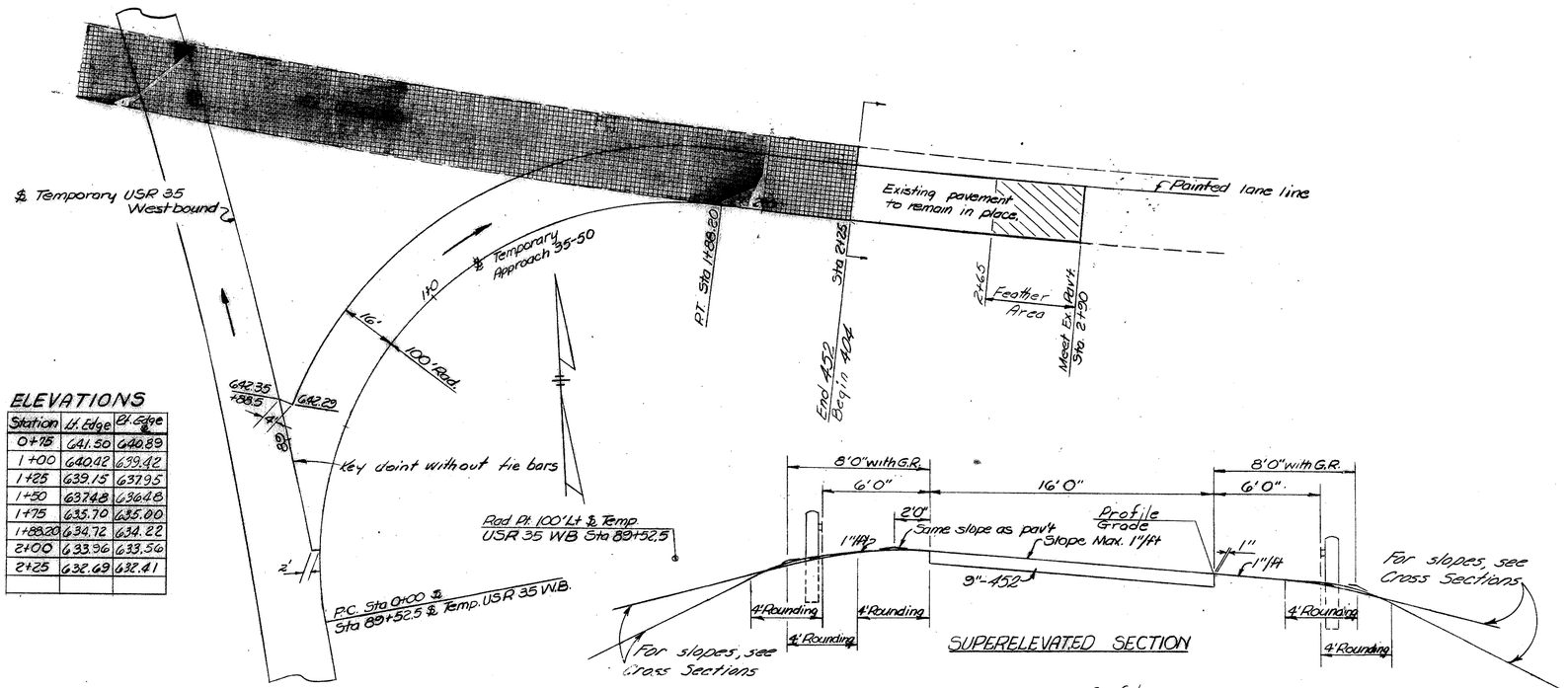
TEMPORARY CONNECTION
STA. 94+00 TO STA. 95+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	F-674(12)	

61 / 225

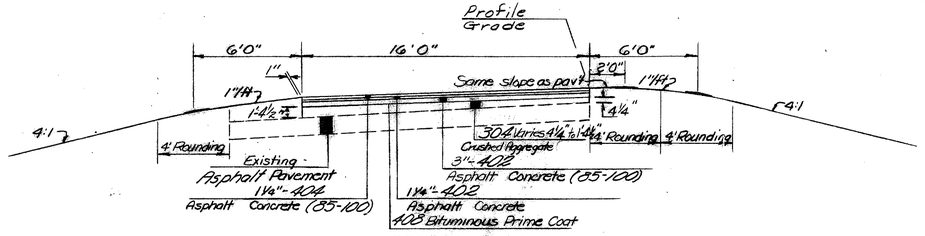
ROSS COUNTY
ROS-35-25.05

LEGEND
Pavement to be abandoned



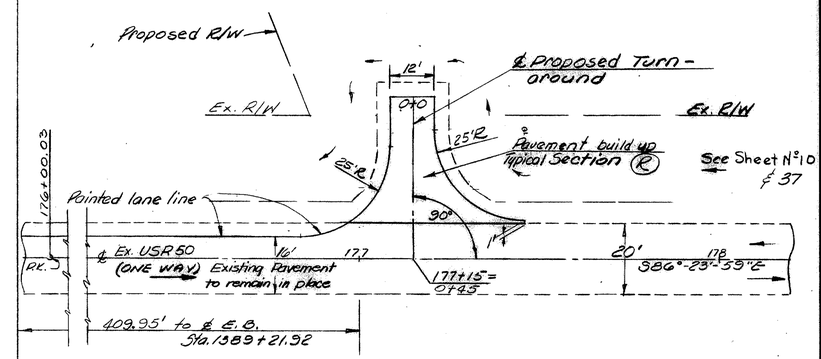
ELEVATIONS

Station	Lt. Edge	Rt. Edge
0+75	641.50	640.89
1+00	640.42	639.42
1+25	639.15	637.95
1+50	637.48	636.48
1+75	635.70	635.00
1+88.20	634.72	634.22
2+00	633.96	633.56
2+25	632.69	632.41

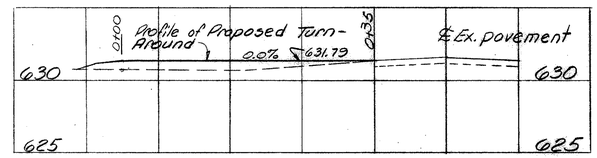


STATION 2+25

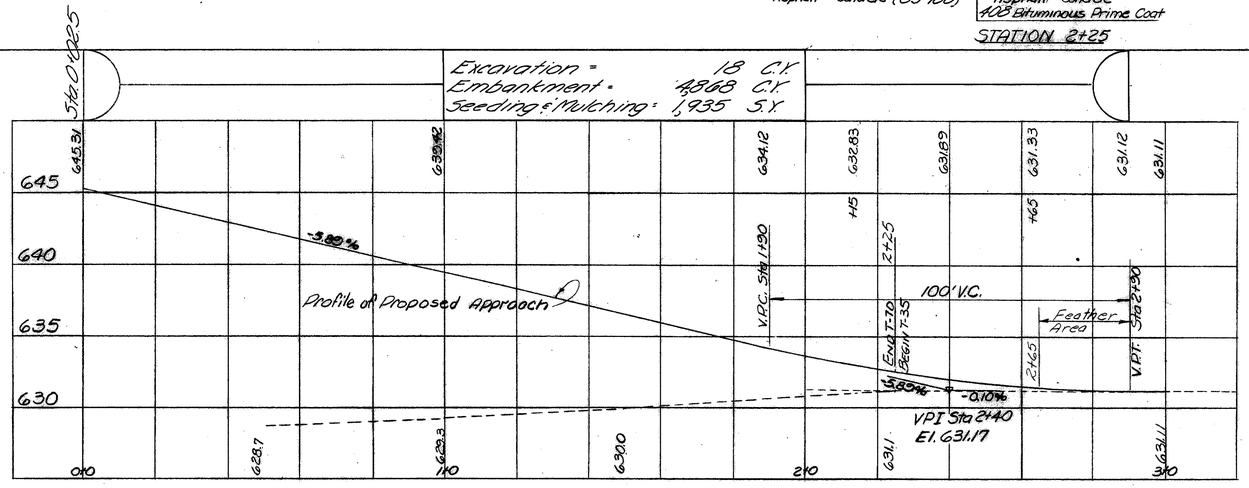
TEMPORARY APPROACH 35-50



PLAN



PROFILE OF PROPOSED TURN-AROUND



PROFILE TEMPORARY APPROACH 35-50

ESTIMATED QUANTITIES

Item	Description	Temp. Approach Sch. 35-50	Turn-around	unit
408	Bituminous Prime Coat, applied at the rate of 0.40 Gal./Sq. Yd.	115.6	73	Sq. Yds.
304	Aggregate Base	10.3	10.1	Cu. Yds.
404	Asphalt Concrete (85-100)	3.3	4.1	Cu. Yds.
402	Asphalt Concrete (85-100)	3.3		Cu. Yds.
452	9" Plain Portland Cement Concrete Pavement	365.9		Sq. Yds.
402	Asphalt Concrete (85-100)	3.0		Cu. Yds.

Quantities carried to Sht. N° 21

ELMER S. BARRETT ASSOCIATES
Consulting Engineers
245-249 S. Paint Street Chillicothe, Ohio

TEMPORARY APPROACH 35-50
&
PROPOSED TURN-AROUND

SCALE			DATE			
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED

Seeding End Width	Sq Yds
0	
123	
34	
508	
88	
639	
142	
533	
50	
132	
0	

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	F-674(12)	

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ROSS COUNTY
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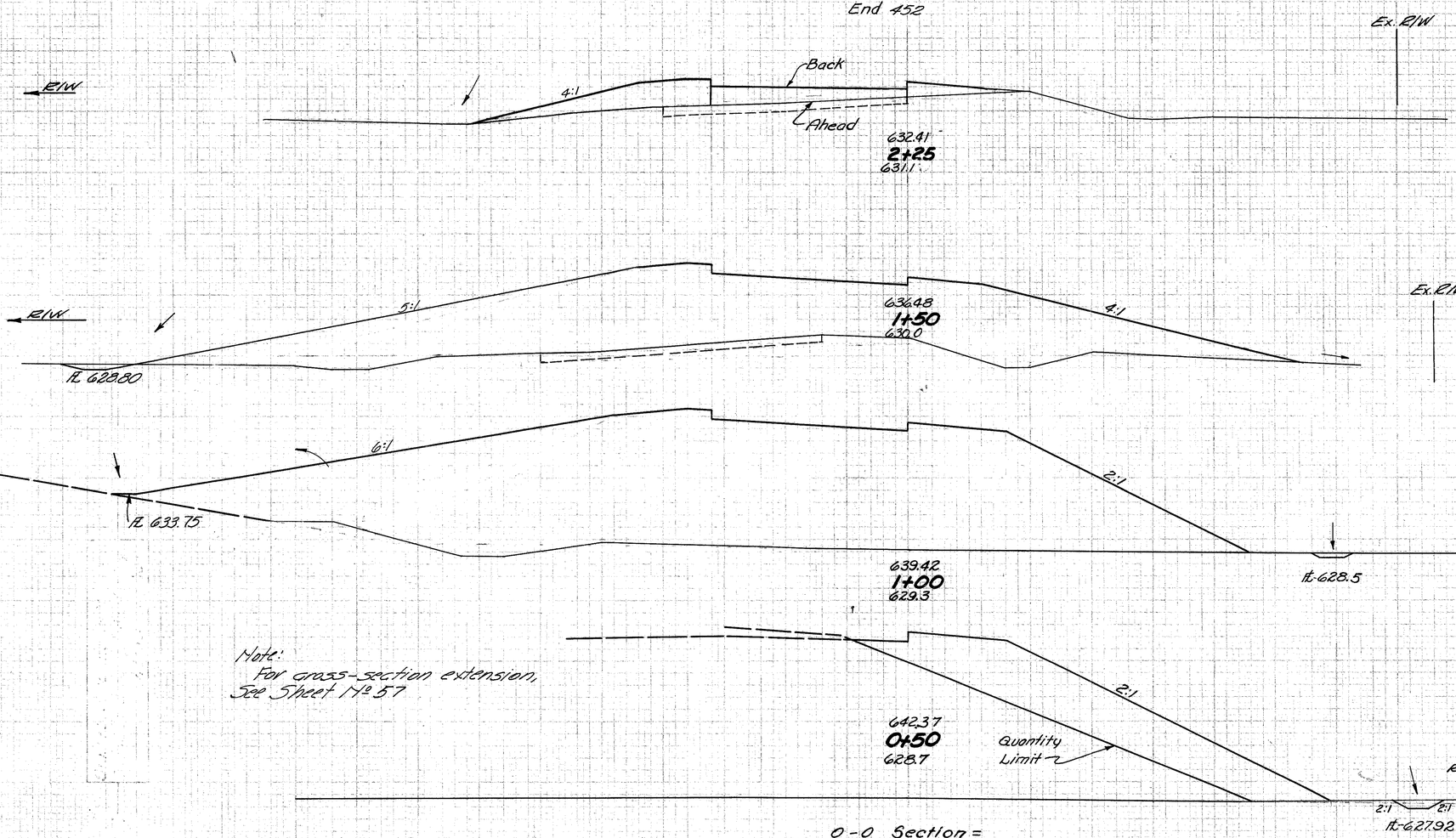
END WORK
STR. 2+90
Begin 404
Sta. 2+25
End 452



Note:
For cross-section extension,
See Sheet No. 57

0-0 Section =
0+02.5 = 8.9+50 (Temporary Connection)

	Sta.	Cut	Fill
	Sta. 2+90	0	0
0 41			
	2+25 Ahead	0	34
	Back	0	52
6 1,108			
4 746			
5 1964			
1 1375			
4 1514			
3 260			
3 241			
	0+02.5	0	0

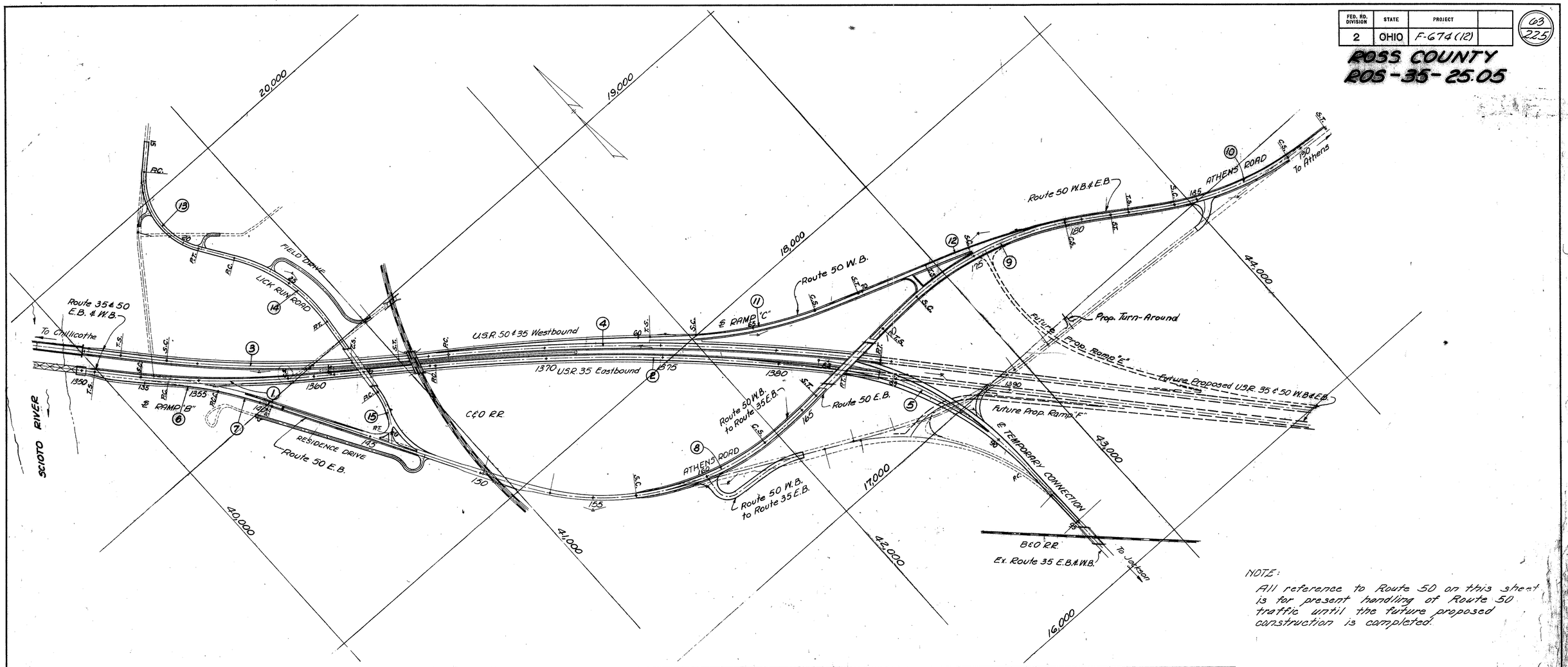
TEMPORARY APPROACH U.S.R. 35 to U.S.R. 50
STA. 0+50 TO STA. 2+50

70 60 50 40 30 20 10 ℄ 10 20 30 40 50 60 70

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	F-674(12)	

03
225

ROSS COUNTY
ROS-35-25.05



NOTE:
All reference to Route 50 on this sheet is for present handling of Route 50 traffic until the future proposed construction is completed.

INTERCHANGE CURVE DATA & COORDINATES

	TANGENT TO CURVE (T.C.) OR TANGENT TO SPIRAL (T.S.) STA.	N	E	SPIRAL TO CURVE (S.C.) STA.	N	E	POINT OF INTERSECTION STA.	N	E	CURVE TO SPIRAL (C.S.) STA.	N	E	CURVE TO TANGENT (C.T.) OR SPIRAL TO TANGENT (S.T.) STA.	N	E	Δ	Ts or T	Es or E	Ls	Xc	Yc	Dc	Rc	Δc or Θ	Lc
U.S.R. 35 EASTBOUND																									
1.	1350+55.61	19,602.75	39,989.64	1352+55.61	19,453.62	40,122.90	1355+73.70	19,213.43	40,331.48	1358+88.39	19,026.86	40,589.13	1360+88.39	18,907.27	40,749.43	12°29'30"	518.09'	23.25'	200'	199.99'	1.75'	1°30'	3819.72'	1°30'	632.78'
2.	1365+23.74	18,650.002	41,100.626	—	—	—	1374+12.45	18,124.822	41,817.558	—	—	—	1382+94.22	17,458.011	42,405.069	12°23'36"	888.71'	48.10'	—	—	—	0°42'	8185.11'	—	1770.48'
U.S.R. 35 WESTBOUND & TEMP. CONNECTION																									
3.	1351+71.43	19,532.006	40,119.641	1353+71.43	19,432.681	40,252.689	1357+73.12	19,129.868	40,516.632	1361+70.76	18,893.651	40,841.556	1363+73.76	18,774.292	41,002.034	12°29'30"	601.69'	27.93'	200'	199.99'	1.45'	1°15'	4583.66'	1°15'	799.33'
4.	1365+86.38	18,646.867	41,175.978	—	—	—	1375+19.52	18,095.432	41,928.752	—	—	—	1384+45.38	17,395.284	42,545.634	12°23'36"	933.14'	50.51'	—	—	—	0°40'	8594.37'	—	1859.00'
5.	81+71.38	17,571.384	42,347.672	—	—	—	87+03.37	17,172.175	42,699.561	—	—	—	91+90.13	16,640.217	42,705.434	40°45'00"	531.99'	95.60'	—	—	—	4°00'	1432.40'	—	1018.75'
RAMP "B" (ATHENS ROAD)																									
6.	136+00.23	19,351.370	40,187.340	—	—	—	137+12.24	19,180.586	40,331.072	—	—	—	138+23.73	19,180.586	40,331.072	8°56'15"	111.95'	4.37'	—	—	—	4°00'	1432.39'	—	223.44'
7.	138+23.73	19,180.856	40,331.072	—	—	—	139+41.03	19,085.224	40,399.376	—	—	—	140+58.18	18,983.389	40,457.591	5°51'36"	117.30'	3.00'	—	—	—	2°30'	2291.83'	—	234.40'
ATHENS ROAD																									
8.	—	—	—	156+84.94	17,652.444	41,370.664	159+93.78	17,479.521	41,626.554	162+68.28	17,458.609	41,934.685	165+88.28	17,464.457	42,234.396	30°10'02"	308.84'	40.89'	300'	299.49'	13.07'	5°00'	1145.92'	7°30'	603.34'
9.	169+98.09	17,490.314	42,643.389	171+98.09	17,498.284	42,843.192	175+79.75	17,527.014	43,223.891	179+26.72	17,312.280	43,539.558	181+26.72	17,205.742	43,708.775	37°08'42"	581.66'	79.92'	200'	199.90'	4.65'	4°00'	1432.40'	4°00'	728.63'
10.	182+02.85	17,163.692	43,772.239	184+02.85	17,057.154	43,941.456	186+77.65	16,901.442	44,168.042	189+35.48	16,885.842	44,442.531	191+35.48	16,866.483	44,641.553	29°18'18"	474.80'	49.35'	200'	199.90'	4.65'	4°00'	1432.40'	4°00'	532.63'
RAMP "C"																									
11.	60+53.84	18,129.901	41,870.627	62+53.84	18,002.571	42,024.818	65+19.65	17,827.079	42,224.563	67+76.40	17,744.379	42,472.270	69+76.40	17,676.404	42,665.331	21°40'37"	465.81'	35.57'	200'	199.95'	3.49'	3°00'	1909.86'	3°00'	522.56'
12.	72+93.98	17,673.678	42,965.901	74+93.98	17,506.793	43,154.368	77+10.76	17,429.555	43,356.925	79+26.72	17,322.717	43,545.547	—	—	—	8°39'17"	216.78'	8.19'	200'	199.98'	2.33'	2°00'	2864.79'	2°00'	432.74'
LICK RUN ROAD																									
13.	16+29.38	20,118.010	40,729.657	—	—	—	18+98.93	19,930.246	40,531.530	—	—	—	20+76.69	19,704.714	40,679.153	30°31'00"	269.55'	98.80'	—	—	—	18°00'	318.31'	—	447.31'
14.	22+38.77	19,569.102	40,767.917	—	—	—	24+95.43	19,354.355	40,908.482	—	—	—	27+31.66	19,099.208	40,880.655	39°25'52"	256.66'	44.60'	—	—	—	8°00'	716.20'	—	492.89'
15.	31+07.38	18,725.703	40,839.920	—	—	—	32+04.76	18,628.897	40,829.362	—	—	—	32+96.38	18,554.568	40,766.449	34°01'15"	97.38'	14.56'	—	—	—	18°00'	318.31'	—	189.00'

ELMER S. BARRETT ASSOCIATES
CONSULTING ENGINEERS
249 S. PAINT ST. CHILLICOTHE, OHIO

GENERAL PLAN
GEOMETRIC LAYOUT

SCALE 0 100' 200' 300' DATE

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
R.W.G.		LKM				

F.A. NO. DIVISION	STATE	PROJECT		64
2	OHIO	F-674(12)		225

ROSS COUNTY
ROS -35 -25.05

PROP. CURVE DATA
P.I. Sta. 137+12.24
Δ = 8°56'15"
Dc = 4°
T = 111.95'
R = 1432.39'
Lc = 223.44'
E = 4.37'

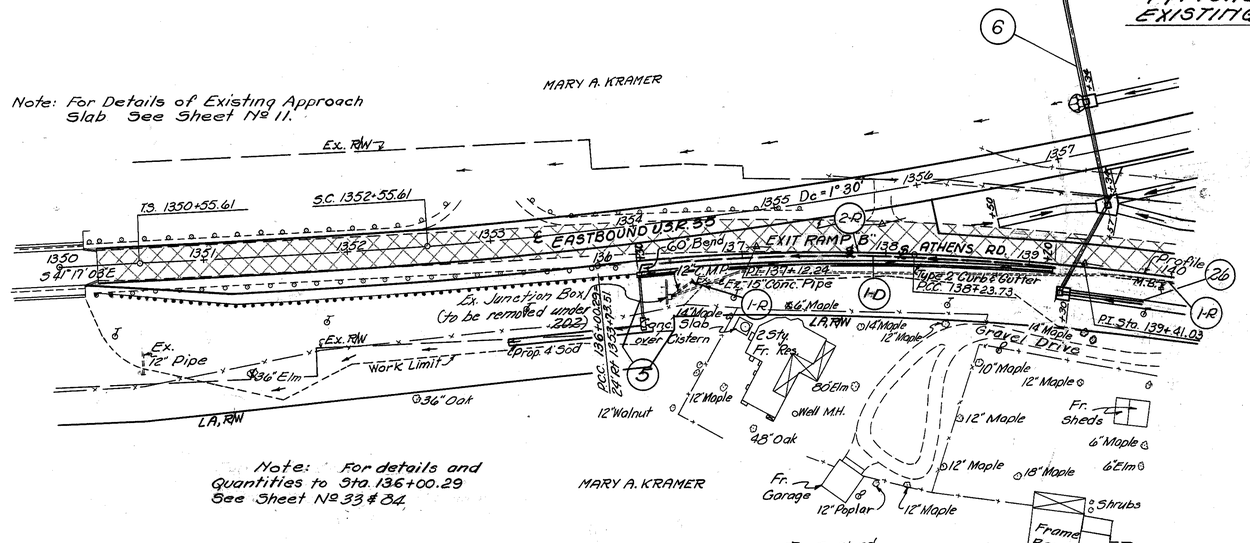
PROP. CURVE DATA
P.I. Sta. 139+41.03
Δ = 3°51'36"
Dc = 2°30'
T = 117.30'
R = 2291.83'
Lc = 234.40'
E = 3.00'

℄ Exist Pav't.
22'
7" Reinforced Concrete
2" Asphalt Pavement

TYPICAL SECTION OF EXISTING PAVEMENT

Note: For Details of Existing Approach Slab See Sheet Nº 11.

MARY A. KRAMER

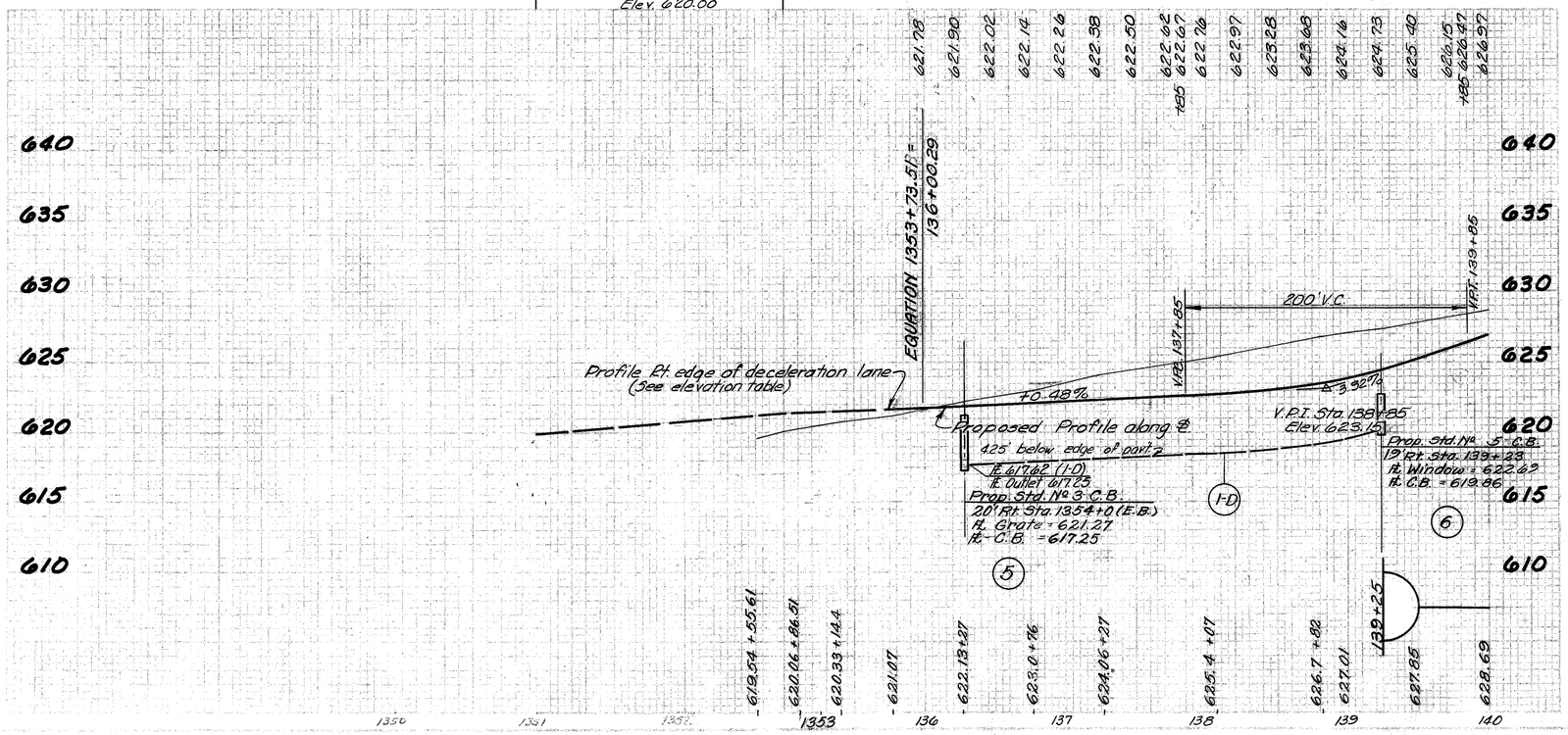


Note: For details and Quantities to Sta. 136+00.29 See Sheet Nº 33 & 34.

MARY A. KRAMER

For Details of Exit Ramp "B" See Sheet Nº 84

BENCH MARK
Chiseled Square on Conc. Walk at East End of Ex. Kilgore Bridge 15' Rt. Sta. 1350+76.5 (E.B.)
Elev. 620.00



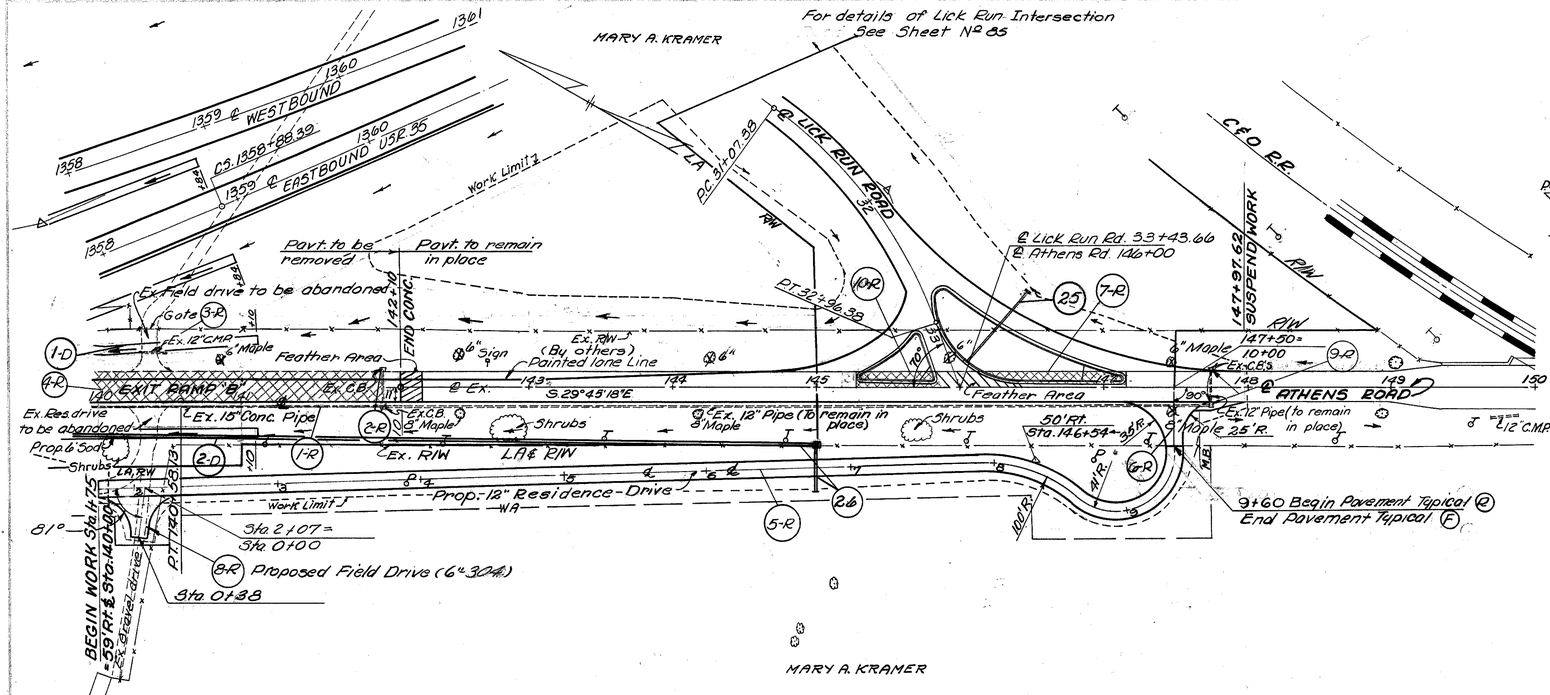
~ DRAINAGE ~ QUANTITIES ~ ROADWAY ~

										Pipe Special for Underdrains 6"x60" Bend									1
605	603	Conduit Type F Shallow Pipe Underdrains	Lin.Ft.	6															288
202		Catch Basin Removed	Each	1															1
202	202	Pipe Removed 24" and Under	Sq.Yds	Lin.Ft. 400															
202		Ex. Pav't. Removed & Disposed		985															
		Side																	
		Station to Station			136+50 to 140+00	136+00.29 to 140+00													
		See Sheet Number			5	6	2b												
		Reference or Structure No.			1-R	2-R		1-D											
		1354+00 (E.B.)	Ft.		46														
		1357+0 (E.B.) 139+23 (Ramp B) Lt. of ℄ Ft.			108	120													
		136+30 to 139+20	Rt.																
		139+23 to 145+00	Rt.			120													
		TOTAL																	
				985	400														288

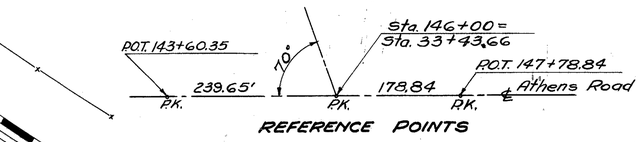
STA. 136+00.29 TO STA. 140+00 ATHENS ROAD

FED. HWY. DIVISION	STATE	PROJECT		SHEET NO.	TOTAL SHEETS
2	OHIO	F-674 (12)		65	225

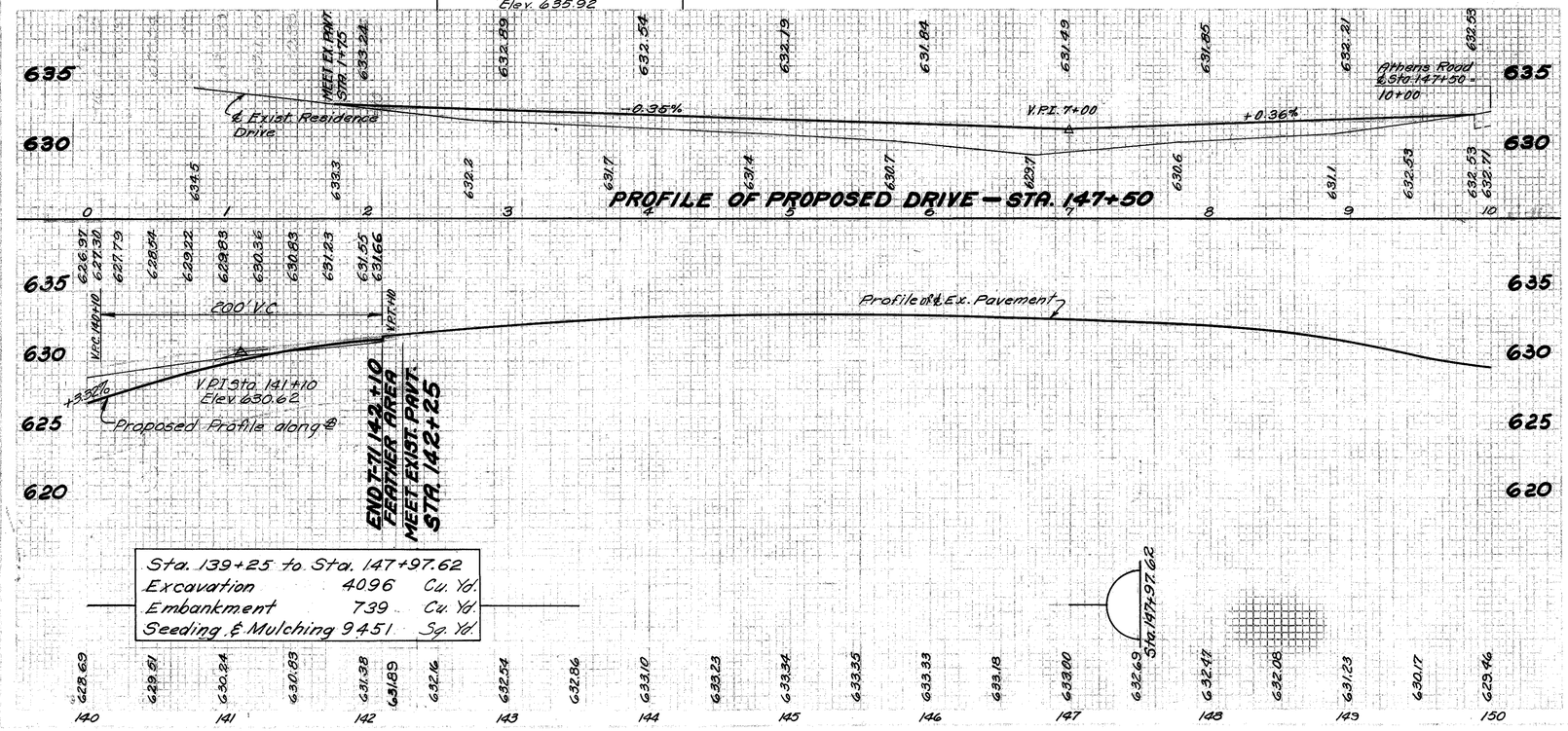
ROSS COUNTY
ROS-35-25.05



BENCH MARK
Chiseled Square in W. End of N.W. Wingwall C&O Bridge over Ex. 35 E 50
438' Rt. ℄ Sta. 1366+26 (E.B.)
Elev. 635.92



REFERENCE POINTS



Sta. 139+25 to Sta. 147+97.62		
Excavation	4096	Cu. Yd.
Embankment	739	Cu. Yd.
Seeding & Mulching	9451	Sq. Yd.

ROADWAY ~ QUANTITIES ~ DRAINAGE

Reference or Structure No.	See Sheet Number	Station to Station	Side	202 Ex. Pav't. Removed & Disposed of Sq. Yds.	202 Pipe Removed 24" and Under Lin. Ft.	202 Catch Basin Removed Each	304 Aggregate Base 6" Sq. Yds.	304 Aggregate Base Cu. Yds.	407 Bituminous Prime Coat-App. @ 0.40 Gals./Sq. Yd. Sq. Yds.	407 Asphalt Conc. 2" Cu. Yds.	407 Asphalt Conc. Sq. Yds.
1-R	140	140+00 to 142+10	Lt./Ext.		210						
2-R	140	142+00	Lt./Ext.		18						
3-R	140	140+30 to 140+48	Lt.		18						
4-R	140	140+00 to 142+10	Lt. & Rt.	514							
5-R	140	1+75 to 9+60 (Res. Drive)	℄								
6-R	140	9+60 to 9+98 (Res. Drive)	℄								
7-R	140	146+13 to 147+20	Lt.	94							
8-R	140	2+07 Res. Drive	Rt.			2					
9-R	140	147+76	Lt. & Rt.								
10-R	140	145+93 to 146+86	Lt.	54							
1-D	140	140+00 to 141+10	Lt.				174	12.3			
2-D	140	140+00 to 141+10	Rt.				103.2	5.7			
25	110	146+	Lt.				103.0	12.3			
26	120	139+23 to 145+00	Rt.								
		Total		662	246	4	1103.0	486.7	1103.2	57	1103.2

Reference or Structure No.	See Sheet Number	Station to Station	Side	Sodding Sq. Yds.
1-D	140	140+00 to 141+10	Lt.	74
2-D	140	140+00 to 141+10	Rt.	74
				148

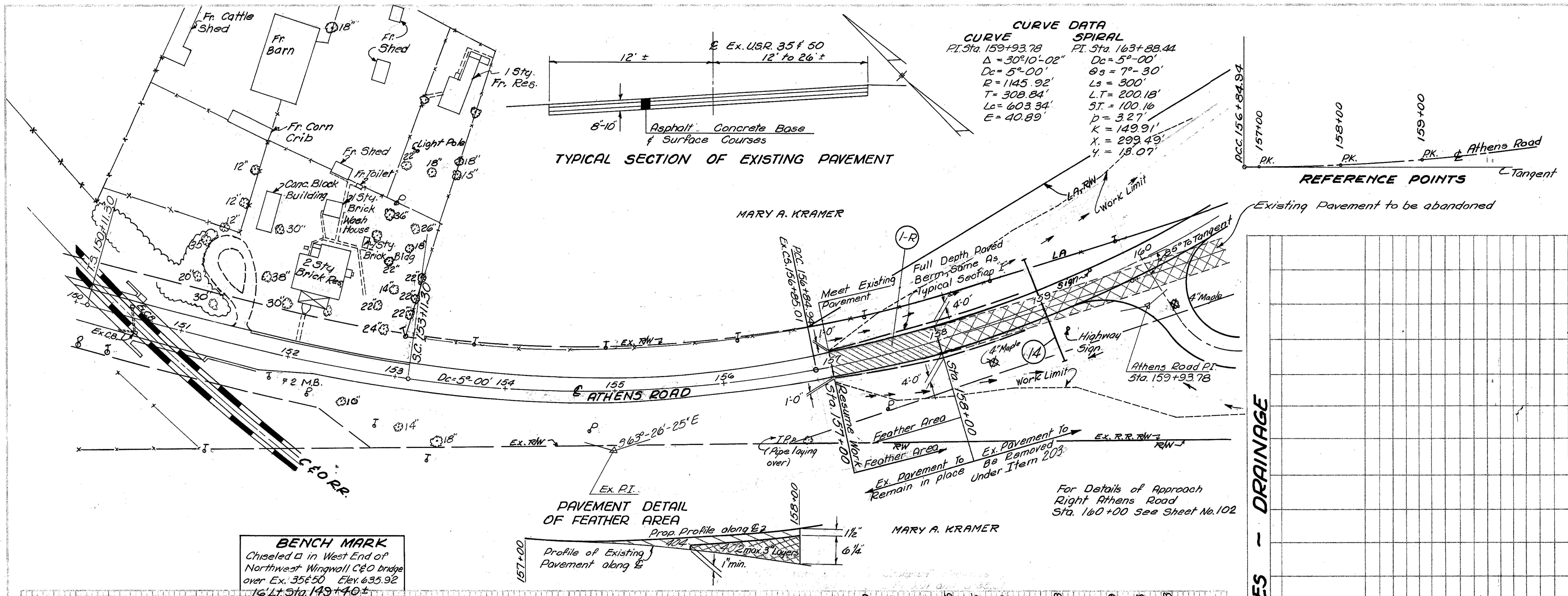
* Carried to Sht. Nº 21

STA. 140+00 TO STA. 150+00 ATHENS ROAD

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	F-674 (12)	

66
225

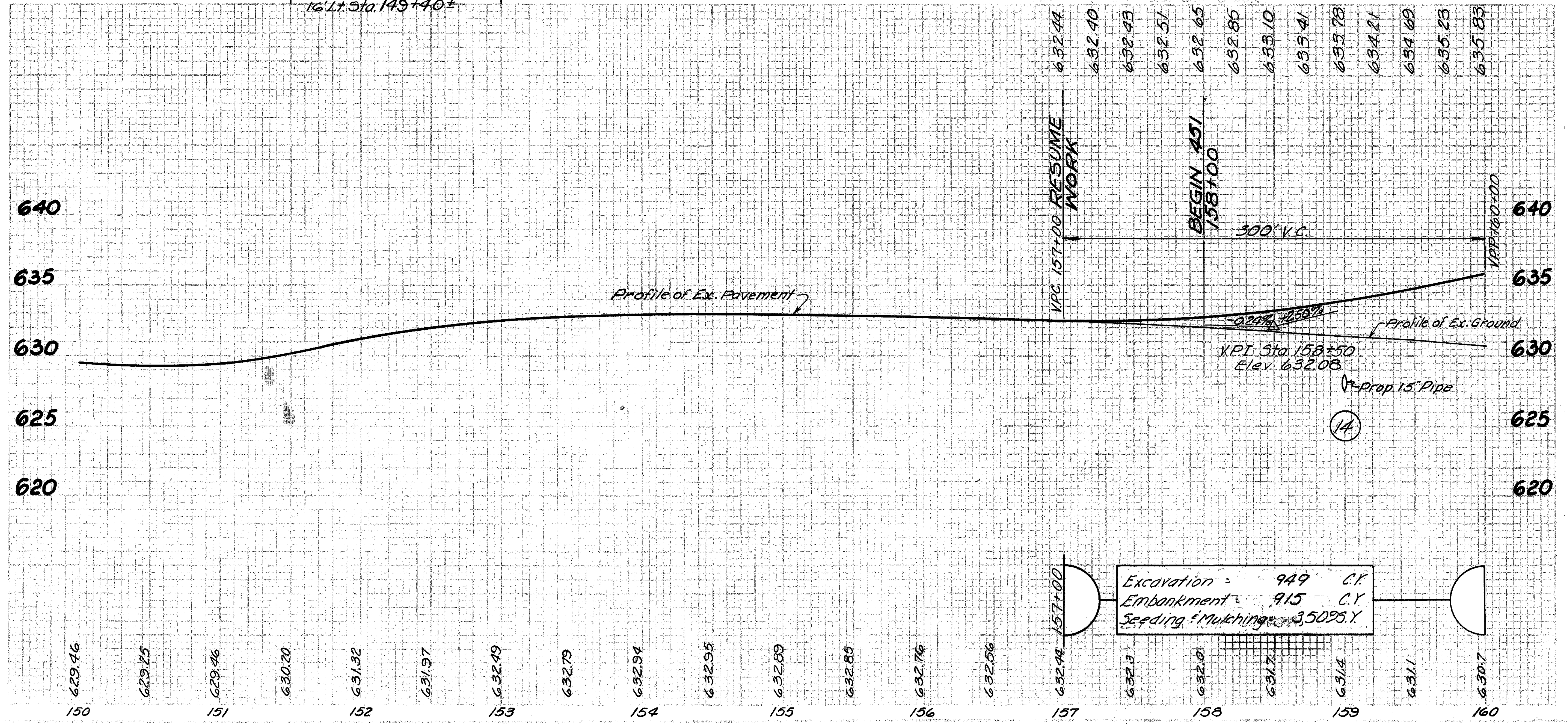
ROSS COUNTY
ROS -35- 25.05



CURVE DATA

CURVE	SPIRAL
P.I. Sta. 159+93.78	P.I. Sta. 163+88.44
Δ = 30°10'-02"	Dc = 5°-00'
Dc = 5°-00'	Θs = 7°-30'
R = 1145.92'	Ls = 300'
T = 308.84'	L.T. = 200.18'
Lc = 603.34'	S.T. = 100.16
E = 40.89'	p = 3.27'
	K = 149.91'
	X. = 299.49'
	Y. = 13.07'

BENCH MARK
Chiseled □ in West End of Northwest Wingwall C&O bridge over Ex. 35 & 50 Elev. 635.92
16' Lt. Sta. 149+40 ±



Excavation = 949 C.Y.
Embankment = 915 C.Y.
Seeding & Mulching = 3,509 S.Y.

ROADWAY ~ QUANTITIES ~ DRAINAGE

Reference or Structure No.	See Sheet Number	Station to Station	Side	402 Asphalt Concrete (85-100)	404 Asphalt Concrete (85-100)			304 4" Aggregate Base	301 3" Bituminous Aggregate Base	310 Subbase Grading A As Per Plan
			Lt & Rt.	Cu. Yds.	Cu. Yds.			Sq. Yds.	Sq. Yds.	Cu. Yds.
1-R		157+00 to 158+00		9.3	7.8			55.6	55.6	13.9
14	113	159+00								
		TOTAL		*9.3	*7.8			*55.6	*55.6	*13.9

* Carried to Sht. No 21

STA. 150+00 TO STA. 160+00 ATHENS ROAD

				67
				225
2	OHIO	F-674 (12)		

ROSS COUNTY
ROS -35 - 25.05

CURVE DATA

CURVE
P.I. Sta. 159+93.78
Δ = 30°10'02"
Dc = 5°-00'
R = 1145.92'
T = 308.84'
Lc = 603.34'
E = 40.89'

SPIRAL
P.I. Sta. 163+88.44
Dc = 5° 00'
θ = 7°-30'
Ls = 300'
L.T. = 200.18'
S.T. = 100.16'
P = 3.27'
K = 149.91
X = 299.49'
Y = 13.07'

BRIDGE NO. ROS-35-26.13
PROPOSED BRIDGE DATA
Type: Continuous Steel Beam with Concrete Deck and Substructure
Span: 51'-0" – 73'-0" – 73'-0" – 51'-0"
Roadway: 28' flr. 2'-0" Safety Curb
Load Frequency: C.F. 400 (S1)
Wearing Surface: 1" Monolithic Concrete
Approach Slab: AS-1-67 (25 Long) Special
Railing: Aluminum Rail and Supports and Concrete Parapet
Alignment: Tangent
S Rein.: 37°-30' R.F.

Note: See Sheet No. 14 for special sod at bridge approaches.
For Details not shown on U.S.R. 35, See Sheet No. 36

For Approach Right Athens Road Sta. 160+00 See Sheet No 102

BENCH MARK
R.R. Spike in Power Pole
394' Rt. Sta. 1380+35 (E.B.)
Elev. 630.93

BENCH MARK
Chiseled Square in Stop Sign Base in Traffic Island - 206' Rt. Sta. 1386+20 (E.B.)
Elev. 632.52

3 Sta. 1382+72.43 (EB) = Sta 167+44.84 Athens Rd

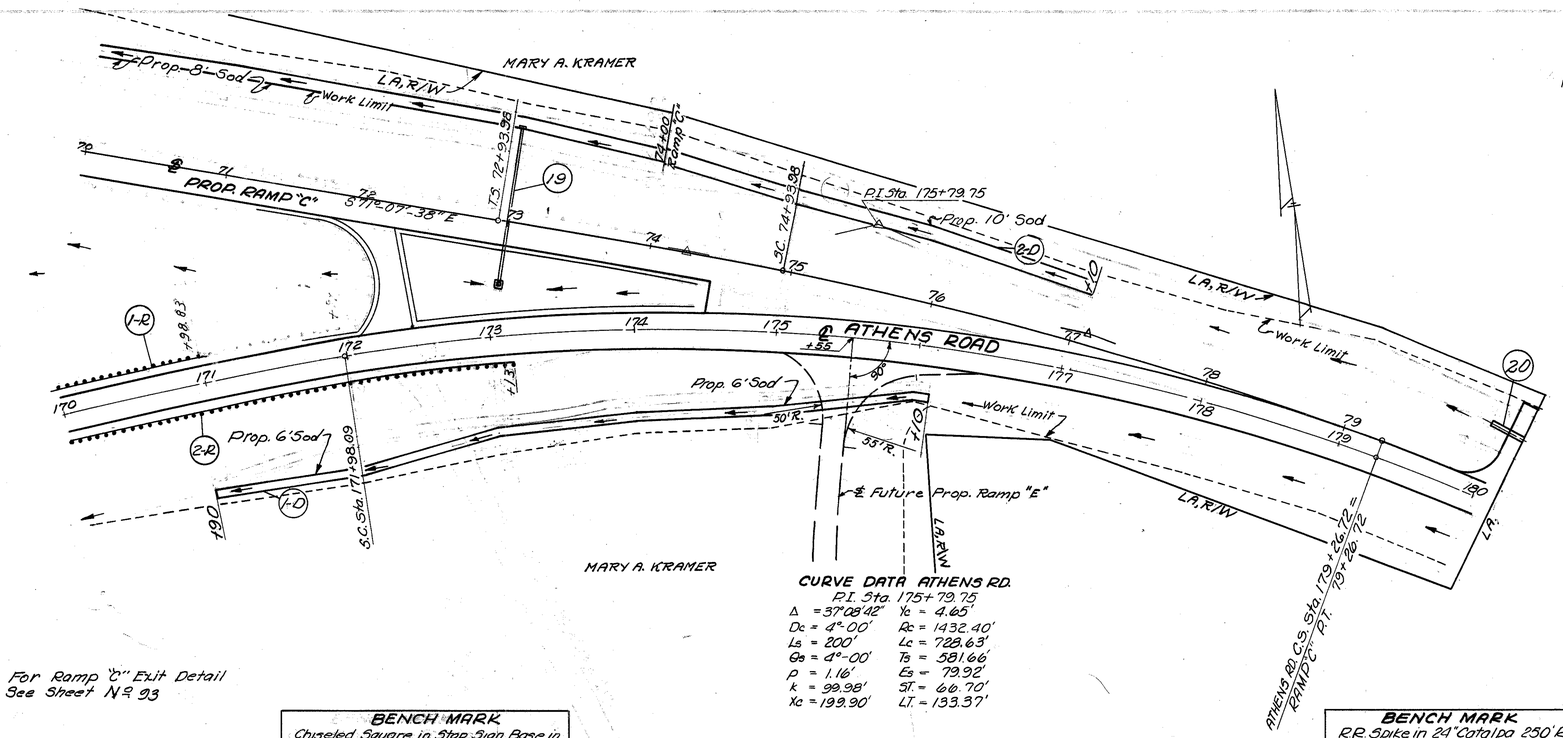
Excavation = 1,609 C.Y.
Embankment = 32,514 C.Y.
Seeding & Mulching = 13,250 S.Y.

V.P.I. Sta. 167+85.01
Elev. 655.95
+2.50%
-2.50%
Bridge Limits 253.68
166+58.17
169+11.85
V.P.C. 163+35.01
900' V.C.
Profile of Existing Ground
℄ E.B.
℄ E.W.B.
℄ Prop. 24" Pipe
℄ Prop. 24" Pipe

ROADWAY ~ QUANTITIES

Reference or Structure No.	See Sheet Number	Station to Station	Side		660 Sodding Sq. Yds.	606 Guard Rail Type 5 Unit Each	606 Approach End Assembly Each	604 Bridge Terminal Assembly Each
1-R	112	162+46.19 to 166+58.69	Rt.			442.5	1	1
2-R	54	163+07 to 166+31.97	Lt.			325	1	1
3-R	114	169+11.33 to 170+00	Lt.			88.5		1
4-R	115	169+38.05 to 170+00	Rt.			62		1
1-D		166+82 to 167+45		Rt.				
13	112	1380+45 (W.B.)		Lt. Ret.				
15	54	1382+10 (NB)		Lt.				
16	114	166+73.5		Lt. Ret.				
17	115	169+00.2		Lt. Ret.				
18	116	1386+00 (E.B.)		Lt.				
		TOTAL			8360	2	4	

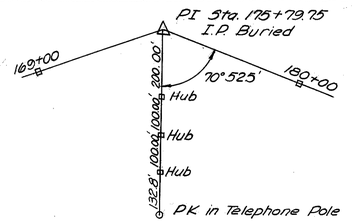
STA. 160+00 TO STA. 170+00 ATHENS ROAD



For Ramp "C" Exit Detail
See Sheet No. 93

CURVE DATA ATHENS RD.
P.I. Sta. 175+79.75

Δ	= 37°08'42"	Yc	= 4.65'
Dc	= 4°-00'	Rc	= 1432.40'
Ls	= 200'	Lc	= 728.63'
Θs	= 4°-00'	Ts	= 581.66'
p	= 1.16'	Es	= 79.92'
k	= 99.98'	St.	= 66.70'
Xc	= 199.90'	L.T.	= 133.37'



REFERENCE POINT

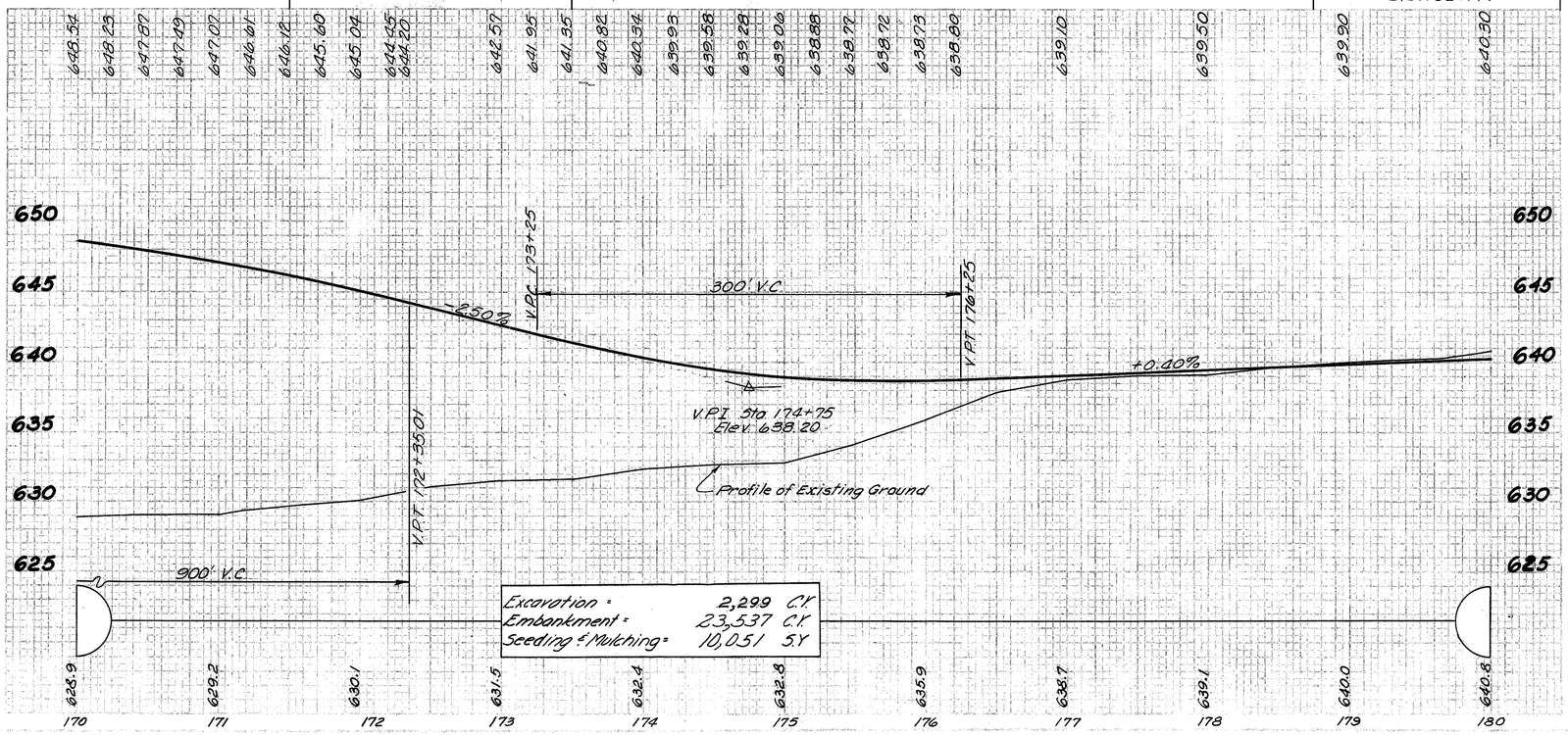
FED. ROAD DIVISION	STATE	PROJECT	
2	OHIO	F-674 (12)	

68
225

ROSS COUNTY
ROS - 35 - 25.05

BENCH MARK
Chiseled Square in Stop Sign Base in Traffic Island at 206' Rt. ℄ Sta. 1386+20 E.B. U.S.R. 35 - Elev. 632.52

BENCH MARK
R.R. Spike in 24" Catalpa 250' Rt. Athens Rd. Sta. 180+10
Elev. 639.47



Excavation =	2,299 C.Y.
Embankment =	23,537 C.Y.
Seeding & Mulching =	10.051 5.Y.

ROADWAY ~ QUANTITIES ~ DRAINAGE

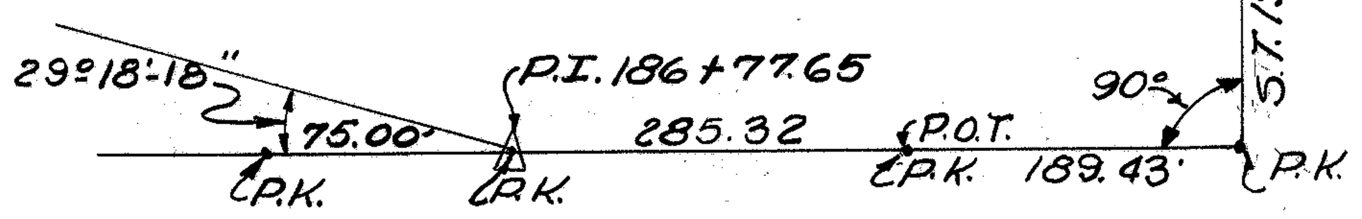
See Sheet Number	Reference or Structure No.	Station to Station	Side	660 Sodding	346	345	169
				S.Y.			
	1-R	170+00 to 170+98.83	Lt.				
	2-R	170+00 to 173+1.3	Rt.				
	1-D	170+90 to 176+1.10	Rt.				
	2-D	74+00 (Ramp C) to 177+10	Lt.				
19		73+00 (Ramp C")	Lt.				
20		180+14.88	Lt.				
		TOTAL					

See Sheet Number	Reference or Structure No.	Station to Station	Side	606 Approach End Assembly Each	606 Guard Rail Type 5 Lin. Ft.	612.06
	1-R	170+00 to 170+98.83	Lt.	1	99	
	2-R	170+00 to 173+1.3	Rt.	1	330	
		TOTAL		2	429	2

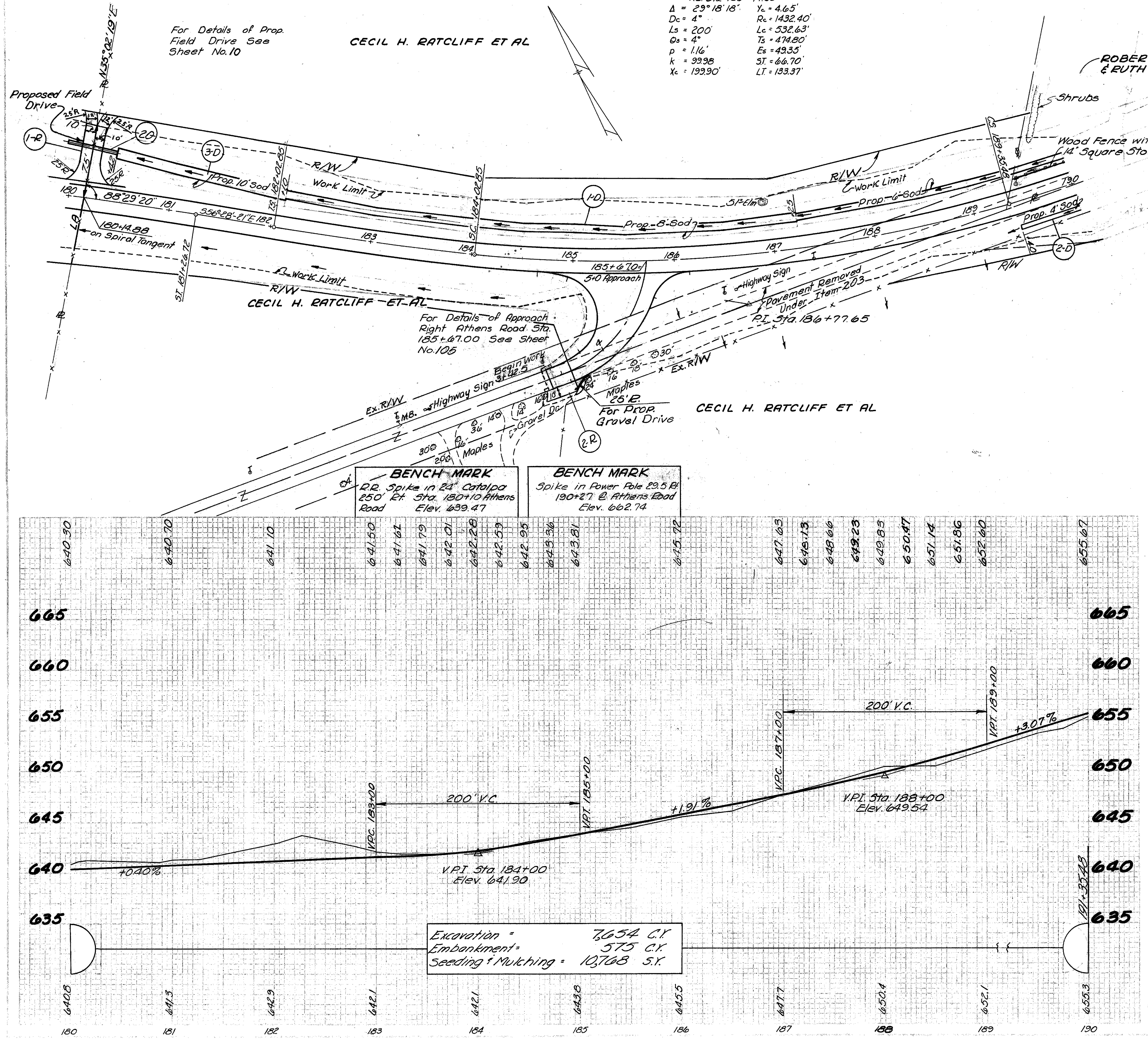
STA. 170+00 TO STA. 180+00 ATHENS ROAD

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	F-674 (12)	

ROSS COUNTY
ROS - 35 - 25.05



REFERENCE POINT



PROP. CURVE DATA
P.I. Sta. 186+77.65

Δ = 29°18'18"	Y_c = 4.65'
Dc = 4°	R_c = 1432.40'
Ls = 200'	L_c = 532.63'
Θs = 4°	T_s = 474.80'
p = 1.16'	E_s = 49.35'
k = 99.98	S.T. = 66.70'
X_c = 199.90'	L.T. = 133.37'

BENCH MARK
R.R. Spike in 24" Catalpa
250' Rt. Sta. 180+10 Athens
Road Elev. 639.47

BENCH MARK
Spike in Power Pole 29.5 Rt.
190+27 ℄ Athens Road
Elev. 662.74

Excavation = 7,654 C.Y.
Embankment = 575 C.Y.
Seeding & Mulching = 10,768 S.Y.

For Athens Road Pavement Details
Sta. 187+91.50 to Sta. 191+35.48
See Sheet No. 86

ROADWAY ~ QUANTITIES ~ DRAINAGE

Reference or Structure No.	See Sheet Number	Station to Station	Side	660 Sodding Sq. Yds.	304 Aggregate Base 6" Sq. Yds.
1-R		180+14.88	Lt.		134.9
2-R		3+42.5 Approach	Rt.		40
1-D		182+10 to 190+00	Lt.	641	
2-D		189+40 to 190+00	Rt.	27	
3-D		180+42 to 182+10	Lt.	191	
20	117	180+14.88	Lt.		
		TOTAL		859	*174.9

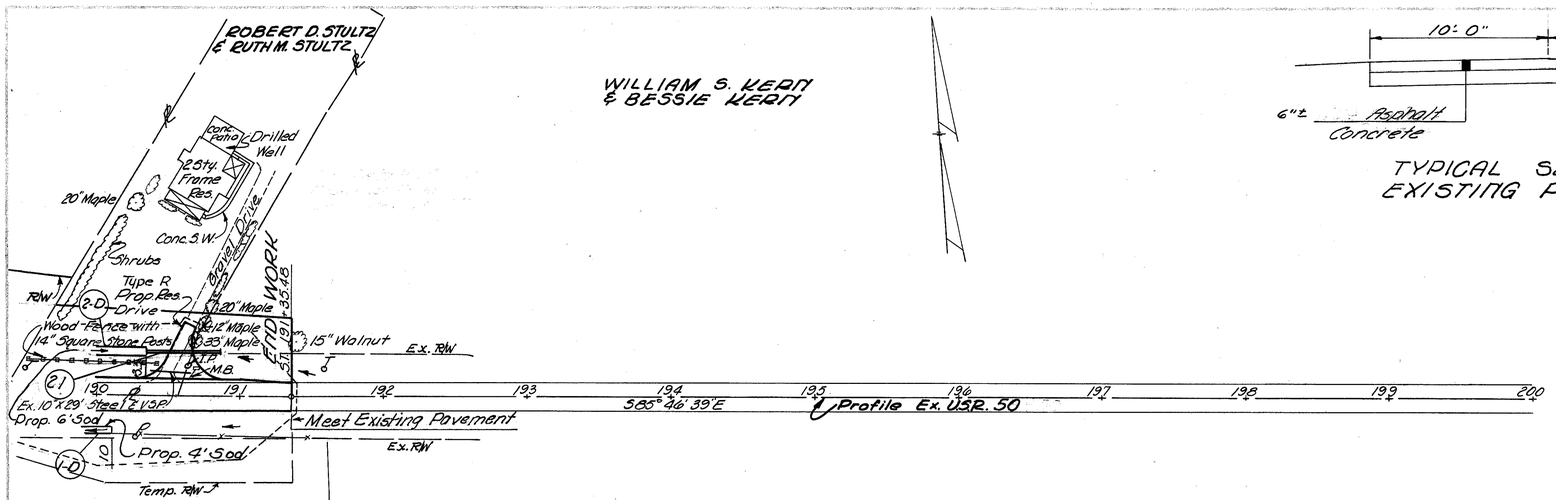
* Carried to Sht. No. 21

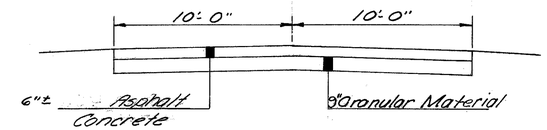
STA. 180+00 TO STA. 190+00 ATHENS ROAD

FED. ROAD DIVISION	STATE	PROJECT	
2	OHIO	F-674 (12)	

70
225

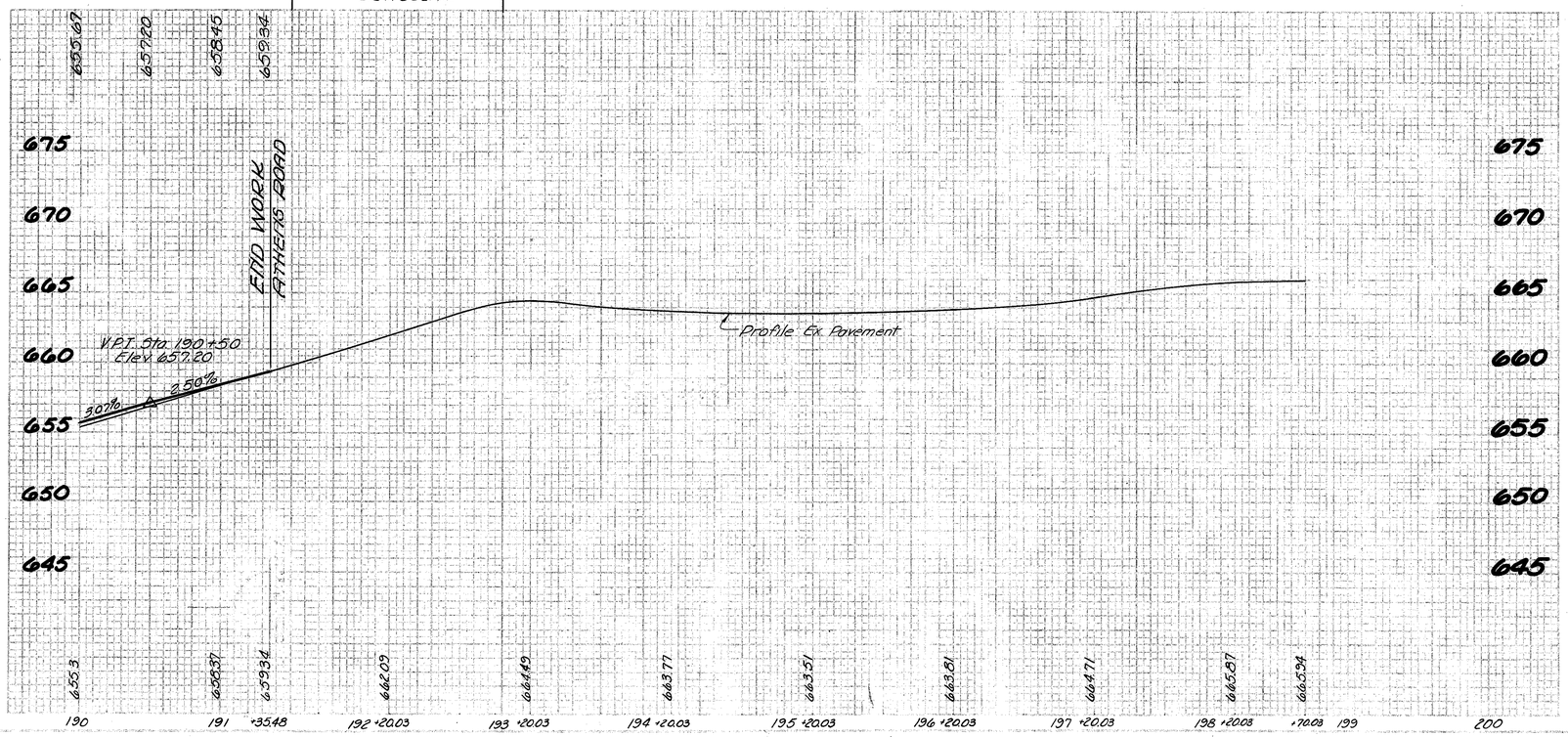
ROSS COUNTY
ROS -35-25.05





TYPICAL SECTION
EXISTING PAVEMENT

BENCH MARK
Spike in Power Pole 295' Rt. 190+27 @ Athens Road
Elev. 662.74



ROADWAY ~ QUANTITIES ~ DRAINAGE

Reference or Structure No.	See Sheet Number	Station to Station	Side	
1-D		190+00 to 190+10	Rt.	
2-D		190+00 to 190+35	Lt.	
21	117	190+50 ±	Lt.	
				Total
Sodding				660 sq. yd.

4
24
28

STA. 190+00 TO STA. 200+00 ATHENS ROAD

F-674(12)

71
225

ROSS COUNTY
ROS-35-25.05

END AREA | VOLUME
CUT | FILL | CUT | FILL

122
1,450
139
1,411
116
1,128
87
661
72
0

T.R/W | Ex. R/W | Painted Lane Line | ℄ Ex. Pav't | LA Ex. R/W | ℄ Drive | W/A

6:1 | 8:1 | 6:1 | 3:1

℄ 628.6 | 632.54 | **143+00** | ℄ 628.5

℄ 624.03 ⌀ 2 Prop. 603-577'×12" Candwit Type C

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

141 9

579 25

Ahead 206 6
Sta. 142+10
Back 221 13

℄ Ex. Pav't Sta. 142+10 =
11' Lt. ℄ Ramp B Sta. 142+10
Meet Existing Pavement

T.R/W | Ex. R/W | LA Ex. R/W | ℄ Drive | W/A

4:1

℄ 628.2 | 631.55 | **142+00** | 631.38 | ℄ 628.2 ⌀ 2 ℄ 623.28

81 5

221 13

End 6' Sod Ex. R/W Lt. Sta. 141+10

End 6' Sod Rt. Sta. 141+10

LA Ex. R/W | L.A. Ex. R/W | ℄ Drive | W/A

6' Sod | 6' Sod

4:1 | 6:1

℄ 627.8 | 629.83 | **141+00** | 630.24 | ℄ 627.8 ⌀ 2 ℄ 622.03

891 43

260 10

Quantity Limit

L.A. Ex. R/W | ℄ Drive | W/A

6' Sod | 6' Sod

Ahead

8:1 | 3:1 | Ahead & Back

6:1 | 6:1

626.97

℄ 625.6 | **140+00** | 628.69 | ℄ 625.5 ⌀ 2 ℄ 620.78

Meet Ex. Pav't of Proposed Drive 59' Rt. Sta. 140+00

1,000 41

Ahead 280 12
Sta 140+00
Back 270 0

Note:
For cross-section extensions
See Sheet № 47 & 48

Begin 6' Sod Lt. Sta. 139+57

Begin 6' Sod Rt. Sta. 139+30

Quantity Limit

Ramp B

L.A. Ex. R/W

2:1 | 4:1 | 6:1 Var.

⑥ For Detail See Sheet No.

Std. #5 C.B. 19' Rt. ℄ Ramp B Sta. 139+23
℄ C.B. 619.86
℄ Grate 622.69

For Proposed Storm Sewer System See Sheet № 108

⑥

℄ 622.5 | 624.73 | **139+25** | 627.43

Prop. 603-577'×12" Candwit Type C with Class 'B' Bedding

750 14

Ahead 270 10
Sta. 139+25
Back 0 0

NOTE: For Earthwork Back Sta. 139+25
See Sheet № 47

139+25

139+25
Ahead
Back

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

(RAMP "B")
ATHENS ROAD STA. 139+25 TO STA. 143+00

SHEET NO.	STATE	PROJECT		TOTAL SHEETS
2	OHIO	F-674(12)		72
				225

ROSS COUNTY
ROS-35-25.05

SECTION	END WIDTH	STA.	SHR AREA CUT	SHR AREA FILL	SHR VOLUME CUT	SHR VOLUME FILL
		149+00				
		631.23				
		R/W				
		Ex. R/W				
0		147+97.62				
		148+00				
		632.47				
		SUSPEND WORK STA. 147+97.62 = 0.0 SECTION				
		End Proposed Res. Drive @ Sta. 147+50 See Sheet No. 65				
		Sta. 147+97.62	0	0		
297					47	31
55		4:1 4:1 ℄ 629.8				
		147+00			26	17
481		633.00				
		Ex. R/W ℄ Drive W/A W/A				
118		3:1 4:1 R/W			49	96
		146+50				
533		633.18			27	87
		℄ 629.2 Drains into Lick Run Road				
		6:1 Var ℄ 630.0 ℄ Drive W/A			44	152
74		℄ 629.8				
		Quantity Limit			21	77
		Note: For cross section extensions, See Sheet No. 100				
		146+00				
419		633.33				
		R/W Quantity Limit Ex. R/W ℄ Drive W/A			25	125
77		145+50				
522		633.35			6	58
		Drainage from Lick Run Rd. ℄ 629.6 ℄ Drive W/A				
		℄ 628.7			38	83
111		6:1 6:1 ℄ 629.4 2:1				
		145+00				
		633.34			35	32
		(26) Prop. 603-577' x 12" Conduit Type C with Class B Bedding For Detail See Sheet No. 120				
1,244						
		Painted Lane Line LA Ex. R/W ℄ Drive W/A				
113		6:1 8:1 6:1 Var 3%			198	83
		℄ 629.0 144+00 ℄ 629.2				
1,305		633.10 9° Prop. 603-577' x 12"			72	13
		℄ 625.78 Conduit Type C			394	41
122		Sta. 143+00			Sta. 143+00 141	9

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

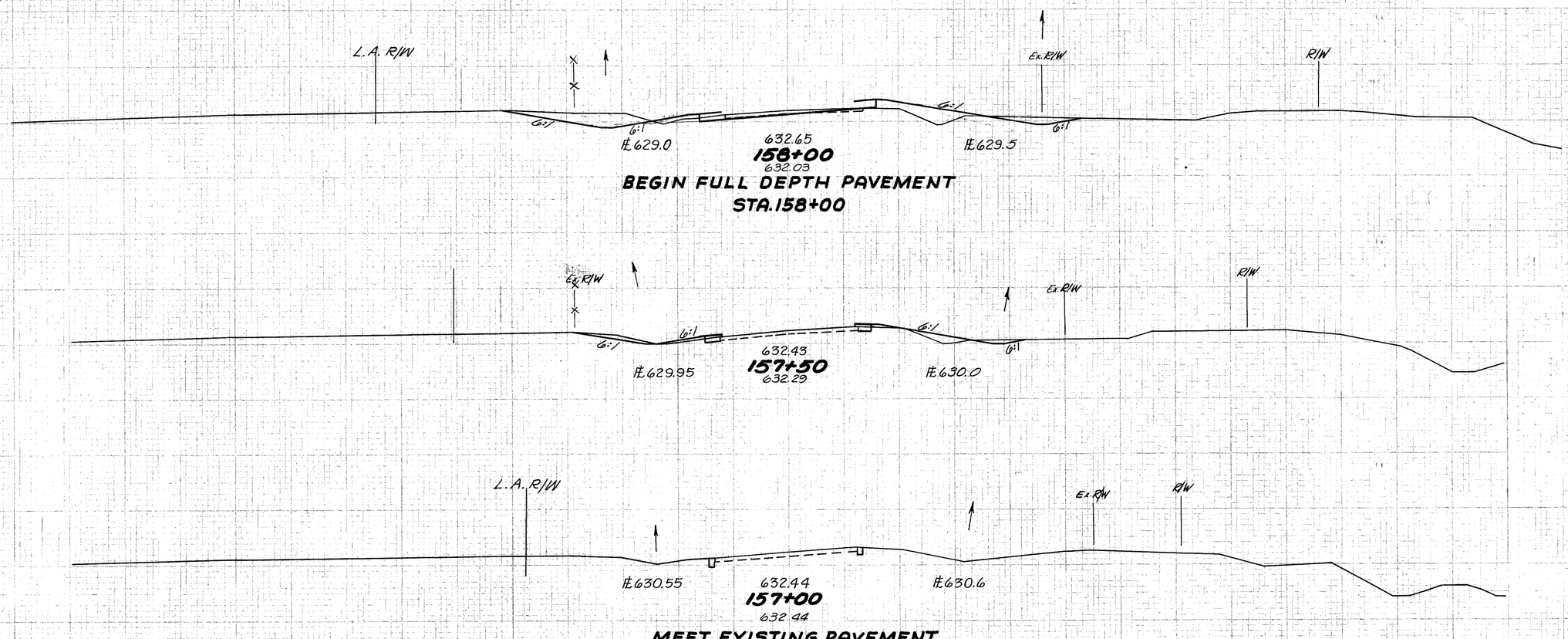
(RAMP "B")
ATHENS ROAD STA. 144+00 TO STA. 149+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	F-674(12)	

73
225

ROSS COUNTY
ROS-35-25.05

SECOND	
FIRST VIEW IN	IS OUT
101	
300	
79	
286	
24 0	Ahead Back



RESUME WORK STA. 157+00

END AREA		VOLUME	
CUT	FILL	CUT	FILL
	51		34
		57	47
	10		17
	12		16
	3		0

ATHENS ROAD STA. 157+00 TO STA. 158+00

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

FED. AID DIVISION	STATE	PROJECT	
2	OHIO	F-674(12)	

74
225

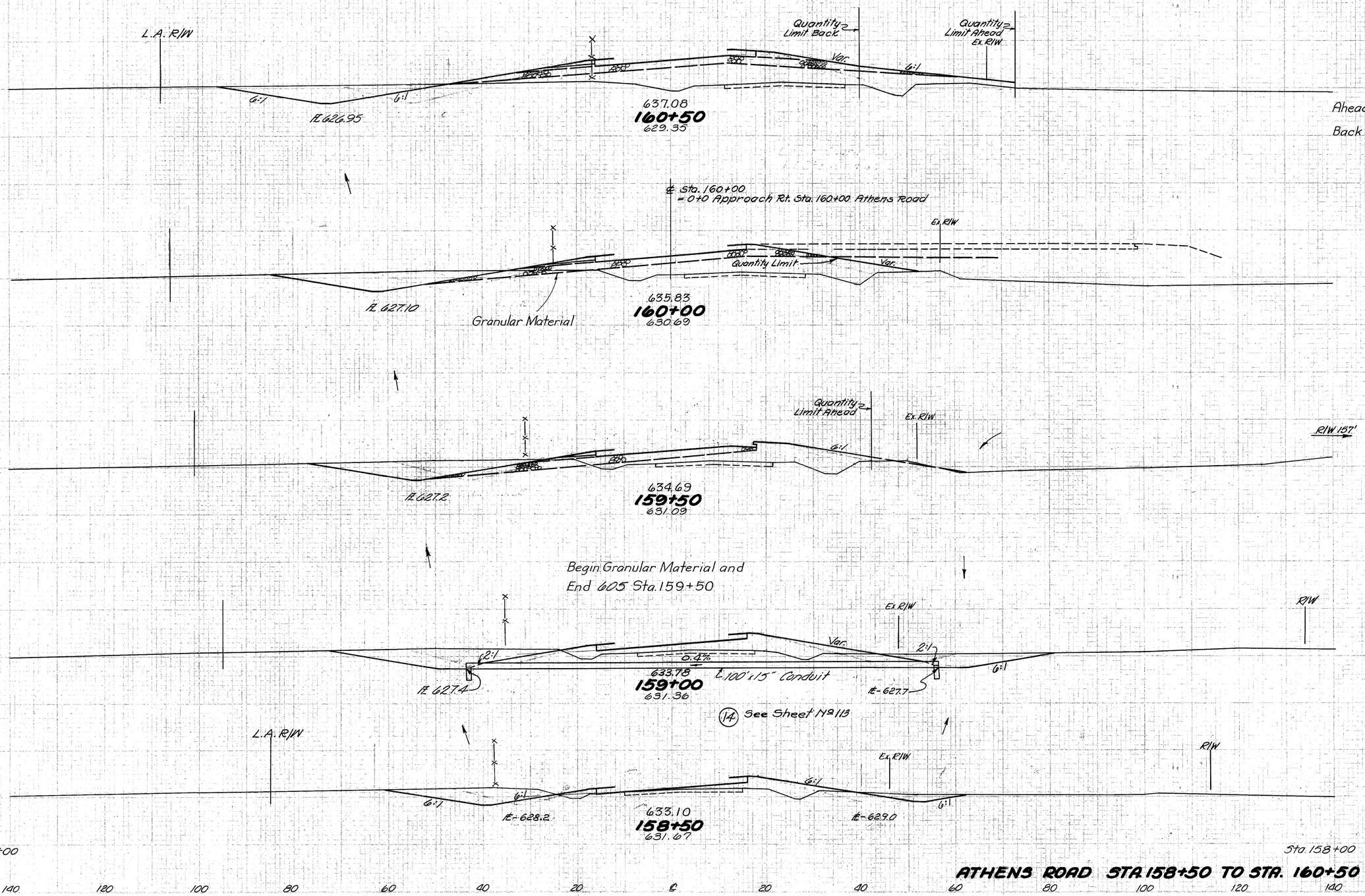
ROSS COUNTY
ROS-35-25.05

SECTION

EAST (WEST)	SOUTH

END AREA / VOLUME

	CUT	FILL	CUT	FILL
Ahead	104 335			
Back	104 253			
	203 415			
	115 195			
	219 322			
	121 153			
	273 257			
	174 125			
	251 179			
	97 68			
	137 94			
	51 34			



(14) See Sheet No 13

ATHENS ROAD STA 158+50 TO STA. 160+50

FED. RD. DIVISION	STATE	PROJECT		75
2	OHIO	F-674(12)		225

ROSS COUNTY
ROS-35-25.05

Begin Guard Rail
Lt. ℄ Sta. 643+07

L.A. R/W

156

4:1

4:1

Granular Material

℄ 626.2

643.33
163+00
629.46

Quantity Limit

4:1

3:1

℄ = 629.0

844

148

℄ 626.35

642.08
162+50
629.74

Quantity Limit

4:1

℄ = 629.5

Begin Guard Rail
Rt. ℄ Sta. 162+46.19

794

138

4:1

4:1

℄ 626.50

640.83
162+00
629.95

Quantity Limit

5:1

℄ 630.0

Note:
For Cross Section Ext.
See Sheet Nº 103, 104

778

142

4.75:1

5:1

℄ 626.65

639.58
161+50
630.44

Quantity Limit

4:1

6:1

℄ 630.5

797

145

836

156

L.A. R/W

5:1

5:1

℄ 626.8

638.33
161+00
630.65

Quantity Limit

6:1

6:1

℄ 631.0

Sta. 160+50

Sta. 160+50

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

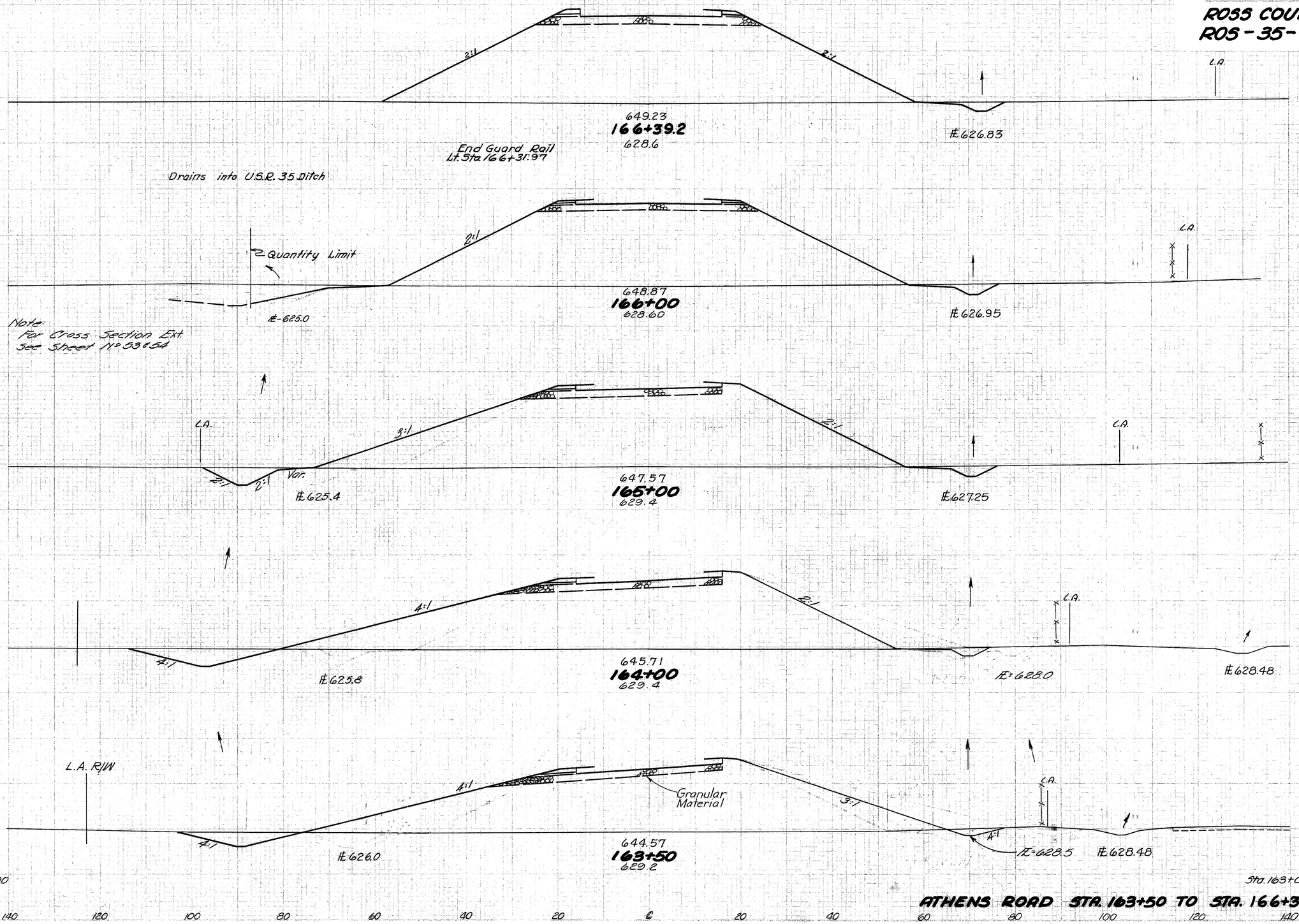
ATHENS ROAD STA. 161+00 TO STA. 163+00

	END AREA		VOLUME	
	CUT	FILL	CUT	FILL
			40	1170
			74	1950
			40	936
			70	1565
			35	754
			76	1228
			47	572
			103	1023
			64	533
			156	804
			104	335

FED. OR DIVISION	STATE	PROJECT		76 225
5	OHIO	F-674(12)		

ROSS COUNTY
ROS-35-25.05

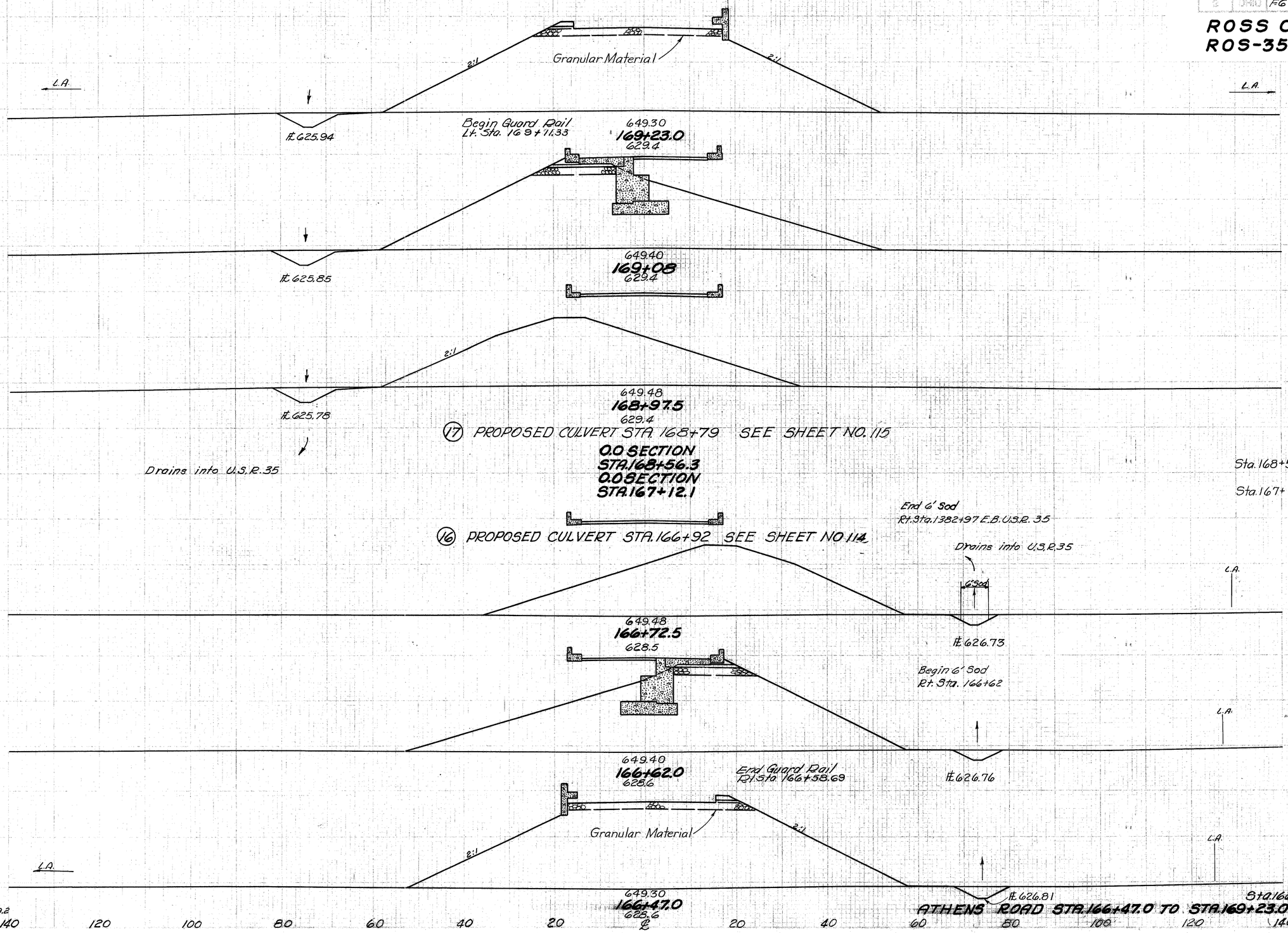
SECTION		END AREA		VOLUME	
END WIDTH	DIS. TANS.	CUT	FILL	CUT	FILL
140					
			17		1549
627					
				66	2167
148					
			74		1436
1817					
					244 5311
179					
			58		1432
2011					
					254 5050
183					
			79		1295
989					
					127 2357
173					
			58		125
914				91	2242
156					
			40		1170



ATHENS ROAD STA. 163+50 TO STA. 166+39.2

SECTION	STATE	PROJECT		77
2	OHIO	FG74 (12)		225

ROSS COUNTY
ROS-35-25.05

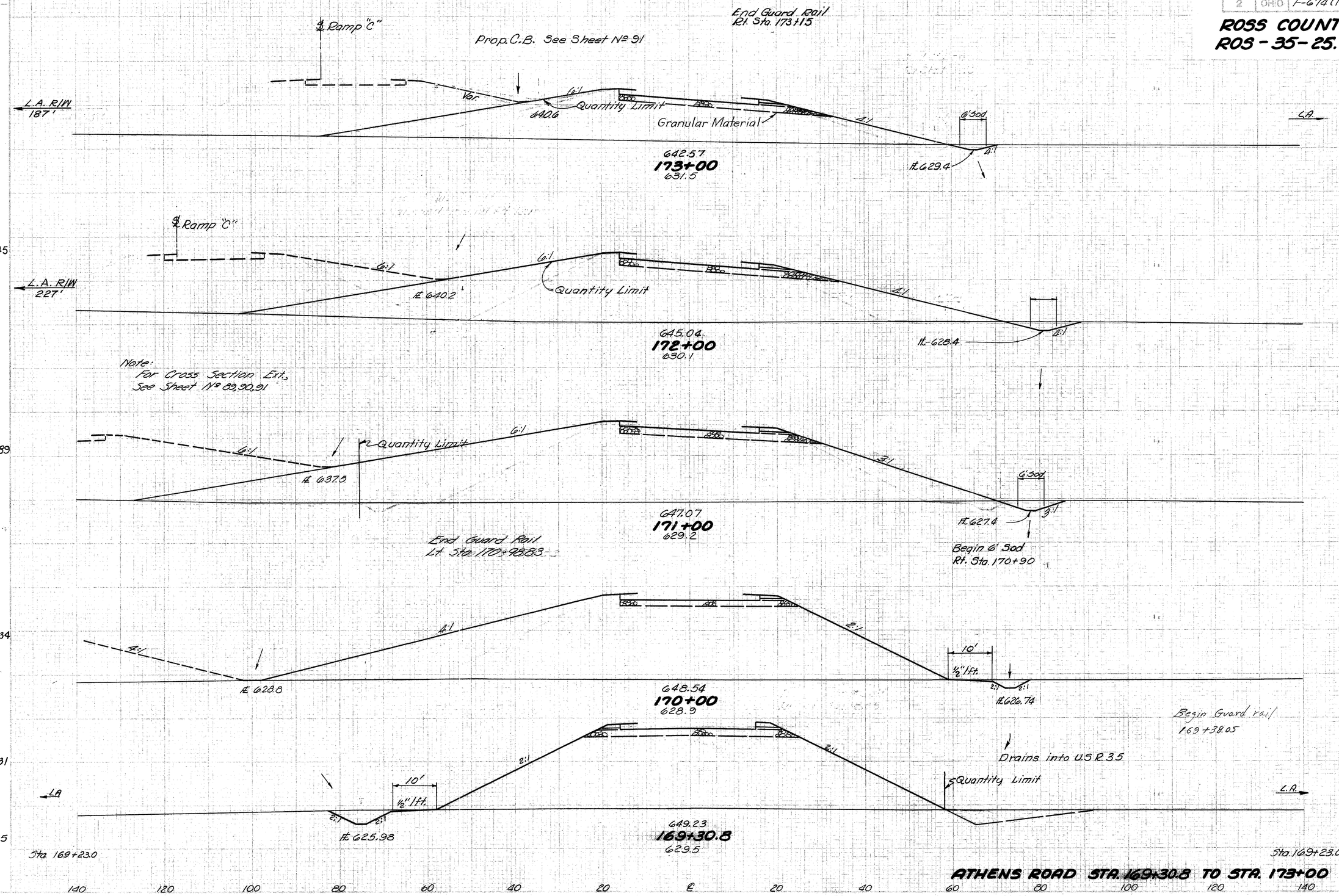


SECTIONS		END AREA		VOLUME	
SO WIDTH	SO TOS.	CUT	FILL	CUT	FILL
132			28	1341	
	207				16 689
116			29	1138	
	115				11 371
81			29	769	
	70				22 587
0		Sta. 168+56.3	0	0	
		Sta. 167+12.1	0	0	
0					11 590
	57				
71			15	805	
	108				6 386
114			16	1179	
					10 716
	205		20	1400	
					5 426
132					
140	118	Sta. 166+39.2	17	1549	

FED. ROAD DIVISION	STATE	PROJECT		76 225
2	OHIO	F-674(12)		

ROSS COUNTY
ROS-35-25.05

END AREA		VOLUME	
CUT	FILL	CUT	FILL
6	876		
41	4373		
16	1485		
63	6047		
18	1780		
57	6645		
13	1808		
56	4228		
30	1491		
8	409		
28	1341		



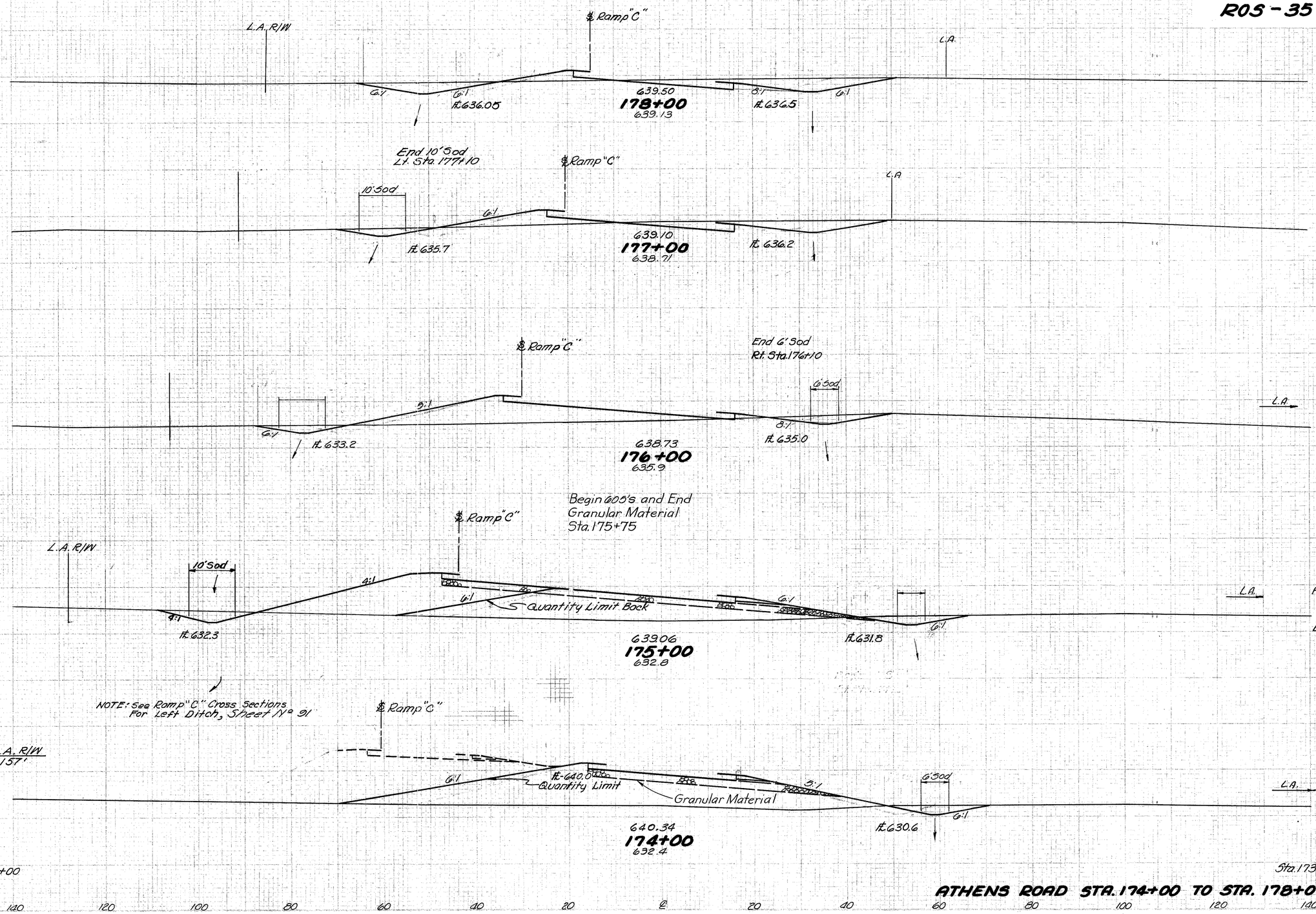
ATHENS ROAD STA. 169+30.8 TO STA. 173+00

SECTIONS	
SEC. WIDTH	SEC. DIS.

FED. AID DIVISION	STATE	PROJECT	
2	OHIO	F-674 (12)	

79
225

ROSS COUNTY
ROS-35-25.05



		END AREA		VOLUME	
		CUT	FILL	CUT	FILL
79		100	21		
				339	122
811					
67		83	45		
				206	467
761					
70		28	207		
				131	1624
967					
104	Ahead	43	670		
40	Back	13	339		
				46	1587
550					
59		12	518		
717				33	2581
70		6	876		

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

ATHENS ROAD STA. 174+00 TO STA. 178+00

FED. RD. DIVISION	STATE	PROJECT		80 225
2	OHIO	F-674 (12)		

ROSS COUNTY
ROS-35-25.05

CROSS SECTIONS END WIDTH	CROSS SECTIONS SQ. FEET		END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
70	922	R/W 8'Sod 641.50 183+00 642.1 E 638.90 E 640.0 R/W	176	0	924	0
96	1067	Begin 8' Sod End 10' Sod Lt. Sta. 182+10 R/W 10'Sod 641.10 182+00 642.9 E 638.60 E 639.4 R/W	323	0	1043	0
96	1183	R/W 10'Sod 640.70 181+00 641.3 E 637.60 E 638.6 R/W	240	0	872	7
117	1294	Begin 10' Sod Lt. Sta. 180+42 L.A. R/W End Work on Proposed Drive 0+84 Profile Proposed Drive Lt. ℄ Sta. 180+14.88 1.4% 180+14.88 = 0+0 Drive L.A. 640.30 180+00 640.8 E 637.0 (20) For Proposed Pipe See Sheet No. 117 E 637.4 Add for Drive Lt. ℄ Sta. 180+14.88	231	4	813	30
116	1083	L.A. R/W ℄ Ramp "C" 639.90 179+00 640.0 E 636.40 E 636.8 L.A.	208	12	570	61
79		Sta. 178+00	100	21		

Sta. 178+00

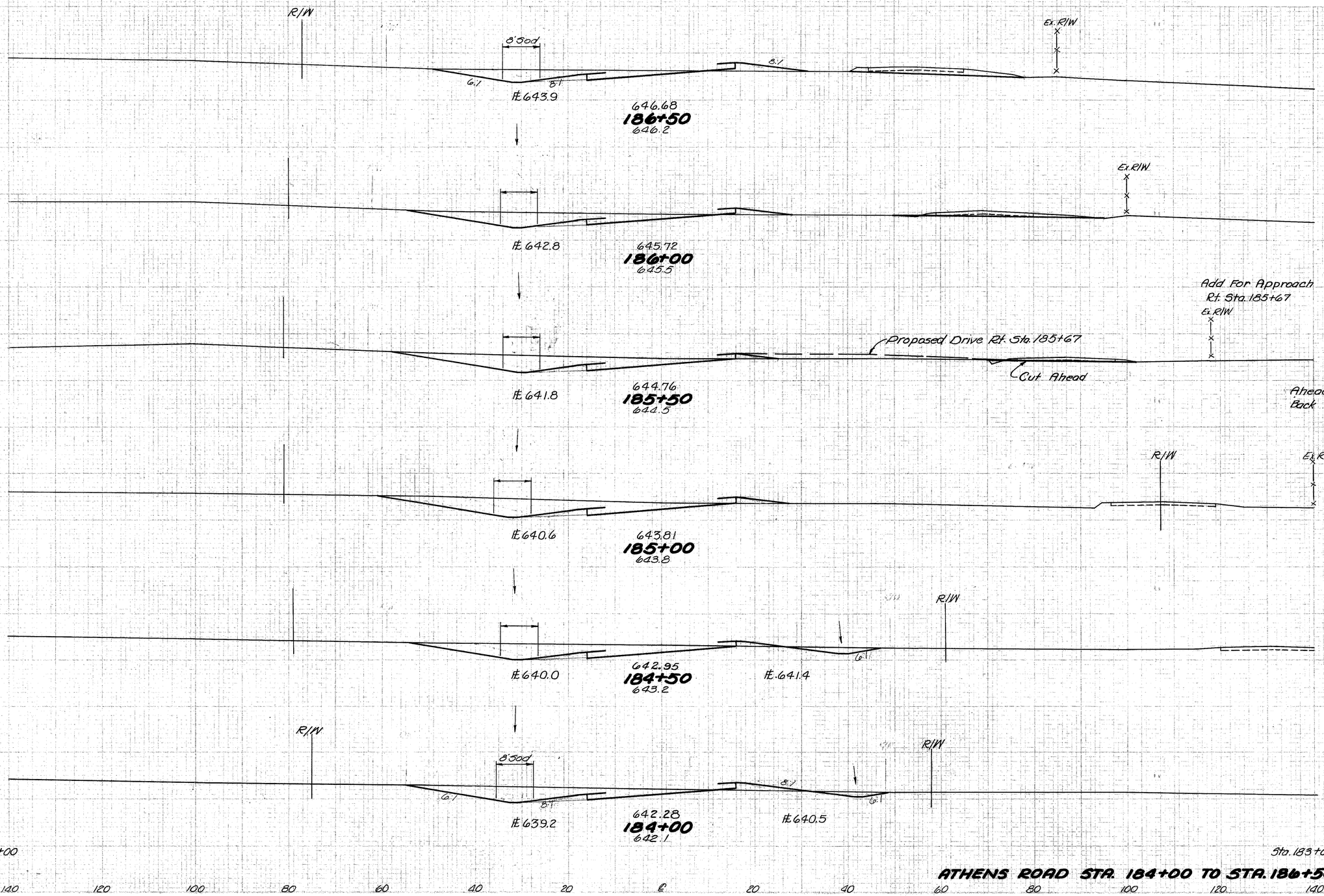
ATHENS ROAD STA. 179+00 TO STA. 183+00

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

FED. DIV.	STATE	PROJECT		81
2	OHIO	F-674 (12)		225

ROSS COUNTY
ROS-35-25.05

RECORDS	
RAD.	TAN.
104	
644	
128	
736	
137	
542	
356	
70	
375	
65	
750	
70	



END AREA		VOLUME	
CUT	FILL	CUT	FILL
136	23		
		262	33
147	13		
			49
		290	22
Ahead			
Back			
166	10		
144	8		
		277	17
155	10		
		285	8
152	9		
		259	26
128	19		
		563	18
176	0		

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	F-674 (12)	

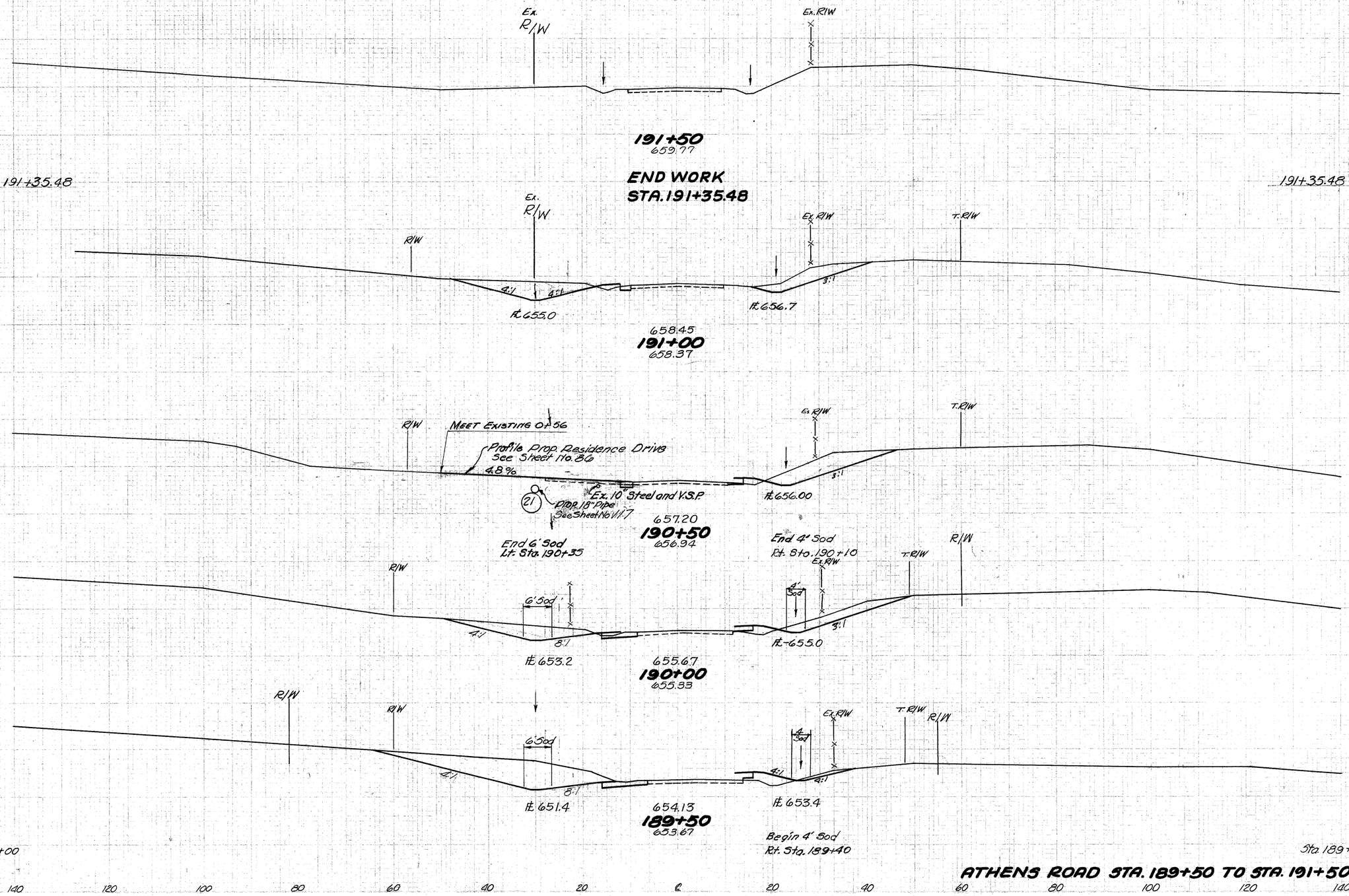
82
225

ROSS COUNTY
ROS-35-25.05

ATHENS ROAD STA. 187+00 TO STA. 189+00

SEC. NO.	KIND	PROJECT		83
2	ORIG	F-674(12)		225

ROSS COUNTY
ROS-35-25.05



				END AREA		VOLUME	
				CUT	FILL	CUT	FILL
0	Ahead Back	191+35.48	191+35.48	0	0		
24							
211							
83						75	2
381				114	3		
54						181	6
339							
68						183	14
417				116	11		
82						274	28
492				180	19		
95						430	51
				284	36		

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

ATHENS ROAD STA. 189+50 TO STA. 191+50

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	F-674 (12)	

84
225

ROSS COUNTY
ROS-35-25.05

End Ex. Approach Slab & Butt Ex. Approach Slab STA. 1350+27

Existing Structure

1350 | 541°17'03"E | T.S. 1350+55.61 | 1351 | ℄ Prop. Eastbound U.S.R. 35 | 1352 | S.C. 1352+55.61 | 1353 | MATCH LINE

A

12' | 6" | +34.5 | L.J. | QUANTITY LIMIT | 12' | L.J. | A

QUANTITY LIMIT +10.50 | 100' | 11' | 6" | +11.50

Note: For Details around the Existing Approach Slab See Sheet N°11.

PLAN

P.C.C. 136+00.29 = 24'Rt. 1353+73.51

LEGEND

- L.J. — Standard Longitudinal Joint
- C.J. — Standard Contraction Joint
- S.E. — Standard Expansion Joint
- Paved Berm

NOTE: For elevations not shown see elevation table.

C | 1357 | B | 1356 | L.J. | DC = 1°-30" | 1355 | QUANTITY LIMIT | L.J. | C.J. | 1354 | MATCH LINE | L.J. | C.J. | G | +00 | +30 | 12' | 8' | 137 | Dc = 4° | 138 | 23' | S.E. | 12' | RAMP "B" | 139 | 8" | 8" | C.J. | +20 | +7.53 | B | C

P.C.C. 138+23.73

P.C.C. 136+00.29 = 24'Rt. 1353+73.51

G

PLAN

QUANTITY LIMIT

7'-0" | 8'-0" | 8'-0" | 11'-0"

2'-0" | 3'-0" | Same Slope as Pav't | Slope more than 0.0156'/ft. | 3'-0"

1½"/ft. | Profile Grade ℄ | Same Slope as Pav't ¾"/ft. Min.

4:1 | 8" | 6" | 8" | 4:1

8' Rounding | 17 | 2 | 3 | 7 | 1 | 3 | 2 | 17 | 8' Rounding

D

SECTION D-D

END 451 PAVEMENT

E | Dc = 2°-30' | 140 | 141 | ATHENS ROAD | P.T. 140+58.13 | 142 | (T-35) Feather Area QUANTITY LIMIT STA. 142+25 & Ex. Pavement | +10 | +25 | 11' | 9%/ft. | D

E

24'-0" | Varies See Plan | 11'-0" | 12'-0" | 11'-0"

℄ E.B. | ℄ Ramp B | variable See plan 2'-0" | 2'-0" | Variable 6'-0" Max.

Profile Grade E.B. | Profile Grade ℄ | 1½"/ft. | 1¼"/ft. | 1'-3" | 6" | 4' Rounding

L.J. | L.J. | 7 | L.J. | 1 | 2 | 3 | 10 | 6-See Sheet N°3

5 See Alignment Sheet for depth of underdrain

SECTION B-B

12'-0" | 8'-0" | 3'-0"

℄ E.B. | see elevation table | Face of Guard Rail | 1" | 1/8"/ft. | 6" | 6" Rounding | 2:1

L.J. | 7 | 1 | 2 | 3 | Match Line See Sheet No 85

SECTION A-A

24'-0" | 12'-0" | Varies | 4'-0" | 3'-0" | See Plan View Varies 6'-0" to 8'-0" (Min) (Max) | See Plan View Varies 12'-0" to 8'-0" (Min) (Max) | 11'-0"

℄ E.B. | 1" | 1/2"/ft. | 6:1 | 6:1 | 4' Rounding | 4' Rounding | 1½"/ft. | 3 | 2 | 1 | L.J. | 7 | Profile Grade Ramp B ℄ | variable See plan 2'-0" | 2'-0" | Variable 6'-0" Max. | 1¼"/ft. | 1'-3" | 6" | 4'-0" Rounding

6" | 7 | 1 | 3 | 2 | 2 | 6" | 10 | 6-See Sheet N°3 | 3 | 2 | 5 | See Alignment Sheet for depth of underdrain | 17

SECTION C-C

SECTION E-E

6" Curb butted against catch basin curb casting and shall be included in bid price for catch basin

2'-0"

C.B. N°3

SECTION G-G

ESTIMATED PAVEMENT QUANTITIES F-674(12)

No.	Item	Description	Quantity	Unit
3	301	3" Bituminous Aggregate Base	739.9	Sq. Yds.
2	304	6" Aggregate Base	739.9	Sq. Yds.
10	609	Standard Type 2 Combination Curb and Gutter	292	Lin. Ft.
1	310	Subbase, Grading A (As per plan)	593	Cu. Yds.
	404	Asphalt Concrete (85-100)	0.7	Cu. Yd.
7	451	9" Reinforced Portland Cement Concrete Pavement	1610.9	Sq. Yds.

Quantities carried to Sh° N°21

ELMER S. BARRETT ASSOCIATES
Consulting Engineers
245-249 S. Paint Street Chillicothe, Ohio

PAVEMENT DETAILS
EXIT RAMP "B"
STA. 1350+17.50 U.S.R. 35 TO STA. 142+25 ATHENS RD.

SCALE 0 10 20 30 DATE

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
		W.D.J.				

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	F-674 (12)	

95
225

ROSS COUNTY
ROS-35-25.05

ESTIMATED PAVEMENT QUANTITIES

No		Description	Quantity	Unit
2&13	304	Aggregate Base (As shown)	136.1	Cu. Yds.
3	301	3" Bituminous Aggregate Base	165	Sq. Yds.
20	402	Asphalt Concrete (85-100)	38.5	Cu. Yds.
11	310	Subbase	99	Cu. Yds.
15	605	Aggregate Drains	190	Lin. Ft.
10	609	Standard Type 2 Combination Curb and Gutter.	452	Lin. Ft.
8	612	4" Concrete Median Pavement Standard Type 1	40	Sq. Yds.
1	310	Subbase, Grading A (As per plan)	36.7	Cu. Yds.
12	408	Bituminous Prime Coat @ 0.40 gal./S.Y.	679.9	Sq. Yds.
4	409	Seal Coat Cover Aggregate using No.8 @ 0.008 C.Y./S.Y.	165	Sq. Yds.
4	409	Seal Coat Bituminous Material @ 0.3 gal./S.Y.	165	Sq. Yds.
14	404	Asphalt Concrete (85-100)	25.3	Cu. Yds.

Quantities carried to Sht. No 21

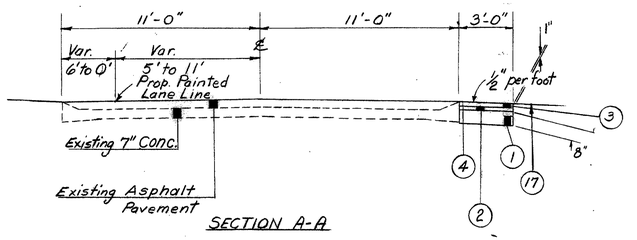
Note:
Sta. 32+25 Begin 605 and end granular material for Drainage

CURVE DATA
P.I. Sta. 1+56.93
Δ = 52°-29'-17"
D_a = 18°-00'
R = 318.31'
L = 291.60'
T = 156.93'
E = 36.58'

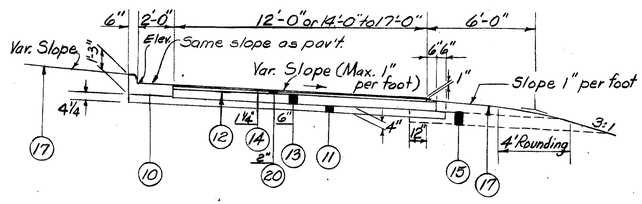
LEGEND
- Feather Area
- Paved Berm
- Existing Pavement to be removed

Elevations shown are at edge of pavement or face of Curb.

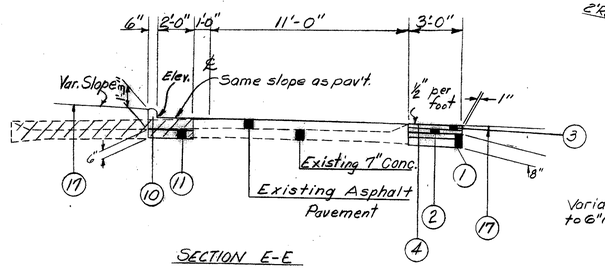
PLAN



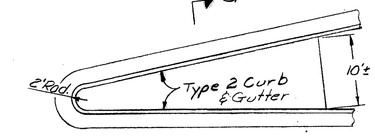
SECTION A-A

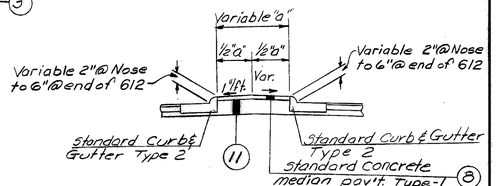


SECTION C-C

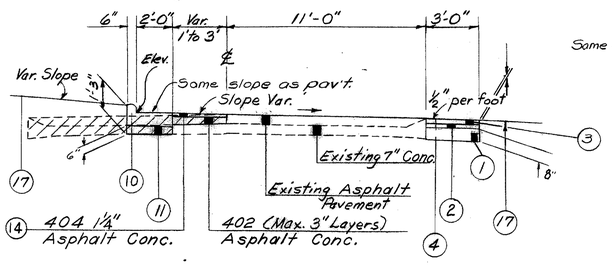


SECTION E-E

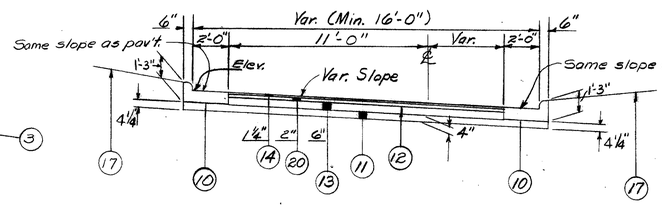




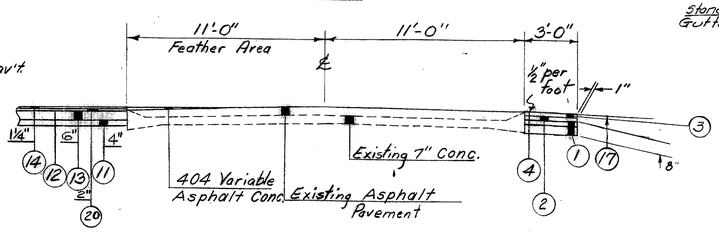
SECTION G-G



SECTION B-B



SECTION D-D



SECTION F-F

ELMER S. BARRETT ASSOCIATES
Consulting Engineers
245-249 S. Paint Street — Chillicothe, Ohio

PAVEMENT DETAILS
INTERSECTION
LICK RUN RD. & ATHENS RD.
STA. 142+25 TO STA. 147+97.62

SCALE 0 10 20 30 DATE

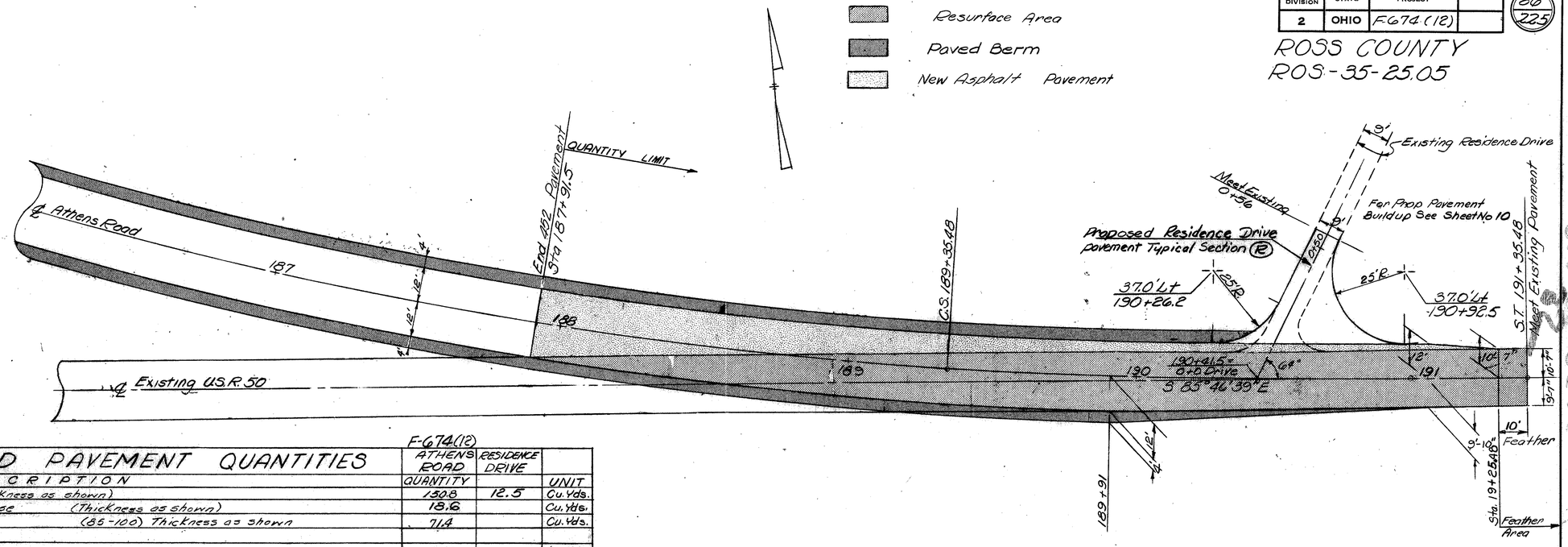
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
HIZ		L.K.M.	HIZ			

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	F-674(12)	

86/225

ROSS COUNTY
ROS-35-25.05

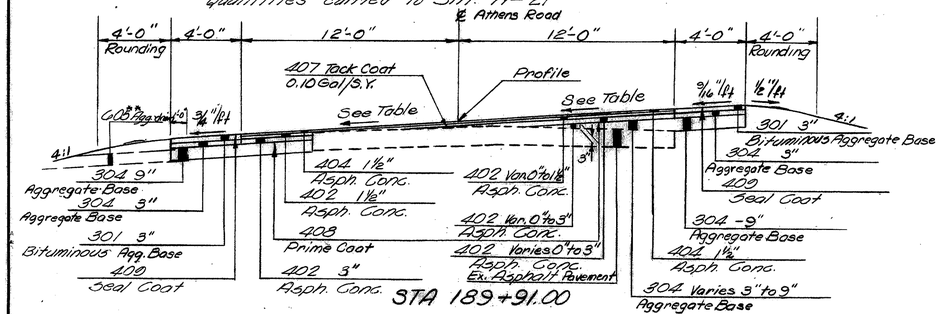
LEGEND
- Resurface Area
- Paved Berm
- New Asphalt Pavement



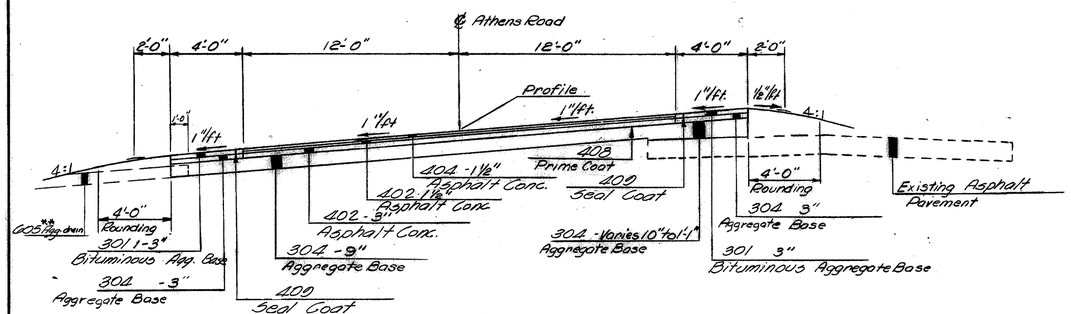
F-674(12)

ITEM	ESTIMATED PAVEMENT QUANTITIES DESCRIPTION	ATHENS ROAD QUANTITY	RESIDENCE DRIVE	UNIT
304	Aggregate Base (Thickness as shown)	150.8	12.5	Cu. Yds.
301	Bituminous Aggregate Base (Thickness as shown)	18.6		Cu. Yds.
402	Asphalt Concrete (85-100) Thickness as shown	71.4		Cu. Yds.
605	Aggregate Drains	120.0		Lin Ft.
407	Tack Coat @ 0.10 gal./S.Y.	463.3		Sq. Yds.
408	Bituminous Prime Coat @ 0.40 gal./S.Y.	459.5	90	Sq. Yds.
409	Seal Coat Cover Aggregate M^s 8 Aggregate	223.0		Sq. Yds.
409	Seal Coat Bituminous Material Applied @ rate of 0.3 gal/Sy.	223.0		Sq. Yds.
404	Asphalt Concrete (85-100) Thickness as shown	37.3	5.0	Cu. Yds.

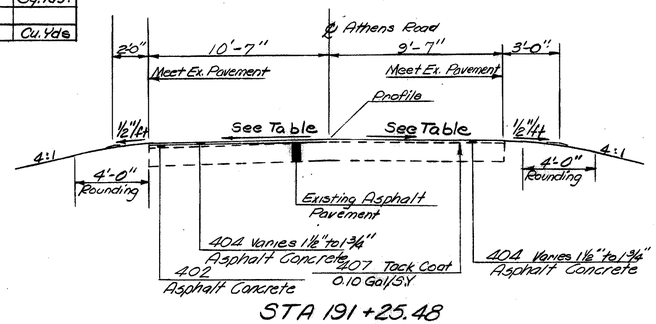
Quantities carried to Sht. No. 21



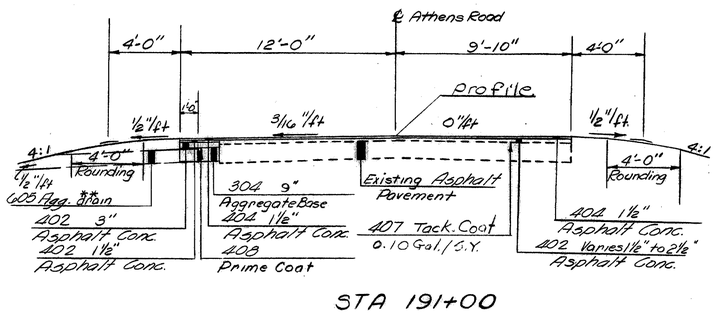
STA 189+91.00



STA 188+00



STA 191+25.48



STA 191+00

PAVEMENT ELEVATIONS

STATION	LEFT EDGE	DISTANCE LEFT	℄	DISTANCE RIGHT	RIGHT EDGE
188+00	648.83	12'-0"	649.83	12'-0"	650.83
188+50	650.14		651.14		652.14
189+00	651.60		652.60		653.60
189+35.48	652.79		653.69		654.59
189+55.48	653.50		654.30		655.10
189+75.48	654.22		654.92	12'-0"	655.62
189+95.48	654.93		655.53	11'-11"	656.13
190+15.48	655.65		656.15	11'-6"	656.65
190+35.48	656.36		656.76	11'-1"	657.16
190+55.48	657.04		657.34	10'-9"	657.64
190+75.48	657.64		657.84	10'-4"	658.04
190+95.48	658.15	12'-0"	658.34	9'-11"	658.41
191+15.48	658.68	11'-2"	658.84	9'-9"	658.78
191+35.48	MEET	EXISTING	PAVEMENT		

** Note: Agg. drains Shall be placed at 25' intervals on the left - Sta 187+91.5 to 191+25

ELMER S. BARRETT ASSOCIATES
Consulting Engineers
245-249 S. Paint Street Chillicothe, Ohio

PAVEMENT DETAILS
ATHENS ROAD
STA 187+91.5 TO 191+35.48

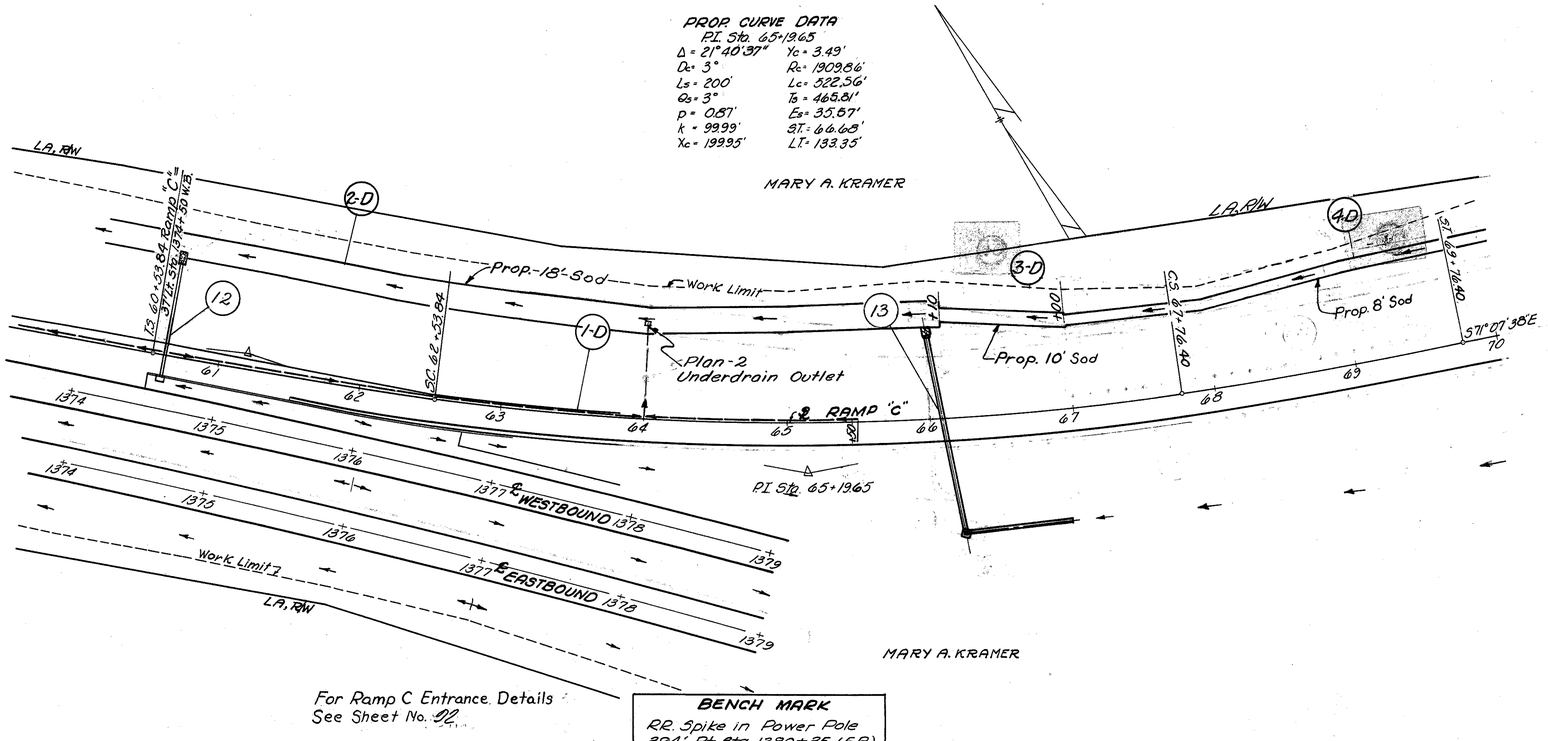
SCALE DATE

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
N.R	N.R	N.R	T.H.B.			

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	F-674 (12)	

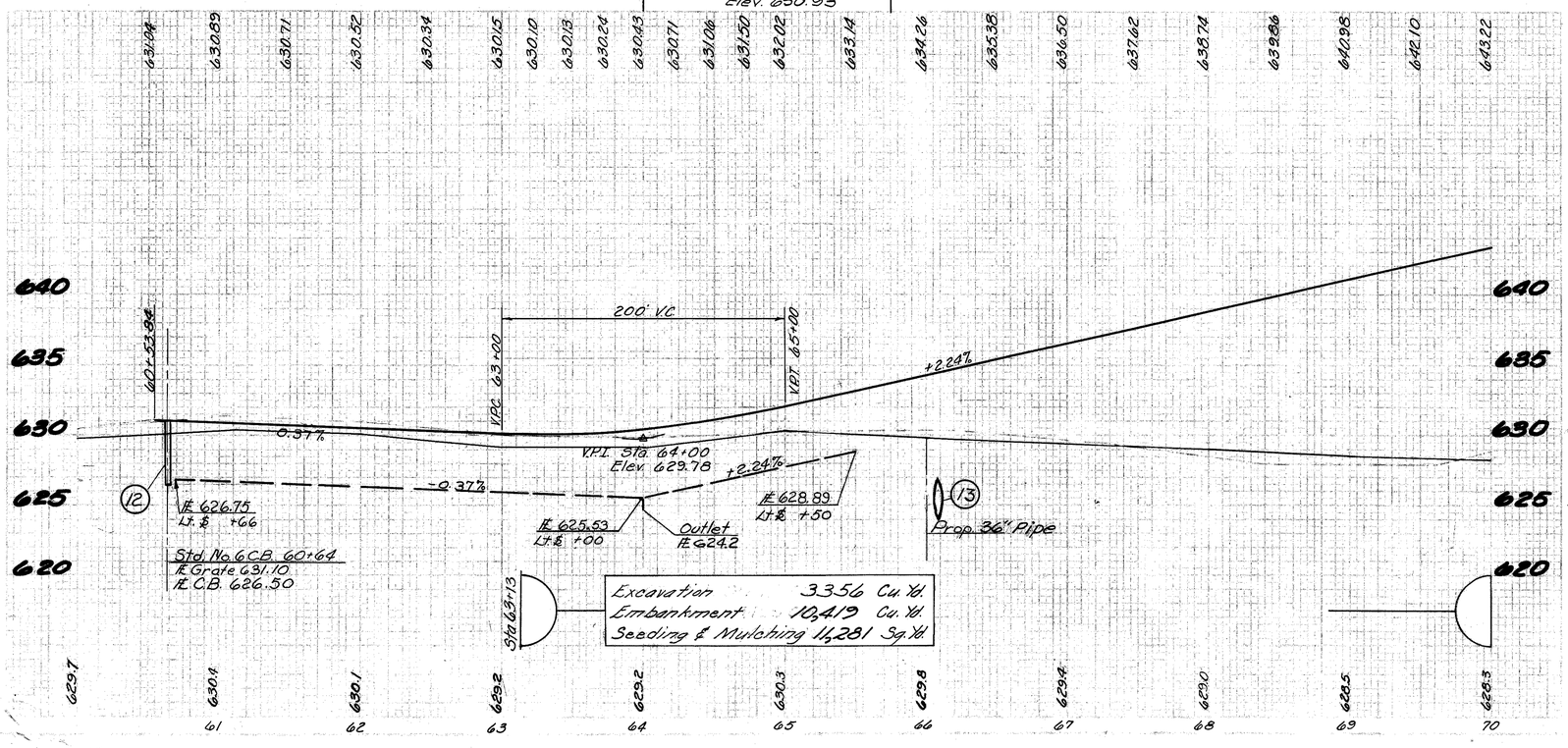
87
225

ROSS COUNTY
ROS - 35 - 25.05


PROP. CURVE DATA
P.I. Sta. 65+19.65
Δ = 21°40'37" Yc = 3.49'
Dc = 3° Rc = 1909.86'
Ls = 200' Lc = 522.56'
θs = 3° Ts = 465.81'
p = 0.87' Es = 35.57'
k = 99.99' S.T. = 66.68'
Xc = 199.95' L.T. = 133.35'

For Ramp C Entrance Details
See Sheet No. 92

BENCH MARK
R.R. Spike in Power Pole
394' Rt. Sta. 1380+35 (EB)
Elev. 630.93


Excavation 3356 Cu. Yd.
Embankment 10,419 Cu. Yd.
Seeding & Mulching 11,281 Sq. Yd.

