

STATE OF OHIO DEPARTMENT OF HIGHWAYS ROSS COUNTY

CONCORD TOWNSHIP

ROS-138-(10.42)(10.90)

FED. RD. DIVISION	STATE	PROJECT	1
2	OHIO	STATE	51

ROSS COUNTY
ROS-138-(10.42)(10.90)

CONVENTIONAL SIGNS

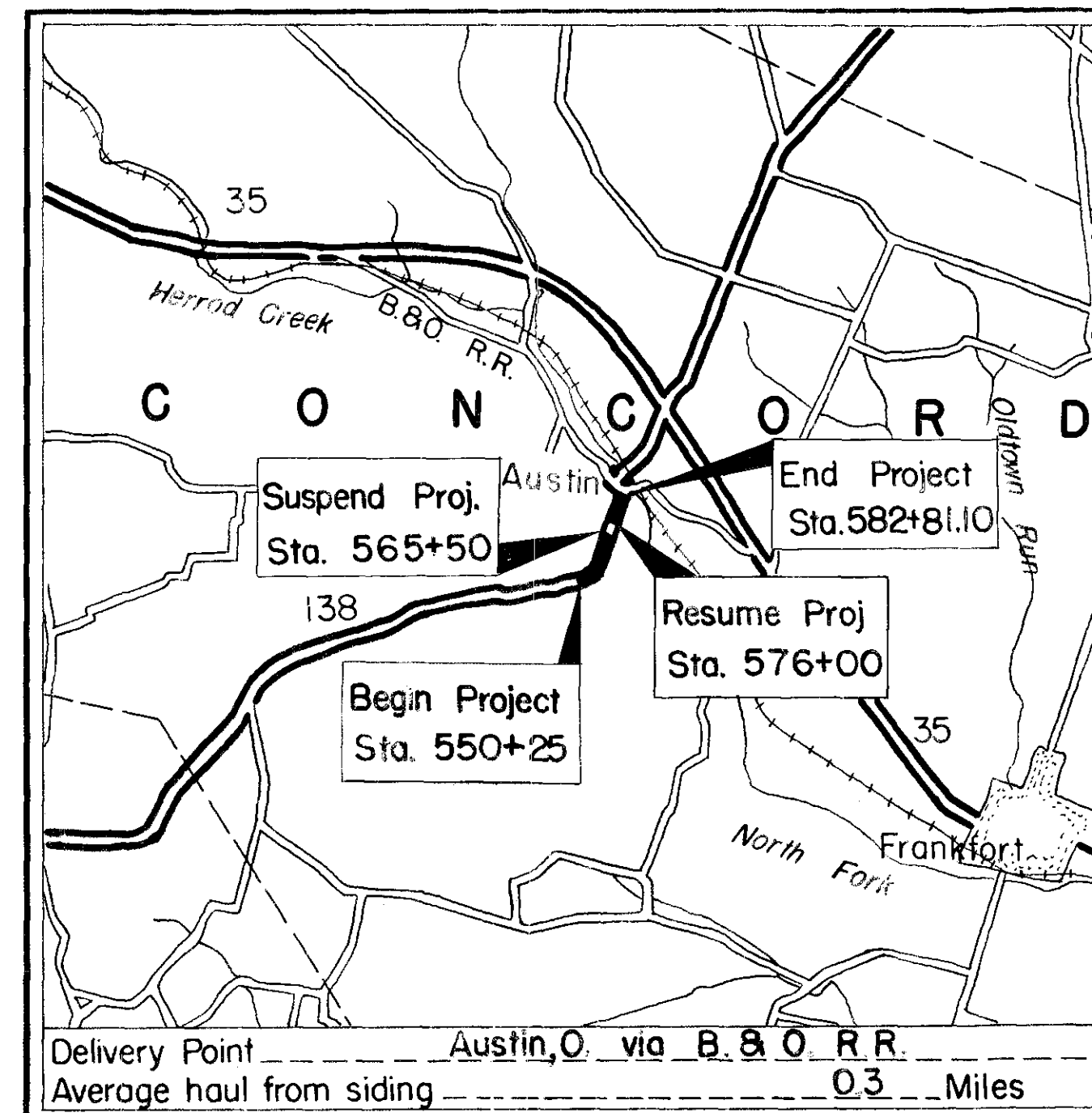
State Line	-----
County Line	-----
Township Line	-----
Section Line	-----
Center Line	-----
Corporation Line	-----
Fence Line	-----
Guard Rail (existing)	-----
Guard Rail (proposed)	-----
Steam Railroad	-----
Power Poles	-----
Telephone Poles	-----
Trees or Stumps (existing)	-----
Trees or Stumps (to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

INDEX OF SHEETS

Title Sheet	1
Typical Sections	2-3
Notes	4-5
Summary of Quantities	6-8
General Summary	9
Plan & Profile	10-15
Superelevation Tables	16
Cross Sections	17-31
Intersection Details	32-33
Structures 20' Span & Under	34-36
Structures Over 20' Span	37-42
Channel Sections	43-49
Right of Way	50-51

LINE DATA

Begin Project Sta. 550+25
 Suspend Project Sta. 565+50
 Gross Length 1525 Lin. Ft.
 Resume Project Sta. 576+00
 End Project Sta. 582+81.10
 Gross Length 681.10
 Gross Length of Project 2206.10 Lin. Ft. or 417 Miles
 Deduct for Equations
 Sta 560+00 Back= Sta.560+00.60 Ahead 0.60 Lin. Ft.
 Sta 568+00 Back= Sta.568+00.10 Ahead 0.10 Lin. Ft.
 Net Length of Project 2205.40 Lin. Ft. or 0.417 Miles
 Add for Approaches
 Sta 549+00 to Sta 550+25 125.00 Lin. Ft.
 Sta 565+50 to Sta 570+00 450.00 Lin. Ft.
 Sta 575+00 to Sta.576+00 100.00 Lin. Ft.
 Net Length of Work 2880.40 Lin. Ft. or 0.545 Miles



LOCATION MAP
SCALE OF MILES



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 4-13-56 Division Deputy Director

Approved John J. Tolson
Date 6-29-56 Deputy Director of Planning & Programming

Approved D. H. Overman
Date 6-27-56 Engineer of Bridges

Approved B. S. Paster
Date 6-29-56 Engineer of Location & Design

Approved H. F. S. Wood
Date 6-29-56 Deputy Director of Design & Construction

Approved V. J. Schaublin
Date 6-30-56 First Assistant Director

Approved J. A. King
Date 9-1-56 Director of Highways

Supplemental Prints of Standard Construction Drawings			
DR-1	1-3-55	L-3-A	4-1-50
G-7.07	6-1-56	RJ-1	1-3-55
I-1,2,3,4,8,5	2-20-45	S-27 PC 3	2-20-45
I-15 No. 2	12-1-54	T-35	1-2-56
L-3	4-1-50	I-14G	1-22-52
I-15 No. 1	8-1-55	I-15 No. 3	12-1-54
L-1	4-1-50		

Supplemental Specifications	
B-119	Rev. 12-14-55
L-209.12	7-17-54
6	12-28-55

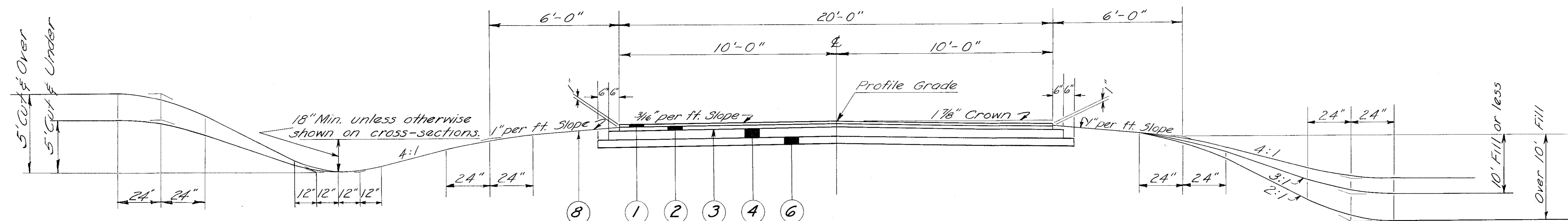
File No.	ROSS COUNTY	ROS-138-(10.42)(10.90)
Date of Letting	19	
Contract No.		

TYPICAL SECTION

TYPE T-35 ON B-119

Scale 3/8" = 1'-0"

ROSS COUNTY
ROS.-138-(10.42)(10.90)

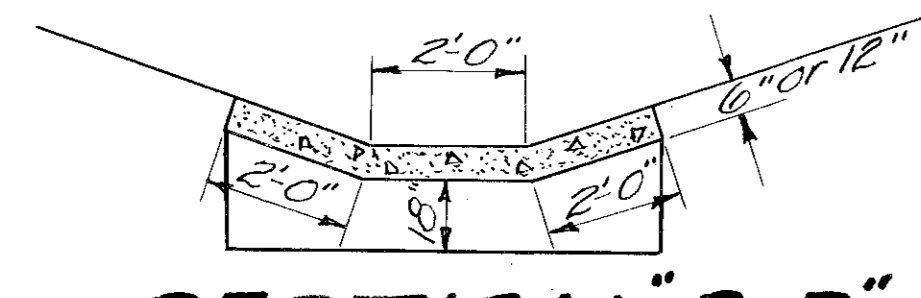


Note: Slopes are governed by noted depth unless otherwise shown on cross-sections.

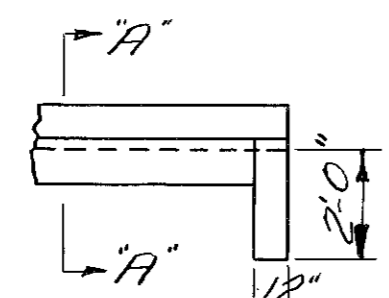
TYPICAL SECTION "A"

The above Typical Section applies between the following Sta.
 Sta. 550+25 to Sta. 553+51.45 = 326.45 Lin. Ft.
 Sta. 554+80.55 to Sta. 556+63.25 = 182.70 Lin. Ft.
 Sta. 564+23.40 to Sta. 564+52.50 = 29.10 Lin. Ft.
 Sta. 581+56.83 to Sta. 582+81.10 = 24.27 Lin. Ft.
 Total = 632.52 Lin. Ft.

BRIDGE No ROS-138-1048
 Limits of Bridge and Approach Slabs
 Sta. 553+51.45 to Sta. 554+80.55

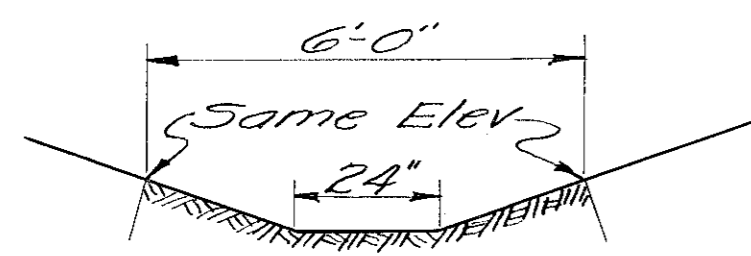


SECTION "A-A"

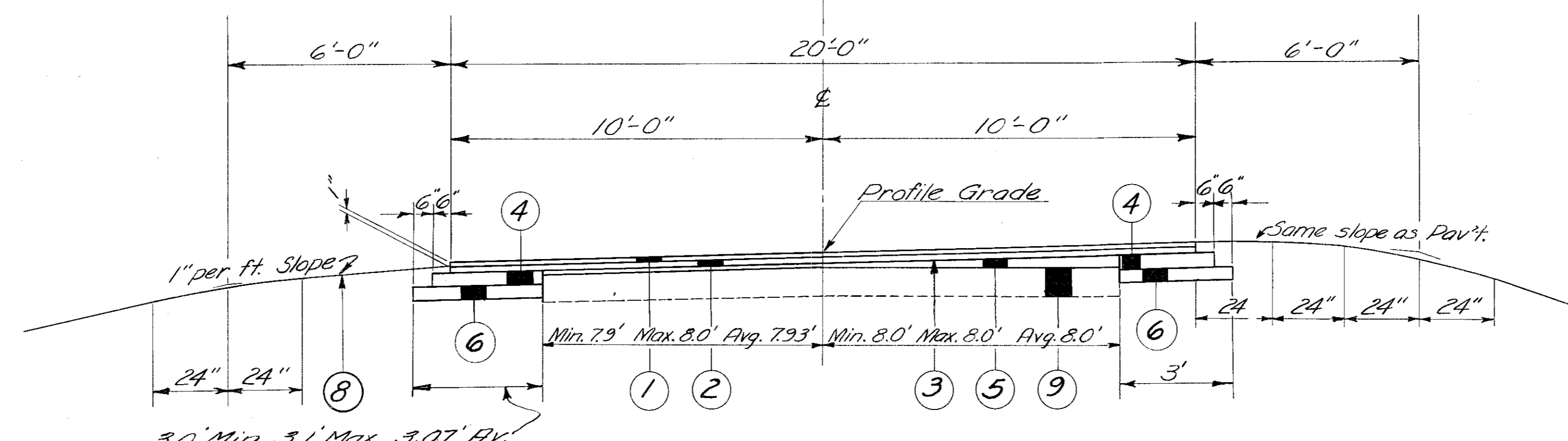


SIDE VIEW

DETAIL OF PAVED GUTTER



DETAIL OF SOD DITCH



TYPICAL SECTION "B"

The above Typical Section applies between the following Sta.
 Sta. 558+76.08 to Sta. 559+50 = 73.92 Lin. Ft.

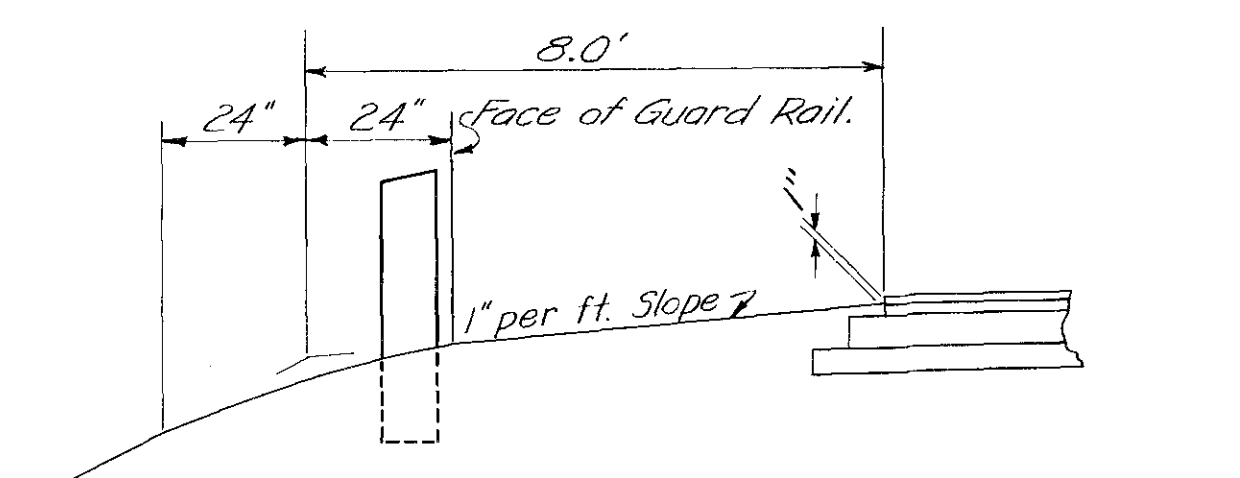
- ① Item T-35 1/4" Asphaltic Concrete Surface Course Type A (85-100)
- ② Item B-35 2" Asphaltic Concrete Leveling Course (85-100)
- ②A Item B-35 1/4" Min. 3 3/4" Max. 2 1/2" Avg. Asphaltic Concrete Leveling Course (85-100)
- ③ Item T-30 Bituminous Prime Coat Sec. M-5.7, Rt. 2 or Rt. 3 or Sec. M-5.3 MC-0 or MC-1 applied at the rate of 0.35 gal. per Sq. Yd.
- ④ Item B-119 5" Crushed Aggregate Base Course.
- ⑤ Item B-119 0" Min. 5" Max. 2 1/2" Avg. Crushed Aggregate Base Course.
- ⑥ Item I-22 4" Subbase
- ⑦ Item I-22 0" Min. 4" Max. 2 1/2" Avg. Subbase
- ⑧ Item L-9 Seeding and Protecting
- ⑨ Existing Pavement, 2" T-32 on 6" to 8" of Traffic Bound.
- ⑩ Item B-119 0" Min. 5" Max. 2 3/4" Avg. Crushed Aggregate Base Course

TYPICAL SECTION

TYPE T-35 ON B-119

Scale 3/8" = 1'-0"

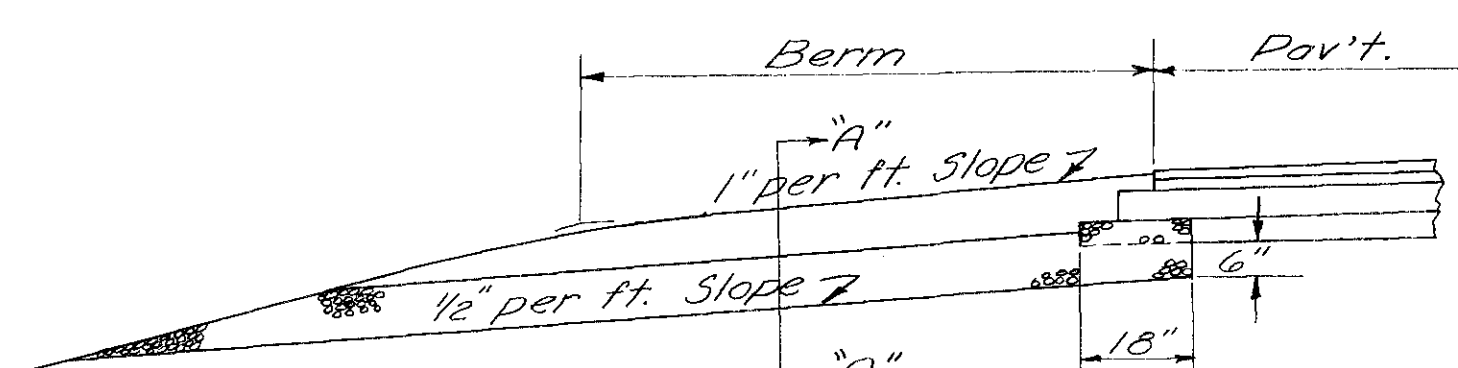
ROSS COUNTY
ROS.-138-(10.42)(10.90)



PART SECTION SHOWING GUARD RAIL

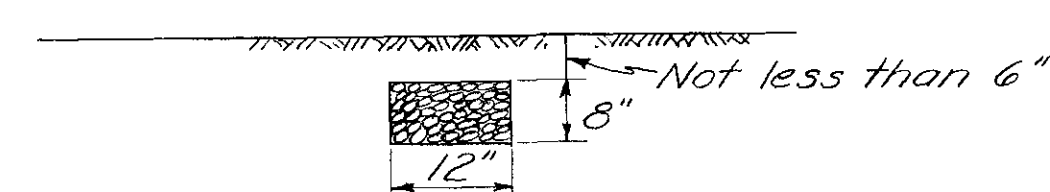
EQUATION

Equation Sta. 560+00.00 Back = Sta. 560+00.60 Ahead

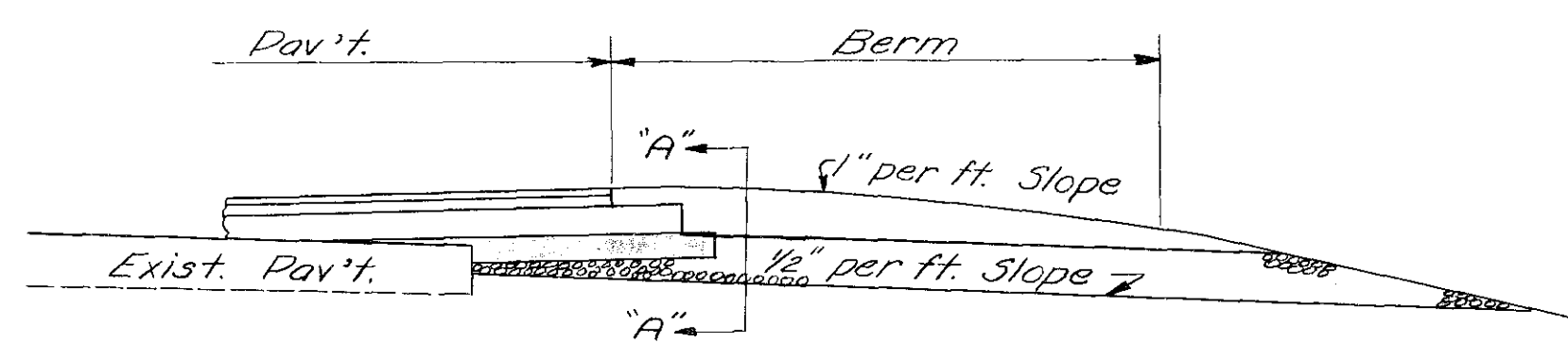


Note: Stone underdrains to be placed as shown above at Stations in table on this Sheet Subject to change at the discretion of the Engineer.

TYPICAL SECTION NO. 1 PART SECTION SHOWING I-9 STONE UNDERDRAINS NO. 2

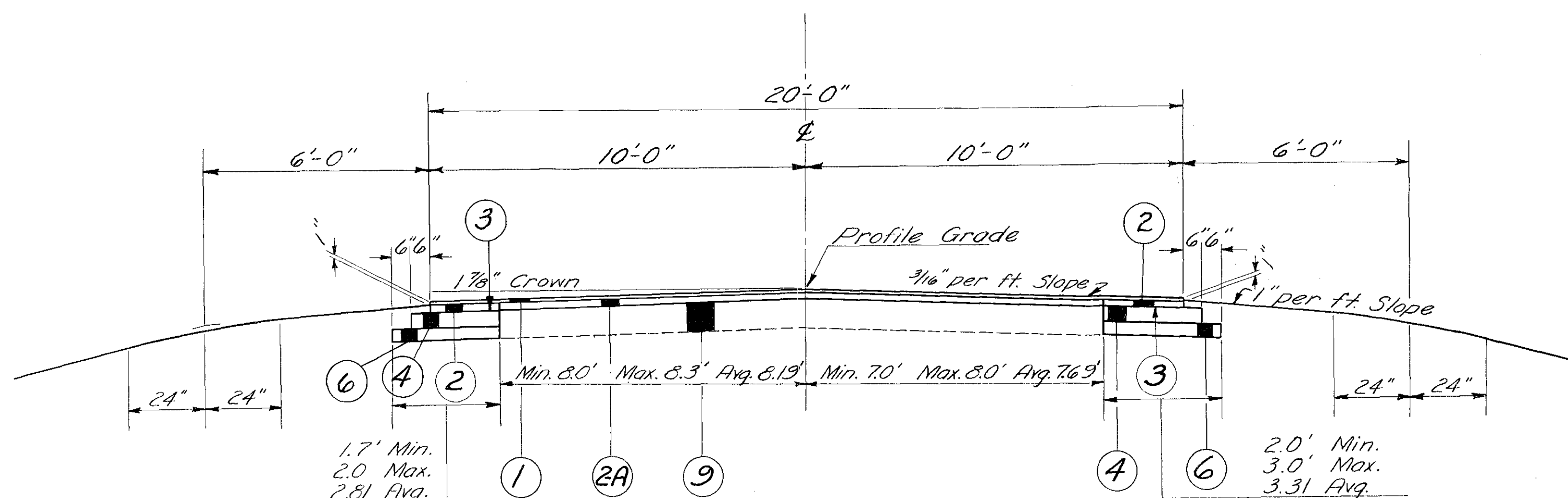


SECTION "A-A"



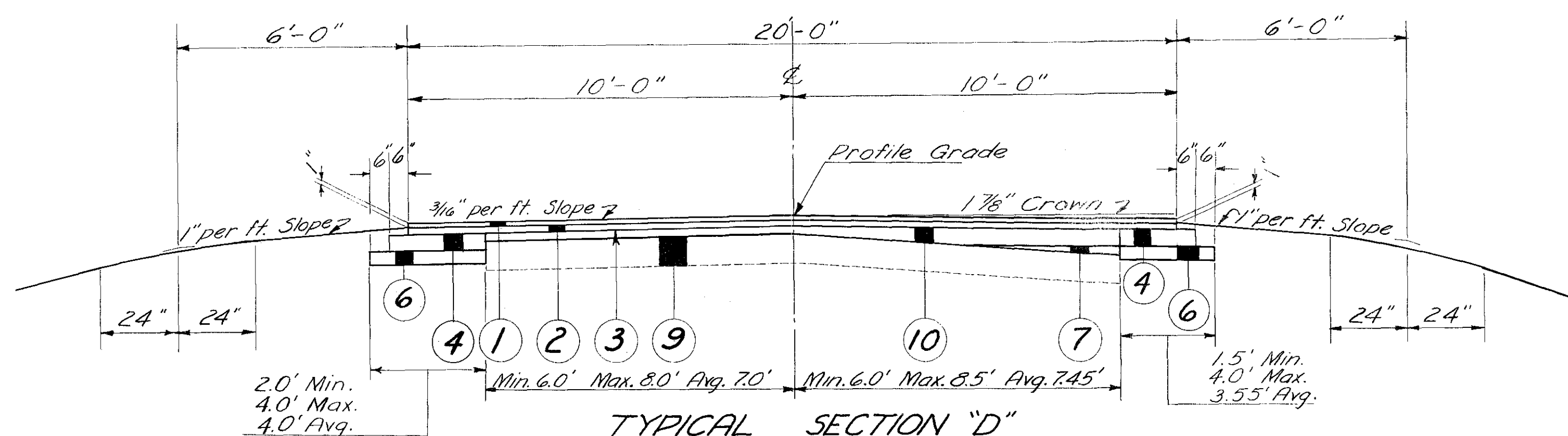
Note: Stone underdrains to be placed as shown above at Stations in table on this Sheet Subject to change at the discretion of the Engineer.

TYPICAL SECTION NO. 2 PART SECTION SHOWING I-9 STONE UNDERDRAINS NO. 2



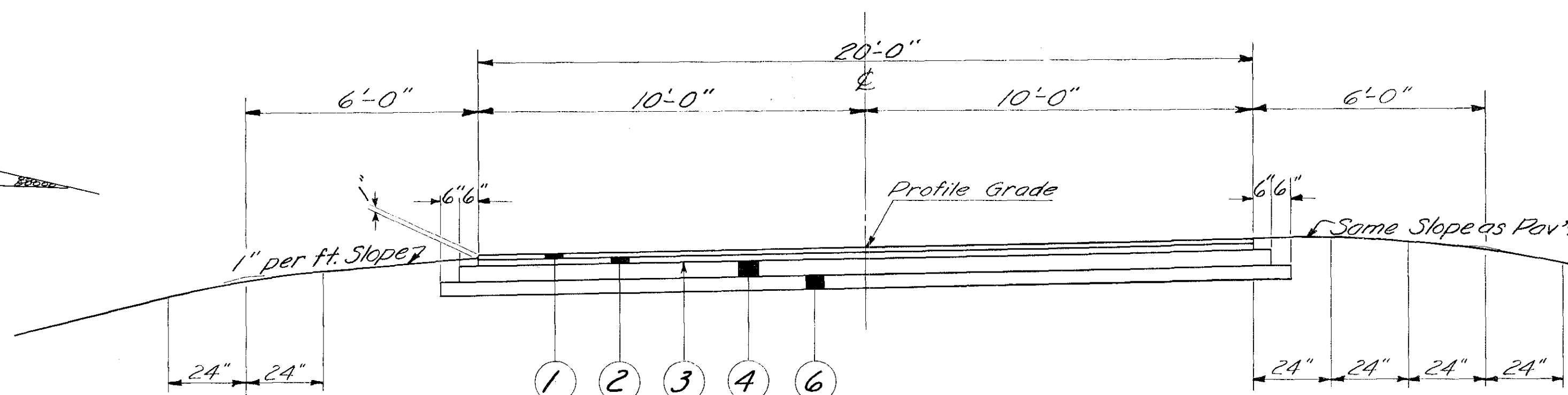
TYPICAL SECTION "C"

The above Typical Section applies between the following Sta.
Sta. 559+50 to Sta. 560+00 = 50.00 Lin. Ft.
Sta. 560+00.60 to Sta. 562+50 = 249.40 Lin. Ft.
Total = 299.40 Lin. Ft.



TYPICAL SECTION "D"

The above Typical Section applies between the following Sta.
Sta. 562+50 to Sta. 564+23.40 = 173.40 Lin. Ft.
Sta. 564+52.50 to Sta. 565+50 = 97.50 Lin. Ft.
Total = 270.90 Lin. Ft.



TYPICAL SECTION "E"

The above Typical Section applies between the following Sta.
Sta. 556+63.25 to Sta. 558+76.08 = 212.83 Lin. Ft.
Sta. 576+00 to Sta. 579+83.17 = 383.17 Lin. Ft.
Total = 596.00 Lin. Ft.

I-9 STONE UNDERDRAINS TO BE PLACED RT. & LT. &

Typical Section No. 1		Typical Section No. 2	
Lt. &	Rt. &	Lt. &	Rt. &
551+00	550+50		
552+00	551+60		
553+00	552+50		
555+50	553+40		
556+50	556+00		
557+00			558+90
557+50			559+40
558+00	560+00		
558+50	561+00		
559+00	562+00		
559+75	563+00		
560+50	563+95		
561+50	565+00		
562+65	576+00		
563+50	576+40		
564+60	577+30		
565+50	578+00		
582+00	578+50		
	579+00		
	579+50		
	582+25		

SUSPEND PROJECT STA. 565+50
RESUME PROJECT STA. 576+00

BRIDGE No ROS-138-1098
Limits of Bridge and Approach Slabs
Sta. 579+83.17 to Sta. 581+86.83

NOTES

GENERAL

FIELD OFFICE

The contractor shall provide a suitable "Field Office" in accordance with section 5-0.01(b), having a minimum of 150 Sq. Ft. of floor space. The contractor shall have a telephone installed and maintained during construction of this project.

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: Section (10.42), 40 M.P.H. and Section (10.90), 30 M.P.H.

TRAFFIC

Two way Traffic shall be maintained at all times except during the placing of proposed pavement when one way traffic will be permitted.

Length of time required for one way traffic shall be kept to a minimum.

Item 5-15, Temporary Run-around Road as per plan, 5-15 Furnishing and Placing Aggregate for Traffic Bound Surface and 5-15, Furnishing and Applying Calcium Chloride or Calcium Magnesium Chloride have been provided in the estimated quantities for use in the construction of temporary roadways for the maintenance of Traffic.

The Contractor shall obtain the approval of the Engineer prior to the Construction of any temporary run-around roads. All aggregate and Calcium Chloride for temporary traffic maintenance shall be placed as needed and as directed by the Engineer.

The following is a suggested sequence of construction operations to facilitate the maintenance of traffic at all times.

Sta. 549+00 to Sta. 559+50 and Sta. 562+50 to Sta. 566+00. Maintain traffic on proposed temporary roadway while constructing proposed structure and placing proposed pavement.

Sta. 559+50 to Sta. 562+50 maintain traffic on existing pavement.

Sta. 575+50 to Sta. 582+81.10 maintain traffic on proposed temporary roadway and existing pavement while constructing proposed structure and proposed pavement.

The preceding is not a mandatory schedule of construction procedure. In lieu of the above, the Contractor may submit to the Director in writing a detailed schedule of his alternate method of maintenance of Traffic and construction procedure.

Prior to adoption and use of an alternative schedule for the Maintenance of Traffic, approval shall be granted by the Director

Sta. to Sta.	Length	Width	Depth	Cu. Yds.
549+00 - 559+50	1050	16'	12"	622.2
562+50 - 566+00	350	16'	12"	207.4
575+50 - 579+75	425	16'	12"	251.9
			Total	1081.5 Use 1100 C.Y.

5-15 Calcium Chloride
1081.5 x 40*/C.Y. x 1/2000 = 21.6 Tons - Use 22 Tons

Payment for Construction, Maintenance, and removal of temporary extension of Proposed Pipe structure at station 564+43, required for construction of 5-15 runaround, is included in the Lump Sum price bid for item 5-15; temporary roadways as per plan.

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 superlevation equals twice the crown.

I-22 SUBBASE

In lieu of the requirements of I-22.04 Method of Measurement and I-22.05 Basis of Payment, the I-22 subbase material shall be paid for on a compacted Volume basis determined by conversion from tonnage. The material shall be weighed on approved scales and the cubic yards of compacted material computed on the basis of the following conversion factors.

One cubic yard of material shall be considered to weigh:
meeting "A" or "C" grading. 3500 lbs.

Material meeting "B" or "D" grading. 3000 lbs.

If the material meets either gradings "A" or "C", payment shall be based on the 3500 lbs. factor even though it may also meet "B" or "D" grading requirements.

Freight bills or certified weigh bills shall be furnished to the Engineer as requested during the progress of the work.

B-119 CRUSHED AGGREGATE BASE COURSE

In lieu of the provisions of Sec. B-119.04 Method of Measurement and Sec. B-119.05 Basis of Payment, the crushed aggregate base course shall be paid for on a compacted volume basis determined by conversion from tonnage. The material shall be weighed on approved scales and the cubic yards of compacted material computed on the basis of the following conversion factors:

One cubic yard of crushed Stone or Gravel: Shall be considered to weigh: 3800 lbs.
* Crushed Slag: 3500 lbs.

* 3800 lbs. shall be used instead of 3500 lbs. when the slag is from a source which is on record at the laboratory, as having a dry rodded weight of 90 lbs. per cubic foot or more.

COMPACTION FOR DRIVES:

The subgrade for drives and mail box turnouts shall be compacted to a depth of 6 inches to the density requirements of Table III, Item E-1. Payment for subgrade compaction, as specified above, shall be included in the unit price bid for Item E-1, Roadway Excavation, as per plan.

ROADWAY

ROADWAY EXCAVATION

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

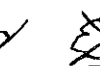

LOCATION AND SIZE OF EXISTING PIPE

The location and size, type, depth of all existing pipes are shown as nearly exact as 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 listings shown on these plans.

REMOVAL OF TREES AND STUMPS

Trees or stumps shall be removed or preserved as indicated on the plan by the following symbols:

Trees or stumps to be removed 
Trees to be preserved 

The number of trees or stumps to be removed, as indicated by the above symbols is approximate and the State of Ohio reserves the right to order the removal of additional trees or stumps, even though these trees or stumps are not indicated on the plans are not indicated to be preserved.

Payment for the removal of these additional trees or stumps is included in the Lump Sum bid for the removal of Trees and Stumps.

REMOVAL (MISCELLANEOUS)

The removal and disposal of any existing pavement, sidewalk, building foundations, steps, cellar floors, well covers, cisterns, tanks of all kinds, concrete bases, walls, curbs and gutters, rails, ties, pole stubs, guard posts, headwalls, pipes, cast iron plates, or other masonry lying within or below the limits of Roadway Excavation, Item E-1. Excavation for Structures, Item E-2 or Channel Excavation Item E-3 (and not specifically paid for under a separate item) are classified as excavation and paid for under the excavation item of which they are a part.

Sidewalks, steps, cellar floors or other masonry shall be excavated to a depth of three (3) feet below the proposed pavement subgrade if located within the proposed pavement area, and to a depth of three (3) feet below the proposed finish pavement surface if without the limits of the proposed pavement area.

Pavement, cellar floors, or other masonry below the above limits shall be broken up into portion whose area does not exceed one (1) square foot but need not be removed.

Backfilling shall be performed according to section E-1.08 of the Construction and Material Specifications.

Wells, cisterns, and tanks of all kinds shall be filled with broken foundation masonry, or rock placed as rock embankment, according to section E-1.08 of the Construction and Material Specifications.

Payment for the above operations shall be included in the contract unit price bid for Roadway Excavation, Item E-1. Excavation for all Structures, Item E-2 or Channel Excavation, Item E-3.

Additional excavation necessary to perform any of the above operations shall be paid for at the contract unit price bid per cubic yard for Roadway Excavation, Item E-1. Excavation for Structures, Item E-2 and Channel Excavation, Item E-3.

ROUNDING OF CORNERS ON CROSS-SECTIONS

The rounded corners shown on the Typical Sections apply to all cross-sections even though otherwise shown in these plans.

NOTES

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

5
51

ROSS COUNTY
ROS.-138 (10.42) (10.90)

GENERAL

ROADWAY

MAINTAINING LOCAL TRAFFIC

The completed crushed aggregate base course, Item B-119, may be used for "maintaining access to drives" on this project. Any damage which is done to the base, subbase or subgrade by local traffic shall be repaired by reshaping, recompacting and by the addition of extra B-119 material, if necessary. Reshaping and recompacting operations shall be done at no additional cost to the State. Payment for additional B-119 material required shall be included in the Lump Sum price bid for "Maintaining Traffic".

TOE WALLS

Payment for Toe Walls on Paved Gutters or Riprap where called for in these Plans, shall be included in price bid per lineal foot of paved gutter, or square yard of riprap.

PAVED GUTTERS

Paved Gutters shall be constructed of stone or broken concrete to a minimum thickness of twelve (12"), 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 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.

FERTILIZING SOD AREAS

All sod areas are to have Commercial Fertilizer (10-6-4) and Agricultural Liming Material applied at the same rate and the same manner as for the seeded areas in accordance with Sections L-9.11.

