FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	H.I.	1951

1/64

ROSS COUNTY
ROS-50-32.13

STATE OF OHIO
DEPARTMENT OF HIGHWAYS

ROS-50-32.13

LIBERTY TOWNSHIP

ROSS COUNTY

All reference to Federal designations throughout the plan shall be disregarded. The project designation shall be considered as H.I.P. as shown on this sheet.

CONVENTIONAL SIGNS

State Line
County Line
Township Line
Section Line
Center Line
Corporation Line
Fence Line
Guard Rail (existing)
Guard Rail (proposed)
Steam Railroad
Power Poles
Telephone Poles
Trees (existing)
Trees (to be removed)

INDEX OF SHEETS

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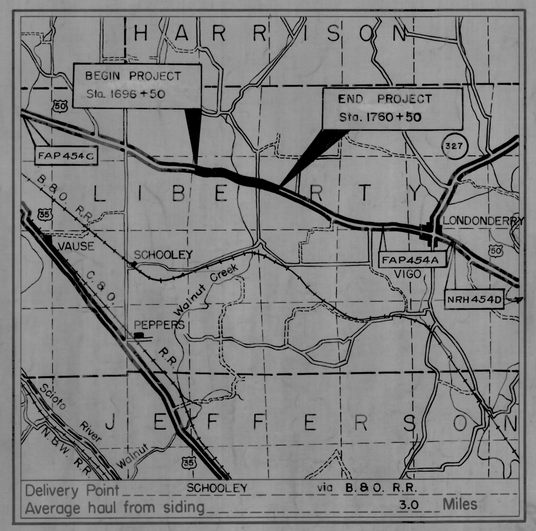
LINE DATA

Begin Project	Sta. 1696+50	
End Project	Sta. 1760+50	
Gross Length of Project	6400 Lin. Ft. or 1.212	Miles
No Deductions or Additions.		
Net Length of Project	6400 Lin. Ft. or 1.212	Miles
Add For Approaches	200 Lin. Ft.	
Net Length of Work	6600 Lin. Ft. or 1.250	Miles



LOCATION MAP

SCALE OF MILES

0 1 2 3

Portion to be improved
State Roads
Other Roads

SCALE

Plan 1" = 50'
Profile: Horizontal 1" = 50'
Profile: Vertical 1" = 5'

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 maintenance and safety of traffic will be as set forth on these plans and estimates.

Approved Joseph N. Doyle P.E. 1209
Date 12-20-50 Division Deputy Director

Approved
Date Chief Engineer, Bureau of Maintenance

Approved
Date 11-15-51 Chief Engineer, Bureau of Bridges & R.R. Crossings

Approved
Date 11-15-51 Chief Engineer, Bureau of Location & Design

Approved L. J. Schaeublin
Date 11-15-51 First Ass't. Director & Chief Engineer

Approved
Date 11-15-51 Director of Highways

CONSTRUCTION BUREAU
SEP 1 1956
GROUND PHOTOLAB

DEPARTMENT OF COMMERCE
BUREAU OF PUBLIC ROADS

RECOMMENDED FOR APPROVAL:

DISTRICT ENGINEER DATE

APPROVED:

DIVISION ENGINEER DATE

File No.	ROSS COUNTY, ROS-50-32.13
	Date of Letting 1950
	Contract No.

Supplemental Prints of Standard Construction Drawings

G-8.07	5-1-51	B-T-71R	1-2-51	AS-1-47, AS-2-47	7-27-49
L-3A	4-1-50	L.J. No.1	8-1-51	CSB-1-47 Sh. No. 1&2	8-25-48
L-3	4-1-50	T.J. No.1	8-1-51	I-12	3-15-48
S-27-PC-3	2-20-45	T.J. No.2	8-1-51	S-27 P.C.1	3-1-39
I-1,2,3,4&5	2-20-45	T.J. No.3	8-1-51		
B-T-50-70-71E No.1	10-1-47	I-15 No.1	3-1-47		
L-1	4-1-50	I-15 No.2	6-17-49		

Supplemental Specifications

5		5-25-48
T-171.19	Rev.	7-31-50
31		6-13-49
M-110.25	Rev.	7-25-51

FED. AID PROJECT	STATE	PROJECT	TYPE FUNDS
2	OHIO	F-454(7)	Post War

2
64

SCHEMATIC PLAN

SCALE
1" = 300' Longitudinally
1" = 30' Laterally

ROSS COUNTY
ROS-50-32.13

Prop. Curve
Δ = 5°45' Lt.
D = 0°40'
T = 431.61'
L = 862.5'
E = 10.83'

P.C. 1697+47.51

P.T. 1706+10.01

BEGIN PROJECT
STA. 1696+50

BEGIN APPROACH
STA. 1695+50

Existing Curve D 10°

Prop. Curve
Δ = 17°-17'
D = 1°20'
T = 653.05'
L = 1296.25'
E = 49.34'

P.C. 1713+68.18

P.T. 1726+64.43

S-65°-59'E

WALNUT CREEK

Existing Curve D 7°

Existing Pavement

Type Rd.

Existing Curve D 4°

Prop. Curve
Δ = 3°08'
D = 0°20'
T = 470.12'
L = 940.00'
E = 6.43'

P.C. 1749+20.34

P.T. 1758+60.34

END PROJECT
STA. 1760+50

END APPROACH
STA. 1761+50

PROPOSED SIGHT DISTANCE
Lt. Lane
Rt. Lane

Note: Proposed N.P.S.D. over 475ft. throughout project.

EXISTING BRIDGE DATA
Type: Steel Low Truss
Span: 87'-3"
Roadway: 15'-3"
Skew: 0°
Condition: Fair

PROPOSED BRIDGE DATA
Type: Continuous Steel Beam
Span: 44'-55'-44'
Roadway: 28'
Skew: 20°0' R.F.

SIGHT DISTANCE LEGEND

- =P.S.D. less than 2200ft. Lt. Lane minimum distance & station shown.
- =P.S.D. less than 2200 ft. Rt. Lane minimum distance & station shown.
- =N.P.S.D. less than 475ft. Lt. Lane minimum distance & station shown.
- =N.P.S.D. less than 475 ft. Rt. Lane minimum distance & station shown.

725
695
665
635

1800' V.C.
760' N.P.S.D.

800' V.C.

300' V.C.

800' V.C.

800' V.C.
480' N.P.S.D.

-0.5%
-3.5%
-1.5%
-0.3%
+3.0%
+5.0%
+3.3%
+0.0%

Existing Bridge Flr.
El. 638.5'
Existing Profile
High Water Elev. 633.

EXISTING SIGHT DISTANCE
Lt. Lane
Rt. Lane

1686 1689 1692 1695 1698 1701 1704 1707 1710 1713 1716 1719 1722 1725 1728 1731 1734 1737 1740 1743 1746 1749 1752 1755 1758 1761 1764 1767

TYPICAL SECTION

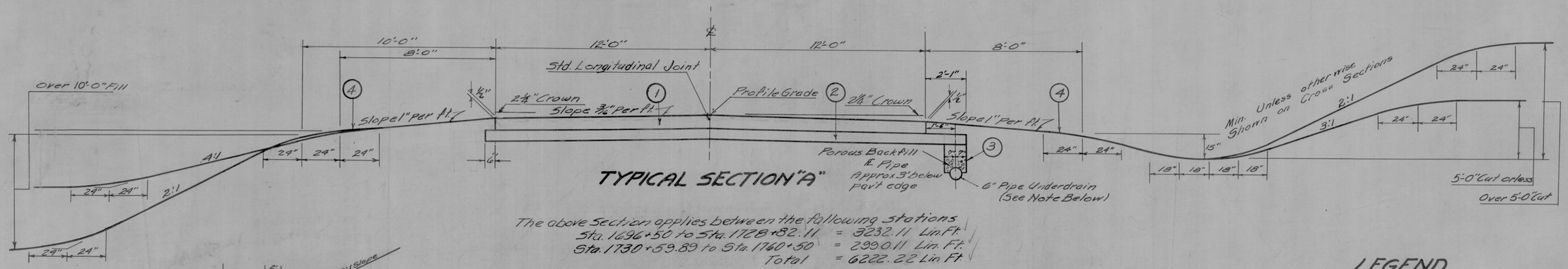
TYPE T-71

Scale 3/8" = 1'-0"

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	F-459(7)	Post War

3/64

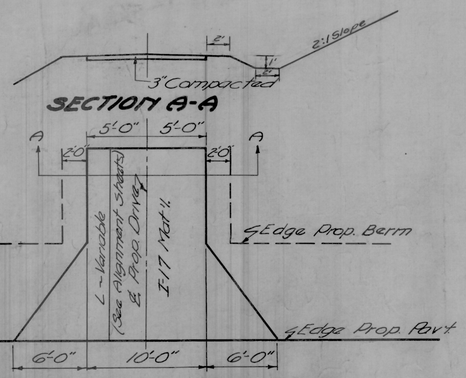
ROSS COUNTY
ROS-50-32.13



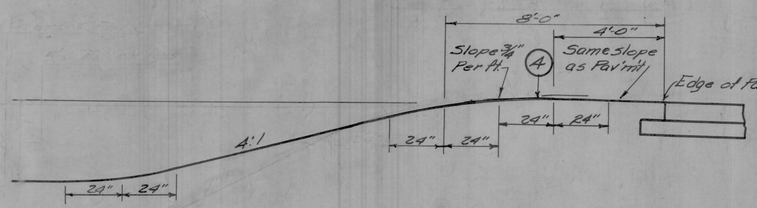
TYPICAL SECTION "A"

The above Section applies between the following Stations

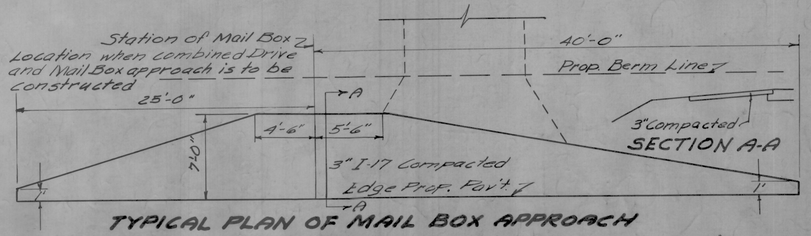
Sta. 1696+50 to Sta. 1728+82.11	=	3232.11 Lin. Ft.
Sta. 1730+59.89 to Sta. 1760+50	=	2990.11 Lin. Ft.
Total	=	6222.22 Lin Ft



TYPICAL PLAN OF DRIVE



PART SECTION SUPERELEVATION

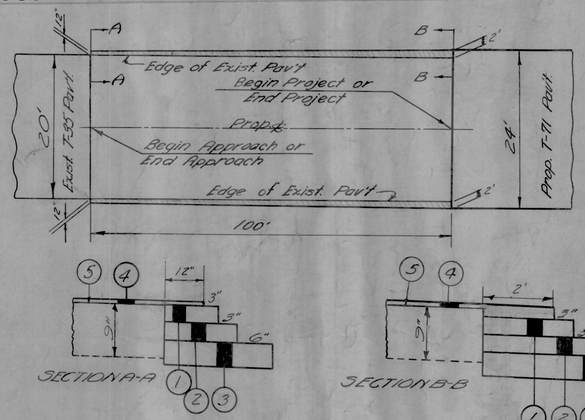


TYPICAL PLAN OF MAIL BOX APPROACH

Note: T-4 Underdrains apply Rt. & Lt. & Sta. 1707+00 to 1716+00, 1750+00 to 1760+50 = 1800.00' & 2100.00 Lin Ft.

② CLASSIFIED EMBANKMENT

Location	18"-28.17 Wide	9"-28.17 Wide	18"-25 Wide	9"-25 Wide
1715+50 - 1728+82.11				1332.11
1730+59.89 - 1749+50				1890.11
1749+50 - 1750+00			50	
1707+00 - 1710+50		350		
1750+00 - 1751+00	100			
1751+00 - 1755+00		400		
1755+00 - 1760+50	550			
1696+50 - 1707+00				1050.
1710+50 - 1715+50		None		
Totals	650	750	50	4272.22

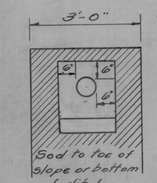


DETAIL - BEGINNING & END APPROACHES

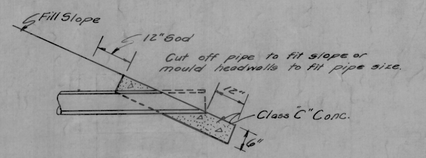
NOTE: For Estimated Quantities See Pavement Calculations Box on Sheet No. 6

LEGEND

1	B-35	3" Asphaltic Concrete Leveling Course
2	B-35	3" Asphaltic Concrete Base Course
3	59-5	4" Classified Embankment Material, Grading "C" or "D"
4	T-35	Variable Depth Asphaltic Concrete Surface Course (Max. 2", Min. 0", Avg. 3/4")
5	T-30	Bituminous Tack Coat

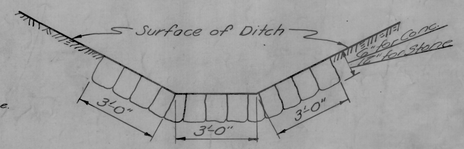


END VIEW OF PIPE OUTLET

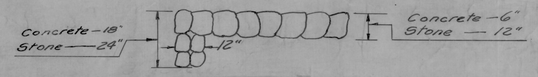


DETAIL OF PIPE OUTLET UNDERDRAIN HEADWALL

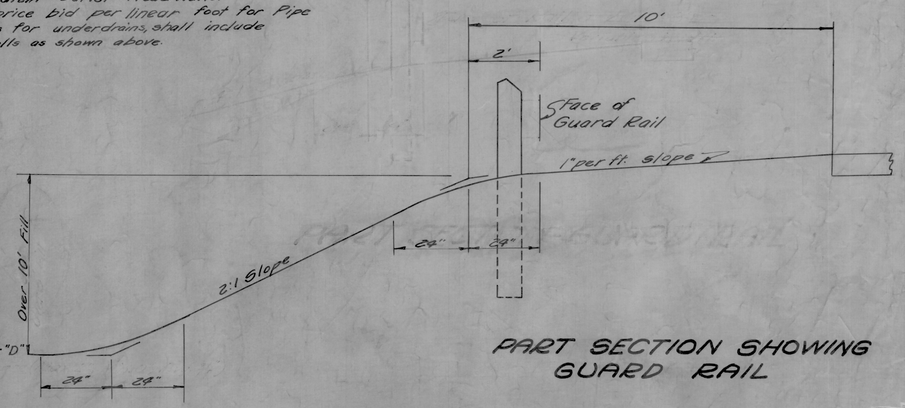
Note: No forms will be required for Pipe Underdrain Outlet Headwalls. Unit price bid per linear foot for Pipe Outlets for underdrains, shall include headwalls as shown above.



DETAIL OF PAVED GUTTER



SECTION OF CUTOFF WALL



PART SECTION SHOWING GUARD RAIL

LEGEND

1. Item T-71 9" Reinforced Portland Cement Concrete Pavement
2. Item 55-5 Classified Embankment, Material, Grading "C" or "D" See Note on Sheet No. 4
3. Item I-4 6" Pipe Underdrains
4. Item L-9 Seeding & Protecting Type A

392
2-83

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	F-459 (7)	Post War

7/64

ROSS COUNTY
ROS-50-(32.13)

NOTES

GENERAL

FIELD OFFICE
The contractor shall provide a suitable "Field Office" in accordance with section 5-0.01 (b), having a minimum of 140 sq. ft. of floor space. The contractor shall have a telephone installed and maintained during construction of this project.

TRAFFIC
Two way traffic shall be maintained at all times, except as outlined below. The existing pavement surface and base material shall be salvaged and utilized to the fullest possible extent for the construction of traffic lanes. Payment for removing and placing existing pavement material in temporary traffic lanes shall be included in the price bid for Item E-1, Roadway Excavation. The Contractor shall arrange his operations so as to keep traffic inconvenience to a minimum.

The following is a suggested method of maintaining traffic.

From Sta. 1695+50 to Sta. 1714+50 construct a temporary roadway on the left side of the existing pavement with a temporary connection to the existing pavement between Stations 1714+50 & 1715+50. Material salvaged from the existing pavement shall be used for part of the surfacing of this temporary roadway. Four inches of T-10 material 20 feet wide has been provided for use in this area. Place the proposed pavement from Sta. 1696+50 to Sta. 1714+50; then use the proposed pavement back of Sta. 1714+50 for maintenance of traffic.

Place the left lane of the proposed pavement from Sta. 1714+50 to Sta. 1718+00. During this operation maintain one way traffic on the existing pavement.

Construct a single lane temporary roadway Rt. & from Sta. 1718+00 to Sta. 1722+00. Use this temporary traffic lane to maintain traffic while the proposed Lt. lane is being placed from Sta. 1718 to 1722.

Then use the left lane of the proposed pavement to maintain one way traffic while the proposed right lane is being placed from Sta. 1714+50 to Sta. 1722+00. Four inches of T-10 10 ft. wide has been provided for use in this area. Material salvaged from the existing pavement shall be used for part of the surfacing of this temporary roadway. Four inches of T-10 20 ft. wide by 100 ft. long has been provided for construction of a temporary approach to the existing pavement at Sta. 1722+50. Material salvaged from the existing pavement shall be used for part of the surfacing of this temporary approach.

Maintain traffic on the existing pavement from Sta. 1722+00 to Station 1743+00 while the proposed pavement and bridge in this area are being constructed. Place traffic from Sta. 1722+00 to Sta. 1743+00 on the proposed pavement.

Construct a two-way temporary roadway Rt. & from Sta. 1743+00 to Sta. 1760+50. Part width construction is permitted on proposed work in this Section. Place the proposed left and then right lanes, using them as they become available for maintaining traffic. Material for surfacing this temporary roadway shall be obtained from the existing pavement scheduled to be removed between Stations 1722 and 1760+50.

In lieu of the above method of maintaining traffic the Contractor may submit to the Engineer for approval a written detailed schedule of methods of work procedure, including sequence of construction operations of his alternate method of maintaining traffic.

In the event that the Contractor desires to use his own schedule for the maintenance of traffic, he shall not begin operations until his proposed schedule has been approved by the Division.

In lieu of use of the existing pavement material for surfacing for temporary roadways, the Contractor may elect to provide T-10 material at his own expense. Additional material for the maintenance of traffic will not be provided.

UTILITY ADJUSTMENT
Any and all work required for Public or Private Utilities will be done by and at the expense of their respective owners unless otherwise noted in these plans.

DESIGN SPEED
This project has been designed for a speed of 60 miles per hour.

PAVEMENT

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

PLACING CONCRETE PAVEMENT
The concrete pavement shall be placed and finished in single lane widths of 12 feet each in areas where maintenance of traffic requires part width construction. In all other areas the pavement may be placed and finished full width in one operation.

FINISHING CONCRETE PAVEMENT
Hand finishing of road approaches and connections to existing road will be permitted as per Section 7.71.211 of the General Specifications.

FLEXIBLE FORMS
Approved flexible forms shall be used for construction of circular pavement edges.

EXISTING PAVEMENT REMOVAL
Removal of existing non-rigid pavement is paid for as Roadway Excavation, Item E-1 and shall be used for temporary roads as directed by the Engineer. Payment for storing and placing salvaged pavement in temporary traffic lanes is included in the unit price bid for Roadway Excavation, Item E-1.

PAVEMENT REMOVAL OUTSIDE of CONSTRUCTION LIMITS
An estimated amount of Roadway Excavation, Item E-1 is provided in the cross sections for removal of the existing pavement between Sta. 1722+00 to Sta. 1742+50.

Payment for excavation shall be made upon cross sections to be taken by the Engineer.

After the existing pavement has been removed, the pavement area and ditch shall be dressed and finished in a sightly manner to conform to the general contour of the surrounding ground. The area shall be seeded in accordance with Item L-9, payment for which shall be based upon final measurement.

The present drainage pattern of the existing roadway area shall not be materially altered by removal of the existing pavement or roadway embankment.

CLASSIFIED EMBANKMENT MATERIAL
Classified embankment used on this project shall meet the requirements of grading "C" or "D" except that the percent passing the No. 200 sieve shall be 5 to 15 for grading "C" or between 5 to 20 for grading "D".

The material need not meet the requirements of 55-5 as to percent passing the No. 50 sieve.

GUARD RAIL REMOVED AND STORED (Panels & Fittings only)
All guard rail listed to be removed and stored, Item I-15, shall be stored on the right of way at the disposal of the State.

Removal of posts included in Item E-1 for payment.

BITUMINOUS CONCRETE BASE COURSE:
Base course may be constructed of Type "A" Surface course composition.

ROADWAY

SEEDING AND PROTECTING ROADWAY AREAS
Quantities of seeding Item L-9 are calculated for soil areas twelve (12') feet outside the work limits as shown on the cross-sections, or to the right of way line if such line is less than twelve (12') feet from the work limits or to the right of way line if such area is in cultivation.

The quantities are approximate and actual limits of seeding will be determined by the Engineer during construction. The number of square yards of seeding shall be the actual number of square yards of seeding placed as determined by final measurements.

ROADWAY EXCAVATION
All roadway excavation shown on the roadway cross-sections, regardless of the nature of the material encountered, will be paid for as Item E-1, Roadway Excavation.

PAVED GUTTERS
Paved gutters shall be constructed of stone or broken concrete to a minimum thickness of twelve (12") inches or Class "E" Concrete to a minimum thickness of six (6") inches. Solid precast concrete blocks may be used in lieu of stone with a minimum thickness of twelve (12") inches. Thickness of paved gutter shall be measured perpendicular to the surface of the ditch.

Concrete gutters shall have an impressed joint at intervals of ten (10') feet.

When constructed of material other than concrete, the material shall be grouted in place.

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

Payment for pipe removed will be made according to the listing shown on these plans.

EMBANKMENT
In lieu of the requirements for full width construction under E-105 the embankment, where traffic is maintained, may be placed in part width construction.

GUARD RAIL REMOVAL
Existing Guard Rail listed for removal and disposal shall become the property of the contractor and shall be disposed of by him.

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	F-454	Post War

5/64

ROSS COUNTY
ROS-50-32.13

NOTES

ROADWAY

PIPE REMOVALS
The removal and disposal of existing pipe (not listed for removal) lying within the limits of proposed excavation, of either Item E-1, or Item E-2 is classified and paid for as excavation; and shall be removed and disposed of by the contractor.

TOE WALLS
Payment for Toe Walls on paved gutters or riprap where called for in these plans, shall be included in price bid per linear foot of paved gutter, or square yard of riprap.

FERTILIZING SOD AREAS
All sod areas are to have Commercial Fertilizer (10-6-4) and Agricultural Ground Limestone applied at the same rate and in the same manner as for the seeded areas in accordance with Section L-9.11.

FLARING GUARD RAIL AT BRIDGES
Guard Rail shall be flared to meet bridge railing in such a manner that the change in alignment of the guard rail shall not exceed 1:10 .

SANITARY SEWERS AND DRAINAGE
Any existing or proposed sanitary sewers or drainage shall not be connected to any storm sewers or gutters drain in this project.

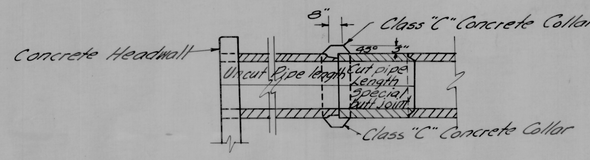
LENGTH OF PIPE SPECIALS
The number of linear feet of pipe to be paid for shall be the length of specials as shown below, regardless of the actual length of pipe special used. If actual length of the pipe special used is less than that shown below, the contractor will furnish enough extra pipe to make up the difference between the assumed and the actual lengths, at the price bid for each special. If the actual length of the pipe special used is greater than that shown below, the extra length of each pipe special, over and above the assumed length, shall be paid for as linear feet of pipe.

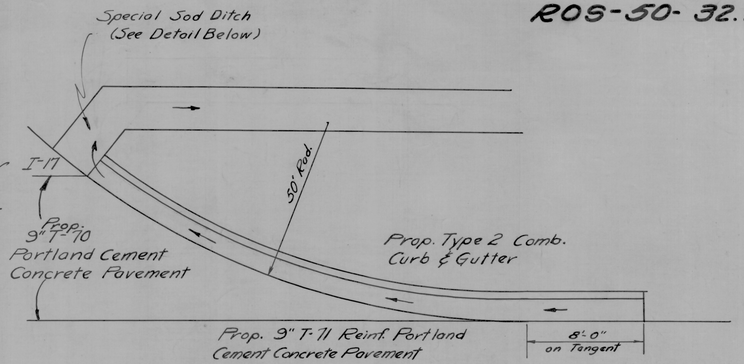
Item No.	Description	Assumed Length of Pipe Specials
I-4	Pipe Underdrains	2'0"

ROADWAY

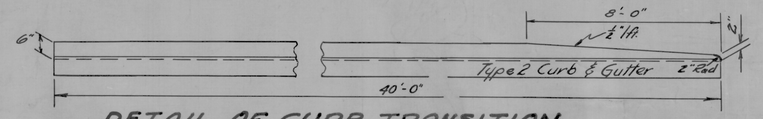
PIPE CUT OFF
When bell and spigot pipe is used, any necessary cut off pipe will be made at the spigot end of the length of pipe adjacent to the end length.

When tongue and grove pipe is used, the length of pipe next to the end length shall be cut and the butt joint formed with a collar as shown below to be included in the price bid per linear foot of pipe.

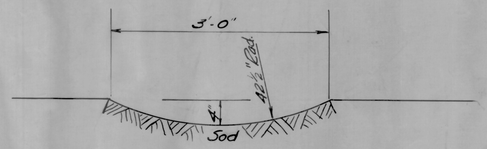




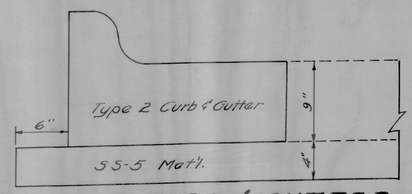
TYPICAL PLAN OF CURB & GUTTER ON APPROACHES
Scale 1"=5'



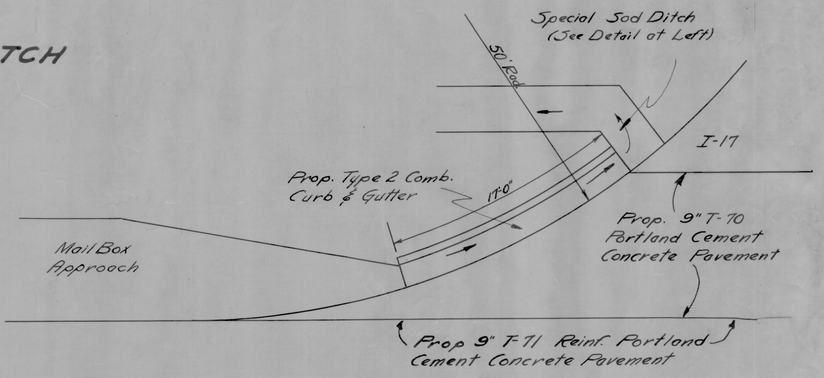
DETAIL OF CURB TRANSITION



DETAIL OF SPECIAL SOD DITCH



DETAIL OF CURB & GUTTER
Scale 12"=1'



DETAIL OF CURB ON APPROACH
LT ℄ STA. 1757+58
Scale 1"=5'

SUMMARY OF QUANTITIES

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	F-454(7)	Post War

6/64

ROSS COUNTY
ROS-50-32.13

PAVEMENT CALCULATIONS

Location	T-30 Bituminous Tack Coat @ 0.1 gal. per Sq. Yd.	T-35 Asphaltic Conc. Surf. Course Var. Thickness 3/4" Avg.	T-35 Asphaltic Conc. Surf. Course 1½"	B-35 Asphaltic Conc. Leveling Course 1¼"	B-35 Asphaltic Conc. Leveling Course 3"	B-35 Asphaltic Conc. Base Course 3"	T-71 Reinforced Portland Cement Concrete Pvt. 9"	SS-5 Classified Embankment 4"	SS-5 Classified Embankment 18"	I-7 9" Reinf. Conc. Approach Slabs
	Sq. Yd.	Cu. Yd.	Sq. Yd.	Sq. Yd.	Sq. Yd.	Sq. Yd.	Sq. Yd.	Sq. Yd.	Sq. Yd.	Sq. Yd.
Typical Section 19"										
6222.22 x 24 x 1/9							16592.59			
50 x 25 x 1/9									138.9	
4272.22 x 25 x 1/9								11867.3		
650 x 28.17 x 1/9									2034.5	
750 x 28.17 x 1/9								2341.5		
Approaches Beg. & End Proj.										
1695+50 - 1696+50	222.2	5.3			38.9	44.4		55.5		
1760+50 - 1761+50	222.2	5.3			38.9	44.4		55.5		
Approach Slabs										
1728+82.11 - 1728+97.11	44.4		44.4	44.4						44.4
1730+44.89 - 1730+59.89	44.4		44.4	44.4						44.4
*Carried from Dr. & App. Box								212.4		
Sub Totals	533.2	10.6	88.8	88.8	77.8	88.8	16592.59	14,538.2	2173.4	88.8
Conversions to gals., cu. yds. etc.	53.3	10.6	3.1	3.1	6.48	7.4	16592.59	1615.4	1086.7	88.8
	53.3 gals.	10.6	3.1 cu. yd.	3.1 cu. yd.	6.48 cu. yd.	7.4 cu. yd.	16592.59	2702.1 cu. yd.		88.8
		13.7 cu. yd.		9.6 cu. yd.						

DRIVES & APPROACHES

See Sheet No.	Station	Side	I-1 Pipe for Driveways 12" Lin. Ft.	15" Lin. Ft.	18" Lin. Ft.	24" Lin. Ft.	42" Lin. Ft.	48" Lin. Ft.	I-17 Side Approaches Mailbox Turnouts & Berm Material Cu. Yd.	T-70 Portland Cement Concrete Pavt. Sq. Yd.	SS-5 Classified Embankment 4" Sq. Yd.	E-12 Pipe Removed and Disposed of 12" Lin. Ft.	E-12 Pipe Removed and Disposed of 18" Lin. Ft.
9	1698+04 Dr. & M.B.	Lt.			22				4.1				15
9	1702+55	Rt.										36	
10	1710+00 Dr. & M.B.	Lt.				26			17.1				
10	1711+35	Rt. & Lt.										78	
10	1713+04.3 Dr. & M.B.	Rt.		24					10.1				
11	1716+50	Lt.		22					4.4				
11	1722+00	Rt.					40		8.7				
12	1733+00	Lt.						40	6.0				
12	1733+00	Rt.							4.6				
13	1742+88 Twp. Rd.	Lt.							17.7	67.8	70.8		
13	1743+29 Twp. Rd.	Rt.							16.5	67.8	70.8		
13	1744+00	Lt.				40			6.6				
14	1752+34	Lt.			24				9.5			20	
15	1756+64	Rt.	22						3.9			24	
15	1756+80 M.B.	Lt.							2.7				
15	1757+58 Pub. Rd.	Lt.							5.4	67.8	70.8		
	Total		22	46	46	66	40	40	117.30	203.4	212.4 *	158	15
									+20%	* Carried to pavt. calculation box		173	
									140.76				

REMOVAL OF TREES & STUMPS

E-9	Lump

CURB & GUTTER

See Sheet No.	Station	Side	I-12 Combination Curb & Gutter Type 2 Lin. Ft.
13	1742+88 Twp. Rd.	Lt.	80
13	1743+29 Twp. Rd.	Rt.	80
15	1757+58 Pub. Rd.	Lt.	57
	Total		217

T-10 CALCULATION

Sta. to Sta.	Length	Width	Thick.	Vol. C.Y.
1695+50-1714+50	1900	20'	4"	463.1
1714+50-1715+50	100	20'	4"	24.7
1718-1722	400	10'	4"	49.4
1722+50	100	20'	4"	24.7
		Total		567.9

M-10 CALCULATION
567.9 x 40 Lbs. per Cu. Yd. x 1/2000 =
11.358 Tons

EROSION CONTROL

See Sheet No.	Station to Station	Side	L-9 Seeding & Protecting Type A" Sq. Yd.	L-9 Agricultural Ground Limestone Ton	L-9 Commercial Fertilizer (10-6-4) Ton	L-10 Sodding Sq. Yd.	I-14 Paved Gutter (As per plan) Lin. Ft.
9-10	1702+00 - 1711+00	Rt.				900	
10	1712+00 - 1712+95	Rt.				95	
10	1713+14 - 1716+00	Rt.				286	
11	1716+00 - 1720+00	Rt.					485
11	1720+60 - 1721+85	Rt.				125	
11-12	1722+15 - 1727+50	Rt.				540	
12	1727+50 - 1728+15	Rt.					65
12	1728+15 - 1729+40	Rt.				125	
14-15	1749+90 - 1756+75	Rt.				690	
9-10	1701+00 - 1709+90	Lt.				890	
10	1710+10 - 1711+50	Lt.				140	
10-11	1712+00 - 1716+42	Lt.				450	
11	1716+58 - 1717+50	Lt.				93	
11	1717+50 - 1718+10	Lt.					67
11	1718+10 - 1719+60	Lt.				150	
11	1721+00 - 1725+50	Lt.				460	
12	1729+00 - 1729+40	Lt.				240	
12	1730+06 - 1731+35	Lt.				130	
12	1731+35 - 1732+83	Lt.					148
12	1733+17 - 1733+50	Lt.					33
12-13	1733+50 - 1742+50	Lt.				903	
13	1742+50 - 1742+70	Lt.					20
13	1743+10 - 1743+40	Lt.					40
13	1743+40 - 1743+83	Lt.				43	
13	1744+15 - 1745+65	Lt.				175	
13-14	1745+65 - 1750+50	Lt.					470
14	1750+50 - 1752+22	Lt.				175	
14-15	1752+43 - 1757+33	Lt.				495	
18	1695+50 to 1729+22	Rt. & Lt.	37830				
36	1730+18 to 1761+50	Rt. & Lt.	30240				
	1722+00 to 1742+50 (Seeding outside work limits)	Rt.	4518				
	Total		72657	35.89	7.17	7105	1328

EXCAVATION & EMBANKMENT

Station to Station	E-1 Excavation Cu. Yd.	Embankment Cu. Yd.	Embankment +20% Cu. Yd.
1695+50-1729+22	52025	31854	
1730+18-1761+50	25525	26612	
1722+00-1742+50 (Pavement Removal outside Work Limits)	1526		
Total	79076	58466	70159