ROADWAY ~ QUANTITIES ~ DRAINAGE

Reference or Structure No.	See Sheet Number	Station to Station	Side	660 Sodding S.Y.	601 Rock Channel Protection C.Y.	604 Catch Basin Std. No. 6 Each	Pipe Special for Underdrains 6"×6" Tee	602 Concrete Masonry C.Y.	603 Conduit, Type B with Class B Bedding 12" L.F.	603 6" Conduit Type F L.F.	605 6" Shallow Pipe Underdrain L.F.
1-D		60+66 to 65+50	Lt.				1			10	536
2-D		60+53.84 to 66+10	Lt.	1,080							
3-D		66+10 to 67+00	Lt.	100							
4-D		67+00 to 70+00	Lt.	267							
12	52	60+64	Lt. & Rt.		3	1		0.23	81		
13	112	66+08.5	Lt. & Rt.								
		Total		1,447	3	1		*0.23	81	10	536

* Quantities carried to Sht. No. 22

STA. 60+53.84 TO STA. 70+00 RAMP "C"

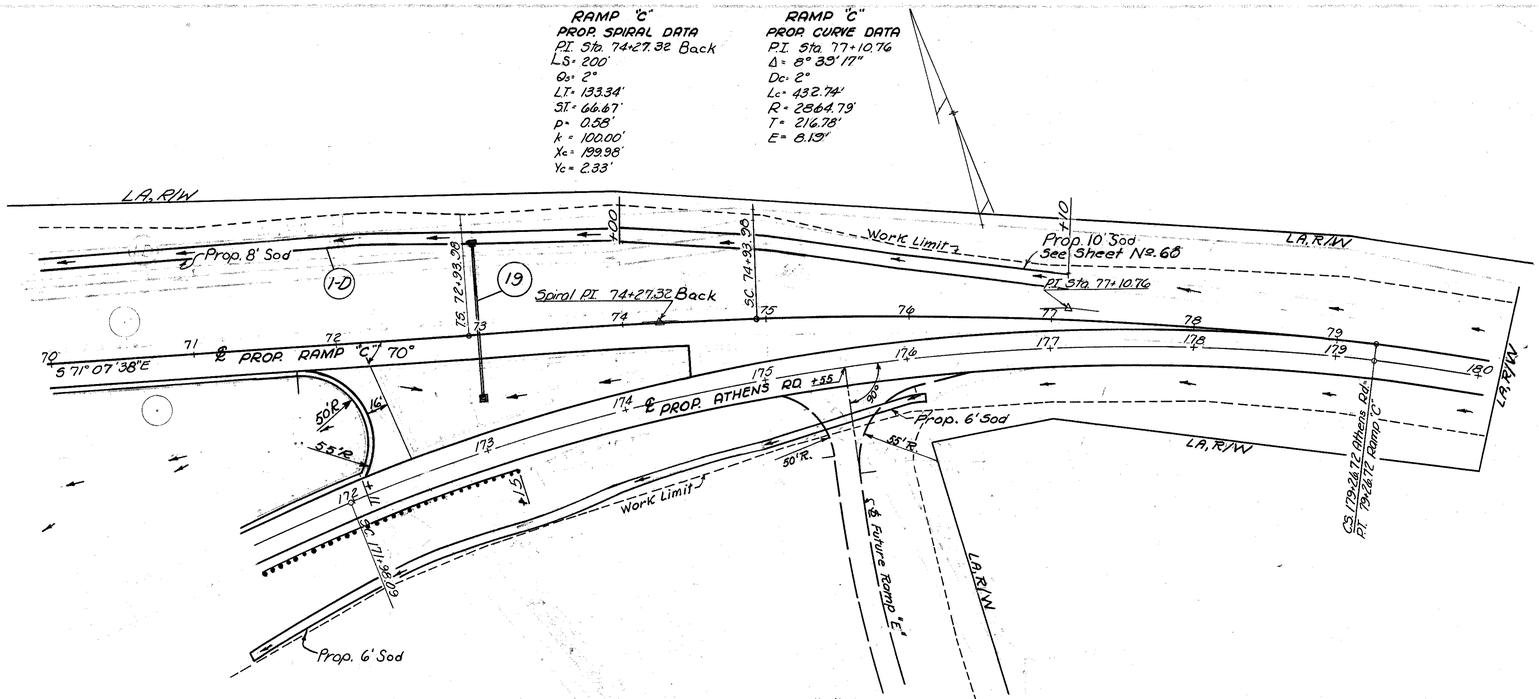
PLANS DIVISION	STATE	PROJECT	
2	OHIO	F-674 (12)	

88
225

ROSS COUNTY
ROS -35- 25.05

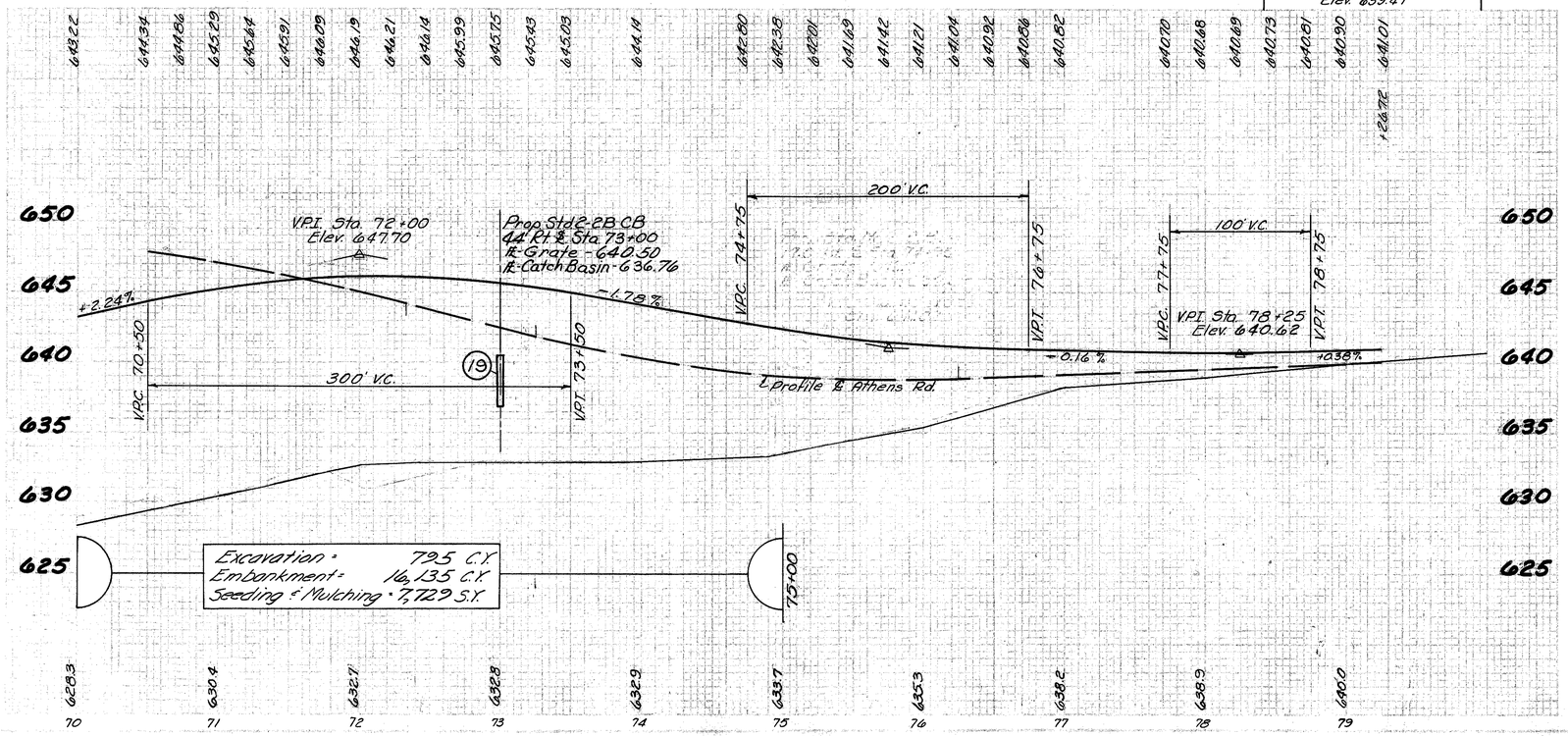
RAMP "C"
PROP. SPIRAL DATA
PI Sta. 74+27.32 Back
L_S = 200'
Q_s = 2°
LT = 133.34'
ST = 66.67'
p = 0.58'
k = 100.00'
X_c = 199.98'
Y_c = 2.33'

RAMP "C"
PROP. CURVE DATA
P.I. Sta. 77+10.76
Δ = 8° 39' 17"
Dc = 2°
Lc = 432.74'
R = 2864.79'
T = 216.78'
E = 8.19'



For Ramp "C" Exit ℄ ATHENS ROAD
Details See Sheet No. 93

BENCH MARK
R.R. Spike in 24" Catalpa
250' Rt Sta. 180+10 Athens Rd.
Elev. 639.47



~ DRAINAGE ~ QUANTITIES ~ ROADWAY

Item		Unit	Side	Station to Station	See Sheet Number	Reference or Structure No.
601	Channel Protection	C.Y.				
660	Sodding	S.Y.				
604	Catch Basin Std. No. 2-2B	Each				
602	Concrete Masonry	C.Y.				
603	Conduit Type B with Class B Bedding	L.in.Ft.	Lt.	70+00 to 74+00	19	1-D
			Lt.	73+00	91	
			Rt.			

Item		Unit				
601	Channel Protection	C.Y.				1
660	Sodding	S.Y.				356
604	Catch Basin Std. No. 2-2B	Each				1
602	Concrete Masonry	C.Y.				0.23
603	Conduit Type B with Class B Bedding	L.in.Ft.				108

Item		Unit				
601	Channel Protection	C.Y.				1
660	Sodding	S.Y.				356
604	Catch Basin Std. No. 2-2B	Each				1
602	Concrete Masonry	C.Y.				0.23 *
603	Conduit Type B with Class B Bedding	L.in.Ft.				108

* Carried to Structure Box, Sht. No. 22

STA. 70+00 TO STA. 79+26.72 RAMP "C"

SHT. NO.	STATE	PROJECT	
2	OHIO	F-674 (12)	

89
225

ROSS COUNTY
ROS-35-25.05

END AREA		VOLUME	
CUT	FILL	CUT	FILL

Begin 8' Sod
End 10' Sod
Lt. Sta. 67+00

Begin Guard Rail
Lt. Sta. 67+00

L.A. R/W

10' Sod

5:1

6:1

Granular Material

℄ 625.9

636.50
67+00
629.4

℄ 624.4

136

225 435

Begin 10' Sod
Sta. 66+10
End 18' Sod

172.2

℄ U.S.R. 35 W.B.

18' Sod

6:1

Var.

Quantity limit

4:1

12.4

713 1444

℄ 623.70

(13) For Details of Prop. Pipe See Sheet No. 11.2

634.26
66+00
629.8

Begin Granular Material
End 6" Underdrains
Sta. 65+50

Begin Guard Rail
Rt. Sta. 65+46

℄ 629.0

160 295

128.9

18' Sod

1½"/Ft.

℄

556 696

10.8

632.02
65+00
630.3

℄ 623.46

℄ 629.25

Quantity Limit

140 81

110.6

Plan-2
Outlet Underdrain
℄ 624.2

18' Sod

℄

609 282

9.1

℄ 623.22

Prop. 603.6"x10' Type F Conduit

Prop. 605.6"x52' Pipe Underdrain

℄ 625.83

℄ 630.5

Quantity limit

630.43
64+00
629.2

189 39

85.0

L.A. R/W

℄ U.S.R. 35 W.B.

18' Sod

1½"/Ft.

3:1

3:1

6:1

673 93

8.5

Ahead
Back

℄ 622.98

℄ 631.0

Note: For Grass Section Extension, See Sheet No. 63

63+13
629.2

Ahead	232	19
Back	0	0

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

RAMP "C" STA. 63+13 TO STA 67+00

FED. TO DIVISION	STATE	PROJECT	
2	OHIO	F-G74 (12)	

20
225

ROSS COUNTY
ROS-35-25.05

Athens Road ℄

L.A. R/W

8' Sod

4:1

6:1

Quantity Limit

℄ 630.8

646.19
72+00
632.7

℄ 637.6

645.29
71+00
630.4

℄ 630.0

Note:
For Cross Sections Ext.,
See Sheet No. 78

8' Sod

4:1

℄ 628.25

℄ 628.8

643.22
70+00
628.3

8' Sod

℄ 626.5

℄ 625.8

℄ 625.80

640.98
69+00
628.5

1378
1491 Add for area between U.S.R. 35, Athens Road and Ramp "C"

L.A. R/W

8' Sod

4:1

6:1

℄ 626.2

℄ 625.2

℄ 625.35

638.74
68+00
629.0

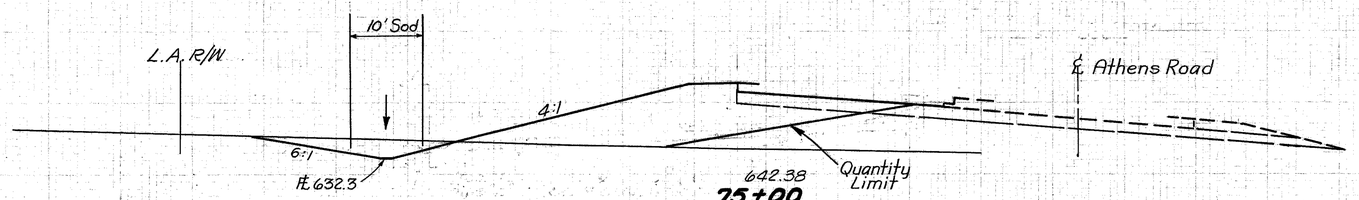
Sta 67+00

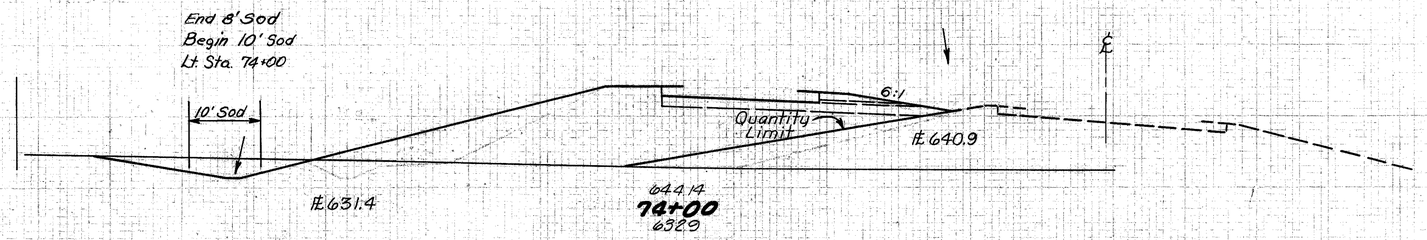
Sta 67+00

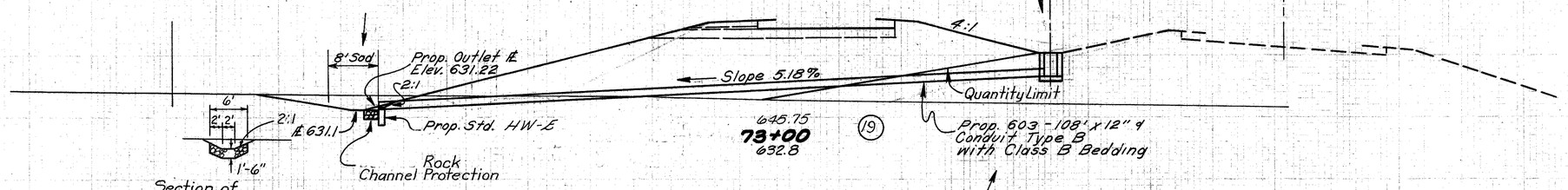
RAMP "C" STA. 68+00 TO STA. 72+00

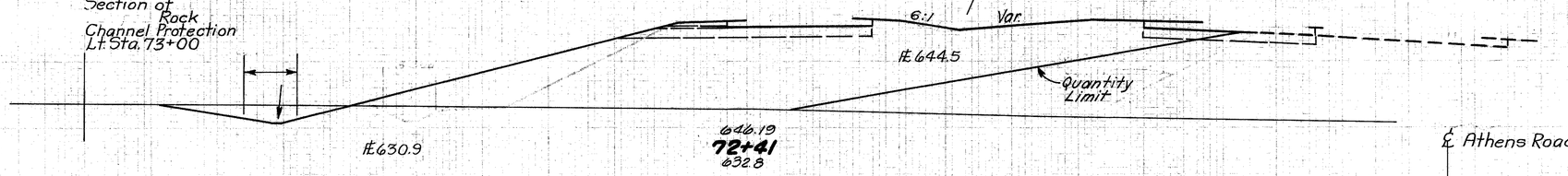
	END AREA		VOLUME	
	CUT	FILL	CUT	FILL
167				
			47 963	
1811				
				1,704347
159				
			45 1384	
1911				
				185 4785
185				
			55 1200	
1722				
				144 3594
125				
			23 741	
1717				
				141 2422
123				
			53 567	
1717				
				515 1948
186				
			Sta 67+00	225 485

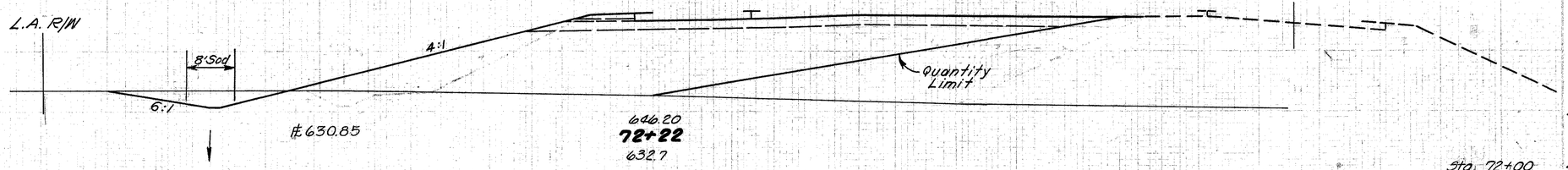
140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120 140











2	OHIO	F-674 (12)	91/225

ROSS COUNTY
ROS-35-25.05

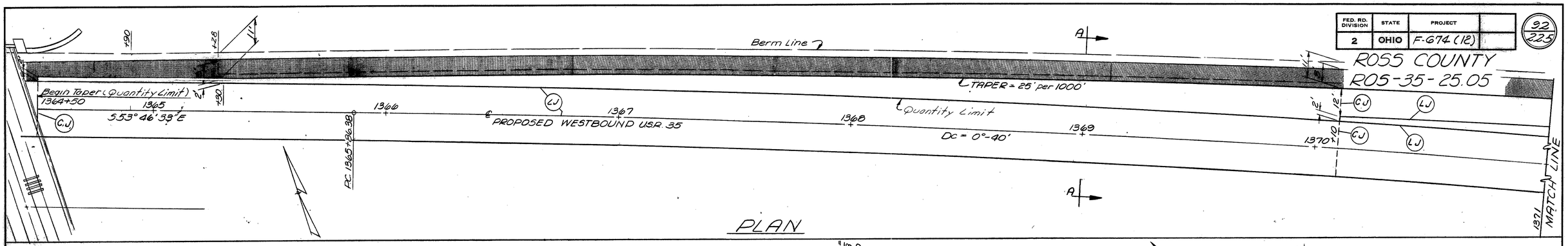
Note: See Athens Road Cross Sections

RAMP "C" STA. 72+22 TO STA 75+00

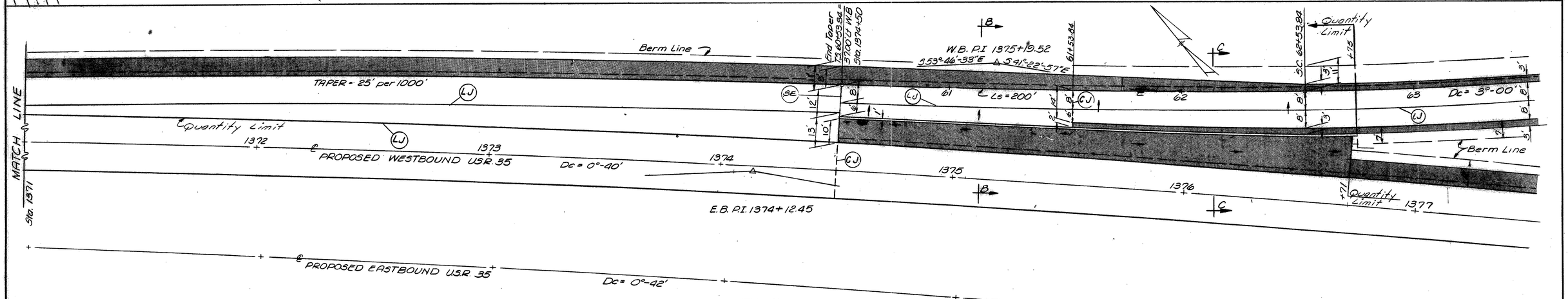
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	F-674 (12)	

92
225

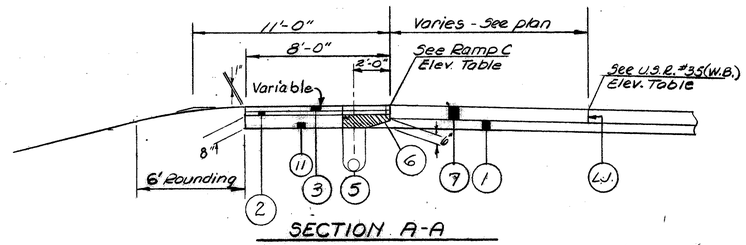
ROSS COUNTY
ROS-35-25.05



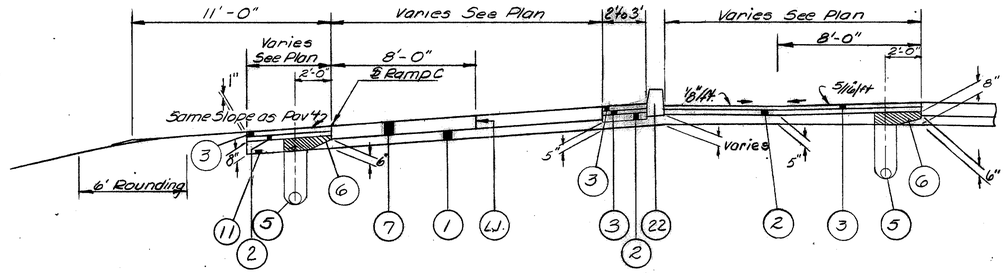
PLAN



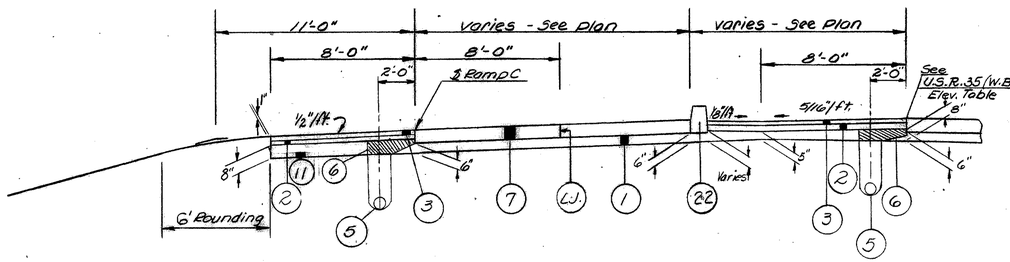
PLAN



SECTION A-A



SECTION C-C



SECTION B-B

LEGEND

- LJ Standard Longitudinal Joint
- CJ Standard Contraction Joint
- Paved Berm.
- SE Standard Expansion Joint.

ESTIMATED PAVEMENT QUANTITIES F-674(12)

No.	Item	Description	Quantity	Unit
3	301	3" Bituminous Aggregate Base	1,227.1	Sq. Yds.
2	304	4" Aggregate Base	1,402.5	Sq. Yds.
22	609	Standard Type B Concrete Curb.	223	Lin. Ft.
1	310	Subbase Grading A As per plan (Thickness as shown)	377.5	Cu. Yds.
7	451	9" Reinforced Portland Cement Concrete Pavement	1,770.5	Sq. Yds.
11	310	Subbase	243.5	Cu. Yds.

Quantities carried to Sht No. 21

ELMER S. BARRETT ASSOCIATES
Consulting Engineers
245-249 S. Paint Street Chillicothe, Ohio

PAVEMENT DETAILS
ENTRANCE RAMP "C"

SCALE 0 10 20 30 DATE

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
		LKM				

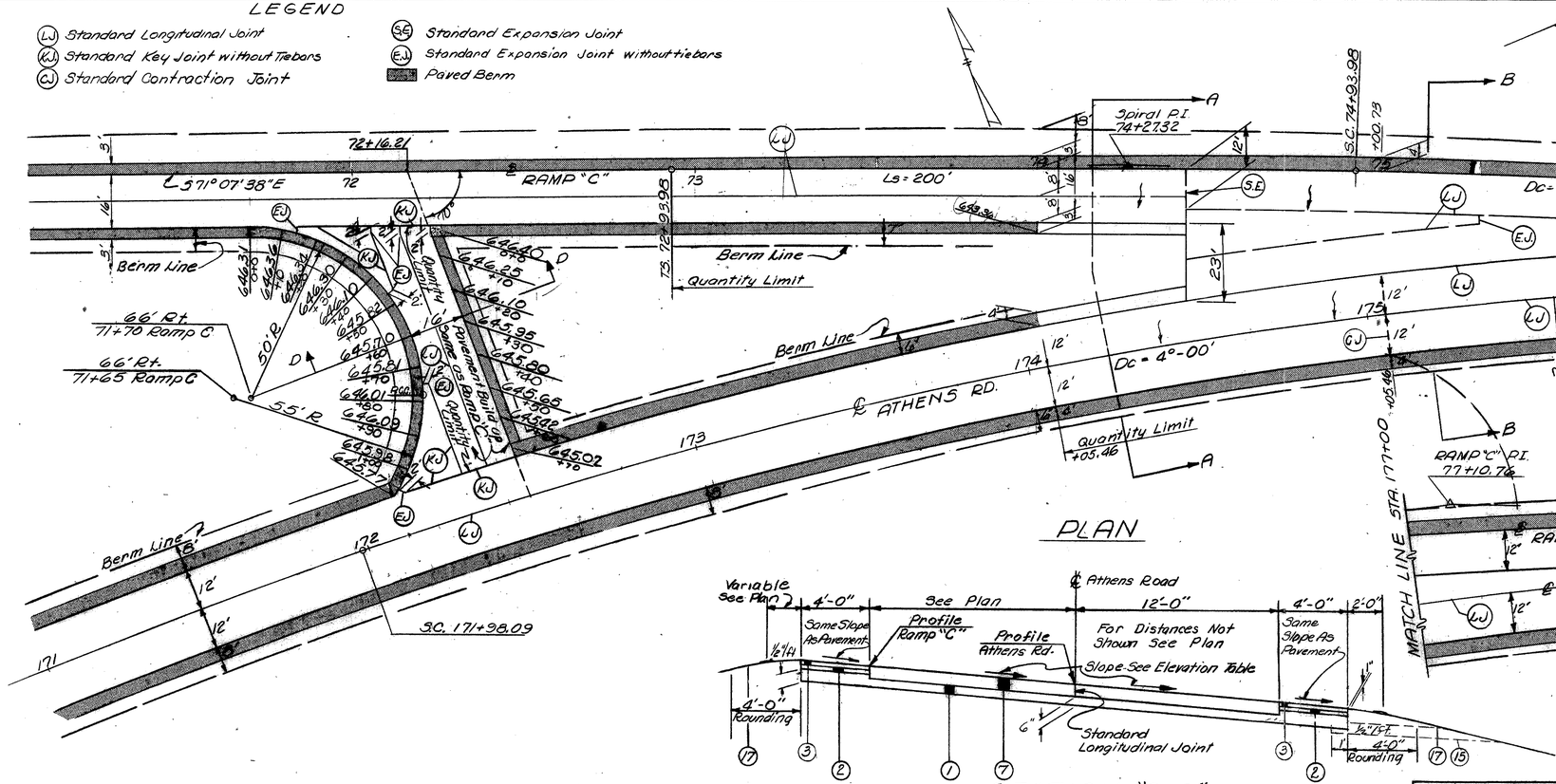
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	F-674(12)	

93/225

ROSS COUNTY
ROS-35-25.05

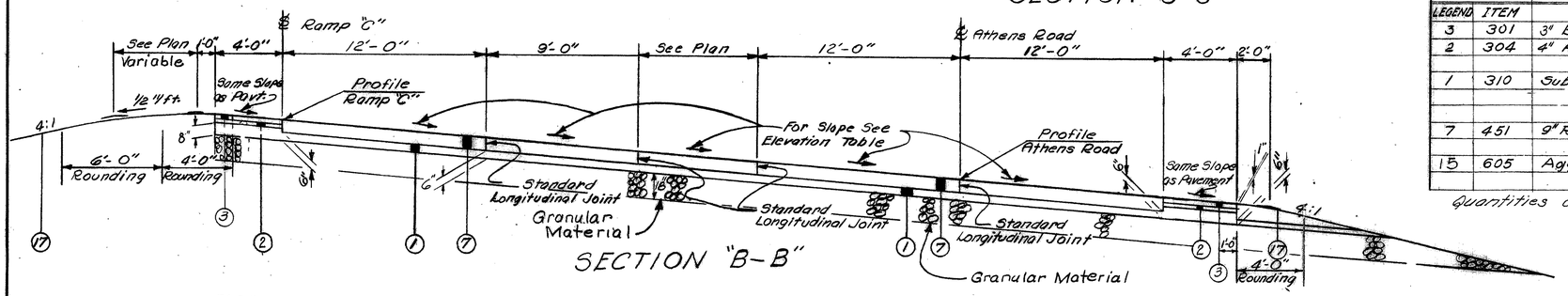
LEGEND

- (LJ) Standard Longitudinal Joint
- (KJ) Standard Key Joint without Tiebars
- (CJ) Standard Contraction Joint
- (SE) Standard Expansion Joint
- (EJ) Standard Expansion Joint without tiebars
- Paved Berm

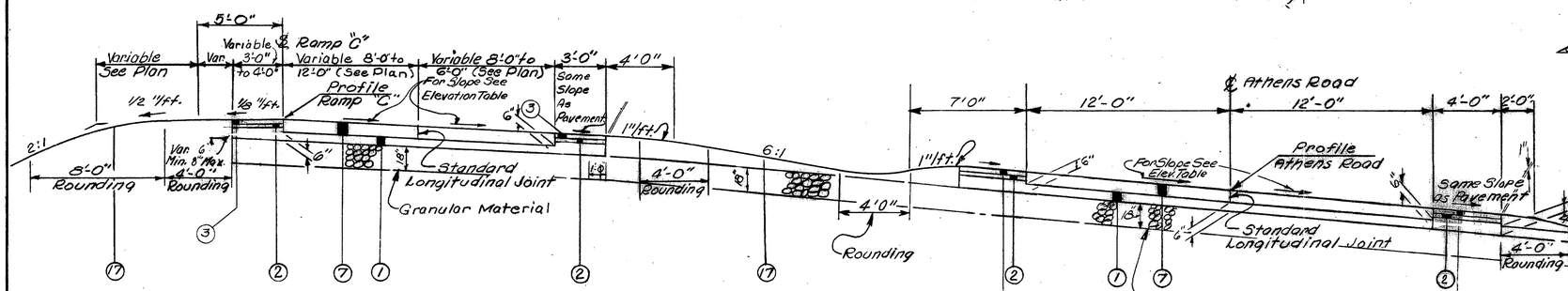


PLAN

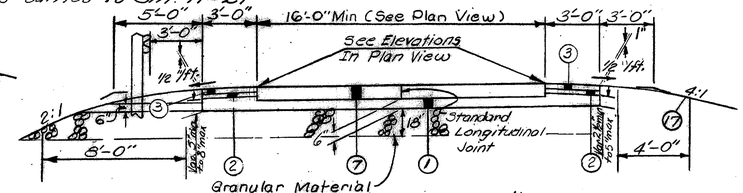
SECTION "C-C"



SECTION "B-B"



SECTION "A-A"



SECTION "D-D"

LEGEND	ITEM	ESTIMATED PAVEMENT QUANTITIES DESCRIPTION	QUANTITIES CROSS OVER	QUANTITIES RAMP C & ATHENS RD.	UNIT
3	301	3" Bituminous Aggregate Base	37.9	614.2	Sq. Yds.
2	304	4" Aggregate Base	57.9	614.2	Sq. Yds.
1	310	Subbase Grading A As per plan (Thickness As Shown)	34.2	347.9	Cu. Yds.
7	451	9" Reinforced Portland Cement Concrete Pavement	184.1	2361.3	Sq. Yds.
15	605	Aggregate Drains		135	Lin. Ft.

Quantities carried to Sht. No. 21

ELMER S. BARRETT ASSOCIATES
Consulting Engineers
245-249 S. Paint Street Chillicothe, Ohio

PAVEMENT DETAILS
EXIT RAMP "C"

SCALE 0 10 20 30 DATE

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
N.H.R.		W.G.L.	N.H.R.			

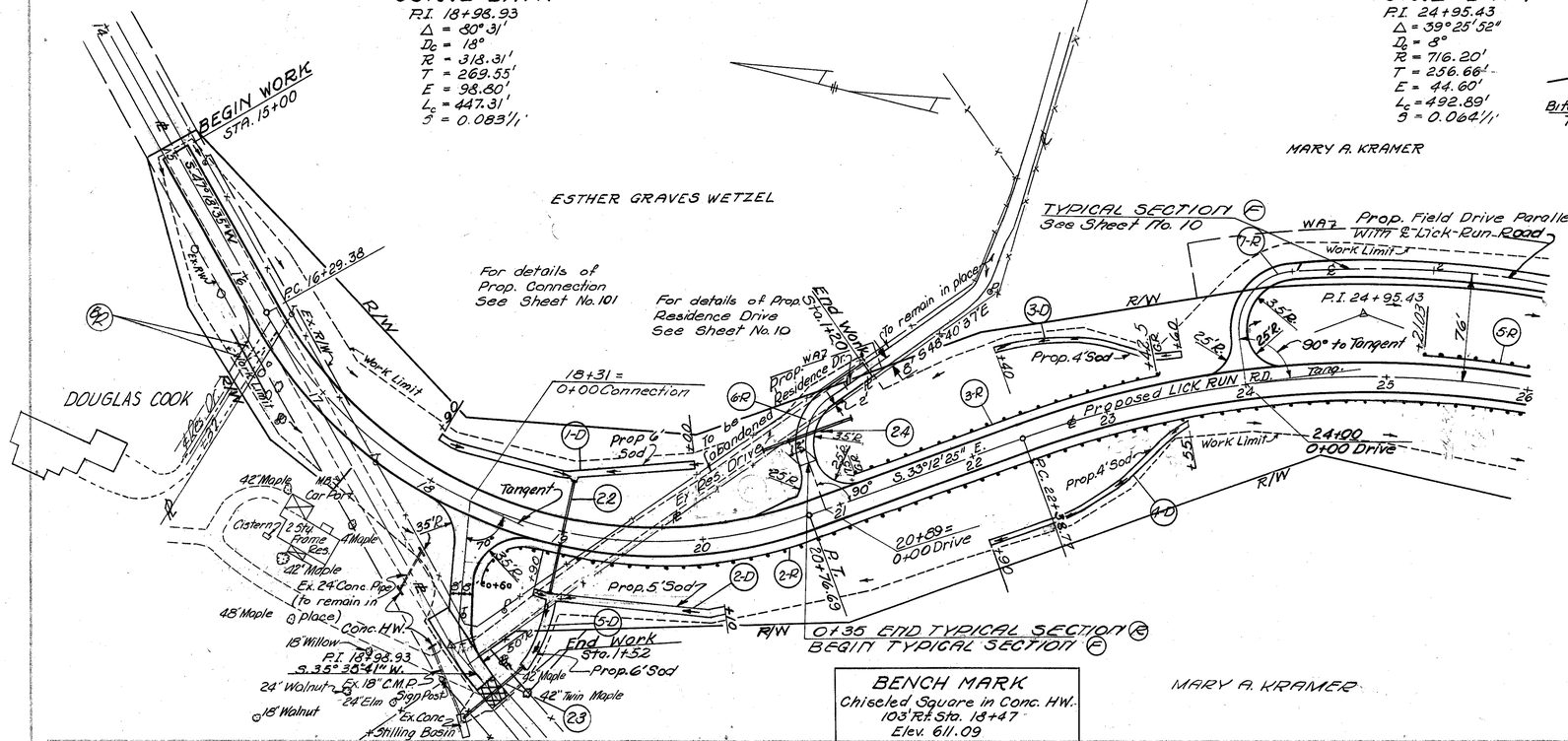
FED. HWY. DIVISION	STATE	PROJECT	
2	OHIO	F-674 (12)	

94
225

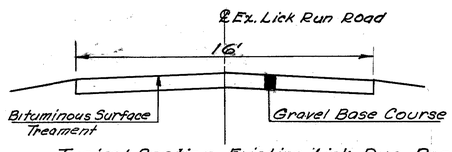
ROSS COUNTY
ROS-35-25.05

CURVE DATA
P.I. 18+98.93
Δ = 80°31'
D_c = 18°
R = 318.31'
T = 269.55'
E = 98.80'
L_c = 447.31'
$\bar{S}$ = 0.083'/'

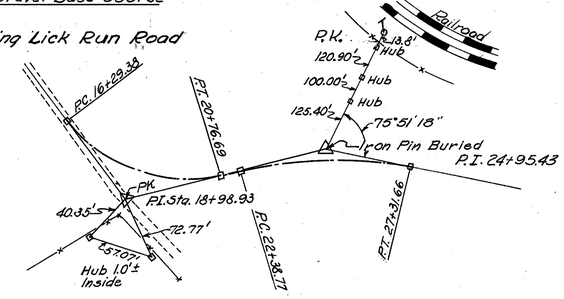
CURVE DATA
P.I. 24+95.43
Δ = 39°25'52"
D_c = 8°
R = 716.20'
T = 256.66'
E = 44.60'
L_c = 492.89'
$\bar{S}$ = 0.064'/'



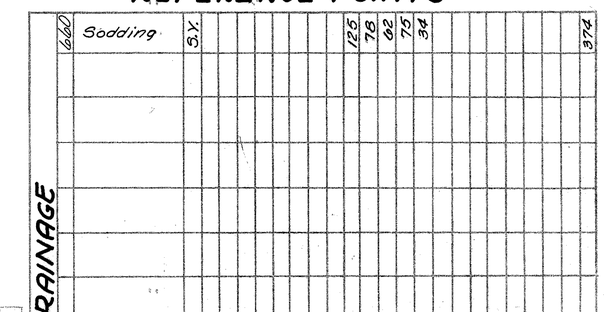
BENCH MARK
Chiseled Square in Conc. HW.
103' Rt. Sta. 18+47
Elev. 611.09



Typical Section Existing Lick Run Road



REFERENCE POINTS



ROADWAY ~ QUANTITIES ~ DRAINAGE

Station to Station	See Sheet Number	Reference or Structure No.		600 Sodding SY	603 12" Conduit Type D	606 Approach End Assembly Each	608 Asphalt Concrete (SS-1(00) 2" Sq. Yds.	608 Bituminous Prime Coat applied @ 0.4 gal. per Sq. Yd. Sq. Yds.	304 Aggregate Base 6" Sq. Yds.	304 Aggregate Base 5" Cu. Yds.	606 Anchor Assembly Each	606 Guard Rail Type 4 Lin. Ft.	Side	Station to Station
				125										
				18										
				02										
				75										
				34										
374														
		2-R	Rt.									1	112.5	at 50 Pipes connection to 28+00
		3-R	Lt.										22.5	21+17.50 to 23+42.5
		5-R	Lt.										28.97	25+21.03 to 26+00
		6-R	Lt.						113.3	11.2				20+89 to 24+00
		7-R	Lt.				808	4.5						24+00 to 26+00
		8-R	Rt.						39.3					16+37 to 17+90
		1-D	Lt.					7.1						17+90 to 20+10
		2-D	Rt.							18.8				18+90 to 20+10
		3-D	Lt.											22+40 to 23+60
		4-D	Rt.											21+90 to 23+55
		5-D	Lt.											19+00
	2.2	118	Lt. & Rt.											19+00
	2.3	118	Rt.											18+98.93
	2.4	119	Lt.											20+89 (0+59 Res. Drive)
				1874.10	1	1300	504.6	180.8	701.6	3	48			Total to Sht 1 of 21

* Carried to Sht 1 of 21

LICK RUN ROAD STA. 15+00 TO STA. 26+00

SHEET NO. DIVISION	STATE	PROJECT	
2	OHIO	F-674 (12)	

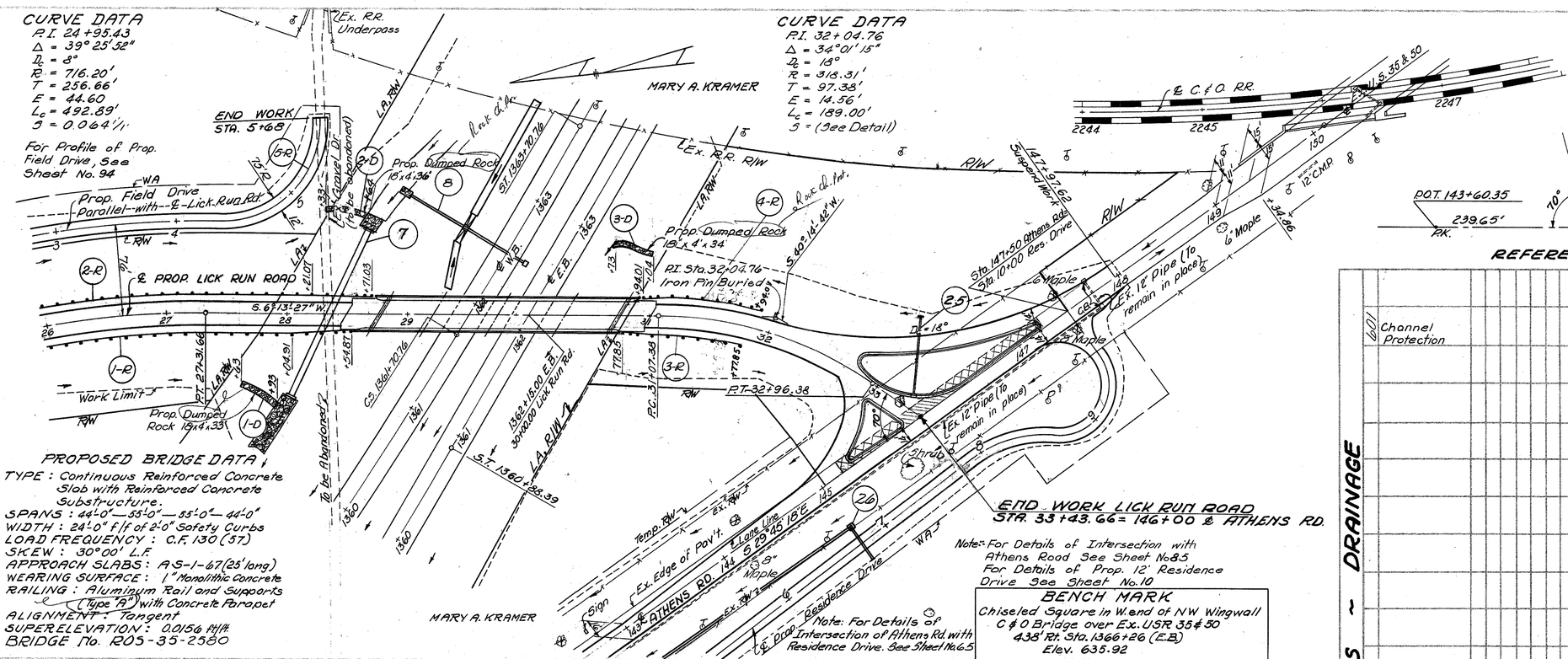
95
225

ROSS COUNTY
ROS-35-25.05

CURVE DATA
P.I. 24+95.43
Δ = 39° 25' 52"
D_c = 8°
R = 716.20'
T = 256.66'
E = 44.60
L_c = 492.89'
S = 0.064 ft/ft

For Profile of Prop. Field Drive, See Sheet No. 94

CURVE DATA
P.I. 32+04.76
Δ = 34° 01' 15"
D_c = 18°
R = 318.31'
T = 97.38'
E = 14.56'
L_c = 189.00'
S = (See Detail)



PROPOSED BRIDGE DATA
TYPE : Continuous Reinforced Concrete Slab with Reinforced Concrete Substructure.
SPANS : 44'-0" — 55'-0" — 55'-0" — 44'-0"
WIDTH : 24'-0" f/f of 2'-0" Safety Curbs
LOAD FREQUENCY : C.F. 130 (57)
SKEW : 30°00' L.F.
APPROACH SLABS : AS-1-67(25' long)
WEARING SURFACE : 1" Monolithic Concrete
RAILING : Aluminum Rail and Supports (Type "B") with Concrete Parapet
ALIGNMENT : Tangent
SUPERELEVATION : 0.015 ft/ft
BRIDGE No. 205-35-2580

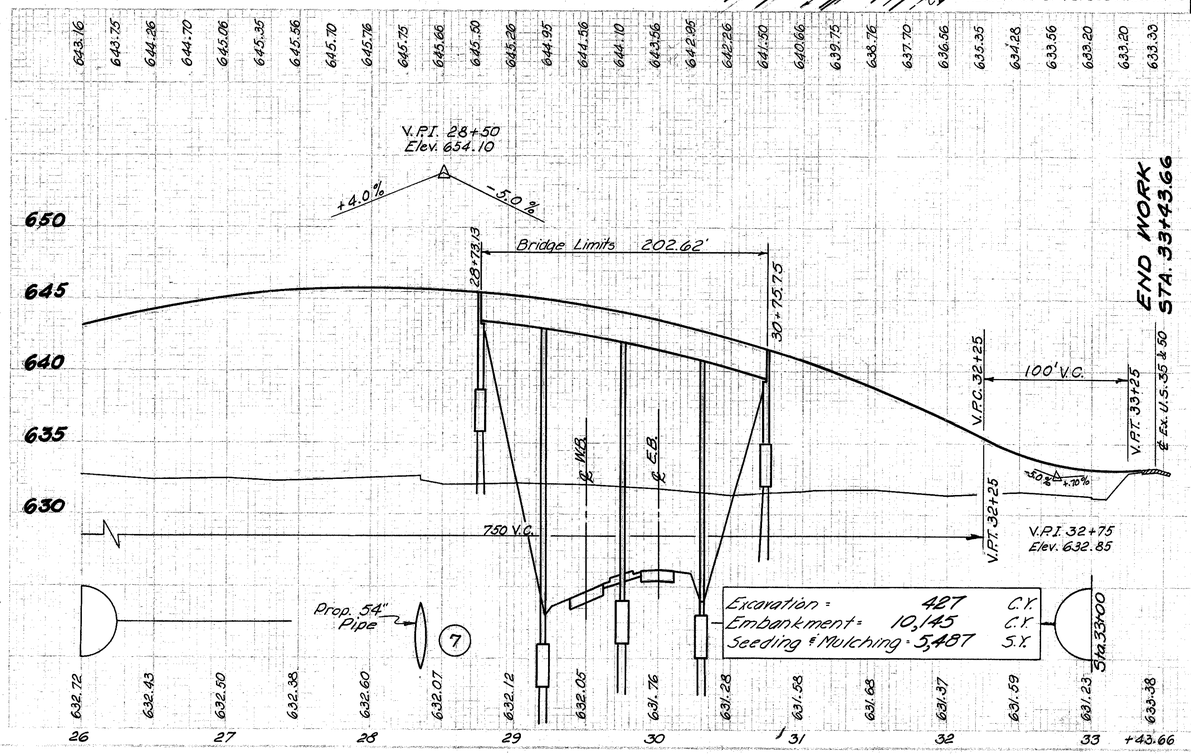
REFERENCE POINTS

END WORK LICK RUN ROAD
STA. 33+43.66 = 146+00 ℄ ATHENS RD.

Note: For Details of Intersection with Athens Road See Sheet No.85
For Details of Prop. 12' Residence Drive See Sheet No. 10

BENCH MARK
Chiseled Square in W. end of NW Wingwall C ℄ O Bridge over Ex. USR 35 ℄ 50
438' Rt. Sta. 1366+26 (E.B.)
Elev. 635.92

Note: For Details of ⑥ Intersection of Athens Rd. with Residence Drive. See Sheet No. 65



ROADWAY ~ QUANTITIES

Station to Station	See Sheet Number	Reference or Structure No.	204 Aggregate Base Sq. Yds.	606 Approach End Assembly Each	606 Bridge Terminal Assembly Each	606 Guard Rail Type 4 Lin. Ft.	Side	
26+00 to 28+54.87	109	1-R				254.87	Rt.	
26+00 to 28+71.03	109	2-R				271.03	Lt.	
30+77.85 to 31+17.85	112	3-R				100.00	Rt.	
30+94.01 to 31+94.01	112	4-R				100.00	Lt.	
28+00 to 28+30	120	5-R					Lt.	
28+35	109	1-D					Lt. Rt.	
1362+50 (NB)	49	2-D					Lt.	
0+50 (Return)	112	2.5					Lt.	
30+73 to 31+04	120	3-D					Lt.	
27+63 to 27+93							Rt.	
28+33 to 28+62							Lt.	
137+23 to 145+00 (Approx.)			3880				Rt.	
TOTAL			3880	4	2	725.90		

4 Carried to Sht. No. 21

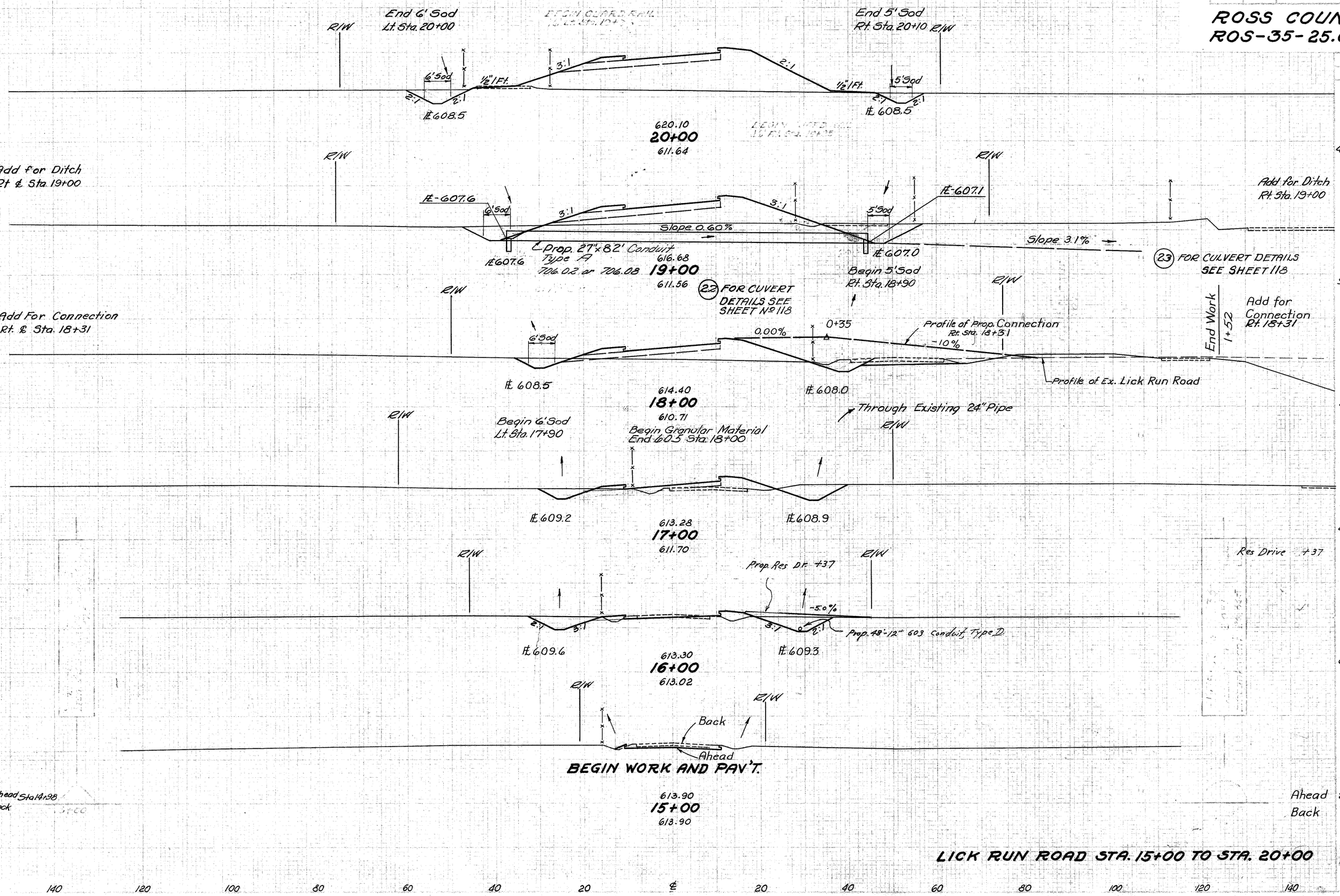
LICK RUN ROAD STA. 26+00 TO STA. 33+43.66

SHEET NO.	STATE	PROJECT	
2	OHIO	F-674(12)	

96
225

ROSS COUNTY
ROS-35-25.05

		END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
107					
1106	Add for Ditch Rt. & Sta. 19+00				
97				47	439
					161
					254 1233
92					
895	Add For Connection Rt. & Sta. 18+31				
136				90	227
					155
					243 698
69					
				41	150
					159 367
695					
56				45	48
					0 72
622					196 0 117
56				61	15
356					150 30
8	Ahead Sta 14+98			Ahead	20 1
0	Back 13+00			Back	0 0



SEC. NO. CONTROL	STATE	PROJECT	
2	OHIO	F 674 (12)	

97
225

ROSS COUNTY
ROS-35-25.05

SECTIONS

END WIDTH	SQ. YDS.
104	
656	
132	
711	
124	
1339	
117	
1245	
107	

END AREA		VOLUME	
CUT	FILL	CUT	FILL
		20	627
		35	1621
		18	1124
		27	2074
		11	1116
		87	3439
		36	741
		154	2185
		47	439

End Guard Rail
16' Lt. Sta. 23+42.5

End Guard Rail
16' Rt. Sta. 20+57.5

R/W
4'Sod
2:1
1/2"/Ft.
2:1
2:1
4'Sod
1/2"/Ft.
2:1
2:1
R/W

℄ 618.5

632.10
23+00
620.80

℄ 620.0

R/W
4'Sod
4'Sod
R/W

℄ 611.5

℄ 612.0

630.10
22+50
613.52

Begin 4'Sod
Lt. Sta. 22+40

R/W
R/W
4'Sod

℄ 610.4

Begin Guard Rail
16' Lt. Sta. 21+17.5

628.10
22+00
611.74

℄ 610.4

Begin 4' Sod
Rt. Sta. 21+90

END WORK
STA. 1+20

W/R
R/W
Profile of Prop. Res. Drive
Lt. Sta. 20+89
-10%
2:1
2:1
R/W

Add for Drive
Lt. Sta. 20+89

Profile of Ex. Res. Drive

℄ 609.4

℄ 609.4

624.10
21+00
611.43

Sta. 20+00

Sta. 20+00

LICK RUN ROAD STA. 21+00 TO STA. 23+00

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

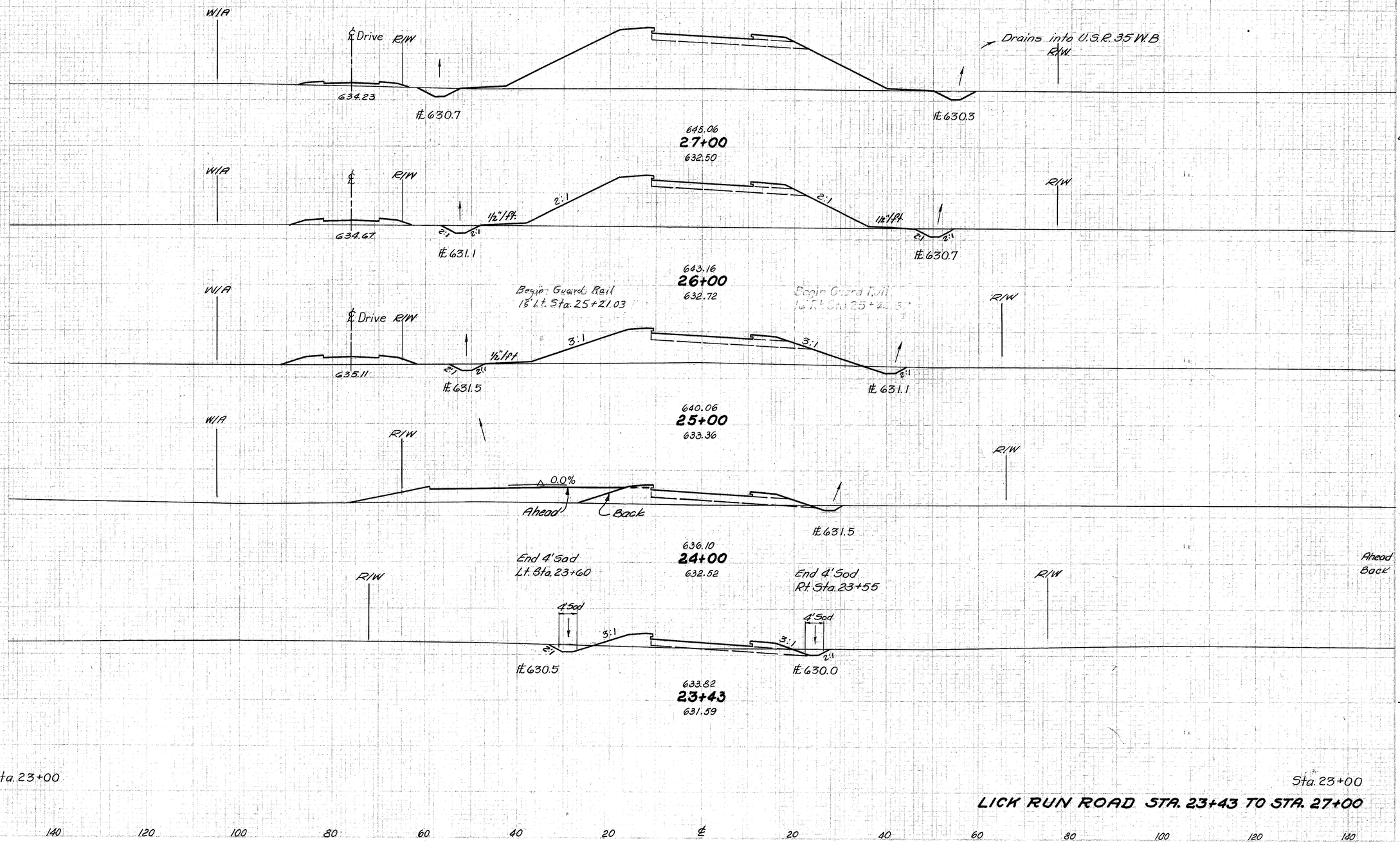
FED. R.D. REGION	STATE	PROJECT		
2	OHIO	F-674 (12)		

98
225

ROSS COUNTY
ROS-35-25.05

SEEDING

END WIDTH	LBS. TOS.
124	
1361	
121	
1283	
110	
950	
61	
339	
46	
358	
104	



	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
	20	754		
			70	2506
	18	599		
			63	1817
	16	382		
			43	1215
Ahead	7	274		
Back	7	125		
			41	216
	32	80		
			41	563
	20	627		

LICK RUN ROAD STA. 23+43 TO STA. 27+00

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

SHEET NO.	STATE	PROJECT	
2	OHIO	F-674 (12)	

99
225

ROSS COUNTY
ROS-35-25.05

End Guard Rail
16' Rt. Sta. 31+77.85

End Rock Channel Protection
Lt. Sta. 31+09

R/W

4'
1½"/Ft.
2:1
2:1
2:1
2:1
2:1
1½"/Ft.
2:1
℄ 628.3
℄ 630.2

Begin Guard Rail
14'-6" Lt. Sta. 30+94.01

640.66
31+00
631.58

R/W

Quantity Limit
Begin Rock Channel Prot.
Lt. Sta. 30+73

641.27
30+82
631.80

℄ 625.9

Begin Guard Rail
14'-6" Rt. Sta. 30+77.85

For Cross Section Drains into U.S.R. 35 E.B.
Ext., See Sht. No. 47

Quantity Limit

R/W

℄ E.B.

30+67
632.20

0:0 SECTION STA. 30+50
BRIDGE

Sta. 30+50

0:0 SECTION STA. 29+05

Sta. 29+05

Sta 30+07

29+46

Quantity Limit

Quantity Limit

℄ W.B.

Book

28+83
631.70

End Guard Rail
14'-6" Lt. Sta. 28+71.03

Edge of Berm

Quantity Limit

Quantity Limit

℄ W.B.

Lt. Sta. 28+64
Dumped Rock
Lt. Sta. 28+33
Drains into U.S.R. 35 W.B.

Sta. 28+35
Prop. 152'-54" Conduit
Type F1, 7%-92
See Sheet No.

645.55
28+68
632.10

End Guard Rail
14'-6" Rt. Sta. 28+54.87

Edge of Berm

R/W

Quantity Limit

645.76
28+00
632.60

Rt. Sta. 27+93
Rock Channel Protection.
Rt. Sta. 27+63

For Cross Section
Ext., See Sheet No. 48

Sta. 27+00

Sta. 27+00

LICK RUN ROAD STA. 28+00 TO STA. 31+00

	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
	38	451		
			13	293
	0	428		
			0	177
	0	210		
			0	66
Sta. 30+50	0	0		
Sta. 29+05	0	0		
			0	175
	0	430		
			0	319
	0	718		
			20	1886
	16	780		
			67	2841
Sta. 27+00	20	754		

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

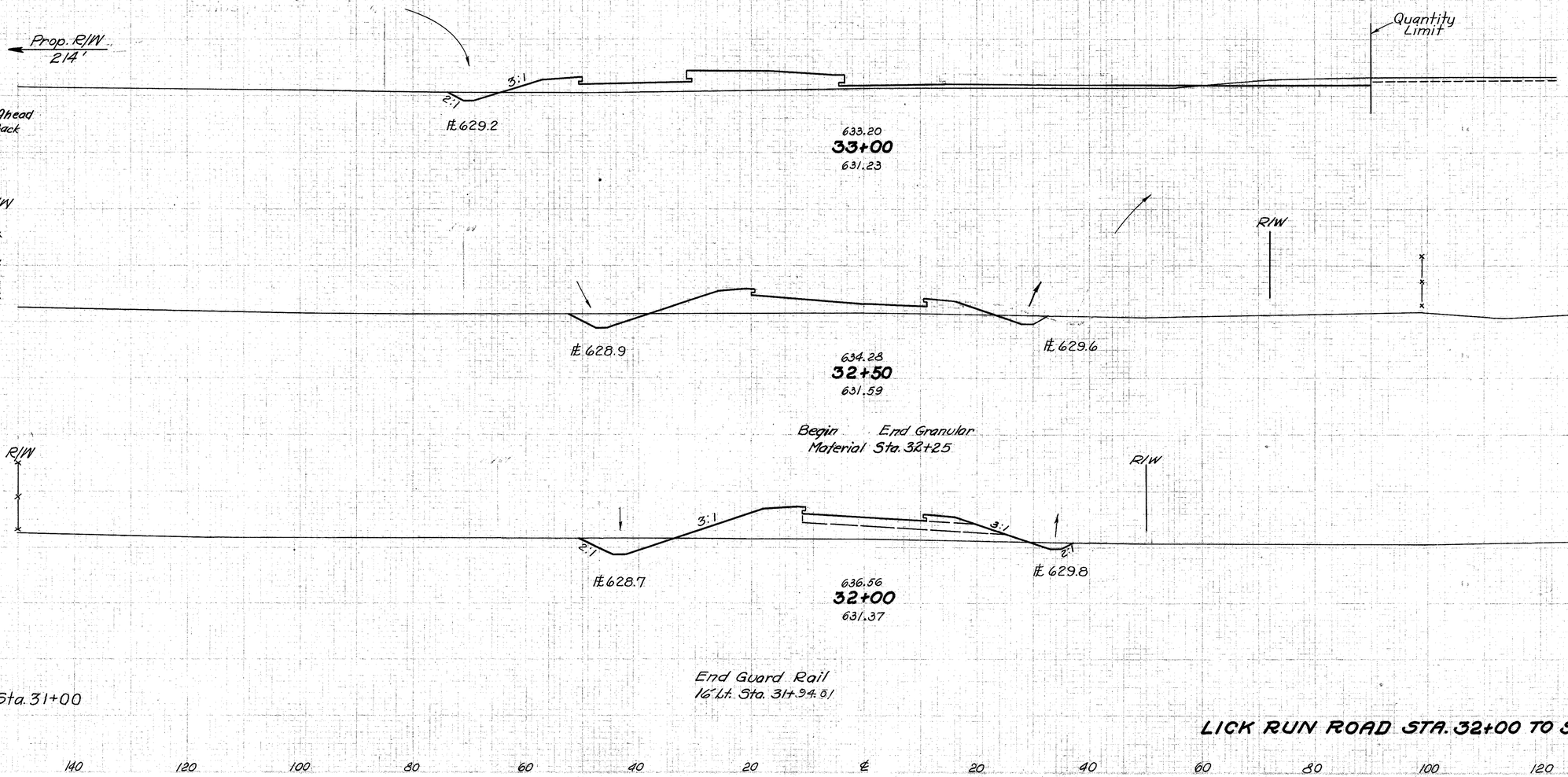
FED. AID PROJECT	STATE	PROJECT	
2	OHIO	F-G74(12)	

100
225

ROSS COUNTY
ROS-35-25.05

INTERSECTION
℄ STA. 33+43.66 LICK RUN ROAD = ℄ STA. 146+00 ATHENS ROAD

	END AREA		VOLUME	
	CUT	FILL	CUT	FILL



0	55			
	322			
61			59	294
			30	138
	378			
			61	336
75			34	225
	1011		137	1252
107			38	451

Ahead	0	0	
Sta. 33+00	34	180	
Back			

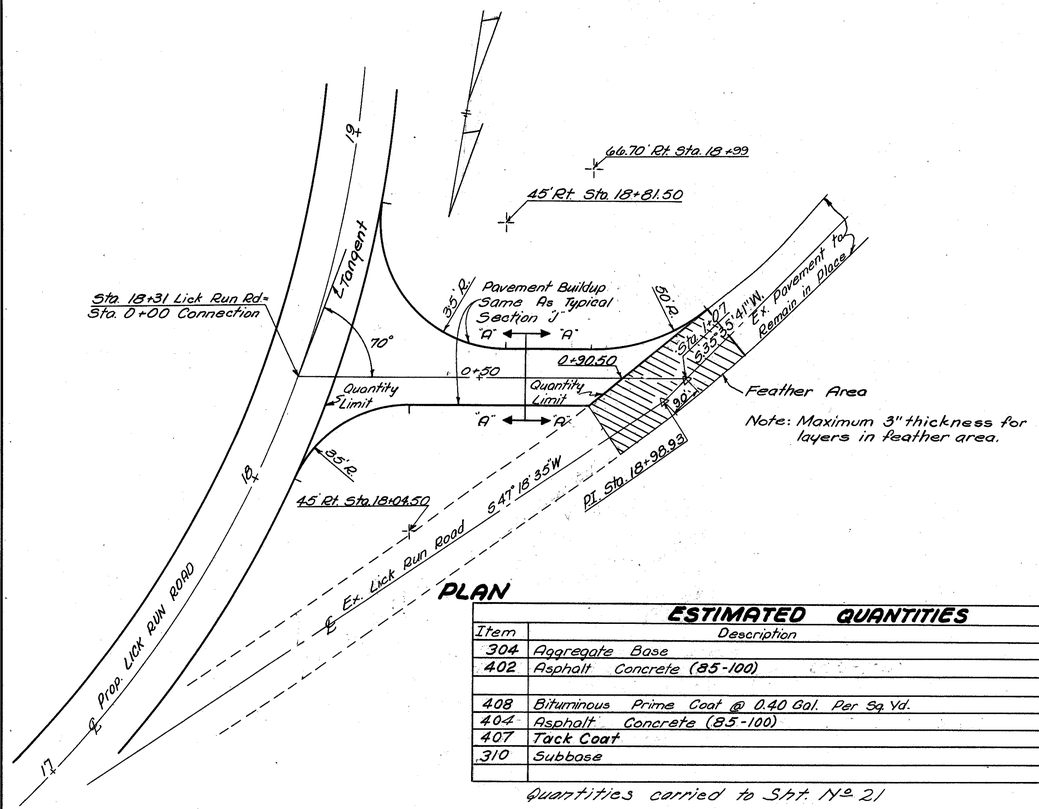
LICK RUN ROAD STA. 32+00 TO STA. 33+00

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

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	F-674 (12)	

101
225

ROSS COUNTY
ROS -35- 25.05



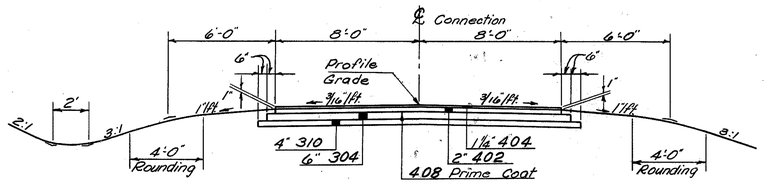
Note: Maximum 3" thickness for layers in feather area.

PLAN

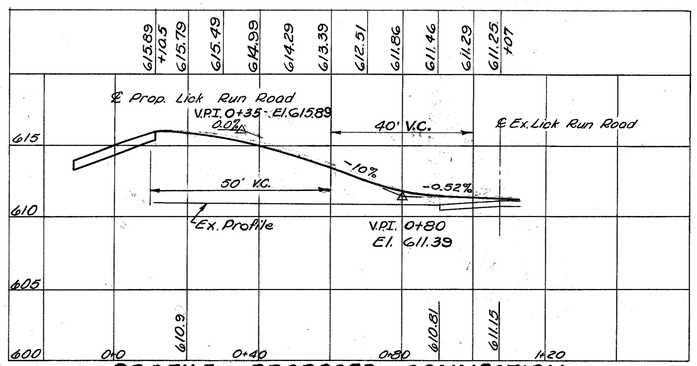
ESTIMATED QUANTITIES

Item	Description	Quantity	Unit
304	Aggregate Base	35.9	Cu. Yds.
402	Asphalt Concrete (85-100)	15.8	Cu. Yds.
408	Bituminous Prime Coat @ 0.40 Gal. Per Sq. Yd.	215.1	Sq. Yds.
404	Asphalt Concrete (85-100)	9.9	Cu. Yds.
407	Tack Coat	80	Sq. Yds.
310	Subbase	25.2	Cu. Yds.

Quantities carried to Sht. No. 21



SECTION "A"-"A"



PROFILE PROPOSED CONNECTION TO EXISTING LICK RUN ROAD

ELMER S. BARRETT ASSOCIATES
CONSULTING ENGINEERS
249 S. PAINT ST. CHILLICOTHE, OHIO

PROPOSED CONNECTION TO EXISTING LICK RUN ROAD

SCALE DATE

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
			WBS			

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	F-674(12)	

102
225

ROSS COUNTY
ROS-35-25.05

CURVE DATA
P.I. Sta. 4+22.00
$\Delta = 21° 45' 48''$
$D_c = 11° 00'$
$T = 100.13'$
$L_c = 197.85'$
$R = 520.87''$
$E = 9.54'$

Legend No.	Item	ESTIMATED PAVEMENT QUANTITIES	Quantity	Unit
13	304	Aggregate Base (6")	121.3	Cu. Yds.
23	402	Asphalt Concrete (85-100)	39.2	Cu. Yds.
	407	Tack Coat For Feather Areas	92	Sq. Yds.
12	408	Bituminous Prime Coat at 0.40 Gal. Per Sq. Yd	706	Sq. Yds.
14	404	Asphalt Concrete (85-100)	27.6	Cu. Yds.
11	310	4" Subbase	83.3	Cu. Yds

Quantities carried to Sht. 1 1/2 21

MARY A. KRAMER

LA

Paved Berm

0+0 Approach = 160+00 Athens Road

160

161

Athens Road

162

To Tangent

Pavement Quantity Limit

Paved Berm

℄ Pavement To Be Removed Under Item 202

℄ Ex. U.S.R. 35 ± 50

S. 3° 2' 17" W.

75' Rad. Rd. Ct. Sta. 159+22

15' 15'

59' Rt. Sta. 160+67

62' Rt. Sta. 160+67

75' Rad.

65' Rad.

50' Rad.

℄ Ex. R/W

Pavement Buildup Same As Typical Section "J"

CURVE DATA
P.I. = 1+38.00
$\Delta = 98° 30'$
$R = 65'$
$T = 75.44'$
$E = 34.58'$
$L_c = 111.74'$

P.T. 1+74.30

Profile ℄

S. 85° 12' 13" E.

See Typical Section J & K.

2+0

3+0

4+0

Sta. 1+38.00

R.R. R/W

Pavement Quantity Limit

Work Limits

P.C. 3+21.87

R/W

37' Rt. Sta. 4+38

Concrete Block Garage

LA. & R/W

Work Limits

Signbase

END FULL DEPTH PAVEMENT

Feather Area

S. 63° 26' 25" E.

Meet Ex. Pavement

Existing 12" C.M.P. (To Remain in Place).

Quantity Limit

P.T. 5+19.72 Meet Existing Pavement

MARY A. KRAMER

V.P.C. 636.83
637.35 (+.37)
V.P.T. 637.26
636.66
635.07
633.48
631.89
V.P.C. 631.09
630.80 (+.75)
630.70

℄ Prop. Athens Road V.P.I. Sta. 0+37 Elev. 637.66

+3.33%

8.33%

-1.59%

Proposed Profile along ℄

V.P.C. 0+12

50' V.C.

V.P.T. 0+62

V.P.C. 4+50

50' V.C.

V.P.T. 5+00

Feather Area

Meet Existing Pavement

End Work Sta. 5+19.72

0.0%

640
635
630
625

0+12

630.65 +03 630.77 +16 631.17 +28.7 630.89 +32 630.79 +39 628.62 +40 628.62 +44.5 631.20 +57 631.39 +63 629.84 1+04 628.51 1+99 628.74 +53 630.25 3+46.5 630.76 +24 630.80 +36 628.68 +38 628.73 +45 629.96 +60 630.20 E.M. +17 630.47 +75 630.52 5+18 630.60 +36.5 630.61

Excavation =	201	C.Y.
Embankment =	4,278	C.Y.
Seeding & Mulching =	3,170	S.Y.

V.P.I. Sta. 4+75
Elev. 630.70

ELMER S. BARRETT ASSOCIATES
CONSULTING ENGINEERS
249 S. PAINT ST. CHILLICOTHE, OHIO

APPROACH RIGHT STA. 160+00 ATHENS ROAD

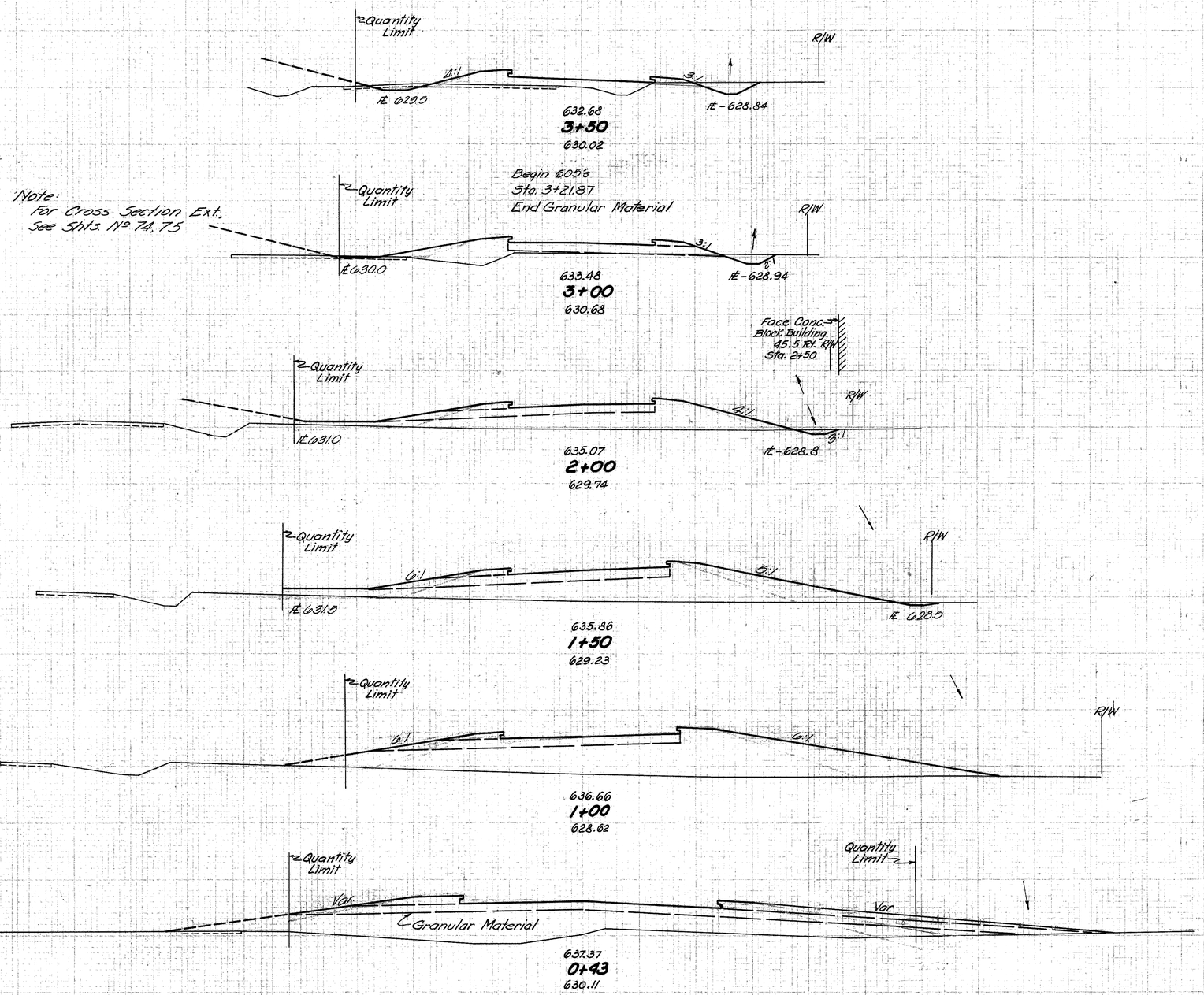
SCALE 0 10 20 30 DATE

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
N.R.	N.R.	L.P.				

ST.	CO.	PROJECT		103
2	OHIO	F-674 (12)		225

ROSS COUNTY
ROS-35-25.05

SECTIONS		END AREA		VOLUME	
CUT	FILL	CUT	FILL	CUT	FILL
50			29	64	
295				40	177
56			14	127	
728				37	726
75			6	260	
464				0	637
02			4	423	
500				4	966
88			0	620	
401				0	1272
67			0	604	
116				0	346
0			0	0	



0.0 SECTION
0+12

APPROACH RIGHT ATHENS ROAD STA. 160+00
STA. 0+12 TO STA. 3+50

FED. DIV.	STATE	PROJECT
2	OHIO	F-674(12)

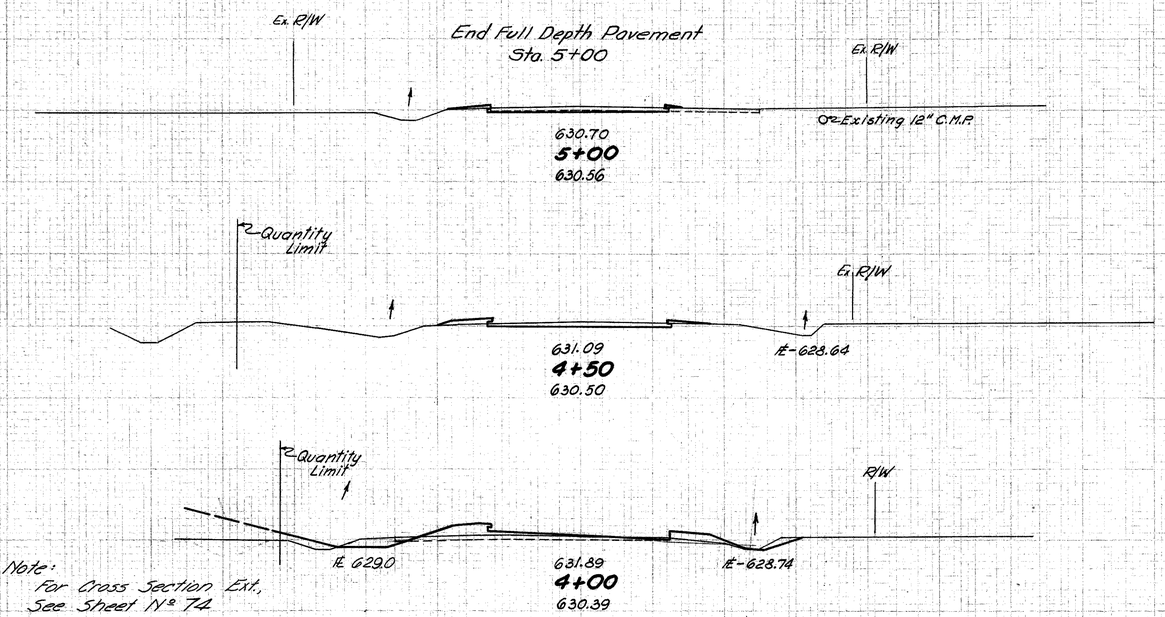
104
225

ROSS COUNTY
ROS-35-25.05

END AREA		VOLUME	
CUT	FILL	CUT	FILL
		0	0
		7	1
		28	9
		30	46
		40	08
		28	64

GRID DIST.	GRID POS.
0	5+19.72
13	
12	
84	
18	
106	
52	
283	
50	Sta. 3+50

0.0 SECTION
STA. 5+19.72



5+19.72

5+19.72

Sta. 3+50

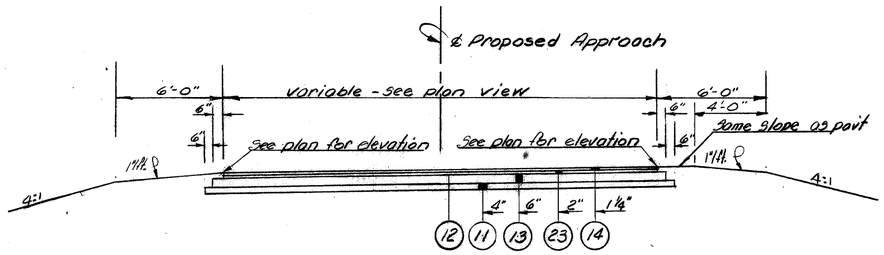
APPROACH RIGHT ATHENS ROAD STA. 160+00
STA. 4+0 TO STA. 5+19.72

100 80 60 40 20 ℄ 20 40 60 80 100

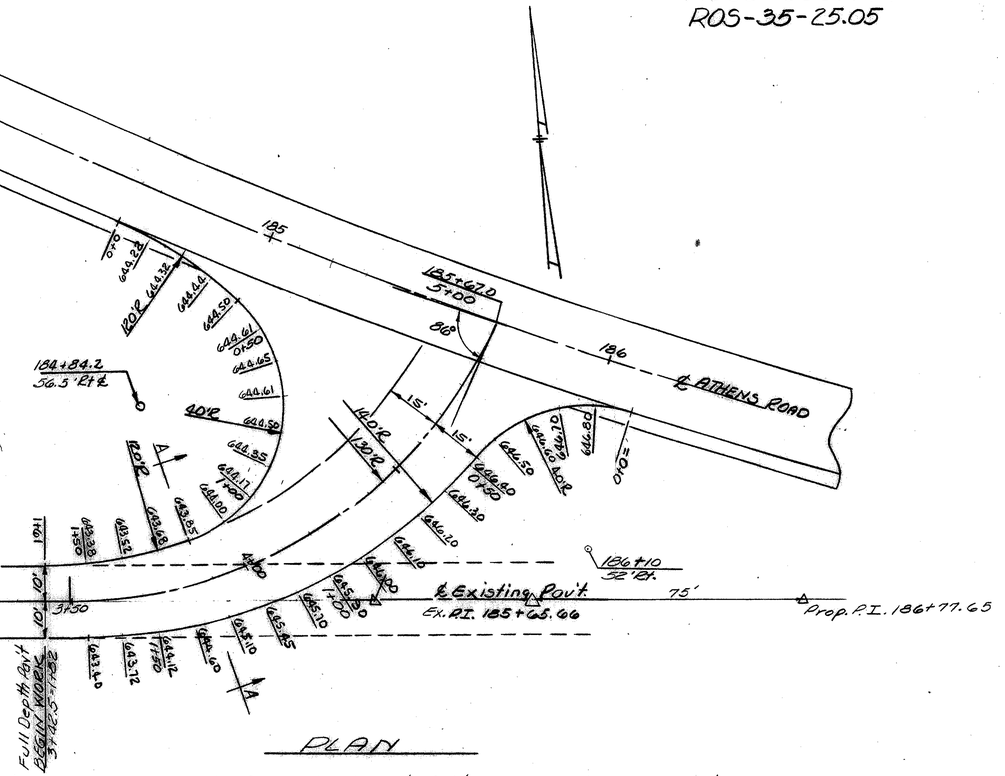
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	F-674(12)	

105
225

ROSS COUNTY
ROS-35-25.05

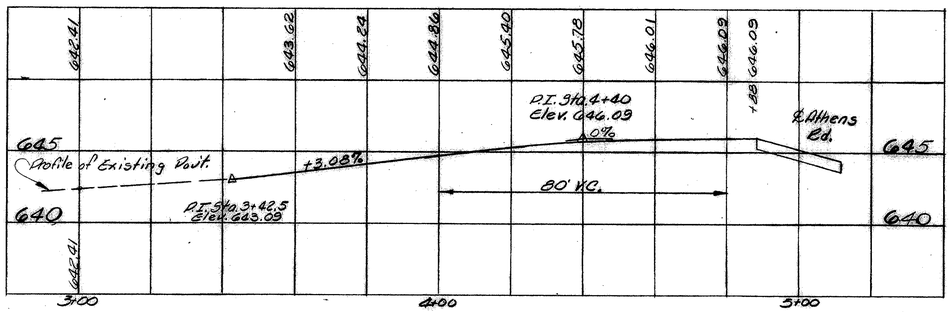


TYPICAL SECTION A-A



PLAN

NOTE: For Details of Gravel Drive at Right of Sta. 3+42.5 See Sheet No 69.



PROPOSED PROFILE

ESTIMATED QUANTITIES

Legend	Item	Description	Quantity	unit
11	310	Subbase	75.4	Cu. Yds.
12	408	Bituminous Prime Coat, applied at the rate of 0.40 Gal./Sq.Yd.	622.7	Sq. Yds.
13	304	6" Aggregate Base	650.7	Sq. Yds.
14	404	Asphalt Concrete (85-100)	21.6	Cu. Yds
23	402	Asphalt Concrete (85-100)	34.6	Cu. Yds

Quantities carried to Sht. No 21

ELMER S. BARRETT ASSOCIATES
Consulting Engineers
245-249 S. Paint Street Chillicothe, Ohio

DETAIL OF APPROACH
RIGHT OF ATHENS ROAD
STA. 185+67.0

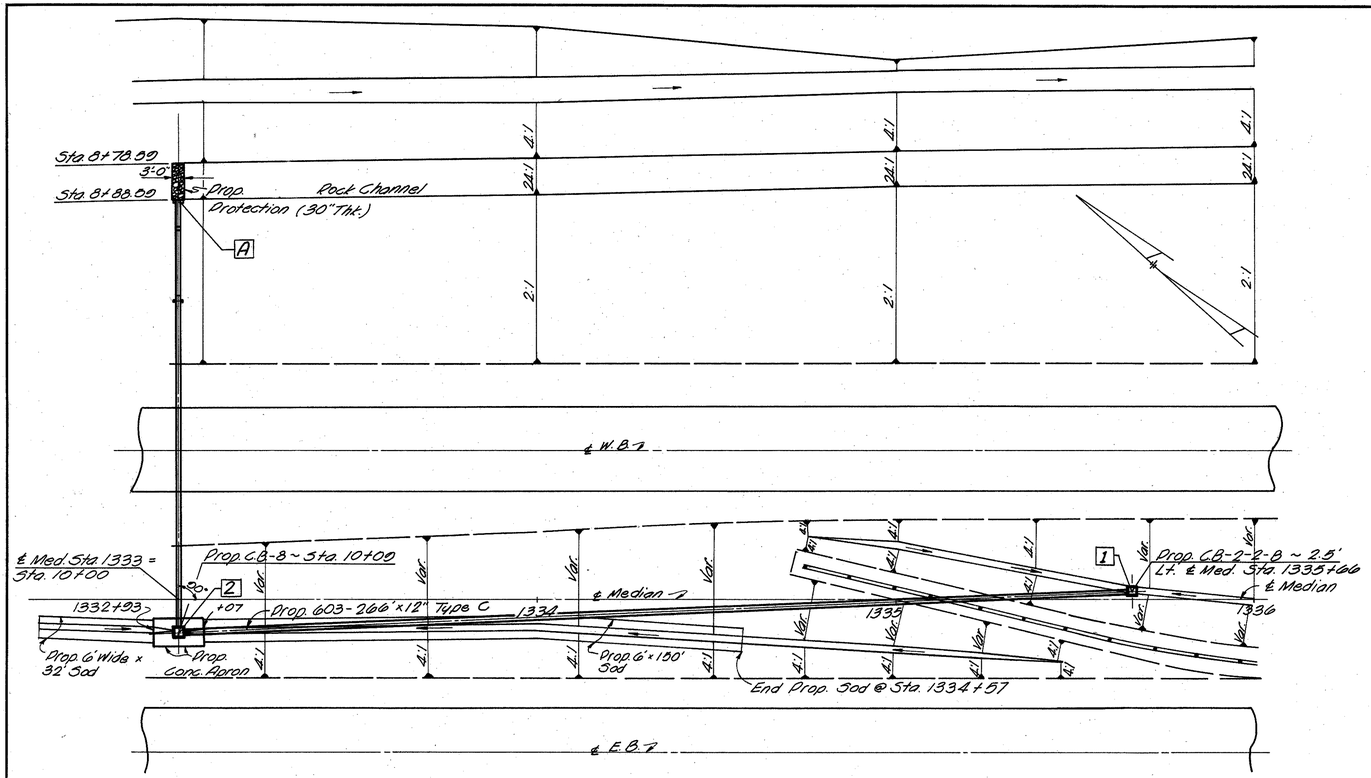
SCALE DATE 11-12-63

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
Roy Cons			HLG			

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

106
225

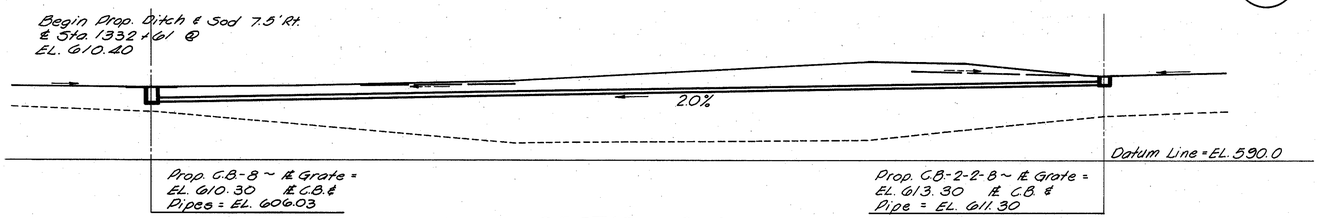
ROSS COUNTY
ROS-35-25.05



LOCATION PLAN

SCALE 0' 10' 20'

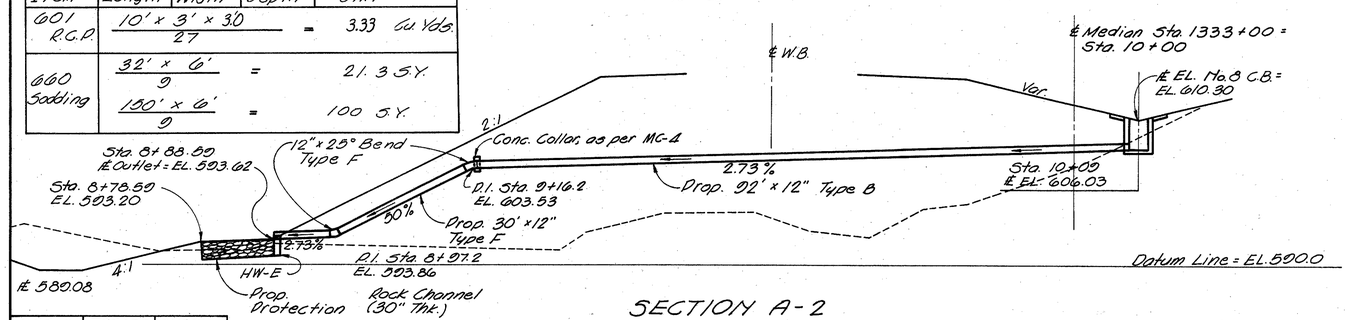
(2)



SECTION 2-1

SCALE 0' 10' 20'

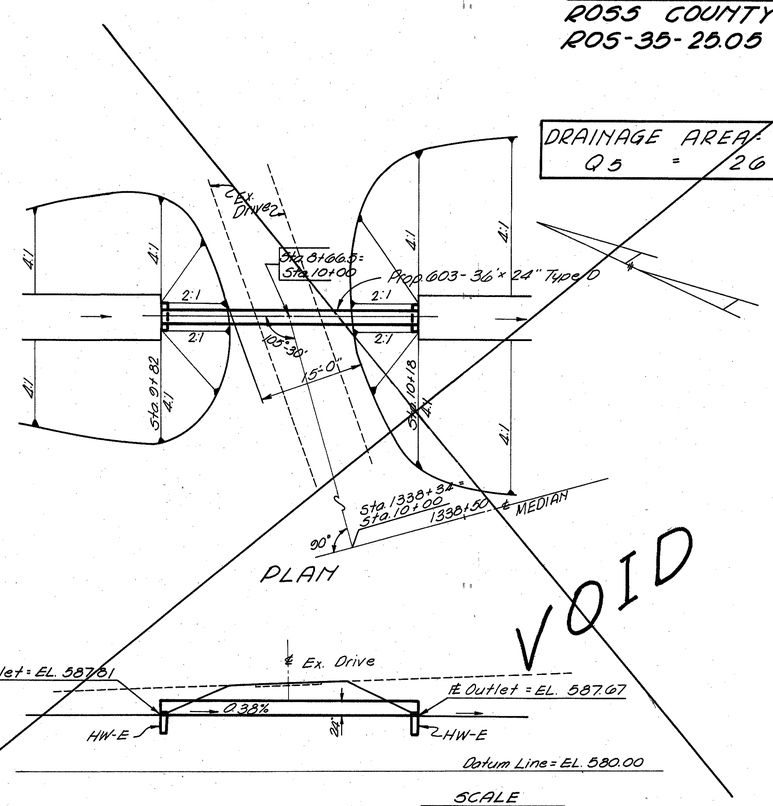
CALCULATIONS				
Item	Length	Width	Depth	Unit
601 R.C.P.	10' x 3' x 3.0 / 27	=	3.33	Cu Yds.
660 Sodding	32' x 6' / 9	=	21.3	S.Y.
	150' x 6' / 9	=	100	S.Y.



SECTION A-2

SCALE 0' 10' 20'

DRAWN	TRACED	CHECKED
O.W.S.	R.C.T.	D.B.B.
4-25-68	5-1-68	5-3-68



SECTION ALONG ℄ PIPE

SCALE 0' 10' 20'

(3)

ESTIMATED QUANTITIES				
No	ITEM		QUANTITY	UNIT
2	601	Rock Channel Protection, Type B	3	Cu Yds.
2	602	Concrete Masonry	0.23	Cu Yds.
2	603	12" Conduit Type B with Class B Bedding	92	Lin. Ft.
2	603	12" Conduit Type F	30	Lin. Ft.
2	603	12" Conduit Type C with Class B Bedding	266	Lin. Ft.
2	604	Catch Basin, Standard No 2-2-B	1	Each
2	604	Catch Basin, Standard No 8	1	Each
2	660	Sodding	121	Sq. Yds.

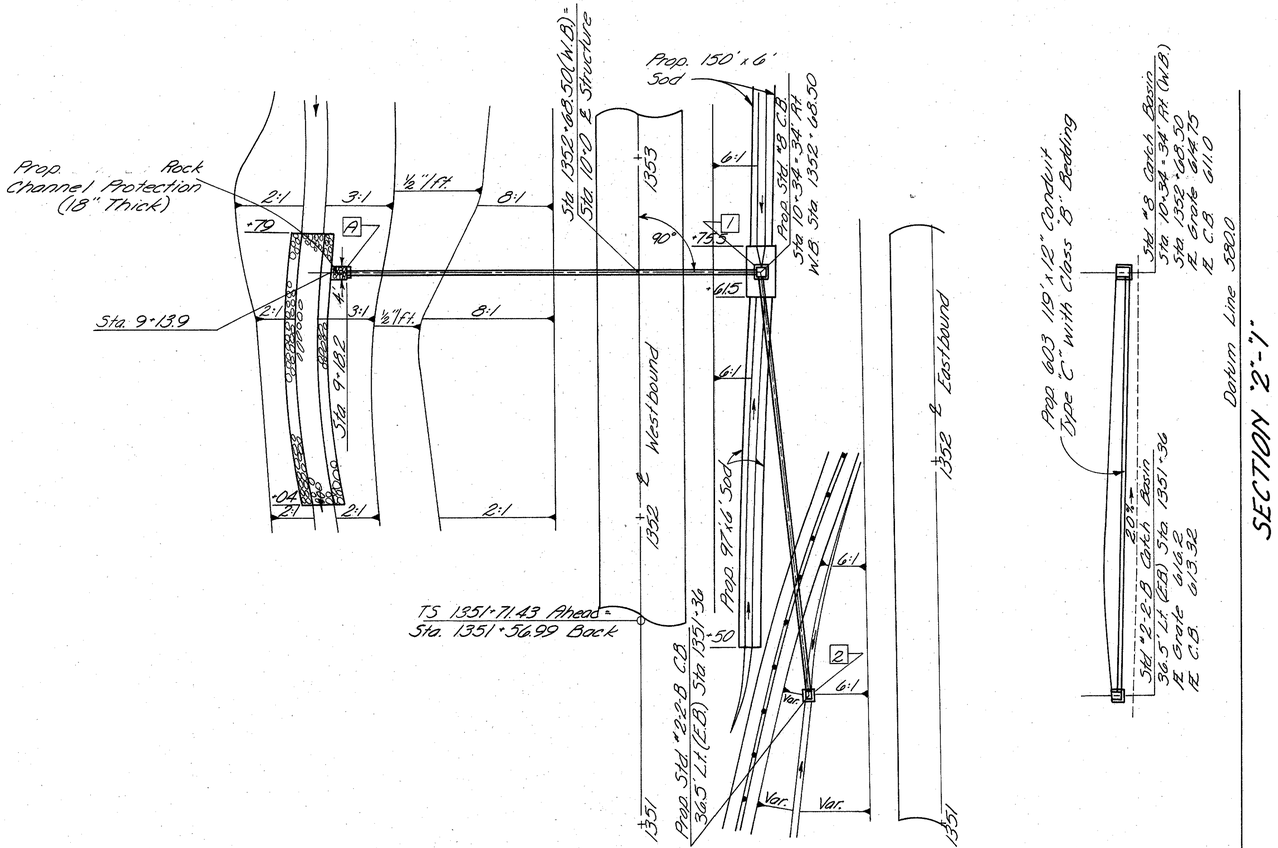
STANDARD CONSTRUCTION DRAWINGS
HW-E
CB-2-2-B
CB-8

(2) PROP. 603 CONDUIT TYPE C — RT. ℄ MED. STA. 1333+00 TO LT. ℄ MED. STA. 1335+66
(2) PROP. 603 CONDUIT TYPE B & F — LT. & RT. ℄ MED. STA. 1333+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

107
225

ROS 35-25.05



STANDARD CONSTRUCTION DRAWING
HW-E, CB "B, and CB "2-2-B

CALCULATIONS				
Item	Length	Width	Depth	Unit
601 R.C.P.	4.3' x 4.0' x 2.0' / 27			= 1.27 C.Y.
660 Sodding	247' x 6' / 9			= 164.7 S.Y.

ESTIMATED QUANTITIES

603	12"ϕ Conduit Type B with Class B Bedding	116 L.F.
603	12"ϕ Conduit Type C with Class B Bedding	119 L.F.
604	Catch Basin, Std. No. B	1 Ea.
604	Catch Basin, Std. No. 2-2-B	1 Ea.
601	Rock Channel Protection Type B	1 C.Y.
602	Concrete, Masonry	0.23 C.Y.
660	Sodding	165 S.Y.

0' 20' 40'
Scale

DRAWN	TRACED	CHECKED
L.L.F. 4-23-68	H.M.M. 5-2-68	D.B.B. 5-4-68

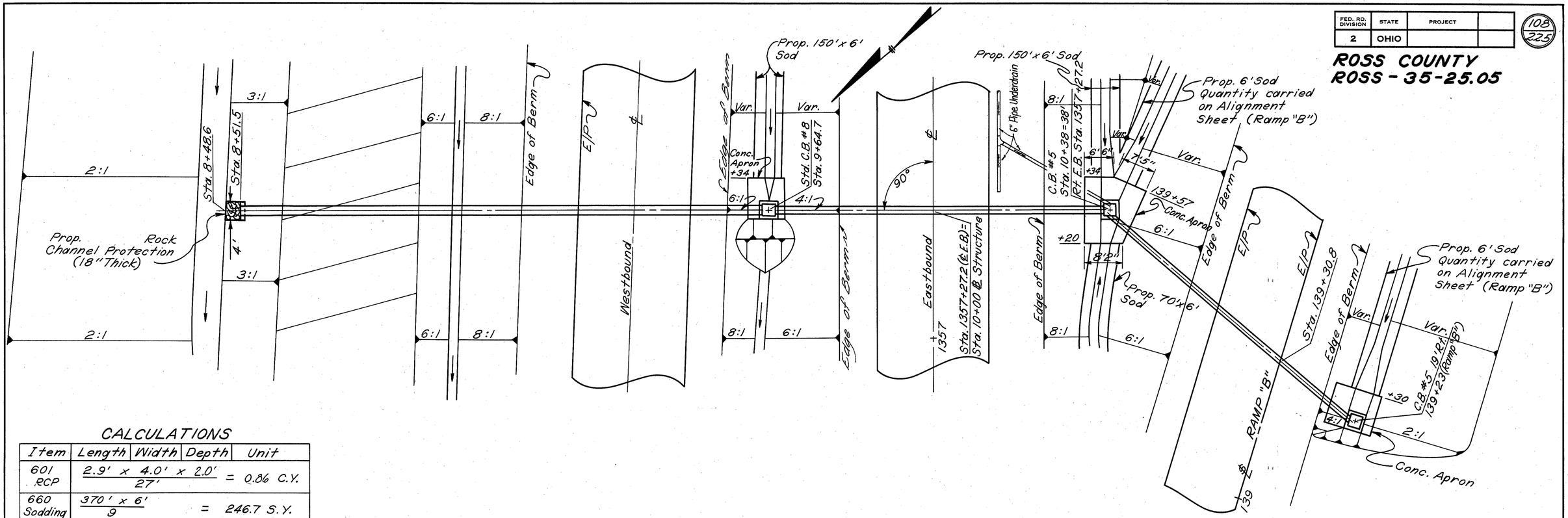
ROS. 35 & STA. 1352+68.50 (W.B.)
PROPOSED 603 CONDUIT TYPE B AND
PROPOSED 603 CONDUIT TYPE C

4

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

108
225

ROSS COUNTY
ROSS - 35 - 25.05



CALCULATIONS

Item	Length	Width	Depth	Unit
601 RCP	$\frac{2.9' \times 4.0' \times 2.0'}{27'}$			= 0.86 C.Y.
660 Sodding	$\frac{370' \times 6'}{9}$			= 246.7 S.Y.

PLAN

DRAINAGE DATA
Drainage Area 7 Ac
Q25 20.2 cfs

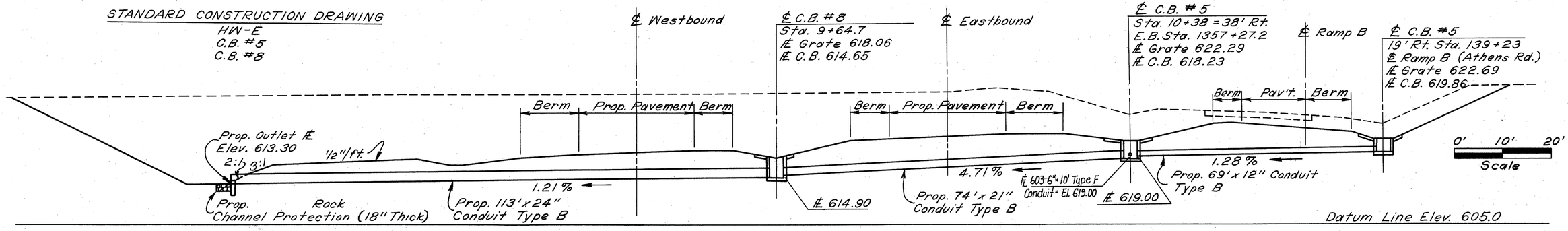
DRAINAGE DATA
Drainage Area 6 Ac
Q25 17.5 cfs

DRAINAGE DATA
Drainage Area 1 Ac
Q25 3.5 cfs

ESTIMATED QUANTITIES

603	12" ϕ Conduit Type B with Class B Bedding	69	L.F.
603	21" ϕ Conduit Type B with Class B Bedding	74	L.F.
603	24" ϕ Conduit Type B with Class B Bedding	113	L.F.
602	Concrete Masonry	0.41	C.F.
604	Catch Basin, Std. #5	2	Ea.
604	Catch Basin, Std. #8	1	Ea.
601	Rock Channel Protection, Type B	1	C.Y.
660	Sodding	247	S.Y.

STANDARD CONSTRUCTION DRAWING
HW-E
C.B. #5
C.B. #8



SECTION

DRAWN	TRACED	CHECKED
L.L.F. 4-26-68	J.B.H 4-29-68	D.B.B. 5-3-68

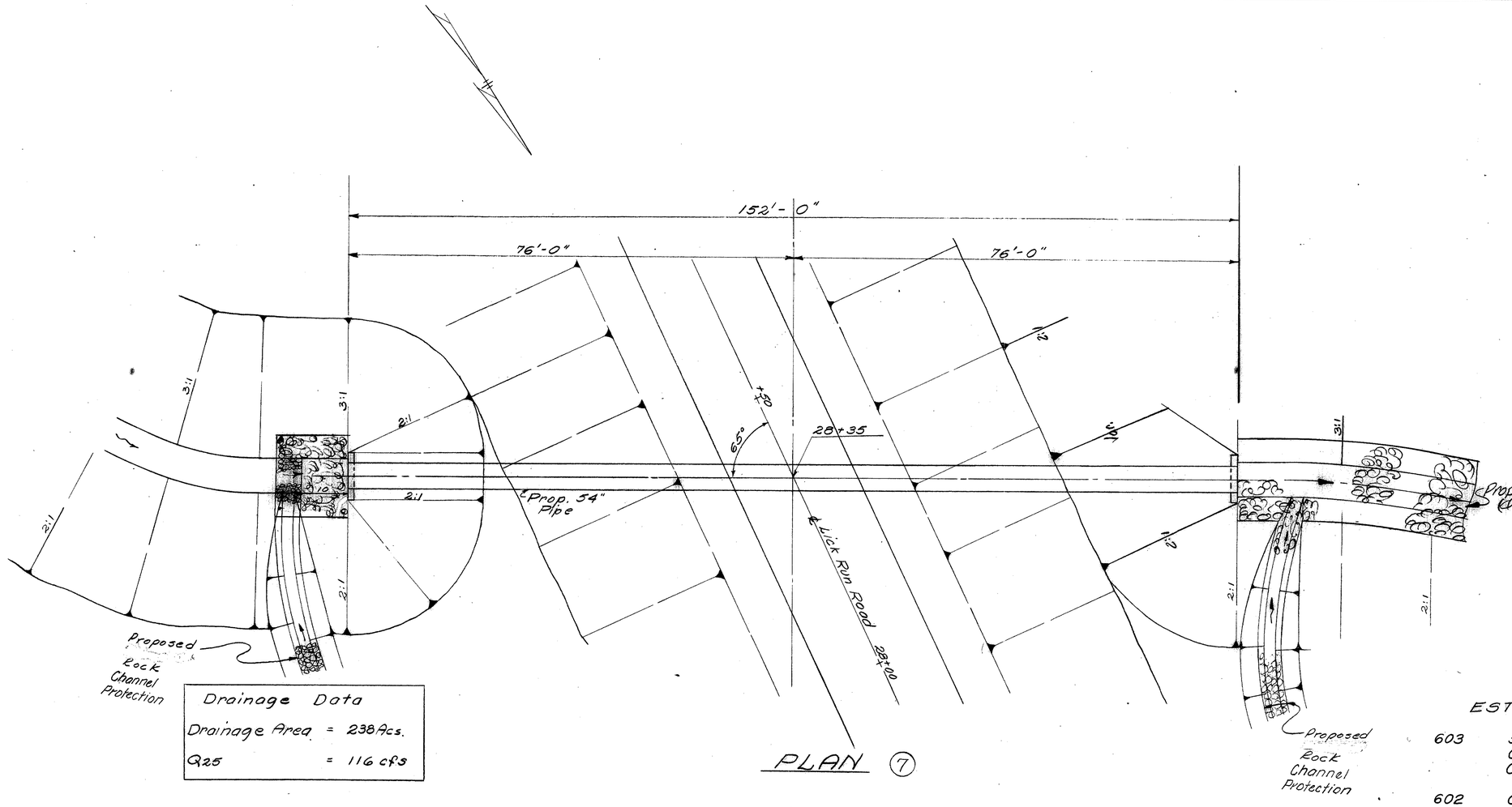
ROS - 35 STA. 1357+27.2
PROP. 603 CONDUIT TYPE B

6

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	F-674(12)	

109
225

ROSS COUNTY
ROS-35-25.05

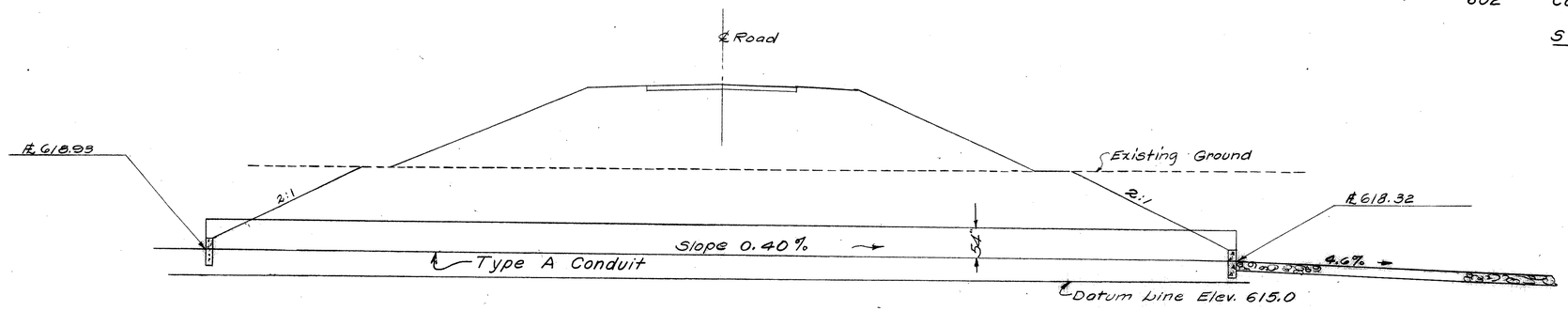


Drainage Data

Drainage Area = 238 Acs.

Q25 = 116 cfs

PLAN ⑦



SECTION

ESTIMATED QUANTITIES

603	54" Conduit Type A with Class B Bedding 706.02 Class IV	152 Lin. Ft.
602	Concrete, Masonry	1.92 Cu. Yds.

STANDARD CONSTRUCTION DRAWING
HW-E

REVISIONS

DRAWN	TRACED	CHECKED
JBK 3-21-68	JBH 3-25-68	D.B.B. 5-10-68

ELMER S. BARNETT ASSOCIATES
Consulting Engineers
245-249 S. Paint Street Chillicothe, Ohio

CULVERT DETAIL

LICK RUN ROAD
STA. 28+35

⑦

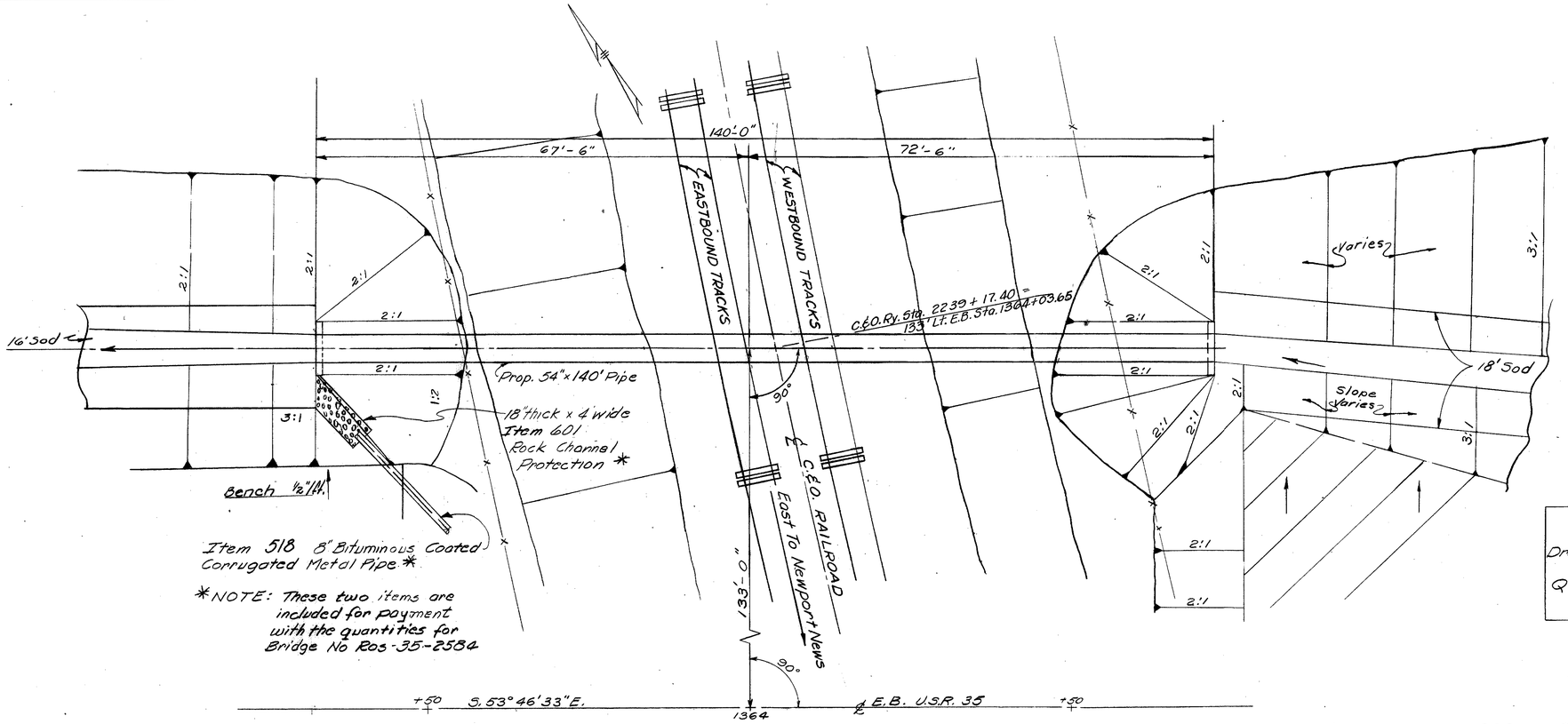
SCALE 0 5 10'

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
N.R.	N.R.	E.R.L.				

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	F-674 (12)	

110
225

ROSS COUNTY
ROS-35-25.05



Item 518 8" Bituminous Coated Corrugated Metal Pipe *

*NOTE: These two items are included for payment with the quantities for Bridge No Ros-35-2584

PLAN (9)

Drainage Data

Drainage Area = 237 Acs.

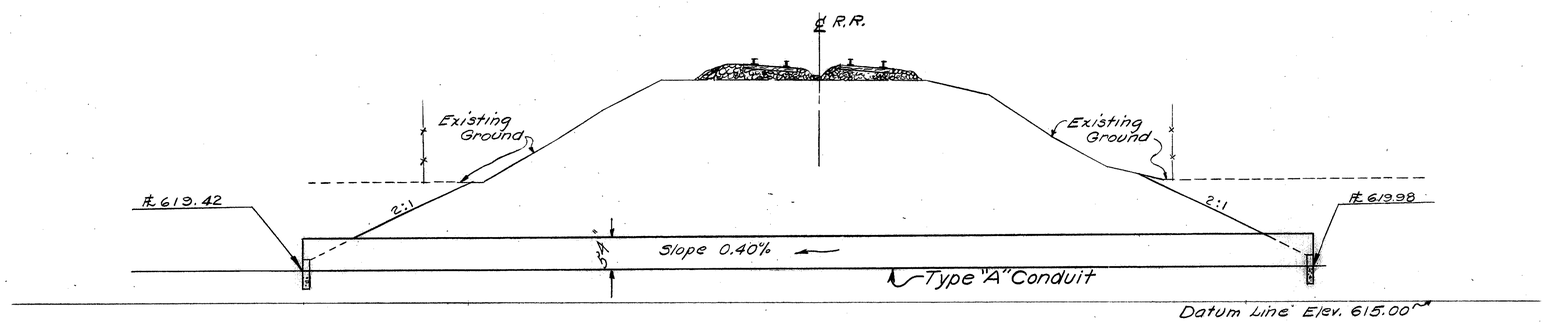
Q 25 = 116 cfs

ESTIMATED QUANTITIES

602	Concrete, Masonry	1.92 Cu. Yds.
603	54" Conduit Type A under Railroad 706.02 Class V	140 Lin. Ft.

**Note: See Proposal Note for Method of Installation of Pipe under Railroad

STANDARD CONSTRUCTION DRAWING HW-E



SECTION

REVISIONS

DRAWN	TRACED	CHECKED
JBK 3-21-68	JBH 3-25-68	D.B.B. 5-10-68

ELMER S. BARRETT ASSOCIATES
Consulting Engineers
245-249 S. Paint Street Chillicothe, Ohio

CULVERT DETAIL
C.&O. R.R. STA. 2239+19.5
LT. STA. 1364 ± ℄ E.B.

(9)

SCALE 0 5' 10' DATE

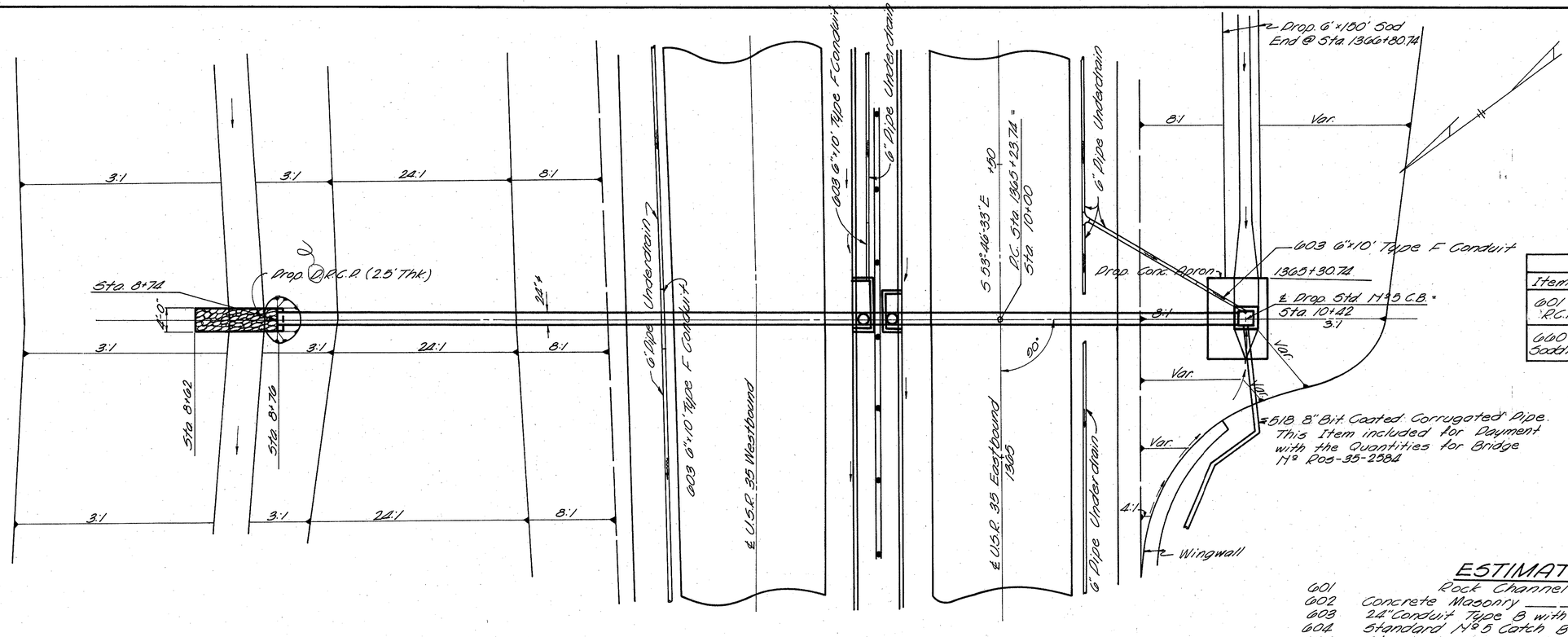
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
N-R	N-R	B.P.	B.B.			

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

111
225

ROSS COUNTY
ROS-35-25.05

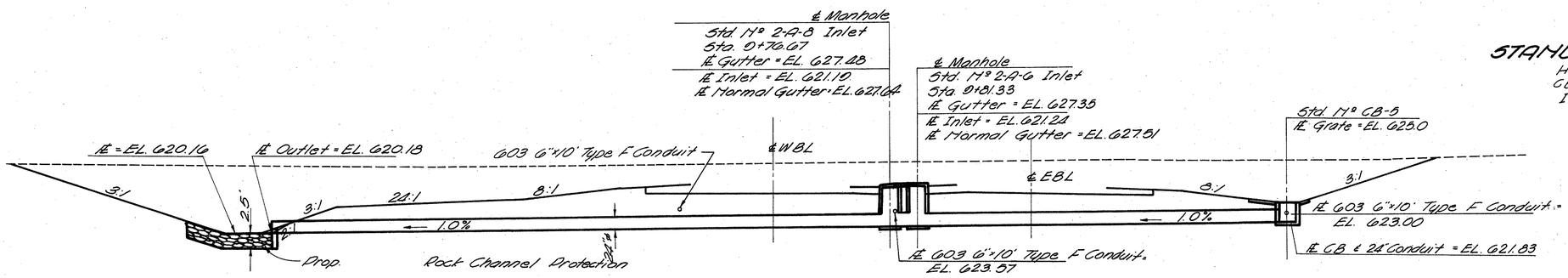
DRAINAGE AREA = 11 Ac.
Q25 = 18 C.F.S



CALCULATIONS				
Item	Length	Width	Depth	Unit
601 R.C.P.	14'	4'	3.0' / 27	= 6.2 Cu Yds.
660 Sodding	150'	6' / 9.		= 100 Sq Yds.

ESTIMATED QUANTITIES

601	Rock Channel Protection Type B	6 Cu Yds.
602	Concrete Masonry	41 Cu Yds.
603	24" Conduit Type B with Class B Bedding	106 Lin Ft.
604	Standard Nº 5 Catch Basin	1-Each
604	Standard Nº 2-A-6 Paved Shoulder Inlet	1-Each
604	Standard Nº 2-A-8 Paved Shoulder Inlet	1-Each
660	Sodding	100 Sq Yds.



Datum Line = EL. 610.0

STANDARD CONSTRUCTION DWG'S

HW-E
CB-5
I-2A

SCALE
0' 10' 20'

Drawn	Traced	Checked
D.W.S. 8-1-68	R.C.T. 5-6-68	J.B.K. 5-8-68

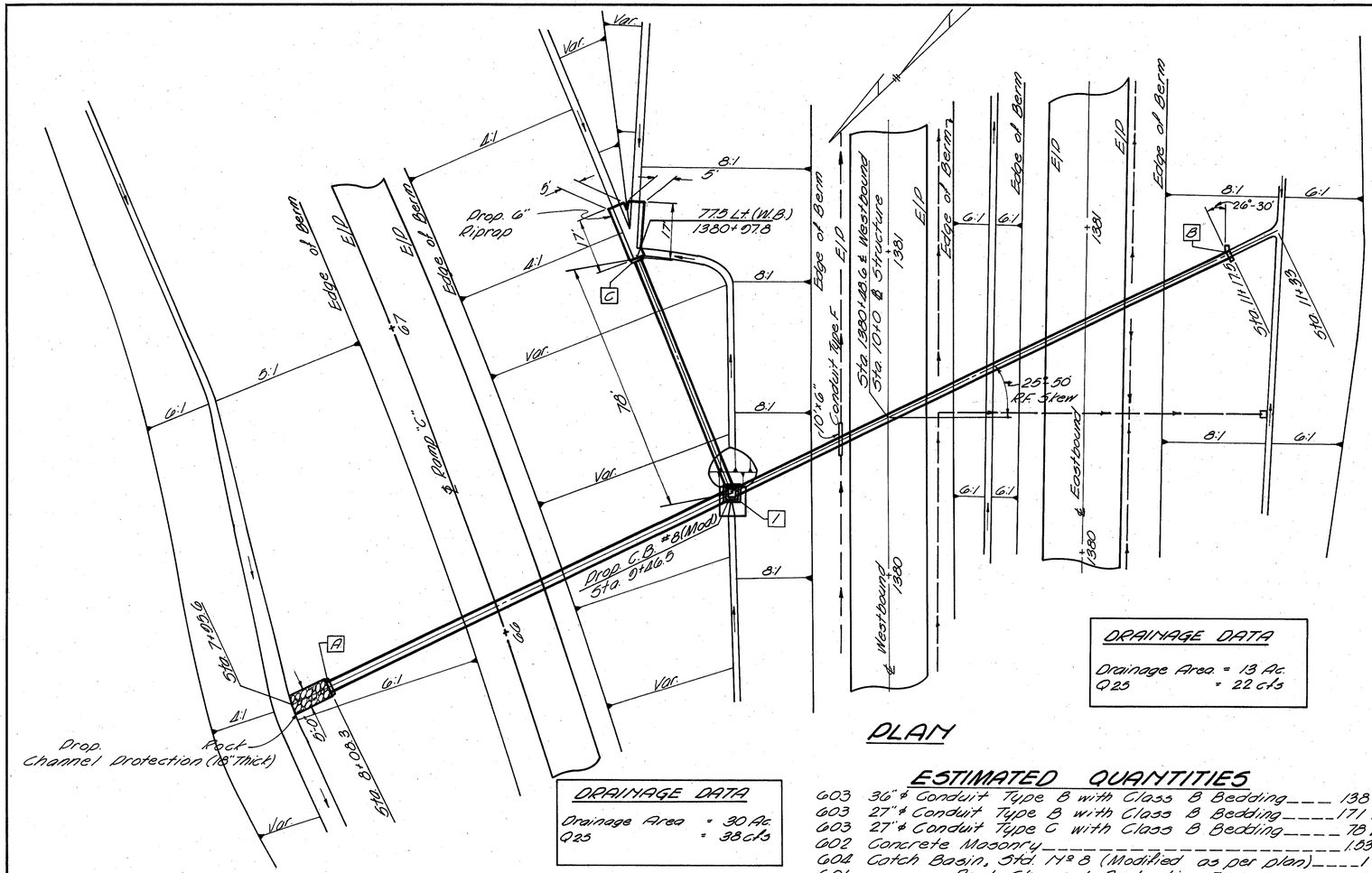
ROS-35 EBL STA. 1365+23.74
PROPOSED 603 CONDUIT TYPE B

10

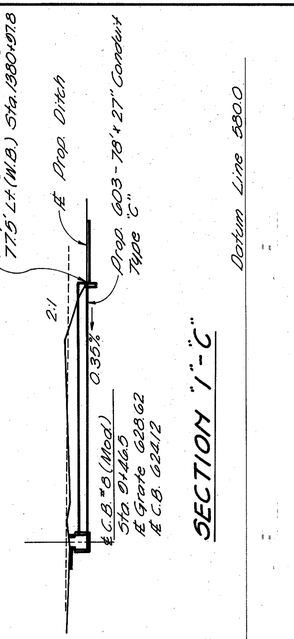
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

112
225

ROSS COUNTY
ROSS-35-25.05



PLAN



SECTION "1"-"C"

Datum Line 5800

DRAINAGE DATA

Drainage Area = 13 Ac.
Q25 = 22 c.f.s

DRAINAGE DATA

Drainage Area = 30 Ac.
Q25 = 38 c.f.s

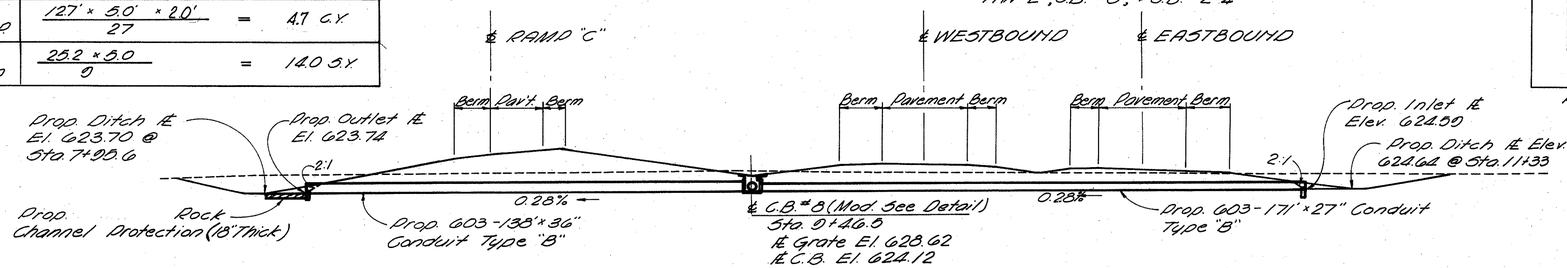
ESTIMATED QUANTITIES

603	36" ϕ Conduit Type B with Class B Bedding	138 L.F.
603	27" ϕ Conduit Type B with Class B Bedding	171 L.F.
603	27" ϕ Conduit Type C with Class B Bedding	78 L.F.
602	Concrete Masonry	1.33 C.Y.
602	Catch Basin, Std 711.8 (Modified as per plan)	1 Ea.
601	Rock Channel Protection Type B	5 C.Y.
601	Riprap, using 6" Rein. Conc. Slab, as per plan	14 S.Y.

CALCULATIONS

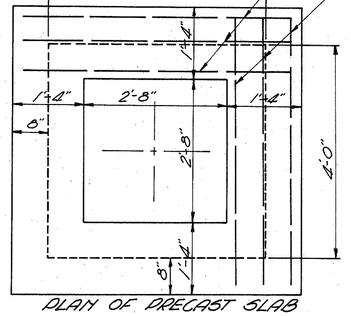
Item	Length	Width	Depth		Unit
601 R.C.P.	127'	5.0'	2.0' / 27	=	4.7 C.Y.
601 Riprap	25.2	5.0 / 9		=	14.0 S.Y.

STANDARD CONSTRUCTION DRAWINGS
HW-E, C.B. #8, & C.B. #2-4

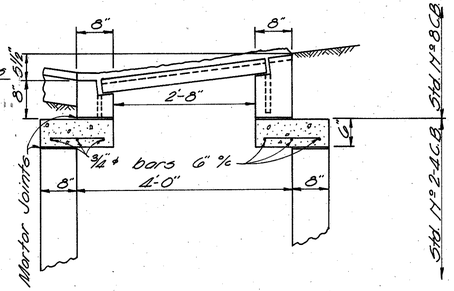


SECTION "A"-"1"-"B"

Datum Line 5800



PLAN OF PRECAST SLAB



12 - 3/4" ϕ x 5'-0" bars required

DETAIL OF NO. 8 CATCH BASIN (MODIFIED)

SCALE
0' 10' 20' 30' 40'

DRAWN	TRACED	CHECKED
L.L.F. 5-6-68	R.C.T. 5-8-68	J.B.K. 5-9-68

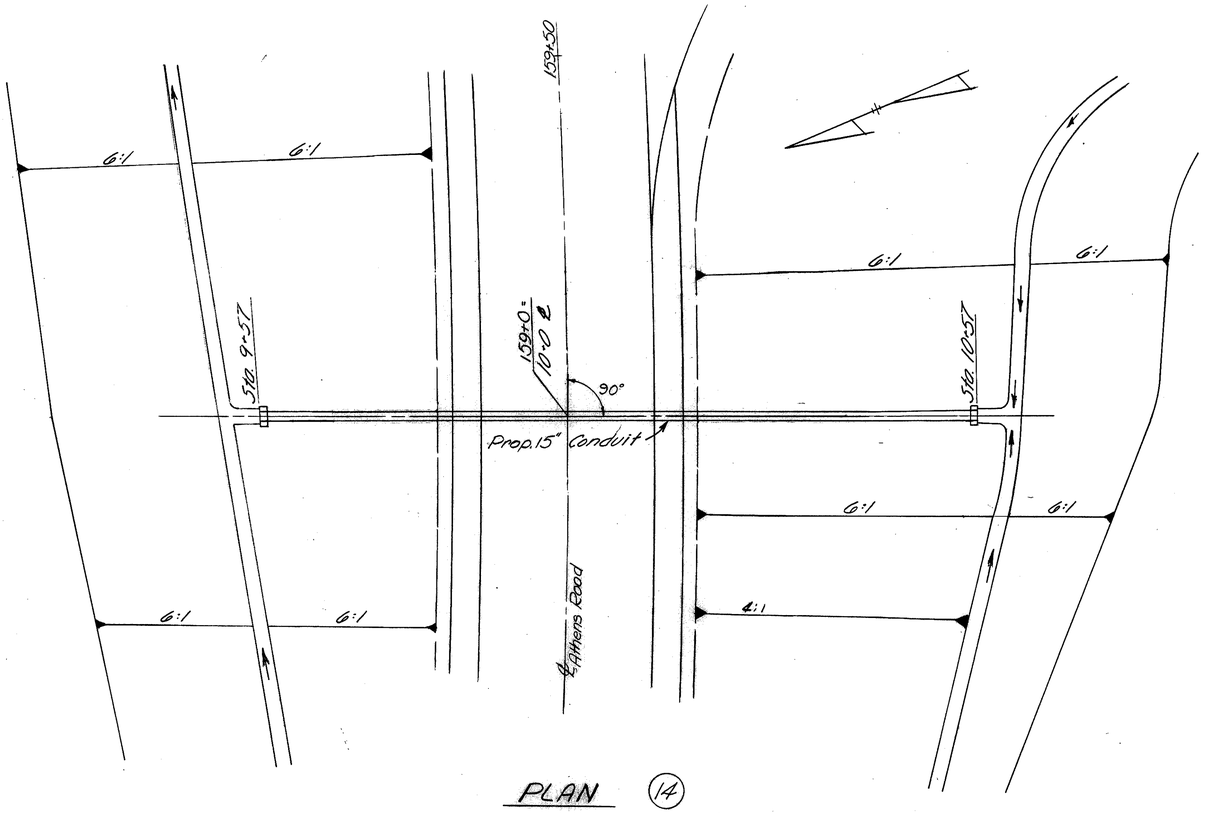
ROS-35 STA 1380+48.6 (WESTBOUND)
PROPOSED 603 CONDUIT TYPE B & C

13

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	F-674 (12)	

113/225

ROSS COUNTY
ROS -35-25.05



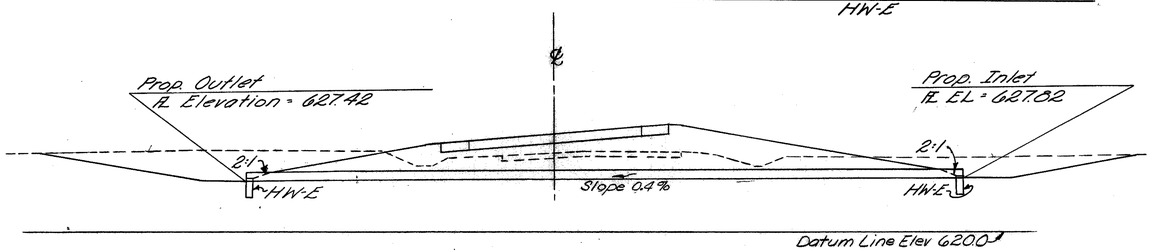
PLAN (14)

DRAINAGE DATA	
Drainage Area	2 Ac.
Q_{25}	4.6 cfs

ESTIMATED QUANTITIES

603	15" ℄ Conduit Type "A" with Class "B" Bedding 706.01, 706.02, or 706.08	100 L.F.
602	Concrete Masonry	0.52 C.Y.

