FED. HI. DIVISN.	STATE	PROJECT	FISCAL YEAR
2	OHIO	F 330 (3)	

POR-224-G.22

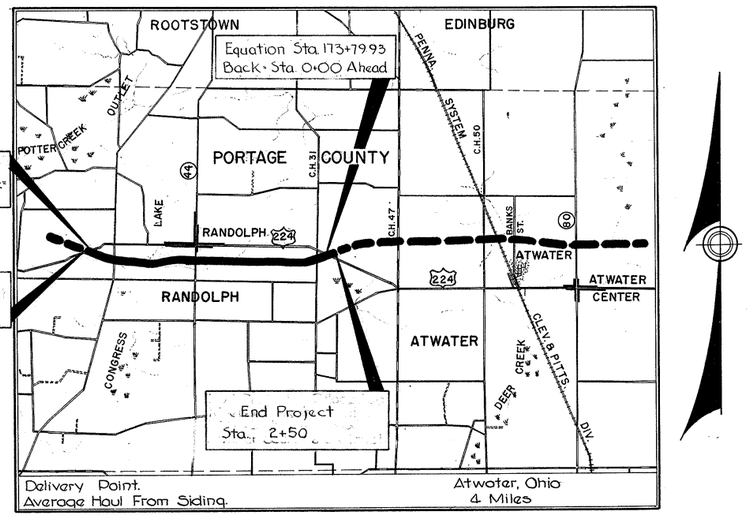
1/109

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
POR-224-6.22
PORTAGE COUNTY
RANDOLPH TOWNSHIP

F-330(3)

CONVENTIONAL SIGNS

Survey Center Line and Base Line		Mail Boxes	□M
Property Lines		Swamp Area	
Existing Roads, etc.		Road Signs	ORS
Fence Lines (regular)		Billboard Type Signs	S
Guard Fence (Existing)		**Trees**	
Guard Fence (Proposed)		Tree Symbol	
Woods Line		Maples	Mp
Brush Line		Cherry	Ch
Streams and Water Course		Plum	Pl
Railroads		Peach	Pe
Field Division Line		Apple	A
Existing Drainage Pipes		Walnut	W
Proposed Drainage Pipes		Hickory	H
Existing Catch Basins & Manholes	□ CB ○ MH	Oak	Oak
Bench Mark		Locust	L
Survey Monument	■	Poplar	P
Reference Points	□	Pear	Pr
Ohio Hwy. Dept. Iron	⊗	Pine	Pi
Property Pipes Found		Elm	Elm
Property Plotted from Plats		Willow	Wl.
Power Poles	Ⓟ	Cottonwood	Cw
Telephone Poles	Ⓣ	Ash	Ash
Guy. Poles	○ GP	Beech	B
Light Poles	Ⓛ	Butternut	Bn
		Trees to be removed	



LOCATION MAP

SCALE OF MILES

0 1 2 3 4

Portion to be improved
Federal Routes — 224
State Routes — 00
Other Routes

INDEX OF SHEETS

Title Sheet	1	Super-elevation Tables	29-30
Relocation Plan	2	Intersection Paving Plans	30-32
Typical Sections	3-4	Culvert Details	33-36
General Notes	5	Special Raised Curb Inlet Detail	37
Quantity Recapitulation	6	Cross Sections	38-93
Quantity Calculations	7	Bridge Plans (over 20' span)	94-98
General Summary	8	Right of Way Sheets	99-109
Plan & Profile	9-28	Fence Detail	37-A

LINE DATA

Begin Project Sta. 423+81.76
Equation: 425+12.62 Back = 0+00.0 Ahead
" 173+79.93 Back = 0+00 Ahead
End Project Sta. 2+50