GUARD RAIL

Station to Station	Side	I-15 Steel Beam Type (Deep) Lin. Ft.	I-15 Removed & Stored (Plates & Fittings only) Lin. Ft.	Special Removed & Disposed of Lin. Ft.	See Sheet No.
1705+27 - 1711+36	Rt.		609		9-10
1715+72 - 1717+20	Rt.		148		10-11
1717+42 - 1719+12	Rt.		170		11
1715+87 - 1721+73	Lt. & Rt.		586		10-11
1726+70 - 1729+60	Rt.			300	12
1729+20 - 1729+55	Rt.			35	12
1730+50 - 1731+25	Rt.			80	12
1730+50 - 1732+20	Rt.			175	12
1727+61 - 1728+86	Lt.	125			12
1727+73 - 1728+98	Rt.	125			12
1730+46 - 1730+83.5	Lt.	37.5			12
1730+50 - 1730+95.5	Rt.	37.5			12
1746+00 - 1748+50	Lt. & Rt.	500			14
1717+25 - 1720+00	Rt.	275			11
Total		1100.0	1513	590	

DRAINAGE

See Sheet No.	Structure No.	Station	Side	Existing Structure Type	Existing Structure Size	Existing Structure Length	Proposed Structure Type	Proposed Structure Size	Proposed Structure Length	E-2 Excavation for Structure Cu. Yd.	E-3 Channel Excavation Cu. Yd.	I-4 6" Pipe Underdrain with porous backfill Lin. Ft.	I-4 8" Pipe Outlet for Underdrain Lin. Ft.	I-5 Pipe Specials 45° Curve Bends 6"x8" 8"x8" Each		I-10 Riprap Type "A" Sq. Yd.	S-1 Concrete for Structure Class C" Cu. Yds.	S-4 Reinforcing Steel Lbs.	S-24 Removal of Existing Structure Lump	S-27 Pipe for Roadway Culverts 15" Lin. Ft.	S-27 24" Lin. Ft.	S-27 48" Lin. Ft.
9	1	1705+46	Lt. & Rt.	conc.	24"	36'		none											Lump			
56	2	1711+50	Lt. & Rt.		none		pipe	24"	76'	61						69	3.8	57			76	
11	3	1720+22.6	Lt. & Rt.	conc.	24"	103.5'		none											Lump			
57	4	on Rt. Twp. Rd. 1742+88	Lt.	pipe	48"	18.8'	pipe	48"	30'	16	31					30	7.1	112	Lump			30
55	5	1757+58	Lt.		none		pipe	15"	65'											65		
		1707+00 to 1716+00	Lt. & Rt.									1800	25	2	2							
		1750+00 to 1760+00	Lt. & Rt.									2100	62	2	2							
		Total								77	31	3900	87	4	4	99	10.9	169	Lump	65	76	30

GENERAL SUMMARY

ITEM NO.	QUANTITY TYPE CODE Nº 7221	UNIT	DESCRIPTION		
			ROADWAY		
E-1	79,076	Cu. Yd.	Roadway Excavation	30,220	48,856
E-11	313	M. Gal.	Water	0	313
E-9	Lump	Lump	Removal of Trees and Stumps	Lump	Lump
E-12	173	Lin. Ft.	12" & 18" Pipe Removed and Disposed of	78	95
			DRAINAGE		
I-1	22	Lin. Ft.	12" Pipe for Driveways	0	22
I-1	46	Lin. Ft.	15" Pipe for Driveways	24	22
I-1	46	Lin. Ft.	18" Pipe for Driveways	0	46
I-1	66	Lin. Ft.	24" Pipe for Driveways	0	66
I-1	40	Lin. Ft.	42" Pipe for Driveways	0	40
I-1	40	Lin. Ft.	48" Pipe for Driveways	0	40
I-4	3900	Lin. Ft.	6" Pipe Underdrains	1000	2900
I-4	87	Lin. Ft.	8" Pipe Outlets for Underdrains	0	87
I-5	8	Each	8" Pipe Special for Underdrains	0	8
I-10	99	Sq. Yd.	Riprap Type "A"	69	30
				0	217
I-14	1328	Lin. Ft.	Paved Gutter as per plan	0	1328
			ROADWAY (CONT'D)		
I-15	1100	Lin. Ft.	Guard Rail Steel Beam Type (Deep)	0	1100
I-15	1513	Lin. Ft.	Guard Rail Removed and Stored, As Per Plan	90	1423
Special	590	Lin. Ft.	Guard Rail Removed and Disposed of	0	590
I-17	141	Cu. Yd.	Side Approaches, Mail Box Turnouts, and Berm Material	0	141
L-9	72,657	Sq. Yd.	Seeding and Protecting Type "A"	6815	65,842
L-9	35.89	Ton	Agricultural Ground Limestone	3.44	32.45
L-9	7.17	Ton	Commercial Fertilizer (10-6-4)	0.68	6.49
L-10	7105	Sq. Yd.	Sodding	831	6274
T-10	568	Cu. Yds.	Traffic Compacted Surface Course for Maintaining Traffic		
M-10	11	Tons	Calcium Chloride for Maintaining Traffic		
			PAVEMENT		
B-35	10	Cu. Yd.	Asphaltic Concrete Leveling Course (70-80 or 85-100)	0	10
B-35	8	Cu. Yd.	Asphaltic Concrete Base Course (70-80 or 85-100)	0	8
T-30	54	Gal.	Bituminous Tack Coat Sec. M-5.5 MS-2 or SS-1	0	54
T-35	14	Cu. Yd.	Asphaltic Concrete Surface Course Type "A" or "C" (70-80 or 85-100)	0	14
T-70	204	Sq. Yd.	9" Portland Cement Concrete Pavement	0	204
T-71	16,593	Sq. Yd.	9" Reinforced Portland Cement Concrete Pavement	1,333	15,260
I-7	89	Sq. Yd.	Reinforced Concrete Approach Slabs	0	89
SS-5	2703	Cu. Yd.	Classified Embankment Material, Grading "C" or "D" as per plan	0	2703
I-12	217	Lin. Ft.	Standard Type 2 Combination Curb and Gutter		
			DRAINAGE (CONT'D)		
E-2	77	Cu. Yd.	Excavation for Structures	61	16
E-3	31	Cu. Yd.	Channel Excavation	0	31
S-1	10.9	Cu. Yd.	Concrete for Structures Class "C"	3.8	7.1
S-4	169	Lbs.	Reinforcing Steel	57	112
S-24	Lump	Lump	Removal of Existing Structures	0	Lump
S-27	65	Lin. Ft.	15" Pipe for Roadway Culverts	0	65
S-27	76	Lin. Ft.	24" Pipe for Roadway Culverts	76	0
S-27	30	Lin. Ft.	48" Pipe for Roadway Culverts	0	30
Special	Lump	Lump	Maintaining Traffic, See Note on Sheet No. 4		

FOR ESTIMATED QUANTITIES FOR BRIDGE Nº RO-50-328 SEE SHEET 61

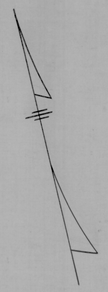
FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	F-454(7)	Post War

ROSS COUNTY
ROS-50-32.13

FED. RD. DIVISION	STATE	PROJECT	SHEET NO.
2	OHIO	F-454(7)	Post War

8
64

ROSS COUNTY
ROS-50-32.13



S 77° 30' E

1685 1686 1687 1688 1689 1690 1691 1692 1693 1694 1695

Note: Profile shown is crown of Existing Pav't.

725
720
715
710

724.75 724.01 723.24 722.77 722.23 722.06 722.13 721.46 721.27 720.85 720.43 719.93 719.50 719.13 719.26 719.02 718.80 718.65 718.33

1686 1687 1688 1689 1690 1691 1692 1693 1694 1695

STA. 1686+00 TO STA. 1694+00

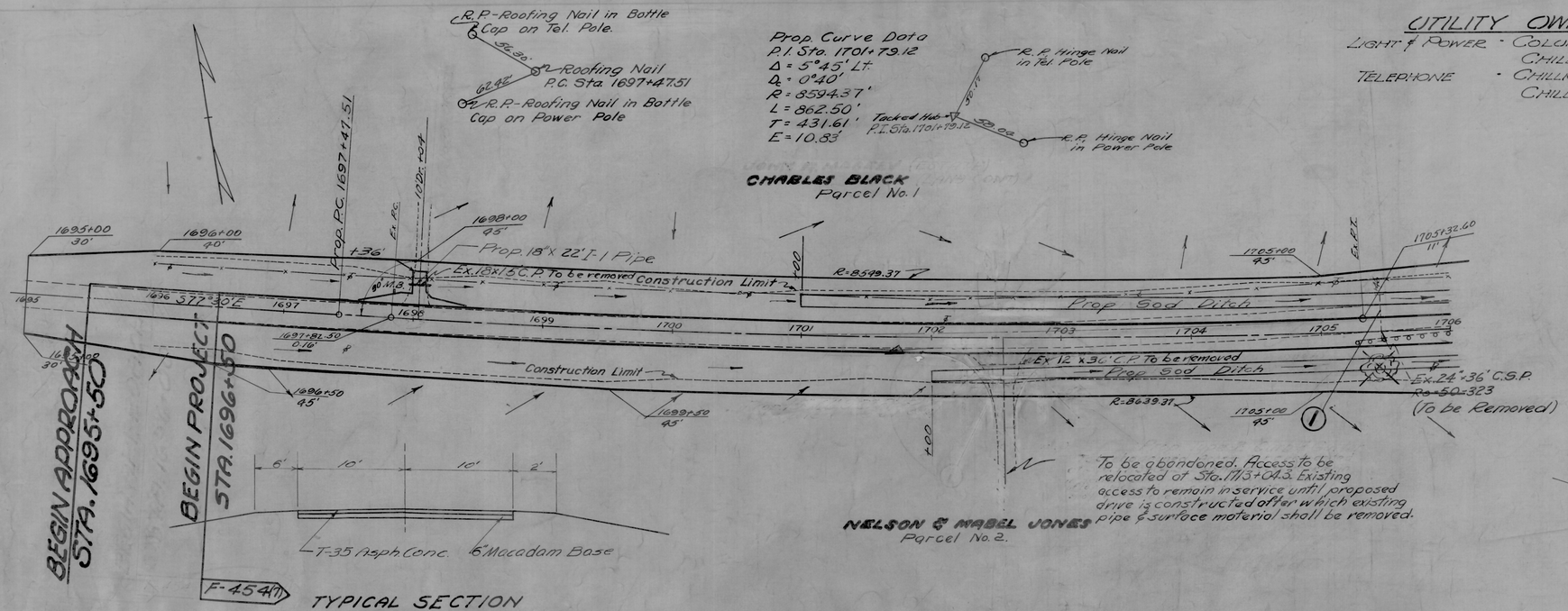
FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	F-454(7)	Post War

ROSS COUNTY
ROS-50-32.13

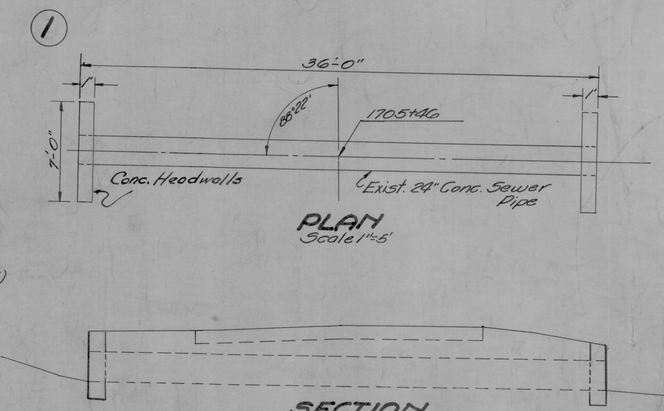
UTILITY OWNERS

LIGHT & POWER - COLUMBUS & SOUTHERN ELECTRIC CO.
CHILLICOTHE, OHIO

TELEPHONE - CHILLICOTHE TELEPHONE CO.
CHILLICOTHE, OHIO



TYPICAL SECTION OF ADJACENT PAVEMENT AT BEGINNING OF PROJECT



ESTIMATED QUANTITIES

Item S-24 Removal of Existing Structure — Lump

Culvert Data
Work Req'd: Remove and dispose of existing structure.

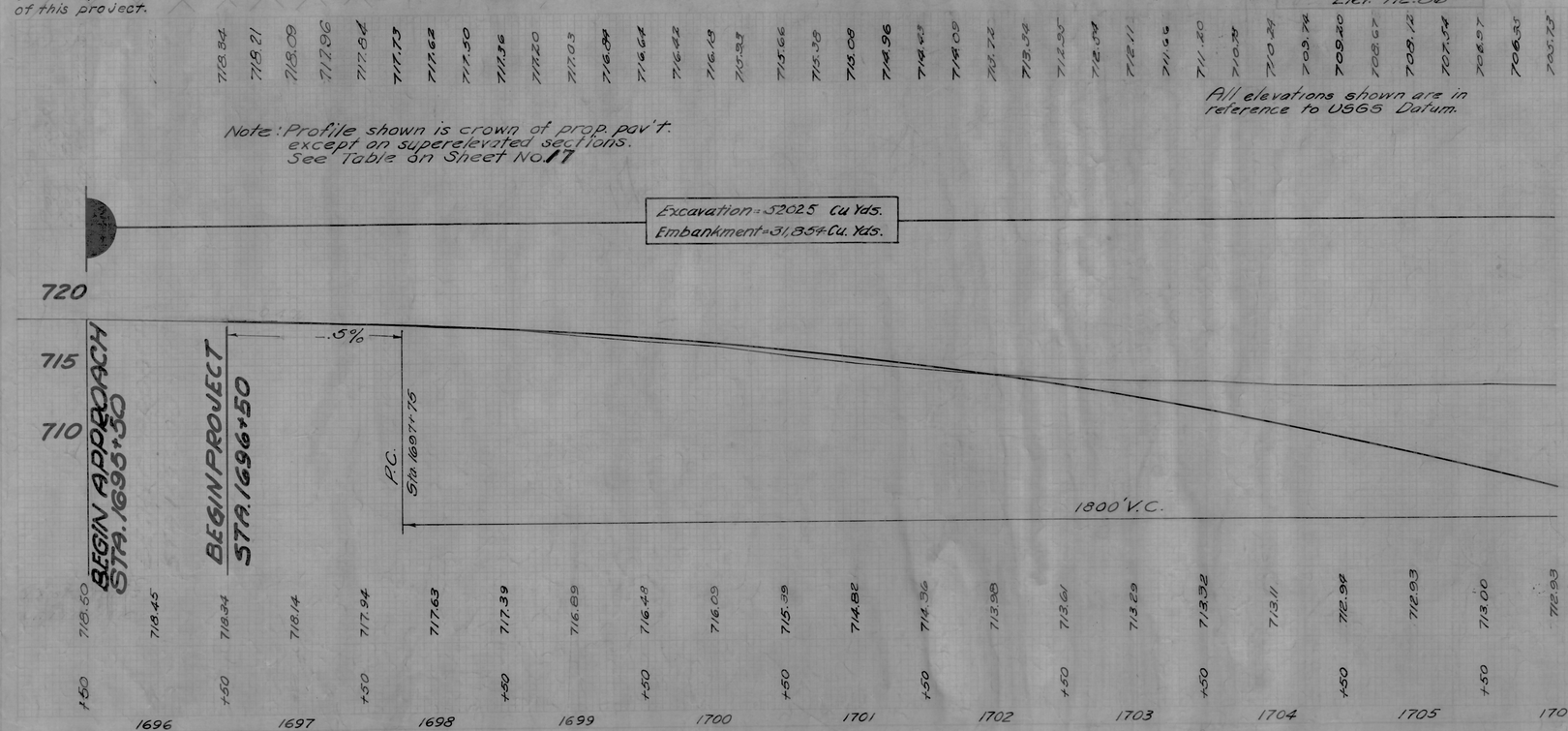
FOR ESTIMATED QUANTITIES SEE SHEET No. 6

NOTE:
Marker will be furnished and erected on the right by the state before acceptance of this project.

BENCH MARK
N.E. Corner of N. Hdwl. of Culvert at Sta. 1705+50
Elev. 712.86

All elevations shown are in reference to USGS Datum.

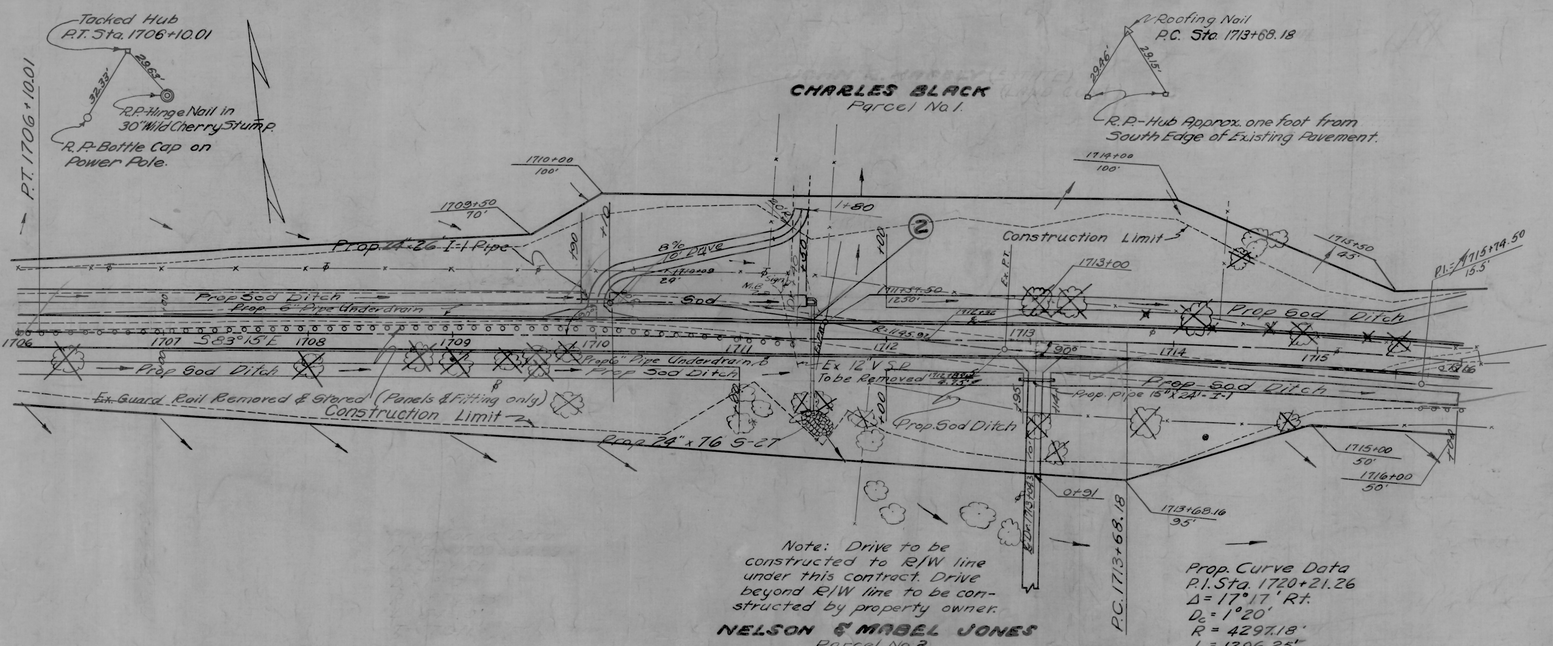
Note: Profile shown is crown of prop. pav't. except on superelevated sections. See Table on Sheet No. 17



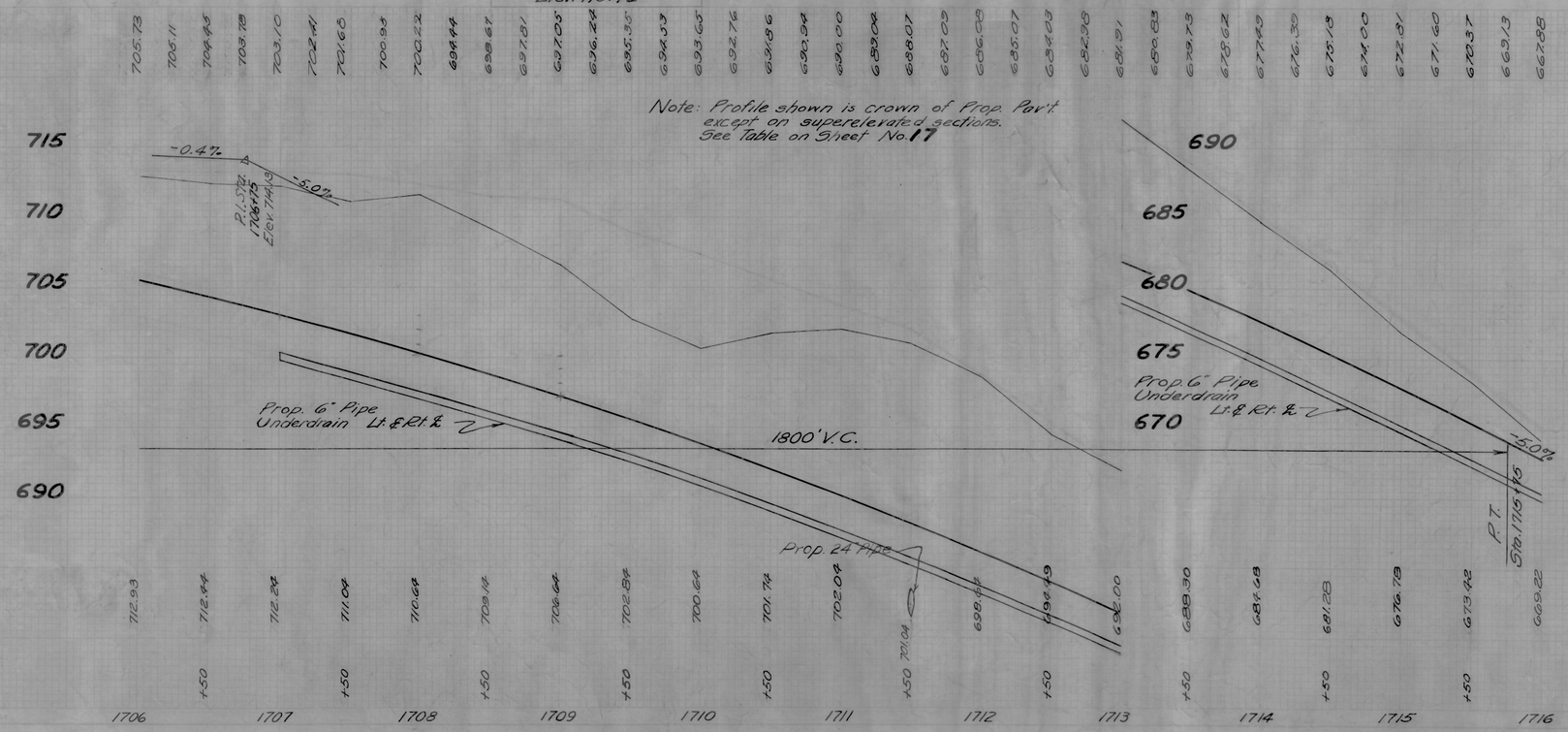
STA. 1696+00 to STA. 1706+00

FED. ROAD DIVISION	STATE	PROJECT	TYPE FUNDS	
2	OHIO	F-454(7)	Post War	10 64

ROSS COUNTY
ROS-50-32.13



BENCH MARK
Spike in Tel. Pole 30' Lt.
Sta. 1709+62
Elev. 710.42



FOR ESTIMATED QUANTITIES
SEE SHEET No. 6

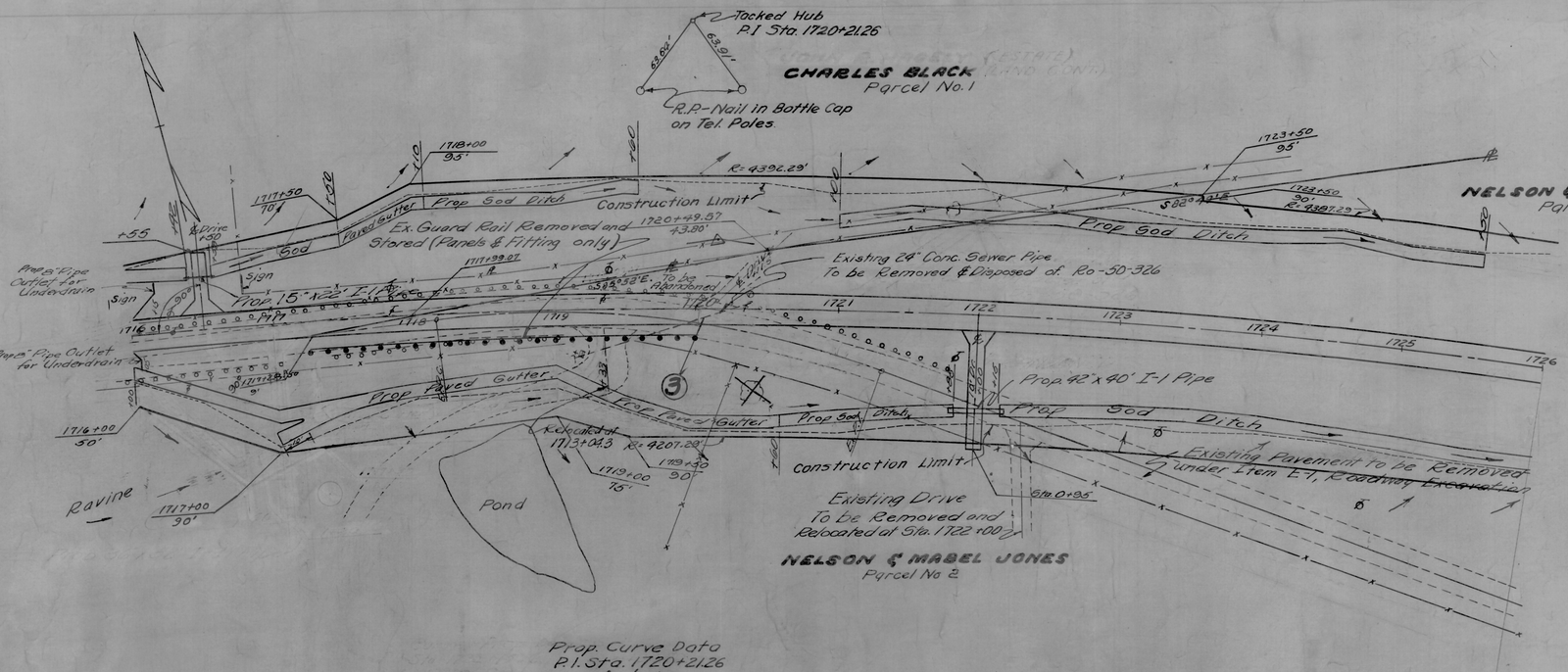
FOR DETAILS OF STRUCTURE
No. 2 SEE SHEET No. 56

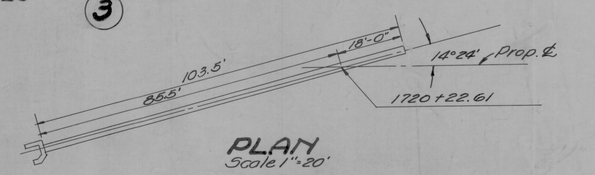
STA. 1706+00 to STA. 1716+00

SHEETS	STATE	PROJECT	TYPE FUNDS
2	OHIO	F-454(7)	Post War

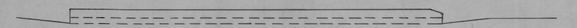
11
64

ROSS COUNTY
ROS-50-32.13





PLAN
Scale 1"=20'



SECTION
Scale 1"=20'

ESTIMATED QUANTITIES

Item 5-24 Removal of Existing Structure — Lump

Culvert Data

Work Req'd: Remove existing structure.

FOR ESTIMATED QUANTITIES SEE SHEET No. 6

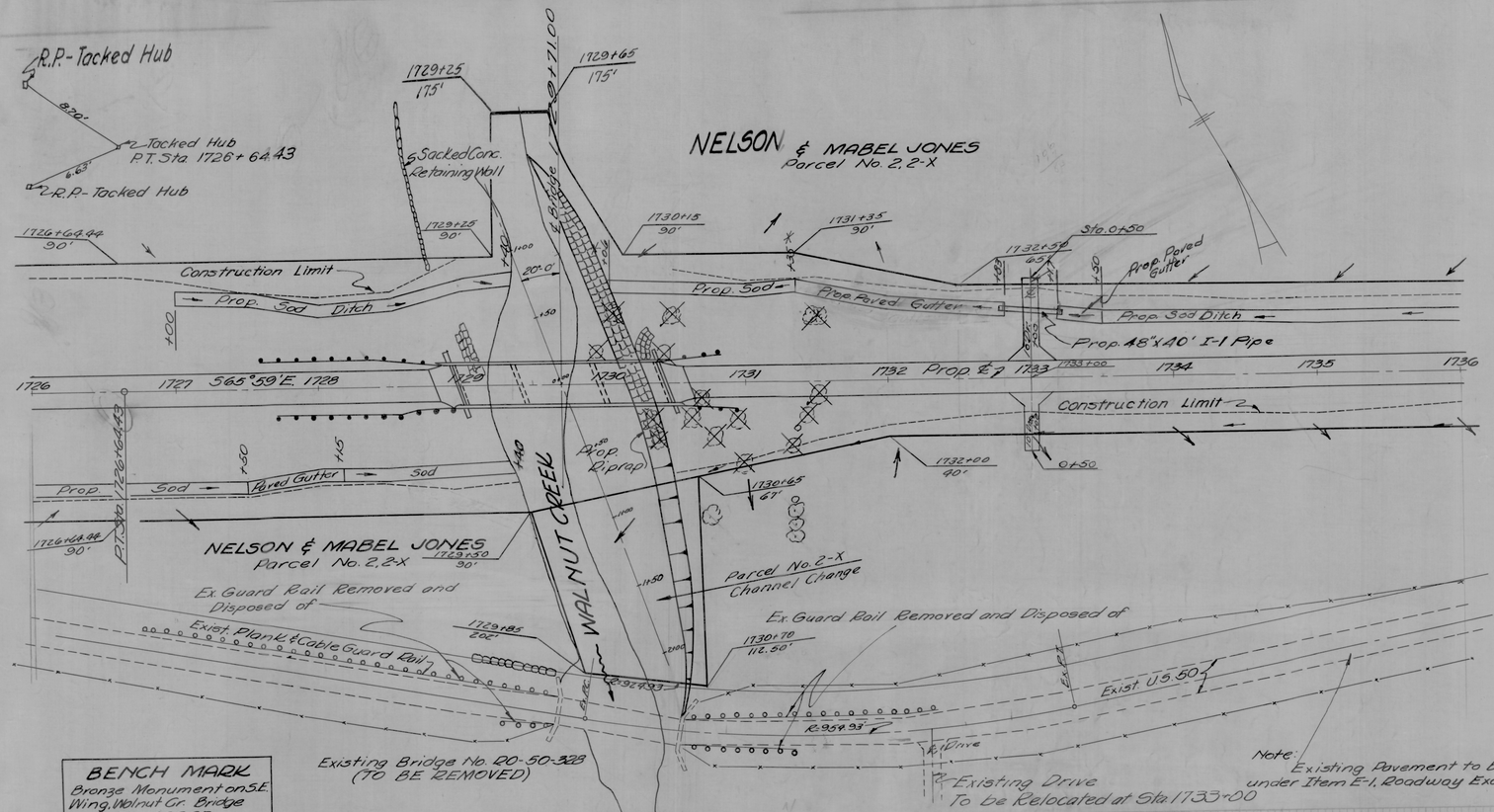
Note: Profile shown is crown of Prop. Pvmt. except on superelevated sections. See Table on Sheet No. 17

STA. 1716+00 to STA. 1726+00

FED. ROAD DIVISION	STATE	PROJECT	STATE FUNDS
2	OHIO	F-454(7)	Post War

12
64

ROSS COUNTY
ROS-50-32.13



BENCH MARK
Bronze Monument on S.E. Wing, Walnut Cr. Bridge
Elev. 637.87

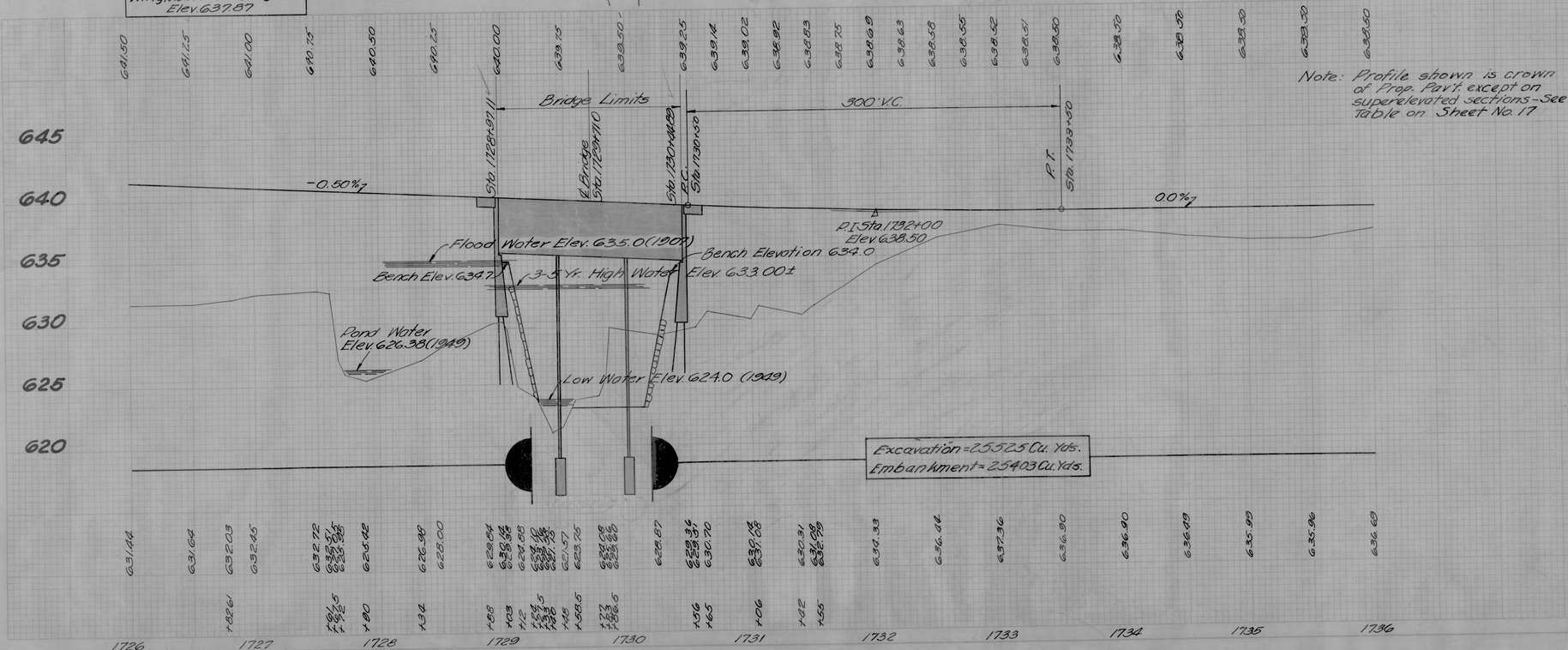
PROPOSED STRUCTURE

TYPE: Continous steel beam with concrete deck and concrete substructure
SPAN: 44'-55'-44' c-c bearings
RDWY: 28' plus 1'-9" safety curbs
LOADING: S-15-46
SKEW: 20°0' R.F.
SURF COURSE: Bituminous
APPROACH SLABS: As shown