The sod bed shall have two (2") inches of loose soil on which the sod is laid after excavation for sod thickness.

SEEDING AND PROTECTING

Quantities for seeding are calculated for the soil areas within the construction limits as shown on the cross-sections and payment for seeding beyond these limits will not be allowed. All areas outside these limits where the vegetative growth has been injuriously disturbed or destroyed by the Contractor shall be restored and seeded in accordance with the provisions of Item L-9 by the contractor at his own expense.

GUARD RAIL REMOVAL

The removal of any Guard Rail or Guard Rail Posts lying within the limits of Roadway Excavation or Embankment (and not specifically paid for under a separate Item) is included in the contract Unit Price per Cubic Yard bid for Item E-1, Roadway Excavation. All resulting material shall become the property of the contractor and shall be disposed of by him at no extra cost to the State, except the plank, steel cable and hardware shall be stored on the Right of Way at the disposal of the State.

SUMMARY OF QUANTITIES

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

6
51

ROSS COUNTY
ROS.-138 (10.42)(10.90)

PAVEMENT CALCULATIONS

See Sheet No.	Station to Station	T-35 Asphaltic Concrete Surface Course			B-35 Asphaltic Concrete Leveling Course		T-30 Bituminous Prime Coat @ 0.35 Gal. per Sq. Yd.	B-119 Crushed Aggregate Base Course			I-22 Subbase			I-7 Reinf. Concrete Approach Slabs per Sq. Yd.	T-30 Bituminous Top Coat @ 0.10 Gal. per Sq. Yd.	I-9 Stone Under-drains N# 2
		1 1/2" Sq. Yds.	2" Sq. Yds.	Var. Depth Cu. Yds.	2" Sq. Yds.	Var. Depth Cu. Yds.	Sq. Yds.	5" Sq. Yds.	6" Sq. Yds.	Var. Depth Cu. Yds.	8" Sq. Yds.	4" Sq. Yds.	Var. Depth Cu. Yds.	Sq. Yds.	Sq. Yds.	Lin. Ft.
2	Typical Section "A"															
	632.52 x 20 x 1/8	1405.6			1405.6		1475.88	1475.88								
	632.52 x 21 x 1/8															
	632.52 x 22 x 1/8															
2	Typical Section "B"															
	73.92 x 20 x 1/8	164.27			164.27		130.84									
	73.92 x 15.93 x 1/8						41.64	41.64								
	73.92 x 5.07 x 1/8															
	73.92 x 6.07 x 1/8															
	73.92 x 15.93 x 1/8 x 2 1/2" x 1/8"									9.09				49.85		
3	Typical Section "C"															
	299.4 x 20 x 1/8	665.33														
	299.4 x 15.88 x 1/8 x 2 1/2" x 1/8"					36.67										
	299.4 x 4.12 x 1/8				137.06											
	299.4 x 5.12 x 1/8						170.33	170.33								
	299.4 x 6.12 x 1/8															
3	Typical Section "D"															
	270.9 x 20 x 1/8	602.0			602.0											
	270.9 x 14.45 x 1/8 x 2 3/4" x 1/8"															
	270.9 x 6.55 x 1/8															
	270.9 x 14 x 1/8 x 2 1/2" x 1/8"															
	270.9 x 7.55 x 1/8															
	270.9 x 21 x 1/8						632.10									
3	Typical Section "E"															
	596.0 x 20 x 1/8	1324.44			1324.44											
	596.0 x 21 x 1/8															
	596.0 x 22 x 1/8															
	Add for Widening 13+14 Sta. 576+50 - Sta. 579+98.17	95.77			95.77		95.77	95.77								
32	Add for County Rd. Conn.	377.78			377.78		392.33	392.33								
7	Add for Driveways		488.33						522.35	234.53		85.33				
	Approach Slabs															
11	Sta. 553+51.45 - Sta. 553+66.45	66.67												33.33	33.33	
11	Sta. 554+65.55 - Sta. 553+80.55	66.67												33.33	33.33	
14	Sta. 579+83.17 - Sta. 579+98.17	66.67												33.33	33.33	
14	Sta. 581+71.83 - Sta. 581+86.83	66.67												33.33	33.33	
	To be used as shown on Sheet N# 3															608
	Feather Areas															
10+11	Sta. 549+00 - Sta. 550+25		9.04		14.47		93.89			13.53				12.35		
12	Sta. 565+50 - Sta. 566+50		6.87		9.33		77.78			10.80				9.88		
13	Sta. 575+50 - Sta. 576+00		3.47		4.44		21.39			2.97				3.00		
7	Base Replacement								9.00				9.00			
	Sub-Total	4901.87	488.33	19.38	4106.92	64.91	3131.95	4225.13	234.53	69.61	85.33	4128.73	54.49	133.32	133.32	608
	Conversion to Cu. Yds., Gal., etc.	170.2	27.13		228.16			596.54	39.09		18.96	458.75			13.33	
	Total		216.7		293.07		1096.18			724.20		513.24		133.32	13.33	608

Note: Asphaltic Concrete Surface Course to be placed 2 1/2" Thick on Approach Slabs.

SUMMARY OF QUANTITIES

DRIVES

See Sheet No.	Station	Side	T-35	B-119			I-1		36"x22" Corr. Metal Pipe Arch
			Asphaltic Concrete Surface Course Sq. Yds.	Crushed Aggregate Base Course			Pipe for Driveways		
			2"	5"	6"	8"	12"	15"	
11	551+14.4 (Res. Dr. & MB)	RT	79.75	85.29					40
11	555+18.2 (Fld. Dr. & MB)	RT	30.83	35.03	103.58				
11	555+18.2 (Res. Dr.)	LT	102.03	109.13		85.33			
12	562+27 (Fld. Dr.)	LT		70.03			36		
13	576+73.75 (Res. Dr.)	LT	70.03	74.46				38'	
13	576+73.75 (Fld. Dr. & MB)	RT	30.83	35.03	60.92			44'	
32	0+57 off & Co. Rd.	LT	84.44	86.50			38		
	LT & 579+17 (Res. Dr.)								
14	582+43 (Res. Dr.)	LT	90.42	90.85					
Total			*488.33	*522.35	*234.53	*85.33	74	82	40

* Carried to Part. Calculation Box, Sheet No. 6

STRUCTURES 20 FT. SPAN & UNDER

Structure No.	Station	See Sheet No.	E-2	E-3	I-10	S-1	S-24	S-27	S-28	I-10	Base
			Excavation Structures	Channel for Excavation	Dumped Rock	Concrete for Structures	Removal of Existing Structures	15" Pipe for Roadway Culvert	7.3'x5.3' Sectional Corr. Plate Pipe Arch	Riprap Type "A"	Replacement 5" B-119 4" I-22
			Cu. Yds.	Cu. Yds.	Cu. Yds.	Cu. Yds.	Lump	Lin. Ft.	Lin. Ft.	Sq. Yds.	Sq. Yds.
1	549+51.25	10									9
1	564+43	12/34	128	511	46	10.9	Lump		62	20	
2	576+11	13/36	8					50			
Total			136	511	*46	10.9	Lump	50	62	20	*9

* Carried to Erosion Control Box on this Sheet

* Carried to Part. Calculation Box Sht. No. 6

GUARD RAIL

See Sheet No.	Station to Station	Side	I-15	I-15	I-15
			Guard Rail * Wire Cable Type: (3 Cable) Lin. Ft.	Guard Rail Removed & Stored Type: Plank & Cable Lin. Ft.	Steel Beam Type (Deep) Lin. Ft.
11	553+44.7 - 554+73 (around Res. Dr.)	LT			137.5
11	553+49.80 - 554+87.30	RT			137.5
12	564+23 - 568+100 "Back" - 568+100.10 "Ahead"	LT	576		
12	569+99.1				
12	564+02 - 564+06	RT	64		
12	564+08 - 564+24	LT		10	
12	564+37 - 564+53	LT		10	
12	564+08 - 564+24	RT		10	
12	564+37 - 564+53	RT		10	
14	580+19 - 580+43	LT		24	
14	578+83.69 - 581+83.69	RT			300
14	579+40 around Co. Rd. to 581+98.81	LT			425
Deduct for Bridges ROS-138-1049					
11	553+66.45 - 554+65.55	RT			198.2
ROS-138-1095					
14	579+98.17 - 581+71.83	RT			347.32
Total			640	88	504.48

* NOTE: OR WOVEN WIRE TYPE, 3 TAPE, STANDARD STRENGTH.

EROSION CONTROL

See Sheet No.	Station to Station	Side	I-14	L-9	L-9	L-9	L-10	I-10
			Paved Gutter	Seeding & Protecting	Commercial Fertilizer (10-6-4)	Agricultural Liming Material	Sodding	Dumped Rock
			Lin. Ft.	Sq. Yds.	Tons	Tons	Sq. Yds.	Cu. Yds.
11	553+68 - 553+75	LT						2.6
11	553+93 - 553+98	RT						2.04
12	565+20	LT					11.0	
14	579+47 - 579+56	LT					5.56	
14	580+15 - 580+35	LT						9.3
14	580+09 - 580+20	RT						5.2
14	581+31 - 581+50	RT						8.15
14	581+49 - 581+77	LT						11.11
14	581+50 - 582+00	RT	50					
14	581+77 - 582+00	LT	23					
17	549+00 - 553+66.45	R&L		2480				
20	554+65.55 - 570+00	R&L		7,357				
28	575+00 - 579+98.17	R&L		3,204				
31	581+71.83 - 582+81.10	R&L		397				
35	0+32 - 2+60	LT		571				
35	0+30 - 1+75	RT		208				
	8+74.5 - 11+04	R&L		357				
	8+26.5 - 11+83	R&L		2059				
Addition from Structure Box								
Total			73	16,633	1.50	7.50	16.56	84.4

SUMMARY OF QUANTITIES

ROADWAY DRAINAGE

See Sheet No.	Station to Station	Side	I-3 Pipe for Roadway Drainage Sec. M-6.4(c)		I-5 Automatic Drainage Gates SEE NOTE BELOW	
			Lin. Ft.	12" 18"	12" 18"	Each
14	579+86 - 580+15	Lt.	30	18"	1	18"
14	579+54 - 580+09	Rt.	50			
Total			30	50	1	1

BORROW CALCULATIONS

Embankment + 20%	9,880 Cu. Yds.
Channel Embankment + 20%	396 Cu. Yds.
Excavation	3,707 Cu. Yds.
Gross Borrow	6,569 Cu. Yds.
Available to reduce Borrow	
Channel Excavation	4,789 Cu. Yds.
Total Material Available to reduce Borrow	4,789 Cu. Yds.
E-4 Net Borrow	1,780 Cu. Yds.

ITEM I-5 AUTOMATIC DRAINAGE GATES
 The automatic drainage gates are pipe mounted and shall be either Armco Model 100 or Brown and Brown Type M Class I or approved equal. The gates shall be fitted with brass bushings, studs and nuts.
 Payment for automatic drainage gates shall include furnishing and placing gates complete in place on the proposed pipe.

EXCAVATION & EMBANKMENT

See Sheet No.	Station to Station	Side	E-1		
			Roadway Excavation	Roadway Embankment	Embankment + 20%
			Cu. Yds.	Cu. Yds.	Cu. Yds.
17	549+00 - 553+66.45	R/L	472	1461	
20	554+65.55 - 570+00	R/L	1912	4591	
28	575+00 - 579+98.17	R/L	1242	2145	
31	581+71.83 - 582+81.10	R/L	81	30	
Total			3707	8233	9880

REMOVAL OF TREES AND STUMPS
 Item E-9 — Lump

GENERAL SUMMARY

D E S C R I P T I O N

ROADWAY

ITEM NO.	QUANTITY	UNIT	DESCRIPTION
E-1	3707	Cu. Yds.	Roadway Excavation, as per plan.
E-1	3700	Sq. Yds.	Compacted Subgrade
E-4	1780	Cu. Yds.	Borrow
E-9	Lump	Lump	Removal of Trees and Stumps
E-11	42	M. Gal.	Water
I-15	504.48	Lin. Ft.	Guard Rail Steel Beam Type (Deep)
I-15	640	Lin. Ft.	Guard Rail Wire Cable Type (3 Cable), or Woven Wire Type, 3 Tape, Standard Strength
I-15	88	Lin. Ft.	Guard Rail Removed & Stored, as per plan
L-9	166.33	Sq. Yds.	Seeding & Protecting
L-9	1.50	Tons	Commercial Fertilizer (10-6-4)
L-9	7.50	Tons	Agricultural Liming Materials
L-10	17	Sq. Yds.	Sodding
S-15	Lump	Lump	Temporary Run-around Roadway, as per plan.
S-15	1100	Cu. Yds.	Furnishing & Placing Aggregate for Traffic Bound Surface Course
S-15	22	Tons	Furnishing & Applying Calcium Chloride or Calcium Magnesium Chloride.
DRAINAGE			
E-2	136	Cu. Yds.	Excavation for Structures
E-3	511	Cu. Yds.	Channel Excavation
I-1	74	Lin. Ft.	12" Pipe for Driveways, M-6.4(a)
I-1	82	Lin. Ft.	15" Pipe for Driveways, M-6.4(a)
I-1	40	Lin. Ft.	36" x 22" Corrugated Metal Arch With Integral Base, Sec. M-6.4(c), 10 Gage, for Driveways.
I-3	30	Lin. Ft.	12" Pipe for Roadway Drainage, Sec. M-6.4(c)
I-3	56	Lin. Ft.	18" Pipe for Roadway Drainage, Sec. M-6.4(c)
I-5	1	Each	12" Automatic Drainage Gate, as per plan
I-5	1	Each	18" Automatic Drainage Gate, as per plan
I-9	608	Lin. Ft.	Stone Underdrains No. 2
I-10	20	Sq. Yds.	Riprap Type "A"
I-10	85	Cu. Yds.	Dumped Rock Fill
I-14	73	Lin. Ft.	Type 1 Paved Gutter, Modified as per plan.
S-1	10.9	Cu. Yds.	Concrete for Structures, Class "E"
S-24	Lump	Lump	Removal of Existing Structures
S-27	50	Lin. Ft.	15" Pipe for Roadway Culvert.
S-28	62	Lin. Ft.	7'-3" x 5'-3" Sectional Corrugated Metal Structures, Sec. M-6.4(g), 10-10 Gage
PAVEMENT			
T-35	217	Cu. Yds.	Asphaltic Concrete Surface Course Type "A" (85-100)
B-35	293	Cu. Yds.	Asphaltic Concrete Leveling Course (85-100)
T-30	1096	Gal.	Bituminous Prime Coat: Sec. M-5.7, RT. Por 3, or Sec. M-5.3, MC-0 or MC-1.
T-30	14	Gal.	Bituminous Tack Coat, as per plan.
B-19	725	Cu. Yds.	Crushed Aggregate Base Course, as per plan
I-22	514	Cu. Yds.	Subbase, as per plan
I-7	134	Sq. Yds.	Reinforced Concrete Approach Slabs (T=10")
STRUCTURES OVER 20 FT. SPAN.			
			- For Estimated Quantities Bridge No. ROS-138-104B, see sheet 38
			For Estimated Quantities Bridge No. ROS-138-109B, see sheet 41
Lump		Lump	Maintaining Traffic, see note on Sheet No. 4

ROSS COUNTY
ROS-138(10.42)(10.90)

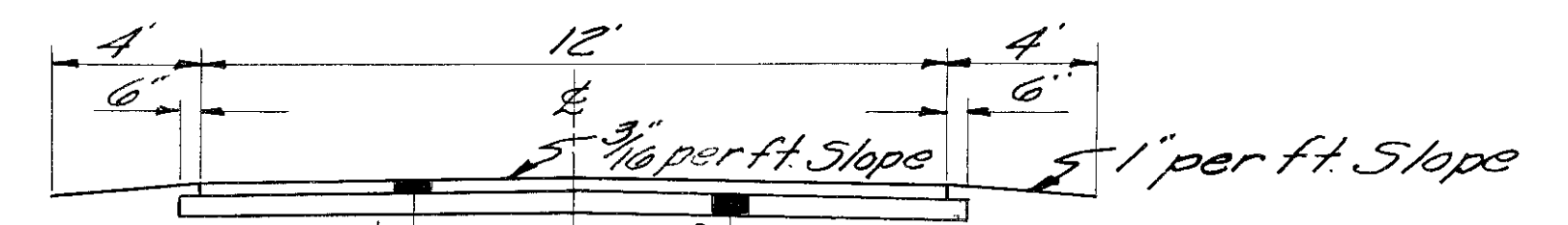
UTILITY OWNERS
POWER : Inter-County Rural Electric Cooperative Inc.
 Hillsboro, Ohio.
TELEPHONE : The Chillicothe Telephone Co.
 Chillicothe, Ohio.
TELEGRAPH : Western Union Telegraph Company
 427 South La Salle Street
 Chicago, Illinois

EXIST. CURVE DATA
 Ex. P.I. Sta. 549+12.07
 $\Delta = 51^{\circ}11'Lt.$
 $Dc = 24'$
 $T = 114.34'$
 $L.C. = 213.26'$
 $R = 238.73$
 $E = 25.95$

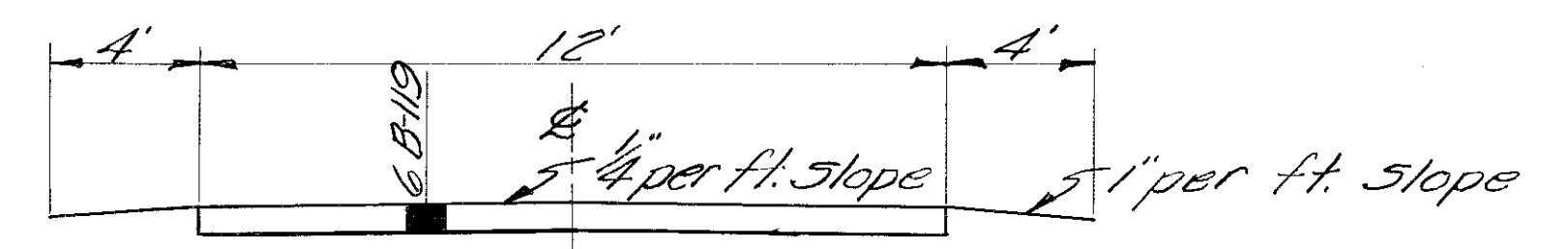
ESTIMATED QUANTITIES FOR FEATHER AREA FROM STA. 549+00 TO STA. 550+25

Item T-35 Asphaltic Concrete Surface Course	9.04 Cu. Yds.
Item B-35 Asphaltic Concrete Leveling Course	14.47 Cu. Yds.
Item T-30 Bituminous Prime Coat @ 0.35 gal. per Sq. Yd.	93.89 Cu. Yds.
Item B-119 Crushed Aggregate Base Course	13.53 Cu. Yds.
Item I-22 Subbase	12.35 Cu. Yds.

Note: Quantities carried to Part Calculation Box Sht. No. 6



TYPICAL RESIDENCE DRIVE



TYPICAL FIELD DRIVE

FOR ESTIMATED QUANTITIES SEE SHEET NO 6, 7 & 8

NANNIE MALLOW ET. AL.

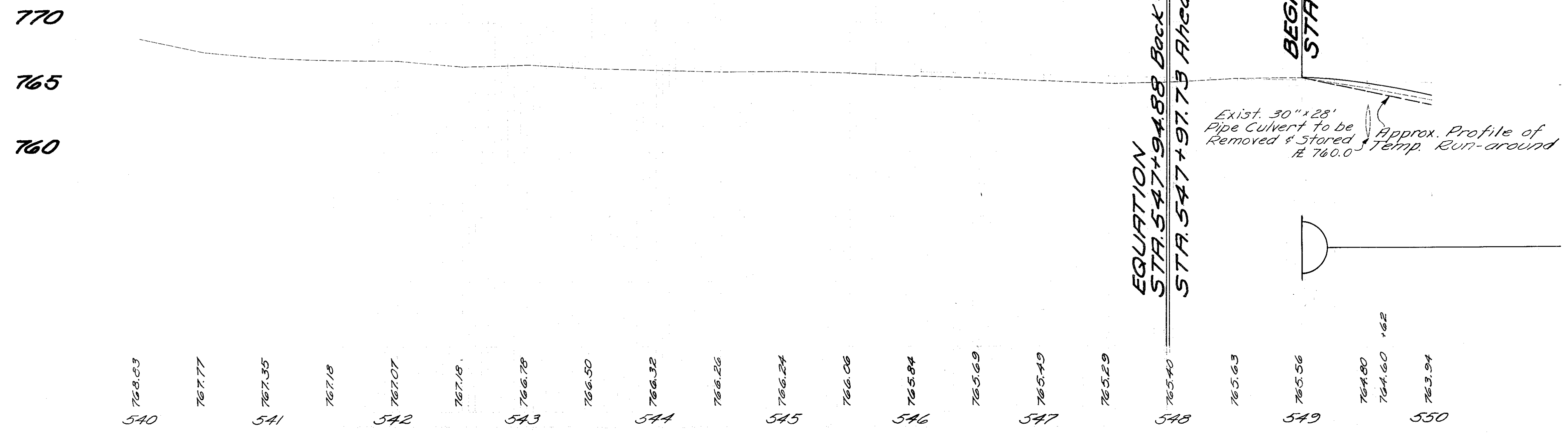
STANLEY A. & LILLIAN JONES

Ex. P.I. Sta. 539+91.0
 $\Delta = 22^{\circ}-10' Rt.$

Ex. P.I. Sta. 542+55.90
 $\Delta = 24^{\circ}-50'-30" Lt.$

All elevations shown are in reference to U.S.G.S. Datum.

Profile shown is $\frac{1}{2}$ Elevations of Existing Part & Traverse



STA. 540+00 TO STA. 550+00

ROSS COUNTY
ROS-138 (10.42) (10.90)

ESTIMATED QUANTITIES FOR FEATHER
AREA FROM STA. 565+50 TO STA. 566+50

Item T-35	Asphaltic Concrete Surface Course	6.87	Cu. Yds
Item B-35	Asphaltic Concrete Layering Course	9.33	Cu. Yds
Item T-30	Bituminous Prime Coat @ 0.35 gal per Sq. Yd.	11.78	Sq. Yds
Item B-119	Crushed Aggregate Base Course	10.80	Cu. Yds
Item I-22	Subbase	9.88	Cu. Yds

Note: Quantities carried to Part. Calculation Box. Sh. No. 6

PROP. STRUCTURE DATA

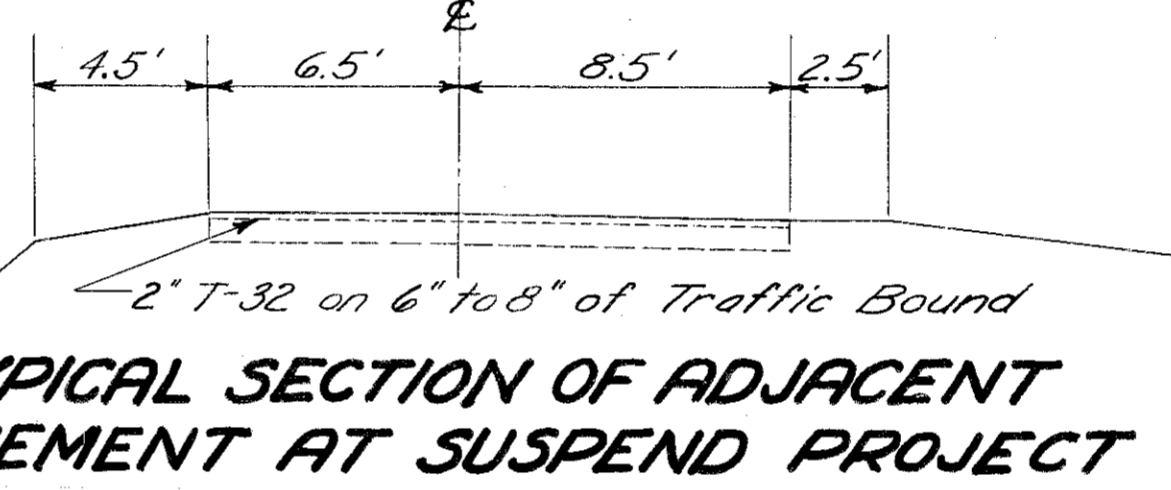
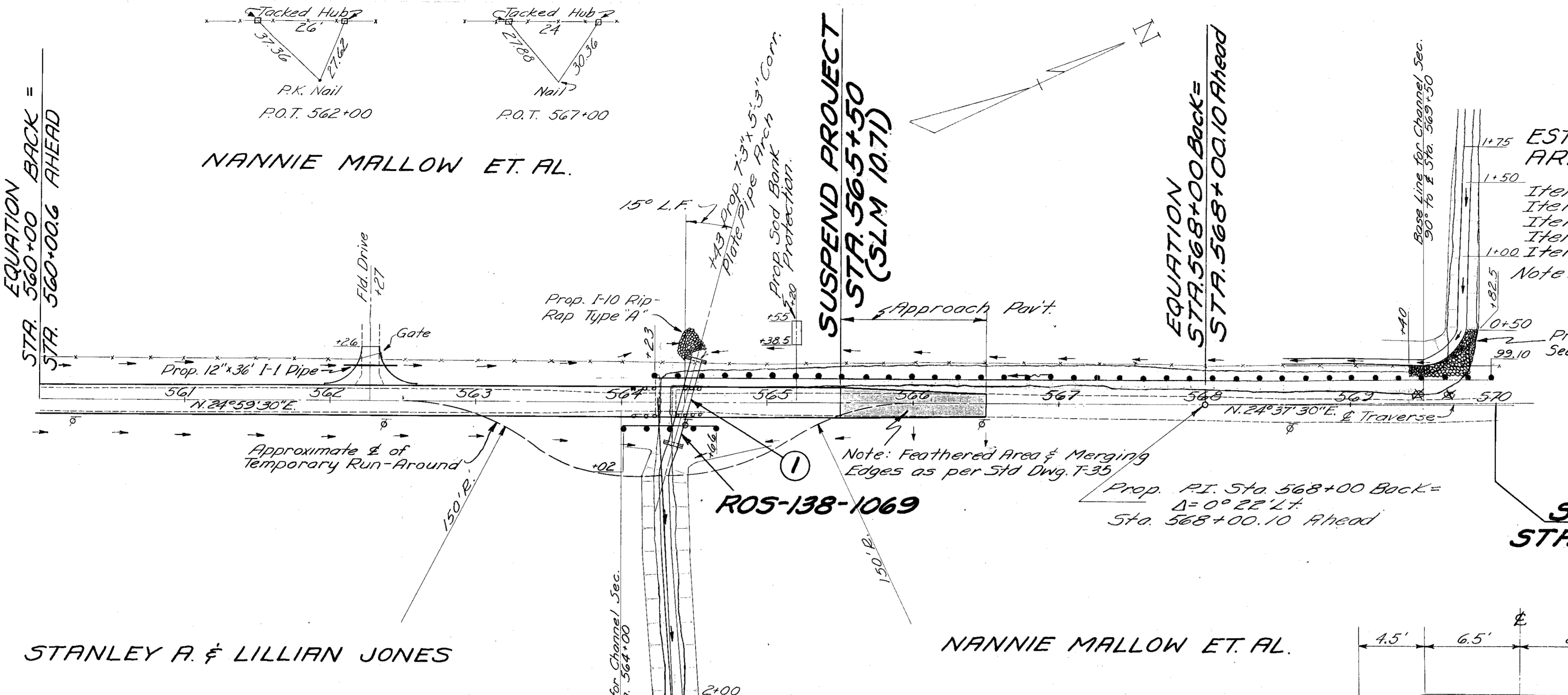
Br. No. Ros-138-1069
Type: Sectional Corr. Plate
Pipe Arch.
Span: 7'-3" x 5'-3"
Length: 62'-0"
Skew: 15° L.F.
Roadway: 32' off of Guard Rail
Surface: Bituminous on fill
Alignment: Tangent

EXISTING BRIDGE DATA

Bridge No. Ros-138-106
Type: Timber Beam
Span: 9'-3"
Roadway: 14'-10"
Skew: Tangent
Condition: Good
Reduction

DRAINAGE AREA = 630 Acres

FOR ESTIMATED QUANTITIES
SEE SHEET No. 6, 7 & 8
FOR DETAIL OF STRUCTURE No. 1
STA. 564+43 SEE SHEET No. 34 & 35

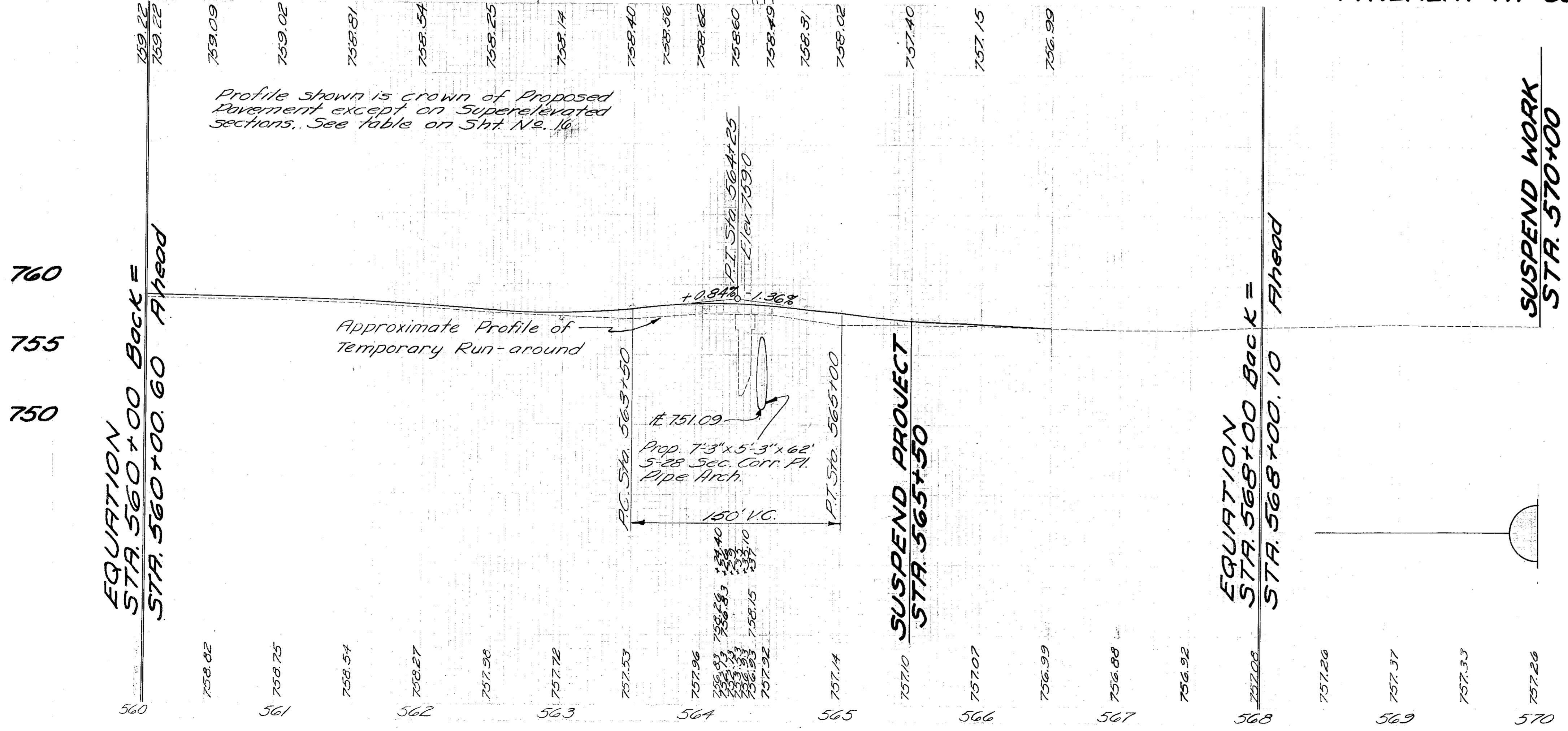


STANLEY A. & LILLIAN JONES

NANNIE MALLOW ET. AL.

BENCH MARK
Spike in 8 1/2\"/>

Profile shown is crown of Proposed Pavement except on Super-elevated sections. See table on Sh. No. 10.

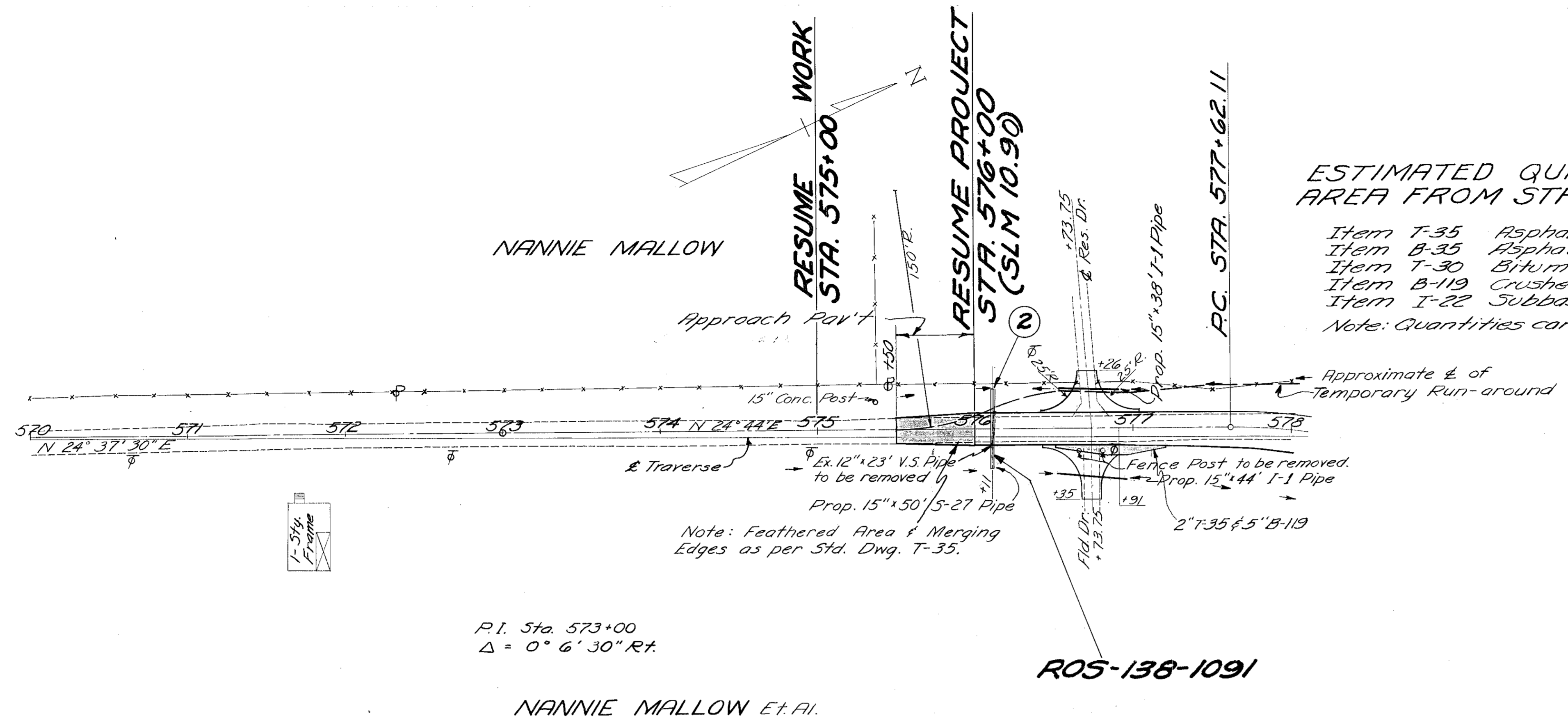


STA. 560+00 TO STA. 570+00

ESTIMATED QUANTITIES FOR FEATHER
AREA FROM STA. 575+50 TO STA. 576+00

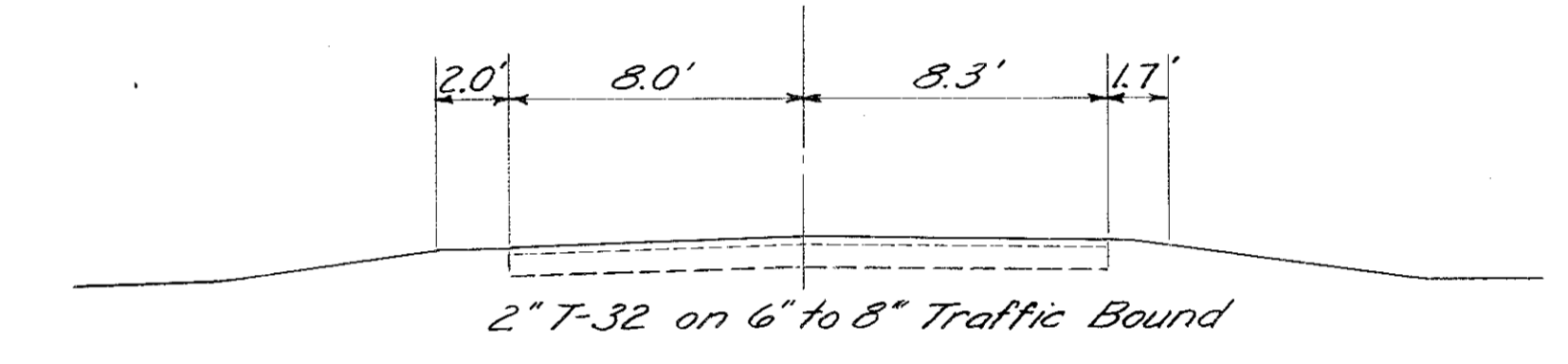
Item T-35 Asphaltic Concrete Surface Course	3.47	Cu. Yds.
Item B-35 Asphaltic Concrete Leveling Course	4.44	Cu. Yds.
Item T-30 Bituminous Prime Coat @ 0.35 gal. per Sq. Yd.	21.39	Sq. Yds.
Item B-119 Crushed Aggregate Base Course	2.97	Cu. Yds.
Item I-22 Subbase	3.00	Cu. Yds.