STANDARD CONSTRUCTION DRAWING
HW-E



SECTION

REVISIONS

DRAWN	TRACED	CHECKED
L.L.F. 5-9-68	H.M.M. 5-10-68	D.B.B. 5-10-68

Consulting Engineers
245-249 S. Paint Street — Chillicothe, Ohio

CULVERT DETAIL
ATHENS RD.
STA. 159+00

(14)

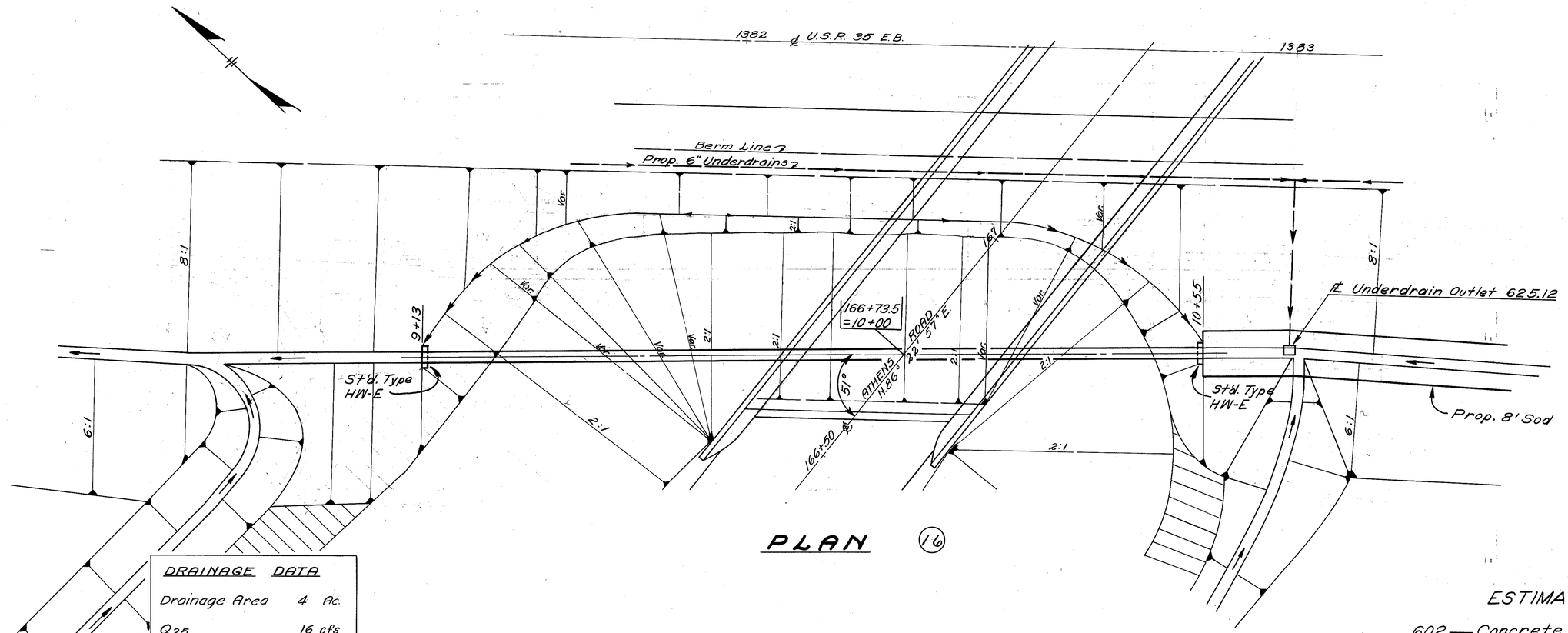
SCALE 0' 10'

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
NR	NR	NR	BBN			

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	F-674 (12)	

114
225

ROSS COUNTY
ROS-35-25.05



PLAN (16)

DRAINAGE DATA

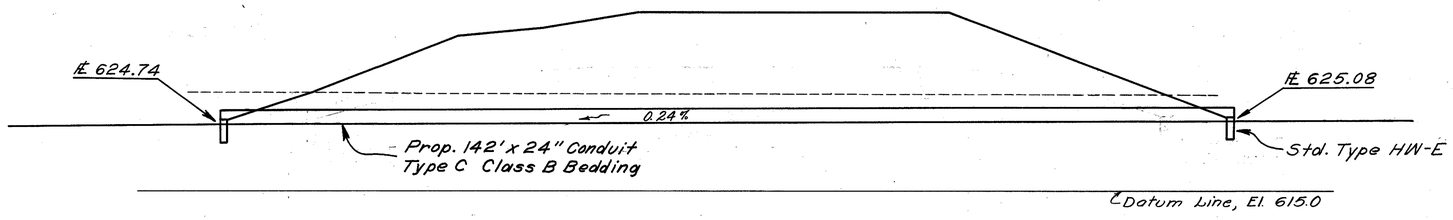
Drainage Area	4 Ac.
Q25	16 cfs

ESTIMATED QUANTITIES

602 — Concrete Masonry — 0.82 C.Y.
603 — 24" Type C Class B Bedding — 142 L.F.
706.02 Class III or 706.13

STANDARD CONSTRUCTION DRAWINGS

HW-E



SECTION

REVISIONS		
Drawn	Traced	Checked
DWS 5-14-68	JBH 5-15-68	D.B.B. 5-16-68

ELMER S. BARRETT ASSOCIATES
CONSULTING ENGINEERS
249 S. PAINT ST. CHILLICOTHE, OHIO

CULVERT DETAIL
ATHENS ROAD-STA. 166+73.5

(16)

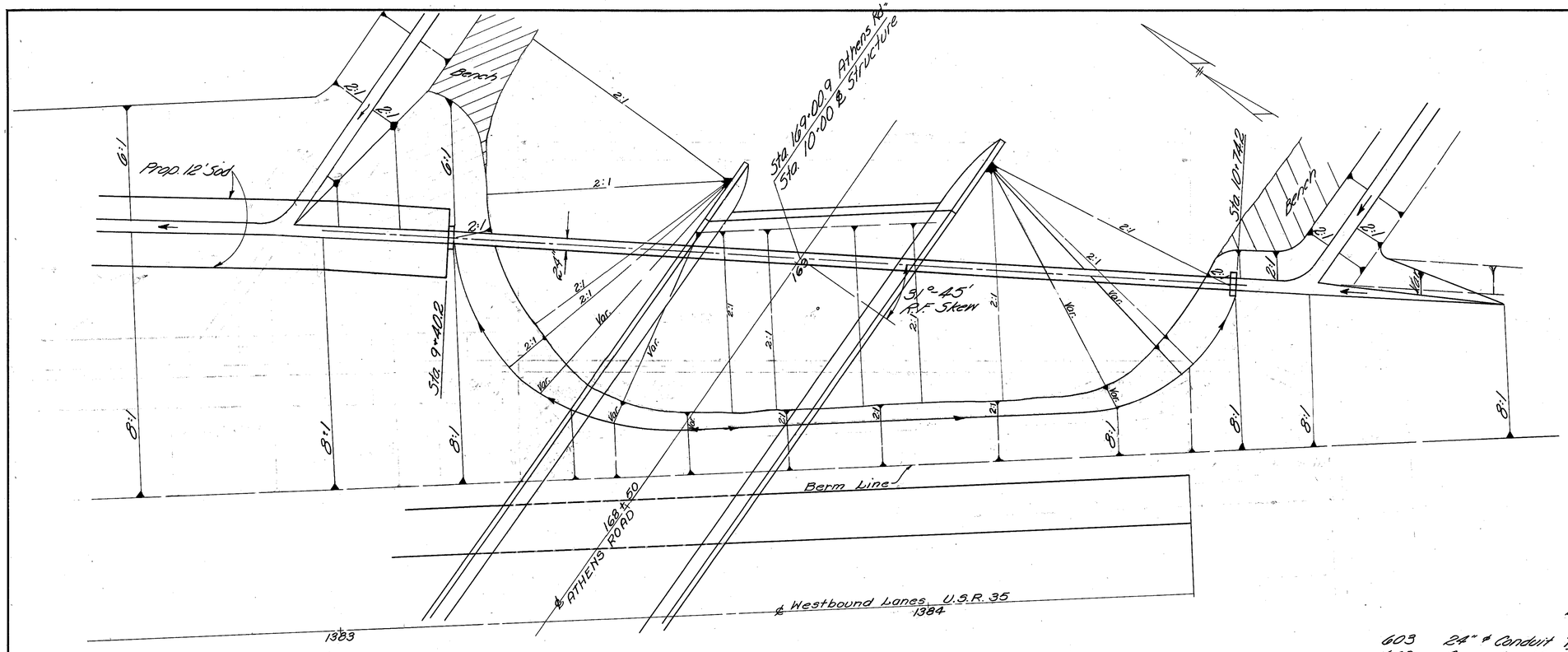
SCALE 0 5' 10' DATE

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
NR	NR	ERS				

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	F-674 (12)	

115
225

ROSS COUNTY
ROS-35-25.05



PLAN (17)

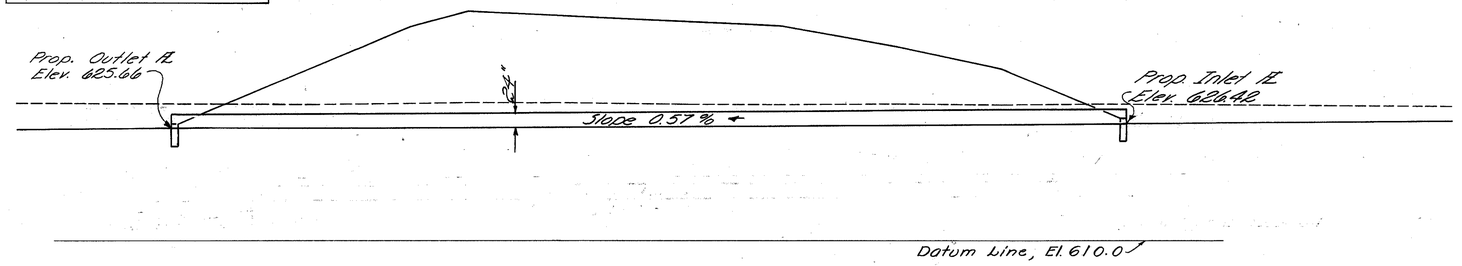
706.02 class III or 707.13

ESTIMATED QUANTITIES

603	24" ϕ Conduit Type "C" with Class "B" Bedding	134	L.F.
602	Concrete Masonry	0.82	C.Y.

STANDARD CONSTRUCTION DRAWING
HW-E

DRAINAGE DATA	
Drainage Area	13.0 Ac.
Q25	20.2 cfs



SECTION

REVISIONS

DRAWN	TRACED	CHECKED
L.L.F. 5-7-68	H.M.M. 5-16-68	D.B.B. 5-16-68

ELMER S. BARRETT ASSOCIATES
CONSULTING ENGINEERS
249 S. PAINT ST. CHILLICOTHE, OHIO

CULVERT DETAIL
ATHENS RD.
STA. 169+00.9

(17)

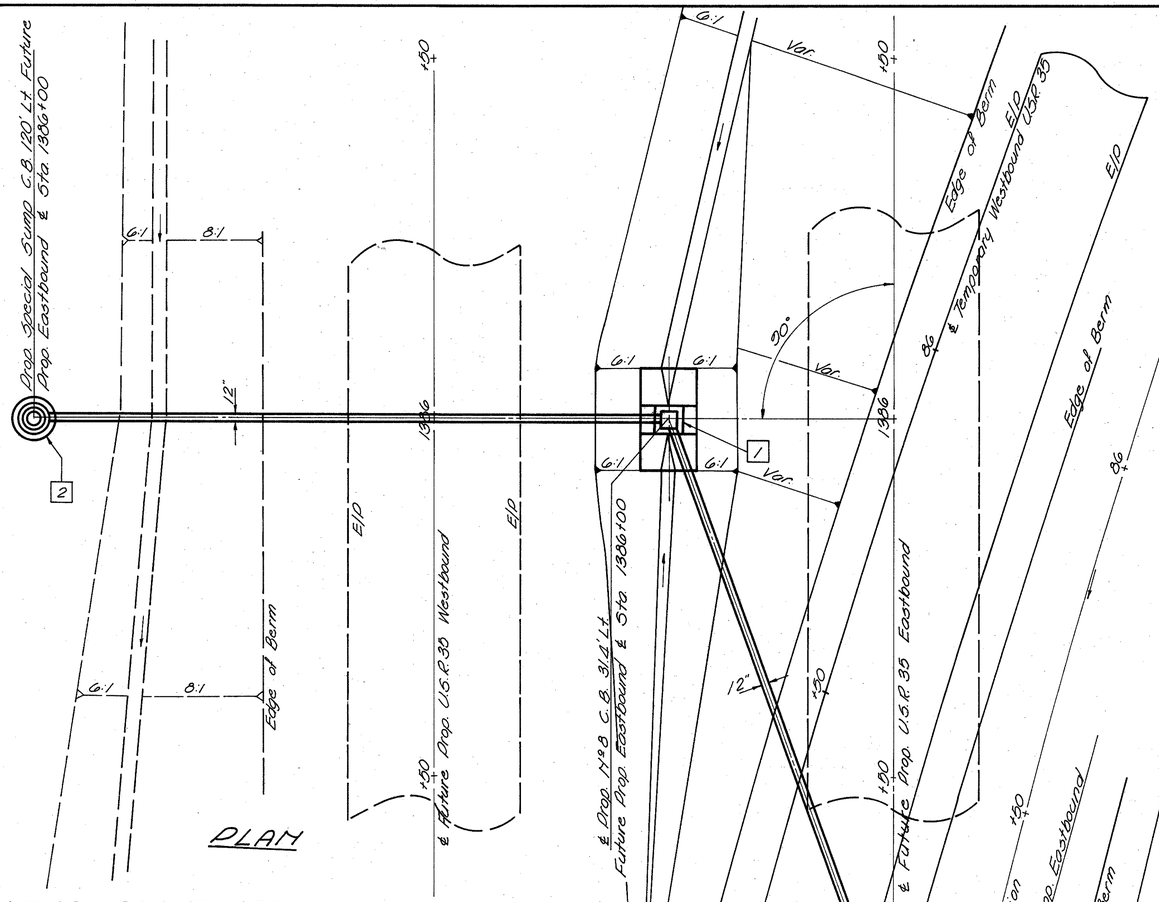
SCALE 0 5' 10' DATE

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
N.R.	N.R.	B.R.B.	W.L.G.			

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

116
225

ROSS COUNTY
ROS-35-25.05



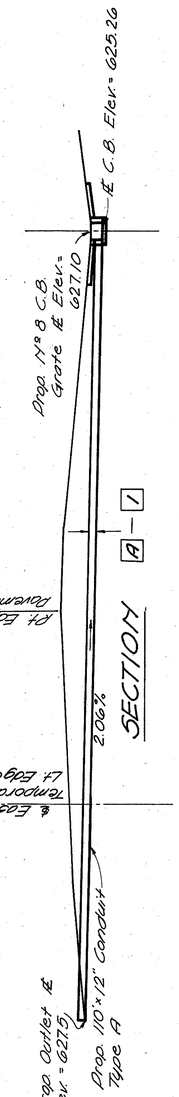
PLAN

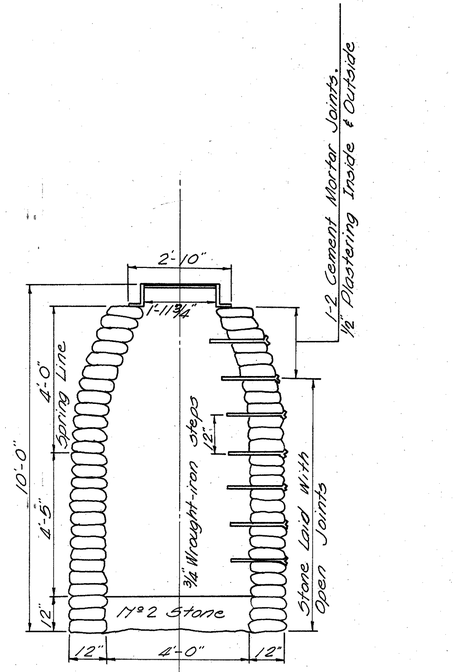
ESTIMATED QUANTITIES

604	Catch Basin Std Nº 8	1 Each
604	Catch Basin Special Sump	1 Each
603	12"ϕ Conduit Type A with Class B Bedding 707.06	110 Lin.Ft.
603	12"ϕ Conduit Type B with Class B Bedding	89 Lin.Ft.

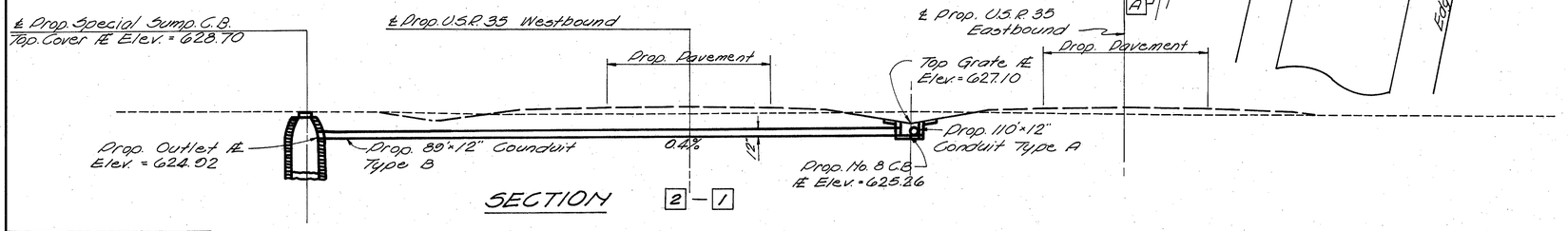
STANDARD CONSTRUCTION DRAWINGS

C.B.-8
M.H.-1 Cover & Steps





SPECIAL SUMP CATCH BASIN WITH STD. MANHOLE-1 COVER
No Scale



SECTION

SCALE
0' 10' 20'

Datum Line Elev. = 610.00

DRAWN	TRACED	CHECKED
D.B.B. 5-14-68	R.C.T. 5-16-68	D.W.S. 5-16-68

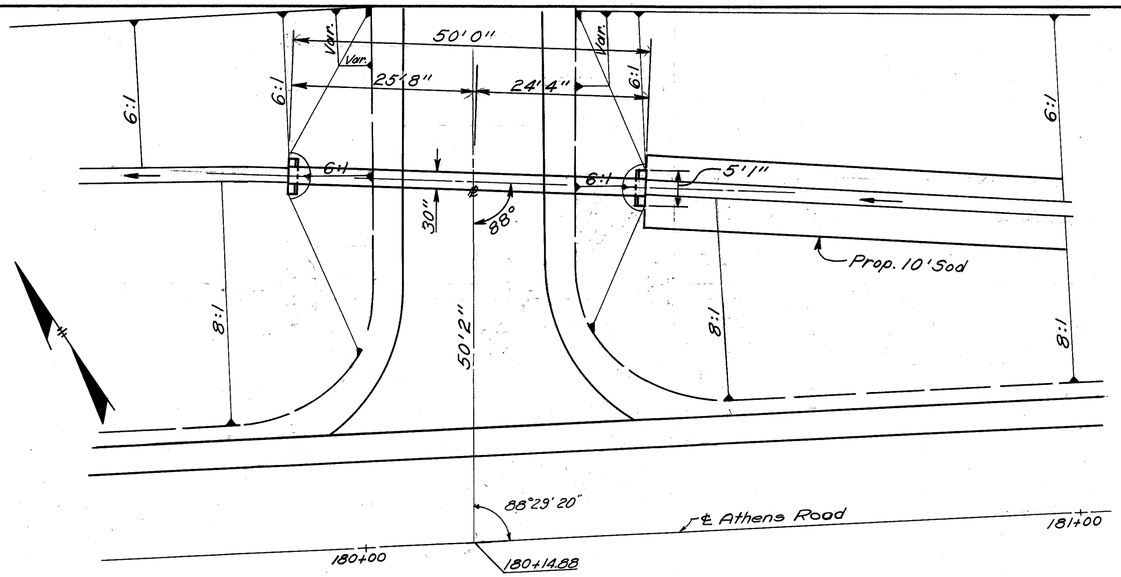
ROS-35 STA. 1386+00 (EASTBOUND)
PROPOSED 603 CONDUIT TYPE A & B

18

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	F-674(12)	

117
225

ROSS COUNTY
ROS-35-25.05



PLAN

(20)

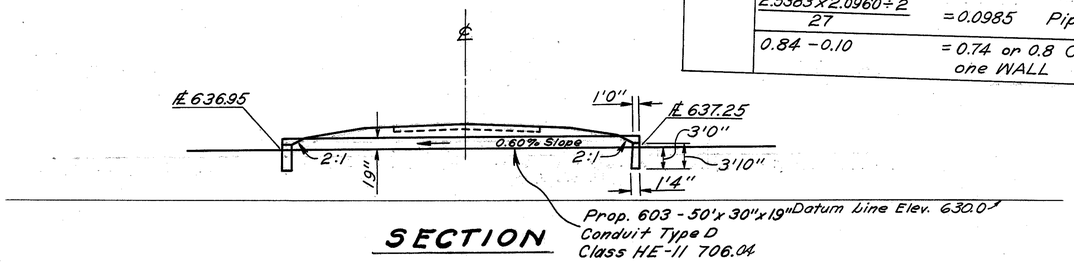
DRAINAGE DATA		
Drainage Area	=	18 Acs.
Q10	=	22 cfs

ESTIMATED QUANTITIES

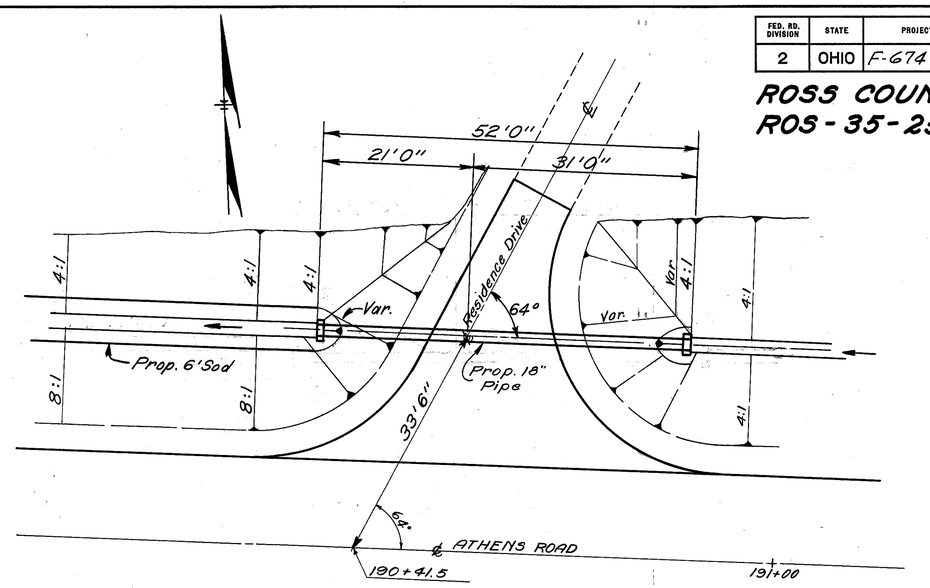
603	30" x 19" Conduit Type D Class HE-II 706.04	50 Lin. Ft.
602	Concrete, Masonry	1.6 Cu. Yds.

CALCULATIONS

Item	Length	Width	Depth	Unit
602 Concrete Masonry	2.333 x 3.8333 / 2			= 4.47 □' End Area
	5.08 x 4.47 / 27			= 0.84 C.Y.
	3.0417 x 2.1250 x .7854			= 5.0765 □' End Area of Pipe
	5.0765 ÷ 2			= 2.5383 □' End Area to Top of Pipe
	2.5383 x 2.0960 ÷ 2 / 27			= 0.0985 Pipe Ded.
	0.84 − 0.10			= 0.74 or 0.8 C.Y. one WALL



SECTION



PLAN

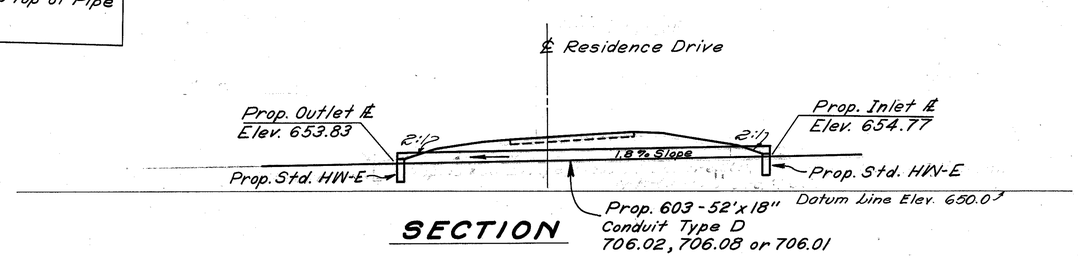
(21)

DRAINAGE DATA		
Drainage Area	=	8 Acs.
Q10	=	13 cfs

ESTIMATED QUANTITIES

603	18" Conduit Type D 706.01, 706.02 or 706.08	52 Lin. Ft.
602	Concrete, Masonry	0.60 Cu. Yds.

STANDARD CONSTRUCTION DRAWING
HW-E



SECTION

REVISIONS		
DRAWN	TRACED	CHECKED
L.L.F. 5-6-68	J.B.H. 5-14-68	D.B.B. 5-15-68

ELMER S. BARRETT ASSOCIATES
CONSULTING ENGINEERS
249 S. PAINT ST. CHILLICOTHE, OHIO

CULVERT DETAIL (20)
RESIDENCE DRIVE
LEFT ATHENS RD. ℄ STA. 190+41.5
LEFT ATHENS RD. ℄ STA. 180+14.88 (21)

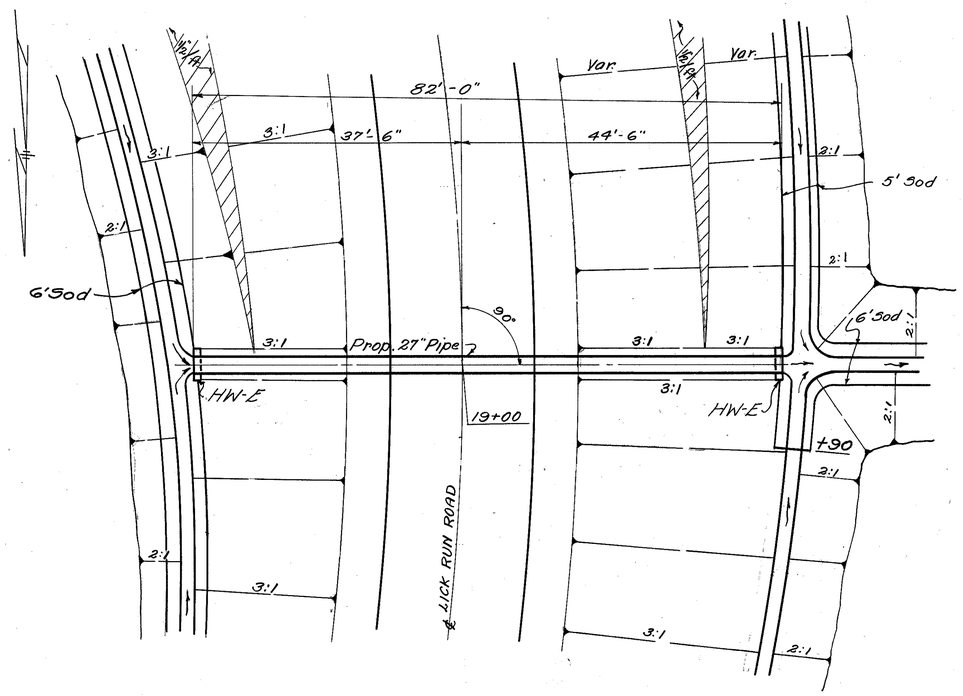
SCALE 0 5' 10' DATE

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
N.R.	N.R.	[illegible]	[illegible]			

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	F-674(12)	

118
225

ROSS COUNTY
ROS-35-25.05



PLAN

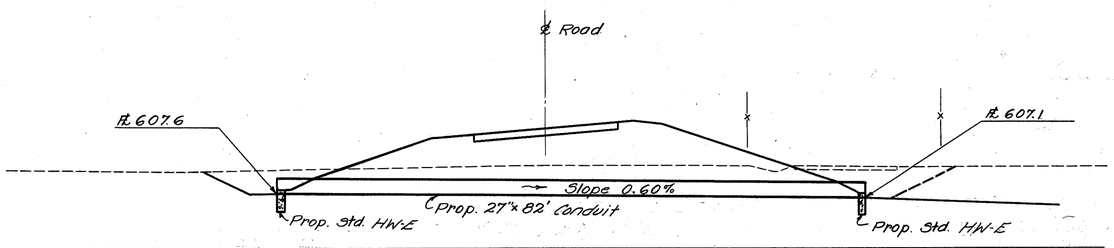
(22)

DRAINAGE DATA	
Drainage Area	25 Acs.
Q_{10}	= 32 cfs

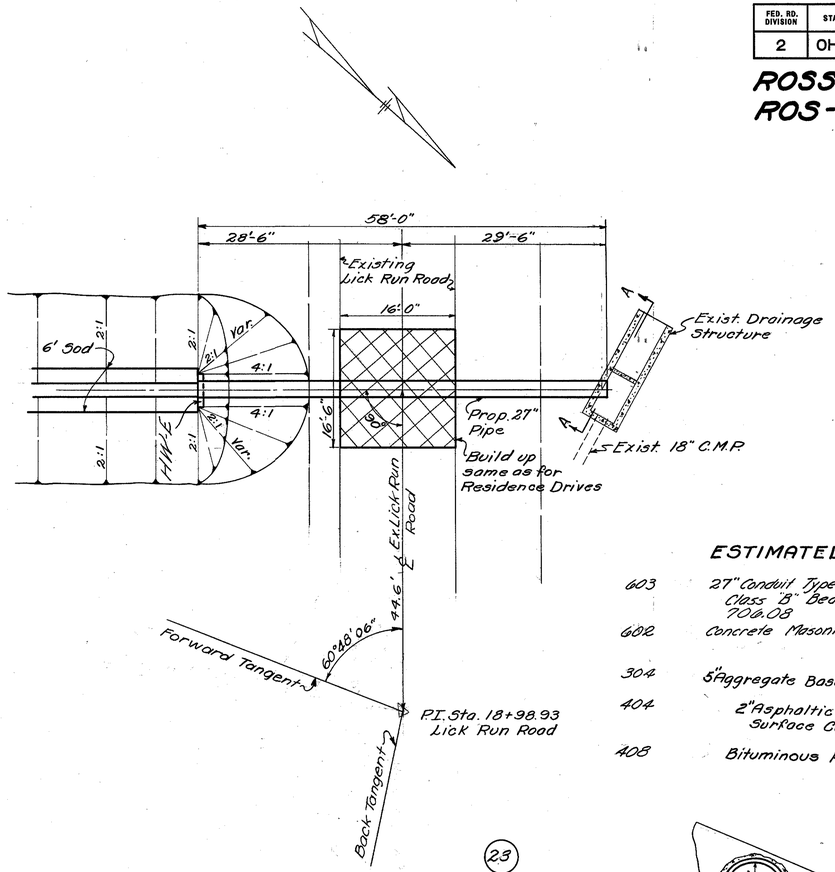
ESTIMATED QUANTITIES

602	Concrete Masonry	0.94 C.Y.
603	27" Conduit Type A 706.02 or 706.08	82.0 L.F.

STANDARD CONSTRUCTION DRAWING
HW-E



SECTION



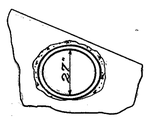
(23)

PLAN

ESTIMATED QUANTITIES

603	27" Conduit Type "A" with Class "B" Bedding 706.02 or 706.08	58 Lin. Ft.
602	Concrete Masonry	0.47 Cu. Yds.
304	5" Aggregate Base Course	4.1 Cu. Yds.
404	2" Asphaltic Concrete Surface Course	1.7 Cu. Yds.
408	Bituminous Prime Coat	30 Sq. Yds.

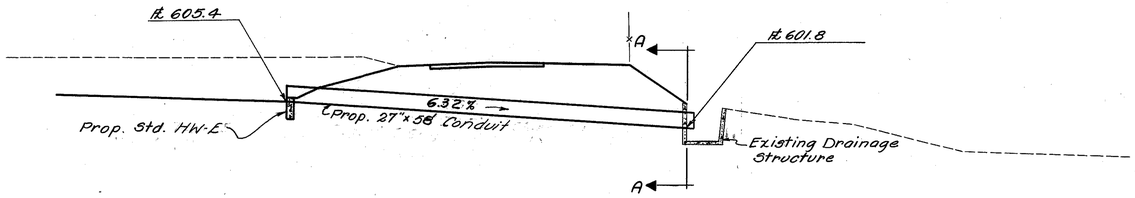
NOTE:
Proposed 27" Pipe shall be placed thru the wall of the existing drainage structure and shall be grouted in place. All work and Materials required will be included for payment in the price bid per lineal foot of pipe.



SECTION A-A

DRAINAGE DATA	
Drainage Area	= 27 Acs.
Q_{10}	= 34 cfs

STANDARD CONSTRUCTION DRAWING
HW-E



SECTION

CALCULATIONS

Item	Length	Width	Depth		Unit
304	16.5'	16.0'	0.417' / 27	=	4.10 C.Y.
404	16.5'	16.0'	0.167' / 27	=	1.70 C.Y.
408	16.5'	16.0' / 9		=	30 S.Y.

REVISIONS

DRAWN	TRACED	CHECKED
J.B.K. 5-8-68	H.M.M. 5-9-68	O.B.B. 5-10-68

ELMER S. BARRETT ASSOCIATES
CONSULTING ENGINEERS
249 S. PAINT ST. CHILLICOTHE, OHIO

CULVERT DETAILS
LICK RUN ROAD
STA. 19+00 (22)
STA. 18+98.93 (23)

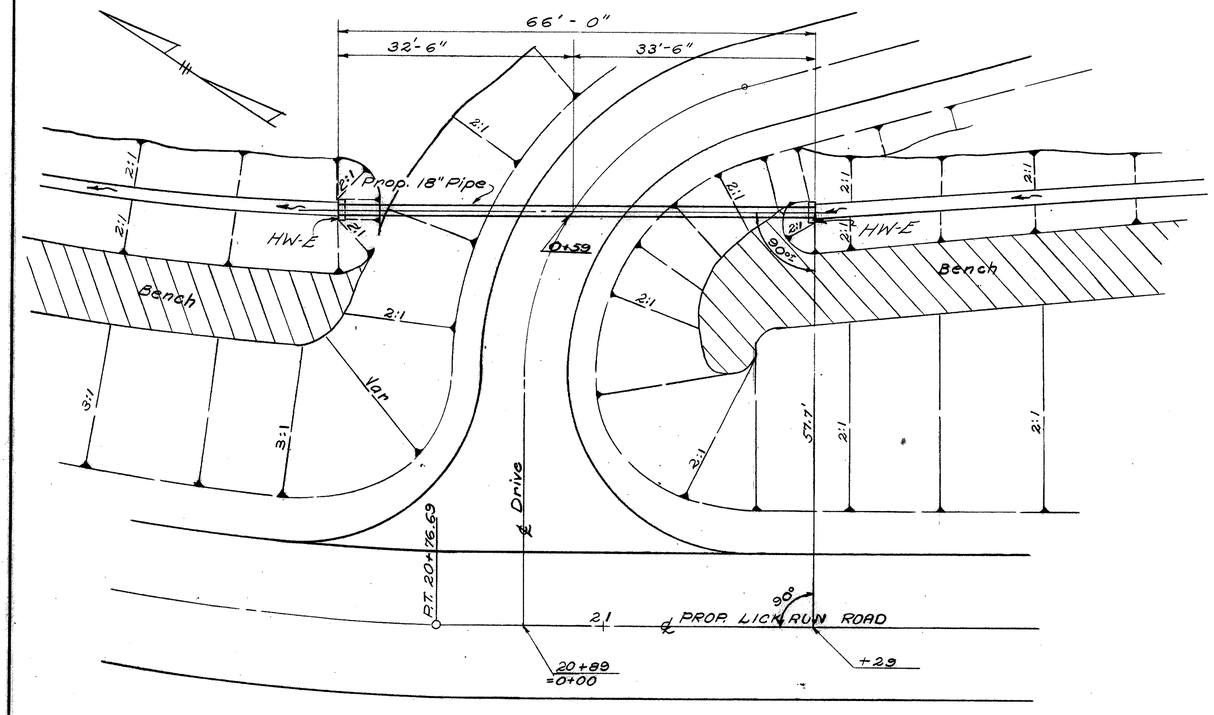
SCALE 0 5' 10' DATE

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
NR	BRB	CRP	TWG			

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	F-674 (12)	

119
225

ROSS COUNTY
ROS-35-25.05



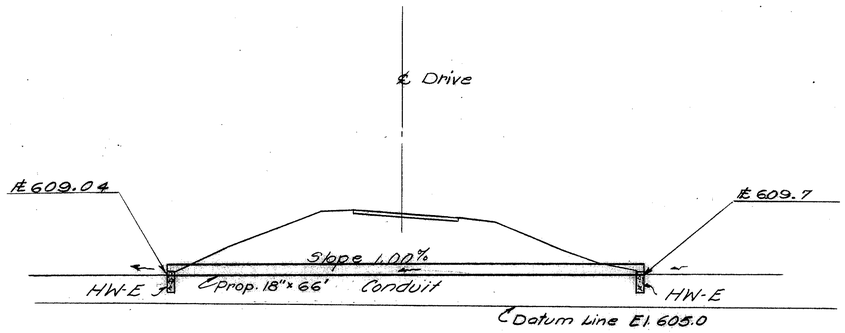
PLAN (24)

DRAINAGE DATA
Drainage Area = 6 Acs
Q_{10} = 12 cfs

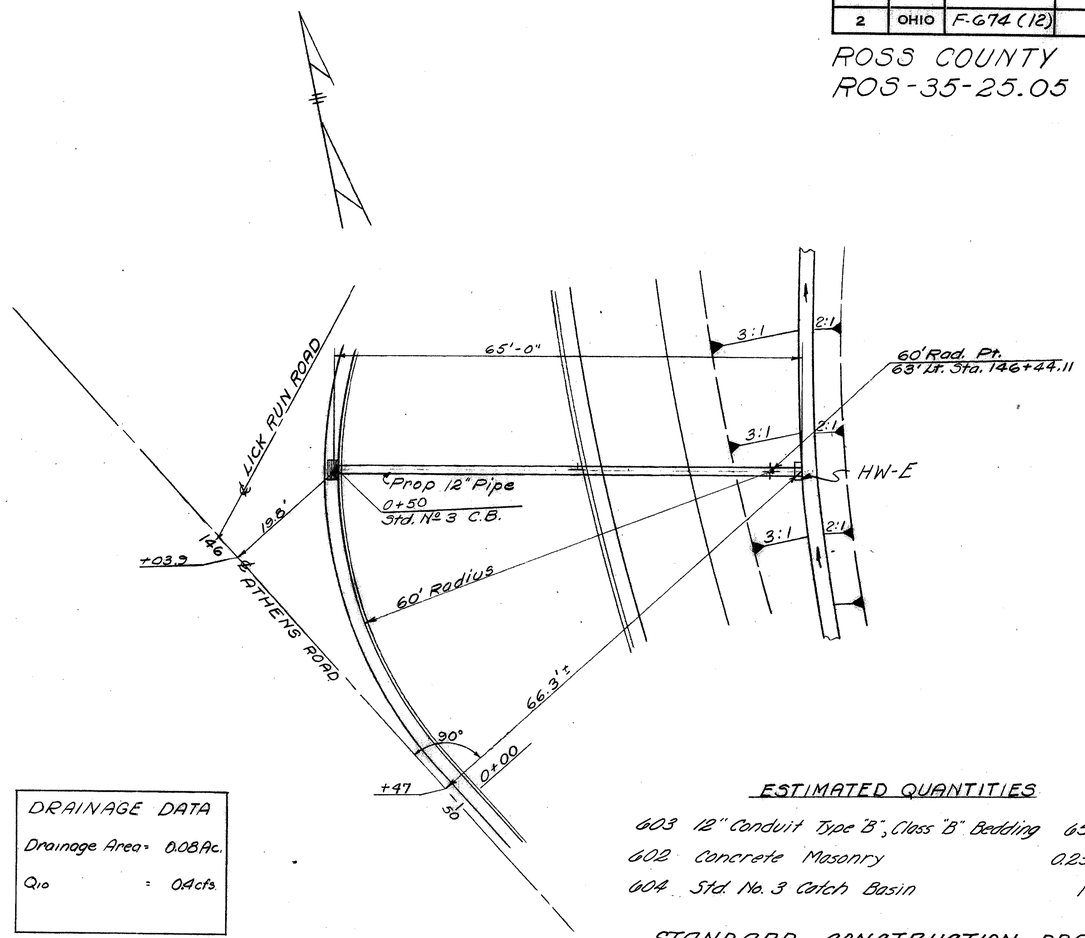
ESTIMATED QUANTITIES

603	18" Conduit Type D	66 Lin.Ft.
602	Concrete Masonry	0.60 Cu.Yds.

STANDARD CONSTRUCTION DRAWING
HW-E



SECTION



DRAINAGE DATA
Drainage Area = 0.08 Ac.
Q_{10} = 0.4 cfs

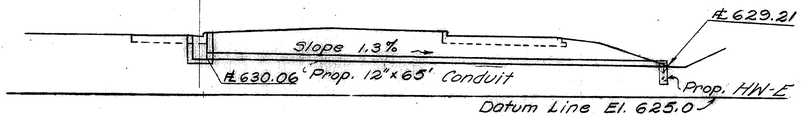
ESTIMATED QUANTITIES

603	12" Conduit Type "B", Class "B" Bedding	65 Lin.Ft.
602	Concrete Masonry	0.23 Cu.Yds.
604	Std. No. 3 Catch Basin	1 Each

STANDARD CONSTRUCTION DRAWINGS
HW-E
C.B. № 3

PLAN (25)

Sta. 0+50 on Curb Return
℄ Prop. Std. № 3 C.B.
R. @ Curb = 633.01
R. Grate = 632.84
R. C.B = 630.06



SECTION

REVISIONS

DRAWN	TRACED	CHECKED
J.B.K. 5-8-68	H.M.M. 5-9-68	D.B.B. 5-10-68

ELMER S. BARRETT ASSOCIATES
Consulting Engineers
245-249 S. Paint Street — Chillicothe, Ohio

DRAINAGE DETAILS (24) (25)

DRIVE - STA. 0+59
(Lt. Sta. 20+89 Lick Run Road)
STA. 0+50 CURB RETURN
(Lick Run & Athens Rd Intersection)

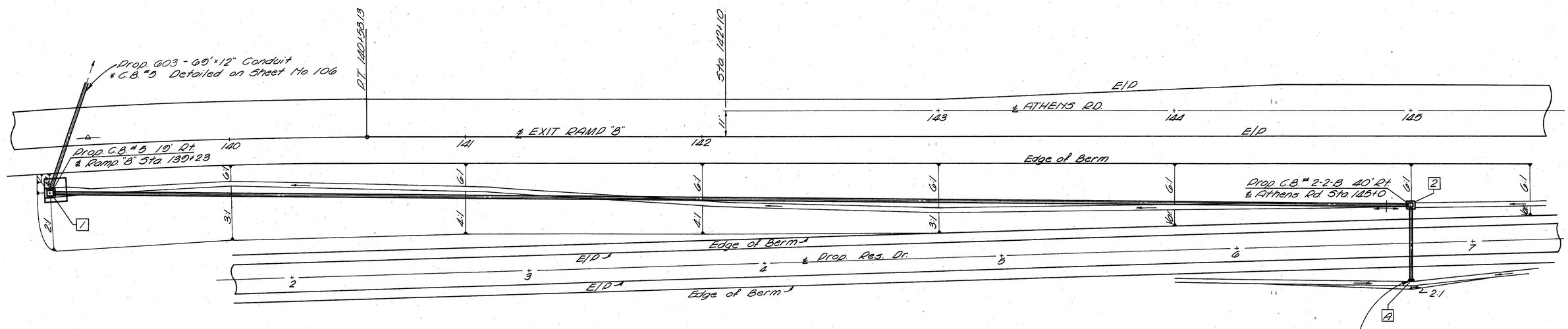
SCALE 0 5' 10' DATE

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
			7462			

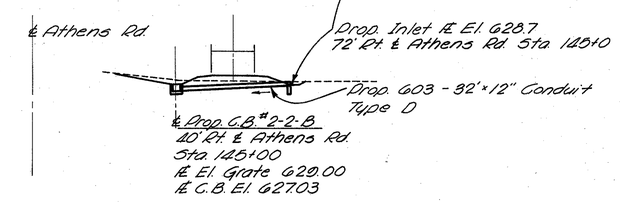
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

120
225

ROSS COUNTY
ROS-35-25.05



PLAN

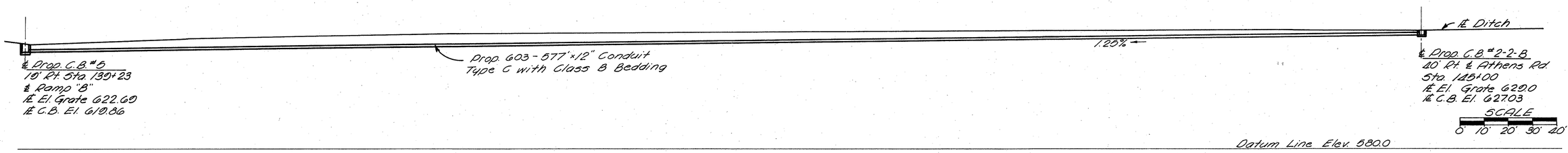


SECTION "2"-"A"

ESTIMATED QUANTITIES

603	12" ϕ Conduit Type "C" with Class "B" Bedding	577 L.F.
603	12" ϕ Conduit Type "D"	32 L.F.
602	Concrete, Masonry	023 C.Y.
604	Catch Basin, Std. No. 2-2-B	1 Ea.

STANDARD CONSTRUCTION DRAWING
HW-2 ℄ C.B. #2-2-B



SECTION "1"-"2"

DRAWN	TRACED	CHECKED
L.L.F. 5-8-68	R.C.T. 5-9-68	J.B.K 5-13-68

ROS-35 RT. OF ATHENS RD. STA. 139+23 TO 145+00
PROPOSED 603 CONDUIT TYPE C & D

26

FED. RO. DIVISION	STATE	PROJECT	
2	OHIO	F-674 (12)	

121
225

ROSS COUNTY
ROS-35-25.05

Buried I.P. 93+64.52 ℄ = ℄ B&O. Main Line

℄ B&O. R.R.

Begin Channel Excavation Sta. 96+00

Cross on Concrete @ End of Pier

Wooded Area

℄ Reference
PK. Spike in 42" Maple Tree
5" above ground

17.45'
Hub
21.74'
110°43'30"
20.87'

N48°42'57"E.

℄ Reference
Buried I.P. 100+00 ℄ =
1343+80 ℄ Median Prop. U.S.R. 35

2:1

Toe of Slope

75'

Offset Line

Excavate to Elevation 584.5

CARMI R. & CARMI V. JONES

CARMI R. & CARMI V. JONES

Tree Line

Channel Easement Line

2:1

Excavate to Elev. 584.5

Toe of Slope

Tree Line

℄ E/W

Ex. R/W & L.A.

Ex. R/W & L.A.

Tree Line

℄ E/W

BEGIN CHANNEL EXCAVATION STA. 96+00

SCIOTO RIVER

Ex. Kilgore Bridge

S. 41°17'03"E.

℄ Median Prop. U.S.R. 35

1343
1344
1345
1346

+25

BENCH MARK
Chiselled on West Side of Existing Pier 165' Rt. ℄ Sta. 99+77
Elevation - 596.03

NOTES: Remove all Trees within Channel Easement.

See R/W Plan for line of Channel Easement.

595
590
585
580

Profile of Existing Ground @ ℄

Excavation 62,698 Cu. Yds.

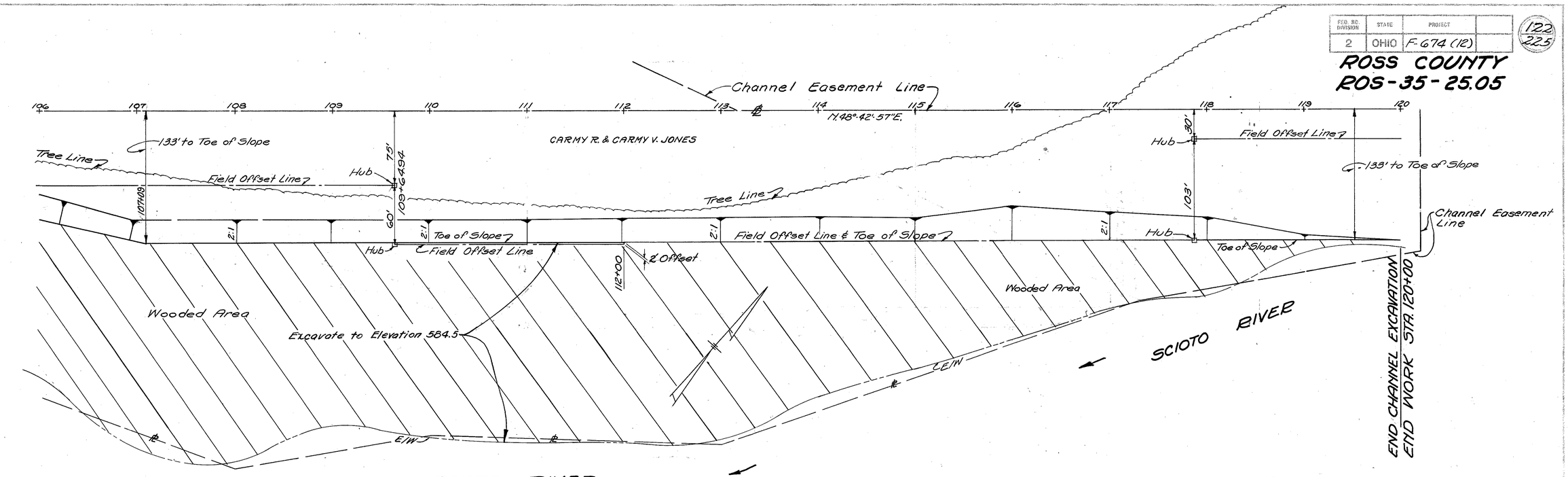
SCIOTO RIVER CHANNEL EXCAVATION
STA. 93+00 TO STA. 106+00

93 94 95 96 97 98 99 100 101 102 103 104 105 106

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	F-674 (12)	

122
225

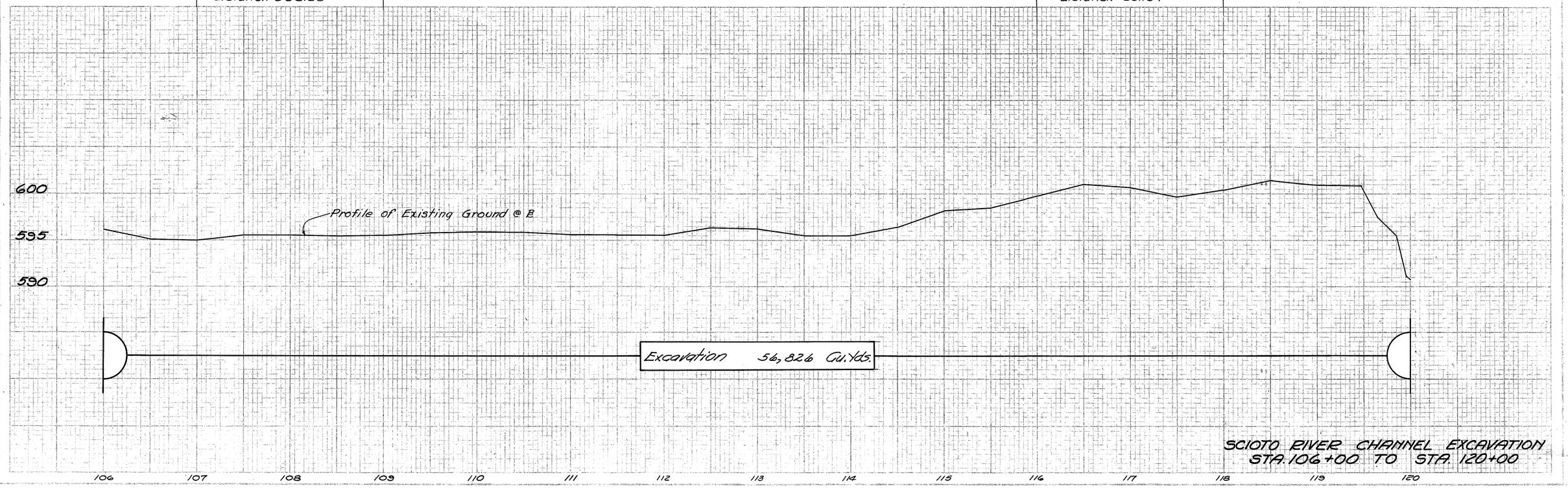
ROSS COUNTY
ROS-35-25.05



BENCH MARK
R.R. Spike in 20" Maple Tree
81' Rt. ℄ Sta. 108+50±
Elevation 598.23

BENCH MARK
R.R. Spike in 24" Elm Tree
30' Lt. ℄ Sta. 117+87
Elevation 601.04

NOTE: Remove all Trees within Channel Easement.



SCIOTO RIVER CHANNEL EXCAVATION
STA. 106+00 TO STA. 120+00

SEE INT.

END SOUTH	SQ. TOS.

REG. NO. DIVISION	STATE	PROJECT	
2	OHIO	F-674(12)	

123
225

ROSS COUNTY
ROS-35-25.05

	END AREA		VOLUME	
	CUT	FILL	CUT	FILL
Sta. 99+00	2026			
			6391	
Sta. 98+00	1425			
			3807	
Sta. 97+00	631			
			1169	
Sta. 96+00	0			

584.5
99+00
590.4

Excavate to 584.5

℄ E.

584.5
98+00
590.9

℄ E.

584.5
97+00
589.2

Excavate to 584.5

Channel Easement

MATCH LINE STA. 96+00.0

290 300 320

MATCH LINE

96+00
592.1

BEGIN CHANNEL EXCAVATION
STA. 96+00

RT. SCIOTO RIVER CHANNEL EXCAVATION
STA. 96+00 TO STA. 99+00

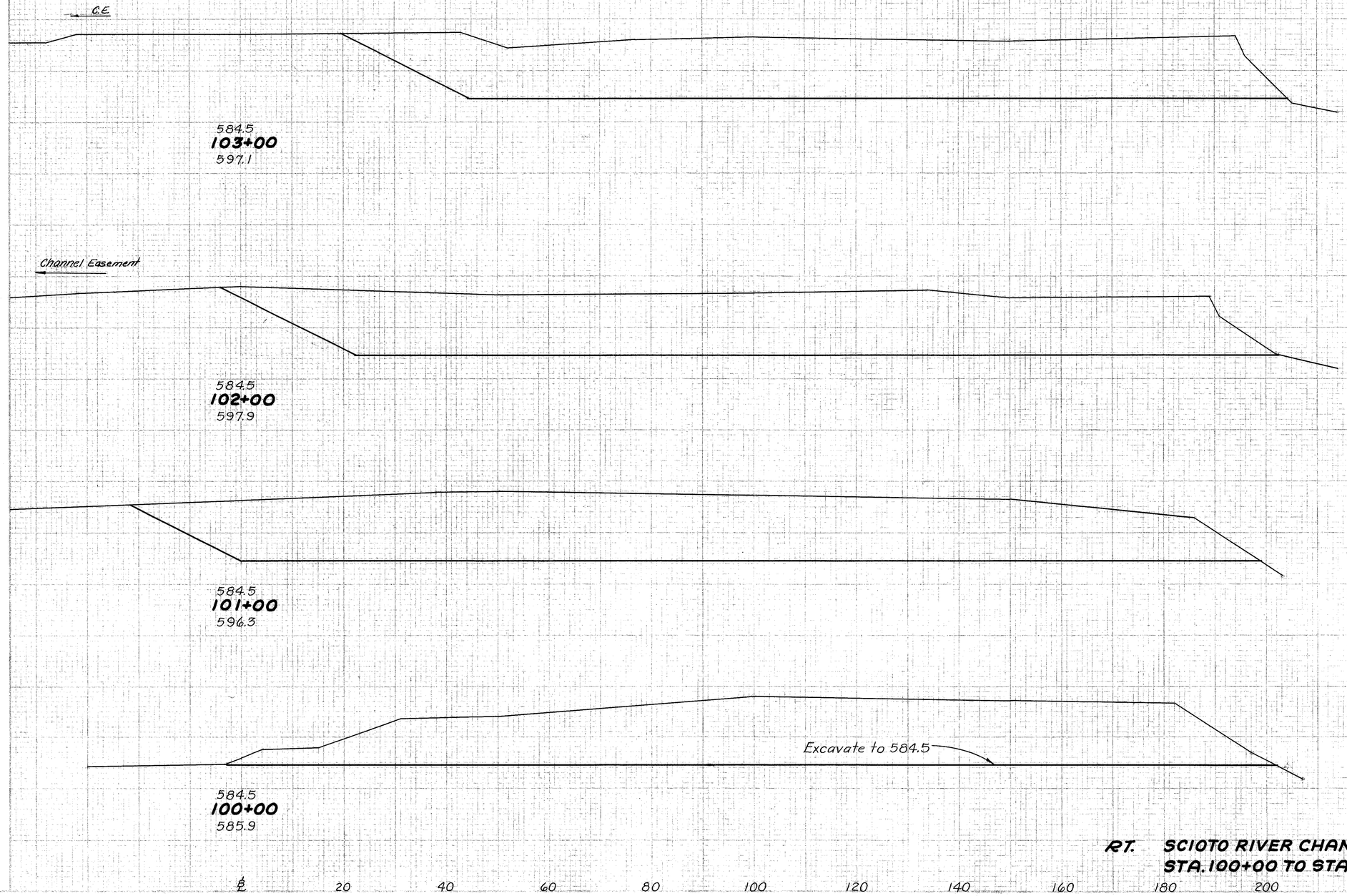
℄ 20 40 60 80 100 120 140 160 180 200 220 240 260 280 290

SECTIONS	
END AREA	VOL. CURVE

FED. OR DIVISION	STATE	PROJECT	
2	OHIO	F-674 (12)	

1237A
225

ROSS COUNTY
ROS-35-25.05



	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
Sta. 103+00	1939			
			7763	
Sta. 102+00	2253			
			8778	
Sta. 101+00	2487			
			8517	
Sta. 100+00	2112			
			7663	
Sta. 99+00	2026			

RT. SCIOTO RIVER CHANNEL EXCAVATION
STA. 100+00 TO STA. 103+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	F-674 (12)	

123B
225

ROSS COUNTY
ROS-35-25.05

GRADING

END WIDTH	SQ. YDS.

END AREA		VOLUME	
CUT	FILL	CUT	FILL

C.E.

584.5
109+00
595.6

Excavate to El. 584.5

MATCH LINE STA. 109+00

MATCH LINE

260 280 300 320

Sta. 109+00 1180

4283

C.E.

584.5
108+00
595.5

Sta. 108+00 1133

3907

C.E.

584.5
107+00
594.9

Sta. 107+00 977

4194

C.E.

584.5
106+00
596.1

Sta. 106+00 1288

5169

C.E.

584.5
105+00
596.3

Sta. 105+00 1503

6317

Channel Easement

584.5
104+00
597.4

Excavate to El. 584.57

Sta. 104+00 1908

Sta. 103+00 1939

7124

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

RT. SCIOTO RIVER CHANNEL EXCAVATION
STA. 104+00 TO STA. 109+00

SEEING

END WIDTH	SIDE TOPS

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	F-674 (12)	

123C
225

ROSS COUNTY
ROS-35-25.05

	END AREA		VOLUME	
	CUT	FILL	CUT	FILL
Sta 114+00	1634			
			5762	
Sta 113+00	1472			
			5193	
Sta 112+00	1332			
			5009	
Sta 111+00	1373			
			4980	
Sta 110+00	1316			
			4622	
Sta 109+00	1180			

C.E.
584.5
114+00
596.1
50' to ℄

C.E.
584.5
113+00
596.6
50' to ℄

Excavate to El. 584.5

C.E.
584.5
112+00
595.9
50' to ℄

C.E.
584.5
111+00
596.7
50' to ℄

Channel Easement
584.5
110+00
596.7
50' to ℄

Excavate to El. 584.5

50 60 80 100 120 140 160 180 200 220 240 260 280 300 320 340

RT. SCIOTO RIVER CHANNEL EXCAVATION
STA. 110+00 TO STA. 114+00

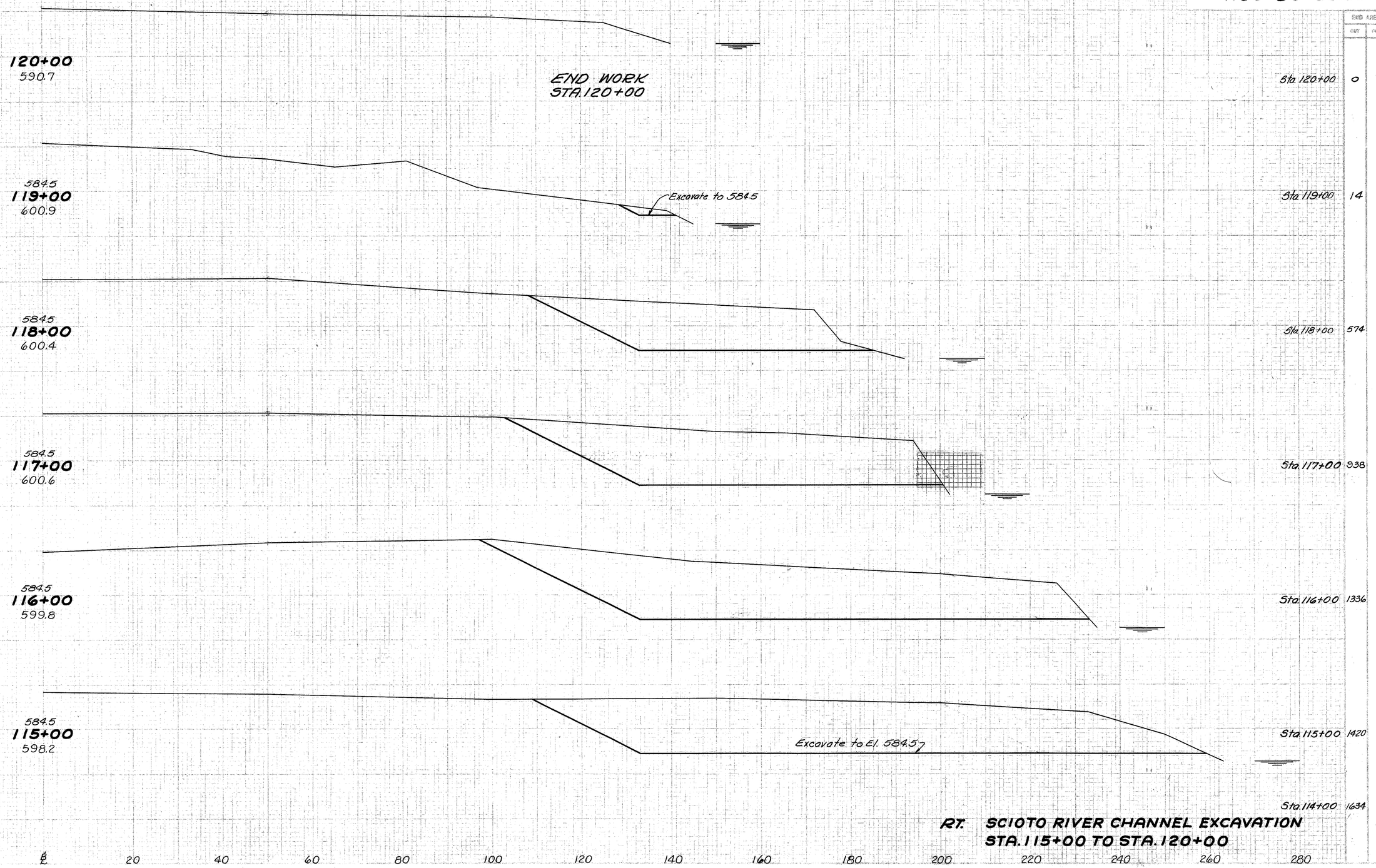
SECTION

CUT (CU YDS)	FILL (CU YDS)

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	F-674 (12)	

123D 225

ROSS COUNTY
ROS-35-25.05



	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
Sta. 120+00	0			
			26	
Sta. 119+00	14			
			1089	
Sta. 118+00	574			
			2800	
Sta. 117+00	938			
			4211	
Sta. 116+00	1336			
			5104	
Sta. 115+00	1420			
			5656	
Sta. 114+00	1634			

RT. SCIOTO RIVER CHANNEL EXCAVATION
STA. 115+00 TO STA. 120+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

123-E 225

ROS-35-25.05

Lt. ℄ 107+53

R.=15'

Top of Spur Dike El.=612.0

Grade shaded area to Elev. 586±

590

588

R=300'

P.T.=670' Lt. ℄ Sta. 104+43

NOTE: Embankment and spur dike of this sheet shall be done immediately after Clearing and Grubbing.

A

2:1

Outlet ℄ El.=586.00
602' Lt. ℄ Sta. 103+00

Inlet ℄ El.=586.50
738' Lt. ℄ Sta. 103+00

Lt. ℄ 103+44

603-24" Conduit Type "D"
702.01-130 L.F.

5' Prop. 18' Risha Drive

NOTE: Since the river is constantly altering the cross sections, they should be retaken prior to construction.

(3)

Lt. ℄ Sta. 103+56

595 594 592 590 588

El.=612.0

606 604 602

1335 1336 1337 1338 1339 1340 1341 1342 1343 1344 1345

To Washington, C.H.

Prop. U.S.R. 35 Westbound Lanes

Existing Structure ℄ Eastbound Lanes

To Jackson

Prop. Channel ℄ Sta. 100+00 = ℄ Sta. 1343+80

102 101 100 99

Lt. ℄ 99+00

12'

Top of Spur Dike Elev.=612.0

610

Top of rock Elev.=610.00

601.08 Rock Channel Protection "Type A"

2:1 slope

600

590

10'-0"

Elev. 588 Water Level (4-69)

Assumed ground line 7-1-69?

Elev. 586.0±

SECTION-A-A

CALCULATIONS				
Item	Length	Width	Depth	Unit
601 R.C.P.	1,025'	x 63'	x 3.5' / 27	= 8464 C.Y.

Reference or Struc. No.	Station to Station	304 Aggregate Base 6" Sq. Yds.
1-R	102+56 - 103+44	116

SUPPLEMENTAL SITE PLAN
BRIDGE No. ROS. 35 25322
U.S.R. 35 over SCIOTO RIVER

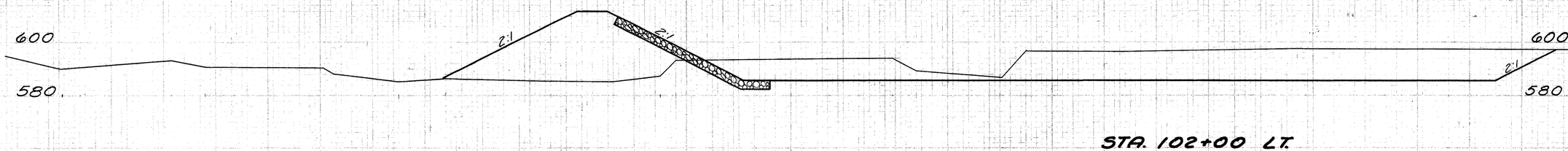
ROSS COUNTY U.S.R. 35
STA. 1335+00 to STA. 1345+00

2	OHIO		

123-F
225

ROSS COUNTY
ROS-35-25.05

END AREA		VOLUME	
CUT	FILL	CUT	FILL



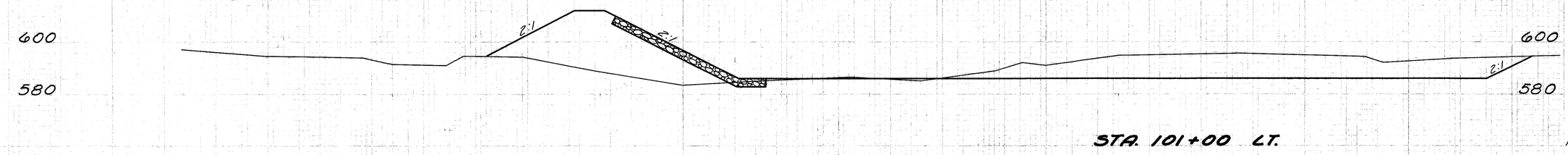
75

STA. 102+00 LT.

2880 1380

722

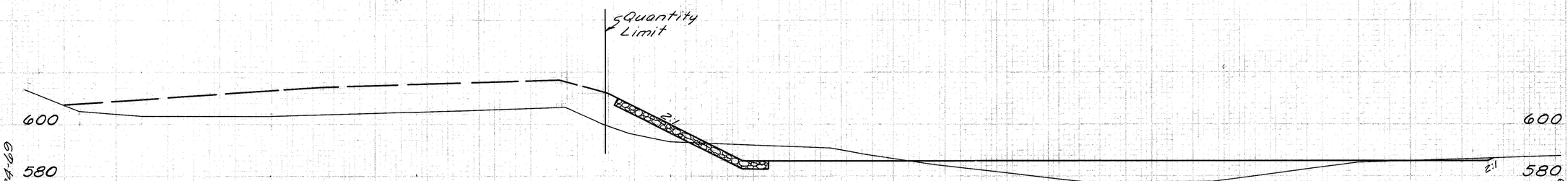
83594709



55

STA. 101+00 LT.

1634 1163



333

3631 4354

5

STA. 100+00 LT.

327 1188

Calc. H.M.M. 4-24-69
Checked L.L.F. 4-24-69

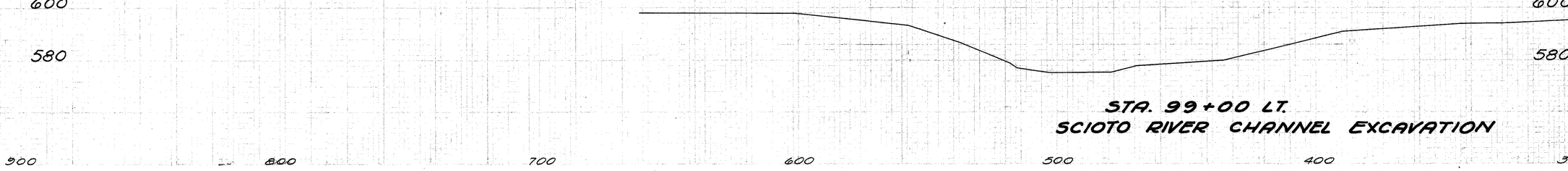
Calc. L.L.F. 4-24-69
Checked H.M.M. 4-24-69

28

606 2200

659 SEEDING	5,472 S.Y.

203 EXCEPTION	54,043 C.Y.
203 EMBANKMENT	43,923 C.Y.



0

0 0

STA. 99+00 LT.
SCIOTO RIVER CHANNEL EXCAVATION

900 800 700 600 500 400 300

LEFT OF STA. 99+00 TO STA. 102+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

123-B
225

ROSS COUNTY
ROS-35 - 25.05

STATION				END AREA		VOLUME	
				CUT	FILL	CUT	FILL
0	580	STA. 107+55	580	0	0		
49				1890	1866		
16		STA. 107+00 LT.		1856	1832		
606	580		580	1275	7519		
93		STA. 106+00 LT.		1532	2228		
950	580		580	1244	7252		
78		STA. 105+00 LT.		1840	1688		
861	580		580	1370	6289		
77		STA. 104+00 LT.		2140	1708		
967	580		580	1149	5171		
97		STA. 103+00 LT.		2800	1084		
956		SCIOTO RIVER CHANNEL EXCAVATION				10519	4563
75	STA. 102+00		STA. 102+00	2880	1380		

Calc. LLF 4-24-69 Checked H.V.M. 4-24-69

Calc. DWS. 4-24-69 Checked H.V.M. 4-24-69

Var.

2:1

℄ Inlet = El. 586.5

℄ Outlet = El. 586.00

0.44% →

Prop. 603-24" Conduit Type "D", 707.01 — 130 L.F.

(3)

LEFT OF STA. 103+00 TO STA. 107+00

Was 124

FED. RD. DIVISION	STATE	PROJECT		
2	OHIO			

124
225

ROSS COUNTY
ROS-35-25.05

EXISTING BRIDGE DATA

Bridge No: 205-35-253
Type: Continuous Steel Truss Bridge with Concrete Floor and Substructure
Spans: 2 Units @ 195'-234'-195' c/c Bearings. 1250' c/c End Pins
Roadway: 24' plus 1-4'-6" Sidewalk on Right
Loading: H-15-33
Skew: None
Wearing Surface: 3/4" Monolithic Concrete
Approach Slab: 25' Long
Condition: Good
Disposition: To remain in place

PROPOSED BRIDGE DATA

TYPE: Welded Hinged Girder with Concrete Deck and Substructure.
SPAN: 93.6'-3@117'-126'-140'-126'-3@117'-93.6'.
ROADWAY: 33'-0" f/f of 6" Curbs.
SKEW: 0°-00'
LOAD FREQUENCY: CF-2000 (57)
WEARING SURFACE: 1" Monolithic Concrete
APPROACH SLABS: AS-1-67 (25' Long)
RAILING: Aluminum Rail and Supports with Concrete Parapet.
ALIGNMENT: Tangent.

DRAINAGE AREA

3,859 Square Miles

Q 50 = 184,000 c.f.s.

1976 Equivalent Passenger Vehicles = 9380 Vehicles per day.

PROFILE PROPOSED STRUCTURE

Bridge Limits = 1285.70'
1959 Flood (50 Yr. Frequency) H.W. El. 610.02
1937 Flood El. 609.50
1913 Flood H.W. El. 618.08
Normal Water El. 584.57
El. 611.73
El. 605.76
Rock Channel Protection (3' Thick)
El. 574.00
Excavate Channel To El. 584.50
El. 571.00
El. 572.50
626' V.C.
+0.5%
-0.5%
Hinge
Clears 1959 Flood 3 feet
12" Cast-in-Place reinforced Concrete Piles
Estimated Average of Pay Lengths: Abutments - 40' Piers - 45'
SEE DETAIL SUPPLEMENTAL SITE PLAN SHEET N° 123-E
SCIOTO RIVER
Bridge Sta. 1343+51.84
End Approach Slab Sta. 1337+08.99
Begin Approach Slab Sta. 1349+94.69
TO WASHINGTON C.H.
Median Prop. U.S.R. 35
S. 41°-17'-03"E.
Prop. U.S.R. 35 Westbound Lanes
Existing Structure Eastbound Lanes
TO JACKSON
Rock Channel Protection (3' Thick)
Excavate to El. 584.50
14" Timber Piling
117'
126'
140'
93.6'
32.4'
70'
33'-0"
94'-0"
B.S. (Fixed)
B.S. (Exp.)
B.S. (Hinged)
Abut. (Exp.)
Abut. (Fixed)
2:1
1:1

BENCH MARK
Square chisled on Concrete Walk at West End of Kilgore Bridge 58' Rt. & Sta. 1336+86
Elev. 615.94

BENCH MARK
Top of Steel Piling North Edge of East Abut. of Ex. Kilgore Bridge. 20' Lt Sta. 1349+75 (E.B.)
Elev. 597.93

BENCH MARK
Square Chiseled on Concrete Walk at East End of Kilgore Bridge 15' Rt. Sta. 1350+16.5 (E.B.)
Elev. 620.00

PROFILE EXISTING STRUCTURE

BRIDGE UTILIZED MAR 17 1982

ELMER S. BARRETT ASSOCIATES
Consulting Engineers
245-249 S. Paint Street Chillicothe, Ohio

SITE PLAN
BRIDGE No. ROS-35-2532L
U.S.R. 35 over SCIOTO RIVER
ROSS COUNTY U.S.R. 35
STA. 1337+08.99 To STA. 1349+94.69

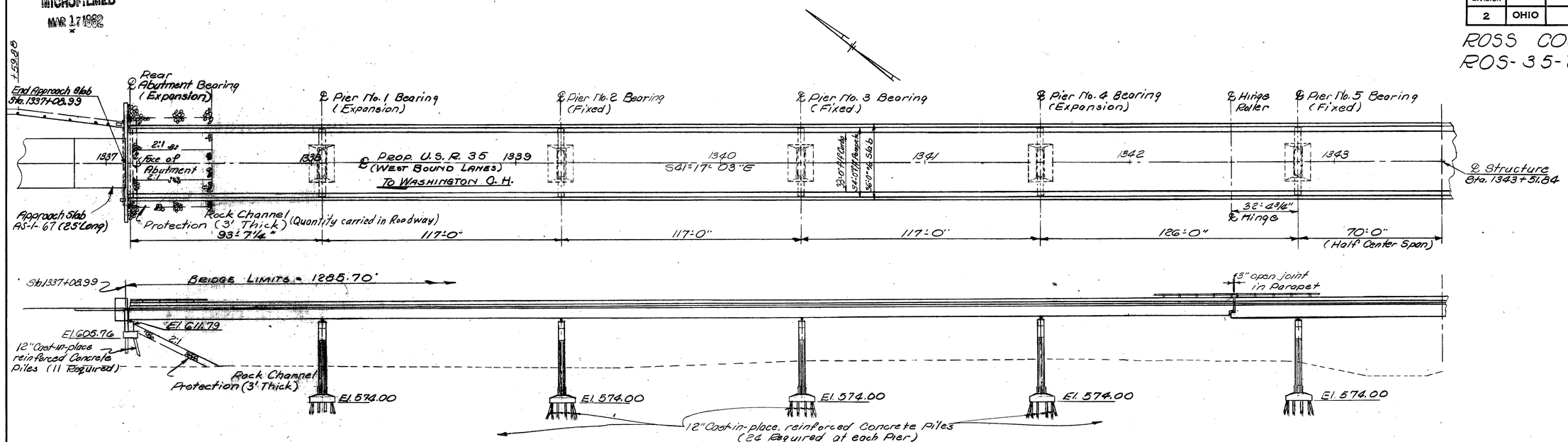
SCALE	DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
	W.I.C.	R.U.M. L.P.				10/29/84	

C9706

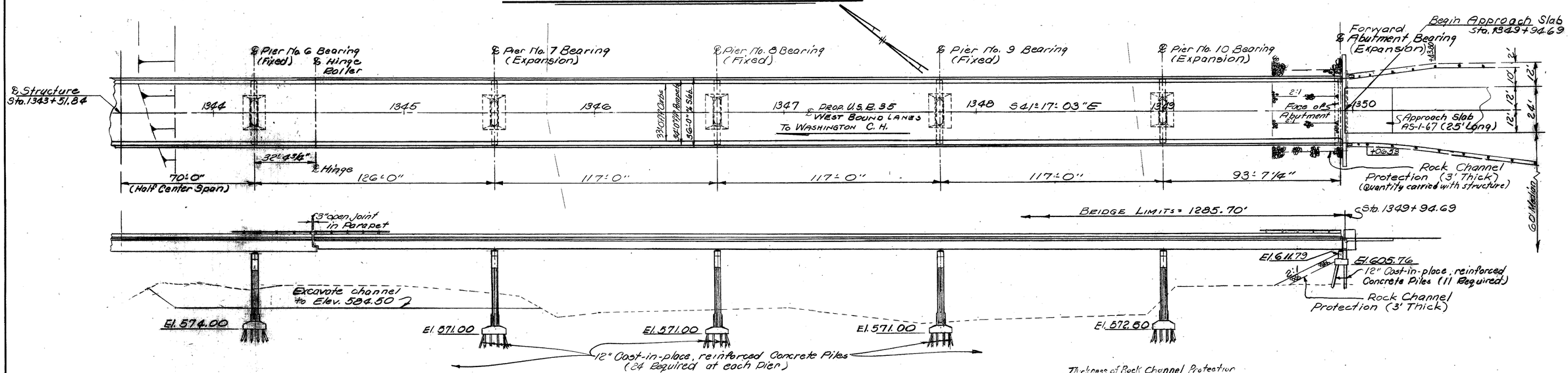
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

125/225

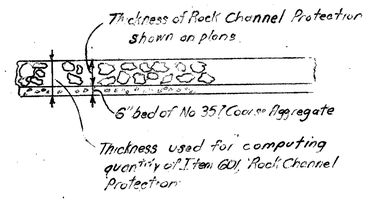
ROSS COUNTY
ROS-35-25.05



HALF GENERAL PLAN AND ELEVATION
(WEST HALF)



HALF GENERAL PLAN AND ELEVATION
(EAST HALF)



DETAIL OF ROCK CHANNEL PROTECTION

ELMER S. BARRETT ASSOCIATES
Consulting Engineers
245-249 S. Paint Street — Chillicothe, Ohio

GENERAL PLAN AND ELEVATION
BRIDGE NO. ROS-35-2532 L
U.S.R. 35 over SCIOTO RIVER
ROSS COUNTY — U.S.R. 35
STA. 1337+08.99 TO STA. 1349+94.69

SCALE			DATE			
QUANTITIES	DRAWN	TRACED	CHECKED	APPROVED	DATE	REVISED
W.I.C.	R.J.M.		J.H.L.	W.W.L.	10/29/64	

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

126
225

ROSS COUNTY
ROS-35-25.05

ESTIMATED QUANTITIES

ITEM	QUANTITY	UNIT	DESCRIPTION	ABUTMENT	PIERS	SUPER	GENERAL	AS BUILT	
503	Lump	Sum	Cofferdams, Cribs and Sheeting				Lump		
503	1744	Cu. Yds.	Unclassified Excavation	93	1651				
601	670	Cu. Yds.	Rock Channel Protection Type A				670		
511	1433	Cu. Yds.	Class C Concrete, Superstructure			1433			
511	691	Cu. Yds.	Class C Concrete, Pier Stems and Caps		691				
511	93	Cu. Yds.	Class C Concrete, Abutments above Footings	93					
511	310	Cu. Yds.	Class C Concrete, Footings	61	249				
825	5830	Sq. Yds.	Concrete Surface Treatment	46		5784			
509	520,453	Pounds	Reinforcing Steel	10,805	38,703	410,945			
513	1,819,700	Pounds	Structural Steel			1,819,700			
514	1,819,700	Pounds	Field Painting of Structural Steel			1,819,700			
517	2,565.08	Lin. Ft.	Railing, (aluminum rail and supports and concrete parapet)			2,565.08			
505	Lump	Sum	First Test Pile				Lump		
506	Lump	Sum	First Pile Test Load				Lump		
506	1	Each	Subsequent Pile Test Load				1		
507	11,680	Lin. Ft.	12" Cast-in-place Reinforced Concrete Piles	880	10,800				
518	33	Cu. Yds.	Porous Backfill	33					
518	44	Each	Scuppers, including supports			44			
518	66	Lin. Ft.	6" Helical Perforated CMP, including specials 707.01	66					
518	48	Lin. Ft.	6" Helical CMP, non-perforated. 707.01	48					
808	1433	Units	Water Reducing, Set Retarding Admixture			1433			

MICROFILMED
MAR 17 1982

FIELD SPLICE NOTES

BOLTS Shall be 1" diameter high strength.
Machine Finish: The concrete bridge deck shall be finished by the use of a finishing machine.

WELDED ATTACHMENTS: No attachments shall be made by field welding to the top flanges or flange plates of continuous beams or plate girders within a distance of 0/0 of the span length on either side of the interior Supports. Welding for attachments to the top flanges at other parts of the spans shall be kept at least 2" from the edge of flange

GENERAL NOTES

REFERENCE shall be made to Standard Drawings BS-1-67 revised 1-11-68, SD-1-65 revised 11-8-65, BR-1-65 revised 11-24-65, FSB-1-62 revised 1-15-63 and Supplemental Specifications 808 dated 1-1-69, 811 dated 1-1-69, 825 dated 1-1-69, 927 dated 1-1-69. On Std. Dng. FSB-1-62 reference to M7.11 shall be considered to read 711.17

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.

Design Loading: CF-2000 (57)
Concrete, Class C: basic unit stress - 1,333 p.s.i. Substructure
basic unit stress - 1,133 p.s.i. Superstructure
Structural Steel: ASTM A36, basic unit stress - 20,000 p.s.i.
Reinforcing Steel: ASTM A615, A616, A617, Deformed, Intermediate or Hard Grade. Basic unit stress - 20,000 p.s.i.

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 for a minimum period of 30 days, after which excavation shall be made for the abutments and piles driven.

EXCAVATION QUANTITY for the abutments includes the removal of fill material required for construction of the abutments. Excavation quantity for the piers includes the removal of material between the surface of the proposed channel and the bottom of the pier footings.

PILES shall be driven to a minimum bearing capacity of 34 tons per pile for the abutments, 46 tons per pile for Piers No. 1, 2, 3, 4, 7, 8, 9, 10 and 48 tons per pile for Piers No. 5 and 6.

WELDS on non-stress carrying members are shown thus N

MACHINE FINISH: The concrete bridge deck shall be finished by the use of a finishing machine.

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

STRUCTURAL STEEL: Steel used for the fabrication of rollers and roller bearing plates shall conform to the requirements of Sec. 711.04. All other structural steel shall conform to the requirements of 711.01, ASTM A36.

ITEM S-7.10, High Strength Steel Bolts, Nuts and Washers paragraph two (2), shall be completely revised and the last sentence of paragraph four (4) revised to read as follows:

"In the final assembly of the parts to be bolted, drift pins shall be placed in a sufficient number of holes (not less than 25 percent for field erection) to provide and maintain accurate alignment of holes and parts, and sufficient bolts shall be installed and brought to a snug tight condition to bring the parts into complete contact. Bolts shall then be installed in any remaining open holes and tightened to a snug tight fit after which all bolts shall be tightened completely by calibrated wrenches or by the turn-of-nut method. Drift pins shall then be replaced with bolts, tightened in the same manner."

"Bolt lengths determined by the use of Table No. 1 shall be adjusted to the next 1/2-inch length increment."

GIRDER ERECTION: The Contractor shall submit to the Director, for approval, three prints showing his proposed erection procedure for the plate girders.

STAINLESS STEEL FASTENERS shall be properly passivated to remove surface impurities and shall be furnished with a Lustrous finish.

ELMER S. BARRETT ASSOCIATES
Consulting Engineers
245-249 S. Paint Street Chillicothe, Ohio

ESTIMATED QUANTITIES AND GENERAL NOTES
BRIDGE NO. ROS-35-2532L
U.S.R. 35 over SCIOTO RIVER
ROSS COUNTY U.S.R. 35
STA 1337+08.99 TO STA 1349+94.69

SCALE	DATE					
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
WIC	P.J.M.		AJM			

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

(127/225)

ROSS COUNTY
ROS-35-25.05

4" 1¼"x25" steel machine bolts with hex.hd. thd 3" inbed 1'-6" Galvanize min of 6" thd end of bolts includ with railing for payment

Rear Abutment
Forward Abutment

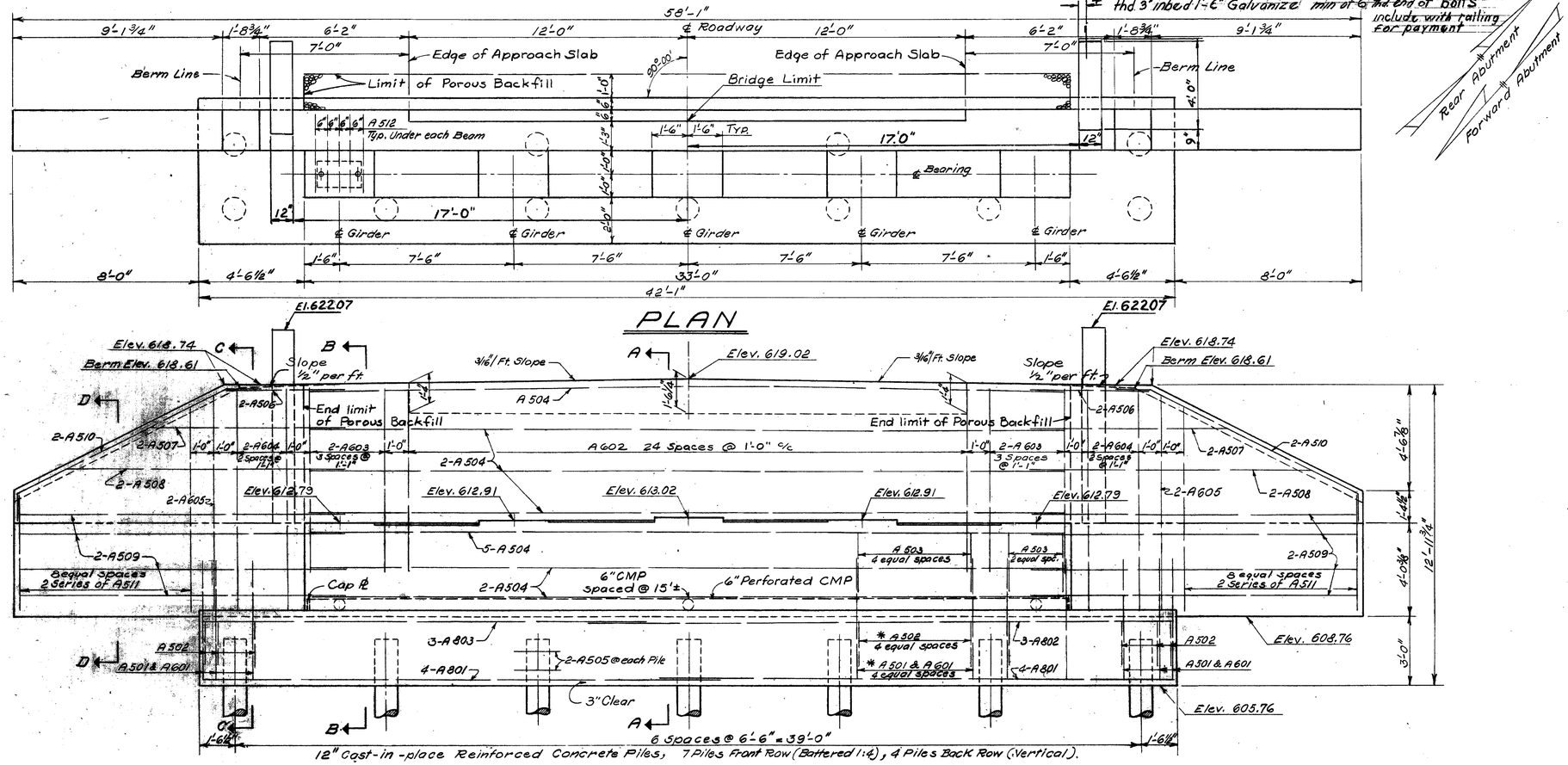
NOTES

POROUS BACKFILL shall extend upward to the approach slab, paved berms and to the surface of the earth shoulders, and outward to the limits as shown on the "Elevation" view.

BRIDGE SEAT REINFORCEMENT: Special care shall be taken in placing of reinforcing bars in the bridge seats so as to avoid interference with the anchor bars.

End Post are included with abutments for payment

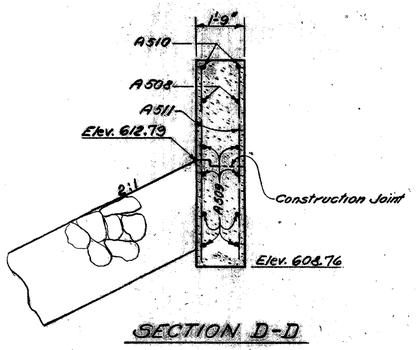
PLAN



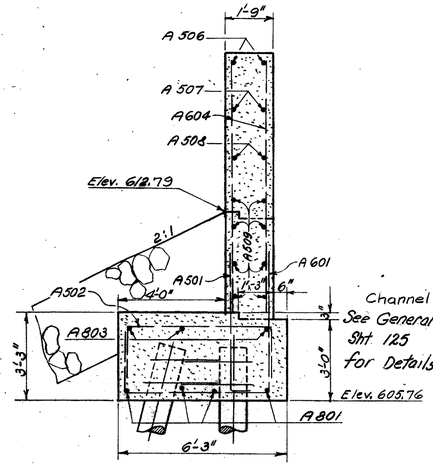
12" Cast-in-place Reinforced Concrete Piles, 7 Piles Front Row (Battered 1:4), 4 Piles Back Row (Vertical).

* Typ. Between Piles

ELEVATION



SECTION D-D



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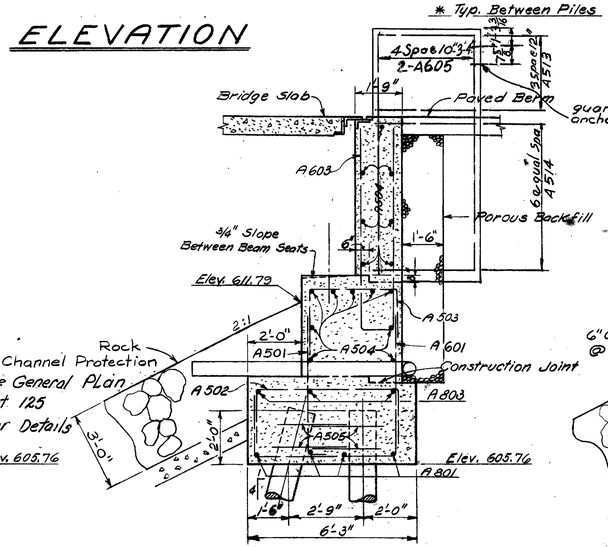
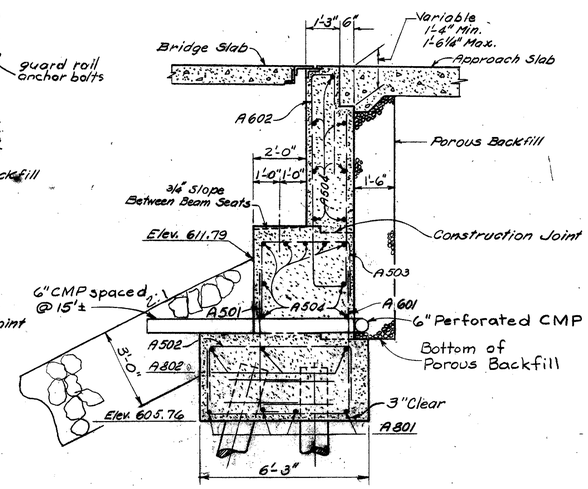


SECTION B-B



SECTION A-A

ELMER S. BARRETT ASSOCIATES
Consulting Engineers
245-249 S. Paint Street — Chillicothe, Ohio

ABUTMENT DETAILS

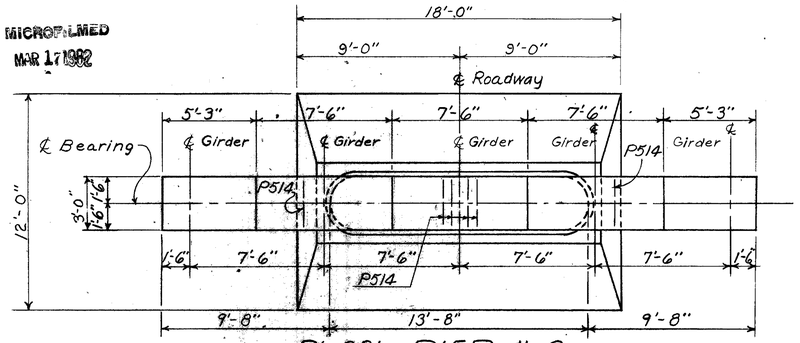
BRIDGE No. ROS-35-2532 L
U.S.R. 35 over SCIOTO RIVER
ROSS COUNTY U.S.R. 35
STA. 1337+08.99 To STA. 1349+94.69

SCALE	DATE					
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
F.H.S.	F.H.S.	L.P.	K.W.W.	W.L.	10/24/64	

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

128/229

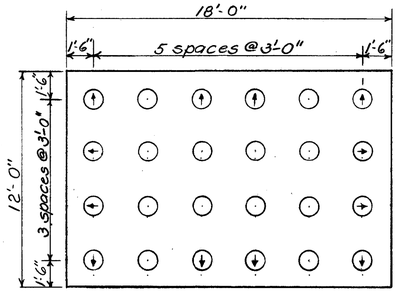
ROSS COUNTY
ROS-35-25.05



PLAN - PIER # 8

Ⓐ Denotes direction of batter
Amount of batter ~ 1:4

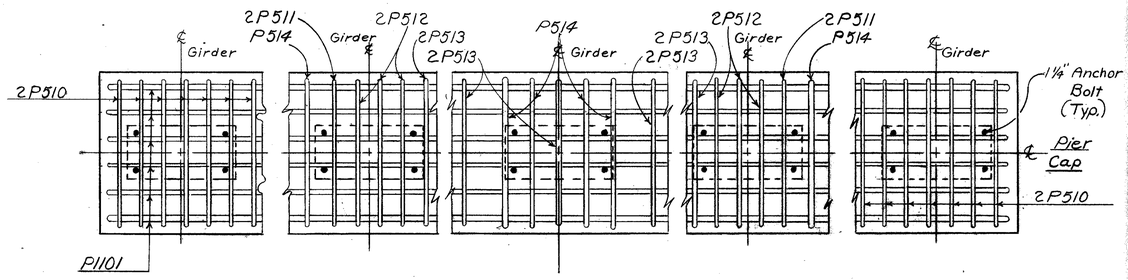
All piles 12" Cast-in-place Reinforced Concrete



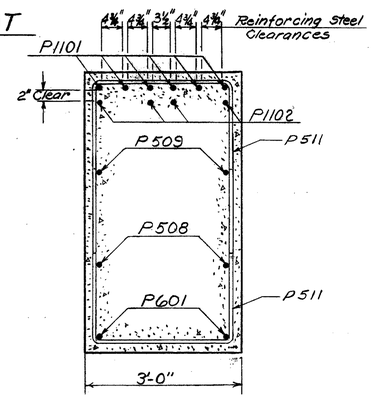
PILE PLAN

NOTES

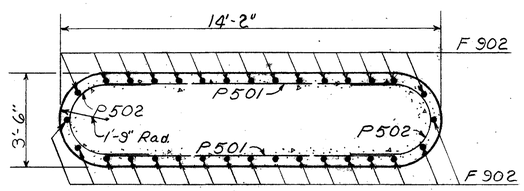
Care shall be taken in placing the reinforcing steel under Girder seats so as not to interfere with bearing anchor bolts.



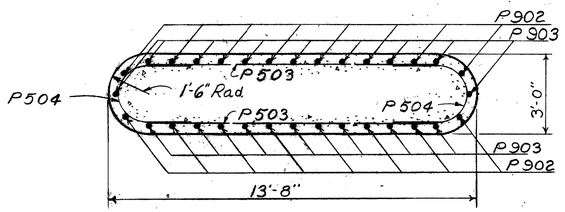
ANCHOR BOLT LAYOUT



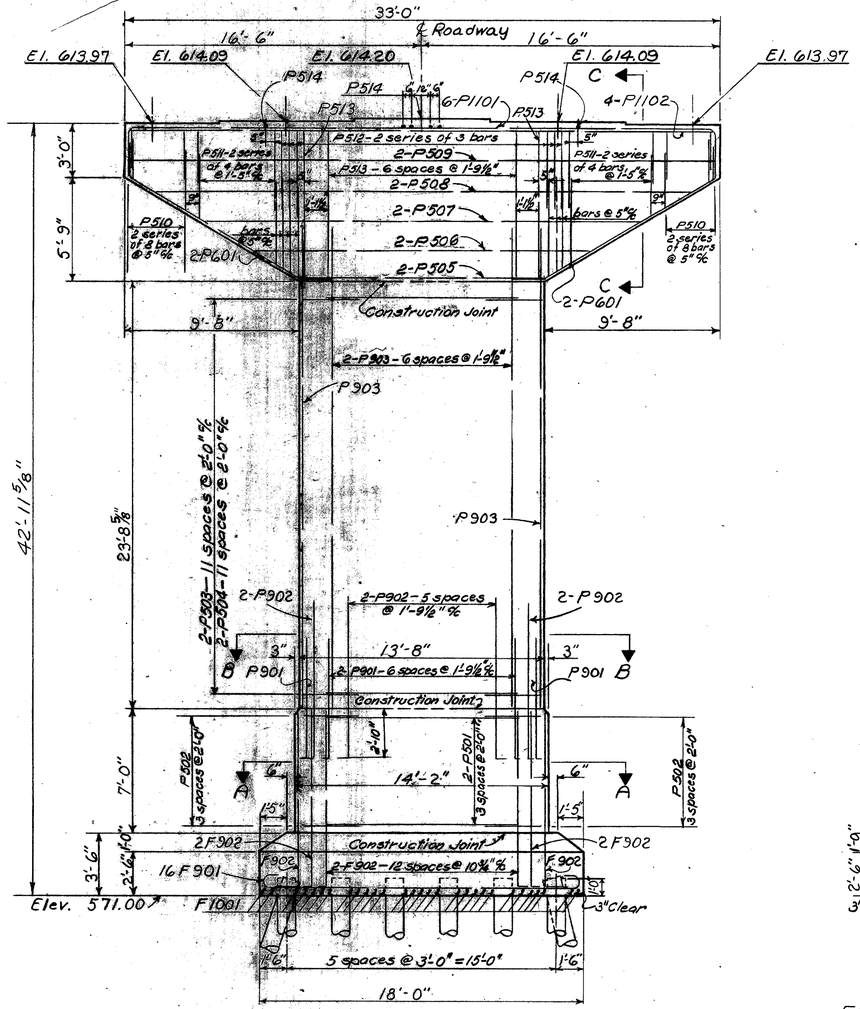
SECTION C-C



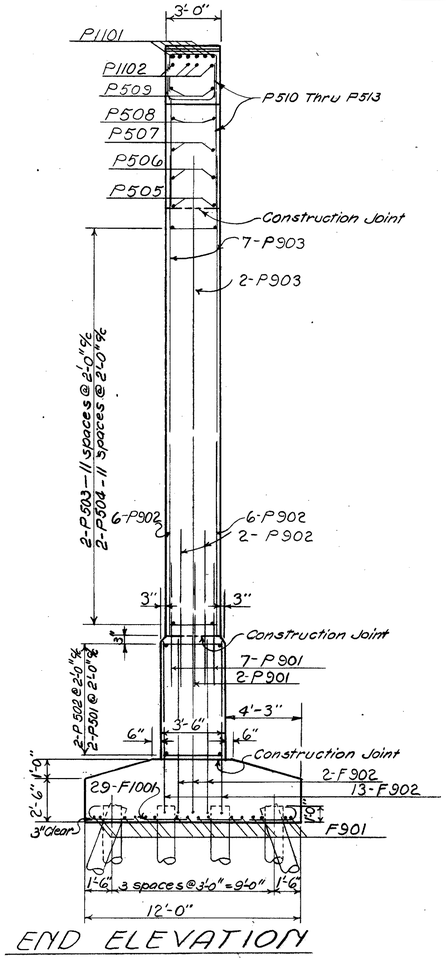
SECTION A-A



SECTION B-B



ELEVATION - PIER # 8



END ELEVATION

ELMER S. BARRETT ASSOCIATES
Consulting Engineers
245-249 S. Paint Street — Chillicothe, Ohio

PIER DETAILS

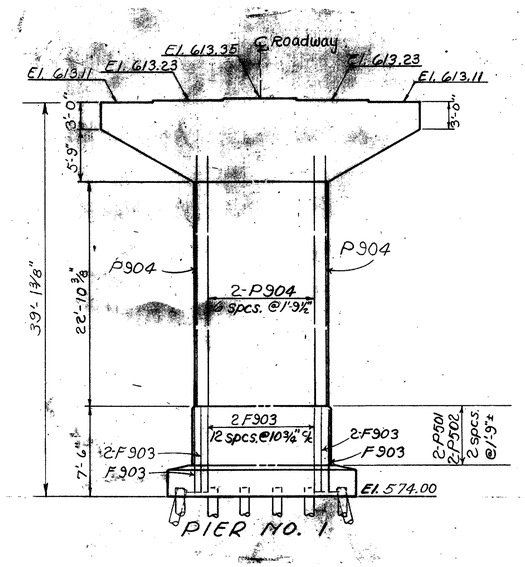
BRIDGE No. ROS-35-2532 L
U.S.R. 35 over SCIOTO RIVER
ROSS COUNTY — U.S.R. 35
STA. 1337+08.99 To STA. 1349+94.69

SCALE	DATE					
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
DJP	DER		[illegible]	[illegible]	10/24/64	

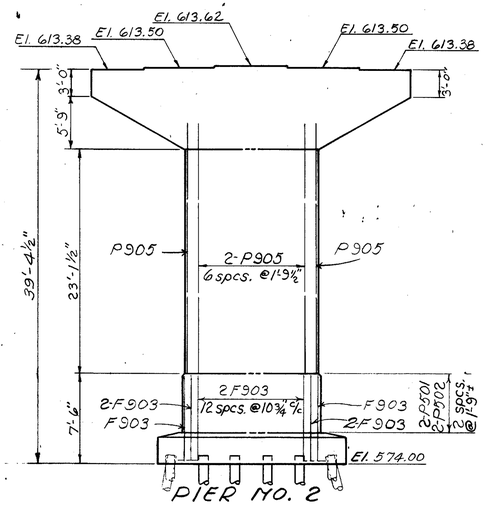
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

129/225

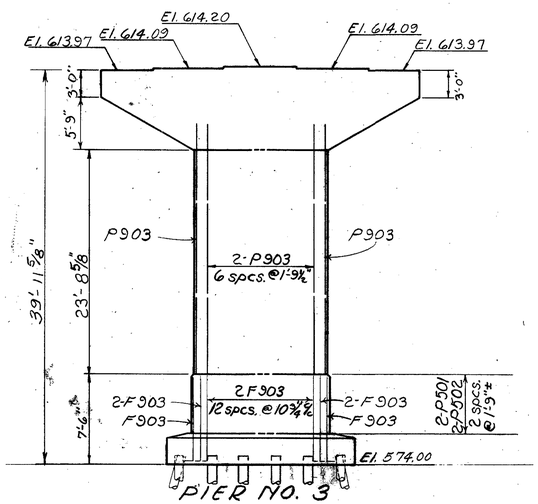
ROSS COUNTY
ROS-35-25.05



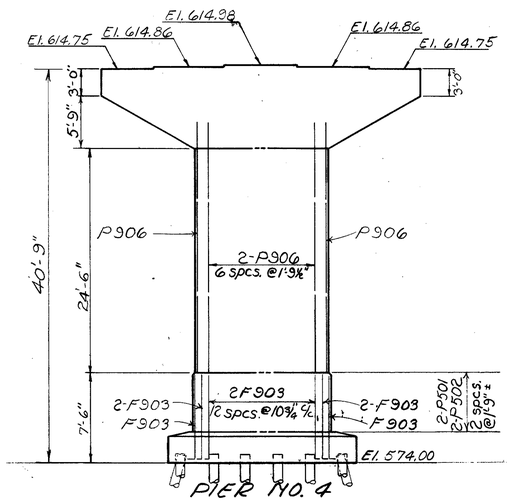
PIER NO. 1



PIER NO. 2



PIER NO. 3



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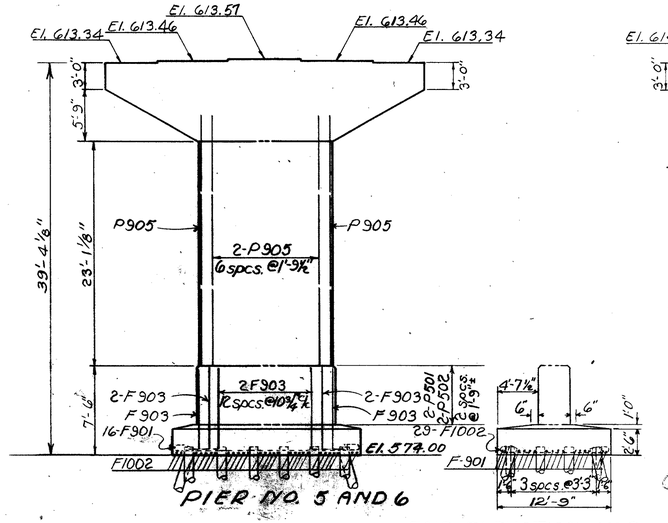
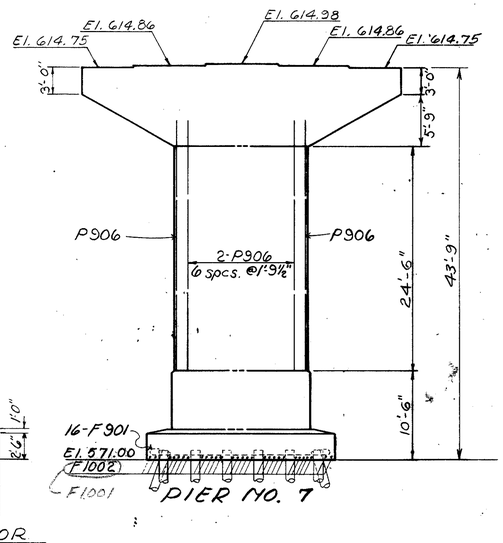


PIER NO. 5 AND 6

END ELEVATION FOR
PIER NO. 5 AND 6



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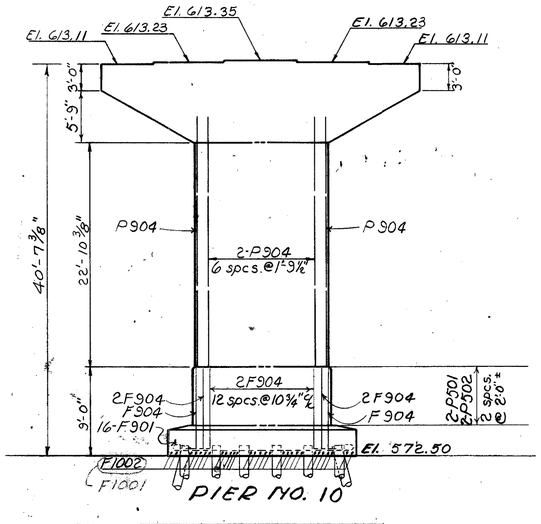

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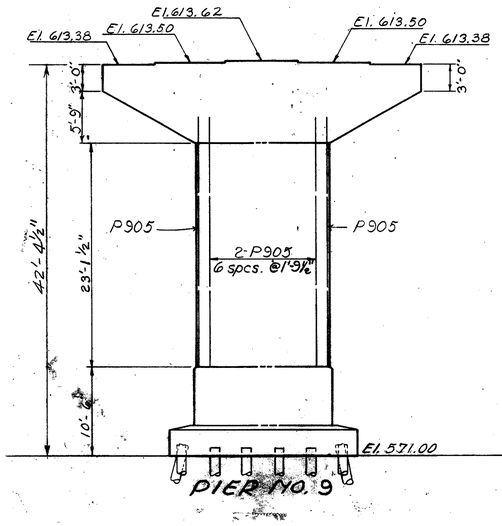

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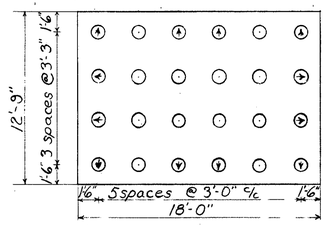


PILE PLAN FOR PIER NO. 5 AND 6

For Pile Plan of Piers 1, 2, 3, 4, 7, 9 and 10 see Pile Plan for Pier No. 8.

NOTE: For dimensions, reintorcing steel and details not shown, see Pier No. 8.

ELMER S. BARRETT ASSOCIATES
Consulting Engineers
245-249 S. Paint Street — Chillicothe, Ohio

PIER DETAILS

BRIDGE No. ROS-35-2532 L
U.S.R. 35 over SCIOTO RIVER
ROSS COUNTY — U.S.R. 35
STA. 1337+08.99 TO STA. 1349+94.69

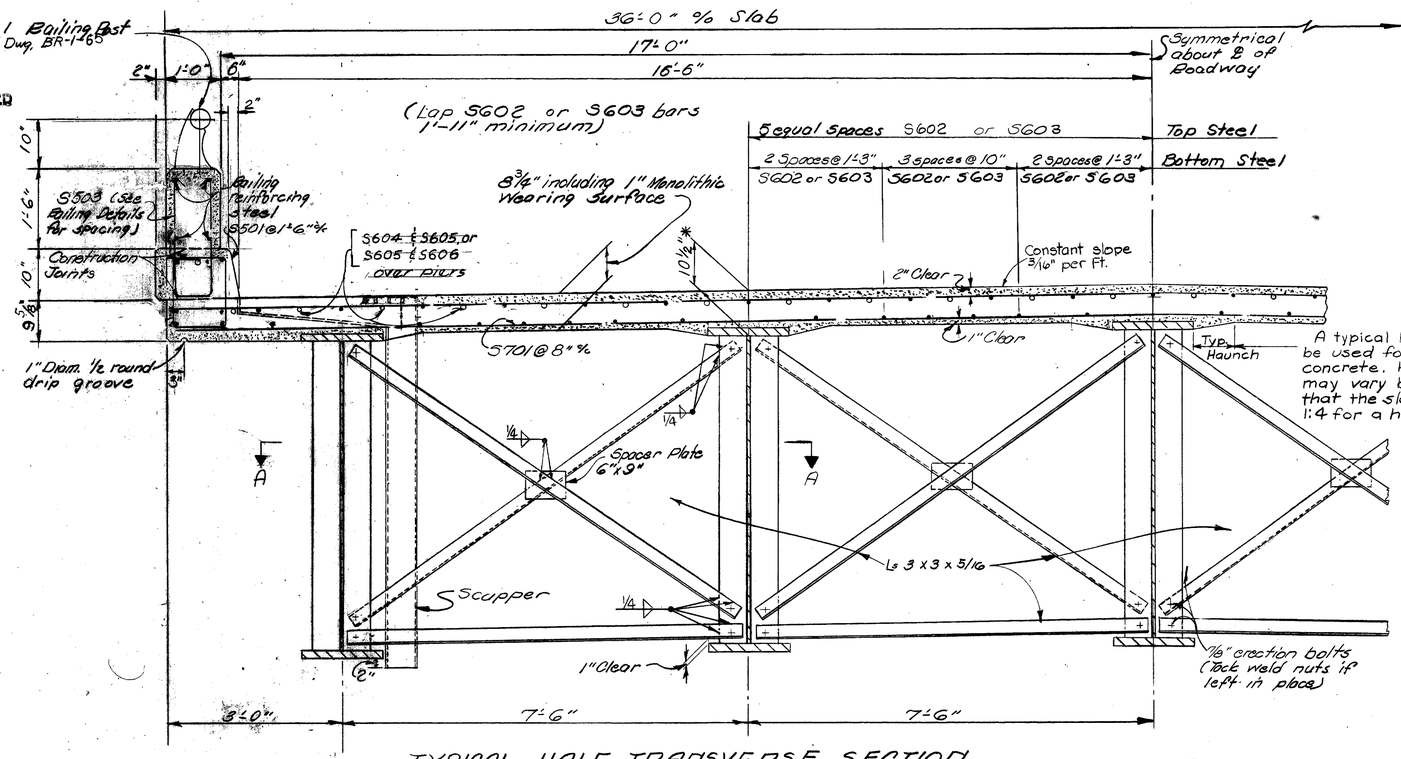
SCALE — DATE

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
DJP	DER		FHJ	MK	10/24/64	7-[illegible]

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

130
225

ROSS COUNTY
ROS-35-25.05

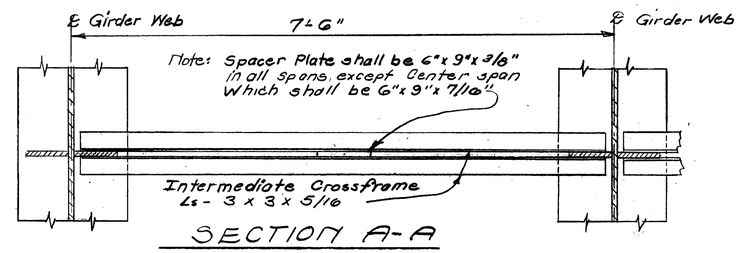


TYPICAL HALF TRANSVERSE SECTION

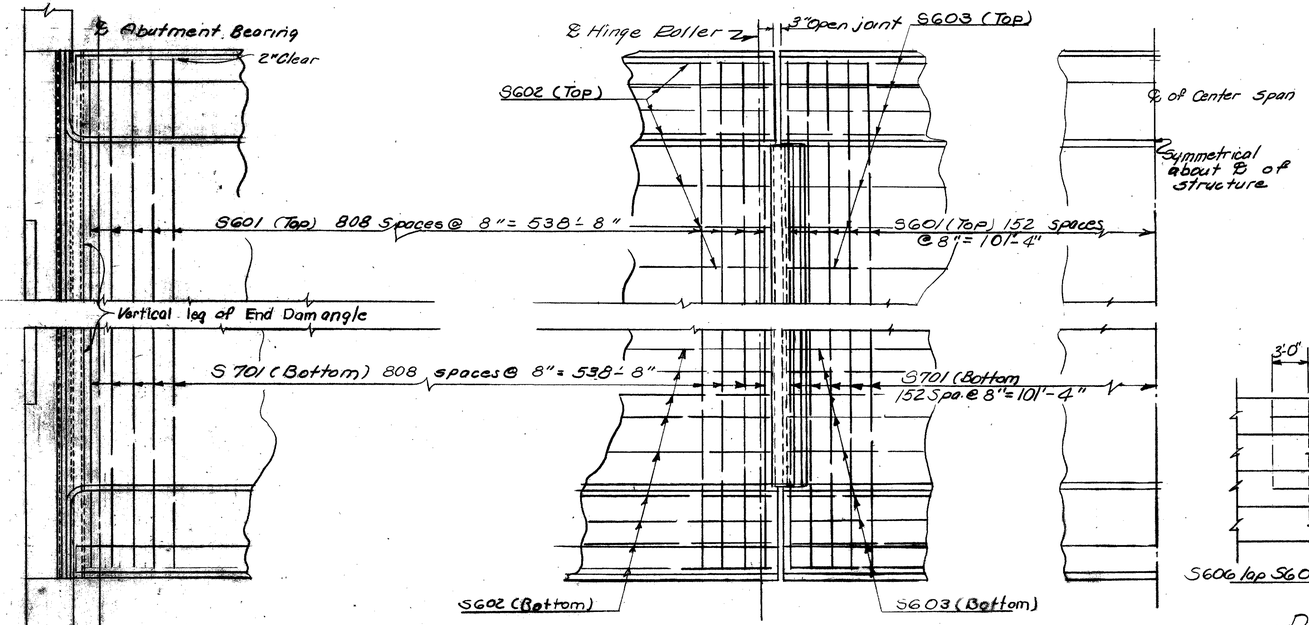
NOTES

* This is the nominal dimension. The quantity of deck concrete to be paid for shall be based upon this dimension, even though deviation from it may be necessary because the top flange of the girder may not have the exact camber or conformation required to place it parallel to the finished grade. Deduction shall be made for volume of encased steel plates as per Sec. 511.19 of the Construction and Material Specifications.

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



SECTION A-A



PART PLAN SLAB REINFORCING

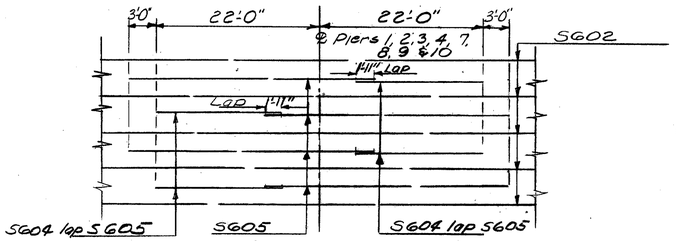


DIAGRAM SHOWING STAGGER OF S604 AND S605 OVER PIERS 1, 2, 3, 4, 7, 8, 9 & 10

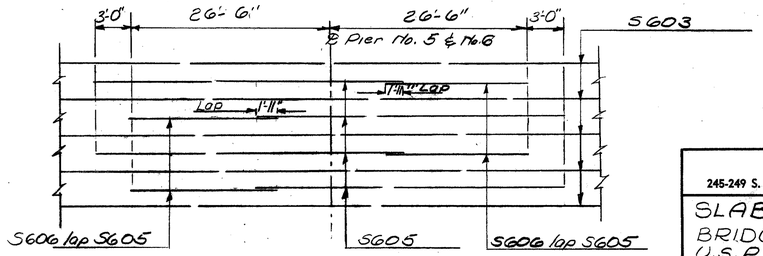


DIAGRAM SHOWING STAGGER OF S605 AND S606 OVER PIERS NO. 5 & NO. 6

ELMER S. BARRETT ASSOCIATES
Consulting Engineers
245-249 S. Paint Street — Chillicothe, Ohio

SLAB REINFORCING DETAILS
BRIDGE NO ROS-35-2532 L
U.S.R. 35 over SCIOTO RIVER

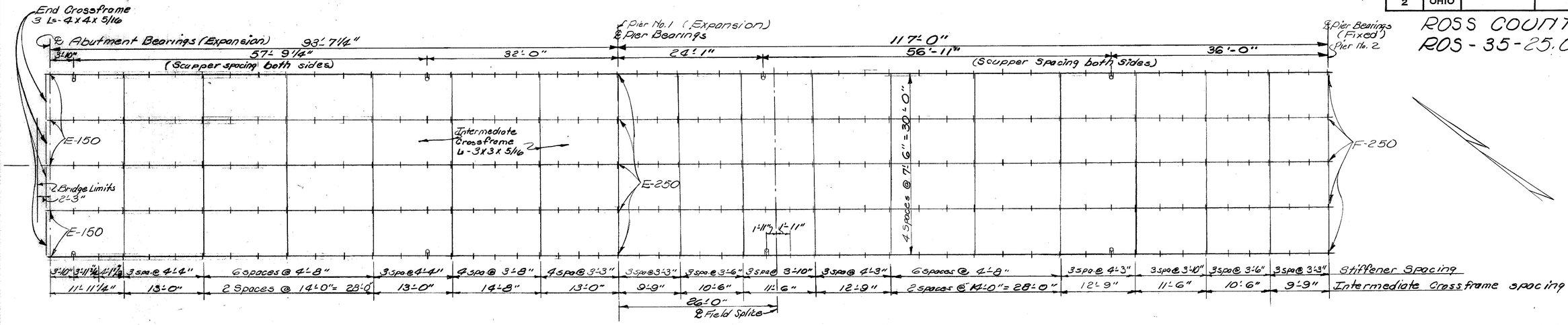
ROSS COUNTY U.S.R. 35
STA. 1337+08.99 TO STA. 1349+94.69

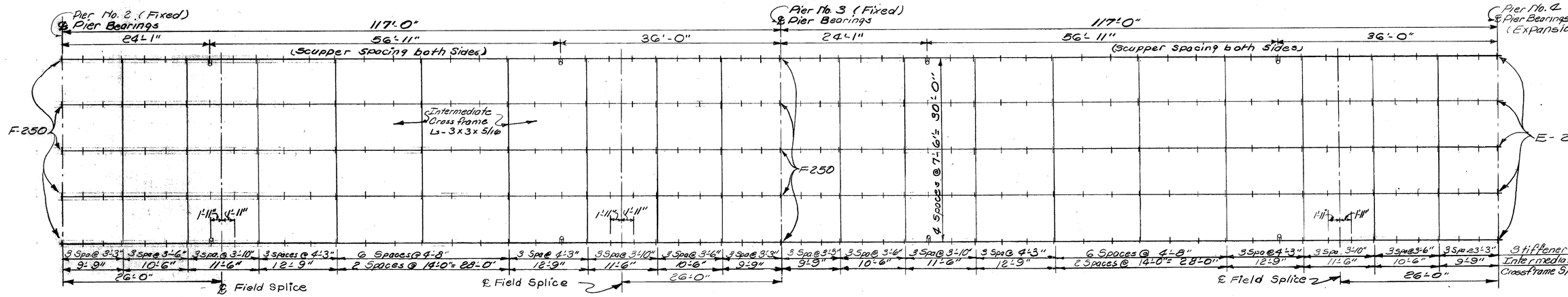
SCALE			DATE			
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
W.I.C.	R.J.M.		F.H.S.	W.L.	10/24/64	

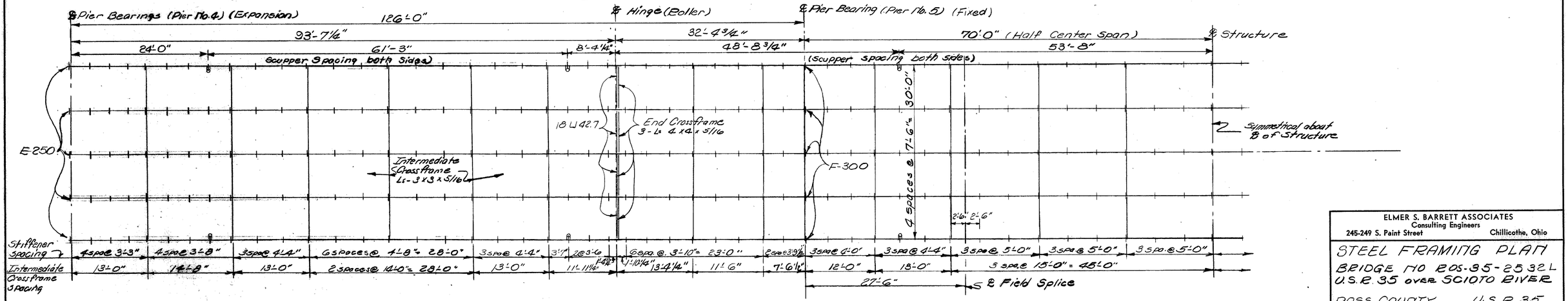
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

131
225

ROSS COUNTY
ROS-35-25.05







HALF STEEL FRAMING PLAN

ELMER S. BARRETT ASSOCIATES
Consulting Engineers
245-249 S. Paint Street — Chillicothe, Ohio

STEEL FRAMING PLAN
BRIDGE NO ROS-35-25.32 L
U.S.R. 35 over SCIOTO RIVER

ROSS COUNTY U.S.R. 35
STA. 1937+08.99 TO STA. 1349+94.69

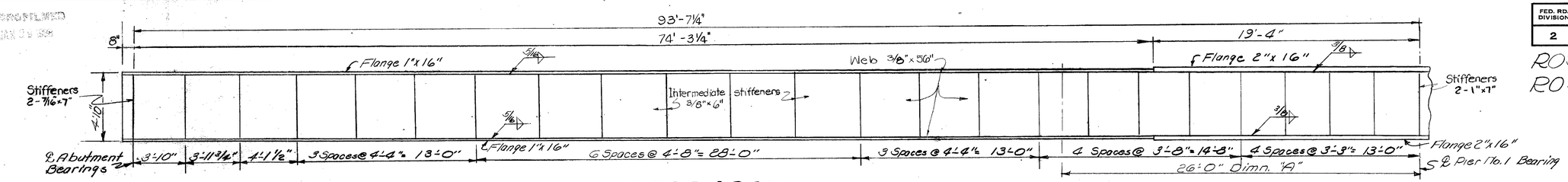
SCALE — DATE

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
W.E.C.	P.J.M.		F.H.S.	W.L.	10/24/64	

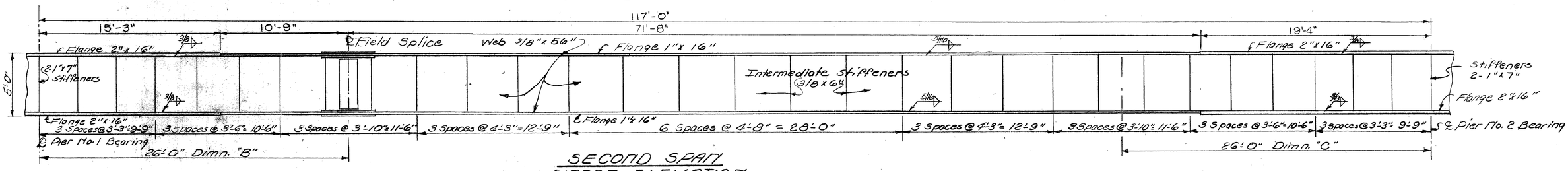
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

182
225

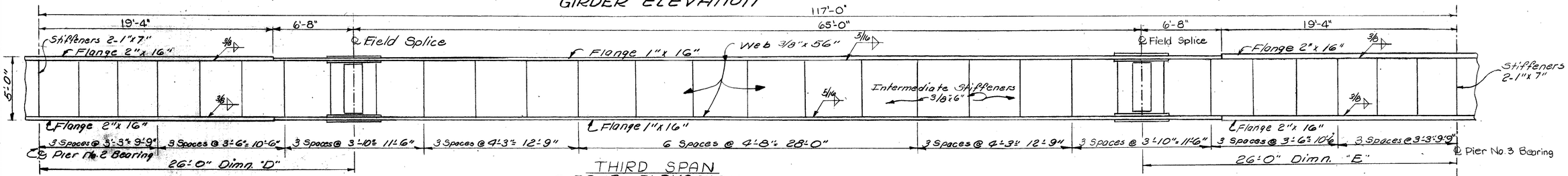
ROSS COUNTY
ROS-35-25.05



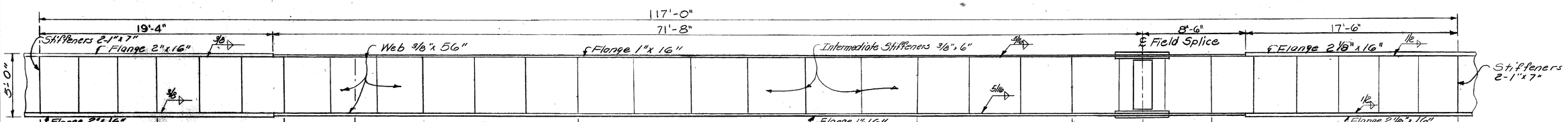
FIRST SPAN
GIRDER ELEVATION



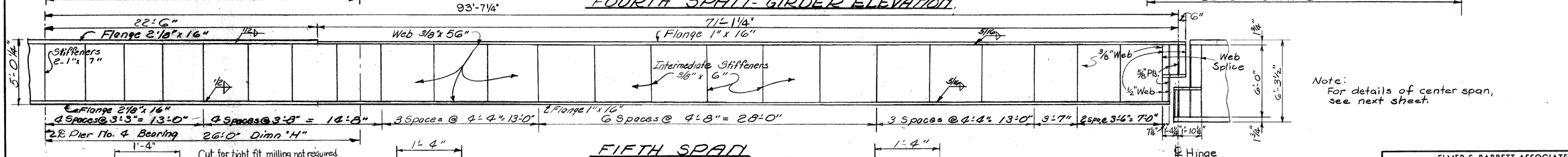
SECOND SPAN
GIRDER ELEVATION



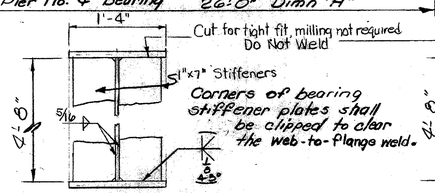
THIRD SPAN
GIRDER ELEVATION



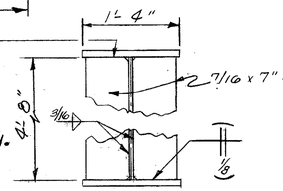
FOURTH SPAN - GIRDER ELEVATION



Note:
For details of center span, see next sheet.

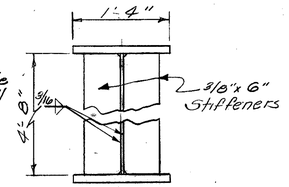


PIER BEARING



ABUTMENT BEARING

Corners of intermediate stiffener plates shall be clipped to clear the web-to-flange weld.



INTERMEDIATE

Intermediate stiffeners shall have contact bearing with the compression flange.

The top flange shall be considered the tension flange from Dimn. "A" thru Dimn. "H" as indicated on the "GIRDER ELEVATIONS". For the remaining length of the girder, the bottom flange shall be considered the tension flange.

ELMER S. BARRETT ASSOCIATES
Consulting Engineers
245-249 S. Paint Street Chillicothe, Ohio

GIRDER ELEVATIONS

BRIDGE NO. ROS-35-2552 L
U.S.R. 35 over SCIOTO RIVER
ROSS COUNTY U.S.R. 35
STA. 1337+08.99 TO STA. 1349+94.69

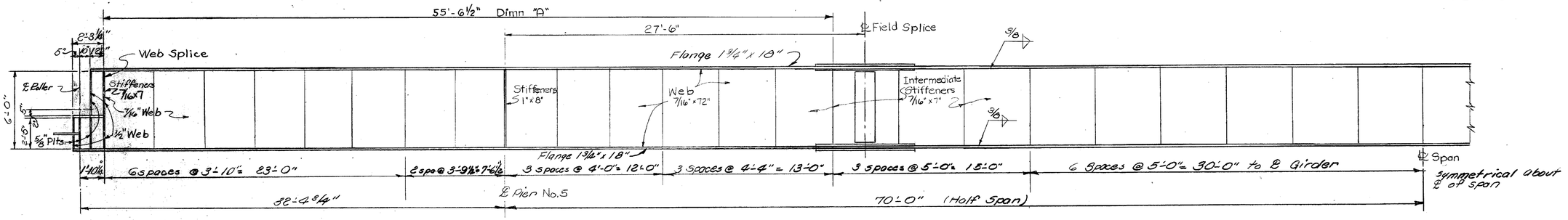
SCALE

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
W.I.C.	P.J.M.				10/29/64	

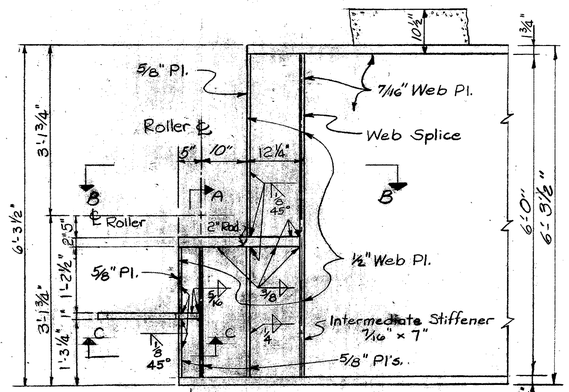
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

133
225

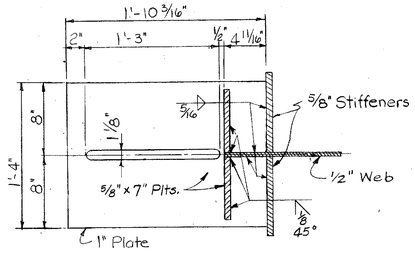
ROSS COUNTY
ROS-35-25.05



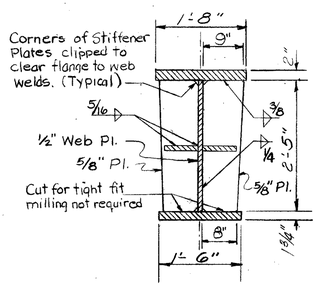
SIXTH SPAN GIRDER ELEVATION



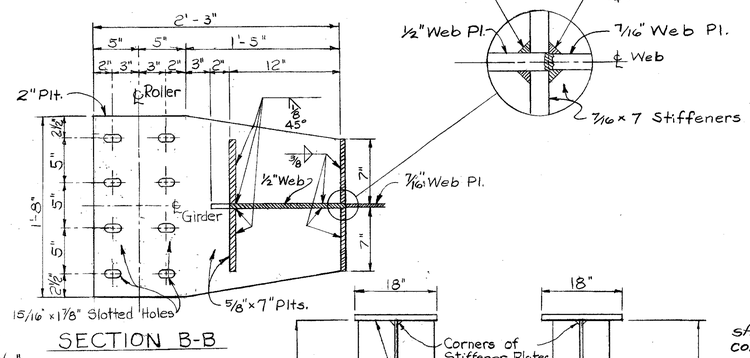
SIXTH SPAN GIRDER END



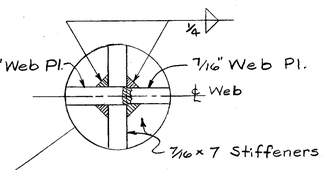
SECTION C-C

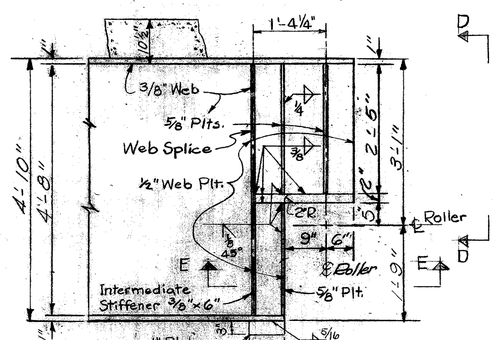


SECTION A-A

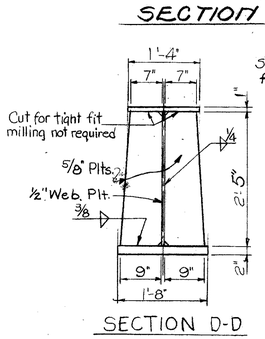


SECTION B-B

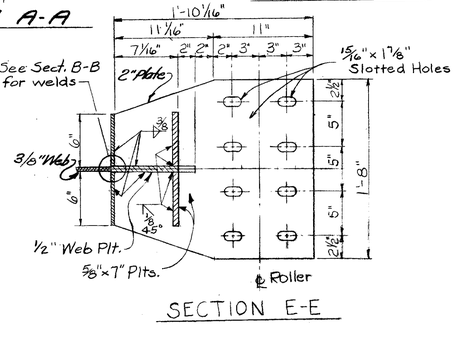




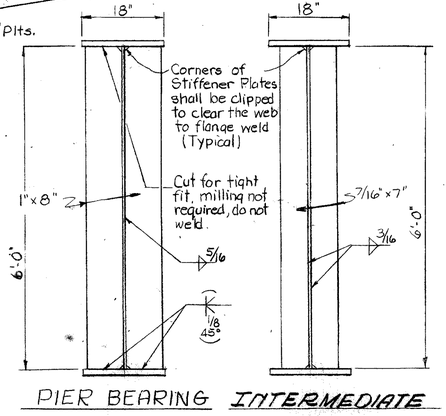
FIFTH AND SEVENTH SPAN GIRDER ENDS



SECTION D-D



SECTION E-E



PIER BEARING INTERMEDIATE STIFFENER DETAILS

Intermediate stiffeners shall have contact bearing with the compression flange.

The top flange shall be considered the tension flange thru Dimn. "A" as indicated on the "GIRDER ELEVATION". For the remaining length of the girder, the bottom flange shall be considered the tension flange.