EXISTING BRIDGE DATA

TYPE: Steel low truss
SPAN: 87'-3"
ROADWAY: 15'-3"
SKEW: None
CONDITION: Fair
(To be removed-See note on Sheet No. 61)

FOR ESTIMATED QUANTITIES
SEE SHEET No. 6

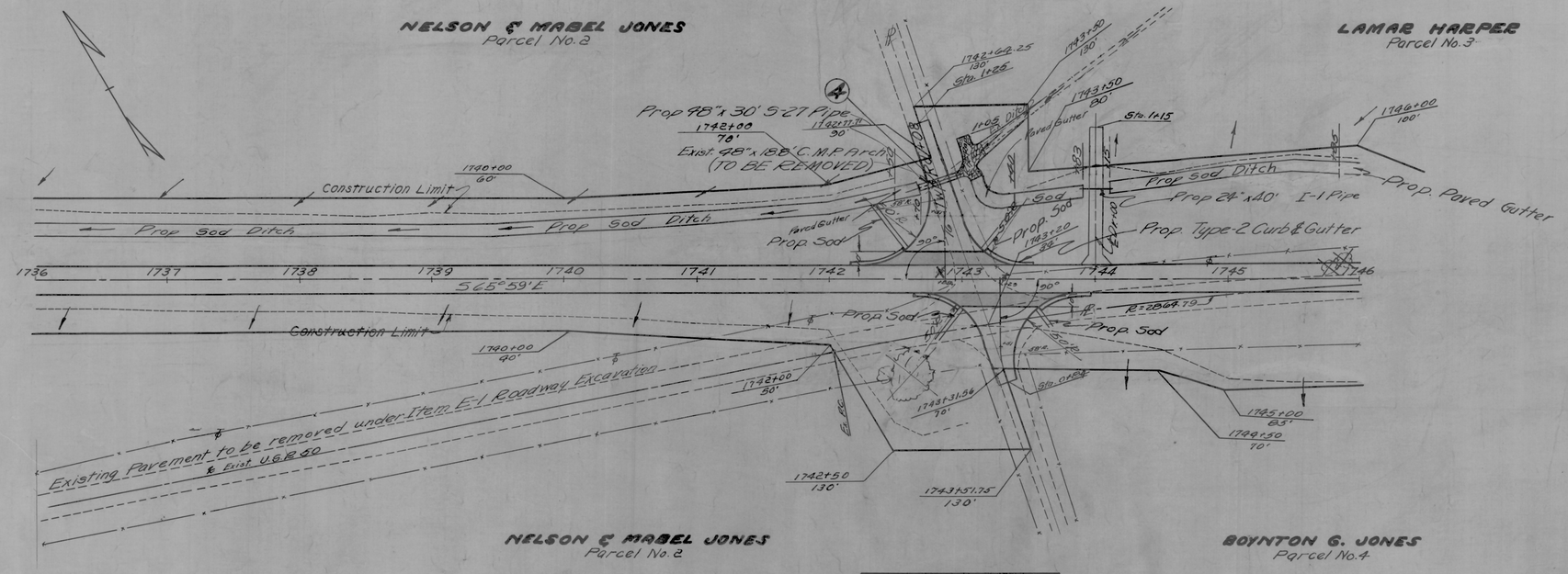


STA. 1726+00 TO STA. 1736+00

FED. AID PROJECT NO.	STATE	PROJECT	TYPE FUNDS
2	OHIO	F-454(7)	Post War

13
64

ROSS COUNTY
ROS-50-32.13

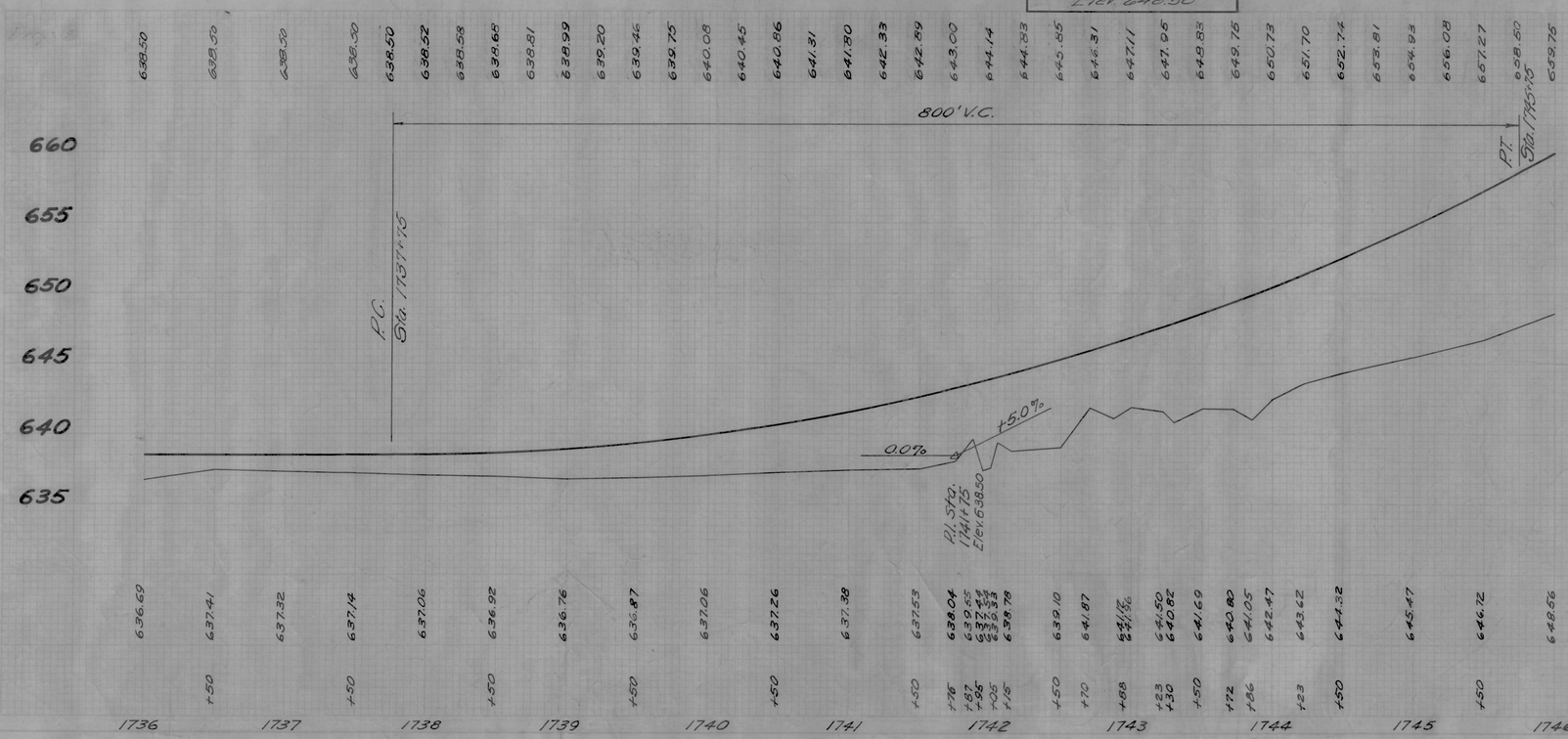


FOR DETAILS OF INTERSECTION
SEE SHEET No. 54

FOR ESTIMATED QUANTITIES
SEE SHEET No. 6

FOR DETAILS OF STRUCTURE
No. 4 SEE SHEET No. 57

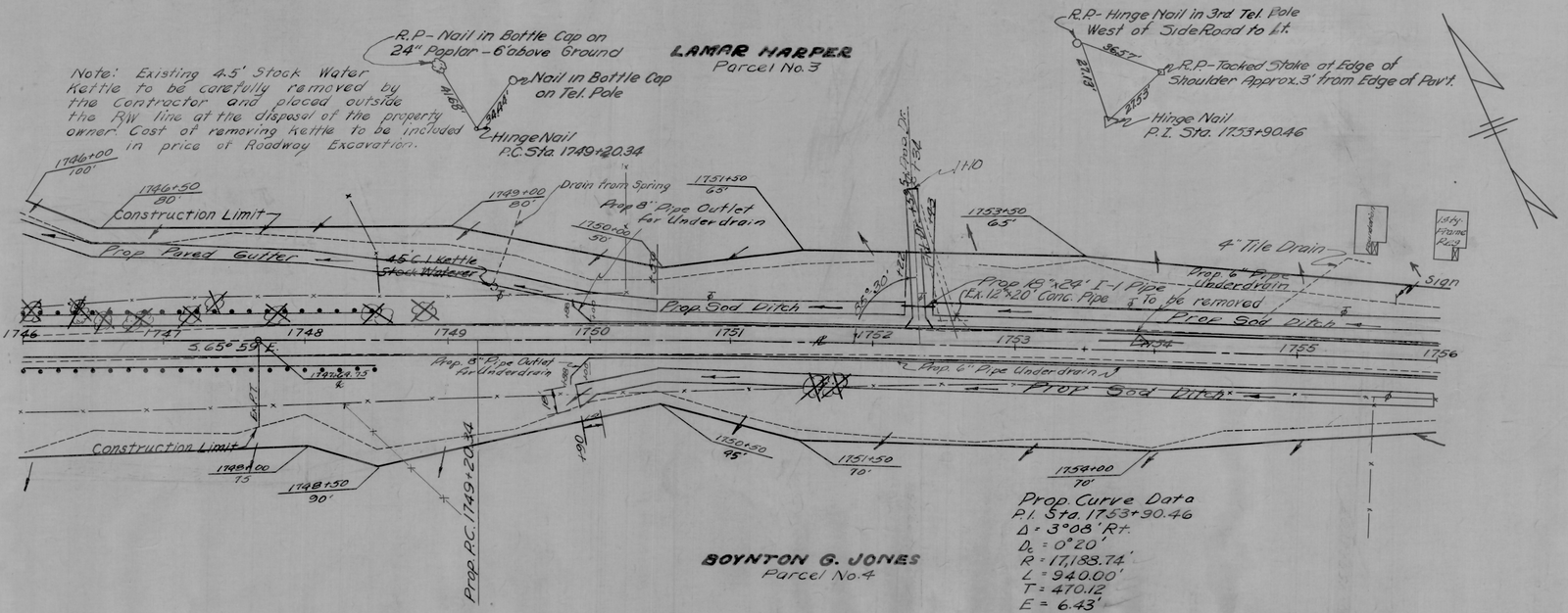
Note: Profile shown is crown of Prop. Pav't.



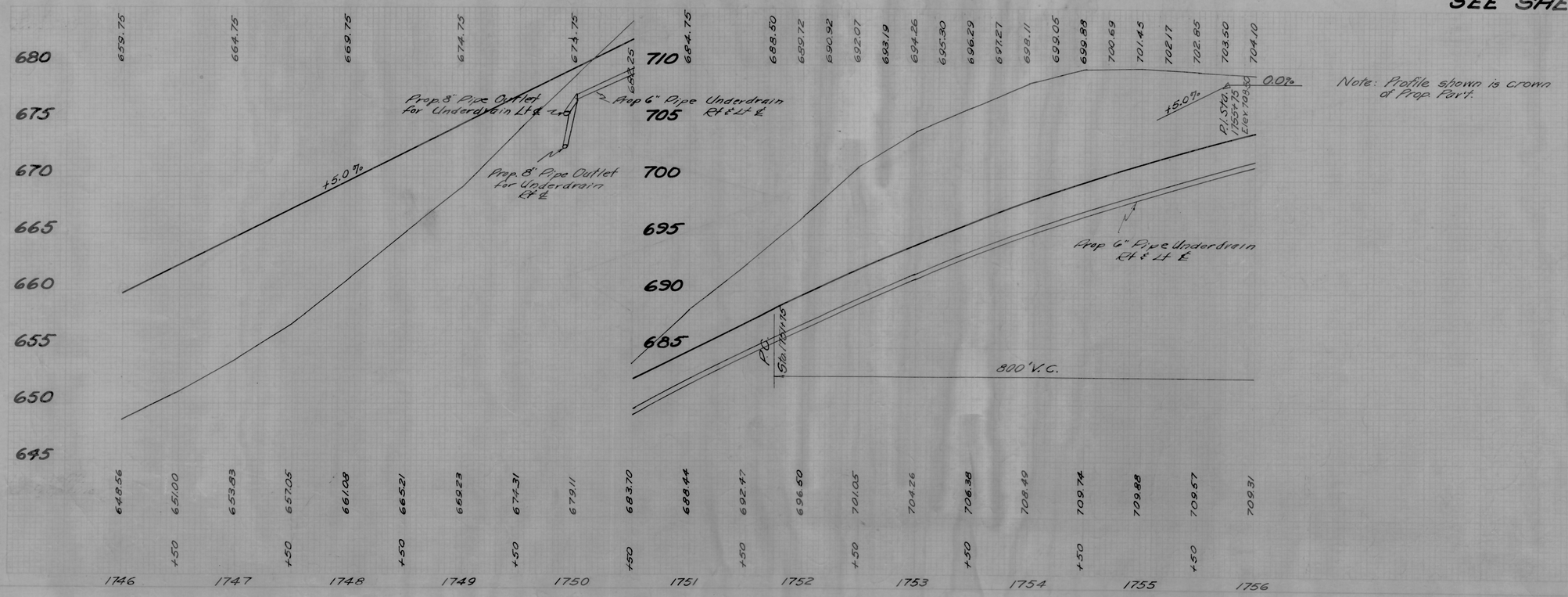
STA. 1736+00 to STA. 1746+00

SEQ. NO.	STATE	PROJECT	TYPE PAVING	
2	OHIO	F-A54(7)	Post War	14 64

ROSS COUNTY
ROS-50-32.13



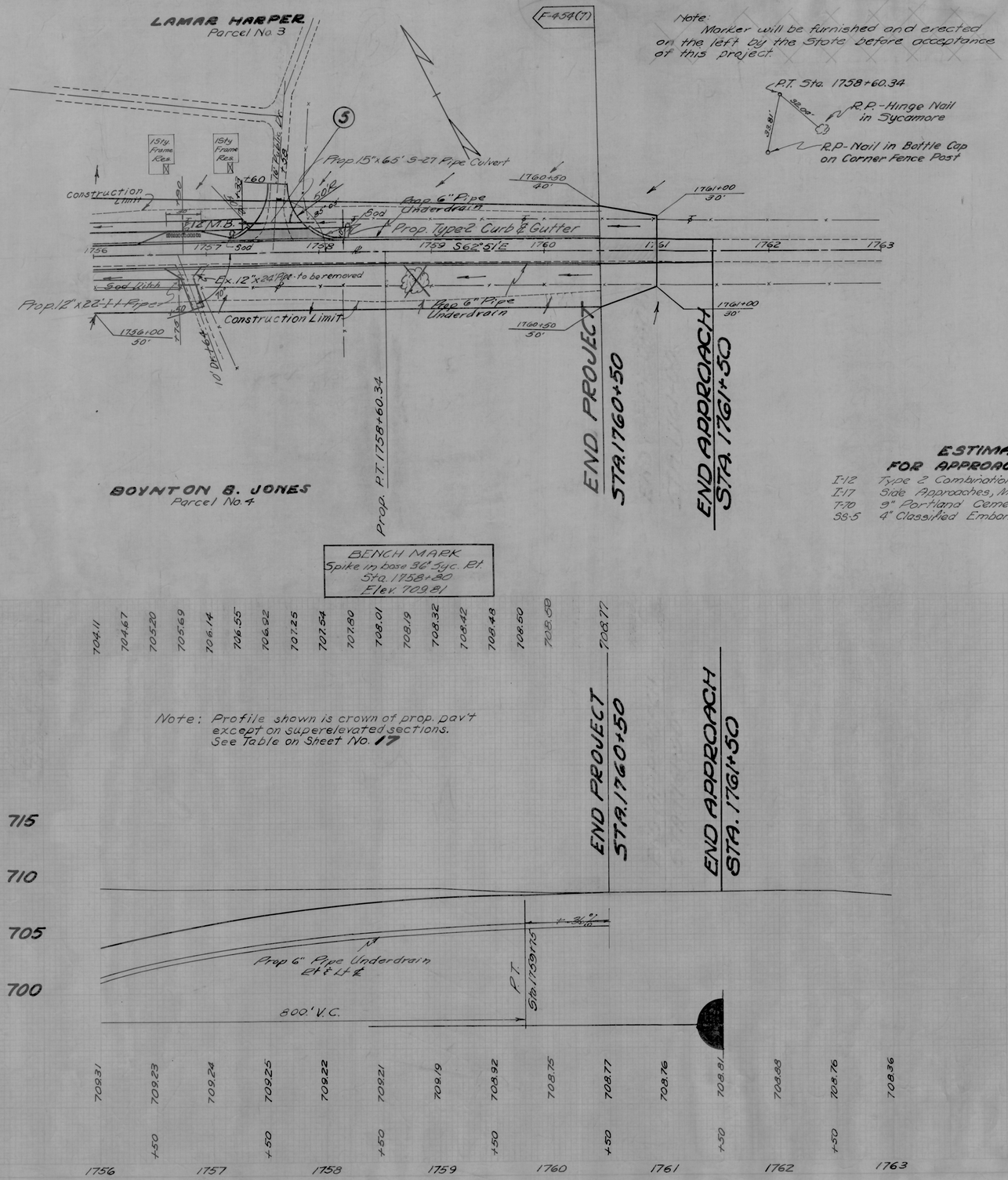
FOR ESTIMATED QUANTITIES
SEE SHEET No. 6

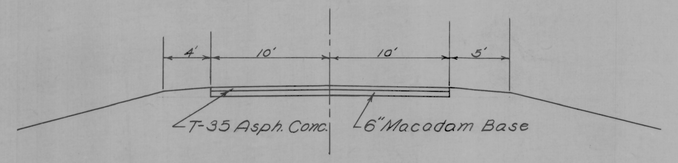


STA. 1746+00 to STA. 1756+00

				TYPE FUNDS	
2	OHIO	F-454(7)		Post War	15 64

ROSS COUNTY
ROS-50-32.13





TYPICAL SECTION
OF ADJACENT PAVEMENT
AT END OF PROJECT

ESTIMATED QUANTITIES
FOR APPROACH - STA. 1757+58 LT. &

I-12	Type 2 Combination Curb and Gutter	57 Lin. Ft.
I-17	Side Approaches, Mail Box Turnouts and Berm Material	5.4 Cu. Yd.
T-70	9" Portland Cement Concrete Pavement	67.8 Sq. Yd.
58.5	4" Classified Embankment	70.8 Sq. Yd.

FOR ESTIMATED QUANTITIES
SEE SHEET No. 6

FOR DETAILS OF STRUCTURE
No. 5 SEE SHEET No. 55

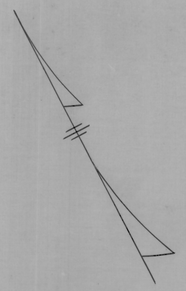
BENCH MARK
Spike in base 36" Syc. Et.
Sta. 1758+80
Elev. 709.81

STA. 1756+00 to STA. 1763+00

FED. RD. DIVISION	STATE	PROJECT	TYPE NO.
2	OHIO	F-454(7)	Post War

16
64

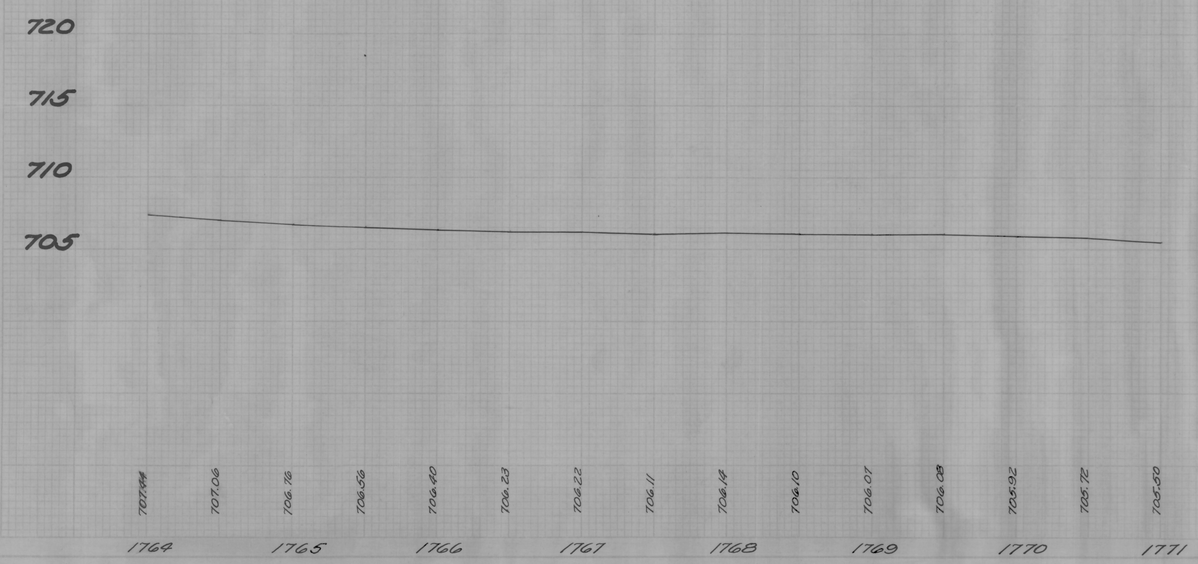
ROSS COUNTY
ROS-50-32.13



S 62° 51' E

1764 1765 1766 1767 1768 1769 1770 1771

Note: Profile shown is crown of Existing Pav't.



STA. 1764+00 TO STA. 1773+00

PAVEMENT ELEVATIONS

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	F-459(7)	Post War

17/64

ROSS COUNTY
ROS-50-32.13

0°40' Curve Lt
P.C. 1697+42.46 P.T. 1706+14.92

Elevation 12' Left	Station	Center Elevation	Super Elevation	Elevation 12' Right
718.14	1696+25	718.33	0.00	718.14
718.04	+50	718.23	.10	718.14
717.94	+75	718.13	.19	718.13
717.90	1697+00	718.03	.29	718.13
717.74	+25	717.93	.39	718.13
717.64	+50	717.83	.48	718.12
717.54	+75	717.73	.58	718.12
717.43	1698+00	717.62		718.01
717.31	+25	717.50		717.89
717.17	+50	717.36		717.75
717.01	+75	717.20		717.59
716.84	1699+00	717.03		717.42
716.65	+25	716.84		717.23
716.45	+50	716.64		717.03
716.23	+75	716.42		716.81
715.99	1700+00	716.18		716.57
715.74	+25	715.93		716.32
715.47	+50	715.66		716.05
715.19	+75	715.38		715.77
714.89	1701+00	715.08		715.47
714.58	+25	714.77		715.16
714.24	+50	714.43		714.82
713.90	+75	714.09		714.48
713.53	1702+00	713.72		714.11
713.15	+25	713.34		713.73
712.76	+50	712.95		713.34
712.35	+75	712.54		712.93
711.92	1703+00	712.11		712.50
711.47	+25	711.66		712.05
711.01	+50	711.20		711.59
710.54	+75	710.73		711.12
710.05	1704+00	710.24		710.63
709.55	+25	709.74		710.13
709.01	+50	709.20		709.59
708.48	+75	708.67		709.06
707.93	1705+00	708.12		708.51
707.35	+25	707.54		707.93
706.78	+50	706.97		707.36
706.16	+75	706.35	.58	706.74
705.54	1706+00	705.73	.48	706.02
704.92	+25	705.11	.39	705.31
704.26	+50	704.45	.29	704.55
703.59	+75	703.78	.19	703.78
702.91	1707+00	703.10	.10	703.01
702.22	+25	702.41	.00	702.22

1°20' Curve Rt
P.C. 1713+68.18 P.T. 1726+64.43

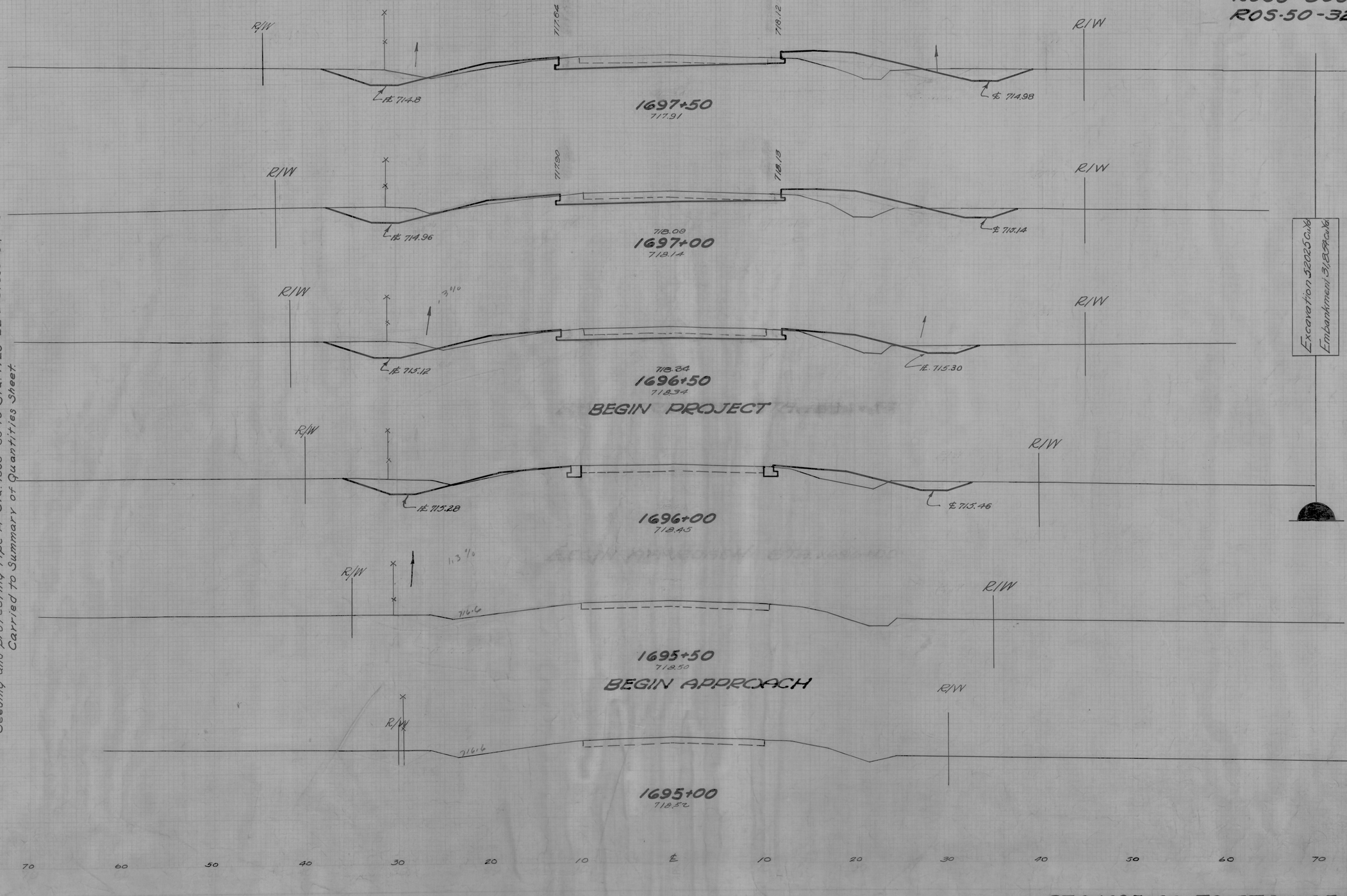
Elevation 12' Left	Station	Center Elevation	Super Elevation	Elevation 12' Right
686.90	1711+75	687.09	.00	686.90
685.96	1712+00	686.08	.07	685.89
685.02	+25	685.07	.14	684.88
684.05	+50	684.03	.21	683.84
683.07	+75	682.98	.28	682.79
682.08	1713+00	681.91	.36	681.72
681.07	+25	680.83	.43	680.64
680.04	+50	679.73	.50	679.54
679.27	+68.16	678.91	.55	678.72
679.01	+75	678.62	.58	678.43
677.88	1714+00	677.49		677.30
676.78	+25	676.39		676.20
675.57	+50	675.18		674.99
674.39	+75	674.00		673.81
673.20	1715+00	672.81		672.62
671.99	+25	671.60		671.41
670.76	+50	670.37		670.18
669.55	+75	669.13		668.97
668.27	1716+00	667.88		667.69
667.02	+25	666.63		666.44
665.77	+50	665.38		665.19
664.52	+75	664.13		663.94
663.29	1717+00	662.90		662.71
662.09	+25	661.70		661.51
660.93	+50	660.54		660.35
659.80	+75	659.41		659.22
657.70	1718+00	658.32		657.12
656.66	+25	657.26		656.08
656.63	+50	656.24		656.05
655.63	+75	655.24		655.05
654.69	1719+00	654.30		654.11
653.78	+25	653.39		653.20
652.89	+50	652.20		652.31
652.05	+75	651.66		651.47
651.24	1720+00	650.85		650.66
650.46	+25	650.07		649.88
649.72	+50	649.33		649.14
649.02	+75	648.63		648.44
648.34	1721+00	647.95		647.76
647.70	+25	647.31		647.12
647.11	+50	646.72		646.53
646.54	+75	646.15		645.96
646.01	1722+00	645.62		645.43
645.52	+25	646.13		644.94
645.06	+50	644.67		644.48
644.63	+75	644.24		644.05
644.25	1723+00	643.86		643.67
643.89	+25	643.50		643.31
643.58	+50	643.19		643.00
643.29	+75	642.90		642.71
643.05	1724+00	642.66		642.47
642.83	+25	642.44		642.25
642.66	+50	642.27		642.08
642.52	+75	642.13		641.94
642.39	1725+00	642.00		641.81
642.26	+25	641.87		641.68
642.14	+50	641.75		641.56
642.01	+75	641.62		641.43
641.89	1726+00	641.50		641.31
641.76	+25	641.37		641.18
641.64	+50	641.25	.58	641.06
641.54	+64.44	641.18	.55	640.99
641.43	+75	641.12	.50	640.93
641.24	1727+00	641.00	.43	640.81
640.07	+25	640.87	.36	640.68
640.84	+50	640.75	.28	640.56
640.64	+75	640.62	.21	640.43
640.45	1728+00	640.50	.14	640.31
640.25	+25	640.37	.07	640.18
640.06	+50	640.25	.00	640.06

2	OHIO	F-454(7)	Post War	18 GA

ROSS COUNTY
ROS-50-32.13

Seeding End Width	Seeding Sq. Yds.
66	
	364
65	
	337
63	
	336
38	
	289
46	

Seeding and protecting type 'A' Sta. 1695+50 to Sta. 1697+50 Sheet.
Carried to Summary of Quantities Sheet.



Excavation 52025 Cu.Yds.
Embankment 31,854 Cu.Yds.