Note: Quantities carried to Pav't Calculation Box Sht. No. 6



P.I. Sta. 573+00
Δ = 0° 6' 30" Rt.

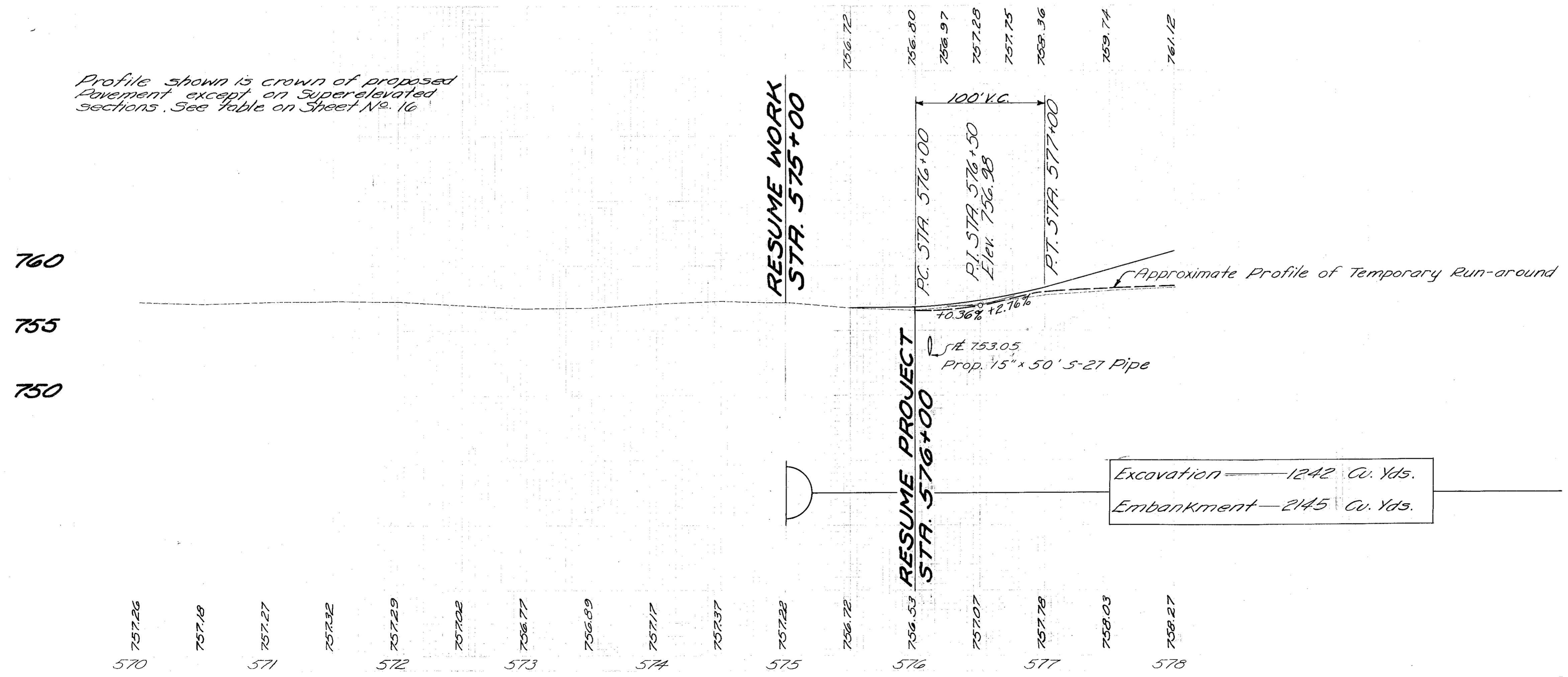
ROS-138-1091



TYPICAL SECTION OF ADJACENT PAVEMENT AT RESUME PROJECT

FOR ESTIMATED QUANTITIES
SEE SHEET NO 6, 7 & 8
FOR DETAIL OF STRUCTURE NO 2
STA. 576+11 SEE SHEET NO 36

Profile shown is crown of proposed
Pavement except on Superelevated
sections. See Table on Sheet No. 16



STA. 570+00 TO STA. 578+00

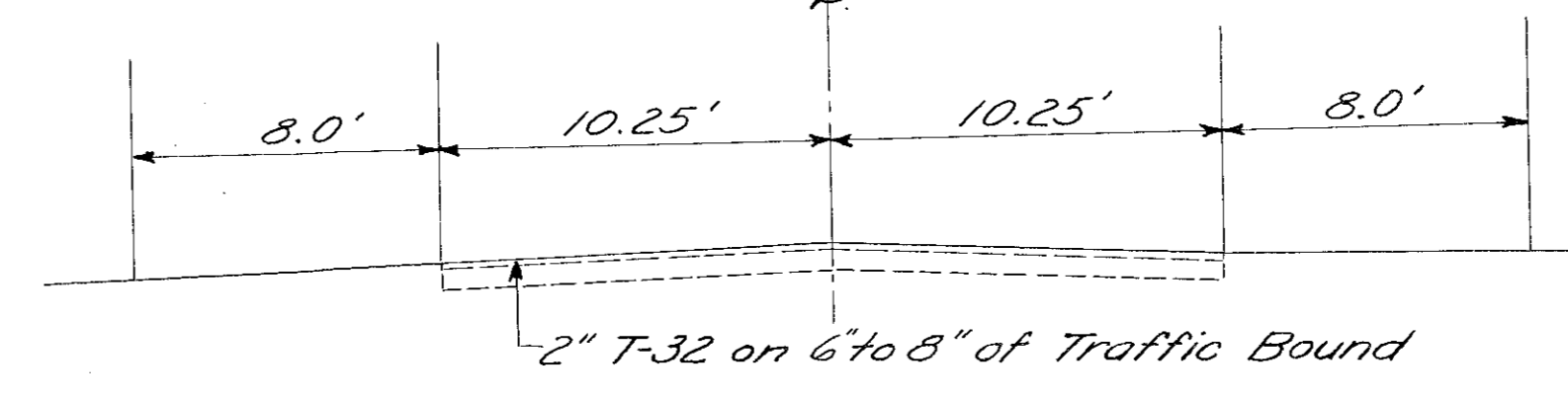
**ROSS COUNTY
ROS 138 (10.42)(10.90)**

Br. No. ROS-138-1098

PROPOSED STRUCTURE DATA

TYPE: Continuous steel beams with reinf. conc. deck and reinf. concrete sub-structure.
 SPANS: 52'-65'-52' 1/2 brgs.
 ROADWAY: 32' flt of Guard Rail.
 LOAD FREQUENCY: CF 30 (51)
 SKEW: 15° L.F.
 WEARING SURFACE: Bituminous.
 APPROACH SLABS: AS-1-54 (15' Long)
 ALIGNMENT: Tangent.

TYPICAL SECTION OF ADJACENT PAVEMENT AT END PROJECT

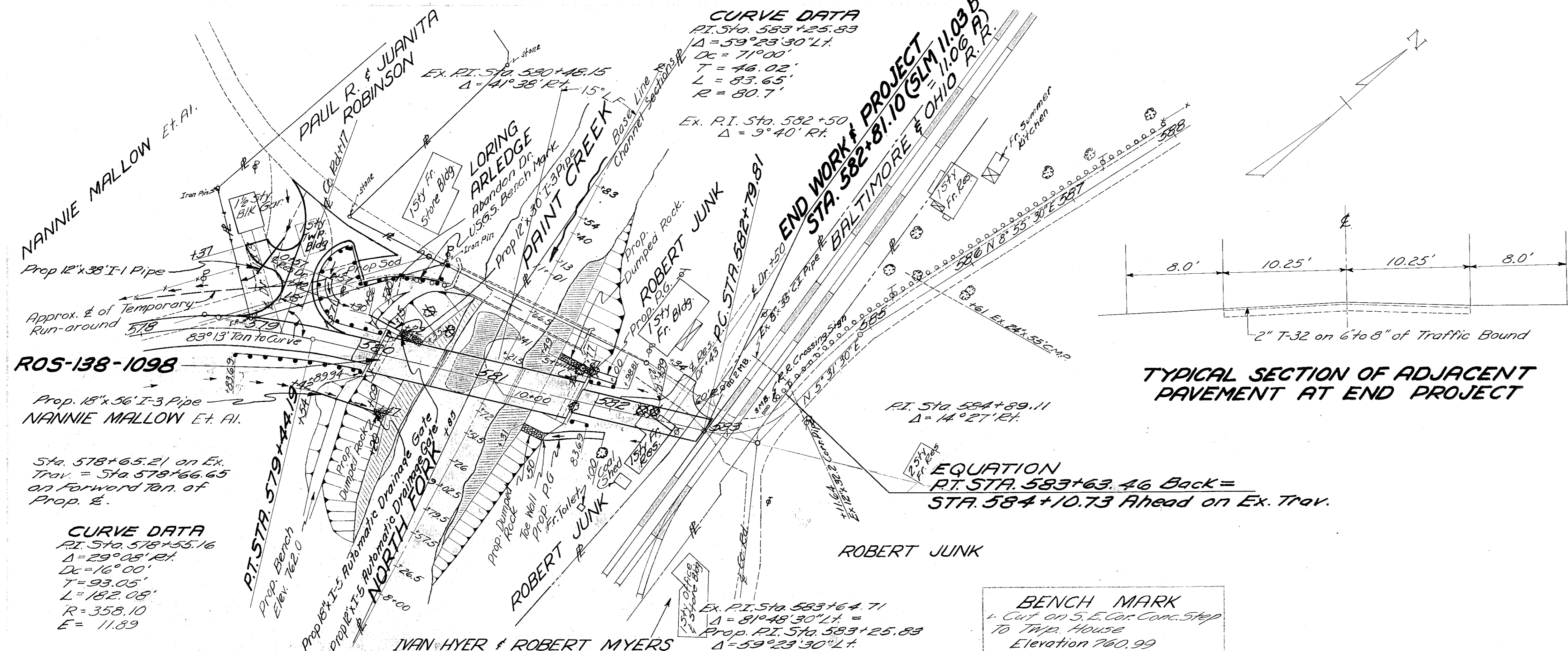


EXISTING BRIDGE DATA

Bridge No. RO-138-109
 Type: High Steel Truss.
 Span: 119'-0"
 Roadway: 16'-1"
 Skew: 0° 00'
 Condition: Poor
 Reduction: 80%

DRAINAGE AREA = 152 SQ. MI.

**FOR ESTIMATED QUANTITIES
SEE SHEET N^o 6, 7 & 8
FOR DETAIL OF COUNTY ROAD
CONNECTION LT. & STA. 579+17
SEE SHEET N^o 32 & 33**



CURVE DATA
 P.I. Sta. 583+25.83
 $\Delta = 59^{\circ}23'30''$ L.T.
 $D_c = 71^{\circ}00'$
 $T = 46.02'$
 $L = 83.65'$
 $R = 80.7'$

ROS-138-1098

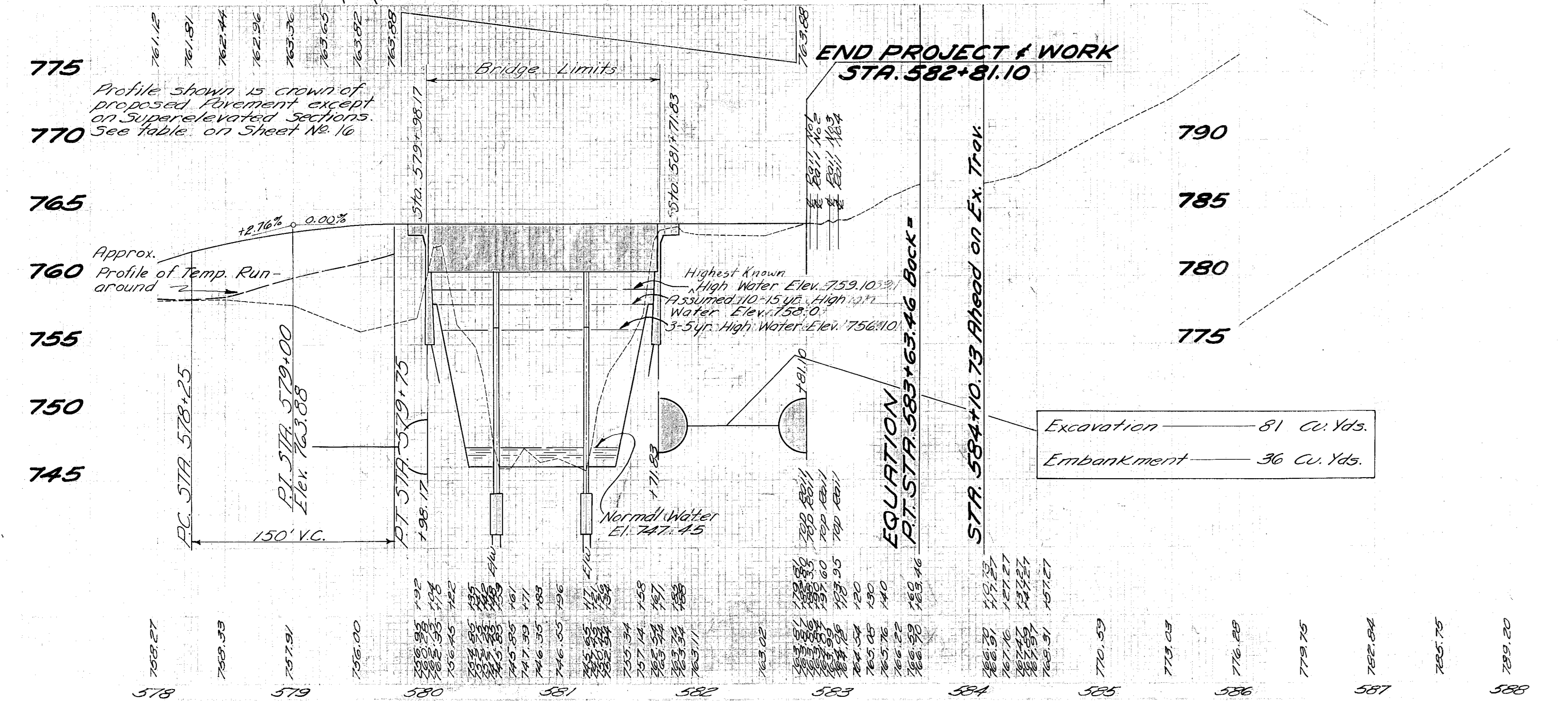
Prop. 18" x 56' I-3 Pipe
 NANNIE MALLOW Et. Al.

Sta. 578+65.21 on Ex. Trav. = Sta. 579+66.65 on Forward Tan. of Prop. ξ .

CURVE DATA
 P.I. Sta. 578+55.16
 $\Delta = 29^{\circ}05'$ R.T.
 $D_c = 16^{\circ}00'$
 $T = 93.05'$
 $L = 182.08'$
 $R = 358.10$
 $E = 11.89$

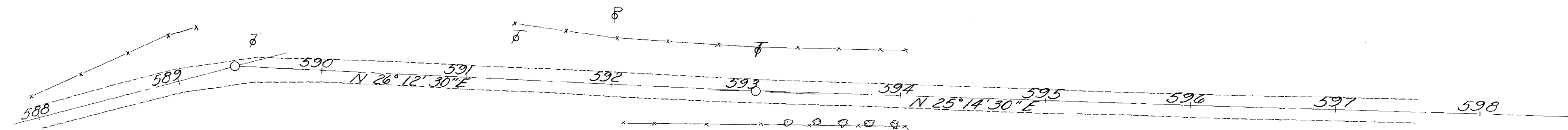
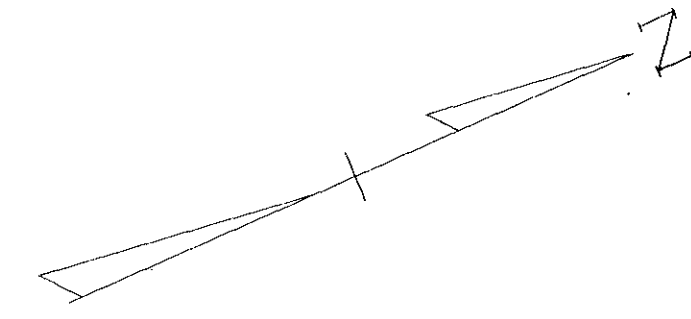
EQUATION
 P.T. STA. 583+63.46 Back =
 STA. 584+10.73 Ahead on Ex. Trav.

BENCH MARK
 1/4 Cut on S.E. Cor. Conc. Slab to Trng. House
 Elevation 760.99



STA. 578+00 TO STA. 588+00

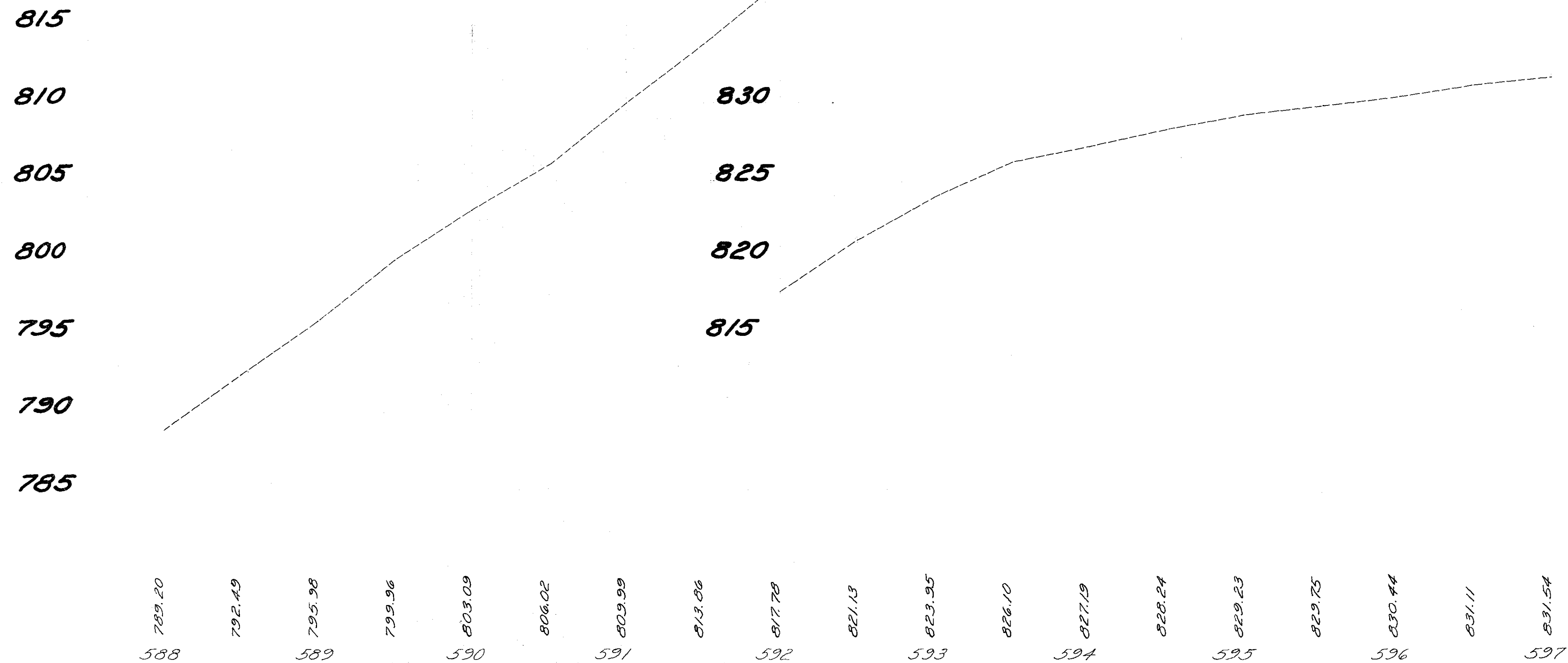
ROSS COUNTY
ROS. - 138 (10.42) (10.90)



P.I. Sta. 589+40.11
 $\Delta = 17^\circ 17' \text{ Rt.}$

P.I. Sta. 592+93
 $\Delta = 0^\circ 58' \text{ Lt.}$

Profile shown is ϕ Elevations
of Existing Pav't \neq Traverse



STA. 588+00 TO STA. 598+00

PAVEMENT ELEVATIONS

ROSS COUNTY
ROS-138 (10.42)(10.90)

Approach Pavement Elevations

Elevation	Width	Station	Center Elevation	Width	Elevation
Left Edge					Right Edge
764.83	8.00'	549+00	765.56	9.50'	766.00
764.75	8.40'	+25	765.42	9.60'	765.88
764.54	8.80'	+50	765.16	9.70'	765.56
764.40	9.00'	+62	764.97	9.75'	765.31
763.86	9.61'	550+00	764.24	9.90'	764.31
763.50	10.00'	+25	763.72	10.00'	763.70

$\Delta = 1^{\circ}30'30''$ $D_c = 1^{\circ}00'$
P.C. Sta. 557+25.25
P.T. Sta. 558+76.03

Elevation	Width	Station	Center Elevation	Width	Elevation
Left Edge					Right Edge
764.67	10.00'	556+63.25	764.83	10.00'	764.67
764.36		+75	764.52		764.39
763.70		557+00	763.86		763.79
763.04		+25	763.20		763.19
763.03		+25.25	763.19		763.19
762.38		+50	762.54		762.64
762.03		+63.25	762.19		762.35
761.72		+75	761.88		762.04
761.06		558+00	761.22		761.38
760.46		+25	760.62		760.78
760.19		+38.08	760.35		760.51
759.97		+50	760.13		760.24
759.59		+76.08	759.78		759.75
759.32		559+00	759.60		759.50
759.25		+25	759.46		759.35
759.20	10.00'	+38.08	759.42	10.00'	759.31
759.18	10.00'	+50	759.38	10.00'	759.28

Approach Pavement Elevations

757.32	10.00'	565+50	757.40	10.00'	757.27
757.05	8.01'	566+00	757.15	9.70'	757.05
756.95	6.20'	+50	756.99	9.40'	756.85

$\Delta = 29^{\circ}08'RA$ $D_c = 16^{\circ}00'$
P.C. 577+62.11
P.T. 579+44.19

Elevation	Width	Station	Center Elevation	Width	Elevation
Left Edge					Right Edge
756.54	8.30'	575+50	756.72	7.80'	756.64
756.59	10.00'	576+00	756.80	10.00'	756.64
756.81		+25	756.97	10.00'	756.81
757.20		+50	757.28	10.00'	757.12
757.78		+75	757.75	10.66'	757.45
758.53		577+00	758.36	11.33'	757.86
759.38		+25	759.05	12.00'	758.39
760.24		+50	759.74	12.66'	758.91
761.09		+75	760.43	13.33'	759.44
761.92		578+00	761.12	14.00'	760.07
762.64		+25	761.81		760.70
763.22		+50	762.44		761.28
763.60		+75	762.96		761.80
763.82		579+00	763.36	14.00'	762.31
763.87		+25	763.65	12.77'	762.75
763.87		+50	763.82	11.54'	763.18
763.80		+75	763.83	10.21'	763.53
763.78		+81	763.88	10.00'	763.60
763.75		+92	763.88	10.00'	763.69
763.72	10.00'	+98.17	763.88	10.00'	763.72

Pavement Elevations for Approach to R.R.

763.72	10.00'	582+31.1	763.88	10.00'	763.72
763.78		+50	763.88		763.78
763.83		+65	763.88		763.83
763.90	10.00'	+81.1	763.88	10.00'	763.86

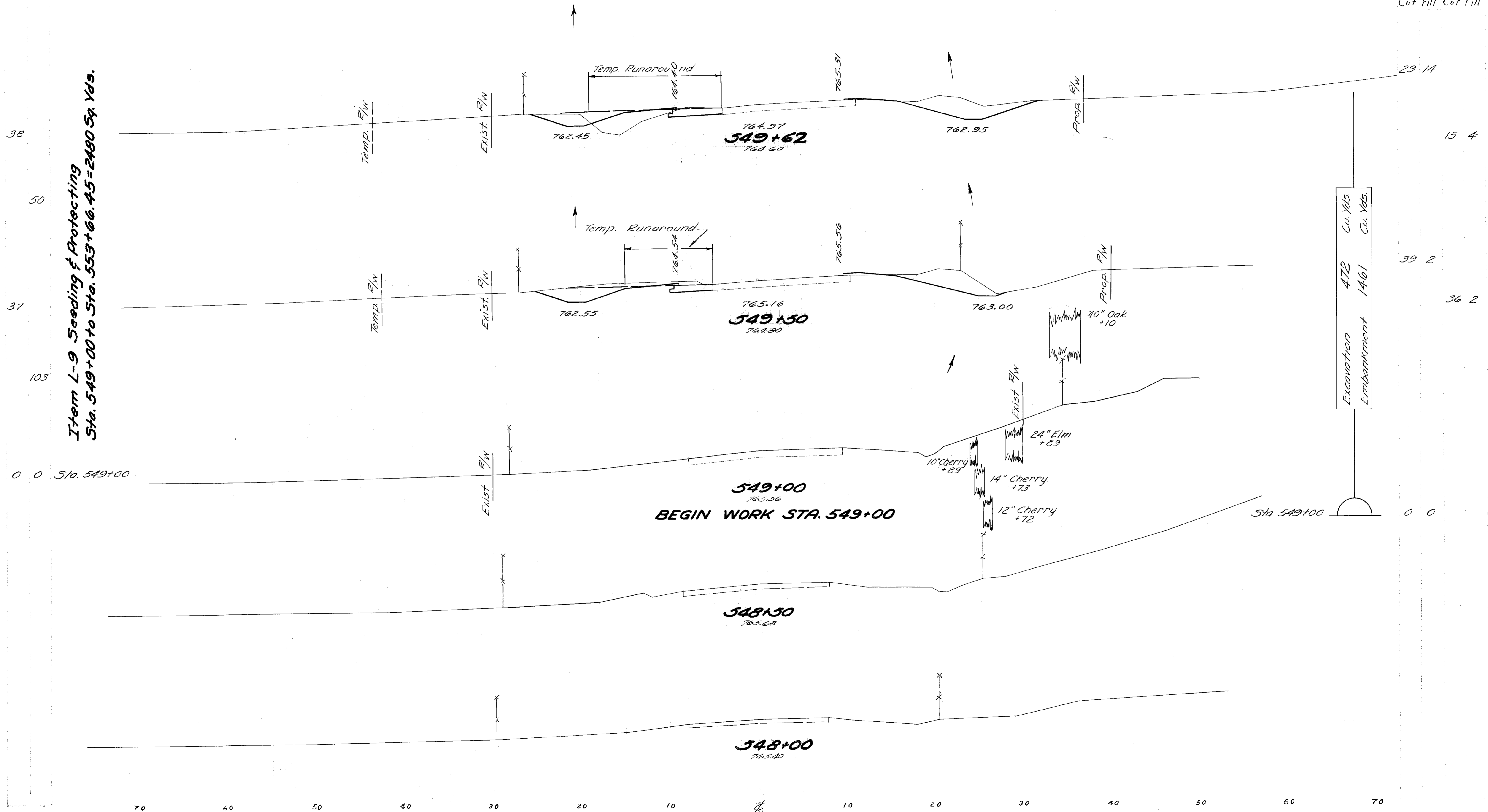
Seeding
End Sq.
Width Yds.

17
51

ROSS COUNTY 205-138-(10.42)(10.90)

End Area Volume
Cut Fill Cut Fill

Item L-9 Seeding & Protecting
Sta. 549+00 to Sta. 553+66.45 = 2480 Sq. Yds.



Excavation	472	Cu. Yds.
Embankment	1461	Cu. Yds.

29	14
15	4
39	2
36	2
0	0

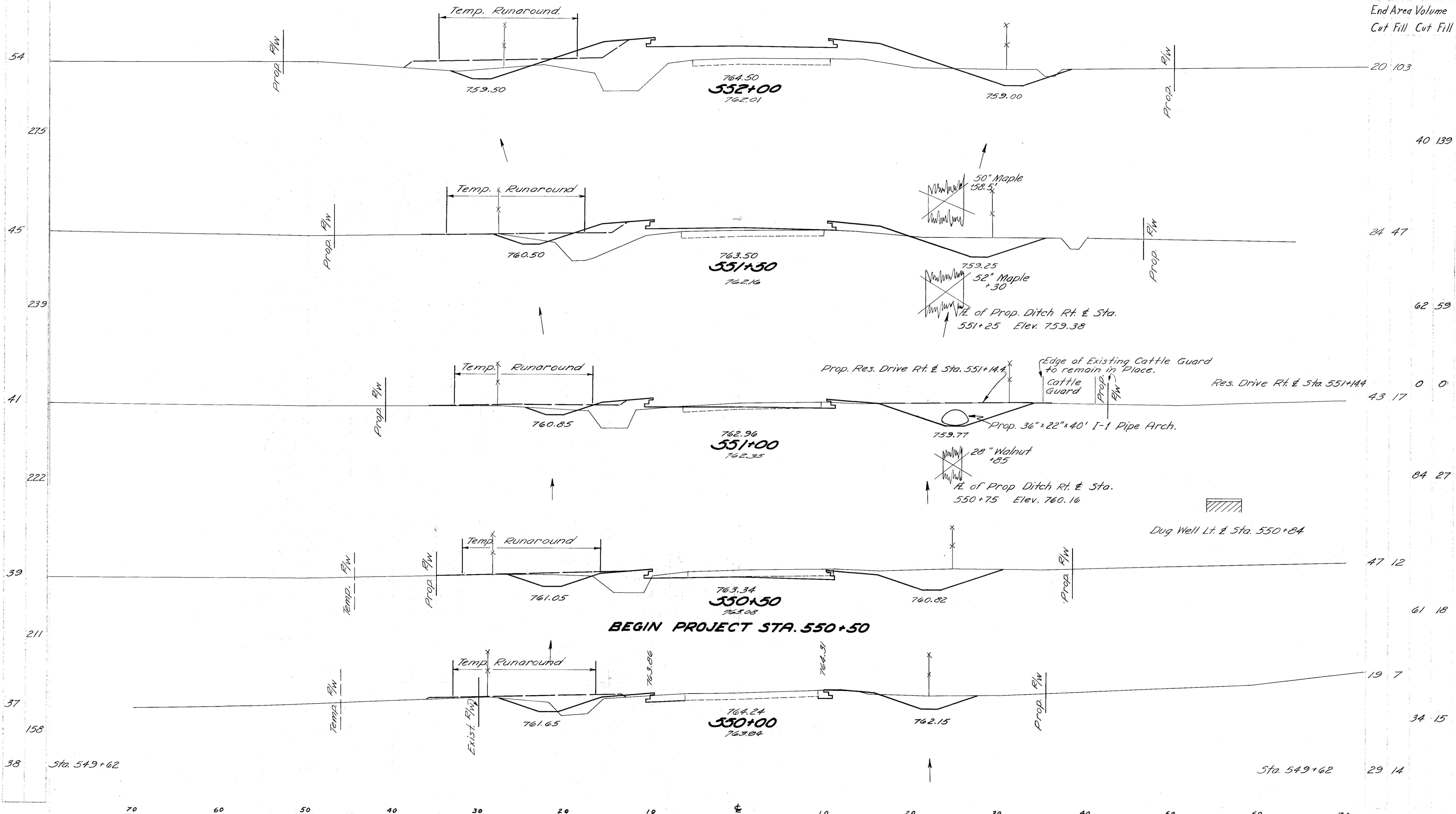
STA 548+00 TO STA. 549+62

Seeding
End Sq.
Width Yds.

18
51

ROSS COUNTY R05-138-(10.42)(10.90)

End Area Volume
Cut Fill Cut Fill



BEGIN PROJECT STA. 550+50

STA 550+00 TO STA 552+00

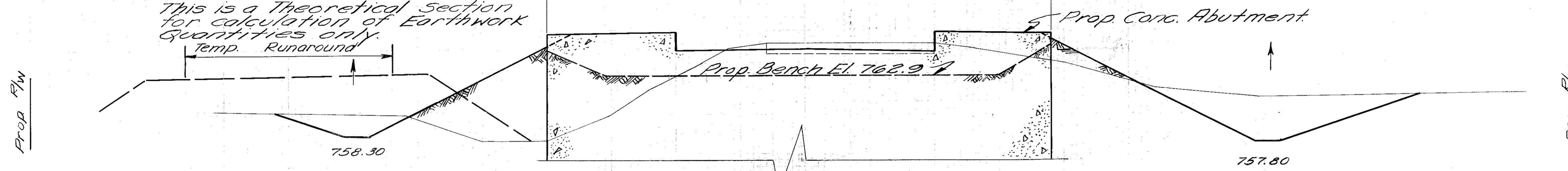
ROSS COUNTY ROS. -138-(10.42)(10.90)

End Area Volume
Cut Fill Cut Fill

Seeding
End Sq.
Width Yds.

This portion of the X-section is a true view taken 90° to & Sta. 553+60 off the End of the skewed Abutment
Note: This portion of the X-section is a fore-shortened view of the skewed abutment taken 90° to &.
This portion of the X-section is a true view taken 90° to & Sta. 553+74 off the end of the skewed Abutment.

Note:
This is a Theoretical Section for calculation of Earthwork Quantities only.

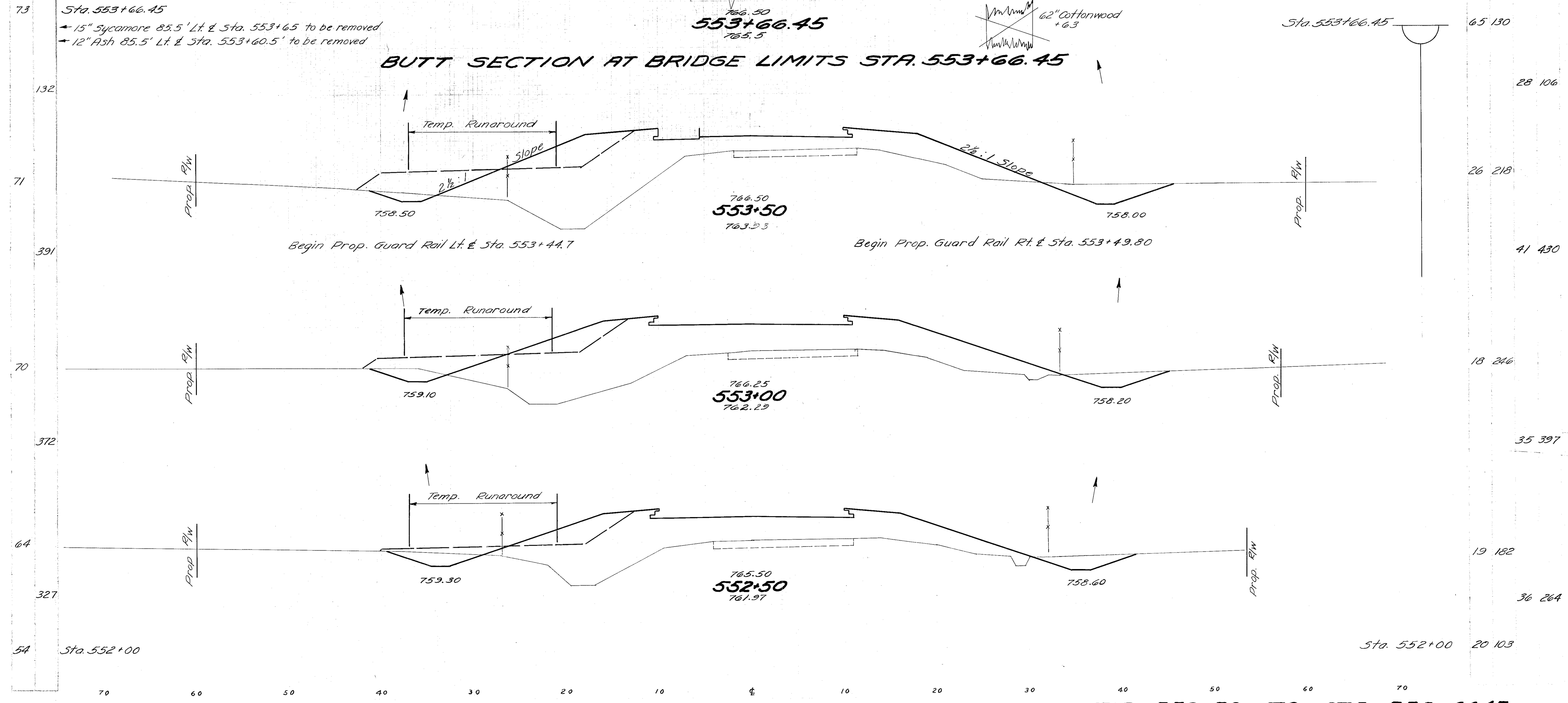


Sta. 553+66.45
← 15" Sycamore 85.5' Lt. & Sta. 553+65 to be removed
← 12" Ash 85.5' Lt. & Sta. 553+60.5' to be removed

766.50
553+66.45
765.5

62" Cottonwood
+63

BUTT SECTION AT BRIDGE LIMITS STA. 553+66.45



STA. 552+50 TO STA. 553+66.45

70 60 50 40 30 20 10 & 10 20 30 40 50 60 70

ROSS COUNTY
ROS. -138-(10.42)(10.90)

Seeding
End 59
Width Yds

57

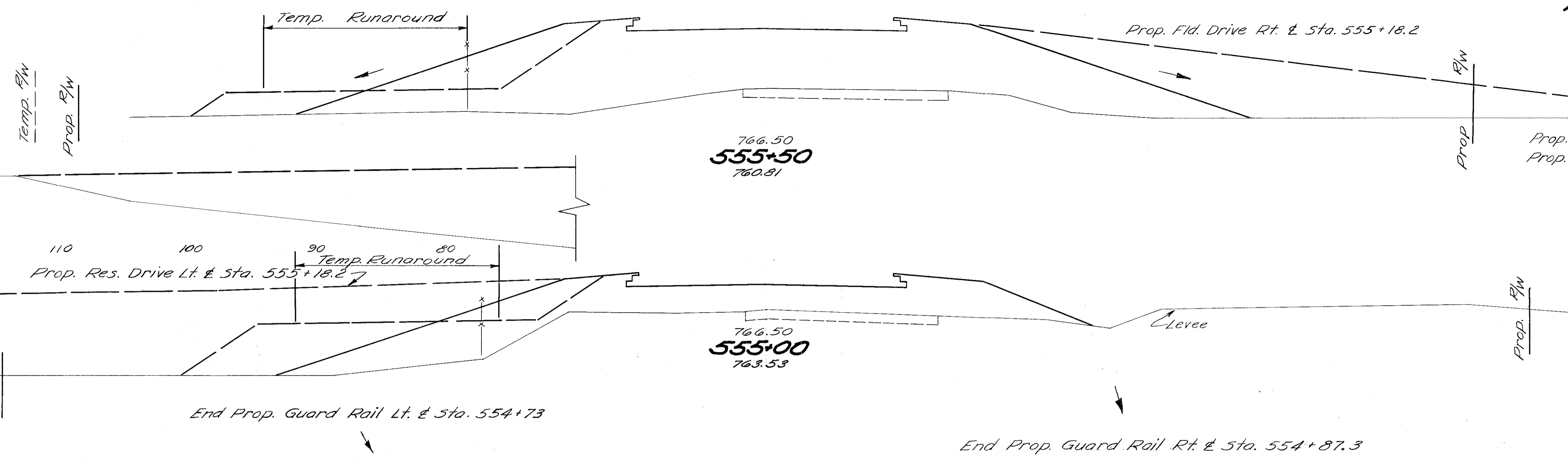
289

47

166

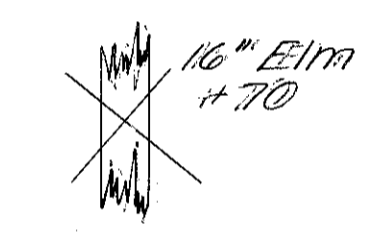
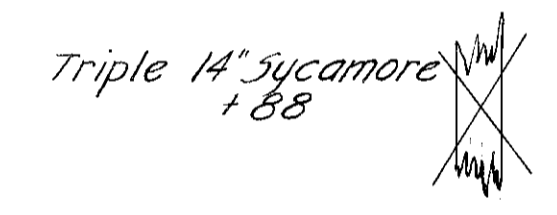
40

Item L-9 Seeding & Protecting
Sta. 554+65.55 to Sta. 570+00 = 7357 Sq. Yds.