ELMER S. BARRETT ASSOCIATES
Consulting Engineers
245-249 S. Paint Street — Chillicothe, Ohio

GIRDER DETAILS

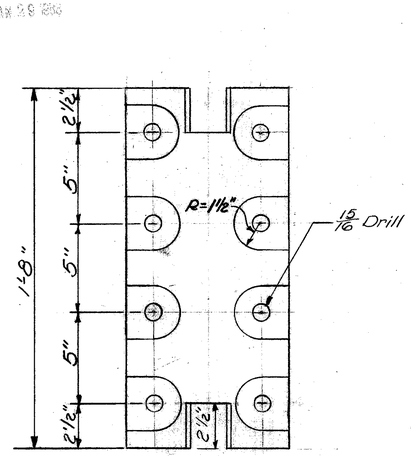
BRIDGE NO. ROS-35-2532 L
U.S.R. 35 over SCIOTO RIVER
ROSS COUNTY — U.S.R. 35
STA. 1337+08.99 TO STA. 1349+94.69

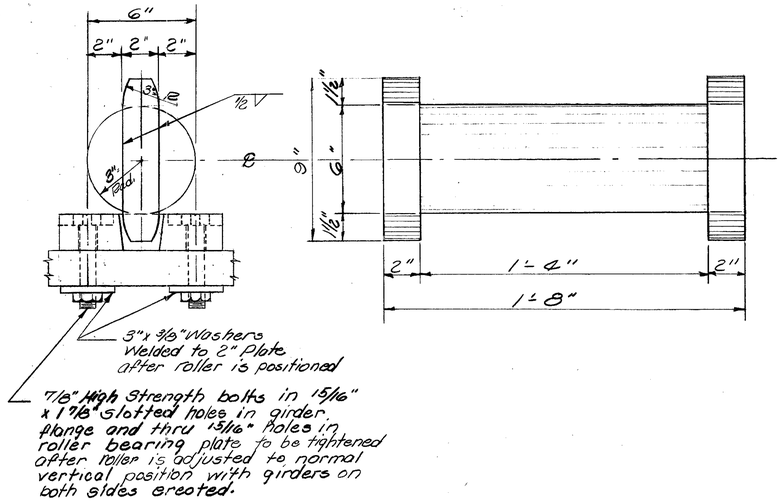
SCALE			DATE			
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
W.I.C.	R.J.M.		F.H.S.	D.W.K.	10/29/69	

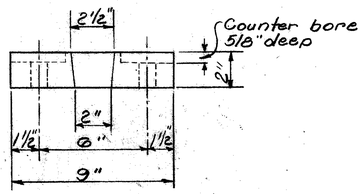
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

134
225

ROSS COUNTY
ROS-35-25.05

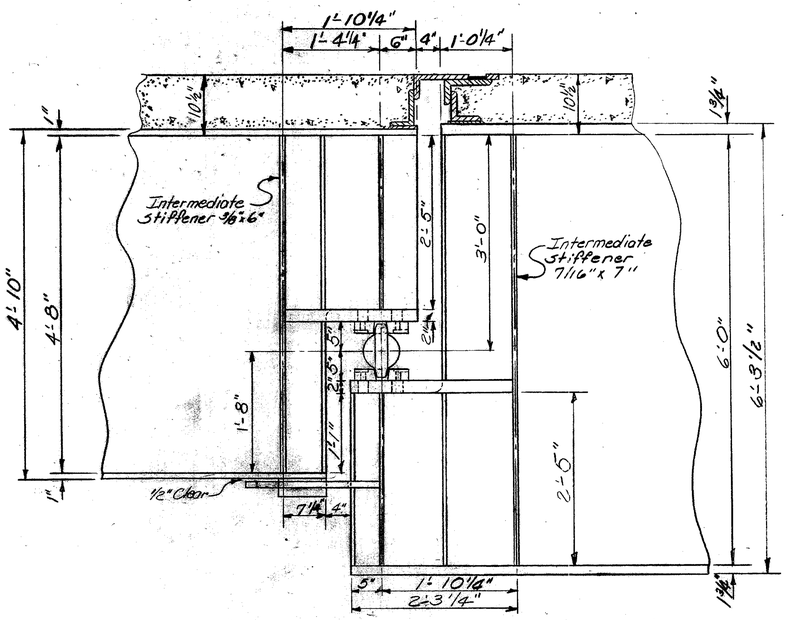






ROLLER BEARING PLATE

ROLLER DETAILS



HINGE ASSEMBLY

DEFLECTION AND CAMBER

SPAN	DISTANCE FROM ℄ BEARING	INTERIOR GIRDERS: DEFLECTION DUE TO WEIGHT OF STEEL	INTERIOR GIRDERS: DEFLECTION DUE TO REMAINING DEAD LOAD	INTERIOR GIRDERS: CONVEXITY REQUIRED FOR VERTICAL CURVE	INTERIOR GIRDERS: SUM OF DEFLECTION AND CONVEXITY	INTERIOR GIRDERS: REQUIRED CAMBER	EXTERIOR GIRDERS: DEFLECTION DUE TO WEIGHT OF STEEL	EXTERIOR GIRDERS: DEFLECTION DUE TO REMAINING DEAD LOAD	EXTERIOR GIRDERS: CONVEXITY REQUIRED FOR VERTICAL CURVE	EXTERIOR GIRDERS: SUM OF DEFLECTION AND CONVEXITY	EXTERIOR GIRDERS: REQUIRED CAMBER
1ST SPAN	23.40'	.15"	.44"	—	.59"	5/8"	.15"	.53"	—	.68"	5/8"
	46.80'	.17"	.50"	—	.67"	5/8"	.17"	.61"	—	.78"	3/4"
	70.20'	.07"	.22"	—	.29"	1/4"	.07"	.26"	—	.33"	3/8"
2ND SPAN	29.25'	.05"	.14"	—	.19"	1/4"	.05"	.16"	—	.21"	1/4"
	58.50'	.22"	.65"	—	.87"	7/8"	.22"	.78"	—	1.00"	1"
	87.75'	.02"	.07"	—	.09"	1/8"	.02"	.08"	—	0.10"	1/8"
3RD SPAN	29.25'	.05"	.16"	—	.21"	1/4"	.05"	.19"	—	0.24"	1/4"
	58.50'	.18"	.53"	—	.71"	3/4"	.18"	.64"	—	0.82"	7/8"
	87.75	.06"	.17"	—	.23"	1/4"	.06"	.20"	—	0.26"	1/4"
4TH SPAN	29.25	.04"	.13"	.24"	.41"	3/8"	.04"	.16"	.24"	0.44"	1/2"
	58.50	.16"	.47"	.33"	.96"	1"	.16"	.57"	.33"	1.06	1"
	87.75	.04"	.12"	.24"	.40"	3/8"	.04"	.14"	.24"	0.42"	3/8"
5TH SPAN	23.40	.01"	.11"	.23"	.35"	3/8"	.01"	.13"	.23"	0.37"	3/8"
	46.80	.10"	.48"	.35"	.93"	7/8"	.10"	.57"	.35"	1.02"	1"
	70.20	.10"	.54"	.37"	1.01	1"	.10"	.67"	.37"	1.14"	1 1/8"
	93.60	-.06"	.19"	.29"	.42"	3/8"	-.06"	.23"	.29	0.46"	1/2"
6TH SPAN	35.00	.19"	.32"	.35"	.86"	7/8"	.19"	.38"	.35	0.92"	7/8"
	70.00	.30"	.54"	.47"	1.31"	1 1/4"	.30"	.65"	.47"	1.42	1 3/8"
	105.00	.19"	.32"	.35"	.86"	7/8"	.19"	.38"	.35"	0.92	7/8"

ELMER S. BARRETT ASSOCIATES
Consulting Engineers
245-249 S. Paint Street — Chillicothe, Ohio

ROLLER DETAILS AND DEFLECTION AND CAMBER
BRIDGE NO ROS-35-2532 L
U.S.R. 35 OVER SCIOTO RIVER
ROSS COUNTY — U.S.R. 35
STA. 1337+08.99 TO STA. 1349+94.69

SCALE

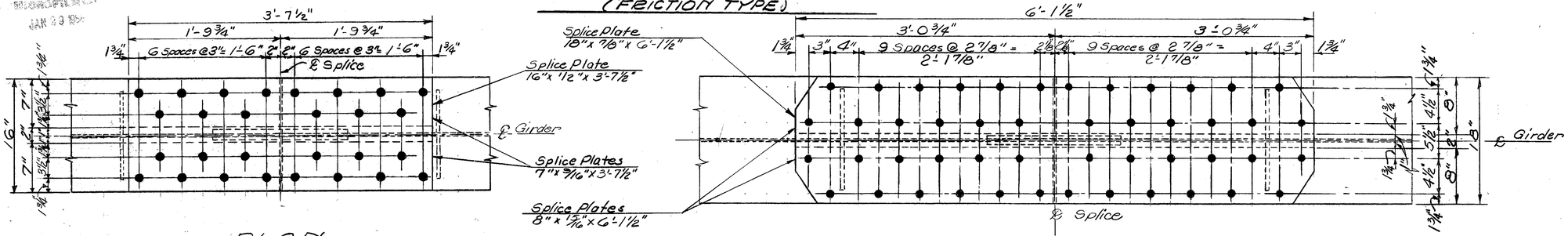
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
W.I.C.	R.J.M.		J.H.S.	W.I.C.	10/21/14	

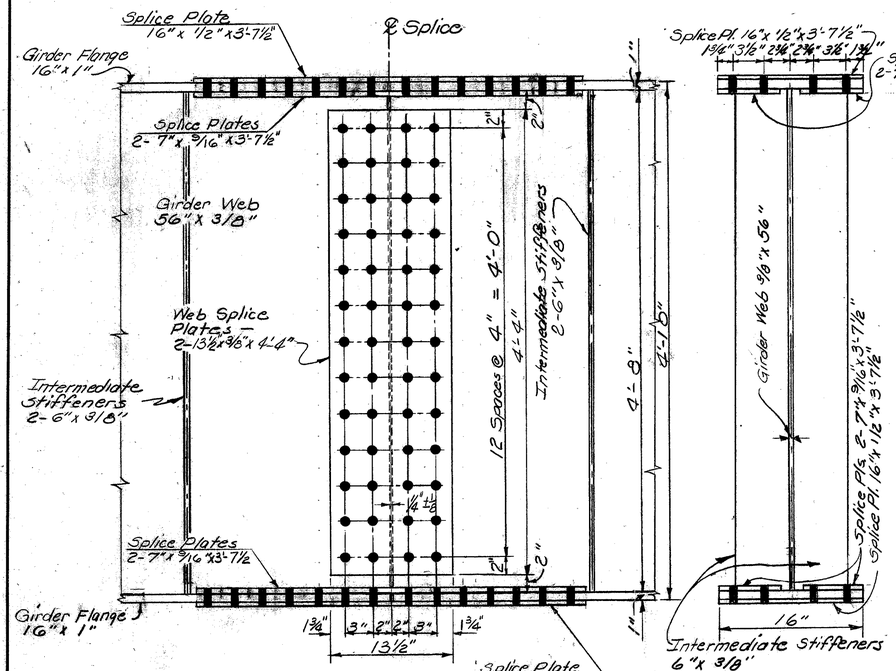
FIELD SPLICE DETAILS
(FRICTION TYPE)

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

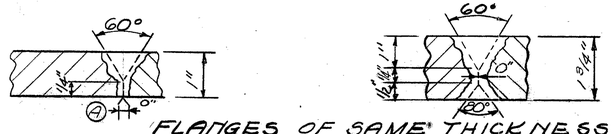
135
225

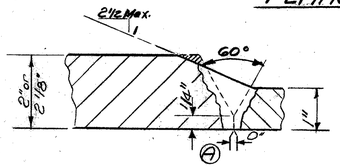
ROSS COUNTY
ROS-35-25.05



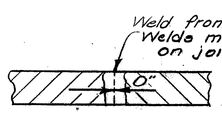


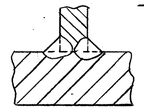
END UNITS



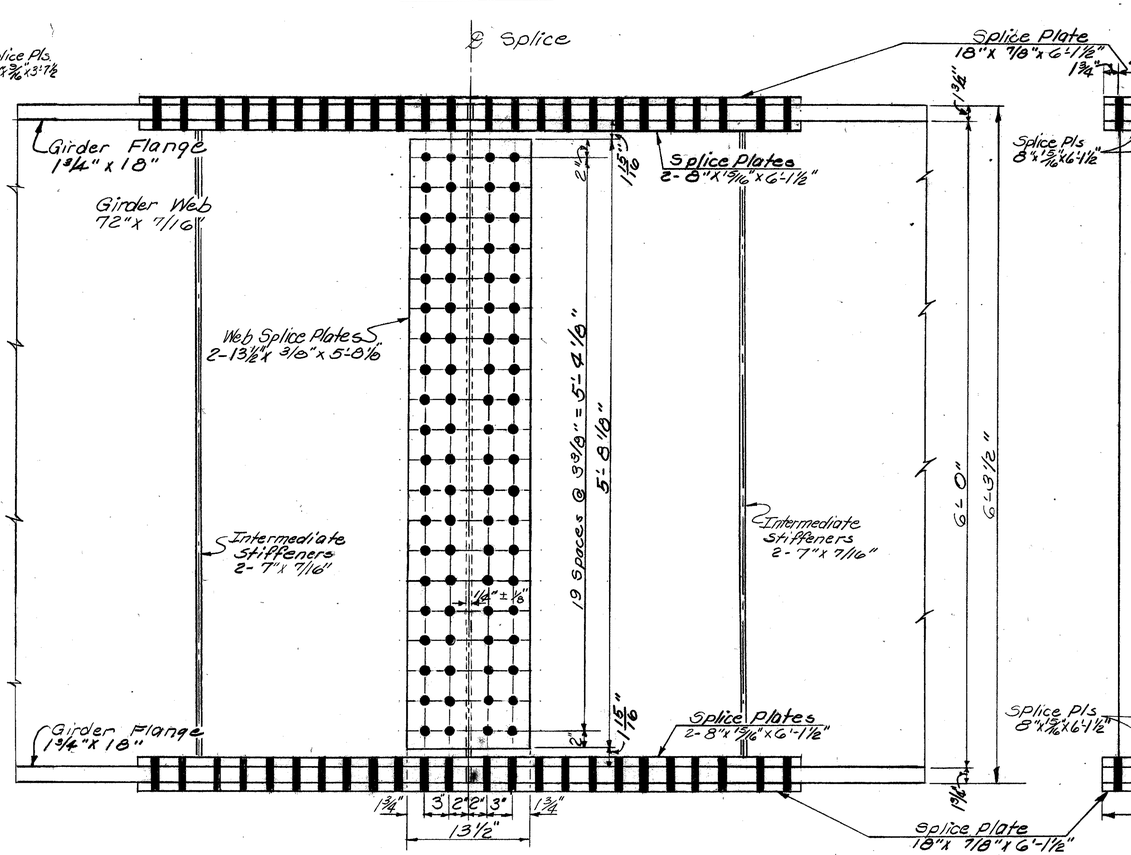


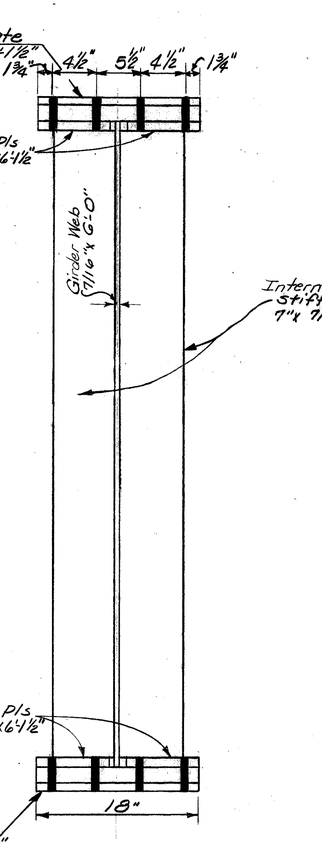
WELDED JOINTS
Automatic Submerged Arc Process
(G) All flange butt-welds shall be ground flush.
Note (A) Weld after placing at least one pass on other side.
Optional shop splices will be permitted in the webs and flanges of girders but their location shall be submitted to the Director for approval.





SHOP SPLICE WELDS





Note: See Sheet No. 126 for Field Splice Notes

ELMER S. BARRETT ASSOCIATES
Consulting Engineers
245-249 S. Paint Street Chillicothe, Ohio

GIRDER SPLICE DETAILS

BRIDGE NO. ROS-35-2532 L
U.S.R. 35 OVER SCIOTO RIVER
ROSS COUNTY U.S.R. 35
STA. 1337+08.99 TO STA. 1349+94.69

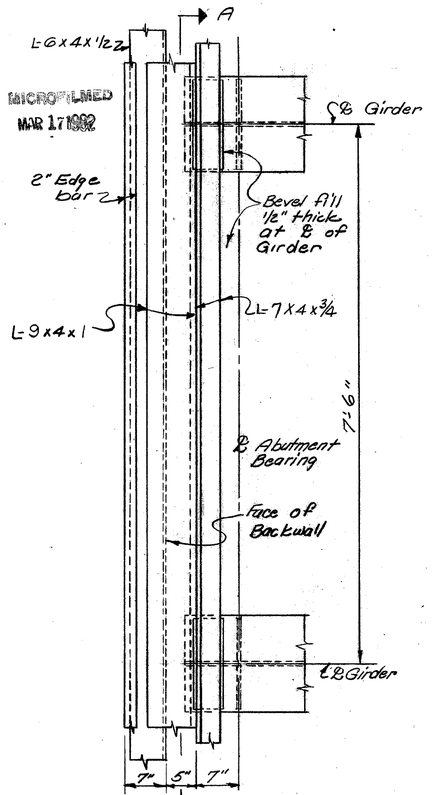
SCALE DATE

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
W.I.C.	P.J.M.		FHS			

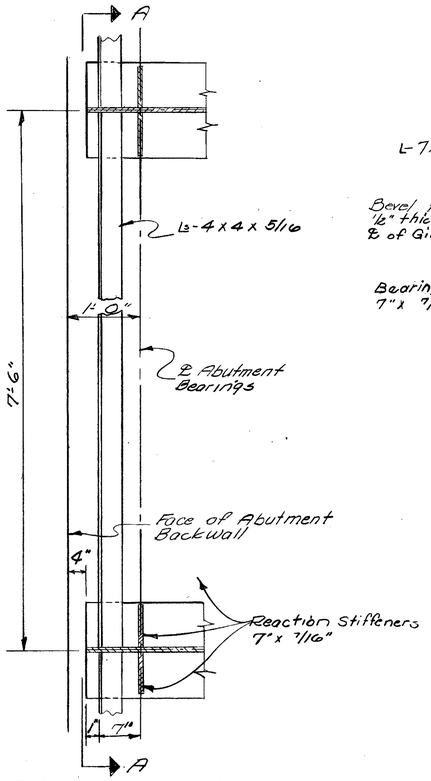
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

136
225

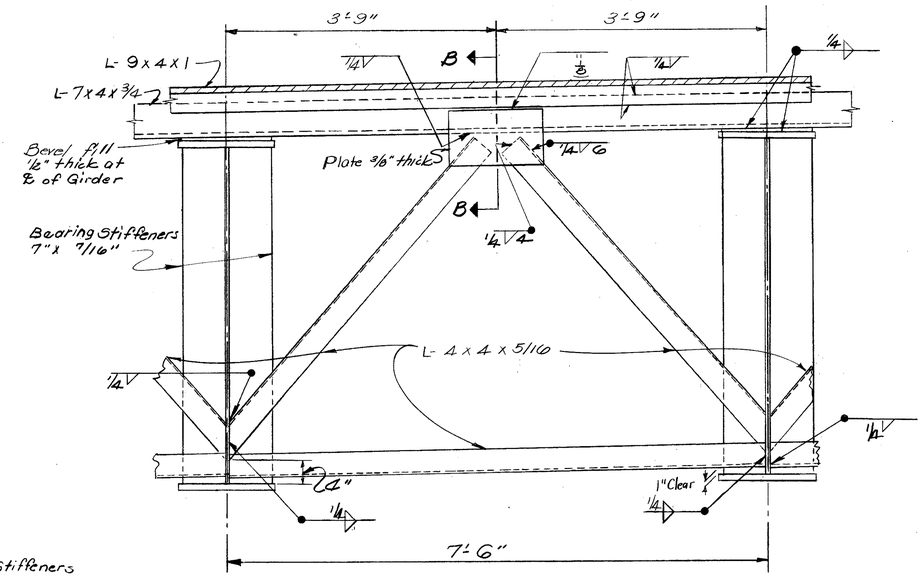
ROSS COUNTY
ROS-35-25.05



PART PLAN
END DAM

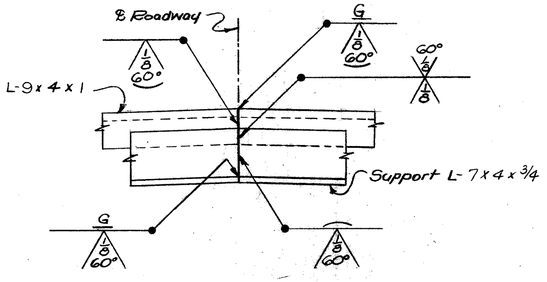


PART PLAN
END CROSSFRAMES

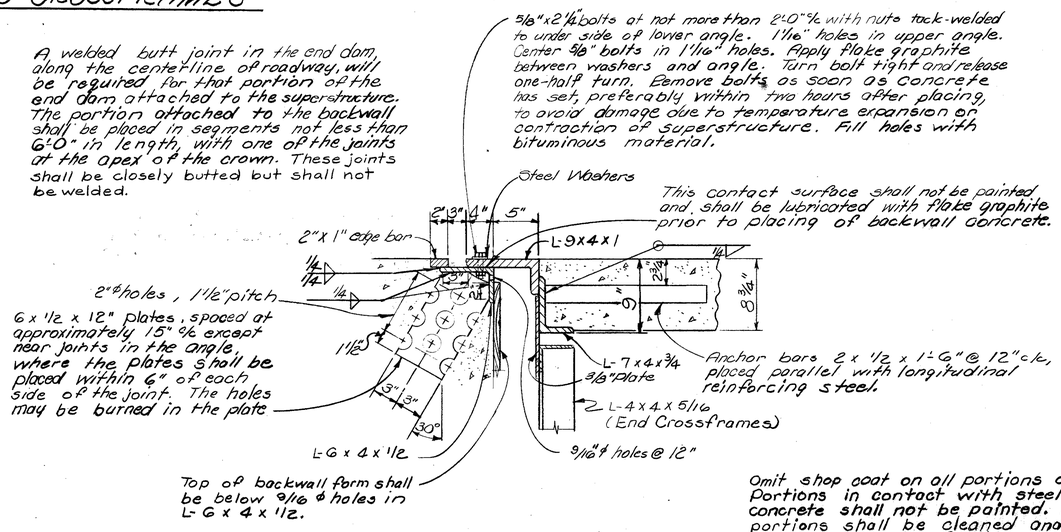


SECTION A-A

A welded butt joint in the end dam along the centerline of roadway, will be required for that portion of the end dam attached to the superstructure. The portion attached to the backwall shall be placed in segments not less than 6'-0" in length, with one of the joints at the apex of the crown. These joints shall be closely butted but shall not be welded.



WELDED BUTT JOINT IN SUPERSTRUCTURE
END DAM ANGLES AT ℄ OF ROADWAY



SECTION B-B

Omit shop coat on all portions of end dam. Portions in contact with steel or with concrete shall not be painted. All other portions shall be cleaned and given the shop coat in the field as well as the two field coats.

ELMER S. BARRETT ASSOCIATES
Consulting Engineers
245-249 S. Paint Street Chillicothe, Ohio

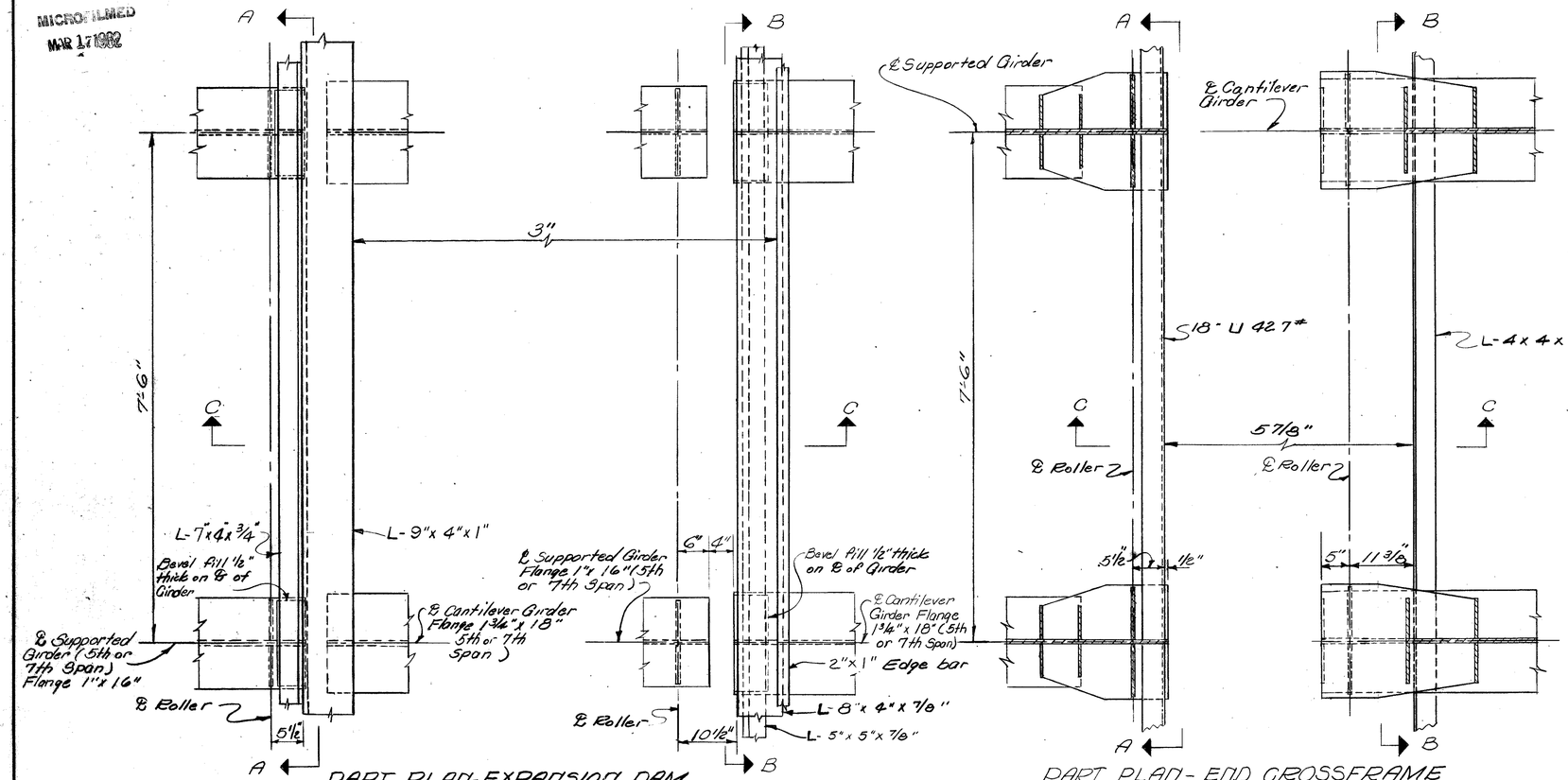
END DAM DETAILS
AT ABUTMENT
BRIDGE NO ROS-35-2532 L
U.S.R.35 over SCIOTO RIVER
ROSS COUNTY U.S.R.35
STA. 1337+08.99 TO STA. 1349+94.69

SCALE				DATE	
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
W.I.C.	R.J.M.		F.H.L.	W.K.	10/29/64	

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

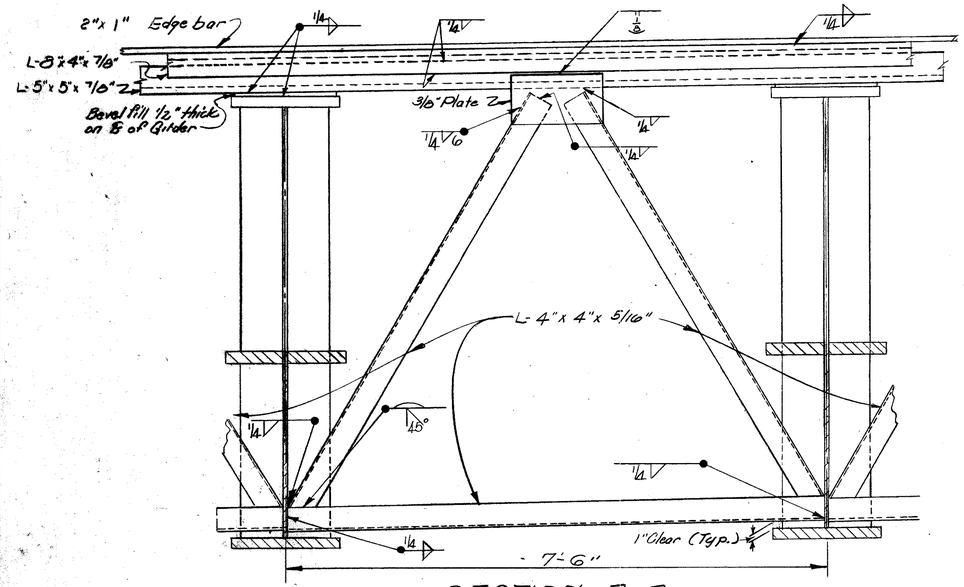
187
225

ROSS COUNTY
ROS-35-25.05

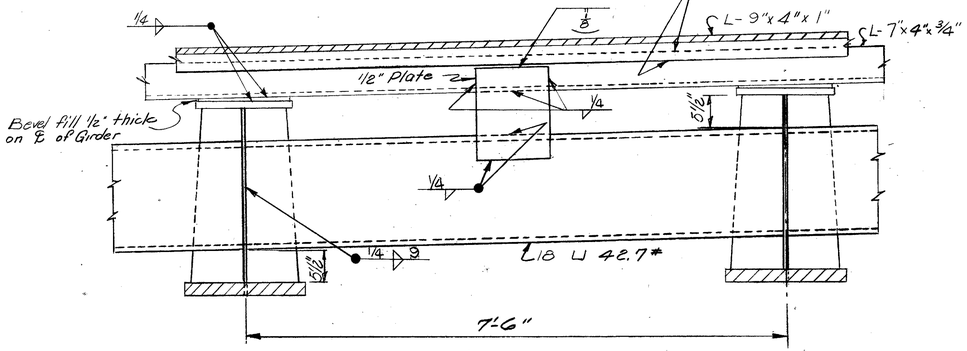


PART PLAN-EXPANSION DAM

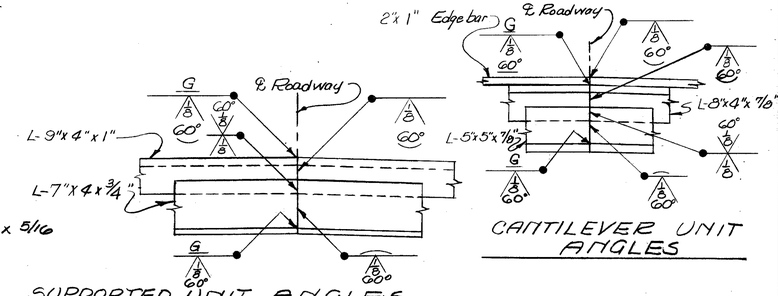
PART PLAN-END CROSSFRAME



SECTION B-B



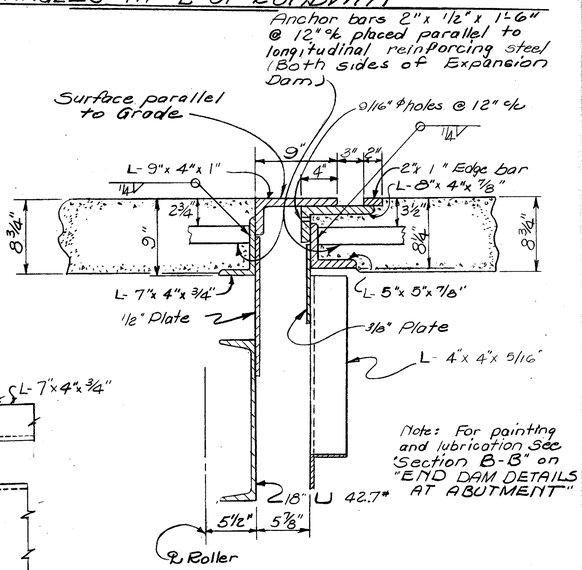
SECTION A-A



SUPPORTED UNIT ANGLES

CANTILEVER UNIT ANGLES

WELDED BUTT-JOINT IN SUPERSTRUCTURE END DAM ANGLES AT ℄ OF ROADWAY



Note: For painting and lubrication see "Section B-B" on "END DAM DETAILS AT ABUTMENT"

SECTION C-C

ELMER S. BARRETT ASSOCIATES
Consulting Engineers
245-249 S. Paint Street Chillicothe, Ohio

END DAM DETAILS AT HINGE

BRIDGE NO. ROS-35-2532L
U.S.R. 35 over SCIOTO RIVER
ROSS COUNTY U.S.R. 35
STA. 1337+08.99 TO STA. 1349+94.69

SCALE

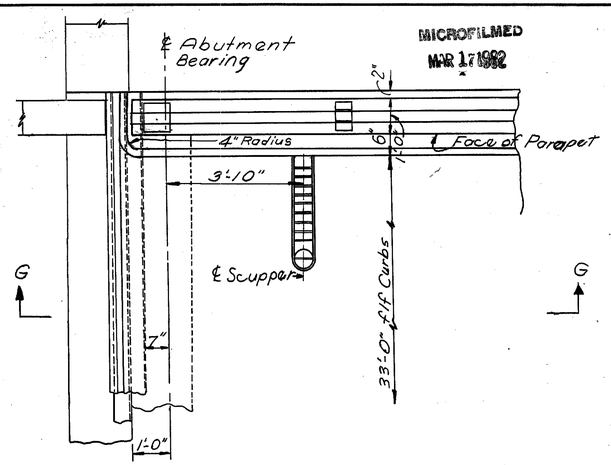
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
W.I.C.	R.J.M.		F.A.S.	W.K.	10/29/04	

DATE

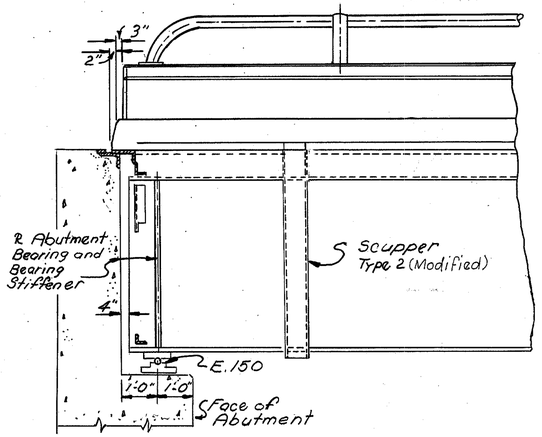
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

138/225

ROSS COUNTY
ROS-35-25.05



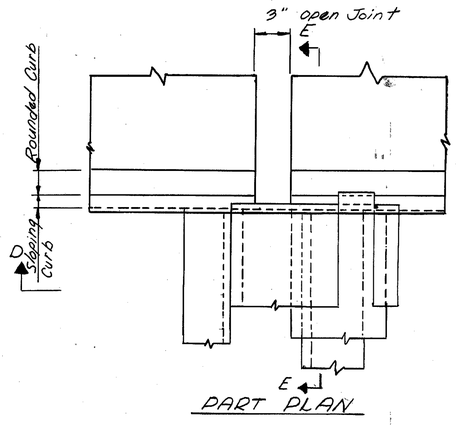
PART PLAN AT ABUTMENT



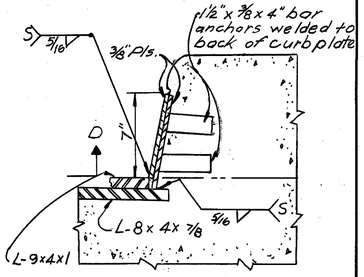
SECTION G-G

NOTES

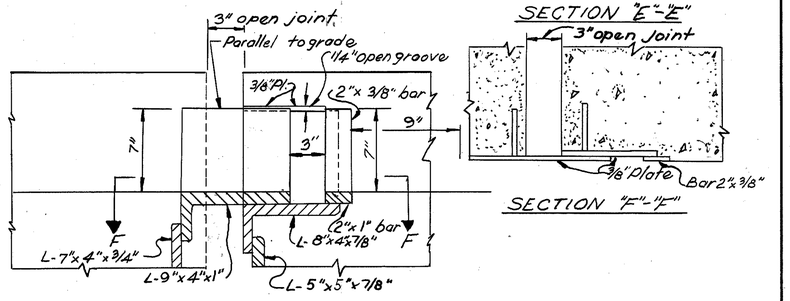
See Std. Dwg. SD-1-65 for Scupper details - modify dimensions to suit installation.



PART PLAN



SECTION "E"-"E"



SECTION D-D

EXPANSION DAM AT HINGE BEARING
CURB PLATE DETAILS

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
DIVISION OF DESIGN AND CONSTRUCTION
BUREAU OF BRIDGES

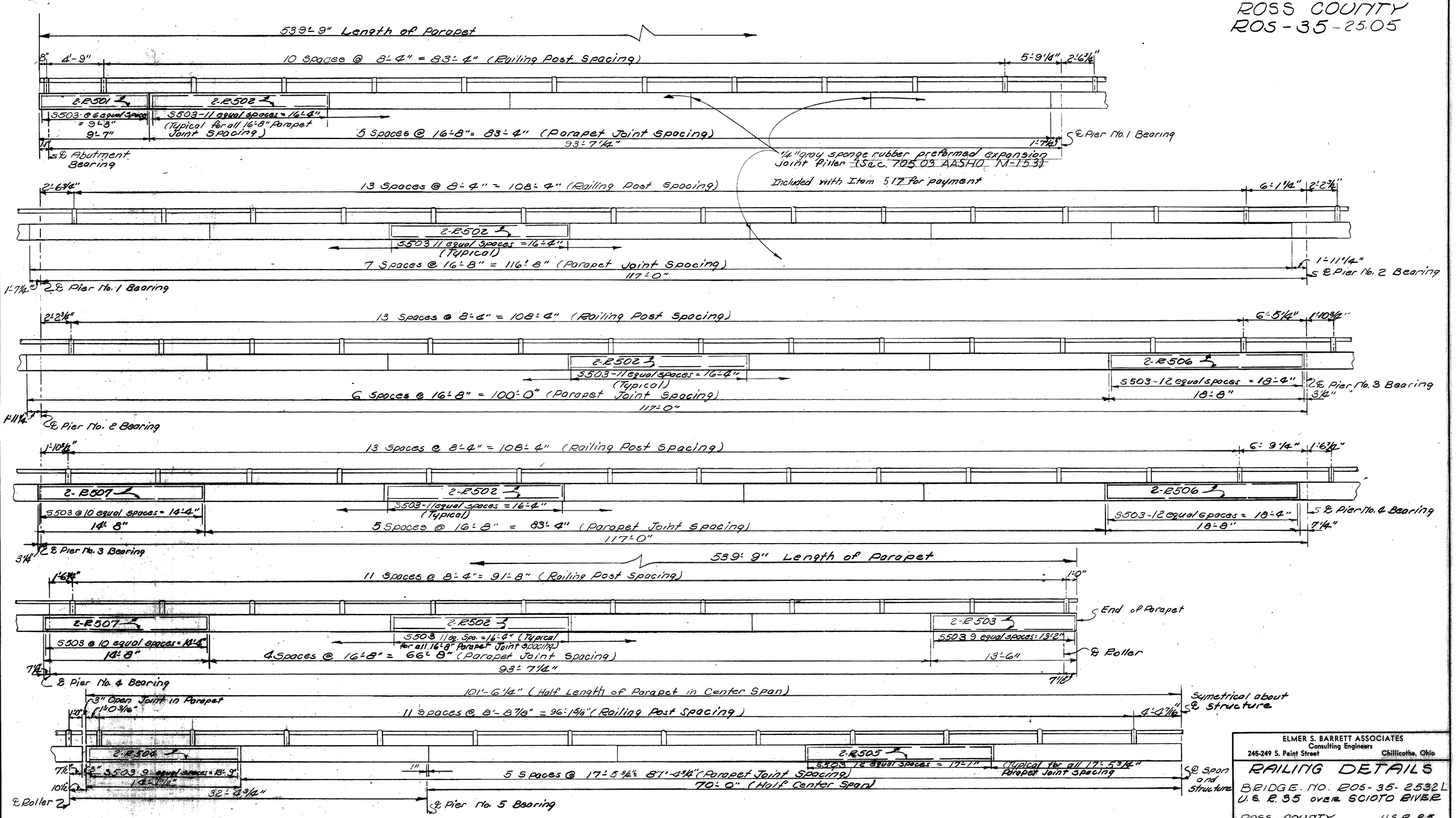
GUTTER and SCUPPER DETAILS
EXPANSION DAM DETAILS
BRIDGE NO. ROS-35-2532 L
U.S.R. 35 OVER SCIOTO RIVER
ROSS COUNTY U.S.R. 35
STA 1337+08.99 TO STA 1349+94.69

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
		G.F.J.				

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

139
225

ROSS COUNTY
ROS-35-25.05



ELMER S. BARRETT ASSOCIATES
Consulting Engineers
245-249 S. Paint Street — Chillicothe, Ohio

RAILING DETAILS

BRIDGE NO. ROS-35-2532L
U.S.R. 35 over SCIOTO RIVER

ROSS COUNTY — U.S.R. 35
STA. 1337+08.99 TO STA. 1349+94.69

SCALE

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
W.I.C.	P.J.M.		F.H.J.	W.L.	10/29/64	

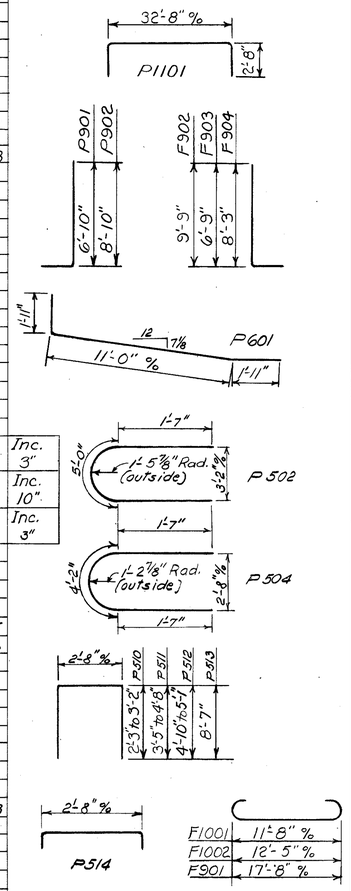
DATE

REINFORCING STEEL LIST

TEN PIERS

Bar Number	Number Required	Length	Shape	Weight
P1101	60	37'-4"		11,901
P1102	40	32'-5"		6,889
P901	160	7'-10"		4,261
P902	160	9'-10"		5,349
P903	32	26'-7"		2,892
P904	32	25'-9"		2,802
P905	64	26'-0"		5,658
P906	32	27'-5"		2,983
P601	40	14'-8"		881
P501	66	10'-8"		734
P502	66	8'-2"		562
P503	240	10'-8"		2,670
P504	240	7'-4"		1,836
P505	20	13'-8"		285
P506	20	18'-9"		391
P507	20	24'-3"		506
P508	20	29'-10"		622
P509	20	32'-6"		678
P510	40 Series of 8 Bars	6'-11" to 8'-9"		2,614 Inc. 3"
P511	40 Series of 4 Bars	9'-3" to 11'-9"		1,752 Inc. 10"
P512	40 Series of 3 Bars	12'-1" to 12'-7"		1,544 Inc. 3"
P513	90	19'-7"		1,838
P514	60	3'-8"		229
F1001	232	14'-6"		14,475
F1002	58	15'-3"		3,806
F901	160	20'-2"		10,971
F902	96	10'-9"	L	3,509
F903	192	7'-9"	L	5,059
F904	32	9'-3"	L	1,006
TOTAL TEN PIERS				98,703

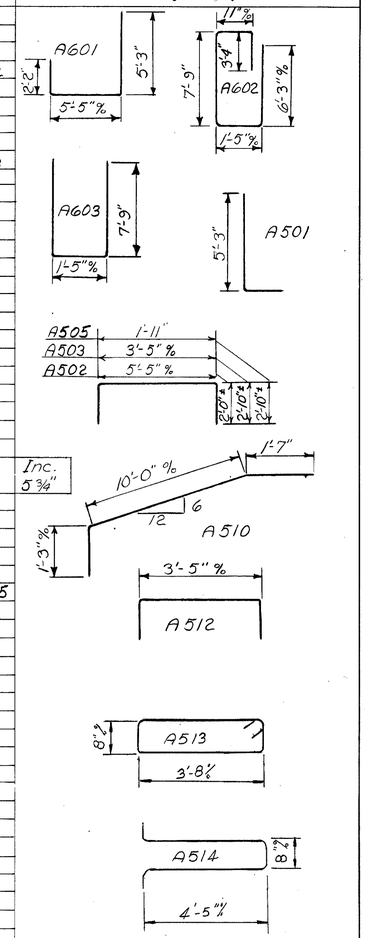
Bending Diagrams



ONE ABUTMENT

Bar Number	Number Required	Length	Shape	Weight
A801	8	22'-1"		472
A802	3	25'-2"		202
A803	3	19'-0"		152
A601	34	12'-6"		638
A602	25	19'-1"		717
A603	8	16'-8"		200
A604	12	9'-5"		170
A605	44	9'-2"		606
A501	34	5'-9"		204
A502	34	9'-2"		325
A503	26	8'-10"		240
A504	16	32'-8"		545
A505	28	7'-4"		214
A506	4	5'-0"		21
A507	4	8'-3"		34
A508	4	12'-0		50
A509	16	14'-0"		234
A510	4	12'-9"		53
A511	4 Series of 9 bars	5'-0" to 8'-10"		260 Inc. 5¾"
A512	25	4'-5"		115
A513	16	9'-2"		153
A514	28	10'-3"		299
TOTAL TWO ABUTMENTS				10,805

Bending Diagrams



SUPERSTRUCTURE

Bar Number	Number Required	Length	Shape	Weight
S701	1923	35'-8"		140,192
S601	1923	35'-8"		103,018
S602	2394	30'-3"		108,773
S603	441	30'-8"		20,313
S604	208	18'-11"		5,910
S605	260	30'-0"		11,716
S606	52	27'-11"		2,180
S501	1712	4'-6"		8035
S503	1856	5'-7"		10,808
TOTAL SUPERSTRUCTURE				410,945

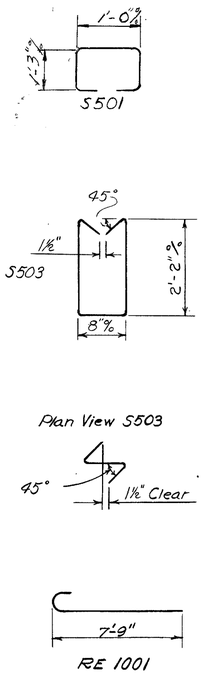
RAILING STEEL

R501	16	9'-3"		
R502	432	16'-4"		
R503	16	13'-2"		
R504	16	13'-9"		
R505	80	17'-1"		
R506	32	18'-4"		
R507	32	14'-4"		

REPLACEMENT STEEL

RE1101	1	8'-6"	
RE1001	1	8'-2"	
RE901	3	7'-10"	
RE801	1	7'-6"	
RE701	8	7'-2"	
RE601	13	6'-11"	
RE501	3	6'-7"	

Bending Diagrams



ROSS COUNTY
ROS-35-25.05

-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, A501 is a No. 5 size bar and A1001 is a No. 10 size.

RAILING STEEL in the parapet wall is included in Item 517 Railing for payment.

ELMER S. BARRETT ASSOCIATES
Consulting Engineers
245-249 S. Paint Street Chillicothe, Ohio

REINFORCING STEEL LIST
BRIDGE No. ROS-35-2532 L
U.S.R. 35 over SCIOTO RIVER
ROSS COUNTY U.S.R. 35
STA. 1337+08.99 To STA. 1349+94.69

SCALE DATE

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
WIC	DER		FHA	WL	10/24/64	

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

141
223

ROSS COUNTY
ROS-35-25.05

PROPOSED STRUCTURE DATA

TYPE: Continuous Reinforced Concrete Slab with Reinforced Concrete Substructure
SPANS: 44'-0"-55'-0"-55'-0"-44'-0"
WIDTH: 24'-0" plus 2 @ 2'-0" Safety Curbs
LOAD FREQUENCY: C.F. 130 (57)
SKEW: 30° 00' L.F. (Special)
APPROACH SLABS: AS-1-67 (25' long)
WEARING SURFACE: 1" Monolithic Concrete
RAILING: Aluminum Rail and Supports with Concrete Parapet
ALIGNMENT: Tangent
SUPERELEVATION: 0.0156 ft. per ft.
1976 ADT 550

CURVE DATA - U.S.R. 35

Eastbound	Westbound
P.I. Sta. 1355+73.70	P.I. Sta. 1357+73.12
Δ = 12° 29' 30" Lt.	Δ = 12° 29' 30" Lt.
D_c = 1° 30'	D_c = 1° 15'
L_s = 200.00'	L_s = 200.00'
θ_s = 1° 30'	θ_s = 1° 15'
p = 0.44'	p = 0.36'
k = 100.00'	k = 100.00'
X_c = 199.99'	X_c = 199.99'
Y_c = 1.75'	Y_c = 1.45'
R = 3819.72'	R = 4583.66'
L_c = 632.78'	L_c = 799.33'
T_s = 518.09'	T_s = 601.69'
E_s = 23.25'	E_s = 27.77'
S.T. = 66.67'	S.T. = 66.67'
L.T. = 133.34'	L.T. = 133.34'

CURVE DATA

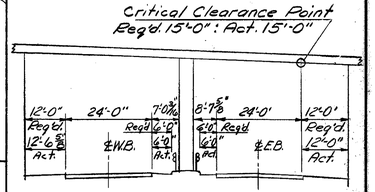
P.I. Sta. 32+04.76
Δ = 34°-01'-15"
D_c = 18°-00'
R = 318.31'
T = 97.38'
L_c = 189.00'
E = 14.56'

CURVE DATA

P.I. Sta. 24+95.93
Δ = 39°-25'-52"
D_c = 8°-00'
R = 716.20'
T = 256.66'
L = 492.89'
E = 44.60'

BENCH MARK

Chiseled Square in West End of N.W. Wingwall C&O. Bridge over U.S.R. 35 & 50. - 438' Rt. Sta. 1366+26 (E.B.) Elev. 635.92



CLEARANCE DIAGRAM
(Section Normal to U.S.R. 35)

ELMER S. BARRETT ASSOCIATES
Consulting Engineers
245-249 S. Paint Street — Chillicothe, Ohio

SITE PLAN
BRIDGE NO. ROS-35-2580
U.S.R. 35 UNDER LICK RUN ROAD

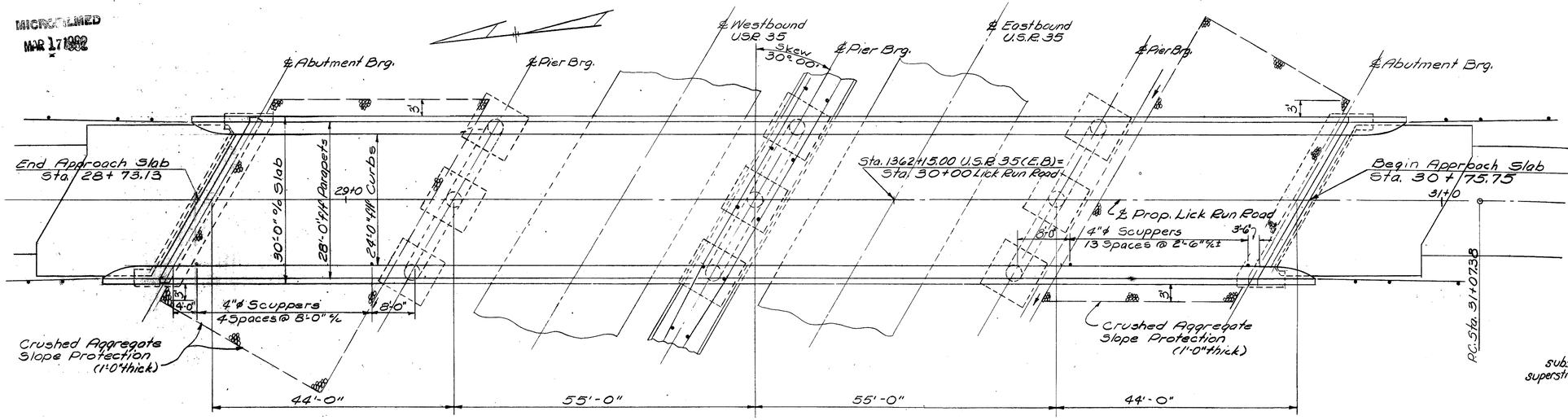
ROSS COUNTY — U.S.R. 35
STA. 1362+15.00 (E.B.)

SCALE	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
DESIGNED: WJE	WOJ		WJE	WJE	10/29/64	

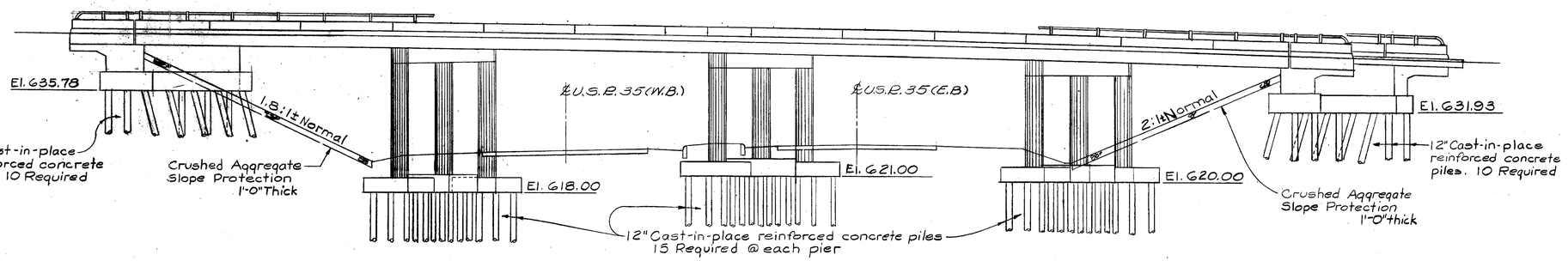
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

142/223

ROSS COUNTY
ROS-35-25.05



GENERAL PLAN



GENERAL ELEVATION

ESTIMATED QUANTITIES

ITEM	QUANTITY	UNIT	DESCRIPTION	ABUT'S.	PIERS	SUPER	GENERAL	AS BUILT	
503	350	Cu.Yds.	Unclassified Excavation	148	202				
511	471	Cu.Yds.	Class C Concrete, Superstructure			471			
511	81	Cu.Yds.	Class C, Concrete, Pier Caps and Columns		81				
511	60	Cu.Yds.	Class C Concrete, Abutments above Footings	60					
511	123	Cu.Yds	Class C Concrete, Footings	52	71				
825	835	Sq.yds	Concrete surface treatment	27		808			
509	147,492	Lbs.	Reinforcing Steel	9,098	25,784	112,610			
516	61	Sq.Ft.	1/4" Preformed expansion joint filler	61					
516	4,900	Lbs.	Structural steel expansion joints			4,900			
516	225	Lbs.	1/4" Rolled bronze sliding plates 711.16	225					
517	441.16	Lin.Ft.	Railing, Type 1 aluminum rail and supports and concrete parapets.	41.33		399.83			
505	Lump	Sum	First test pile				Lump		
507	2420	Lin.Ft.	12" cast-in-place reinforced concrete piles	850	1,570				
518	58	Lin.Ft.	6" Helical perforated CMP, 707.01 , including specials	58					
518	46	Lin.Ft.	6" Helical CMP, 707.01 , non-perforated.	46					
518	19	Each	Scuppers, 4"ϕ cast or wrought iron pipe			19			
518	18	Cu.Yds.	Porous Backfill	18					
601	409	Sq.Yds.	Crushed aggregate slope protection				409		
808	471	Units	Water-reducing, set-retarding admixture			471			

GENERAL NOTES

REFERENCE shall be made to Standard Drawing BR-1-65 revised 11-24-65 and to Supplemental Specifications 808 dated 1-1-69 & 825 dated 1-1-69.

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.
Design Loading - CF 130 (57)
substructure Concrete Class C - basic unit stress 1,333 p.s.i.
superstructure Concrete Class C - basic unit stress 1,133 p.s.i.
Structural Steel - ASTM A36 basic unit stress 20,000 p.s.i.

Reinforcing Steel - ASTM A615, A616, A617 Deformed Intermediate or Hard Grade. Basic unit stress 20,000 p.s.i. Except, spiral reinforcment shall be plain, A306 or A499 with basic unit stress of 18,000 p.s.i.

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 for a minimum period of 30 days, after which excavation shall be made for the abutments and piles driven.

EXCAVATION QUANTITY for the abutments includes the removal of fill material required for construction of the abutments. Excavation quantity for the Piers includes the removal of material between the surface of the proposed roadway and the bottom of the pier footing.

PILES shall be driven to a minimum bearing capacity of 40 Tons per pile for the abutments and 42 Tons per pile for the piers.

~~SURFACE FINISH OF CONCRETE: The requirements of Sec. 5-1.22, Rubbed Finish, shall apply to the following exposed concrete surfaces:~~

~~a. The entire superstructure except the top and bottom surfaces of safety curbs and roadways.~~

~~b. The entire surface of piers and abutments except the face of the spill-through abutments between limits of the slab.~~

MACHINE FINISH: The concrete bridge deck shall be finished by the use of a finishing machine.

WELDS on non-stress carrying members are shown thus: N

STAINLESS STEEL FASTENERS shall be properly passivated to remove surface impurities and shall be furnished with a lustrous finish.

ELMER S. BARRETT ASSOCIATES
Consulting Engineers
245-249 S. Paint Street Chillicothe, Ohio

GENERAL PLAN AND ELEVATION, EST. QUANTITIES AND GEN. NOTES
BRIDGE NO. ROS-35-2580
U.S.R. 35 UNDER LICK RUN ROAD
ROSS COUNTY U.S.R. 35
STA. 1362+15.00 (E.B.)

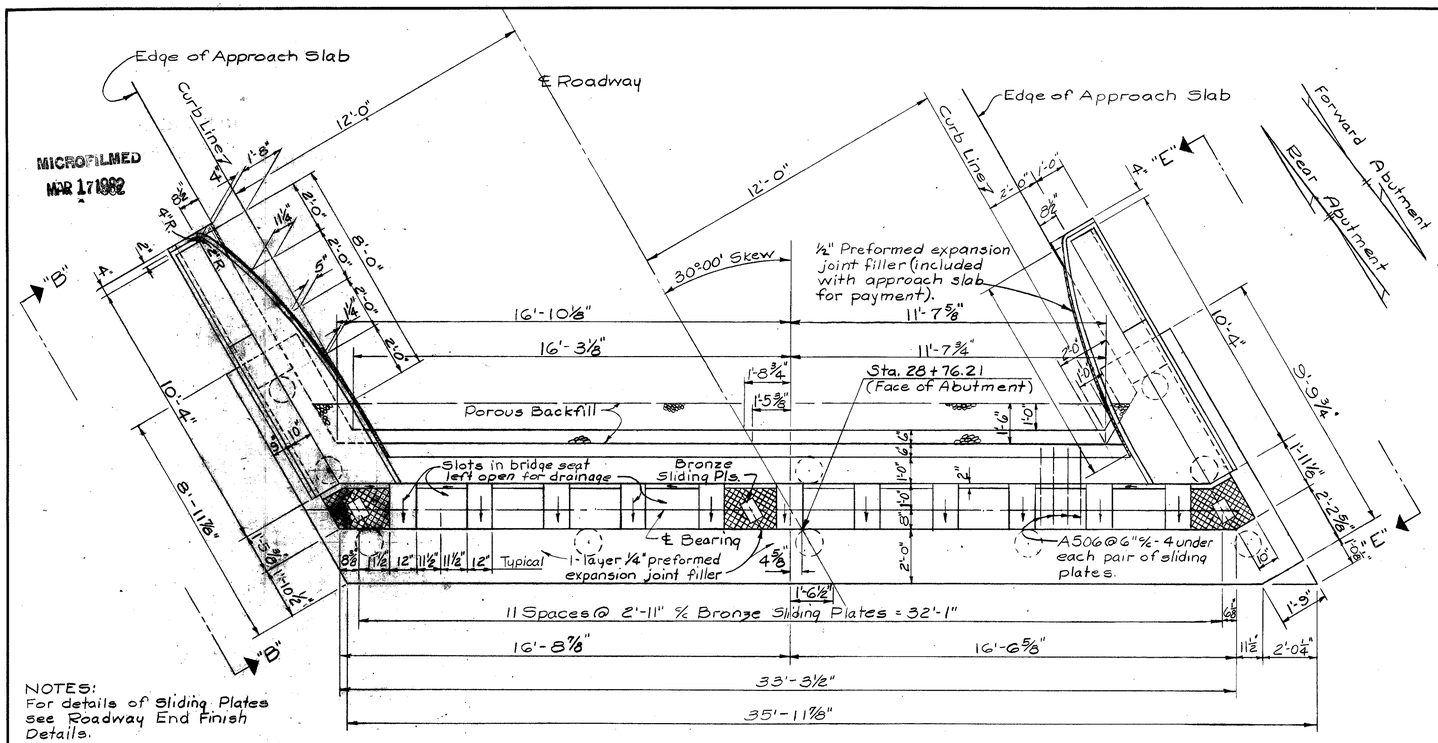
SCALE DATE

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
[illegible]	W.B.J.		[illegible]	[illegible]	10/24/64	

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

143/225

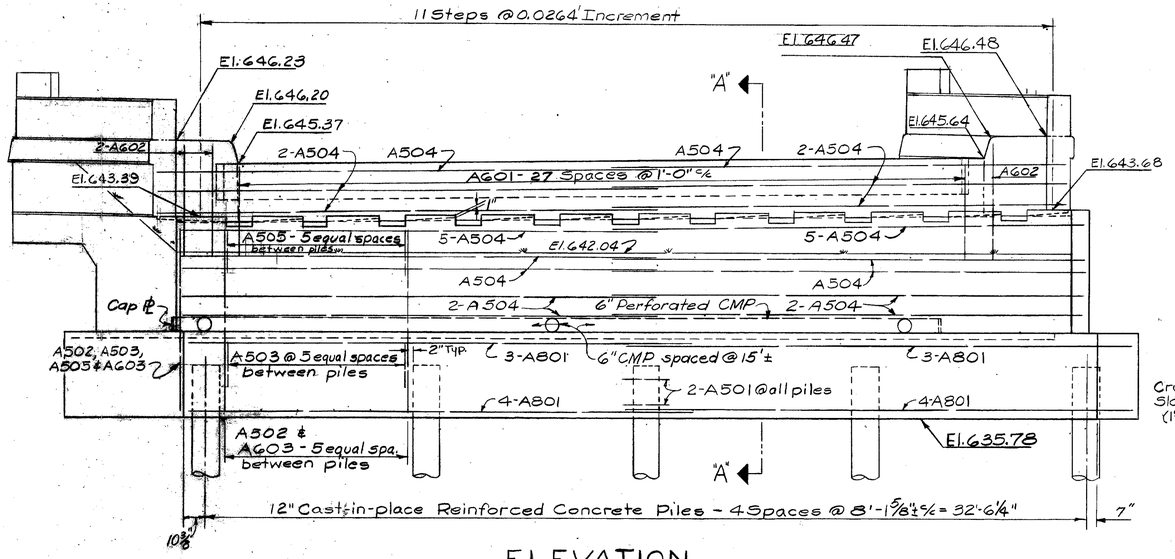
ROSS COUNTY
ROS-35-25.05



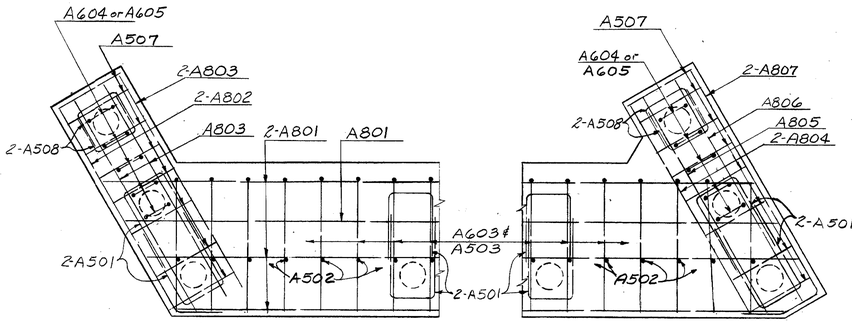
PLAN

NOTES:
For details of Sliding Plates see Roadway End Finish Details.

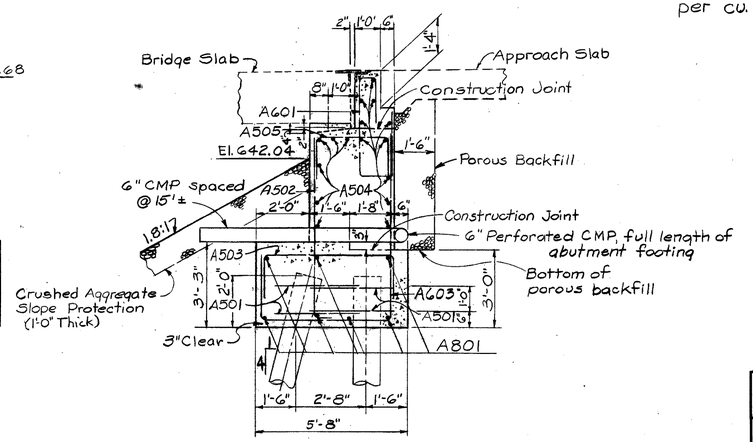
Sliding Plates and preformed expansion joint filler shall be at all raised portions of bridge seat.



ELEVATION
REAR ABUTMENT



PART FOOTING PLAN



SECTION "A"-"A"

NOTES:

CONCRETE shall be Class "E".

POROUS BACKFILL shall extend upward to the approach slab and outward to the abutment wings. Excavation therefor 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.

ELMER S. BARRETT ASSOCIATES
Consulting Engineers
245-249 S. Paint Street — Chillicothe, Ohio

ABUTMENT DETAILS
BRIDGE NO. ROS-35-2580
U.S.R. 35 UNDER LICK RUN ROAD
ROSS COUNTY — U.S.R. 35
STA. 1362+15.00 (E.B.)

SCALE		DATE				
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
J.W.H.	W.D.J.		HEB	MK	10/29/64	

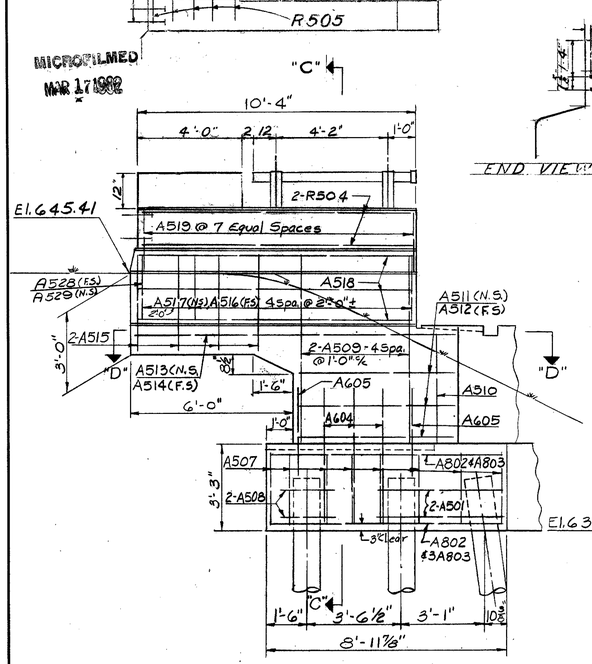
2R506

1¼"x20" Guard rail anchor bolts with hex nuts thd 3", imbed 1'-6" ASTM A325 Galvanize the nuts and 6" min. of thd end Include with railing for payment

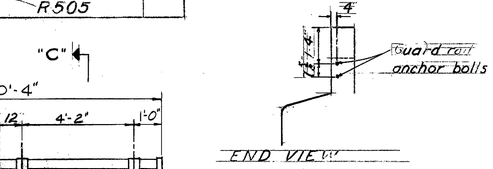
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

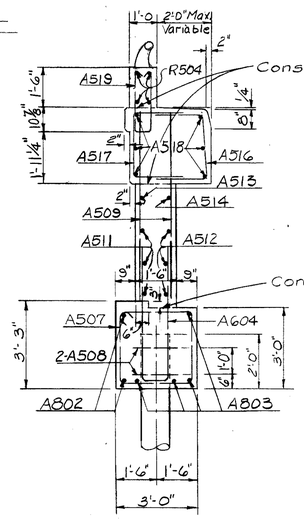
144/225

ROSS COUNTY
ROS-35-25.05

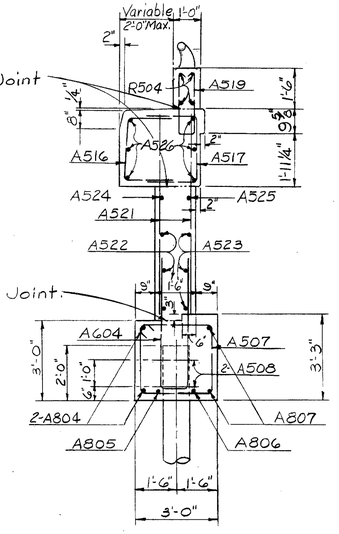


VIEW "B"-"B"

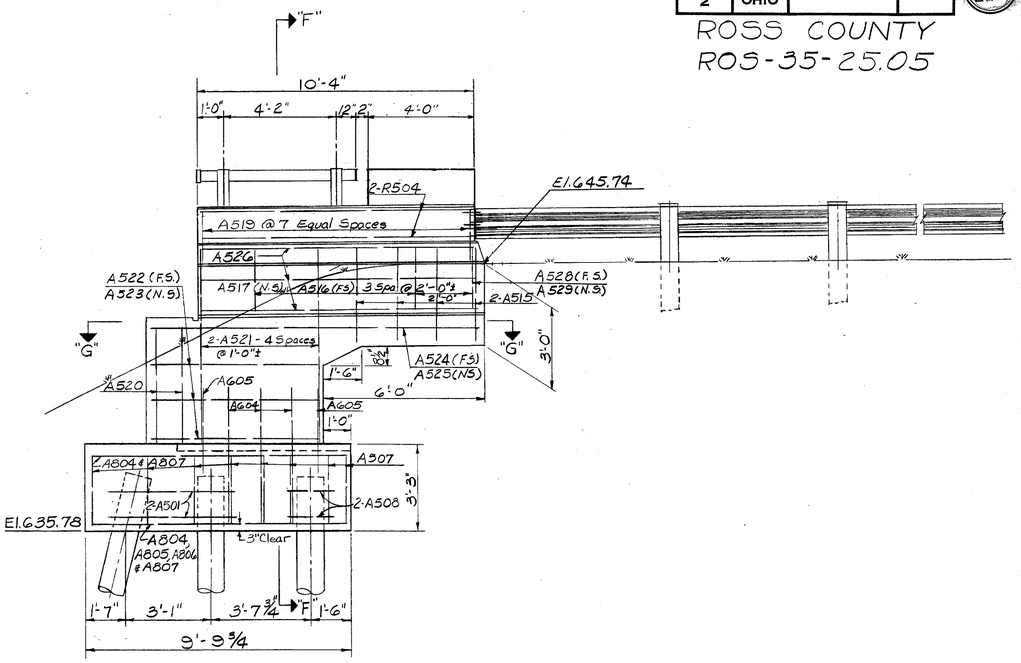




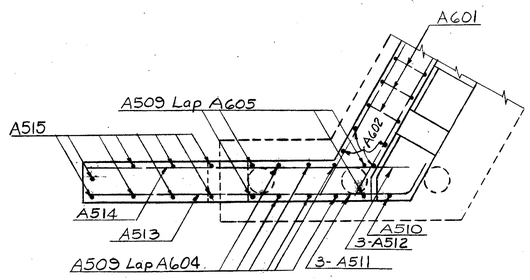
SECTION "C"-"C"



SECTION "F"-"F"



VIEW "E"-"E"



SECTION "D"-"D"

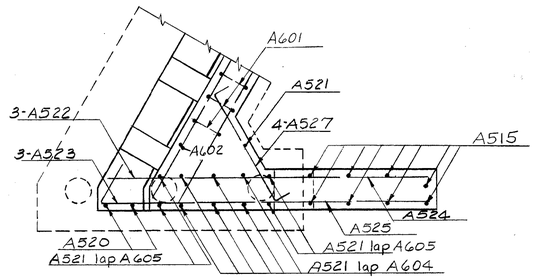
NOTES

SEE Standard Drawing BR-1-65 for details of aluminum railing and concrete parapet.

ALUMINUM RAILING and Concrete Parapet Wall are included with 517 Railing for payment.

LEGEND

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



SECTION "G"-"G"

ELMER S. BARRETT ASSOCIATES
Consulting Engineers
245-249 S. Paint Street Chillicothe, Ohio

REAR ABUTMENT DETAILS
BRIDGE NO. ROS-35-2580
U.S.R. 35 UNDER LICK RUN ROAD
ROSS COUNTY U.S.R. 35
STA. 1362+15.00 (E.B.)

SCALE			DATE		
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
JWH	W.D.J.		HBS	MK	10/30/64	

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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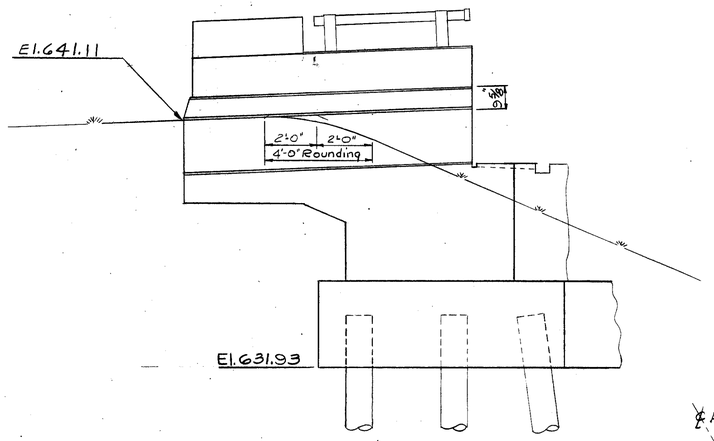
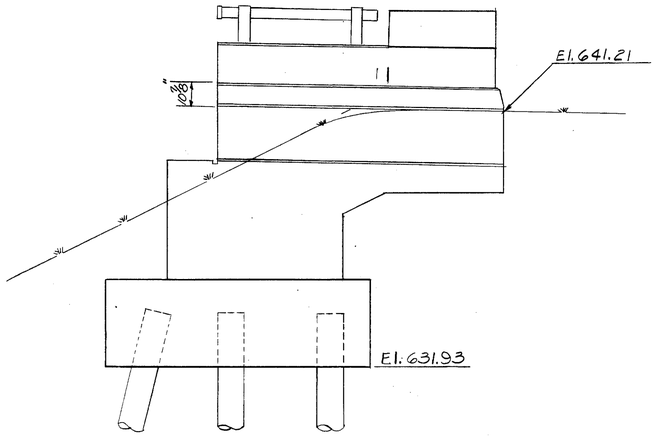
ROSS COUNTY
ROS-35-25.05

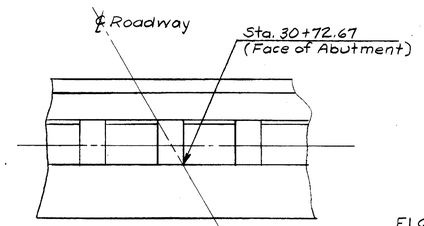


VIEW "B"-"B"

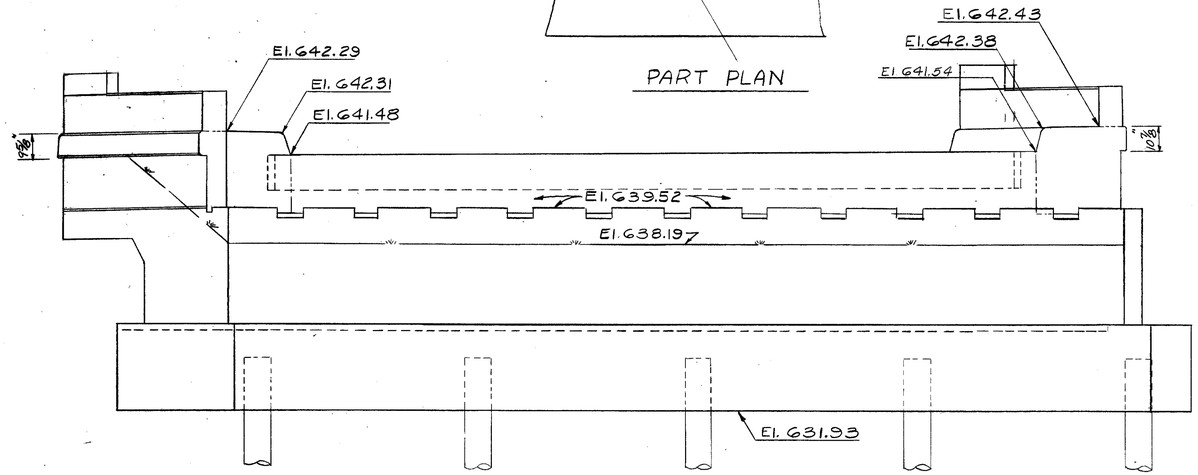


VIEW "E"-"E"

NOTE:
Reinforcing steel, dimensions, details and notes not shown identical to Rear Abutment Details



PART PLAN



ELEVATION
FORWARD ABUTMENT

ELMER S. BARRETT ASSOCIATES
Consulting Engineers
245-249 S. Paint Street — Chillicothe, Ohio

ABUTMENT DETAILS

BRIDGE NO. ROS-35-2580
U.S.R 35 UNDER LICK RUN ROAD

ROSS COUNTY — U.S.R. 35
STA. 1362+15.00 (E.B.)

SCALE — DATE

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
J.W.H.	W.D.J.		H.B.Z.	M.K.	10/30/64	

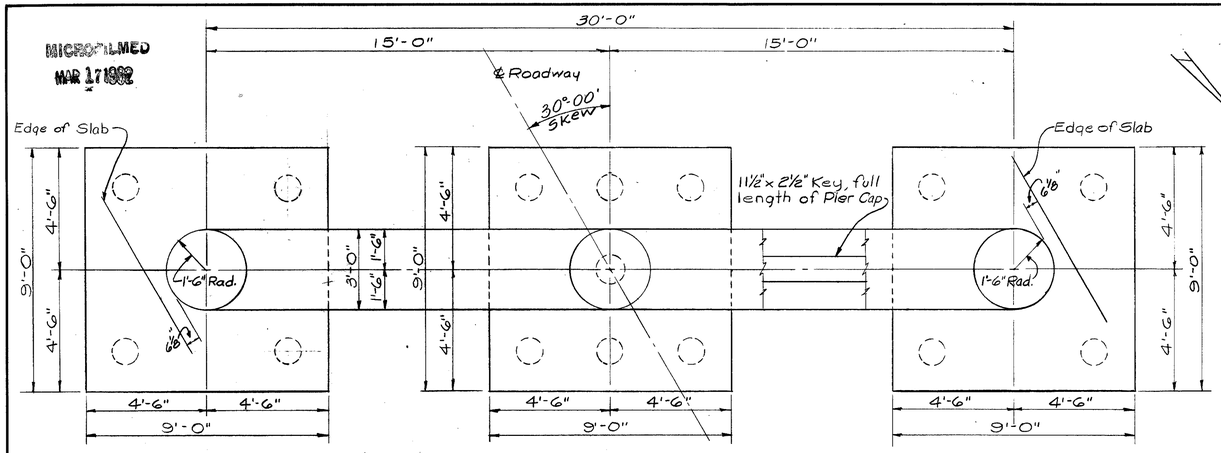
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

146
225

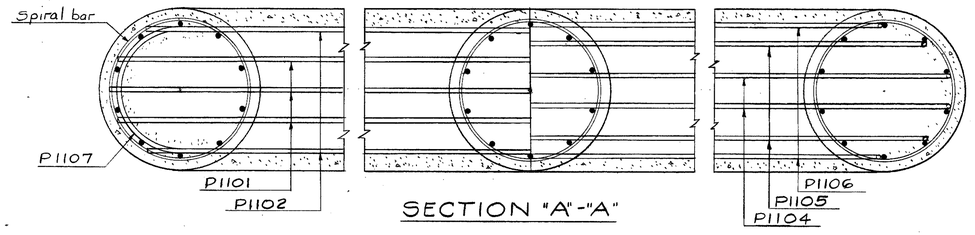
ROSS COUNTY
ROS-35-25.05

NOTES:

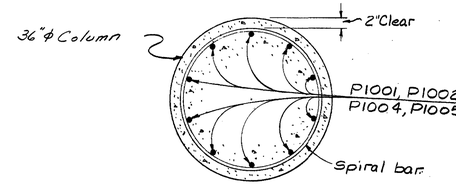
PILES shall be 12" Cast-in-place reinforced concrete piles.



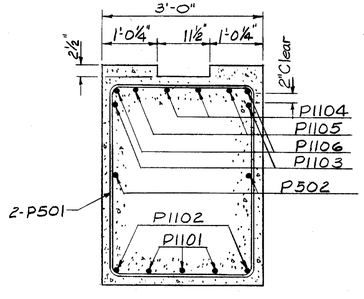
PLAN
ALL PIERS



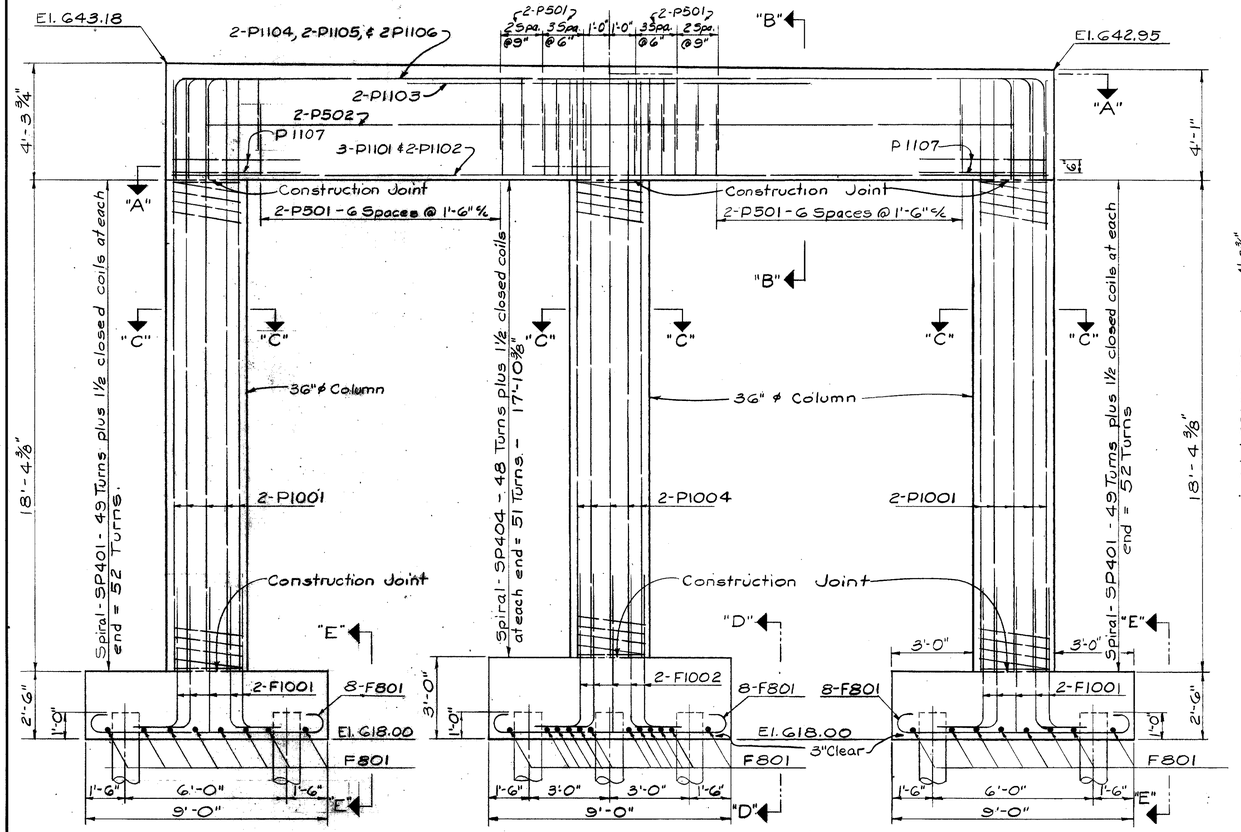
SECTION "A"-"A"



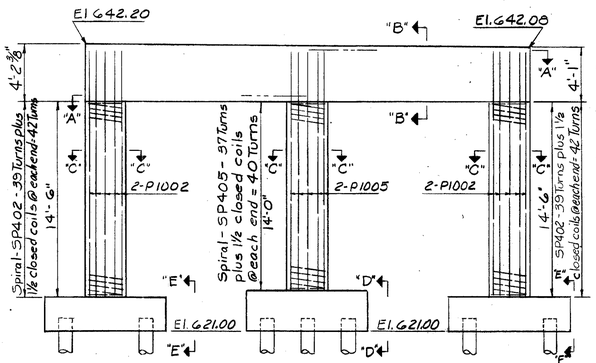
SECTION "C"-"C"



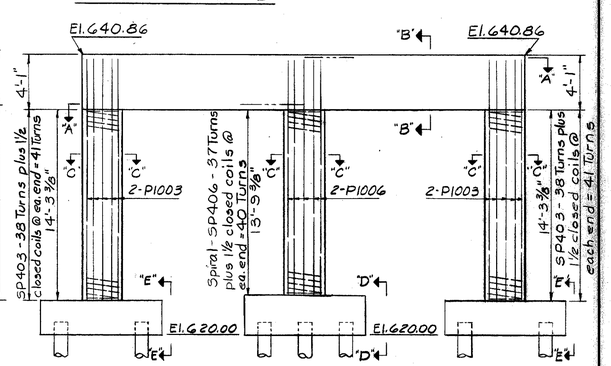
SECTION "B"-"B"



ELEVATION
REAR PIER

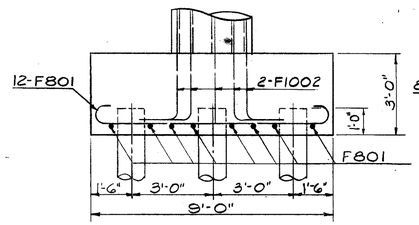


ELEVATION
CENTER PIER

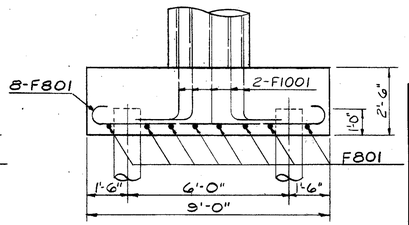


ELEVATION
FORWARD PIER

NOTE: All details, dimensions and reinforcing steel not shown in Center Pier and Forward Pier Elevation are identical to Rear Pier Elevation.



VIEW "D"-"D"



VIEW "E"-"E"

ELMER S. BARRETT ASSOCIATES
Consulting Engineers
245-249 S. Paint Street Chillicothe, Ohio

PIER DETAILS

BRIDGE NO. ROS-35-2580
U.S.R. 35 UNDER LICK RUN ROAD
ROSS COUNTY U.S.R. 35
STA. 1362+15.00 (E.B.)

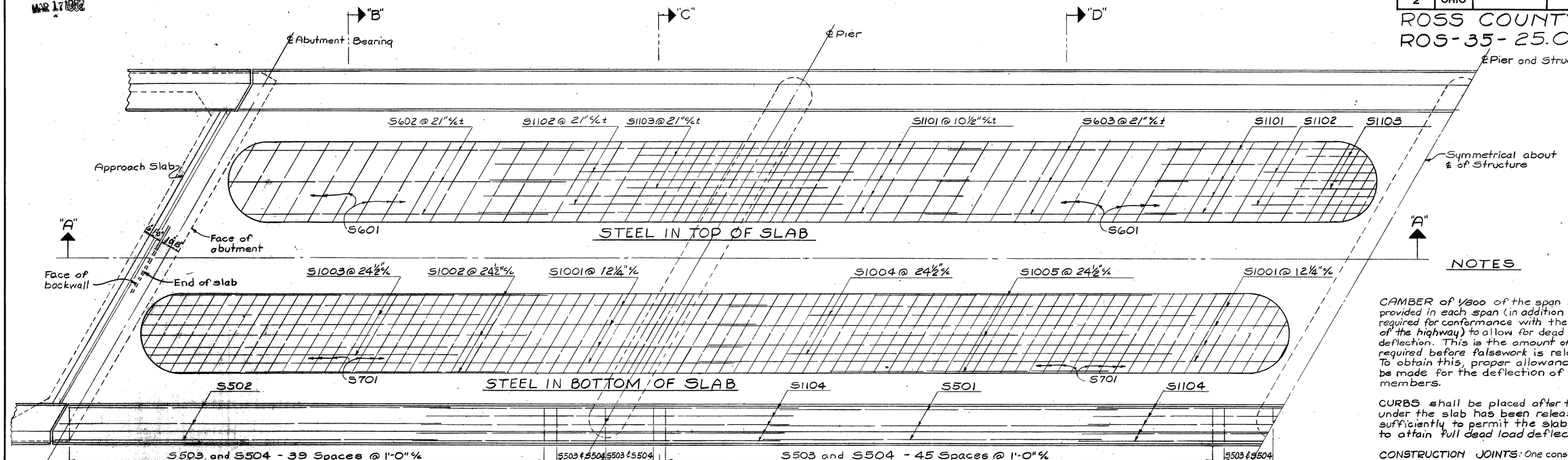
SCALE

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
JWH	WDJ		HBZ	WL	10/30/64	

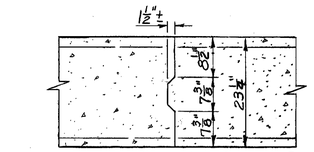
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

147
225

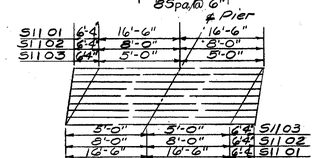
ROSS COUNTY
ROS-35-25.05



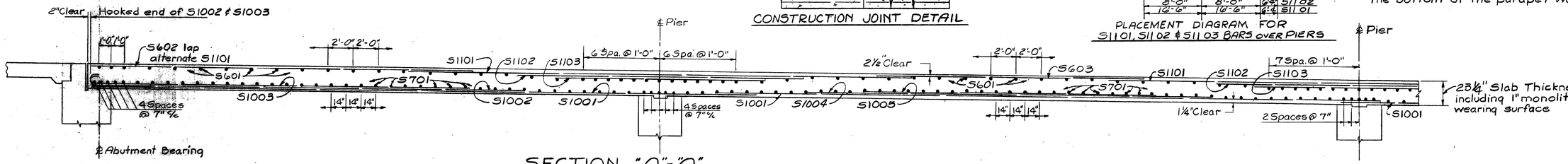
PART PLAN



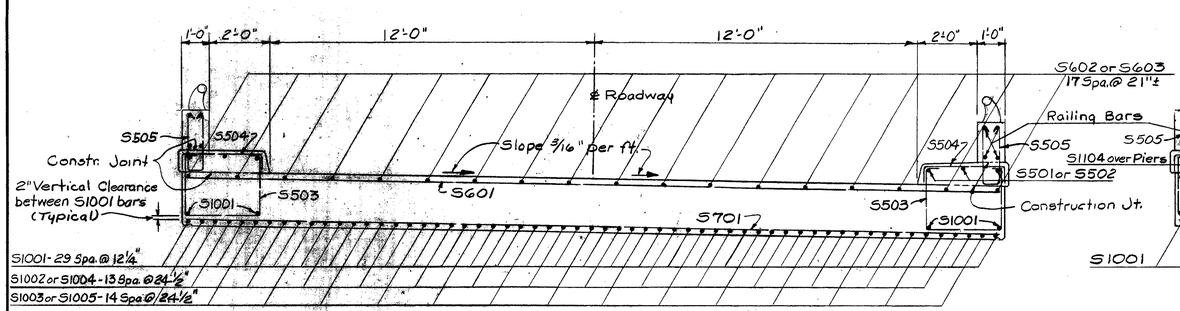
CONSTRUCTION JOINT DETAIL



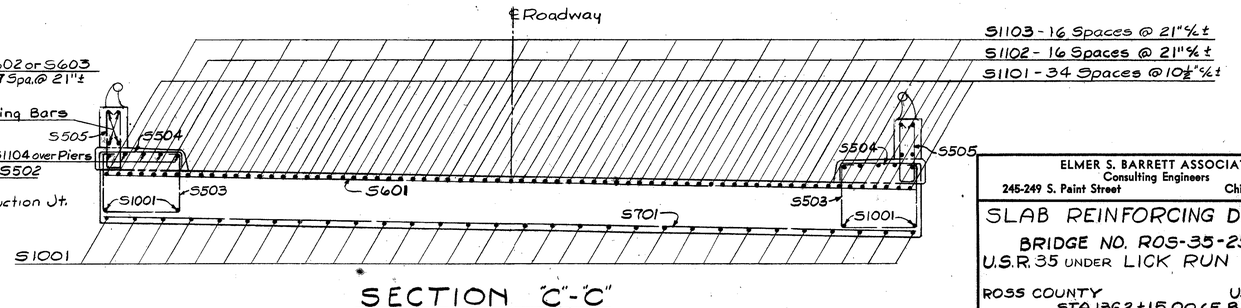
PLACEMENT DIAGRAM FOR S1101, S1102 & S1103 BARS over PIERS



SECTION "A"-"A"



SECTION "B"-"B" AND "D"-"D"



SECTION "C"-"C"

NOTES

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

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

CONSTRUCTION JOINTS: One construction joint in the bridge slab may be placed on the transverse centerline of an interior span or 1'-0"± off the transverse centerline if necessary to miss transverse reinforcing bars. One longitudinal joint on the centerline of roadway will be permitted. A horizontal construction joint shall be placed between each curb and the top of the slab and between each curb and the bottom of the parapet wall.

ELMER S. BARRETT ASSOCIATES
Consulting Engineers
245-249 S. Paint Street — Chillicothe, Ohio

SLAB REINFORCING DETAILS
BRIDGE NO. ROS-35-2580
U.S.R. 35 UNDER LICK RUN ROAD

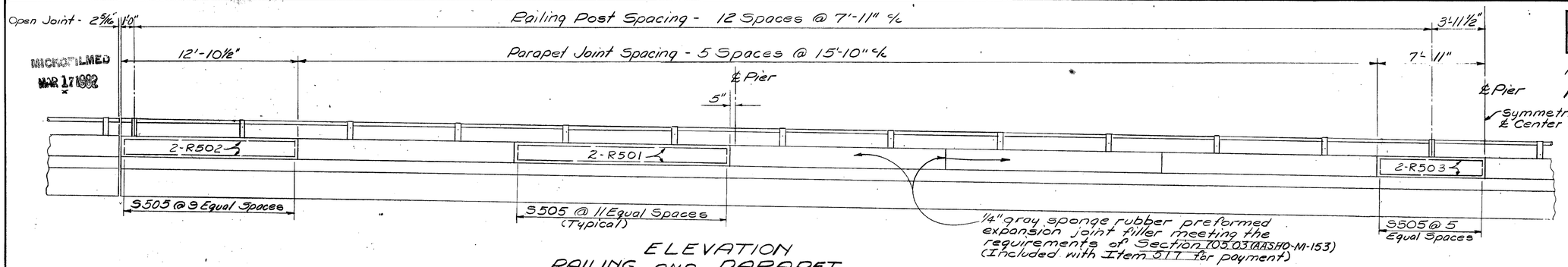
ROSS COUNTY — U.S.R. 35
STA. 1362 + 15.00 (E.B.)

SCALE			DATE		
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
J.W.H.	W.D.J.		H.B.Z.	W.K.	10/30/64	

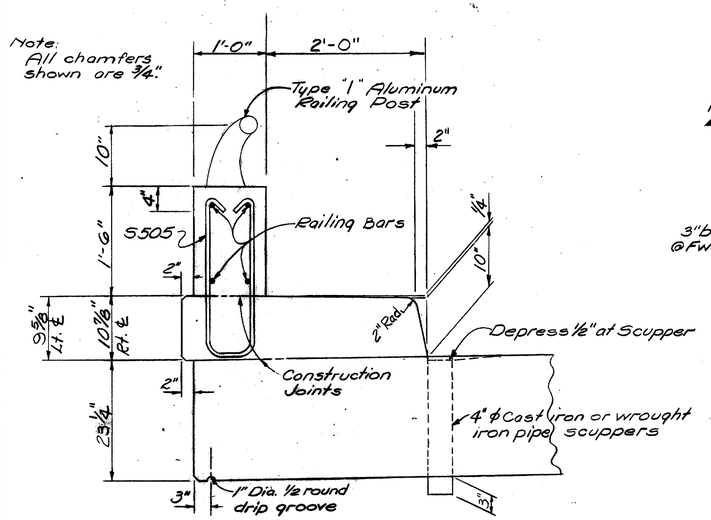
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

148/225

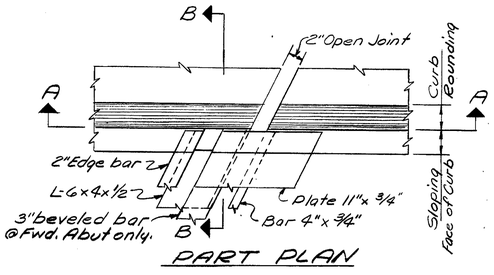
ROSS COUNTY
ROS-35-25.05



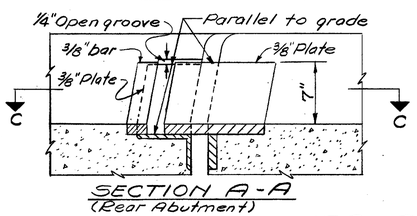
ELEVATION
RAILING AND PARAPET



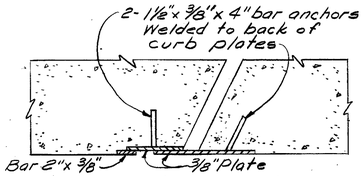
PART SECTION
TREATMENT OF PARAPET AND FASCIA



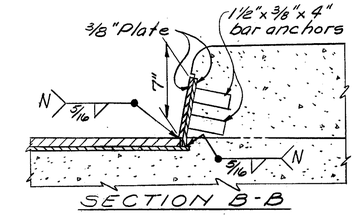
PART PLAN



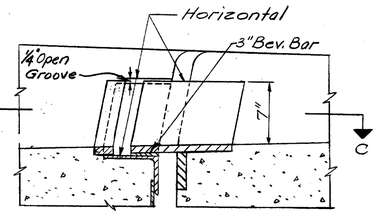
SECTION A-A
(Rear Abutment)



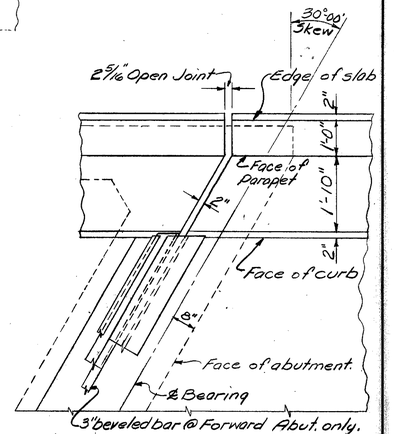
SECTION C-C



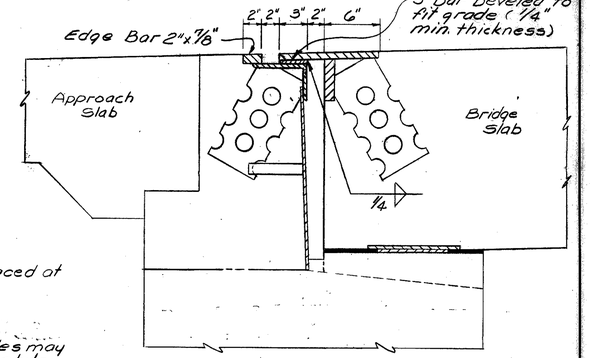
SECTION B-B



SECTION A-A
(Forward Abutment)



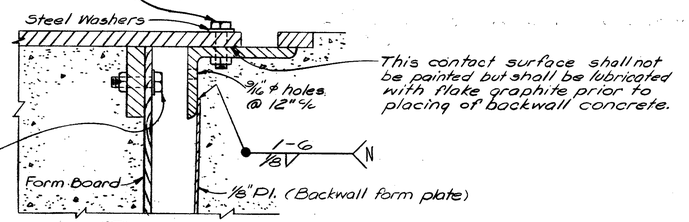
PART PLAN AT ABUTMENT



FORWARD ABUTMENT
ROADWAY END FINISH

Note: For Details not shown see Roadway End Finish - Rear abutment.

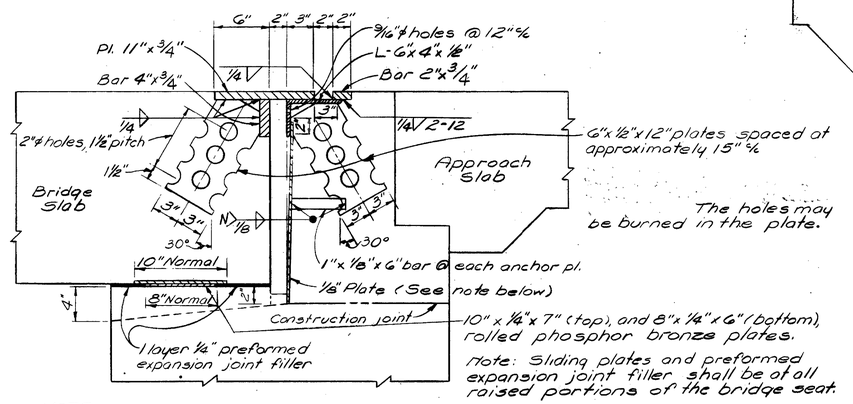
No joints will be permitted in End Finish.



Omit shop coat on all portions of end dam. Portions in contact with steel or with concrete shall not be painted. All other portions shall be cleaned and given the shop coat in the field as well as two field coats.

END FINISH DETAILS

CURB PLATE DETAILS



NOTE:
1/8" Backwall form plate shall be provided in lengths not to exceed 6'-0", joints between lengths shall be tightly butted and no joints shall be placed opposite drainage slots in bridge seat; plates shall be notched to fit around anchor plates.

REAR ABUTMENT
ROADWAY END FINISH

ELMER S. BARRETT ASSOCIATES
Consulting Engineers
245-249 S. Paint Street — Chillicothe, Ohio

SUPERSTRUCTURE DETAILS
BRIDGE NO. ROS-35-2580
U.S.R. 35 UNDER LICK RUN ROAD
ROSS COUNTY — U.S.R. 35
STA. 1362+15.00 (E.B.)

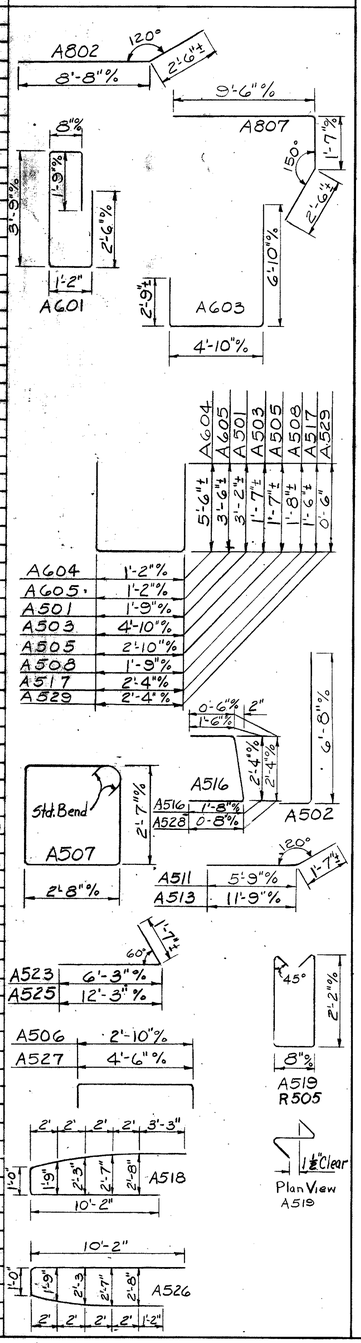
SCALE			DATE		
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
J.W.H.	W.D.J.		H.E.B.	W.L.	10/20/64	

REINFORCING STEEL LIST

ONE ABUTMENT

Bar Number	Number Required	Length	Shape	Weight
A801	14	18'-10"	—	704
A802	2	11'-2"	—	60
A803	4	9'-2"	—	98
A804	2	8'-8"	—	46
A805	1	9'-2"	—	24
A806	1	9'-6"	—	25
A807	2	13'-3"	—	71
A601	28	9'-2"	—	386
A602	5	4'-3"	—	32
A603	25	14'-1"	—	529
A604	6	11'-10"	—	107
A605	4	7'-10"	—	47
A501	20	7'-9"	—	162
A502	25	7'-2"	—	187
A503	25	7'-9"	—	202
A504	32	17'-8"	—	590
A505	25	5'-8"	—	148
A506	48	3'-10"	—	192
A507	16	11'-3"	—	188
A508	8	4'-9"	—	40
A509	10	6'-8"	—	70
A510	1	4'-2"	—	4
A511	3	7'-4"	—	23
A512	3	6'-3"	—	20
A513	1	13'-4"	—	14
A514	1	11'-9"	—	12
A515	16	3'-6"	—	58
A516	9	5'-3"	—	49
A517	9	5'-1	—	48
A518	3	22'-1"	—	69
A519	16	5'-7"	—	93
A520	2	4'-6"	—	9
A521	10	7'-0"	—	73
A522	3	6'-0"	—	19
A523	3	7'-8	—	24
A524	1	12'-1"	—	13
A525	1	13'-8"	—	14
A526	3	20'-0"	—	63
A527	4	5'-6"	—	23
A528	2	3'-3"	—	7
A529	2	3'-1"	—	6
TOTAL ONE ABUTMENT				4549
TOTAL TWO ABUTMENTS				9098

Bending Diagrams



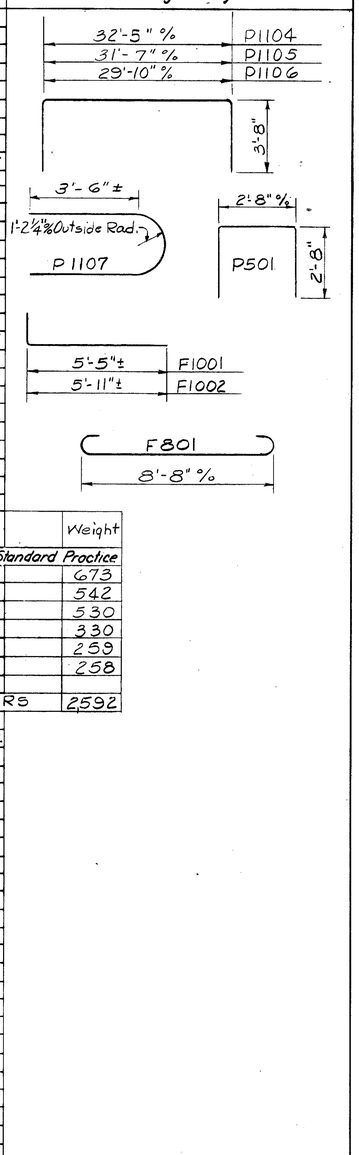
THREE PIERS

Bar Number	Number Required	Length	Shape	Weight
P1101	9	32'-3"	—	1542
P1102	6	31'-2"	—	994
P1103	6	15'-0"	—	478
P1104	6	39'-1"	□	1246
P1105	6	38'-3"	□	1219
P1106	6	36'-6"	□	1164
P1107	12	10'-9"	C	685
P1001	20	22'-0"	—	1893
P1002	20	18'-2"	—	1563
P1003	20	17'-11"	—	1542
P1004	10	21'-5"	—	922
P1005	10	17'-6"	—	753
P1006	10	17'-4"	—	746
P501	144	7'-9"	□	1164
P502	6	29'-10"	—	187
F1001	60	6'-6"	L	1678
F1002	30	7'-0"	L	904
F801	156	10'-10"	C	4512
SUB-TOTAL THREE PIERS				23,192

SPIRAL

Bar Number	No. Required	Core Dia % Spiral	Length	Pitch	Weight
Other details in accordance with CRSI Standard Practice					
SP401	2	32"	18'-4⅞"	4½"	673
SP402	2	32"	14'-6"	4½"	542
SP403	2	32"	14'-3⅜"	4½"	530
SP404	1	32"	17'-10⅜"	4½"	330
SP405	1	32"	14'-0"	4½"	259
SP406	1	32"	13'-9⅜"	4½"	258
TOTAL SPIRAL - THREE PIERS					2592
TOTAL - THREE PIERS					25,784

Bending Diagrams



SUPERSTRUCTURE

Bar Number	Number Required	Length	Shape	Weight
S1101	105	39'-4"	—	21,943
S1102	51	22'-4"	—	6,051
S1103	51	16'-4"	—	4426
S1104	30	30'-3"	—	4,822
S1001	136	52'-4"	—	30626
S1002	28	35'-6"	C	4,277
S1003	30	31'-1"	C	4,013
S1004	28	31'-10"	—	3,835
S1005	30	23'-0"	—	2,969
S701	183	34'-2"	—	12,780
S601	121	34'-2"	—	6,210
S602	36	30'-0"	—	1,622
S603	36	21'-0"	—	1,136
S501	12	27'-11"	—	349
S502	12	31'-4"	—	392
S503	446	7'-11"	□	3,683
S504	446	3'-8"	□	1,706
S505	304	5'-7"	⊠	1,770
TOTAL SUPERSTRUCTURE				112,610

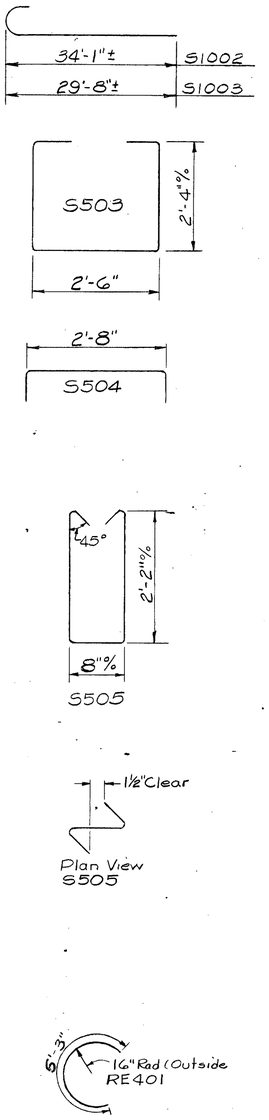
REPLACEMENT STEEL

RE1101	3	8'-6"	—
RE1001	3	8'-2"	—
RE801	1	7'-6"	—
RE701	1	7'-2"	—
RE601	1	7'-11"	—
RE501	1	6'-7"	—
RE401	1	6'-3"	C

RAILING STEEL

R501	80	15'-6"	—
R502	16	12'-6"	—
R503	16	7'-7"	—
R504	16	10'-0"	—
R505	20	5'-7"	⊔
R506	16	3'-8	—

Bending Diagrams



~NOTES~

BAR SIZE is indicated in the bar mark. The first digit where three digits are used, and the first two digits where four digits are used, indicate the bar size. For example, A501 is a number 5 size bar and P1001 is a number 10 size bar.

RAILING STEEL in the parapet wall is included with Item 517 Railing for payment.

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 "Number of Turns" shown is the "Length" divided by the pitch plus three turns (total number of closed coils) expressed as the nearest whole number.

Spiral reinforcing bars shall not have deformations but shall in all other respects conform to Item 509. The 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.

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

149 / 223

ROSS COUNTY
ROS-35-25.05

ELMER S. BARRETT ASSOCIATES
Consulting Engineers
245-249 S. Paint Street — Chillicothe, Ohio

REINFORCING STEEL LIST
BRIDGE NO. ROS-35-2580
U.S.R. 35 UNDER LICK RUN ROAD
ROSS COUNTY — U.S.R. 35
STA. 1362+15.00 (E.B.)

SCALE		DATE				
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
JWH	WDJ		HEZ	WK	10/30/64	

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

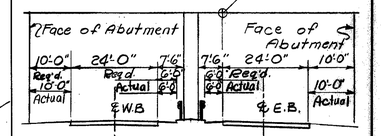
150/225

ROSS COUNTY
ROS-35-25.05

PROPOSED STRUCTURE DATA

TYPE: Continuous Steel Beam, concrete floor, ballasted deck and reinforced concrete substructure.
SPANS: 2 @ 46'-6 7/8".
WIDTH: 32'-2" % of fascia girders.
LOADING: Cooper E-72 L.L. and Steam Impact.
SKEW: 19°08'02" (From chord reference line) L.F.
RAILING: Aluminum rail and supports - Type "C"
ALIGNMENT: 3°00' Curve & between Tracks
SUPERELEVATION: 3 1/8" W.B. - 4 1/4" E.B.
5 1/4" Future.

Critical Clearance Point 'A' (Future Track)
Required 15'-0" - Actual 15'-2"



CLEARANCE DIAGRAM
(Section Normal to U.S.R.35)

EXISTING BRIDGE DATA

Location: 450'± South of proposed structure.
Type: Thru Girder with concrete floor and balasted Deck. Concrete Substructure.
Span: 77'-4"
H.W.V. Clearance:
Vertical - 14'-0 1/2"
Horizontal - 30'-0"
Date Built:- 1926
Condition: Fair
Disposition: To remain in place
Bridge No. - 2596

C&O RY. BRIDGE # F484

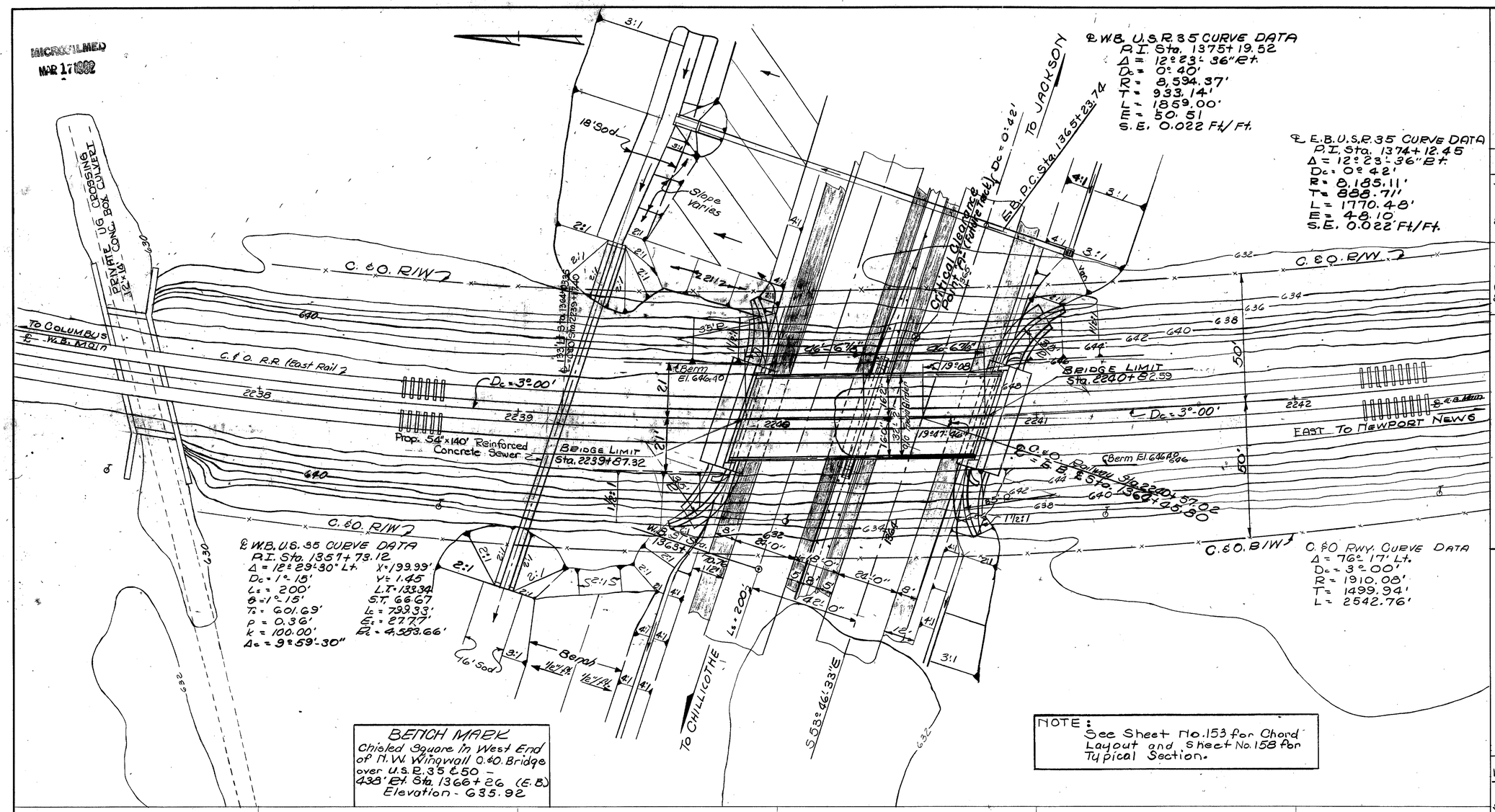
ELMER S. BARRETT ASSOCIATES
Consulting Engineers
245-249 S. Paint Street Chillicothe, Ohio

SITE PLAN

BRIDGE NO. ROS-35-2584
U.S.R. 35 UNDER C&O R.R.

ROSS COUNTY U.S.R. 35
STA. 1364+45.80

SCALE	DATE						
DESIGNED	DRAWN	TRACED	CHECKED	APPROVED	QUAN.	QUAN.	
WEB	MF	PJM	KDD	MW	GLA		



NOTE: See Sheet No. 153 for Chord Layout and Sheet No. 158 for Typical Section.

BENCH MARK
Chisled Square in West End of N.W. Wingwall C&O. Bridge over U.S.R. 35 & 50 - 438' Rt. Sta. 1366+26 (E.B.) Elevation - 635.92

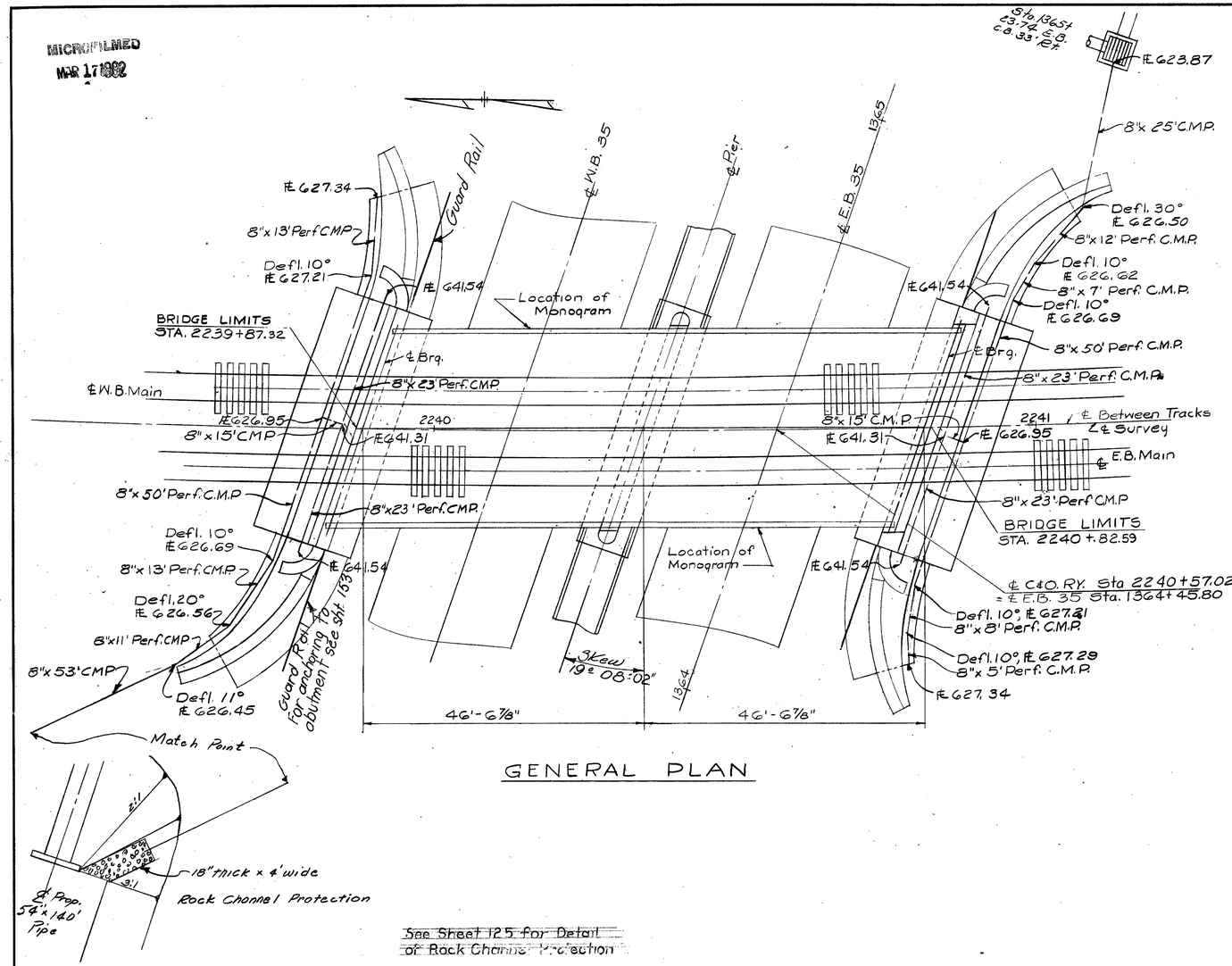
NOTE: Rail Elevations as of May 5, 1965

W.B. East Rail	648.90	648.93	649.02	649.06	649.07
W.B. West Rail	649.24	649.30	649.36	649.40	649.41
E.B. East Rail	649.17	649.26	649.32	649.44	649.54
E.B. West Rail	649.53	649.60	649.70	649.80	649.90
	2238	2239	2240	2241	2242

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

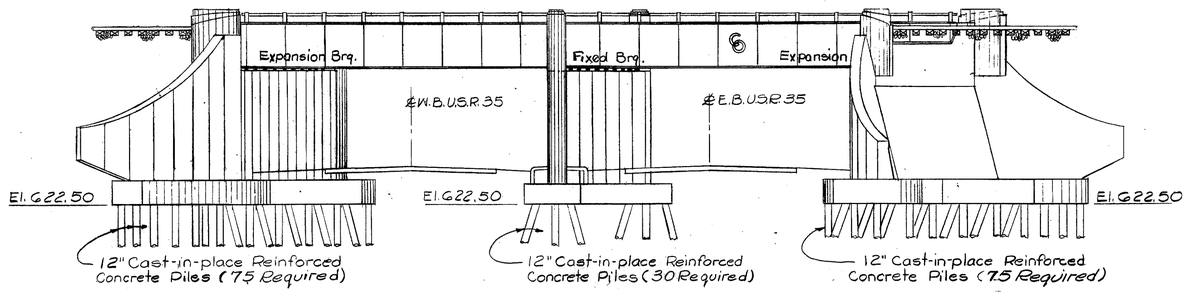
151
225

ROSS COUNTY
ROS-35-25.05



GENERAL PLAN

See Sheet 125 for Detail of Rock Channel Protection



GENERAL ELEVATION

ESTIMATED QUANTITIES

ITEM	QUANTITY	UNIT	DESCRIPTION	SUPER	ABUT'S.	PIER	GENERAL	AS BUILT
503	399	Cu.Yds.	Unclassified Excavation		336	63		
503	Lump	Sum	Cofferdams, cribs and sheeting				Lump	
511	129	Cu.Yds	Class C Concrete, Superstructure	129				
511	579	Cu.Yds	Class C Concrete, Abutments & Pier Wall		501	78		
511	358	Cu.Yds	Class C Concrete, Footings		316	42		
512	340	Sq.Yds	Type A Waterproofing	27	313			
512	174	Lin.Ft.	Waterproofing, 1"x12" Premolded Sealing Strip	102	72			
809	390	Sq.Yds.	5 Ply Membrane Waterproofing, Type "D"	390				
809	390	Sq.Yds.	3" Concrete protective cover	390				
509	3,510	Sq.Ft.	Welded wire fabric, 6x6 x 7 gage.	3,510				
509	65,706	Pounds	Reinforcing Steel	22,958	35,504	7,244		
810	335,100	Pounds	Structural Steel	335,100				
514	335,100	Pounds	Field Painting of Structural Steel	335,100				
516	18	Sq. Ft.	1½" Preformed Expansion Joint Filler		18			
516	458	Sq. Ft.	½" Preformed Expansion Joint Filler, Type II		458			
516	65	Sq Ft	¼" Preformed Expansion Joint Filler, Type II		65			
516	441	Lin.Ft.	Copper Strip (16oz. x 8" wide) Perforated		354	87		
516	87	Lin.Ft.	Folded Copper Strip (16oz x 15" wide) Perforated		87			
516	27	Lin.Ft.	Folded Copper Strip (16oz x 17" wide) Perforated		27			
516	146	Lin.Ft.	Bent Copper Strip (16oz x 9" wide) Perforated	73	73			
516	198	Lin.Ft.	Bent Copper Strip (16oz x 6" wide) Perforated	198				
517	188.29	Lin.Ft.	Railing, Type 1, aluminum rail and supports.	188.29				
505	Lump	Sum	First Test Pile				Lump	
507	9680	Lin.Ft	12" Cast-in-place Reinforced Concrete Piles		7880	1800		
518	232	Cu.Yds	Porous Backfill		232			
518	108	Lin.Ft.	8" Non-perforated corrugated metal pipe including Specials 707.01, bituminous coated as per 707.04		108			
518	261	Lin.Ft.	8" Perforated corrugated metal pipe including Specials 707.01, bituminous coated as per 707.04.		261			
601	4	Cu. Yds.	Rock channel protection, Type B		4			
Special	462	Lin.Ft.	Joint Sealing Compound, Carey Noah's Pitch or Equal.	204	258			
808	129	Units	Water-reducing, set-retarding admixture.	129				
Special	Lump	Sum	Roll-in bents and appurtenances.	Lump				

C&O RY. BRIDGE *F484

ELMER S. BARRETT ASSOCIATES
Consulting Engineers
245-249 S. Paint Street — Chillicothe, Ohio

GENERAL PLAN & ELEVATION AND ESTIMATED QUANTITIES
BRIDGE NO. ROS-35-2584
U.S.R. 35 UNDER C&O. RY.
ROSS COUNTY — U.S.R. 35
STA. 1364+45.80

SCALE	DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	MICRO'D
		W.D.J.				6/8/65	

GENERAL NOTES

FED. RD. DIVISION	STATE	PROJECT		
2	OHIO			

15
225

ROSS COUNTY
ROS-35-25.05

CONSTRUCTION PROCEDURE

THE RAILWAY COMPANY WILL:	THE CONTRACTOR SHALL:
1. FURNISH FLAGMAN, WATCHMEN AND ENGINEERING INSPECTION.	
2. FURNISH MATERIALS FOR AND MAKE ALL ALTERATIONS TO SIGNALS AND T & T FACILITIES.	
3. FURNISH, ERECT AND MAINTAIN TEMPORARY TRESTLE, EXCAVATE AS NECESSARY TO CAP PILES, PLACE STEEL AND TIMBER STRINGERS, AND PERFORM ALL TRACK WORK INCIDENTAL TO THIS CONSTRUCTION.	
	4. PERFORM ALL EXCAVATION NECESSARY BELOW THAT EXCAVATED BY RAILWAY COMPANY.
5. PLACE BRACING FOR TEMPORARY TRESTLE AS EXCAVATION BY THE CONTRACTOR PROGRESSES.	
	6. CONSTRUCT ABUTMENT BREASTWALLS AND PIERS TO CONSTRUCTION JOINT ELEVATION.
	7. FURNISH ALL LABOR AND MATERIALS, EXCEPT ROLLERS, TO ERECT FALSEWORK FOR ROLLING BRIDGE IN PLACE FROM BOTH SIDES OF RAILWAY.
	8. ERECT SUPERSTRUCTURE ON BLOCKING ON ROLLING-IN BENTS.
9. REMOVE PORTION OF TEMPORARY TRESTLE NECESSARY TO ROLL SPANS INTO POSITION.	
10. PLACE ROLLERS UNDER SPANS ON ROLLING-IN BENTS AND ROLL SPANS INTO POSITION.	
11. PLACE TIMBER FALSEWORK STRINGERS AT ENDS OF SPANS AFTER SPANS ARE ROLLED IN.	
	12. AFTER RAILWAY COMPANY HAS ROLLED SUPERSTRUCTURE INTO POSITION, SOLDER COPPER DAMS IN JOINTS BETWEEN SUPERSTRUCTURE AND ABUTMENTS AND BETWEEN SLABS AND PLACE PROTECTION ON JOINTS.
	13. REMOVE PORTION OF FALSEWORK BENTS LEFT IN STRUCTURE BETWEEN ABUTMENTS AFTER SUPERSTRUCTURE HAS BEEN ROLLED IN PLACE.
	14. CONSTRUCT ABUTMENT WINGWALLS AND PLACE ABUTMENT AND PIER CONCRETE ABOVE CONSTRUCTION JOINT.
	15. REMOVE ROLLING-IN BENT FALSEWORK.
	16. INSTALL ABUTMENT PIPE DRAINS AND WATERPROOFING AND BACKFILL TO BOTTOM OF FALSEWORK STRINGERS
17. BACKFILL FROM BOTTOM OF TIMBER STRINGERS AND REMOVE PORTION OF TRESTLE NECESSARY TO PLACE BALLAST AND TRACK.	
18. FURNISH AND PLACE BALLAST, TRACK AND INSIDE GUARD RAIL.	

DESIGN: A.R.E.A. SPECIFICATIONS FOR STEEL RAILWAY BRIDGES DATED 1964, A.R.E.A. SPECIFICATIONS FOR CONCRETE AND REINFORCED CONCRETE RAILWAY BRIDGES AND OTHER STRUCTURES DATED 1962, AND A.R.E.A. SPECIFICATIONS FOR THE DESIGN OF CONTINUOUS STEEL RAILWAY BRIDGES DATED 1962.

DESIGN LOADING COOPER, E-72, WITH STEAM IMPACT
CONCRETE, CLASS C : BASIC UNIT STRESS - 1,333 PSI SUPERSTRUCTURE
CONCRETE, CLASS C : BASIC UNIT STRESS - 1,133 PSI SUBSTRUCTURE
STRUCTURAL STEEL: ASTM A36, BASIC UNIT STRESS - 20,000 PSI*
REINFORCING STEEL: ASTM, A515, A516, A517 , DEFORMED, INTERMEDIATE OR HARD GRADE, BASIC UNIT STRESS - 20,000 PSI

CONSTRUCTION: STATE OF OHIO, DEPARTMENT OF HIGHWAYS, CONSTRUCTION AND MATERIAL SPECIFICATIONS, DATED JANUARY 1, 1969

REFERENCE SHALL BE MADE TO STANDARD DRAWING BR-1-65 , REVISED NOV. 24, 1965, SUPPLEMENTAL SPECIFICATIONS 808 DATED 1-1-69, 809 & 811 BOTH DATED 1-1-69, 810 DATED 1-1-69

BENCH MARK: CHISELED SQUARE IN WEST END OF N.W. WING WALL C&O BRIDGE OVER USR 35 AND 50.438 FEET RIGHT OF STATION 1366+26 (EAST BOUND) ELEVATION = 635.92, TO STATE DATUM.

DETAIL DRAWINGS: THE RAILWAY COMPANY SHALL APPROVE AND BE FURNISHED A COMPLETE SET OF FABRICATION STEEL DRAWINGS IN INK ON TRACING CLOTH OR CLOTH REPRODUCTIONS. (INCLUDED WITH ITEM 810 FOR PAYMENT)

POROUS BACKFILL: 2 FEET THICK SHALL EXTEND UP TO THE RAILROAD BALLAST AND TO THE SURFACE OF EARTH SHOULDERS, AND OUTWARD TO THE ENDS OF THE WING WALLS AND SURFACE OF THE EMBANKMENT SLOPES. THE POROUS BACKFILL SHALL EXTEND DOWN TO THE FLOW LINE OF THE 8" DIAMETER, PERFORATED, BITUMINOUS COATED, CORRUGATED METAL PIPE ABUTMENT DRAIN.

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 TEMPORARY TRESTLES OR ROLLING-IN-BENTS SHALL BE SUBMITTED TO THE DIRECTOR FOR APPROVAL BY THE DEPARTMENT OF HIGHWAYS AND BY THE RAILWAY COMPANY. SHEETING AND BRACING PLANS ARE TO BE PREPARED BY A PROFESSIONAL ENGINEER AND SHALL BEAR HIS SEAL & SIGNATURE. ONE COPY OF HIS DESIGN COMPUTATIONS SHALL ACCOMPANY THE PLANS SUBMITTED FOR APPROVAL.

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 CO-OPERATE WITH THE RAILROAD IN THE RELOCATION OF THESE LINES. THE COST OF THE RELOCATION SHALL BE INCLUDED IN THE RAILROAD FORCE ACCOUNT WORK.

PILES SHALL BE DRIVEN TO A MINIMUM BEARING CAPACITY OF 45 TONS PER PILE FOR THE ABUTMENTS AND 43 TONS PER PILE FOR THE PIER.

STAINLESS STEEL FASTENERS shall be properly passivated to remove surface impurities and shall be furnished with a lustrous finish.

WATERPROOFING: TYPE "D" WATERPROOFING CONSISTS OF FOUR LAYERS OF ASPHALTIC FELT, ONE MIDDLE LAYER OF ASPHALTIC TREATED FABRIC AND SIX MOPPINGS OF ASPHALTIC TYPE "D" WATERPROOFING AND THREE INCH REINFORCED CONCRETE PROTECTION SHALL COMPLY WITH SUPPLEMENTAL SPECIFICATION NO. 809. TYPE "A" WATERPROOFING SHALL BE USED FOR DAMPPROOFING THE BACKS OF THE ABUTMENTS, WINGWALLS AND ENDS OF SUPERSTRUCTURE SLAB EXCEPT SURFACES WHERE PREMOLDED SEALING STRIP IS USED. IT SHALL COVER SURFACES FROM TOP OF FOOTING TO FINISHED EARTH LINE OR TO THE LIMITS OF MEMBRANE WATERPROOFING.

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 SUPERVISIONS OF THE RAILROAD COMPANY, NOTHING IN SEC. E-2.04, E-2.08 OR G-8.07 OF THE SPECIFICATIONS SHALL BE CONSTRUED TO HOLD THE CONTRACTOR LIABLE FOR ALIGNING AND RESURFACING THE RAILROAD TRACKS.

EXCAVATION QUANTITY CALCULATIONS: THE LIMITS OF THE 503 UNCLASSIFIED EXCAVATION ARE SHOWN ON THE "CHORD LAYOUT AND EXCAVATION PLAN SHEET".

PLASTIC CEMENT: SHALL MEET THE REQUIREMENTS GIVEN ON PAGE 29-2-6 1935 A.R.E.A. MANUAL. (REFER TO SUPPLEMENTAL SPECIFICATION NO. 809).

DESIGN DATA

Cooper's E-72 Loading and Steam Impact.

BEAMS:

Center of Abut. Brg. to Center of Pier Brg. - 46'-6⅞" (two spans continuous)
Beam Spacing - 2'-5½" c/c.
D.L. Camber - 0" Beams to be fabricated with convex flange up.

	Negative Moment	Positive Moment	End Shear	Reaction
DEAD LOAD	337.5$^{k'}$	189.0$^{k'}$	36.1^{k}	72.2^{k}
LIVE LOAD *	402.3	349.7	46.8	79.9
IMPACT	286.1	248.1	33.4	50.1
CENTRIFUGAL FORCE	184.0	160.0	22.0	36.6
	1,209.9$^{k'}$	946.8$^{k'}$	138.3^{k}	238.8^{k}

* INCLUDES ECCENTRICITY AND TILT

ALLOW $f_c = 20.0 - 6\left(\frac{7.75 \times 12}{12.117}\right) = 19.65$ K/in²

S.M. REQ'D. NEG. MOM. $= \frac{1209.9 \times 12}{19.65} = 739$ in³

SM 36 WF 194 = 663.6 in³
2-11"x⅜" PS = 191.4
SM FURNISHED = 855.0 in³

SM REQ'D. POS. MOM. $= \frac{946.8 \times 12}{19.65} = 579.0$ in³

SM FURNISHED (36 WF 194) = 663.6 in³

WEB AREA REQ'D. $= \frac{138.3}{12.5} = 11.06$ in²

WEB AREA FURNISHED = 36.48 x 0.770 = 28.09 in²
ALLOW. DIAGONAL TENSION = 20. K/in²
MAX. DIAGONAL TENSION = 17.6 K/in²

C&O RY. BRIDGE # F484

ELMER S. BARRETT ASSOCIATES
Consulting Engineers
245-249 S. Paint Street Chillicothe, Ohio

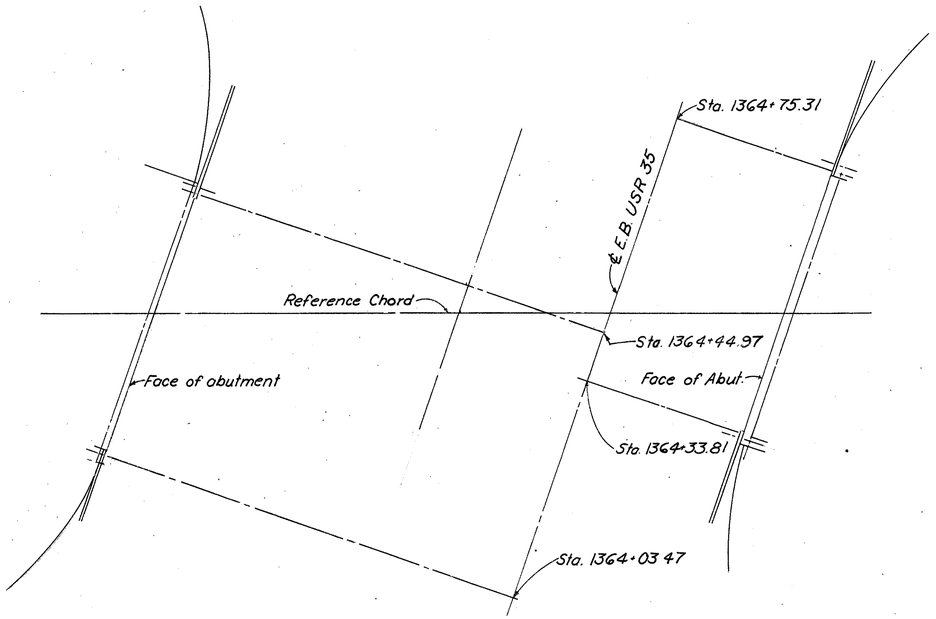
GENERAL NOTES & DESIGN DATA
BRIDGE NO. ROS-35-2584
USR 35 UNDER C&O RY.
ROSS COUNTY U.S.R. 35
STA. 1364+45.80

SCALE	DATE
DRAWN: KDS	TRACED: DESIGNED: CHECKED: REVISED: 6/8/65 APPROVED:

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

153 / 225

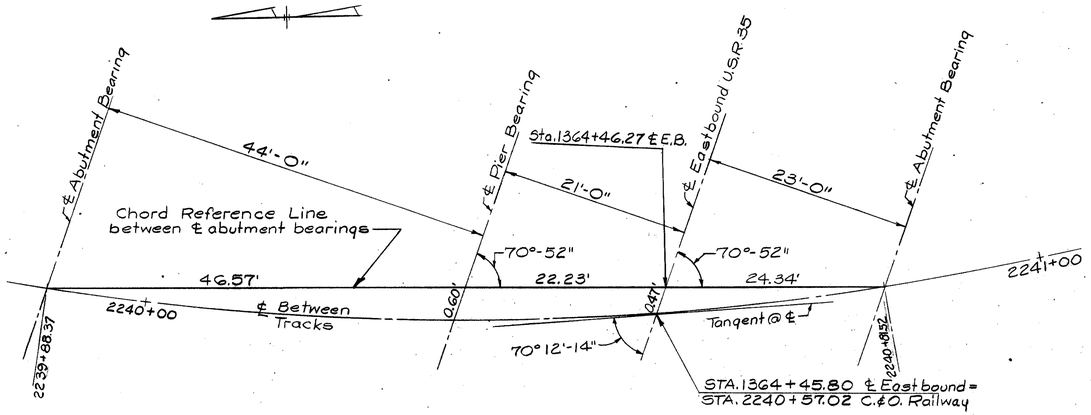
ROSS COUNTY
ROS-35-25.05



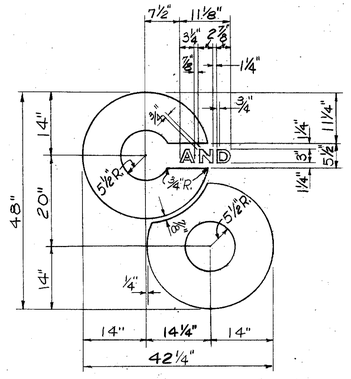
GUARD RAIL ATTACHMENTS

~~Anchorage is to consist of two $\frac{3}{4}$"×4" bolts on 6" pitch anchored to obutment or wall with suitable expandable anchors.~~
Cost to be included in unit price bid for 606 Guard Rail, Type S.

Anchorage is to be made using Connection Bracket as shown on sheet 16.

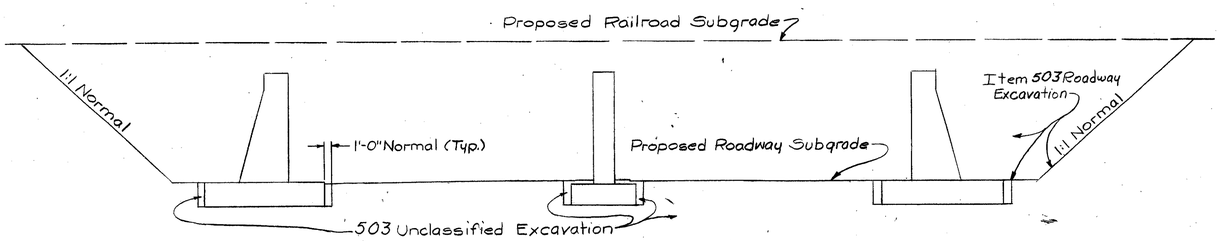


CHORD LAYOUT



DETAIL OF C. & O. RY. MONOGRAM

To be painted black by Contractor on the web of the fascia girder. (For location see General Plan and Elevation) The cost of painting monogram shall be included with Item 514 Field painting of Structural Steel.



STRUCTURE EXCAVATION LIMITS

C&O RY. BRIDGE # F484

ELMER S. BARRETT ASSOCIATES
Consulting Engineers
245-249 S. Paint Street — Chillicothe, Ohio

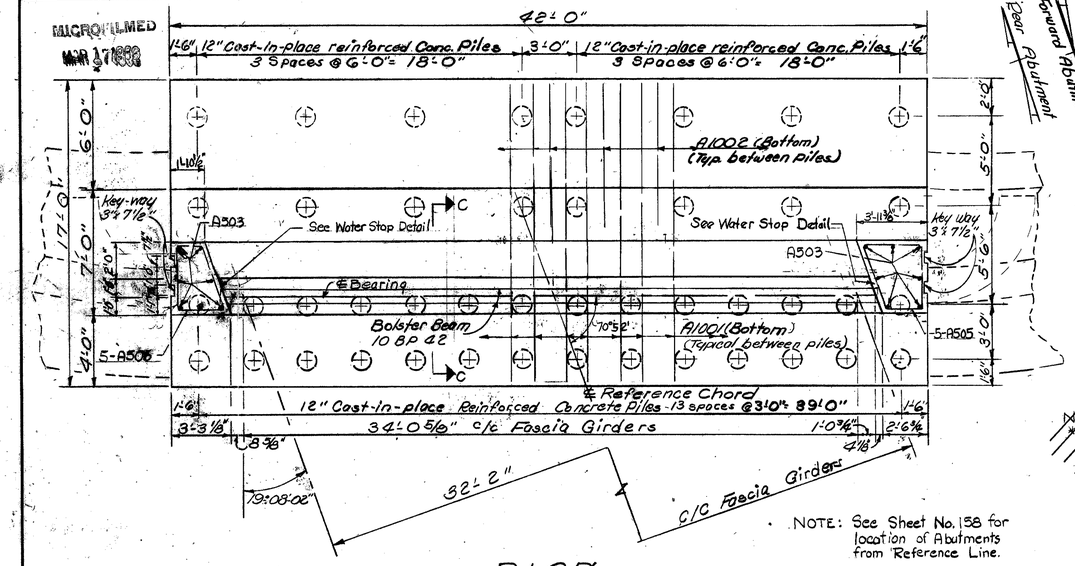
CHORD LAYOUT AND STRUCTURE EXCAVATION LIMITS
BRIDGE NO. ROS-35-2584
U.S.R. 35 UNDER C. & O. RY.
ROSS COUNTY — U.S.R. 35
STA. 1364+45.80

SCALE	DATE					
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	WORKED
W.E.	W.D.J.		K.W.B.	W.K.	6/8/65	1965

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

154/225

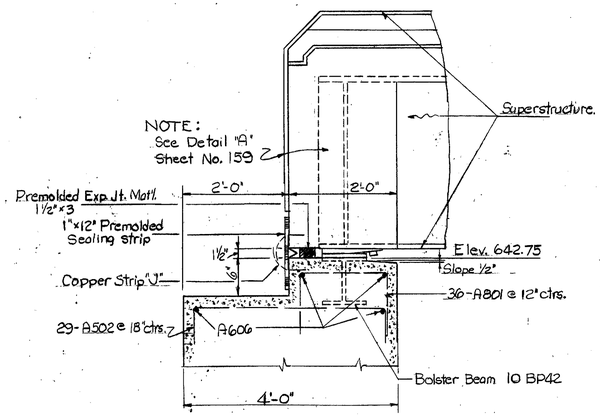
ROSS COUNTY
ROS-35-25.05



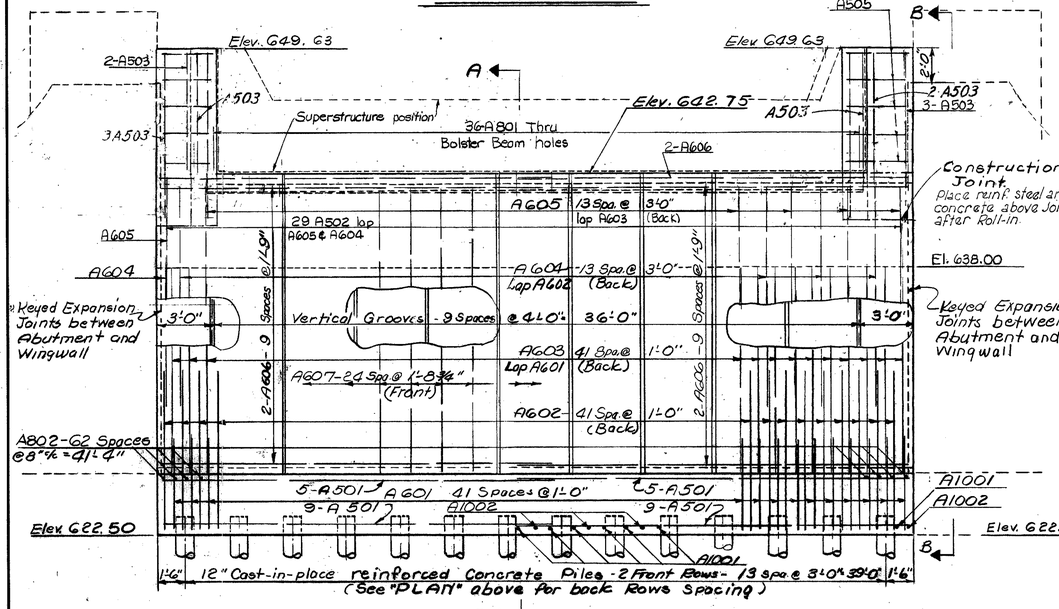
PLAN

NOTE: See Sheet No. 158 for location of Abutments from Reference Line.

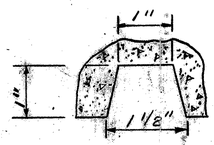
NOTE:
* These bars to be butt welded. A507 bars extend 1'-3" above construction joint. Weld A503 & A504 to A507 after rolling in.



SECTION "C"-"C"

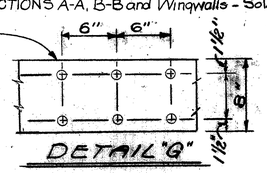


ELEVATION

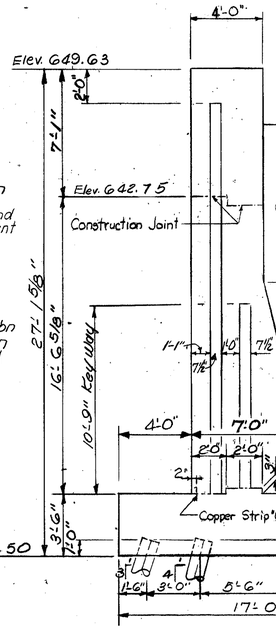


TYPICAL SECTION THRU VERTICAL GROOVE

16 oz. x 8" Wide Copper Strip with 1¼" ϕ holes @ 6" c/c. (For Location see SECTIONS A-A, B-B and Wingwalls - Solder Joints.)