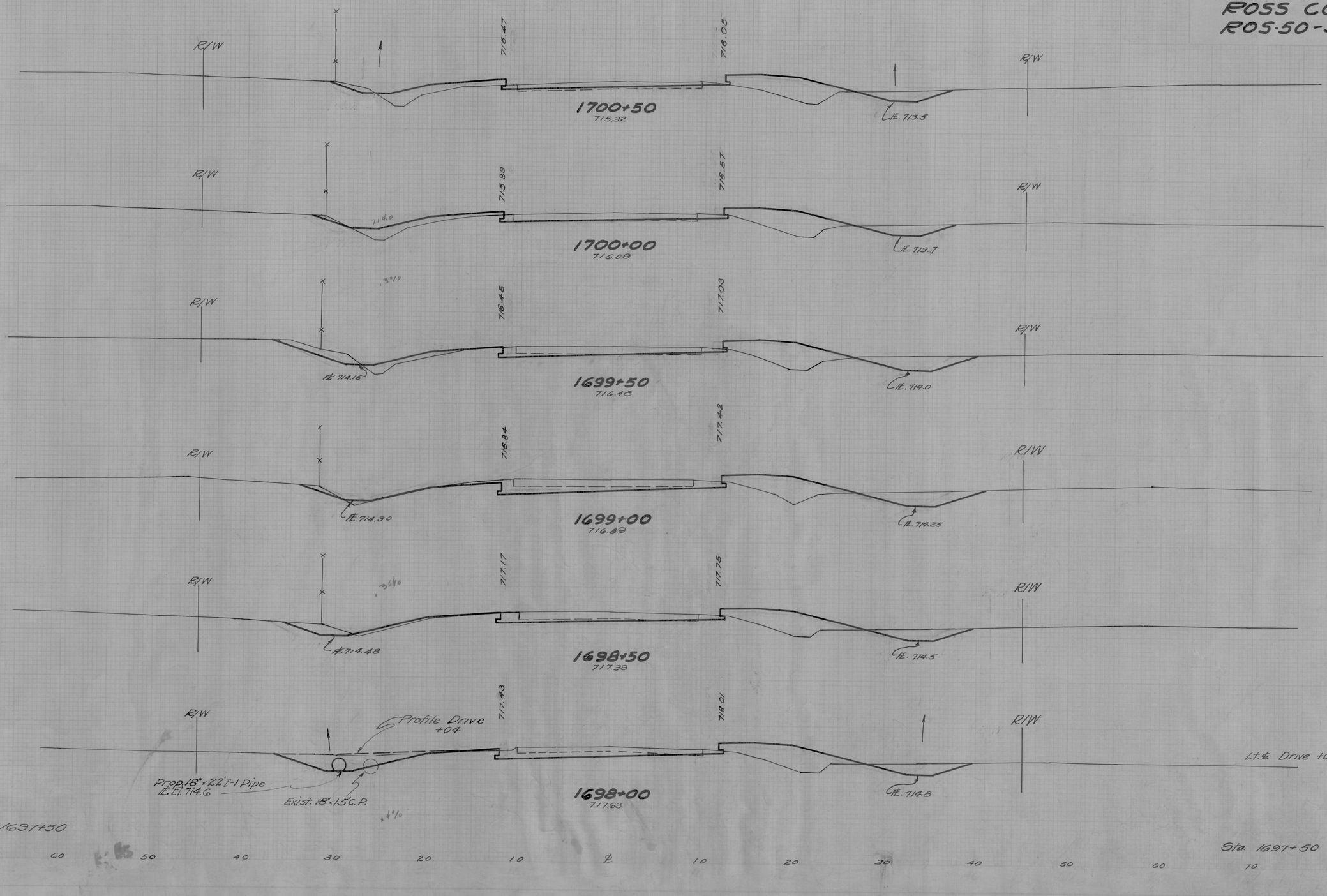
End Area Cut	End Area Fill	Volume Cut	Volume Fill
45	24		
		81	47
43	27		
		84	40
48	16		
		56	15
12	0		
		11	0
0	0		

STA. 1695+00 TO STA. 1697+50

Seeding End Sq. Width Yds
66
369
67
372
67
67
375
68
378
68
372
66

2 | OHIO | F-454(7) | Post War | 19 64

ROSS COUNTY
ROS-50-32.13



End Area Cut	End Area Fill	Volume Cut	Volume Fill
27	35		
		49	64
26	34		
		53	59
31	30		
		77	48
52	22		
		83	41
38	22		
		80	44
0	2		
49	26		
		87	46
45	24		

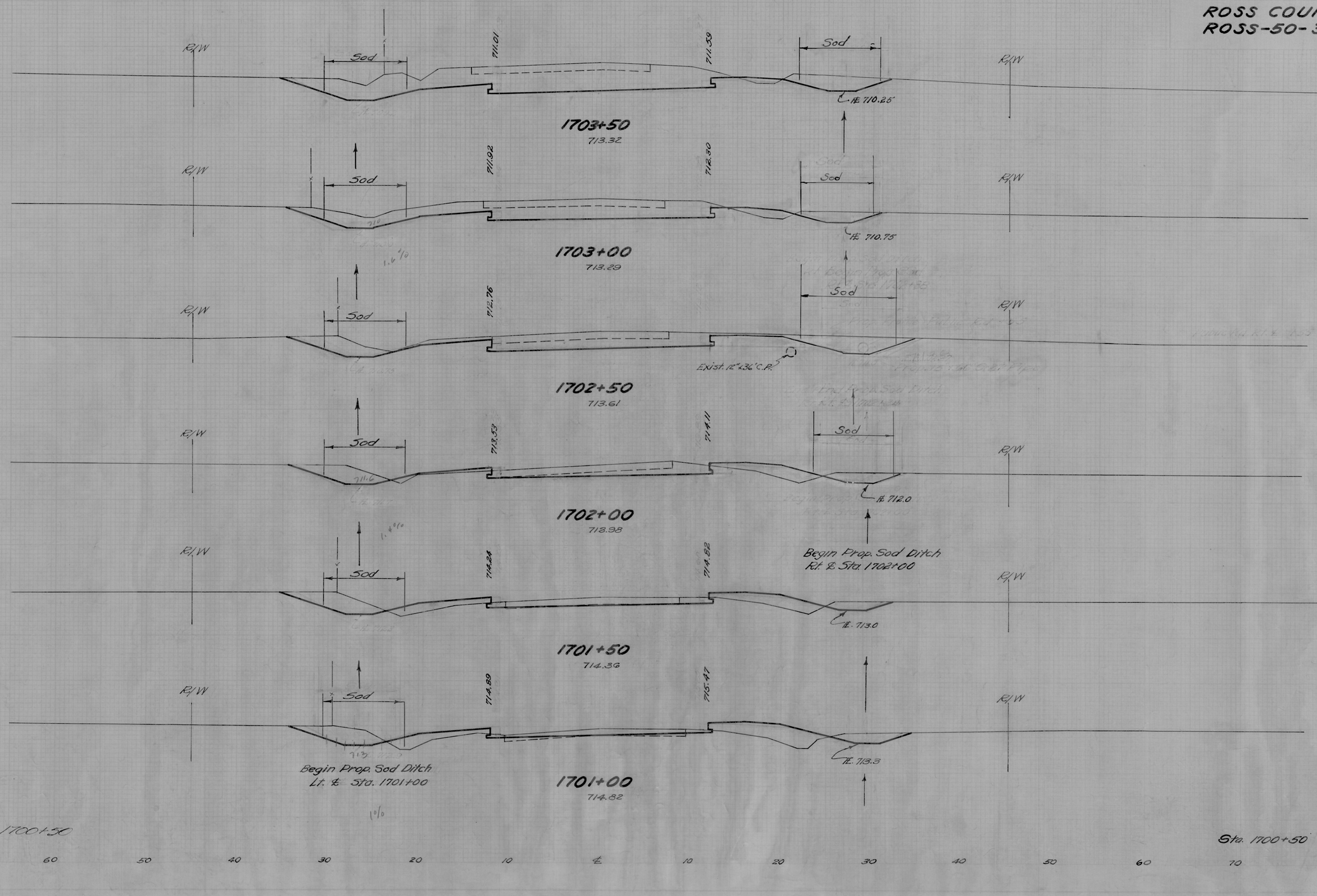
STA. 1698+00 TO STA. 1700+50

2 F-454(1) Post War

20
64

ROSS COUNTY
ROSS-50-32.13

Seeding End Area Width	Sq. Yds.
48	
	264
47	
	292
58	
	303
51	
	300
57	
	319
58	
	344
66	



End Area Volume	Cut	Fill	Cut	Fill
	125	2		
			194	6
	85	5		
			148	5
	75	0		
			115	12
	50	13		
			74	33
	30	22		
			60	45
	35	27		
			57	57
	27	35		

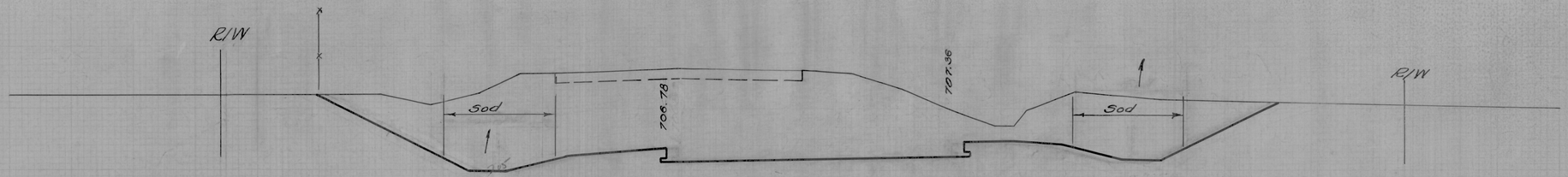
STA. 1701+00 TO STA. 1703+50

F-454(7) Post War

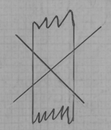
21
64

ROSS COUNTY
ROS-50-32.13

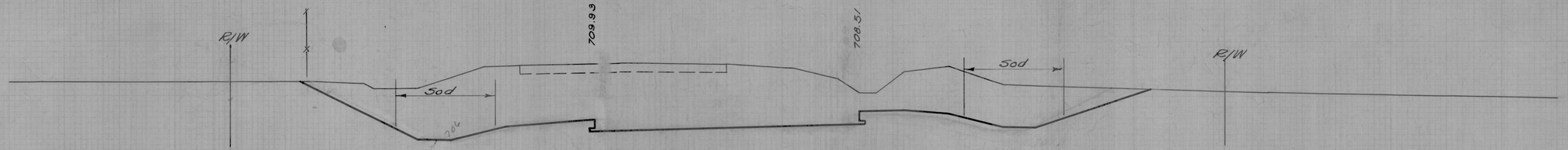
Seeding End Width	Seeding Sq. Yds.	Station	End Area Cut	End Area Fill	Volume Cut	Volume Fill
65						
	344	1705+50	369	0		
					630	0
59						
	328	1705+00	312	0		
					502	0
59						
	328	1704+50	230	0		
					368	0
59						
	297	1704+00	169	0		
					270	2
48	Sta. 1705+50					
		Sta. 1703+50	125	2		



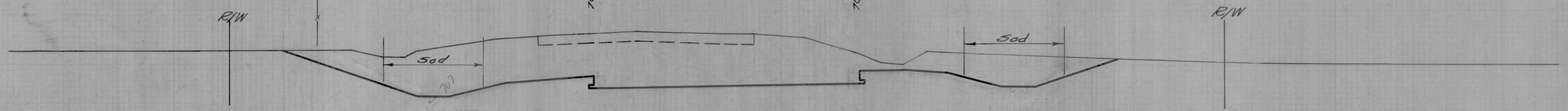
1705+50
713.00



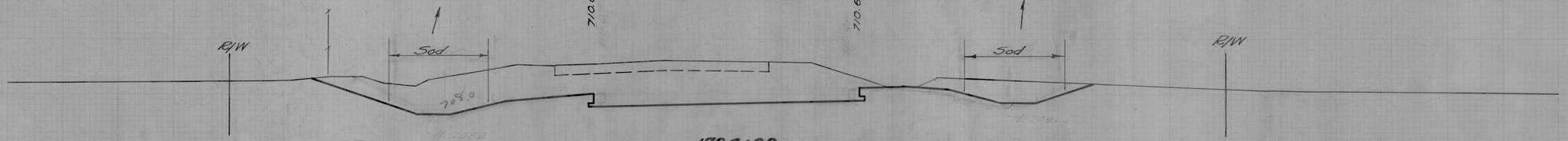
34" Honey Locust Stump
+93



1705+00
712.93



1704+50
712.94



1704+00
713.11

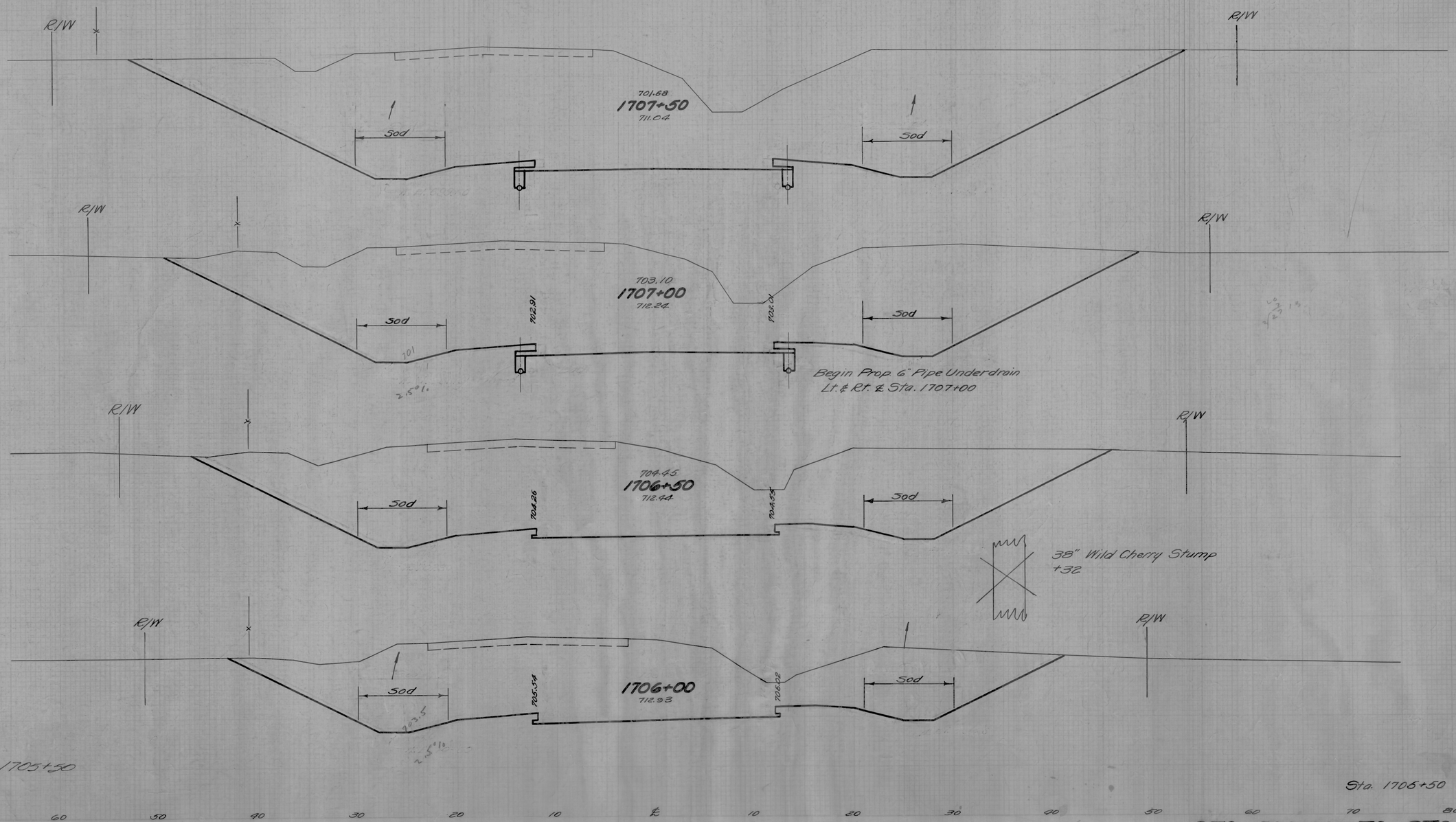
STA. 1704+00 TO STA. 1705+50

F-454(7) Post War

22
64

ROSS COUNTY
ROS-50-32.13

Seeding End Sq. Width	Yds.
84	444
76	406
70	367
62	353



End Area Volume			
Cut	Fill	Cut	Fill
953	0		
		1591	0
765	0		
		1279	0
616	0		
		1028	0
494	0		
		800	0
Sta. 1705+50	369	0	

65 Sta. 1705+50

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

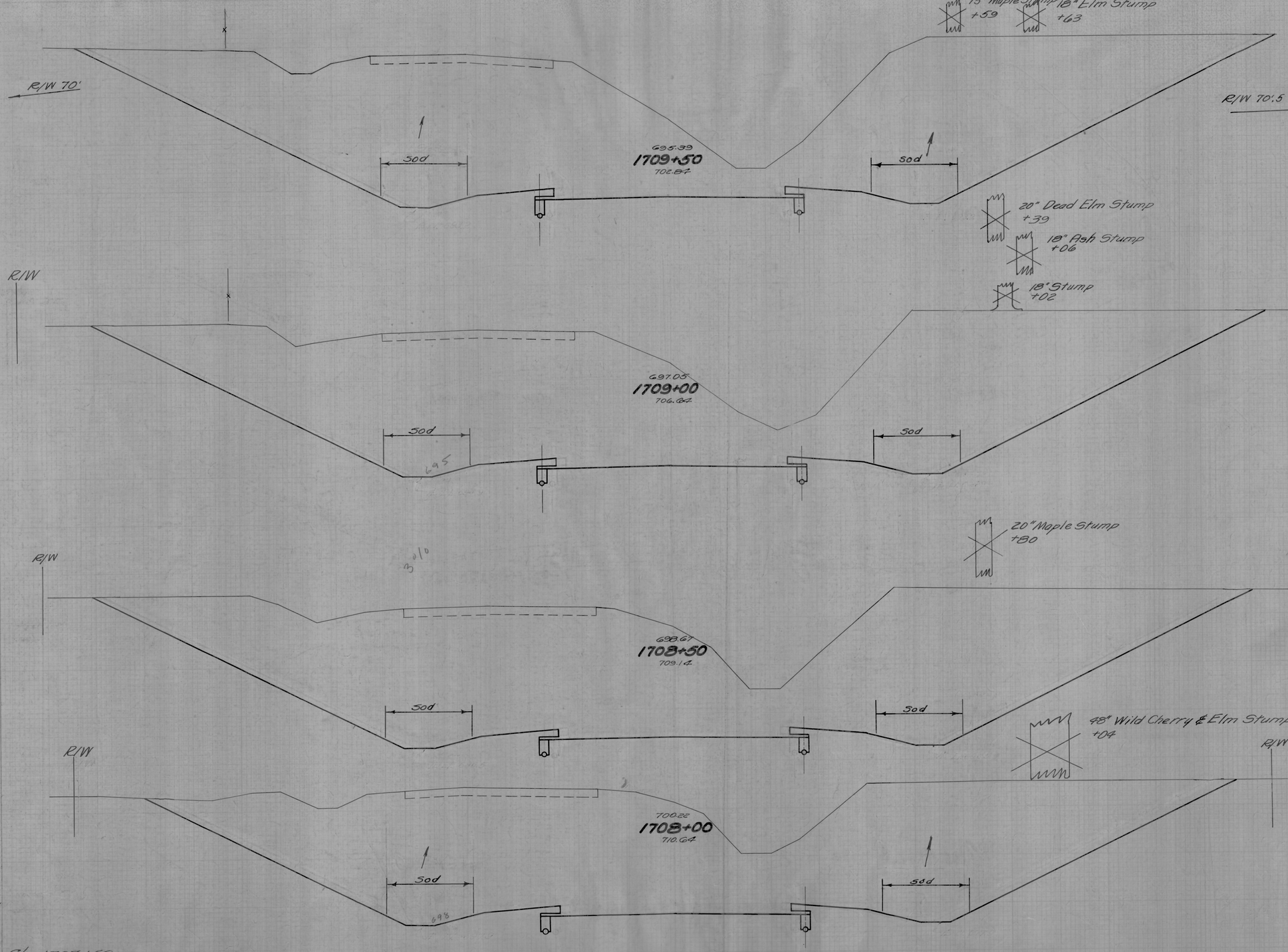
STA. 1706+00 TO STA. 1707+50

F-454(1) Post War

23
64

ROSS COUNTY
ROS-50-32.13

Seeding End Width	Seeding Sq. Yds.
115'	602
102	530
96	511
88	478
84	

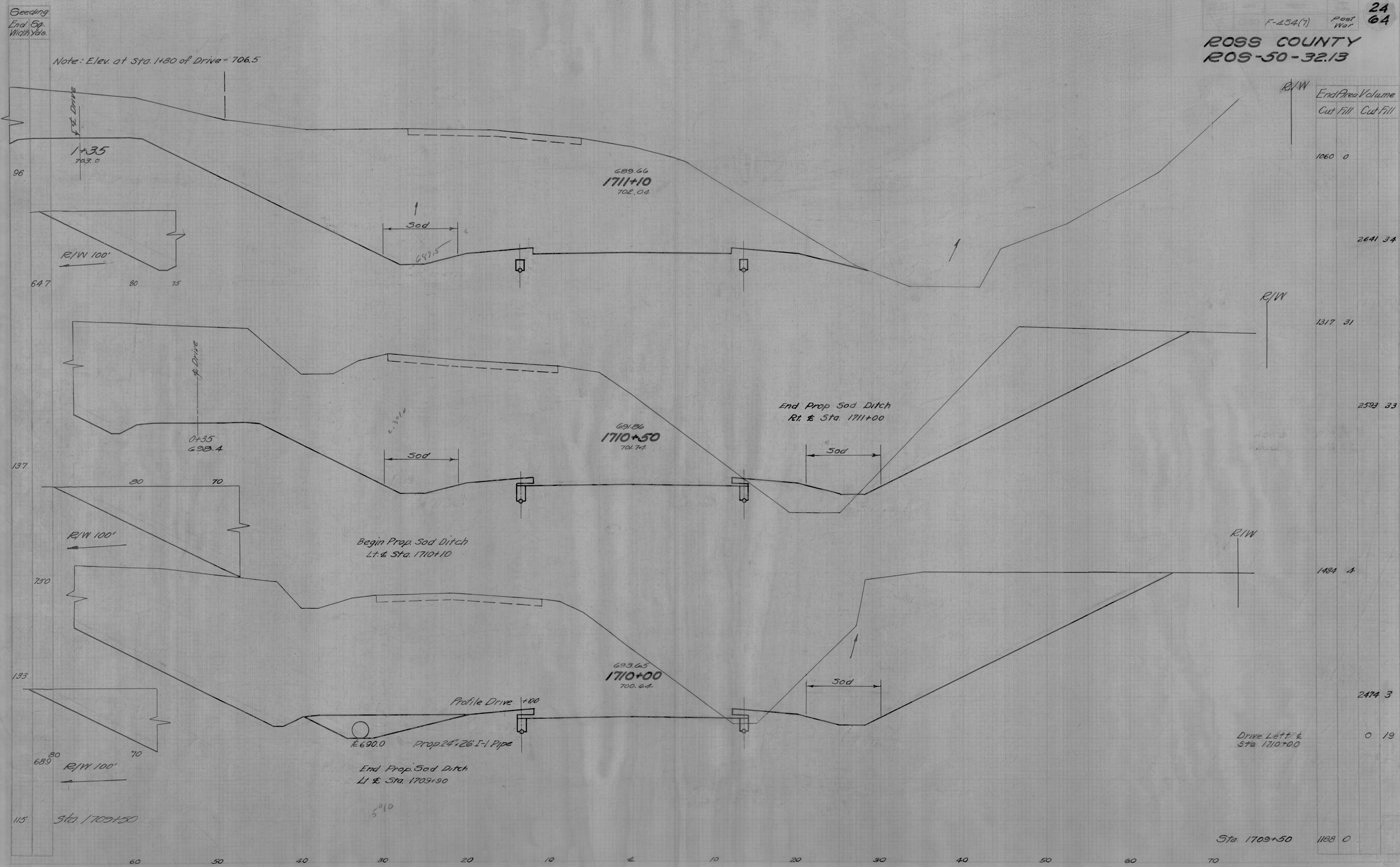


End Area Cut	End Area Fill	Volume Cut	Volume Fill
1188	0		
		2185	0
1172	0		
		2176	0
1178	0		
		2091	0
1080	0		
		1882	0
953	0		

STA. 1708+00 TO STA. 1709+50

F-454(7) Post War 24 64

ROSS COUNTY
ROS-50-32.13



STA. 1710+00 TO STA. 1711+10

F-454(7) Post War

25
GA

ROSS COUNTY
ROS-50-32.13

Seeding End Area Width	Sq. Yds.	End Area Volume Cut	Fill	Cut	Fill
135					
		1868	0		
466					
				1129	0
127					
		1724	0		
235					
		926	0		
		1233	0		
109					
		1698	0		
435					
96	Sta. 1711+10	1060	0		

R/W 100'

70 65

Sod

686.08
1712+00
698.64

685.36

685.89

Sod

R/W 85'

Begin Prop. Sod Ditch
Lt. & Sta. 1712+00

Begin Prop. Sod Ditch
Rt. & Sta. 1712+00

R/W 100'

687.36
1711+68
700.02

± 685.0

685

R/W 83'

R/W 100'

688.07
1711+50
701.04

R/W 82'

± 682.3

Prop. 24" Pipe

-18%

± 650.9

End Prop. Sod Ditch
Lt. & Sta. 1711+50

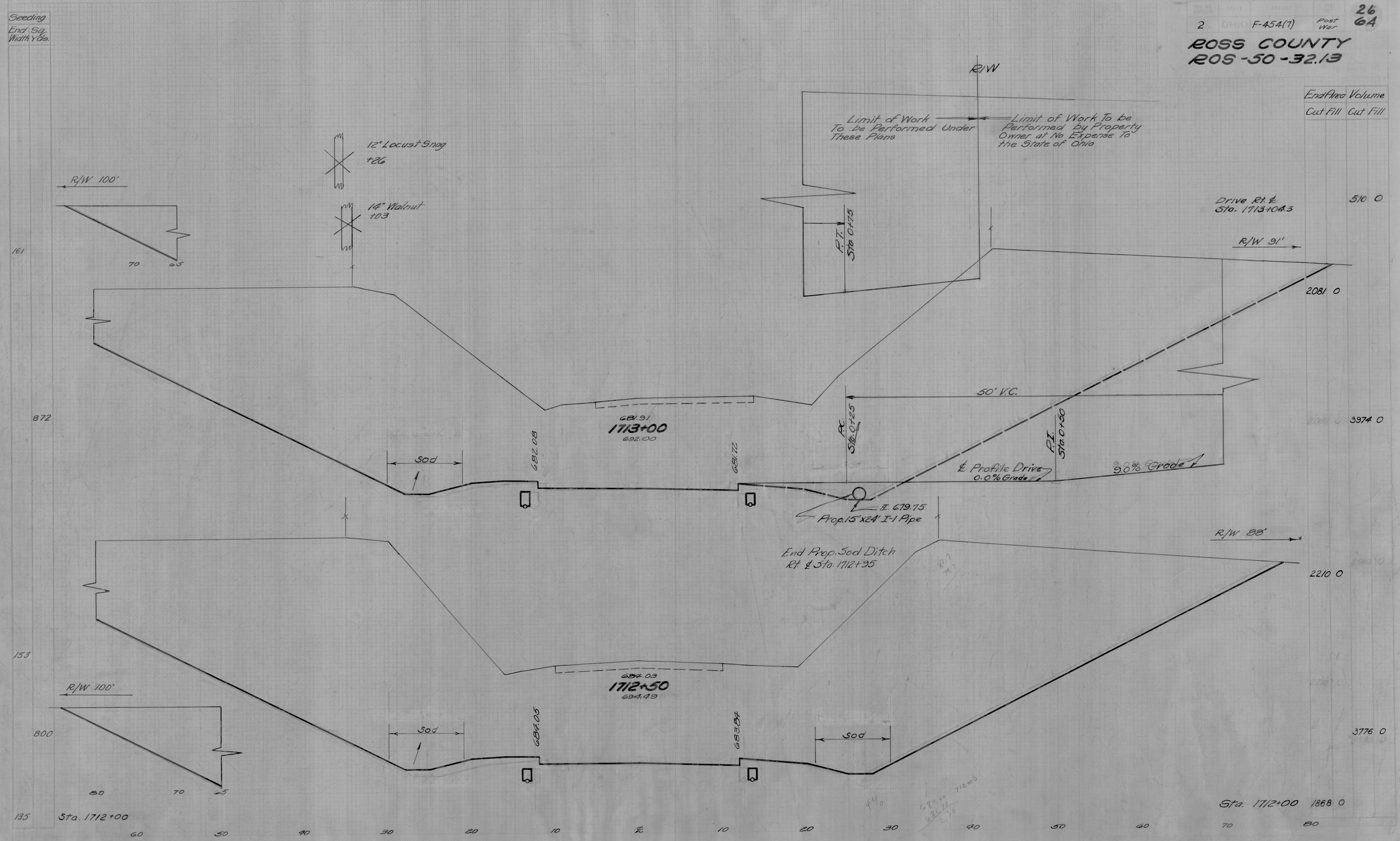
FOR STRUCTURE QUANTITIES
SEE SHEET No. 56

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

STA. 1711+50 TO STA. 1712+00

2 OHIO F-454(7) Post War 26 64

ROSS COUNTY
ROS-50-32.13

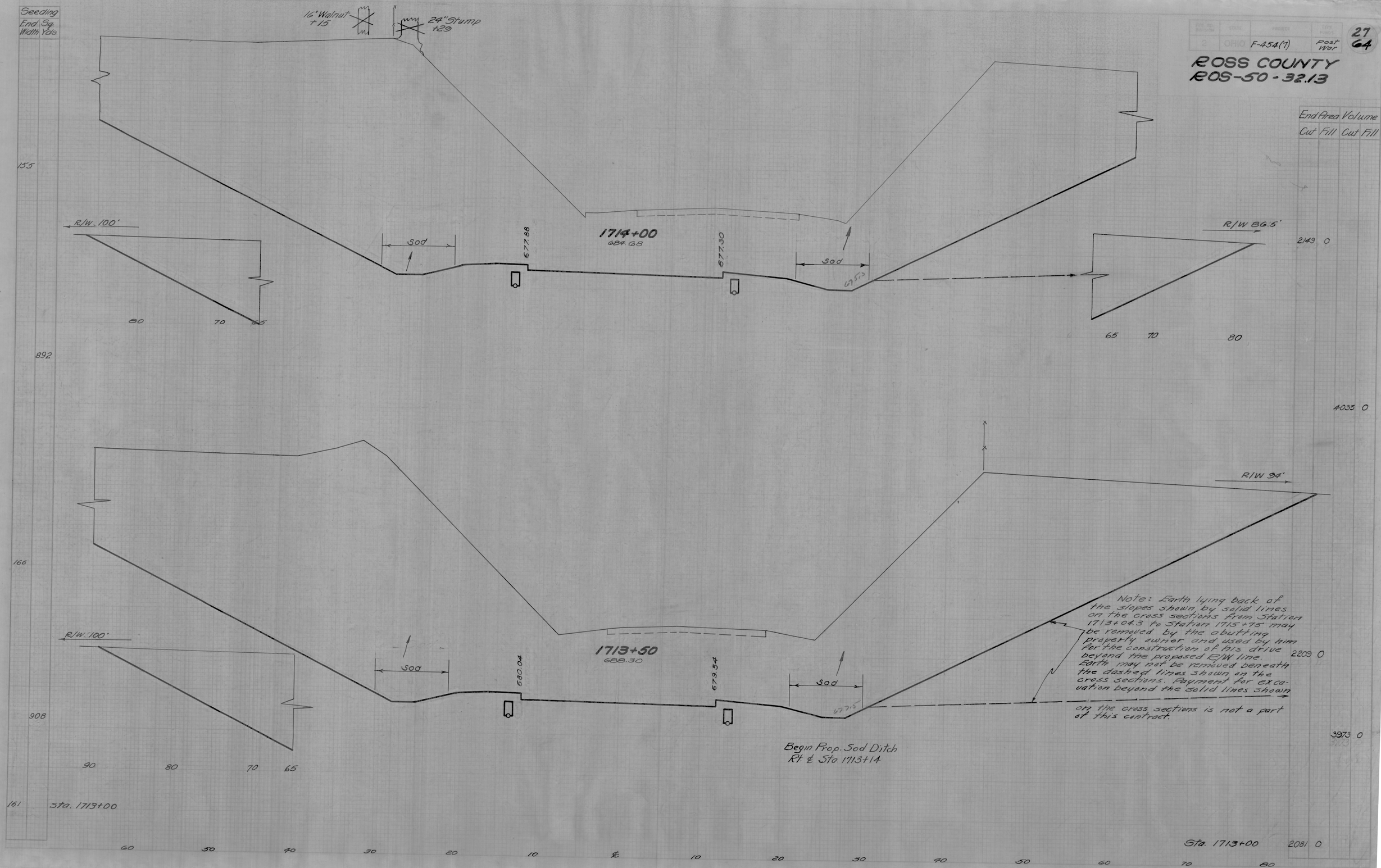


STA. 1712+50 TO STA. 1713+00

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	F-454(7)	Post War

27
64

ROSS COUNTY
ROS-50-32.13



End Area Cut	End Area Fill	Volume Cut	Volume Fill
2149	0		
		4035	0
2209	0		
		3973	0
2081	0		

Note: Earth lying back of the slopes shown by solid lines on the cross sections from Station 1713+04.3 to Station 1715+75 may be removed by the abutting property owner and used by him for the construction of his drive beyond the proposed R/W line. Earth may not be removed beneath the dashed lines shown on the cross sections. Payment for excavation beyond the solid lines shown on the cross sections is not a part of this contract.

Begin Prop. Sod Ditch
Rt. ℄ Sta. 1713+14

STA. 1713+50 TO STA. 1714+00

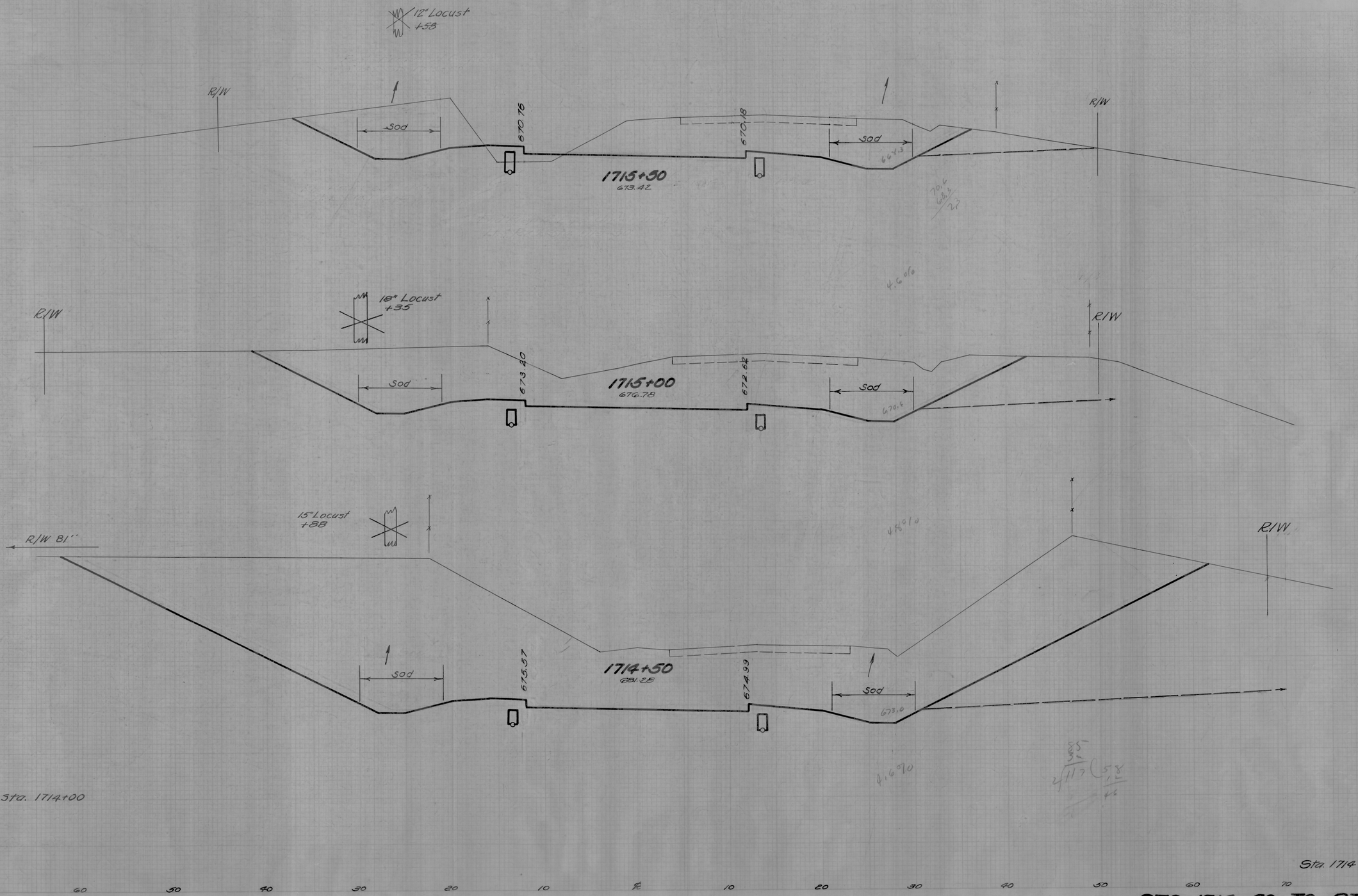
Seeding	
End Width	Sq. Yds.
53	
	328
65	
181	
108	
731	
155	

F-454(7) Post War

28
64

ROSS COUNTY
ROS-50-32.13

End Area		Volume	
Cut	Fill	Cut	Fill
	247		9
		604	8
	405		0
	1343		0
	1046		0
	2958		0
Sta. 1714+00	2149		0

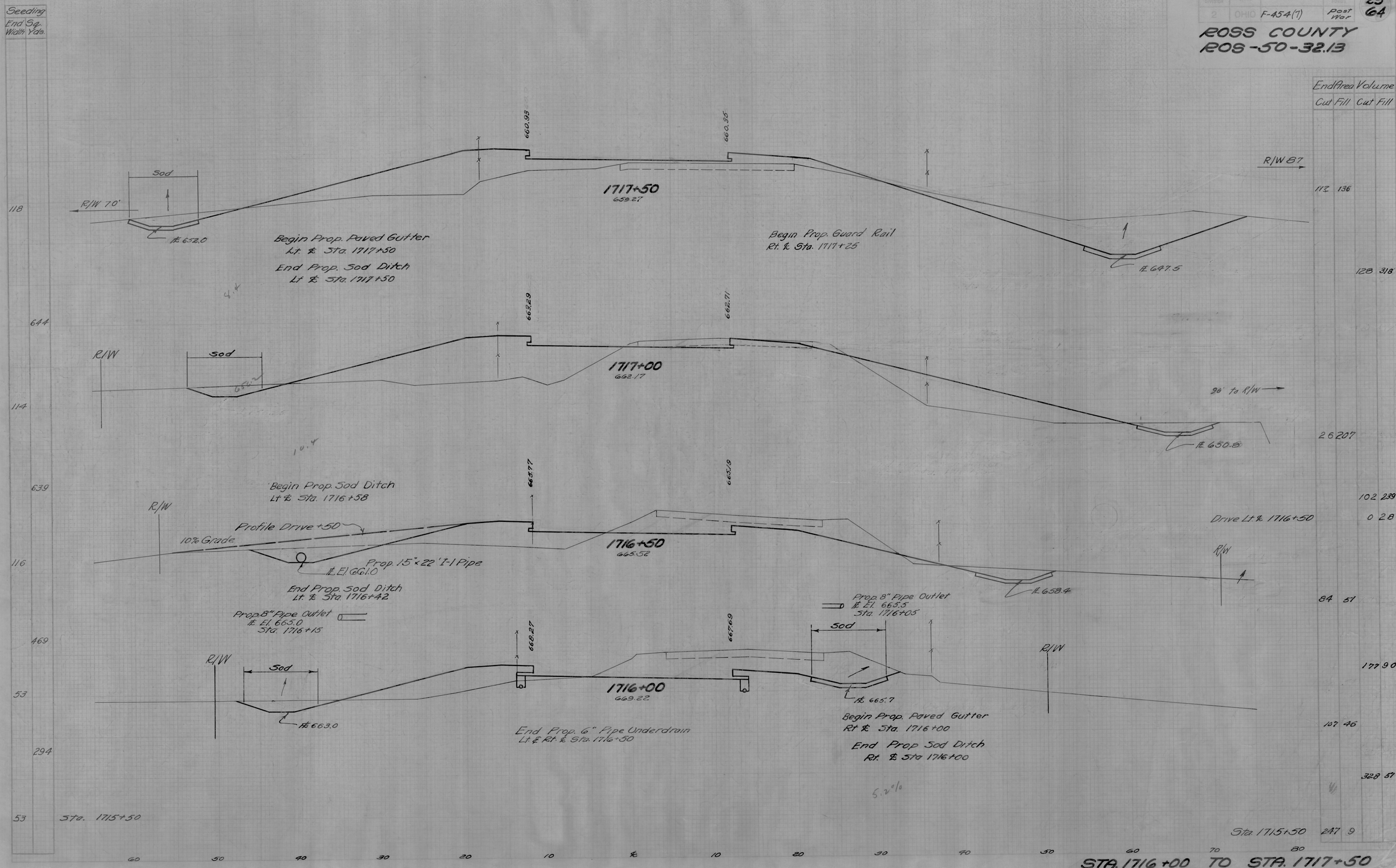


STA. 1714+50 TO STA. 1715+50

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	F-454(7)	Post War

29
64

ROSS COUNTY
ROS-50-32.13



End Area Volume			
Cut	Fill	Cut	Fill
112	136		
		128	318
26	207		
		102	239
		0	28
84	51		
		177	90
107	46		
		328	51
Sta. 1715+50	247	9	

STA. 1716+00 TO STA. 1717+50

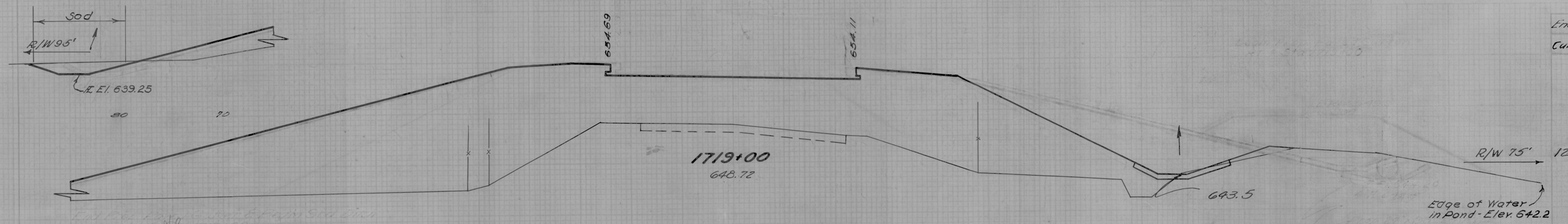
Seeding	
End Width	Sq. Yds.