End Area	Volume
Cut	Fill
0	319
0	169
0	389
0	438

0 154



This portion of the x-section is a true view taken 90° to & Sta. 554+59 off the end of the skewed Abutment

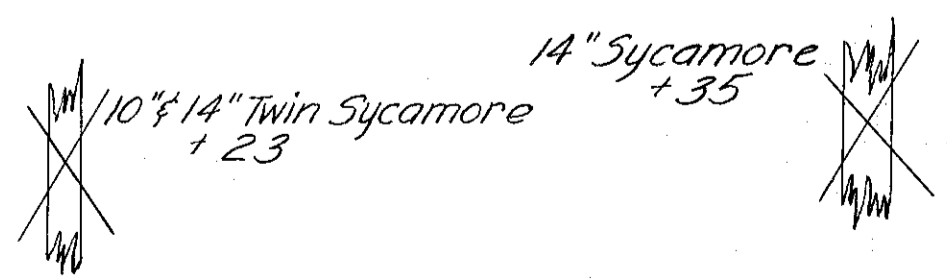
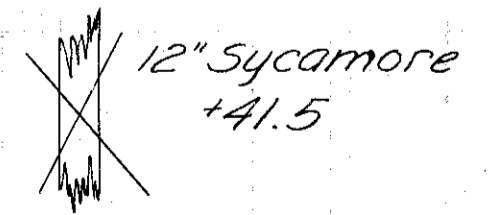
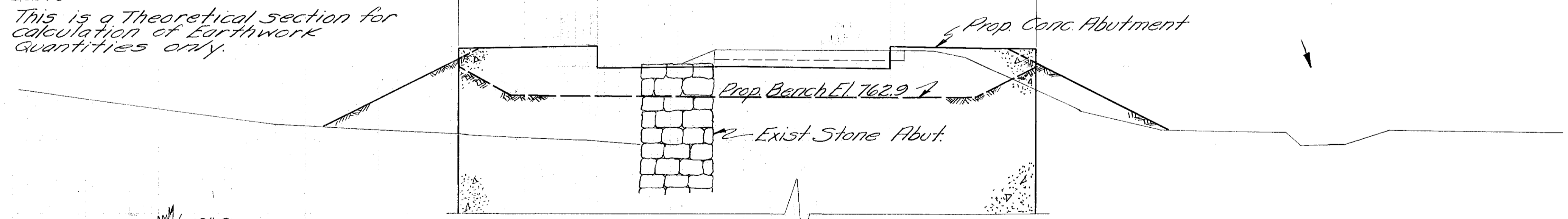
Note: This portion of the x-section is a foreshortened view of the skewed Abutment taken 90° to &

This portion of the x-section is a true view taken 90° to & Sta. 554+73 off the end of the skewed Abutment

Note:
This is a Theoretical section for calculation of Earthwork quantities only.

Prop. R/W

Prop. R/W



← 3-14" Sycamore's Lt. & Sta. 554+16

	Cu. Yds
Excavation	1912
Embankment	4591

11 175

Sta. 554+65.55 17 121

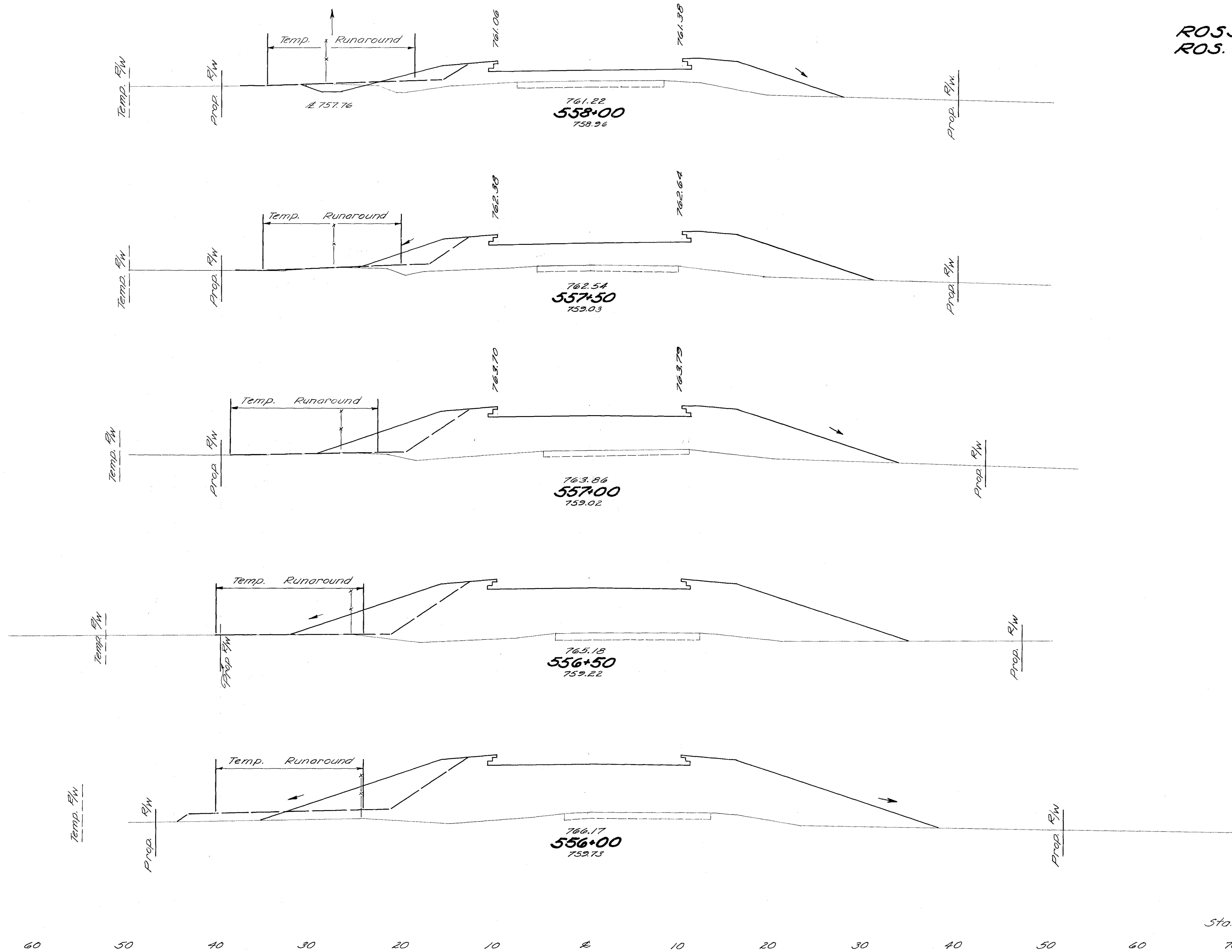
BUTT SECTION AT BRIDGE LIMITS STA. 554+65.55

70 60 50 40 30 20 10 & 10 20 30 40 50 60 70

STA. 554+62 TO STA. 555+50

ROSS COUNTY
ROS. - 138-(10.42)(10.90)

Seeding
End Sq.
Width Yds.
40
217
38
228
44
261
50
294
56
314
57



End Area	Volume
Cut	Fill
4 88	
	4 217
0 146	
	0 337
0 218	
	0 464
0 283	
	0 565
0 326	
	0 597
Sta. 555+50	0 319

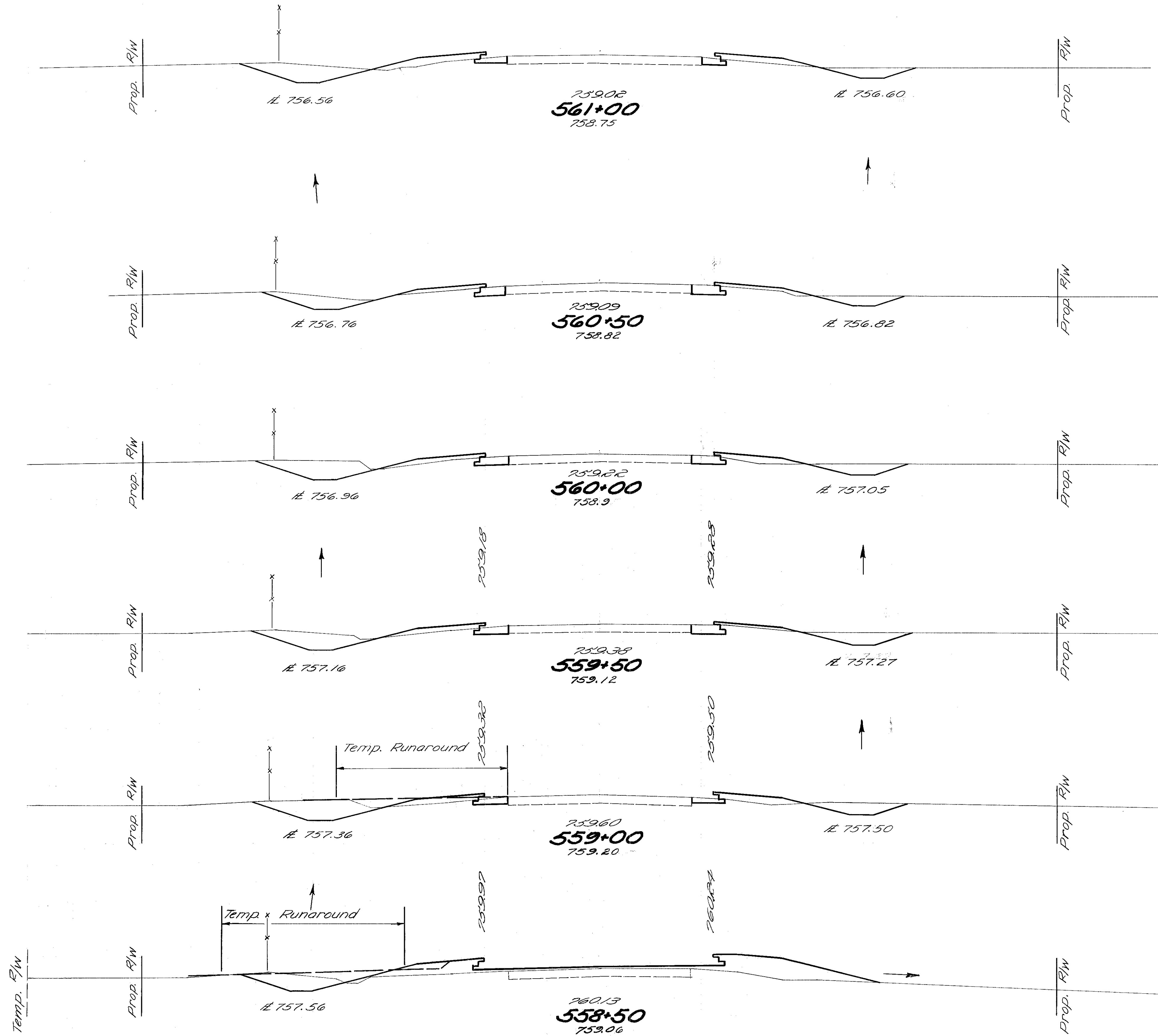
STA. 556+00 TO STA. 558+00

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

Seeding
End Sta
Width Vals

ROSS COUNTY
R.O.S. - 138-(10.42)(10.90)

40
214
37
208
38
214
39
214
38
211
38
217
40
Sta. 558+00



End Area	Volume
Cut	Fill
20	9
34	14
16	6
35	13
21	8
39	12
21	5
39	13
21	9
27	40
8	34
11	113

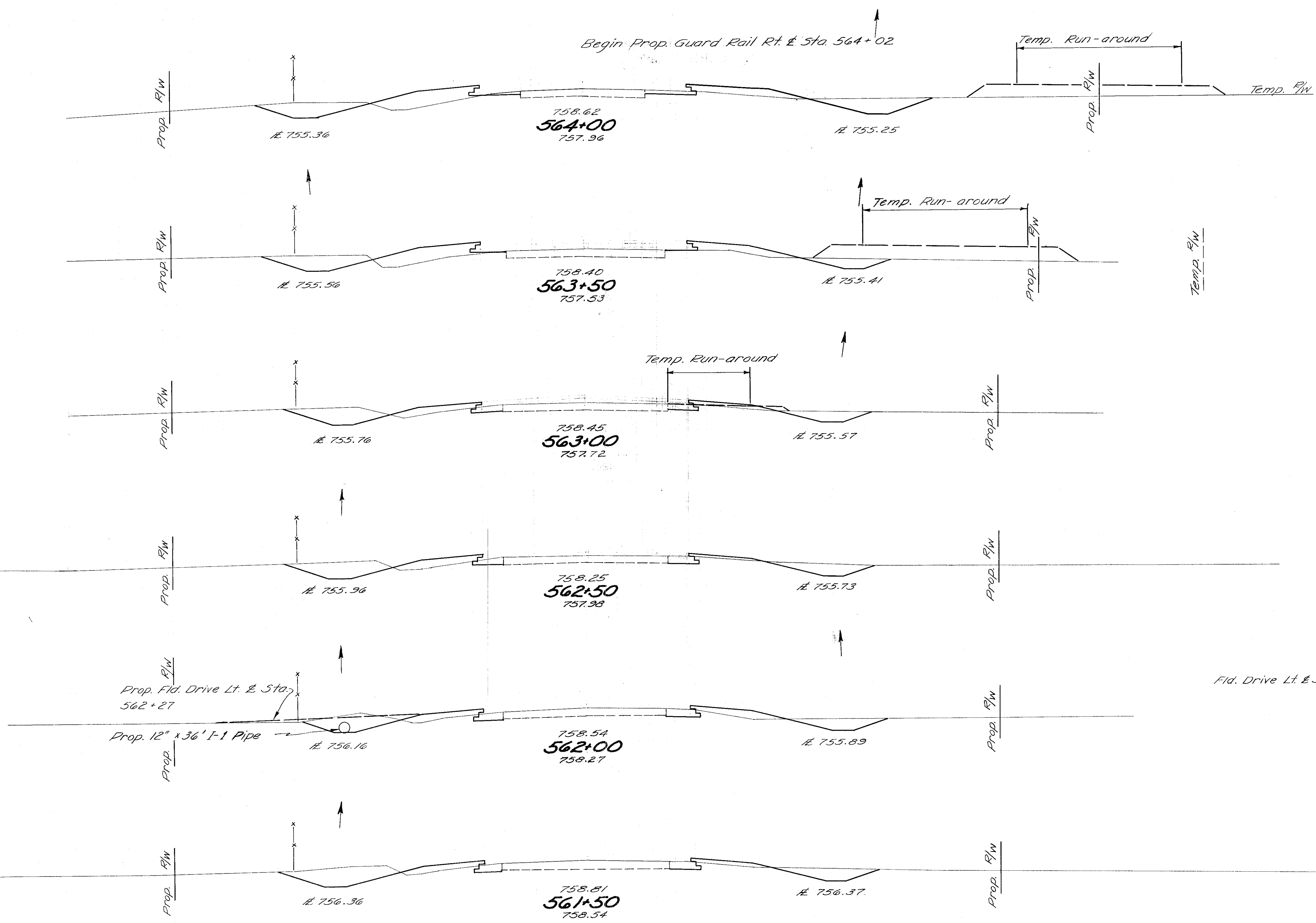
70 60 50 40 30 20 10 0 10 20 30 40 50 60 70
STA. 558+50 TO STA. 561+00

Sta. 558+00 4 88

ROSS COUNTY
ROJ. - 138-(10.42)(10.90)

Seeding
End Sq.
Width Yds.

47
250
43
225
38
211
38
208
37
217
40
222
40



End Area Volume
Cut Fill Cut Fill

24	19
38	36
17	20
37	27
23	9
44	16
24	8
44	16
23	10
48	16
29	7
46	15
20	9

Sta. 561+00

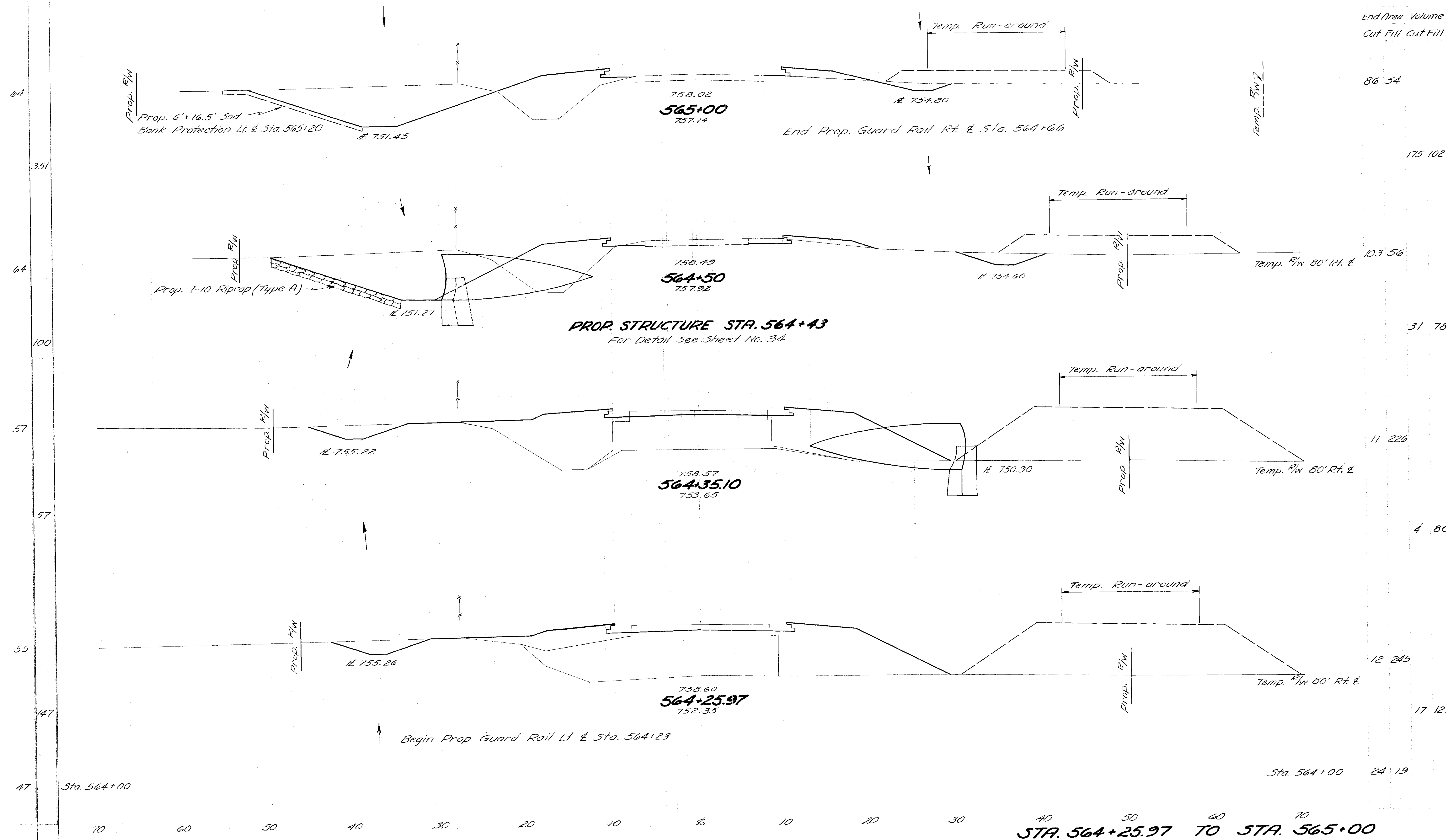
Sta. 561+00

70 60 50 40 30 20 10 0 10 20 30 40 50 60 70
STA. 561+50 TO STA. 564+00

ROSS COUNTY
ROS. - 138-(10.42)(10.90)

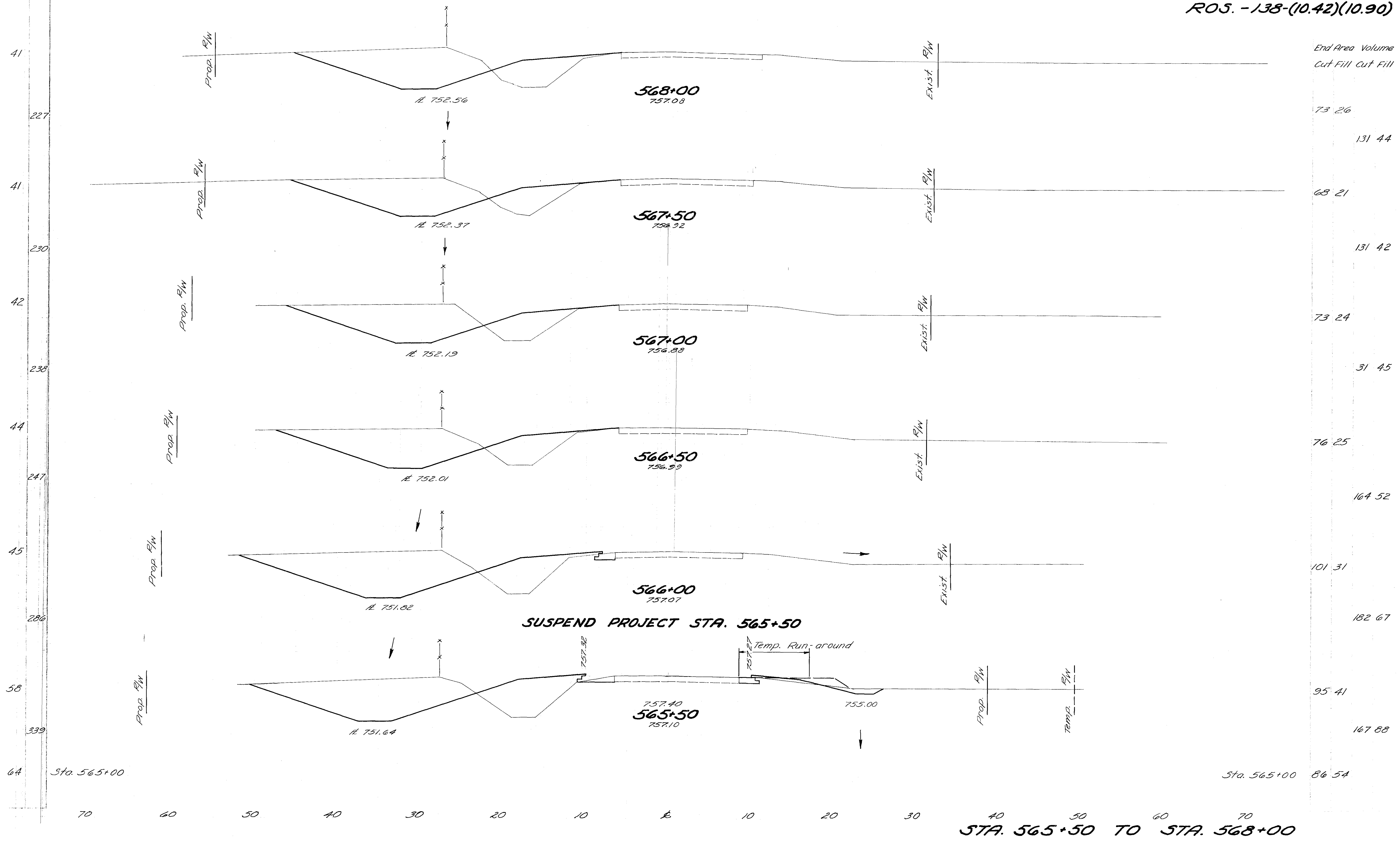
Seeding
End Sq.
Width Yds.

End Area Volume
Cut Fill cut Fill



Seeding
End Sq.
Width Yds.

ROSS COUNTY
ROS. - 138-(10.42)(10.90)



End Area Volume
Cut Fill Cut Fill

73 26

131 44

68 21

131 42

73 24

31 45

76 25

164 52

101 31

182 67

95 41

167 88

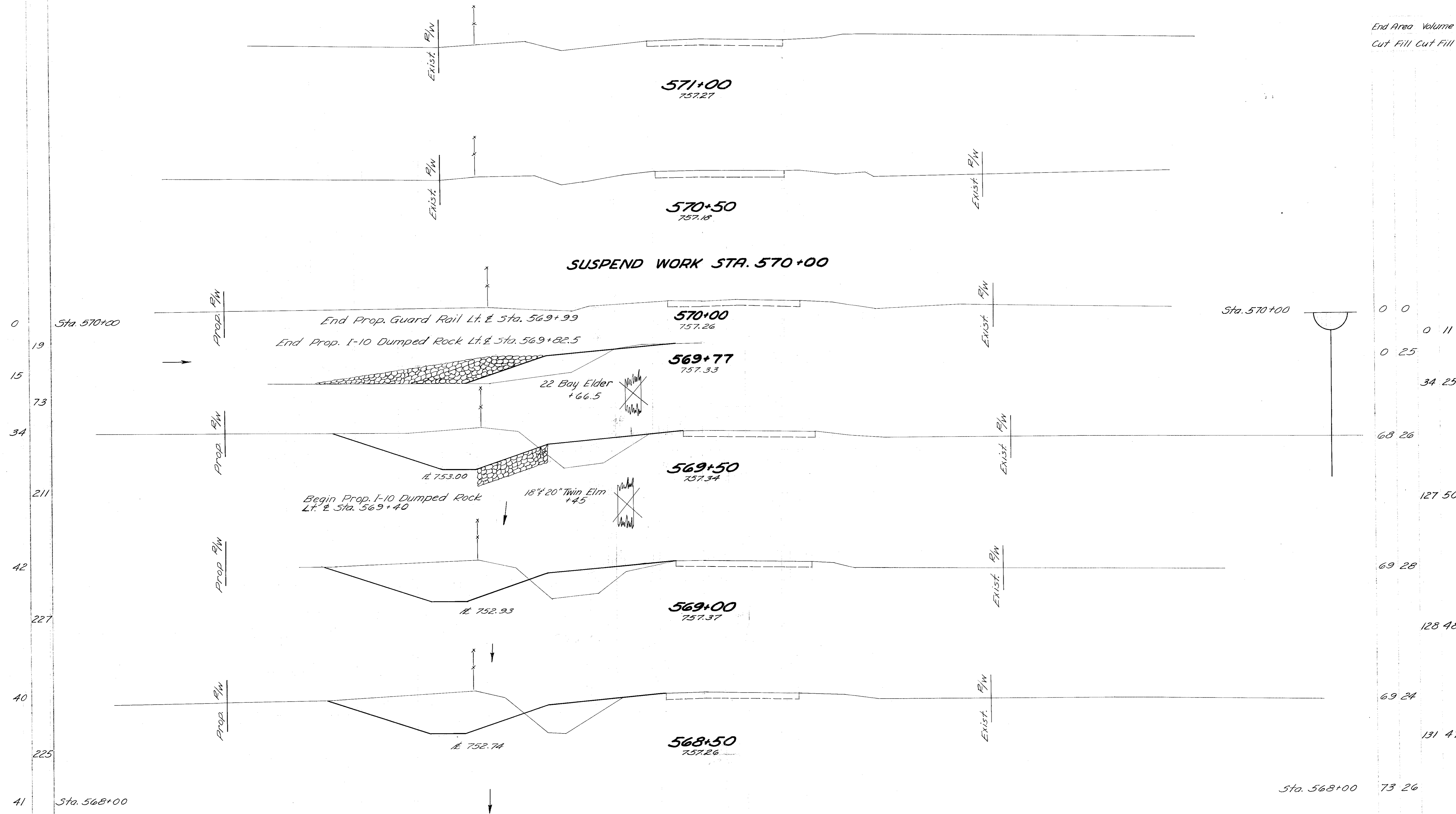
Sta. 565+00 86 54

STA. 565+50 TO STA. 568+00

ROSS COUNTY
ROJ. - 138-(10.42)(10.90)

End Area Volume
Cut Fill Cut Fill

Seeding
End 50
width yds.



STA. 568+50 TO STA. 571+00

Seeding
End Sq.
Width Yds.

ROSS COUNTY
R.O.S. - 138-(10.42)(10.90)

End Area Volume
Cut Fill Cut Fill



70 60 50 40 30 20 10 0 10 20 30 40 50 60 70
STA. 571+50 TO STA. 574+00

Seeding
End Sq.
Width Yds.

28
51

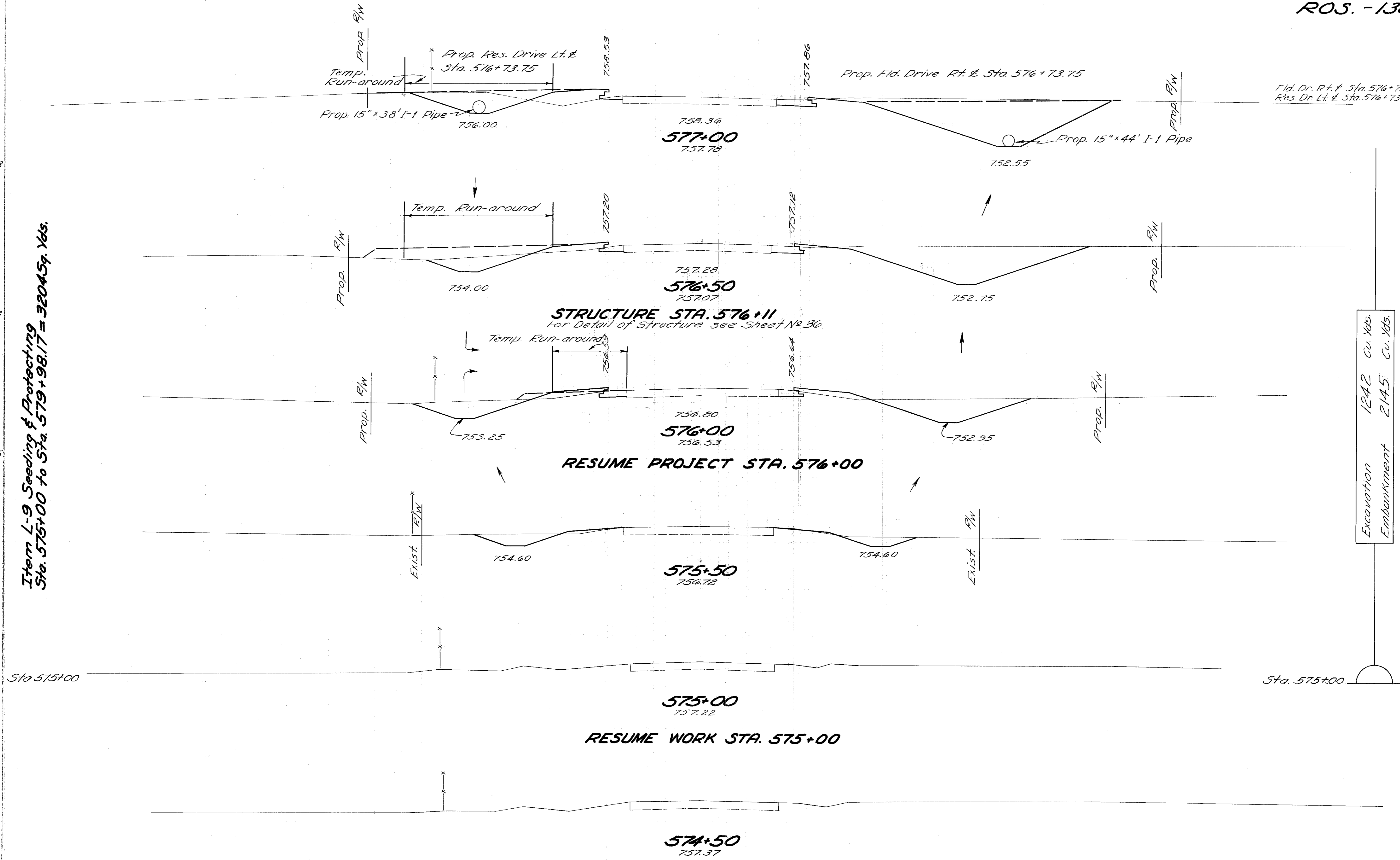
ROSS COUNTY
ROS. - 138-(10.42)(10.9)

End Area Volume
Cut Fill Cut F

57
308
54
283
48
225
33
92
0

11
0
99 9
165
80 5
116
45 7
53
12 3
11 3
0 0

Item L-9 Seeding & Protecting
Sta. 575+00 to Sta. 579+98.17 = 3204.59 Yds.



Fld. Dr. Rt. & Sta. 576+73.75
Res. Dr. Lt. & Sta. 576+73.75

STRUCTURE STA. 576+11
For Detail of Structure see Sheet No 30

RESUME PROJECT STA. 576+00

RESUME WORK STA. 575+00

Excavation 1242 Cu. Yds.
Embankment 2145 Cu. Yds.

STA. 574+50 TO STA. 577+00

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

Seeding
End Sq.
Width Yds.

30
51

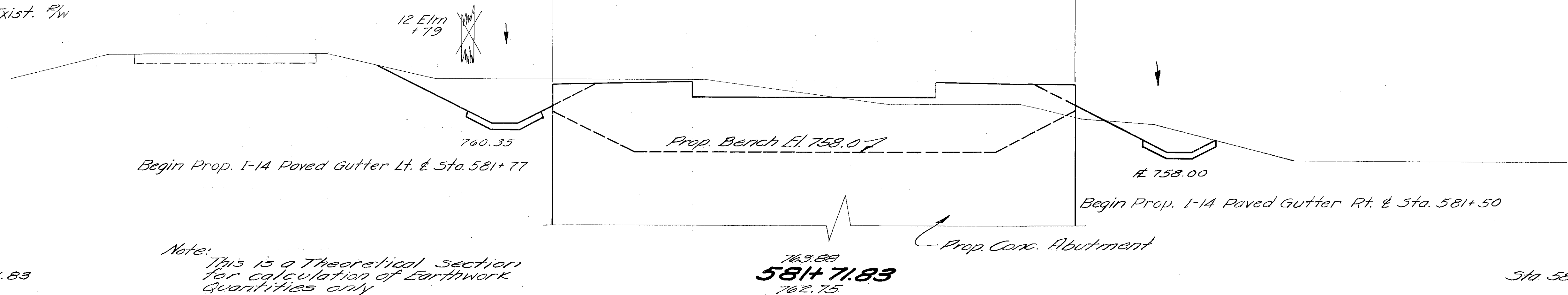
ROSS COUNTY
ROS. - 138-(10.42)(10.90)

79' to Exist. ^{R/W}

This portion of the x-section is a true view taken 90° to & Sta. 581+78.50 off the end of the skewed abutment.