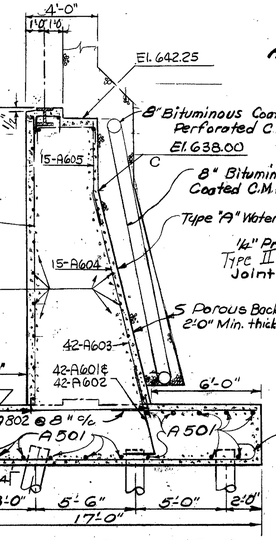


DETAIL "Q"

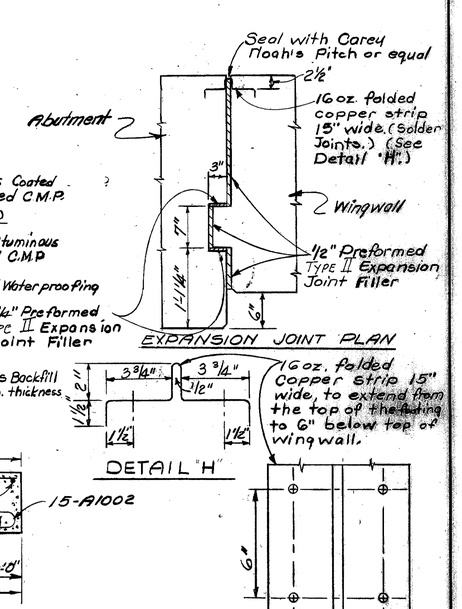


VIEW B-B

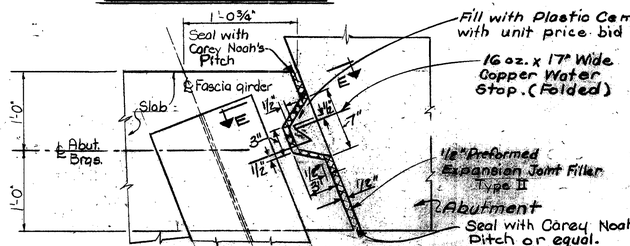
NOTE Reinforcing steel to be 2" clear in abutment walls and 3" clear in footing.



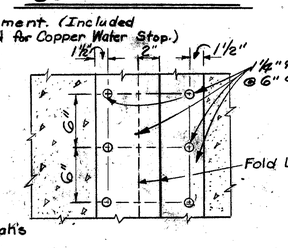
SECTION A-A



EXPANSION JOINT DETAILS



WATER STOP DETAIL



SECTION E-E

ELMER S. BARRETT ASSOCIATES
Consulting Engineers
245-249 S. Paint Street — Chillicothe, Ohio

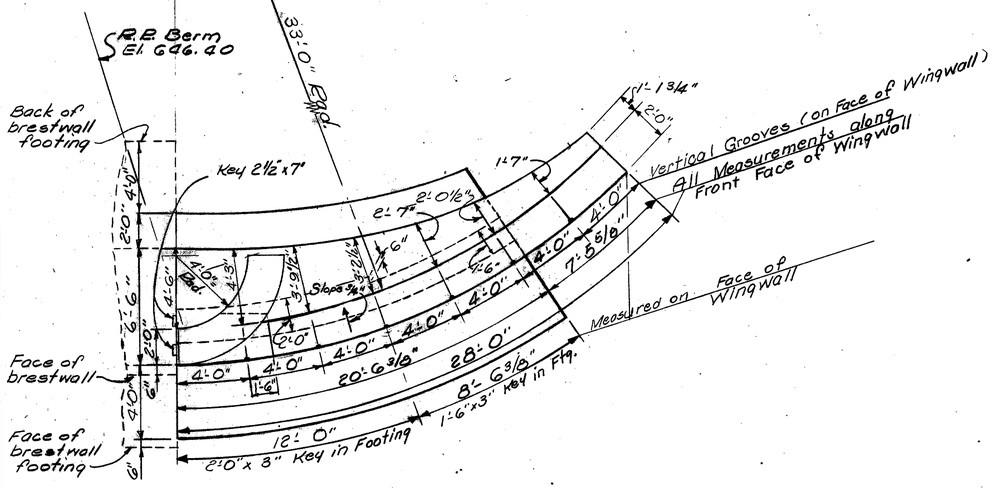
ABUTMENT DETAILS
BRIDGE NO. ROS-35-2[illegible]
U.S.R. 35 UNDER C. & O. R.Y.
ROSS COUNTY U.S.R. 35
STA 1364+45.80

SCALE	DATE					
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED		REVISED
W.I.C.	P.J.M.		J.W.H.	W.I.C.	6/8/65	

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

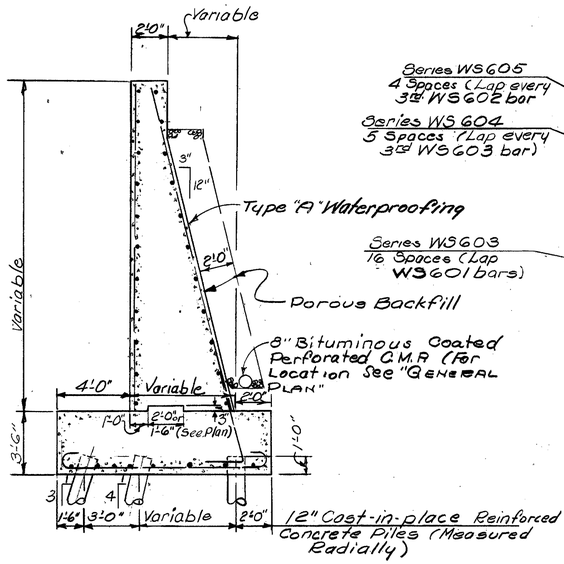
185
225

ROSS COUNTY
ROS-35-25.05

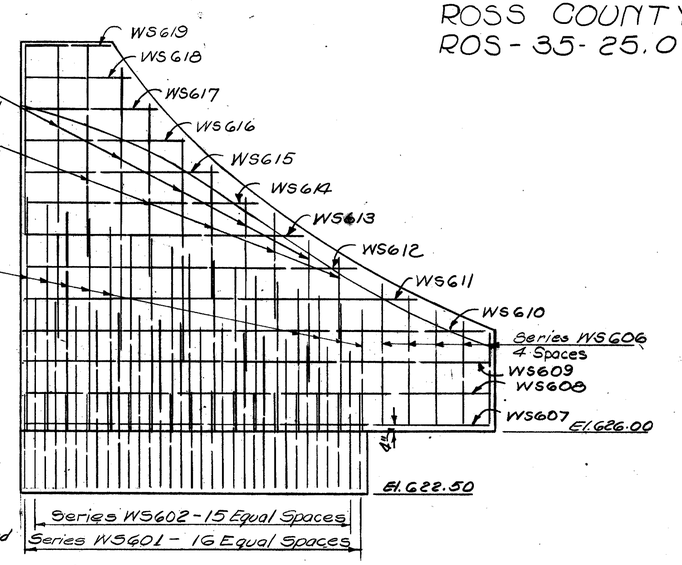


PLAN- NORTHEAST AND SOUTHWEST WINGWALL

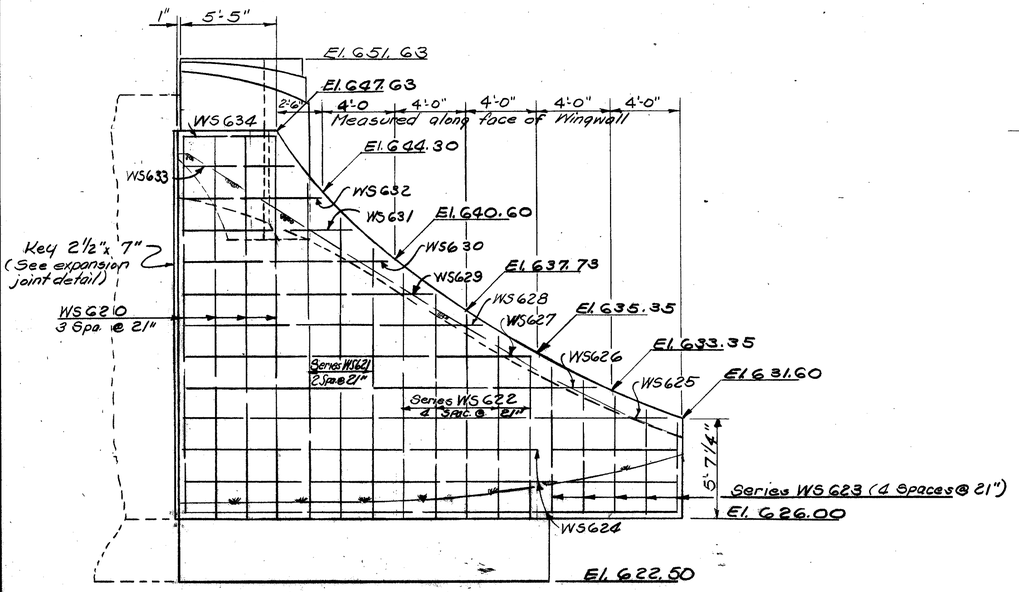
MICROFILMED
MAR 17 1982



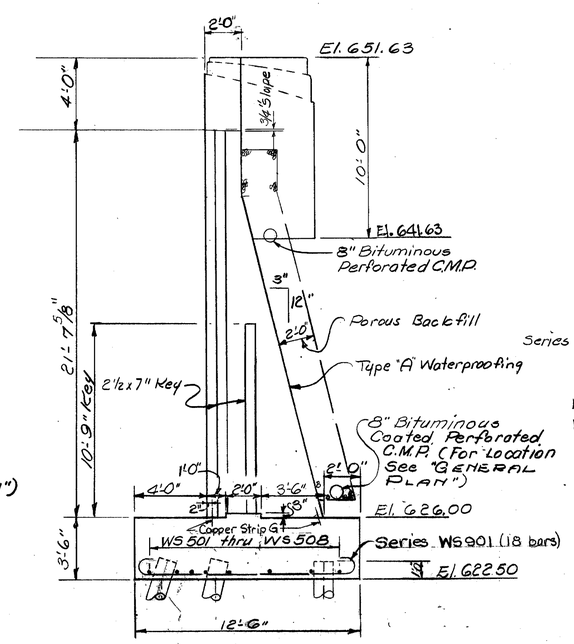
TYPICAL RADIAL SECTION



DEVELOPED REAR ELEVATION
(STEEL IN BACK OF WINGWALL)

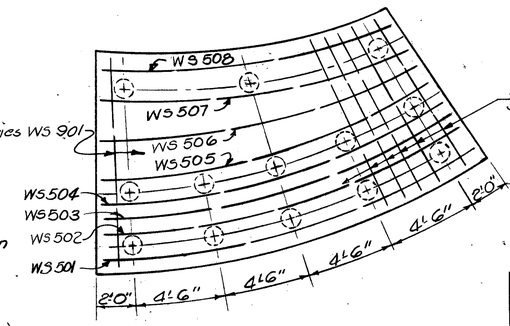


DEVELOPED FRONT ELEVATION
(STEEL IN FRONT FACE OF WINGWALL)



END ELEVATION

Note: For "END POST DETAILS" See "Northwest and Southeast Wingwall Details."



FOOTING PLAN

C&O RY. BRIDGE # F484

ELMER S. BARRETT ASSOCIATES
Consulting Engineers
245-249 S. Paint Street — Chillicothe, Ohio

NORTHEAST AND SOUTHWEST WINGWALL DETAILS
BRIDGE NO. ROS-35-2584
U.S.R. 35 UNDER C. & O. RY.
ROSS COUNTY — U.S.R. 35
STA. 1364+45.80

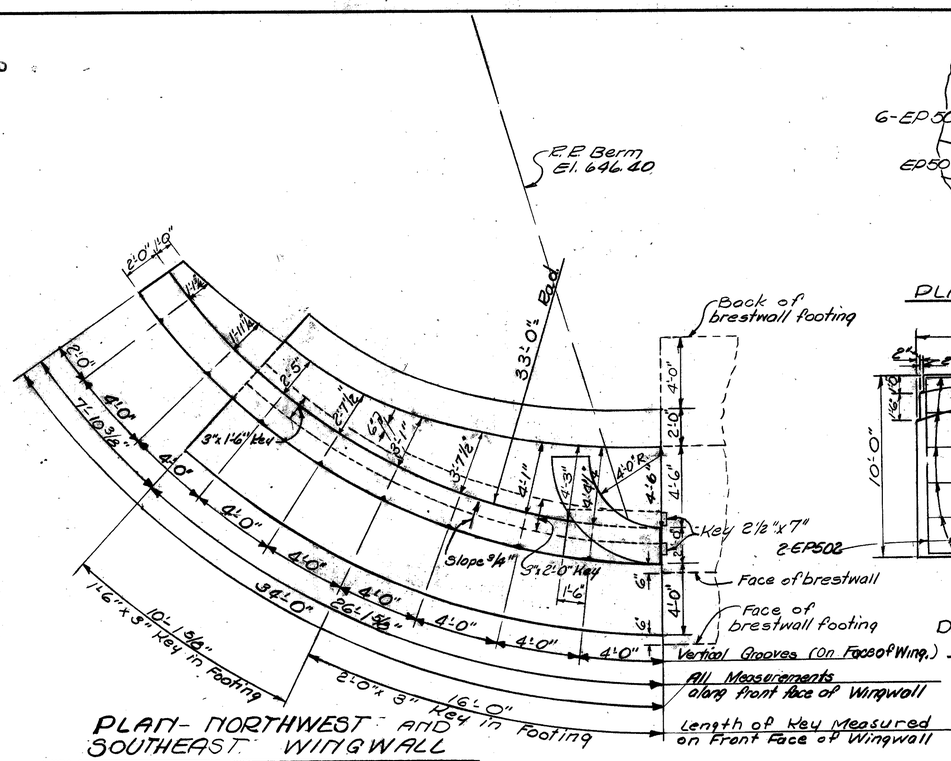
SCALE	DATE

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
W.I.C.	P.J.M.		J.W.H.	W.I.C.	6/8/65	

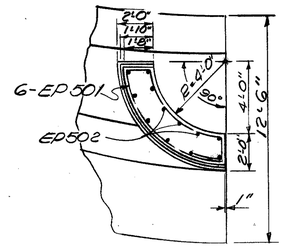
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

156/225

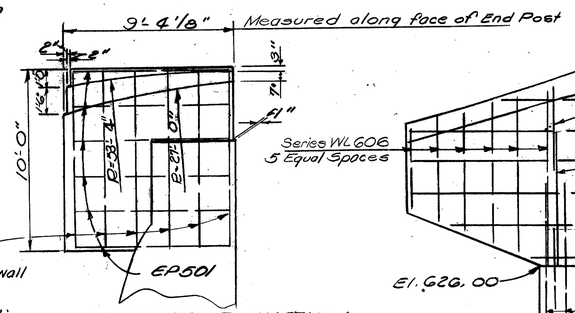
ROSS COUNTY
ROS-35-25.05



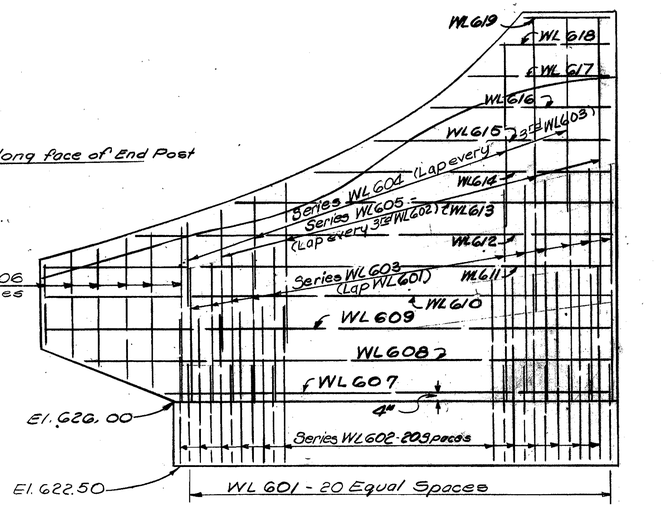
PLAN- NORTHWEST AND SOUTHEAST WINGWALL



PLAN- END POST

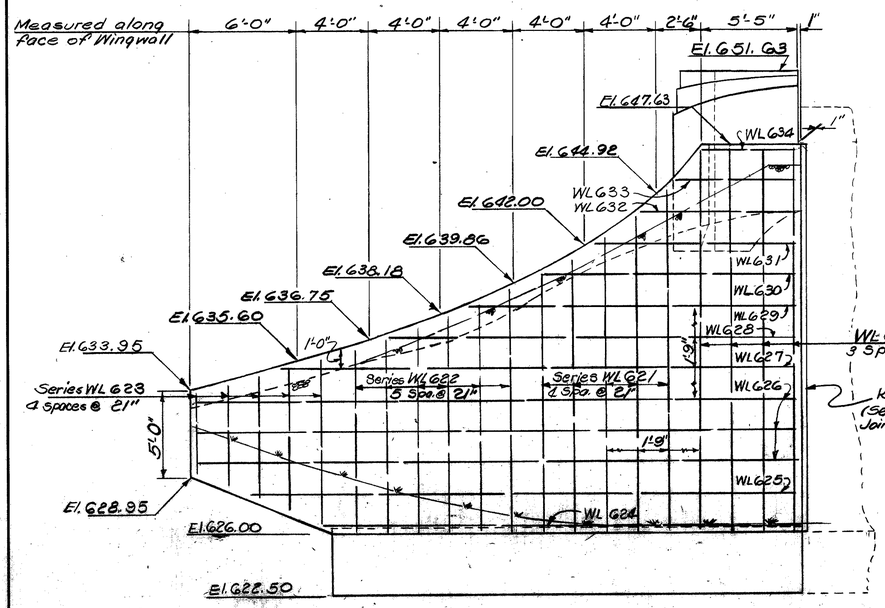


DEVELOPED ELEVATION OF END POST

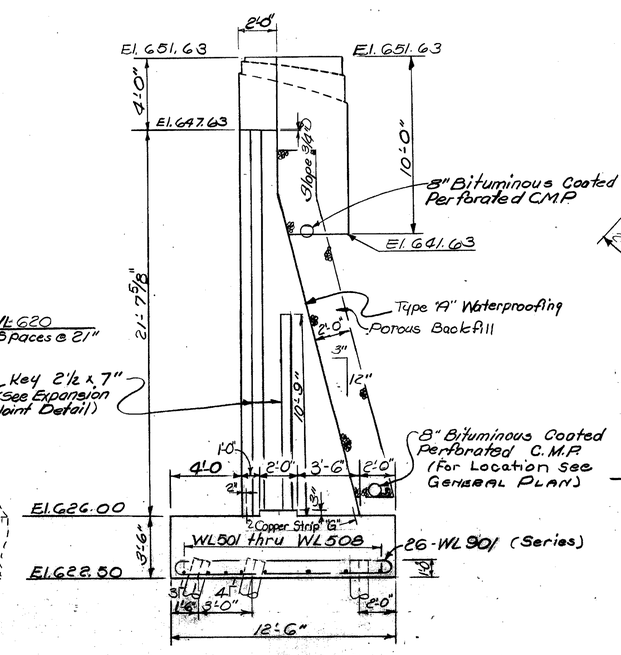


DEVELOPED REAR ELEVATION (STEEL IN BACK OF WINGWALL)

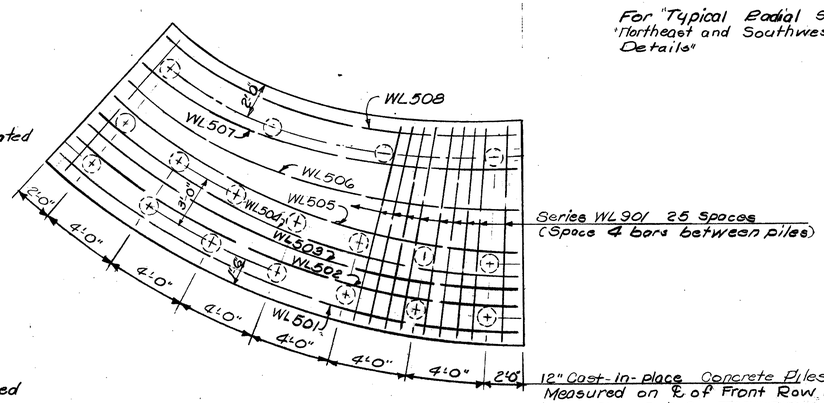
Note:
Reinforcing steel to be 2" clear in Wingwall above footings, and 3" clear in footings.



DEVELOPED FRONT ELEVATION (STEEL IN FRONT FACE OF WINGWALL)



END ELEVATION



FOOTING PLAN

For "Typical Radial Section" see "Northeast and Southwest Wingwall Details"

C&O RY. BRIDGE #F484

ELMER S. BARRETT ASSOCIATES
Consulting Engineers
245-249 S. Paint Street — Chillicothe, Ohio

NORTHWEST AND SOUTHEAST WINGWALL DETAILS
BRIDGE NO. ROS-35-2584
U.S.R. 35 UNDER C. & O. RY.
ROSS COUNTY — U.S.R. 35
STA. 1364+45.80

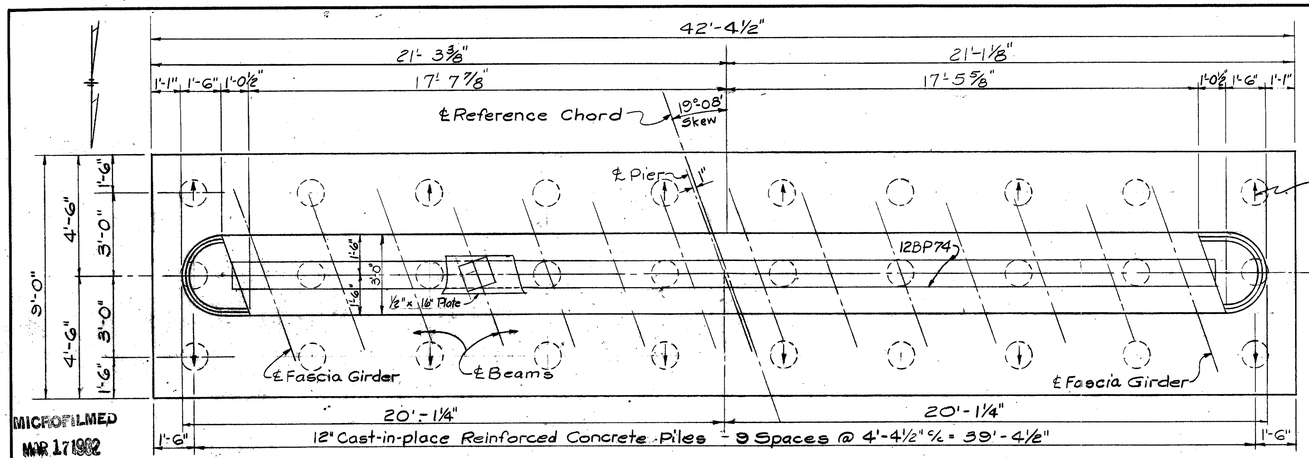
SCALE				DATE	
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE / REVISED
W.I.C.	P.J.M.		JWH		6/8/65

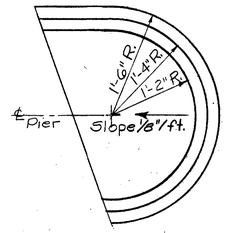
FED. RD. DIVISION	STATE	PROJECT		
2	OHIO			

157/225

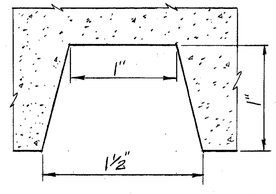
ROSS COUNTY
ROS-35-25,05

PIER PLAN





VIEW "F"-"F"



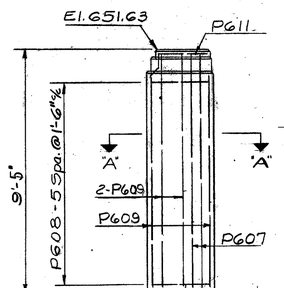
VERTICAL GROOVE DETAIL

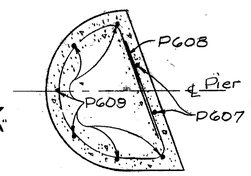
Note: Reinforcing steel shall be 2" clear except where otherwise shown.

LEGEND

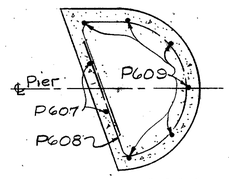
⊕ - Denotes direction of batter

N.S.- Near Side
F.S- Far Side

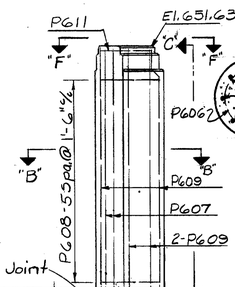


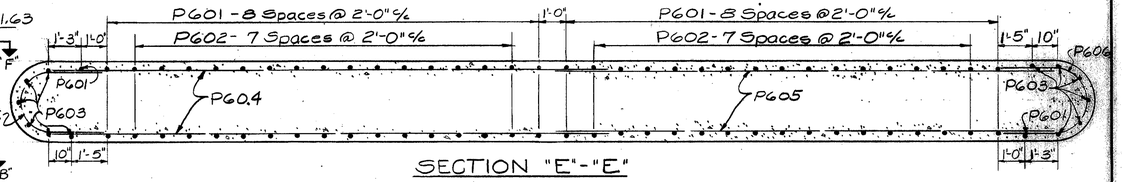


SECTION "A"-"A"

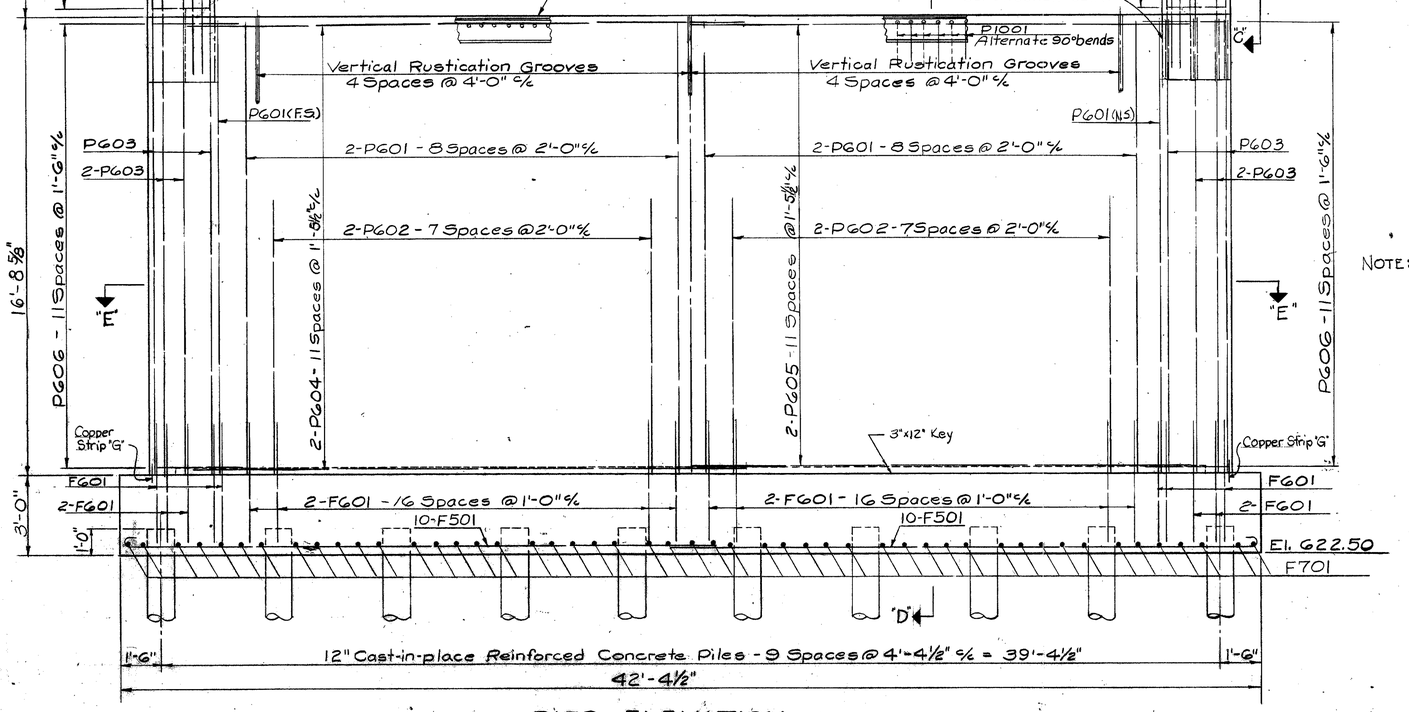


SECTION "B"-"B"

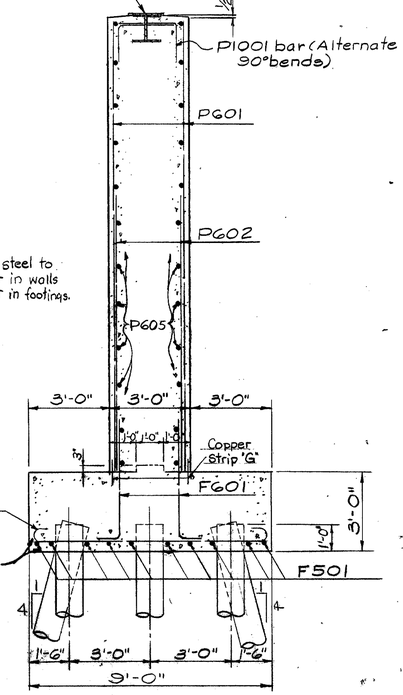




SECTION "E"-"E"

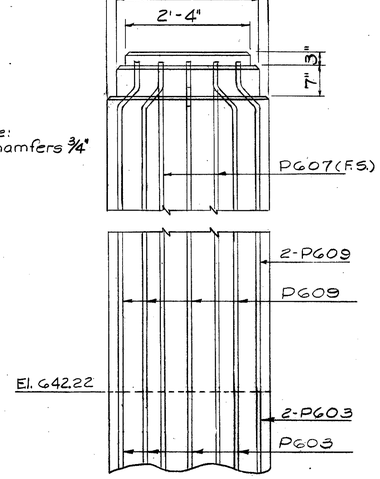


PIER ELEVATION



NOTE: Reinforcing steel to be 2" Clear in walls and 3" Clear in footings.

SECTION "D"-"D"



VIEW "C"-"C"

C&O RY. BRIDGE # F484

ELMER S. BARRETT ASSOCIATES
Consulting Engineers
245-249 S. Paint Street — Chillicothe, Ohio

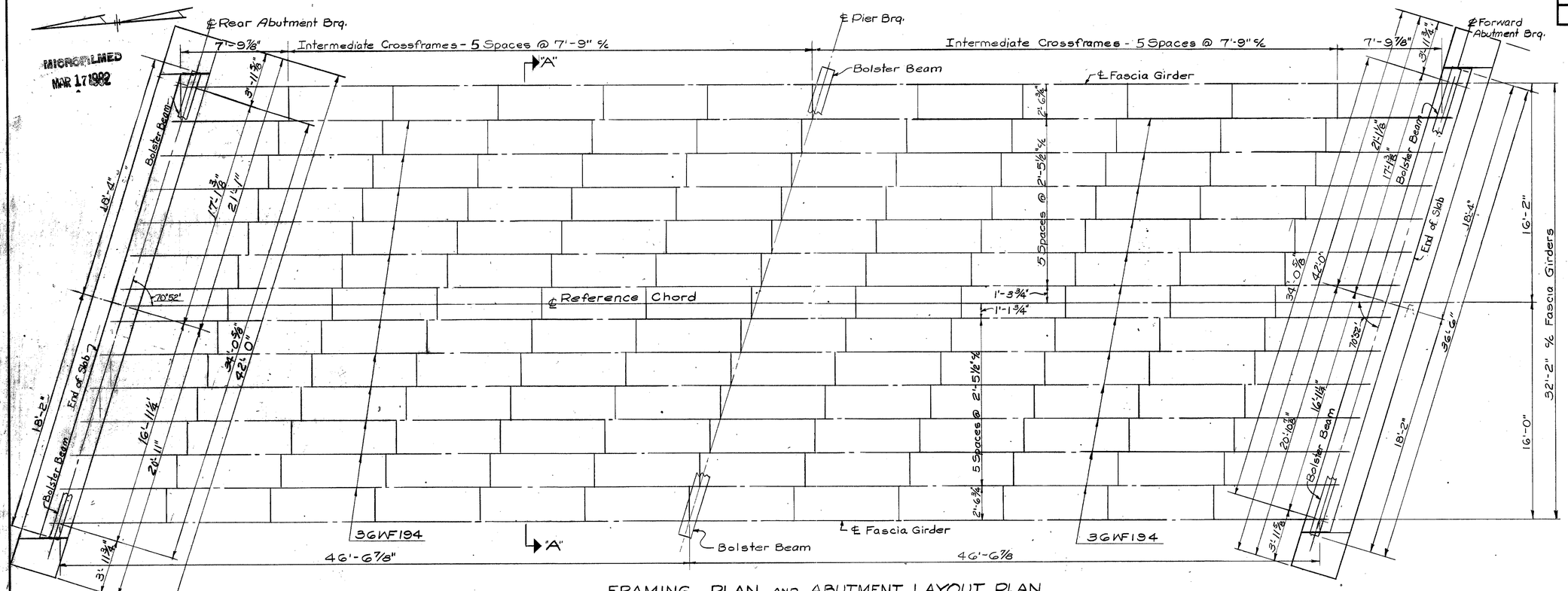
PIER DETAILS
BRIDGE NO. ROS-35-2584
U.S.R. 35 UNDER C.&O. RY.
ROSS COUNTY — U.S.R.35
STA. 1364+45.80

SCALE	DATE					
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
F.H.S.	W.D.J.		K.D.N.	M.L.	6/8/66	

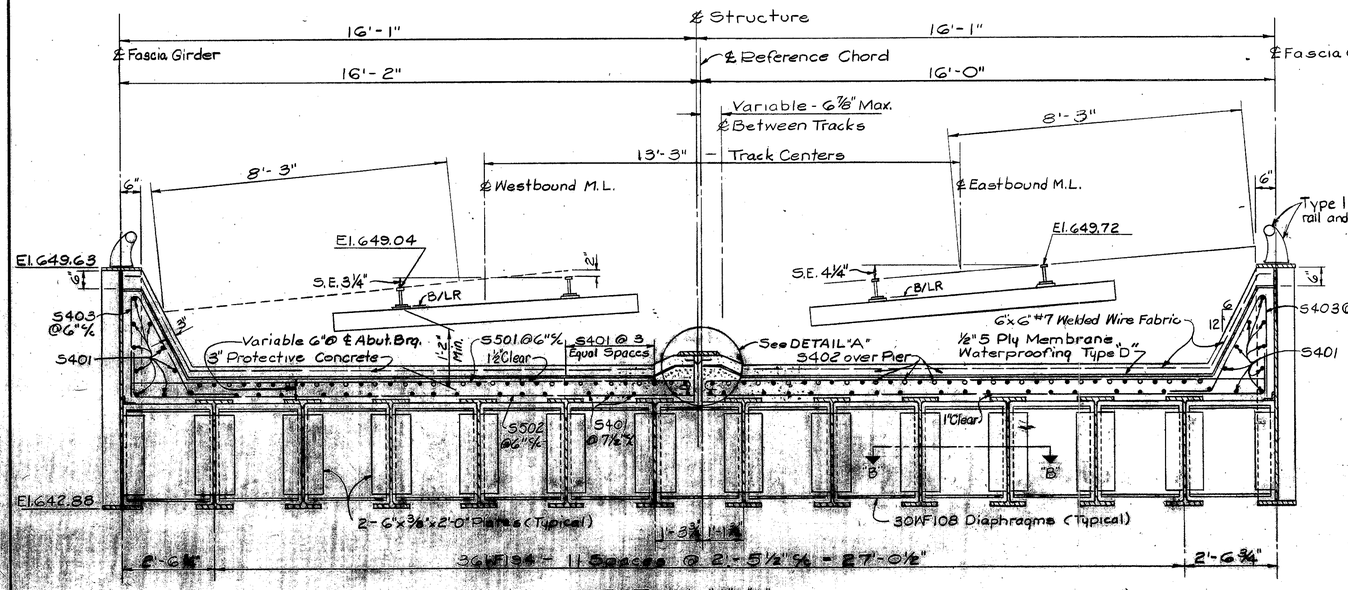
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

158
225

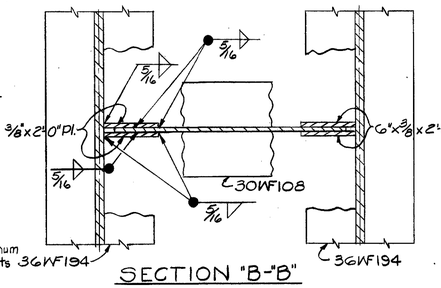
ROSS COUNTY
ROS-35-25.05



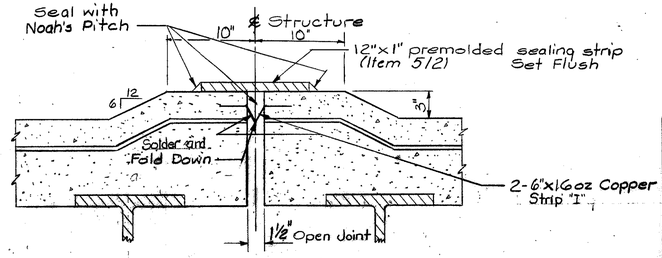
FRAMING PLAN AND ABUTMENT LAYOUT PLAN



SECTION "A-A"



SECTION "B-B"



DETAIL "A"

C&O RY. BRIDGE #F484

ELMER S. BARRETT ASSOCIATES
Consulting Engineers
245-249 S. Paint Street — Chillicothe, Ohio

SUPERSTRUCTURE FRAMING DETAILS AND ABUTMENT LAYOUT PLAN
BRIDGE NO. ROS-35-2584
U.S.R. 35 UNDER C.&O. R.Y.
ROSS COUNTY — U.S.R. 35
STA. 1364+45.80

SCALE	DATE					
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
K.W.H.	W.D.J.		M.W.C.	M.W.C.	6/18/65	

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

ROSS COUNTY
ROS-35-25.05

95'-2⅞"

℄ Abutment Bearing "A"

℄ Pier Brg.

S401- @ 7½" ℄ between Longitudinal Beams

℄ Abutment Bearing

℄ Fascia Girder

S502 - 182 Spaces @ 6" ℄

Slope Down 12" @ ℄ Pier Brg. to 6" @ ℄ Abut. Brg. (See Section "B"-"B")

3GWF194

BOTTOM STEEL

1"x12" Premolded Sealing Strip

1½" Open Joint

℄ Structure

Slope Down 12" @ ℄ Pier Brg. to 6" @ ℄ Abut. Brg. (See Section "B"-"B")

S501 - 182 Spaces @ 6" ℄

TOP STEEL

S401- 16 Equal Spaces

For Section "A"-"A" See Sheet No. 154

"A"

SLAB PLAN

16'-1"

16'-1"

½" Preformed Exp. Jt. Type II

℄ Fascia Girder

1'-0¾"

½"

3" Recess

El. 649.63

17" Folded Copper - See Water-Stop, Sheet No. 154

½" Preformed Expansion Jt. Type II

3-S407

3-S408

3-S409

3" Min. Reinforced Concrete Protection

½" 5 Ply Membrane Waterproofing Type "D"

16 oz. x 8" Copper Strip "G"

Type "A" Waterproofing

1"x12" Premolded Sealing Strip

2-9" Copper Strip "J" See Detail "A"

Abutment

1"x12" Premolded Sealing Strip

2-6" Copper Strip "I" See Detail "A"

1½" Open Joint

Seal with Noah's Pitch

VIEW "C"-"C"

6"

3" 3"

1¼" holes @ 6" ctrs.

COPPER STRIP "I"

9"

3" in concrete

COPPER STRIP "J"

1'-8"

16 oz. x 6" Copper Flashing "I"

℄ 1"x12" premolded sealing strip

Extend around end of Slab as shown

3"

Solder

6"x6" #7 Welded Wire Fabric

½"-5 Ply Membrane Waterproofing Type "D"

1½" Open Joint

SECTION "D"-"D"

Extend flashing around end of slab and solder to horizontal flashing between slab and abutment to form water-tight joint

Membrane Waterproofing

Pour diaphragm at end of slab prior to rolling in

Seal with Noah's pitch Copper Strip "J"

1"x12" Premolded sealing strip

Solder copper strips together and fold as shown. Cover with sealing strip.

1½"

DETAIL "A"

6" ℄ Brg.

℄ Pier Bearing

End ½" 5 Ply Membrane Waterproofing Type "D"

Elev. 649.63

1"x12" Premolded Sealing Strip (See Detail "A")

6"x8" Copper Flashing

½" 5 Ply Membrane Waterproofing Type "D"

3" Protective Concrete S501 @ 6" ℄

6"x6" No. 7 Welded Wire Fabric

16 oz. x 8" Copper Flashing (See Detail "G" Sheet No. 154)

S501

S502

S401

S502 @ 6" ℄

S406

S404 3 between each beam
S405 3 outside fascia girder
4 between center beams

3'-3⅜"

Note: S404 & S405 bars 2 required between each beam.

℄ Brg.

SECTION "B"-"B"

Skew 19°-08'

S401

S402

℄ Pier

3'-0" 10'-6" 10'-6" 3'-0"

DIAGRAM SHOWING STAGGER OF S402 BARS OVER PIER

C&O RY. BRIDGE # F484

ELMER S. BARRETT ASSOCIATES
Consulting Engineers
245-249 S. Paint Street Chillicothe, Ohio

SLAB DETAILS

BRIDGE NO. ROS-35-25.84
U.S.R. 35 UNDER C. & O. R.Y.

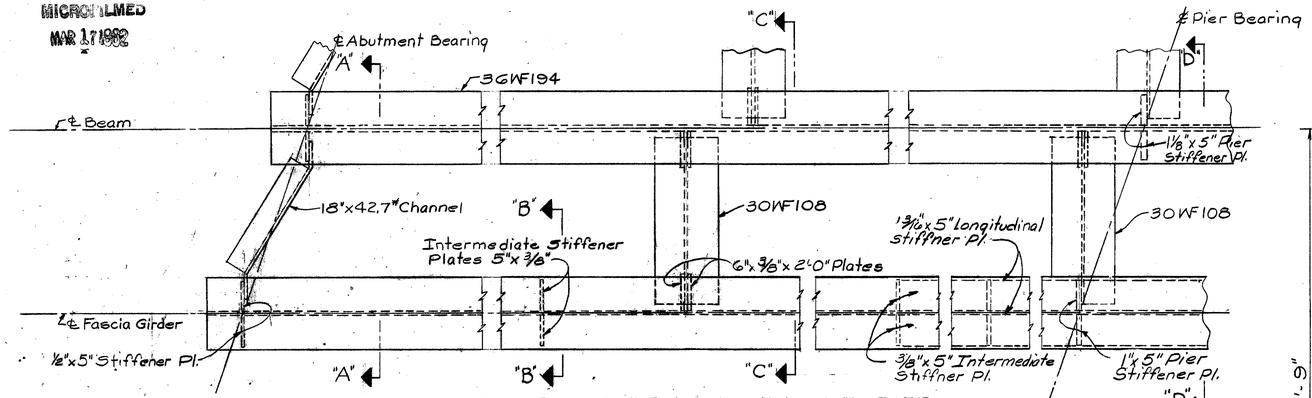
ROSS COUNTY U.S.R. 35
STA. 1364+43.80

SCALE	DATE					
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
K.W.B.	W.D.J.		[illegible]	[illegible]	6/8/65	

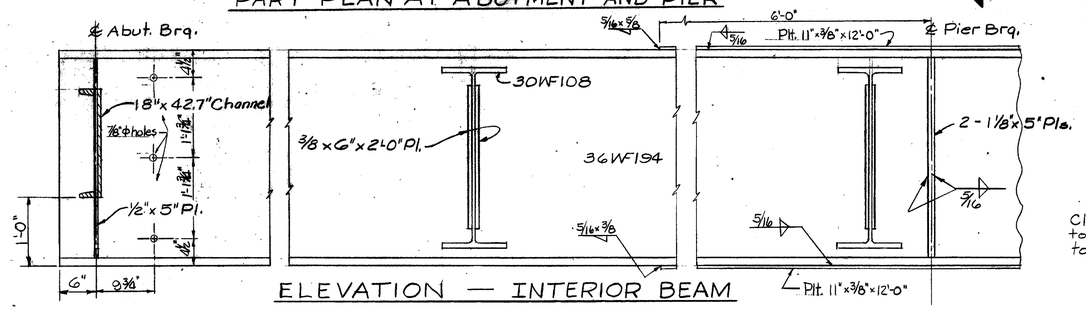
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

160
223

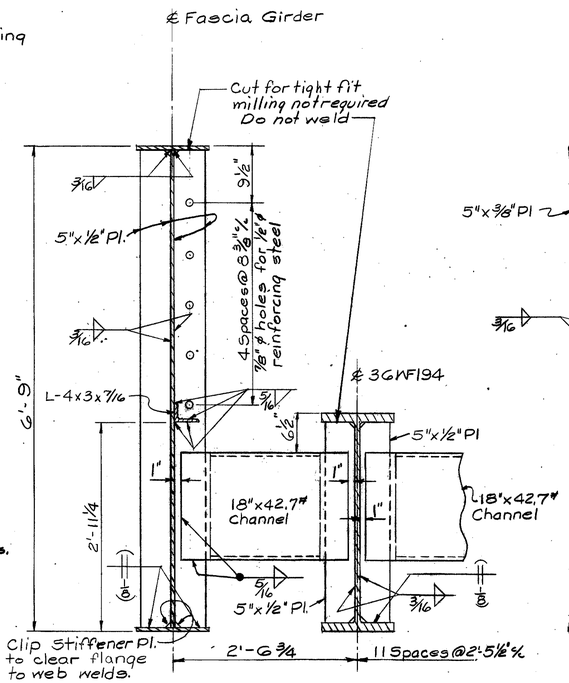
ROSS COUNTY
ROS-35-25.05



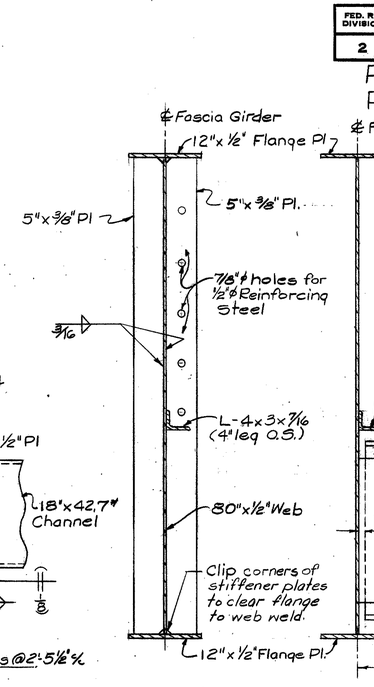
PART PLAN AT ABUTMENT AND PIER



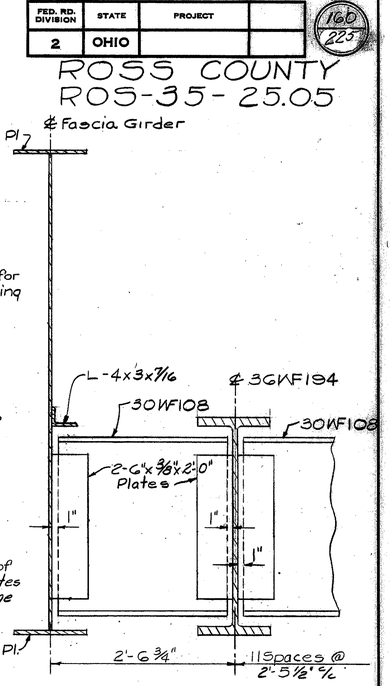
ELEVATION — INTERIOR BEAM



SECTION "A"-"A"



SECTION "B"-"B"

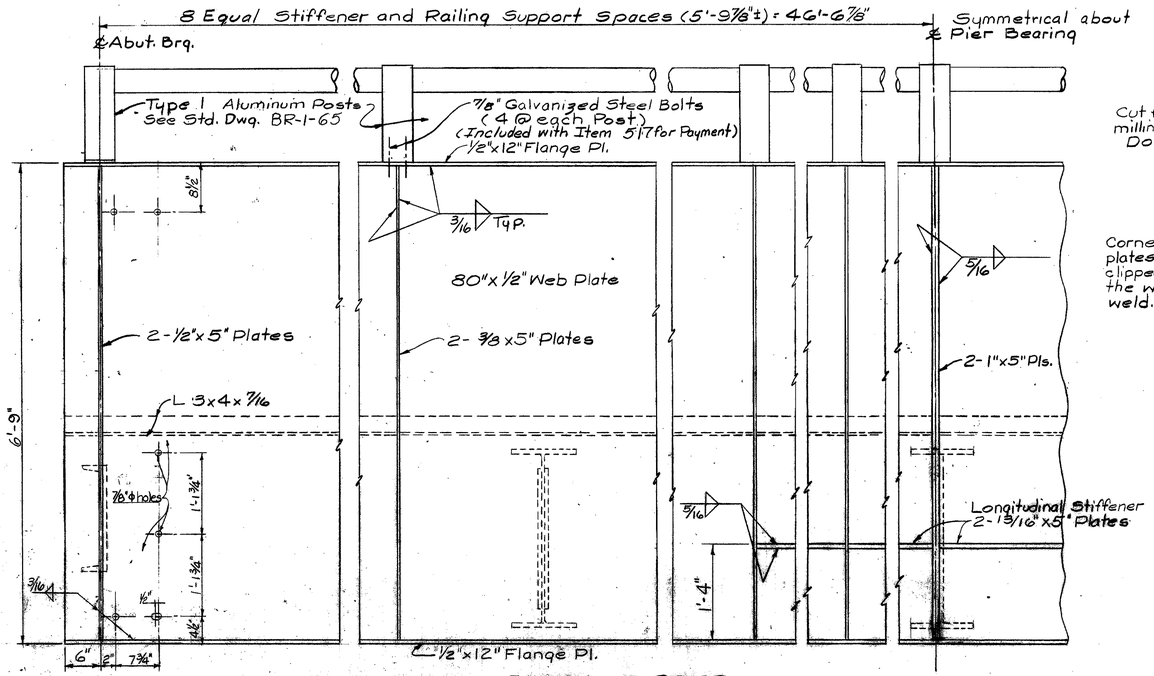


SECTION "C"-"C"

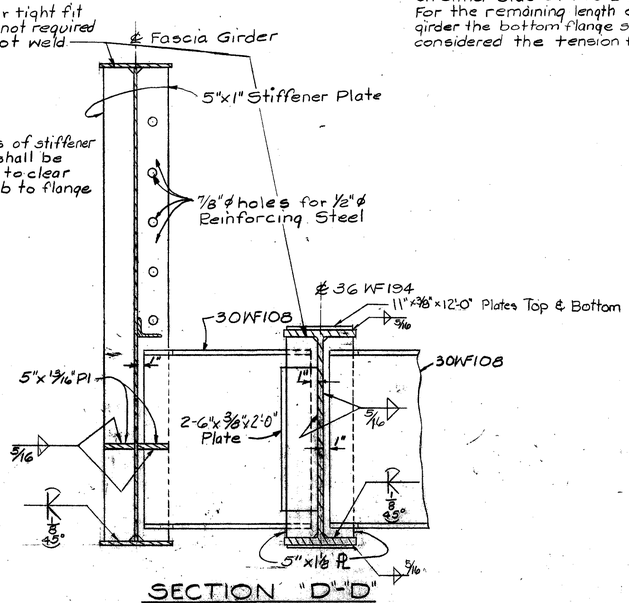
Intermediate stiffeners shall have contact bearing with the compression flange.

The top flange shall be considered the tension flange from 12'-0" on either side of the ℄ of Pier. For the remaining length of the girder the bottom flange shall be considered the tension flange.

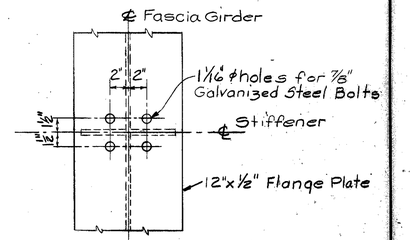
Note: For welding of 30WF108 See Section "B"-"B" Sheet No. 158



ELEVATION — FASCIA GIRDER



SECTION "D"-"D"



RAILING POST HOLES

C&O RY. BRIDGE # F484

ELMER S. BARRETT ASSOCIATES
Consulting Engineers
245-249 S. Paint Street — Chillicothe, Ohio

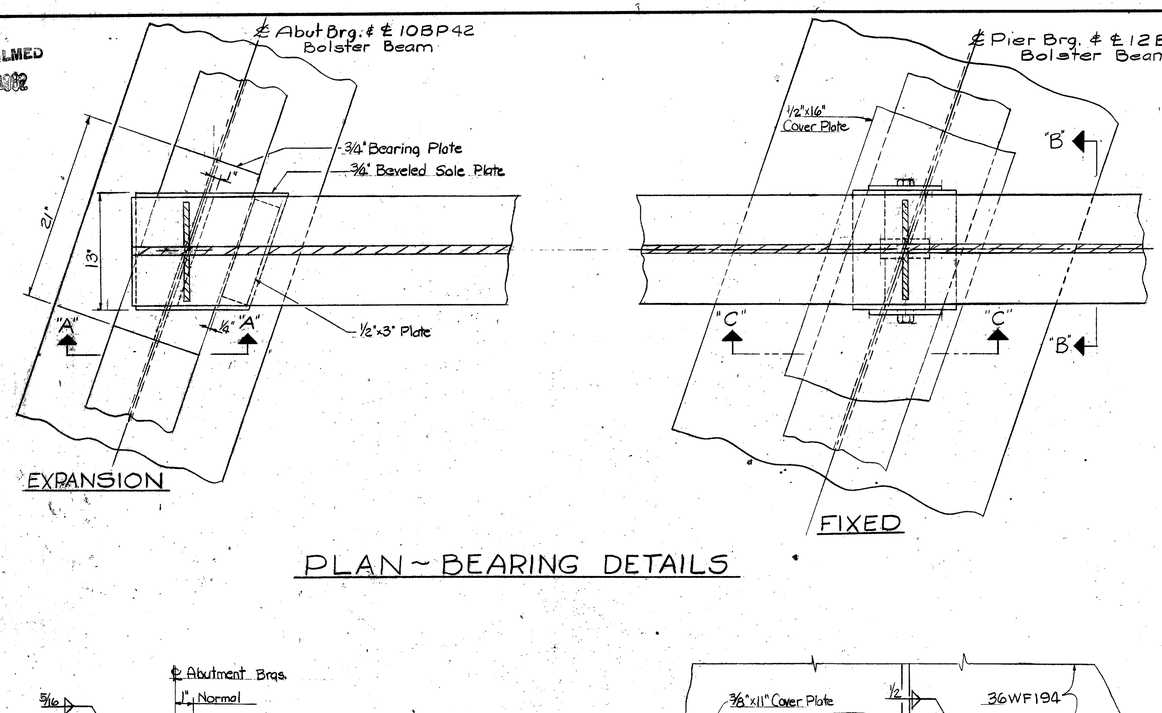
STEEL FRAMING
BRIDGE NO. ROS-35-2584
U.S.R. 35 UNDER C.&O. R.Y.
ROSS COUNTY — U.S.R. 35
STA. 1864+45.80

SCALE	DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	INSPECTED
		W.D.J.				6/8/68	

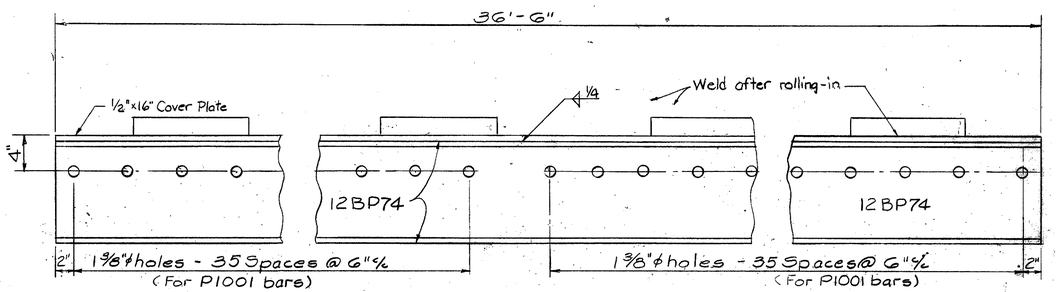
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

161
825

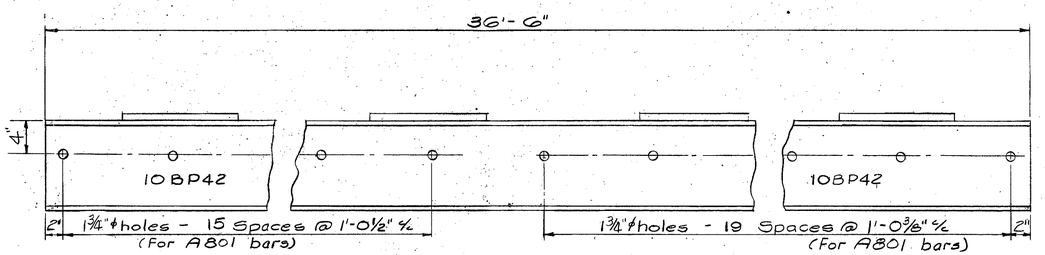
ROSS COUNTY
ROS-35-25.05



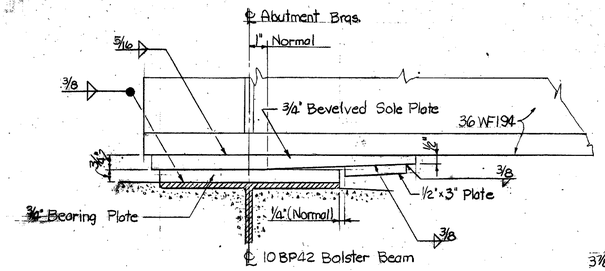
PLAN ~ BEARING DETAILS



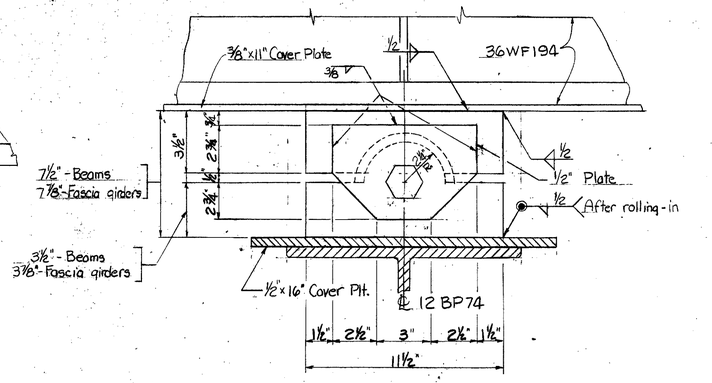
PIER BOLSTER BEAM
(1 Required)



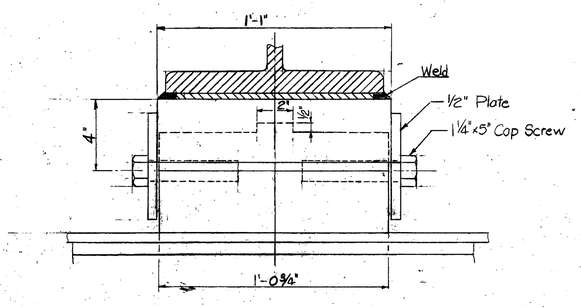
ABUTMENT BOLSTER BEAM
(2 Required)



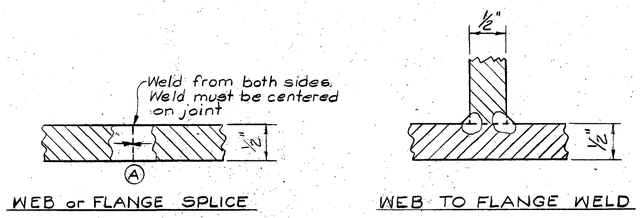
SECTION "A"-"A"



SECTION "C"-"C"



SECTION "B"-"B"



WEB or FLANGE SPLICE

WEB TO FLANGE WELD

SHOP SPLICE WELDS
(FASCIA GIRDER)

WELDED JOINTS
Automatic Submerged Arc Process

(G) All flange butt-welds shall be ground flush.

Ⓐ Weld after placing at least one pass on other side

Optional shop splices will be permitted in the web and flanges of fascia girders but their location shall be submitted to the Director for approval.

C&O RY. BRIDGE #F484

ELMER S BARRETT ASSOCIATES
Consulting Engineers
245-249 S. Paint Street - Chillicothe, Ohio

BEARING & SHOP SPLICE DETAILS
BRIDGE NO. ROS-35-2584
U.S.R. 35 UNDER C.&O. R.Y
ROSS COUNTY - U.S.R. 35
STA. 1864+45.80

SCALE		DATE				
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
W.D.J.				6/8/65		

MICROFILMED

MAR 17 1982

REINFORCING STEEL LIST

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

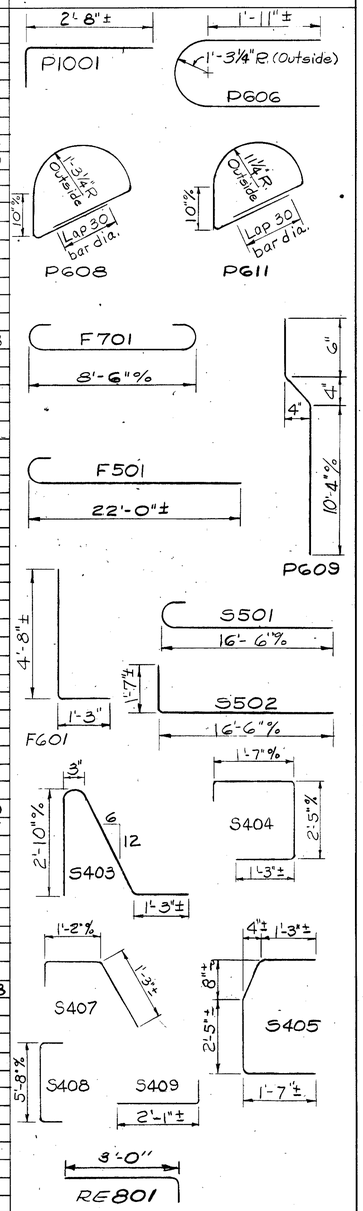
162 / 225

ROSS COUNTY
ROS-35-25.05

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 A501 is a number 5 size bar and A1001 is a number 10 size.

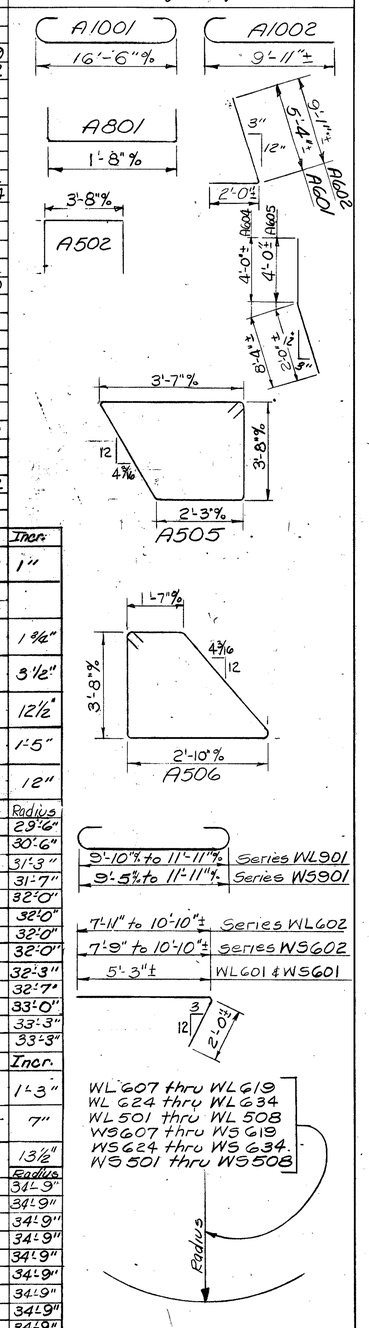
Bar Number	Number Required	Length	Shape	Weight
PIER				
P1001	72	3'-9"	⌐	1162
P601	38	16'-5"	—	937
P602	32	10'-3"	—	493
P603	12	16'-10"	—	303
P604	24	20'-6"	—	739
P605	24	18'-7"	—	670
P606	24	7'-10"	⊂	282
P607	4	11'-2"	—	67
P608	12	9'-4"	⌐	168
P609	12	11'-3"	⌐	203
P611	2	7'-9"	⌐	23
F701	49	10'-2"	⊂⊃	1018
F601	82	5'-9"	L	708
F501	20	22'-7"	⊂	471
TOTAL PIER REINFORCING				7,244
SUPERSTRUCTURE				
S501	366	17'-1"	⊂	6,521
S502	366	18'-3"	⊂	6,967
S401	352	24'-8"	—	5,800
S402	34	24'-0"	—	545
S403	382	7'-6"	⌐	1,914
S404	92	5'-5"	⌐	333
S405	92	5'-10"	⌐	358
S406	36	17'-7"	—	423
S407	12	2'-11"	⌐	23
S408	12	6'-8"	⌐	53
S409	12	2'-7"	⌐	21
TOTAL SUPERSTRUCT.				22,958
REPLACEMENT STEEL				
RE1001	1	8'-2"	—	
RE901	1	7'-10"	—	
RE801	1	3'-11	⌐	
RE701	2	7'-2"	—	
RE601	2	6'-11"	—	
RE501	1	6'-7"	—	
RE401	1	6'-3"	—	

Bending Diagrams



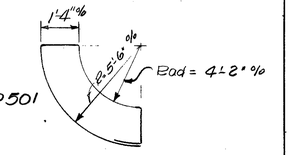
Bar Number	Number Required	Length	Shape	Weight
ABUTMENT BREASTWALL				
	One Abutment			
A1001	28	19'-4"	⊂	2329
A1002	15	11'-8"	⊂	732
A801	36	4'0"	⌐	384
A802	63	7'11"	—	1,332
AG01	42	7'-2"	⌐	452
AG02	42	11'-0"	⌐	694
AG03	42	12'3"	—	773
AG04	15	12'4"	—	278
AG05	15	6'-0"	—	135
AG06	44	21'-8"	—	1,432
AG07	25	16'-6"	—	620
A501	28	21'-7"	—	630
A502	29	5'-0"	⌐	151
A503	14	8'-5"	—	123
A505	5	13'-9"	⌐	72
A506	5	12'-4"	⌐	64
TOTAL ONE ABUTMENT				10,201
TOTAL TWO ABUTMENTS				20,402
N.W. & S.E. WINGWALLS				
WL901	1 Series of 86 bars	12'-4" To 14'-5"	⊂	1,182
WL601	21	7'-1"	⌋	223
WL602	1 Series of 21 bars	9'-9" To 12'-9"	⌋	354
WL603	1 Series of 21 bars	7'-4" To 13'-2"	—	323
WL604	1 Series of 7 bars	5'-0" To 11'-8"	—	85
WL605	1 Series of 7 bars	9'-11" To 16'-5"	—	128
WL606	1 Series of 6 bars	4'-8" To 9'-8"	—	65
				Radius
WL607	1	22'-1"	⌒	33
WL608	1	26'-7"	⌒	40
WL609	1	29'-11"	⌒	45
WL610	1	30'-2"	⌒	45
WL611	1	30'-7"	⌒	46
WL612	1	26'-3"	⌒	39
WL613	1	20'-9"	⌒	31
WL614	1	16'-10"	⌒	25
WL615	1	13'-2"	⌒	20
WL616	1	10'-5"	⌒	16
WL617	1	8'-2"	⌒	12
WL618	1	6'-3"	⌒	9
WL619	1	5'-0"	⌒	8
WL620	4	21'-4"	—	128
WL621	1 Series of 5 bars	14'-9" To 19'-0"	—	124
WL622	1 Series of 6 bars	10'-8" To 13'-1"	—	105
WL623	1 Series of 5 bars	4'-8" To 9'-2"	—	52
				Radius
WL624	1	26'-3"	⌒	39
WL625	1	30'-5"	⌒	46
WL626	3	33'-3"	⌒	150
WL627	1	28'-6"	⌒	43
WL628	1	22'-6"	⌒	34
WL629	1	18'-3"	⌒	27
WL630	1	14'-0"	⌒	21
WL631	1	10'-6"	⌒	16
WL632	1	8'-7"	⌒	13

Bending Diagrams



Bar Number	Number Required	Length	Shape	Weight
N. E. or S.W. WINGWALLS (CONTINUED)				
WL633	1	6'-8"	⌒	10
WL634	1	5'-2"	⌒	8
WL501	1	27'-10"	⌒	29
WL502	1	26'-11"	⌒	28
WL503	1	26'-4"	⌒	27
WL504	1	25'-7"	⌒	27
WL505	1	24'-8"	⌒	26
WL506	1	23'-3"	⌒	24
WL507	1	22'-6"	⌒	23
WL508	1	21'-0"	⌒	22
EP501	12	18'-1"	⌐	226
EP502	22	9'-8"	—	242
TOTAL ONE WINGWALL				4219
TOTAL N.W.&S.E. WINGWALLS				8438
N.E. & S.W. WINGWALLS				Incr.
WS 901	1 Series of 18 bars	11'-11" To 14'-5"	⊂	806
WS601	17	7'-1"	⌋	181
WS602	1 Series of 16 bars	9'-7" To 12'-9"	⌋	267
WS603	1 Series of 17 bars	6'-7" To 13'-3"	—	253
WS604	1 Series of 6 bars	4'-6" To 12'-10"	—	78
WS605	1 Series of 5 bars	7'-9" To 18'-5"	—	98
WS606	1 Series of 5 bars	5'-2" To 8'-0"	—	49
				Radius
WS607	1	23'-7"	⌒	35
WS608	1	23'-11"	⌒	36
WS609	1	24'-3"	⌒	36
WS610	1	23'-7"	⌒	35
WS611	1	20'-5"	⌒	31
WS612	1	17'-7"	⌒	26
WS613	1	15'-3"	⌒	23
WS614	1	12'-9"	⌒	19
WS615	1	10'-9"	⌒	16
WS616	1	8'-10"	⌒	13
WS617	1	7'-3"	⌒	11
WS618	1	5'-10"	⌒	9
WS619	1	4'-10"	⌒	7
WS620	4	21'-4"	—	128
WS621	1 Series of 3 bars	18'-8" To 19'-1"	—	76
WS622	1 Series of 5 bars	9'-1" To 13'-9"	—	86
WS623	1 Series of 5 bars	5'-2" To 8'-5"	—	52
				Radius
WS624	3	27'-4"	⌒	123
WS625	1	26'-10"	⌒	40
WS626	1	22'-7"	⌒	34
WS627	1	19'-6"	⌒	29
WS628	1	16'-7"	⌒	25
WS629	1	13'-9"	⌒	21
WS630	1	11'-5"	⌒	17
WS631	1	9'-5"	⌒	14
WS632	1	7'-8"	⌒	12
WS633	1	6'-0"	⌒	9
WS634	1	5'-1"	⌒	8
WS 501	1	21'-9"	⌒	23
WS 502	1	21'-1"	⌒	22
WS 503	1	20'-7"	⌒	21
WS 504	1	20'-0"	⌒	21
WS 505	1	19'-4"	⌒	20
WS506	1	18'-3"	⌒	19
WS 507	1	17'-3"	⌒	18
WS 508	1	16'-4"	⌒	17
EP501	12	18'-1"	⌐	226
EP502	24	9'-8"	—	242
TOTAL ONE WINGWALL				3,332
TOTAL N.E.& S.W. WINGWALLS				6,664
TOTAL ABUTMENTS				35,504

Bending Diagrams



C&O RY. BRIDGE #F484

ELMER S. BARRETT ASSOCIATES
Consulting Engineers
245-249 S. Paint Street — Chillicothe, Ohio

REINFORCING STEEL LIST
BRIDGE NO. ROS-35-2584
U.S.R. 35 UNDER C.&O. RY.
ROSS COUNTY — U.S.R. 35
STA. 1364+45.80

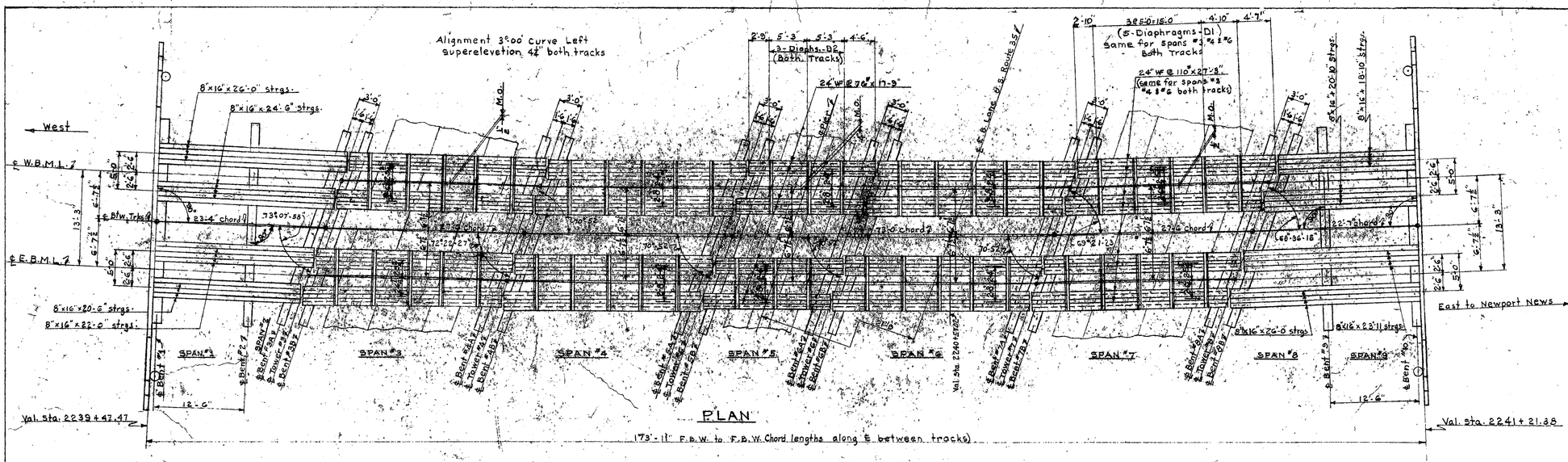
SCALE — DATE

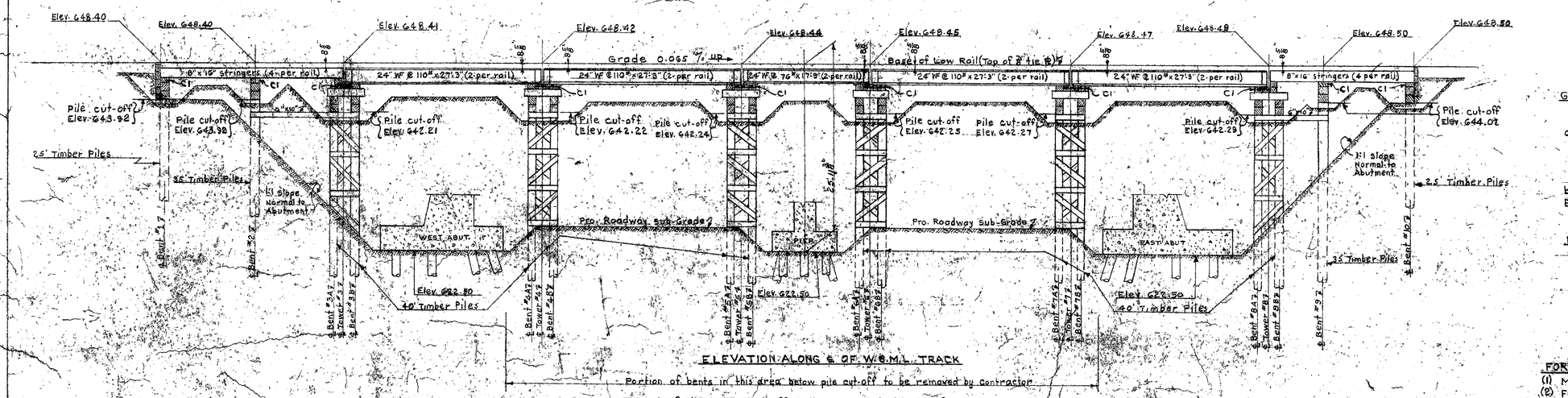
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
WIC	W.O.J. P.J.M.		JWH	WK	6/8/65	

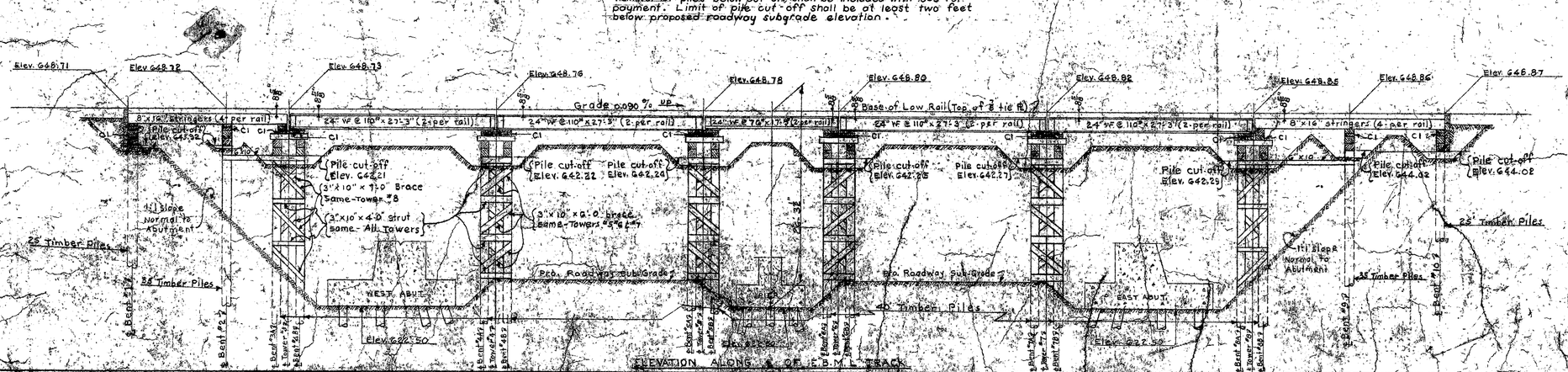
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

182A 225

R05-35-25.05







GENERAL NOTES:

Structural Steel: A.R.E.A. Specs. for steel Railway Bridges, dated 1967, using A.S.T.M. A36 steel.

Welding: A.W.S. Specifications for welded Highway and Railway Bridges, dated 1966, using the electric arc process.

Design: C&O. H8 Engine, specification steam impact and overload stresses.
Maximum pile load = 17 Tons.
Maximum soil pressure 27 Tons/□' (Capping off piles)

Bench Mark: Chisled square in west end of N.W. Wingwall, C.&O. bridge over U.S. Rt. 35 & 50, 438 Ft. Rt Highway Sta. 1366+26 (E.B. Lane) Elev. 635.92.

ERECTOR NOTE:

Fasten timber blocking with ¾"x18" drift bolts.
Fasten timber caps to piles with ¾"x 22" drift bolts.
Fasten tie blocks to ties with 30d nails every tie.
Fasten guard rails to ties with ⅝"x8" sealtite Lag Bolts (washer head).
Fasten ties to stringers with ¾"x14" drift bolts every 4th tie.
Fasten stringers to caps with ¾"x 22" drift bolts.
Fasten stringers together with 2-¾"x 26" bolts each side of bent per rail.
Dap all 8"x16" stringers to 1-3" over caps.

FORCE ACCOUNT WORK TO BE DONE BY C.&O. RAILWAY COMPANY

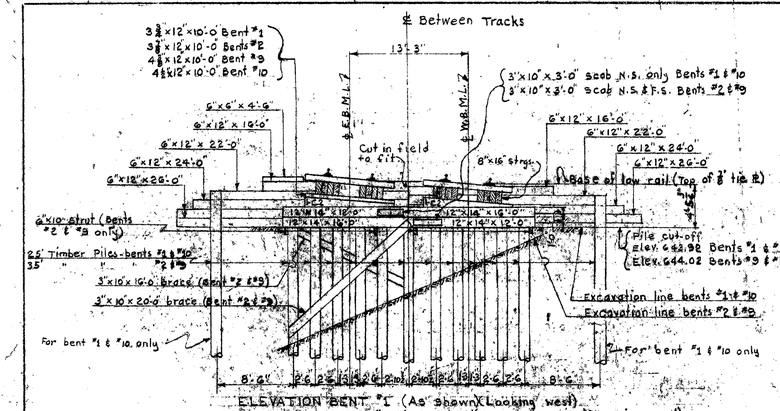
(1) Make alterations to signal and T.&T. facilities
(2) Furnish, erect and maintain temporary trestle, excavating only as necessary to place caps and stringers. Place bracing on bents and towers as excavation by Contractor progresses.
(3) Remove portion of trestle, above pile cut-off, between Abutments, to roll new span into place.
(4) Roll bridge superstructure into position as outlined on dwg. "B0125-3.
(5) Place temporary spans at ends of bridge after it is rolled into position.
(6) Place track and ballast on new bridge.
(7) Backfill from bottom of steel and timber stringers and remove portion of trestle necessary to place ballast and track.
(8) Place ballast and track.

Material salvaged from the temporary trestle to be the property of the contractor

Highway Bridge No. R05-35-2584 Work this dwg. with dwg. "B0125-1-1-8
For list of materials required see dwg "B0125-1

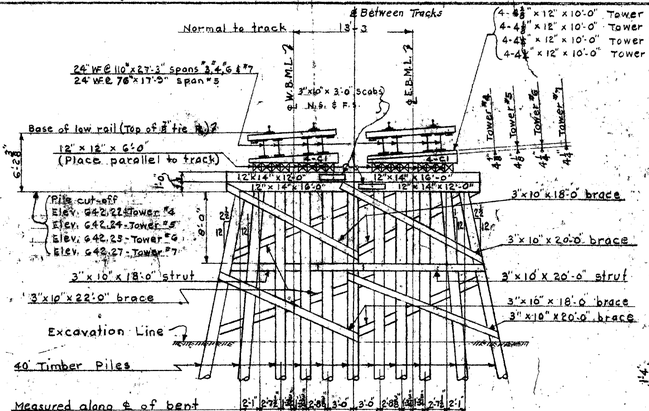
Temp. A.F.E. 64287

REVISIONS	THE CHESAPEAKE AND OHIO RAILWAY COMPANY Chief Engineer's Office, Huntington, West Virginia
	TEMPORARY TRESTLE DETAILS BUILDING BRIDGE "F-484 U.S. ROUTE "35 UNDERPASS V.A. JUNCTION, OHIO ASHLAND-RUSSELL DIVISION - RUSSELL, KY.
	SCALE 1"=10'-0" VAL. SEC. V-48 DRAWING NO. B0125-2 DATE 3-11-68 DRAWN E.B.N. CHECKED W.C.S.
CORR. FILE NO. H-1425	



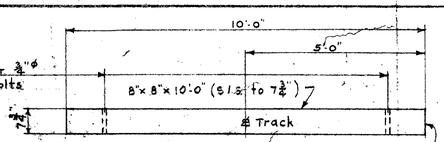
ELEVATION BENT #1 (As shown) Looking west)
ELEVATION BENT #10 (Opp. hand) Except as noted) Looking East)
ELEVATION BENT #2 (As shown) Looking west)
ELEVATION BENT #9 (Opp. hand) Except as noted) Looking East)
(Omit backwall timbers on bents #2 & #9)

Scale: ⅜"=1'-0"



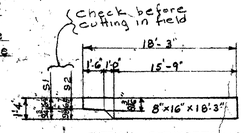
ELEVATION BENTS #4A, #5A, #6A & #7A (As shown) Looking East)
ELEVATION BENTS #4B, #5B, #6B & #7B (Opp. hand) Looking West)

Scale: ⅜"=1'-0"



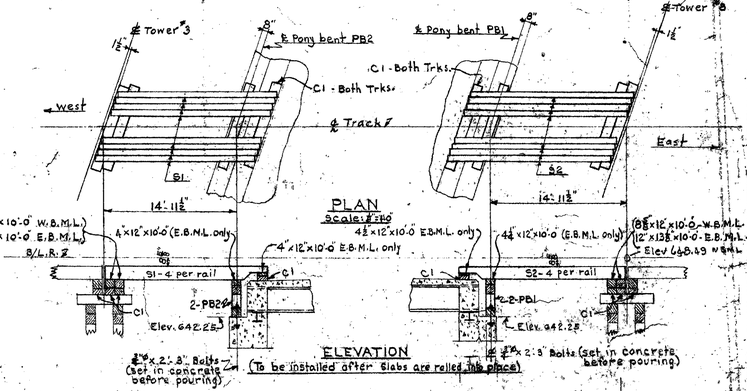
TIE DETAIL
177-REQ'D. Mk. #1 (W.B.M.L.)
177-REQ'D. Mk. #2 (E.B.M.L.)
(Holes for ¾"ø Hook bolts to be bored in field. See plan for location)

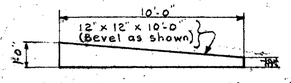
Scale: ½"=1'-0"



DETAIL-STRINGERS-S1 & S2
16-REQ'D.-S1
16-" -S2

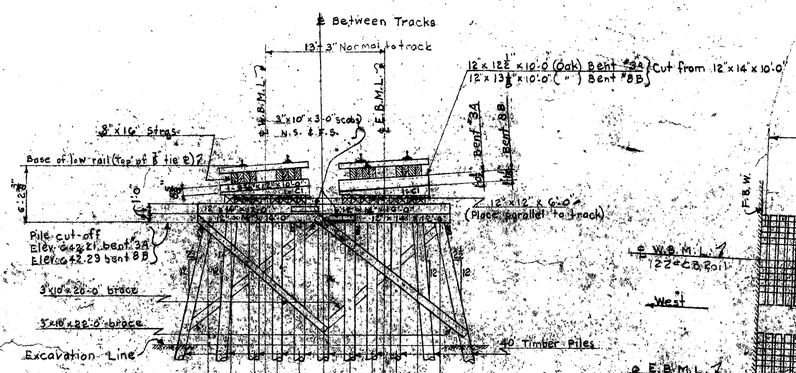
No scale





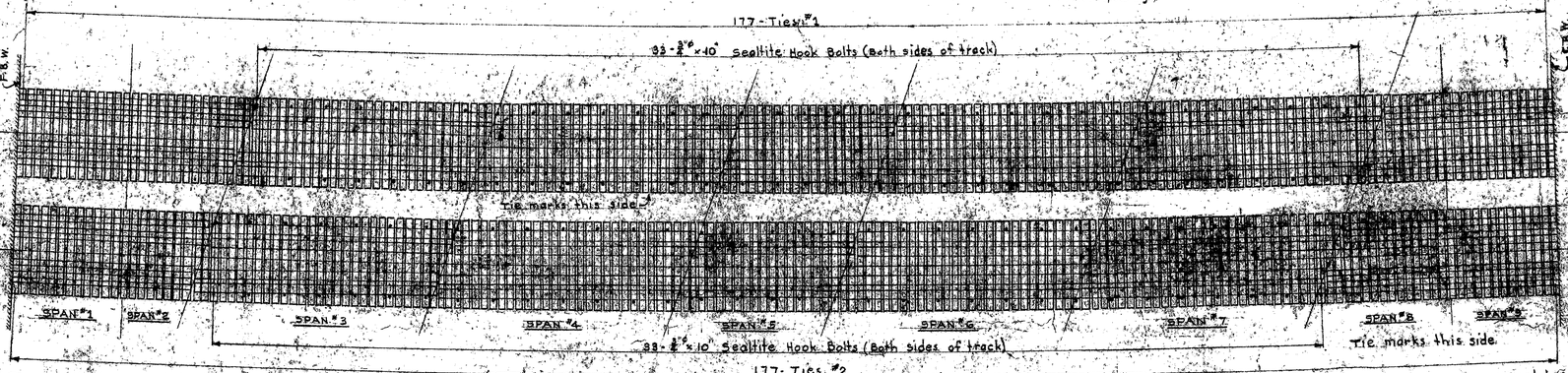
DETAIL BLOCK-C1

No scale



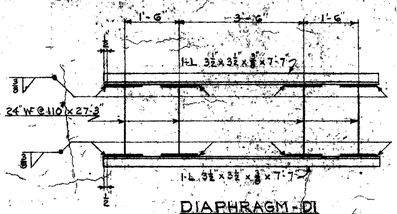
ELEVATION BENT #3A (As shown) Looking East)
ELEVATION BENT #3B (Opp. Hand) Except as noted) Looking West)

Scale: ⅜"=1'-0"



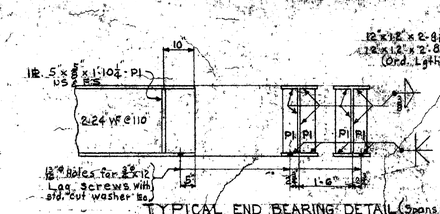
TIE PLAN

Scale: ⅛"=1'-0"



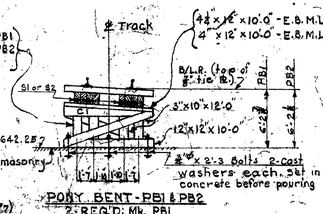
DIAPHRAGM-D1
40-Req'd.

Scale: ⅜"=1'-0"



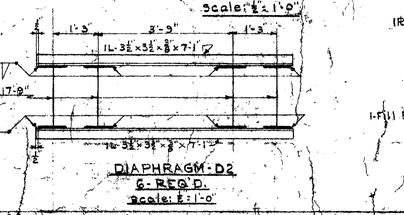
TYPICAL END BEARING DETAIL (Spans #3, #4, #6 & #7)

Scale: ½"=1'-0"



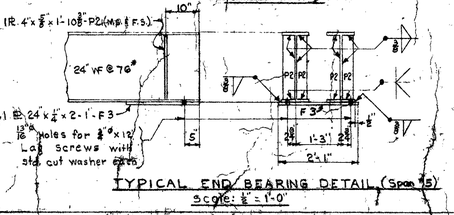
PONY BENT-PB1 & PB2
2-REQ'D. Mk. PB1
2-REQ'D. Mk. PB2

Scale: ⅜"=1'-0"



DIAPHRAGM-D2
6-REQ'D.

Scale: ⅜"=1'-0"



TYPICAL END BEARING DETAIL (Span #5)

Scale: ½"=1'-0"

Work this dwg. with dwg. "50125-2 & 3"
For list of materials required see dwg. 50125-4

Highway Bridge No. ROS-35-2584

Temp. A.F.E. 44267

REVISIONS	THE CHESAPEAKE AND OHIO RAILWAY COMPANY
	Chief Engineer's Office at Huntington, West Virginia
	TEMPORARY TRESTLE DETAILS
	BUILDING BRIDGE "F-484
	U.S. ROUTE "35" UNDERPASS
	V&A JUNCTION, OHIO
	ASHLAND-RUSSELL DIVISION - RUSSELL S-D
	SCALE: As Noted / KAL SEC. / DRAWING NO.
	DATE: 3-11-66
CORR. FILE NO. H-14-25	DRAWN: E.B.N. / CHECKED: HVC / Y-46-44 / 50125-1

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

ROS-35-25.05

1658
725

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

P05-35-25.05

F.B.W. Sta. 2239+47.47

℄ Bent #1 ℄ Bent #2 ℄ Tower #3 ℄ Tower #4 ℄ Tower #5 ℄ Tower #6 ℄ Tower #7 ℄ Bent #8 ℄ Bent #9 ℄ Bent #10

F.B.W. Sta. 2241+21.38

West

℄ W.B.M.L.℄

℄ Betw. Tracks ℄

℄ E.B.M.L.℄

8"x16"x6'-0" strgs. 8"x16"x14'-0" strgs. 8"x16"x13'-3" strgs. 8"x16"x13'6" strgs. 8"x16"x14'3" strgs. 8"x16"x13'-9" strgs. 8"x16"x13'-9" strgs. 8"x16"x6'-0" strgs. 8"x16"x9'-0" strgs. 8"x16"x6'-0" strgs. 8"x16"x13'-9" strgs. 8"x16"x13'-9" strgs. 8"x16"x6'-0" strgs. 8"x16"x13'-3" strgs. 8"x16"x13'-9" strgs. 8"x16"x13'-3" strgs. 8"x16"x13'-3" strgs. 8"x16"x14'-0" strgs. 8"x16"x6'-0" strgs. 8"x16"x10" strgs. 8"x16"x

Falsework stringers shown on drawing 50125 placed in step #11

8"x16"x22'-0" strgs.

8"x16"x ' strgs.

8"x16"x23'-11" strgs.

8"x16"x26'-0" strgs.

Falsework stringers shown on drawing "50125 placed in step #1

East to Newport News

13'-9" 13'-9" 13'-9" 13'-9" 9'-0" 9'-0" 13'-9" 13'-9" 13'-9" 13'-9"

PLAN
Scale: 1/8" = 1'-0"

Elev. 648.40 (W.B.M.L.) Elev. 648.72 (E.B.M.L.)
Elev. 648.40 (W.B.M.L.) Elev. 648.71 (E.B.M.L.)
Elev. 648.41 (W.B.M.L.) Elev. 648.73 (E.B.M.L.)
Grade 0.065 % up → W.B.M.L.
Grade 0.09 % up → E.B.M.L.
Elev. 648.42 (W.B.M.L.) Elev. 648.76 (E.B.M.L.)
Elev. 648.44 (W.B.M.L.) Elev. 648.78 (E.B.M.L.)
Elev. 648.45 (W.B.M.L.) Elev. 648.80 (E.B.M.L.)
Base of low rail (Top of 8" tie ℍ)
Elev. 648.47 (W.B.M.L.) Elev. 648.82 (E.B.M.L.)
Elev. 648.48 (W.B.M.L.) Elev. 648.85 (E.B.M.L.)
Elev. 648.50 (W.B.M.L.) Elev. 648.86 (E.B.M.L.)
Elev. 648.50 (W.B.M.L.) Elev. 648.87 (E.B.M.L.)

C.I. Note "B"

STEP #11 STEP #9 STEP #7 STEP #5 STEP #3 STEP #1

3⅜"x12"x10'-0" (E.B.M.L. only) 8⅝"x12"x10'-0" (E.B.M.L. only)
4⅜"x12"x10'-0" (E.B.M.L. only) 8⅝"x12"x10'-0" (E.B.M.L. only)
4½"x12"x10'-0" (E.B.M.L. only) 8⅝"x12"x10'-0" (E.B.M.L. only)
3⅜"x12"x10'-0" (E.B.M.L. only) 8⅝"x12"x10'-0" (E.B.M.L. only)
4⅜"x12"x10'-0" (E.B.M.L. only) 8⅝"x12"x10'-0" (E.B.M.L. only)
4½"x12"x10'-0" (E.B.M.L. only) 8⅝"x12"x10'-0" (E.B.M.L. only)
24" WF @ 110# x 27'-3" (2-per rail)
24" WF @ 76# x 17'-9" (2-per rail)

STEP #12 STEP #8 STEP #2 STEP #10 STEP #4 STEP #13 STEP #6

8"x16" stringers (4-per rail)

ELEVATION ALONG ℄ BETWEEN E.B.M.L. & W.B.M.L. TRACKS
TEMPORARY TRESTLE
(see drawing "50125)
Scale: 1/8" = 1'-0"

3⅜"x12"x10'-0" Bent 3A & 3B
4⅜"x12"x10'-0" " 4A & 4B
4⅝"x12"x10'-0" " 5A & 5B
4⅞"x12"x10'-0" " 6A & 6B
4¾"x12"x10'-0" " 7A & 7B
4⅞"x12"x10'-0" " 8A & 8B

Bents 3A & 3B 4A & 4B 5A & 5B 6A & 6B 7A & 7B 8A & 8B

13'-3" (Normal to track)
℄ E.B.M.L.
℄ W.B.M.L.
8"x16" stringers
B/L.R.F.
12"x14"x12'-0"
12"x16"x16'-0"
Pile cut-off
3"x10"x3'-0" scabs N.S. & E.S.

TYPICAL FOR CAPPING OFF BENTS IN TOWERS #3, #4, #5, #6, #7 & #9 (except as noted)
steps: #1, #3, #5, #7, #9 & #11
(Looking west)
scale: 1/8" = 1'-0"

Note "B"
Keep stringers blocked to both bents while passing traffic. (Typical for all bents.)

Note:
Procedure for capping off piles same for both tracks. Blocking marked thus ⊛ is for E.B. track only.

13'-3" (Normal to track)
℄ E.B.M.L.
℄ W.B.M.L.
8"x16" stringers
8"x8"x10'-0" Tie
7⅞"x8"x10'-0" Tie
B/L.R.F.
2-C.I.
2-12"x12"x10'-0"
12"x12"x4'-0"
Varies

DETAIL · BENT A (Looking west)
Scale: 1/4" = 1'-0"

Work this dwg. with dwg. "50125, sheet 3
For list of materials required see dwg. "50125-A

Highway Bridge No. ROS-35-2584
Temp. A.F.E. 44267

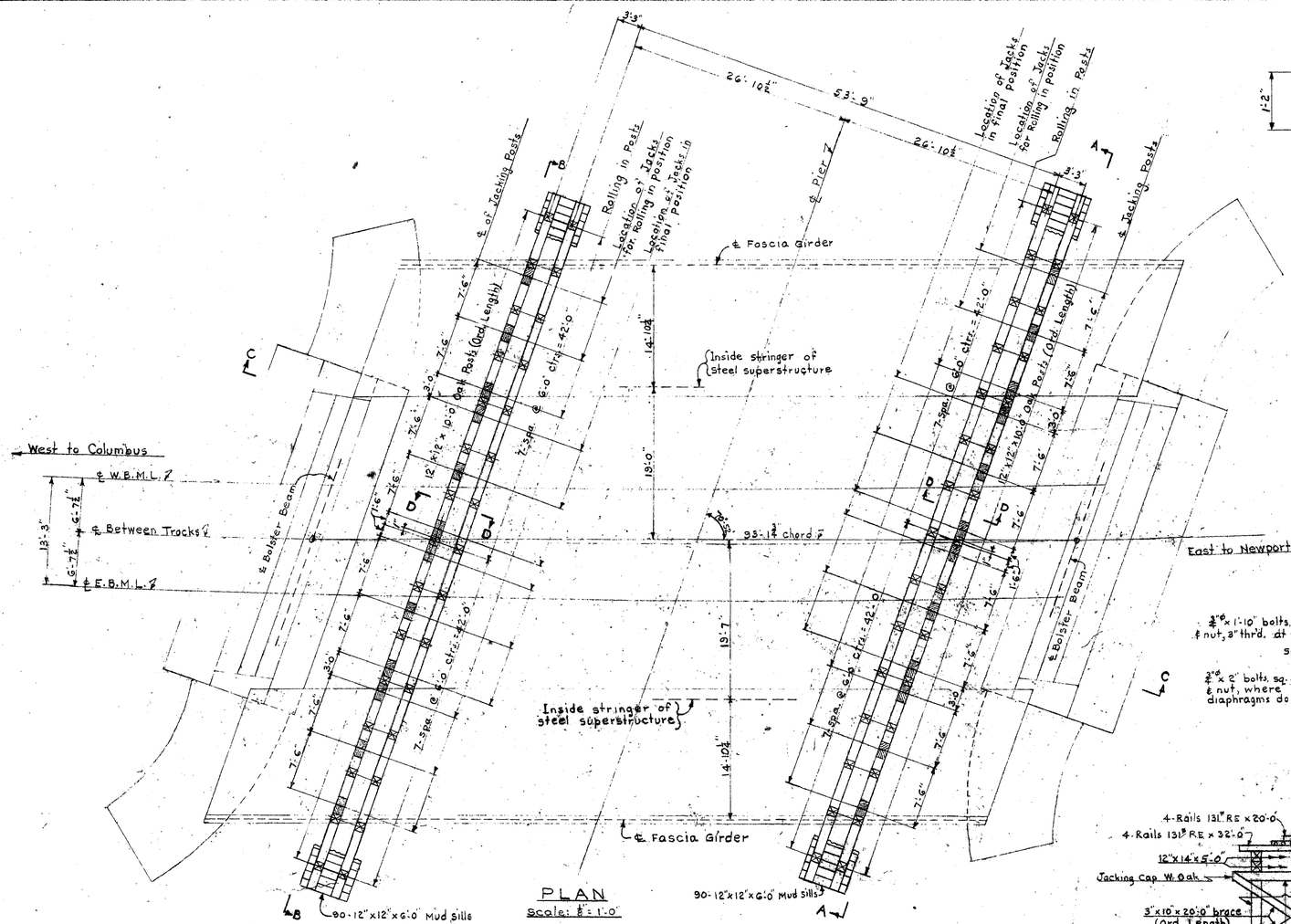
REVISIONS	THE CHESAPEAKE AND OHIO RAILWAY COMPANY Chief Engineer's Office — Huntington, West Virginia
	CAPPING OFF DETAILS TEMPORARY TRESTLE BUILDING BRIDGE "F-484 U.S. ROUTE 35 UNDERPASS V. A. JUNCTION, OHIO. ASHLAND-RUSSELL DIVISION-RUSSELL S-D

CORR. FILE NO.	SCALE: As Noted DATE: 3-11-66 DRAWN: E.B.N. CHECKED: H.C.J.	VAL. SEC.	DRAWING NO.
H-1425		V-46 44	50125-2

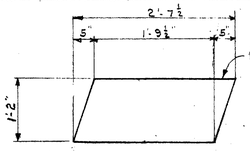
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

1420
225

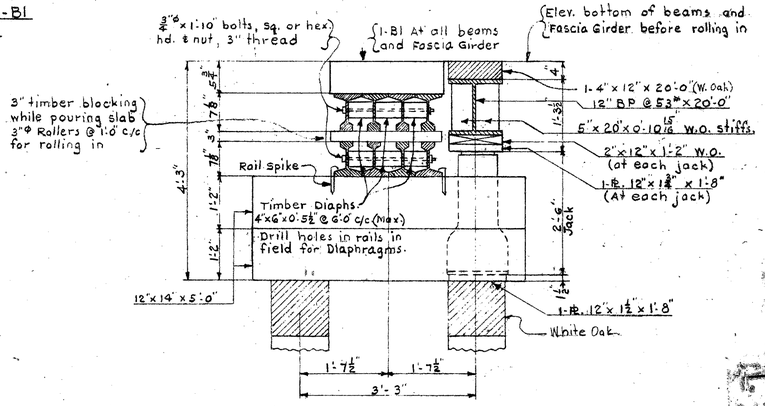
ROS-35-25.05



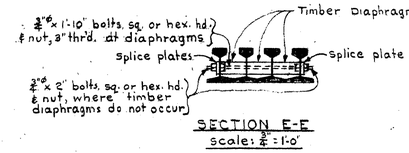
PLAN
Scale: 8' = 1'-0"



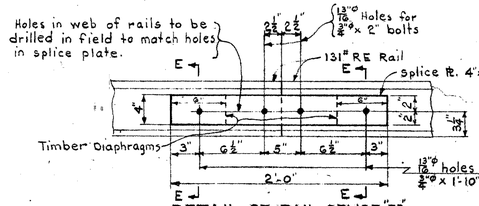
DETAIL BLOCK-B1
Scale: ½" = 1'-0"
28-Req'd



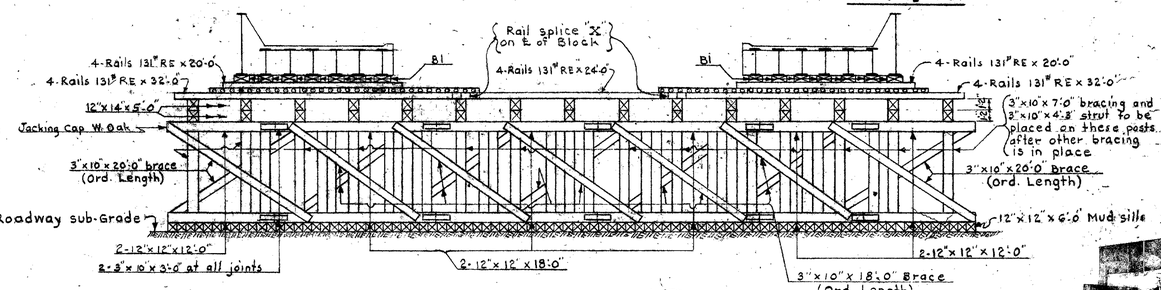
SECTION D-D
Scale: ½" = 1'-0"



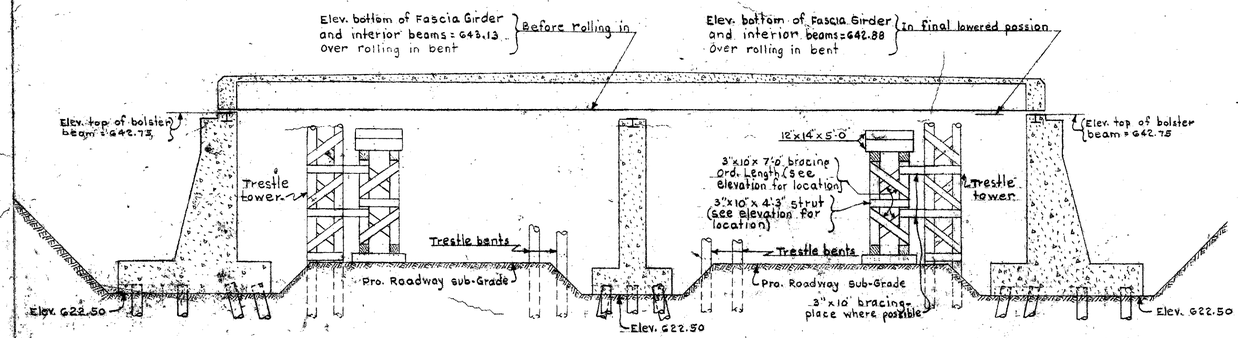
SECTION E-E
Scale: ½" = 1'-0"



DETAIL OF RAIL SPLICE "X"
Scale: 1½" = 1'-0"



ELEVATION A-A (As Shown)
ELEVATION B-B (Similar)
(Far side bent same except omit jacking posts)
Scale: ½" = 1'-0"



SECTION C-C
Scale: 8' = 1'-0"

NOTE:
Contractor shall furnish all labor and materials, except rollers, to erect and remove falsework for rolling bridge into place. He shall furnish jacking beams.
Contractor shall erect steel superstructure on this falsework using 3" blocking in place of rollers, and pour slab completely, also place waterproofing and protection.
Railway Company will furnish and place 3" rollers, roll span into place, then lower into final position and place ballast and track without cost to Contractor.
Contractor shall pour walls on abutments above horizontal construction joint near bridge seat elevation after span is in final position.
Contractor shall solder all copper strips and place joint material.

DESCRIPTION OF HARDWARE
Fasten timber blocking, caps and sills with ¾"ø x 18" drift bolts.
Fasten caps to posts with 1-¾"ø x 22" drift bolts per post. 2 per post toed.
Fasten post to sills with 2-¾"ø x 22" drift bolts per post.
Bolt all bracing to post with ¾"ø bolts
Bolt all scabs, using 2-¾"ø bolts each side of splice.
All bolts to have sq. or hex hd. and nuts and 2 cast washers each.
All drift bolts to have button heads.
Total weight of each slab with rails, ties and ballast to be rolled in = 857 Tons. (Maximum jacking load = 66 Tons at each jack.)
Total weight of each slab without rails, ties and ballast to be rolled in = 224 Tons. (Maximum jacking load = 28 Tons at each jack).
Soil pressure = 2.0 Tons

Highway Bridge No. ROS-35-2584

Work this dwg. with dwgs. #50125, -1 & -2
For list of materials required see dwg. #50125-4

Temp A.F.E. 44267

REVISIONS	THE CHESAPEAKE AND OHIO RAILWAY COMPANY Chief Engineer's Office — Huntington, West Virginia
	FALSEWORK FOR ROLLING SUPERSTRUCTURE INTO PLACE BUILDING BRIDGE C-484 U.S. ROUTE #35 UNDERPASS V. A. JUNCTION, OHIO ASHLAND-RUSSELL DIVISION — RUSSELL SUB.
CORR. FILE NO. H-1428	SCALE: As Noted DATE: 3-11-66 DRAWN: E.B.N. CHECKED: HC &
	VAL. SEC. V-46 44
	DRAWING NO. 50125-3

MATERIAL REQUIRED FOR CAPPING OFF BENTS

16 - 8" x 16' x 6'-0" Stringers
36 - do x 13'-9" "
4 - do x 13'-3" "
4 - do x 13'-6" "
4 - do x 14'-0" "
32 - do x 9'-0" "
8 - 12" x 12 x 10'-0" Blocks
40 - do x 4'-0" "
8 - C1 from temporary trestle

Reuse

Make 4 Bents "A" & Reuse

HARDWARE

16 - 7/8" x 10" Drift Bolts (Button head)
96 - 7/8" x 18" " " (" ")
48 - 7/8" x 22" " " (" ")

24 - 7/8" x 36" Bolts sq. or hex hd.
32 - 7/8" x 54" Rods 3" thread each end
88 - sq. or hex nuts, 7/8" tap
112 - std. cast washers for 7/8" bolts

MATERIAL REQUIRED FOR TEMPORARY TRESTLE

TIMBER

26 - 25'-0" Timber Piles
22 - 35'-0" " "
132 - 40'-0" " "

354 - 8" x 8" x 10'-0" Bridge Ties (9 is to 1/2)

2 - 6" x 6" x 4'-6 Backing off Timbers
4 - 6" x 12" x 16'-0" " "
4 - do x 22'-0" " "
4 - do x 24'-0" " "
4 - do x 26'-0" " "
52 - 12" x 12" x 10'-0" Beveled Blocks - C1

1 - 3 1/2" x 12" x 10'-0" Block
1 - 3 1/2" x 12" x 10'-0" "
3 - 4 1/2" x 12" x 10'-0" "
1 - 4 1/2" x 12" x 10'-0" "
32 - 12" x 14" x 12'-0" caps
32 - 12" x 14" x 14'-0" "
4 - 8" x 16" x 18'-10" Stringers
4 - do x 20'-6" "
4 - do x 20'-10" "
4 - do x 22'-0" "
4 - do x 23'-11" "
4 - do x 24'-6" "
8 - do x 26'-0" "
1 - 12" x 12 1/2" x 10'-0" Block (Oak)
1 - 12" x 13 1/2" x 10'-0" " (") +
2 - 6 1/2" x 12" x 10'-0" Blocks
4 - 3 1/2" x 12" x 10'-0" "
8 - 4 1/2" x 12" x 10'-0" "
4 - 4 1/2" x 12" x 10'-0" "
96 - 12" x 12" x 6'-0" "
2 - 6" x 10" x 6'-0" Struts
2 - do x 10'-0" "
2 - do x 12'-0" "
2 - do x 14'-0" "

27 - 2" x 4" x 16'-0" Tie Blocks
64 - 3" x 10" x 3'-0 Scabs
160 - do x 4'-0" struts
96 - do x 6'-0" Bracing
40 - do x 7'-0" "
2 - do x 16'-0" "
50 - do x 18'-0" "
34 - do x 20'-0" "
22 - do x 22'-0" "

STRUCTURAL STEEL

8 - 24" WF @ 76# x 17'-9"
32 - 24" WF @ 110# x 27'-3"
80 - L5 3 1/2" x 3 1/2" x 5/8" x 7'-7" - D1
12 - L5 do x 7'-1" - D2
8 - Fill Pls. 24" x 3/4" x 2'-1" - F3
128 - Stiff. Pls. 5" x 3/8" x 1'-10 1/2" - P1
32 - " " 4" x 3/8" x 1'-10 3/8" - P2
80 - 3/4" x 1'-0" Lag screws
80 - Std. cut washers for 3/4" Lag screws

DECK HARDWARE

710 - 1/4" x 8" sealtite Lag screws
30 - 3/4" x 14" Button Head Drift bolts
132 - 3/4" x 10" sealtite Hook Bolts complete with nut washer

TRESTLE HARDWARE

100 - 3/4" x 10" Drift Bolts (Button Head)
52 - 3/4" x 14" " " (" ")
330 - 3/4" x 18" " " (" ")
300 - 3/4" x 22" " " (" ")

60 - 3/4" x 20" Bolts sq. or hex hd.
1350 - 3/4" x 21" " " " "
85 - 3/4" x 23" " " " "
260 - 3/4" x 26" " " " "
64 - 3/4" x 36" " " " "
1819 - sq. or hex nuts, 3/4" tap
3638 - Std. Cast washers for 3/4" bolts

MATERIAL REQUIRED FOR TWO END SPANS AFTER SLABS ARE ROLLED INTO PLACE

16 - 8" x 16" x 18'-3" Stringers - S1
16 - do x 18'-3" Stringers - S2
4 - 8 5/8" x 12" x 10'-0"
2 - 12" x 13 3/8" x 10'-0"
1 - 4" x 12" x 10'-0"
1 - 4 1/2" x 12" x 10'-0"
4 - 12" x 12" x 10'-0" - C1 (Beveled)
2 - 12" x 12 1/2" x 10'-0"

HARDWARE

48 - 7/8" x 36" bolts, sq. or hex hd.
48 - sq. or hex nuts, 7/8" tap
96 - std. cast washers for 7/8" bolts

16 - 7/8" x 10" Drift bolts (Button head)
48 - 7/8" x 14" " " (" ")
16 - 7/8" x 18" " " (" ")
64 - 7/8" x 22" " " (" ")

MATERIAL REQUIRED FOR TWO PONY BENTS PB1 & PB2

4 - 12" x 12" x 10'-0" - C1 (Beveled)
4 - 12" x 12" x 10'-0" Sills
16 - 12" x 12" x 3'-0" Posts (Ord. Lgth.)
2 - 4 1/2" x 12" x 10'-0" Block
2 - 4" x 12" x 10'-0" "
8 - 3" x 10" x 12'-0" Bracing

HARDWARE

16 - 7/8" x 10" Drift Bolts (Button head)
48 - 7/8" x 22" " " (" ")

48 - 7/8" x 18" Bolts sq. or hex hd.
12 - 7/8" x 27" " " " "
70 - Sq. or hex nuts 7/8" tap
140 - Std. cast washers for 7/8" bolts

MATERIAL REQUIRED FOR ROLLING IN BENTS

24 - 12" x 12" x 12'-0" caps & sills
24 - do x 18'-0" " " "
108 - do x 10'-0" Posts (Oak)
180 - do x 6'-0" Mud sills
60 - 12" x 14" x 5'-0" Blocks
80 - 3" x 10" x 3'-0" Scabs
48 - do x 4'-3" struts
20 - do x 5'-0" "
96 - do x 7'-0" Bracing
40 - do x 18'-0" "
16 - do x 20'-0" "

HARDWARE

480 - 7/8" x 18" Drift Bolts (Button head)
325 - 7/8" x 22" " " (" ")

336 - 7/8" x 18" Bolts, sq. or hex hd.
210 - 7/8" x 21" " " " "
546 - sq. or hex nuts, 7/8" tap
1092 - std. cast washers for 7/8" bolts

Used material meeting the requirements of 711.26 may be furnished by the contractor for Rolling in Bents.

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

162E 225

R05-35-25.05

NOTE:
All timber to be untreated

For details see dwgs. #50125,-1,-2 & -3

Highway Bridge No. R05-35-2584

Temp. A.F.E. 44267

REVISIONS	THE CHESAPEAKE AND OHIO RAILWAY COMPANY ENGINEERING DEPARTMENT		
	MATERIALS REQUIRED TEMPORARY TRESTLE BUILDING BRIDGE #F-484 U.S. ROUTE #35 UNDERPASS V.A. JUNCTION, OHIO		
	ASHLAND-RUSSELL DIVISION — RUSSELL S-D		
	SCALE: None	VAL. SEC.	DRAWING NO.
	DATE: 3-11-66	V-46	
	DRAWN: E.B.N.	44	50125-4
CORR. FILE NO. H-1425	CHECKED:		

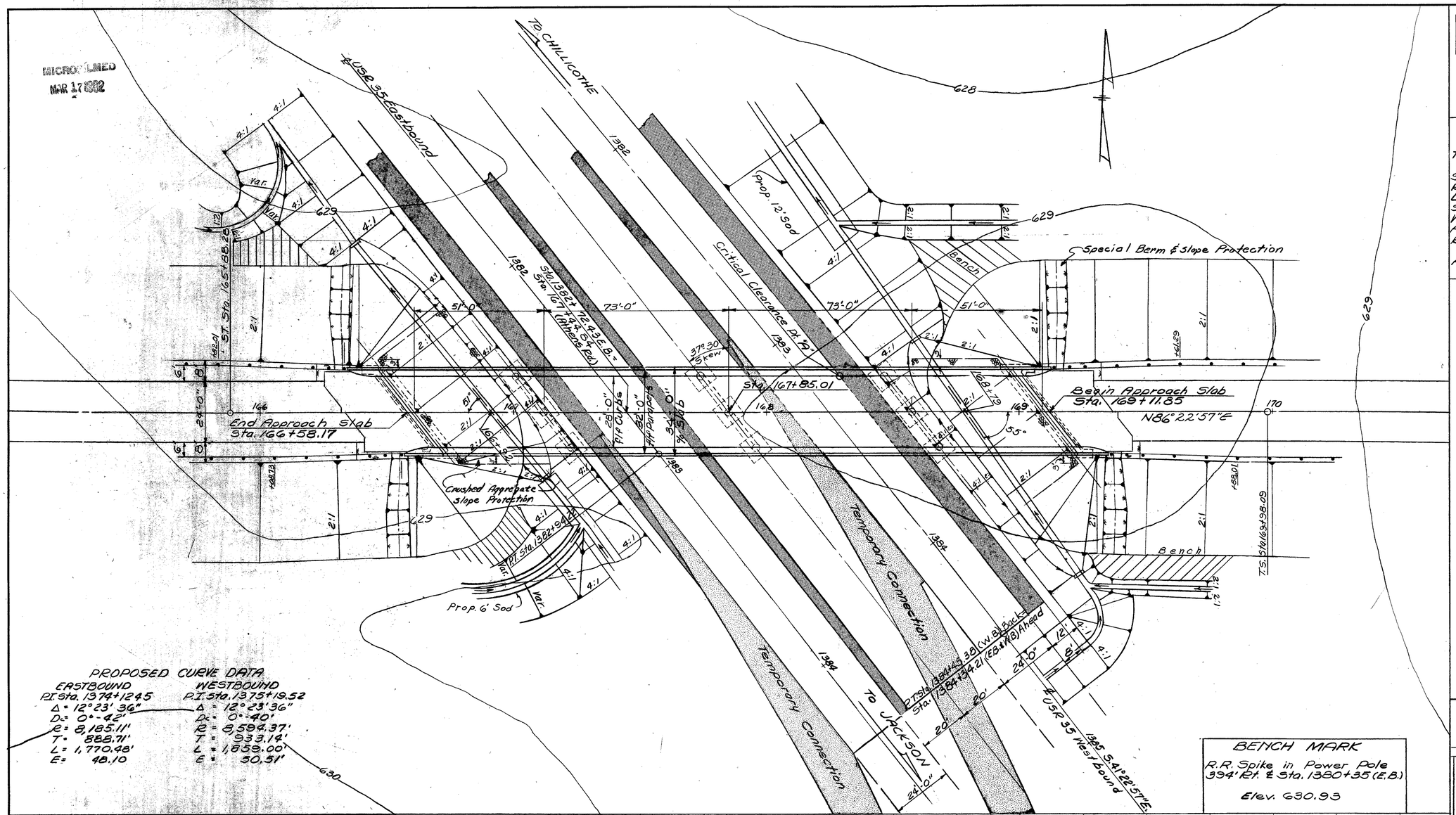
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

163
205

ROSS COUNTY
ROS-35-25.05

PROPOSED STRUCTURE DATA

TYPE: Continuous Steel Beam with Concrete Deck and Substructure
SPAN: 51'-0"-73'-0"-73'-0"-51'-0"
ROADWAY: 28' f/f 2'-0" Safety Curbs
LOAD FREQUENCY: C.F. 400 (S7)
SKEW: 37° 30' R.F.
WEARING SURFACE: 1" Monolithic Concrete
APPROACH SLABS: RS-1-67(25' Long) Special
RAILING: Aluminum Rail and Supports and Concrete Parapet
ALIGNMENT: Tangent
1976 ADT 850

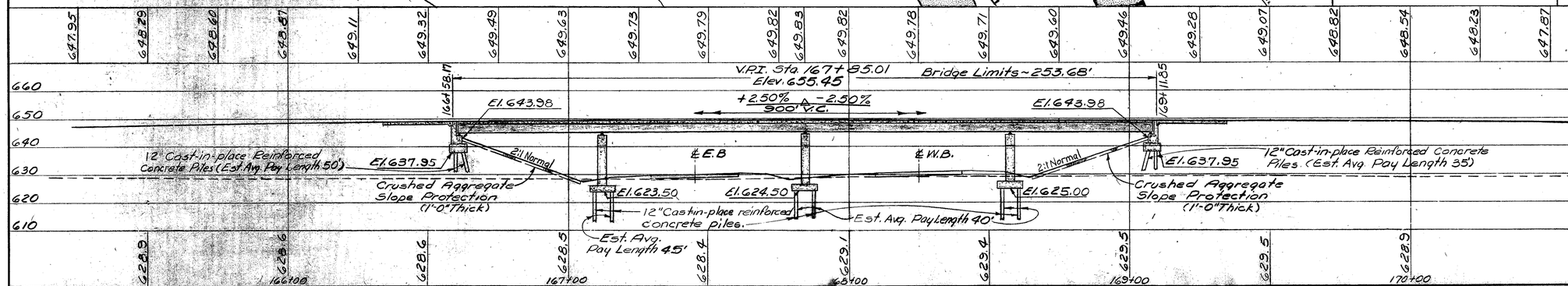


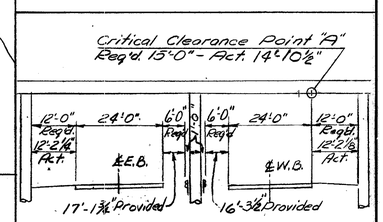
PROPOSED CURVE DATA

EASTBOUND	WESTBOUND
P.I. Sta. 1374+12.45	P.I. Sta. 1375+19.52
Δ = 12°23' 36"	Δ = 12°23' 36"
D_c = 0°-42'	D_c = 0°-40'
R = 8,185.11'	R = 8,584.37'
T = 888.71'	T = 933.14'
L = 1,770.48'	L = 1,859.00'
E = 48.10	E = 30.51'

BENCH MARK

R.R. Spike in Power Pole 394' Rt. & Sta. 1380+35 (E.B.)
Elev. 630.93





CLEARANCE DIAGRAM
(SECTION NORMAL TO U.S.R. 35)

ELMER S. BARRETT ASSOCIATES
Consulting Engineers
245-249 S. Paint Street — Chillicothe, Ohio

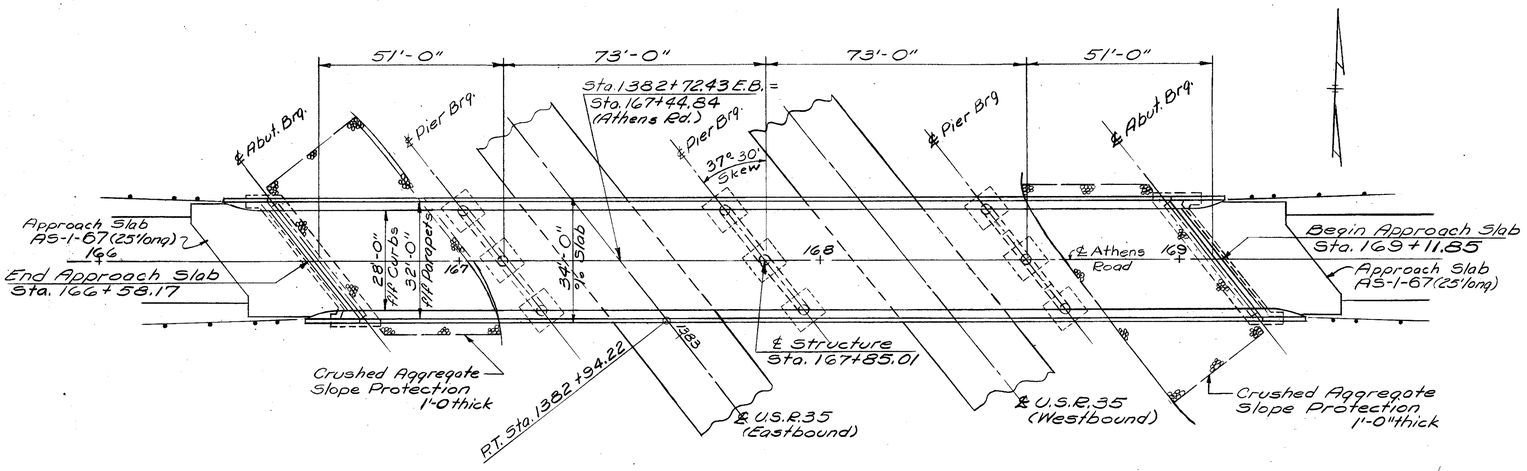
SITE PLAN
BRIDGE NO. ROS-35-2619
U.S.R. 35 UNDER ATHENS RD.
ROSS COUNTY — U.S.R. 35
STA. 1382 + 72.43 (E.B.)

SCALE		DATE				
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
WJC	W.D.J.		7/82	WK	10/30/84	

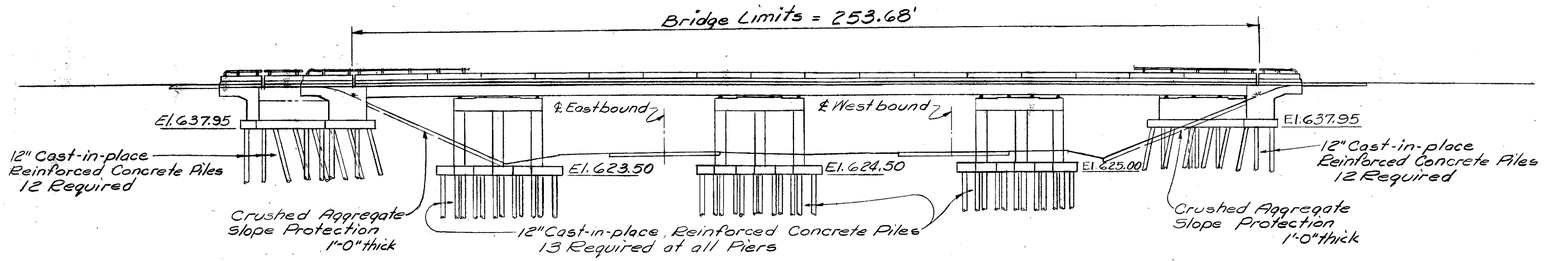
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

164
223

ROSS COUNTY
ROS-35-25.05



GENERAL PLAN



GENERAL ELEVATION

ESTIMATED QUANTITIES

ITEM	QUANTITY	UNIT	DESCRIPTION	ABUT'S.	PIERS	SUPER	GENERAL	AS BUILT	
503	388	Cu.Yds.	Unclassified Excavation	201	187				
601	497	Sq.Yds.	Crushed Aggregate Slope Protection				497		
511	284	Cu.Yds.	Class C Concrete, Superstructure			284			
511	82	Cu.Yds.	Class C Concrete, Pier Caps and Columns		82				
511	90	Cu.Yds.	Class C Concrete, Abutments above Footings	90					
511	138	Cu.Yds.	Class C Concrete, Footings	71	67				
509	112,976	Lbs.	Reinforcing Steel	11,572	24,792	76,612			
513	225,000	Lbs.	Structural Steel			225,000			
514	225,000	Lbs.	Field Painting of Structural Steel			225,000			
825	1122	Sq.Yds.	Concrete Surface Protection	51		1071			
517	553.67	Lin.Ft.	Railing aluminum rail and supports and concrete parapet	53.67		500.00			
505	Lump	Sum	First Test Pile				Lump		
507	2640	Lin.Ft.	12" Cast-in-place Reinforced Concrete Piles	1020	1620				
518	72	Lin.Ft.	6" Helical perforated CMP, 70701 including specials	72					
518	48	Lin.Ft.	6" Helical CMP, 70701, non-perforated.	48					
518	12	Each	Scuppers, including supports			12			
518	30	Cu.Yds.	Porous Backfill	30					
808	284	Each	Water Reducing, Set-Retarding Admixture			284			

GENERAL NOTES

*REFERENCE shall be made to Standard Drawing BR-1-65 revised 11-24-65, FSB-1-62 revised 1-15-63.

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.

Design Loading: C F-400 (57)
Concrete, Class C: basic unit stress - 1,333 p.s.i. Substruct.
Concrete, Class C: basic unit stress - 1,133 p.s.i. Superst.
Structural Steel: ASTM A36, basic unit stress - 20,000 p.s.i.,

Reinforcing Steel - ASTM A515; A516, A517 Deformed, Intermediate, or Hard Grade. Basic unit stress 20,000 p.s.i. Except spiral reinforcement may be plain, Structural Grade with basic unit stress of 18,000 p.s.i.

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 for a minimum period of 30 days, after which excavation shall be made for the abutments and piles driven.

EXCAVATION QUANTITY for the abutments includes the removal of fill material required for construction of the abutments.

PILES shall be driven to a minimum bearing capacity of 33 tons per pile for the abutments and 45 tons per pile for the piers.

WELDS on Non-Stress carrying members are shown thus. N

*REFERENCE Contd Supplemental Specifications 808 dated 1-1-69, 811 dated 1-1-69, 825 dated and 927 dated 1-1-69 On Std. Dng. FSB-1-62, Specification reference M-7.11 shall be considered to read 711.17

WELDED ATTACHMENTS: No attachments shall be made by field welding to the flanges or flange plates of continuous beams or plate girders within a distance of 0.10 of the span length on either side of the top flanges at other parts of the spans shall be kept at least 2" from edge of flange.

SURFACE FINISH OF CONCRETE: The requirements of Sec. 511.22, Rubbed Finish, shall apply to the following exposed concrete surfaces:
a. The entire superstructure except the top and bottom surfaces of safety curbs and roadways.
b. The entire surface of piers and abutments except bridge seats, backwalls and the face of the spill through abutments between outside beams.

MACHINE FINISH: The concrete bridge deck shall be finished by the use of a finishing machine.

STAINLESS STEEL FASTENERS shall be properly passivated to removed surface impurities and shall be furnished with a lustrous furnish.

ELMER S. BARRETT ASSOCIATES
Consulting Engineers
245-249 S. Paint Street Chillicothe, Ohio

GENERAL PLAN AND ELEVATION, EST. QUANTITIES AND GEN. NOTES
BRIDGE NO. ROS-35-26.19
U.S.R. 35 UNDER ATHENS ROAD
ROSS COUNTY U.S.R. 35
STA. 1382+72.43 (E.B.)

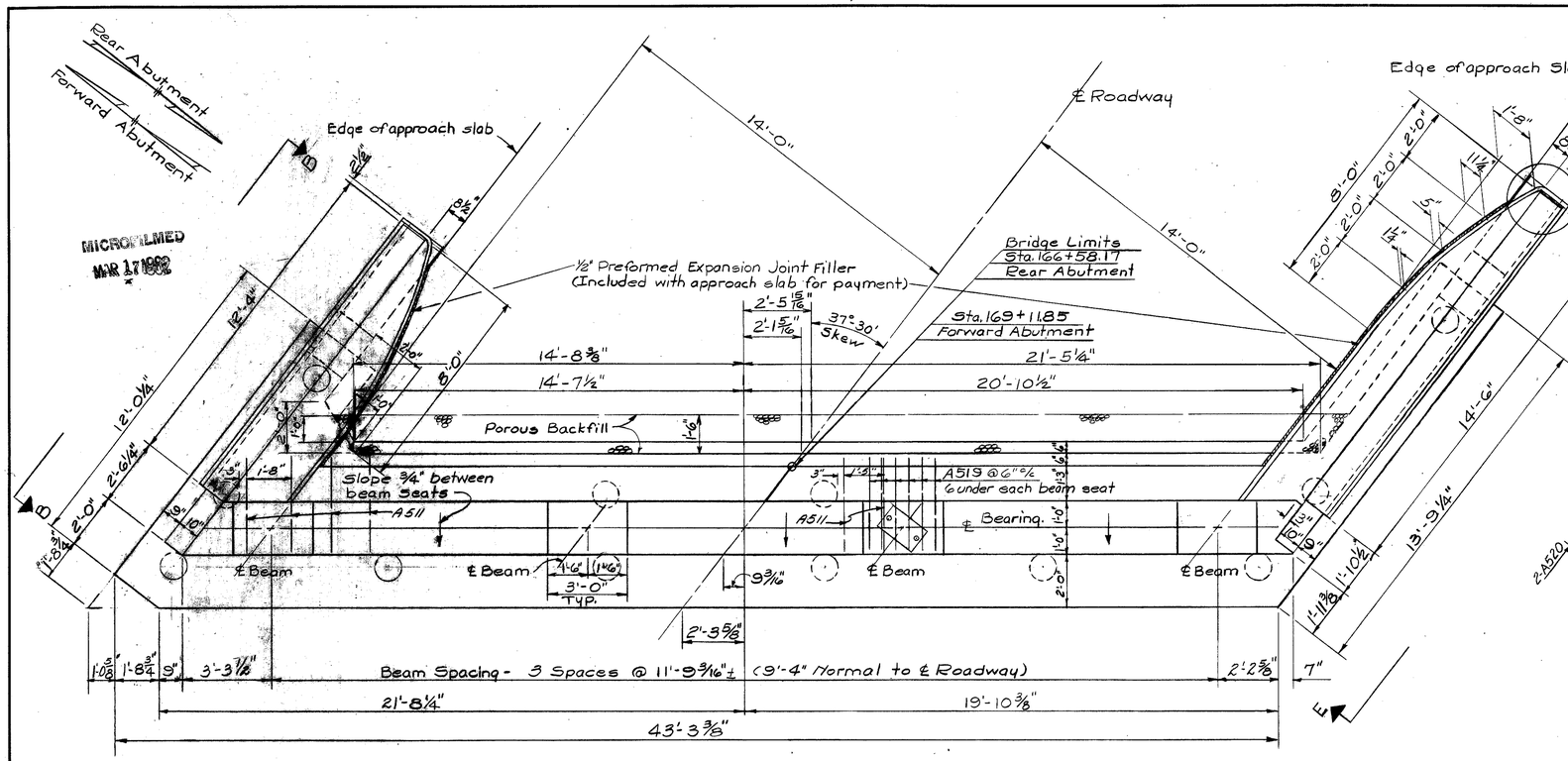
SCALE
DATE

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
K.D.D.	W.Q.W.		H.E.Z.	W.L.	10/30/64	

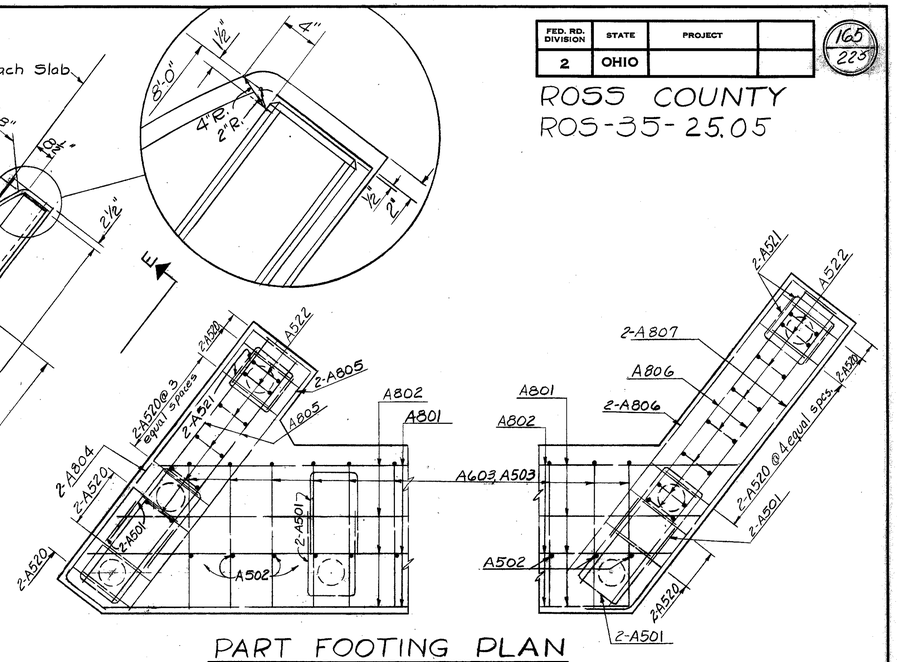
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

165/223

ROSS COUNTY
ROS-35-25.05



PLAN



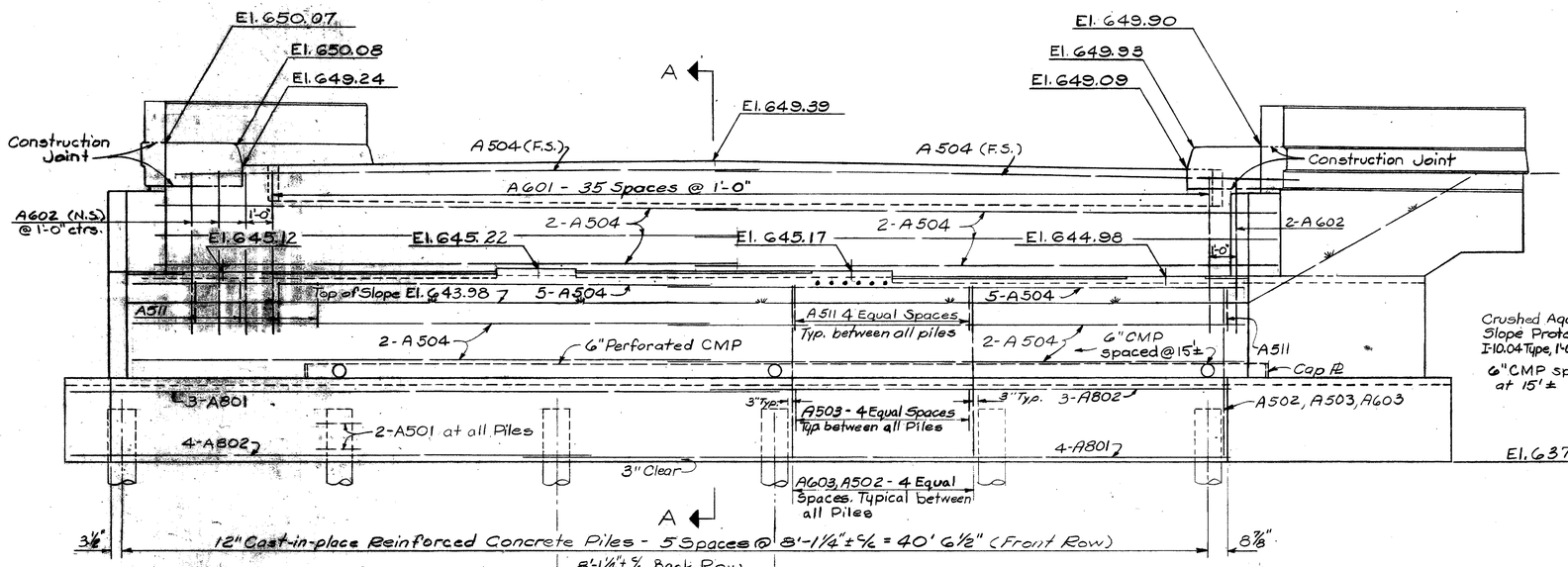
PART FOOTING PLAN

NOTES

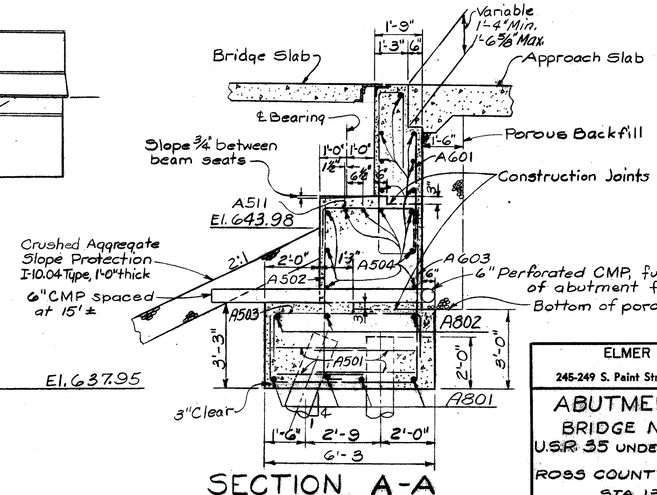
POROUS BACKFILL shall extend upward to the approach slab and outward to the abutment wings.

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

LEGEND
N.S. - denotes Near Side
F.S. - denotes Far Side



ELEVATION



SECTION A-A

ELMER S. BARRETT ASSOCIATES
Consulting Engineers
245-249 S. Paint Street Chillicothe, Ohio

ABUTMENT DETAILS
BRIDGE NO. ROS-35-2619
U.S.R. 35 UNDER ATHENS ROAD

ROSS COUNTY U.S.R. 35
STA. 1382 + 72.43 (E.B.)

SCALE DATE

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
KDD	WDJ		HEB	WL	10/20/64	

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

166
223

ROSS COUNTY
ROS-35-25.05

NOTES

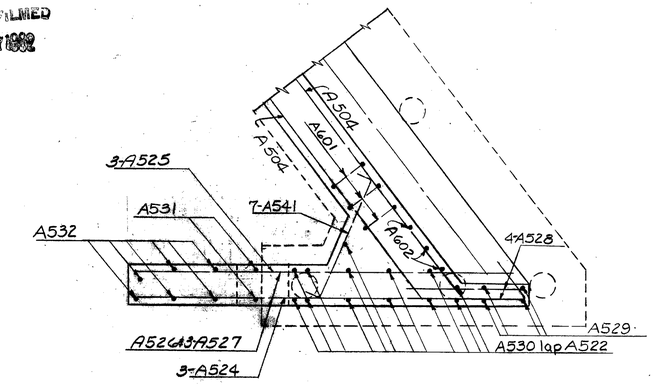
SEE STANDARD DRAWING BR-1-65 for details of aluminum railing and concrete parapet.

ALUMINUM RAILING and concrete parapet Wall are included with 517, Railing for payment.