NET LENGTH OF PROJECT = 17,760.79 L.F. or 3.363 Miles

Add For Approaches

Relocated U.S. 224 - Sta. 423+75 to 423+81.76 =	6.76	L.F.
Sta. 2+50 (At. Sect.) to 6+00 (Ran. Sect.) =	350.00	L.F.
Exist. U.S. 224 (West Cross.) Sta. 4+00 W. to 0+30 E.	430.	L.F.
Sta. 0+66 E. to 4+00 E.	334.	L.F.
State Rte. #44 Sta. 0+44 N to 3+60 N	316.	L.F.
Sta. 0+44 S. to 3+60 S	316.	L.F.
County Highway #31 - Sta. 0+39 S to 6+50 S	611.	L.F.
Sta. 0+52 N to 5+00 N	448.	L.F.
Exist. U.S. 224 (East Cross) Sta. 0+67 W. to 6+75 W.	608.	L.F.
Sta. 0+67 E. to 4+50 E.	383.	L.F.
Total =	3802.76	L.F. or 0.720 Mile
NET LENGTH OF WORK =	21,563.55	L.F. or 4.084 Miles

SCALE

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

Supplemental Prints of Std. Constr. Drawings			
S-27 PC-3	2-20-45	G-7.07	6-1-56
L-3	4-1-50	I-21-23	8-1-56
L-3-A	4-1-50	SD-53	7-21-53
RI-1	1-3-55	DR-1	1-3-55
T-35	1-2-56	LJ No. 1	7-1-55
S-27-PC-4	1-4-54	B-T-712	3-2-53
I-1,2,3,4&5	2-20-45	T-J	5-1-56
I-8-CB-2-2-A&B	8-1-56	A-1-54	7-1-54
I-8-CB I-3 & I-4	5-1-52	P-1-54	7-1-54
I-8-MH-1	5-1-52	I-14-G	1-22-52
I-12	7-1-54	B.T-50-70-71 E N° 1	10-1-47
I-15-No. 1	8-1-55	L-1	4-1-50
I-15-No. 2	12-1-54	OS-2	7-1-55
CS-1-54	7-16-56	I-8 MH N°-1-A	1-3-55
I-15 No. 2-A	7-2-56	AS-1-54	12-1-54

Supplemental Specification	
L-209.12	7-17-54
18	Rev. 9-7-55
M-109.23	Rev. 4-20-56
M-103.14	7-31-50
M-110.27	9-9-52
6	12-28-55
5	6-8-55
B-119	Rev. 6-30-56

LIMITED ACCESS

This improvement is especially designed for through traffic and has been declared a Limited Access Highway or Freeway by action of the Director of Highways in accordance with provisions of Section 5511.02 of the revised Code of Ohio.

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

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

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

Approved Carl L. Campbell
Date 10-19-56 Division Deputy Director

Approved John Hines
Date 11-8-56 Deputy Director of Planning and Programming

Approved D.H. Berryman
Date 11-5-56 Engineer of Bridges

Approved E.S. Preston
Date 11-6-56 Engineer of Location and Design

Approved H.J. Gerald
Date 11-6-56 Deputy Director of Design and Construction

Approved L.T. Schaublin
Date 11-8-56 First Assistant Director

Approved S.O. Linzell
Date 11-8-56 Director of Highways

CONSTRUCTION BUREAU AUG 4 1959 GROUND PHOTOLAB

PREPARED AND RECOMMENDED BY
AURILIO, PACE AND BALLARD
CONSULTING ENGINEERS
Wilson T. Ballard
WILSON T. BALLARD
HIGHWAY PLANS

DEPARTMENT OF COMMERCE
BUREAU OF PUBLIC ROADS

APPROVED:

DISTRICT ENGINEER — DATE

File No.	POR-224-G.22
	Date of Letting _____ 19____
	Contract No. _____

TITLE SHEET

FED. R. DIVISION	STATE	PROJECT	FISCAL YEAR
2	OHIO	F 330( )	