Note: This portion of the x-section is a foreshortened view of the skewed abutment.

This portion of the x-section is a true view taken 90° to & Sta. 581+67 off the end of the skewed abutment.



Begin Prop. 1-14 Paved Gutter Lt. & Sta. 581+77

Prop. Bench El. 758.07

El. 758.00

Begin Prop. 1-14 Paved Gutter Rt. & Sta. 581+50

Prop. Conc. Abutment

Note: This is a Theoretical Section for calculation of Earthwork Quantities only

BUTT SECTION AT BRIDGE LIMITS STA. 581+71.83

12" Elm 581+68 12" stump 581+65

36" Sycamore 580+56

28" Honey Locust 580+35

This portion of the x-section is a true view taken 90° to & Sta. 580+04 off the end of the skewed abutment and is included in channel quantities see x-sections Sht. No.

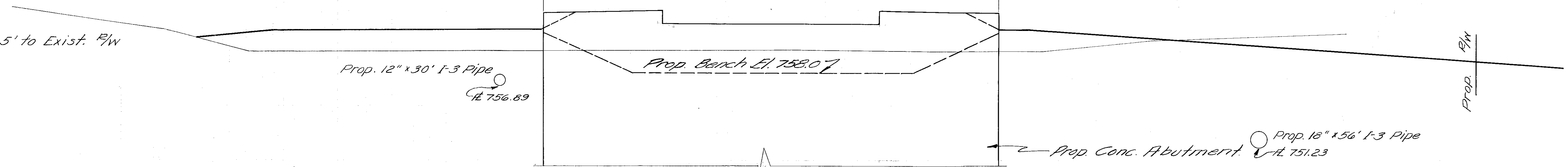
Note: This portion of the x-section is a foreshortened view of the skewed abutment taken 90° to & and is a theoretical section for calculation of Earthwork Quantities only.

This portion of the x-section is a true view taken 90° to & Sta. 579+92.50 off the end of the skewed abutment and is included in channel quantities see x-section Sht. No.

End Prop. 1-3 Pipe Lt. & Sta. 580+15

End Prop. 1-3 Pipe Rt. & Sta. 580+09

105.5' to Exist. ^{R/W}



Prop. 12" x 30' 1-3 Pipe

Prop. Bench El. 758.07

El. 756.89

Prop. Conc. Abutment

Prop. 16" x 56' 1-3 Pipe El. 751.23

This portion of the x-section is a true view taken 90° to & Sta. 580+04 off the end of the skewed abutment and is included in channel quantities see x-sections Sht. No.

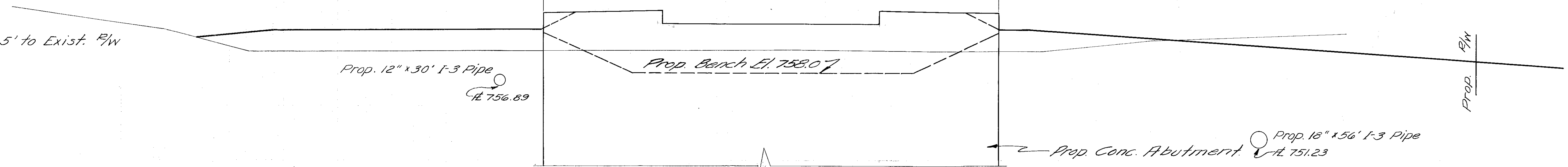
Note: This portion of the x-section is a foreshortened view of the skewed abutment taken 90° to & and is a theoretical section for calculation of Earthwork Quantities only.

This portion of the x-section is a true view taken 90° to & Sta. 579+92.50 off the end of the skewed abutment and is included in channel quantities see x-section Sht. No.

End Prop. 1-3 Pipe Lt. & Sta. 580+15

End Prop. 1-3 Pipe Rt. & Sta. 580+09

105.5' to Exist. ^{R/W}



Prop. 12" x 30' 1-3 Pipe

Prop. Bench El. 758.07

El. 756.89

Prop. Conc. Abutment

Prop. 16" x 56' 1-3 Pipe El. 751.23

BUTT SECTION AT BRIDGE LIMITS STA. 579+98.17

51

Sta. 581+71.83

Sta. 581+71.83

58.23

23

Sta. 579+98.17

Sta. 579+98.17

0.125

16

24

Sta. 579+92

Sta. 579+92.0

233

70 60 50 40 30 20 10 & 10 20 30 40 50 60 70

STA. 579+98.17 TO STA. 581+71.83

0.41

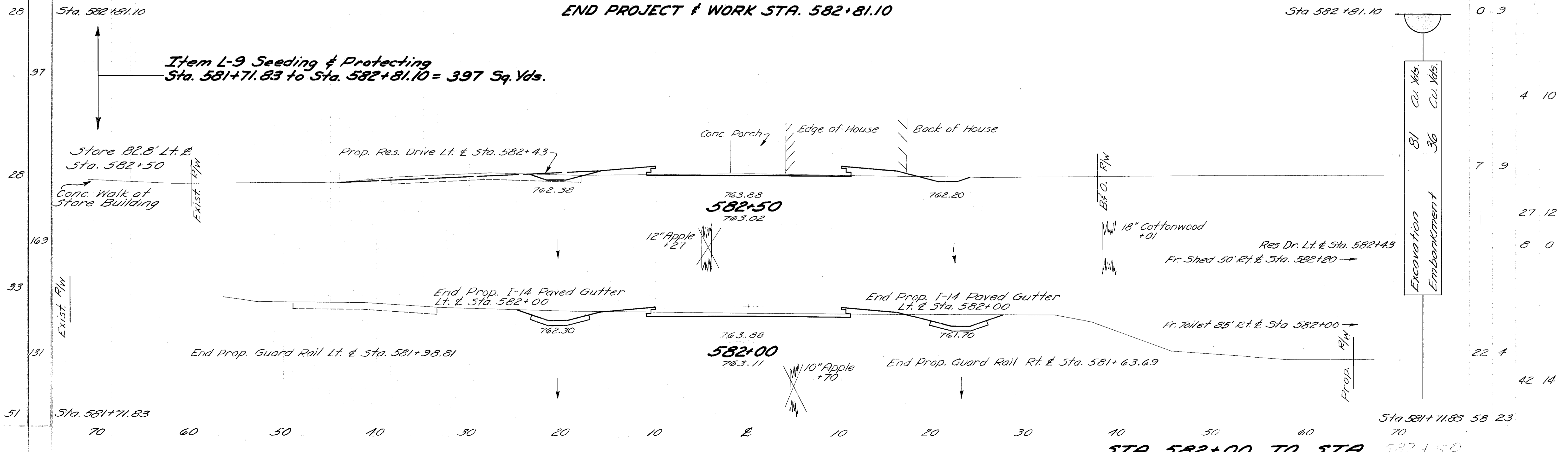
End Area Volume
Cut Fill Cut Fill

Seeding
End Sq.
Width Yds.

31
51

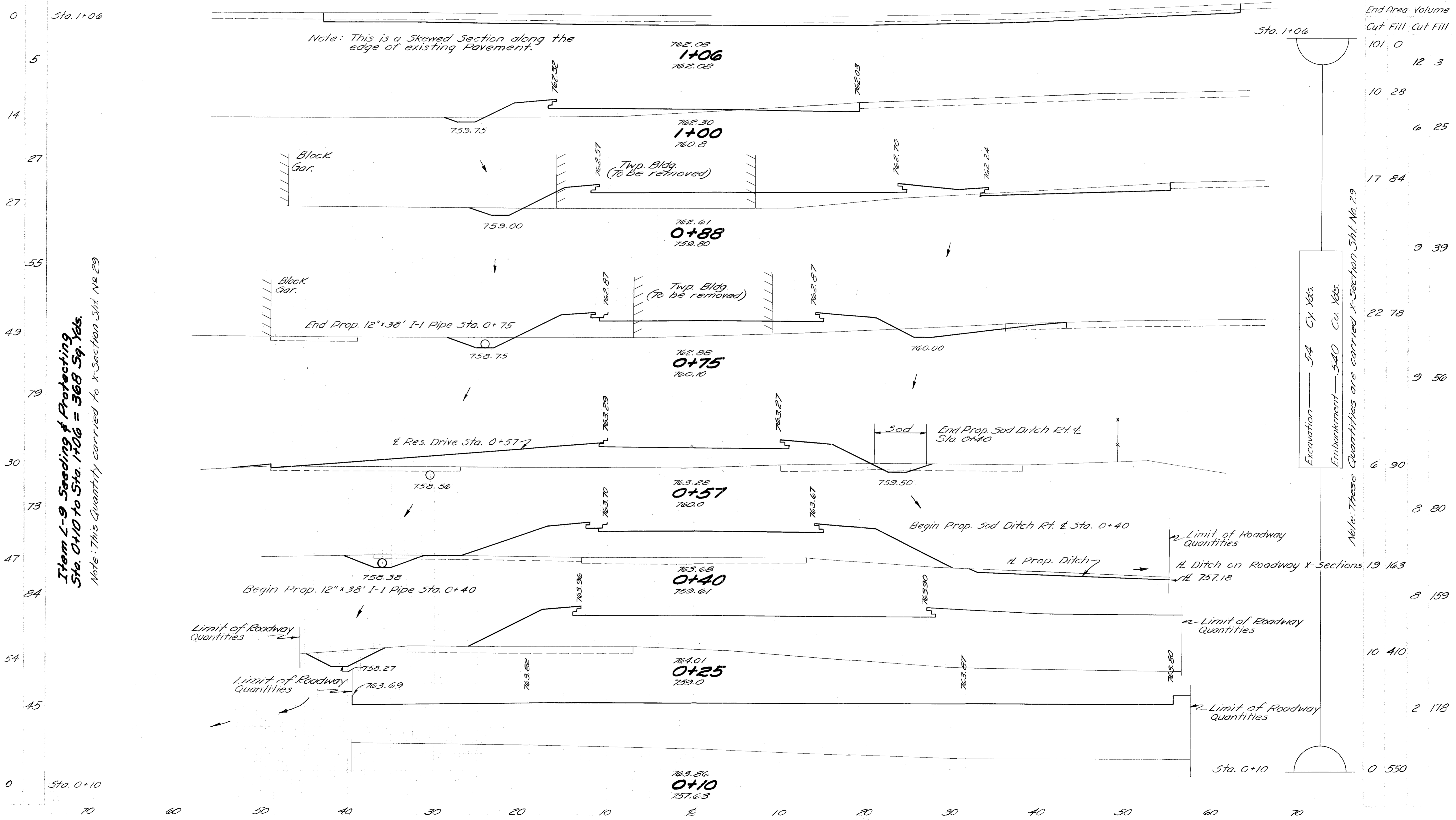
ROSS COUNTY
ROS. - 138-(10.42)(10.92)

End Width Volume
Cut Fill Cut Fill



Seeding
End Sq.
Width Yds.

ROSS COUNTY
ROS.-138-(10.42)(10.90)



Item L-9 Seeding & Protecting
Sta. 0+10 to Sta. 1+06 = 368 Sq. Yds.
Note: This Quantity carried to X-Section Sht. No. 29

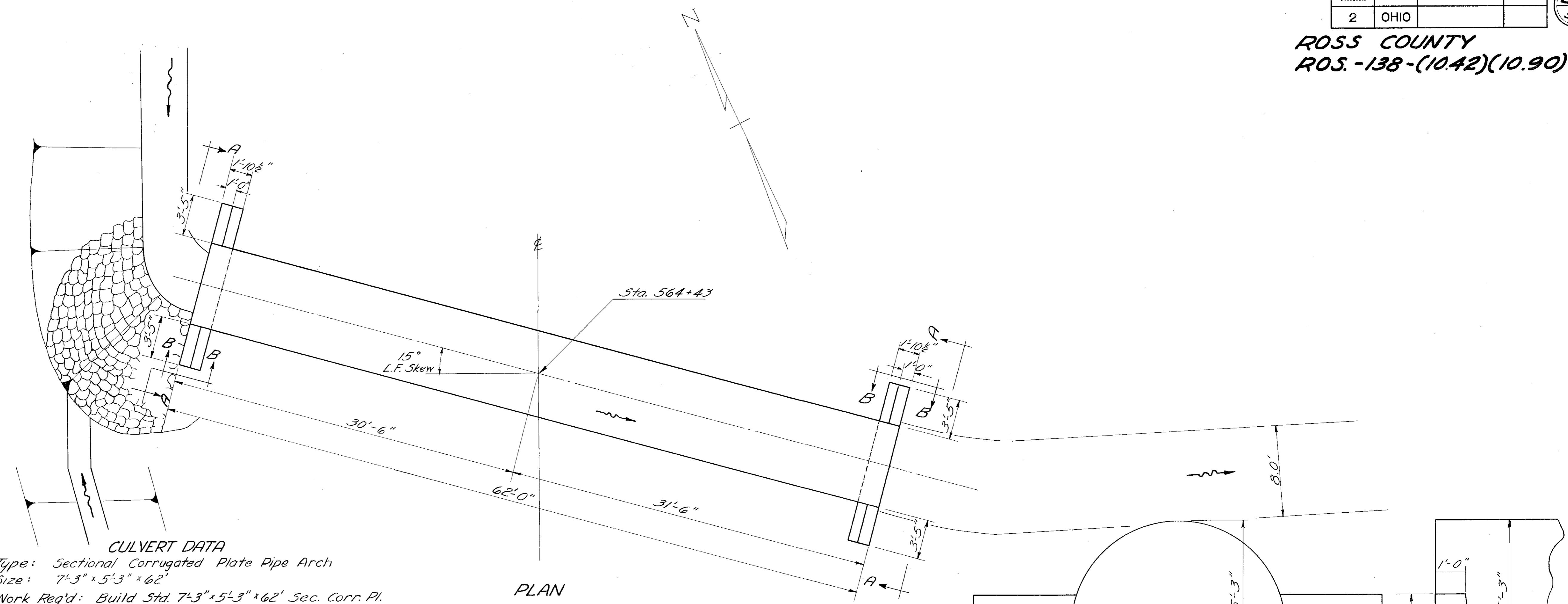
Note: These Quantities are carried X-Section Sht. No. 29

Station	End Area	Volume	Cut	Fill	Cut	Fill
Sta. 1+06	101.0				12.3	
			10.28			
				6.25		
			17.84			
				9.39		
			22.78			
				9.56		
			6.90			
				8.80		
			19.163			
				8.153		
			10.410			
				2.178		
Sta. 0+10	0.550					

Excavation — 54 Cy Yds.
Embankment — 540 Cu Yds.

CROSS SECTIONS FOR COUNTY ROAD CONNECTION STA. 0+10 TO STA. 1+06

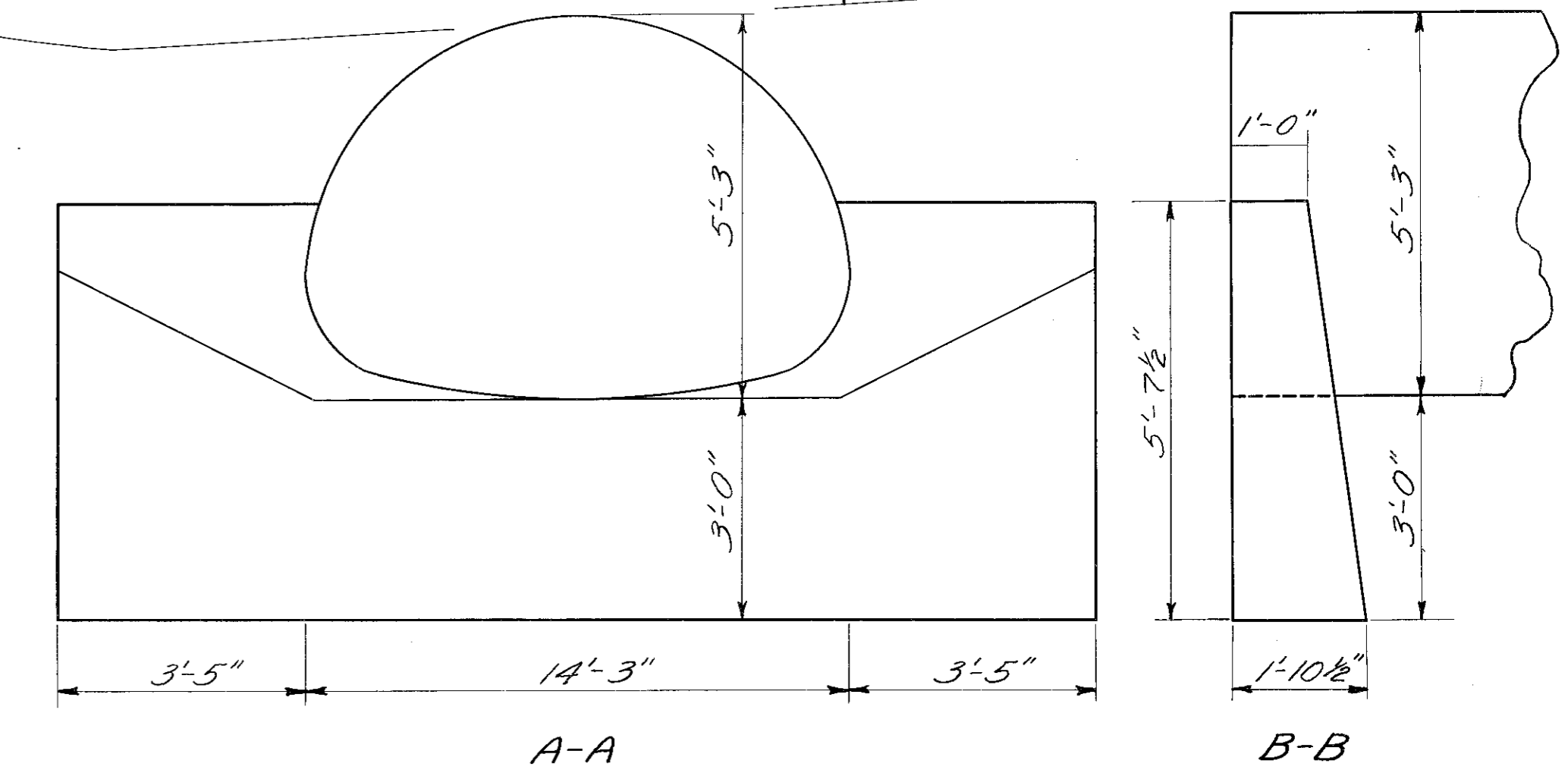
ROSS COUNTY
ROS. -138-(10.42)(10.90)



CULVERT DATA
 Type: Sectional Corrugated Plate Pipe Arch
 Size: 7'-3" x 5'-3" x 62'
 Work Req'd: Build Std. 7'-3" x 5'-3" x 62' Sec. Corr. Pl. Pipe Arch Culvert with Standard Conc. End Walls.
 Remove Existing Structure. Excavate Channel.
 Place Riprap. See Std. Drawing - SP-53

PLAN
Scale 1"=5'

DRAINAGE AREA = 630 Ac.
Q₁₀ = 220 cfs.

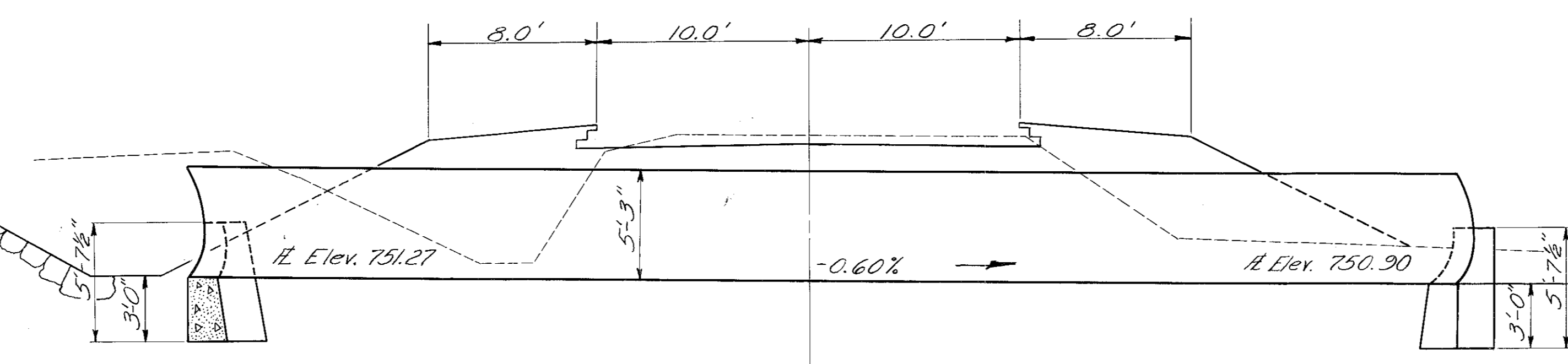


A-A

B-B

NOTES:

- (1) Tolerances of 1" plus or minus in the nominal span and rise will be permitted
- (2) All plates shall be No. 10 gage.
- (3) The Pipe Arch Culvert shall be completely assembled and the embankment over the top of the Pipe Arch shall be placed to finished height and struts if any removed, before any work is done on the End Walls. Excavation shall be made, End Walls constructed and backfilled. The fill material removed in constructing the End Walls shall be included in the estimated quantity of Excavation.
The Concrete shall be Class "E"



SECTION
Scale 1"=5'

ESTIMATED QUANTITIES

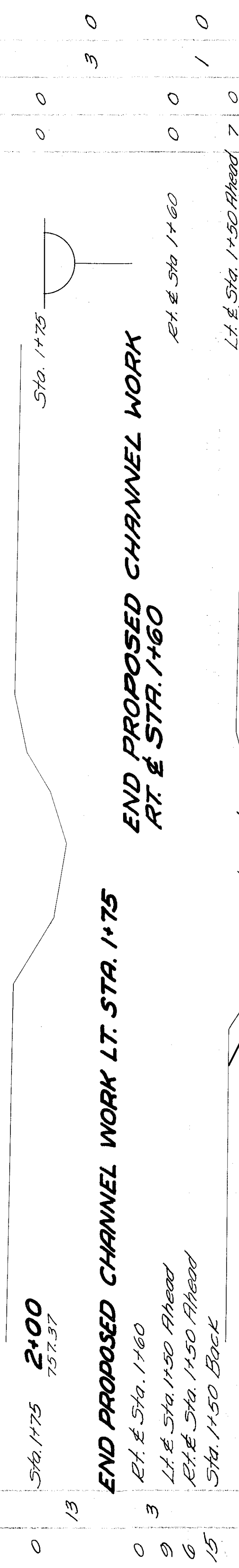
Item E-2 Excavation for Structure	128-CY.
* Item E-3 Channel Excavation	511-CY.
Item I-10 Riprap - Type "A"	20-SY.
Item S-1 Concrete for Structures - Class "E"	10.9-CY.
Item S-24 Removal of Existing Structure	Lump
Item S-28 7'-3" x 5'-3" Sec. Corr. Pl. Pipe Arch	62-L.F.
* Item I-10 Dumped Rock	46-Cu. Yds.

* Quantities carried from Channel X-Section Sta. No. 35

End Area Volume
Cut Fill Cut Fill

Item L-9 Seeding & Protecting
Sta. 0+30 to Sta. 1+75 = 208 Sq. Yds.

Seeding
End Sq.
Width Yds.

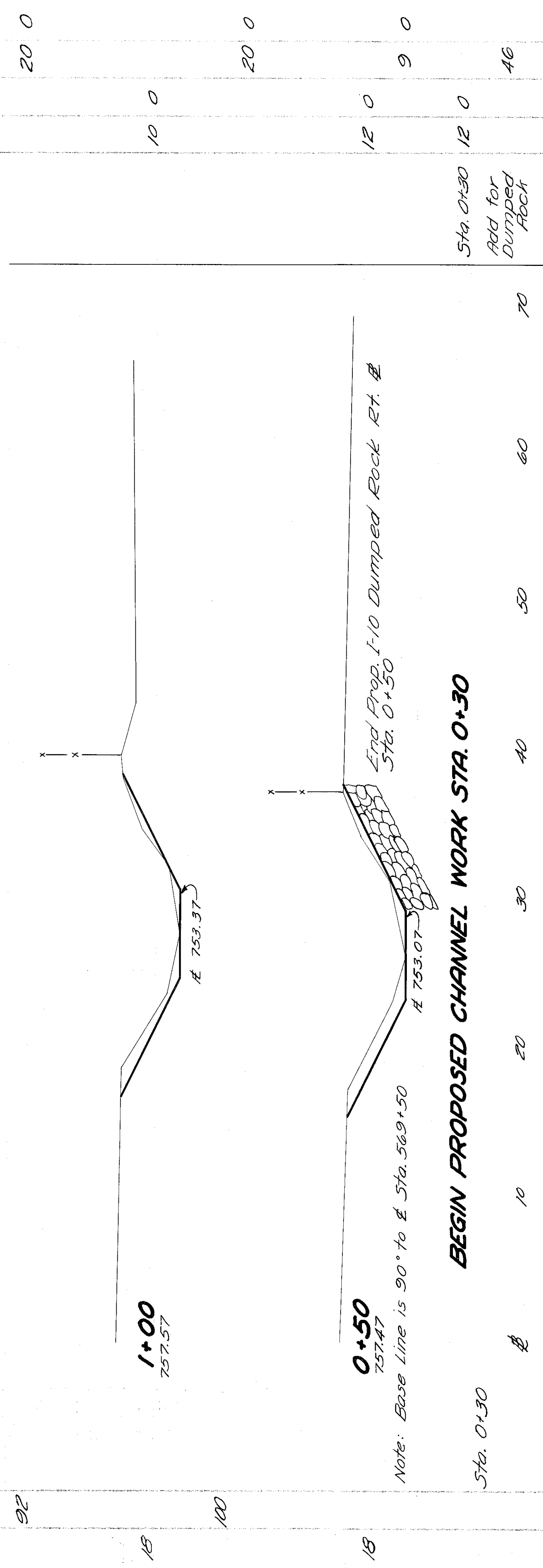


END PROPOSED CHANNEL WORK
RT. & STA. 1+60

END PROPOSED CHANNEL WORK LT. STA. 1+75

RT. & STA. 1+60

LT. & STA. 1+50 Ahead
RT. & STA. 1+50 Ahead
Sta. 1+50 Back



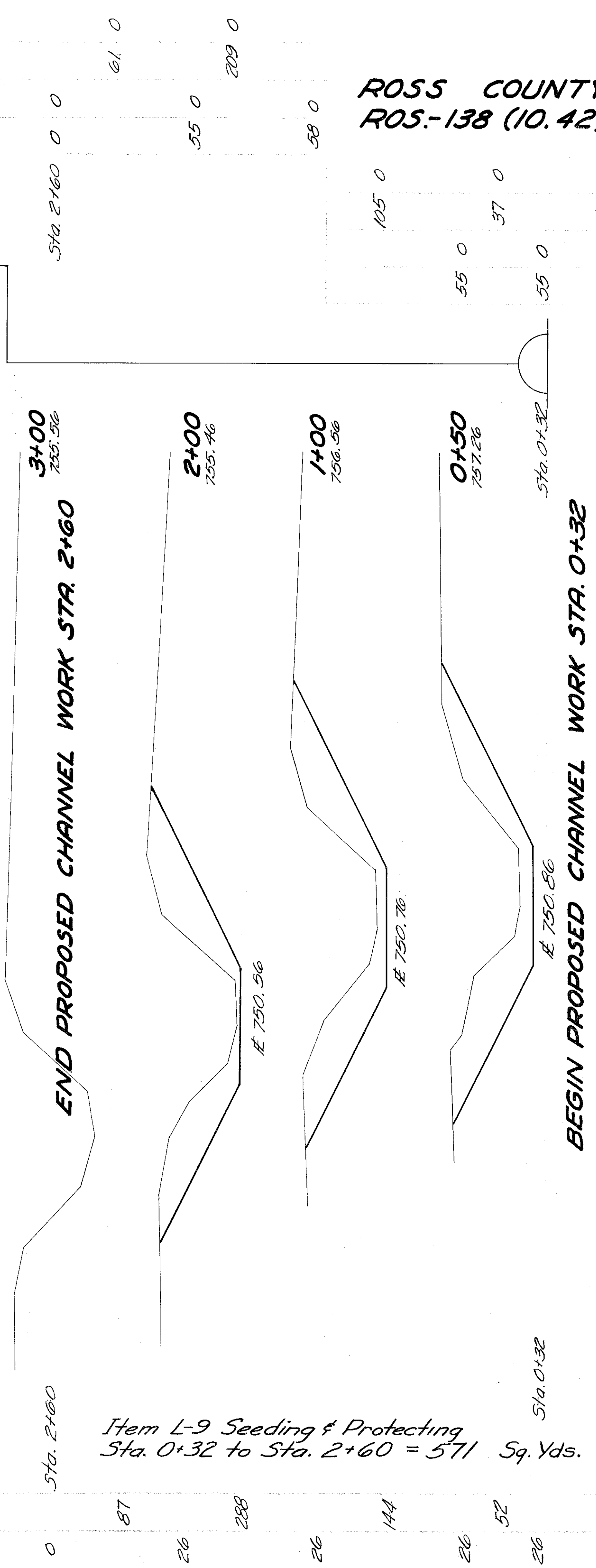
BEGIN PROPOSED CHANNEL WORK STA. 0+30

Note: Base Line is 90° to & Sta. 569+50

Sta. 0+30
Add for
Dumped
Rock

Excavation ——— 511 Cu. Yds.
Embankment ——— 0 Cu. Yds.

Note: Estimated Quantities
for Excavation, Embankment
& Dumped Rock carried to
Structure Sheet. No. 34



END PROPOSED CHANNEL WORK STA. 2+60

BEGIN PROPOSED CHANNEL WORK STA. 0+32

Item L-9 Seeding & Protecting
Sta. 0+32 to Sta. 2+60 = 571 Sq. Yds.

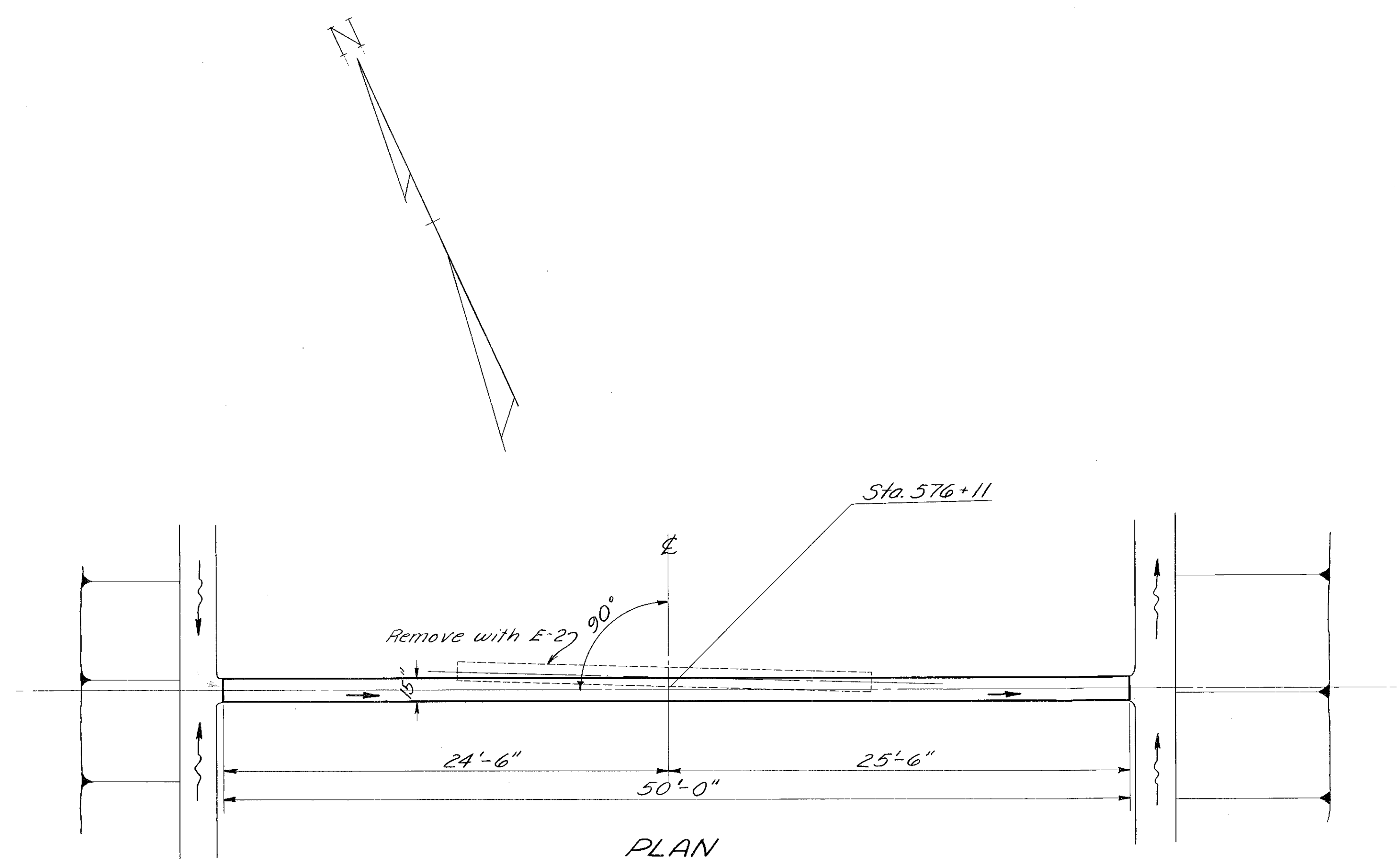
ROSS COUNTY
ROS.-138 (10.42)(10.90)

Note: Base Line 90° to &
Sta. 564+00

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

36
51

ROSS COUNTY
ROS. - 138-(10.42)(10.90)



PLAN
Scale 1"=5'

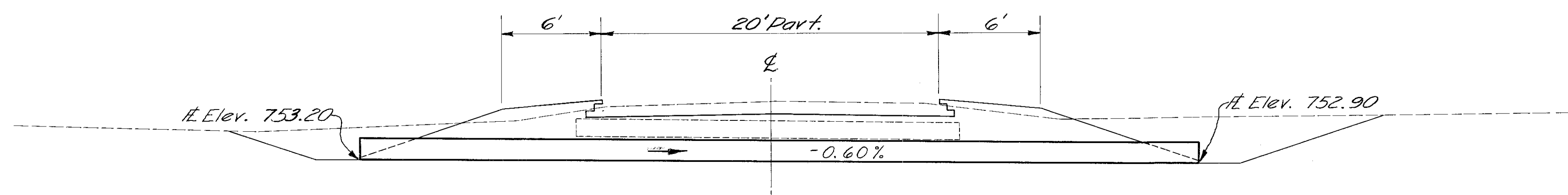
CULVERT DATA

Type: Pipe
Size: 15" x 50'
Work Reqd: Build Std. 15" x 50' Pipe Culvert.

DRAINAGE AREA = 0.33 Ac.
 $Q_{10} = 2.6$ cfs.

ESTIMATED QUANTITIES

Item E-2 Excavation for Structure 8-C.Y.
Item S-27 15" Pipe for Roadway Culvert. 50-L.F.