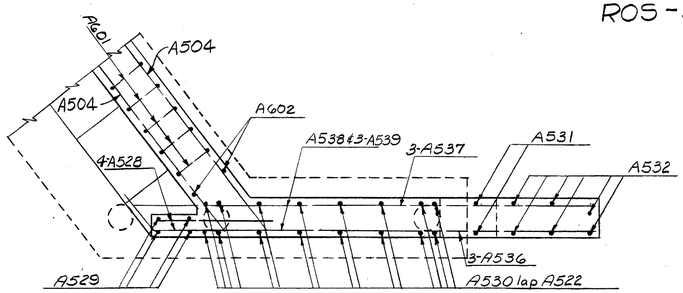
LEGEND

N.S. denotes Near Side

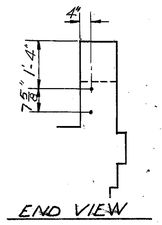
F.S. denotes Far Side



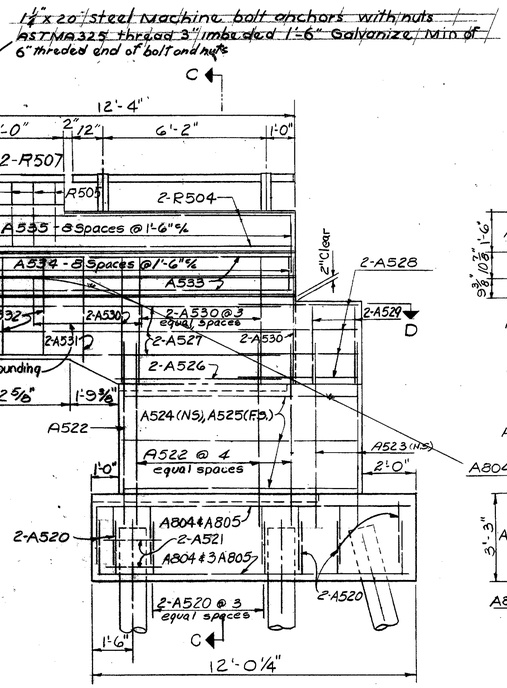
SECTION D-D



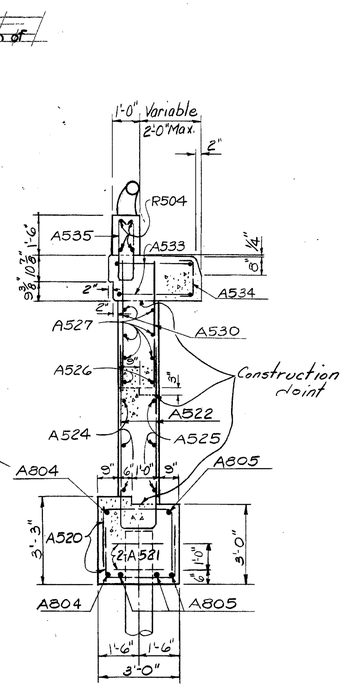
SECTION G-G



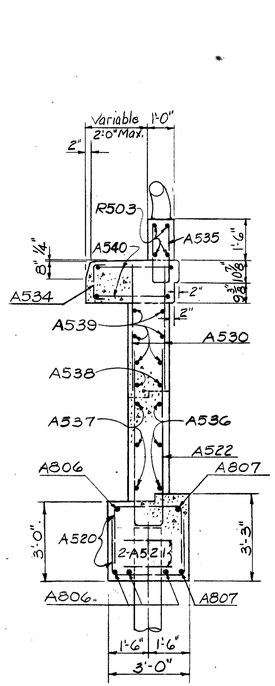
END VIEW



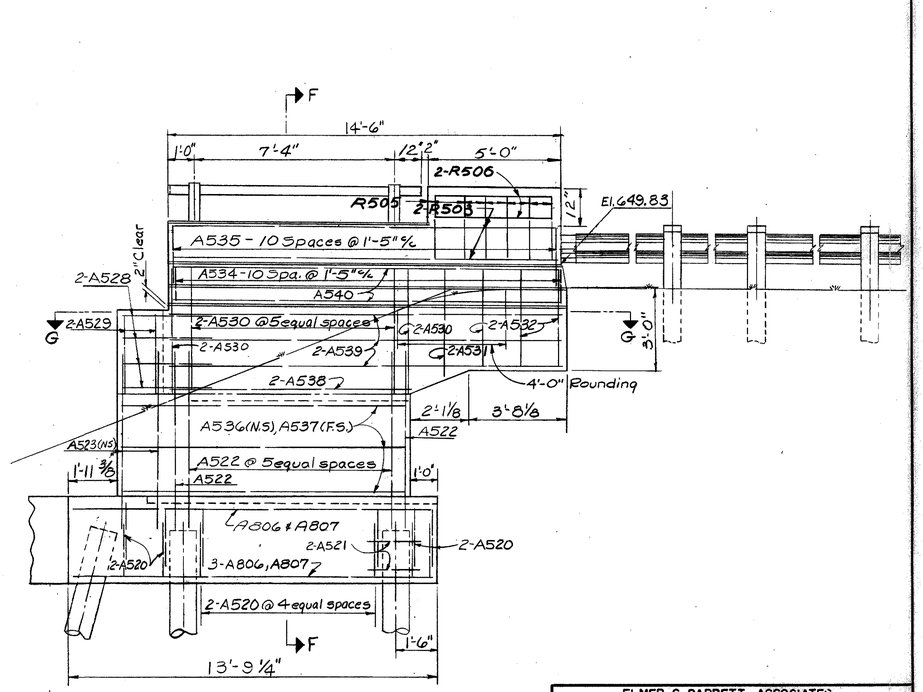
VIEW B-B



SECTION C-C



SECTION F-F



VIEW E-E

ELMER S. BARRETT ASSOCIATES
Consulting Engineers
245-249 S. Paint Street Chillicothe, Ohio

ABUTMENT DETAILS

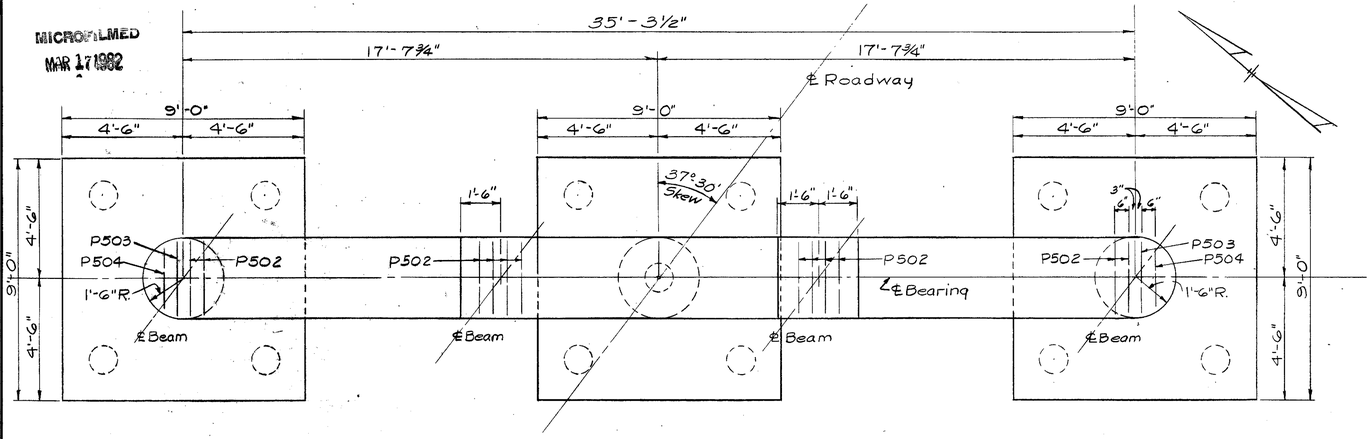
BRIDGE NO. ROS-35-2619
U.S.R. 35 UNDER ATHENS ROAD
ROSS COUNTY U.S.R. 35
STA. 1382 + 72.43 (E.B.)

SCALE			DATE			
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
JWH	WDJ		HEZ	WK	10/30/64	

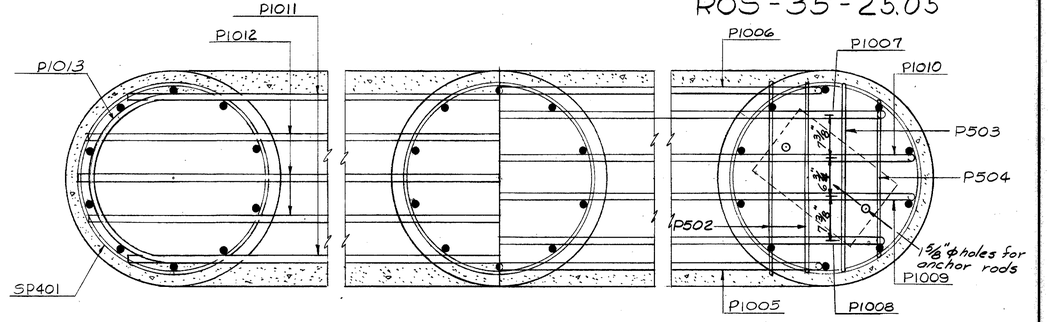
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

167
225

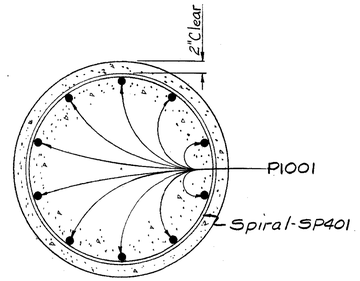
ROSS COUNTY
ROS-35-25.05



PLAN
REAR PIER



SECTION "A"-"A"



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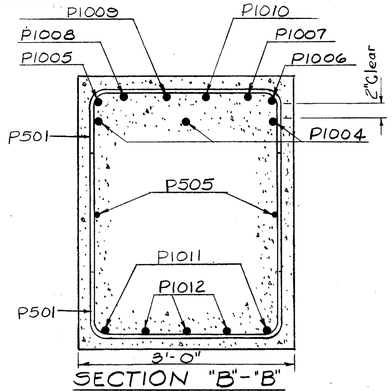

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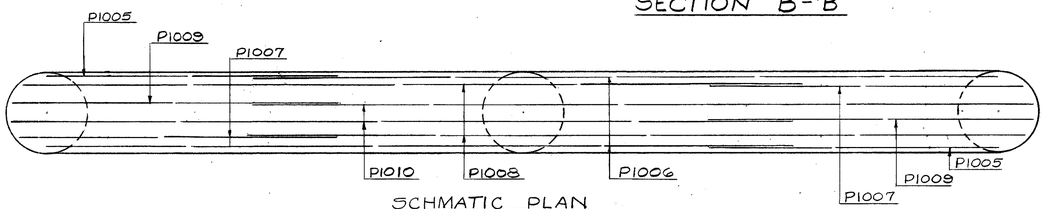
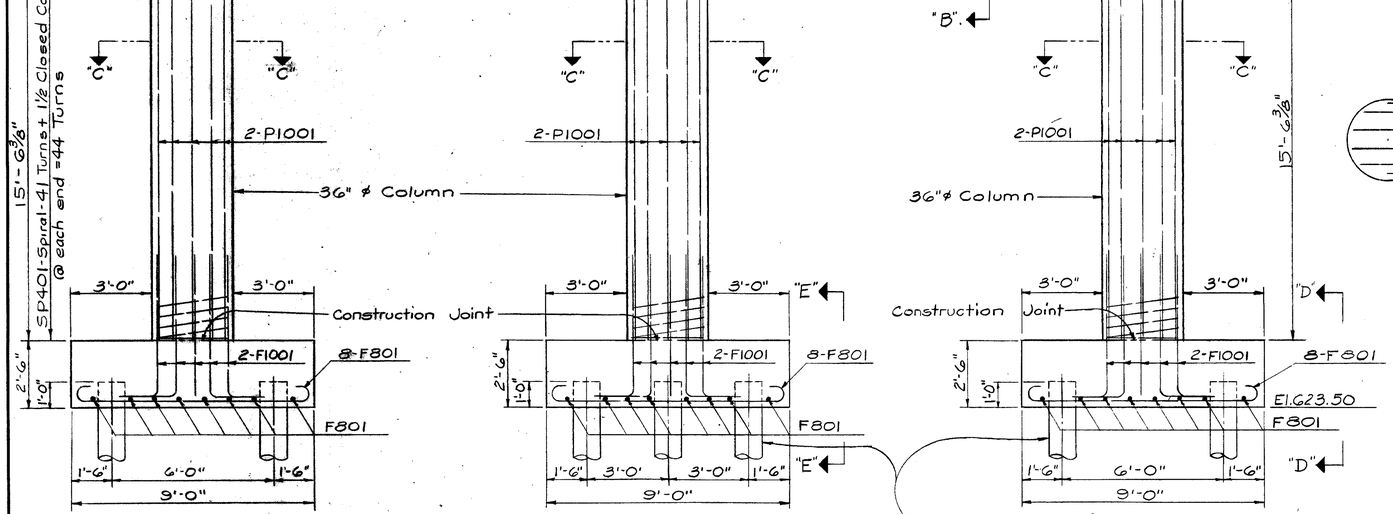
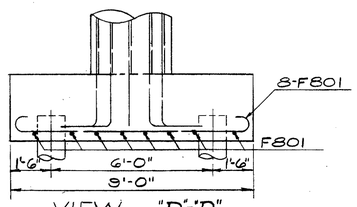


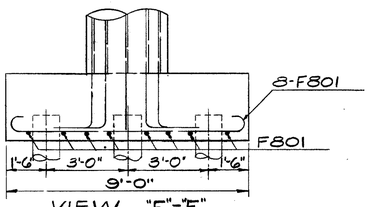
SCHMATIC PLAN
(Showing Stagger of Reinforcing Bars in Top of Pier Cap)



ELEVATION
REAR PIER



VIEW "D"-"D"



VIEW "E"-"E"

NOTES

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

ELMER S. BARRETT ASSOCIATES
Consulting Engineers
245-249 S. Paint Street Chillicothe, Ohio

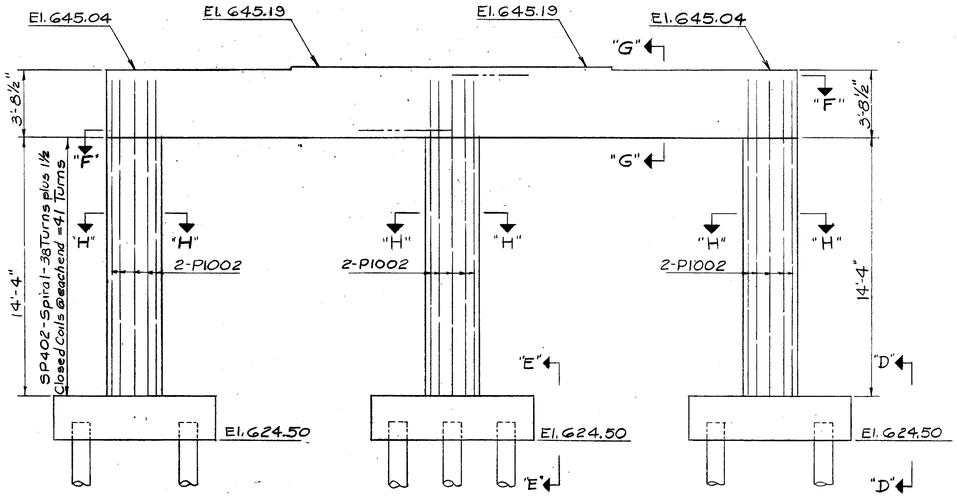
PIER DETAILS
BRIDGE NO. ROS-35-2619
U.S.R. 35 UNDER ATHENS ROAD
ROSS COUNTY U.S.R. 35
STA. 1382+72.43 (E.B.)

SCALE			DATE			
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
JWH.	W.D.J.		JWH.	WRL	10/30/64	

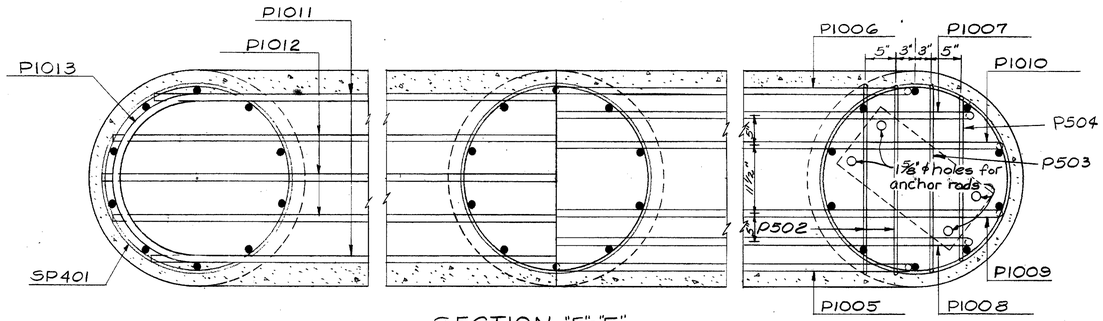
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

168
225

ROSS COUNTY
ROS-35-25.05



ELEVATION
CENTER PIER



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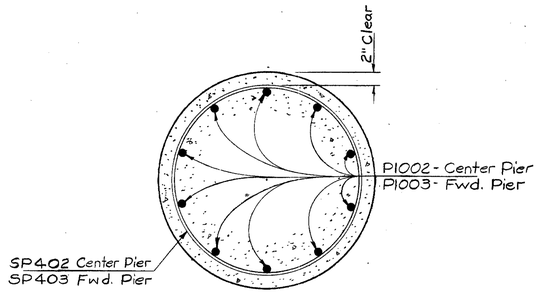

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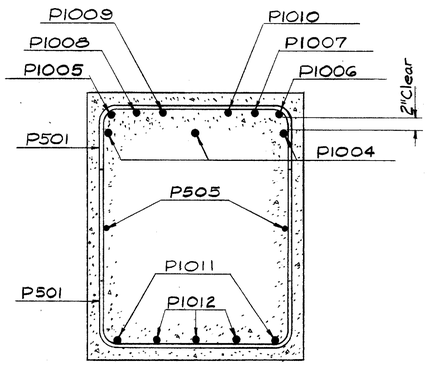
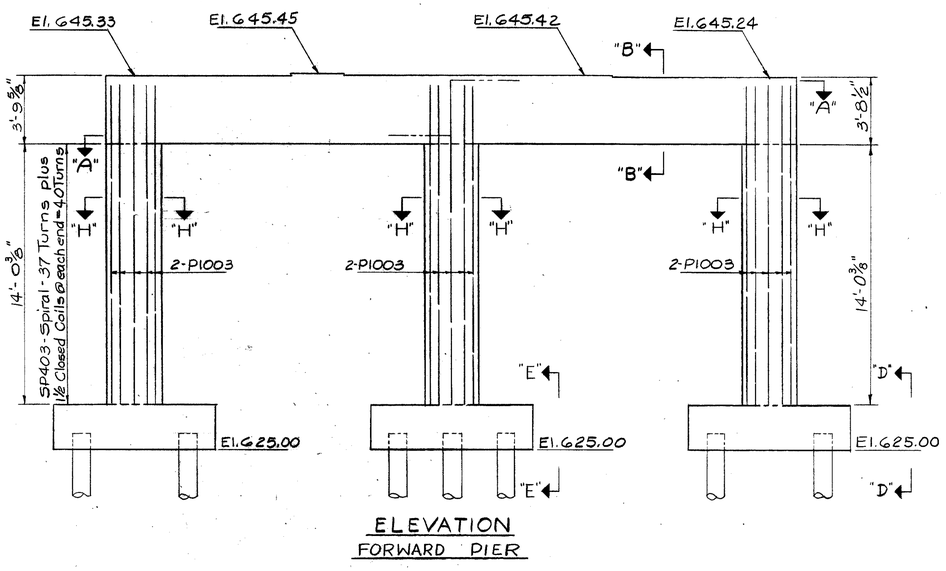


SECTION "G"-"G"



ELEVATION
FORWARD PIER

NOTE:
All details, dimensions and reinforcing steel not shown in Center Pier and Forward Pier are identical to Rear Pier.

ELMER S. BARRETT ASSOCIATES
Consulting Engineers
245-249 S. Paint Street — Chillicothe, Ohio

PIER DETAILS

BRIDGE NO. ROS-35-2619
U.S.R. 35 UNDER ATHENS ROAD
ROSS COUNTY — U.S.R. 35
STA. 1382 + 72.43 (E.B.)

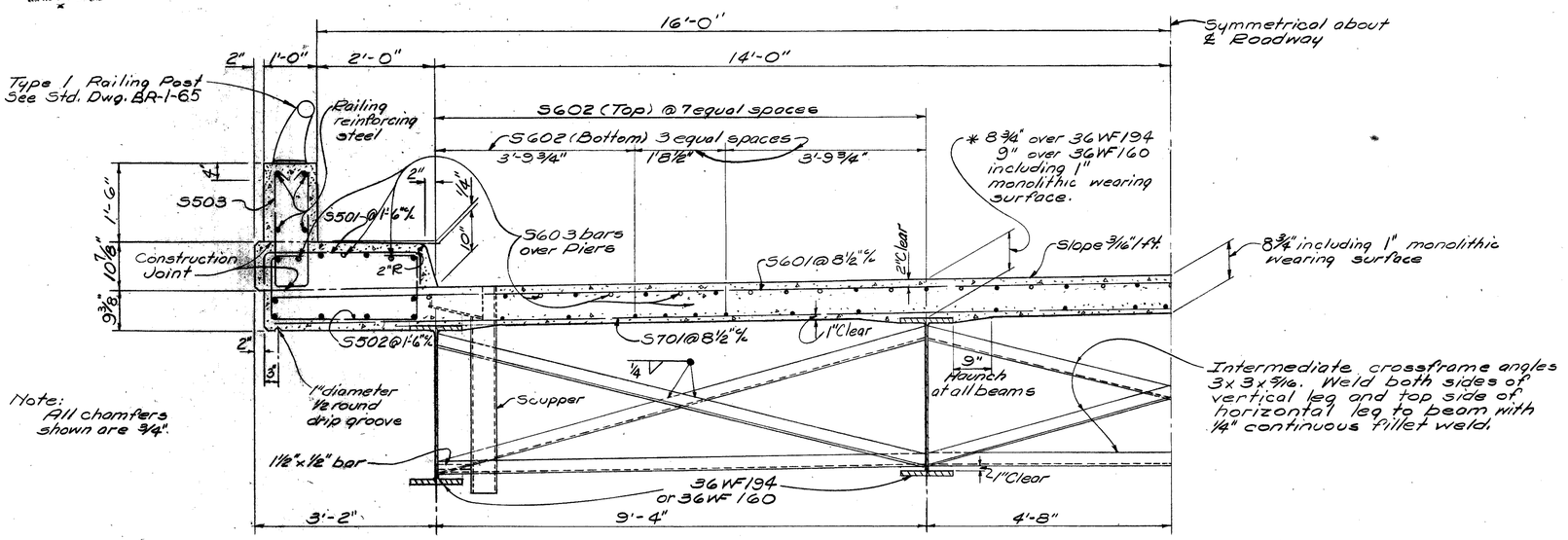
SCALE			DATE			
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
JWH	W.D.J.		[illegible]	[illegible]	10/30/64	

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

169
225

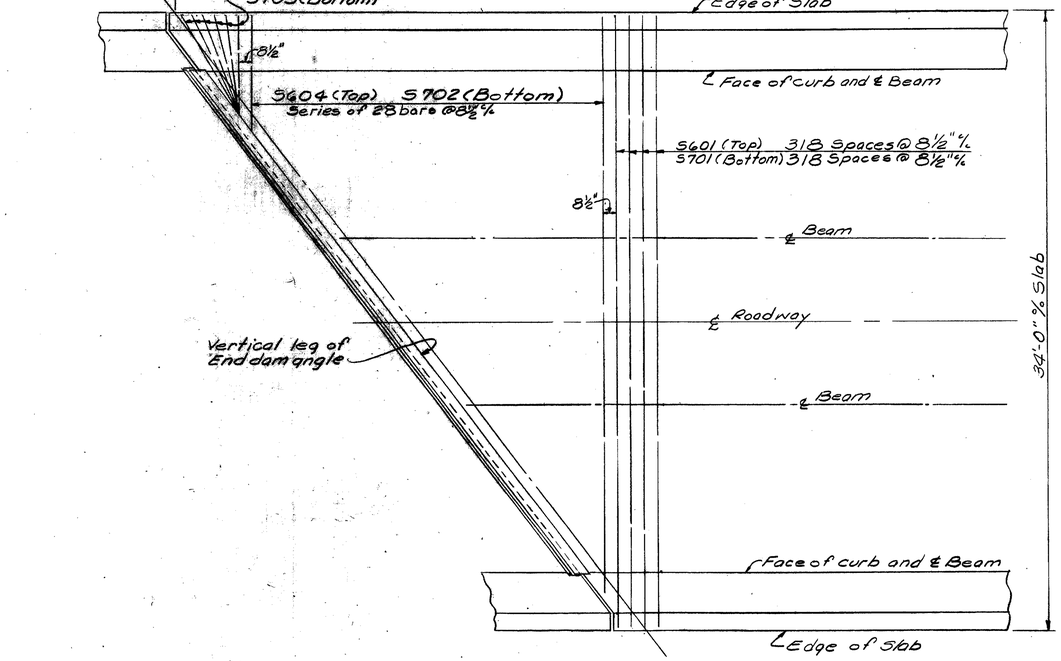
ROSS COUNTY
ROS-35-25.05

Note:
All longitudinal bars S602 except as otherwise shown.
Lap S602 bars 1'-11" minimum.



Note:
All chamfers shown are 3/4".

HALF TRANSVERSE SECTION



PART PLAN SLAB REINFORCING

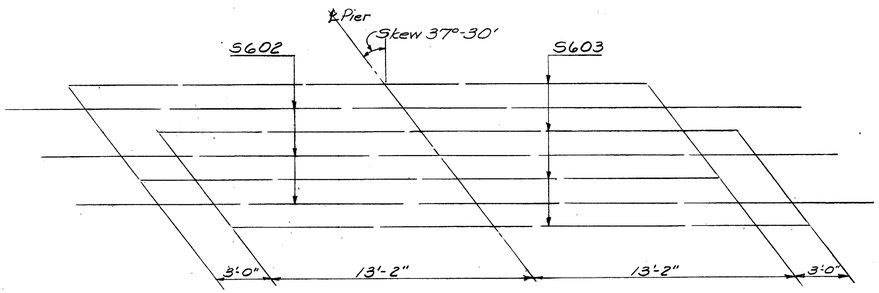
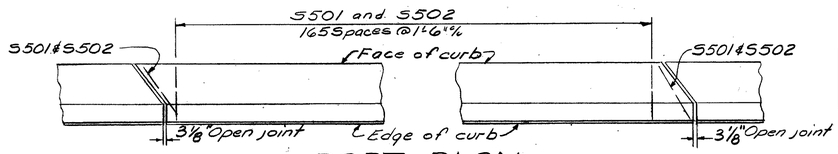


DIAGRAM SHOWING STAGGER OF S603 BARS OVER PIERS

NOTES

* This is a 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.

DECK SLAB HAUNCH: The haunch in the deck slab adjacent to the top of the steel beams, which is shown as 9" wide, may vary from this dimension between the limits of 6" and 12", except that the maximum slope shall not exceed 3 inches per foot. Payment for deck slab concrete shall be based on the 9" width.



PART PLAN CURB REINFORCING

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Consulting Engineers
245-249 S. Paint Street — Chillicothe, Ohio

SLAB REINFORCING DETAILS
BRIDGE NO. ROS-35-2619
U.S.R. 35 UNDER ATHENS ROAD
ROSS COUNTY — U.S.R. 35
STA. 1382+72.43 (EB.)

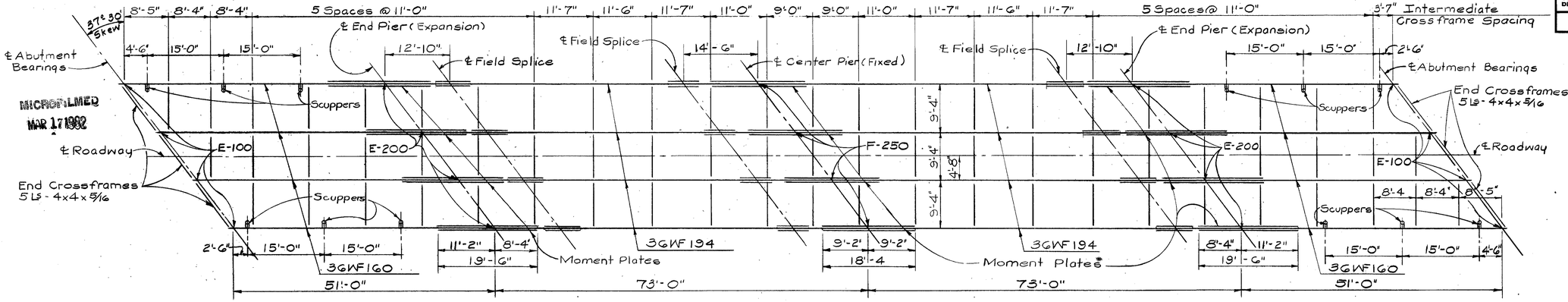
SCALE — DATE

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
K.D.D.	W.O.U.		H.W.B.	W.W.L.	10/30/64	

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

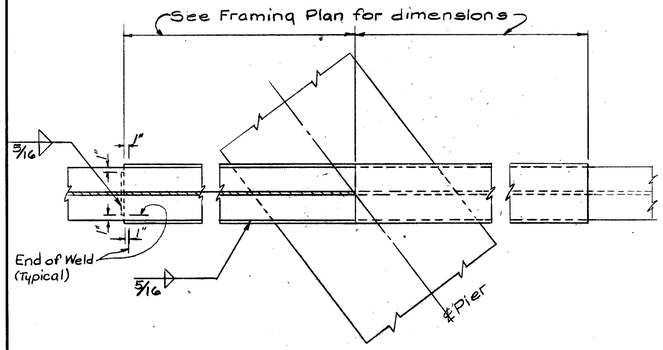
170
223

ROSS COUNTY
ROS-35-25.05

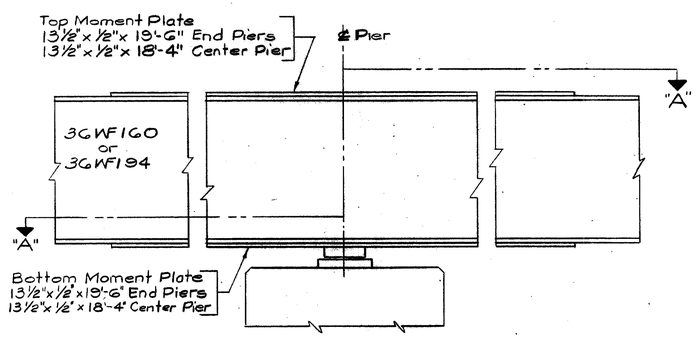


FRAMING PLAN

Note:
See Sheet No 170-A for
Field Splice Details



SECTION "A"-"A"



ELEVATION
MOMENT PLATE DETAILS

DEFLECTION AND CAMBER TABLE				
LOCATION	OUTSIDE BEAMS		INSIDE BEAMS	
	END SPAN	MIDDLE SPAN	END SPAN	MIDDLE SPAN
Deflection due to weight of steel	1/32"	1/16"	1/32"	1/16"
Deflection due to remaining dead load	1/8"	3/8"	1/8"	3/8"
Convexity required for vertical curve	7/32"	7/16"	7/32"	7/16"
Sum of convexity and deflection	3/8"	7/8"	3/8"	7/8"
Required Camber	0	7/8"	0	7/8"

ELMER S. BARRETT ASSOCIATES
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245-249 S. Paint Street Chillicothe, Ohio

SUPERSTRUCTURE DETAILS

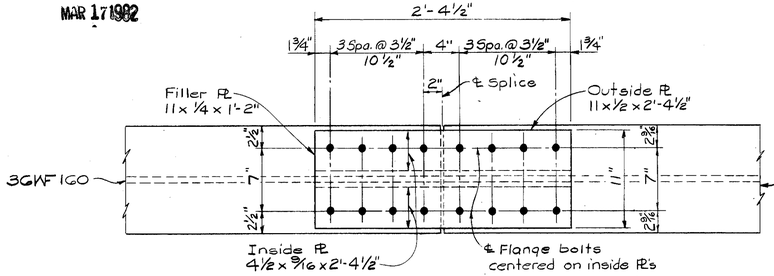
BRIDGE NO. ROS-35-2619
U.S.R. 35 UNDER ATHENS ROAD
ROSS COUNTY U.S.R. 35
STA. 1382 + 72.43 (E.B.)

SCALE	DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
	FDD THS	W.D.J		WAC	WL	10/30/64	

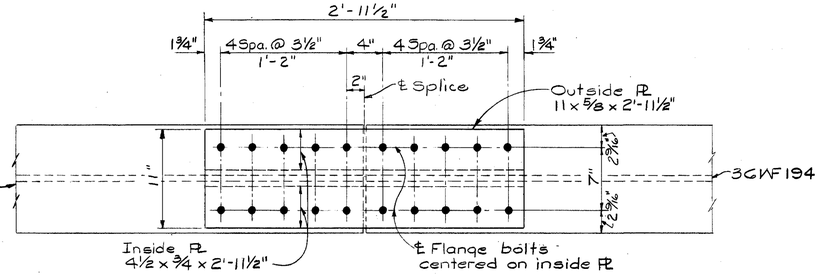
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

170-A (223)

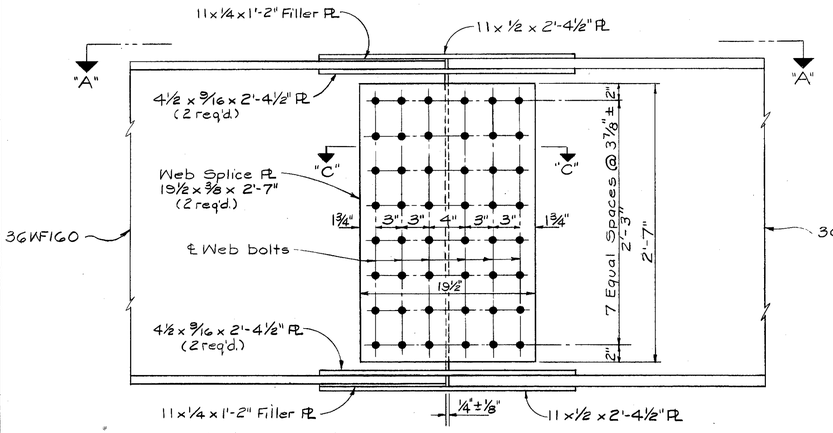
ROSS COUNTY
ROS-35-25.05



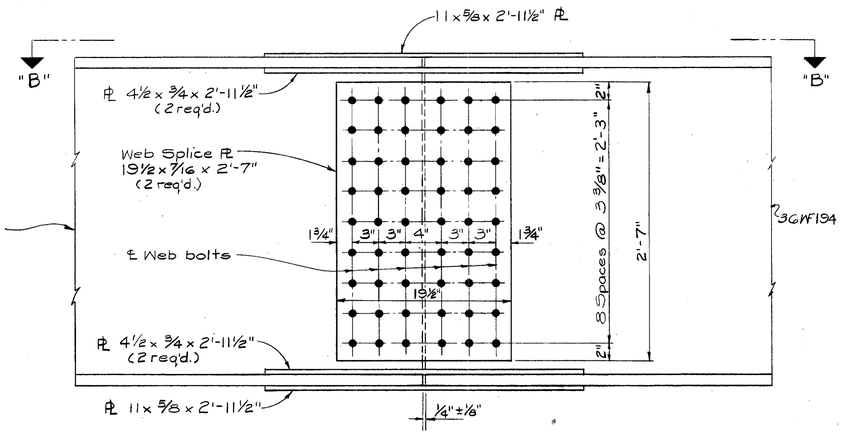
VIEW "A"-"A"
Flange Splice



VIEW "B"-"B"
Flange Splice



BEAM SPLICE DETAIL (Near End Piers)
Web Splice



BEAM SPLICE DETAIL (Near Center Pier)
Web Splice

NOTES

DESIGN SPECIFICATIONS: Splice details conform to the requirements of "Design Specifications for Highway Structures" of the State of Ohio, Department of Highways, dated September 1, 1957, together with current revisions thereof, except strength of splice is based on Section 1.6.31 of the A.A.S.H.O. "Standard Specifications for Highway Bridges" dated 1961, together with current revisions thereof.

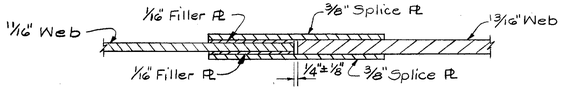
DESIGN UNIT STRESSES:

Structural Steel	ASTM A-36	20,000 p.s.i. bending 12,000 psi. shear
High Strength Bolts	ASTM A-325	13,500 psi. shear 40,000 psi. bearing

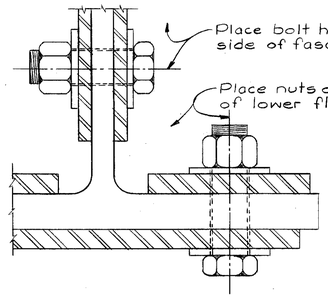
MATERIAL: Splice plates, bolts, and fills shall be according to Item S-7. Bolts shall be 1" diameter, High Strength. The splice weight plus the weight of fills shall be included under Item S-7, Structural Steel for payment.

FILLS shown on the project plans are based on the nominal member sizes being spliced, however, in the final shop assembly, fills shall be furnished to the nearest 1/16 inch in thickness based on the actual measured sizes of the members being spliced. Drawing together of splice plates over material that varies by 1/16 inch or more in thickness, at the centerline of the splice, will not be permitted.

FIELD ASSEMBLY: In the final assembly of parts to be bolted, each beam shall be so supported that drift pins may be placed in a sufficient number of holes (not less than 25% for field erection), to provide and maintain accurate alignment of holes and parts. Heavy driving of drift pins will not be permitted. Sufficient bolts shall be installed and brought to a snug tight condition to bring all parts of the splice into complete contact before the member is released. Bolts shall then be installed in any remaining open holes and tightened to a snug tight fit, after which all bolts shall be tightened completely by calibrated wrenches or by the turn-of-nut method. Drift pins shall then be replaced with bolts, tightened in the same manner.



SECTION "C"-"C"



Washers may be omitted as allowed in Sec. S-7.10.

TYPICAL SECTION
(at ℄ of beam splice)

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Consulting Engineers
245-249 S. Paint Street — Chillicothe, Ohio

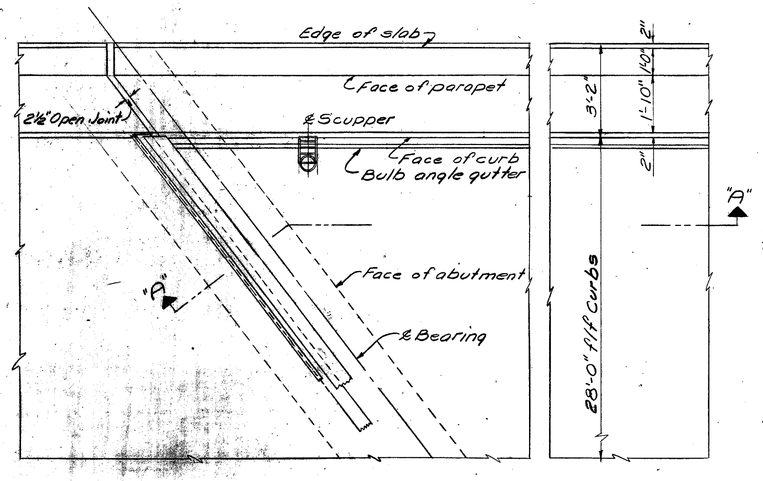
BEAM SPLICE DETAILS
BRIDGE NO. ROS-35-2619
U.S.R. 35 UNDER ATHENS ROAD
ROSS COUNTY — U.S.R. 35
STA. 1382 + 72.43 (E.B.)

SCALE		DATE				
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
	W.D.J.		WIC			

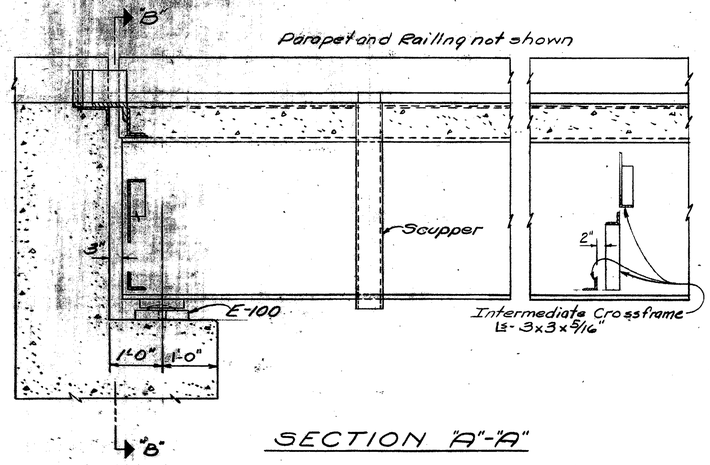
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

171
223

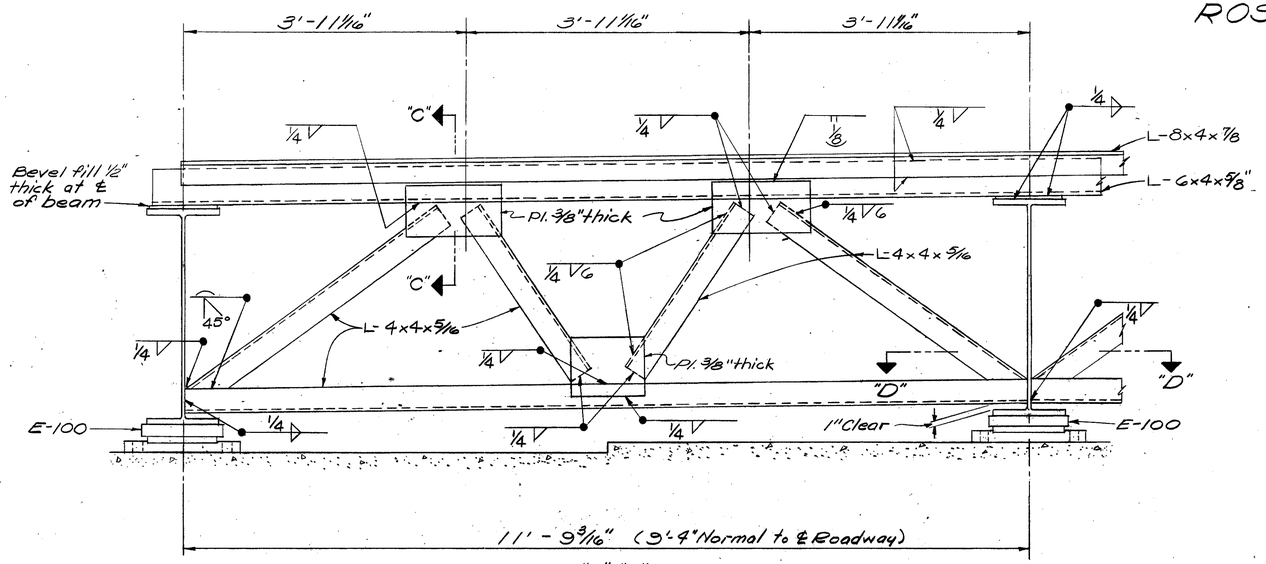
ROSS COUNTY
ROS-35-25.05



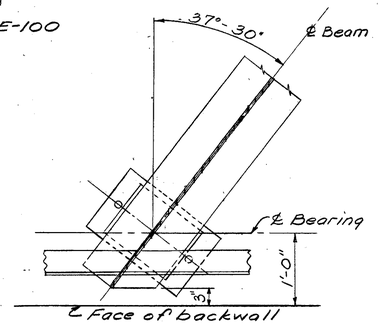
PART PLAN AT ABUTMENT



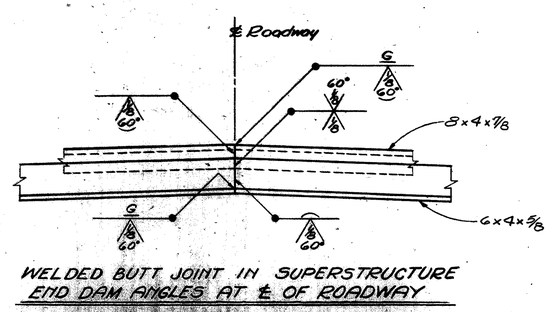
SECTION "A"-"A"



SECTION "B"-"B"

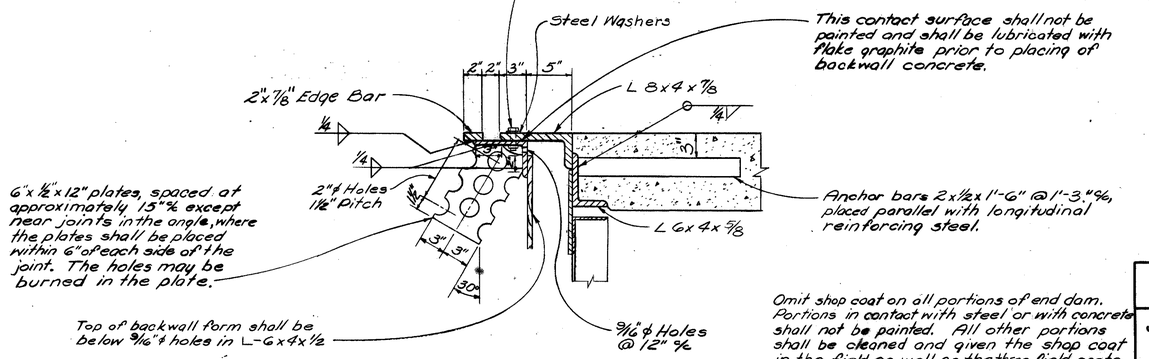


SECTION "D"-"D"



WELDED BUTT JOINT IN SUPERSTRUCTURE END DAM ANGLES AT ℄ OF ROADWAY

A welded butt joint in the end dam along the centerline of roadway, will be required for that portion of the end dam attached to the superstructure. The portion attached to the backwall shall be placed in segments not less than 6'-0" in length, with one of the joints at the apex of the crown. These shall be closely butted but shall not be welded.



SECTION "C"-"C"

Omit shop coat on all portions of end dam. Portions in contact with steel or with concrete shall not be painted. All other portions shall be cleaned and given the shop coat in the field as well as the three field coats.

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Consulting Engineers
245-249 S. Paint Street — Chillicothe, Ohio

SUPERSTRUCTURE DETAILS

BRIDGE NO. ROS-35-2619
U.S.R. 35 UNDER ATHENS ROAD
ROSS COUNTY — U.S.R. 35
STA. 1382+72.43 (E.B.)

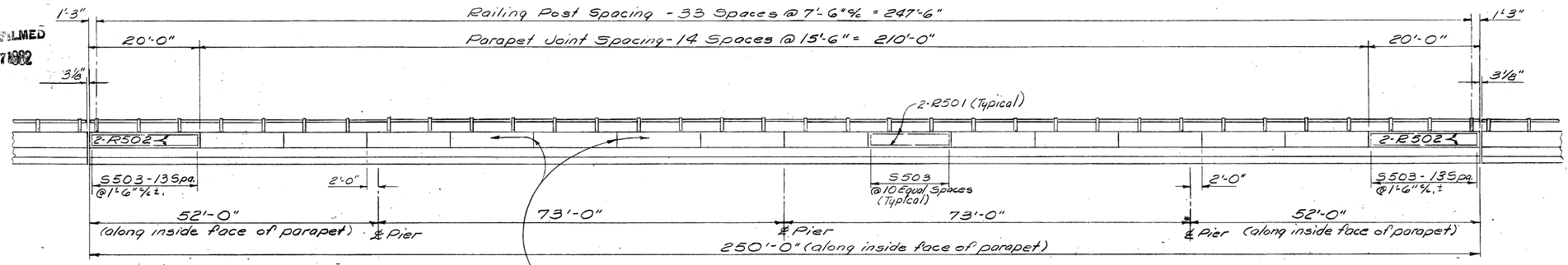
SCALE — DATE

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
K.D.D.	W.D.J.		HWJ	NL	10/30/64	

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

172
225

ROSS COUNTY
ROS-35-25.05



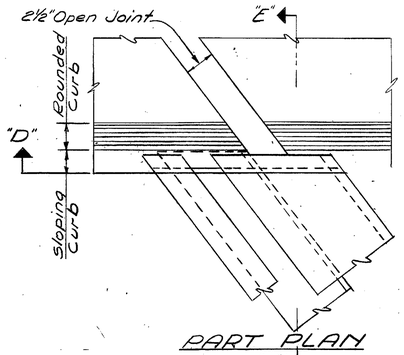
¼" grey sponge rubber preformed expansion joint filler meeting the requirements of Section 705.03 (AASHO M153). Included with Item 517 for payment.)

TREATMENT OF PARAPET AND FASCIA

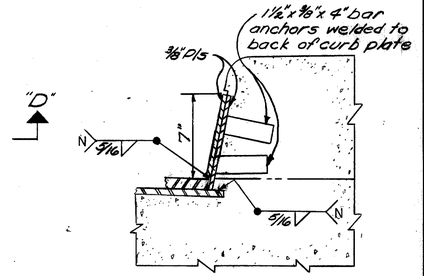
NOTES

DECK DRAINAGE: Scuppers shall be made of steel. Milled joints will be permitted in bulb angles but individual lengths shall be as long as practicable. Gutters shall be accurately adjusted for alignment and grade with allowance for dead load deflection before concrete is placed. Welding for scuppers shall be continuous fillet weld. Steel gutters and supports are included under Item S-7, structural steel.

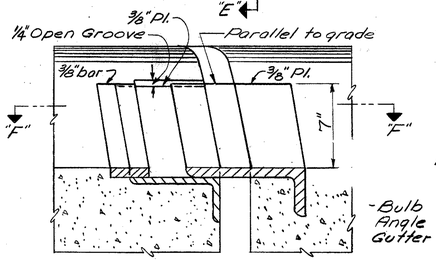
SCUPPERS are paid for under Item S-29, scuppers. The first support angle each side of scupper is included with scupper for payment.



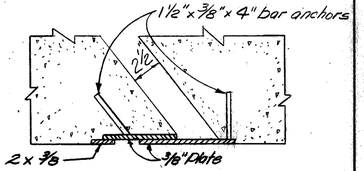
PART PLAN



SECTION "E"-"E"

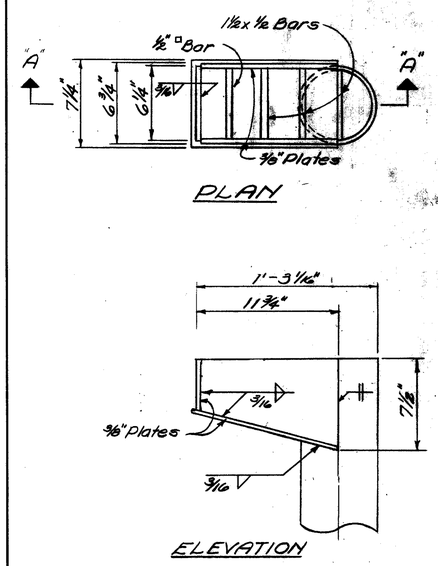


SECTION "D"-"D"



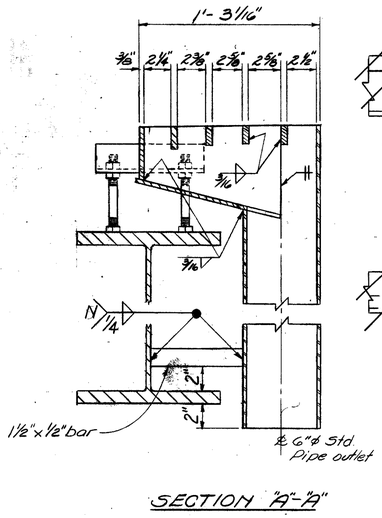
SECTION "F"-"F"

CURB PLATE DETAILS

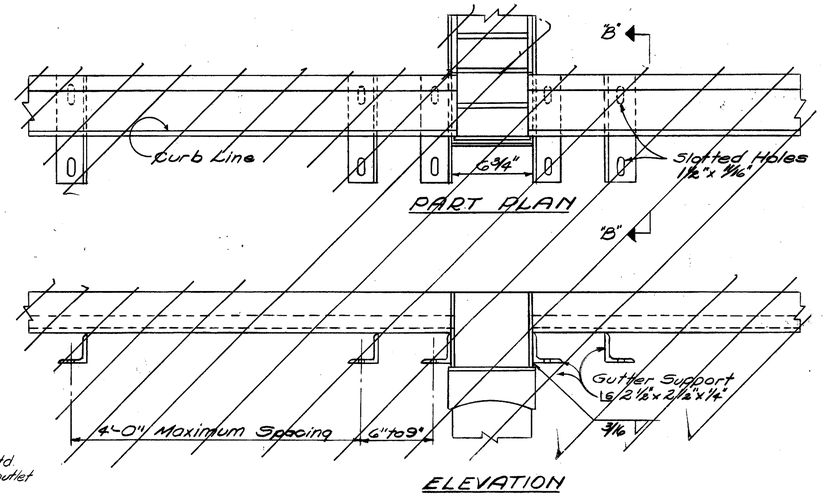


PLAN

ELEVATION

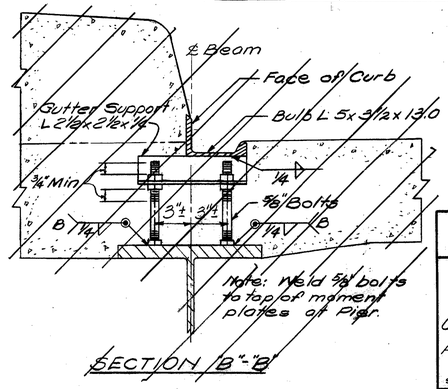


SECTION "A"-"A"



PART PLAN

ELEVATION



SECTION "B"-"B"

GUTTER AND SCUPPER DETAILS

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Consulting Engineers
245-249 S. Paint Street — Chillicothe, Ohio

SUPERSTRUCTURE DETAILS
BRIDGE NO. ROS-35-2619
U.S.R. 35 UNDER ATHENS ROAD
ROSS COUNTY — U.S.R. 35
STA. 1382 + 72.43 (E, B)

SCALE — DATE

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
KDD	WDJ		JLG	MW	10/30/64	

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

173
225

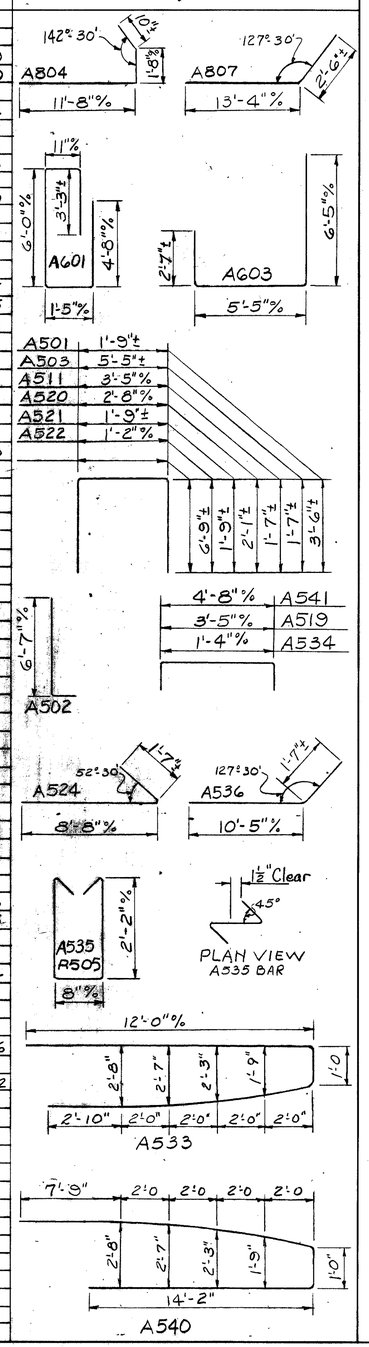
REINFORCING STEEL LIST

ROSS COUNTY
ROS-35-2505

ONE ABUTMENT

Bar Number	Number Required	Length	Shape	Weight
A801	7	27'-3"	—	509
A802	7	19'-3	—	360
A803	Deleted			
A804	2	13'-11"	⌒	74
A805	4	11'-2"	—	119
A806	4	13'-10"	—	148
A807	2	15'-8"	⌒	84
A601	36	15'-7"	⊓	843
A602	5	6'-0"	—	45
A603	25	14'-1"	⊔	529
A501	24	8'-5"	⊏	211
A502	25	7'-1"	L	185
A503	25	8'-3"	⊓	215
A504	32	21'-10"	—	729
A505	Deleted			
A506				
A507				
A508				
A509				
A510				
A511	25	6'-3"	⊓	163
A512	Deleted			
A513				
A514				
A515				
A516				
A517				
A518				
A519	24	4'-5"	⊓	111
A520	36	6'-7"	⊓	247
A521	8	4'-11"	⊓	41
A522	14	14'-4"	⊔	209
A523	4	6'-9"	—	28
A524	3	10'-1"	⌒	32
A525	3	8'-3	—	26
A526	2	6'-3	—	13
A527	6	11'-8"	—	73
A528	16	4'-5"	—	74
A529	8	2'-8"	—	22
A530	29	4'-6"	—	136
A531	4	3'-10"	—	16
A532	12	3'-6"	—	44
A533	2	23'6"	⌒	49
A534	20	2'-4"	⌒	49
A535	20	5'-7"	⊠	116
A536	3	12'-0"	⌒	38
A537	3	11'-3"	—	35
A538	2	9'-0	—	19
A539	6	14'-2"	—	89
A540	2	30'-7"	⌒	64
A541	7	5'-8"	⊓	41
TOTAL ONE ABUTMENT				5,786
TOTAL TWO ABUTMENTS				11,572

Bending Diagrams



THREE PIERS

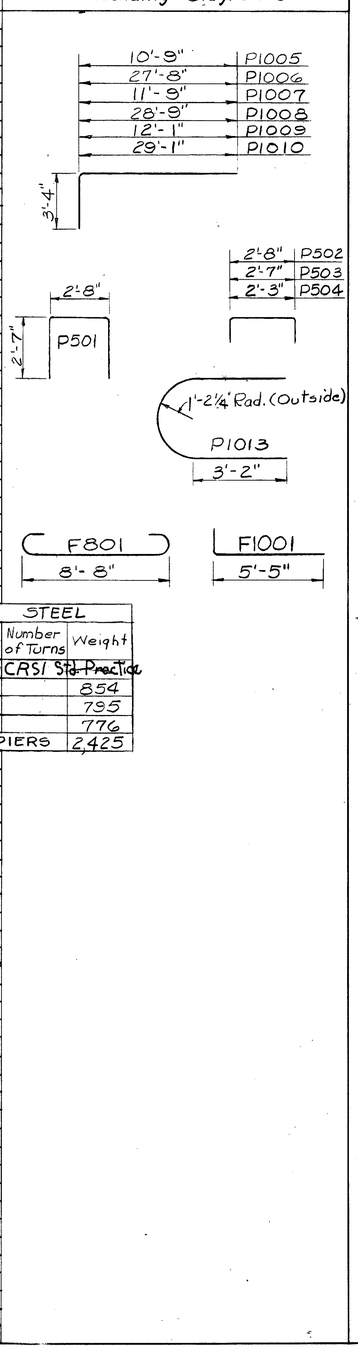
Bar Number	Number Required	Length	Shape	Weight
P1001	30	18'-9"	—	2420
P1002	30	17'-7"	—	2270
P1003	30	17'-3"	—	2227
P1004	9	16'-0"	—	620
P1005	6	13'-9"	L	355
P1006	6	30'-8"	L	792
P1007	6	14'-9"	L	381
P1008	6	31'-9"	L	820
P1009	6	15'-1"	L	389
P1010	6	32'-1"	L	828
P1011	12	19'-11"	—	1028
P1012	18	20'-7"	—	1594
P1013	12	10'-0"	⊂	516
P501	132	7'-6"	⊏	1033
P502	36	3'-8"	⊓	138
P503	6	3'-7"	⊓	22
P504	6	3'-3"	⊓	20
P505	12	18'-6"	—	232
F1001	90	6'-6"	L	2517
F801	144	10'-10"	⊂	4165
SUB-TOTAL THREE PIERS				22,367

SPIRAL REINFORCING STEEL

Bar Number	Number Required	Core Dia % Spiral	Length	Pitch	Number of Turns	Weight
Other details in accordance with CRSI Std. Practice						
SP401	3	32"	15'-6 3/8"	4½"		854
SP402	3	32"	14'-4"	4½"		795
SP403	3	32"	14'-0 3/8"	4½"		776
TOTAL SPIRAL - THREE PIERS						2,425

TOTAL THREE PIERS 24,792

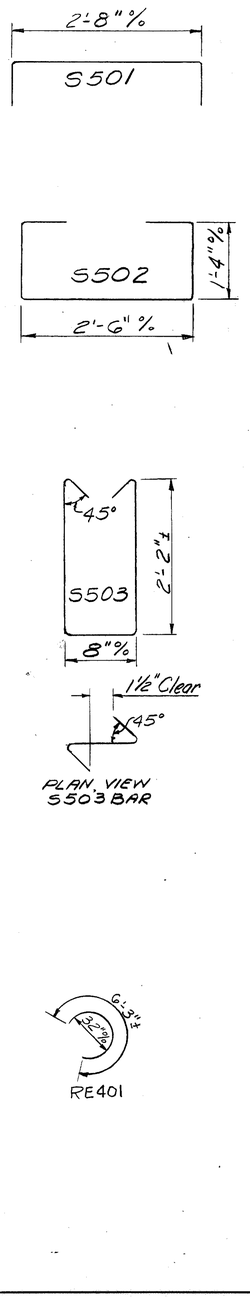
Bending Diagrams



SUPERSTRUCTURE

Bar Number	Number Required	Length	Shape	Weight
S701	319	33'-8"	—	21,952
S702	2 Series of 28 bars	31'-8 to 6'-6½"	—	2,187 INC. 11⅛"
S703	12	5'-7"	—	137
S601	319	33'-8"	—	16,131
S602	576	29'-5	—	25450
S603	81	29'-4	—	3569
S604	2 Series of 28 bars	31'-8" to 6'-6½"	—	1,607 INC. 11⅛"
S605	12	5'-7"	—	101
S501	336	3'-8"	⊓	1,285
S502	336	5'-11"	⊓	2,073
S503	364	5'-7"	M	2,120
TOTAL				76,612

Bending Diagrams



REPLACEMENT STEEL

RE1001	1	8'-2"	—
RE801	1	7'-6"	—
RE701	2	7'-2"	—
RE601	3	6'-11"	—
RE501	1	6'-7"	—
RE401	1	6'-3"	C

Bending Diagrams

RAILING STEEL

R501	112	14'-8"	—
R502	16	19'-8"	—
R503	8	14'-2"	—
R504	8	12'-0"	—
R505	20	5'-7"	— B
R506	8	4'-8"	—
R507	8	3'-8"	—

~NOTES~

BAR SIZE is indicated in the bar mark. The first digit where three digits are used, and the first two digits where four digits are used, indicate the bar size. For example, A501 is a number 5 size bar and P1001 is a number 10 size bar.

RAILING STEEL in the parapet wall is included with Item 517 Railing for payment.

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 "Number of Turns" shown is the "Length" divided by the pitch plus three turns (total number of closed coils) expressed as the nearest whole number.
Spiral reinforcing bars shall not have deformations but shall in all other respects conform to Item 509.
1½ 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.

ELMER S. BARRETT ASSOCIATES
Consulting Engineers
245-249 S. Paint Street Chillicothe, Ohio

REINFORCING STEEL LIST
BRIDGE NO. ROS-35-2619
U.S.R. 35 UNDER ATHENS ROAD
ROSS COUNTY U.S.R. 35
STR

SCALE		DATE				
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
KDD	WDJ		WBZ	MK	10/30/64	

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MATERIALS - GENERAL

Materials to be furnished may be specified in the plans by a given manufacturer's catalog number or type. This is for descriptive purpose only and the contractor may assume that approved equal materials may be furnished.

816 STRUCTRAL SUPPORTS, STEEL BEAM (Type)

The structral steel beam supports including 8 and 6 pound beams, 4 pound drive post and hardware shall be galvanized in accordance with ASTM A-123 and A-153 respectively.

Quantities for item 816 "Structural Supports, Steel Beam (Type)" appearing in the quantity tables are approximate. The contractor shall be responsible for determining exact support lengths prior to fabrication and galvanizing of supports. Payment shall be at the contract unit price bid per lin. ft. which price and payment shall include all costs in connection with the embedment of the supports.

The cost of the concrete used for embedment will be a separate pay item.

STRUCTURAL SIGN SUPPORTS QUANTITIES

Quantities for Item 816 Structural Beam Supports appearing in the summary tables are approximate. The contractor shall be responsible for determining exact support lengths prior to fabrication and galvanizing of supports.

816 OVERHEAD SIGN SUPPORT, BY TYPE

All component parts of the overhead sign supports shall be steel, except for the truss and components for the number 7 series which shall be aluminum. For specific details and materials, see sheet number 210.

Cost of furnishing and installing the sign brackets and the fixture support arm, length "G", with mounting holes and hardware shall be included in the contract unit price bid for Overhead Sign Supports.

Switch enclosure mounting brackets including mounting bolts and drilled holes shall be furnished and installed under payment for 816 Overhead Sign Supports at the contract price per overhead sign support, by type.

Payment for this item shall be made at the contract unit price bid for each overhead sign support, by type, installed in place and accepted, which price shall be full compensation for furnishing all anchor bolts (for installation under 816 concrete for overhead sign support foundation), and for furnishing and installing each overhead sign support structure shown on sheet 202 including fixture support arms, switch enclosure mounting bracket, sign brackets and all component parts necessary to make a complete workable installation ready for sign erection, installation of disconnect switch and enclosure, ground rod and wire connections and sign wiring.

Erection of these supports shall be accomplished in a manner meeting the requirements of Supplemental Specification 816

810 - CONCRETE FOR SIGN SUPPORT FOUNDATION, BY TYPE

Foundations shall be constructed in the manner called for under Supplemental Specifications 816. Concrete shall be Class "C".

Payment for installation only of the 2 inch galvanized steel and the ¾ inch EMT Conduit E/L's will be included in this item. Payment for furnishing this Conduit is included in the unit price bid for Overhead Sign Supports.

Payment for this item shall be based on plan dimensions (or dimensions as modified by the Engineer) in lieu of plan quantities as required in Supplemental Specification 816.

Payment for reinforcing steel shall be included in the cost of concrete foundations.

Basis Of Payment Shall Be As Follows:
1. Concrete foundations for Overhead Sign Supports, Per Cubic Yard.
2. Concrete foundations for Ground Mounted Sign Supports, Per Cubic Yard.

813 SIGN ERECTION, BY TYPE

The contractor shall erect sign panels furnished by others as noted on the Schematic Signing Layout sheet numbers 199 200 201. The panels shall be mounted on the brackets or beam supports provided in the plans.

The contractor shall submit a schedule for sign erection to the Division Traffic Engineer, and the Engineer, Bureau of Traffic, 450 East Town Street, Columbus, Ohio, 120 calendar days prior to the start of any scheduled erection work. The schedule shall include Proposed Dates, Time, Sign Numbers and Delivery Point.

The price bid per square foot for "Item 813, Sign Erection, by Type", shall include all necessary Equipment, Manpower and Tools to erect the signs noted. All sign material and accessories will be furnished and transported to a designated Delivery Point, on or near the subject project by others.

The contractor shall be responsible for the handling and storage of the sign panels and accesories from the time of arrival at the Delivery Point.

UNDERGROUND UTILITIES

Extreme caution should be exercised in areas with underground electrical conduit or cables, sewers, drains, water lines, or other underground utilities.

The contractor is fully responsible for all damage inflicted on (Underground) utilities in the excavation and placement of sign support foundations, protective guardrail, delineators and the like.

CERTIFICATION AND APPROVAL OF SIGN SUPPORT

The contractor shall submit through proper channels the Drawings, Information, and Samples as required below:

A. 8 Copies of Shop Drawings & Material Lists For Approval:
   1 Overhead Sign Supports
   2 Sign Face Layout Plans
B. 8 Copies of Catalog Cuts Descriptions of Samples of Fabricators Standard Items as shown in the Plans or their equals for approval of their use.
C. Certification and/or samples for all material which have been approved above under "A" and "B".
D. Approval of Items under "A" and "B" shall be in the hand of the contractor prior to any Purchase or Installation.
E. Certification of samples under "C" must be in hand and approved prior to contract completion.

813 INTERIM COVERING FOR SIGNS

This item shall consist of furnishing and installing an interim cover and attachment materials for signs referred to in the plans as "Bagged" or as directed by the Engineer. This item shall also include the subsequent removal of covers when directed by the Engineer.

Material for covering shall be plastic coated burlap blankets in conformance with 705.09.

The Engineer shall approve the method proposed for attaching interim covers to signs prior to installation of covers.

Work shall include all necessary materials, hardware, labor, and equipment required to preform the required item of work.

Basis of payment shall be Interim Covering for Signs, per square foot.

In addition to the 0 sq.ft. referred to in the Plans, an additional quantity of 100 sq.ft. for Item 813, Interim Covering for Signs, have been included to cover signs as directed by the Engineer.

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816 ALTERNATE DESIGNS FOR OVERHEAD SIGN SUPPORTS

If the contractor desires to furnish an alternate design for Overhead Sign Supports, the alternate designs must be submitted to the State at least 21 days prior to opening of bids. The Bidder will be notified as to acceptance or rejection of alternate design at least 7 days before bids are to be opened. Alternate designs must utilize tubular structural members. Submissions shall be made to Ohio Department of Highways, Bureau of Traffic, 450 East Town Street, Columbus, Ohio 43216.

816 INTERIM STEEL DRIVE POST, 4 LBS. PER FOOT, AS PER PLAN

This work shall consist of furnishing and installing 4 pound per linear foot steel drive posts as specified for interim lane width transitions.

This item shall include 4pounds per foot steel drive posts 11'-0" long bolted to the inside of interim barrels furnished under 606 using a minimum of three 5/16" steel bolts spaced on 12" centers

Post flanges shall be 90 degrees to interim edge lines facing approaching traffic. Steel bearing plates 3"×2" shall be used at each bolt outside the barrel to prevent pull through. Mounting of signs on the drive posts with the bottom of the signs 7' above the pavement shall be included in Item 815.

The quantity furnished and installed will be paid for at the price bid per Lin. Ft which price shall be full compensation for furnishing and installing drive posts including necessary hardware, labor and equipment.

816 STRUCTURAL SUPPORTS, 6LB. BEAM, AS PER PLAN

This item shall consist of the furnishing, assembly, and installation of two (2) 3lb. per foot drive posts (6 lb beam) in combination with a square seamless tubular post extension spliced to the top of the 6lb. beam. Details are shown on Sheet S.O.W.

Square seamless tubular post material shall be mild steel conforming to ASA 1020 steel, minimum yeild strength 35,000 P.S.I, ultimate yeild 55,000 P.S.I.

Work shall include all labor, material, equipment, tools, and hardware necessary to preform the required item of work.

Basis of payment shall be for Structural Supports, 6 lb. Beam, As Per Plan per linear foot measured by total length of combination beam from end to end.

GALVANIZED SUPPORTS

The structural steel beam supports including the 8 and 6 pound beams and the 4 pound drive post shall be galvanized, after punching, in accordance with ASTM-153 except where aluminum or stainless steel is specified.

816 ROCK EXCAVATION

Where solid rock is encountered in excavation for sign support foundations, the depth to be excavated below rock surface may be decreased as directed by the Engineer to a maximum of thirty-five (35) percent of depth specified in the plans.

620 INTERIM DELINEATORS, AS PER PLAN

This work shall cosist of furnishing and installing interim delineators as specified on plan sheets.

This item shall include 2 pounds per foot steel drive posts 4'-0" long bolted to inside of interim barrels furnished under 606 using a minimum of three 5/16" steel bolts spaced on 12" centers. Post flanges shall be 90° degrees to interim edge lines facing approaching traffic. Type C-2 delineators shall be mounted on the drive post flanges with the top of the delineator 4' above the pavement.

The quantity furnished and installed will be paid for at the price bid per each which price shall be full compensation for furnishing and installing drive posts and delineators including necessary hardware, labor and equipment.

SIGN LOCATIONS

All signs shall be placed normal to the roadway on which they are stationed unless otherwise noted on the plans.

EXISTING SIGNS

The existing traffic control signs are to be removed by others as requested by the Contractor.

621 EXISTING PAVEMENT MARKINGS REMOVED

This item shall consist of the removal or obliteration of painted pavement markings from the pavement.

The markings may be removed either mechanically, or by any other method approved by the engineer except that the method shall not be injurious to the appearance, smoothness or strength of the pavement.

Payment for Item Special Existing Pavement Markings Removed shall be at the contract unit price per Linear Foot and shall constitute full compensation for all work, including materials, equipment, labor, incidentals and disposal of surplus materials. An estimated amount has been provided in the General Summary for use as directed by the Engineer.

ERECTION OF OVERHEAD SPAN TYPE SIGN SUPPORTS (7 SERIES)

In all cases, Span Type Overhead Sign Supports and signs shall be erected concurrently. At no time shall the box trusses be erected without the sign being in place within eight (8) hours.

816 BREAKAWAY SIGN SUPPORT CONNECTION

This item consists of cutting and drilling the structural support; furnishing and attaching the fuse plate; and furnishing and attaching the base plates for each structural sign support as indicated on the plans.

All materials, labor and equipment required to fabricate and install this item for each sign support (exclusive of the structural sign support) will be measured and paid for at the unit price bid for Item 816 each Breakaway Sign Support Connection.

816 CONSTRUCTION LAYOUT STAKES FOR SIGNS

The contractor shall stake out all sign supports in accordance with Supplemental Specification 816 prior to installation of any foundations or supports.

After stakeout the contractor shall notify the Engineer a minimum of seven (7) days in advance of scheduled work. Support locations for each support will be field checked and approved by the Engineer prior to proceeding with construction work required.

If both major and minor type supports are included within the project it will be permissible to perform the construction stakeout and field inspection in two (2) stages, one for major supports and one for minor supports.

Cost for this item of work will be incidental to the various 816 items of work contained in the project.

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See Sheet 17-C	Station	Side	Reference 17-C	815 Sign Erection: Flat Sheet Type (Sq. Ft.)	815 Sign Erection: Extru. Sheet Type (Sq. Ft.)	816 Structural Support: 2# Drive Post (Lin. Ft.)	3# Drive Post (Lin. Ft.)	4# Drive Post (Lin. Ft.)	6# Beam (Lin. Ft.)	6# Beam as per plan (Lin. Ft.)	8# Beam (Lin. Ft.)	Steel Beam (CM1F21) (Lin. Ft.)	4# Interim Drive Post (Lin. Ft.)	816 Concrete for Sign Support Foundations: Ground (Cu. Yd.)	Overhead (Cu. Yd.)	816 Overhead Sign Support 11-C 7.3: Des. 2 Span 64' (Each)	Des. 2 Span 68' (Each)	815 Interim Caging for Signs (Sq. Yd.)	816 Breakaway Sign Support Connection (Each)		
	Eastern Ave.																				
	81+00	Lt.		7.1			15.0							.10							
	83+50	Rt.		6.3			15.0							.10							
	85+25	Rt.		6.3			15.0							.10							
	86+15	Rt.		5.3			14.5							.10							
	89+40	Rt.		10.0						15.0				.10							
	89+87	Lt.		8.0			14.0							.10							
	90+00	Lt.		5.3			14.5							.10							
	Service Rd. "B"																				
	101+50	Rt.		6.3			15.0							.10							
	Ramp "H"																				
	81+50	Rt.	84		45.0								17.0/23.0	2.50							
	Ramp "F"																				
	6+00	Lt.		8.1	40.0			9.0					18.75/21.75	2.50							
	9+50	Lt.		8.5				17.5						.10							
	U.S. 35																				
	1301+00 E.B.	Rt.	38		88.0							23.25/26.25		2.50							
	1310+00 W.B.	Rt.	22		238.0										8.5		1				
	1311+00 E.B.	Rt.		9.0				15.5						.10							
	1327+00 E.B.	Rt.		27.0					36.0					.20							
	1330+00 W.B.	Lt.	40		112.0							23.25/27.75		2.50							
	1332+18 ℄	Lt.		12.0					17.0					.10							
	1332+25 ℄	Lt.		1.5		12.5								.10							
	1332+50 ℄	Rt.		1.5		12.5								.10							
	1332+65 ℄	Rt.		12.0					17.0					.10							
	1335+00 E.B.	Rt.	39		88.0							25.0/28.0		2.50							
	1336+30 ℄	℄		15.0				18.0/18.5						.20							
	1350+30 ℄	℄		15.0				15.0/14.5						.20							
	1352+00 W.B.	Lt.	42		112.0							22.25/27.25		2.50							
	1353+68 E.B.	Rt.	41		242.0										8.5	1					
	1358+00 W.B.	Lt.	43		60.0							20.25/21.25		2.50					2		
	1365+00 W.B.	Lt.		27.0					36.0					.20							
	87+50 Temp.	Lt.		27.0					36.0					.20							
	88+50 Temp.	Lt.		12.0				16.0/16.0						.20							
	92+00 Temp.	Lt.			40.0			16.0/17.5/19.5						.30							
	95+00 Temp.	Rt.		6.0			15.0							.10							
	97+00 Temp.	Lt.		6.0			15.0							.10							
	2+25 Temp. 50	Rt.		6.0			15.0							.10							
	U.S. 50																				
	141+50	Rt.		12.0			27.0							.20							
	145+00	Rt.		12.0			27.0							.20							
	148+00	Rt.		6.0			15.0							.10							
	155+00	Rt.		6.0			15.0							.10							
	160+00	Lt.		8.0	20.0	5.5/6.5/10.0					14.0/14.0			.20							
	160+50	Rt.		8.0	20.0				16.0/16.5					.20							
	161+50	Rt.		12.0			30.0							.20							
	3+00 (50 to 35)	Rt.		6.0			15.0							.10							
	165+00	Lt.		8.0	20.0	5.5/5.5/10.0					14.0/14.0			.20							
	166+00	Rt.		16.0				33.0						.20							
	172+30	Rt.		8.0	12.0	4.5/4.5/6.0		14.0/14.5						.20							
	174+00	Lt.		6.0	12.0	3.6/3.5/7.0		15.5/16.0						.20							
	177+00	Lt.		6.0			15.0							.10							
	170+50	Lt.			40.0						15.5/16.0			.20							
	183+00	Lt.		6.0	12.0	3.5/3.5/7.0		13.5/14.0						.20							
	185+50	Lt.			32.0				16.0/16.0					.20							
	187+00	Rt.		6.0			15.0							.10							
	Sub-total			374.2	1283.0	110.0	307.0	313.5	206.5	15.0	87.5	32.5.00		23.6	17.0	1	1		2		

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SIGNS

See Sheet No.	Station	Side	Reference No.	815 Sign Erection		816 Structural Support								816 Concrete for Sign Support Foundations		816 Overhead Sign Support No. 7.3		815 Interim Covering for Signs	816 Breakaway Sign Support Connection		
				Flat Sheet Type	Extra Sheet Type	2# Drive Post	3# Drive Post	4# Drive Post	6# Beam	6# Beam as per plan	8# Beam	Steel Beam (OM-F2)	4# Interim Drive Post	Ground	Overhead	Des. 2 Span Ga.	Des. 2 Span Ga.				
				Sq. Ft.	Sq. Ft.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Cu. Yd.	Cu. Yd.	Each	Each	Sq. Yd.	Each		
200	U.S. 50													.10							
	188+00	Lt.		6.0			15.0														
	Ramp "C"																				
	72+00	Lt.		15.0			32.0							.20							
201	U.S. 35																				
	1359+00 E.B.	R&L		32.0					35.5					.20							
	1364+00 E.B.	R&L		32.0					35.5					.20							
	1368+00 E.B.	R&L		32.0					35.5					.20							
	1372+00 E.B.	R&L		18.0				30.0						.20							
	1377+00 W.B.	Lt.		9.0				15.5						.10							
	1378+00 W.B.	Rt.		5.0			14.5							.10							
	1382+00 W.B.	Rt.		7.5			15.0							.10							
	88+00 Temp.	Rt.		9.0				15.5						.10							
	88+50 Temp.	℄		10.5					16.5					.10							
	92+00 Temp.	Rt.		8.0				15.5						.10							
	98+60 Temp.	Rt.		5.0			14.5							.10							
	99+00 Temp.	Lt.		16.0					17.5					.10							
	3+50 Temp. 50	Rt.		5.0			14.5							.10							
	177+00 Ex. 50	R&L		8.0			26.0							.20							
	180+50 Ex. 50	Rt.		9.0				15.5						.10							
	U.S. 50																				
	138+40	Rt.		10.5					16.5					.10							
	140+00	Rt.		3.0			13.0							.10							
	146+75	Rt.		9.0				15.0						.10							
	140+75	Lt.		5.0			14.5							.10							
	155+00	Lt.		6.3			15.0							.10							
	0+40 (50 to 35)	Lt.		5.3			14.5							.10							
	6+00 (50 to 35)	Lt.		9.0				15.5						.10							
	172+50 (U.S. 50)	Lt.		5.3			14.5							.10							
	72+25 Ramp "C"	Lt.		7.5				15.0						.10							
	Appr. Rt. 185+07	Lt.		5.3			14.5							.10							
	Appr. Rt. 185+07	Rt.		6.3			15.0							.10							
	Lick Run Road													.10							
	15+00	Rt.		6.3			15.0														
	22+50	Lt.		6.3			15.0							.10							
	28+50	Rt.		9.0				15.5						.10							
	U.S. 50 Inter.	R&L		19.6			56.5							.40							
35 + 36	1374+40 E.B.	Lt.	*	6.3									11.0								
	1375+40 E.B.	Lt.	*	6.3									11.0								
	1376+40 E.B.	Lt.	*	6.3									11.0								
	1377+40 E.B.	Lt.	*	6.3									11.0								
	1379+40 E.B.	Lt.	*	6.3									11.0								
	1381+40 E.B.	Lt.	*	6.3									11.0								
	1383+40 E.B.	Lt.	*	6.3									11.0								
	To be used as directed by Engr.																	100			
	Sub-total			374.2	1233.0	110.0	307.0	313.5	206.5	15.0	87.5	325.00		23.6	17.0	1	1		2		
	Total			750.0	1233.0	110.0	626.0	466.5	362.5	15.0	87.5	325.00	77.0	27.7	17.0	1	1	100	2		

*Note: Location may be adjusted to fit bores.

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STRIPING

See Sheet N°	Sta. To Sta.	Lane	Side	N° Lines	621 4" Edge Lines White	621 4" Lane Lines White	621 8" Channel-izing Line White	621 12" Stop Line White	621 4" Barrier Lines Yellow	621 24" Broad Transverse Stripes White	621 Curb Marking Yellow	
					Lin. Ft.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Lin. Ft.	
30-36	1323+00 - 1384+34.21	EB	Rt&L	2	12268.42							
30-36	1323+00 - 1384+34.21	EB	℄	1		6134.21						
30-33	1323+00 - 1351+56.99	WB	℄	1		2856.99						
30-33	1323+00 - 1351+56.99	WB	Rt&L	2	5713.98							
33-36	1351+71.43 - 1384+45.38	WB	Rt&L	2	6547.90							
33-36	1351+71.43 - 1384+45.38	WB	℄	1		3273.95						
	Temporary Connection											
55	82+96 - 92+47.10	Rt.	Rt.	1	951.10							
55	84+35 - 89+69	Rt.	Lt.	1	514.00							
55	82+55 - 89+67.5	Lt.	Rt.	1	712.50							
55	83+60 - 94+00	Lt.	Lt.	1	1040.00							
55	89+67.5 - 93+00	℄	℄	1		332.50						
	Athens Road											
64	135+20 - 136+96		Lt.	1		176.00						
64	136+96 - 138+37		Lt.	2			243.00					
64	136+96 - 138+37		Lt.							194.00		
64-65	138+37 - 144+71		Rt&Lt.	2	1268.00							
66-70	157+00 - 191+35.48		Rt&Lt.	2	6870.96							
66-70	157+00 - 191+35.48		℄	1		3435.48						
66	Appr. 160+00		Rt.	1				31.00				
67	Appr. 185+67.0		Rt.	1				17.00				
66-67	157+00 - 169+00		Rt.	1					1200.00			
67-68	167+00 - 179+00		Lt.	1					1200.00			
	Ramp "C"											
34-35	1369+14 - 1372+45		Lt.	1		331.00						
34-35	1369+14 - 1374+50		Lt.	1	536.00							
35	1372+45 - 1374+50		Lt.	1			205.00					
87	60+53.84 - 62+76.84		Lt.	1							223.00	
87	60+53.84 - 61+53.84		Lt.	1	100.00							
87-88	61+53.84 - 74+44		Rt&Lt.	2	2580.32							
88	74+44 - 76+17		Rt.	2			347.00					
88	74+44 - 76+17		Rt.							261.00		
88	72+10 - 72+27		Rt.	1				18.00				
	Lick Run Road											
95	29+50 - 32+50		℄	1		300.00						
95	33+00		Rt.	1				15.00				
95	33+32		Lt&Rt.	1				26.00				
	Existing U.S.R. 50											
36-37	1389+00 to 177+00 (U.S. 50)		Lt.	1			416.00					
36-37	1389+00 to 177+00 (U.S. 50)		Lt.							244.00		
	Sub-total				39103.18	16840.13	1211.00	107	2400.00	699.00	223.00	
	Conv. to Miles				7.41	⊙ 1.12						
	Total (Miles)				7.41	1.12						

DELINEATORS

Station to Station	Lane	Side	620 delineator Type C-1 Post Mounted	620 delineator Type C-2 Post Mounted	620 delineator Type C-2 Interim as per plan		
			Each	Each	Each		
1301+00 - 1311+00	E.B.	Rt.	6				
1301+00 - 1307+00	W.B.	Lt.	4				
80+00 - 83+00	H	Rt.		4			
83+00 - 91+00	H	Lt.		9			
91+00 - 95+00	H	Lt.		5			
95+00 - 1323+00	H&E.B.	Rt.		11			
1324+00 - 1336+00	E.B.	Rt.	7				
2+60 - 1317+00	F&W.B.	Lt.		18			
1318+00 - 1336+00	W.B.	Lt.	10				
1356+50 - 1382+50	E.B.	Rt.	14				
1350+50 - 1363+50	W.B.	Lt.	8				
1377+00 - 1381+00	W.B.	Lt.	3				
133+00 - 139+00	B	Rt.		7			
139+00 - 141+00	B	Lt.		3			
141+00 - 145+00	B	Rt.		5			
1364+50 - 63+50	W.B&C	Lt.		14			
63+50 - 70+50	C	Rt.		7			
70+50 - 78+50	C	Lt.		10			
1374+90 #	E.B.	Lt.			1		
1375+90 #	E.B.	Lt.			1		
1376+90 #	E.B.	Lt.			1		
1378+40 #	E.B.	Lt.			1		
1380+40 #	E.B.	Lt.			1		
1382+40 #	E.B.	Lt.			1		
Total			52	93	6		

Note: Stations may be adjusted to fit barrels.

⊙ Calculation for pay length of lane lines 16,840.13 lin. Ft. x 15/40 x 1/5280 = 1.12 Miles

GENERAL SUMMARY

ITEM NO.	QUANTITY	UNIT	DESCRIPTION
			Type Code 7221
			TRAFFIC CONTROL
620	52	Each	delineators, Type C-1, post mounted
620	93	Each	delineators, Type C-2, post mounted
620	6	Each	Interim delineators, as per plan
621	7.41	Miles	4" Edge Lines,
621	1.12	Miles	4" Lane Lines,
621	0.45	Miles	4" Barrier Lines,
621	1211	Lin. Ft.	8" Channelizing Line,
621	107	Lin. Ft.	12" Stop Lines,
621	699	Lin. Ft.	24" Broad Transverse Stripes,
621	223	Lin. Ft.	Curb Marking,
815	750	Sq. Ft.	Sign Erection Flat Sheet Type
815	1233	Sq. Ft.	Sign Erection Extru-Sheet Type
815	100	Sq. Ft.	Interim Covering for Signs
816	110	Lin. Ft.	Structural Support, 2# Drive Post
816	626	Lin. Ft.	Structural Support, 3# Drive Post
816	461	Lin. Ft.	Structural Support, 4# Drive Post
816	77	Lin. Ft.	Structural Support, 4# Interim Drive Post, as per plan
816	364	Lin. Ft.	Structural Support, 6# Beam
816	15	Lin. Ft.	Structural Support, 6# Beam, as per plan
816	88	Lin. Ft.	Structural Support, 8# Beam
816	325	Lin. Ft.	Structural Support, Steel Beam 10WF21
816	2	Each	Breakaway Sign Support Connection
816	27.7	Cu. Yd.	Concrete Foundation For Ground Mounted Sign Supports
816	17.0	Cu. Yd.	Concrete Foundation for Overhead Sign Supports.
816	1	Each	Overhead Sign Support, No. 7.3, Des. 2, 64' Span
816	1	Each	Overhead Sign Support, No. 7.3 Des. 2, 68' Span
Special	2000	Lin. Ft.	Existing Pavement Markings Removed

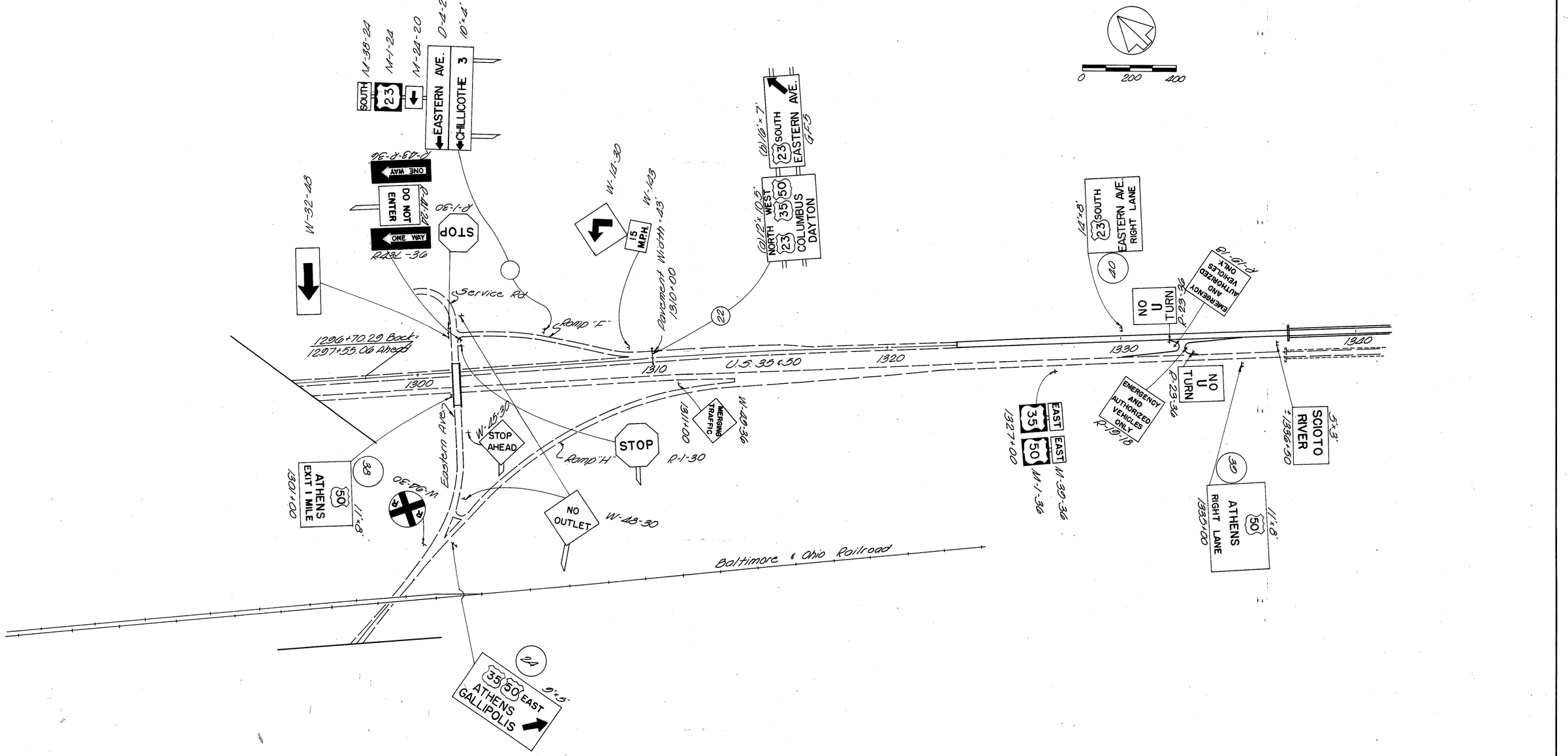
FED. RD. DIVISION	STATE	PROJECT	FEDERAL YEAR
2	OHIO		

ROS-35-25.05

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

192
225

ROSS COUNTY
ROS-35-25.05

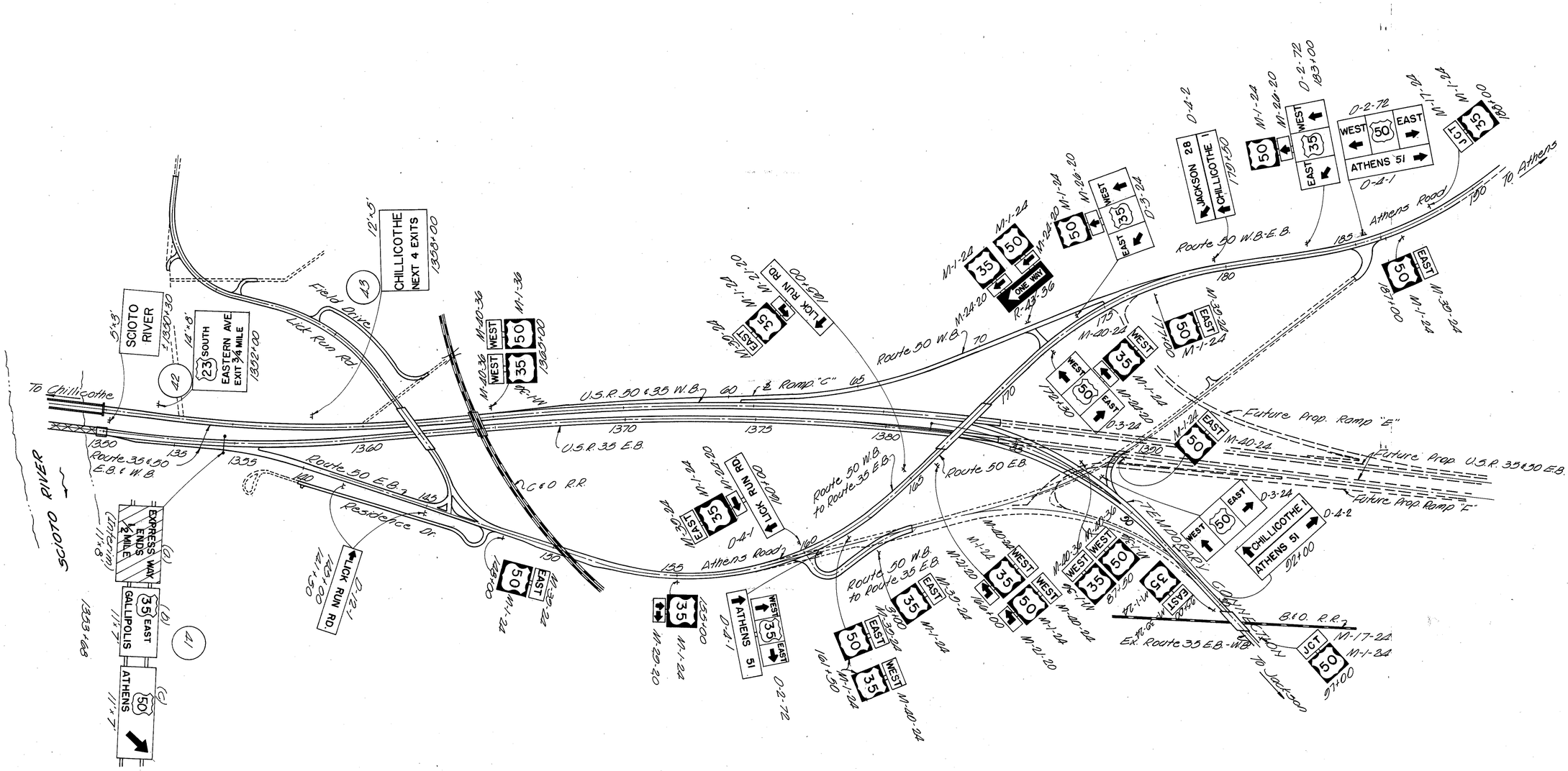


TRAFFIC CONTROL PLAN

FED. RD. DIVISION	STATE	PROJECT		
2	OHIO			

200
225

ROSS COUNTY
ROS-35-25.05

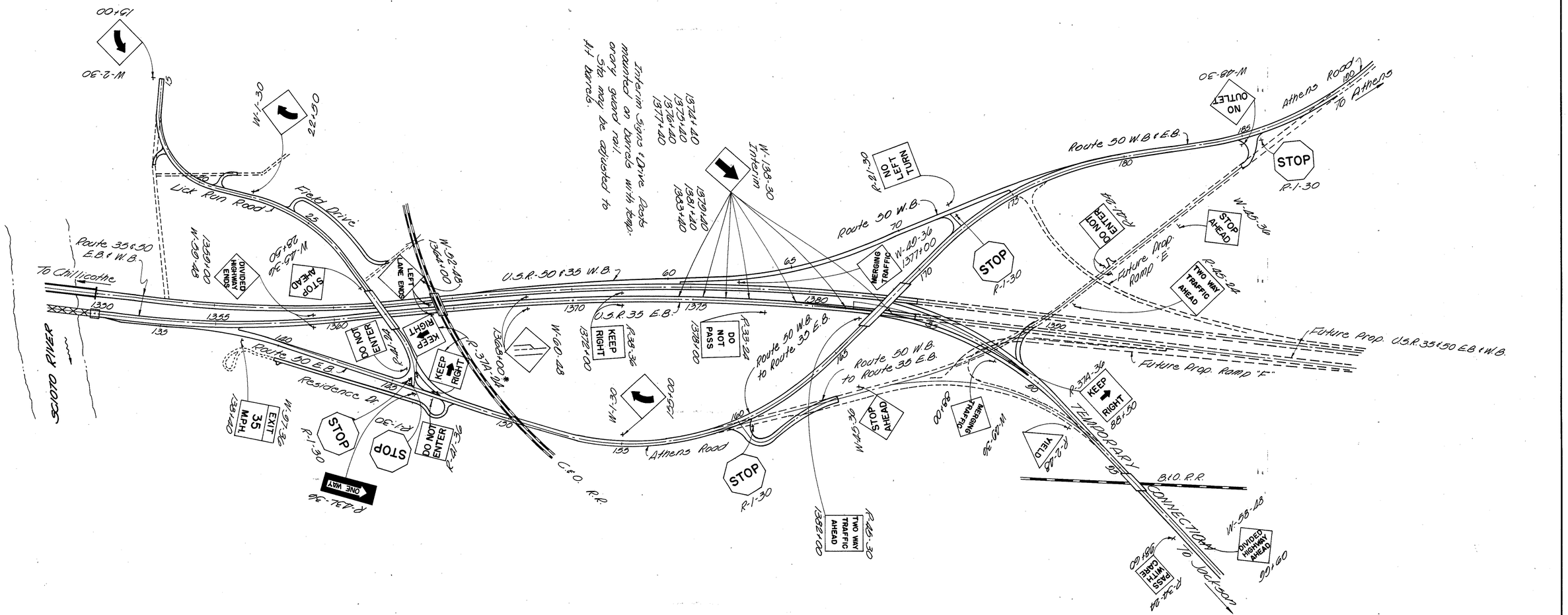


TRAFFIC CONTROL PLAN

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

201
225

ROSS COUNTY
ROS-35-25.05



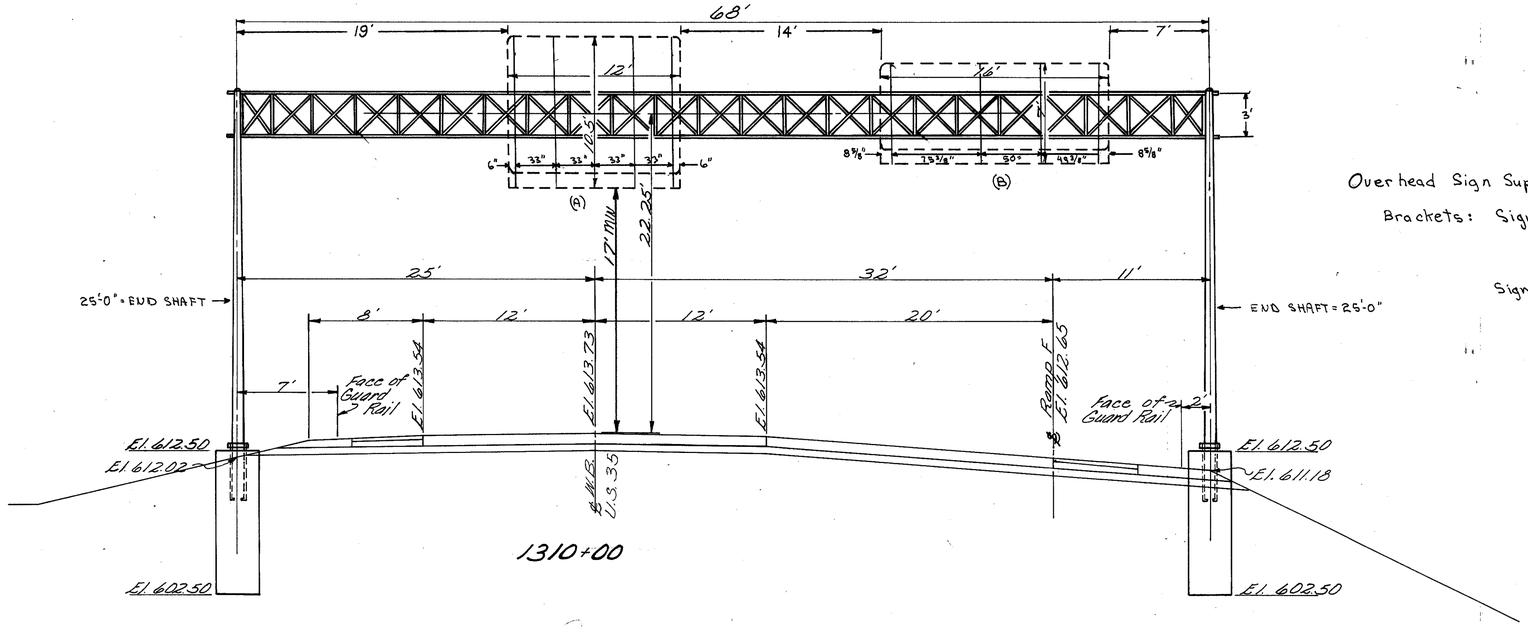
* Note:
Location of proposed sign left of Sta. 1363+00 may be adjusted (RH also) so that the sign post may be mounted on a guard rail post in the median.

TRAFFIC CONTROL PLAN

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

202
225

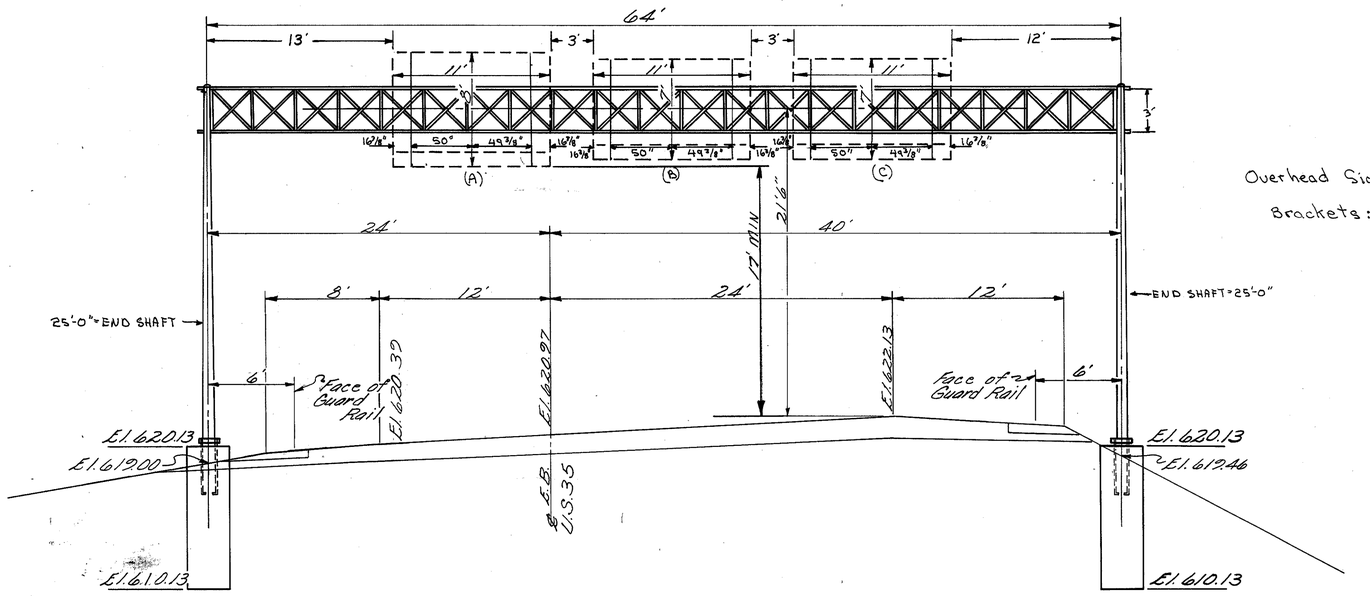
ROS COUNTY
ROS ~35~25.05



Overhead Sign Support, No. 7.3, Design 2, 68' Span

Brackets: Sign (A) Spacing - 6", 4 @ 33", 6"
Number - 5
Type - Y_A

Sign (B) Spacing - 8 5/8", 75 3/8", 50", 49 3/8", 8 5/8"
Number - 4
Type - Y_A



Overhead Sign Support, No. 7.3, Design 2, 64' Span

Brackets: Sign (A) Spacing - 16 3/8", 50", 49 3/8", 16 1/4"
Number - 3
Type - Y_A

Sign (B) Spacing - 16 3/8", 50", 49 3/8", 16 1/4"
Number - 3
Type - Y_A

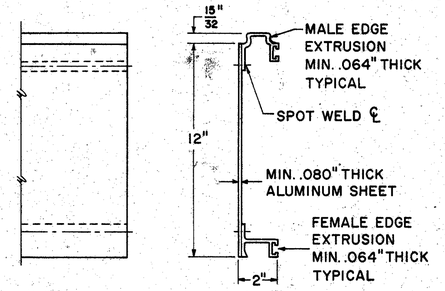
Sign (C) Spacing - 16 3/8", 50", 49 3/8", 16 1/4"
Number - 3
Type - Y_A

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

203
225

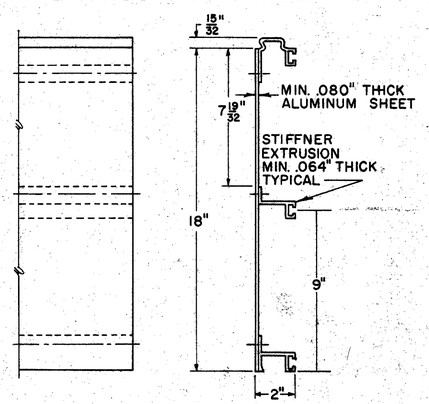
ROS-35-25.05

12" EXTRUSHEET PANEL



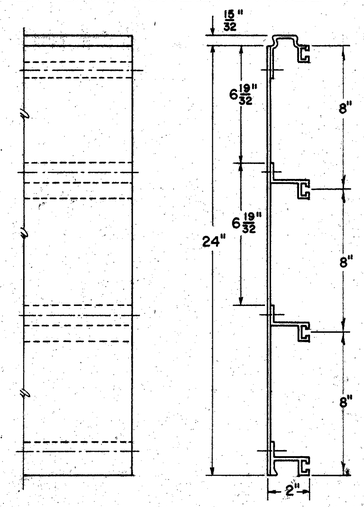
FRONT VIEW SIDE VIEW

18" EXTRUSHEET PANEL



FRONT VIEW SIDE VIEW

24" EXTRUSHEET PANEL



FRONT VIEW SIDE VIEW

NOTES:

EXTRUSHEET PANELS SHALL BE ALUMINUM; SPOT WELDING AND ALL MATERIALS SHALL CONFORM WITH SUPPLEMENTAL SPECIFICATION NO. 815

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

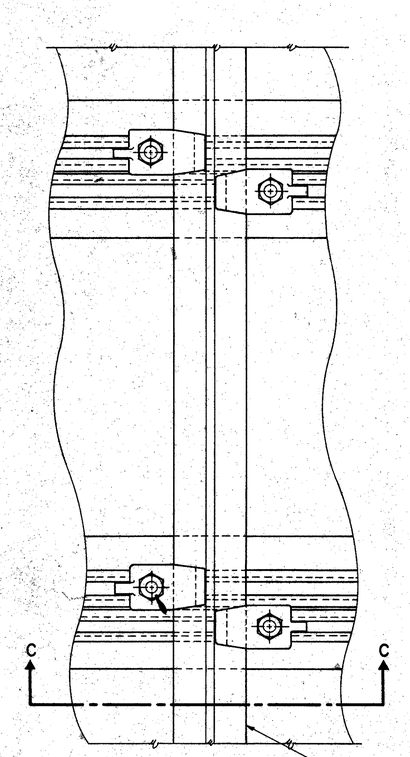
INDIVIDUAL PANELS SHALL BE THE SAME LENGTH AS THE HORIZONTAL LENGTH OF SIGN WITH NO SPLICES.

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

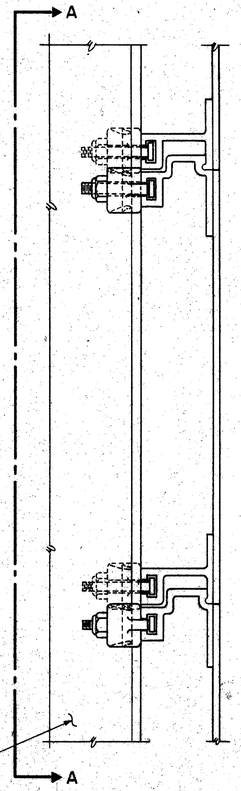
EXTRUSHEET PANELS SHALL BE FASTENED TO EACH VERTICAL SUPPORT MEMBER WITH MOUNTING CLIPS; ALTERNATELY AT EACH HORIZONTAL EXTRUSION; BOTH SIDES AT EACH JOINT, AND ON BOTH SIDES AT TOP AND BOTTOM EDGE OF SIGN.

THE PANELS SHALL BE DESIGNED TO WITHSTAND A WIND LOAD OF 35 POUNDS PER SQUARE FOOT, IN ACCORDANCE WITH THE A.A.S.H.O. SPECIFICATION FOR DESIGN AND CONSTRUCTION OF STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS.

THE MAXIMUM SIGN LENGTH FOR TWO SUPPORTS IS 19'-0".
THE MAXIMUM SIGN LENGTH FOR THREE SUPPORTS IS 29'-0".

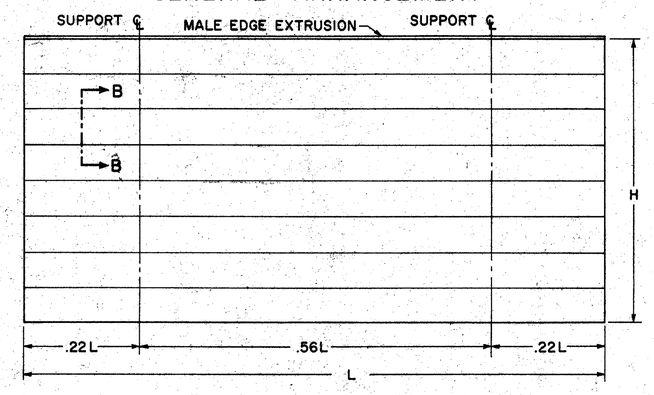


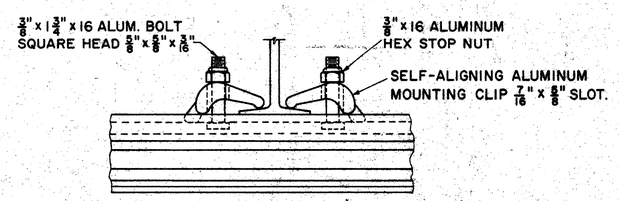
SECTION A-A



SECTION B-B

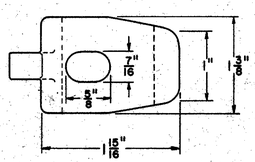
GENERAL ARRANGEMENT

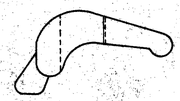




SECTION C-C

CLIP DETAIL





SPOT WELDS

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

BUREAU OF TRAFFIC
OHIO DEPARTMENT OF HIGHWAYS

ALUMINUM EXTRUSHEET PANEL SIGN

ECD
1

DATE
9-26-63
5-19-64
10-21-65

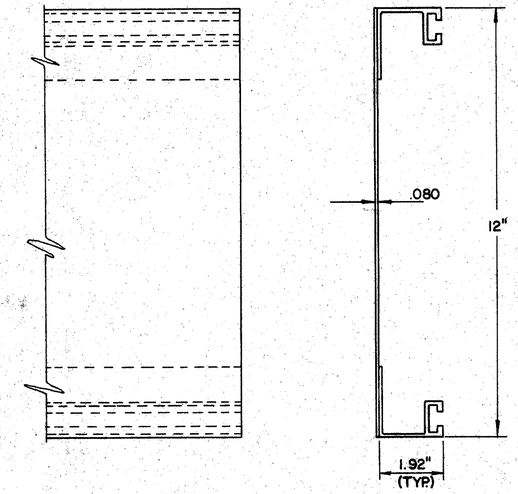
APPROVED Fred C. Gerber
ENGINEER OF TRAFFIC

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

204
225

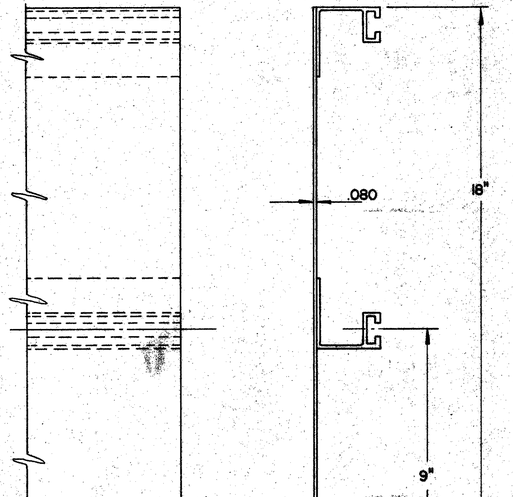
ROS - 35 - 25.05

12" BOLTED-EXTRUSHEET PANEL



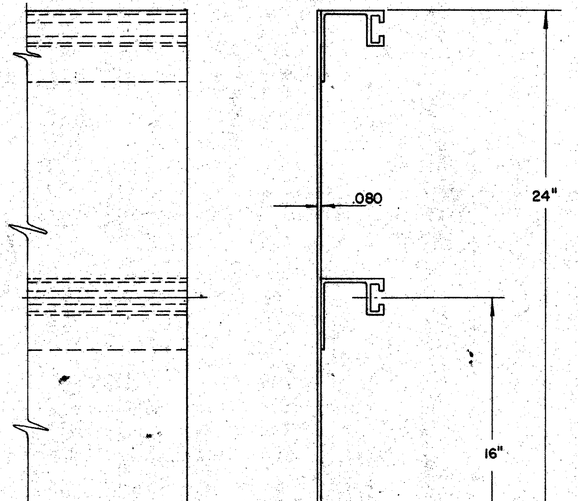
FRONT VIEW SIDE VIEW

18" BOLTED-EXTRUSHEET PANEL



FRONT VIEW SIDE VIEW

24" BOLTED-EXTRUSHEET PANEL



FRONT VIEW SIDE VIEW

NOTES

EXTRU-SHEET PANELS SHALL BE ALUMINUM; SPOT WELDING, MATERIALS AND HARDWARE SHALL CONFORM WITH SPECIFICATION NO. 815.

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

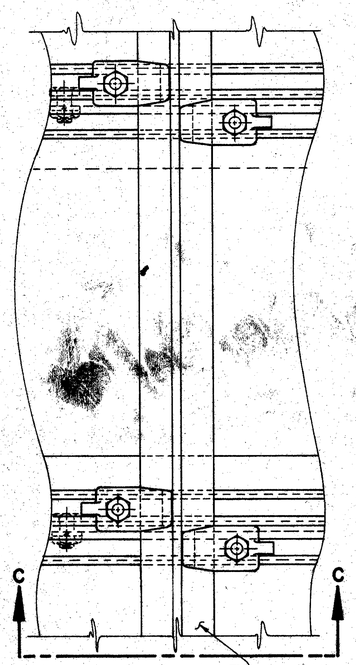
INDIVIDUAL PANELS SHALL BE THE SAME LENGTH AS THE HORIZONTAL LENGTH OF SIGN, WITH NO SPLICES.

THE PANELS SHALL BE ERECTED HORIZONTALLY AND BOLTED ON 24" CENTERS.

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

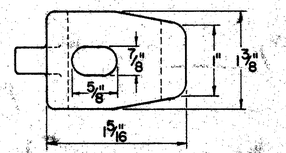
THE PANELS SHALL BE DESIGNED IN ACCORDANCE WITH THE A.A.S.H.O SPECIFICATION FOR THE DESIGN AND CONSTRUCTION OF STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, BASE ON A WIND LOAD OF 35#/SQ.FT.

THE MAXIMUM SIGN LENGTH FOR TWO SUPPORTS IS 19'-0". THE MAXIMUM SIGN LENGTH FOR THREE SUPPORTS IS 29'-0".

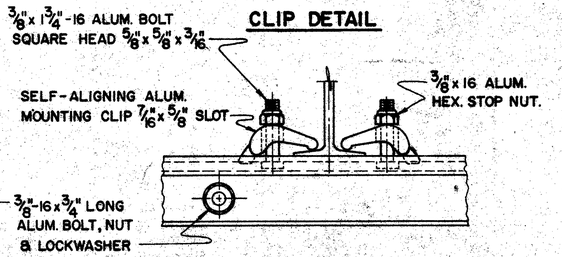


SECTION A-A

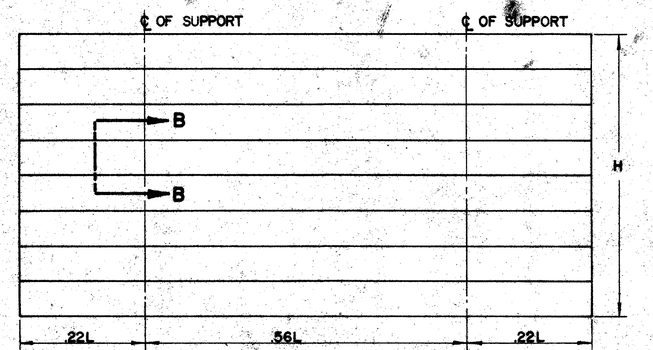
SECTION B-B



CLIP DETAIL



SECTION C-C



GENERAL ARRANGEMENT

SPOT WELDS

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

BUREAU OF TRAFFIC
OHIO DEPARTMENT OF HIGHWAYS

ALUMINUM BOLTED EXTRUSHEET PANEL SIGN

ECD 2

DATE 10-14-65

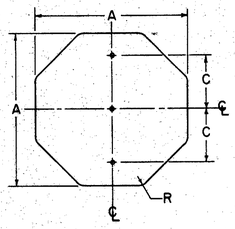
APPROVED Fred C. Taylor
ENGINEER OF TRAFFIC

ALUMINUM BOLTED-EXTRUSHEET PANEL SIGN

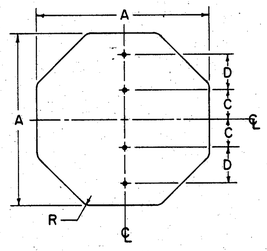
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

205
225

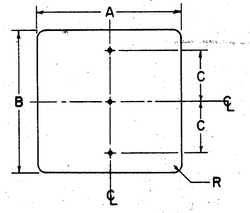
ROS-35-25.05



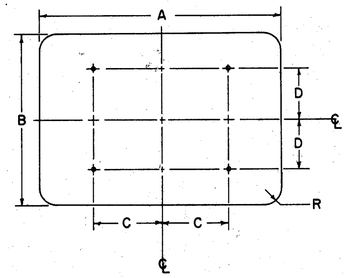
A	C	R	GAUGE
30	8	1 1/2	.080
36	8	1 1/2	.080



A	C	D	R	GAUGE
48	8	10	1 1/2	.100

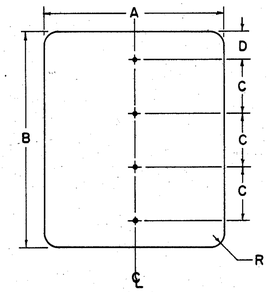


A	B	C	R	GAUGE
30	42	12	1 1/2	.080
36	36	11	1 1/2	.080
36	42	15	1 1/2	.080
36	48	15	1 1/2	.080
48	24	10	3	.100
48	36	13	3	.100

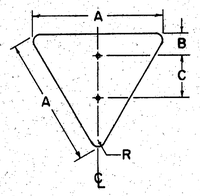


A	B	C	D	R	GAUGE
48	48	22	16	3	.100
48	60	22	22	3	.100

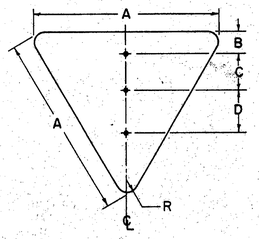
SPEED LIMIT SIGNS ON TWO SUPPORTS



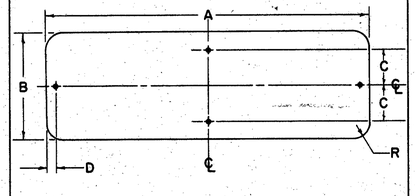
A	B	C	D	R	GAUGE
48	48	12	6	3	.100
48	60	15	7 1/2	3	.100



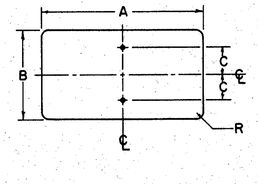
A	B	C	R	GAUGE
36	3	16	2 1/2	.080



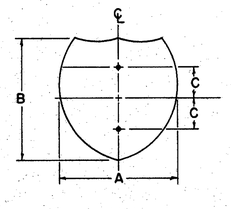
A	B	C	D	R	GAUGE
48	4	10	15	3	.100
60	5	10	15	4	.100



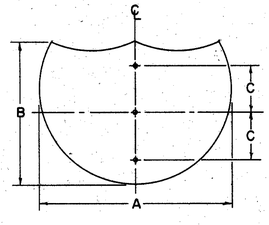
A	B	C	D	R	GAUGE
36	12	4	1	1 1/2	.080



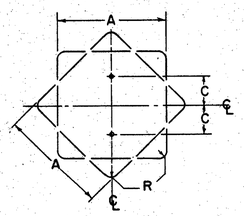
A	B	C	R	GAUGE
12	6	3	1 1/2	.063
20	15	6	1 1/2	.063
24	12	4 1/2	1 1/2	.063
24	18	15	1 1/2	.063
24	30	8	1 1/2	.063
24	48	10	1 1/2	.100
30	36	10 1/2	1 1/2	.080
36	18	7 1/2	1 1/2	.080



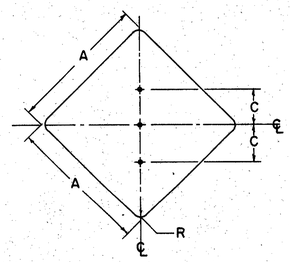
A	B	C	GAUGE
24	24	8	.063
30	24	8	.080



A	B	C	GAUGE
36	36	11	.080
48	36	11	.100

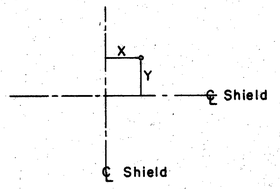


A	C	R	GAUGE
18	7 1/2	1 1/2	.063
24	8	1 1/2	.063
30	8	1 1/2	.080



A	C	R	GAUGE
36	12	3	.080
48	14	3	.100

Location of holes on "Demountable Shields" (attached to guide signs)



SIZE	NO. HOLES	X	Y
(26) 24X24	4	7	7
30X24	4	8	8
(39) 36X36	4	10	10
		0	10
48X36	6	15	10

For notes on fastening see drawing for miscellaneous "Signing Items" sheet.

NOTES:

ALL DEMENSIONS ARE IN INCHES UNLESS OTHERWISE SHOWN.

MATERIAL

FLAT SIGN BLANKS SHALL BE FURNISHED IN ALUMINUM ALLOY 6061-T6, (ASTM-B209, GS11A-T6) WITH MILL FINISH.

BOLT HOLES

THE BOLT HOLES SHALL BE 3/8" IN DIAMETER, AND MAY BE DRILLED, BLANKED OR PUNCHED TO FINISHED SIZE.

BUREAU OF TRAFFIC
OHIO DEPARTMENT OF HIGHWAYS

SIGN BLANK DETAILS

SBD

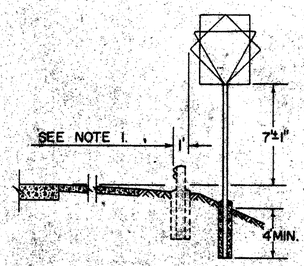
DATE 4-14-67

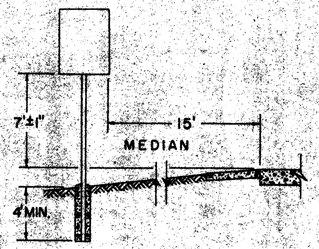
APPROVED_____
ENGINEER OF TRAFFIC

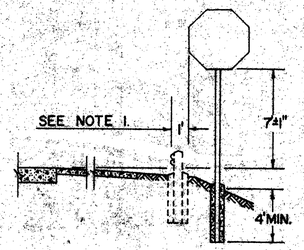
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

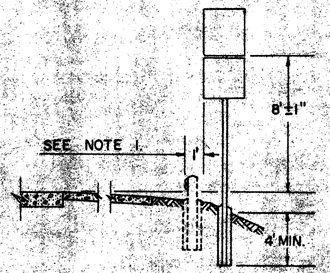
206
225

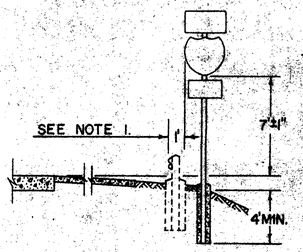
ROS-35-25.05

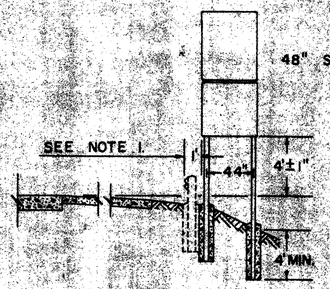


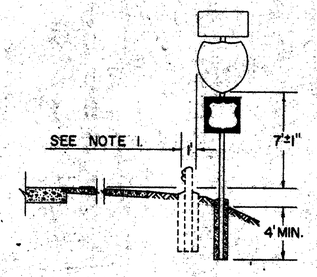


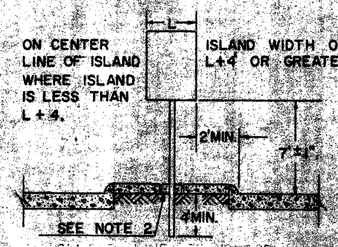


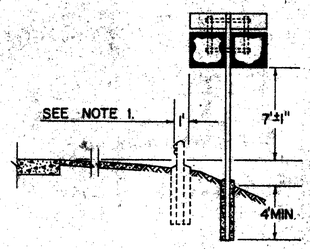


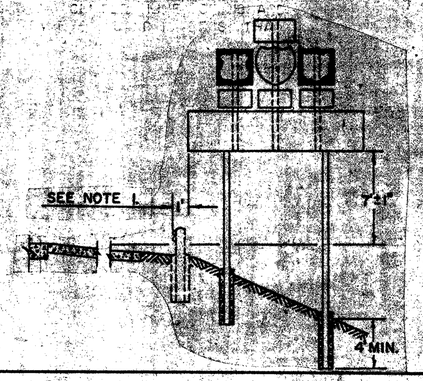


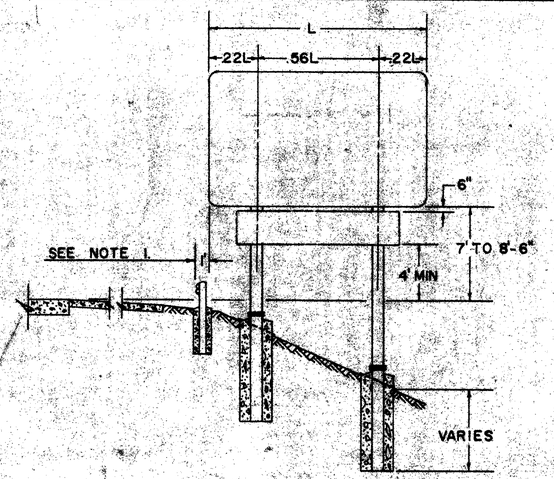


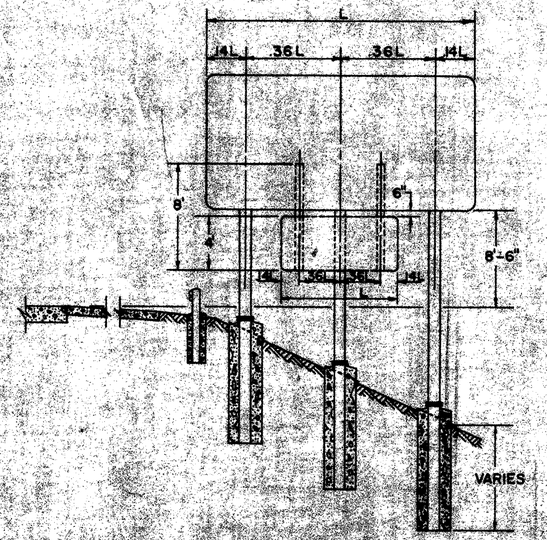


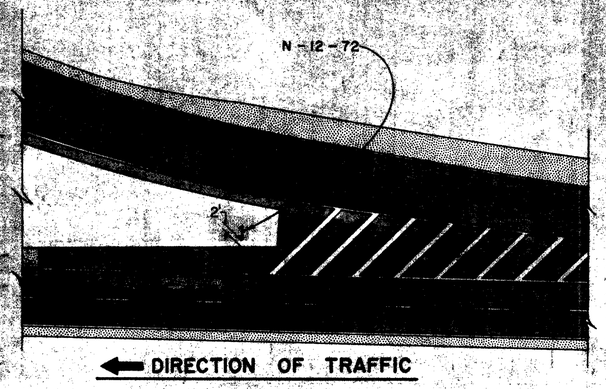


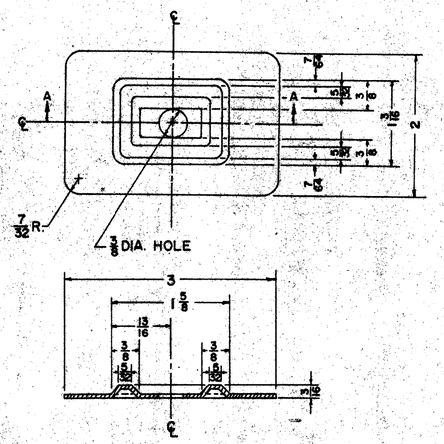








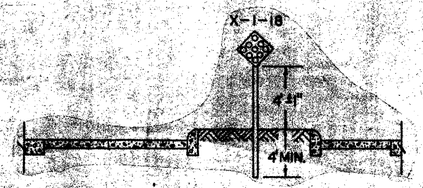




SECTION AA

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

BEARING PLATE DETAIL



SIGN SUPPORT SPACING

L-FT	2 SUPPORTS		3 SUPPORTS		L-FT	2 SUPPORTS		3 SUPPORTS	
	.22	.56	.14	.36		.22	.56	.14	.36
5.0	1.10	2.80	0.70	1.80	17.0	3.74	9.52	2.38	6.12
6.0	1.32	3.36	0.84	2.16	18.0	3.96	10.08	2.52	6.48
7.0	1.54	3.92	0.98	2.52	20.0	4.18	10.64	2.66	6.84
8.0	1.76	4.48	1.12	2.88	22.0			2.80	7.20
9.0	1.98	5.04	1.26	3.24	24.0			2.94	7.56
10.0	2.20	5.60	1.40	3.60	26.0			3.08	7.92
11.0	2.42	6.16	1.54	3.96	27.0			3.22	8.28
12.0	2.64	6.72	1.68	4.32	24.0			3.36	8.64
13.0	2.86	7.28	1.82	4.68	28.0			3.50	9.00
14.0	3.08	7.84	1.96	5.04	26.0			3.64	9.36
15.0	3.30	8.40	2.10	5.40	27.0			3.78	9.72
16.0	3.52	8.96	2.24	5.76	28.0			3.92	10.08

NOTES

1. THE NEAR EDGE OF ALL MAIN LINE SIGNS, EXCEPT GORE INSTALLATIONS, SHALL BE LOCATED ONE FOOT (1') BACK OF GUARD RAIL FACE. THIS DIMENSION SHALL BE DETERMINED BY ROADWAY TYPICAL SECTION & USED WHETHER OR NOT GUARD RAIL IS PRESENT.
   ON RAMPS THE NEAR EDGE OF SIGNS SHALL BE LOCATED ONE FOOT (1') BACK OF GUARD RAIL FACE. THIS DIMENSION WILL BE DETERMINED AND USED AS FOR MAIN LINE ABOVE.
   ON APPROACHES THE NEAR EDGE OF SIGNS SHALL BE
   (A) ONE FOOT (1') BEHIND EXISTING GUARD RAIL
   (B) TWO FEET (2') FROM THE EDGE OF PAVED OR TRAVELED SHOULDER WITH A MINIMUM OF 6' FROM EDGE OF ROADWAY PAVEMENT.

2. POSTS PLACED IN CONCRETE MEDIANS SHALL BE INSTALLED BY DRIVING THROUGH A 6" SLEEVE OR CORE DRILLED HOLE. THE HOLE SHALL BE FILLED WITH ASPHALT OR PORTLAND CONCRETE AFTER THE POST IS IN THE PROPER POSITION.

3. HORIZONTAL BACK BRACING SHALL ALWAYS BE MOUNTED ON THE FRONT FLANGE OF THE SUPPORT EXCEPT WHERE SIGNS ARE MOUNTED BACK TO FACK. BACK BRACING SHALL NEVER EXTEND ABOVE TOP EDGE OF UPPERMOST SIGN PLATE AND SHALL BE ATTACHED TO SUPPORTS USING 5/16" GALVANIZED STEEL BOLTS.

4. SCREWS, NUTS, AND WASHERS FOR SIGN ERECTION SHALL BE ALUMINUM EXCEPT AS NOTED ABOVE. 5/16" TRUSS HEAD SLOTTED MACHINE SCREWS WITH HEX. NUTS PLAIN AND LOCKWASHERS SHALL BE USED. PLAIN WASHERS SHALL BE 5/16" WIDE", USED ON SIGN FACE ONLY.

5. SIGN INSTALLATIONS SHALL BE PLACED SO THAT SUPPORTS ARE NOT PLACED IN DRAINAGE DITCHES.

6. HORIZONTAL CLEARANCES SHOWN PERTAIN TO NON-CURBED SECTIONS. SECTIONS WITH UNMOUNTABLE CURB SHALL HAVE A HORIZONTAL CLEARANCE OF 2'-0" MINIMUM FROM THE CURB FACE TO THE SIGN EDGE.

7. VERTICAL AND HORIZONTAL CLEARANCE BETWEEN SIGNS ON ONE ASSEMBLY SHALL BE A MAXIMUM OF 2" AND A MINIMUM OF 1".

8. GALVANIZED STEEL BEARING PLATES SHALL BE INCLUDED BETWEEN ALL SHEET ALUMINUM SIGNS ATTACHED TO VERTICAL SUPPORTS AT EACH SIGN BOLT LOCATION.

BUREAU OF TRAFFIC
OHIO DEPARTMENT OF HIGHWAYS

TYPICAL PLACEMENT OF SIGNS

TPS-1

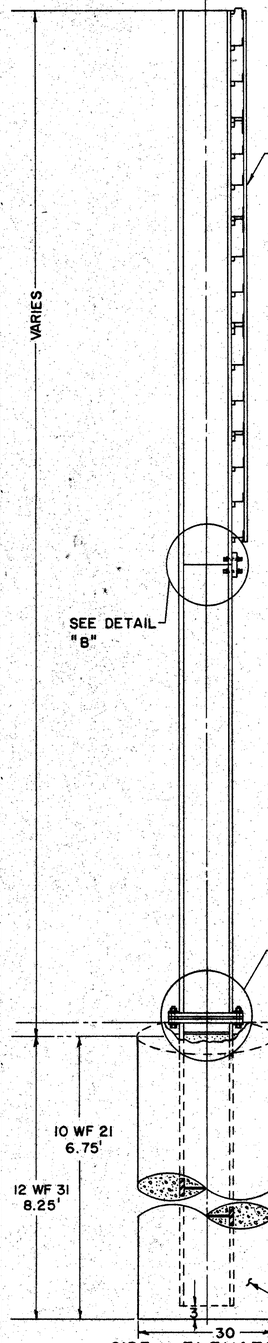
DATE
9-27-67
7-12-68

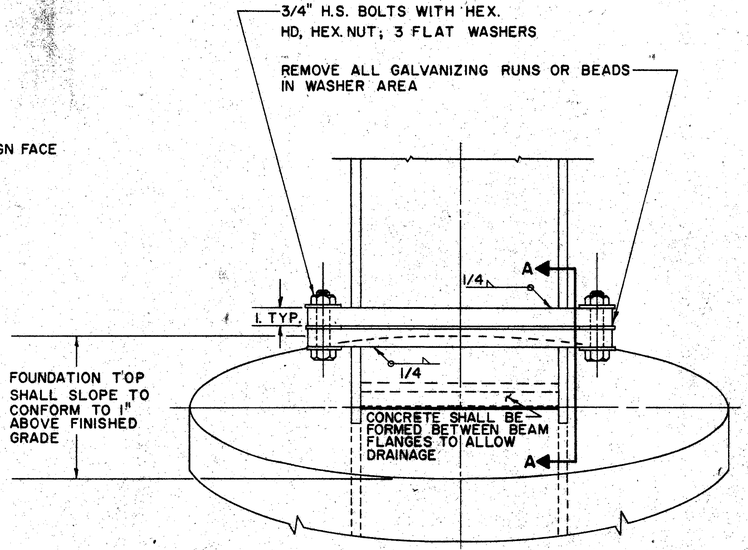
APPROVED _____
ENGINEER OF TRAFFIC

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

207
225

ROS-35-25.05



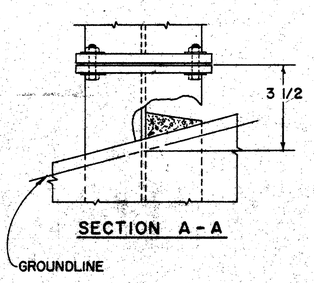


BOLTING PROCEDURE

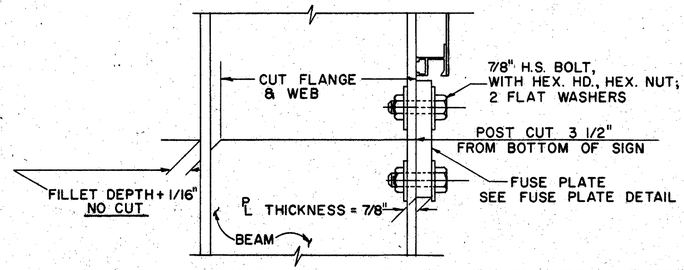
1. ASSEMBLE POST TO STUB W/BOLTS & ONE FLAT WASHER ON EACH BOLT BETWEEN PLATES.
2. TIGHTEN ALL BOLTS THE MAXIMUM POSSIBLE W/12" TO 15" WRENCH TO BED & TO CLEAN BOLT THREADS. LOOSEN EACH BOLT IN TURN & RETIGHTEN BOLTS IN A SYSTEMATIC ORDER TO THE PRESCRIBED TORQUE OF 750 IN. LBS.
3. BURR THREADS AT JUNCTION W/NUT USING A CENTER PUNCH TO PREVENT NUT LOOSENING.

NOTE: TIGHTEN THE H.S. BOLTS IN THE BASE CONNECTION ONLY TO GIVEN TORQUE DO NOT OVER TIGHTEN

VIEW "A" ROTATED 180°



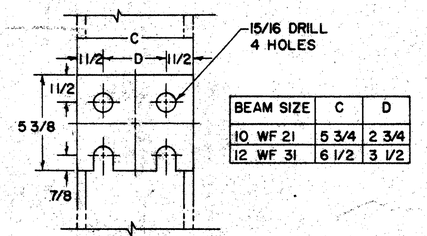
SECTION A-A



FABRICATOR NOTE: ALL FRICTION FUSE BOLTS SHALL BE TIGHTENED IN THE SHOP FOLLOWING A METHOD APPROVED BY THE ENGINEER. TIGHTENING SHALL BE TO SUCH A DEGREE AS TO OBTAIN MINIMUM RESIDUAL TENSION IN EACH BOLT OF 36,050 LBS.