2 / 109

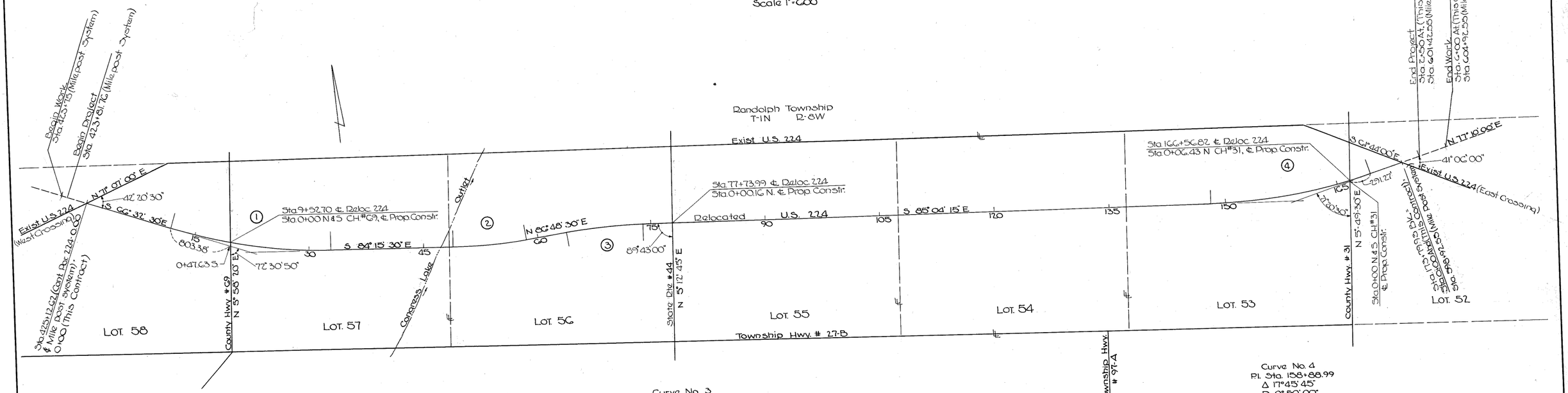
POR-224-6.22

RELOCATION PLAN

POR. - 224 - 6.22

PORTAGE COUNTY - RANDOLPH TOWNSHIP

Scale 1"=600'



Curve No. 1
P.I. Sta. 22+33.44
Δ 17° 43' 00"
D 0° 50' 00"
R 6875.49'
T 1071.55'
L 2126.00'
E 83.00'
P.C. 11+61.89
P.T. 32+87.89

Curve No. 2
P.I. Sta. 53+64.21
Δ 8° 56' 00"
D 0° 56' 00"
R 6138.83'
T 479.54'
L 957.14'
E 18.70'
P.C. 48+84.67
P.T. 58+41.81

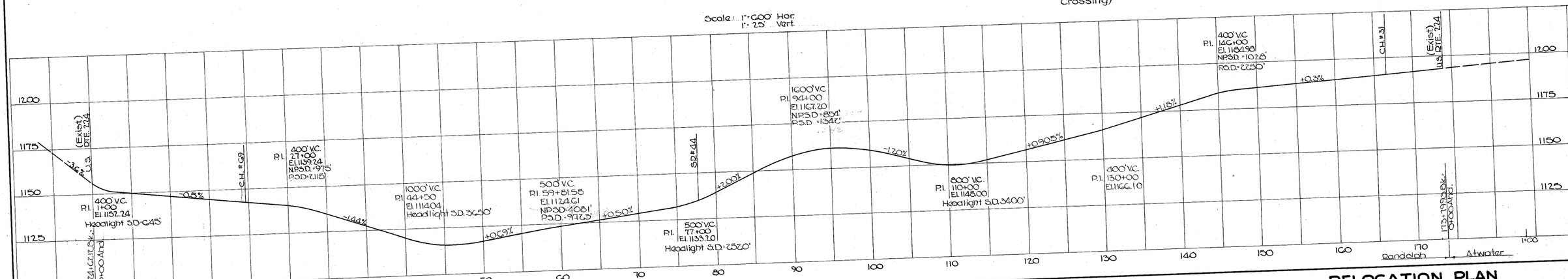
Curve No. 3
P.I. Sta. 69+10.65
Δ 8° 01' 15"
D 0° 50' 00"
R 6875.49'
T 488.07'
L 974.50'
E 17.30'
P.C. 64+22.58
P.T. 73+97.08