SECTION
Scale 1"=5'

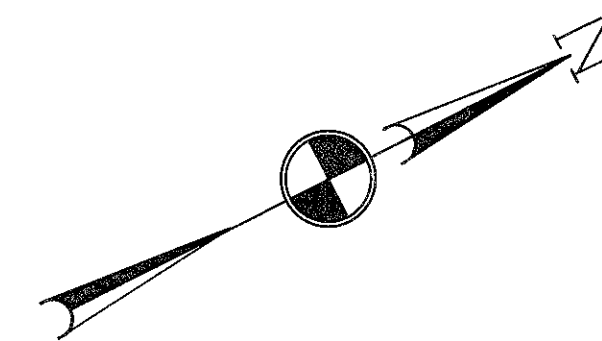
2

ROS-138-10 91
PIPE CULVERT
STA. 576+11

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

37
51

ROSS COUNTY
ROS-138-(10.42)(10.90)
 0.5+ Mi. South of Austin



PROPOSED STRUCTURE
 TYPE: Continuous concrete slab on capped pile piers and abutments
 SPANS: 30'-37.5'-30' 1/2 brgs.
 ROADWAY: 32'-0" w/ guard rails
 LOAD FREQUENCY: CP=30(51)
 SKEW: 20° R.F.
 WEARING SURFACE: Bituminous
 APPROACH SLABS: A3-1-54 (15' long)
 ALIGNMENT: Tangent

P.C. STA. = 557+25.25
 P.T. STA. = 557+25.25

CURVE DATA
 P.I. STA. = 558+00.67
 $\Delta = 1^\circ - 30.5' Lt.$
 $D = 1^\circ - 00'$
 $T = 75.42'$
 $L = 150.83'$
 $E = 0.50'$
 $R = 5729.58'$

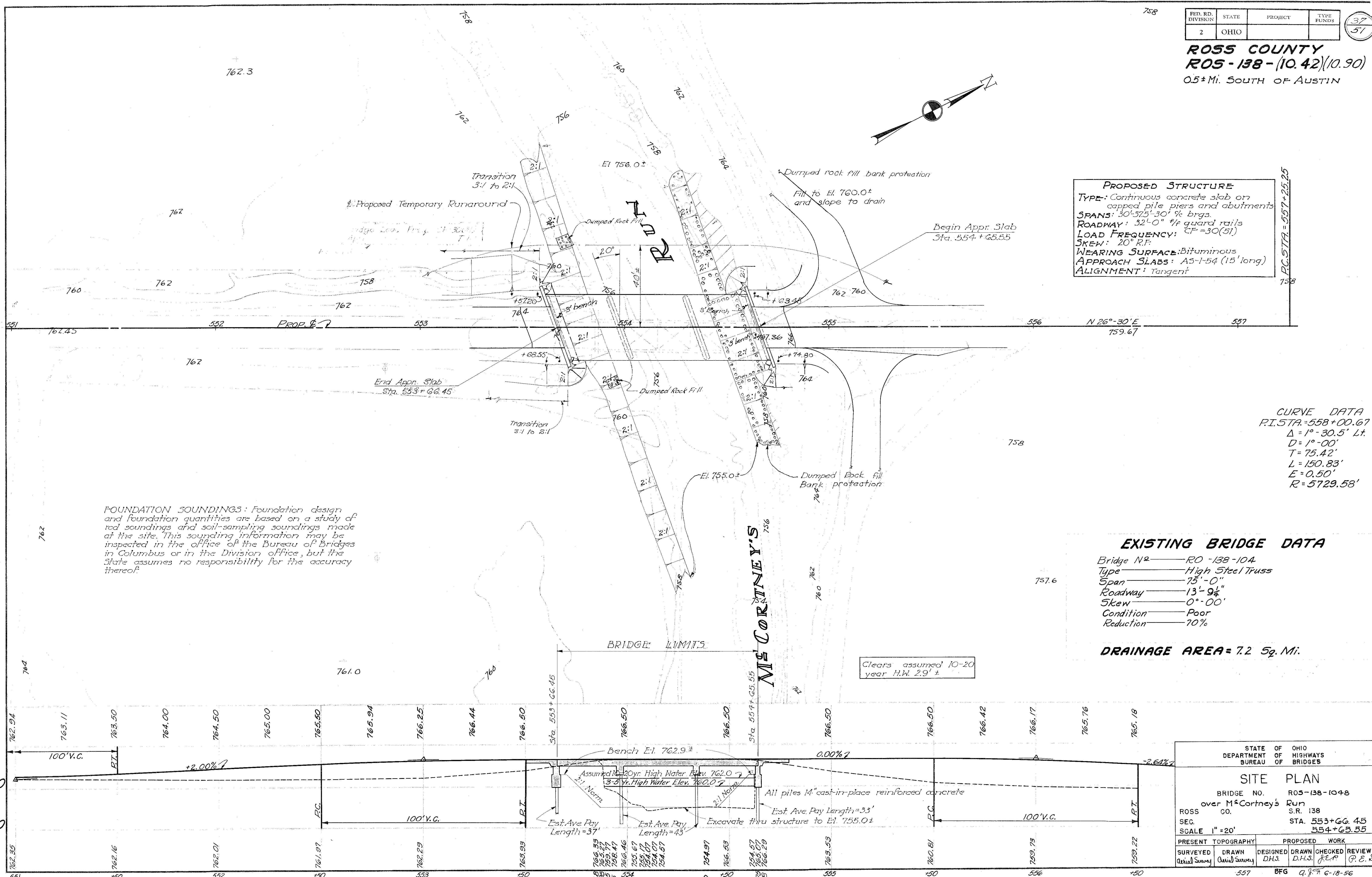
EXISTING BRIDGE DATA

Bridge No. — RO-138-104
 Type — High Steel Truss
 Span — 75'-0"
 Roadway — 13'-9 1/4"
 Skew — 0°-00'
 Condition — Poor
 Reduction — 70%

DRAINAGE AREA = 7.2 Sq. Mi.

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

Clears assumed 10-20 year H.W. 2.9' ±

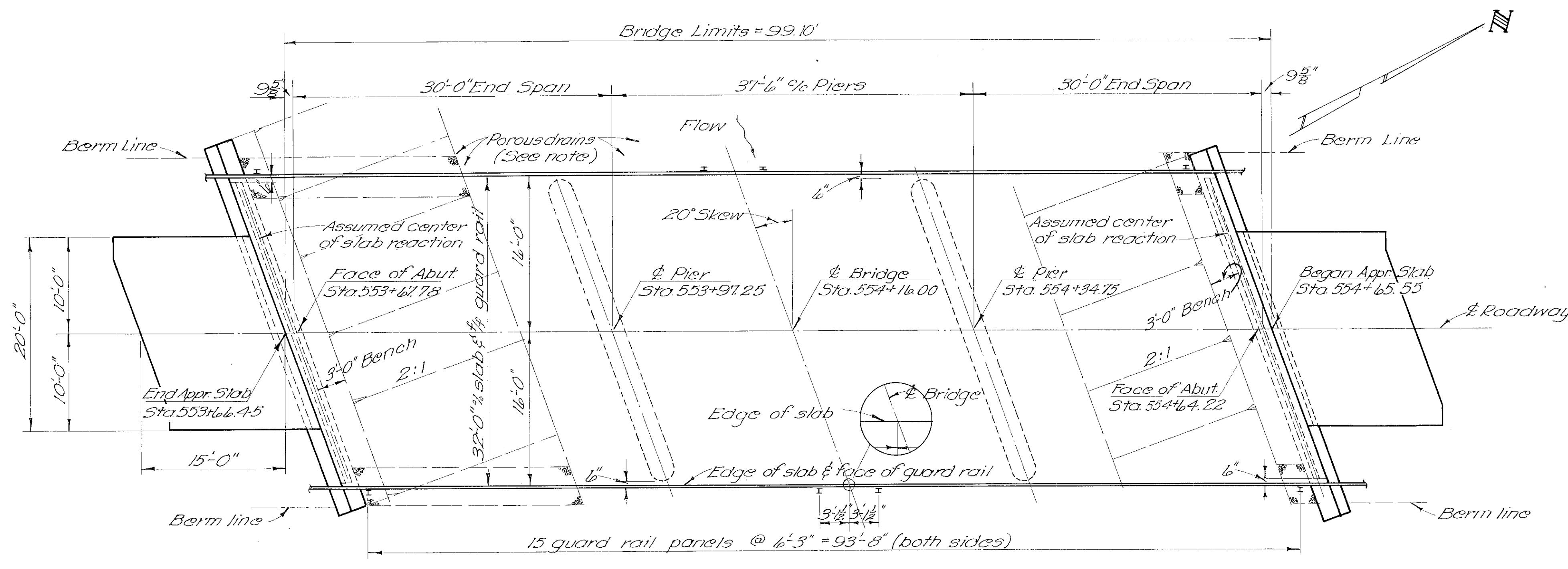


BRIDGE LIMITS

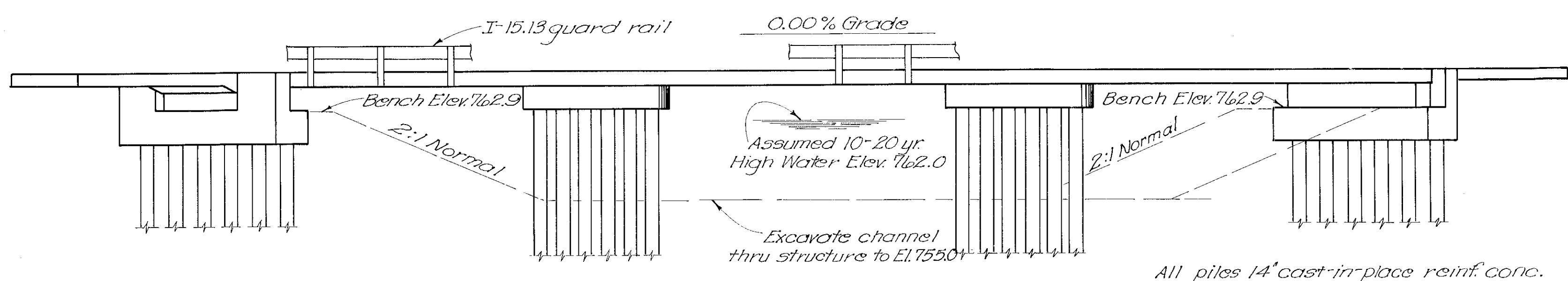
M^cCORTNEY'S

STATE OF OHIO DEPARTMENT OF HIGHWAYS BUREAU OF BRIDGES					
SITE PLAN					
BRIDGE NO. ROS-138-1048			over M ^c Cortney's Run		
ROSS CO. S.R. 138			SEC. STA. 553+66.45		
SCALE 1" = 20'			554+65.55		
PRESENT TOPOGRAPHY			PROPOSED WORK		
SURVEYED	DRAWN	DESIGNED	PROPOSED DRAWN	CHECKED	REVIEWED
Aerial Survey	Aerial Survey	D.H.S.	D.H.S.	J.E.P.	P.E.S.
557 BFG 6-18-56					

ROSS COUNTY
ROS-138-(10.42)(10.90)



GENERAL PLAN



ELEVATION

ESTIMATED QUANTITIES								
Item	Total	Unit	Description	Super.	Abut's	Pier	General	As Built
E-2	58	Cu.Yd.	Unclassified excavation		58			
E-3	699	Cu.Yd.	Channel excavation				699	65:423 276
S-1	146	Cu.Yd.	Class "C" concrete, superstructure and pier caps	134		12		
S-1	41	Cu.Yd.	Class "E" concrete, abutments		41			
S-3	378	Sq.Yd.	Type "C" waterproofing	378				
S-4	39,985	Lb.	Reinforcing steel	33,102	4,408	3,372	103	
S-14	198.2	lin.ft.	Railing (Type I-15.13 with galvanized steel posts and bolts)	198.2				
S-15	Lump	Sum	Temporary run-around bridge (only)				Lump	
S-16	Lump	Sum	First test pile				Lump	
S-18	940	lin.ft.	14" cast-in-place reinforced concrete piles		420	520		65:11 929
S-24	Lump	Sum	Removal of existing structure				Lump	
S-29	13	Cu.Yd.	Porous backfill		13			
S-29	7	Cu.Yd.	Porous drains on embankment slopes				7	
T-10	205	Cu.Yd.	Dumped rock fill				205	
T-35	22	Cu.Yd.	Asphaltic concrete surface course Type "A" or "C" (85-100)	22				

GENERAL NOTES

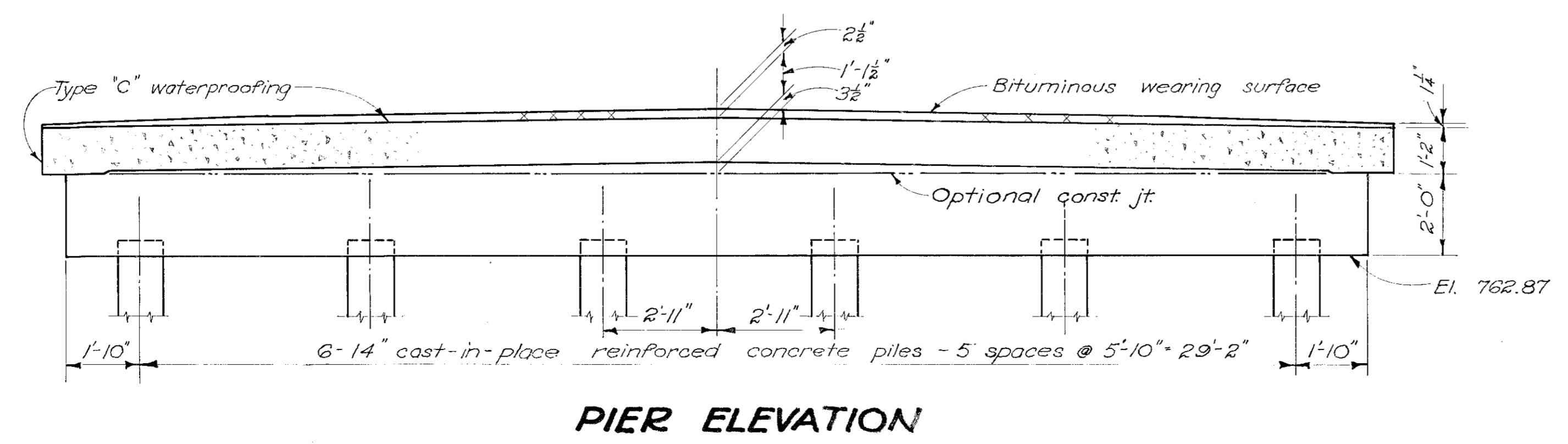
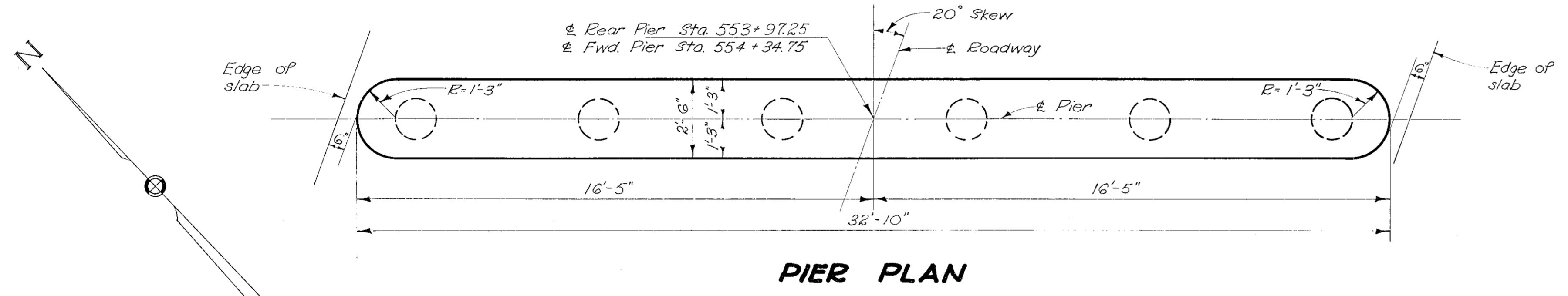
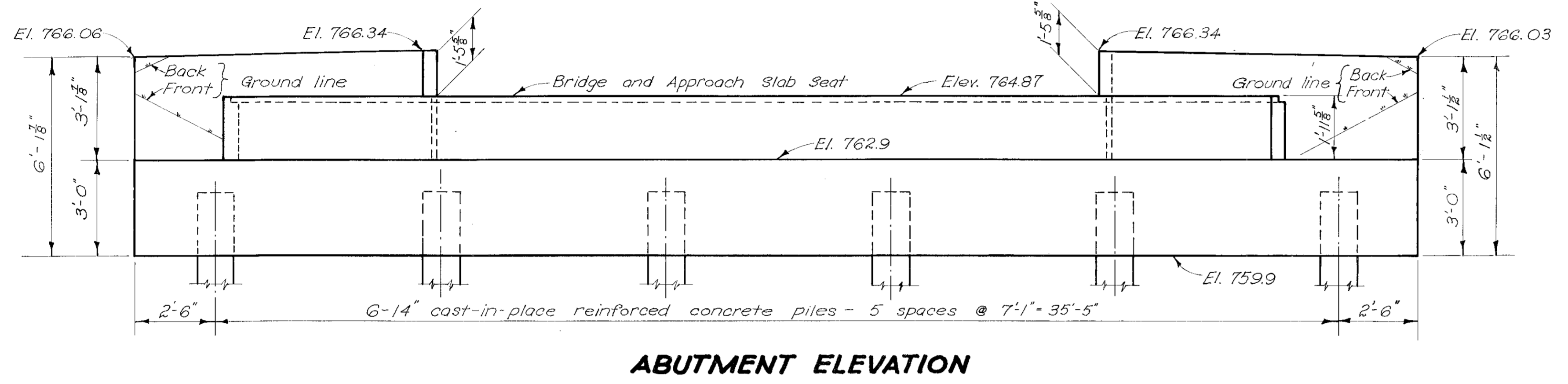
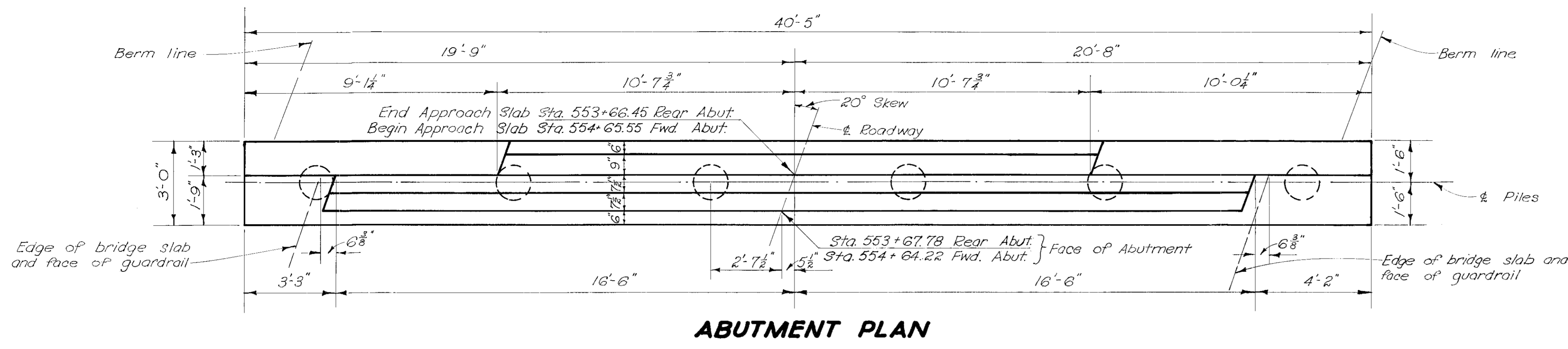
- REFERENCE** shall be made to Standard Drawings C5-1-54, A-1-54 and P-1-54, all revised 12-1-54.
- TEMPORARY RUN-AROUND BRIDGE**: Load frequency for bridge, CF=30, with unit stresses increased 25% as per Sec. 82 of the Design Specifications for Highway Structures.
- REMOVAL OF EXISTING STRUCTURE**: When no longer needed to maintain traffic the existing structure shall be removed. The superstructure shall become the property of the Contractor. The substructure shall be removed to proposed ground lines and to whatever extent is necessary to avoid interference with new construction, including pile driving. Portions of the forward abutment within the area of the approach pavement and shoulders shall be removed to 3ft. below top of such pavement and shoulders. Waste masonry shall be disposed of as bank protection as shown on the site plan or as directed by the Engineer.
- PILES** shall be driven to a minimum bearing capacity of 27 tons for the abutments and 37 tons for the piers. The length of penetration of every pile shall be at least 80% of the estimated average length of penetration of the piles in the pertinent pier or abutment as indicated on the plans unless a lesser penetration is approved by the Director.
- GRAVEL**, if used as the coarse aggregate, shall be according to Sec. M-3.93 instead of M-3.91 for Class "C" concrete in the superstructure. Gravel meeting the requirements of Sec. M-3.93 also may be used for other concrete in this structure.
- GALVANIZING** of all members which are specified to be galvanized shall be as called for in Sec. M-7.4(d).
- POROUS DRAINS**, extending across bench at forward corners of bridge, and from face of abutment to Elev. 755 at rear corners of bridge, shall be provided. The drains shall be 4ft. wide and one ft. thick.
- ASPHALTIC CONCRETE SURFACE COURSE**, Item T-35, laid in two courses, shall be provided.
- PIER PILE ENCASEMENT** as shown on Std. Dwg. No. P-1-54 may be omitted provided that the tapered portion, if any, of all pier piles does not extend above the stream bed or the proposed surface of the ground. If the tapered portion of any pile extends above these limitations, the encasement will be required for all the pier piles. If the encasement is omitted, the painting of the piles shall extend to low water elevation or, if the proposed surface of the ground is above low water, it shall extend to at least one foot below the proposed surface of the ground.

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

**GENERAL PLAN & ELEVATION
NOTES AND
ESTIMATED QUANTITIES
BRIDGE NO. ROS-138-1048
OVER MCCORTNEY'S RUN
ROSS COUNTY STA. 553+66.45
554+65.55**

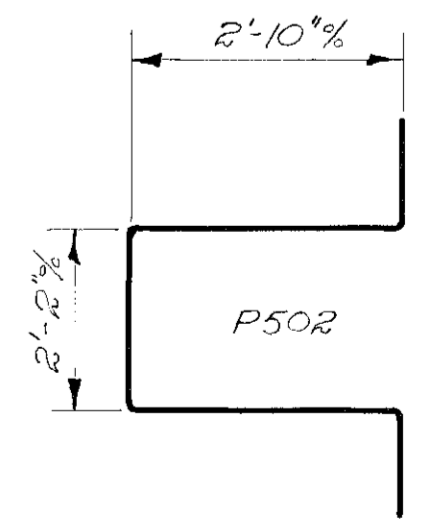
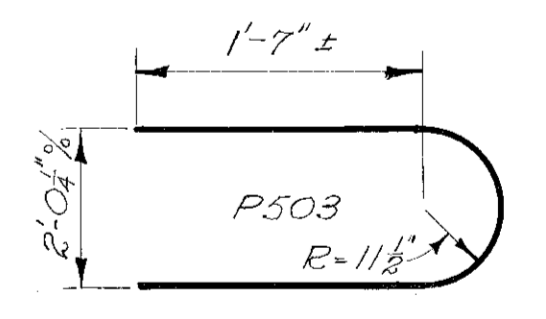
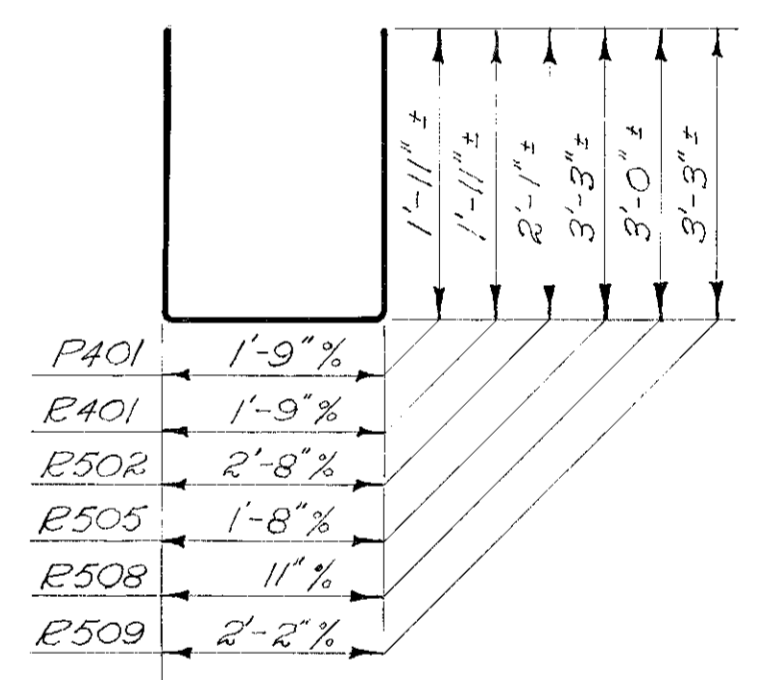
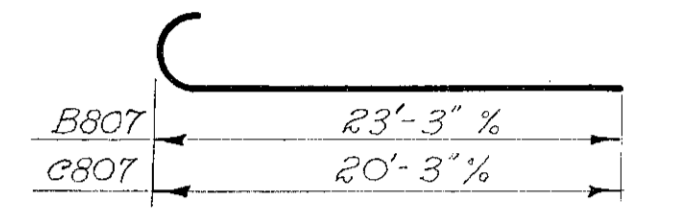
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
		RHD	JD	BFG	6-18-56	

ROSS COUNTY
ROS-138-(10.42)(10.90)



REINFORCING STEEL LIST

MARK	No.	LENGTH	WEIGHT	SHR.
Superstructure				
A807	96	34'-7"	8864	3
B807	32	24'-4"	2079	B
C807	32	21'-4"	1823	B
D807	16	22'-0"	940	3
E807	16	16'-10"	719	3
F907	64	26'-4"	5730	3
G907	32	15'-0"	1632	3
H907	32	11'-1"	1206	3
J601	32	20'-5"	981	3
K601	16	15'-9"	379	3
M601	91	33'-6"	4579	3
N601	63	33'-6"	3170	3
Abutments				
R1001	16	18'-0"	1239	3
R801	16	21'-5"	915	3
R501	16	20'-10"	348	3
R502	118	6'-7"	796	B
R503	8	17'-2"	143	3
R504	24	5'-4"	133	3
R505	30	7'-11"	248	B
R506	8	8'-9"	79	3
R507	16	5'-3"	83	3
R508	16	6'-8"	111	B
R509	16	8'-5"	140	B
R401	48	5'-5"	174	B
PIERS				
P1001	8	33'-6"	1153	3
P901	8	30'-4"	825	3
P701	72	4'-0"	589	3
P501	4	30'-4"	127	3
P502	48	9'-0"	451	B
P503	8	6'-4"	53	B
P401	48	5'-5"	174	B
Replacement Steel				
RE1001	1	7'-2"	31	3
RE901	1	6'-10"	23	3
RE801	1	6'-6"	17	3
RE701	1	6'-2"	13	3
RE601	1	5'-11"	9	3
RE501	1	5'-7"	6	3
RE401	1	5'-3"	4	3



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

ABUTMENT & PIER DETAILS
& REINFORCING STEEL LIST
BRIDGE No. ROS-138-1048
OVER M^cCORTNEY'S RUN
ROSS COUNTY STA. 553 + 66.45
554 + 65.55

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISION
wj	wj	RBT	JED	BFG	9.8.56	6-18-56

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

40
51

ROSS COUNTY
ROS-138-(10.42)(10.90)
At Austin

CURVE DATA.
PI. Sta. 583 + 25.83
 $\Delta = 59^\circ - 23' - 30''$ Lt.
 $D_c = 71' - 00''$
T = 46.02
L = 83.65
R = 80.7

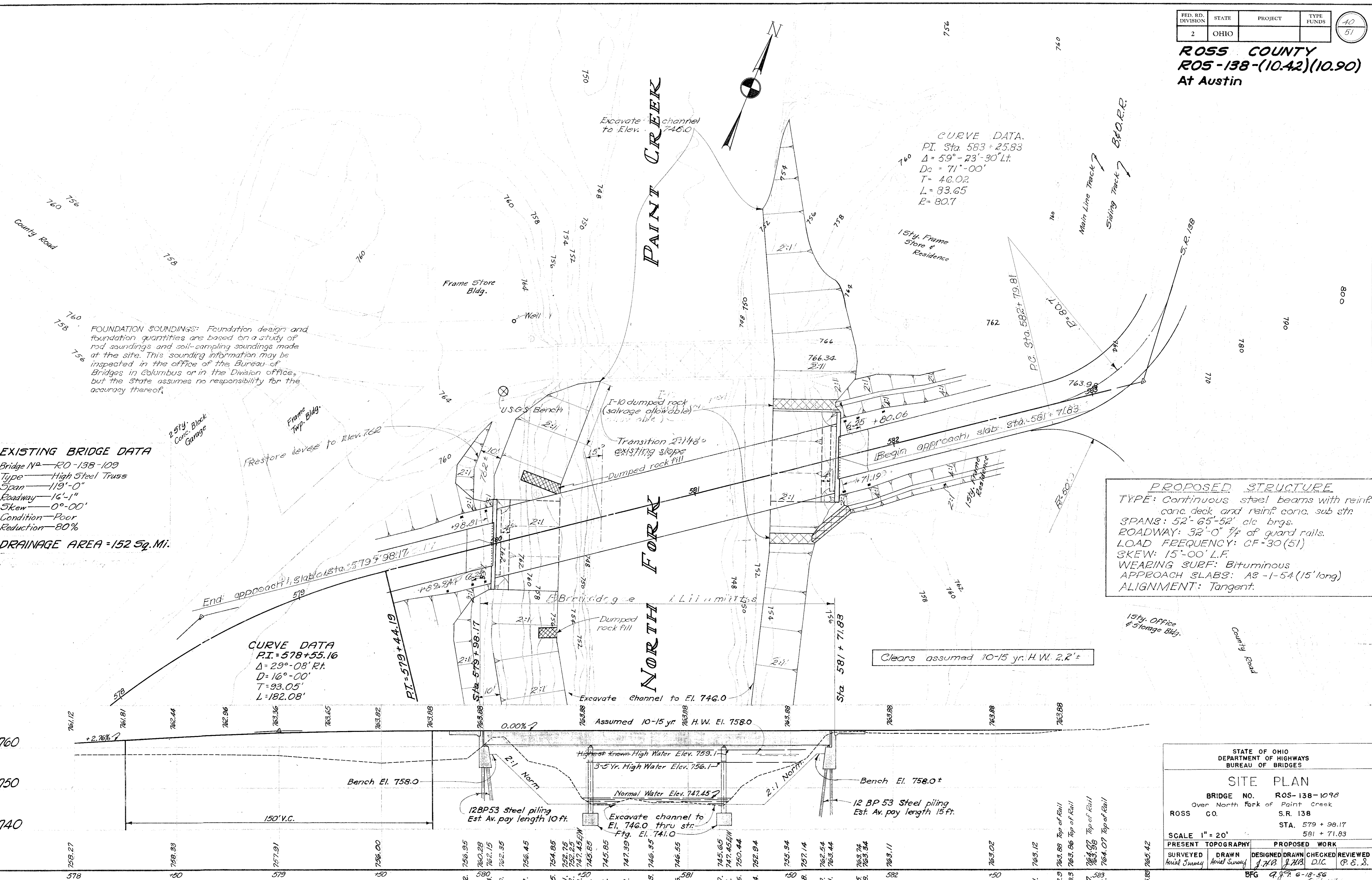
EXISTING BRIDGE DATA
Bridge No. — RO-138-109
Type — High Steel Truss
Span — 119'-0"
Roadway — 16'-1"
Skew — 0°-00'
Condition — Poor
Reduction — 80%
DRAINAGE AREA = 152 Sq. Mi.

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

PROPOSED STRUCTURE
TYPE: Continuous steel beams with reinf. conc. deck and reinf. conc. sub str.
SPANS: 52'-65'-52' c/c brgs.
ROADWAY: 32'-0" w/ 4' of guard rails.
LOAD FREQUENCY: CF-30(51)
SKEW: 15°-00' L.F.
WEARING SURF: Bituminous
APPROACH SLABS: AS-1-54 (15' long)
ALIGNMENT: Tangent.

CURVE DATA
P.I. = 578 + 55.16
 $\Delta = 29^\circ - 08' R$.t.
D = 16°-00'
T = 93.05'
L = 182.08'

Clears assumed 10-15 yr. H.W. 2.2'±



STATE OF OHIO DEPARTMENT OF HIGHWAYS BUREAU OF BRIDGES					
SITE PLAN					
BRIDGE NO. ROS-138-109		Over North Fork of Paint Creek			
ROSS CO.		S.R. 138			
STA. 579 + 98.17		581 + 71.83			
SCALE 1" = 20'					
PRESENT TOPOGRAPHY			PROPOSED WORK		
SURVEYED Aerial Survey	DRAWN Aerial Survey	DESIGNED J.H.B.	DRAWN J.H.B.	CHECKED D.C.	REVIEWED P.E.S.
BFG 9.8.6-18-56					

ROSS COUNTY
ROS-138-(10.42)(10.90)

GENERAL NOTES

REFERENCE shall be made to Standard Drawing CSB-1-55, sheets 1, 2, & 5, dated 3-1-55. Railing shall have a top handrail.

REMOVAL OF EXISTING STRUCTURE: When no longer needed to maintain traffic the existing structure shall be removed and become the property of the Contractor. Abutments shall be removed to the proposed ground line. Waste masonry may be disposed of as bank protection as directed by the Engineer.

TRANSVERSE DECK REINFORCING shall be placed parallel to the abutments.

POROUS DRAINS, extending from face of abutment to Elev. 748, shall be provided at all four corners of the bridge. The drains shall be 5 feet wide at the low end, tapering to 4 feet wide at the face of the abutment, and one foot thick.

STEEL FOR END FINISH, GUTTERS AND SCUPPERS need not be copper-bearing.

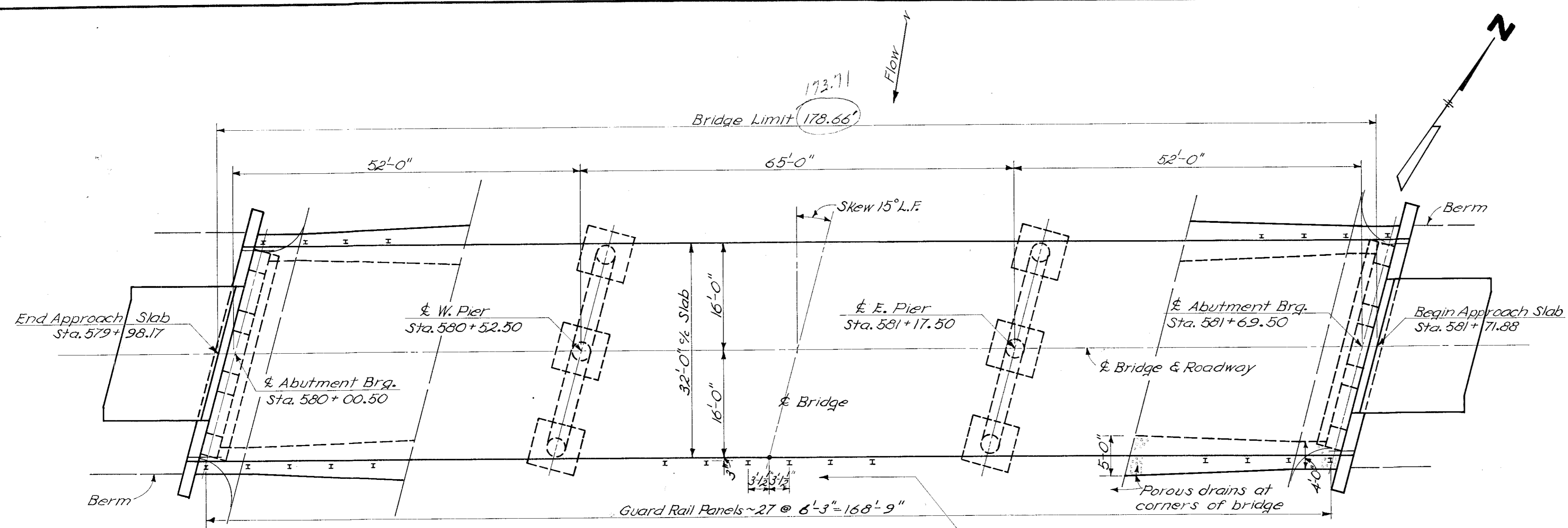
PILES shall be driven to a minimum bearing capacity of 40 tons. The length of penetration of every pile shall be at least 80% of the estimated average pay length of the piles in the pertinent abutment as indicated on the plans unless a lesser penetration is approved by the Director. Due to the high density of the soil and the hard driving expected a hammer having a minimum energy rating of 15000 ft. lbs. shall be used.

GRAVEL, if used as the coarse aggregate, shall be according to Sec. M-3.93 instead of M-3.91 for Class "C" concrete in the superstructure. Gravel meeting the requirements of Sec. M-3.93 also may be used for other concrete in this structure.

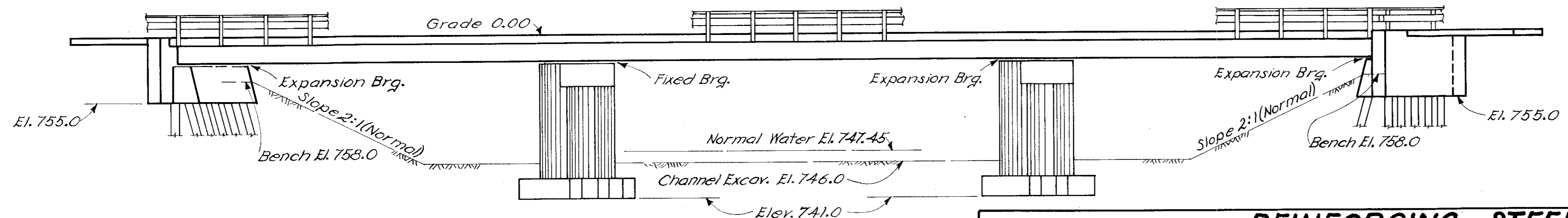
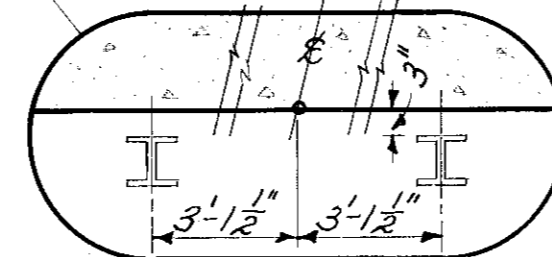
PAINT, both shop and field, shall be applied by brushing. Spray application not permitted.

GALVANIZING of all members which are specified to be galvanized shall be as called for in Sec. M-7.4(d).

ASPHALTIC CONCRETE SURFACE COURSE, Item T-35, laid in two courses, shall be provided.