E F-454(7) Post War

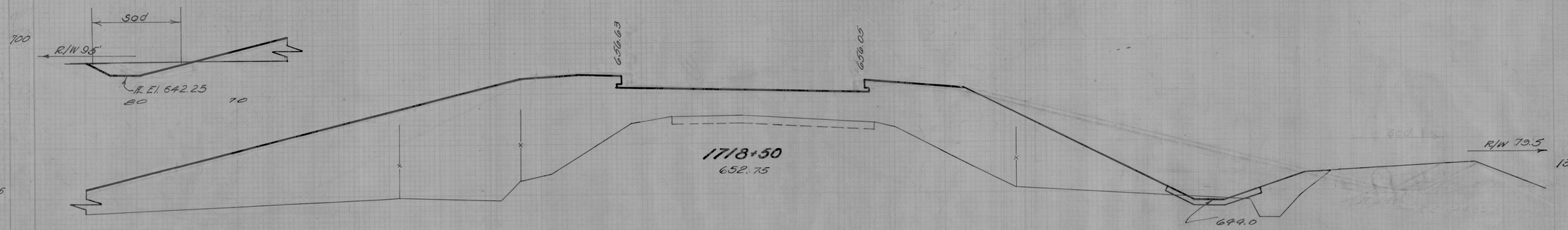
30
64

ROSS COUNTY
ROSS-50-32.13

End Area		Volume	
Cut	Fill	Cut	Fill

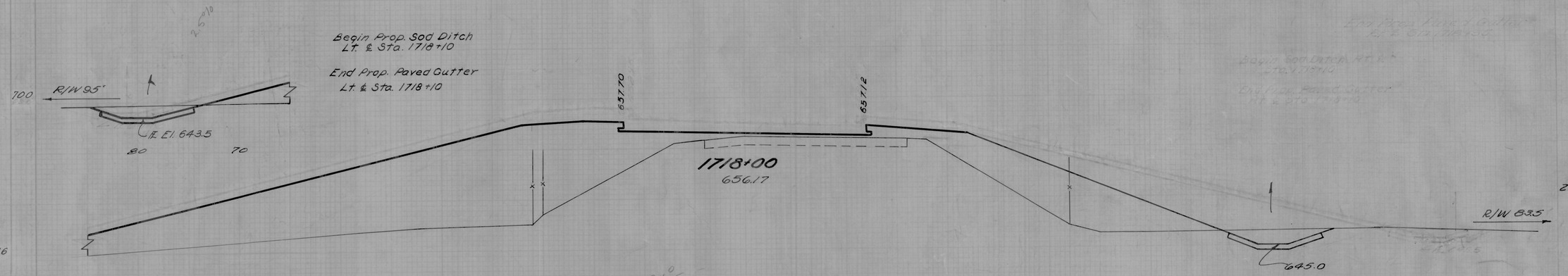


12 677



23 1195

13 614



35 984

25 499

127 541

686

118 Sta. 1717+50

Sta. 1717+50 112 136

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

STA. 1718+00 TO STA. 1719+00

Seeding
End Sg.
With Yds.

2 F-454(7) Post War 31/64

ROSS COUNTY
ROSS-50-32.13

End Area Volume			
Cut	Fill	Cut	Fill

12" Locust
+62

R/W 95'

152

850

-3%

649.72

649.14

℄ 636.17

80 70

1720+50
641.14

R/W 90'

℄ 634.5

39 825

R/W 95'

154

819

-3%

651.54

650.66

℄ 636.33

90 80 70

1720+00
643.13

Exist 24" Conc. Sewer Pipe
Ro-50-326

R/W 90'

33 926

℄ 636.0

End Prop. Guard Rail
Rt. ℄ Sta 1720+00

39 1622

End Prop. Sod Ditch
Lt. ℄ Sta. 1719+60

R/W 95

141

Sod

742

652.89

652.31

℄ 636.5

80 70

1719+50
645.44

Exist 24" Conc. Sewer
Ro-50-326

R/W 90'

63 1593

35 741

637.5

44 1303

126 Sta. 1719+00

Sta. 1719+00 12 667

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

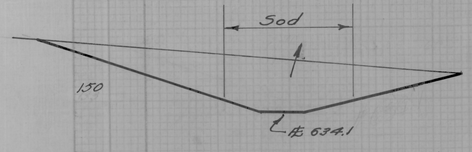
STA. 1719+50 TO STA. 1720+50

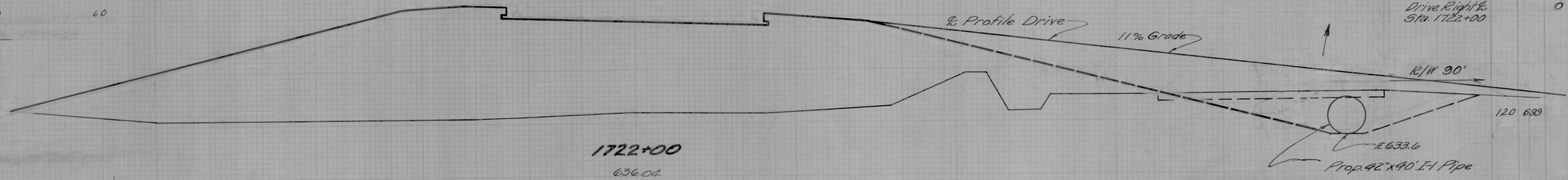
2 F-454(7) Post War 32/64

ROSS COUNTY
ROSS-50-32.13

Seeding
End Sq.
Width Yds.

End Area Volume
Cut Fill Cut Fill

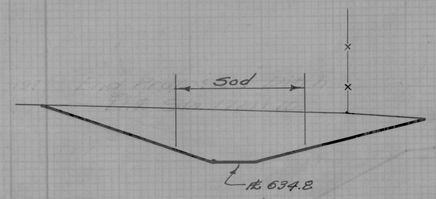




0 80

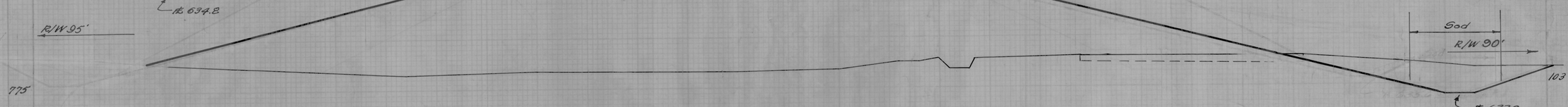
120 689

1722+00
636.04



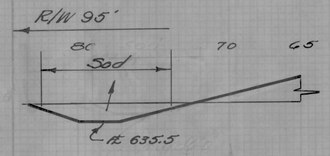
End Prop. Sod Ditch
Rt. ℄ Sta. 1721+85

393 1317



103 723

1721+50
636.64



136 1328

Begin Prop. Sod Ditch
Lt. ℄ Sta. 1721+00

77 1422

Begin Prop Sod Ditch
Rt. ℄ Sta. 1720+60
End Prop. Paved Gutter
Rt. ℄ Sta. 1720+60

Sta. 1720+50 39 825

152 Sta. 1720+50

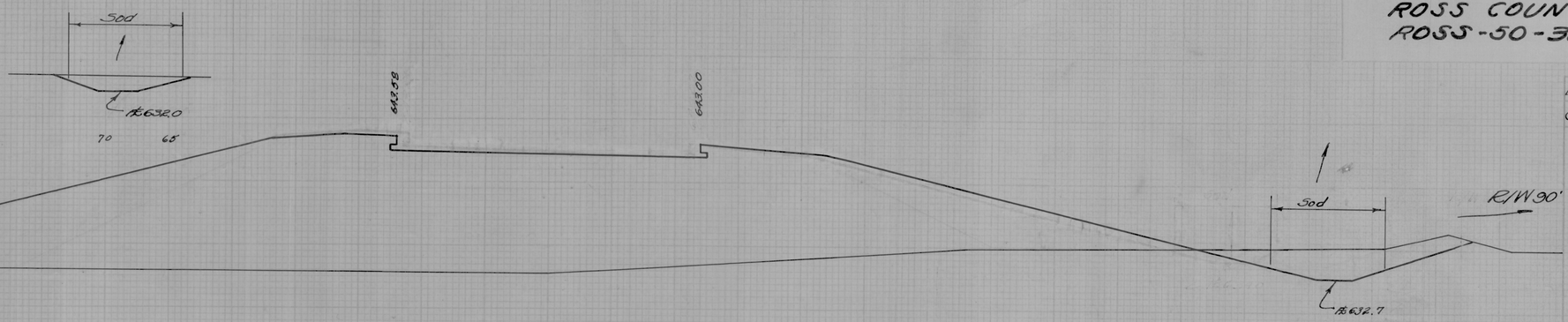
60 50 40 30 20 10 ℄ 10 20 30 40 50 60 70

STA. 1721+00 TO STA. 1722+00

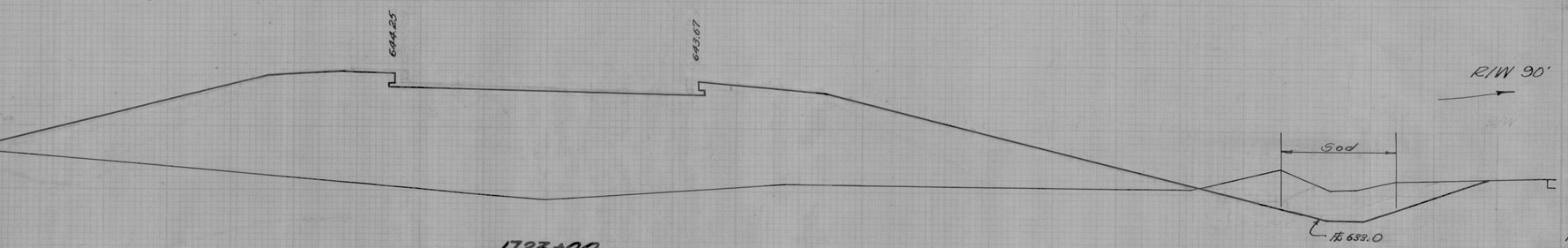
Seeding End Sq. Width Yds.		End Area Volume			
		Cut	Fill	Cut	Fill
119	214		40		740
138	258		178		1196
135	792		132		532
			189		1185
			52		728
			159		1322
150			120		629

2 | F-454(7) | Post War | 33 64

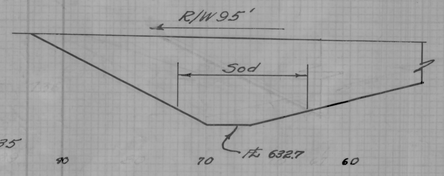
ROSS COUNTY
ROSS-50-32.13



1723+50
632.74



1723+00
634.14





1722+50
635.14

Begin Prop. Sod Ditch
Rt. & Sta. 1722+16

Sta. 1722+00

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

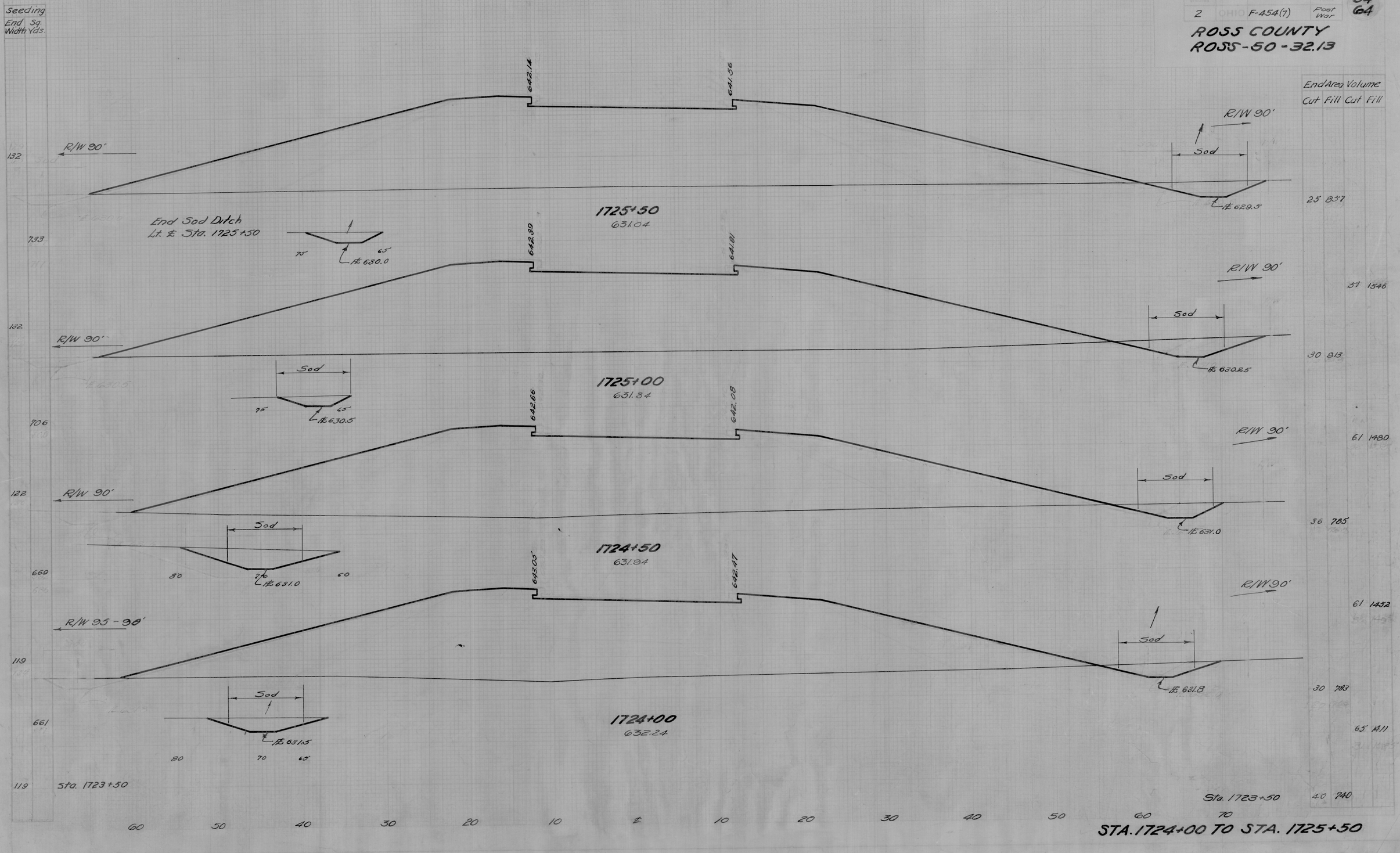
STA. 1722+50 TO STA. 1723+50

Seeding End Sq. Width Yds.	
132	
733	
132	
706	
122	
669	
119	
661	
119	

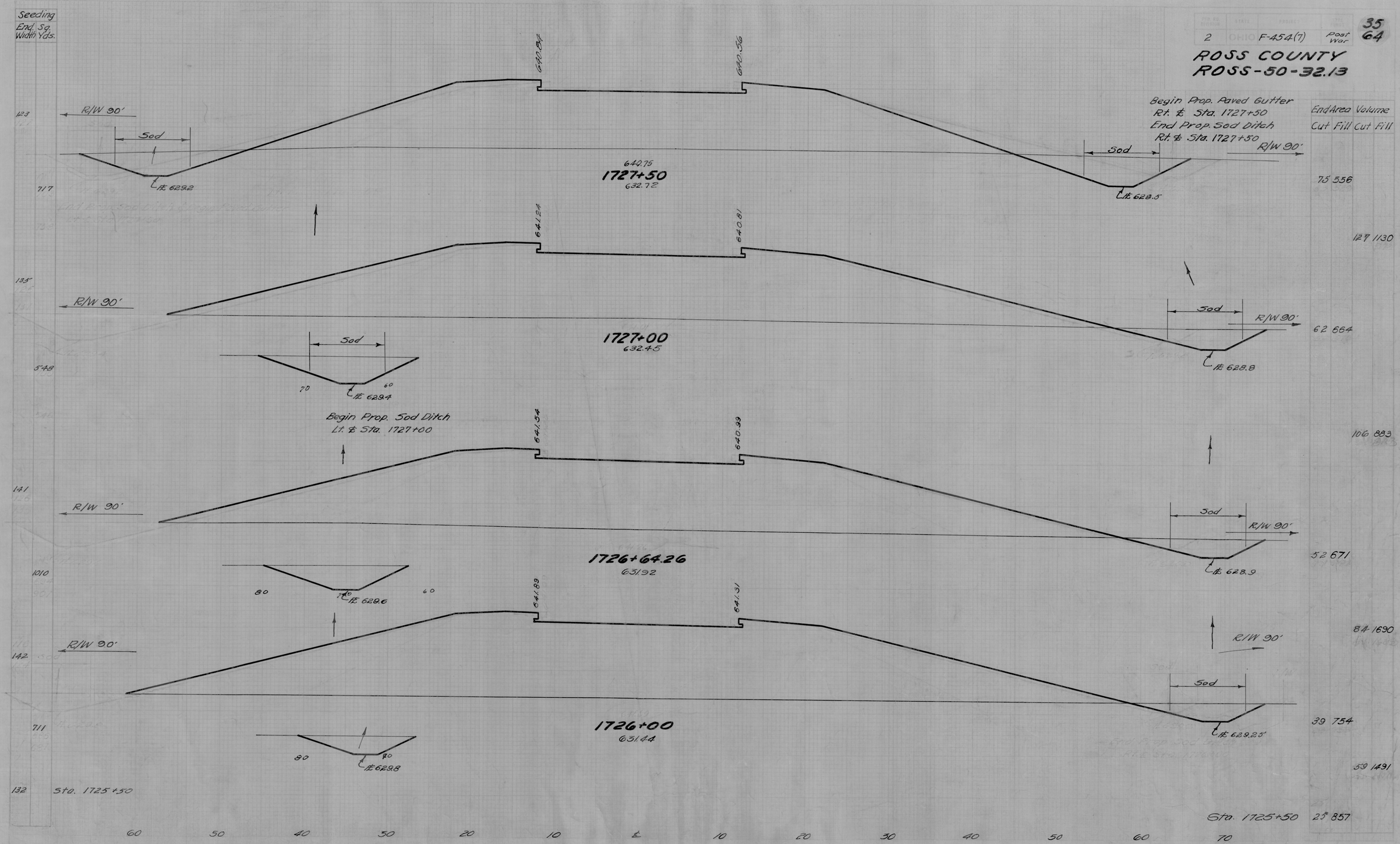
2 | OHIO | F-454(7) | Post War | 34 64

ROSS COUNTY
ROSS-50-32.13

End Area Volume			
Cut	Fill	Cut	Fill
	25		837
	51		1346
	30		813
	61		1480
	36		785
	61		1452
	30		783
	65		1411
Sta. 1723+50	40		740



STA. 1724+00 TO STA. 1725+50



Seeding
End Sq. Width Yds.
2
OHIO
F-454(7)
Post War
35
64
ROSS COUNTY
ROSS-50-32.13
Begin Prop. Paved Gutter
Rt. ℄ Sta. 1727+50
End Prop. Sod Ditch
Rt. ℄ Sta. 1727+50
End Area Volume
Cut Fill Cut Fill
R/W 90'
Sod
640.84
640.56
640.75
1727+50
632.72
℄ 629.2
℄ 628.5
75 556
127 1130
641.24
640.81
1727+00
632.45
℄ 629.4
℄ 628.8
62 664
Begin Prop. Sod Ditch
Lt. ℄ Sta. 1727+00
641.54
640.99
1726+64.26
631.92
℄ 629.6
℄ 628.9
106 883
52 671
641.89
641.31
1726+00
631.44
℄ 629.8
℄ 629.25
84 1690
39 754
59 1491
Sta. 1725+50
Sta. 1725+50
25 857
123
717
135
548
141
1010
142
711
132
60 50 40 30 20 10 ℄ 10 20 30 40 50 60 70
STA. 1726+00 TO STA. 1727+50

RTE. NO. DIVISION	STATE	PROJECT	TYPE WORK
2	OHIO	F-454(7)	Post War

36
64

ROSS COUNTY
ROS-50-32.13

Seeding
End Sq.
Width Yds.

130 Ahead
116 Back
322
116

Seeding & Protecting Dyked Sta. 1730+18 to Sta. 1728+30 = 302.49 Sq. Yds. Carried to Summary of Quantities Sheet.

12" Box Elder +48

12" Box Elder +40

Ahead

Back

12" Box Elder +38

R/W 90'

R/W 80'

Sod

℄ Elev. 622.8

14" Box Elder 1729+91

639.31
1730+44.89
629.00

Begin Prop. Sod Ditch
Lt. ℄ Sta. 1730+06

80 70 60 50

STA. 1730+18 = 0.0 Section

STA. 1730+44.89
BRIDGE LIMITS
STA. 1728+97.11

STA. 1729+22 = 0.0 Section

End Prop. Sod Ditch
Lt. ℄ Sta. 1729+40

End Sod Ditch
Sta. 1729+40

	End Area Cut	End Area Fill	Volume Cut	Volume Fill
Ahead	60	692		
Back	0	378		
			0	188
	0	0		
	0	0		
			0	133
Ahead	0	349		
Back	186	649		
			247	1210
			38	872
			64	1696
			31	961
			38	1406
Sta. 1727+50			75	556

76
211
76 Ahead
127 Back

R/W 90'

Back

Ahead

640.04
1728+97.11
629.97

End Prop. Guard Rail
Rt. ℄ Sta. 1728+98

Sod

653 R/W 90'

℄ Elev. 624.0

End Prop. Guard Rail
Lt. ℄ Sta. 1728+86

℄ Elev. 623.5

640.25
1728+50
628.00

640.54

640.31

124

Sod

R/W 90'

℄ Elev. 624.5

678

Sod

℄ Elev. 623.75

Begin Sod Ditch
Sta. 1728+15
End Paved Gutter

118

Sod

669

℄ Elev. 625.0

Begin Prop. Guard Rail
Lt. ℄ Sta. 1727+61

640.50
1728+00
625.75

Begin Prop. Guard Rail
Rt. ℄ Sta. 1727+73

123 Sta. 1727+50

℄ Elev. 624.0

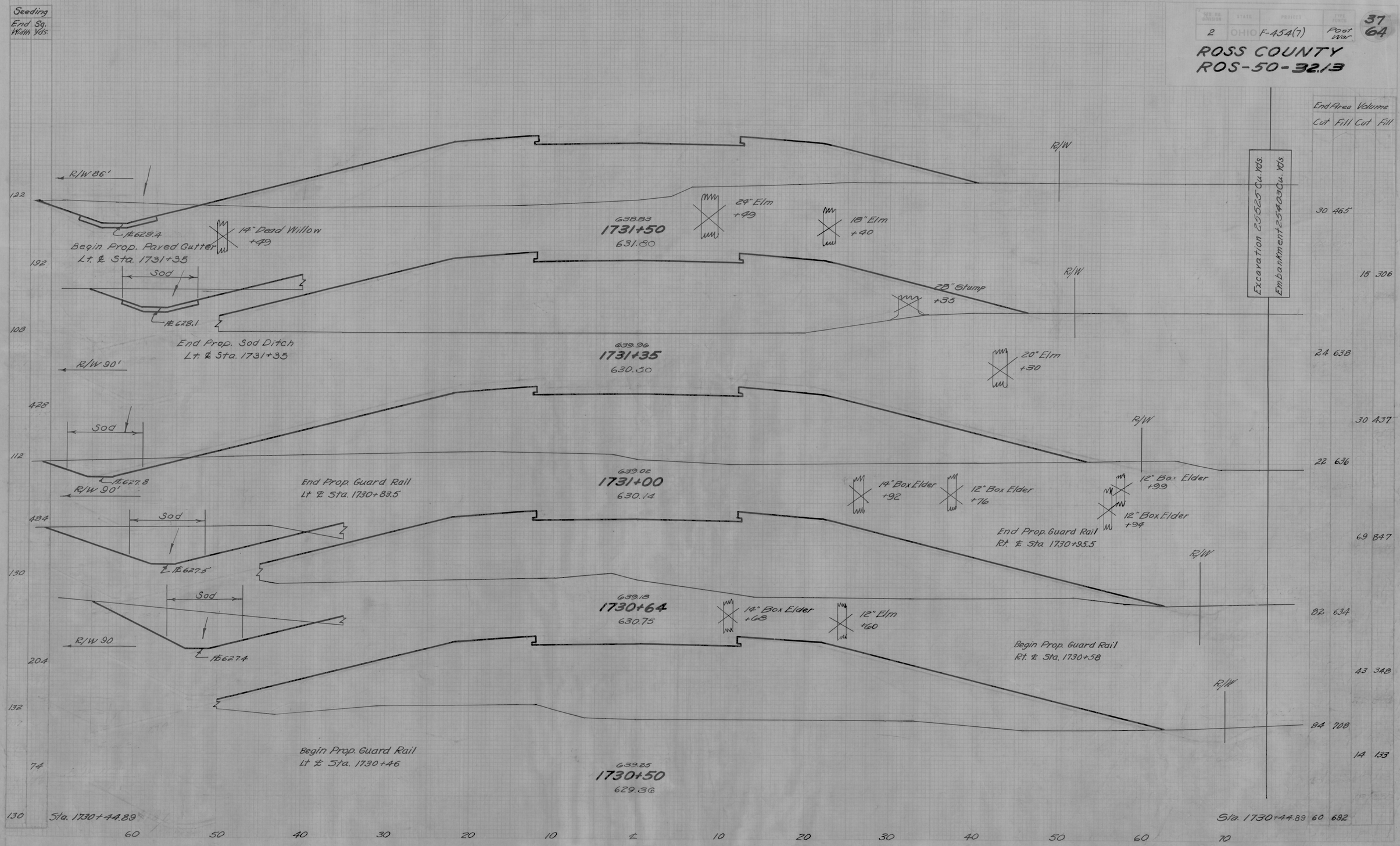
60 50 40 30 20 10 ℄ 10 20 30 40 50 60 70

STA. 1728+00 to STA. 1729+13

SEC. NO. DIVISION	STATE	PROJECT	TYPE FUNCTION
2	OHIO	F-454(7)	Post War

37
64

ROSS COUNTY
ROS-50-32.13

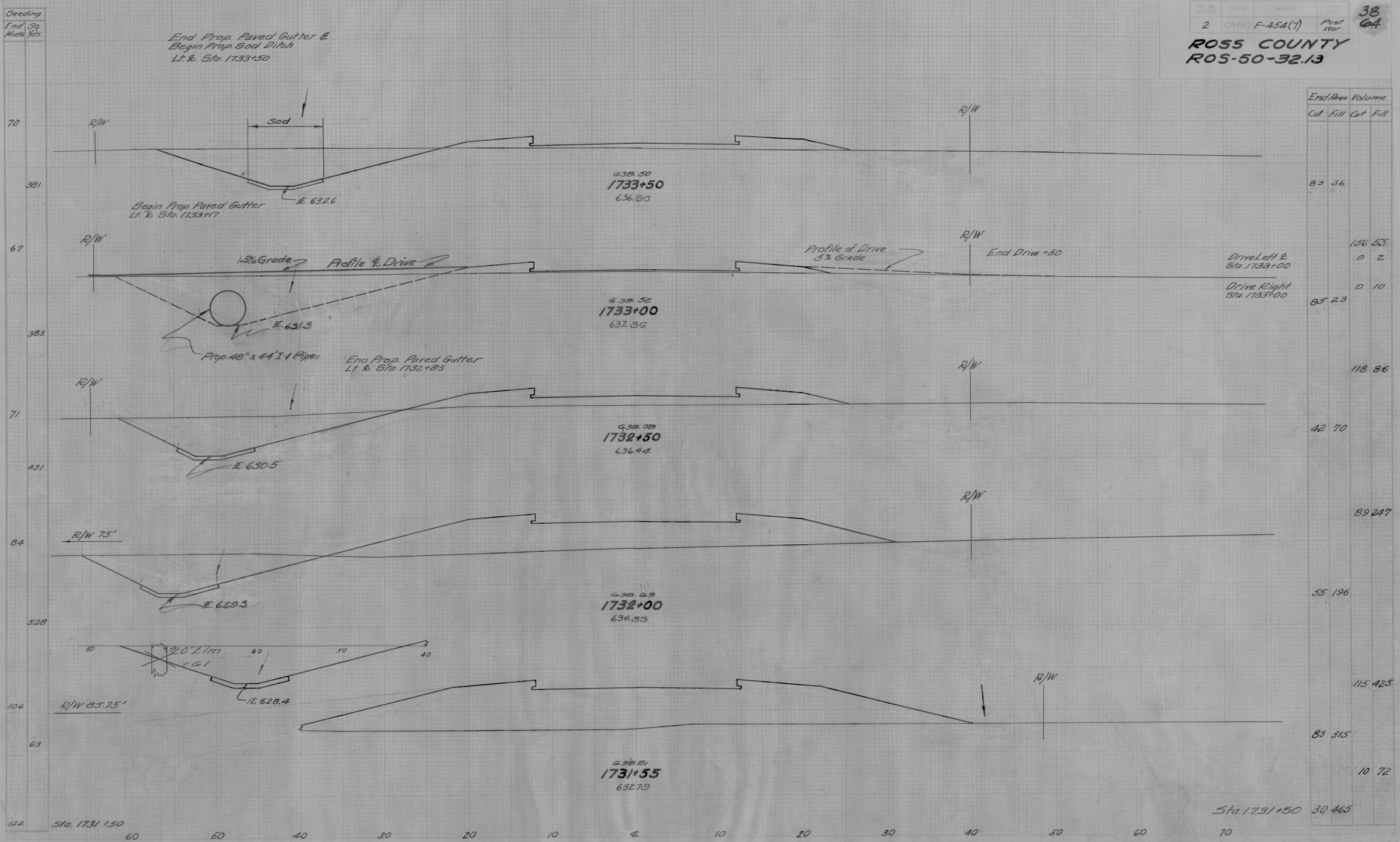


STA. 1730+50 to STA. 1731+50

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	F-454(7)	Post War

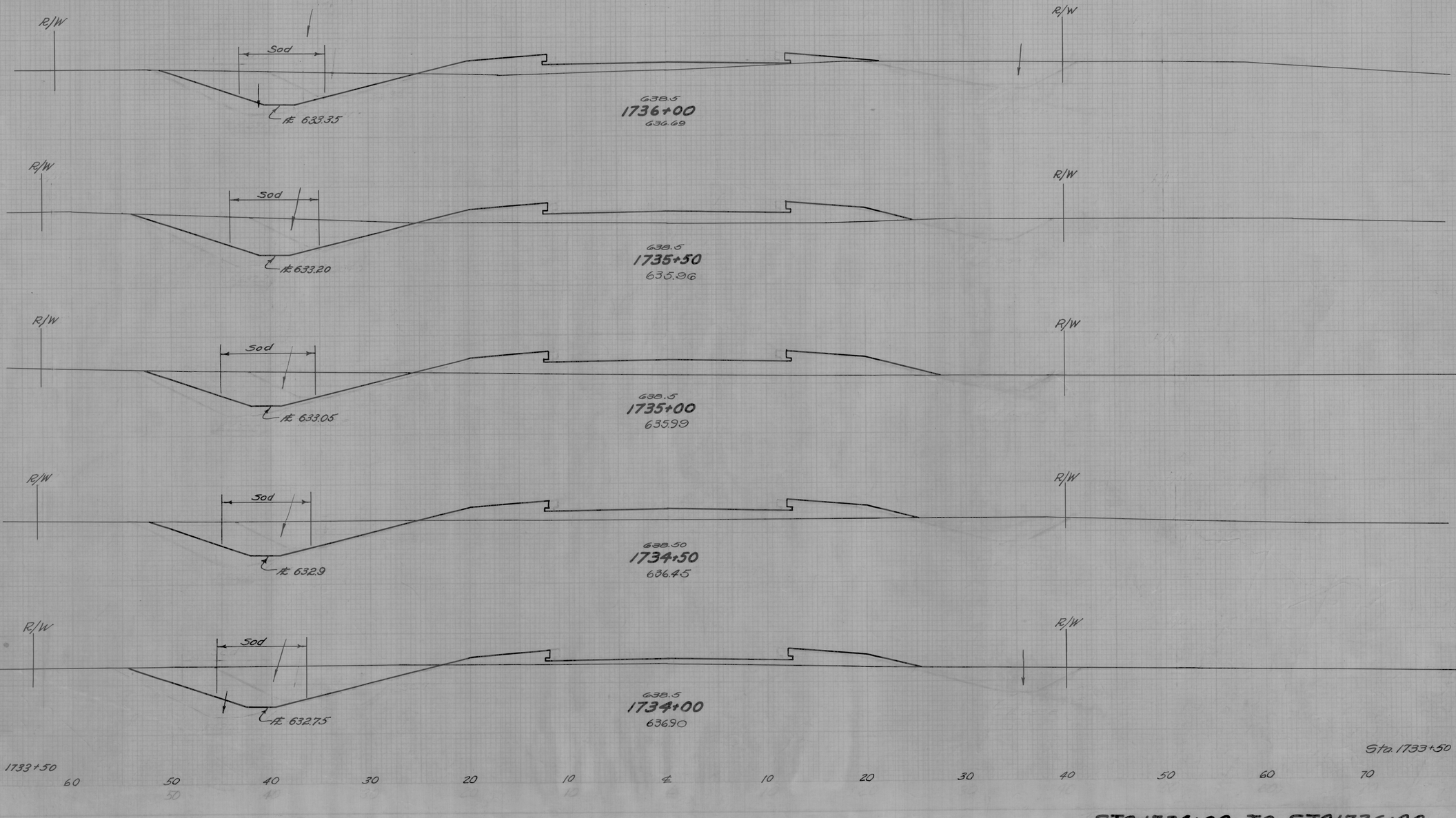
38
64

ROSS COUNTY
ROS-50-32.13



STA. 1731+55 TO STA. 1733+50

Seeding	
End Width	Sq. Yds.
63	361
67	381
70	386
69	383
69	386
70	



End Area		Volume	
Cut	Fill	Cut	Fill
49	36		
		100	91
39	62		
		103	127
52	75		
		95	119
51	53		
		112	84
70	38		
		142	69
Sta. 1733+50		83	36