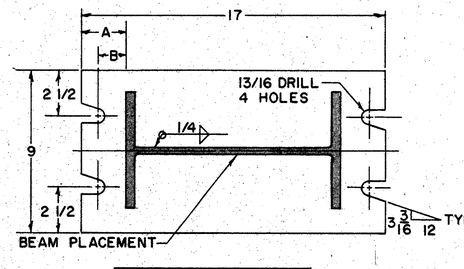
NOTE: INSTALL FUSE PLATE WITH NOTCHES TOWARD BASE

DETAIL "B"



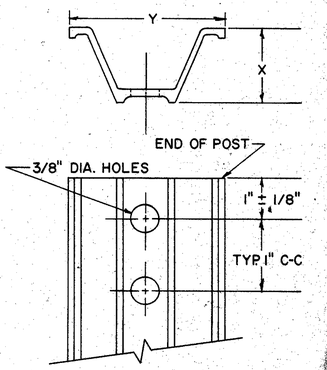
BEAM SIZE	C	D
10 WF 21	5 3/4	2 3/4
12 WF 31	6 1/2	3 1/2

FUSE PLATE DETAIL



BEAM SIZE	A	B
10 WF 21	3 1/2	2 5/8
12 WF 31	2 1/2	1 5/8

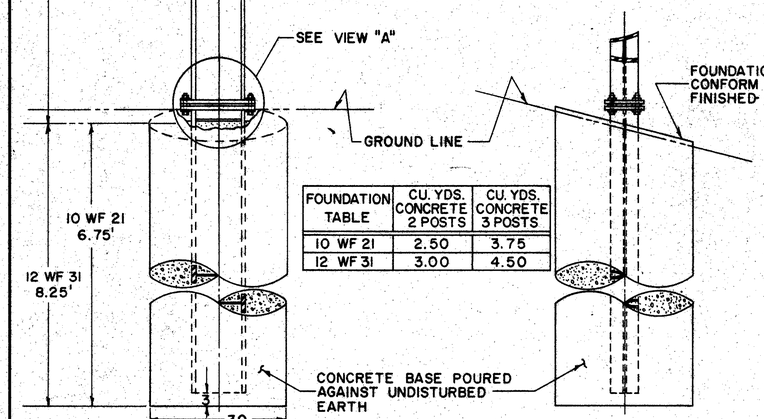
BASE PLATE DETAIL



WEIGHT PER FOOT	X ± 3/32"	Y ± 1/8"
2.00 #	1 15/32"	3 1/16"
3.00 #	1 7/8"	3 1/2"
4.00 #	2"	3 5/8"

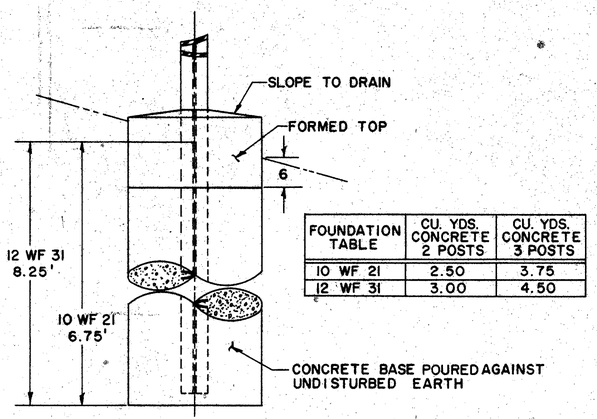
DRIVE POST DETAIL

NOTE: THE FOUNDATION FOR 4# DRIVE POST IS SIMILAR TO THE FOUNDATION SHOWN FOR 6# & 8# BEAM



FOUNDATION TABLE	CU. YDS. CONCRETE 2 POSTS	CU. YDS. CONCRETE 3 POSTS
10 WF 21	2.50	3.75
12 WF 31	3.00	4.50

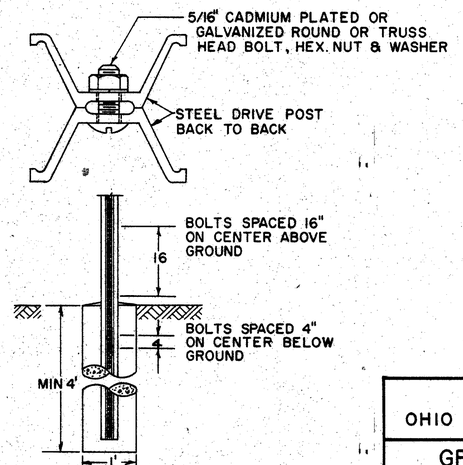
BREAK-AWAY SUPPORT



FOUNDATION TABLE	CU. YDS. CONCRETE 2 POSTS	CU. YDS. CONCRETE 3 POSTS
10 WF 21	2.50	3.75
12 WF 31	3.00	4.50

STANDARD SUPPORT

STRUCTURAL SUPPORTS



#6 & 8# BEAM DETAIL

NOTES: ALL MATERIALS SHALL CONFORM TO THE STATE OF OHIO, CONSTRUCTION & MATERIALS SPECIFICATIONS OR AS OTHERWISE SPECIFIED

1) 511 FOUNDATIONS
2) 711.01 STRUCTURAL STEEL SHAPES & PLATES
3) 711.09 H.S. STEEL BOLTS, NUTS & WASHERS

ALL DIMENSIONS IN INCHES UNLESS OTERWISE SHOWN

BUREAU OF TRAFFIC
OHIO DEPARTMENT OF HIGHWAYS

GROUND MOUNTED SIGN SUPPORTS

GMSS

DATE: 5-10-68, 7-12-68

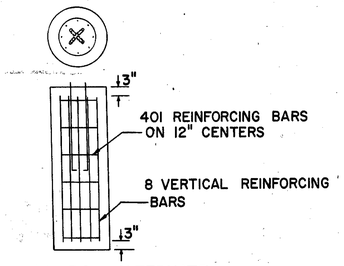
APPROVED _____
ENGINEER OF TRAFFIC

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

20
225

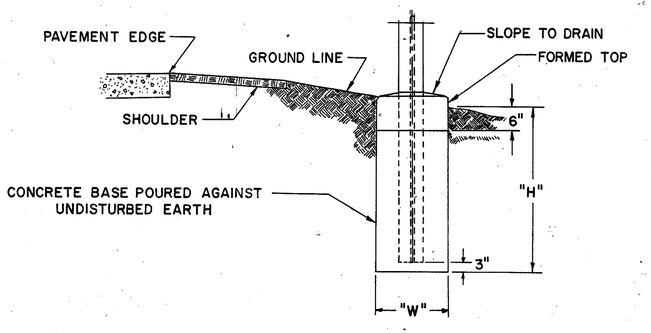
ROS-35-25.05

BEAM SIZE	ANCHOR BOLTS DIA.	ANCHOR BOLTS LENGTH	BASE PLATE	HOLE SIZE	DIM. M	DIM. N	DIM. P	WELD SIZE	DIM. H	DIM. W	CU. YDS. FOR 2 POST	MARK	TYPE	NO.	LENGTH	WEIGHT FOR 1 POST
10B11.5	3/4"	3'-0"	7/8"x6"x18"	7/8"	3 1/2"	14"	3 1/2"	1/4"	5.25'	2'-6"	1.9	401	101	6	7'-6"	45
												402	STR.	8	5'-0"	
10B17	1"	3'-6"	7/8"x6"x18"	1 1/8"	3 3/4"	14"	4 1/4"	1/4"	6.0'	2'-6"	2.2	401	101	7	7'-6"	52
												403	STR.	8	5'-9"	
12B22	1"	4'-0"	1"x9"x19"	1 1/8"	5 1/2"	15"	4 1/4"	1/4"	6.75'	2'-6"	2.5	401	101	8	7'-6"	61
												404	STR.	8	7'-0"	
12WF27	1 1/4"	4'-0"	1"x9"x19"	1 3/8"	5 1/2"	15"	5 1/4"	1/4"	8.0'	2'-6"	2.9	401	101	9	7'-6"	94
												501	STR.	8	8'-0"	
14WF30	1 1/4"	4'-0"	1"x11"x20"	1 3/8"	7 1/2"	16"	5 1/4"	5/16"	8.25'	2'-6"	3.0	401	101	10	7'-6"	101
												502	STR.	8	8'-6"	
14WF34	1 1/4"	4'-0"	1"x12"x22"	1 3/8"	9"	18"	5 1/4"	5/16"	9.0'	2'-6"	3.3	401	101	10	7'-6"	103
												503	STR.	8	8'-9"	
16WF36	1 1/2"	5'-0"	1 1/4"x14"x23"	1 5/8"	10"	19"	6"	5/16"	9.75'	2'-6"	3.5	401	101	11	7'-6"	145
												601	STR.	8	9'-3"	
16WF40	1 1/2"	5'-6"	1 1/4"x14"x24"	1 5/8"	10"	20"	6"	5/16"	10.0'	2'-6"	3.6	401	101	11	7'-6"	148
												602	STR.	8	9'-6"	
16WF45	1 1/2"	6'-0"	1 1/4"x14"x24"	1 5/8"	10"	20"	6"	5/16"	10.5'	2'-6"	3.8	401	101	11	7'-6"	155
												603	STR.	8	10'-0"	
18WF50	1 3/4"	7'-6"	1 1/2"x14"x26"	1 7/8"	10"	22"	6 3/4"	5/16"	11.5'	2'-6"	4.2	401	101	12	7'-6"	164
												604	STR.	8	10'-6"	

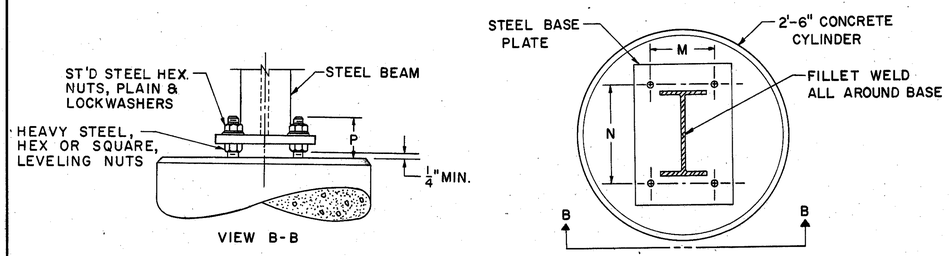


REINFORCING FOR ALTERNATE ANCHOR BASE

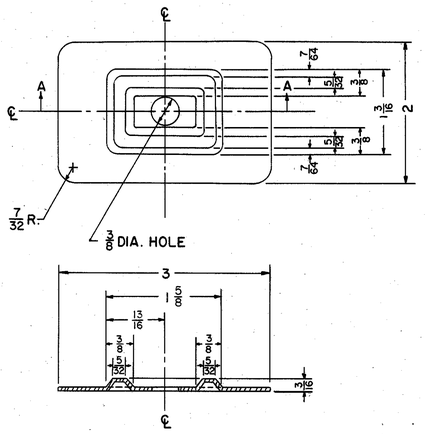
BEAM SIZE	DIM. W	DIM. HO	CU. YDS. CONC. 2 POST
4# POST	1'-0"	4.0'	0.2
6#BEAM	1'-0"	4.0'	0.2
8#BEAM	1'-0"	4.0'	0.2
10B11.5	2'-6"	5.25'	1.9
10B17	2'-6"	6.0'	2.2
12B22	2'-6"	6.75'	2.5
12WF27	2'-6"	8.0'	2.9
14WF30	2'-6"	8.25'	3.0
14WF34	2'-6"	9.0'	3.3
16WF36	2'-6"	9.75'	3.5
16WF40	2'-6"	10.0'	3.6
16WF45	2'-6"	10.5'	3.8
18WF50	2'-6"	11.5'	4.2



FOUNDATION DETAILS FOR EMBEDDED POSTS AND BEAMS

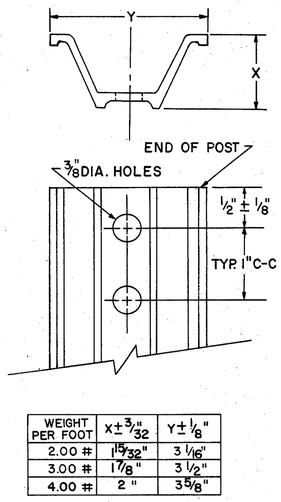


ALTERNATE ANCHOR BASE DETAILS



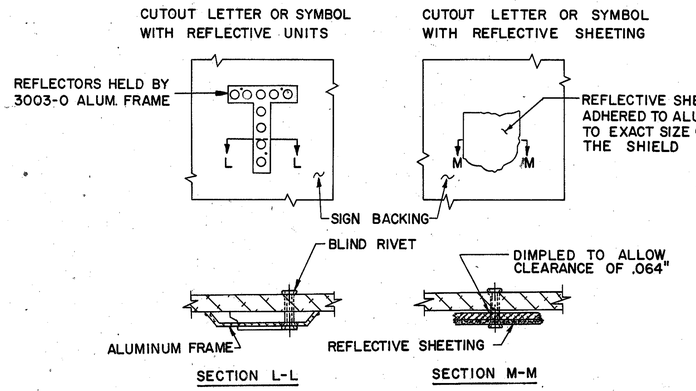
NOTE:
THE PLATE IS SYMMETRICAL ABOUT EITHER CENTERLINE.
METAL SHALL BE 16 GAUGE STEEL.
ALL DIMENSIONS ARE IN INCHES.

BEARING PLATE DETAIL

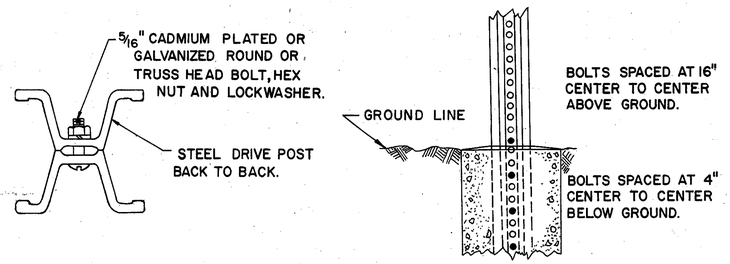


WEIGHT PER FOOT	X ± 3/32"	Y ± 1/8"
2.00 #	1 15/32"	3 1/16"
3.00 #	1 7/8"	3 1/2"
4.00 #	2 "	3 5/8"

DRIVE POST DETAILS



DEMOUNTABLE LETTERS & SYMBOLS



6# & 8# BEAM DETAILS

NOTES

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

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

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

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

DEMOUNTABLE SHIELDS SHALL BE AFFIXED TO THE BACKING UTILIZING 5/16" TRUSS HEAD BOLTS, PLAIN AND LOCKWASHERS. FOR HOLE LOCATION DETAILS SEE SHEET NO. 205.

IN LIEU OF THE .040" THICK FRAME SPECIFIED IN SUPPLEMENTAL SPECIFICATION 815.08, THE FRAMES FOR THE REFLECTIVE UNITS IN THE SIGN OUTLINES ONLY, MAY BE .032" THICK ALUMINUM. (A.S.T.M. B209GSIIA-T6).

BUREAU OF TRAFFIC
OHIO DEPARTMENT OF HIGHWAYS

MISCELLANEOUS SIGNING ITEMS

MSI

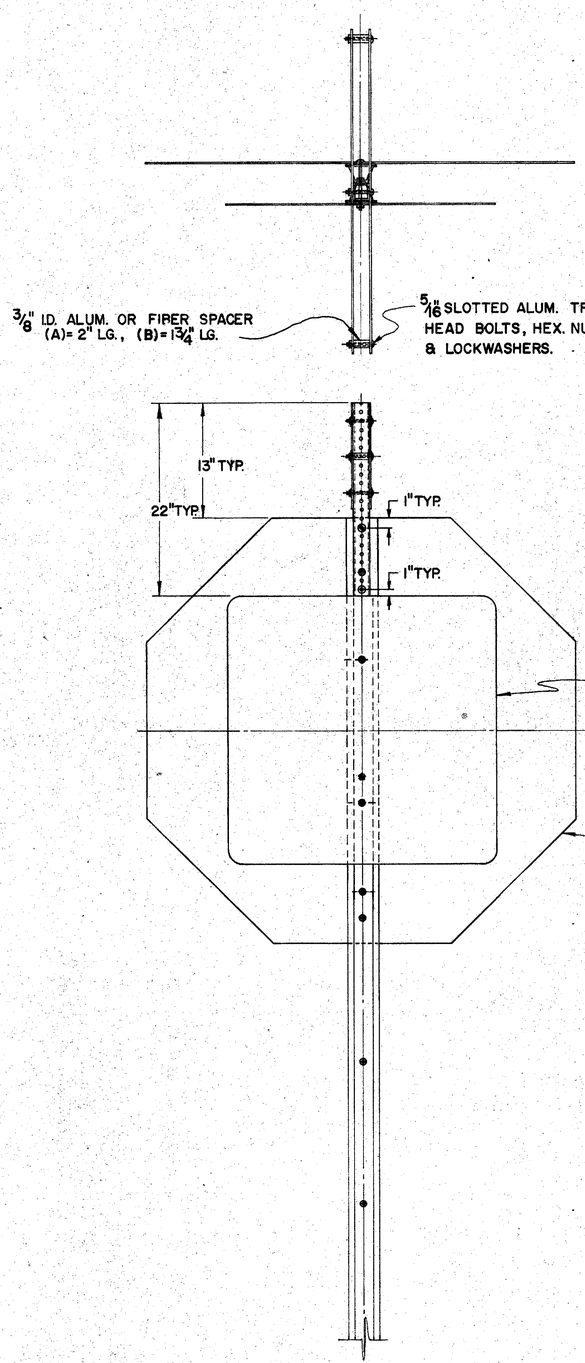
DATE
10-29-63
8-19-64
10-13-65
4-14-67

APPROVED Fred C. Tasker
ENGINEER OF TRAFFIC

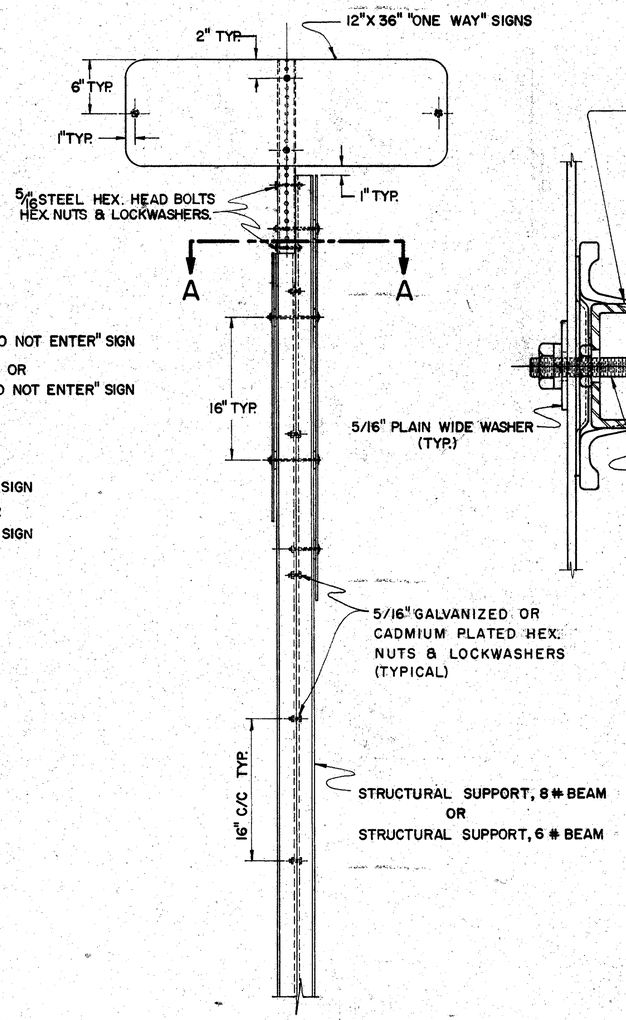
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

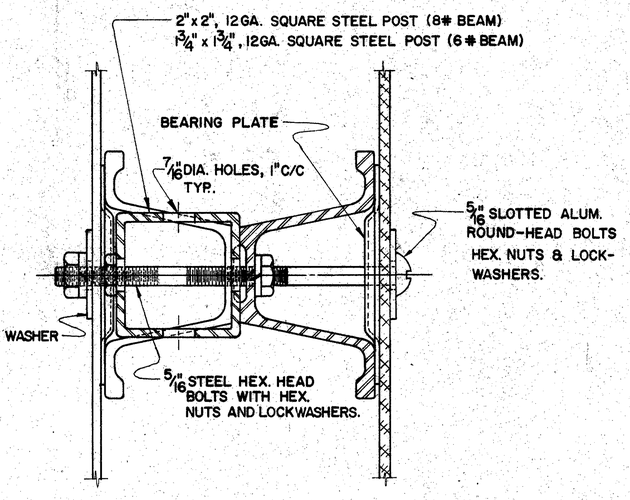
209
22.5

ROS-35-25.05

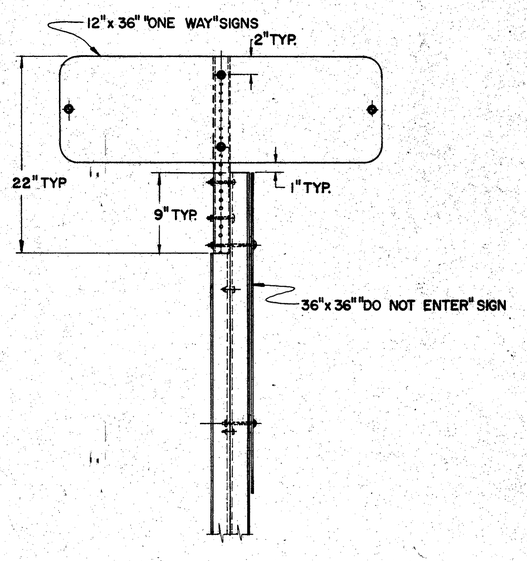


"ONE WAY", "STOP", "DO NOT ENTER",
SIGN INSTALLATION.





SECTION A-A



"ONE WAY", "DO NOT ENTER"
SIGN INSTALLATION

NOTES

MATERIALS

ALL SIGN MATERIALS SHALL BE IN ACCORDANCE WITH SUPPLEMENT SPECIFICATION 815.

ALL STRUCTURAL MATERIALS SHALL BE IN ACCORDANCE WITH SUPPLEMENT SPECIFICATION 816.

FOR SPECIFICATIONS FOR THE 2" & 1 3/4" SQUARE STEEL POST SEE GENERAL NOTES, SHEET NO. 194.

BUREAU OF TRAFFIC
OHIO DEPARTMENT OF HIGHWAYS

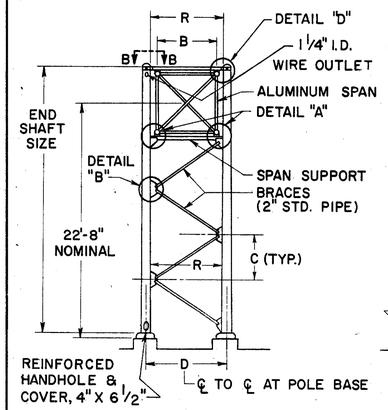
SPECIAL "ONE WAY" SIGN SUPPORT DETAILS	SOW	DATE 2-7-66 4-18-67
APPROVED _____ ENGINEER OF TRAFFIC		

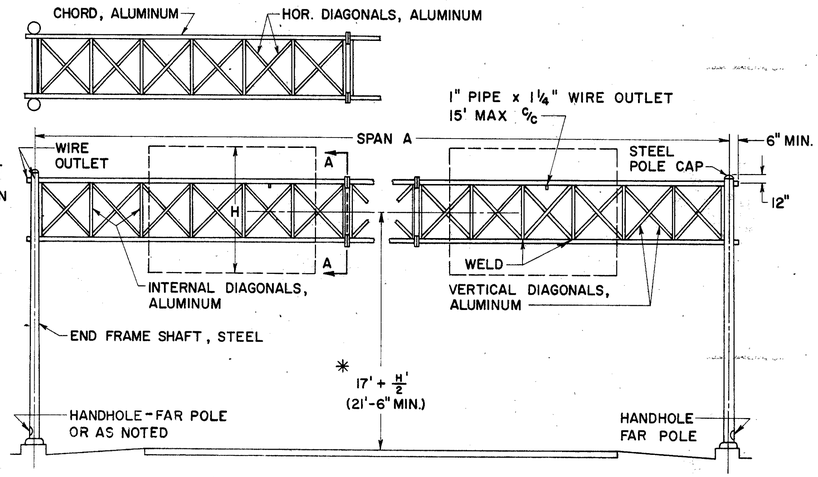
SPECIAL "ONE WAY" SIGN SUPPORT DETAILS

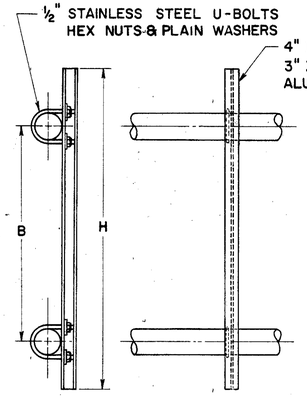
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

210/225

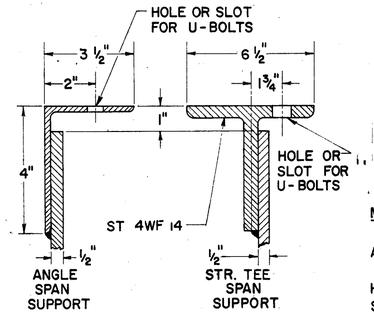
ROS-35-25.05







SIGN BRACKET



SECTION D-D

NOTES

MATERIALS

THE OVERHEAD SPAN TRUSS SHALL BE ALUMINUM AND THE END FRAMES SHALL BE STEEL.

SPAN TRUSS AND END FRAMES, INCLUDING HARDWARE, SHALL BE IN ACCORDANCE WITH SUPPLEMENTAL SPECIFICATION 816 UNLESS OTHERWISE NOTED.

STEEL POLE BASES AND GUSSETS SHALL CONFORM TO THE REQUIREMENTS OF ASTM SPECIFICATION A-373.

AFTER FABRICATION THE TAPERED POLES SHALL HAVE A MINIMUM YIELD STRENGTH OF 48,000 PSI.

FABRICATION

THE ENTIRE STEEL END FRAME SHALL BE HOT DIP GALVANIZED IN ACCORDANCE WITH 711.02

MAXIMUM LENGTH OF SPAN SECTIONS IS 30 FT.

ERECTION

USE A MINIMUM OF 1" CAMBER IN SPAN TRUSS MEMBER FOR A 50' SPAN; ADD 1/4" OF CAMBER FOR EACH 5' OF INCREASE IN SPAN OVER 50'.

PAYMENT

PAYMENT FOR THE GALVANIZED CONDUIT SHALL BE INCLUDED IN THE UNIT PRICE BID FOR OVERHEAD SIGN SUPPORTS.

SOILS

THE FOUNDATION DETAILS SHOWN ARE FOR AVERAGE SOIL CONDITIONS (MEDIUM CLAY, CEMENTED SAND AND GRAVEL, SANDY CLAY, OR STIFF CLAY).

FOR POOR SOIL CONDITIONS, INCREASE "D" MIN. BY: 50% IN DRY OR WET SAND, 60% IN SILTY CLAY, 100% IN SOFT CLAY, AND FROM 75% TO 150% IN WET SILT, DEPENDING ON QUICKSAND ACTION.

REINFORCING STEEL

COST OF REINFORCING STEEL SHALL BE INCLUDED IN THE UNIT PRICE FOR ITEM 816 CONCRETE FOR SIGN SUPPORT FOUNDATIONS.

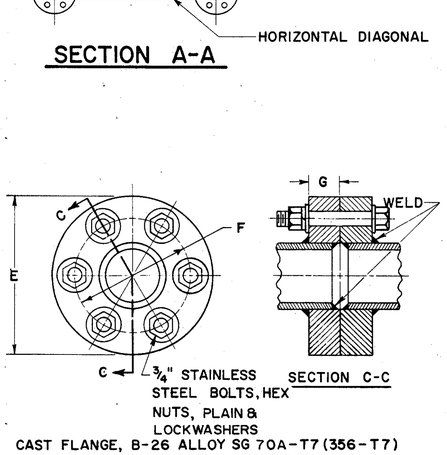
BAR SIZE IS INDICATED IN THE BAR MARK. THE FIRST DIGIT WHERE THREE DIGITS ARE USED AND THE FIRST TWO DIGITS WHERE FOUR ARE USED, INDICATE THE BAR SIZE NUMBER.

* FOUNDATION ELEVATION

ELEVATION OF TOPS OF FOUNDATIONS SHALL BE BUILT UP SO THAT 17' CLEARANCE IS MAINTAINED OVER THE ENTIRE WIDTH OF THE PAVEMENT AND SHOULDERS.

DESIGN

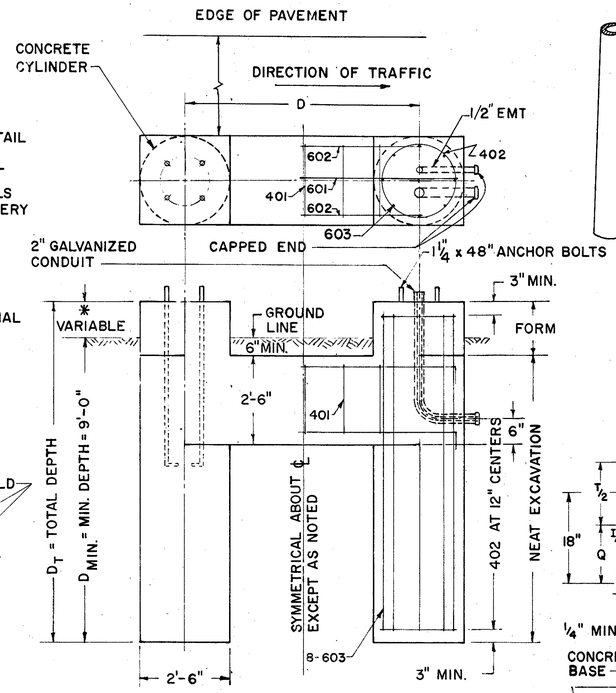
THE DESIGN OF OVERHEAD SUPPORTS IS IN ACCORDANCE WITH A.A.S.H.O. SPECIFICATION FOR THE DESIGN AND CONSTRUCTION OF STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, ADOPTED JUNE 12, 1961.



SECTION A-A

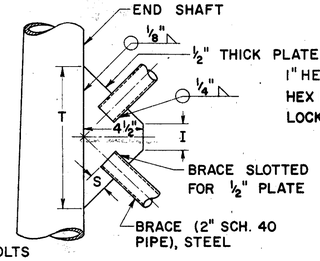
CAST FLANGE, B-26 ALLOY SG 70A-T7 (356-T7)

FLANGE DETAIL

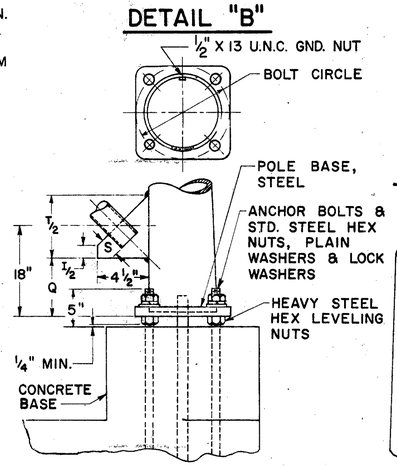


FOUNDATION DETAIL

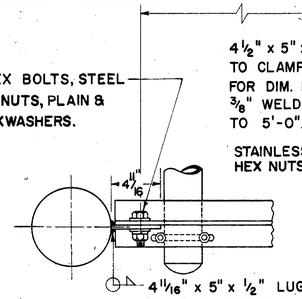
(RIGHT HAND SHOWN - LEFT HAND OPPOSITE)



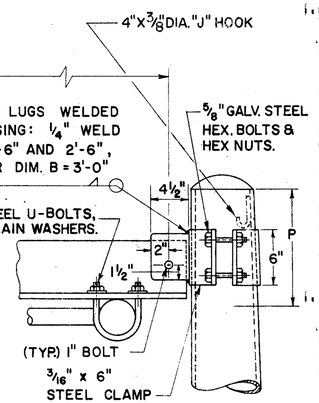
DETAIL "B"



POLE BASE DETAIL

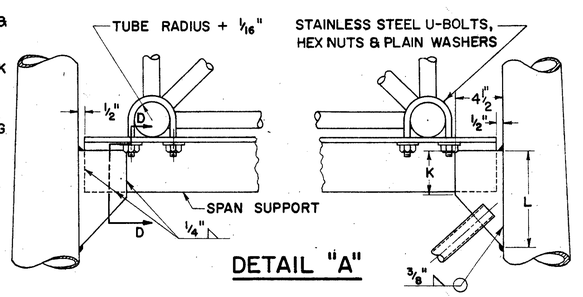


VIEW B-B



DETAIL "D"

UPPER SPAN SUPPORT (ALTERNATE METHODS)

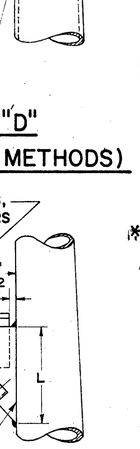


DETAIL "A"

LOWER SPAN SUPPORT

DESIGN NO.	SPAN A	B	C	D	E	END SHAFT	BRACE LENGTH	F	G	I	K	L	P	Q	R	S	T	U BOLTS	V	BOLT CIRCLE	SPAN SUPPORT SECTION D-D	CHORDS	HORIZONTAL AND INTERNAL DIAGONAL	VERTICAL DIAGONAL
1	50'Thru 55'	3'-0"	4'-11 3/4"	4'-5"	7"	8"x4.5"x25'-0",3GA	5'-10 13/16"	5 1/2"	1 1/4"	3 1/2"	4 3/4"	8"	12"	6 5/8"	3'-9"	1 1/2"	10"	5/8"	3'-3 5/8"	11"	SPLIT TEE 3'-8"	3 1/2" x .188"	1.660"x .140"	1.660"x .140"
2	56'Thru 80'	3'-0"	4'-11 3/4"	4'-5"	9 1/4"	8"x4.5"x25'-0",3GA	5'-10 13/16"	7 7/16"	1 3/8"	3 1/2"	4 3/4"	8"	12"	6 5/8"	3'-9"	1 1/2"	10"	5/8"	3'-3 5/8"	11"	SPLIT TEE 3'-8"	4 3/4" x .188"	1.900"x .145"	1.660"x .140"
3	81'Thru 90'	4'-0"	4'-10 1/4"	5'-7"	9 1/4"	8"x6.22"x25'-6",3GA	6'-7 1/8"	7 7/16"	1 3/8"	5/8"	4 3/8"	7 3/4"	12"	6 1/4"	4'-11"	1 1/2"	9 1/2"	5/8"	4'-5 5/8"	11"	SPLIT TEE 4'-10"	4 3/4" x .188"	1.900"x .145"	1.900"x .145"
4	91'Thru 105'	4'-0"	4'-10 1/4"	5'-7"	9 1/4"	8"x6.22"x25'-6",3GA	6'-7 1/8"	7 7/16"	1 3/8"	5/8"	4 3/8"	7 3/4"	12"	6 1/4"	4'-11"	1 1/2"	9 1/2"	5/8"	4'-5 5/8"	11"	SPLIT TEE 4'-10"	4 3/4" x .188"	2"x .188"	1.900"x .145"

REINFORCEMENT SCHEDULE			
MARK	NO.	LENGTH	TYPE
401	12"C/C	8'-6"	102
402	12"C/C	7'-6"	103
601	4	D+ 4'-0"	101
602	8	D+ 2'-0"	101
603	32	D_T - 6"	STR.



BUREAU OF TRAFFIC
OHIO DEPARTMENT OF HIGHWAYS

OVERHEAD SIGN SUPPORTS | 816 No. 7.3 | DATE 7-25-62 5-5-64

APPROVED Robert E. Sommer
ENGINEER OF TRAFFIC

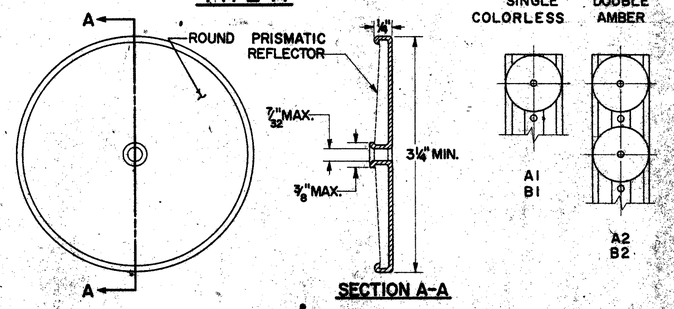
300 SQ. FT. SIGN AREA — OVERHEAD SIGN SUPPORT, 816 NO. 7.3

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

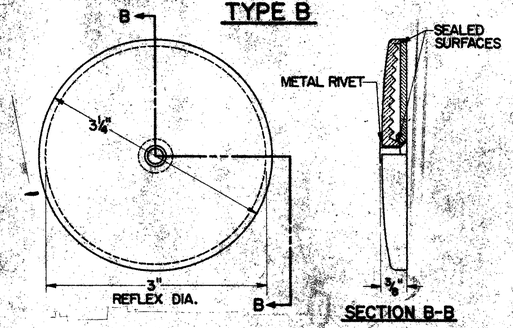
211
225

ROS-35-25.05

TYPE A



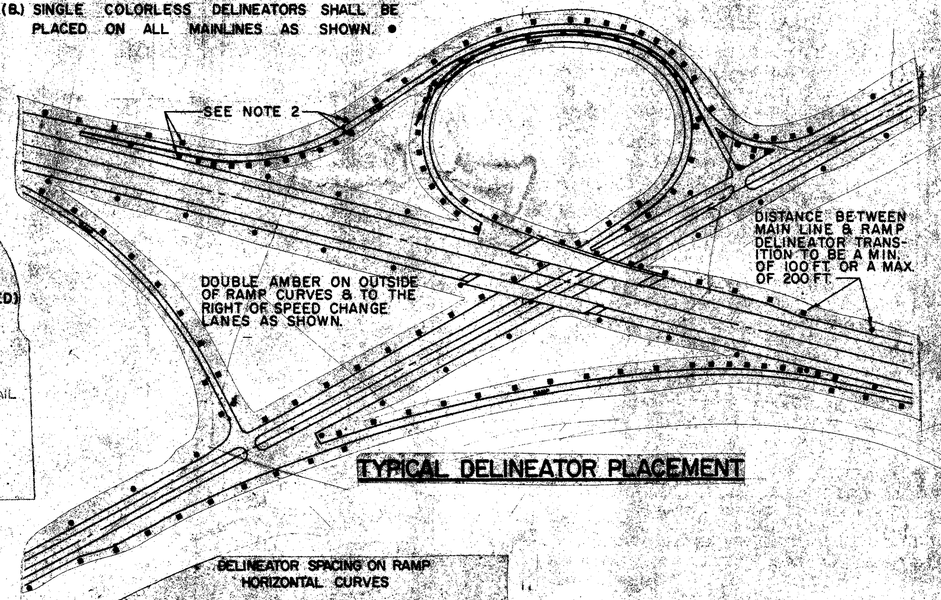
TYPE B



NOTE:

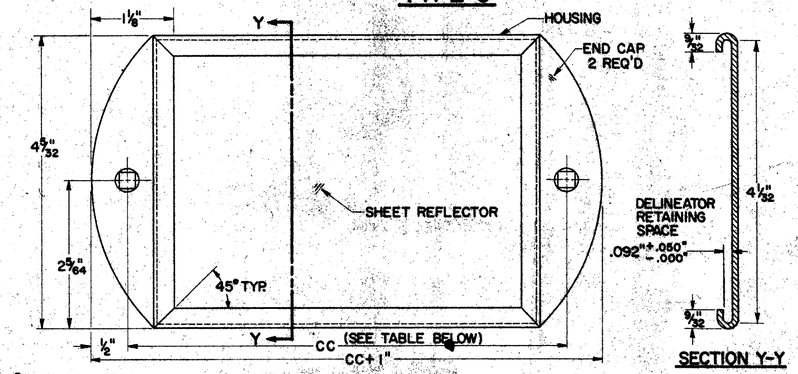
(A.) DOUBLE AMBER DELINEATORS SHALL BE PLACED ON ALL RAMPS AS SHOWN. ■

(B.) SINGLE COLORLESS DELINEATORS SHALL BE PLACED ON ALL MAINLINES AS SHOWN. ●

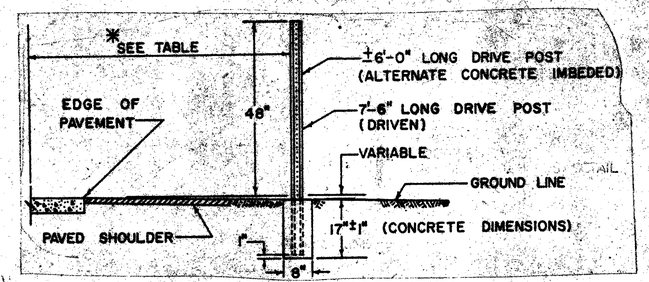


TYPICAL DELINEATOR PLACEMENT

TYPE C



TYPE	DIM. CC
C1 – SINGLE COLORLESS	6"
C2 – DOUBLE AMBER	11"



LATERAL PLACEMENT OF DELINEATORS

* TABLE

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

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

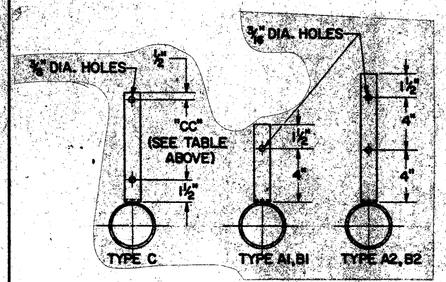
DELINEATOR SPACING ON RAMP HORIZONTAL CURVES

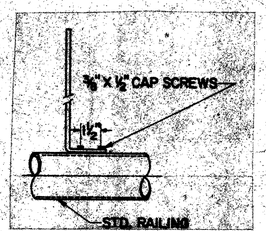
RADII, FT. FROM	RADII, FT. TO	SPACING ON CURVE	* TRANSITION SPACING	
TANGENT	1,801	100'	100'	100'
1,800	1,401	80'	100'	100'
1,400	1,001	70'	100'	100'
1,000	751	60'	100'	100'
750	551	50'	90'	100'
550	326	40'	70'	100'
325	———	30'	60'	100'

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

NOTES

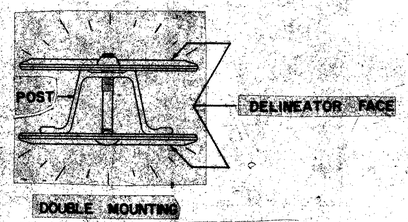
1. TYPE A1 OR B1 DELINEATORS ON THE RIGHT OF THE THROUGH ROADWAY ARE TO BE SPACED AT 200 FT. INTERVALS THROUGHOUT, REGARDLESS OF CURVES.
2. WHEN CROSSING FROM LEFT TO RIGHT OR FROM RIGHT TO LEFT ON THE RAMPS, THE DELINEATORS AT THE POINT OF CROSSOVER ARE TO BE AT THE SAME STATION ON EACH SIDE.
3. NO DELINEATORS ARE TO BE PLACED IN PAVED BERM.
4. WHEN RADII OF CURVE ON RAMPS REQUIRE 100' SPACING THE DELINEATORS SHALL BE PLACED ON THE RIGHT IN RELATION TO THE FLOW OF TRAFFIC.



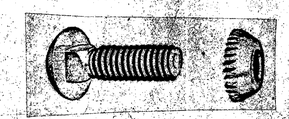


ALL BRACKETS ¼" x 1¼" STAINLESS STEEL

BRIDGE RAIL BRACKET

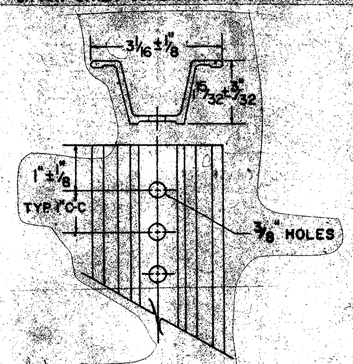


DELINEATOR MOUNTING



TAMPER RESISTANT FASTENERS SHALL BE USED TO FASTEN DELINEATORS TO POST. AS/OR SIMILAR TO ONE SHOWN ABOVE.

TAMPER RESISTANT FASTENERS



2 LB./F.T. DELINEATOR DRIVE POST

BUREAU OF TRAFFIC
OHIO DEPARTMENT OF HIGHWAYS

DELINEATOR DETAILS

620

DATE
9-25-62
5-24-65
9-12-67

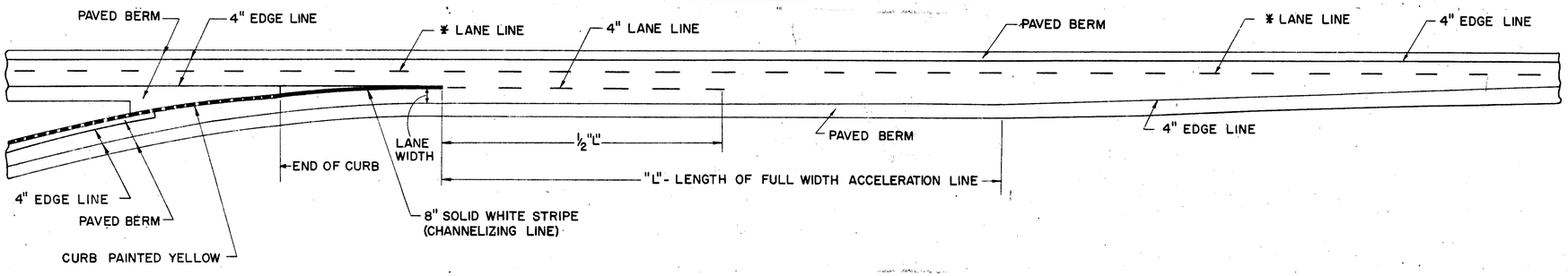
APPROVED Robert L. Bowen
ENGINEER OF TRAFFIC

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

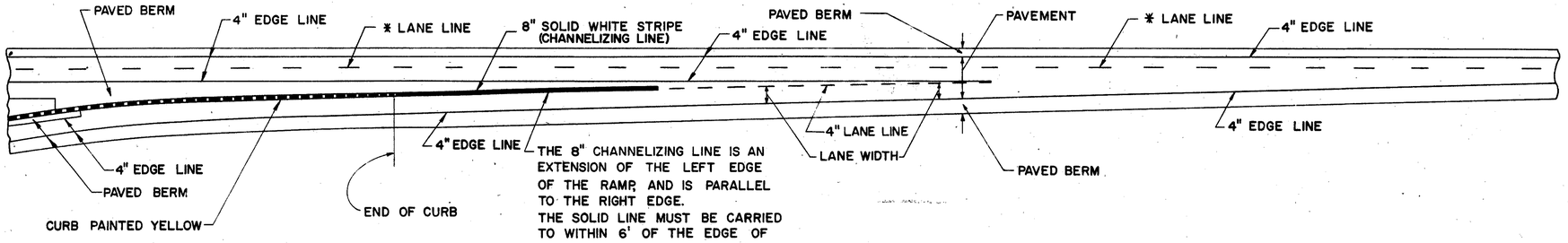
212
225

ROS-35-25.05

ENTRANCE TERMINAL - PARALLEL ACCELERATION LANE

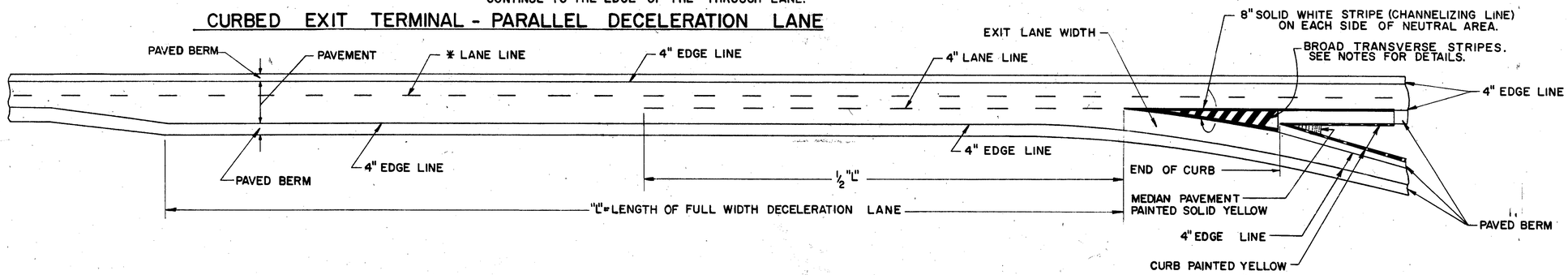


ENTRANCE TERMINAL - TAPERED ACCELERATION LANE

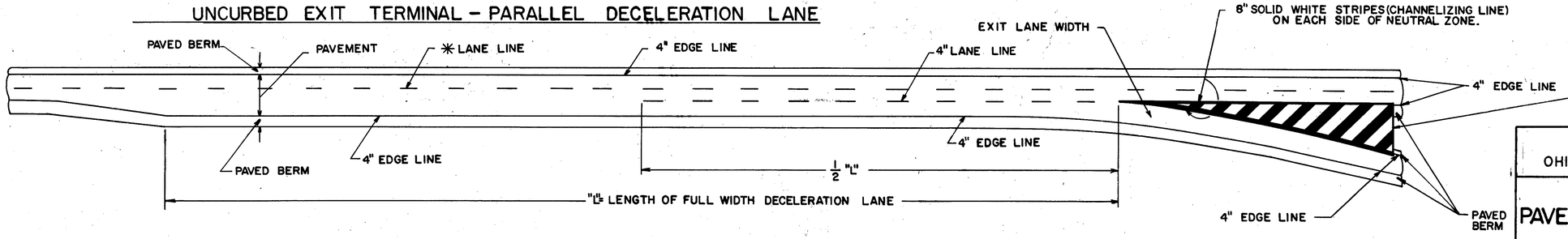


THE 8" CHANNELIZING LINE IS AN EXTENSION OF THE LEFT EDGE OF THE RAMP AND IS PARALLEL TO THE RIGHT EDGE. THE SOLID LINE MUST BE CARRIED TO WITHIN 6' OF THE EDGE OF THE THROUGH LANE, OR TO THE END OF THE RAMP CURVE IF CLOSER. THE 4" DASHED LINE SHOULD CONTINUE TO THE EDGE OF THE THROUGH LANE.

CURBED EXIT TERMINAL - PARALLEL DECELERATION LANE



UNCURBED EXIT TERMINAL - PARALLEL DECELERATION LANE



NOTES

DIAGONAL STRIPES AT EXIT RAMPS SHALL BE 24" BROAD TRANSVERSE STRIPES, 621.11, WITH A 6' SPACE BETWEEN STRIPES.

* 6" LANE LINE ON INTERSTATE HIGHWAYS ONLY.
4" LANE LINE ON ALL OTHER HIGHWAYS.

BUREAU OF TRAFFIC
OHIO DEPARTMENT OF HIGHWAYS

PAVEMENT MARKING | 621

DATE
7-17-61
4-6-62
5-24-65
9-[illegible]-67
4-17-68

APPROVED Robert E. Lower
ENGINEER OF TRAFFIC

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	F-674(12)	

176
187

3
14

ROSS COUNTY
ROS-35-25.05
LIMITED ACCESS

PROPERTY AND SCHEMATIC PLAN

ROS-35-25.05
ROSS COUNTY, OHIO
SCIOTO, SPRINGFIELD, & LIBERTY TWPS.

END CHANNEL EXCAVATION STA. 120+00
Scioto River Channel Excavation
SCIOTO RIVER
SHRADER SUBDIVISION
IVAN W. SHARP
GRACE L. SHARP
ESTHER R. GRAVES WETZEL
JOHN S. COLE & EDNA COLE
CHILLICOTHE Telephone Co.
Residence Drive
MARY A. KRAMER
Field Drive
Connection to Ft. Lick Road
C.H. & D. Telephone line
C.H. & C. R.R.
Bridge St. Underpass
Barn
Tract No. 4
Tract No. 2
Tract No. 1
FRACTIONAL SECTION 30
FRACTIONAL SECTION 3
R-21-W
T-7-N
T-6-N
V.M.S. 480
SCIOTO TWP.
SPRINGFIELD TWP.
EPAC. 360.30
CARMI R. & CARMI V. JONES
B. LA/RW
LA/RW
Ex. R/W
MATCH LINE
Westbound
Eastbound (Survey)
2 Sty. Fr. Res.
Driveway
Barn
MARY A. KRAMER
BEGIN CHANNEL EXCAVATION STA. 96+00
C & SOE 5 KW Dist. Line
B. & O. R.R.
Ex. R/W
Farm Buildings
2 Sty. Brick Res.
SPRINGFIELD TWP. LIBERTY TWP.
P.C. 1352+55.61
P.T. 1360+77.69
P.C. 1365+83.71
P.C. 1382+94.22
P.T. 1385+88.88
P.C. 1562+88.88
P.T. 1565+88.88
P.C.C. 156 L 84.94
Leased to ALBERT E. CYDRUS
Service Station & Restaurant
FLORA H. IMMEL
Temporary Connection
Temp. Approach 35+50
Ramp "C"
Athens Road
Proposed Drive Point of Access
Parcel
ROBERT D. STULTZ & RUTH M. STULTZ
WILLIAM S. KERN & BESSIE KERN
CECIL H. & RATCLIFF MARJORIE L. BURT
T.S. 182+02.85
C.S. 184+02.85
T.S. 184+02.85
C.S. 189+35.48
T.S. 191+35.48
C.S. 179+26.76
T.S. 181+26.76
C.S. 171+98.09
T.S. 169+98.09
END PROJECT STA 1384+24.21
P.T. 1382+94.22
P.T. 1565+88.88
Ex. U.S.R. 35
C & O R.R.
R/W

LEGEND

- LIMITED ACCESS LINE ——— L.A
- RIGHT OF WAY ——— R/W
- PROPERTY LINE ——— P.L.
- SLOPE EASEMENT LINE ——— S.L.
- EXISTING RIGHT OF WAY ——— Ex. R/W

- Area to be acquired for LA/RW [Warranty Deed Limited Access]
- Area acquired for LA/RW ROS-35-22.82
- Area to be acquired for R/W [Easement]
- Area to be acquired for R/W [Warranty Deed]
- Existing Right-of-Way
- Channel Easement
- Work Agreement
- Sewer Easement
- Temporary Right-of-Way

BEGIN PROJECT STA. 323+00
VIRGINIA MILITARY SURVEY 480
CARMI R. & CARMI V. JONES
Ex. L.A. & R/W
Ex. L.A. & R/W
MATCH LINE
1330
1340

DATE	REVISIONS

ELMER S. BARRETT ASSOCIATES
Consulting Engineers
245-249 S. Paint Street Chillicothe, Ohio

PROPERTY AND SCHEMATIC R/W PLAN

SCALE 0 50 100 200 300 DATE 3-16-64

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
N.R.	N.R.	N.R.	R.W.G.			

SUMMARY OF ADDITIONAL RIGHT OF WAY REQUIRED

U.S.R. 35 SEC. ROSS COUNTY, OHIO

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	F-674(12)	

177/187

ROSS COUNTY
ROS-35-25.05
LIMITED ACCESS

4/14

PARCEL NUMBER	OWNER	DEED RECORD BOOK	DEED RECORD PAGE	DEED AREA	TO BE ACQUIRED LAND	TO BE ACQUIRED BLDGS	RESIDUE LEFT	RESIDUE RIGHT	SHEET NUMBER	REMARKS
144X	CARMI R. & CARMI V. JONES	262	166	250.00 Ac.	1.005 Ac.		136.065 Ac.	58.095 Ac.	13	[See Ros-35-22.82 ----- Parcel 145 LA = 20.836 Ac., P.R.O. = 19.680 Ac. Parcel 145 = 0.093 Ac. Residue Lt. = 155.291 Ac. &
145X	" " " " "				19.226 Ac.				13-14	Residue Rt. = 59.100 Ac.] Parcels 144X & 145X are Channel Easements.
146WL	MARY A. KRAMER	325	39[illegible]	196.080 Ac.	7.297 Ac.		———	——— *	5-6	P.R.O. = 4.165 Ac. Deed Area includes Tract No. 1 (47.15 Ac.) and Tract No. 2 (37.68 Ac.) in Liberty Twp.
146	" " "				2.649 Ac.				12	and also Tract No. 3 (56.715 Ac.) and Tract No. 4 (54.535 Ac.) in Springfield Twp. * See Vol. 267, Pg. 96
146WA	" " "								12	Construct Field Dr. Lt. of Prop. Lick Run Rd. Sta. 23+75 to Sta. 28+30.
146S	" " "								12	Sewer Easement
146A-S	" " "								12	Sewer Easement
147	JOHN S. COLE & EDNA COLE	246	62[illegible]	2.502 Ac.	0.101 Ac.		0	2.279 Ac.	12	P.R.O. = 0.122 Ac.
148	ESTHER GRAVES WETZEL	314	56	31.526 Ac.	0.793 Ac.		30.539 Ac.	0	12	P.R.O. = 0.194 Ac. Deed Area includes only Tract No. 1
148WA	" " "								12	Construct Residence Dr. Lt. of Prop. Lick Run Rd. Sta. 20+85 to Sta. 21+60.
149	MARY A. KRAMER	325	39[illegible]	196.080 Ac.	0.692 Ac.		———	——— *	6	P.R.O. = 0.230 Ac. [Tract No. 3 (Springfield Twp.) T.B.A. = 0.639 Ac., P.R.O. = 0.102 Ac. —— Tract No. 1 (Liberty
149WA	" " "								6	Twp. Section 3) T.B.A. 0.053 Ac., P.R.O. 0.128 Ac.] Parcel 149WA - Construct Res. Dr. Rt. Ex. Athens Rd. Sta. 139+90
										to Sta. 147+75
150WL	CHESAPEAKE AND OHIO RAILWAY COMPANY	203	252	2.83 Ac.	0.309 Ac.				7	
150T	" " " " " "								7	Temp. Right-of-Way Area = 0.005 Ac.
150A-T	" " " " " "								7	Temp. Right-of-Way Area = 0.245 Ac.
150S	" " " " " "								7	Sewer Easement
151WL	MARY A. KRAMER	325	39[illegible]	196.080 Ac.	~~26.855~~ 27.726 Ac.		———	——— *	8-9-10	P.R.O. = 1.639 Ac. [Tract No. 1 (Liberty Twp. Section 3) T.B.A. = 14.358 Ac., P.R.O. = 0.687 Ac. —— Tract No. 2 (Liberty Twp. Section 3)
										T.B.A. = ~~9.194~~ 9.799 Ac., P.R.O. = 0.952 Ac. —— Tract No. 3 (Springfield Twp. Section 30) TBA = ~~2.503~~ 2.606 Ac.]
152	MARY A. KRAMER	325	393	196.080 Ac.	1.047 Ac.		———	——— *	8	This Parcel is a part of 3.71 Ac. leased to Albert E. Cydrus as recorded in Vol. 13, Pg. 443
										Lease is in Tract No. 1 Residue of lease = 2.663 Ac. and is included in Residue Right of Tract No. 1
153WL	MARY A. KRAMER	325	39[illegible]	196.080 Ac.	1.153 Ac.		———	——— *		This Parcel is a part of 2.00 Ac. leased to Albert E. Cydrus as recorded in Vol. 13, Pg. 491
									9	Lease is in Tract No. 1 Residue of lease = 0.847 Ac. and is included in Residue Right of Tract No. 1
155WL	FLORA H. IMMEL	214	39[illegible]	138.794 Ac.	0.733 Ac.		2.943 Ac.	135.039 Ac.	9	P.R.O. = 0.079 Ac. Deed Area includes only Tract No. 1. Residue is with respect to the existing
										easterly right-of-way line of U.S.R. 35.
156WD	CECIL H. RATCLIFF AND MARJORIE L. BURT	294	63[illegible]	40.00 Ac.	2.045 Ac.		37.400 Ac.	2.438 Ac.	11	P.R.O. = 0.555 Ac. Deed Area includes only Parcel "B" of Tract No. 1 [Section 3 T.B.A. = 0.746 --
										Section 2 T.B.A. = 1.299 Ac., P.R.O. = 0.555 Ac.]
157	ROBERT D. STULTZ AND RUTH M. STULTZ	283	37[illegible]	0.73 Ac.	0.079 Ac.		0.569 Ac.	0	11	P.R.O. = 0.082 Ac.
158	WILLIAM S. KERN AND BESSIE KERN	277	523	13.26 Ac.	0.038 Ac.		13.172 Ac.	0	11	P.R.O. = 0.050 Ac.
159WD	MARY A. KRAMER	325	393	196.080 Ac.	0.044 Ac.		———	——— *	10	P.R.O. = 0.244 Ac.
160	CECIL H. RATCLIFF AND MARJORIE L. BURT	294	63[illegible]	40.00 Ac.	0.127 Ac.		0	39.724 Ac.	11	P.R.O. = 0.149 Ac. Deed Area includes only Parcel "A" of Tract No. 1

* RESIDUAL ACREAGE - MARY A. KRAMER
Tract No. 1 (Liberty Twp. - Section 3) Residue Left = 8.895 Ac., Residue Right = 20.829 Ac.
Tract No. 2 (Liberty Twp. - Sections 2 & 3) Residue Left = 25.063 Ac., Residue Right = 2.188 Ac. with respect to Prop. Athens Rd.
Tract No. 3 (Springfield Twp. - Section 30) Residue Left = 28.870 Ac., Residue Right = 10.490 Ac.
Tract No. 4 is not affected.

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	F-674(12)

178/187

ROSS COUNTY
ROS-35-25.05
LIMITED ACCESS

5/17

SCIOTO TWP.
ROSS COUNTY
VMS 480

CARMI R. & CARMI V. JONES

Ex—L.A.—R/W

BEGIN PROJECT Sta 1323+00

Cultivated Field

CARMI R. & CARMI V. JONES
S-41°-17'-03"E 1421.39'

1330+00
220' Lt. E.B
178' Lt. ℄

Ex.—L.A.—R/W

S-41°-17'-03"E

℄ Construction Limits

1329+76.97
80' Lt. E.B.
1329+76.97
75' Lt. E.B.

1330+00
80.66 Lt. E.B.
38.66 Lt. ℄

145 LA

S 42°-55'-15" E 677.25'

1406.28' S 41°17'03"E

Sign

TEMPORARY CONNECTION

℄ Median

S 41°17'03"E

℄ WESTBOUND

23.00'

5.00'

42'

℄ MEDIAN (℄ SURVEY)

S41°17'03"E

Temp. Connection

1320 1321 1322 1323 1324 1325 1326 1327 1328 1329 1330 1331 1332 1333 1334 1335 1336

S41°17'03"E

℄ EASTBOUND (℄ SURVEY)

℄ Ex

℄ Existing Pavement (Ex. U.S.R. 35 & 50)

Construction Limits

1326+26.97
50' Lt. E.B.

N 41°17'03"W
1056.28'

20.00'

10.00'

70'

1048.36' Ex. L.A. — R/W

N 41°17'03"W 1048.36'

L.A. — R/W N 41°17'03"W 450.00'

N 41°17'03"W 1150.00'

Ex. LA-R/W

1330+00
70' Rt. E.B.
112' Rt. ℄

1330+76.97
112' Rt. ℄

1330+76.97
122' Rt. ℄

1326+26.97
70' Rt. E.B.

Cultivated Field

CARMI R. & CARMI V. JONES

SCIOTO TWP
ROSS COUNTY
VMS 480

See Sheet No. 13/14

145 X

Channel Easement Line

1338+00
178' Lt.

N 48°42'57"E
151.00'

101+99
480' Lt.

1339+00
149' Lt.

1340+00
180' Lt.

CARMI R. & CARMI V. JONES

1345+77.45
120' Lt. E

101+20
107.45' Rt.

N 48° 42' 57" E

102

CARMI R. & CARMI V. JONES

S25°-06'-33"E

Ex LA-R/W 104.12'

208.24'

1341+76.97
108' Lt. ℄

1342+26.97
108' Lt. ℄

S41°17'03"E 577.45'

Ex LA-R/W

50.00'

S41°17'03"E

Construction Limits

101

145 LA

1345+74.50
42' Lt. ℄

28.95'

S 50°32'57" W

43.60'

1336+76.97
58' Lt. E

S 46°-59'-45"E
502.49'

PROP. WESTBOUND

1342+26.97
28' Lt. E

PROP. WESTBOUND
S41°-17'-03"E 351.50'

PROP. BRIDGE

S41°17'03"E

℄ MEDIAN (℄ SURVEY)

1336 1337 1338 1339 1340 1341 1342 1343 1344 1345 1345+86.41 1346 1347 1348 1348+90 1349 1350

2-S 48°42'57" W 42.00'

1350

℄ Ex.

℄ Ex. KILGORE Bridge

Ex. U.S.R. 35 & 50

℄ Ex. KILGORE Bridge

Sta. 100+00 Channel Excavation
Sta. 1343+80 ℄ Median Prop. U.S.R. 35

Ex LA R/W

N 41°-17'-03"W L.A. 1150.00'

10.00'

N 41°-17'-03"W 391.20'

Ex LA — R/W

1342+26.97
112' Rt. ℄

98+88

98+88

1346+18.17
112' Rt. ℄

98+88
238.17' Rt.

1343+80
112' Rt.

CARMI R. & CARMI V. JONES
T.B.A. = 20.221 Ac.
Residue Lt. = 136.065 Ac.
Residue Rt. = 58.025 Ac.
Deed = 280.00 Ac.

CARMI R. & CARMI V. JONES

N 0°-28'-34"E 250.44'

Channel Easement Line

See Sheet No. 14/14

144 X

RIVER

Scioto Township

Springfield Township

NOTE:
All required right of way between Sta. 1320+00 and the Scioto River was purchased on the ROS-35-22.82 project

1348+34
158' Lt.

1350+55.61
200' Lt.

L.A. R/W S41°17'03"E 221.61'

Construction Limit

N 39°30'51"E 197.88'

146 WL

1348+77
81' Lt.

82.06'

N 39°30'51"E

185.34'

N 36°28'00"E

1349+23
152' Rt.

S41°17'03"E
132.61'

SCIOTO

FRACTIONAL SECTION 30

V.M.S. 480

ROSS COUNTY
SPRINGFIELD TOWNSHIP
T-8N R-21W
FRACTIONAL SECTION 30

DATE	REVISIONS

ELMER S. BARRETT ASSOCIATES
Consulting Engineers
245-249 S. Paint Street Chillicothe, Ohio

R/W PLAN
STA. 1320 TO STA. 1350

SCALE 0 20 30 DATE 3-16-64

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
WIG	LLP	LKM	RWG			

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	F-674(12)	

173/187

6/14

ROSS COUNTY
SPRINGFIELD TOWNSHIP
T8N.-R.21W.
FRACTIONAL SECTION 30

ROSS COUNTY
ROS-35-25.05
LIMITED ACCESS

℄ SURVEY (EASTBOUND)
PROJ. CURVE DATA
P.I. Sta. 1355+73.70
Δ = 12°29'30" Lt. Yc = 1.75'
Dc = 1°30' Rc = 3819.72'
Ls = 2.00' Lc = 632.78'
Θs = 1°30' Ts = 518.09'
p = 0.14' Es = 23.25'
k = 100.00' ST = 66.67'
Xc = 159.99' LT = 133.34'

PROP. CURVE DATA (LICK RUN ROAD)
P.I. Sta. 24+95.43
Δ = 39°25'52"
Dc = 8°
T = 256.66'
R = 716.20'
Lc = 492.89'
E = 44.60'

P.I. 32+04.76
Δ = 34°01'15"
Dc = 18°
T = 97.38'
R = 318.31'
Lc = 189.00'
E = 14.56'

MARY A. KRAMER
T.B.A. = 38.937 Ac.
P.R.O. = 6.278 Ac.
Residue Lt. = 117.368 Ac.
Residue Rt. = 33.502 Ac.
Total = 196.080 Ac.

MARY A. KRAMER

MARY A. KRAMER

PROP. CURVE DATA (ATHENS ROAD)
P.I. Sta. 137+12.24
Δ = 8°56'-15"
Dc = 4°
T = 111.95
R = 1432.39'
Lc = 223.44'
E = 4.37'

P.I. Sta. 139+41.03
Δ = 5°51'-36"
Dc = 2°30
T = 117.30'
R = 2291.83'
Lc = 234.40
E = 3.10'

MARY A. KRAMER
T.B.A. = 38.937 Ac.
P.R.O. = 6.278 Ac.
Residue Lt. = 117.368 Ac.
Residue Rt. = 33.502 Ac.
Total = 196.080 Ac.

END LIMITED ACCESS
STA. 145+00
ATHENS ROAD

Springfield Township - R.21 W. - T. 8 N. - Tract No. 3
T. 7 N. - R. 21 W. - Liberty Township - Tract No. 1
FRACTIONAL SECTION 30
FRACTIONAL SECTION 3

DATE	REVISIONS

R/W PLAN
STA. 1350 TO STA. 1365

SCALE 0 40 80 DATE 3-16-64

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
EKE	LP	LP	RWG			

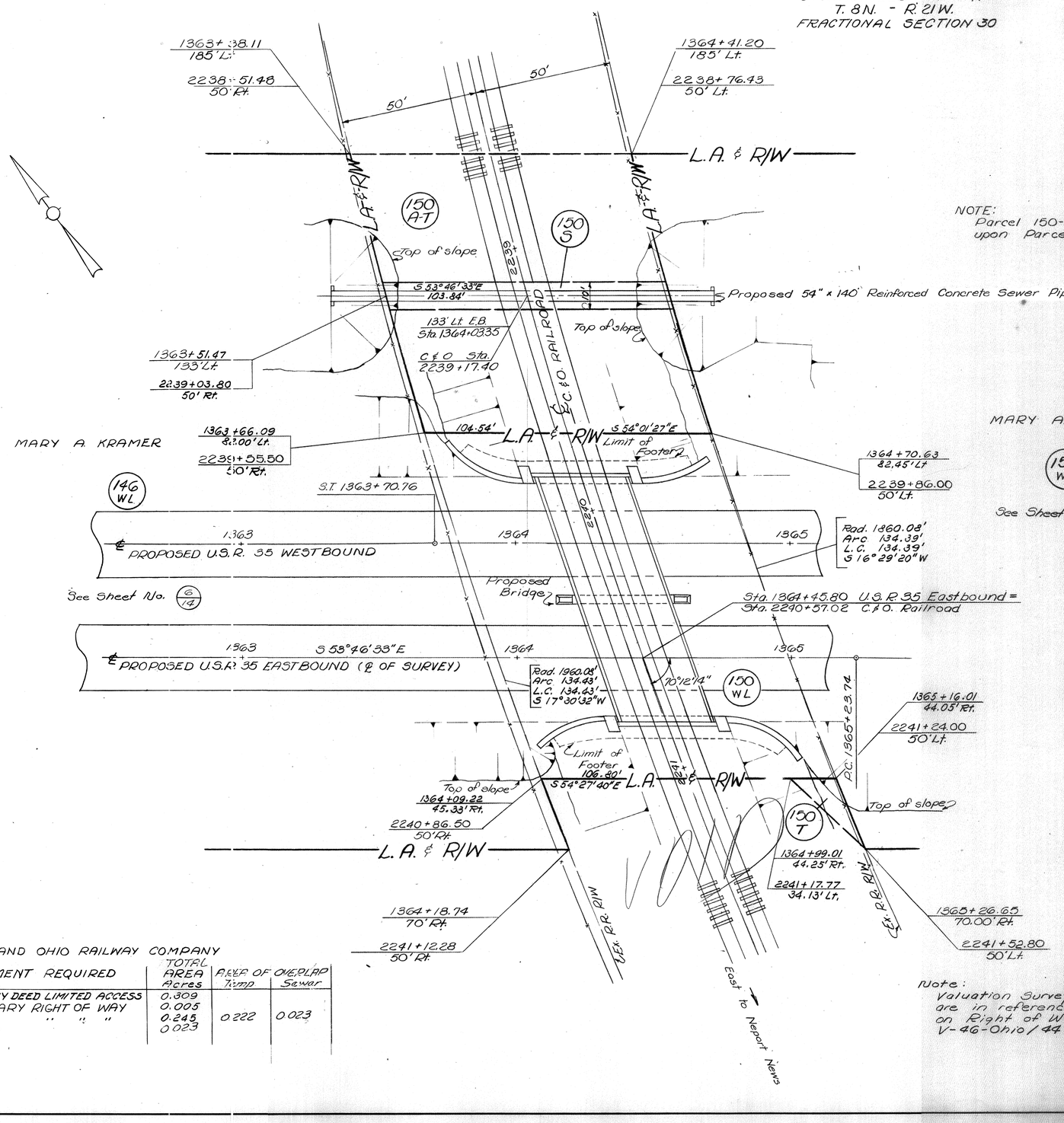
ROSS COUNTY
SPRINGFIELD TOWNSHIP
T. 8N. - R. 21W.
FRACTIONAL SECTION 30

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	F-674(12)	

180/187

ROSS COUNTY
ROS-35-25.05
LIMITED ACCESS

7/14



NOTE:
Parcel 150-S is superimposed upon Parcel 150 A-T.

RAILROAD CURVE DATA
Δ = 76°17' Lt.
D_c = 3°00'
R = 1910.08'
T = 1499.94'
L = 2542.76'

THE CHESAPEAKE AND OHIO RAILWAY COMPANY

PARCEL	EASEMENT REQUIRED	TOTAL AREA Acres	AREA OF OVERLAP Temp	AREA OF OVERLAP Sewer
150 WL	WARRANTY DEED LIMITED ACCESS	0.309		
150 T	TEMPORARY RIGHT OF WAY	0.005		
150 A-T	" " "	0.245	0.222	0.023
150 S	SEWER	0.023		

Note:
Valuation Survey Stations shown are in reference to those shown on Right of Way and Track Map V-46-Ohio/44 dated Dec. 31, 1927.

C & O RY. BRIDGE # 484

ELMER S. BARRETT ASSOCIATES
Consulting Engineers
245-249 S. Paint Street — Chillicothe, Ohio

SUPPLEMENTAL
R/W PLAN
THE CHESAPEAKE AND OHIO
RAILWAY COMPANY

SCALE 0 10 20 — DATE 3-16-64

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
RKE	RLE		RWG			

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	F-G74(12)	

181/187

8/14

ROSS COUNTY
ROS-35-25.05
LIMITED ACCESS

ROSS COUNTY
SPRINGFIELD TWP.—LIBERTY TWP.
T. 8 N. — R. 21 W. FRACTIONAL SECTION 30
T. 7 N. — R. 21 W. FRACTIONAL SECTION 3

EASTBOUND
PROP. CURVE DATA
P.I. Sta. 1374+12.45
Δ = 12° 23' 36"
Dc = 0° 42'
Rc = 8185.11'
T = 888.71'
Lc = 1770.48'
E = 48.10'

RAMP "C"
PROP. CURVE DATA
P.I. Sta. 65+19.65
Δ = 21° 40' 37"
Dc = 3°
Ls = 200'
θs = 3°
p = 0.87'
k = 99.99'
Xc = 199.95'
Yc = 3.49'
Rc = 1909.86'
Lc = 522.56'
Ts = 465.81'
Es = 35.57'
ST = 66.68'
LT = 133.35'

MARY A. KRAMER

1377+00
225' Lt.

428.37'
S 56° 09' 50" E

1374+00
210' Lt.

308.32'
S 49° 22' 49" E

1368+00
195' Lt.

614.89'
S 51° 08' 20" E

L.A. & R/W

Construction Limit

1365+23.74
185' Lt.

282.86'
S 54° 50' 04" E

Springfield Township T. 8 N. - R. 21 W.
Liberty Township T. 7 N. - R. 21 W.

FRACTIONAL SECTION 30
FRACTIONAL SECTION 3

Tract No. 3
Tract No. 1

151 WL

12" Pipe

TS. 60+53.84 Back
Sta. 1374+50 Westbound

SC. 62+53.84

RAMP "C"

36" Pipe

P.I. Sta. 65+19.65

MATCH LINE
See Sheet No. 9 & 14

24" Pipe

℄ PROPOSED U.S.R. 35 WEST BOUND

P.I. Sta. 1374+12.45 (EB)

℄ PROPOSED U.S.R. 35 EASTBOUND (℄ Survey)

27" Pipe

1365 S 53° 46' 33" E 1366

P.C. 1365+86.38

1367 1368 1369 1370 1371 1372 1373 1374 1375 1376 1377 1378 1379 1380

1368+07.55

S 85° 52' 29" E

271.13'
S 53° 46' 33" E

1365+26.65
70' Rt.

2241+52.80
50' Lt.

P.C. 1365+23.74

L.A. & R/W

S 49° 43' 04" E 793.80'

1368+00
65.38' Rt.

N 42° 16' 40" W
476.47'

1376+00
56' Rt.

6/14

See Sheet No. 6/14 MATCH LINE

MARY A. KRAMER

Fr. Cattle Shed
Fr. Barn
Fr. Corn Crib
Fr. Shed
1 Sty. Fr. Res.
Fr. Shed (Fr. Toilet)
Light Pole
Conc. Block Building
1 Sty. Brick Wash House
2 Sty. Brick Bldg.
2 Sty. Brick Res.
Gate
Ex. Drive
Remains
Ex. R/W
Ex. C. & O. R.R.
Ex. E.R. R/W
Ex. U.S.R. 35 E.B.
℄ Maple
12 CMP
12 MB.
Existing U.S.R. 35 E.B.
Ex. R/W
Ex. R.R. R/W
Ex. R.R. R/W (B. & O.)

2243
2244
2245
2246
2247

Note:
Asterisk (*) indicates that the call is from the Spiral Tangent

Ex. Curve Data
P.I. Sta. 155+09.10
Δ = 33° 41' 07"
Dc = 5° 00'
Ls = 300.00'
θs = 7° 30'
p = 3.27'
k = 149.91'
Rc = 1145.92'
Lc = 373.71'
Ts = 497.80'
Es = 54.77'

ATHENS ROAD
PROP. CURVE DATA
CURVE
P.I. Sta. 159+93.78
Δ = 30° 10' 02"
Dc = 5° 00'
Rc = 1145.92'
T = 308.84'
Lc = 603.34'
E = 40.89'

SPIRAL
P.I. Sta. 163+88.44 Back
Dc = 5°
θs = 7° 30'
Ls = 300'
Lt = 200.18'
ST = 100.16'
p = 3.27'
k = 149.91'
X = 299.49'
Y = 13.07'

MARY A. KRAMER
T.B.A. = 38.937 Ac.
P.R.O. = 6.278
Residue Lt. = 117.363
Residue Rt. = 33.502
Total = 196.080 Ac.

BEGIN LIMITED ACCESS
STA. 156+84.94
ATHENS ROAD

156+84.94
40' Lt.

Spiral = 294.73'
L.C. = 294.49'
N 60° 58' 04" W

S 63° 15' 09" E 206.41'

159+00
65' Lt.

159+88.81
26.63' Lt.

137.79'

383.76'
S 63° 26' 25" E

℄ ATHENS ROAD

245.96'

S 78° 44' 56" E 362.28'

1612+25.68

1612+88.28
80' Lt.

N 84° 07' 30" E 267.72'

Construction Limit

S 86° 07' 05" E

Spiral P.I. Sta. 163+88.44 Back
Sta. 163+88.10 Ahead

LN 86° 22' 57" E

163+53.17*
83.32' Rt.

12 C.M.P.

Sign

Ex. Guard Rail Posts

Highway Dates
Off-Route Signs

163+18.86*
135.68' Rt.

S 80° 37' 20" E
130.69'

162+00
147' Rt.

Approach right Ahead Sta. 162+00

214.85'
S 89° 26' 00" E

Highway Sign

S 63° 35' 56" E
724.16'

Construction Limit

MARY A. KRAMER
(Leased to Albert E. Cydrus)

160+17
192.92' Rt.

S 45° 35' 43" E 426.72'

Ex. R.R. R/W (B. & O.)

156+99.61
60.89' Rt.

P.I. Sta 155+09.10

I.P. (Pipe laying over)

152

DATE	REVISIONS

R/W PLAN
STA. 1365+00 TO STA. 1380+00
SCALE 0 50
DATE 3-16-64

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
RKE	LP	LP	RWG			

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	F-674(12)	

182
187

9
14

ROSS COUNTY
ROS-35-25.05
LIMITED ACCESS

ROSS COUNTY
LIBERTY TOWNSHIP
T. 7 N. R. 21 W.
FRACTIONAL SECTION 3

ATHENS ROAD

PROP. SPIRAL DATA
P.I. Sta. 163+88.44 Back
Dc = 5°00'
Qs = 7°30'
Ls = 300'
L.T. = 200.18'
S.T. = 100.16'
p = 3.27'
k = 149.91'
X = 299.49'
y = 13.07

PROP. CURVE DATA
P.I. Sta. 175+79.75
Δ = 37°08'42" Yc = 4.65'
Dc = 4°00' Rc = 1432.40'
Ls = 200' Lc = 728.63'
θs = 4° Ts = 581.66'
p = 1.16' Es = 79.92'
k = 99.98' S.T. = 66.70'
Xc = 199.90' L.T. = 133.37'

See Sheet No. 10/14

Tract No. 2 / Tract No. 1

Spiral P.I. Sta. 171+31.46 Back = Sta. 171+31.35 Ahead

S 89° 37' 03" E 172

SC 171+98.02

Construction Limits

151 WL

N 86° 22' 57" E 171

TS 169+98.02

MARY A. KRAMER

T.B.A. = 38.937 Ac.
P.R.O. = 6.278
Residue Lt. = 117.363
Residue Rt. = 33.502
Total = 196.080 Ac.

MARY A. KRAMER

Sta. 1382+72.43 U.S.R. 35 = Sta. 167+94.84 Athens Rd.

24" Pipe

16'

12" Pipe

8'

END PROJECT
1384+34.21 E.B.

1385+78.82
107.99' Lt.

I.P.

S 4°15'27" W
237.29'

See Sheet No. 8/14 MATCH LINE

1381 1382 1383 1384 1385 1386 1387 1388 1389 1390 1391 1392 1393 1394 1395

P.C. 81+71.38

155.52'

PROP. U.S.R. 35 WESTBOUND

Lease Line

151.07'

153 WL

P.I. Sta. 87+03.37
32' Lt. & E.B. 1387+03.37

1387+44.73
61.67' Rt.

PROP. U.S.R. 35 EASTBOUND (℄ SURVEY)

24" Pipe

167+71.9'
140.36' Rt.

1384+00
64.56' Rt.

Lease Line

91.98'

1384+66.91

TEMPORARY CONNECTION (℄ Survey)

1386+84.42

Sta. 1382+94.22

P.I. 1382+94.22

S 0°39'55" E

L.A. & R/W

MARY A. KRAMER
leased to
ALBERT E. CYDRUS

R=1869.86'
Arc=241.77'
L.C.=241.61'
S 70°41'29" E

1385+34.05
179.94' Rt.

Ex. R/W

S 85°21'35" E 682.69'

Conc. Slab for Septic Tank

Shingle Pump House

Metal Service Station

Conc. Block Fruit Stand

Car Shelter

Filler Caps for Gas Tanks

1 Sty. Metal Building

2 Pump Gas Islands

Conc. Slab Gravel & Crushed Stone Area

Ed's Roadside Market Signs

Light Pole

Sign Post

12" CMP

Posts

Sta. 1385+39.25

Gravel

Stop Sign

Stop Signs

Asphalt Curb

USR. 35 & 50 Signs

Ashland Oil Sign

Existing U.S.R. 35 & 50

Light Pole

Highway Signs

Ex. R/W

MARY A. KRAMER
Leased to
ALBERT E. CYDRUS

1386+62.55
290.58' Rt.

Gravel Area

2 Pump Gas Islands

Conc. Block Restaurant

1 Sty. Building with Pressed Siding

Conc. Base for Fuel Tank

1 Sty. Fr. Building

1 Pump Gas Island

5+0

4+0

Rt. 54.92'

1380+80
80' Rt.

165+66.75*
102.98' Lt.

165

N 86° 22' 57" E

164

163+53.17*
83.32' Rt.

S 63° 26' 25" E

163+18.86*
155.68' Rt.

L.A. & R/W 176.86

L.A.

Ex. U.S.R. 50

Ex. R/W

159 WD

Approx. Future Construction Limit

Construction Limit

8" Maple

12" Maple

Ex. R/W

1392+32.46
279.76' Lt.

CECIL H. RATCLIFF & MARJORIE L. BURT

Highway Sign

Motel Sign

1389+32.88

S 86° 24' 09" E 806.87'

Highway Sign

Motel Sign

36"

1234.53'

S 41°22'57" E

1389+06.21
46.70' Rt.

PROP. TEMPORARY APPROACH
35 TO 50

30"

17

34"
S 86° 24' 09" E
191.23'

Ex. R/W

S 3° 28' 27" E 536.32'

L.A. & R/W

FLORA H. IMMEL

155 WL

N 3° 35' 51" W
18.00'

R = 916.72'
Arc = 384.37'
L.C. = 375.00'
S 22° 38' 46" E

L.A.

1387+83.77
194.69' Rt.

8" Maple Highway Sign

4" Maple

P.T. 91+30.13

1387+71.04
181.96' Rt.

Ex. R/W

2 Maple

4" Maple Highway Sign

Highway Sign

Ex. Guard Rail

Ex. R/W

1393+29.37
376.21' Rt.

Construction Limit

Conc. Base

10" Elm

C.L. 1+37.73

Ex. 1+67 U.S.R. 35

8" Elm

Highway Sign

10" CMP

Ex. R.R. R/W

FLORA H. IMMEL

T.B.A. = 0.733 Ac.
Residue Lt. = 2.943
Residue Rt. = 135.039
P.R.O. = 0.079
Total = 138.794 Ac.

Note:
Asterisk (*) indicates that the call is from the Spiral Tangent.

TEMPORARY CONNECTION
PROR CURVE DATA
P.I. Sta. 87+03.37
Δ = 40°45'00" Rt.
Dc = 4°
R = 1432.40'
Lc = 1018.75'
T = 531.99'
E = 95.60

VOID

DATE	REVISIONS

ELMER S. BARRETT ASSOCIATES
Consulting Engineers
245-249 S. Paint Street Chillicothe, Ohio

R/W PLAN
STA. 1380 TO STA. 1395

SCALE 20 50 DATE 3-16-64

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
RKE	LP	L.P.	RWG			

ROSS COUNTY
LIBERTY TOWNSHIP
T. 7 N. — R. 21 W.
FRACTIONAL SECTION 3

NOTE:
Asterisk [*] indicates the call is from Spiral Tangents.

ATHENS ROAD
PROP. CURVE DATA
P.I. Sta. 175+79.75
Δ = 37°08'42"
Dc = 4°00'
Ls = 200'
θs = 2°00'
p = 1.16'
k = 99.98'
Xc = 199.90'
Yc = 4.65'
Rc = 1432.40'
Lc = 728.63'
Ts = 381.66'
Es = 79.92'
S.T. = 66.70'
L.T. = 133.37'

PROP. CURVE DATA RAMP "C"
CURVE DATA
P.I. Sta. 65+19.65
Δ = 21°40.37"
Dc = 3°00'
Ls = 200'
θs = 3°00'
p = 0.87'
k = 99.99'
Xc = 199.95'
Yc = 3.49'
Rc = 1909.86'
Lc = 522.56'
Ts = 465.81'
Es = 35.57'
S.T. = 66.68'
L.T. = 133.35'

SPIRAL DATA
P.I. Sta. 74+27.32 (Back)
Ls = 200'
θs = 2°00'
L.T. = 133.34'
S.T. = 66.67'
p = 0.58'
k = 100.00'
Xc = 199.98'
Yc = 2.33'

CURVE DATA
P.I. Sta. 77+10.76
Δ = 8°39'37"
Dc = 2°00'
Lc = 432.74'
R = 2864.79'
T = 216.78'
E = 8.19'

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	F-674(12)	

183/187

10/14

ROSS COUNTY
ROS-35-25.05
LIMITED ACCESS

Prop. Drive
POINT OF ACCESS
180+16.62* / 65.89' Lt.
65.92'
179+00 / 75' Lt.
S 55°31'03" E 123.08'
180+14.88* / 24" Pipe
CECIL H. RATCLIFF & MARJORIE L. BURT
Spiral P.I. Sta. 179+93.42 Back = Sta. 179+93.35 Ahead
156 WD
See Sheet No. 11/14
180
67.94'
151 WL
179
P.I. Sta. 77+10.76 Ramp "C"
CS-179+26.72 Athens Rd. = P.T. 79+26.72 Ramp "C"
180+13.09* / 67.92' Rt.
MARY A. KRAMER
L.A. & R/W
END LIMITED ACCESS STA. 180+14.88 ATHENS ROAD
299.55' S 60°07'03" E
177+00 / 50' Rt.
87.11' S 77°55'49" E
176+10 / 60' Rt.
1388+99.67 / 568.17' Lt.
S 35°02'19" W 365.42' to corner
S 5°39'50" W
Future Construction Limit
L.A. & R/W
293.99'
S 1°18'41" W 28.57'
1392+00 / 375.40' Lt.
1392+21 / 356.02' Lt.
1391+00 / 353' Lt.
159 WD
1391+50 / 325.96' Lt.
S 86°24'09" E 135.96'
Ex. R/W
70.77' S 86°24'09" E
R/W
S 12°27'05" W 151.35'
90.22'
Construction Limit
S 86°24'09" E 145.82'
8" Maple
Ex. R/W
1393+17.11 / 452.30' Lt.
Ex. Field Drive to remain in place
12" CMP
Ex. R/W
Highway Sign
Parcel "B" Deed 123
1393+34.17 / 381.56' Lt.
CECIL H. RATCLIFF & MARJORIE L. BURT
1392+32.46 / 279.78' Lt.
R/W Maple
S 86°24'09" E 806.27'
Motel Sign
Ex. R/W
Ex. U.S.R. 50
LA
S 41°22'57" E
FLORA H. IMMEL

MARY A. KRAMER
T. B. A. = 38.937 Ac.
P.R.O. = 6.278 Ac.
Residue Lt. = 117.363 Ac.
Residue Rt. = 33.502 Ac.
Total = 196.080 Ac.

MARY A. KRAMER
Tract No. 2
Tract No. 1
175+00 / 120' Lt.
S 63°34'02" E 428.17'
P.I. Sta. 175+79.75 Athens Road
Sc. 74+93.98
L.A. & R/W
S 70°39'59" E 703.35'
Construction Limit
Ts. 72+93.98
℄ ATHENS ROAD [℄ Survey]
Construction Limit
168+80.28 / 332.40' Lt.
1381+00 / 313' Lt.
S 56°09'50" E 422.37'
151 WL
CS. 67+76.40
St. 69+76.40
℄ PROP. U.S.R. 35 WESTBOUND
S 71°07'38" E
℄ RAMP "C"
Spiral P.I. Sta. 171+31.46 Back = Sta. 171+31.39 Ahead
S 69°37'03" E 112
Sc. 171+92.09
VOID
151 WL
8/14
See Sheet No. MATCH LINE
N 86°22'57" E 110
Ts. 169+99.09
Sta. 1382+72.43 = Sta. 167+44.84 Ahead
Ahead
P.I. 1382+94.22
1385+79.82' / 107.99' Lt.
P.I. 1384+45.38
℄ PROP. U.S.R. 35 WESTBOUND
℄ PROP. U.S.R. 35 EASTBOUND (℄ SURVEY)
END PROJECT 1384+34.21 E.B.
155.52'
Lease Line
S 4°15'17" W 237.29'
151.04'
S 85°21'35" E 682.60'
98.98'
1384+66.91
1386+84.42
86.25'
151 WL
See Sheet No. 9/14
1381 1382 1383 1384 1385 1386 1387 1388 1389 1390 1391 1392

DATE	REVISIONS

ELMER S. BARRETT ASSOCIATES
Consulting Engineers
245-249 S. Paint Street — Chillicothe, Ohio

R/W PLAN
ATHENS ROAD STA. 170 TO STA. 180
&
RAMP "C" STA. 66 TO STA. 79+26.72

SCALE 0 20 50 DATE 3-16-64

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
R.K.E.	L.D.	L.P.	R.W.G.			

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	F-GT4(12)	

184 / 187

11 / 14

ROSS COUNTY
ROS-35-25.05
LIMITED ACCESS

ROSS COUNTY
LIBERTY TOWNSHIP
T. 7 N. — R. 21 W.
SECTION 2 & FRACTIONAL SECTION 3

ATHENS ROAD

PROP. CURVE DATA
P.I. Sta. 175+79.72
Δ = 37°08'42" Yc = 4.65'
Dc = 4°00' Rc = 1432.40'
Ls = 200' Lc = 728.63'
θs = 4°00' Ts = 383.66'
p = 1.16' Es = 79.92'
k = 99.98' St = 360.70'
Xc = 199.90' Lt = 733.37'

PROP. CURVE DATA
P.I. Sta. 186+77.65
Δ = 29°18'18" Yc = 4.65'
Dc = 4°00' Rc = 1432.40'
Ls = 200' Lc = 532.63'
θs = 4°00' Ts = 274.80'
p = 1.16' Es = 49.35'
k = 99.98' St = 266.70'
Xc = 199.90' Lt = 533.37'

NOTE: Asterisk [*] indicates the call is from Spiral Tangents.

Prop. Drive (POINT OF ACCESS)

FRACTIONAL SECTION 3
SECTION 2

S 4°07'31" W

CECIL H. RATCLIFF
&
MARJORIE L. BURT
T.B.A. = 2.045 Ac.
P.R.O. = 0.555 Ac.
Residue Lt. = 37.400 Ac.
Residue Rt. = 2.938 Ac.
Total = 40.00 Ac.

ROBERT D. STULTZ
& RUTH M. STULTZ
T.B.A. = 0.079 Ac.
P.R.O. = 0.082 Ac.
Residue Lt. = 0.569 Ac.
Total = 0.73 Ac.

WILLIAM S. KERN
&
BESSIE KERN
T.B.A. = 0.038 Ac.
P.R.O. = 0.050 Ac.
Residue Lt. = 13.172 Ac.
Total = 13.26 Ac.

CECIL H. RATCLIFF
&
MARJORIE L. BURT
T.B.A. = 0.127 Ac.
P.R.O. = 0.149 Ac.
Residue Lt. = 0 Ac.
Residue Rt. = 39.724 Ac.
Total = 40.00 Ac.

VOID

PARCELS 157 and 158

DATE	REVISIONS

ELMER S. BARRETT ASSOCIATES
Consulting Engineers
245-249 S. Paint Street — Chillicothe, Ohio

R/W PLAN
ATHENS ROAD
STA. 180 TO STA. 196

SCALE 0 20 50 — DATE 3-16-64

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
LKE	LP	LP	RWG		-	

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	F-674(12)	

185/187

12/19

ROSS COUNTY
ROS-35-25.05
LIMITED ACCESS

ROSS COUNTY
SPRINGFIELD TOWNSHIP
T. 8 N. — R. 21 W.
FRACTIONAL SECTION 30

PROP. LICK RUN ROAD CURVE DATA

P.I. Sta. 18+98.93	P.I. Sta. 24+95.43
Δ = 80°31'	Δ = 39°25'52"
Dc = 18°00'	Dc = 8°00'
R = 318.31'	R = 716.20'
T = 269.55'	T = 256.66'
Lc = 447.31'	Lc = 492.89'
E = 98.80'	E = 44.60

IVAN W. SHARP & GRACE L. SHARP

JOHN S. COLE & EDNA COLE
T.B.A. = 0.101 Ac.
P.R.O. = 0.122 Ac.
Residue Rt. = 2.279 Ac.
Total = 2.502 Ac.

ESTHER GRAVES WETZEL
T. B. A. = 0.793 Ac.
P.R.O. = 0.194 Ac.
Residue Lt. = 30.539 Ac.
Total = 31.526 Ac.

MARY A. KRAMER
T.B.A. = 38.937 Ac.
P.R.O. = 6.278 Ac.
Residue Lt. = 117.368 Ac.
Residue Rt. = 33.502 Ac.
Total = 196.080 Ac.

MARY A. KRAMER

VOID

See Sheet No. 6A

DATE	REVISIONS

ELMER S. BARRETT ASSOCIATES
Consulting Engineers
245-249 S. Paint Street — Chillicothe, Ohio

R/W PLAN
PROP. LICK RUN ROAD
STA. 14+00 TO STA. 30+00

SCALE 0 20 50 — DATE 3-16-64

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
LKE	LP	LP	RWG			

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	F-674(12)	

(186/187)

ROSS COUNTY
ROS-35-25.05
LIMITED ACCESS

(13/14)

ROSS COUNTY
SCIOTO TOWNSHIP
V.M.S. 480

101+49
480' Lt.

1339+00
149' Lt.

103+00
480' Lt.

N 48°42'57"E 151.00'

S 25°56'43"E
104.12'

1340+00
120' Lt.

101+20
380' Lt.

Tree Line

N 73°59'04"E 1124.48'

Channel Easement Line Z

CARMI R. & CARMI V. JONES
T. B. A. = 20.231 Ac.
Residue Lt. = 136.065 Ac.
Residue Rt. = 58.095 Ac.
Deed = 250.00 Ac.

(193/X)

See Sheet No. (14/14)

1339
1340
1341
1342
1343
1344
1345
1346

Proposed Bridge

98+60

Ex. L.A. & R/W

98+66

1393+80
112' Rt.

Ex. L.A. & R/W

S 34°17'03"E 577.33'

101+20

99
101
102
103
104
℄
105
106
107
108
℄ Scioto River Channel Excavation
109
110
111
112
113
114

N 48°42'57"E

N 48°42'57"E 703.10'

113+16.90

30°

(14/14)

See Sheet No.

Sta. 100+00 ℄ Channel Excavation =
Sta. 1343+80 ℄ Prop. U.S.R. 35

Slope 2:1

Tree Line

N 51°31'59"W 255.31'

Edge of Water

Tree Line

Excavate to
Elev. 584.5

S 68°45'11"W

432.38'

S 38°47'22"W ℄ 203.04'

S 50°37'30"W 300.17'

Edge of Water

℄ Section

Prop. U.S.R. 35

98+88
239.17' Lt.

1396+18.17
112' Rt.

Ex. Kilgore Bridge

S 41°17'03"E

1345+77.43
120' Lt.

101+20
197.45' Rt.

103+75
210' Rt.

109+00
365' Rt.

110+00
330' Rt.

See Sheet No. (5/14)

DATE	REVISIONS

ELMER S. BARRETT ASSOCIATES
Consulting Engineers
245-249 S. Paint Street Chillicothe, Ohio

R/W PLAN
SCIOTO RIVER CHANNEL EXCAVATION
STA. 99 TO STA. 114

SCALE 0 20 40 DATE 3-16-64

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
RKE	L.P.	L.P.	RWG			

FED. RD. DIVISION	STATE	PROJECT		
2	OHIO	F-674(12)		

187/187

19/19

ROSS COUNTY
ROS-35-25.05
LIMITED ACCESS

CARMI R. & CARMI V. JONES
T.B.A. = 20.231 Ac.
Residue Lt. = 136.065 Ac.
Residue Rt. = 58.095 Ac.
Deed = 250.00 Ac.

Sta. 93+64.52 ℄ = ℄ B. & O. Main Line

N48°42'57"E

98+88
1343+80
112' Rt.

98+60

98+88
238.17' Rt.

1343

1344

1345

1346

Ex. L.A. & R/W

Prop. Bridge

Ex. Kilgore Bridge

Prop. U.S.R. 35

Median

Tree Line

CARMI R. & CARMI V. JONES

Channel Easement Line
N0°28'54"E 350.49'

BEGIN CHANNEL EXCAVATION
STA. 96+00

Toe of Slope

Excavate to Elev. 584.5

144 X

95+60
336' Rt.

Tree Line

S82°06'20"W
342.28'

1346+18.17
112' Rt.

98+88
238.17' Rt.

S41°17'03"E 238.17'

See Sheet No. 13/14

ROSS COUNTY
SCIOTO TOWNSHIP
V.M.S. 480

Wooded Area

℄ Scioto River Channel Excavation

Sta. 100+00 ℄ Channel Excavation =
Sta. 1343+80 ℄ Median Prop. U.S.R. 35

577.45'

S41°17'03"E

Excavate to Elev. 584.5

CARMI R. & CARMI V. JONES

145 X

S51°31'59"W 255.31'

Tree Line

Edge of Water

1345+77.85
120' Lt.

1014+20
197.45 Rt.

1031+75
210' Rt.

S68°45'11"W
432.38'

℄ MATCH LINE

N48°42'57"E

℄ Scioto River Channel Excavation

1124.28'

Channel Easement Line

113+16.90

CARMI R. & CARMI V. JONES
T.B.A. = 20.231 Ac.
Residue Lt. = 136.065 Ac.
Residue Rt. = 58.095 Ac.
Deed = 250.00 Ac.

N48°42'57"E 703.10'

Channel Easement Line

Tree Line

Tree Line

MATCH LINE

2:1 Slope

Toe of Slope

END CHANNEL EXCAVATION
Sta. 120+00

S41°17'05"E 195'

120+20

120+20
145' Rt.

145 X

S58°56'00"W 294.28'

Wooded Area

Excavate to Elev. 584.5

S68°45'11"W 432.38'

S38°47'22"W 205.04'

Edge of Water

108+00
365' Rt.

S50°37'30"W ℄ 300.17'

110+00
330' Rt.

S30°04'43"W 455.79'

119+00
340' Rt.

117+30
195' Rt.

ROSS COUNTY
SCIOTO TOWNSHIP
V.M.S. 480

See Sheet No. 5/14

DATE	REVISIONS

ELMER S. BARRETT ASSOCIATES
Consulting Engineers
245-249 S. Paint Street Chillicothe, Ohio

R/W PLAN
SCIOTO RIVER CHANNEL EXCAVATION
STA. 94 TO STA. 120

SCALE 0 20 40 DATE

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
RKE	LP	L.P.	RWG			

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	F-674(12)	

174/187

1/14

F-674(12)

ROSS COUNTY
ROS-35-25.05

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
ROS-35-25.05
ROSS COUNTY
SCIOTO, SPRINGFIELD & LIBERTY TOWNSHIPS
GRADE SEPARATION WITH THE CHESAPEAKE AND OHIO RAILWAY

LIMITED ACCESS

This improvement is especially designed for through traffic and has been declared a limited access highway or freeway on U.S.R. 35 by action of the Director of Highways in accordance with the provisions of Section 5511.02 of the revised Code of Ohio.

1963 SPECIFICATIONS

Plans Prepared by ELMER S. BARRETT ASSOCIATES

Elmer S. Barrett

249 S. Paint St. Chillicothe, 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 necessary for this improvement will be provided by the State of Ohio.

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

Approved _____
Date _____ Division Deputy Director

Approved _____
Date _____ Engineer of Bridges

Approved _____
Date _____ Engineer of Location & Design

Approved _____
Date _____ Deputy Director of Design & Construction

Approved _____
Date _____ Deputy Director of Right of Way

Approved _____
Date _____ Deputy Director of Planning & Programming

Approved _____
Date _____ First Assistant Director

Approved _____
Date _____ Director of Highways

CONVENTIONAL SIGNS

State Line
County Line
Township Line
Proposed Limited Access & Right of Way ——LA & R/W——
Proposed Right of Way ——R/W——, Existing Right of Way — —R/W— —, Limited Access ——L.A.——
Center Line
Corporation Line
Fence Line
Guard Rail (existing)
Guard Rail (proposed)
Railroad or
Power Poles
Telephone Poles
Trees & Stumps (existing)
Trees & Stumps (to be removed)

INDEX OF SHEETS

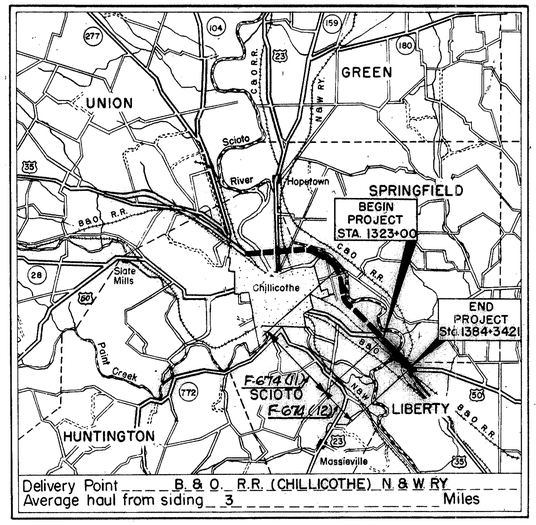
LINE DATA

BEGIN PROJECT F-674 (12) STA. 1323+00 E.B.
END PROJECT F-674 (12) STA 1384+34 21 E.B.
NET LENGTH OF PROJECT F-674 (12) ____ 6,134.21 Lin. Ft or 1.161 Miles

ADD FOR APPROACHES

U.S.R 35	STA. 1320+50	To	STA 1323+00	250.00
LICK RUN ROAD	STA. 15+00	To	STA 33+43.66	1,843.66
ATHENS ROAD	STA. 136+00.29	To	STA 147+97.62	1,197.33
	STA. 157+00.00	To	STA 191+35.48	3,435.48
TEMPORARY CONNECTION	STA. 84+58	To	STA 94+50	992.00

TOTAL LENGTH OF APPROACHES ____ 7,718.47 Lin. Ft. or 1.461 Miles
TOTAL LENGTH OF WORK ____ 6,134.21 + 7,718.47 ____ 13,852.68 Lin. Ft. or 2.623 Miles



Delivery Point ____ B & O R.R. (CHILLICOTHE) N & W RY ____
Average haul from siding 3 Miles

LOCATION MAP

SCALE OF MILES

0 1 2 4 6 8

Portion to be improved
Portion to be improved under Separate Contract
Federal Roads
State Roads
Other Roads

SCALE

Plan 0 25 50
Profile: Horizontal 0 25 50
Profile: Vertical 0 5 10
Cross Sections 0 5 10

File No.	ROSS COUNTY	ROS - 35 - 25.05
	Date of Letting	19
	Contract No.	

Supplemental Prints of Standard Construction Drawings

B-T-70-71	11-15-60			I-8 C.B. No. 6	2-1-63	I-14 G	1-22-52	L-3	4-1-50	AR-1-57	4-2-62
B-T-71R	3-2-53					I-15 No.1	11-15-60	L-3A	4-1-50	AS-1-54	7-5-62
DR-1	1-3-55			I-8 C.B. No.8	2-1-63	I-15 No.5B	2-1-63	L.J. No.1	7-1-55		
		HW-E	2-1-63	I-81 No. 2-A	2-1-63	I-15 No.2-A	8-17-60	RI-1	7-15-58	TSB-1-62	1-15-63
G-7.07	4-1-64	I-1	11-15-60			I-21-23	3-10-64	T-35	1-2-56	FAC I-1	2-25-64
		I-8 No.2-2A&B	2-1-63	I-12	2-1-63	I-15-No.6	2-1-63	T.J.	9-12-60	FAC I-2	2-25-64
		I-8 C.B. No.3	2-1-63			I-15-No.2	11-15-60				

Supplemental Specifications	
S-307	8-23-60
S-101	7-12-62
L-120	1-2-62
I-128	7-31-59
M-206.14	7-15-49
I-127	1-15-62
CE-101.04	5-22-56
I-129R	4-5-61
M-107.18R	4-3-61
M-109.28R	8-12-59

DEPARTMENT OF COMMERCE
BUREAU OF PUBLIC ROADS

APPROVED:

DIVISION ENGINEER DATE

LOCATION PLAN

ROS-35-25.05

ROSS COUNTY, OHIO

SCIOTO, SPRINGFIELD and LIBERTY TWP'S.

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	F-674[12]	

175/187

2/14

ROSS COUNTY
ROS-35-25.05
LIMITED ACCESS

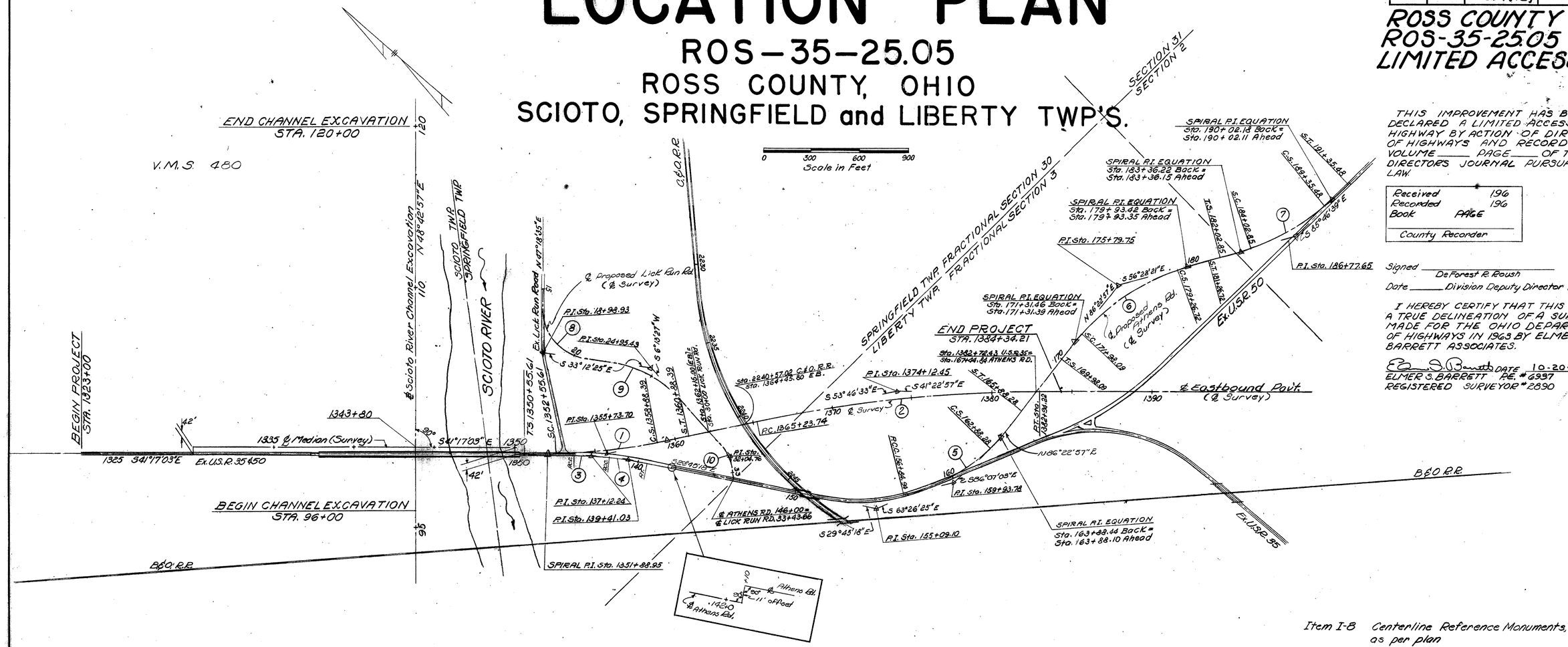
THIS IMPROVEMENT HAS BEEN DECLARED A LIMITED ACCESS HIGHWAY BY ACTION OF DIRECTOR OF HIGHWAYS AND RECORDED IN VOLUME ____ PAGE ____ OF THE DIRECTORS JOURNAL PURSUANT TO LAW.

Received	196
Recorded	196
Book PAGE	
County Recorder	

Signed _____
De Forest R. Roush
Date _____ Division Deputy Director.

I HEREBY CERTIFY THAT THIS PLAT IS A TRUE DELINEATION OF A SURVEY MADE FOR THE OHIO DEPARTMENT OF HIGHWAYS IN 1963 BY ELMER S. BARRETT ASSOCIATES.

S. Barrett DATE 10-20-64
ELMER S. BARRETT P.E. # 6937
REGISTERED SURVEYOR # 2890



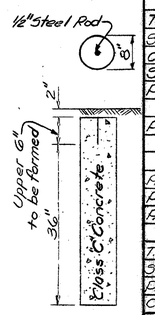
Item I-8 Centerline Reference Monuments, as per plan 66 Each

PROPOSED CURVE DATA

CURVE No.	1	2	3	4	5	6	7	8	9	10
P.I. STATION	1355+73.70	1374+12.45	137+12.24	139+41.03	159+93.78	175+79.75	186+77.65	18+93.93	24+95.43	32+04.76
Δ	12°29'30"	12° 23'36"	8°56'15"	5°51'36"	30°10'02"	37°08'42"	29°18'18"	80°31'00"	39°25'52"	34°01'15"
Dc	1°30'	0°42'	4°00'	2°30'	5°00'	4°00'	4°00'	18°00'	8°00'	18°00'
Ts OR T	518.09'	888.71'	111.95'	117.30'	308.84'	581.66'	474.80'	269.55'	256.66'	97.38'
Rc	3819.72'	8185.11'	1432.39'	2291.83'	1145.92'	1432.40'	1432.40'	318.31'	716.20'	318.31'
Lc	632.78'	1770.48'	223.44'	234.40'	603.34'	728.63'	532.63'	447.31'	492.89'	189.00'
Es OR E	23.25'	48.10'	4.37'	3.00'	40.89'	79.92'	49.35'	98.80'	44.60'	14.56'
Δc	9°29'30"									
θc	1°30'				7°30'	4°00'	4°00'			
p	0.44'									
k	100.00'									
Ls	200.00'				300.00'	200.00'	200.00'			
Xc	199.99'				299.49'	199.90'	199.90'			
Yc	1.75'				13.07'	4.65'	4.65'			
L.T.	133.34'									
S.T.	66.67'									

DETAIL OF MONUMENT ASSEMBLY

Monuments shall be constructed of Class "C" Concrete cast-in-place in a circular hole eight inches (8") in diameter and forty-four inches (44") in depth. The top of concrete shall be finished at a depth of two inches (2") below ground level and the upper six inch (6") portion of the concrete shall be formed. One-half inch (½") steel rods, six inches (6") long shall be embedded in the wet concrete, as directed by the engineer to mark centerline and station.



MONUMENTS TO BE PLACED AFTER CONSTRUCTION

Station	Dist. Lt.	Dist. Rt.	Station	Dist. Lt.	Dist. Rt.
U.S.R. 35			S.T. 165+88.28	20'	20'
T.S. 1350+55.61	42'	26'	T.S. 169+98.09	20'	20'
S.C. 1352+55.61	20'	35'	S.C. 171+98.09	20'	20'
C.S. 1358+88.39	20'	24'	C.S. 179+26.72	18'	18'
S.T. 1360+88.39	69'	24'	S.T. 181+26.72	18'	18'
P.C. 1365+23.74	150'	40'	T.S. 182+02.85	18'	18'
1374+00	20'	24'	S.C. 184+02.85	18'	18'
P.T. 1382+94.22	20'	24'	C.S. 189+35.48	18'	18'
1388+00	20'	20'	S.T. 191+35.84	16'	16'
Athens Road			195+00	20'	20'
P.C.C. 136+00.29	44'	11'	Lick Run Road		
P.C.C. 138+23.73	68'	15'	15+00	20'	20'
P.T. 140+58.13	23'	11'	P.C. 16+29.38	40'	90'
148+00	20'	20'	P.T. 20+76.69	18'	18'
T.S. 150+11.30	20' Rt	38' Rt	P.C. 22+38.77	18'	18'
S.C. 153+11.30	20'	20'	P.T. 27+31.66	18'	18'
P.C.C. 156+84.94	20'	20'	P.C. 31+07.38	18'	18'
C.S. 162+88.28	20'	20'	P.T. 32+96.38	10' Lt.	80' Lt.

Date	REVISIONS

ELMER S. BARRETT ASSOCIATES
Consulting Engineers
245-249 S. Paint Street Chillicothe, Ohio

LOCATION PLAN

SCALE 0 100 200 300 DATE 3-16-64

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
NR	NR	NR	ENG			

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	F-G74(12)	

214
225

3
14

ROSS COUNTY
ROS-35-25.05
LIMITED ACCESS

PROPERTY AND SCHEMATIC PLAN

ROS-35-25.05
ROSS COUNTY, OHIO
SCIOTO, SPRINGFIELD, & LIBERTY TWPS.

END CHANNEL EXCAVATION STA. 120+00

C.H.& D. & C.&E.R.R. Over Channel Excavation

SCIOTO RIVER

V.M.S. 480 SCIOTO TWP. SPRINGFIELD TWP. 2 FRACT. SEC. 30

CARMI R. & CAEM V. JONES

SHRADER SUBDIVISION

IVAN W. SHARP & GRACE L. SHARP

DOUGLAS EDDY

ESTHER GRAVES WETZEL

HAROLD RESHAMWALA

2 CHILLICOTHE Telephone Co.

Entrance Drive

Field Drive

Connection to Ex. Lick Run

C.H.& D. & C.&E.R.R.

C.& O. R.R. Underpass

MARY A. KRAMER

Barn

Tract No. 4 — FRACTIONAL SECTION 30 — Tract No. 1 — Tract No. 2

FRACTIONAL SECTION 3

SECTION 2 FRACTIONAL SECTION 3

SPRINGFIELD TWP. T-6-N R-21-W — LIBERTY TWP. T-7-N R-21-W

PC 16+29.38

PT 20+28.38

PC 1365+83.74

PT 1382+94.22

ST 1365+85.29

ST 1365+85.29

ST 1350+55.61

ST 1352+55.61

C.S. 1362+88.88

C.S. 1356+84.94

C.S. 1379+60.72

ST 1381+86.72

C.S. 1389+35.48

ST 1391+35.48

T.S. 1382+02.85

S.C. 1384+02.85

T.S. 1369+98.09

S.C. 1371+98.09

END PROJECT STA 1384+24.21

Proposed Drive Point of Access

Parcel "A"

Parcel "B"

Parcel "C"

Parcel "D"

115' ℄ Athens Road

ROBERT D. STULTZ & RUTH M. STULTZ

WILLIAM S. KERN & BESSIE KERN

MARJORIE L. BURT

CECIL H. RATCLIFF

CHILLICOTHE Telephone Co.

C & SOE 5 KW Dist. Line

Leased to ALBERT E. CYDRUS

Service Station & Restaurant

FLORA H. IMMEL

Temporary Connection

Temp. Approach 35+50

Form Buildings

2 Sty. Brick Res.

2 Sty. Fr. Res.

Residence

Barn

Telephone line

Ex. L.A.

Ex. R/W

L.A.

R/W

B.& O. R.R.

C & O. R.R.

Ex. U.S.R. 35

P.A. D. 22

BEGIN CHANNEL EXCAVATION STA. 98+00

MATCH LINE

BEGIN PROJECT STA. 1323+00

VIRGINIA MILITARY SURVEY 480

CARMI R. & CAEM V. JONES

Ex. L.A. & R/W

1330

1340

LEGEND

LIMITED ACCESS LINE	L.A
RIGHT OF WAY	R/W
PROPERTY LINE	℄
SLOPE EASEMENT LINE	S.L.
EXISTING RIGHT OF WAY	Ex R/W

Area to be acquired for LA/RW [Warranty Deed Limited Access]	
Area acquired for LA/RW ROS-35-22.82	
Area to be acquired for R/W [Easement]	
Area to be acquired for R/W [Warranty Deed]	
Existing Right-of-Way	
Channel Easement	
Work Agreement	
Sewer Easement	
Temporary Right-of-Way	

DATE	REVISIONS

ELMER S. BARRETT ASSOCIATES
Consulting Engineers
245-249 S. Paint Street Chillicothe, Ohio

PROPERTY AND SCHEMATIC R/W PLAN

SCALE 0 50 100 200 300 DATE 3-16-64

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
N.R	N.R	N.R	R.W.G			

SUMMARY OF ADDITIONAL RIGHT OF WAY REQUIRED

U.S.R. 35 SEC. ROSS COUNTY, OHIO

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	F-674(12)	

215/225

ROSS COUNTY
ROS-35-25.05
LIMITED ACCESS

4/14

PARCEL NUMBER	OWNER	DEED RECORD BOOK	DEED RECORD PAGE	DEED AREA	TO BE ACQUIRED LAND	TO BE ACQUIRED BLDGS	RESIDUE LEFT	RESIDUE RIGHT	SHEET NUMBER	REMARKS
144X	CARMI R. & CARMI V. JONES	262	166	250.00 Ac.	1.005 Ac.		126.005 Ac.	58.095 Ac.	13	[See Ros-35-22.82 -----Parcel 145 LA = 20.886 Ac., P.R.O. = 14.680 Ac. Parcel 145 = 0.093 Ac. Residue Lt. = 155.291 Ac. &
145X	" " " " "				30.29 Ac.				13-14	Residue Rt. = 59.100 Ac.] Parcels 144 X & 145X are Channel Easements.
145					2.79 Ac.					
146WL	MARY A. KRAMER	325	398	196.080 Ac.	7.297 Ac		———	*	5-6	P.R.O. = 4.206 Ac. Deed Area includes Tract No. 1 (47.15 Ac.) and Tract No. 2 (37.68 Ac.) in Liberty Twp.
146	" " "				2.738 Ac.				12	and aslo Tract No. 3 (56.715 Ac.) and Tract No. 4 (54.535 Ac.) in Springfield Twp. See Vol. 267, Pg. 96
146 T	" " "				0.53 Ac.				12	Construct Field Dr. Lt. of Prop. Lick Run Rd. Sta. 23+75 to Sta. 28+50.
147	DOUGLAS COOK	342	682	1.18 Ac	0.072 Ac		0	1.039 Ac.	12	P.R.O. = 0.069 Ac.
147A	HAROLD FLESHMAN	339	618	1.27 Ac	0.089 Ac.		0	1.188 Ac.	12	P.R.O. = 0.053
148	ESTHER GRAVES WETZEL	314	58	174.236 Ac	0.793 Ac.		30.539 Ac.	0	12	P.R.O. = 0.194 Ac. Deed Area includes only Tract No. 1
148 T	" " "				0.03 Ac				12	Construct Residence Dr. Lt. of Prop. Lick Run Rd. Sta. 20+85 to Sta. 21+60.
149	MARY A. KRAMER	325	398	196.080 Ac.	1.337 Ac.		———	*	6	P.R.O. = 0.358 Ac. [Tract No. 3 (Springfield Twp.) T.B.A. = 1.002 Ac., P.R.O. = 0.102 Ac. —— Tract No. 1 (Liberty
149 T	" " "				0.01 Ac				6	Twp. Section 3) T.B.A. 0.335 Ac., P.R.O. 0.256 Ac.] Parcel 149 WA - Construct Res. Dr. Rt. Ex. Athens Rd. Sta. 139+90
										to Sta. 147+75
150 L.A.	CHESAPEAKE AND OHIO RAILWAY COMPANY	203	252	2.83 Ac.	0.309 Ac.				7	
150 T	" " " " "				0.06 Ac.				7	Temp. Right-of Way Area = 0.062 Ac.
150 AT	" " " " "				0.24 Ac				7	Temp. Right-of-Way Area = 0.245 Ac.
150 S	" " " " "								7	Sewer Easement
151 WL	MARY A. KRAMER	325	398	196.080 Ac.	27.726 Ac.		———	*	8-9-10	P.R.O. = 1.639 Ac. [Tract No. 1 (Liberty Twp. Section 3) T.B.A. = 15.321 Ac., P.R.O. = 0.687 Ac. —— Tract No. 2 (Liberty Twp. Section 3)
										T.B.A. = 2.799 Ac., P.R.O. = 0.952 Ac. —— Tract No. 3 (Springfield Twp. Section 30) TBA = 2.606 Ac.]
151 T					0.03 Ac.				8	Temp. to Construct a Drive
152	MARY A. KRAMER	325	398	196.080 Ac.	1.081 Ac.		———	*	8	This Parcel is a part of 3.71 Ac. leased to Albert E. Cydrus as recorded in Vol. 13, Pg. 443
										Lease is in Tract No. 1 Residue of lease = 2.629 Ac. and is included in Residue Right of Tract No. 1
153WL	MARY A. KRAMER	325	398	196.080 Ac.	1.153 Ac.		———	*		This Parcel is a part of 2.00 Ac. leased to Albert E. Cydrus as recorded in Vol. 13, Pg. 491
									9	Lease is in Tract No. 1 Residue of lease = 0.847 Ac. and is included in Residue Right of Tract No. 1
155WL	FLORA H. IMMEL	214	391	138.794 Ac.	0.733 Ac.		2.943 Ac.	135.039 Ac.	9	P.R.O. = 0.079 Ac. Deed Area includes only Tract No. 1. Residue is with respect to the existing
										easterly right-of-way line of U.S.R. 35.
156WD	CECIL H. RATCLIFF AND MARJORIE L. BURT	294	632	40.00 Ac.	2.467 Ac.		37.046 Ac.	2.370 Ac.	11	P.R.O. = 0.555 Ac. Deed Area includes only Parcel "B" of Tract No. 1 [Section 3 T.B.A. = 0.856 ——
										Section 2 T.B.A. = 1.611 Ac., P.R.O. = 0.555 Ac.]
157	ROBERT D. STULTZ. AND RUTH M. STULTZ	283	371	0.73 Ac	0.079 Ac.		0.569 Ac.	0	11	P.R.O. = 0.082 Ac.
158	WILLIAM S. KERN AND BESSIE KERN	277	523	13.26 Ac.	0.038 Ac.		13.172 Ac.	0	11	P.R.O. = 0.050 Ac.
159WD	MARY A KRAMER	325	398	196.080 Ac	0.044 Ac.		———	*	10	P.R.O. = 0.244 Ac.
160	CECIL H. RATCLIFF AND MARJORIE L. BURT	294	632	40.00 Ac.	0.159 Ac.		0	39.663 Ac.	11	P.R.O. = 0.172 Ac. Deed Area includes only Parcel "A" of Tract No. 1

* RESIDUAL ACREAGE - MARY A. KRAMER
Tract No. 1 (Liberty Twp - Section 3) Residue Left = 8.895 Ac., Residue Right = 20.829 Ac.
Tract No. 2 (Liberty Twp. - Sections 2 & 3) Residue Left = 25.063 Ac., Residue Right = 2.183 Ac. with respect to Prop. Athens Rd.
Tract No. 3 (Springfield Twp. - Section 30) Residue Left = 28.870 Ac., Residue Right = 10.490 Ac.
Tract No. 4 is not affected.

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	F-674(12)	

2/16
225

5
17

ROSS COUNTY
ROS-35-25.05
LIMITED ACCESS

SCIOTO TWP
ROSS COUNTY
VMS 480

NOTE
For areas abandoned to Ross County, See Sheet 14A

Note: For fence quantities, See Sheet No 22-A

CARMI R. & CARMI V. JONES

BEGIN PROJECT 1323+00

Ex—L.A—R/W

Cultivated Field

CARMI R. & CARMI V. JONES
S-41°-17'-03"-E 1421.39'

1330+00
220' Lt. E.B
178' Lt. ℄

Ex—L.A—R/W

S-41°-17'-03" E

℄ Construction Limits

1406.28'-S41°17'03"E

TEMPORARY CONNECTION

Sign

℄ Median

Temp. Connection

S 41°17'03"E ℄ WESTBOUND

1329+76.97
80' Lt. E.B
1329+76.97
75' Lt. E.B

1330+00
80.66' Lt. E.B
38.66' Lt. ℄

23.00'

C 500'

42'

145 LA

S 42° 55'-15" E 677.25'

℄ MEDIAN (℄ SURVEY)

S41°17'03"E

1320 1321 1322 1323 1324 1325 1326 1327 1328 1329 1330 1331 1332 1333 1334 1335 1336

S41°17'03"E ℄ EASTBOUND (℄ SURVEY)

E Ex

Existing Pavement (Ex. U.S.R. 35 & 50)

Construction Limits

1326+26.97
50' Rt. E.B.

N-41°17'03"W 1056.28'

20.00'

1048.36' Ex. L.A—R/W

N41°17'03"W 1048.36'

L.A—R/W N41°17'03"W 450.00'

10.00'

70'

N-41°17'03" W 1150.00' Ex. LA-R/W

1330+00
70' Rt. E.B.
112' Rt. ℄

1330+76.97
112' Rt. E

1330+76.97
122' Rt. ℄

Cultivated Field

1326+26.97
70' Rt E.B.

CARMI R. & CARMI V JONES

See Sheet No. 13 & 13A

145 X

SCIOTO TWP
ROSS COUNTY
VMS 480

1338+00
178' Lt.

800.00'

CARMI R & CARMI V. JONES

LA S25°-06'-45"E 104.12'
208.24'

Ex LA-R/W

1340+00
120' Lt

CARMI R. & CARMI V. JONES

1341+76.97
108' Lt. ℄

1342+26.97
108' Lt. ℄

S41°17'03"E 577.45'

Ex LA-R/W

50.00'

S41°17'03"E

1336+76.97
58' Lt E

S 46° 59' 45" E
502.49'

Construction Limits

DROP WESTBOUND

1342+26.97
28' Lt. E

S41°17'03"E 351.50'

PROP. WESTBOUND

PROP. BRIDGE

S41°17'03"E

1336 1337 1338 1339 1340 1341 1342 1343 1344 1345 1346 1347 1348 1349 1350

℄ MEDIAN (℄ SURVEY)

1345+86.41

1348+30

E Ex.

Ex. KILGORE Bridge

Ex. U.S.R. 35 & 50

Ex. KILGORE Bridge

Sta. 100+00 Channel Excavation
Sta. 1343+80 ℄ Median Prop. U.S.R. 35

10.00'

N41°17'03"W 1150.00' L.A.

N-41°17'03"W 391.20'

Ex LA—R/W

1342+26.97
122' Rt. ℄

1342+26.97
112' Rt. E

98+88

1343+80
112' Rt.

98+88

CARMI R. & CARMI V. JONES
N10°-28'-34"E 455.44'

Channel Easement Line

See Sheet No. 13/14

1346+13.17
112' Rt. E

98+88
238.17' Rt.

144 X

1345+77.45
120' Lt. E

1014.20
187.45' Rt.

1345+74.50
42' Lt. E

78.06'
S 32°52'57" W

45.00'

102

S 48°-42'-57" E

101

RIVER

Scioto Township
Springfield Township

1348+34
158' Lt.

1350+55.61
200' Lt.

L.A. R/W S41°17'03"E 221.61'

Construction Limit

S 48°18'
N 39°31'00" E

1348+77
81' Lt.

146 WL

82.06'
N 39°36'15" E

S 48°42'57" W
42.00

1350

135.34

N 36°28'00" E

ROSS COUNTY
SPRINGFIELD TOWNSHIP
T-8N R 21W
FRACTIONAL SECTION 30

NOTE:
All required right of way between Sta. 1320+00 and the Scioto River was purchased on the ROS-35-22.82 project

CARMI R. & CARMI V. JONES
T.B.A. = 20.231 Ac.
Residue Lt. = 136.065 Ac.
Residue Rt. = 58.095 Ac.
Deed = 250.00 Ac.

CARMI R. & CARMI V. JONES

SCIOTO

VMS 480 SECTION 30 FRACTIONAL

POINT OF PERMISSABLE STOCK UNDER-PASS STA 1349+50

1349+23
132' Rt.

S41°17'03"E 132.61'

DATE	REVISIONS

ELMER S. BARRETT ASSOCIATES
Consulting Engineers
245-249 S. Paint Street Chillicothe, Ohio

R/W PLAN
STA. 1320 TO STA. 1350

SCALE 0 20 50 DATE 3-16-64

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
WIC	LLP	LKM	RWG			

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	F-679 (12)

217/225

6/14

ROSS COUNTY
ROS-35-25.05
LIMITED ACCESS

ROSS COUNTY
SPRINGFIELD TOWNSHIP
T8N.-R.21 W.
FRACTIONAL SECTION 30

℄ SURVEY (EASTBOUND)
PROP. CURVE DATA
P.I. Sta. 1355+73.70

Δ= 12°29'30"Lt	Yc= 1.75'
Dc= 1°30'	Rc= 3819.72'
Ls= 200'	Lc= 632.78'
θs= 1°30'	Ts= 518.09'
p= 0.44'	Es= 23.25'
k= 100.00'	S.T.= 66.67'
Xc= 199.99'	L.T.= 133.34'

PROP. CURVE DATA (LICK RUN ROAD)

P.I. Sta. 24+95.43	P.I. 32+04.76
Δ= 39°25'52"	Δ= 34°01'15"
Dc= 8°	Dc= 18°
T= 256.66'	T= 97.38'
R= 716.20'	R= 318.31
Lc= 492.89'	Lc= 189.00'
E= 44.60'	E= 14.56'

MARY A. KRAMER
T.B.A. = 41.253 Ac.
P.R.O. = 6.406 Ac.
Residue Lt. = 116.684 Ac.
Residue Rt. = 31.865 Ac.
Total = 196.080 Ac.

PROP. CURVE DATA (ATHENS ROAD)

P.I. Sta. 137+12.24	P.I. Sta. 139+41.03
Δ= 8°56'-15"	Δ= 5°51'-36"
Dc= 4°	Dc= 2°30'
T= 111.95	T= 117.30'
R= 1432.39'	R= 2291.83'
Lc= 223.44'	Lc= 234.40
E= 4.37'	E= 3.00'

MARY A. KRAMER
T.B.A. = 41.253 Ac.
P.R.O. = 6.406 Ac.
Residue Lt. = 116.684 Ac.
Residue Rt. = 31.865 Ac.
Total = 196.080 Ac.

END LIMITED ACCESS
STA. 145+00
ATHENS ROAD

DATE	REVISIONS
5/5/68	Revised Parcel 149

R/W PLAN
STA. 1350 TO STA. 1365
SCALE 0 50 100 DATE 3-16-64

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
RKE	LP	LP	RWG			

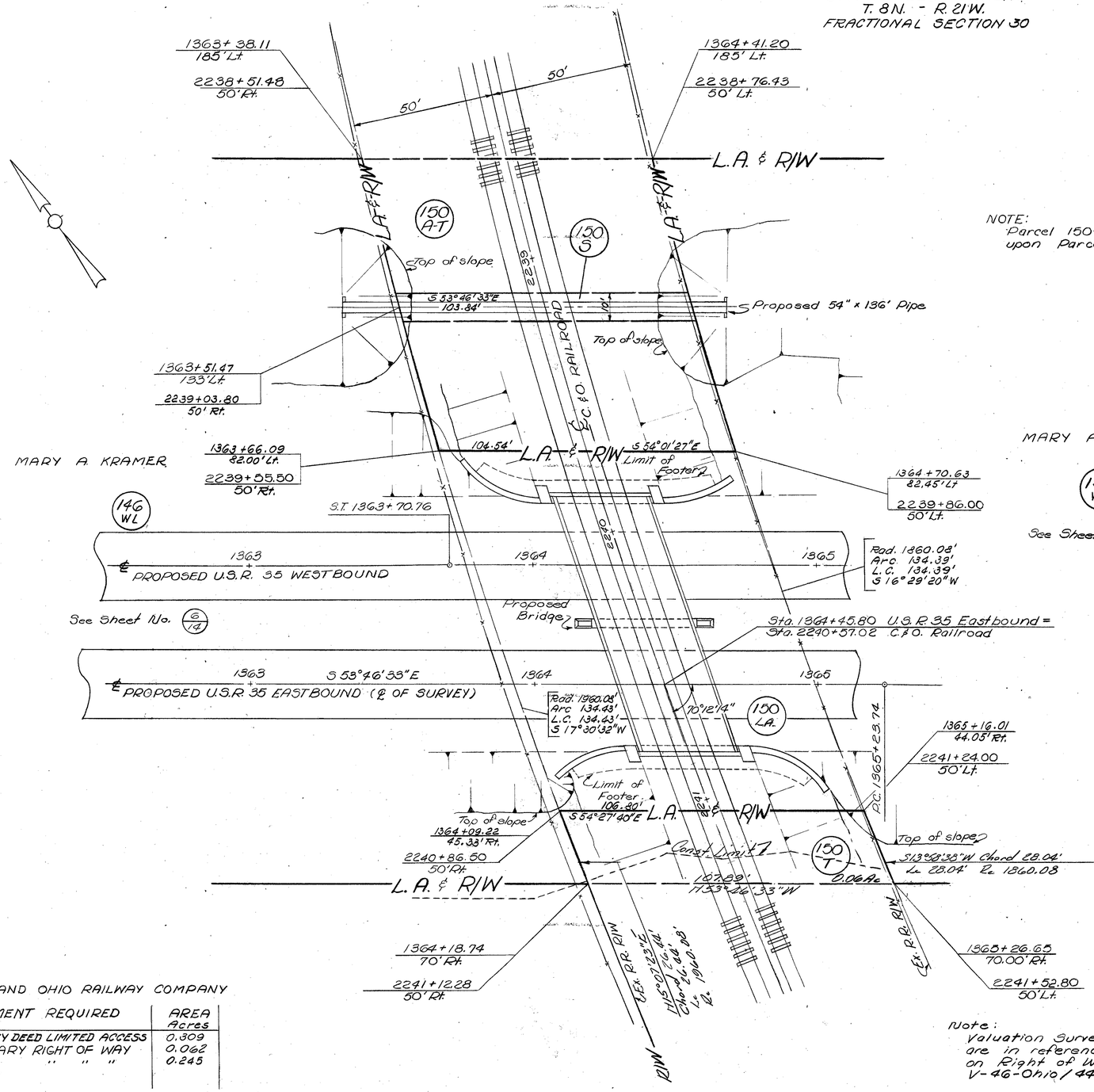
ROSS COUNTY
SPRINGFIELD TOWNSHIP
T. 8N. - R. 21W.
FRACTIONAL SECTION 30

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	F-GT4(12)	

218
225

7
14

ROSS COUNTY
ROS-35-25.05
LIMITED ACCESS



NOTE:
Parcel 150-S is superimposed upon Parcel 150 A-T.

RAILROAD CURVE DATA
Δ = 76°17' Lt.
D_c = 3°00'
R = 1910.08'
T = 1499.94'
L = 2542.76'

THE CHESAPEAKE AND OHIO RAILWAY COMPANY

PARCEL	EASEMENT REQUIRED	AREA Acres
150 WL	WARRANTY DEED LIMITED ACCESS	0.309
150 T	TEMPORARY RIGHT OF WAY	0.062
150 A-T	" " "	0.245
150 S	SEWER	

Note:
Valuation Survey Stations shown are in reference to those shown on Right of Way and Track Map V-46-Ohio/44 dated Dec. 31, 1927.

5/5/68 Revised Parcel 150T

ELMER S. BARRETT ASSOCIATES
Consulting Engineers
245-249 S. Paint Street Chillicothe, Ohio

SUPPLEMENTAL
R/W PLAN
THE CHESAPEAKE AND OHIO
RAILWAY COMPANY

SCALE 0 10 20 DATE 3-16-64

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
RKE	RKE		RWG			

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	F-674(12)	

2/9
2.25

8/14

ROSS COUNTY
ROS-35-25.05
LIMITED ACCESS

ROSS COUNTY
SPRINGFIELD TWP.—LIBERTY TWP.
T. 8 N. — R. 21 W. FRACTIONAL SECTION 30
T. 7 N. — R. 21 W. FRACTIONAL SECTION 3

EASTBOUND
PROP. CURVE DATA
P.I. Sta. 1374+12.45
Δ = 12° 23' 36"
Dc = 0° 42'
R = 8185.11'
T = 888.71'
Lc = 1770.48'
E = 48.10'

RAMP "C"
PROP. CURVE DATA
P.I. Sta. 65+19.65
Δ = 21° 40' 37"
Dc = 3°
Ls = 200'
θs = 3°
p = 0.87'
k = 99.99'
Xc = 199.95'
Yc = 3.49'
Rc = 1909.86'
Lc = 522.56'
Ts = 265.81'
Es = 35.57'
ST = 66.68'
LT = 133.35

MARY A. KRAMER

Springfield Township T. 8 N. - R. 21 W.
Liberty Township T. 7 N. - R. 21 W.

1365+23.74 185' Lt.
1368+00 195' Lt.
1374+00 210' Lt.
1377+00 225' Lt.
1379+00 265' Lt.

282.86' S 54° 50' 04" E
614.89' S 51° 08' 20" E
308.32' S 49° 22' 49" E
208.23' S 35° 10' 50" E

L.A. & R/W
Construction Limit
FRACTIONAL SECTION 30
FRACTIONAL SECTION 3
Tract No. 3
Tract No. 1

151 WL

24" Pipe
12" Pipe
36" Pipe
27" Pipe
TS 60+53.84 Sta. 1374+58.84 Westbound
SC. 62+53.84
P.I. Sta. 65+19.65
Ramp "C"

℄ PROPOSED U.S.R. 35 WESTBOUND
P.I. Sta. 1374+12.45 (EB)
℄ PROPOSED U.S.R. 35 EASTBOUND (℄ Survey)

S 53° 46' 33" E
PC. 1365+86.38
PC. 1365+23.74
N 17° 25' 54" E Chord 285.25'
Lc 285.50' Rc 1860.08'
S 05° 52' 20" E
1368+07.55
1056.58' N 51° 03' 37" W
396.80' N 41° 57' 13" W

1376+00 65'
1380+00 85'
N 46° 38' 29" E 45'
164+72.72 = 1380+00
128.76' 130'

See Sheet No. 6/14 MATCH LINE
See Sheet No. 9/14 MATCH LINE

MARY A. KRAMER

Fr. Cattle Shed
Fr. Barn
Fr. Shed
Fr. Corn Crib
Fr. Shed (Fr. Toilet)
1 Sty. Fr. Res.
Light Pole
Conc. Block Building
1 Sty. Brick Wash House
2 Sty. Brick Res.
1 Sty. Brick Bldg.
Ex. Drive
Remains
26" Gate

Note:
Asterisk (*) indicates that the call is from the Spiral Tangent

Ex. Curve Data
P.I. Sta. 155+09.10
Δ = 38° 41' 07"
Qs = 5° 00'
Ls = 300.00'
θs = 7° 30'
p = 8.27'
k = 149.91'
R = 1145.92'
Lc = 603.34'
E = 40.89'
Tc = 317.17'
Ec = 54.77'

ATHENS ROAD
PROP. CURVE DATA
CURVE
P.I. Sta. 159+33.78
Δ = 30° 10' 02"
Dc = 5° 00'
R = 1145.92'
T = 308.84'
Lc = 603.34'
E = 40.89'

SPIRAL
P.I. Sta. 163+88.44 Back
Dc = 5°
θs = 7° 30'
Ls = 300'
LT = 200.18'
ST = 100.16'
p = 3.27'
k = 149.91'
X = 299.49'
y = 13.07'

MARY A. KRAMER
T.B.A. = 41.253 Ac.
R.R.O. = 6.806
Residue Lt. = 116.684
Residue Rt. = 31.265
Total = 196.080 Ac.

BEGIN LIMITED ACCESS
STA. 156+84.94
ATHENS ROAD

Spiral = 294.73'
L.C. = 294.49'
N 60° 55' 04" W
156+84.94 40' Lt.
159+88.81 26.63' Lt.