GENERAL PLAN



ELEVATION

ESTIMATED QUANTITIES				Superstr.	Abut.	Piers	Gen.	As Built
Item	Total	Unit	Description					
E-2	Lump	Sum	Cofferdams, cribs, and sheeting				Lump S.	
E-2	127	Cu. Yd.	Unclassified excavation		127	90	C-1, +B	227
E-3	3680	Cu. Yd.	Channel excavation				C-5, +10A	2556
S-1	127	Cu. Yd.	Class "C" concrete, superstructure	127				
S-1	37	Cu. Yd.	Class "C" concrete, pier caps and columns			37		
S-1	31	Cu. Yd.	Class "E" concrete, pier footings			27	C-1, +A	31
S-1	88	Cu. Yd.	Class "E" concrete, abutments		88			
S-3	650	Sq. Yd.	Type "C" waterproofing	650				
S-4	52977	Lbs.	Reinforcing steel	35613	4971	12490	C-1, +2B	53175
S-7	106800	Lbs.	Structural steel	106800			C-5, +671	107471
S-8	402800	Lbs.	Field painting of structural steel				C-5, +671	107471
S-14	34733	Lin. Ft.	Railing (Type I-15.13 with handrail and galvanized steel posts)	34733				
S-16	Lump	Sum	First test pile				Lump S.	
S-18	250	Lin. Ft.	Steel piles (12 BP53)		250		C-5, +63	457
S-24	Lump	Sum	Removal of existing structure				Lump S.	
S-29	22	Cu. Yd.	Porous backfill			22		
S-29	16	Cu. Yd.	Porous drains on embankment slopes					16
T-35	38	Cu. Yd.	Asphaltic concrete surface course, Type "A" or "B" (85-100)	38				

REINFORCING STEEL LIST

Mark	No.	Length	Weight	Shp.	Bending Diagrams		Mark	No.	Length	Weight	Shp.		
Superstructure							Abutments						
S601	255	32'-9"	12544	S			A801	16	3'-4"	1339	S		
S602	240	35'-6"	12797	S			A802	8	23'-3"	497	S		
S603	40	26'-0"	1562	S			A601	42	14'-1"	888	B		
S501	255	32'-9"	8710	S			A602	22	11'-7"	383	B		
Piers							Replacement Bars						
P1101	32	15'-8"	2664	S			RE11	1	7'-6"	40	S		
P1102	32	7'-5"	1261	B			RE10	1	7'-2"	31	S		
P1001	24	9'-4"	964	B			RE9	1	6'-10"	23	S		
P1002	12	25'-0"	1291	S			RE8	1	6'-6"	17	S		
P901	4	34'-2"	465	B			RE6	2	5'-11"	18	S		
P902	4	28'-6"	388	S			RE5	1	5'-7"	6	S		
P903	8	13'-0"	354	B			RE4	1	5'-3"	4	S		
P904	16	15'-8"	852	S			RES4	1	5'-3"	4	B		
P905	16	6'-8"	363	B			SPIRAL REINFORCING LIST						
P906	6	34'-6"	704	B			Mark	No.	Core D.	Length	Pitch	No. of Turns	Weight
P601	27	6'-6"	264	S			SPA01	6	28	12'-8"	4'-2"	36	4213
P602	30	6'-0"	270	S									
P603	48	5'-6"	396	S									
P501	104	6'-10"	741	B									

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, P901 is a No. 9 size bar and P1102 is a No. 11 size bar.

SPIRAL REINFORCING BARS

The "Length" shown in the steel list for the spiral bars is the distance from the top of the footing to the bottom of the pier cap.

The "No. of Turns" shown in the steel list for the spiral bars is the "Length" divided by the pitch, plus 3 turns (total number of closed coils), expressed as the nearest whole number.

Spiral reinforcing bars shall not have deformations but shall in other respects conform to Item S-4.

1/2 closed coils shall be provided at the ends of each spiral unit.

Three 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.

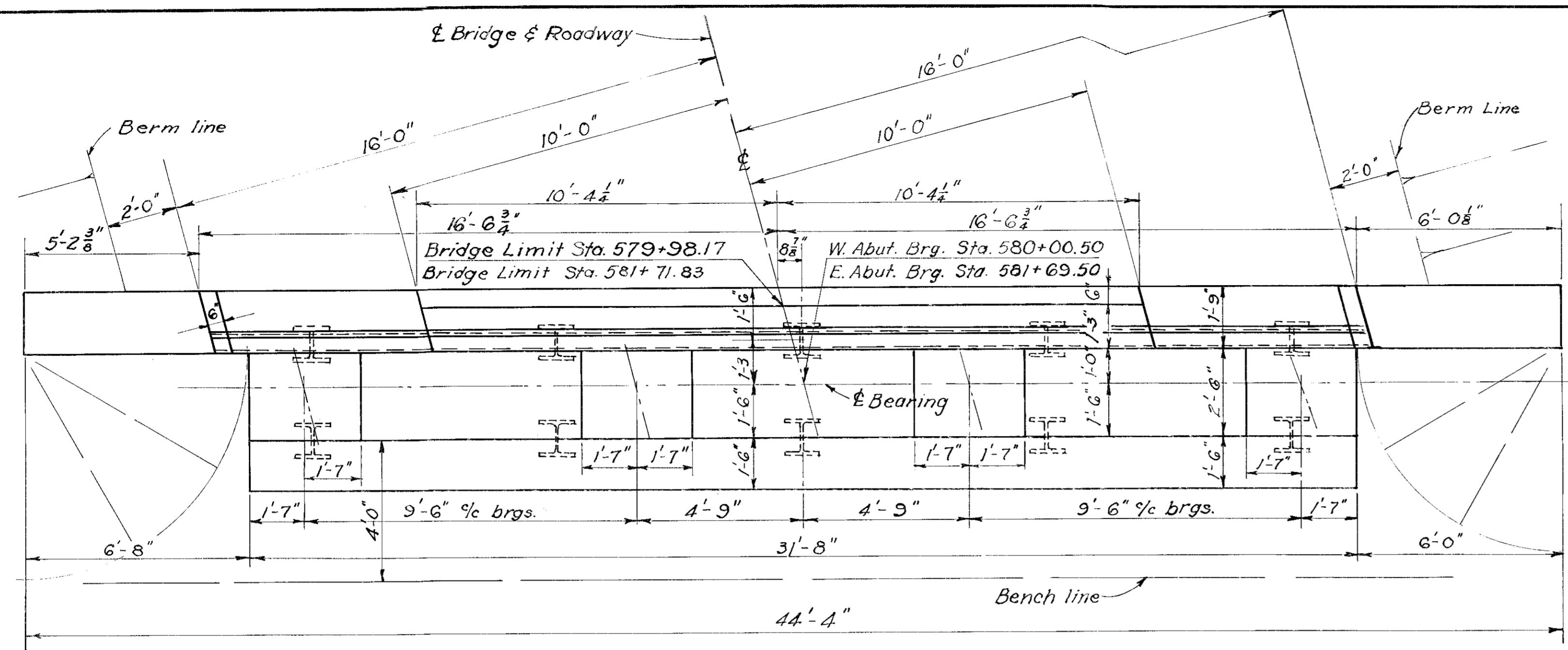
STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES AND RAILROAD CROSSINGS

GENERAL PLAN & ELEVATION
NOTES - QUANTITIES - STEEL LIST
BRIDGE NO. ROS-138-1098
OVER NORTH FORK OF PAINT CREEK
ROSS COUNTY STA. 579+98.17
581+71.63

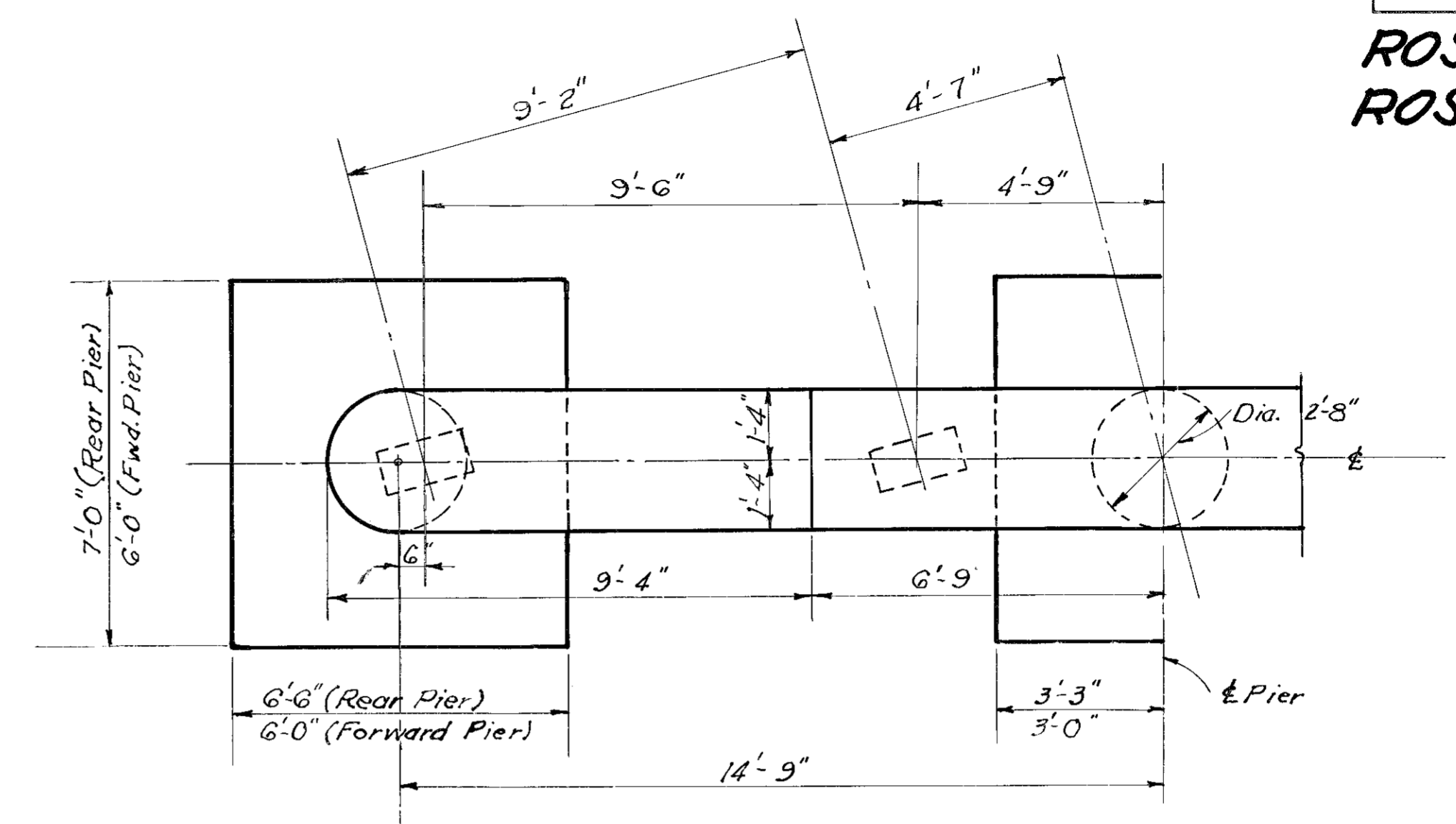
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J.V.G.	J.V.G.	R.W.L.	E.S.S.	B.F.G.	6-18-56	

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

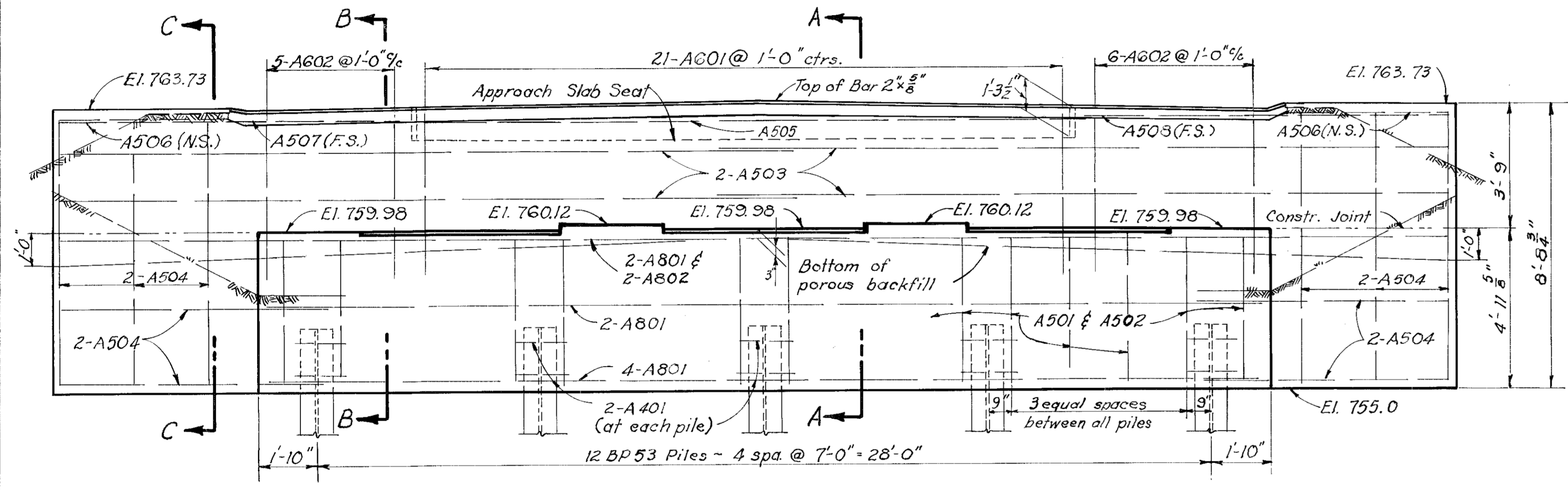
ROSS COUNTY
ROS-138-(10.42)(10.90)



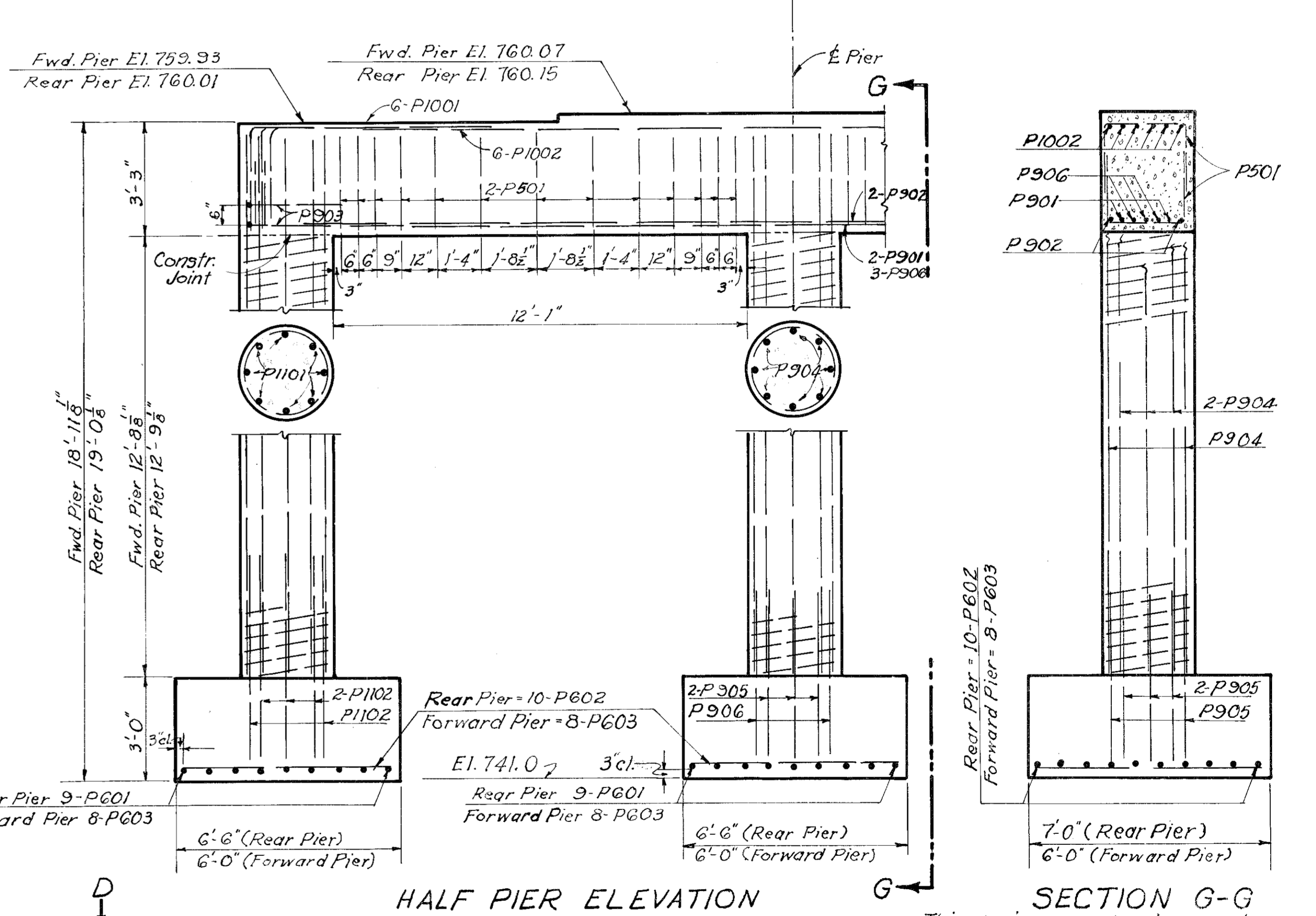
ABUTMENT PLAN



HALF PIER PLAN



ABUTMENT ELEVATION



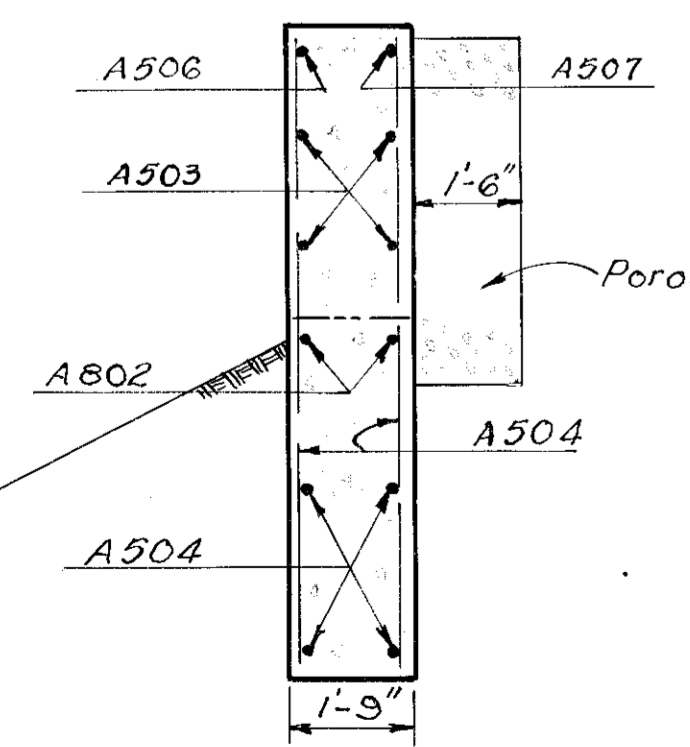
HALF PIER ELEVATION

POROUS BACKFILL shall extend upward to the approach slab and to the surface of the earth shoulders, and outward to the surface of the earth embankment slopes. Excavation thereto, 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.

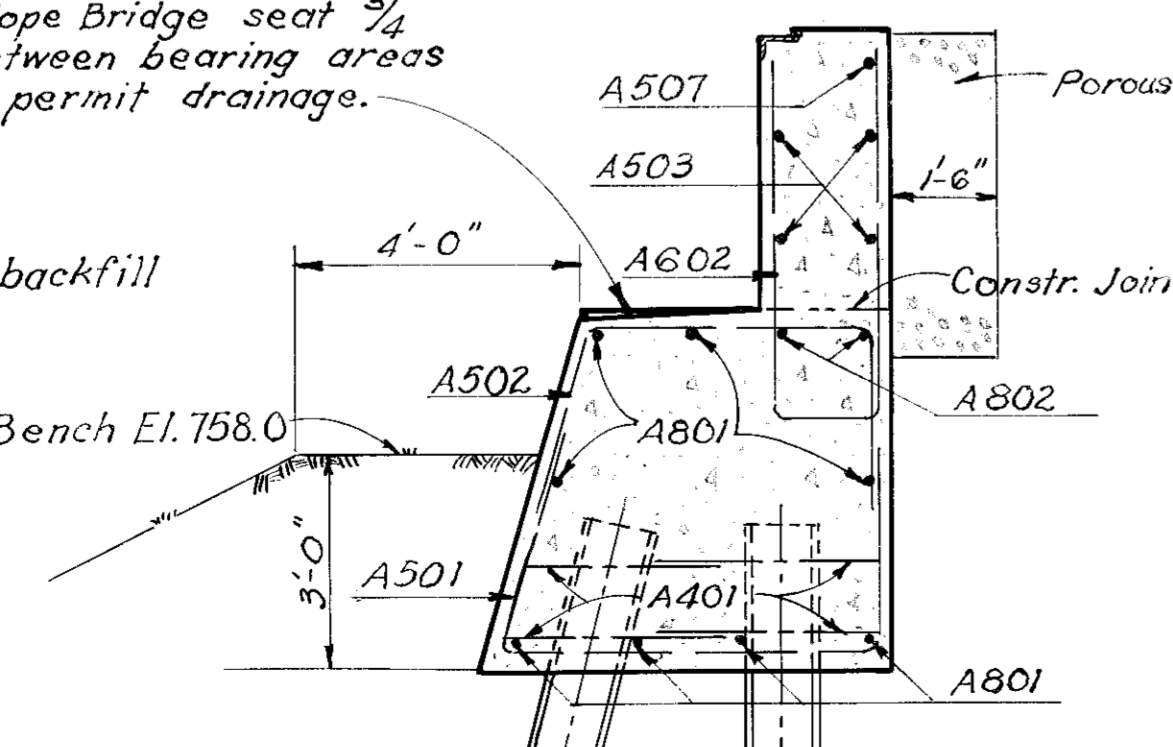
PLACE REINFORCING BARS at bridge seats in abutments and piers so that they will clear the bearing anchor bars.

REINFORCING STEEL shall be 2" clear from face of concrete unless otherwise noted.

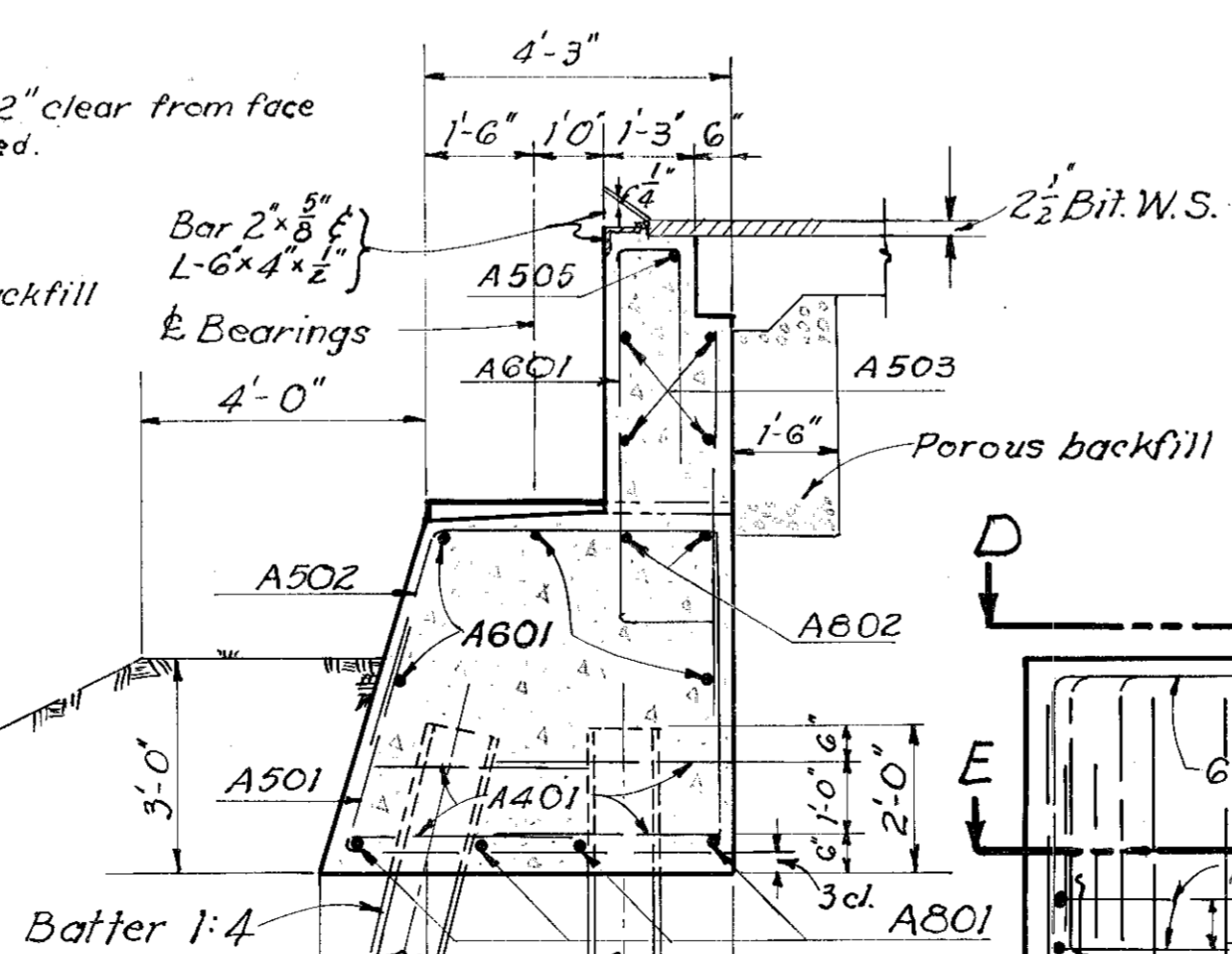
Note: Slope Bridge seat $\frac{3}{4}$ " between bearing areas to permit drainage.



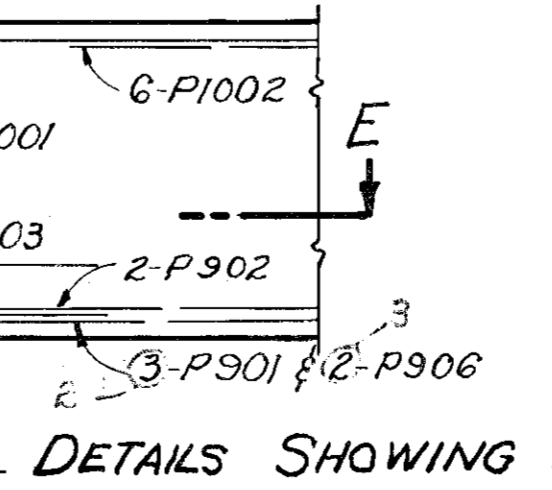
SECTION C-C



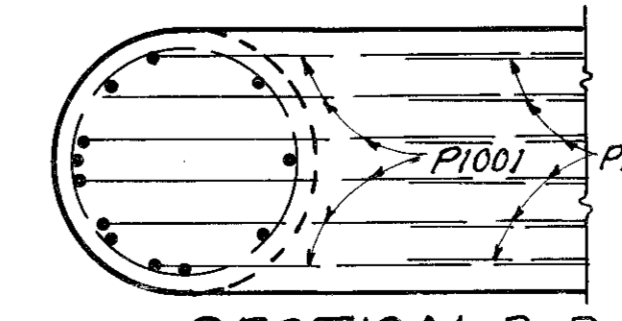
SECTION B-B



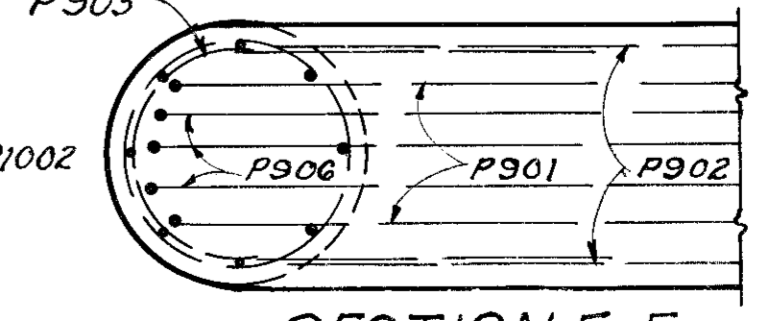
SECTION A-A



DETAILS SHOWING REINFORCING AT END COLUMN AND PIER CAP



SECTION D-D



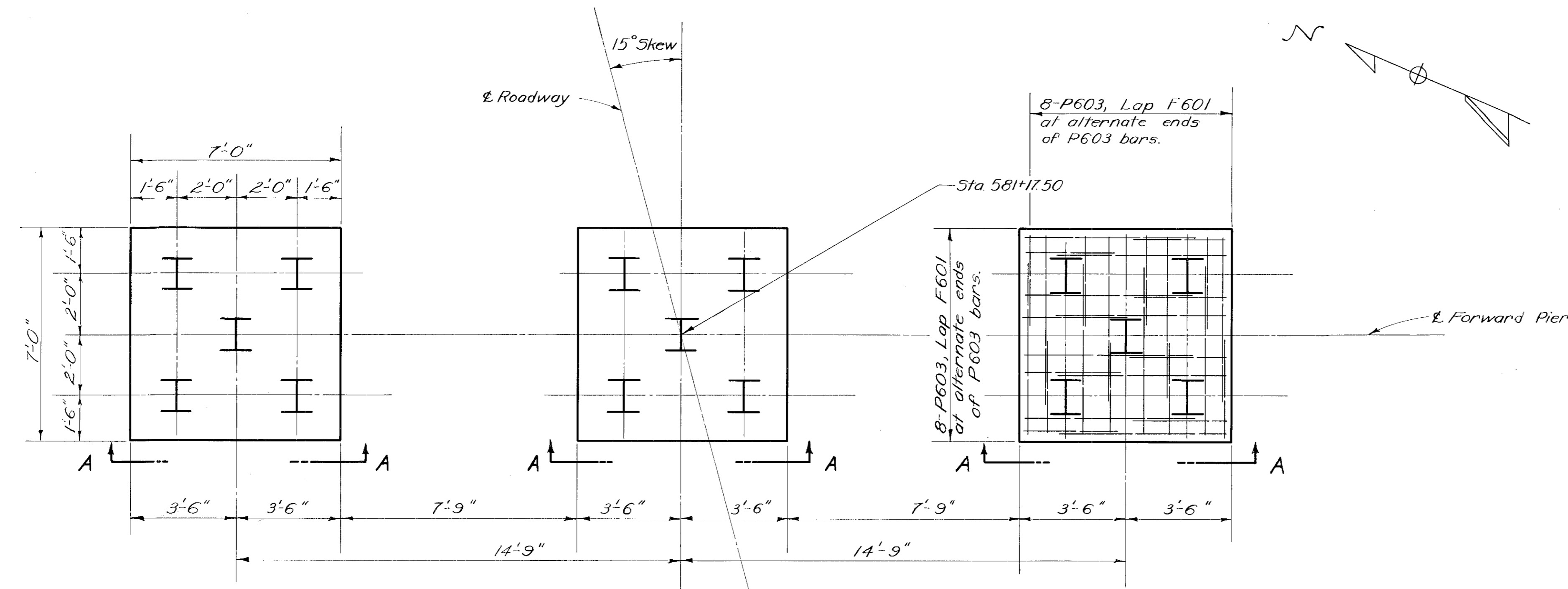
SECTION E-E

SECTION G-G
This sheet superseded in part by Sheet No. 42A. (7-15-57)

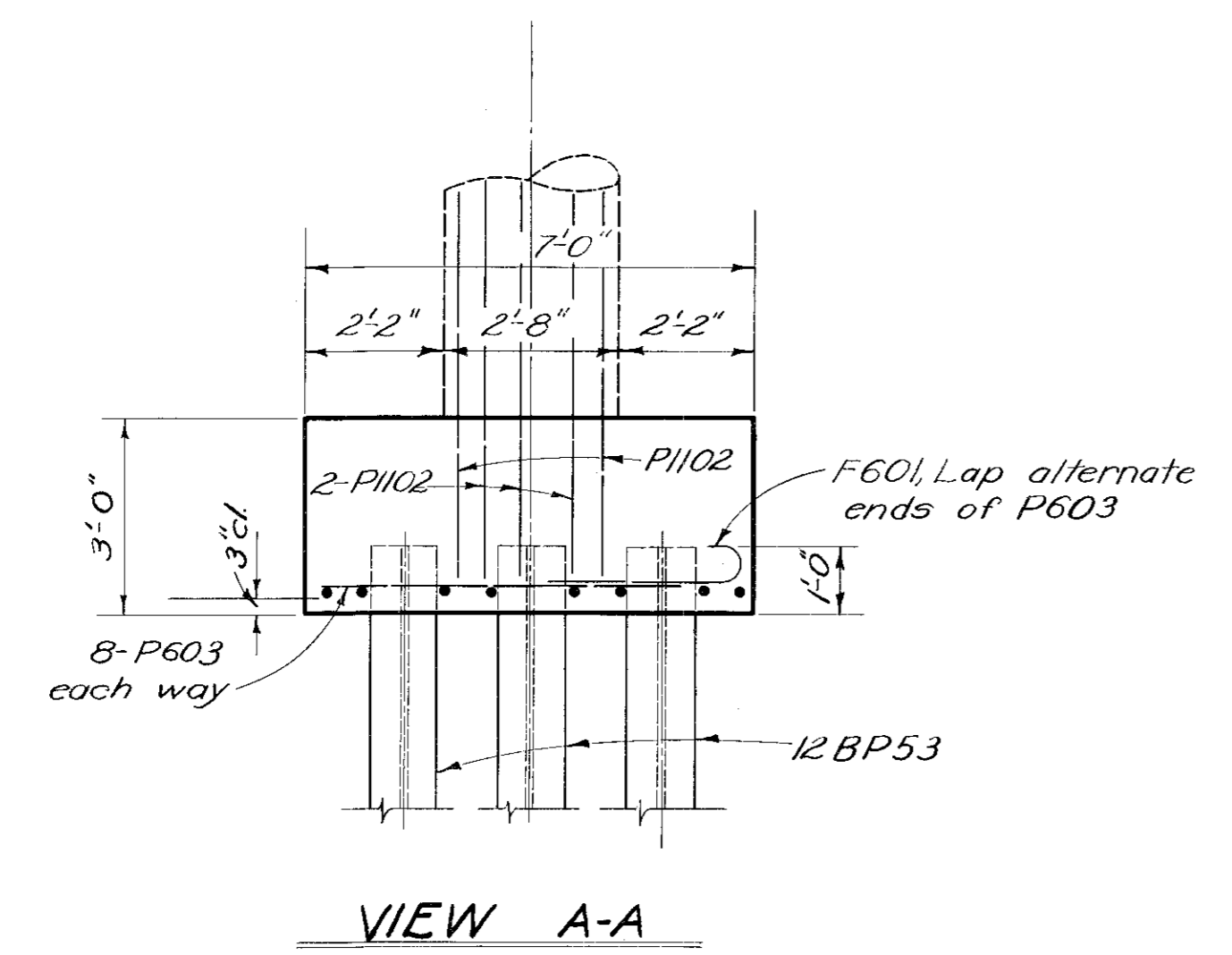
STATE OF OHIO DEPARTMENT OF HIGHWAYS BUREAU OF BRIDGES AND RAILROAD CROSSINGS			
ABUTMENT & PIER DETAILS			
BRIDGE NO. ROS-138-10.98			
OVER NORTH FORK OF PAINT CREEK			
ROSS COUNTY STA. 579+98.17			
581+71.83			
DESIGNED	DRAWN	TRACED	CHECKED
J.V.G.	J.V.G.	J.E.G.	B.F.G.
			REVIEWED
			DATE
			7-15-57

Note: Shift the vertical reinforcing steel in the pier columns, so that the reinforcing bars in the cap may be properly placed.

ROS-138-(1042)(10.90)



PLAN OF FORWARD PIER FOOTINGS
All footings typical



VIEW A-A

Note:
All Details above footings same as shown on Sheet No. 42.
PILING shall be driven to a minimum bearing capacity of 30 tons at Forward Pier.
Estimated average length of piling = 15'

STEEL LIST					
Mark	No.	Length	Weight	Shp	Bending Diagram
F601	48	3'-7"	258	B	

ADDITIONAL REINFORCING STEEL REQUIRED FOR FORWARD PIER FOOTINGS

ADDITIONAL ESTIMATED QUANTITIES				
Item	Total	Unit	Description	Forward Pier
E-2	8	cu. yd.	Unclassified excavation	8
S-1	4	cu. yd.	Class E ² concrete, pier footings	4
S-4	258	lbs.	Reinforcing steel	258
S-18	225	Lin. Ft.	Steel piles (12BP53)	225

EXPLANATORY NOTE:
In excavating to footing elevation at forward pier it was found that the foundation material was not suitable for spread footings and therefore a pile foundation was necessary.

This sheet supersedes Sheet No. 42 for part shown.