2	OHIO	F-454(7)	Post War

39
64

ROSS COUNTY
ROS-50-32.13

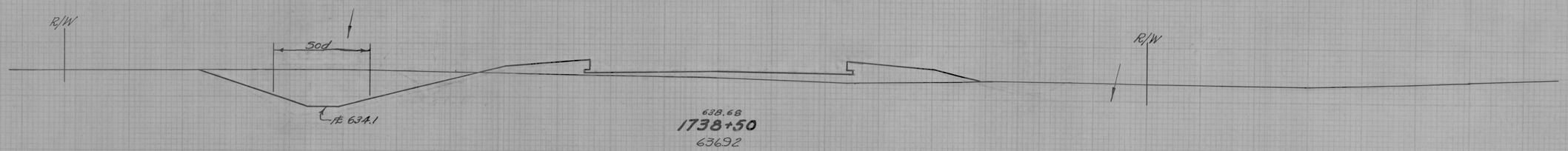
STA. 1734+00 TO STA. 1736+00

SHEET NO.	STATE	PROJECT	TYPE
2	OHIO	F-454(7)	Post War

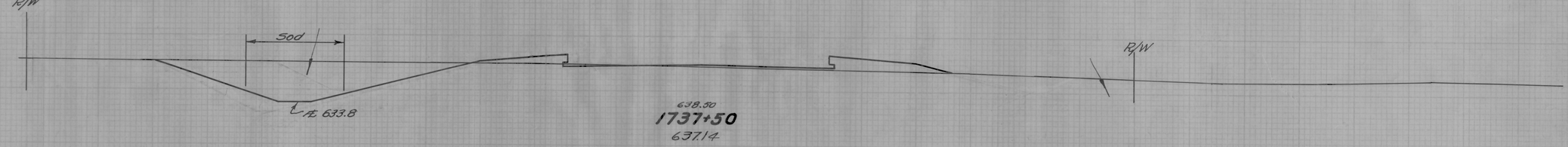
40
64

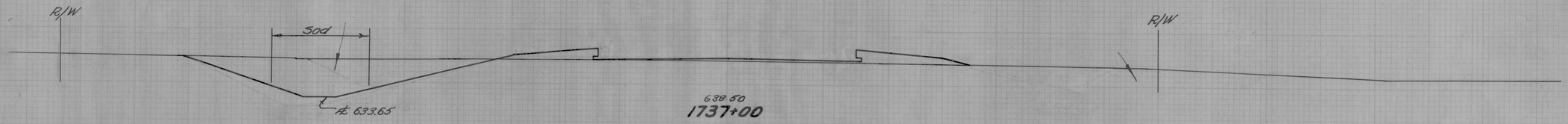
ROSS COUNTY
ROS-50-32.13

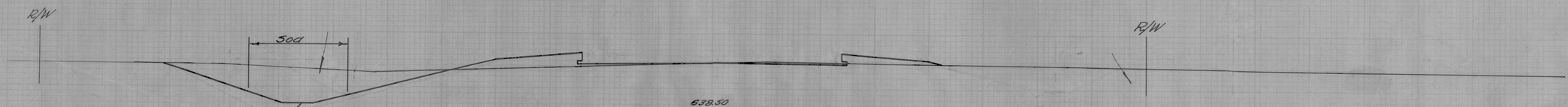
Seeding End Width	Seeding Sq. Yds.
65	
	364
66	
	361
64	
	356
64	
	356
64	
	353
63	











Sta. 1736+00

Sta. 1736+00

End Area Cut	End Area Fill	Volume Cut	Volume Fill
50	38		
		97	56
55	23		
		106	36
39	16		
		107	27
57	13		
		94	28
45	17		
		87	49
49	36		

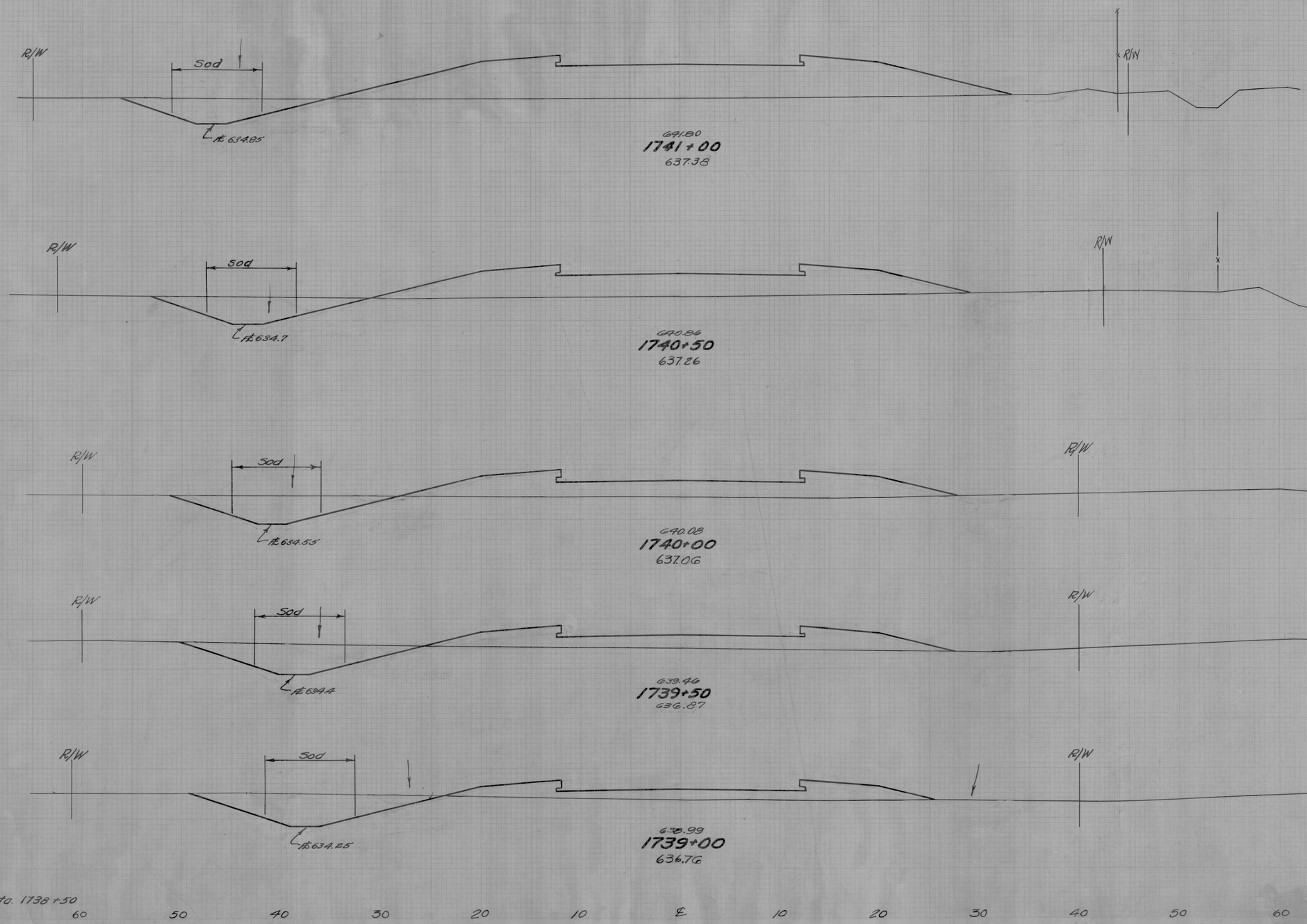
60 50 40 30 20 10 ℄ 10 20 30 40 50 60 70

STA. 1736+50 TO STA. 1738+50

2	F-A54(7)	Post War	41 64

ROSS COUNTY
ROS-50-32.13

Seeding End Width	Sq. Yds.
74	
	397
69	
	381
68	
	375
67	
	372
67	
	367
67	



End Area Cut	End Area Fill	Volume Cut	Volume Fill
30	187		
		59	294
34	131		
		65	202
36	87		
		73	153
43	78		
		85	122
49	54		
		92	85
50	38		

STA. 1738+00 TO STA. 1741+00

2 F-454(7) Post War

42
64

ROSS COUNTY
ROS-50-32.13

Seeding End Sq. Width Yds.	End Area Volume Cut	Fill	Cut	Fill
92	188	239		
199	130	194		
87	162	285		
481	172	512		
86	31	268		
467	55	475		
82	28	245		
433	54	400		
74	30	187		

End Prop. Paved Gutter
Lt. & Sta. 1742+70

R/W 130'

℄ 637.3

80 70 60

36" Dead Snag
+83

Berm of Twp. Rd. +08

646.16
1742+70
641.85

70 80 90 100 110 120 130

R/W 130'

Begin Prop. Paved Gutter
Lt. & Sta. 1742+50

End Prop. Sod Ditch
Lt. & Sta. 1742+50

60" Stump
+56

R/W 83'

Sod

℄ 635.3

645.86
1742+50
639.10

R/W 130'

70 80 90 100 110

R/W 70'

Sod

℄ 635.15

644.14
1742+00
637.54

R/W

Sod

℄ 635.0

642.89
1741+50
637.53

R/W

Sta. 1741+00

Sta. 1741+00

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

STA. 1741+50 TO STA. 1742+70

2 F-454(7) Post War 13 64

ROSS COUNTY
ROS-50-32.13

Seeding End Width	Seeding Sq. Yds.		End Area Cut	End Area Fill	Volume Cut	Volume Fill
121		R/W 88' 100 90 80 Sod ℄ El. 639.20 70 60				
		G52.74 1744+50 644.32			12	483
647		Begin Prop Sod Ditch Lt. ℄ Sta. 1744+10				
		Profile Drive 10% Grade				
		Drive Lt. ℄ Sta. 1744+00 R/W			31	846
					21	431
112		R/W Sod 100 90 80 70 60 50 End Sta. 1+15 ℄ El. 638.20 Prop. 24"x40' I-1 Pipe				
		G50.73 1744+00 642.47				
		End Prop Sod Ditch Lt. ℄ Sta. 1743+91				
583					37	701
		R/W 130'-80' Sod ℄ 637.9 End Paved Gutter and Begin Sod Ditch Lt ℄ Sta. 1743+40				
98		G48.83 1743+50 641.69			19	326
489		Begin Prop. Paved Gutter Lt. ℄ Sta. 1743+10 For Details See Sheet No. 52			93	547
		R/W 130' Profile of Drive				
		Profile of Drive For Details See Sheet No. 52				
		Twp. Rd 1742+88 Lt ℄ Twp. Rd 1743+29 Rt ℄				0 412 2 85
78		End Sta. 1+25 R/W 130'			81	264
283		G47.11 1743+00 641.96			138	280
92		110 100 60 60 70 80 90 100 110 Sta. 1742+70			Sta. 1742+70	188 239
		70 60 50 40 30 20 10 ℄ 10 20 30 40 50 60 70				

STA. 1743+00 TO STA. 1744+50

Seeding	End Sq.	Width	Yds.
130			
819			
165			
828			
133			
773			
146			
742			
121			

FED. NO.	STATE	PROJECT	SHEET NO.
2	OHIO	F-454 (7)	Post War

44
64

ROSS COUNTY
ROS-50-32.13

End Area Volume			
Cut	Fill	Cut	Fill

28" Sycamore +53
29" Dead Elm +76
24" Sycamore +54
R/W 80'
20" Sycamore +39
662.26
1746+50
651.00
30" Sycamore +05
R/W 80'
14 1093
90 80 Rt. 640.95 70
R/W 100'
43 2142
30" Sycamore +89
30" Sycamore +75
639.75
1746+00
648.56
Begin Prop. Guard Rail Lt. ℄ Sta 1746+00
Begin Prop. Paved Gutter Lt. Sta. 1745+85
End Prop. Sod Ditch Lt. Sta. 1745+85
Begin Prop. Guard Rail Rt. ℄ Sta. 1746+00
R/W 81.67'
32 1220
R/W 96
657.27
1745+50
646.72
90 80 70 60 50
Sod
Rt. 640.35
Sod
75 65
Rt. 639.75
R/W 92'
R/W 83.33'
51 2224
23 1182
43 1985
654.93
1745+00
645.47
R/W 85'
23 961
32 1337
Sta. 1744+50
Sta. 1749+50
12 483
70 60 50 40 30 20 10 ℄ 10 20 30 40 50 60 70

STA. 1745+00 TO STA. 1746+50

2 F-454(1) Post War 45 64

ROSS COUNTY
ROS-50-3213

Seeding
End Sq. Width Yds.

24" Poplar +83
26" Sycamore +56
End Prop. Guard Rail Lt. ℄ Sta. 1748+50
End Prop. Guard Rail Rt. ℄ Sta. 1748+50
132
R/W 80'
℄ 661.25
G 72.25
1748+50
665.21
18" Sycamore +44
722
75 70 65
R/W 90'
128
R/W 80'
G 69.75
1748+00
661.08
36" Sycamore +79
℄ 654.0
739
75 70 60 50
R/W 80'
℄ 649.5'
138
28" Sycamore +35
30" Sycamore +16
G 67.25
1747+50
657.05
753
R/W 78.32
133
R/W 80'
℄ 646.8
G 64.75
1747+00
653.83
731
130 Sta. 1746+50
70 60 50 40 30 20 10 ℄ 10 20 30 40 50 60 70

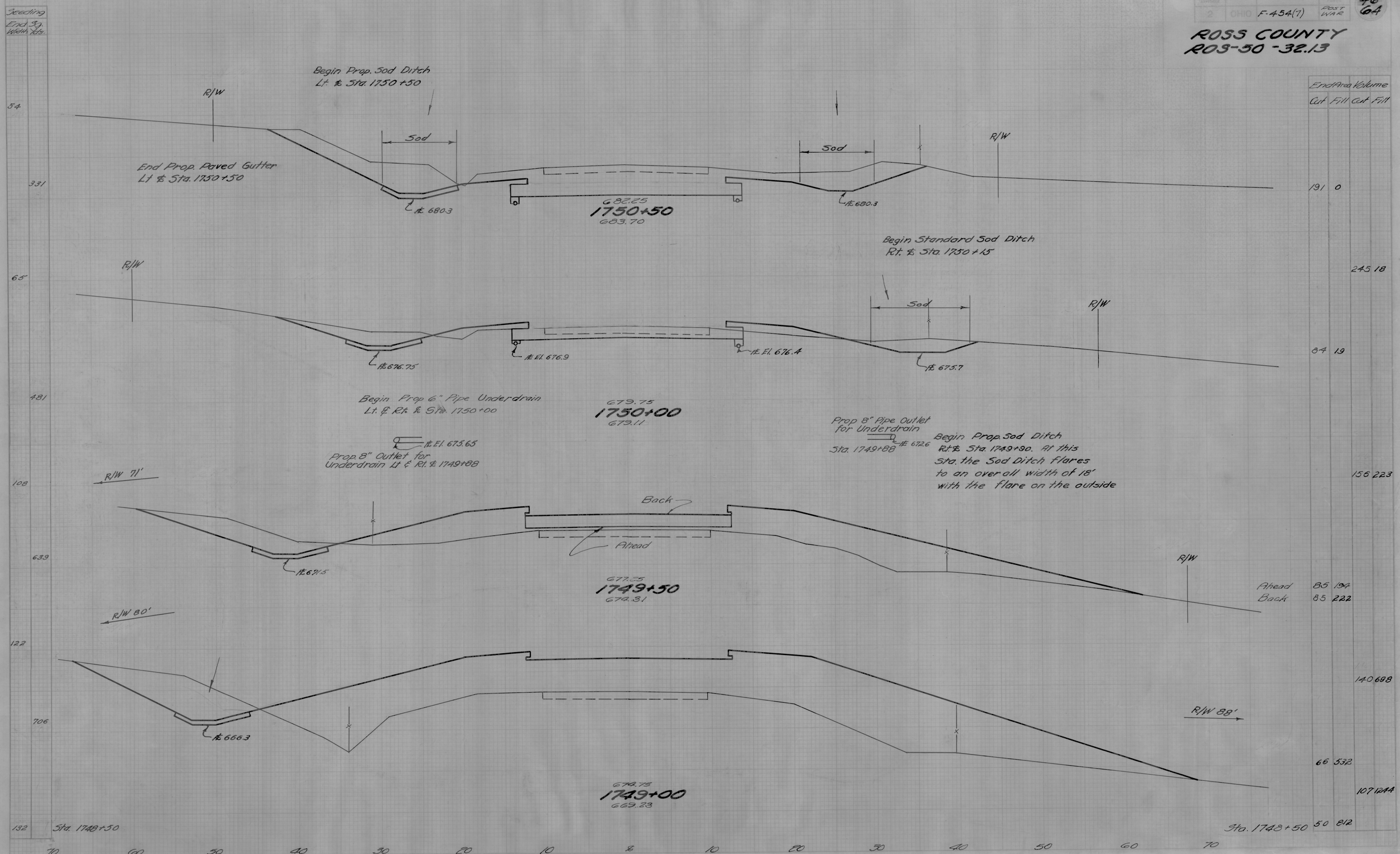
End Area		Volume	
Cut	Fill	Cut	Fill
	50	812	
	82	1582	
	39	897	
R/W			
	69	1757	
R/W			
	35	1001	
	45	1910	
	14	1062	
	26	1995	
Sta. 1746+50	14	1093	

STA. 1747+00 TO STA. 1748+50

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	F-454(7)	POST WAR

46
64

ROSS COUNTY
ROS-50 -32.13



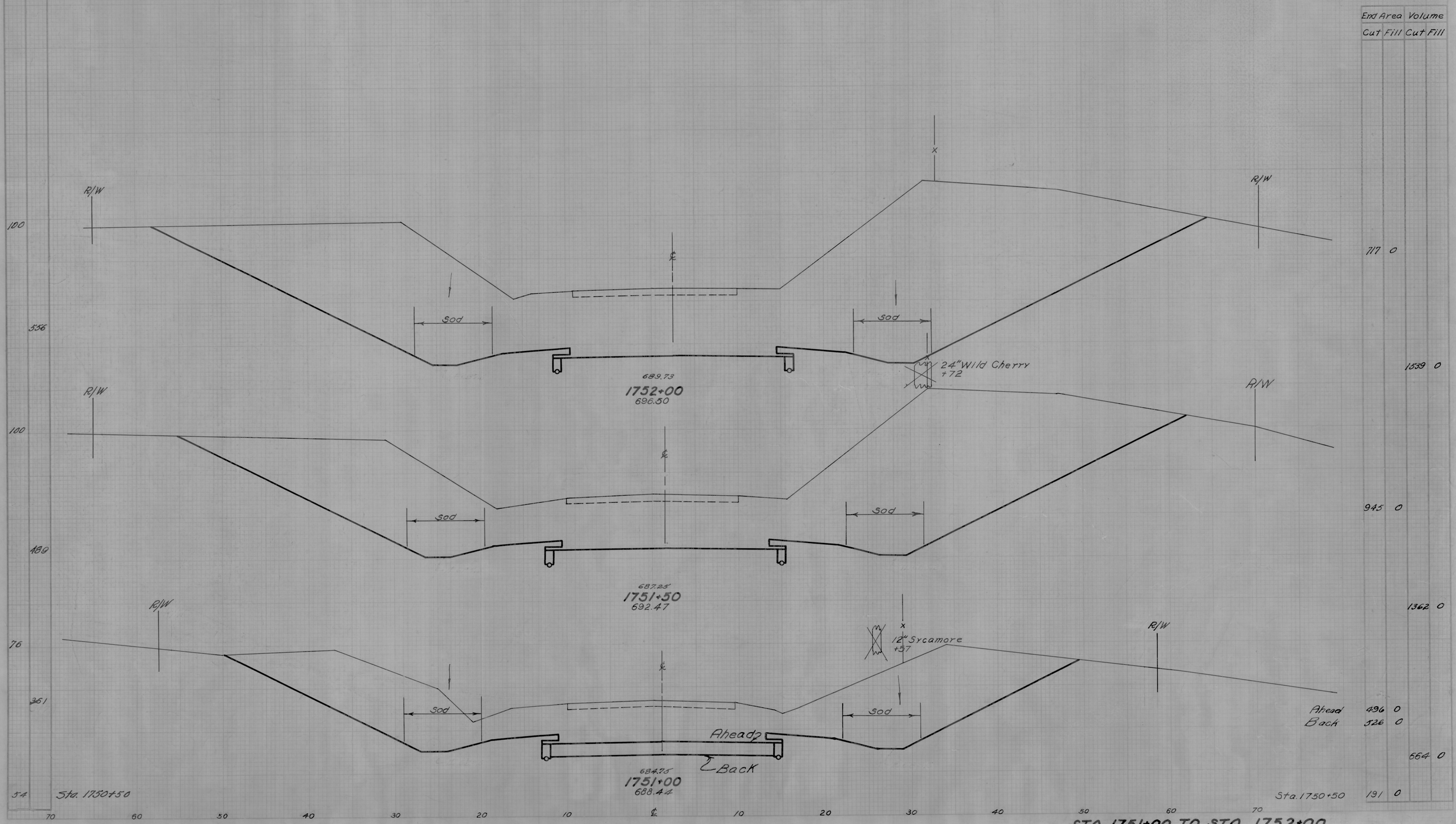
	End Area Cut	End Area Fill	Volume Cut	Volume Fill
	191	0		
			245	18
	84	19		
			156	223
Ahead	85	194		
Back	85	222		
			140	698
	66	532		
			107	1244
Sta. 1748+50	50	812		

STA. 1749+00 TO STA. 1750+50

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	F-454(7)	Post War

47
64

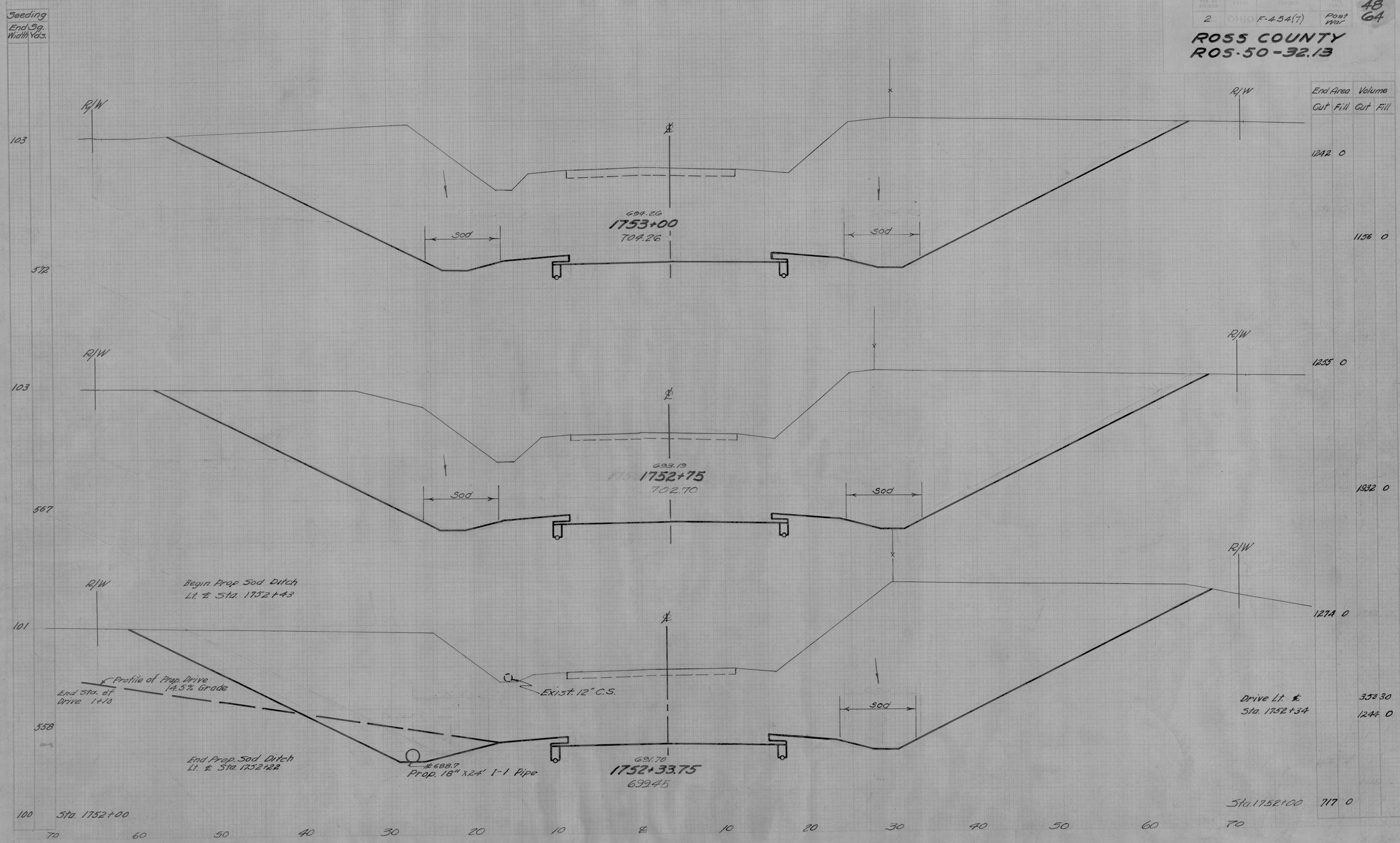
ROSS COUNTY
ROS-50-32.13



STA. 1751+00 TO STA. 1752+00

FED. RD. DIVISION	STATE	PROJECT	TYPE	
2	OHIO	F-454(7)	Post War	48 / 64

ROSS COUNTY
ROS-50-32.13

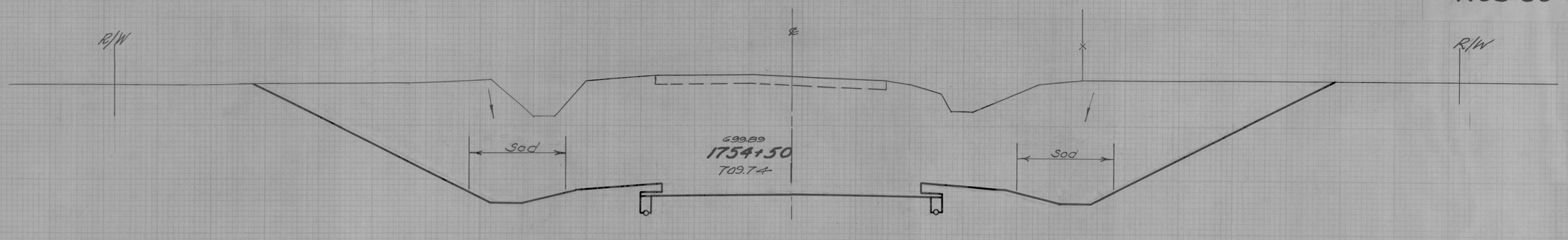


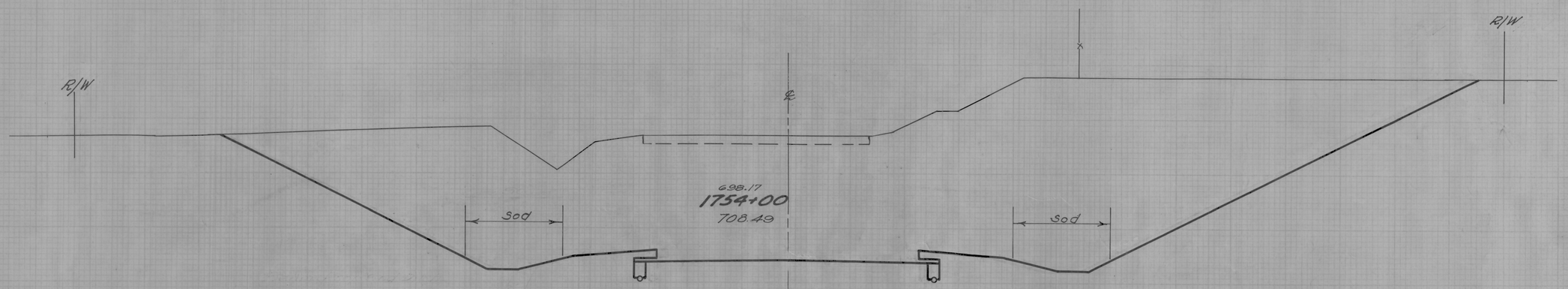
STA. 1752+33.75 TO STA. 1753+00

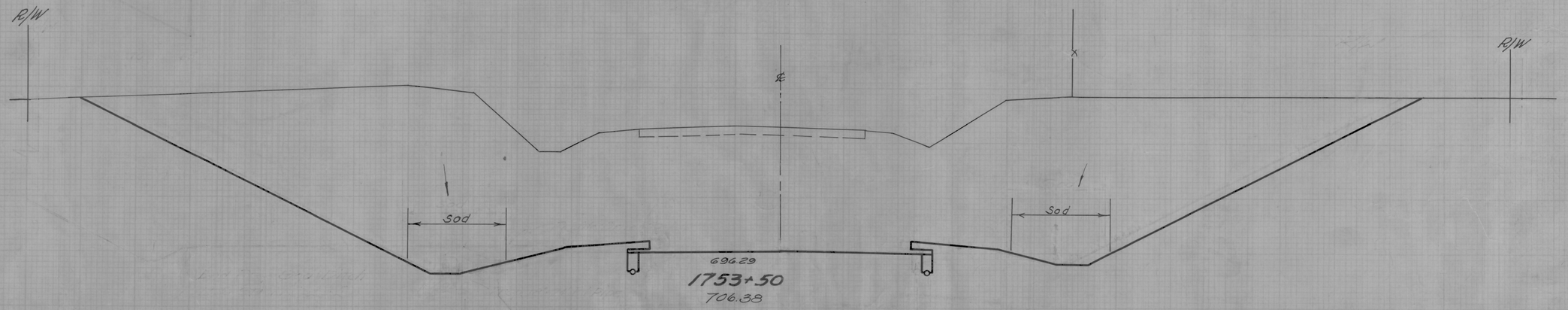
Seeding End Sq. Width	Yds.
87	
	514
98	
	553
101	
	567
103	

2 | OHIO | F-454(7) | Post Mar | 49 64

ROSS COUNTY
ROS-50-32.13







End Area Cut	End Area Fill	Volume Cut	Volume Fill
828	0		
		1847	0
1167	0		
		2237	0
1249	0		
		2306	0
1242	0		