S 29° 45' 18" E 2243'
S 29° 45' 18" E 149.33'
S 29° 45' 18" E 299.33'
S 29° 48' 03" W Chord 373.34'
Lc 373.91' Rc 1960.08'
S 60° 14' 20" W 402.61'
S 63° 26' 25" E 383.78'
S 63° 26' 25" E 137.79'
S 80° 37' 20" E 130.69'
S 45° 35' 43" E 446.72'
S 63° 26' 25" E 724.16'
S 26° 44' 27" E 450.45'
N 86° 22' 57" E

Ex. C. & O. R.R.
Ex. E.R. R/W
Ex. R/W
Ex. U.S. R. 35 50'
Maple
12" CMP
2 MB.
10"
14"
18" Ex. R/W
Ex. E.R. R/W [B.℄ O.]
P.I. Sta 155+09.10
C.I.P. (pipe laying over)
Ex. R.R. R/W [B.℄ O.]
R/W

Highway Signs
Approach right Athens 2+20
Ex. Guard Rail Posts
12" C.M.P.
Sign
15" Pipe
Ex. R/W
Construction Limit
MARY A. KRAMER (Leased to Albert E. Cydrus)
1 Sty. Conc. Blk. Garage

156+00 40
156+44.94 40' Lt.
156+49.61 60.99' Rt.
160+32.15 202.11
161+25.68
162+00 105'
163+00 147' Rt.
163+53.17* 89.32' Rt.
163+18.86* 135.68' Rt.
Spiral Pt. Sta. 163+88.44 Back = Sta. 165+88.10 Ahead
Sta. 162+88.28
℄ ATHENS ROAD
℄ L.A.
℄ Ex. R/W
℄ Ex. R/W 2

DATE	REVISIONS
5/16/68	Revised Parcel 151 WL 9 & 152
5/19/69	Added Par 151 T

R/W PLAN
STA. 1365+00 TO STA. 1380+00

SCALE
DATE 3-16-64

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
RKE	LP	LD	RWG			

KEUFFEL & ESSER CO. NO. 186-9 AGEPROOF

188 to 162

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	F-674(12)	

220
225

9
14

ROSS COUNTY
ROS-35-25.05
LIMITED ACCESS

ROSS COUNTY
LIBERTY TOWNSHIP
T. 7 N. R. 21 W.
FRACTIONAL SECTION 3

ATHENS ROAD

PROP. SPIRAL DATA
P.I. Sta. 163+88.44 Back
Dc= 5°00'
Ds= 7°30'
Ls= 300'
L.T.= 200.18'
S.T.= 100.16'
p = 3.27'
k = 149.91'
X = 299.49'
y = 13.07

PROP. CURVE DATA
P.I. Sta. 175+79.75'
Δ = 37°08'42"
Dc= 4°00'
Ls= 200'
θs= 4°
p = 1.16'
k = 99.98'
Xc= 199.90'
Yc= 4.65'
Rc= 1432.40'
Lc= 728.63'
Ts= 581.66'
Es= 79.92'
S.T.= 66.70'
L.T.= 133.37'

See Sheet No. 10/14

Tract No. 2
Tract No. 1

Spiral P.I. Sta. 171+31.46 Back = Sta. 171+31.35 Ahead

S 89° 37' 03" E 17¾

S.C. 171+98.09

Construction Limits

151 WL

N 86° 22' 57" E 171

TS. 169+98.09

MARY A. KRAMER

T.B.A. = 41.253 Ac.
P.R.O. = 6.406
Residue Lt. = 116.684
Residue Rt. = 31.865
Total = 196.080 Ac.

Sta. 1382+72.43 U.S.R. 35 = Sta. 167+44.84 Athens Rd.

See Sheet No 8/14 MATCH LINE

24" Pipe

12" Pipe

24" Pipe

P.C. 81+71.38

1381 1382 1383 1384 1385 1386 1387 1388 1389 1390 1391 1392 1393 1394 1395

167+71.95 140.36' Rt.

1384+00 64.56' Rt.

1384+66.91

1386+84.42

1385+78.82 107.99' Lt.

END PROJECT 1384+34.21 E.B.

I.R.

S 4°15'27" W 237.29'

PROP. U.S.R. 35 WESTBOUND

P.I. Sta. 87+03.37 32' Lt. & EB. 1387+03.37

1387+44.73 61.67' Rt.

TEMPORARY CONNECTION (& Survey)

PROP. U.S.R. 35 EASTBOUND (& Survey)

Loose Line 151.04'

S 85° 21' 35" E 155.52'

153 WL

Loose Line 92.58'

S.T. 165+58.28

ATHENS ROAD (& Survey)

1382+94.22 135'

1380+80 90' Rt.

165+66.75* 102.93' Lt.

S 50° 38' 52" E

MARY A. KRAMER leased to ALBERT E. CYDRUS

R=1869.86' Arc=241.17' L.C.=241.01' S 70°41'29" E

1385+34.05 179.94' Rt.

Conc. Slab for Septic Tank

Shingle Pump House

Metal Service Station

Conc. Block Fruit Stand

Car Shelter

Filler Caps for Gas Tanks

1 Sty. Metal Building 2 Pump Gas Islands

Fr. Bldg.

Conc Slab Gravel & Crushed Stone Area

Ed's Roadside Market Signs

Light Pole

Sign Post

Posts

12" CMP

Ex. R/W

Ex. R/W 176.80

S 63° 26' 25" E 265.40'

N 87° 02' 25" W

N 41° 16' 22" 57" E

165

164

163+33.17* 83.32' Rt.

Existing U.S.R. 35 & 50

USR. 35 & 50 Signs

Ashland Oil Sign

Light Pole

MARY A. KRAMER Leased to ALBERT E. CYDRUS

Gravel Area

2 Pump Gas Islands

Conc. Block Restaurant

1 Sty. Building with Pressed Siding

Conc. Base for Fuel Tank

1 Sty. Fr. Building

1 Pump Gas Island

163+18.86* 155.68' Lt.

4+00 5+00

R/W

P.I. 5+19.72

TEMPORARY CONNECTION
PROP CURVE DATA
P.I. Sta. 87+03.37
Δ = 40°45'00" Rt.
Dc = 4°
R = 1432.40'
Lc = 1018.75'
T = 531.99'
E = 95.60

FLORA H. IMMEL
T.B.A. = 0.733 Ac.
Residue Lt. = 2.943
Residue Rt. = 135.039
P.R.O. = 0.079
Total = 138.794 Ac.

Note:
Asterisk (*) indicates that the call is from the Spiral Tangent.

1386+62.55 290.53' Rt.

Gravel Stop Signs

Asphalt Curb

1387+83.77 194.69' Rt.

1387+71.04 181.96' Rt.

Ex. Guard Rail

Ex. R/W

Ex. R.R. R/W

See Sheet No. 10/14

Approx. Future Construction Limits

L.A. & R/W

159 WD

Ex. R/W

Construction Limit

8" Maple

Ex. R/W

12" Maple

Ex. U.S.R. 50

CECIL H. RATCLIFF & MARJORIE L. BURT

1388+38.46 219.10 Lt.

Highway Sign

Motel Sign

S 86° 24' 09" E 806.57'

1389+32.88

S 41° 22' 57" E 1384.50'

1389+06.21 46.70' Rt.

PROP. TEMPORARY APPROACH 35 TO 50

S 86° 24' 09" E 194.23'

N 3° 35' 51" 18.00'

S 3° 35' 51" W

S 3° 28' 27" E 536.32'

R=916.72' Arc=395.87' L.C.=375.00' S 22° 08' 46" E

FLORA H. IMMEL

L.A. & R/W

Ex. R/W

8" Maple Highway Sign

4" Maple Highway Sign

P.T. 91+90.13

1389+29.87 376.21' Rt.

Construction Limit

Conc. Base

10" Elm

Ex. U.S.R. 35

8" Elm Highway Sign

10" CMP

Highway Sign

139+15.73

N

DATE	REVISIONS

ELMER S. BARRETT ASSOCIATES
Consulting Engineers
245-249 S. Paint Street Chillicothe, Ohio

R/W PLAN
STA. 1380 TO STA. 1395

SCALE 20 0 50 DATE 3-16-64

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
RKE	LP	LP	RWG			

ROSS COUNTY
LIBERTY TOWNSHIP
T. 7 N. — R. 21 W.
FRACTIONAL SECTION 3

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	F-674(12)	

221/225

10/14

ROSS COUNTY
ROS-35-25.05
LIMITED ACCESS

ATHENS ROAD PROP. CURVE DATA
P.I. Sta. 175+79.75
Δ = 37°08'42" Yc = 4.65'
Dc = 4°00' Rc = 1432.40'
Ls = 200' Lc = 728.63'
θs = 4°00' Ts = 381.66'
p = 1.16' Es = 79.92'
k = 99.98' ST = 66.70'
Xc = 199.90' L.T. = 133.37'

PROP. CURVE DATA
P.I. Sta. 65+19.65
Δ = 21°40'37" Yc = 3.49'
Dc = 3°00' Rc = 1909.86'
Ls = 200' Lc = 522.56'
θs = 3°00' Ts = 465.81'
p = 0.87' Es = 35.57'
k = 99.99' ST = 66.65'
Xc = 199.95' L.T. 133.35'

RAMP "C" SPIRAL DATA
P.I. Sta. 74+27.32 (Back)
Ls = 200'
θs = 2°00'
L.T. = 133.34'
ST = 66.67'
p = 0.58'
k = 100.00'
Xc = 199.98'
Yc = 2.33'

RAMP "C" CURVE DATA
P.I. Sta. 77+10.76
Δ = 8°39'37"
Dc = 2°00'
Lc = 432.74'
R = 2864.79'
T = 216.78
E = 8.19'

NOTE:
Asterisk [*] indicates the call is from Spiral Tangents.

MARY A. KRAMER

Tract No. 2
Tract No. 1

MARY A. KRAMER

MARY A. KRAMER
T. B. A. = 41.253 Ac.
P. R. O. = 6.406 Ac.
Residue Lt. = 116.684 Ac.
Residue Rt. = 31.965 Ac.
Total = 196.080 Ac.

CECIL H. RATCLIFF & MARJORIE L. BURT

CECIL H. RATCLIFF & MARJORIE L. BURT

FLORA H. IMMEL

Prop. Drive
POINT OF ACCESS

180+18.65
78.76' Rt.

179+00
85'

S56°30'E 124.26'

180+14.88*
24" Pipe

Spiral P.I. Sta. 179+93.42 Back*
Sta. 179+93.35 Ahead

156 WD

See Sheet No. 11/14

180
67.94' Rt.

151 WL

CS. 179+26.72 Athens Rd.*
P.I. 79+26.72 Ramp "C"

180+13.09*
67.92' Rt.

S 63°53'56"E 515.61'

P.I. Sta. 175+79.75
Athens Road

P.I. Sta. 77+10.76
Ramp "C"

END LIMITED ACCESS
STA. 180+14.88
ATHENS ROAD

L.A. & R/W

S 35°02'19"W 365.46'
To corner

174+25
150'

Sc. 74+93.98

ATHENS ROAD [℄ Survey]

299.55'
S 60°07'03"E

177+00
50' Rt.

S77°55'49"E

176+10
60' Rt.

1388+99.67
568.17' Lt.

S 5°39'30"W

L.A. & R/W

Future Construction Limit

FUTURE PROPOSED RAMP "E"

293.92'

1391+00
353' Lt.

1391+50
325.96' Lt.

1392+00
375.40' Lt.

S1°18'41"W
28.57'

1392+21
356.02' Lt.

159 WD

S88°24'09"E 135.96'

Ex. R/W

Ex. Field Drive to remain in place

12" CMP

Ex. R/W

Highway Sign

1393+17.11
452.30' Lt.

Ex. U.S.R. 35

Parcel "B" 1.21 Ac.

L Ex. R/W

S 86°24'09"E 143.86'

Construction Limit

S 86°24'09"E 806.27'

Motel Sign

1393+34.17
381.56' Lt.

Ex. R/W

Maple St.

1392+32.46
279.78' Lt.

Sta. 72+93.98

Construction Limit

Spiral P.I. Sta. 171+31.49 Back
Sta. 171+31.39 Ahead

S89°37'08"E

Sc. 171+93.09

Sc. 169+93.09

N 86°22'57"E

Ts. 169+93.09

Sta. 1382+72.43 = Sta. 167+44.89 Athens Rd.

P.I. Sta. 1384+45.98

1385+78.82'
107.99' Lt.

12" Pipe

END PROJECT
1384+34.21 E.B.

℄ PROP. U.S.R. 35 WESTBOUND

℄ PROP. U.S.R. 35 EASTBOUND (℄ SURVEY)

Lease Line

155.52'

S 4°15'17"W
237.29'

151.04'

P.I. Sta. 1382+94.22

1384+66.91

1386+84.42

S89°21'35"E 682.69'
92.98'

26.25'

See Sheet No. 9/14

See Sheet No. 8/14
℄ MATCH LINE

S71°07'38"E ℄ RAMP "C"

St. 69+76.40

CS. 67+76.40

151 WL

S41°22'57"E

Ex. R/W

Ex. U.S.R. 50

LA

Ex. R/W

L Ex. R/W

DATE	REVISIONS
5/6/68	Revised Parcel 151WL.

ELMER S. BARRETT ASSOCIATES
Consulting Engineers
245-249 S. Paint Street — Chillicothe, Ohio

R/W PLAN
ATHENS ROAD STA. 170 TO STA. 180
& RAMP "C" STA. 66 TO STA. 79+26.72

SCALE 0 20 50 DATE 3-16-64

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
RKE	LP	LP	RWG			

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	F-GT4(12)	

222
225

11
14

ROSS COUNTY
ROS-35-25.05
LIMITED ACCESS

ROSS COUNTY
LIBERTY TOWNSHIP
T. 7 N. — R. 21 W.
SECTION 2 & FRACTIONAL SECTION 3

ATHENS ROAD

PROR. CURVE DATA
P.I. Sta. 175+79.75
Δ = 37°08'42" Yc = 4.65'
Dc = 4°00' Rc = 1432.40'
Ls = 200' Lc = 728.63'
θs = 4°00' Ts = 581.66'
p = 1.16' Es = 79.92'
k = 99.98' ST = 66.70'
Xc = 199.90' LT = 133.37'

PROR. CURVE DATA
P.I. Sta. 186+77.65
Δ = 29°18'18" Yc = 4.65'
Dc = 4°00' Rc = 1432.40'
Ls = 200' Lc = 532.63'
θs = 4°00' Ts = 474.80'
p = 1.16' Es = 49.35'
k = 99.98' ST = 66.70'
Xc = 199.90' LT = 133.37'

NOTE: Asterisk [*] indicates the call is from Spiral Tangents.

ROBERT D. STULTZ & RUTH M. STULTZ
T.B.A. = 0.079 Ac.
P.R.O. = 0.082 Ac.
Residue Lt. = 0.569 Ac.
Total = 0.73 Ac.

WILLIAM S. KERN & BESSIE KERN
T.B.A. = 0.058 Ac.
P.R.O. = 0.050 Ac.
Residue Lt. = 13.172 Ac.
Total = 13.26 Ac.

CECIL H. RATCLIFF & MARJORIE L. BURT
T.B.A. = 2.467 Ac.
P.R.O. = 0.555 Ac.
Residue Lt. = 37.046 Ac.
Residue Rt. = 2.370 Ac.
Total = 40.00 Ac.

CECIL H. RATCLIFF & MARJORIE L. BURT
T.B.A. = 0.159 Ac.
P.R.O. = 0.172 Ac.
Residue Lt. = 0 Ac.
Residue Rt. = 39.669 Ac.
Total = 40.00 Ac.

PARCELS 157 and 158

DATE	REVISIONS
5/5/68	Revised Parcel 156 WD & 160

ELMER S. BARRETT ASSOCIATES
Consulting Engineers
245-249 S. Paint Street Chillicothe, Ohio

R/W PLAN
ATHENS ROAD
STA. 180 TO STA. 196

SCALE 0 20 50 DATE 3-16-64

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
EKE	LP	LP	RWG			

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	F-674(12)	

223
225

12
14

ROSS COUNTY
ROS-35-25.05
LIMITED ACCESS

ROSS COUNTY
SPRINGFIELD TOWNSHIP
T.8 N. — R. 21 W.
FRACTIONAL SECTION 30

PROP. LICK RUN ROAD CURVE DATA

P.I. Sta. 18+98.93
Δ = 80°31'
Dc = 18°00'
R = 318.31'
T = 269.55'
Lc = 447.31'
E = 98.80'

P.I. Sta. 24+95.43
Δ = 39°25'52"
Dc = 8°00'
R = 716.20'
T = 256.66'
Lc = 492.89'
E = 44.60

ESTHER GRAVES WETZEL
T.B.A. = 0.795 Ac.
P.R.O. = 0.194 Ac.
Residue Lt. = 30.539 Ac.
Total = 31.526 Ac.

DOUGLAS COOK
T.B.A. = 0.072 Ac.
P.R.O. = 1.039 Ac.
Residue Rt. = 1.187 Ac.
Total

HAROLD FLESHMAN
T.B.A. = 0.029 Ac.
P.R.O. = 0.053 Ac.
Residue Rt. = 1.188 Ac.
Total = 1.270 Ac.

IVAN W. SHARP & GRACE L. SHARP

MARY A. KRAMER
T.B.A. = 38.985 Ac.
P.R.O. = 6.319 Ac.
Residue Lt. = 117.368 Ac.
Residue Rt. = 33.413 Ac.
Total = 196.080 Ac.
Parcel 146 — 2.73 Ac.

MARY A. KRAMER

See Sheet No. 6/14

DATE	REVISIONS
6/11/68	Added Parcel 147A, Revised Parcel 149
4/1/69	Revised Parcel 146
6-19-78	Rev. Calls-Pcls. 146 (Errors) WHB

ELMER S. BARRETT ASSOCIATES
Consulting Engineers
245-249 S. Paint Street — Chillicothe, Ohio

R/W PLAN
PROP. LICK RUN ROAD
STA. 14+00 TO STA. 30+00

SCALE 0 20 50 DATE 3-16-64

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
DKE	LP	LP	RWG			

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	F-674(12)	

224
225

13
14

ROSS COUNTY
ROS-35-25.05
LIMITED ACCESS

ROSS COUNTY
SCIOTO TOWNSHIP
V.M.S. 480

CARMI R. & CARMI V. JONES
T.B.A. = 30.291 Ac.
Residue Lt. = 126.005 Ac.
Residue Rt. = 58.095 Ac.
Deed = 250.00 Ac.

140
X

Ex. L.A. & R/W

98+60

98+88
238.17' Rt.
1346+18.17
112' Rt.

1343+90
112' Rt.

99+

1339

1340

1341

1342

1343

1344

1345

1346

Proposed Bridge

Ex. Kilgore Bridge

Prop. U.S.R. 35

℄ Median

S 41°17'03" E 377.93'

Ex. L.A. & R/W

N 41°17'03" E 377.93'

1340+00
120' Lt.

101+20
380' Lt.

Tree Line

101+20

Sta. 100+00 ℄ Channel Excavation =
Sta. 1343+80 ℄ Prop. U.S.R. 35

N 48°42'57" E

℄ Scioto River Channel Excavation

101 102 103 104 ℄ 105 106 107 108 109 110 111 112 113 114

N 48°42'57" E 703.10'

1137+16.90

1102+42.21
1137.21
110+35

N 73°59'10" E
322.78'

See Sheet No. 14/14

See Sheet No. 7/14

S 61°31'39" W 255.31'

Tree Line

Edge of Water

1345+77.45
120' Lt.

101+20
197.45' Rt.

103+75
210' Rt.

S 68°45'11" W
452.38'

Slope 2:1

Excavate to
Elev. 584.5

S 38°47'22" W 208.04'

S 50°37'30" W 300.17'

Edge of Water

108+00
365' Rt.

110+00
330' Rt.

See Sheet No. 5/14

DATE	REVISIONS
4/23/69	Added Par 142 & Additional Area 145 E

ELMER S. BARRETT ASSOCIATES
Consulting Engineers
245-249 S. Paint Street Chillicothe, Ohio

R/W PLAN
SCIOTO RIVER CHANNEL EXCAVATION
STA. 99 TO STA. 114

SCALE 0 20 40 DATE 3-16-64

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
RKE	L.P.	L.P.	RWG			

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

R/W PLAN
ROS 35-25.05
ROSS COUNTY

13-A
14

See Sheet N° 13

S 41°17'03" E
1044.27'

1332+00
1025

110+25
137.21'

1342+42.21
102.5'

1334+60
775'

1336+40
775'

107+75
740'

S 41°17'03" E
180'

C.L.2

N 48°42'57" E
105'

S 10°03'22" W
256.73'

1334+60
670'

1338+00
575'

105+75
580'

N 48°42'57" E
847'

N 44°35'37" E
259.85'

145

1336+20
505'

Carmi R. & Carmi V. Jones
T.B.A. 2.79 Ac.
Residue Lt. 126.005 Ac.
Residue Rt. 58.095 Ac.

Prop R/W2 N 48°42'57" E
327'

Prop Spur Dike

Prop R/W2 S 48°42'57" W
397'

C.L.

145
X
T.B.A. 30.29 Ac.

N

1332+00
178'

1336+20
178'

1338+00
178'

101+78
580'

Ex L.A R/W2
S 41°17'03" E

420'

180'

S 25°06'43" E
208.24'

101+20
383'

134
120'

Ex L.A R/W2
S 41°17'03" E

Prop Channel & Sta 100+00 =
Prop R'dwy & Sta 1343+80

Prop U.S.R. 35
& West bound Lanes

1330 1331 1332 1333 1334 1335 1336 1337 1338 1339 1340 1341 1342 1343 1344 1345

Completion Date		
Revised 4/29/69	Revision Description Added Par 145 Additional Area Par 145X	By BDB

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	F-674(12)	

225
225

19
19

ROSS COUNTY
ROS-35-25.05
LIMITED ACCESS

CARMI R. & CARMI V. JONES
T.B.A. = 20.231 Ac.
Residue Lt. = 136.065 Ac.
Residue Rt. = 58.095 Ac.
Deed = 250.00 Ac.

ROSS COUNTY
SCIOTO TOWNSHIP
V.M.S. 480

Sta. 93+64.52 ℄ = ℄ B. & O. Main Line

N 48°42'57" E

98+88
1343+80
112' Rt.

98+60

CARMI R. & CARMI V. JONES

Channel Easement Line

N 0°28'54" E 450.44'

Ex. L.R. & R/W

S 41°17'03" E 238.17'

Excavate to Elev. 584.5

Toe of Slope

144 X

BEGIN CHANNEL EXCAVATION
STA. 96+00

Tree Line

95+60
396' Rt.

S 82°06'29" W
942.28'

1346+18.17
112' Rt.
98+88
238.17' Rt.

Ex. Kilgore Bridge

1343

1345

1346

Prop. U.S.R. 35

Median

S 41°17'03" E

Prop. Bridge

See Sheet No. 13/14

Ex. L.R. & R/W

90°

Wooded Area

Tree Line

℄ Scioto River Channel Excavation

N 48°42'57" E

Sta. 100+00 ℄ Channel Excavation =
Sta. 1343+80 ℄ Median Prop. U.S.R. 35

S 41°17'03" E

Excavate to Elev. 584.5

CARMI R. & CARMI V. JONES

145 X

S 51°31'59" W 255.31'

Tree Line

Edge of Water

1345+77.95
120' Lt.
101+20
197.45 Rt.

103+75
210' Rt.

S 66°45'11" W
452.38'

℄ MATCH LINE

106 107 108 109 110 111 112 113 114 115 116 117 118 119 120

℄ Scioto River Channel Excavation

N 48°42'57" E

Channel Easement Line

1124.28'

113+16.90

N 48°42'57" E 703.10'

Channel Easement Line

CARMI R. & CARMI V. JONES
T.B.A. = 20.231 Ac.
Residue Lt. = 136.065 Ac.
Residue Rt. = 58.095 Ac.
Deed = 250.00 Ac.

Tree Line

Tree Line

END CHANNEL EXCAVATION
Sta. 120+00

S 41°17'03" E 195'

120+20

120+20
145' Rt.

2:1 Slope

Toe of Slope

145 X

S 58°56'00" W 294.28'

MATCH LINE

Wooded Area

Excavate to Elev. 584.5

S 68°45'11" W 432.38'

S 38°47'22" W 208.04'

S 50°37'30" W ℄ 300.17'

S 30°04'43" W 459.79'

Edge of Water

108+00
365' Rt.

110+00
330' Rt.

113+00
340' Rt.

117+30
195' Rt.

ROSS COUNTY
SCIOTO TOWNSHIP
V.M.S. 480

See Sheet No. 5/14

DATE	REVISIONS

ELMER S. BARRETT ASSOCIATES
Consulting Engineers
245-249 S. Paint Street Chillicothe, Ohio

R/W PLAN
SCIOTO RIVER CHANNEL EXCAVATION
STA. 94 TO STA. 120

SCALE 0 20 50 DATE

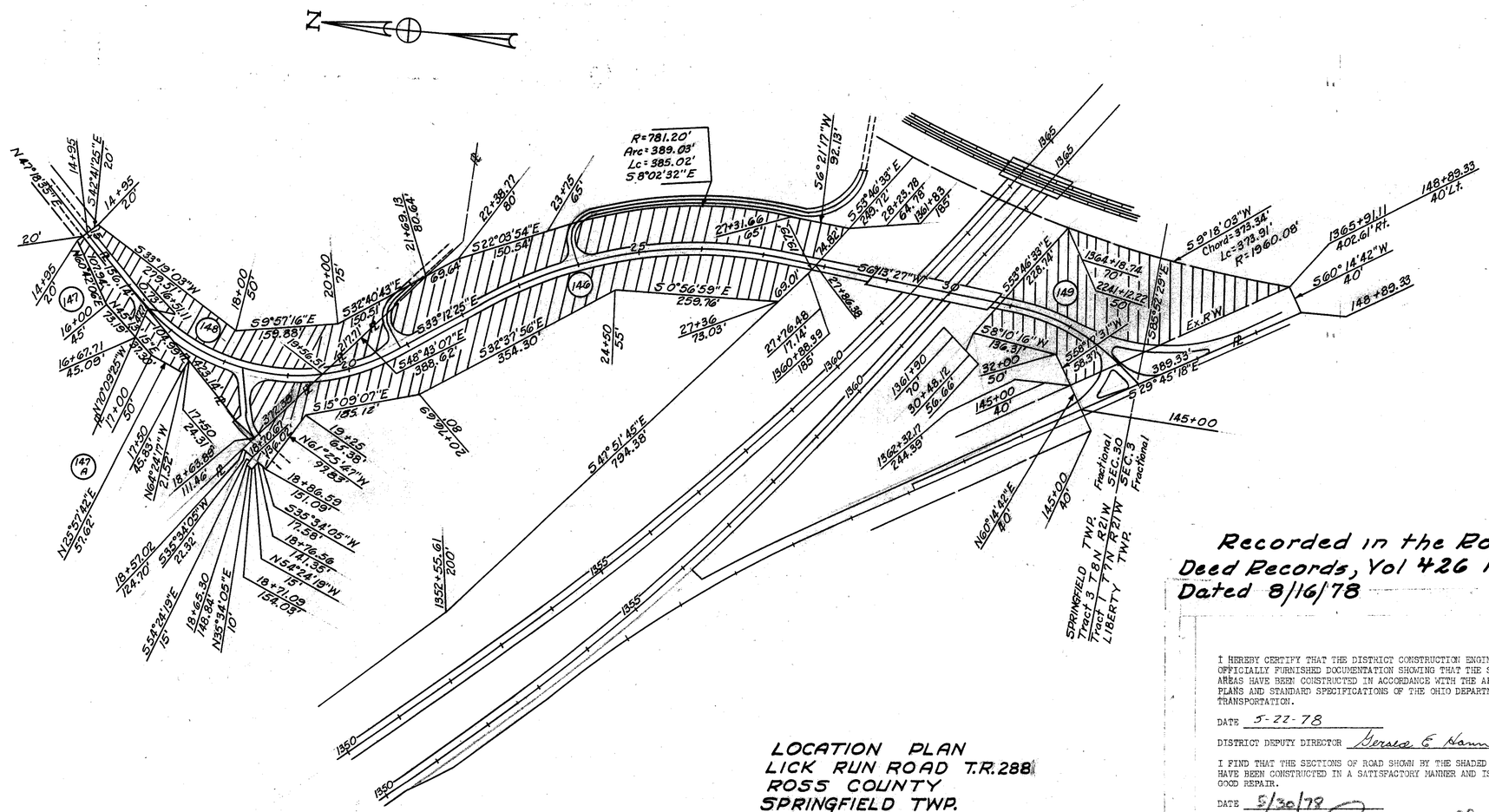
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
RKE	LP	L.P.	RWG			

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

ROSS COUNTY
ROS -35 -25.05

14A
14

PAGE 1 of 1



LOCATION PLAN
LICK RUN ROAD T.R.288
ROSS COUNTY
SPRINGFIELD TWP.
T-8-N - R-21-W
FRACTIONAL SEC. 30
LIBERTY TWP.
T-7-N, R-21-W
FRACTIONAL SEC. 3

Recorded in the Ross County
Deed Records, Vol 426 Page 445
Dated 8/16/78

I HEREBY CERTIFY THAT THE DISTRICT CONSTRUCTION ENGINEER HAS OFFICIALLY FURNISHED DOCUMENTATION SHOWING THAT THE SHADED AREAS HAVE BEEN CONSTRUCTED IN ACCORDANCE WITH THE APPROVED PLANS AND STANDARD SPECIFICATIONS OF THE OHIO DEPARTMENT OF TRANSPORTATION.

DATE 5-22-78

DISTRICT DEPUTY DIRECTOR Geneva E. Hann

I FIND THAT THE SECTIONS OF ROAD SHOWN BY THE SHADED AREAS HAVE BEEN CONSTRUCTED IN A SATISFACTORY MANNER AND IS IN GOOD REPAIR.

DATE 5/30/78

ROSS COUNTY ENGINEER Paul M. Miller

THE SHADED AREA OF THIS PLAN APPROVED AND ACCEPTED BY US THIS 30th DAY OF MAY FOR MAINTENANCE AND PUBLIC USE.

BOARD OF COMMISSIONERS OF ROSS COUNTY, OHIO
Robert Bettinger
Ignatius Wehrley
Jean M. Eshman

RECORD OF LAND PARCEL NO.	DEED/EASEMENT BOOK	PAGE
146	358	362
147	360	401
147-A	355	659
148	357	51
149	358	362

TE-95
400-1-63

GENERAL INFORMATION

INTRODUCTION

The project consists of the partial relocation, widening and resurfacing of USR 35, beginning on USR 35, 0.4 mile northwest of the Scioto River, extending southeastward, and terminating 0.7 mile southeast of the Scioto River, 300 feet north of existing USR 35. Included in this report are profiles of intersecting Lick Run and Athens Roads, Ramp C, and a temporary connector to existing USR 35.

Proposed grades indicate the following maximum proposed cuts and fill embankments:

	CUTS (Max.)	FILL EMBANKMENTS (Max.)
USR 35	13'	26'
Lick Run Road	-	16'
Athens Road	2'	20'
Ramp C	1'	16'
USR 35 Temporary Connector	-	23'

GEOLOGY OF THE PROJECT

The alignment traverses a portion of the broad, terraced floodplain of the Scioto River, near the southern limits of the glacial advance. Deep outwash, valley fill, and alluvium overlie bedrock, of Upper Devonian age.

EXPLORATION

Exploratory borings were made by means of truck-mounted mechanical soil auger and hand auger (in areas of difficult access), on July 24, 25, and 26, 1963.

INVESTIGATIONAL DISCLOSURES

Borings disclose materials occurring immediately below proposed grade and in the embankment foundation areas are comprised predominantly of unstratified gravels, sands, sandy silt, silts and silt clays, in the A-1-a, A-1-b, A-3a, A-4, and A-6a classifications having low moisture contents or moisture contents in the lower portion of the plastic range.

Frost susceptible silts were encountered within three feet of proposed grade at stations 1371+95, 1377+88, and 1382+85.

Wet silt was encountered in the embankment foundation at station 1350+00.

LEGEND FOR PROJECT AVERAGE RESULTS OF TESTS - 78 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 and/or stone fragments	A-1-a(0)	A-1-a	61	25	7	- 7 -		NP	NP	6	22
Gravel and/or stone fragments with sand	A-1-b(0)	A-1-b	43	30	14	7	6	NP	NP	8	11
Coarse and fine sand	------	A-3a	7	22	43	13	15	NP	NP	11	7
Gravel with sand and silt	A-2-4(0)	A-2-4	34	21	16	16	13	25	2	10	4
Gravel with sand silt and clay	A-2-6(1)	A-2-6	30	24	11	14	21	35	16	17	1
Sandy silt	A-4(3)	A-4a	5	12	33	26	24	23	3	13	15
Silt	A-4(8)	A-4b	1	2	13	53	31	28	6	18	8
Silt and clay	A-6(9)	A-6a	7	6	11	34	42	32	12	19	8
Silty clay	A-6(12)	A-6b	0	0	6	43	51	40	19	23	1
Elastic clay	A-7-5(11)	A-7-5	0	10	28	17	45	56	20	24	1

Sod or Topsoil='X'= Approximate depth.

Auger boring - plan view.

Auger boring plotted to vertical scale only.

Water content nearly equal to or greater than liquid limit.

w Free water.

NOTE: Figures beside borings indicate water content in percent. e.g. 15

SOIL PROFILE

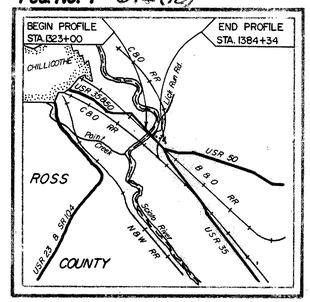
1 / 25

ROSS COUNTY
ROS-35-25.05

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

NOTE: INFORMATION SHOWN BY THE 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-GTA (12)



LOCATION MAP

Recon-J.S.M.-7/9/63

Drilling-auger-L.M.D.-7/24/63-7/26/63
T.R.S.-7/26/63

Drafting-S.J.H.-8/9/63

SUMMARY OF SOIL TEST DATA

NOTE: NP shown in Liquid Limit and Plasticity Index columns indicates that the material is non-plastic.
*Denotes sample taken at or near grade.

STATION & OFFSET	DEPTH FROM-TO	% AGG.	% C.S.	% F.S.	% SILT	% CLAY	L.L.	P.I.	% W.C.	SHTL CLASS.
				USR 35						
1325+00 86'Lt	0.0-5.5	0	3	10		50	38	7	17	A-4b
	5.5-11.0	55	32	7		- 6 -	NP	NP	4	A-1-a
1329+00 96'Lt	0.3-6.0	0	10	28		17	45	36	20	24	A-7-5
	6.0-11.0	63	24	6		- 7 -	NP	NP	3	A-1-a
1331+00 95'Lt	0.0-5.0	63	31	5		- 1 -	NP	NP	3	A-1-a
	5.0-8.0	88	18	8		- 6 -	NP	NP	3	A-1-a
1334+00 95'Lt	0.0-5.0	73	17	4		- 6 -	NP	NP	5	A-1-a
	5.0-8.0	72	22	4		- 2 -	NP	NP	4	A-1-a
1337+00 85'Lt	0.0-6.0	57	37	6		- 0 -	NP	NP	3	A-1-a
	6.0-12.0	63	26	6		- 5 -	NP	NP	4	A-1-a
1350+00 85'Lt	0.0-5.0	0	0	7		60	33	27	11	17	A-4b
	5.0-11.0	0	2	4		47	47	38	11	22	A-6a
	11.0-13.0	0	1	19		50	30	23	4	18	A-4b
	13.0-19.0	61	20	6		7	6	15	1	15	A-1-a
	19.0-25.0	43	35	11		- 6 -		NP	14	A-1-b
1353+65 80'Lt	0.0-4.0	8	2	9		50	31	38	5	12	A-4b
	4.0-10.0	0	2	19		53	26	33	4	13	A-4b
1354+95 75'Lt	0.0-5.0	44	24	21		- 11 -		NP	4	A-1-b*
	5.0-10.0	46	34	13		- 7 -		NP	6	A-1-b
1355+90 70'Lt	0.0-4.0	0	8	25		30	37	NP	14	A-4a
	4.0-9.0	58	32	7		- 8 -		NP	7	A-1-a
	9.0-14.0	57	31	5		- 7 -		NP	6	A-1-a*
1359+00 55'Lt	0.0-3.5	0	2	31		37	30	21	3	14	A-4a
	3.5-8.0	64	21	10		- 5 -		NP	3	A-1-a
	8.0-14.0	41	17	20		13	9	NP	5	7	A-1-b*
1362+00 42'Lt	0.5-4.0	8	13	40		7	27	23	8	13	A-2-4
	4.0-9.0	50	38	5		- 7 -		NP	6	5	A-1-a*
	9.0-14.0	9	16	45		16	14	NP	6	11	A-3a*

STATION & OFFSET	DEPTH FROM-TO	% AGG.	% C.S.	% F.S.	% SILT	% CLAY	L.L.	P.I.	% W.C.	SHTL CLASS.
1365+10 20'Lt	0.0-4.0	0	10	25	35	30	24	7	12	A-4a
	4.0-9.0	62	21	7		- 10 -	NP	NP	10	A-1-a*
	9.0-14.0	67	16	6		- 11 -	NP	NP	7	A-1-a
	14.0-18.0	66	17	5		- 12 -	NP	NP	8	A-1-a
1368+00 22'Lt	0.0-5.5	16	20	28	14	22	21	4	11	A-4a*
	5.5-12.0	26	35	19	9	11	NP	NP	7	A-1-b
1371+95 25'Lt	0.0-4.0	0	15	34	38	13	33	6	15	A-4a*
	4.0-10.0	52	21	5	11	11	NP	NP	13	A-1-b
1374+90 27'Lt	0.0-6.0	0	31	41	8	20	NP	NP	15	A-3a*
	6.0-12.0	58	20	9	8	6	NP	NP	7	A-1-a
1377+88 30'Lt	0.0-6.0	0	3	11	50	36	38	10	19	A-4b*
	6.0-12.0	66	19	4	7	4	NP	NP	8	A-1-a
1382+85 32'Lt	0.0-6.0	0	4	25	44	27	23	3	19	A-4a*
	6.0-10.0	42	24	5	22	7	NP	NP	8	A-2-4
	10.0-16.0	54	20	10	10	6	NP	NP	6	A-1-b
				LICK RUN ROAD						
16+00 10'Lt	0.0-5.0	0	2	3	37	58	34	12	23	A-6a*
	5.0-10.0	0	2	3	32	43	32	13	24	A-6a
19+50 CL	0.5-4.0	0	6	23	42	29	26	5	11	A-4a
	4.0-11.0	0	1	4	47	48	32	11	20	A-6a
	11.0-14.0	0	1	2	33	64	37	14	22	A-6a
22+00 CL	0.3-4.0	0	1	6	61	32	32	10	16	A-4b
	4.0-11.0	0	0	6	43	51	45	13	23	A-6b
	11.0-18.0	36	36	15		- 13 -	NP	NP	9	A-1-b
25+00 CL	0.5-6.0	11	15	44	13	17	NP	NP	10	A-3a
	6.0-12.0	54	11	9	13	8	NP	NP	10	A-2-4
33+00 CL	0.0-4.0	30	24	11	14	21	26	16	17	A-2-6*
	4.0-10.0	11	14	42	21	12	NP	NP	10	A-3a

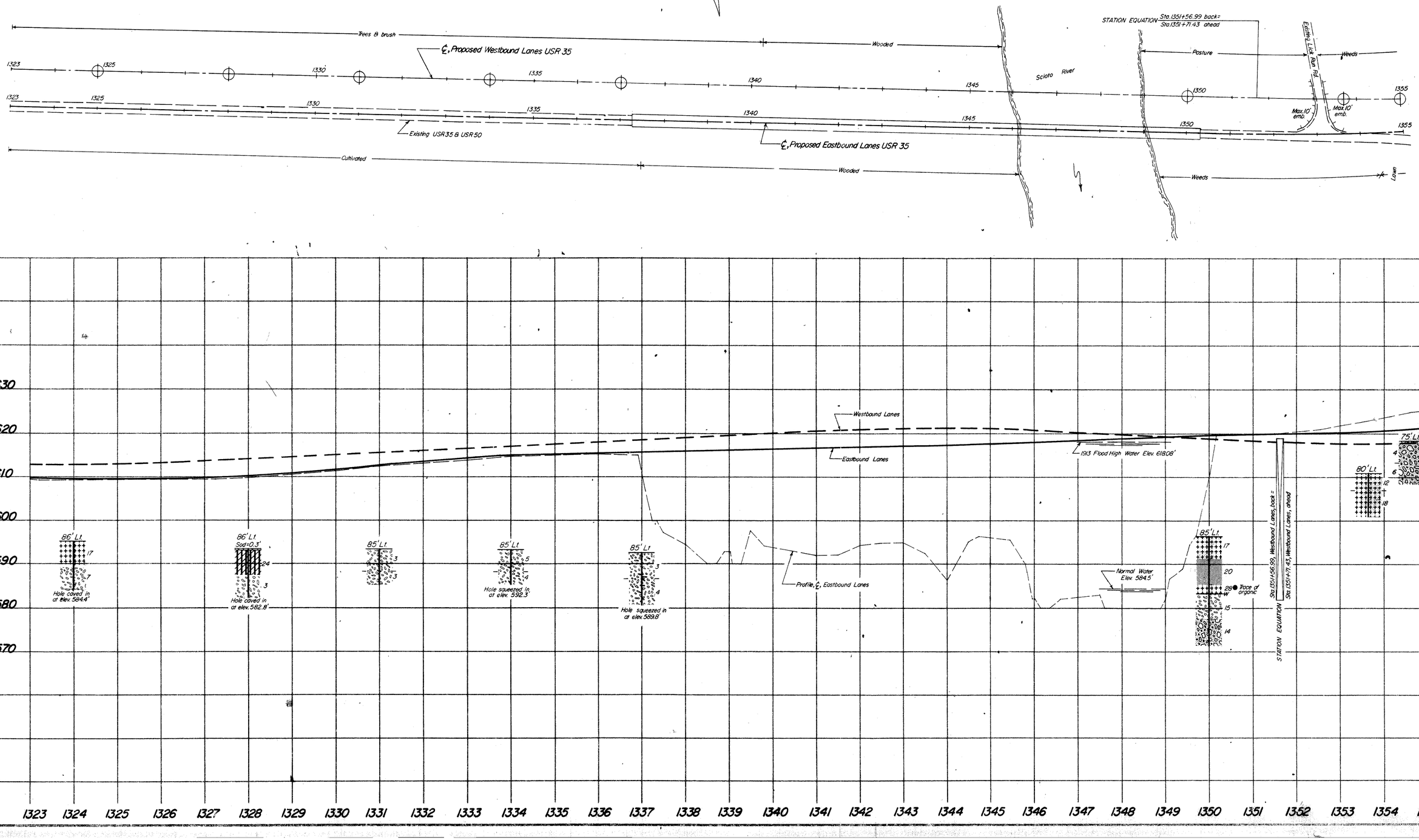
STATION & OFFSET	DEPTH FROM-TO	% AGG.	% C.S.	% F.S.	% SILT	% CLAY	L.L.	P.I.	% W.C.	SHTL CLASS.
				ATHENS ROAD						
164+00 CL	0.0-3.0	14	3	35	19	24	27	12	11	A-6a
	3.0-8.0	60	28	12		- 5 -	NP	NP	5	A-1-a
	8.0-14.0	46	30	13		- 11 -	NP	NP	6	A-1-b
171+00 CL	0.0-6.0	6	3	43	30	13	NP	NP	7	A-4a
	6.0-12.0	10	15	34	19	17	NP	NP	13	A-4a
	12.0-15.0	53	36	7		- 4 -	NP	NP	6	A-1-a
175+00 CL	0.0-6.0	11	15	37	5	32	NP	NP	7	A-4a
	6.0-12.0	31	32	10	15	12	NP	NP	9	A-2-4
179+00 CL	0.0-4.0	23	13	16	33	10	38	8	13	A-4a*
	4.0-10.0	32	34	26		- 11 -	NP	NP	7	A-1-b
183+00 CL	0.0-3.0	14	11	27	9	39	28	12	15	A-6a*
188+00 CL	0.0-5.0	12	18	34	19	23	23	7	16	A-4a*
	5.0-10.0	0	17	35	23	25	24	8	18	A-4a
				RAMP C						
69+00 BL	0.0-4.0	24	13	15	23	15	23	14	16	A-6a
	4.0-10.0	43	28	8		- 9 -	NP	NP	11	A-1-b
	10.0-14.0	56	27	10		- 7 -	NP	NP	6	A-1 a
				TEMPORARY CONNECTOR						
86+00 98'Lt	0.0-6.0	0	13	50	13	24	NP	NP	17	A-4a*
	6.0-10.0	8	27	43	10	12	NP	NP	11	A-3a
88+20 178'Lt	0.0-5.0	11	16	44	15	14	NP	NP	11	A-3a
	5.0-10.0	0	38	42	10	10	NP	NP	7	A-3a
88+50 BL	0.0-6.0	0	1	22	50	27	27	10	15	A-4b
	6.0-10.0	0	18	52	12	17	NP	NP	10	A-4a
	10.0-12.0	59	23	10		- 8 -	NP	NP	7	A-1-a

SOIL PROFILE

2
25

ROSS COUNTY
ROS-35-25.05

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

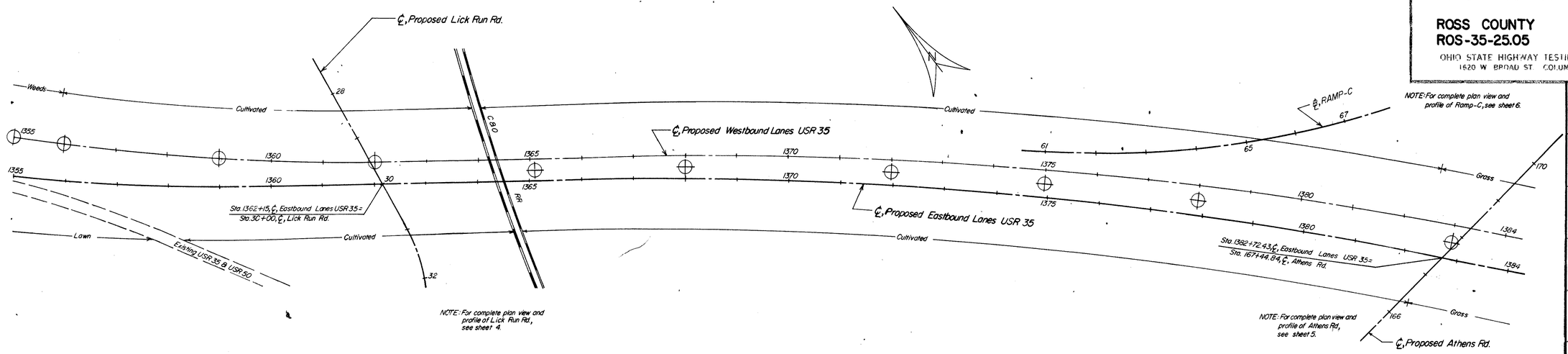


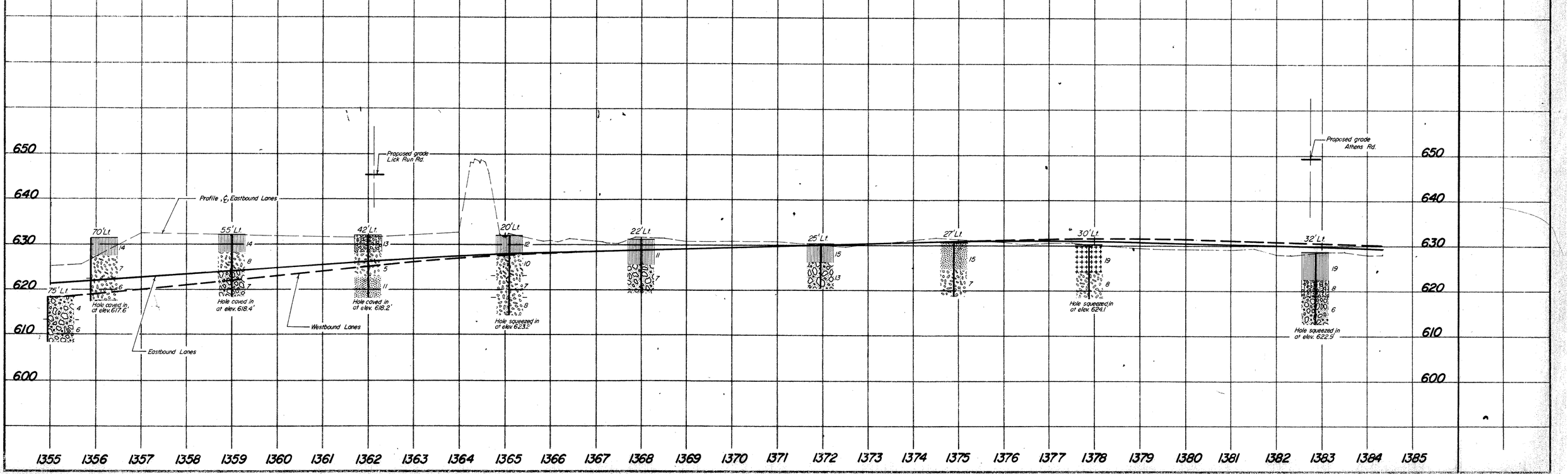
SOIL PROFILE

3
25

ROSS COUNTY
ROS-35-25.05

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





SOIL PROFILE

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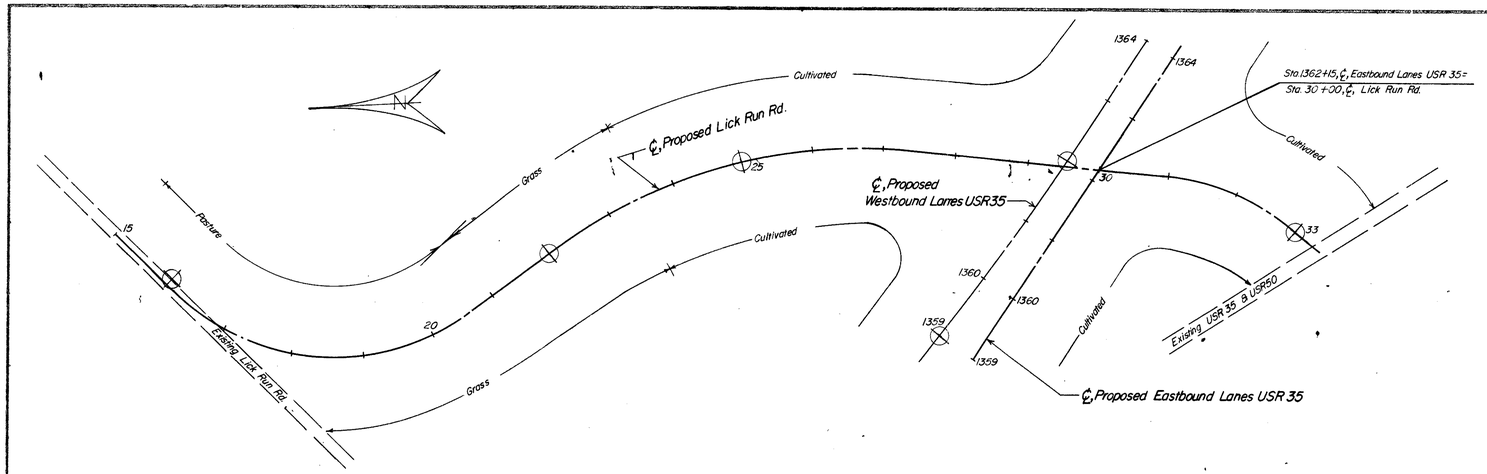
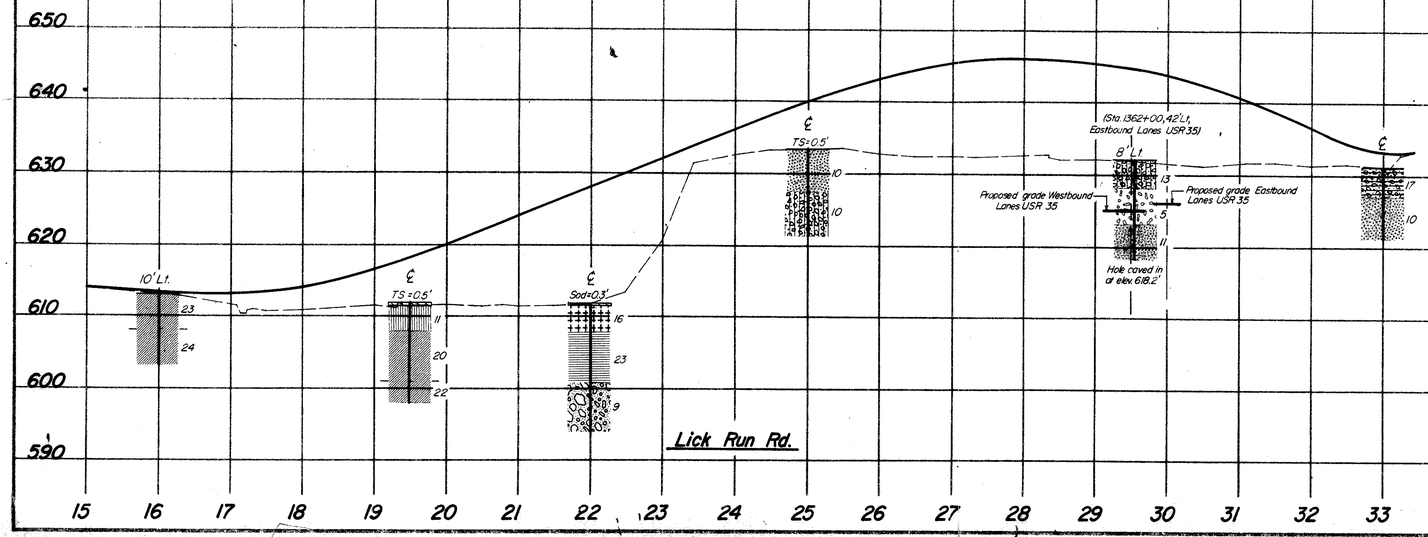
ROSS COUNTY
ROS-35-25.05

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





SOIL PROFILE

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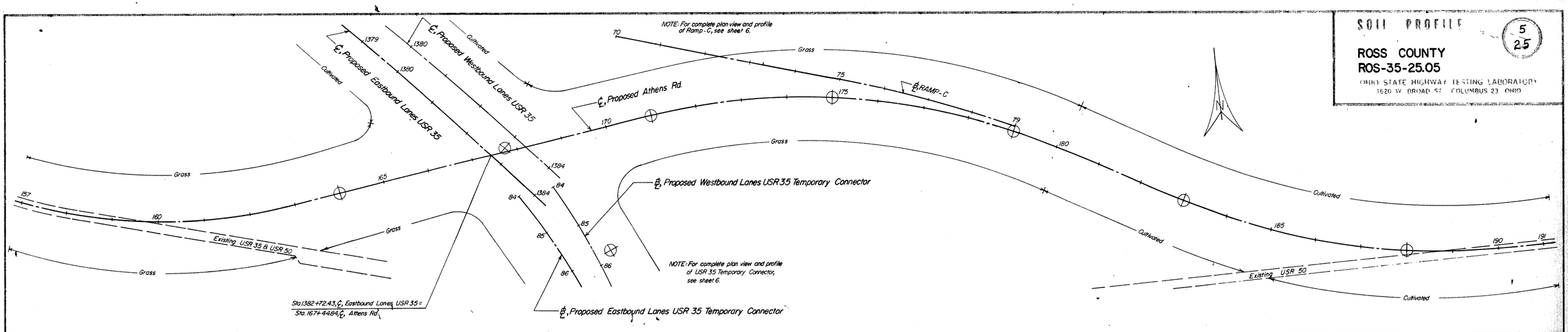
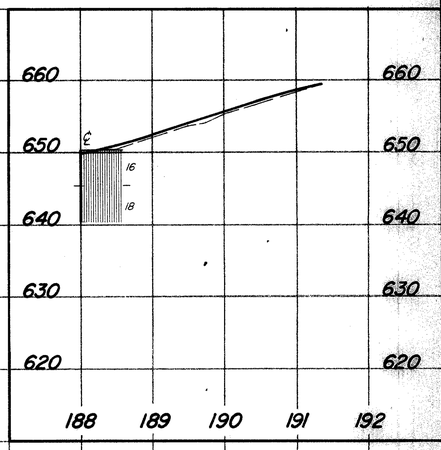
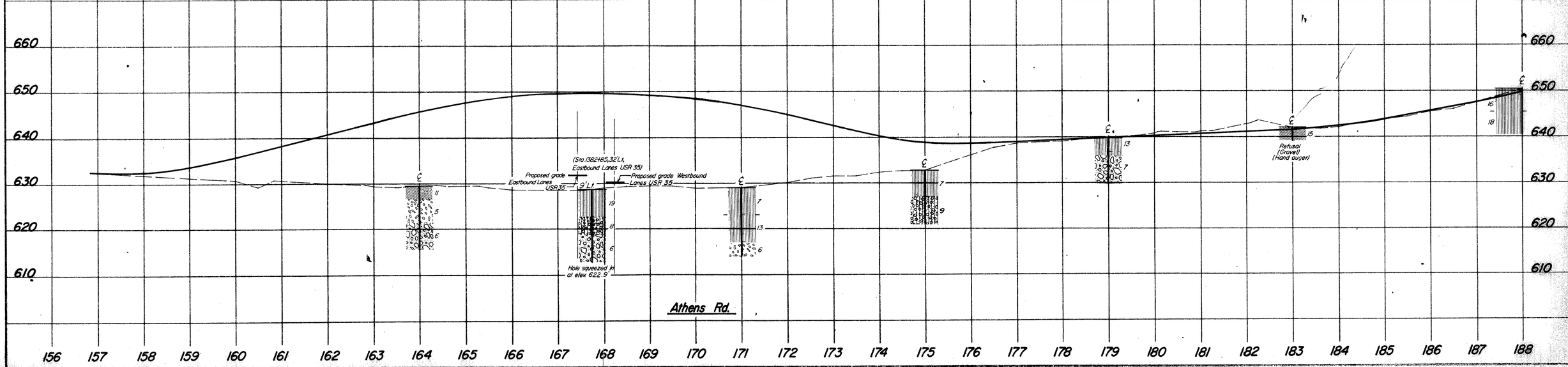
ROSS COUNTY
ROS-35-25.05

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







SOIL PROFILE

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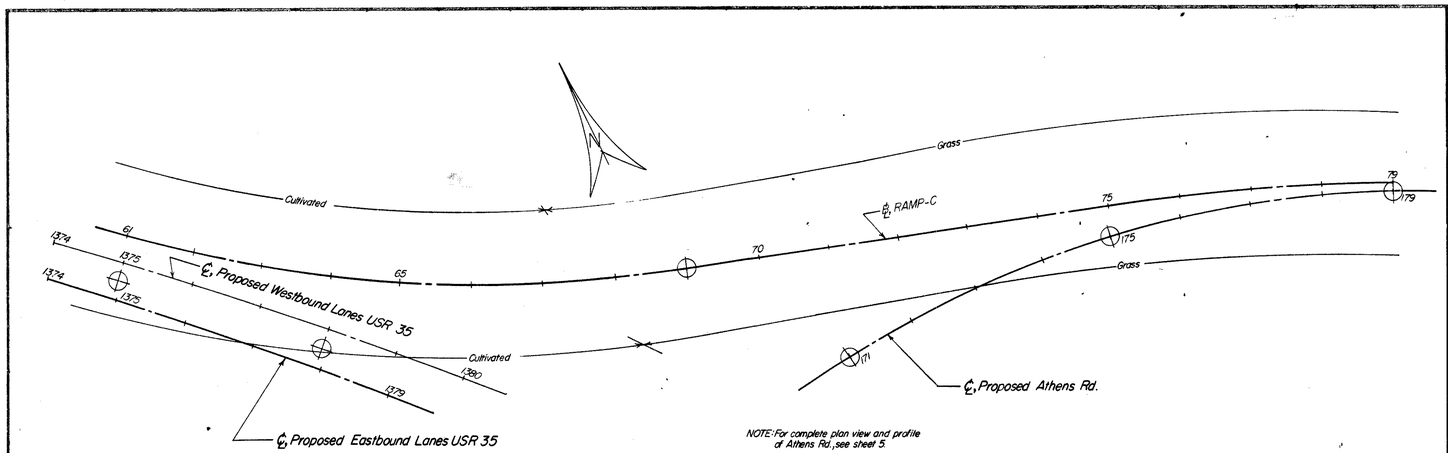
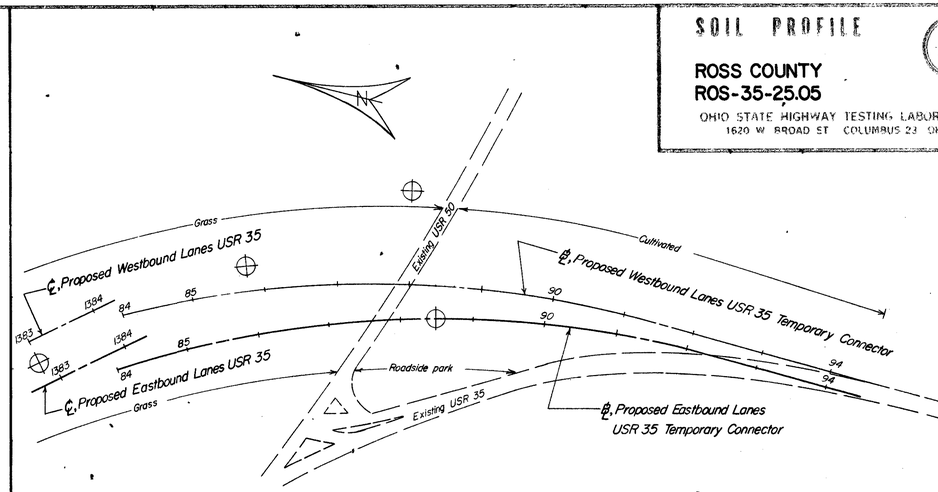
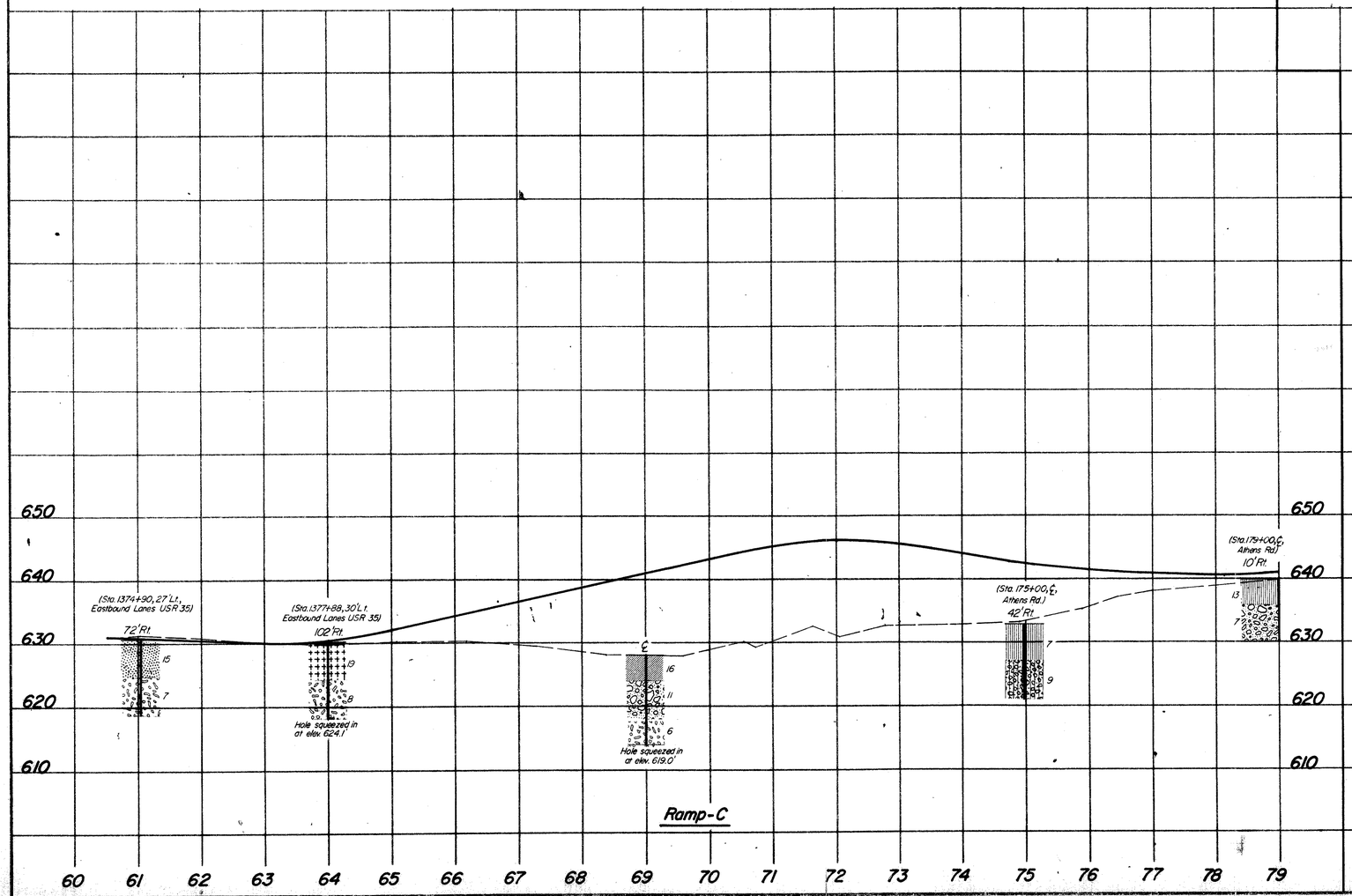
ROSS COUNTY
ROS-35-25.05

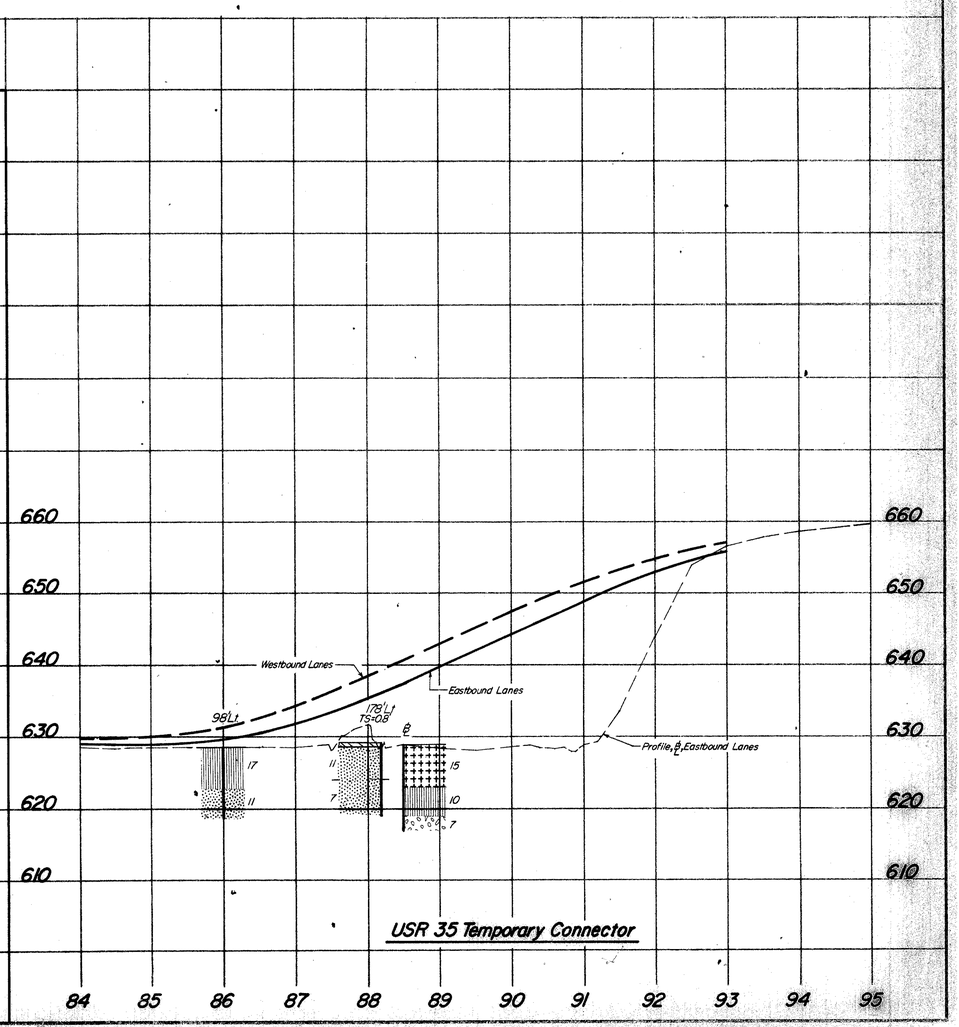
OHIO STATE HIGHWAY TESTING LABORATORY
1620 W BROAD ST COLUMBUS 23 OHIO



NOTE: For complete plan view and profile of Athens Rd., see sheet 5.







ROSS COUNTY
ROS-35-25.05

GEOLOGY OF THE SITE

The structure site is located on the broad flat flood plain of the Scioto River, which occupies a deep pre-glacial stream valley. Valley fill, reported to be in excess of 100 feet deep, overlies shale bedrock, of Devonian age.

EXPLORATION

The exploration consisted of five drive sample borings and ten drive rod penetration tests, made between September 9 and 23, 1963.

INVESTIGATIONAL FINDINGS

The borings disclose that loose to very dense sands and gravels occur from ground surface to depths of at least 61 feet, elevation 532 feet. The borings were terminated at 61-foot depth, elevations 536 to 532 feet, after penetrating in excess of 30 feet of material requiring 25 blows or more per foot in the standard penetration test.

The rod soundings, generally penetrating to greater depths than the borings, met relatively uniform resistance to penetration with increase in depth and were terminated at 59 to 74 feet depths, elevations 528 to 522 feet, considered to be in dense sand and gravel similar to that revealed by the borings at a higher elevation.

No test penetrated to bedrock surface.

Free water was encountered in rod sounding holes numbers 1, 4, 5, 8, 9, 13, and 15, between elevations 580 and 583 feet.

LEGEND

- Auger Boring - Plan View.
- Press and/or Drive Sample and/or Core Boring - Plan View.
- Drive Rod Penetration Resistance - Soundings - Plan View
- R — Electrical Resistivity Probe - Plan View.
- A — Indicates Auger Boring.
- B — Indicates Press and/or Drive Sample and/or Core Boring.
- R — Electrical Resistivity Probe plotted to vertical scale only.
- TR — Top of Rock
- Water saturated zone.
- TD — Total Depth.
- Horizontal bar on log indicates the depth the sample was taken.
- X-Y — Figures to the right of boring log in profile view indicate the number of blows for "Standard Penetration" test. X = First 6 inches, Y = Second 6 inches
- Casing
- Resistance "R" ≤ 10,000 lbs.
- Resistance "R" ≥ 10,000 lbs.
- 1/16 — Indicates final measurement of penetration in inches.
- W — Indicates Free Water elevation.
- Indicates Static Water elevation.
- Footing — Capped pile
- Footing on pile

SYMBOLS OF ROCK TYPES

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

GENERAL INFORMATION

Drive Rod Penetration Tests

Drive rod penetration resistance tests constitute driving a 1.3.5 inch diameter steel rod, with a 45° cone point, into the ground, using a 122-pound drop-hammer with a free fall of five feet. At one or two-foot depth intervals, a measurement is taken to determine the amount of penetration achieved in three hammer drops. This reading is converted to an empirical value for capacity "R", in thousands of pounds (which is a measure of both the point resistance and frictional resistance on the rod), by using charts prepared by the Ohio Department of Highways, Bureau of Bridges, on the basis of correlation study of rod penetration with past performance of pile driving. For interpretation, a graph is prepared by plotting the value "R" against the depth at which the reading was taken, and connecting the plotted points. The curve so obtained reflects the density of subsurface materials in a manner that can be readily compared with data from similar tests at other locations on the structure site. From this comparison, the overall uniformity of subsurface conditions may be evaluated.

Drive Sample Borings - Drive - Press Sample Borings

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

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

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

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

Particle Size Definitions

8"	3"	2.0mm		0.42mm		0.074mm	0.005mm
Boulders	Cobbles	Gravel	Coarse Sand		Fine Sand	Silt	Clay
		No 10 sieve		No 40 sieve		No 200 sieve	

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

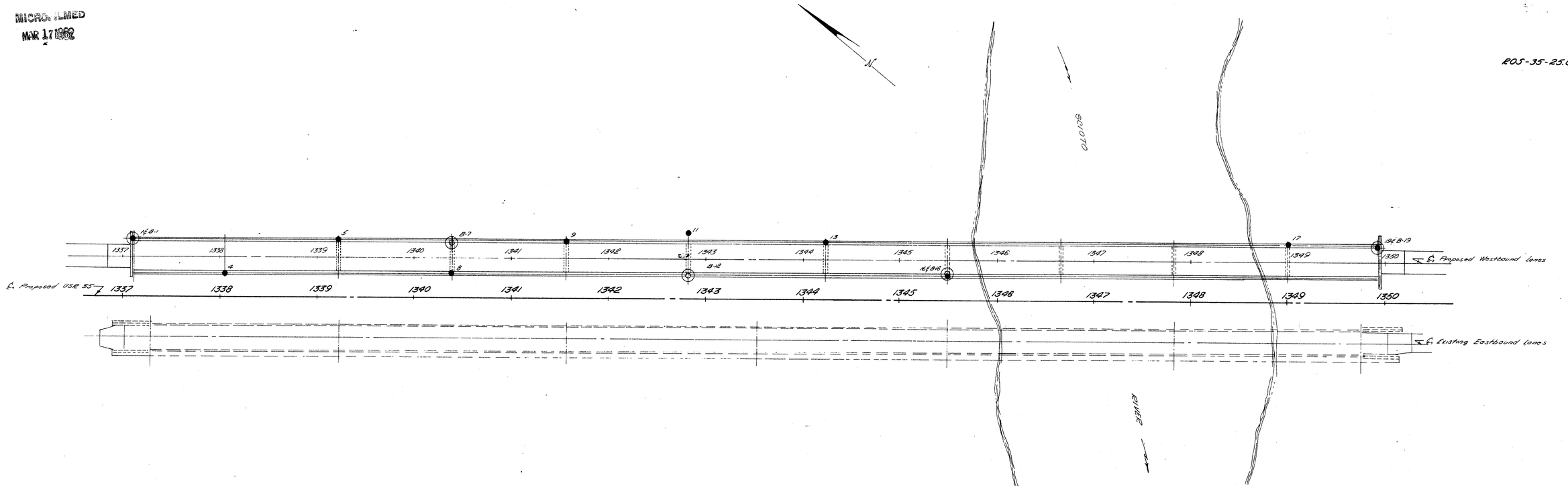
OHIO STATE HIGHWAY
TESTING LABORATORY
1620 WEST BROAD STREET, COLUMBUS 23, OHIO

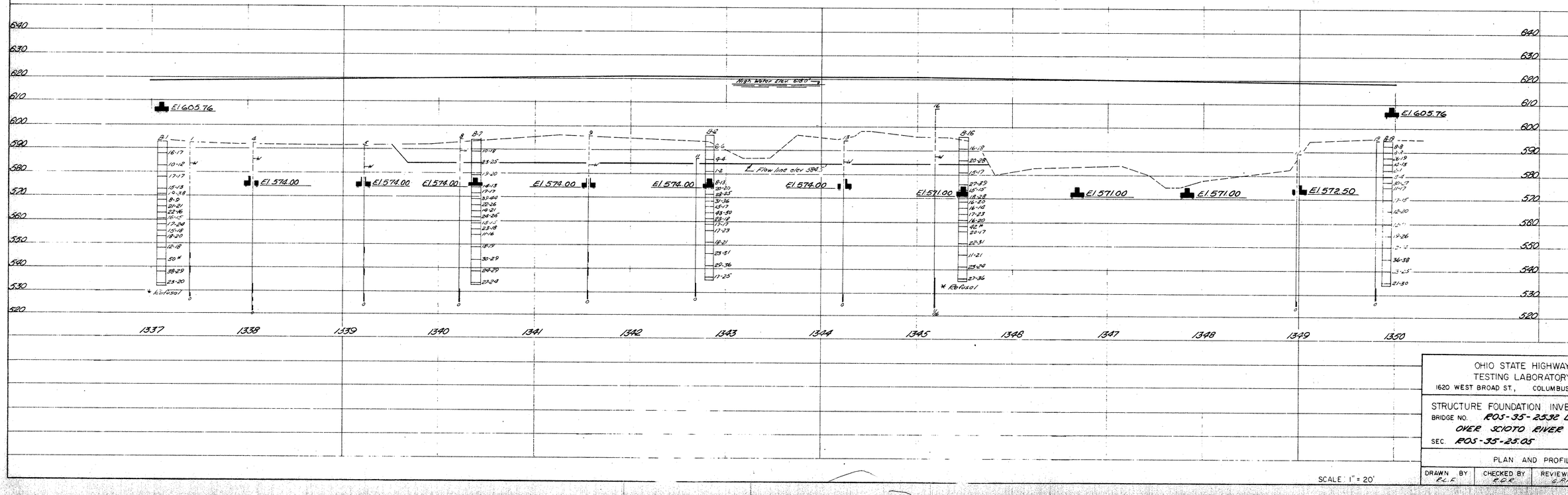
STRUCTURE FOUNDATION INVESTIGATION
BRIDGE NO ROS-35-25.32 L
OVER SCIOTO RIVER
SEC ROS-35-25.05

CHECKED BY	REVIEWED BY	DATE
RDE	GPH	10-7-63

8
2.5

ROS-35-25.05





SCALE 1" = 20'

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

STRUCTURE FOUNDATION INVESTIGATION
BRIDGE NO. ROS-35-2532 L
OVER SCIOTO RIVER
SEC. ROS-35-25.05

PLAN AND PROFILE

DRAWN BY	CHECKED BY	REVIEWED BY	DATE
R.L.F.	E.O.K.	G.P.N.	

R05-35-25.05

LOG OF BORING

Date Started 9-9-63 | Sampler Type SS | Dia. 1 3/8" | Water Elev.
Date Completed 9-9-63 | Casing Length | Dia.
Boring No. B-1 | Station & Offset 1337+10, 60' Lt (REAR ABUTMENT) | Surface Elev. 593.0'

Elev.	Depth	Std. Pen. (N)	Rec. ft.	Loss ft.	Description	Sample No.	% Agg	% C.S.	% F.S.	% Silt	% Clay	L.L.	Pl.	W.C.	SHTL Class.
593.0	0														
	2														
589.0	4														
	6	10/12			Brown Silty Gravelly Sand	1		V	I	S	U	A	L	14	
	8														
584.0	10	10/12			Brown Silty Sand	2		V	I	S	U	A	L	21	
	12														
579.0	14														
	16	17/12			Brownish-Gray Silty Gravelly Sand	3	36	35	17	12	-	NP	NP	16	
	18														
574.0	20	14/12			Gray Sandy Gravel	4	59	24	9	8	-	NP	NP	13	
570.5	22	10/24			Gray Gravel	5		V	I	S	U	A	L		
568.0	24	8/0			Gray Gravel	6		V	I	S	U	A	L		
565.5	26														
	28	21/21			Gray Gravelly Sand	7	31	41	18	10	-	NP	NP	16	
560.5	30	22/16			Gray Gravelly Sand	8	30	42	22	6	-	NP	NP	17	
	32														
555.5	34	16/15			Gray Gravelly Sand	9	23	41	29	7	-	NP	NP	18	
553.0	36	17/24			Gray Gravelly Sand	10		V	I	S	U	A	L	11	
	38	15/19			Gray Gravelly Sand	11	46	31	15	8	-	NP	NP	13	
549.0	40	18/20			Gray Sandy Gravel	12	68	18	9	5	-	NP	NP	13	
	42														
	44														
	46	12/18			Gray Sand (Wash Sample)	13		V	I	S	U	A	L		
543.0	48														
	50	50*			Gray Sandy Gravel	14	53	28	11	8	-	NP	NP	10	
538.0	52														
	54														
	56	26/20			Gray Sandy Gravel	15	59	23	12	6	-	NP	NP	17	
533.0	58														
	60	21/6			Gray Gravelly Sand	16	38	38	14	10	-	NP	NP	13	

*Refusal

BOTTOM OF BORING

LOG OF BORING

Date Started 9-10-63 | Sampler Type SS | Dia. 1 3/8" | Water Elev.
Date Completed 9-10-63 | Casing Length | Dia.
Boring No. B-2 | Station & Offset 1340+39, 56' Lt (THIRD PIER) | Surface Elev. 594.4'

Elev.	Depth	Std. Pen. (N)	Rec. ft.	Loss ft.	Description	Sample No.	% Agg	% C.S.	% F.S.	% Silt	% Clay	L.L.	Pl.	W.C.	SHTL Class.
594.4	0														
	2														
589.4	4														
	6	10/18			Brown Sandy Gravel	1	77	14	5	4	-	NP	NP	9	
	8														
584.4	10														
	12	23/25			Brown Sandy Gravel	2	75	13	5	7	-	NP	NP	11	
	14														
579.4	16	19/20			Brown Sandy Gravel	3	72	16	6	6	-	NP	NP	13	
	18														
	20	14/12			Gray Silty Gravelly Sand	4	39	29	17	9	6	NP	NP	15	
	22	17/17			Gray Gravelly Sand						-	NP	NP	10	
569.4	24	39/24			No Sample Recovered										
566.9	26														
	28	22/26			Gray Gravelly Sand	6	33	35	24	8	-	NP	NP	20	
564.4	30	14/21			Gray Gravelly Sand	7	17	29	47	7	-	NP	NP	19	
	32														
561.9	34	24/25			Gray Gravelly Sand	8	37	40	16	7	-	NP	NP	18	
559.4	36	15/15			Gray Sand	9	7	39	47	7	-	NP	NP	22	
	38	23/18			Brown Gravel	10		V	I	S	U	A	I		
	40														
	42														
	44														
	46														
	48														
	50														
	52														
	54														
	56														
	58														
	60														

LOG OF BORING

Date Started 9-11-63 | Sampler Type SS | Dia. 1 3/8" | Water Elev.
Date Completed 9-11-63 | Casing Length | Dia.
Boring No. B-12 | Station & Offset 1342+82, 25' Lt (FIFTH PIER) | Surface Elev. 596.5'

Elev.	Depth	Std. Pen. (N)	Rec. ft.	Loss ft.	Description	Sample No.	% Agg	% C.S.	% F.S.	% Silt	% Clay	L.L.	Pl.	W.C.	SHTL Class.
596.5	0														
	2														
591.5	4														
	6	6/6			Brown Gravelly Sandy Silt	1		V	I	S	U	A	L	17	
	8														
586.5	10	4/4			Brown Silty Gravelly Sand	2		V	I	S	U	A	L	21	
	12														
	14														
	16	1/2			Gray Silty Clay	3	0	4	8	24	64	47	19	21	
	18														
576.5	20	8/12			Gray Gravelly Sand	4	26	51	13	4	6	NP	NP	19	
574.0	22	20/20			Brownish-Gray Silty Gravelly Sand	5	19	43	20	10	8	NP	NP	16	
	24														
	26				Brown Gravel	6		V	I	S	U	A	L		
	28	3/12			Brown Gravelly Sand	7		V	I	S	U	A	L	19	
566.5	30	15/17			Gray Gravelly Sand	8	41	35	18	6	-	NP	NP	19	
564.0	32	43/60			Gray Silty Gravelly Sand	9	33	33	24	1	9	NP	NP	18	
561.5	34														
	36	24/24			Gray Gravelly Sand	10	16	37	40	7	-	NP	NP	20	
559.0	38	17/17			Gray Sand	11	0	42	53	5	-	NP	NP	24	
	40														
	42														
551.5	44														
	46														
	48														
	50														
	52														
	54														
	56														
	58														
	60														

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

STRUCTURE FOUNDATION INVESTIGATION
BRIDGE NO. R05-35-25.92 L
OVER SCIOTO RIVER
SEC. R05-35-25.05

BORING DATA

TYPED BY	CHECKED BY	REVIEWED BY	DATE

ROS-35-25.05

LOG OF BORING

Date Started 9-12-63 Sampler Type SS Dia. 1 3/8" Water Elev.
Date Completed 9-12-63 Casing: Length Dia.
Boring No. C-16 Station & Offset 1345+48, 28' Lt (SEVENTH PIER) Surface Elev. 596.1'

Elev.	Depth	Std. Pen. (N)	Rec. ft.	Loss ft.	Description	Sample No.	Physical Characteristics % Agg.	% C.S.	% F.S.	% Silt	% Clay	L.L.	Pl.	W.C.	SHTL Class.
596.1	0														
	2														
	4														
591.1	6	16/18			Brown Sandy Gravel	1	72	11	8	4	5	NP	NP	9	
	8														
586.1	10	20/28			Brown Sandy Gravel	2	74	13	5	3	5	NP	NP	9	
	12														
	14														
581.1	16	15/17			Brown Gravel	3	85	7	5	-3	-	NP	NP	12	
	18														
576.1	20	27/39			Gray Gravelly Sand	4		V	I	S	U	A	L	22	
573.6	22	15/15			Gray Gravelly Sand	5	20	54	19	-7	-	NP	NP	20	
571.1	24	18/28			Gray Sand	6	0	20	70	-10	-	NP	NP	25	
568.6	26	16/20			Gray Silty Gravelly Sand	7	21	15	51	-13	-	NP	NP	18	
566.1	28	16/14			Gray Gravelly Sand	8	25	28	40	-7	-	NP	NP	18	
563.6	30	17/23			Gray Gravelly Sand	9	38	37	18	-7	-	NP	NP	19	
561.1	32	16/20			Gray Sand	10	5	43	42	-10	-	NP	NP	22	
558.6	34	42*			Gray Gravelly Sand	11		V	I	S	U	A	L	23	
556.1	36	20/17			Gray Gravelly Sand	12	19	40	33	-8	-	NP	NP	17	
	38														
	40														
551.1	42	22/31			Gray Sandy Gravel	13	47	32	14	-7	-	NP	NP	16	
	44														
546.1	46	11/21			Gray Gravelly Sand	14	44	22	27	-7	-	NP	NP	15	
	48														
541.1	50	23/24			Gray Sandy Gravel	15	51	34	9	-6	-	NP	NP	15	
	52														
	54														
536.1	56	27/36			Gray Sandy Gravel	16	58	29	9	-4	-	NP	NP	13	
535.1	58				BOTTOM OF BORING										
	60														

*REFUSAL

LOG OF BORING

Date Started 9-10-63 Sampler Type SS Dia. 1 3/8" Water Elev.
Date Completed 9-10-63 Casing: Length Dia.
Boring No. B-19 Station & Offset 1349+92, 58' Lt (FORWARD ABUTMENT) Surface Elev. 595.0'

Elev.	Depth	Std. Pen. (N)	Rec. ft.	Loss ft.	Description	Sample No.	Physical Characteristics % Agg.	% C.S.	% F.S.	% Silt	% Clay	L.L.	Pl.	W.C.	SHTL Class.
595.0	0														
	2														
592.5	4	8/8			Brownish-Gray Silt and Clay	1	0	0	3	51	46	38	14	21	
590.0	6	8/8			Brownish-Gray Sandy Silt	2	0	1	25	42	32	NP	NP	17	
587.5	8	26/19			Brown Silty Sandy Gravel	3	69	11	6	10	4	NP	NP	8	
585.0	10	14/13			Brown Sandy Gravel	4	71	11	8	6	4	NP	NP	13	
582.5	12	2/1			Gray Silty Gravel	5		V	I	S	U	A	L	40	
580.0	14	4/4			Brown Silty Sandy Gravel	6	69	13	7	7	4	NP	NP	13	
577.5	16	30/27			Gray Gravel	7		V	I	S	U	A	L		
575.0	18	11/17			Brownish-Gray Gravelly Sand	8	44	26	25	-5	-	NP	NP	18	
	20														
570.0	22	17/15			Brown Silty Gravelly Sand	9	32	26	30	-12	-	NP	NP	19	
	24														
565.0	26	12/20			Gray Sand	10	12	49	32	-7	-	NP	NP	17	
	28														
560.0	30	12/19			Gray Sand	11	14	33	44	-9	-	NP	NP	24	
	32														
555.0	34	17/26			Gray Sand	12		V	I	S	U	A	L	18	
	36														
550.0	38	12/14			Gray Sandy Gravel	13	73	21	4	-2	-	NP	NP	15	
	40														
545.0	42	36/38			Red Gravel	14		V	I	S	U	A	L		
	44														
540.0	46	23/25			Gray Sandy Gravel	15	47	32	13	-8	-	NP	NP	13	
	48														
535.0	50	21/30			Brown Silty Gravelly Sand	16	27	41	24	-12	-	NP	NP	16	
534.0	52				BOTTOM OF BORING										

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

STRUCTURE FOUNDATION INVESTIGATION
BRIDGE NO. RDS-35-25.32 L
OVER SCIOTO RIVER
SEC. RDS-35-25.05

BORING DATA

TYPED BY	CHECKED BY	REVIEWED BY	DATE
WRS	CC	CC	

Test Location No. 1
Station & Offset 1337+10, 60' LT. REAR ABUTMENT
Surface Elev. 592.8' Water Elev. 583.8'
Piling
Hammer
Formula
Reference
Rod Condition 6000

Test Location No. 4
Station & Offset 1338+05, 25' LT. FIGHT PIER
Surface Elev. 592.5' Water Elev. 585.5'
Piling
Hammer
Formula
Reference
Rod Condition 6000

Test Location No. 5
Station & Offset 1339+22, 60' LT. SECOND PIER
Surface Elev. 594.6' Water Elev. 582.6'
Piling
Hammer
Formula
Reference
Rod Condition 6000

Test Location No. 8
Station & Offset 1340+39, 26' LT. THIRD PIER
Surface Elev. 594.6' Water Elev. 582.6'
Piling
Hammer
Formula
Reference
Rod Condition 6000

Test Location No. 9
Station & Offset 1341+56, 58' LT. FOURTH PIER
Surface Elev. 596.0' Water Elev. 584.0'
Piling
Hammer
Formula
Reference
Rod Condition 6000

Test Location No. 11
Station & Offset 1342+82, 68' LT. FIFTH PIER
Surface Elev. 596.8' Water Elev. DRY
Piling
Hammer
Formula
Reference
Rod Condition 6000

Test Location No.
Station & Offset
Surface Elev. Water Elev.
Piling ROS-35-2505
Hammer
Formula
Reference
Rod Condition

610 606 602 598 594 590 586 582 578 574 570 566 562 558 554 550 546 542 538 534 530 526 522 518

TEST ROD

10 20 30 40 50 60 70 80 90 100
Capacity "R" in Thousands of Pounds

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

STRUCTURE FOUNDATION INVESTIGATION
BRIDGE NO. ROS-35-2532L
OVER SCIOTO RIVER
SEC. ROS-35-2505

DRIVE ROD PENETRATION RESISTANCE DATA

PLOTTED BY	CHECKED BY	REVIEWED BY	DATE
R.P.W.	E.D.R.	G.P.W.	10-7-63

Test Location No. ___
Station & Offset ___
Surface Elev. ___ Water Elev. ___
Piling ___
Hammer ___
Formula ___
Reference ___
Rod Condition ___

610 606 602 598 594 590 586 582 578 574 570 566 562 558 554 550 546 542 538 534 530 526 522

Capacity "R" in Thousands of Pounds

Test Location No. ___
Station & Offset ___
Surface Elev. ___ Water Elev. ___
Piling ___
Hammer ___
Formula ___
Reference ___
Rod Condition ___

Capacity "R" in Thousands of Pounds

Test Location No. ___
Station & Offset ___
Surface Elev. ___ Water Elev. ___
Piling ___
Hammer ___
Formula ___
Reference ___
Rod Condition ___

Capacity "R" in Thousands of Pounds

Test Location No. 13
Station & Offset 1349+23, 58' LT.
SIXTH PIER
Surface Elev. 598.1' Water Elev. 585.1'
Piling ___
Hammer ___
Formula ___
Reference ___
Rod Condition 6000

TEST ROD

Capacity "R" in Thousands of Pounds

Test Location No. 16
Station & Offset 1345+98, 25' LT.
SEVENTH PIER
Surface Elev. 592.8' Water Elev. 582.2'
Piling ___
Hammer ___
Formula ___
Reference ___
Rod Condition 6000

TEST ROD

Capacity "R" in Thousands of Pounds

Test Location No. 17
Station & Offset 1348+99, 58' LT.
TENTH PIER
Surface Elev. 582.1' Water Elev. DRY
Piling ___
Hammer ___
Formula ___
Reference ___
Rod Condition 6000

TEST ROD

Capacity "R" in Thousands of Pounds

Test Location No. 19
Station & Offset 1349+98, 58' LT.
FORWARD ABUTMENT
Surface Elev. 595.0' Water Elev. DRY
Piling ___
Hammer ___
Formula ___
Reference ___
Rod Condition 6000

TEST ROD

Capacity "R" in Thousands of Pounds

Test Location No. ___
Station & Offset ___
Surface Elev. ___ Water Elev. ___
Piling 1205-35-25.05
Hammer ___
Formula ___
Reference ___
Rod Condition ___

606 602 598 594 590 586 582 578 574 570 566 562 558 554 550 546 542 538 534 530

Capacity "R" in Thousands of Pounds

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

STRUCTURE FOUNDATION INVESTIGATION
BRIDGE NO. 1205-35-2532 L
OVER SCIOTO RIVER
SEC. 1205-35-25.05

DRIVE ROD PENETRATION RESISTANCE DATA

PLOTTED BY	CHECKED BY	REVIEWED BY	DATE
RPW	ROR	SAP	2-26-62

ROSS COUNTY
ROS-35-25.05

GEOLOGY OF THE SITE

The structure site is located upon the terraced floodplain of the Scioto River, which occupies a valley formed by pre-glacial and inter-glacial streams. Deep alluvial deposits overlie bedrock, of Devonian age.

EXPLORATION

The exploration consisted of two drive sample borings and five drive rod penetration tests, made between July 17 and 19 and on September 5 and 6, 1963.

INVESTIGATIONAL FINDINGS

The borings disclosed moist, very loose to very dense silty and sandy gravels, and occasional silty and gravelly sands. The borings were terminated at 45 and 51-foot depths, elevations 586 and 581 feet, after penetrating more than 30 feet of material requiring in excess of 30 blows per foot in the standard penetration test.

The rod soundings, penetrating to greater depths, met very low and low to medium-high, erratic resistance to penetration with increase in depth and were terminated at 82 to 109-foot depths, elevations 550 to 524 feet, upon encounter with medium-resistance or refusal to penetration, considered to be in materials similar to those at higher elevations, as revealed by the borings.

No free water was observed in the rod sounding holes.

LEGEND

- Auger Boring - Plan View.
- Press and/or Drive Sample and/or Core Boring - Plan View.
- Drive Rod Penetration Resistance - Soundings - Plan View.
- (R) Electrical Resistivity Probe - Plan View.
- A — Indicates Auger Boring.
- B — Indicates Press and/or Drive Sample and/or Core Boring.
- (R) Electrical Resistivity Probe plotted to vertical scale only.
- TR — Top of Rock
- Water saturated zone.
- TD — Total Depth.
- Horizontal bar on log indicates the depth the sample was taken.
- X-Y — Figures to the right of boring log in profile view indicate the number of blows for "Standard Penetration" test. X = First 6 inches; Y = Second 6 inches
- Casing
- Resistance "R" < 10,000 lbs.
- Resistance "R" > 10,000 lbs.
- 1/16 — Indicates final measurement of penetration in inches.
- W — Indicates Free Water elevation.
- Indicates Static Water elevation.
- Footing ▬ Capped pile
- Footing on pile

SYMBOLS OF ROCK TYPES

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

GENERAL INFORMATION

Drive Rod Penetration Tests

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

Drive Sample Borings - Drive - Press Sample Borings

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

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

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

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

Particle Size Definitions

Boulders	Cobbles	Gravel	Coarse Sand	Fine Sand	Silt	Clay
8"	3"	2.0mm (No. 10 sieve)	0.42mm (No. 40 sieve)	0.074mm (No. 200 sieve)	0.005mm	

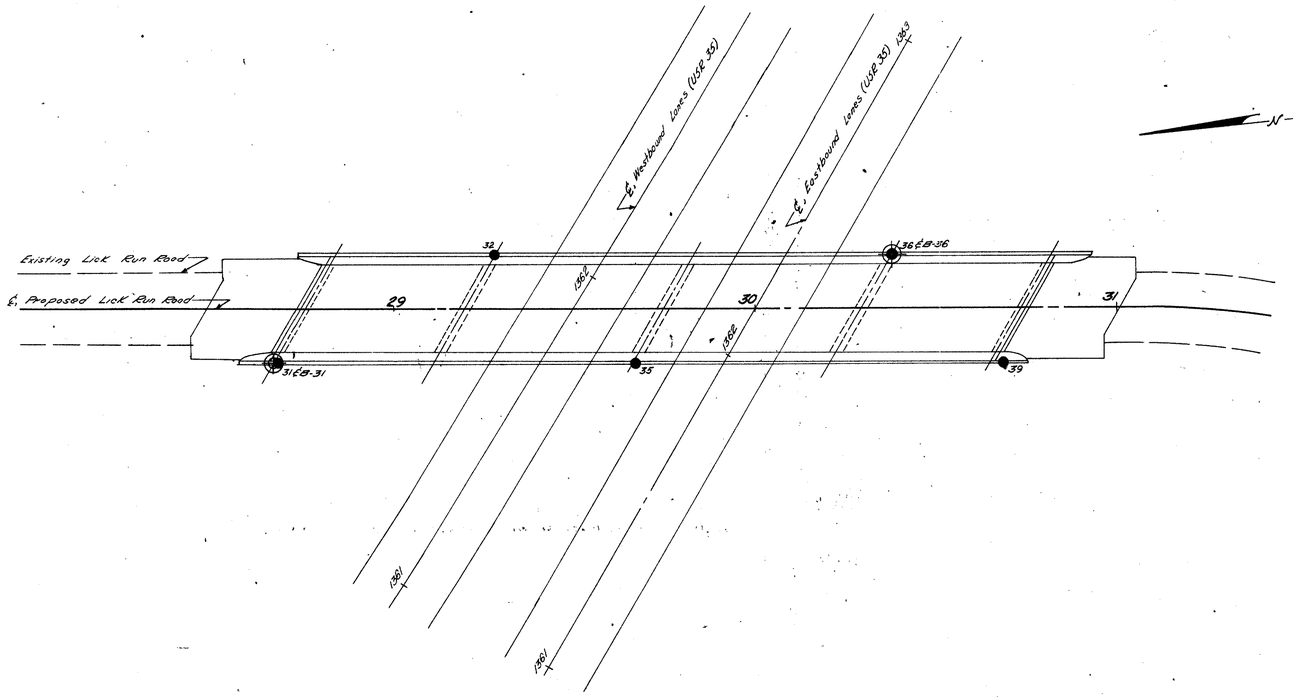
NOTE: Information shown by this subsurface investigation was obtained solely for the use in establishing design controls for the project. The State of Ohio does not guarantee the accuracy of this data and it is not to be construed as a part of the plans governing construction of the project.

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

STRUCTURE FOUNDATION INVESTIGATION
BRIDGE NO. ROS-35-2580
USR 35 UNDER LICK RUN ROAD
SEC. ROS-35-25.05

CHECKED BY	REVIEWED BY	DATE
R.P.W.	R.O.E.	9-20-63

ROS-35-25.05



SCALE 1" = 20'

OHIO STATE HIGHWAY TESTING LABORATORY			
1620 WEST BROAD ST., COLUMBUS 23, OHIO			
STRUCTURE FOUNDATION INVESTIGATION BRIDGE NO. ROS-35-2580 USR 35 UNDER LICK RUN ROAD SEC. ROS-35-25.05			
PLAN AND PROFILE			
DRAWN BY E.L.F.	CHECKED BY C.F.M.	REVIEWED BY R.O.E.	DATE 9-25-63

LOG OF BORING

Date Started 9-5-63
Date Completed 9-5-63
Boring No. B-31
Sampler Type SS Dia. 1 3/8"
Casing: Length 25' Dia. 3 1/2"
Station & Offset 28+67, 15' Rt (REAR ABUTMENT)
Water Elev.
Surface Elev. 632.2'

Elev.	Depth	Std. Pen. (N)	Rec. ft.	Loss ft.	Description	Sample No.	% Agg	% C.S.	% F.S.	% Silt	% Clay	L.L.	Pl.	W. C.	SHTL Class.
632.2	0														
	2														
	4														
627.2	6	1			Brown Silty Gravelly Sand	1	30	14	27	12	17	PL=	23	28	
	8														
622.2	10	1			No Sample Recovered										
619.7	12	1/2			Brown Sandy Gravel	2	68	16	9	-7	-	NP	NP	9	
617.2	16	4/12			Brown Silty Sandy Gravel	3	61	17	14	11	7	NP	NP	11	
614.7	18	13/14			Brown Silty Gravelly Sand	4	25	37	9	21	8	NP	NP	14	
612.2	20	13/17			Gray Silty Sandy Gravel	5		V	I	S	U	A	L	10	
	22														
	24														
607.2	26	26/29			Gray Silty Sandy Gravel	6	53	22	10	10	5	NP	NP	12	
604.7	28	36/36			Gray Silty Sandy Gravel	7	59	15	8	13	5	NP	NP	8	
602.2	30	34/43			Gray Silty Gravelly Sand	8	39	20	20	14	7	NP	NP	10	
	32														
	34														
597.2	36	20/50			Brownish-Gray Gravel	9		V	I	S	U	A	L		
	38														
592.2	40														
	42	36/42			Brown Sandy Gravel	10		V	I	S	U	A	L	13	
	44														
587.2	46	25/19			Brown Sandy Gravel	11		V	I	S	U	A	L	11	
	48														
582.2	50														
581.2		31/22			Brown Sandy Gravel	12	66	16	8	-1	0-	NP	NP	8	

BOTTOM OF BORING

LOG OF BORING

Date Started 9-6-63
Date Completed 9-6-63
Boring No. B-36
Sampler Type SS Dia. 1 3/8"
Casing: Length Dia.
Station & Offset 30+38, 15' Lt (FORWARD PIER)
Water Elev.
Surface Elev. 631.6'

Elev.	Depth	Std. Pen. (N)	Rec. ft.	Loss ft.	Description	Sample No.	% Agg	% C.S.	% F.S.	% Silt	% Clay	L.L.	Pl.	W. C.	SHTL Class.
631.6	0														
	2														
	4														
626.6	6	3/3			Brownish-Gray Silty Gravelly Sand	1	20	13	34	16	17	24	8	20	
	8														
621.6	10	8/14			Brown Silty Gravelly Sand	2	36	24	18	14	8	NP	NP	13	
619.1	12	20/35			Brown Silty Gravel	3	76	3	10	6	5	NP	NP	14	
616.6	14	28/15			Brown Silty Sandy Gravel	4	57	22	8	-1	14-	NP	NP	11	
614.1	16	18/25			Brown Silty Sandy Gravel	5		V	I	S	U	A	L	13	
611.6	18	22/28			Brown Silty Sandy Gravel	6	61	20	5	9	5	NP	NP	12	
609.1	20	38/45			Brown Gravel	7	82	9	3	-6	-	NP	NP	12	
606.6	22	33/31			Brown Silty Sandy Gravel	8	57	21	9	8	5	NP	NP	10	
604.1	24	32/28			Brown Sandy Gravel	9	75	14	5	-6	-	NP	NP	10	
601.6	26	30/50			Brown Silty Sandy Gravel	10	57	20	9	5	9	NP	NP	13	
	28														
	30														
596.6	32	21/22			Brown Silty Sandy Gravel	11	51	26	10	7	6	NP	NP	15	
	34														
591.6	36	22/16			Brown Silty Gravelly Sand	12	18	45	21	9	7	NP	NP	19	
	38														
586.6	40	50*			Brown Sandy Gravel	13	70	14	9	-7	-	NP	NP	12	
586.3	42	(0.3')			BOTTOM OF BORING										

*REFUSAL

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

STRUCTURE FOUNDATION INVESTIGATION
BRIDGE NO. 205-35-2580
US RT 35 UNDER LICK RUN ROAD
SEC. 205-35-25.05

BORING DATA

TYPED BY	CHECKED BY	REVIEWED BY	DATE
JAC	RPW	ADE	9-30-63

Test Location No 31
Station & Offset 28+68, 15' RT
REAR ABUTMENT
Surface Elev 632.2 Water Elev
Piling
Hammer
Formula
Reference
Rod Condition

Test Location No (31)
Station & Offset
Surface Elev (cont'd) Water Elev
Piling
Hammer
Formula
Reference
Rod Condition
532
528
524
TEST ROD

Test Location No 32
Station & Offset 29+28, 15' LT
REAR PIER
Surface Elev 632.1 Water Elev
Piling
Hammer
Formula
Reference
Rod Condition GOOD
TEST ROD

Test Location No 35
Station & Offset 29+67, 15' RT
CENTER PIER
Surface Elev 632.0 Water Elev
Piling
Hammer
Formula
Reference
Rod Condition GOOD
TEST ROD

Test Location No 36
Station & Offset 30+38, 15' LT
FORWARD PIER
Surface Elev 631.6 Water Elev
Piling
Hammer
Formula
Reference
Rod Condition GOOD

Test Location No (36)
Station & Offset
Surface Elev (cont'd) Water Elev
Piling
Hammer
Formula
Reference
Rod Condition
TEST ROD
532
528
524

Test Location No 39
Station & Offset 30+69, 15' RT
FORWARD ABUTMENT
Surface Elev 632.9 Water Elev
Piling
Hammer
Formula
Reference
Rod Condition GOOD

Test Location No (39)
Station & Offset
Surface Elev (cont'd) Water Elev
Piling
Hammer ROS-35-25.05
Formula
Reference
Rod Condition
532
528
524
TEST ROD

632 628 624 620 616 612 608 604 600 596 592 588 584 580 576 572 568 564 560 556 552 548 544 540 536

10 20 30 40 50 60 70 80 90 100
Capacity "R" in Thousands of Pounds

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

STRUCTURE FOUNDATION INVESTIGATION
BRIDGE NO. ROS-35-2580
USR 35 UNDER LICK RUN ROAD
SEC. ROS-35-25.05

DRIVE ROD PENETRATION RESISTANCE DATA

PLOTTED BY	CHECKED BY	REVIEWED BY	DATE
R.C.	E.P.W.	K.O.R.	9-20-63

ROSS COUNTY
ROS-35-25.05

GEOLOGY OF THE SITE

The structure site is located on the broad flat valley of the Scioto River, on the gravel terrace east of the river. Deep valley fill, comprised of glacial outwash, and found to be in excess of 115 feet deep, overlies shales, of Devonian age.

EXPLORATION

The exploration consisted of two drive sample borings and five drive rod penetration tests, made between August 15 and September 26, 1963.

INVESTIGATIONAL FINDINGS

Borings disclose very loose to very dense sands and gravels with occasional silts to 51 and 71 feet, elevations 582 and 561 feet, where the borings were terminated after penetrating in excess of 30 feet of materials requiring in excess of 30 blows per foot in the standard penetration test.

The rod soundings met uniform medium resistance to penetration with increase in depth. With the exception of the sounding at test location 55, the soundings were terminated due to refusal or near refusal to penetration at 110 to 115 feet, elevations 523 to 518 feet. Sounding number 55 was terminated at 84-foot depth, elevation 549 feet, in material offering medium resistance. It is considered that the material penetrated by the drive rod is similar to that encountered by the borings at higher elevations.

No test penetrated to bedrock surface.

No free water was encountered in the rod sounding holes.

LEGEND

- Auger Boring - Plan View.
- Press and/or Drive Sample and/or Core Boring - Plan View.
- Drive Rod Penetration Resistance - Soundings - Plan View.
- R — Electrical Resistivity Probe - Plan View.
- A — Indicates Auger Boring.
- B — Indicates Press and/or Drive Sample and/or Core Boring.
- R — Electrical Resistivity Probe plotted to vertical scale only.
- TR — Top of Rock
- Water saturated zone.
- TD — Total Depth.
- Horizontal bar on log indicates the depth the sample was taken.
- X-Y — Figures to the right of boring log in profile view indicate the number of blows for "Standard Penetration" test. X = First 6 inches; Y = Second 6 inches
- Casing
- Resistance "R" ≤ 10,000 lbs.
- Resistance "R" ≥ 10,000 lbs.
- 1/16 — Indicates final measurement of penetration in inches.
- Indicates Free Water elevation.
- Indicates Static Water elevation.
- Footing — Capped pile
- Footing on pile

SYMBOLS OF ROCK TYPES

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

GENERAL INFORMATION

Drive Rod Penetration Tests

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

Drive Sample Borings - Drive - Press Sample Borings

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

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

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

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

Particle Size Definitions

Boulders	Cobbles	Gravel	Coarse Sand	Fine Sand	Silt	Clay
8"	3"	2.0mm	0.42mm	0.074mm	0.005mm	
		No. 10 sieve	No. 40 sieve	No. 200 sieve		

C&O RY. BRIDGE # F484

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

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

STRUCTURE FOUNDATION INVESTIGATION

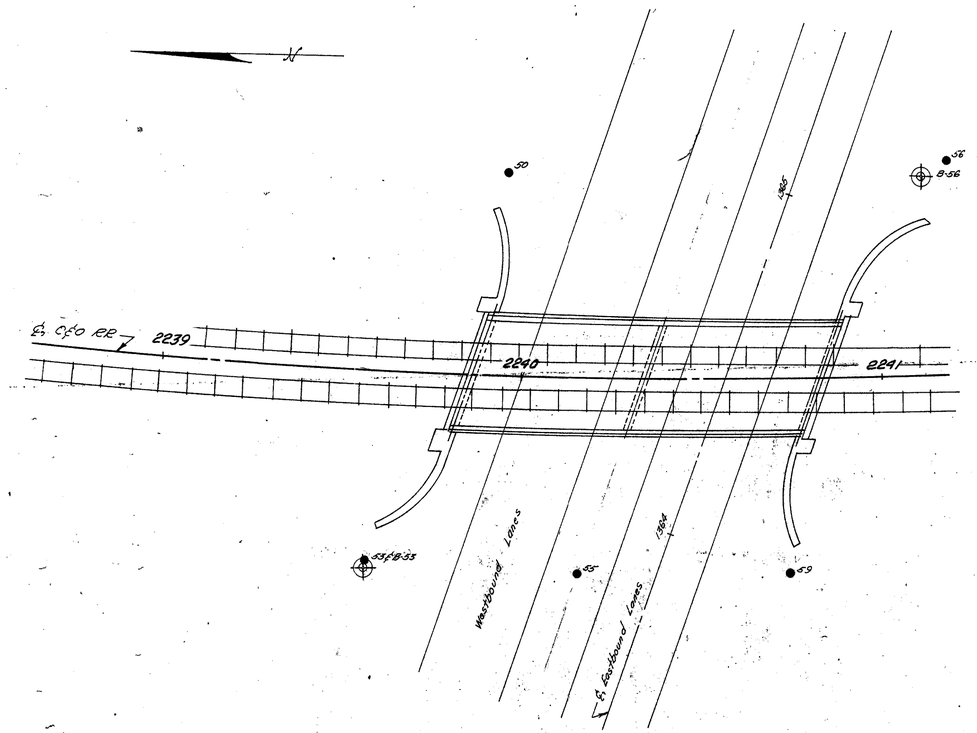
BRIDGE NO. ROS-35-25.84
USR 35 UNDER C&O RR

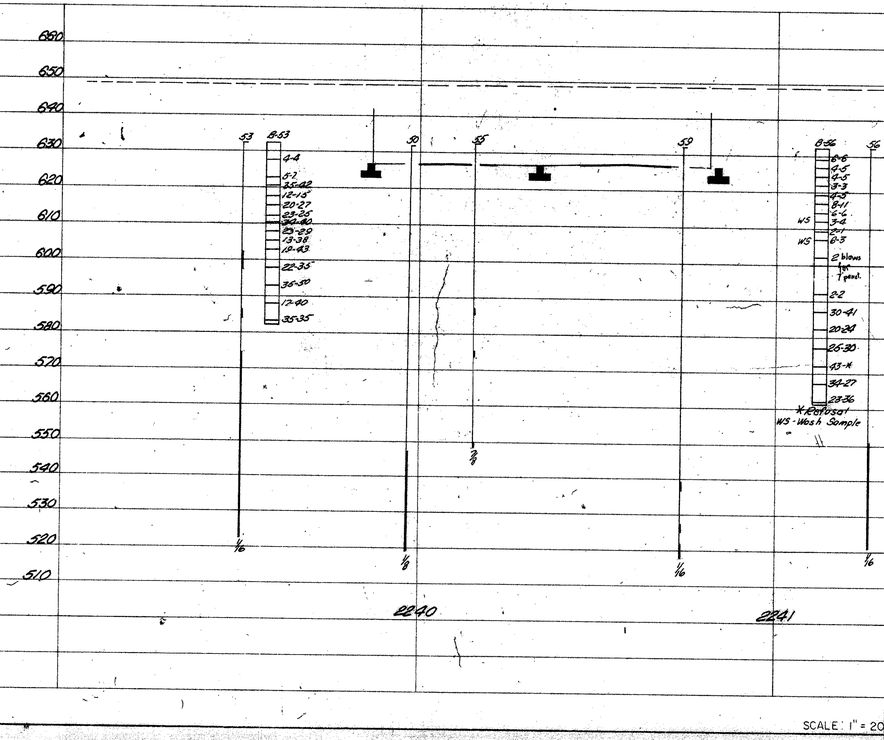
SEC. ROS-35-25.05

CHECKED BY	REVIEWED BY	DATE
PPW	R.O.E	12-9-63

18
25

ROS-35-25.05





SCALE: 1" = 20'

C&O RY. BRIDGE #F484

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

STRUCTURE FOUNDATION INVESTIGATION
BRIDGE NO. ROS-35-2584
USR 35 UNDER C&O RR
SEC. ROS-35-25.05

PLAN AND PROFILE

DRAWN BY	CHECKED BY	REVIEWED BY	DATE
R.L.F.	E.P.W.	E.O.E.	10-1-63

19
25

ROS-35-25.05

LOG OF BORING

Date Started 9-5-63 | Sampler Type SS Dia. 1 3/8" | Water Elev.
Date Completed 9-5-63 | Casing: Length Dia.
Boring No. B-53 | Station & Offset 1363+63, 72' Lt. (REAR ABUTMENT) | Surface Elev. 632.8'

Elev.	Depth	Std. Pen. (N)	Rec. ft.	Loss ft.	Description	Sample No.	% Agg.	% C.S.	% F.S.	% Silt	% Clay	L.L.	Pl.	W.C.	SHTL Class.
632.8	0														
	2														
627.8	4														
	6	4/4			Brown Silty Sand	1	0	32	32	12	24	28	6	22	
	8														
622.8	10														
	12	5/7			Brown Gravelly Sandy Silt	2		V	I	S	U	A	L	20	
620.3	14	35/42			Brown Silty Gravel	3	75	9	4	8	4	NP	NP	9	
617.8	16	12/15			Brown Silty Sandy Gravel	4		V	I	S	U	A	L	19	
615.3	18	20/27			Brown Silty Sandy Gravel	5	70	11	7	7	5	NP	NP	10	
612.8	20	23/25			Brown Silty Sandy Gravel	6	52	17	7	18	6	NP	NP	9	
610.3	22	34/40			Brownish-Gray Silty Sandy Gravel	7	68	13	6	9	4	NP	NP	11	
607.8	24	23/29			Brownish-Gray Silty Sandy Gravel	8	63	18	6	-1	3-	NP	NP	13	
605.3	26	13/38			Gray Gravel	9		V	I	S	U	A	L		
602.8	28	19/43			Brown Silty Sandy Gravel	10	57	17	9	12	5	NP	NP	13	
	30														
	32														
597.8	34														
	36	22/35			Brown Gravel	11		V	I	S	U	A	L		
	38														
592.8	40														
	42	35/50			Brown Gravel	12		V	I	S	U	A	L		
	44														
587.8	46	17/40			Gray Gravel	13		V	I	S	U	A	L		
	48														
582.8	50														
581.8		35/35			Brown Sandy Gravel	14	58	22	10	-1	0-	NP	NP	13	

BOTTOM OF BORING

LOG OF BORING

Date Started 8-15-63 | Sampler Type SS Dia. 1 3/8" | Water Elev.
Date Completed 8-15-63 | Casing: Length 70' Dia. 3 1/2"
Boring No. B-56 | Station & Offset 1365+17, 33' Rt. (FORWARD ABUTMENT) | Surface Elev. 632.2'

Elev.	Depth	Std. Pen. (N)	Rec. ft.	Loss ft.	Description	Sample No.	% Agg.	% C.S.	% F.S.	% Silt	% Clay	L.L.	Pl.	W.C.	SHTL Class.
632.2	0														
	2														
629.7	4	6/6			Brown Sandy Clay	1	0	3	18	47	32	31	14	18	
627.2	6	4/5			Brown Silty Gravelly Sand	2	21	21	32	14	12	NP	NP	18	
624.7	8	4/5			Brown Silty Gravelly Sand	3	25	18	31	13	13	24	7	16	
622.2	10	3/3			Brown Silty Sandy Gravel	4	59	16	5	13	7	NP	NP	19	
619.7	12	4/5			No Sample Recovered										
617.2	14	8/11			Brown Silty Sandy Gravel	5	54	20	7	14	5	NP	NP	12	
614.7	16	6/6			Brown Silty Sandy Gravel	6	52	25	8	10	5	NP	NP	10	
612.2	18	3/4			Gray Sand (Wash Sample)	7		V	I	S	U	A	L		
609.7	20	2/1			No Sample Recovered										
607.2	22	6/3			Gray Sand (Wash Sample)	8		V	I	S	U	A	L		
	24														
602.2	26	2 blows 7.0' penet.			Brown Silty Sandy Gravel	9	61	24	5	6	4	NP	NP	19	
	28														
	30														
	32														
	34														
	36														
	38														
592.2	40	2/12			Brown Sandy Gravel	10	58	29	6	6	3	NP	NP	16	
	42														
	44														
587.2	46	30/41			Brown Silty Sandy Gravel	11	62	19	7	7	5	NP	NP	9	
	48														
582.2	50	20/24			Brown Silty Gravelly Sand	12	40	39	9	9	3	NP	NP	12	
	52														
	54														
577.2	56	25/30			Brown Sandy Gravel	13		V	I	S	U	A	L	9	
	58														
572.2	60	43/*			Brown Gravelly Sand	14	21	55	14	-1	0-	NP	NP	14	
	62														
	64														
567.2	66	34/27			Brown Sandy Gravel	15	61	23	10	-6	-	NP	NP	10	
	68														
562.2	70														
561.2		23/36			Brown and Gray Sand	16		V	I	S	U	A	L	11	

*REFUSAL

BOTTOM OF BORING

C&O RY. BRIDGE # F484

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

STRUCTURE FOUNDATION INVESTIGATION
BRIDGE NO. ROS-35-25.04
US# 35 UNDER C&O RR
SEC. ROS-35-25.05

BORING DATA

TYPED BY	CHECKED BY	REVIEWED BY	DATE

Test Location No. ____
Station & Offset ____
Surface Elev. ____ Water Elev. ____
Piling ____
Hammer ____
Formula ____
Reference ____
Rod Condition ____

635 631 627 623 619 615 611 607 603 599 595 591 587 583 579 575 571 567 563 559 555 551 547 543 539

10 20 30 40 50 60 70 80 90 100
Capacity "R" in Thousands of Pounds

Test Location No. ____
Station & Offset ____
Surface Elev. ____ Water Elev. ____
Piling ____
Hammer ____
Formula ____
Reference ____
Rod Condition ____

10 20 30 40 50 60 70 80 90 100
Capacity "R" in Thousands of Pounds

Test Location No. ____
Station & Offset ____
Surface Elev. ____ Water Elev. ____
Piling ____
Hammer ____
Formula ____
Reference ____
Rod Condition ____

10 20 30 40 50 60 70 80 90 100
Capacity "R" in Thousands of Pounds

Test Location No. ____
Station & Offset ____
Surface Elev. ____ Water Elev. ____
Piling ____
Hammer ____
Formula ____
Reference ____
Rod Condition ____

10 20 30 40 50 60 70 80 90 100
Capacity "R" in Thousands of Pounds

Test Location No. 50
Station & Offset 1364+79, 76' LT REAR LEFT WINGWALL
Surface Elev. 632.1 Water Elev. DRY
Piling ____
Hammer ____
Formula ____
Reference ____
Rod Condition GOOD

10 20 30 40 50 60 70 80 90 100
(CONT'D NEXT COLUMN)
Capacity "R" in Thousands of Pounds

Test Location No. (50)
Station & Offset ____
Surface Elev. (GOOD PEN.) Water Elev. ____
Piling ____
Hammer ____
Formula ____
Reference ____
Rod Condition ____

535 531 527 523 519 TEST ROD 515

10 20 30 40 50 60 70 80 90 100
Capacity "R" in Thousands of Pounds

Test Location No. 53
Station & Offset 1363+65, 79' LT REAR RIGHT WINGWALL
Surface Elev. 632.7 Water Elev. DRY
Piling ____
Hammer ____
Formula ____
Reference ____
Rod Condition GOOD

10 20 30 40 50 60 70 80 90 100
(CONT'D NEXT COLUMN)
Capacity "R" in Thousands of Pounds

Test Location No. (53)
Station & Offset ____
Surface Elev. ____ Water Elev. ____
Piling R09-35-25.05
Hammer ____
Formula ____
Reference ____
Rod Condition ____

535 531 527 523 TEST ROD 519 631 627 623 619 615 611 607 603 599 595 591 587 583 579 575 571 567 563 559 555

10 20 30 40 50 60 70 80 90 100
Capacity "R" in Thousands of Pounds

C&O RY. BRIDGE # F484

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

STRUCTURE FOUNDATION INVESTIGATION
BRIDGE NO. R09-35-25.84
USR 35 UNDER C&O RR
SEC. R09-35-25.05

DRIVE ROD PENETRATION RESISTANCE DATA

PLOTTED BY	CHECKED BY	REVIEWED BY	DATE
E.C.	R.P.W.	R.O.P.	10-9-63

Test Location No. _____
Station & Offset _____
Surface Elev. _____ Water Elev. _____
Piling _____
Hammer _____
Formula _____
Reference _____
Rod Condition _____

635 631 627 623 619 615 611 607 603 599 595 591 587 583 579 575 571 567 563 559 555 551 547 543 539

10 20 30 40 50 60 70 80 90 100
Capacity "R" in Thousands of Pounds

Test Location No. _____
Station & Offset _____
Surface Elev. _____ Water Elev. _____
Piling _____
Hammer _____
Formula _____
Reference _____
Rod Condition _____

10 20 30 40 50 60 70 80 90 100
Capacity "R" in Thousands of Pounds

Test Location No. _____
Station & Offset _____
Surface Elev. _____ Water Elev. _____
Piling _____
Hammer _____
Formula _____
Reference _____
Rod Condition _____

10 20 30 40 50 60 70 80 90 100
Capacity "R" in Thousands of Pounds

Test Location No. 55
Station & Offset 1363+81, 21' LT
Surface Elev. 632.7 Water Elev. DRY
Piling _____
Hammer _____
Formula _____
Reference _____
Rod Condition GOOD

TEST ROD

10 20 30 40 50 60 70 80 90 100
Capacity "R" in Thousands of Pounds

Test Location No. 56
Station & Offset 1365+24, 38' RT FORWARD LEFT WINGWALL
Surface Elev. 632.1 Water Elev. DRY
Piling _____
Hammer _____
Formula _____
Reference _____
Rod Condition GOOD

(CONT'D NEXT COLUMN)

10 20 30 40 50 60 70 80 90 100
Capacity "R" in Thousands of Pounds

Test Location No. (56)
Station & Offset _____
Surface Elev. (632.1) Water Elev. _____
Piling _____
Hammer _____
Formula _____
Reference _____
Rod Condition _____

535 531 527 523 TEST ROD 519 515

(CONT'D FROM PREV. COLUMN)

10 20 30 40 50 60 70 80 90 100
Capacity "R" in Thousands of Pounds

Test Location No. 59
Station & Offset 1364+01, 35' RT FORWARD RIGHT WINGWALL
Surface Elev. 632.3 Water Elev. DRY
Piling _____
Hammer _____
Formula _____
Reference _____
Rod Condition GOOD

(CONT'D FROM PREV. COLUMN)

10 20 30 40 50 60 70 80 90 100
Capacity "R" in Thousands of Pounds

Test Location No. (59)
Station & Offset _____
Surface Elev. _____ Water Elev. _____
Piling 205-35-25.05
Hammer _____
Formula _____
Reference _____
Rod Condition _____

535 531 527 523 TEST ROD 519 515

10 20 30 40 50 60 70 80 90 100
Capacity "R" in Thousands of Pounds

C&O RY. BRIDGE # E-484

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

STRUCTURE FOUNDATION INVESTIGATION
BRIDGE NO. 205-35-25.84
USR 35 UNDER C&O RR
SEC. 205-35-25.05

DRIVE ROD PENETRATION RESISTANCE DATA

PLOTTED BY	CHECKED BY	REVIEWED BY	DATE
RC	EPM	FOR	2-7-63

ROSS COUNTY
ROS-35-25.05

GEOLOGY OF THE SITE

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

EXPLORATION

The exploration consisted of two drive sample borings, made on July 26 and August 14, and five drive rod penetration tests, made between September 26 and October 1, 1963.

INVESTIGATIONAL FINDINGS

Borings disclose subsurface materials are comprised of loose to very dense gravels and sands with some intervals of silt. The borings were terminated at 41 and 56-foot depths, elevations 588 and 572 feet, after penetrating in excess of 15 feet of material requiring in excess of 30 blows per foot in the standard penetration test.

Rod soundings, extending to greater depths than the borings, encountered uniform medium resistance to penetration with increase in depth and were discontinued at the abutment locations at 106 and 105-foot depths, elevations 523 and 522 feet, upon encounter with high and very high resistance to penetration. Rod soundings at the proposed pier locations were discontinued at 62 and 60-foot depths, elevations 569 and 565 feet, in material offering medium-high resistance to penetration.

No test penetrated to bedrock surface.

No free water was encountered in any of the rod sounding holes.

LEGEND

- Auger Boring - Plan View.
- Press and/or Drive Sample and/or Core Boring - Plan View.
- Drive Rod Penetration Resistance - Soundings - Plan View.
- (R) Electrical Resistivity Probe - Plan View.
- A — Indicates Auger Boring.
- B — Indicates Press and/or Drive Sample and/or Core Boring.
- (R) TR — Electrical Resistivity Probe plotted to vertical scale only. Top of Rock.
- Water saturated zone.
- TD — Total Depth.
- Horizontal bar on log indicates the depth the sample was taken.
- X-Y — Figures to the right of boring log in profile view indicate the number of blows for "Standard Penetration" test. X = First 6 inches, Y = Second 6 inches
- Casing
- Resistance "R" =< 10,000 lbs.
- Resistance "R" => 10,000 lbs.
- 1/16 — Indicates final measurement of penetration in inches.
- W — Indicates Free Water elevation.
- Indicates Static Water elevation.
- Footing — Capped pile
- Footing on pile

SYMBOLS OF ROCK TYPES

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

GENERAL INFORMATION

Drive Rod Penetration Tests

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

Drive Sample Borings - Drive - Press Sample Borings

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

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

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

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

Particle Size Definitions

Boulders	Cobbles	Gravel	Coarse Sand	Fine Sand	Silt	Clay
8"	3"	2.0mm	0.42mm	0.074mm	0.005mm	
		No. 10 sieve	No. 40 sieve	No. 200 sieve		

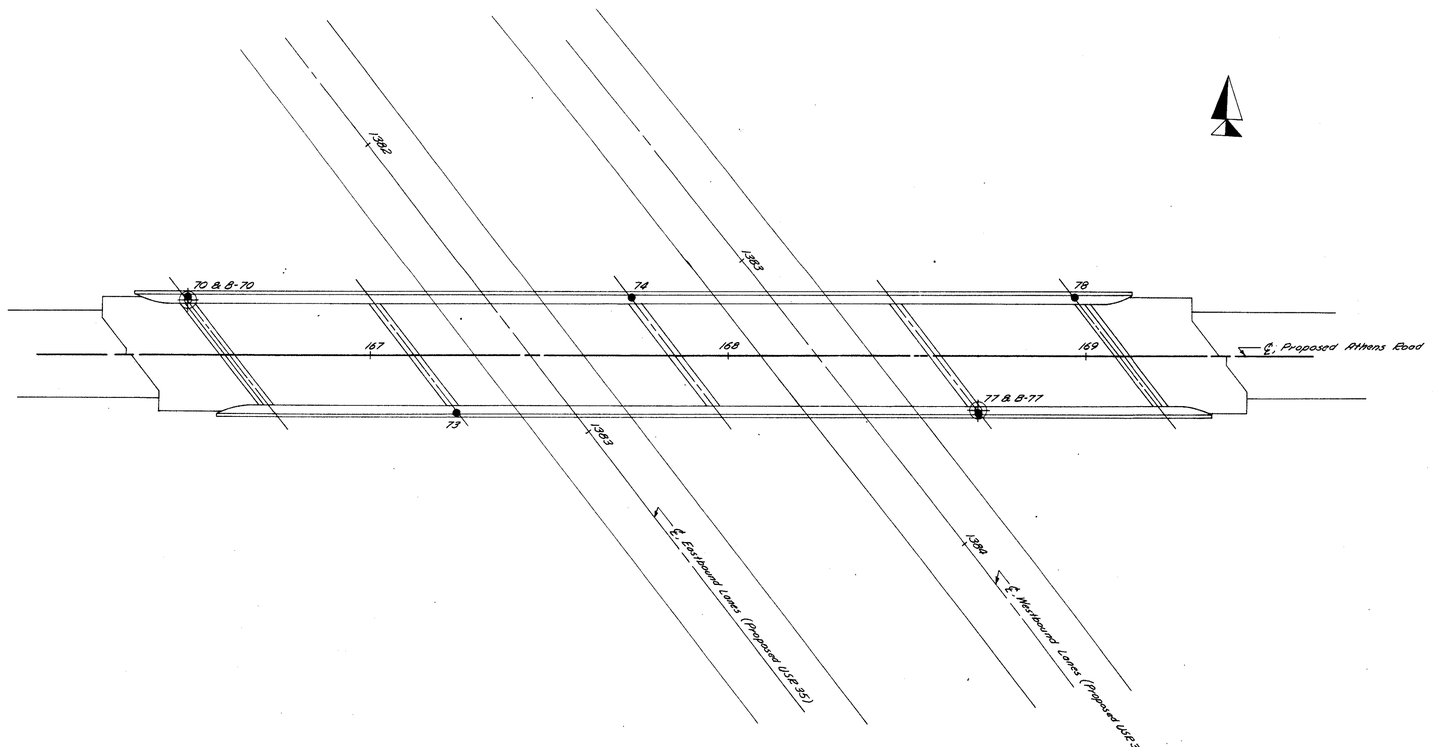
NOTE: Information shown by this subsurface investigation was obtained solely for the use in establishing design controls for the project. The State of Ohio does not guarantee the accuracy of this data and it is not to be construed as a part of the plans governing construction of the project.

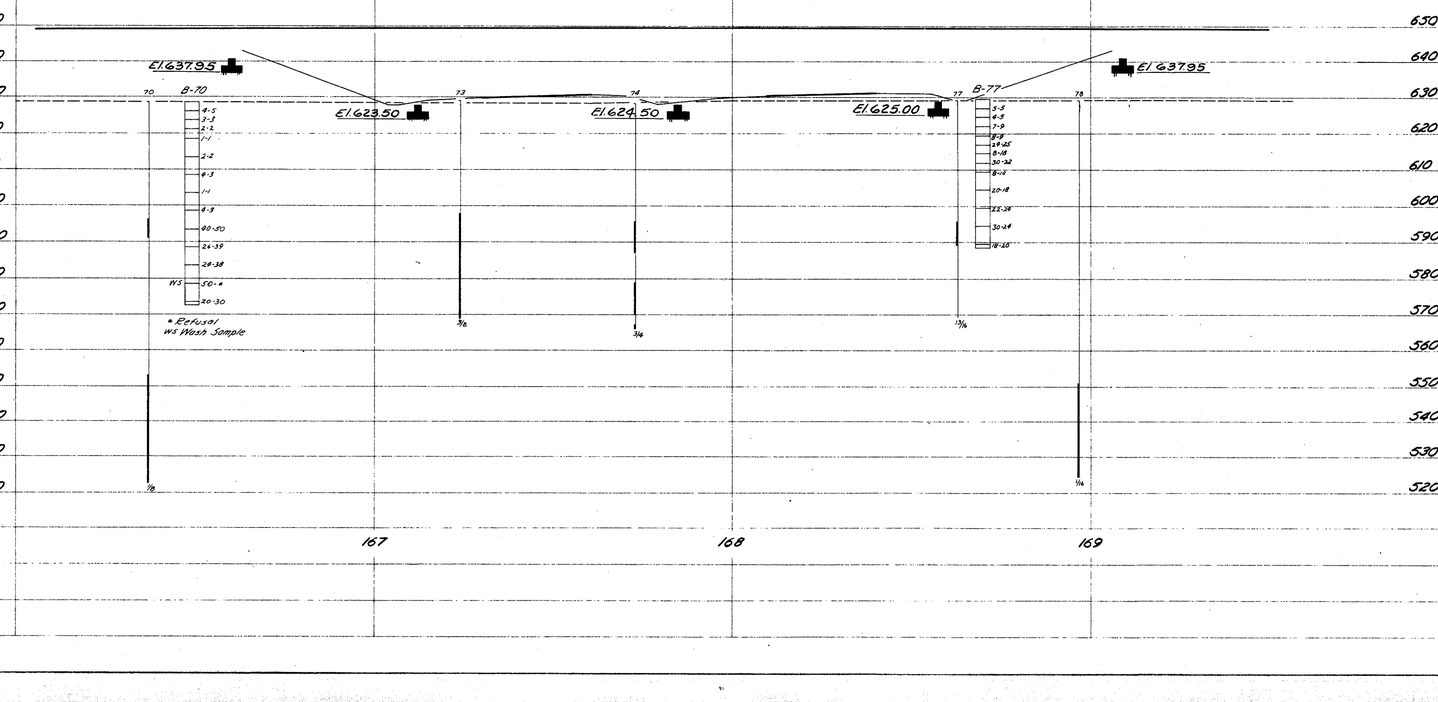
OHIO STATE HIGHWAY
TESTING LABORATORY
1620 WEST BROAD STREET, COLUMBUS 23, OHIO

STRUCTURE FOUNDATION INVESTIGATION
BRIDGE NO. ROS-35-2619
UNDER ATHENS ROAD
SEC. ROS-35-25.05

CHECKED BY	REVIEWED BY	DATE
R.O.R.	G.P.H.	10-11-63

ROS-35-2505





SCALE: 1" = 20'

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

STRUCTURE FOUNDATION INVESTIGATION
BRIDGE NO. ROS-35-26.19
UNDER ATHENS ROAD
SEC. ROS-35-25.05

PLAN AND PROFILE

DRAWN BY	CHECKED BY	REVIEWED BY	DATE
E.P.M.	D.D.E.	E.P.M.	10/11/63

ROS-35-2505

LOG OF BORING

Date Started 7-26-63 | Sampler Type SS Dia. 1 3/8" | Water Elev.
Date Completed 7-26-63 | Casing: Length 30' Dia. 3 1/2" | Surface Elev. 628.5'
Boring No. B-70 | Station & Offset 166+49, 15' Lt (REAR ABUTMENT)

Elev.	Depth	Std. Pen. (N)	Rec. ft.	Loss ft.	Description	Sample No.	Physical Characteristics: % Agg	% C.S.	% F.S.	% Silt	% Clay	L.L.	Pl.	W.C.	SHTL Class.
628.5	0														
626.0	2	4/5			Brown Sandy Silt	1	0	6	20	53	21	25	6	18	
623.5	4	3/3			Brown Silty Gravelly Sand	2	15	27	29	10	19	NP	NP	14	
621.0	6	2/2			Brown Silty Gravelly Sand	3		V	I	S	U	A	L	17	
618.5	8	1/1			No Sample Recovered - Brown Silty Gravelly Sand			V	I	S	U	A	L		
	10														
613.5	12	2/2			No Sample Recovered - Brown Silty Gravelly Sand			V	I	S	U	A	L		
	14														
608.5	16	4/3			Brown Sandy Gravel	4		V	I	S	U	A	L	14	
	18														
603.5	20	1/1			No Sample Recovered - Brown Silty Gravelly Sand			V	I	S	U	A	L		
	22														
598.5	24	4/3			No Sample Recovered - Brown Silty Gravelly Sand			V	I	S	U	A	L		
	26														
593.5	28	40/50			Brown Silty Sandy Gravel	5	66	13	8	9	4	NP	NP	7	
588.5	30														
	32														
	34														
	36														
	38														
	40	26/39			Brown Sandy Gravel	6		V	I	S	U	A	L	10	
	42														
583.5	44														
	46	24/38			Brown Sandy Gravel	7		V	I	S	U	A	L	12	
	48														
578.5	50	50/*			Brown Sand (Wash Sample)	8		V	I	S	U	A	L		
	52														
573.5	54														
572.5	56	20/30			Brown Silty Gravelly Sand	9	33	31	19	10	7	NP	NP	11	

BOTTOM OF BORING
*REFUSAL

LOG OF BORING

Date Started 8-14-63 | Sampler Type SS Dia. 1 3/8" | Water Elev.
Date Completed 8-14-63 | Casing: Length Dia. | Surface Elev. 629.4'
Boring No. B-77 | Station & Offset 168+70, 15' Rt (FORWARD PIER)

Elev.	Depth	Std. Pen. (N)	Rec. ft.	Loss ft.	Description	Sample No.	Physical Characteristics: % Agg	% C.S.	% F.S.	% Silt	% Clay	L.L.	Pl.	W.C.	SHTL Class.
629.4	0														
626.9	2	5/5			Brown Silt and Clay	1	0	0	2	59	39	33	11	24	
624.4	4	4/5			Brown Sandy Silt	2	0	8	37	30	25	24	5	23	
621.9	6	7/9			Brown Silty Sand	3	0	26	49	15	10	NP	NP	11	
619.4	8	8/9			Brown Silty Sand	4	6	30	35	23	6	NP	NP	20	
616.9	10	24/25			Brown Silty Sandy Gravel	5	67	13	8	9	3	NP	NP	11	
614.4	12	8/18			Gray Sandy Gravel	6	61	29	4	-6	-	NP	NP	10	
611.9	14	30/32			Brown Silty Sandy Gravel	7	62	17	8	8	5	NP	NP	8	
609.4	16	8/10			Brown Sandy Gravel	8		V	I	S	U	A	L	5	
	18														
604.4	20	20/18			Brown Silty Sandy Gravel	9	54	23	9	10	4	NP	NP	11	
	22														
599.4	24	22/24			Brown Silty Sandy Gravel	10	44	27	9	15	5	NP	NP	9	
	26														
594.4	28	30/24			Brown Silty Sandy Gravel	11	64	16	7	9	4	NP	NP	9	
	30														
589.4	32				BOTTOM OF BORING										
588.4	34	18/20			Brown Sandy Gravel	12		V	I	S	U	A	L	10	

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

STRUCTURE FOUNDATION INVES
BRIDGE NO. ROS-35-26/9
UNDER ATHENS ROAD
SEC. ROS-35-25.05

BORING DATA

TYPED BY	CHECKED BY	REVIEWE
J.A.C.	R.D.P.	G.P.M.

Test Location No. ____
Station & Offset ____
Surface Elev. ____ Water Elev. ____
Piling ____
Hammer ____
Formula ____
Reference ____
Rod Condition ____

637 633 629 625 621 617 613 609 605 601 597 593 589 585 581 577 573 569 565 561 557 553 549 545 541

10 20 30 40 50 60 70 80 90 100
Capacity "R" in Thousands of Pounds

Test Location No. 70
Station & Offset 166+49 16' LT
REAR ABUTMENT
Surface Elev. 628.5' Water Elev. DRY
Piling ____
Hammer ____
Formula ____
Reference ____
Rod Condition GOOD

10 20 30 40 50 60 70 80 90 100
Capacity "R" in Thousands of Pounds
(CONT'D NEXT COLUMN)

Test Location No. (70)
Station & Offset ____
Surface Elev. (ROAD) Water Elev. ____
Piling ____
Hammer ____
Formula ____
Reference ____
Rod Condition ____

537 533 529 525 521 (TEST ROD)

10 20 30 40 50 60 70 80 90 100
Capacity "R" in Thousands of Pounds

Test Location No. 73
Station & Offset 167+24 16' RT
REAR PIER
Surface Elev. 628.9' Water Elev. DRY
Piling ____
Hammer ____
Formula ____
Reference ____
Rod Condition ROD BENT-32'

(TEST ROD)

10 20 30 40 50 60 70 80 90 100
Capacity "R" in Thousands of Pounds

Test Location No. 74
Station & Offset 167+73 16' LT
CENTER PIER
Surface Elev. 628.2' Water Elev. DRY
Piling ____
Hammer ____
Formula ____
Reference ____
Rod Condition GOOD

(TEST ROD)

10 20 30 40 50 60 70 80 90 100
Capacity "R" in Thousands of Pounds

Test Location No. 77
Station & Offset 168+70 16' RT
FORWARD PIER
Surface Elev. 629.3' Water Elev. DRY
Piling ____
Hammer ____
Formula ____
Reference ____
Rod Condition GOOD

(TEST ROD)

10 20 30 40 50 60 70 80 90 100
Capacity "R" in Thousands of Pounds

Test Location No. 78
Station & Offset 168+97 16' RT
FORWARD ABUT
Surface Elev. 629.3' Water Elev. D
Piling ____
Hammer ____
Formula ____
Reference ____
Rod Condition GOOD

(CONT'D NEXT COLUMN)

10 20 30 40 50 60 70 80 90 100
Capacity "R" in Thousands of Pounds

10 20 30 40 50 60 70 80 90 100
Capacity "R" in Thousands of Pounds

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

STRUCTURE FOUNDATION INVESTIGATION
BRIDGE NO. ROS-35-2619
UNDER ATHENS ROAD
SEC. ROS-35-25.05

DRIVE ROD PENETRATION RESISTANCE DATA

PLOTTED BY	CHECKED BY	REVIEWED BY	DATE
R.S.	R.O.E.	G.P.H.	10-11-63