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
DIVISION OF DESIGN AND CONSTRUCTION
BUREAU OF BRIDGES

REVISED FOOTINGS FOR FORWARD PIER
BRIDGE NO. ROS-138-1098
OVER NORTH FORK OF PAINT CREEK

STA. 579+98.17 to STA. 581+71.83
Ross County

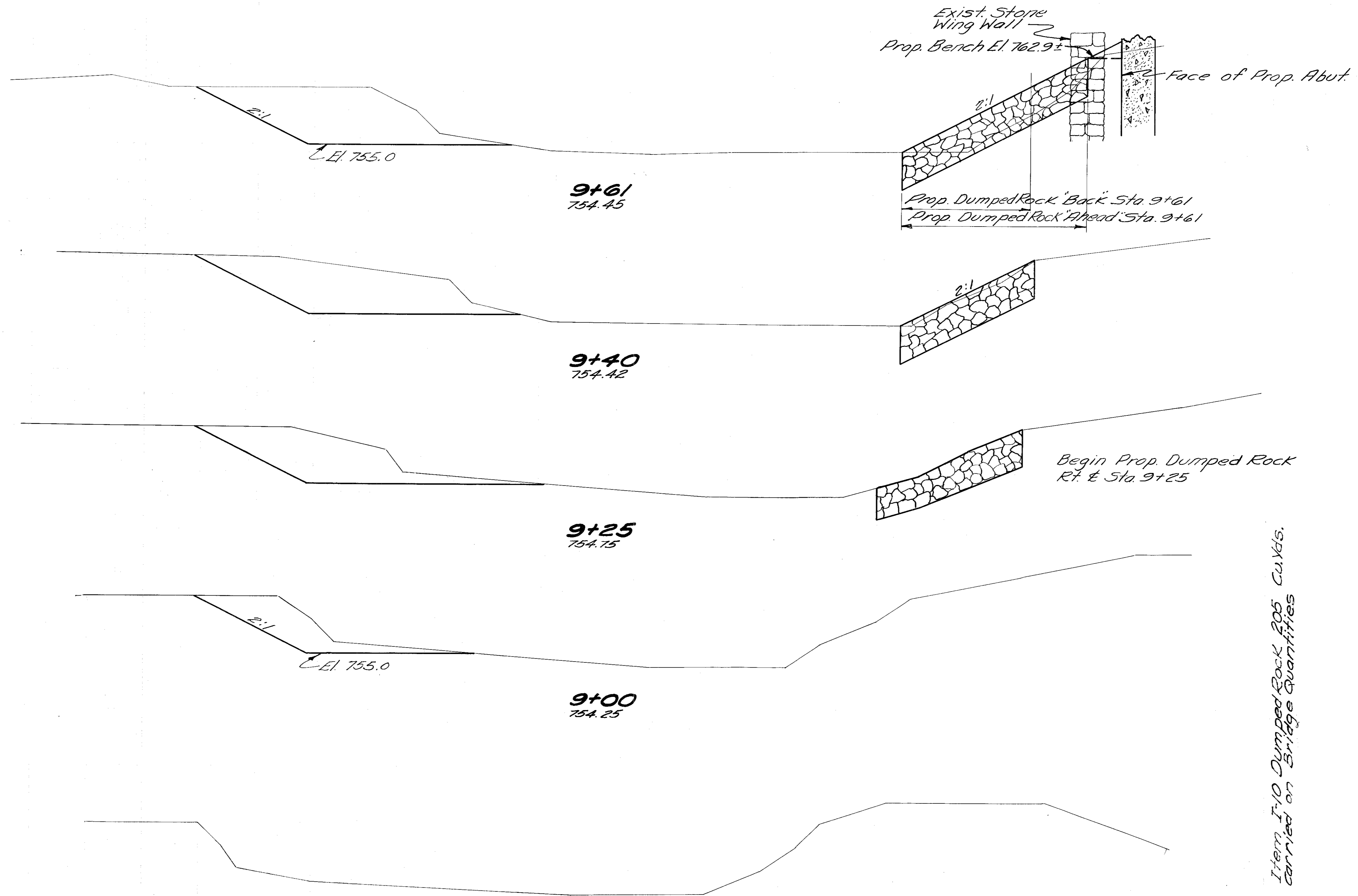
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
BCA	BCA	LDC		q.f.	7-18-57	

Seeding
End Sq
Width Yds.

ROSS COUNTY
ROS-138-(10.42)(10.90)

End Area Volume
Cut Fill Cut Fill

Item L-9 Seeding & Protecting
Sta. 8+74.5 To Sta. 11+04=357.59 Yds.



103 2
85 0
117 0
62 0
105 0
71 0
48 0
22 0
0 0

Excavation 699 Cu. Yds.
Embankment 137 Cu. Yds.

Item I-10 Dumped Rock 205 Cu. Yds.
Carried on Bridge Quantities

BEGIN PROP. CHANNEL WORK STA. 8+74.5

CHANNEL SECTIONS FOR McCORTNEY'S RUN STA. 8+74.5 TO STA. 9+61

Sta. 8+74.5

Sta. 8+74.5

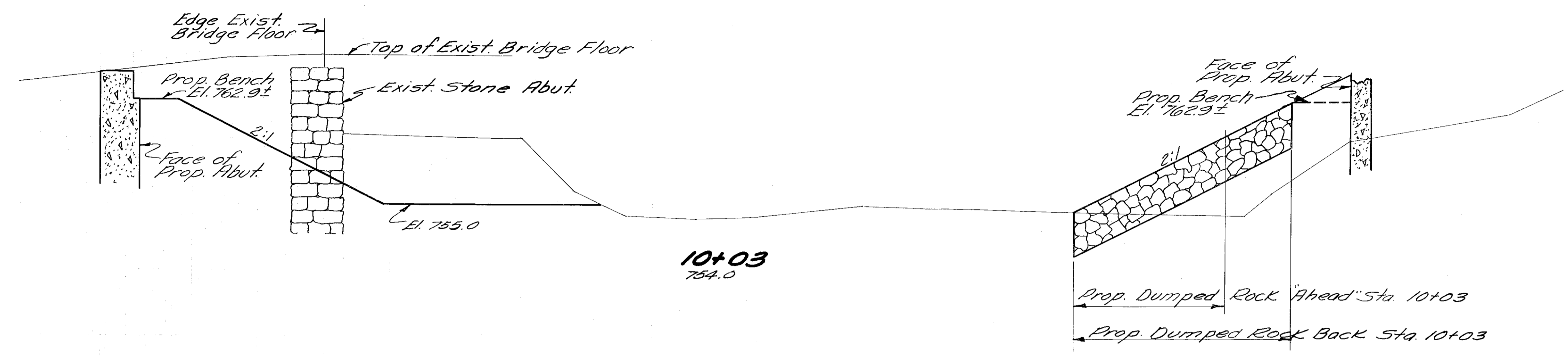
70 60 50 40 30 20 10 0 10 20 30 40 50 60 70

Seeding
End Sq.
Width Xls.

44
51

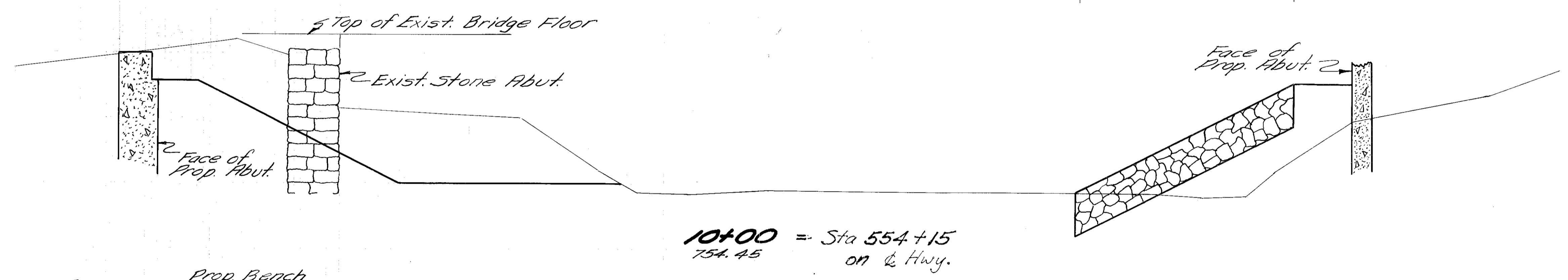
ROSS COUNTY ROS-138-(10.42)(10.90)

End Area Volume
Cut Fill Cut Fill



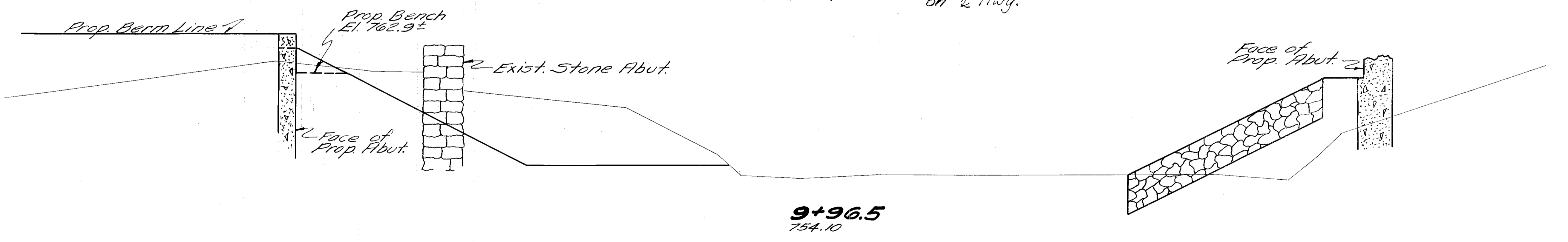
181.45

18.5



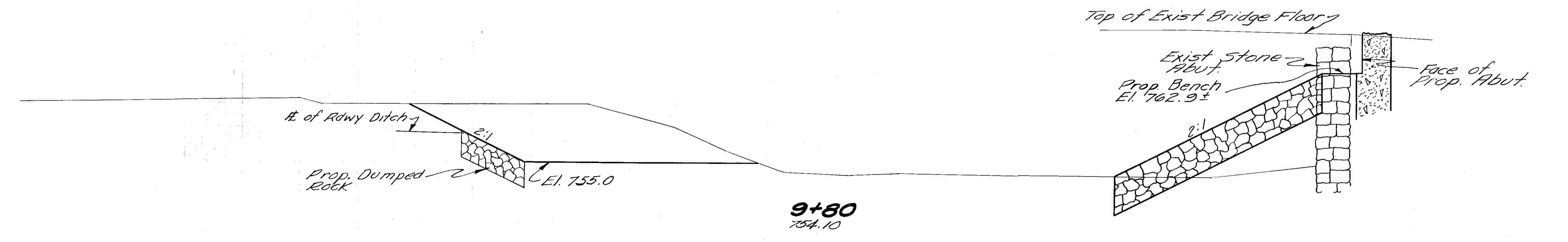
152.45

19.5



138.40

46.20



13.25

41.10

Sta. 9+61 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 Sta. 9+61 103.2

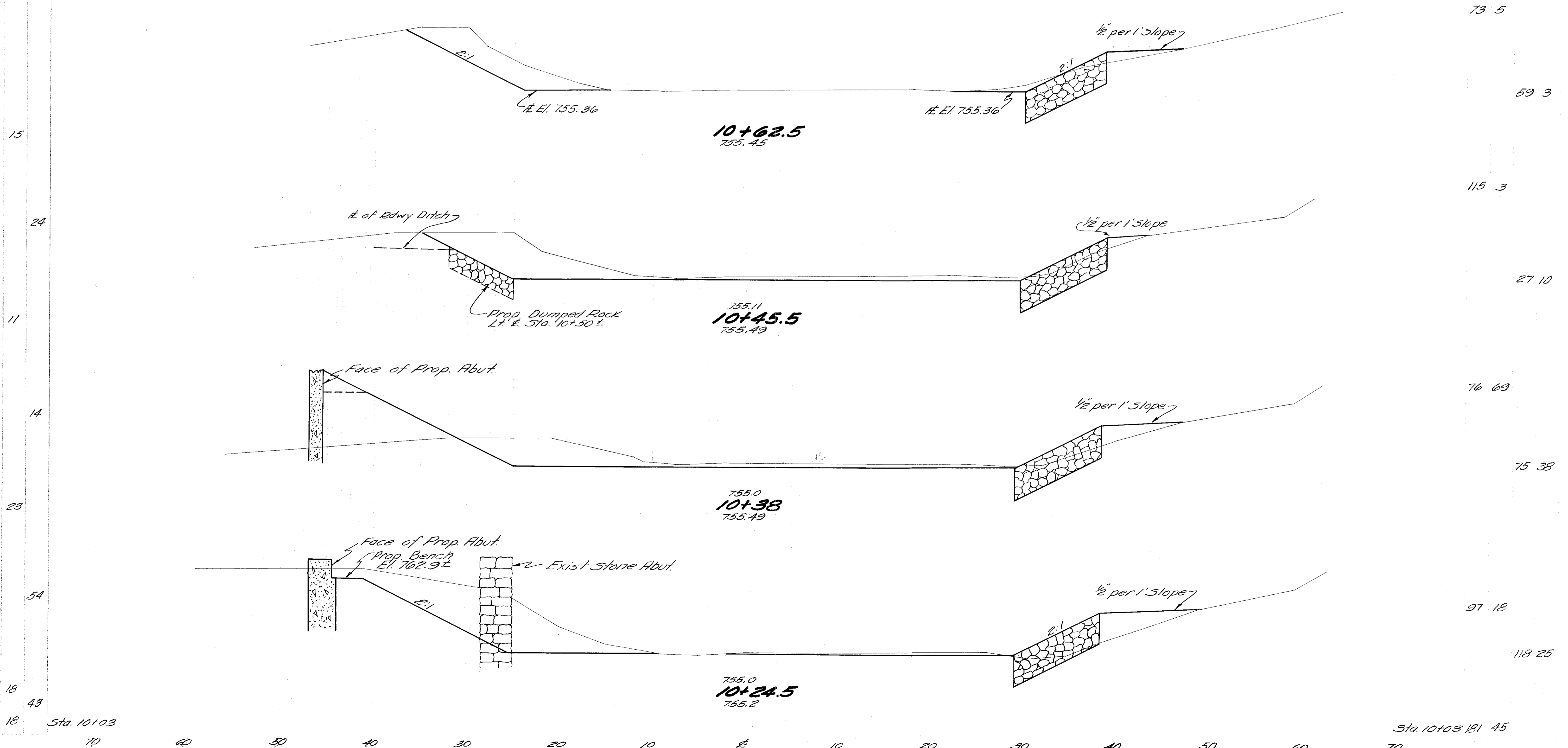
CHANNEL SECTIONS FOR McCORTNEY'S RUN STA. 9+80 TO STA. 10+03

Seeding
End Sq.
Width Yds.

45
51

ROSS COUNTY
R05-138-(10.42)(10.90)

End Area Volume
Cut Fill Cut Fill



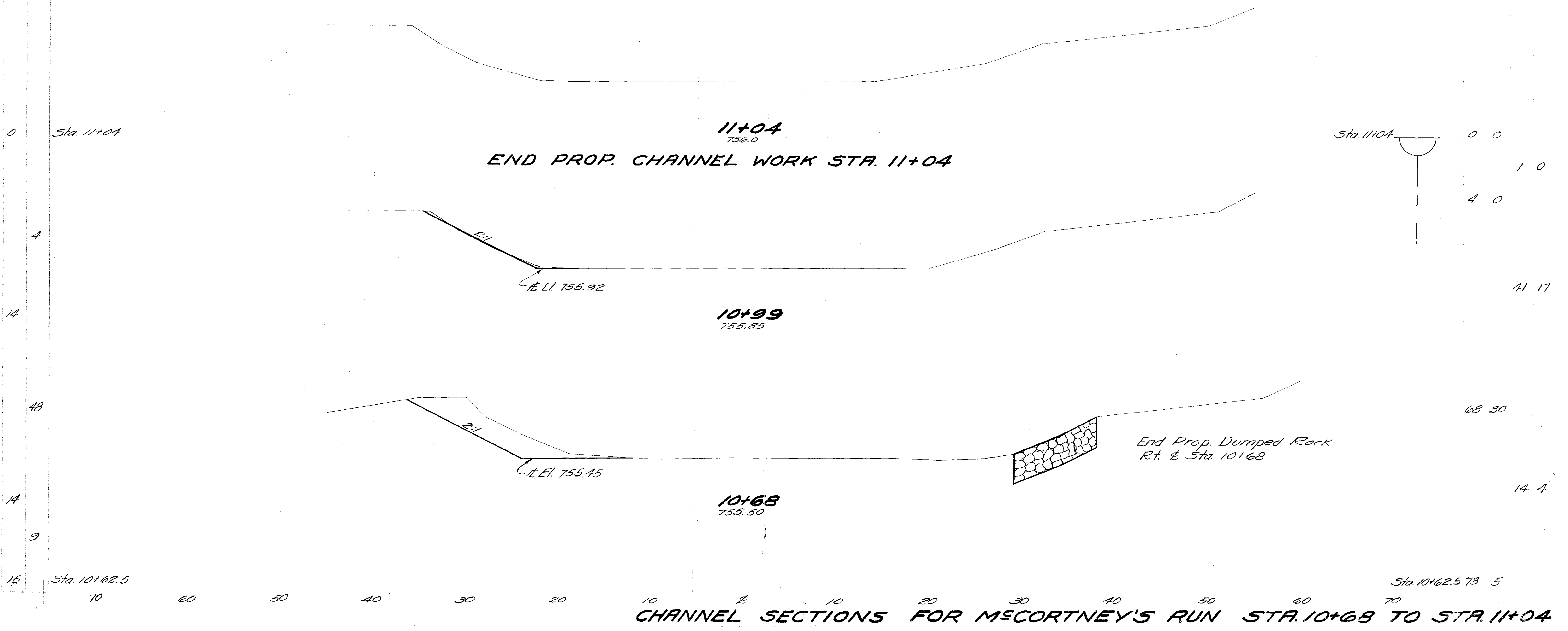
CHANNEL SECTIONS FOR McCORTNEY'S RUN STA. 10+24.5 TO STA. 10+62.5

Seeding
End Sq.
Width Yds

46
51

ROSS COUNTY
R05-138-(10.42)(10.90)

End Area Volume
Cut Fill Cut Fill



CHANNEL SECTIONS FOR McCORTNEY'S RUN STA. 10+68 TO STA. 11+04

End Area Volume
Cut Fill Cut Fill
441 0

406 27

420 58

326 47

330 50

247 36

249 35

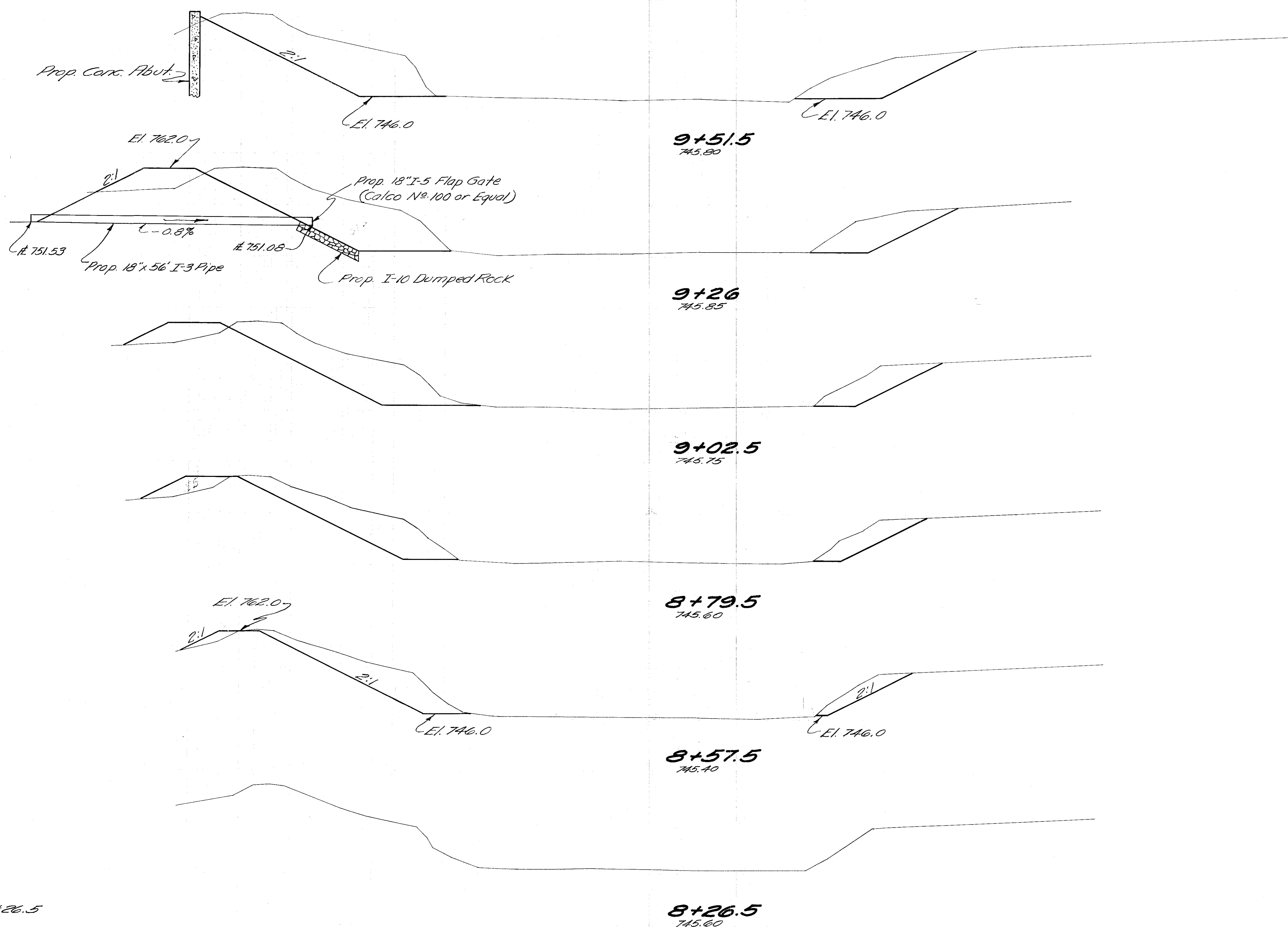
175 18

181 10

104 6

Excavation 3,580 Cu. Yds.
Embankment 193 Cu. Yds.

Sta. 8+26.5 0 0



Seeding
End Sta.
Width Yds.

56
207
90
215
75
102
75
178
71
122
0

Item L-9 Seeding & Protecting
Sta. 8+26.5 to Sta. 11+83 = 2059.59 Yds.

Sta. 8+26.5

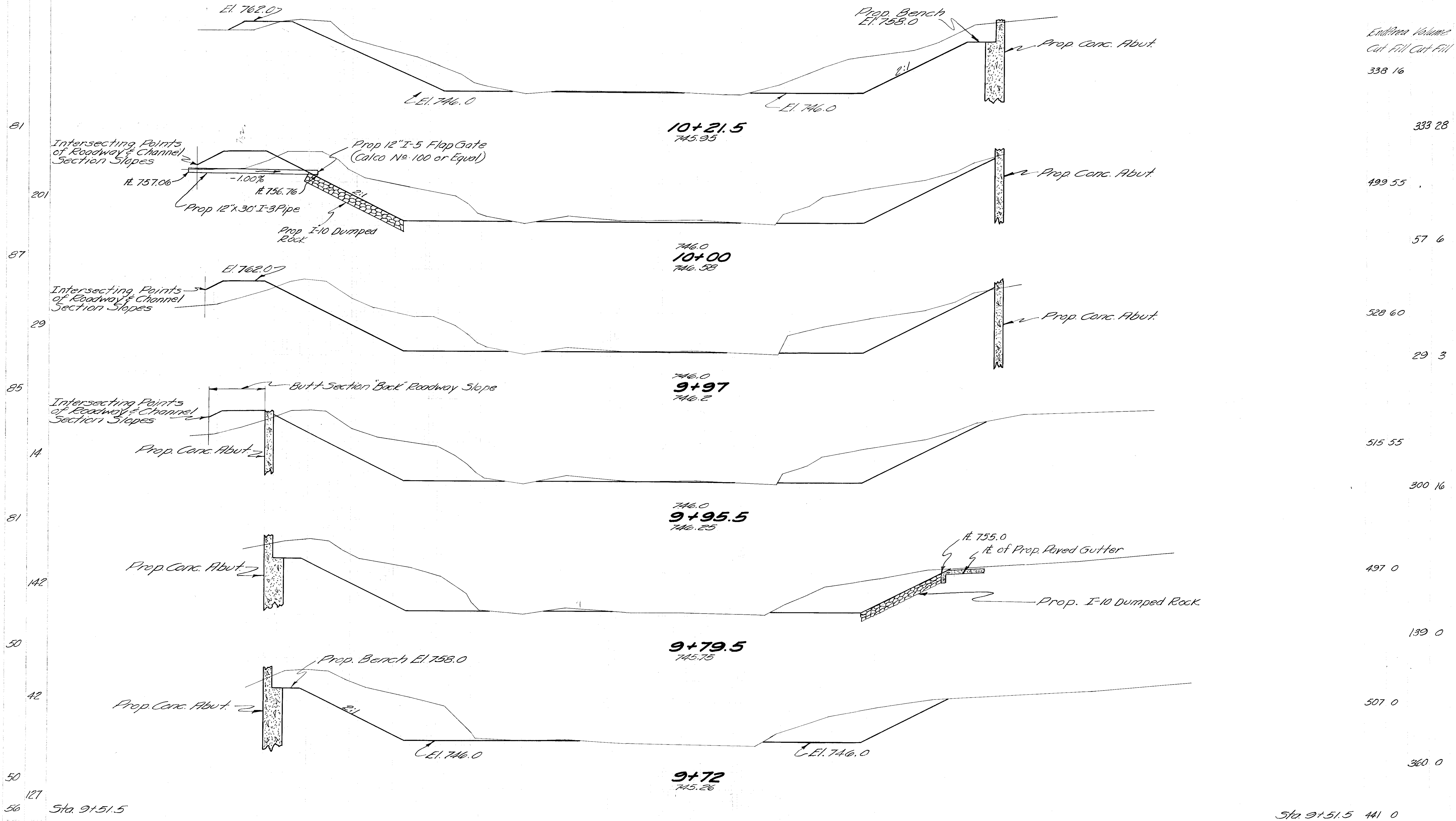
BEGIN PROP. CHANNEL WORK STA. 8+26.5

130 120 110 100 90 80 70 60 50 40 30 20 10 ± 10 20 30 40 50 60 70 80 90 100 110 120 130
CHANNEL SECTIONS FOR NORTH FORK PAINT CREEK STA. 8+26.5 TO STA. 9+51.5

Sealing
544 50
Width 4.15

ROSS COUNTY ROS-138-(10.42)(10.90)

End Area Volume
Cut Fill Cut Fill
338 16



333 28

499 55

57 6

528 60

29 3

515 55

300 16

497 0

139 0

507 0

360 0

Sta. 9+51.5 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 Sta. 9+51.5 441 0

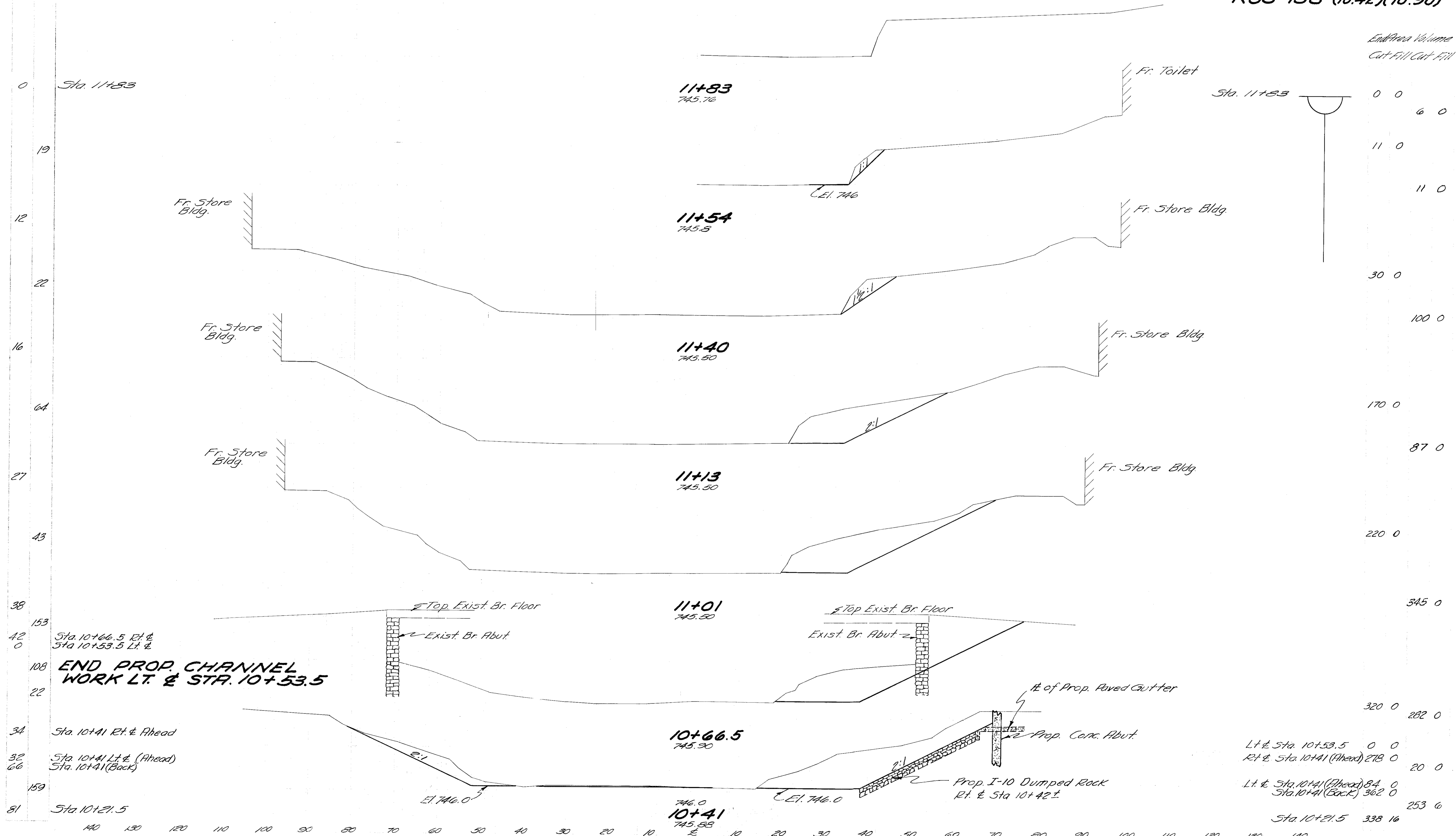
CHANNEL SECTIONS FOR NORTH FORK PAINT CREEK STA. 9+72 TO STA. 10+21.5

Spacing
End Sta
Width Yds.

49
51

END PROP. CHANNEL WORK RT. & STA. 11+83

ROSS COUNTY
ROS-138-(10.42)(10.90)



End Area Volume
Cut+Fill Cut+Fill

Sta. 11+83	0	0	0	0
	11	0	6	0
	11	0	11	0
	30	0	30	0
	100	0	100	0
	170	0	170	0
	87	0	87	0
	220	0	220	0
	345	0	345	0
	320	0	282	0
Lt. & Sta. 10+53.5	0	0	0	0
Rt. & Sta. 10+41 (Ahead)	278	0	20	0
Lt. & Sta. 10+41 (Ahead)	84	0	0	0
Rt. & Sta. 10+41 (Back)	362	0	253	0
Sta. 10+21.5	338	16	0	0

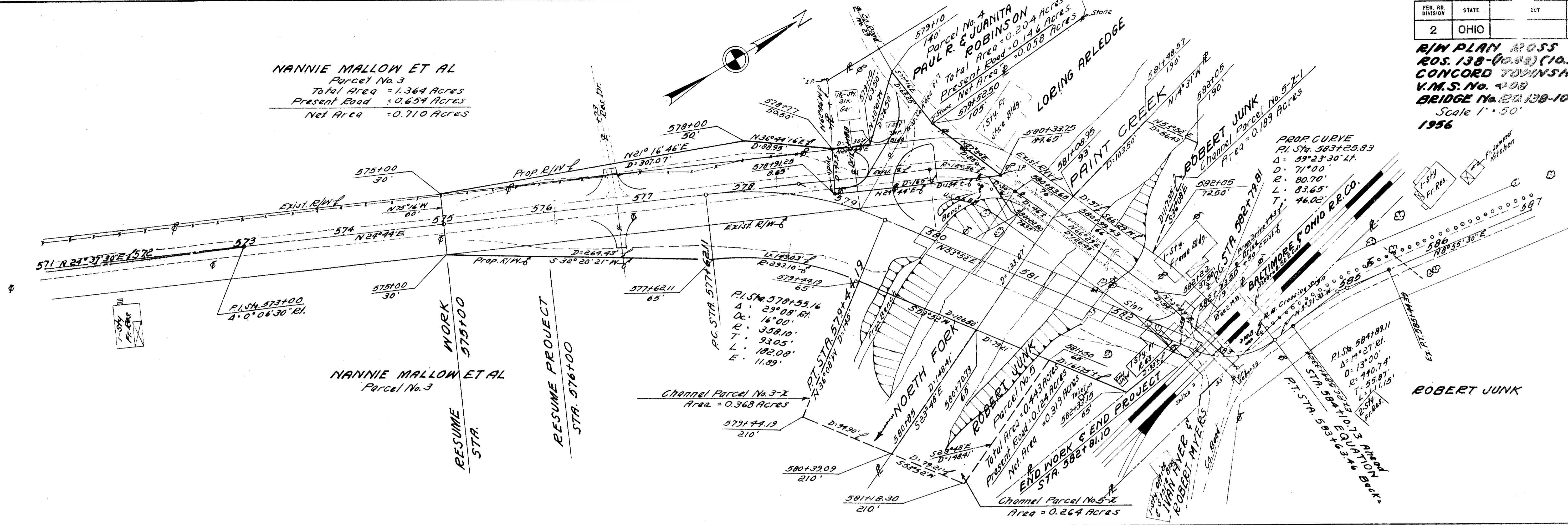
END PROP. CHANNEL WORK LT. & STA. 10+53.5

Sta. 10+41 Rt. & Ahead
Sta. 10+41 Lt. & (Ahead)
Sta. 10+41 (Back)
Sta. 10+21.5

CHANNEL SECTIONS FOR NORTH FORK PAINT CREEK STA. 10+41 TO STA. 11+83

**R/W PLAN CROSS COUNTY
 ROS. 138-(10.30) (10.30)
 CONCORD TOWNSHIP
 V.M.S. No. 408
 BRIDGE No. 20138-109
 Scale 1" = 50'
 1956**

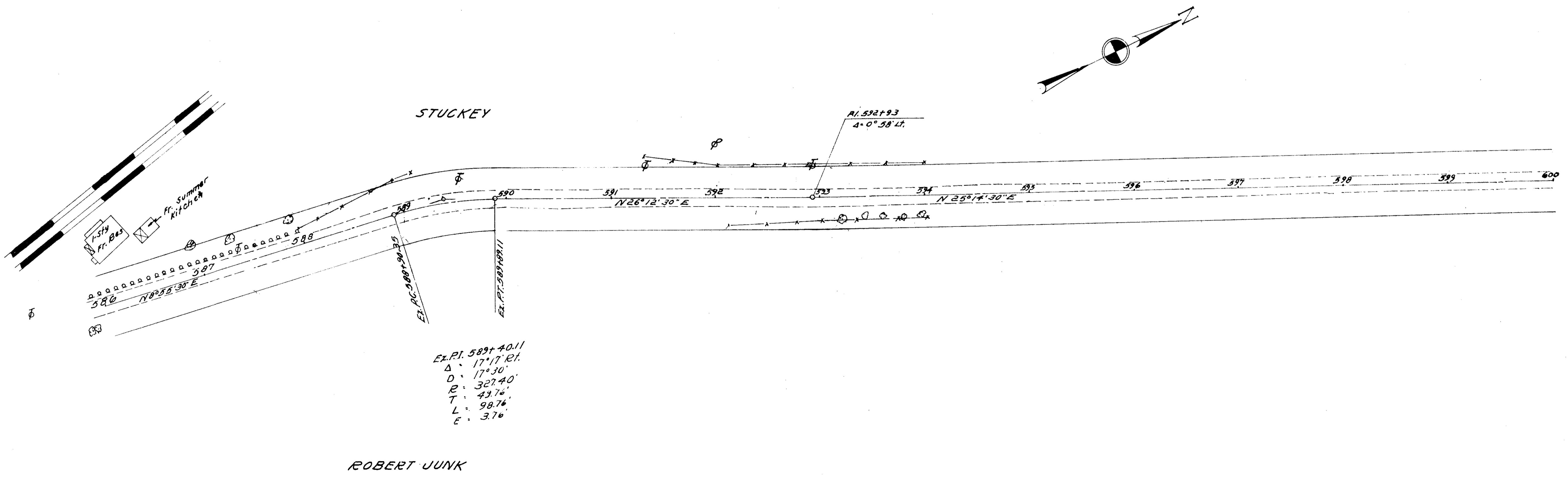
**NANNIE MALLOW ET AL
 Parcel No. 3
 Total Area = 1.364 Acres
 Present Road = 0.654 Acres
 Net Area = 0.710 Acres**



**NANNIE MALLOW ET AL
 Parcel No. 3**

ROBERT JUNK

STUCKEY



**EX. P.I. 589+40.11
 Δ = 17°17' RT.
 D = 17°30'
 R = 327.40'
 T = 43.76'
 L = 98.76'
 E = 3.76'**

ROBERT JUNK