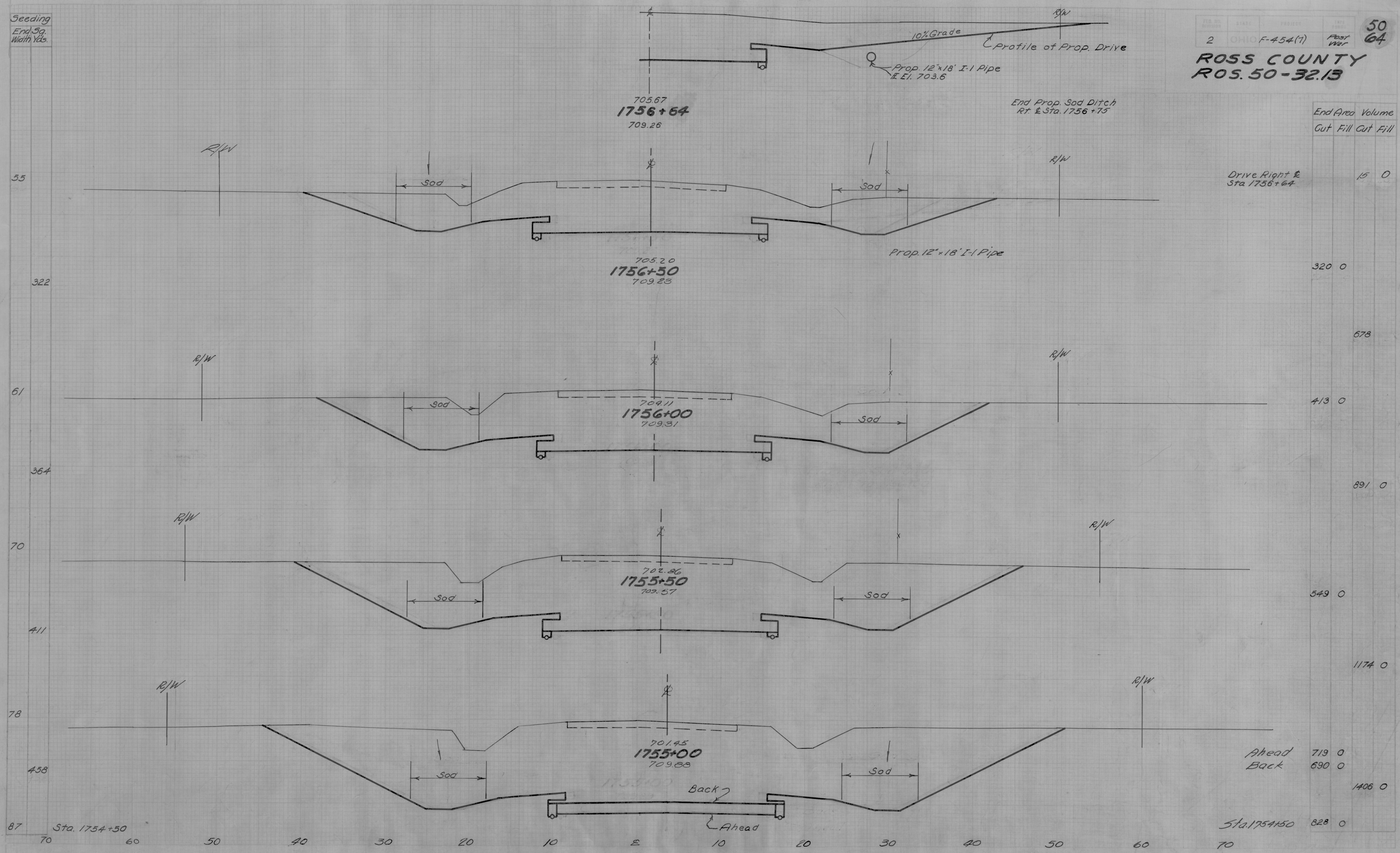
Sta. 1753+00 — 70 60 50 40 30 20 10 ℄ 10 20 30 40 50 60 70 — Sta. 1753+00

STA. 1753+50 TO STA. 1754+50

FED. RD. DIVISION	STATE	PROJECT	TAPE FORM
2	OHIO	F-454(7)	Post War

50
64

ROSS COUNTY
ROS. 50-32.13



	End Area Cut	End Area Fill	Volume Cut	Volume Fill
Drive Right ℄ Sta 1756+64			15	0
	320	0		
			678	
	413	0		
			891	0
	549	0		
			1174	0
Ahead	719	0		
Back	690	0		
			1406	0
Sta. 1754+50	828	0		

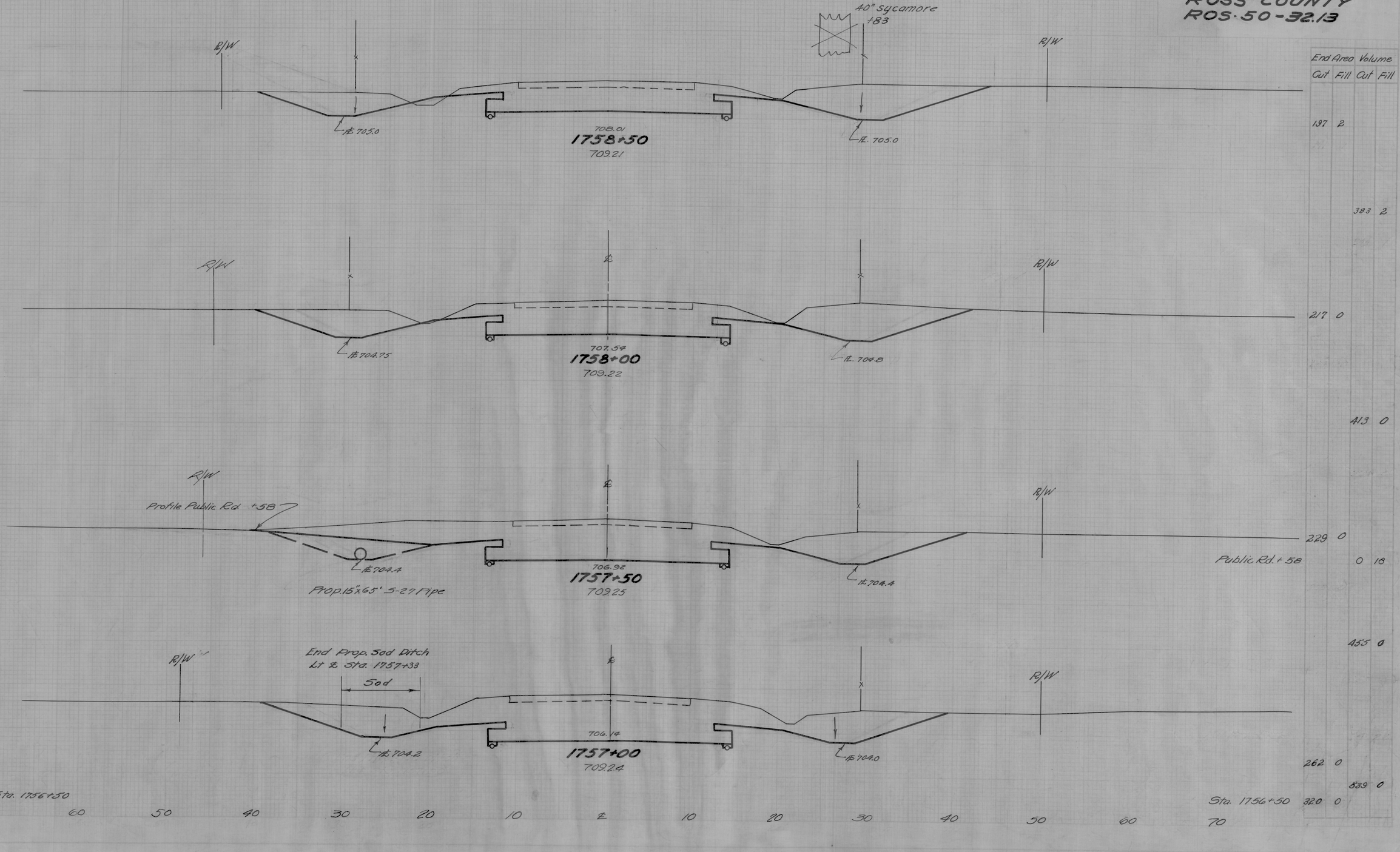
STA. 1755+00 TO STA. 1756+50

2 OHIO F-454(7) Post War

51
64

ROSS COUNTY
ROS-50-32.13

Seeding End Sq. Width Yds.	End Area Cut	End Area Fill	Volume Cut	Volume Fill
63	137	2		
364			383	2
68	217	0		
386			413	0
71	229	0		
	Public Rd. + 58		0	18
369			455	0
62				
325	262	0		
			839	0
55 Sta. 1756+50	Sta. 1756+50	320	0	



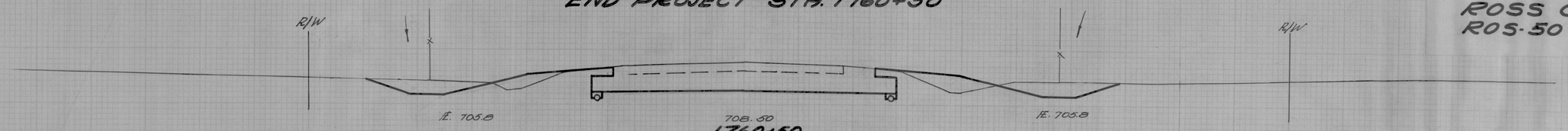
STA. 1757+00 TO STA. 1758+50

2 OHIO F-454(7) Post War 52 64

ROSS COUNTY
ROS-50-32.13

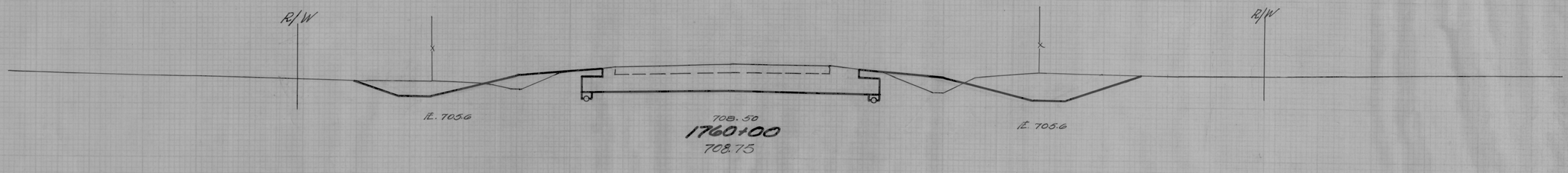
Seeding End Sq. Width Yds.		End Area Cut	End Area Fill	Volume Cut	Volume Fill
56		92	14		
	3/9				
				177	27
59					
	3/3				
				217	22
61					
	3/4				
				277	12
63					
	3/5				
				335	6
63					

END PROJECT STA. 1760+50



708.50
1760+50
708.77

End Prop 6" Pipe Underdrain
Lt. & Rt. & Sta. 1760+50



708.50
1760+00
708.75



708.45
1759+50
708.97



708.32
1759+00
709.19

				135	8
				164	5
				197	2

Sta. 1758+50

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

Sta. 1758+50

STA. 1759+00 TO STA. 1760+50

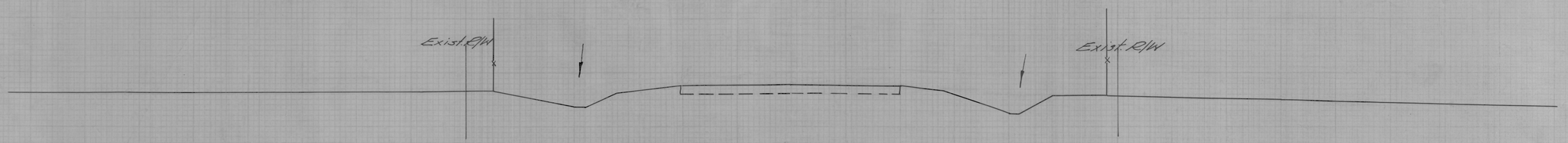
Seeding
End Sq. Width Yds.

2 F-454(7) Post War

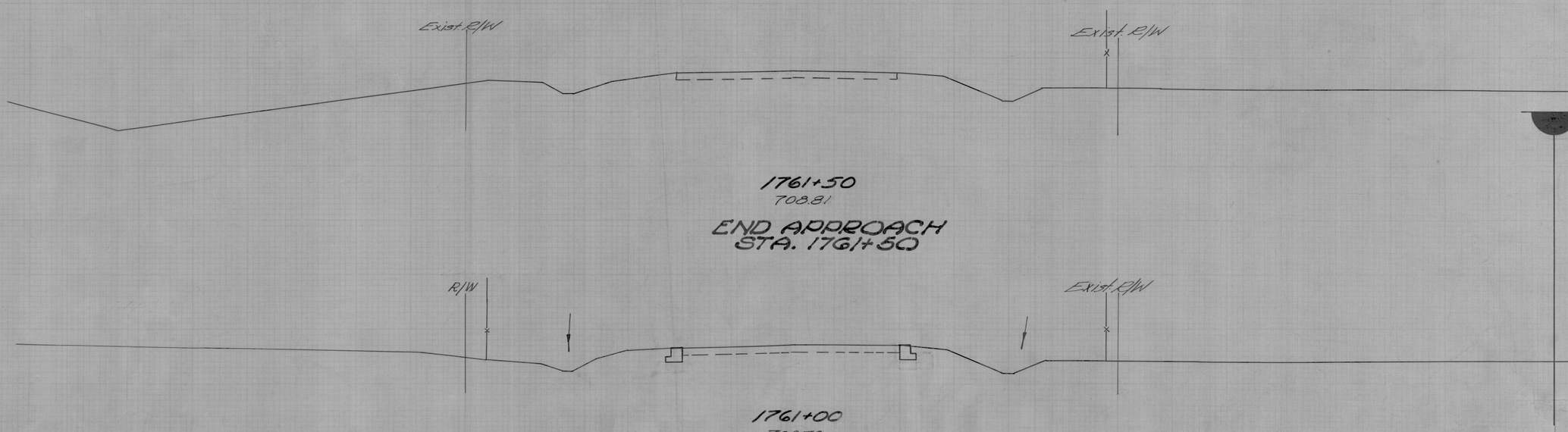
53
64

ROSS COUNTY
ROS-50-32.13

End Area		Volume	
Cut	Fill	Cut	Fill



1762+00
708.88



1761+50
708.81

END APPROACH
STA. 1761+50

1761+00
708.76

STA. 1761+00 TO STA. 1762+00

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	F-454(7)	Post War

54
64

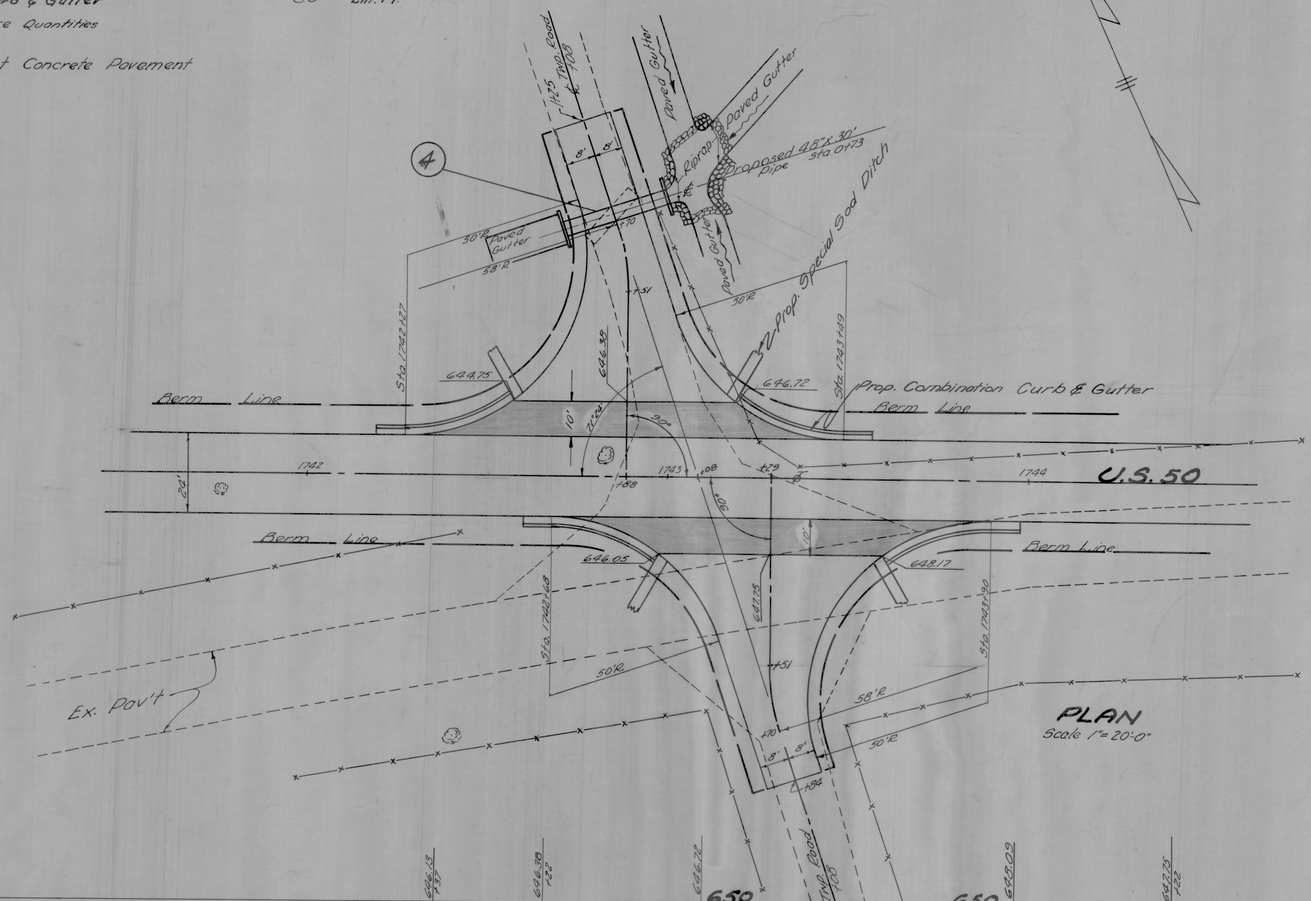
ROSS COUNTY
ROS-50-32.13

ESTIMATED QUANTITIES L.T. ℄

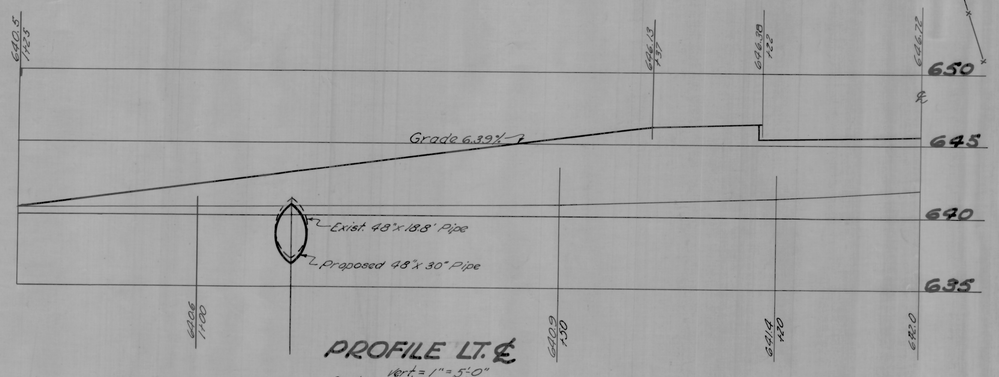
I-17 Side Approaches, Mailbox Turnouts and Berm Material	17.7	Cu.Yds.
T-70 9" Portland Cement Concrete Pavement	67.8	Sq. Yds.
55-5 Classified Embankment - 4"	70.8	Sq. Yds.
L-10 Sodding	21.0	Sq. Yds.
I-12 Type 2 Combination Curb & Gutter	80	Lin. Ft.

See Sheet No. 57 for structure Quantities

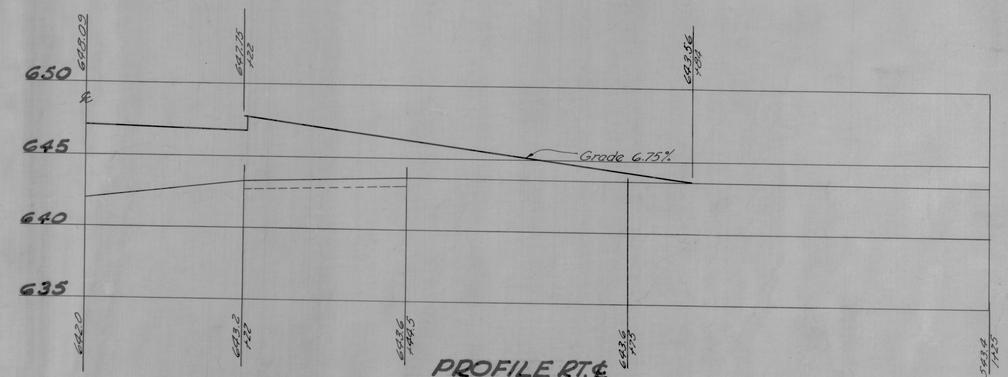
T-70 Portland Cement Concrete Pavement



PLAN
Scale 1"=20'-0"



PROFILE LT. ℄
Scale Vert.= 1"=5'-0"
Hor.= 1"=10'-0"



PROFILE RT. ℄
Scale Vert.= 1"=5'-0"
Hor.= 1"=10'-0"

ESTIMATED QUANTITIES RT. ℄

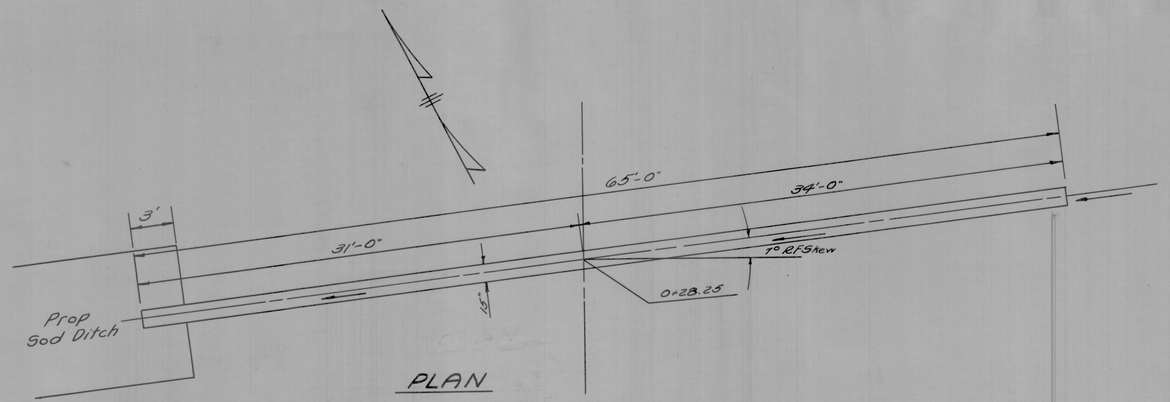
I-17 Side Approaches, Mailbox Turnouts & Berm Material	16.5	Cu.Yds.
T-70 9" Portland Cement Concrete Pavement	67.8	Sq. Yds.
55-5 Classified Embankment - 4"	70.8	Sq. Yds.
L-10 Sodding	200	Sq. Yds.
I-12 Type 2 Combination Curb & Gutter	80	Lin. Ft.

TOWNSHIP ROAD APPROACHES
STA. 1743+08 RT. & LT. ℄

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	F-454(7)	Post Mar

55/64

ROSS COUNTY
ROS-50-32.13

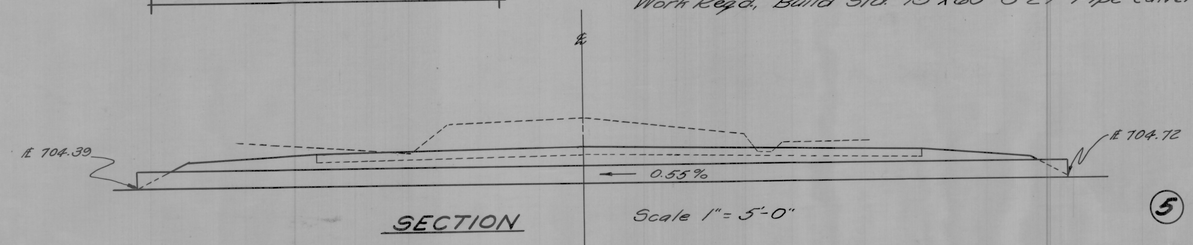


PLAN

DRAINAGE AREA 1 Acre
Q_{10} = 4.0 c.f.s.

ESTIMATED QUANTITIES

S-27 15" Pipe for Roadway Culvert 65 Lin. Ft.
Work Req'd, Build Std 15"x65' S-27 Pipe Culvert



SECTION

Scale 1" = 5'-0"

(5)

SIDE ROAD CULVERT
Lt. ℄ STA. 1757+58

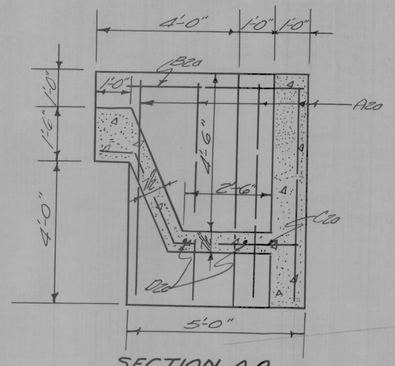
(5)

SIDE ROAD CULVERT
LT. STA. 1757+58

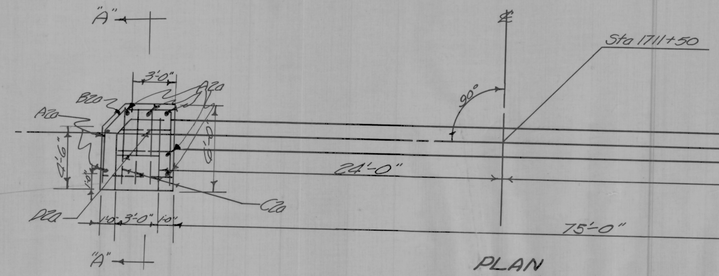
FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	F-454(7)	POST WAR

56/64

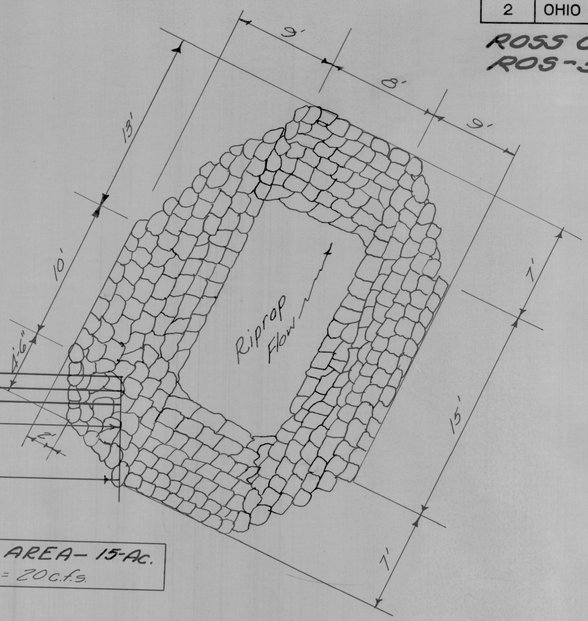
ROSS COUNTY
ROS-50 32.13



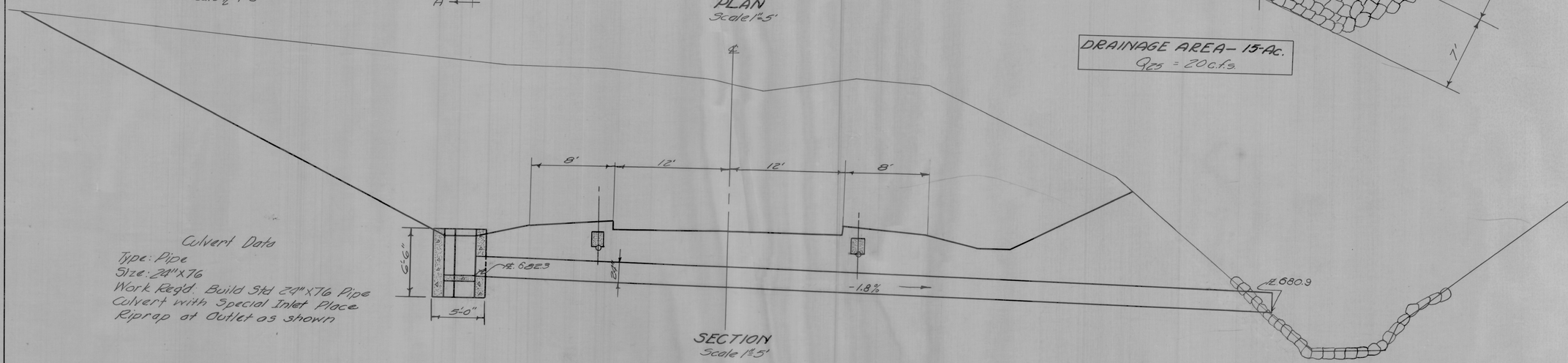
SECTION A-A
Scale ½"=1'-0"



PLAN
Scale 1"=5'



DRAINAGE AREA- 15-Ac.
Q_{25} = 20 c.f.s.



SECTION
Scale 1"=5'

Culvert Data
Type: Pipe
Size: 24"x76
Work Req'd: Build Std 24"x76 Pipe Culvert with Special Inlet Place Riprap at Outlet as shown

REINFORCING STEEL				
Mark	Size	No. Req'd	Length	Weight
A2a	½"φ	7	6'-0"	28
B2a	½"φ	1	14'-0"	9
C2a	½"φ	3	7'-3"	14
D2a	½"φ	2	3'-9"	6
		Total Weight (Lbs)		57

Note: Steel to be bent in the Field

NOTE:→ The bar size designations shown above do not correspond with the size designations given in the January, 1, 1951 edition of the Construction and Material Specifications.

ESTIMATED QUANTITIES

Item E-2 Excavation for Structure	61-C.Y.
Item I-10 Riprap-Type "A"	69-S.Y.
Item S-1 Concrete for Structure-Class "C"	3.8-C.Y.
Item S-4 Reinforcing Steel	57-Lbs
Item S-27 24" Pipe for Roadway Culvert	76-L.Ft.

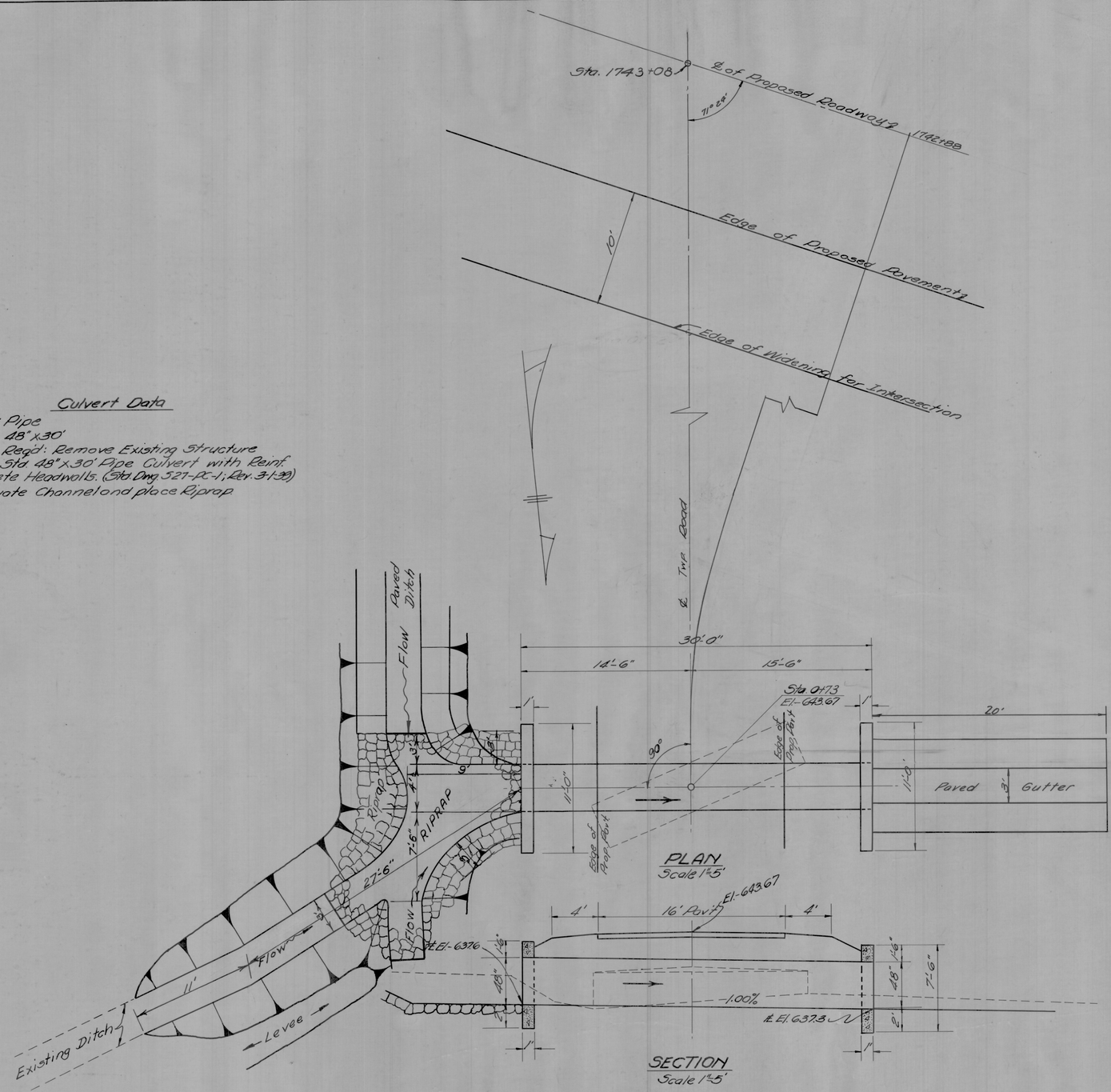
②

PIPE CULVERT
STA 1711+50

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	F-454(7)	Post 1961

57
64

ROSS COUNTY
ROS-50-32.13



DRAINAGE AREA-1.50 Ac.
Q_{25} = 7.0 c.f.s.

Culvert Data

Type: Pipe
Size: 48"x30'
Work Reqd: Remove Existing Structure
Build Std. 48"x30' Pipe Culvert with Reinf. Concrete Headwalls. (Std. Dwg. 521-PC-1, Rev. 3-1-93)
Excavate Channel and place Riprap.

ESTIMATED QUANTITIES

Item E-2	Excavation for Structure	16-C.Y.
Item E-3	Channel Excavation	31-C.Y.
Item S-1	Concrete for Structure, Class "C"	7.1-C.Y.
Item S-4	Reinforcing Steel	112-Lbs.
Item S-24	Removal of Existing Structure	Lump
Item S-27	48" Pipe for Roadway Culvert	30 L.F.
Item I-10	Riprap	30-S.Y.

4

PIPE CULVERT
FOR SIDE ROAD
STA. 1742+88 Lt.

F-454(7) Post War

ROSS COUNTY
ROS-50-32.13

	End Area		Volume	
	Cut	Fill	Cut	Fill
STA. 1+30 = 0:0 SECTION	0	0		
		25	0	
624.0 1+00 627.0		45	0	
		208	0	
623.50 0+50 622.0		180	0	
		412	0	
623.0 0+00 623.50		265	0	

FOR ESTIMATED QUANTITIES
SEE BRIDGE PLANS SHEET No. 61

Channel Sections Lt ℄
Excavation = 645 Cu. Yds.
Embankment = 0 Cu. Yds.

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

CHANNEL SECTIONS LEFT ℄ STA. 0+00 TO STA. 1+01

F-454(7) Post War

ROSS COUNTY
ROS-50-32.13

Sta. 2+45 = 0:0 Section.

622.0
2+00
628.0

622.25
1+50
629.0

622.50
1+00
629.5

622.75
0+50
629.0

	End Area	Volume
	0	0
		207 0
	248	0
		549 0
	345	0
		736 0
	472	0
		915 0
	516	0
		478 0
Sta. 0+00		0

Channel Sections Rt. ℄
Excavation = 2905 Cu. Yds.
Embankment = 0 Cu. Yds.

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

CHANNEL SECTIONS RIGHT ℄ STA. 0+50 TO STA. 2+00

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	F-454(7)	POST WAR

60
64

ROSS COUNTY
ROS-50-32.13
Approx. 2.8 Miles West of Londonderry

N

Excavate channel to El. 624.0 ±

Sacked Conc. slope paving

Riprap to El. 630.0

Riprap to El. 633.0

Riprap to El. 633.0

Riprap to El. 630.0

Excavate channel to El. 623.0

End Approach Slab Sta. 1728+97.11

Begin Approach Slab Sta. 1730+44.89

℄ Bridge Sta. 1729+71.00

WALNUT CREEK

130'

20'

40'

Cultivated

1727+00

To Chillicothe

1728+00

1729+00

1730+00

1731+00

1732+00

365° 59' E

1733+00

To Londonderry

12" Dead Elm +96

12" Dead Elm +32

14" Willow +50

20" Elm +61

12" Willow +47

12" Box Elder +49

12" Elm +40

14" Box Elder +92

12" Box Elder +40

14" Box Elder +68

24" Elm +49

18" Elm +42

12" Box Elder +60

14" Box Elder +92

28" Stump +35

12" Box Elder +35

20" Elm +30

12" Box Elder +76

12" Box Elder +99

12" Box Elder +72

22" Stump +32

28" Sycamore +32

16" Sycamore +32

14" Sycamore

Brush

Brush

Brush

632

630

628

624

622

2:1

2:1 Norm

BRIDGE LIMITS

℄ Bridge Sta. 1729+71.00 For Gr. El. 639.65

Sta. 1728+97.11 640.00

Sta. 1730+44.89 639.29

639.50

220'± to end of channel excavation at N.E. corner of existing bridge abutment.

Clears 3 to 5 yr. H.W. 2.8'±

Drainage Area 4.8 Sq. Mi.

EXISTING BRIDGE DATA
Type: Steel Low Truss
Span: 87'-3"
Roadway: 15'-3"
Skew: 0°
Condition: Fair

(To be removed)

PROPOSED STRUCTURE
TYPE: Continuous steel beam with concrete deck and concrete substructure
SPAN: 44'-35'-44' ℅ bearings
RDWY: 28' plus 1'-9" safety curbs
LOADING: S-15-46
SKEW: 20° R.F.
SURF. COURSE: Bituminous
APPROACH SLAB: As shown

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

641.00 640.50 -0.5% 640 635 630 625 620

3-5 Yr. High Water Elev. 633.00 ±

Pond Water Elev. 626.38 (1942)

Low Water Elev. 624.0 1949

Estimated length of piles = 18'

Bench El. 634.7

Excavate channel to El. 623.0

Bench El. 634.0

Estimated length of piles = 17'

633.02 638.33 638.69 638.98

300' V.C.

632.45 632.22 632.51 632.63 632.39 626.92 632.96 633.46 634.04 634.88 634.88 635.96 636.11 636.14 636.26 636.07 636.70 636.94 636.98 637.42 637.43 637.37 638.08 638.29 638.79 638.93 639.33 639.48

1727+00 +50 +61 +73 +82 +90 1728+00 +34 +50 +80+94/1729+00 1730+00 +30 +36 +63 1731+00 +06 +35 +42 +50 +55 1732+00 +54

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

SITE PLAN
BRIDGE NO. ROS-50-32.13
over WALNUT CREEK

Ross County
Sec. ROS-50-32.13 Sta. 1729+71.00

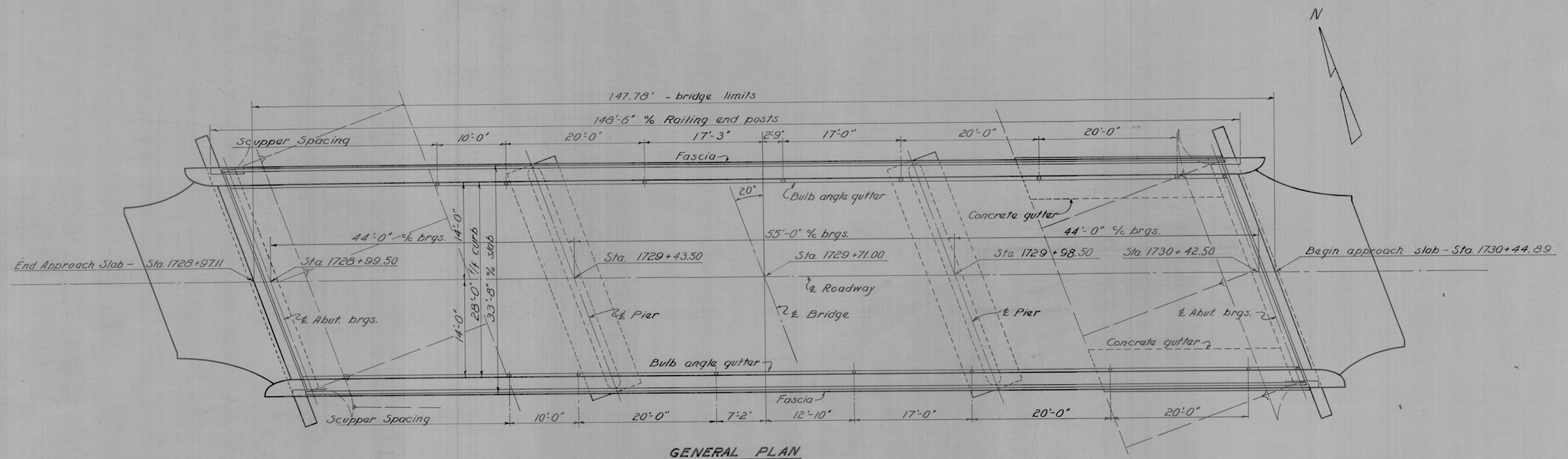
PRESENT TOPOGRAPHY		PROPOSED WORK				
Surveyed	Drawn	Design'd	Drawn	Checked	Rev.
Aerial		J.W.G.	J.W.G.	R.E.B.	12-29-2

BFG WHC 11-29-

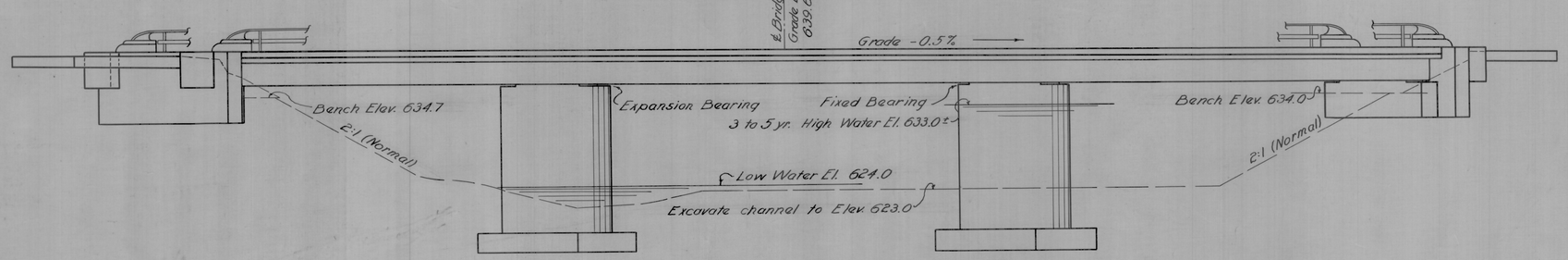
FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	F-454 (7)	POST WAR

61
64

ROSS COUNTY
ROS - 50 - 32.13



GENERAL PLAN



GENERAL ELEVATION

Piling not shown

ESTIMATED QUANTITIES

Item	Total	Unit	Description	Super.	Piers	Abuts.	Gen.	Revised As Built	
E-2	Lump	Sum	Cofferdams, cribs and sheeting				Lump		
E-2	232	Cu.Yds.	Unclassified excavation, including rock		177	55			
E-3	3550	Cu.Yds.	Channel excavation				3550	C.O. 5 = 298	3252
S-1	126	Cu.Yds.	Class "C" concrete, superstructure	126					
S-1	80	Cu.Yds.	Class "E" concrete, abutments			80			
S-1	87	Cu.Yds.	Class "E" concrete, pier walls		87				
S-1	28	Cu.Yds.	Class "E" concrete, pier footings		28				
S-3	444	Sq.Yds.	Type "C" waterproofing	444					
S-4	40,973	Lbs.	Reinforcing steel	30,178	3890	6850	55		
S-7	112,500	Lbs.	Structural steel	112,500				C.O. 5 + 2335	113,035
S-8	112,500	Lbs.	Field painting of structural steel	112,500				C.O. 5 + 335	113,035
S-14	297	Lin.Ft.	Railing, steel with concrete end posts	297					
S-16	Lump	Sum	First test pile				Lump		
S-18	245	Lin.Ft.	Piling, 12 BP 53 or 12" reinforced concrete			245		C.O. 5 - 2.67	235.33
S-24	Lump	Sum	Removal of existing structure				Lump		
S-29	288.3	Lin.Ft.	Subdrainage for wearing surface course	288.3				C.O. 5 + 3	393
T-10	390	Sq.Yds.	Type "A" riprap				390		
T-14	61	Lin.Ft.	Concrete gutter				61	C.O. 5 + 2.5	63.5
T-35	30	Cu.Yds.	Asphaltic concrete surface course, Type A or C (70-80 or 85-100)	30					

W.E.J. 3-29-50

GENERAL NOTES

REFERENCE shall be made to Standard Drawing CSB-1-47, revised 8-25-49.

REMOVAL OF EXISTING BRIDGE:
Trusses, floorbeams and stringers of existing structure shall be match-marked and carefully removed when no longer needed to maintain traffic, and piled along the right-of-way at the disposal of the State's forces. Remainder of structure shall become the property of the Contractor.
Existing substructure shall be removed to 4 ft. below existing bridge seat, and slopes dressed to 2:1 slope.

BITUMINOUS SURFACE COURSE shall be 2½" Asphaltic concrete, Item T-35, laid in two 1¼" courses.

PILING shall be driven to rock with a minimum bearing capacity of 28 tons.

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

SURFACE FINISH OF CONCRETE:
Railing and posts, curb faces and fascias of deck shall receive a rubbed surface finish. All other exposed surfaces shall be governed by the provisions of Item S-1.

CONCRETE GUTTERS shall be 6 ft. wide and 6 in. thick, and shall be depressed 6 in. at the center. They shall extend from face of abutment down to Elev. 623.0 and shall be centered under scuppers. Reinforcing bars ½" ϕ @ 1'-6" centers, both directions, included in price per lin. ft.

PIER FOOTINGS shall extend a minimum of 3 inches into solid rock but the bottom of the footing shall be no higher than the elevations shown on the plans.

SUB-DRAINAGE FOR WEARING SURFACE COURSE shall be as described in Sec. 5-29.07 except that at the East end of the bridge a copper drain tube shall be placed within one foot of the end of the concrete deck.

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES AND RAILROAD CROSSINGS

GENERAL PLAN, ELEVATION & NOTES ~ ESTIMATED QUANTITIES
BRIDGE NO. RO-50-328 OVER WALNUT CREEK

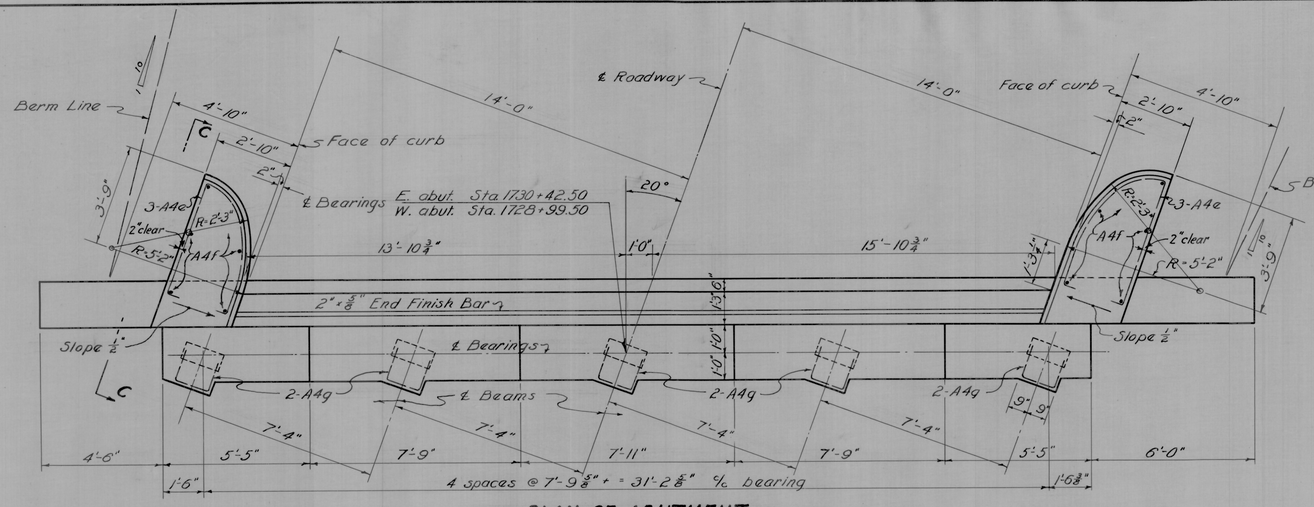
ROSS COUNTY
SEC. ROS - 50 - 32.13 Sta. 1729+71.00

DESIGNED	DRAWN	TRACED	CHECKED	REVISED	DATE	REVISED
FLL	FLL	FLL	DWP	DFG	11-19-50	12-13-50

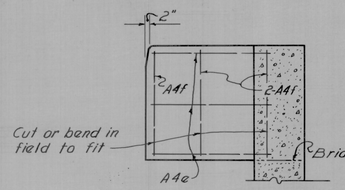
FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	F-454(7)	POST WAR

62
64

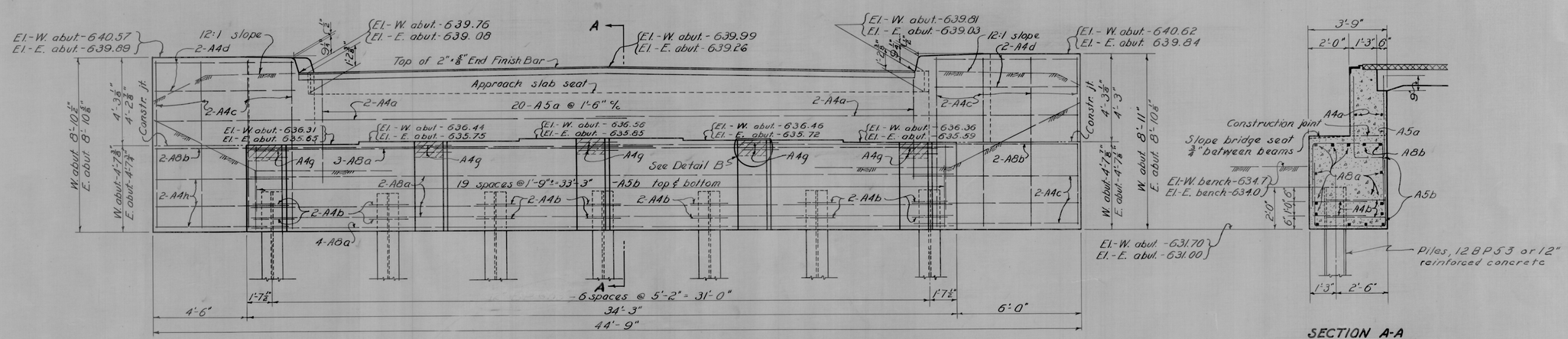
ROSS COUNTY
ROS-50-32.13



PLAN OF ABUTMENT



SECTION C-C



ELEVATION OF ABUTMENT

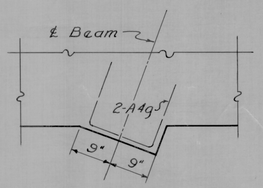
All earth slopes shown are 2:1 except as noted.

Clearance between surface of concrete and reinforcing steel shall be 2" except as noted.

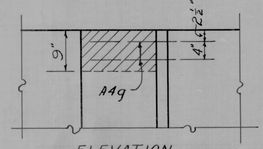
All earth fill around abutments shall be made full height of earth bench. Excavation shall then be made for abutment cap, after which piling shall be driven. If bottom forms for abutment cap are used, they shall be left in place.

Concrete above bridge seat construction joint shall not be placed until after steelwork is erected. Steel end finish shall be used as a template for top of backwall.

SECTION A-A



PLAN



ELEVATION

DETAIL B

Shaded areas on abutment face shall be finished with particular care, to provide plane surfaces at right angles with the grade to insure full bearing for bumper angles.

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES AND RAILROAD CROSSINGS

ABUTMENT DETAILS
BRIDGE NO. RO-50-328
OVER WALNUT CREEK

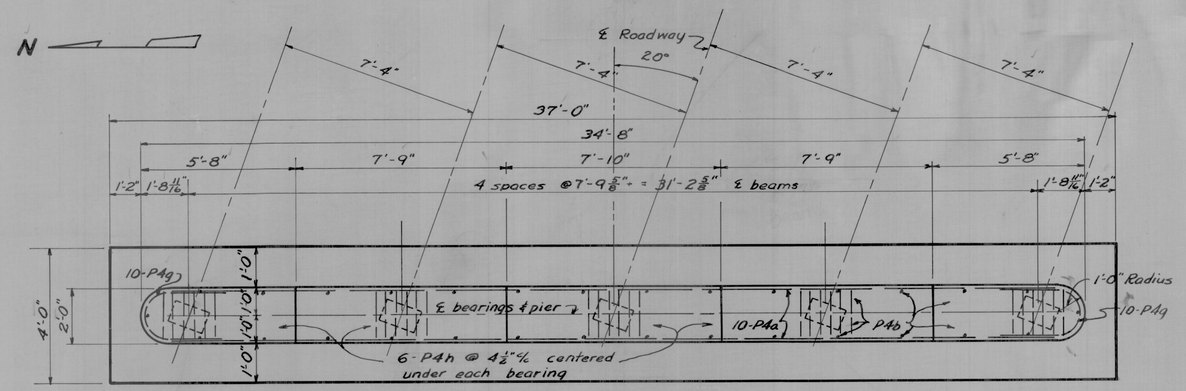
ROSS COUNTY
SEC. ROS-50-32.13 Sta. 1729+71.00

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
FLL	FLL	FLL	DWP	BFG WHB	11-29-50	

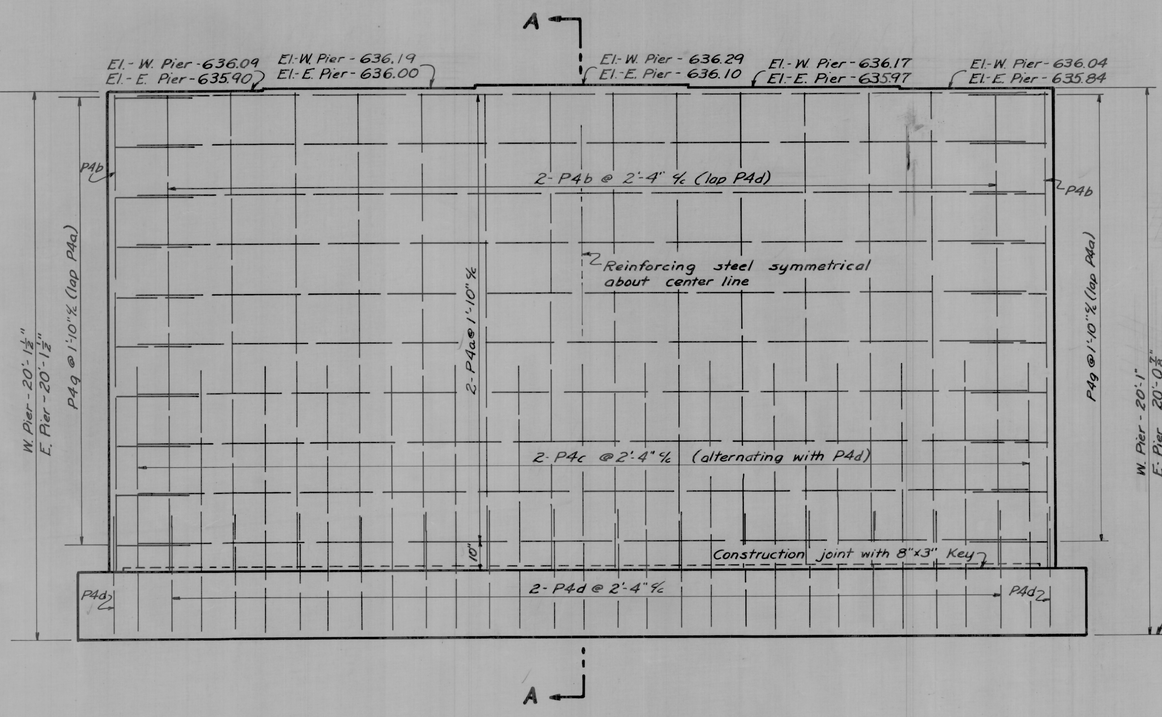
FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	F-454(7)	POST WAR

63
64

ROSS COUNTY
ROS-50-32.13

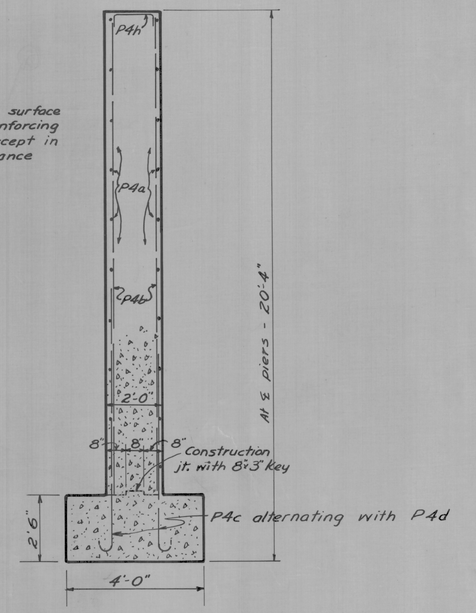


PLAN



ELEVATION

Clearance between surface of concrete and reinforcing steel shall be 2" except in footing where clearance shall be 3".



SECTION A-A

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES AND RAILROAD CROSSINGS

PIER DETAILS

BRIDGE No. RO-50-328
OVER WALNUT CREEK

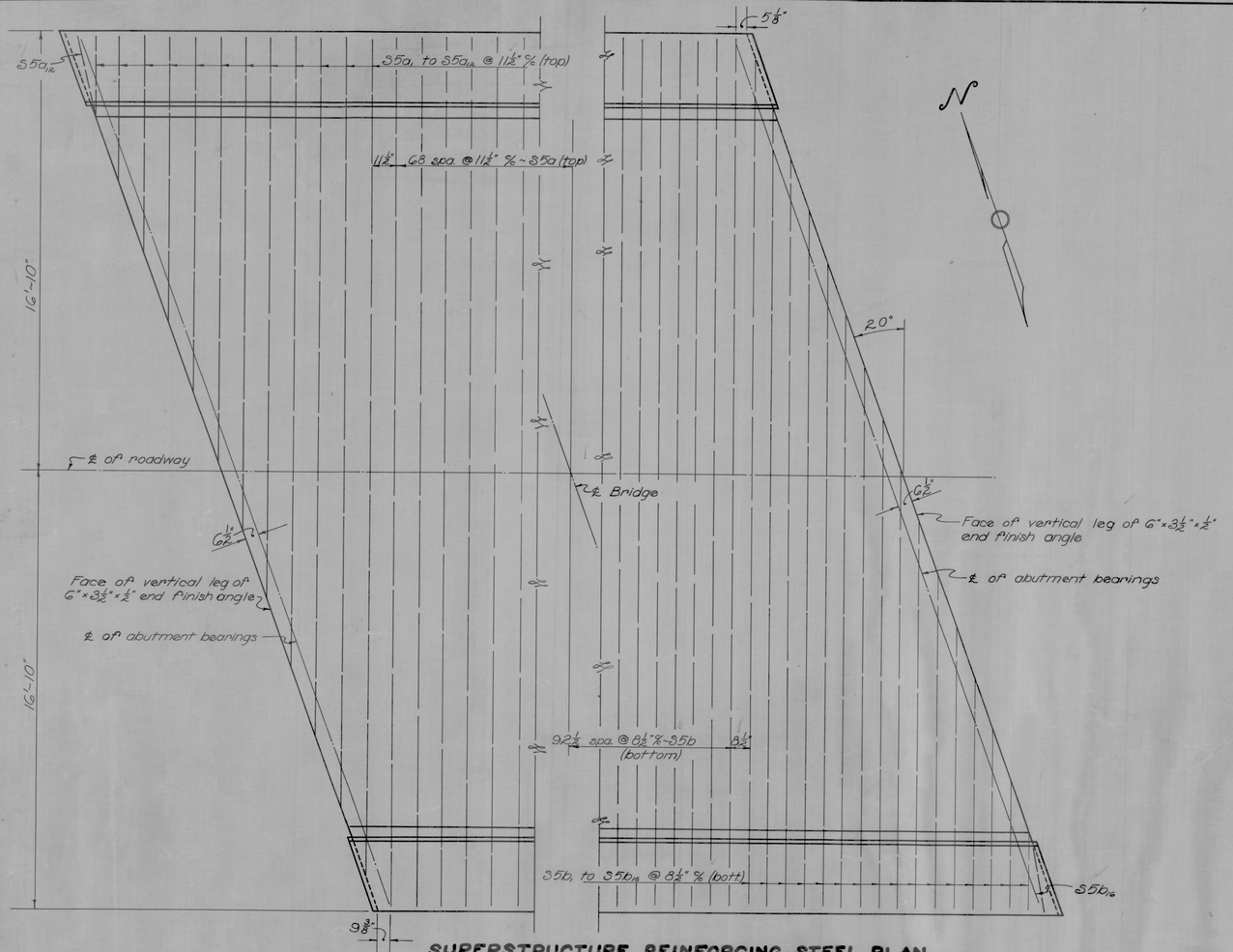
ROSS COUNTY
SEC.-ROS-50-32.13 STA. 1729+71.00

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
FLL	FLL	EWP	DWP	BFG WHR	11-29-50	

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	F-454(7)	POST WAR

64
64

ROSS COUNTY
ROS-50-32.13

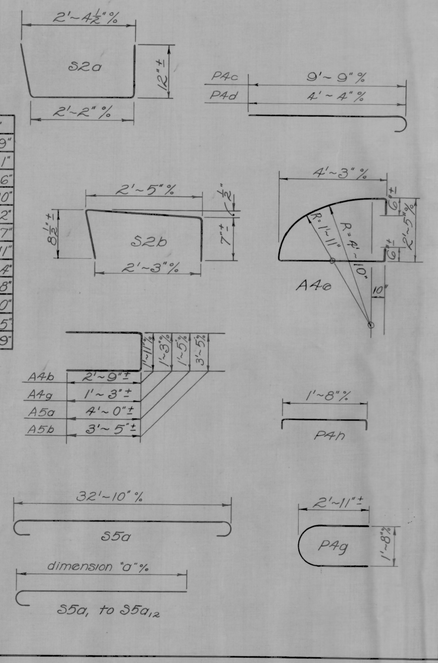


SUPERSTRUCTURE REINFORCING STEEL PLAN
SYMMETRICAL ABOUT ℄ BRIDGE BY ROTATION

REINFORCING STEEL LIST

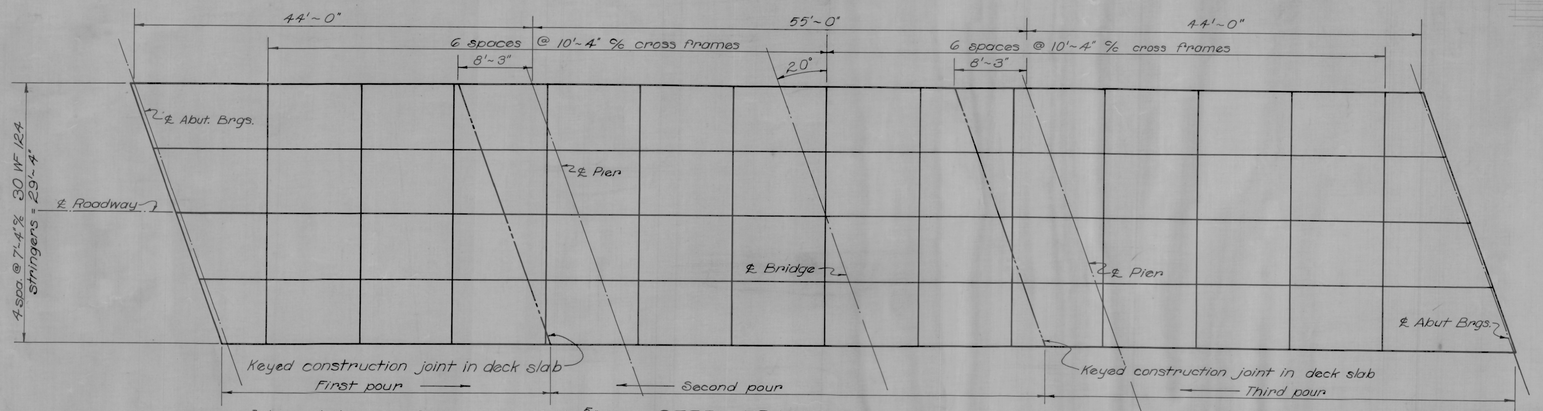
MARK	SIZE	NO.	LENGTH	WEIGHT	S'TR
Superstructure					
S2a	½"ϕ	194	4'-0"	518	Bt
S2b	½"ϕ	194	3'-6"	454	Bt
S4a	⅝"ϕ	265	30'-9"	8,499	Str
S4b	⅝"ϕ	48	22'-0"	1,101	Str
S5a	¾"ϕ	137	34'-2"	7,030	Bt
S5a1	¾"ϕ	2	33'-5"	100	Bt
S5a2	¾"ϕ	2	30'-9"	92	Bt
S5a3	¾"ϕ	2	28'-2"	85	Bt
S5a4	¾"ϕ	2	25'-6"	77	Bt
S5a5	¾"ϕ	2	22'-10"	69	Bt
S5a6	¾"ϕ	2	20'-3"	61	Bt
S5a7	¾"ϕ	2	17'-7"	53	Bt
S5a8	¾"ϕ	2	15'-0"	45	Bt
S5a9	¾"ϕ	2	12'-4"	37	Bt
S5a10	¾"ϕ	2	9'-8"	29	Bt
S5a11	¾"ϕ	2	7'-1"	21	Bt
S5a12	¾"ϕ	4	4'-5"	27	Bt
S5b	¾"ϕ	186	32'-9"	9,150	Str
S5b1	¾"ϕ	2	32'-5"	97	Str
S5b2	¾"ϕ	2	30'-6"	92	Str
S5b3	¾"ϕ	2	28'-6"	86	Str
S5b4	¾"ϕ	2	26'-7"	80	Str
S5b5	¾"ϕ	2	24'-8"	74	Str
S5b6	¾"ϕ	2	22'-8"	68	Str
S5b7	¾"ϕ	2	20'-9"	62	Str
S5b8	¾"ϕ	2	18'-10"	57	Str
S5b9	¾"ϕ	2	16'-10"	51	Str
S5b10	¾"ϕ	2	14'-11"	45	Str
S5b11	¾"ϕ	2	13'-0"	39	Str
S5b12	¾"ϕ	2	11'-0"	33	Str
S5b13	¾"ϕ	2	9'-1"	27	Str
S5b14	¾"ϕ	2	7'-1"	21	Str

Bending Diagrams

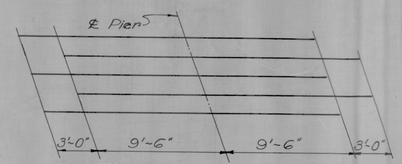


MARK	SIZE	NO.	LENGTH	WEIGHT	S'TR
S5b16	¾"ϕ	2	5'-2"	16	Str
S5b17	¾"ϕ	4	3'-3"	20	Str
S5c	¾"ϕ	40	31'-0"	1,862	Str
Piers					
P4a	⅝"ϕ	40	32'-5"	1,368	Str
P4b	⅝"ϕ	60	17'-5"	1,090	Str
P4c	⅝"ϕ	60	10'-4"	646	Bt
P4d	⅝"ϕ	60	4'-11"	308	Bt
P4g	⅝"ϕ	40	6'-10"	285	Bt
P4h	⅝"ϕ	60	3'-2"	198	Bt
Abutments					
A4a	⅝"ϕ	8	23'-3"	194	Str
A4b	⅝"ϕ	56	7'-1"	413	Bt
A4c	⅜"ϕ	44	8'-6"	390	Str
A4d	⅝"ϕ	16	6'-10"	114	Str
A4e	⅝"ϕ	12	10'-3"	128	Bt
A4f	⅝"ϕ	20	3'-10"	80	Str
A4g	⅝"ϕ	20	3'-6"	73	Bt
A4h	⅝"ϕ	12	6'-7"	82	Str
A5a	¾"ϕ	40	9'-1"	545	Bt
A5b	¾"ϕ	80	9'-11"	1,192	Bt
A8a	1"ϕ	26	33'-10"	2,991	Str
A8b	1"ϕ	8	23'-10"	648	Str
Replacement Bars					
RE2	½"ϕ	1	5'-8"	4	Str
RE4	⅝"ϕ	1	6'-1"	6	Str
RE5	¾"ϕ	2	6'-6"	20	Str
RE8	1"ϕ	1	7'-4"	25	Str

Note: The bar size designations shown do not correspond with the size designations given in the January 1, 1951 edition of the Construction and Material Specifications.



STEEL FRAMING PLAN
Showing concrete pouring sequence for deck slab



STAGGER DIAGRAM - S4b BARS

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES AND RAILROAD CROSSINGS

SUPERSTRUCTURE REINFORCING STEEL PLAN, STEEL FRAMING PLAN & REINFORCING STEEL LIST
BRIDGE NO. ROS-50-328
OVER WALNUT CREEK
ROSS COUNTY STA. 1729 + 71.00
SEC. ROS-50-32.13

DESIGNED	DRAWN	TRACED	CHECKED	REVISED BY DFG	DATE	REVISED
FLL	FLL	E.J.S.	DWP	WHC	11-29-50	