Curve No. 4
P.I. Sta. 158+88.99
Δ 17° 45' 45"
D 0° 50' 00"
R 6875.49'
T 1074.37'
L 2131.50'
E 83.43'
P.C. 148+14.62
P.T. 169+46.12

Note:
The Ohio Planning Survey mile post system stationing is shown at the beginning and end of this project. However the stationing for this project is based on 0+00 at the intersection of existing U.S. Rte. 224 (West Crossing)

No. curves existing line	3
No. curves proposed line	4
Max. curve existing line	7° 30'
Max. curve proposed line	0° 56'
Length existing line	3.3 Miles
Length proposed line	3.3 Miles
Max. grade existing line	5.0 %
Max. grade proposed line	3.60%

Scale: 1"=600' Hor.
1"= 25' Vert.



RELOCATION PLAN

FED. RD. DIVISION	STATE	PROJECT	FISCAL YEAR
2	OHIO	F330( )	

3/109

POR-224-G22

RELOC. U.S. ROUTE 224 TYPICAL SECTIONS
TYPE T-71
SCALE 1"=5'

UTILITY COMPANIES

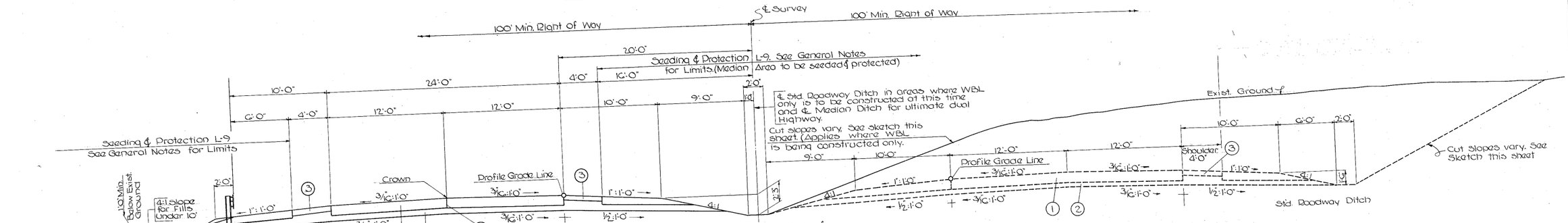
The Ohio Edison Co.
47 N. Main St.
Akron 8, Ohio.

The Ohio Bell Telephone Co.
Room 504
820 W. Superior Ave
Cleveland, 13 Ohio.

TYPICAL SECTION KEY		
STATIONS From	STATIONS To	PROPOSED CONSTRUCTION
423+81.76	430+00	Grade & pave W.B. Lanes only. A
430+00	438+50	Transition grading and paving to dual highway section A&E
438+50	464+00	Grade and pave dual highway section A&B or C&D
464+00	469+00	Transition grading and paving to W.B. Lanes construction only. A&E
469+00	476+50	Grade and pave W.B. Lanes only A&B
476+50	478+00	Grade for W.B. Lanes & E.B. Lanes. Pave W.B. Lane only A&B ⊕
478+00	1118+00	Grade and pave W.B. Lanes only. A
1118+00	1148+14.62	Grade and pave W.B. Lanes only. A&E
1148+14.62	1155+00	Transition grading and paving to dual highway section. A&E
1155+00	2+50 (AT)	Grade and pave dual highway section. A&B or C&D
2+50 (AT)	6+00 (AT)	Grade dual highway section only. A&B ⊕

⊕ In Fill areas where grading only is to be performed at this time, the fill material shall be placed to the bottom of the subbase.

Design Speed 70 M.P.H.



TYPICAL SPECIAL DITCH AT TOE OF FILL SLOPES

Note: Sod or Conc. shall be placed in ditches only when indicated on plans.

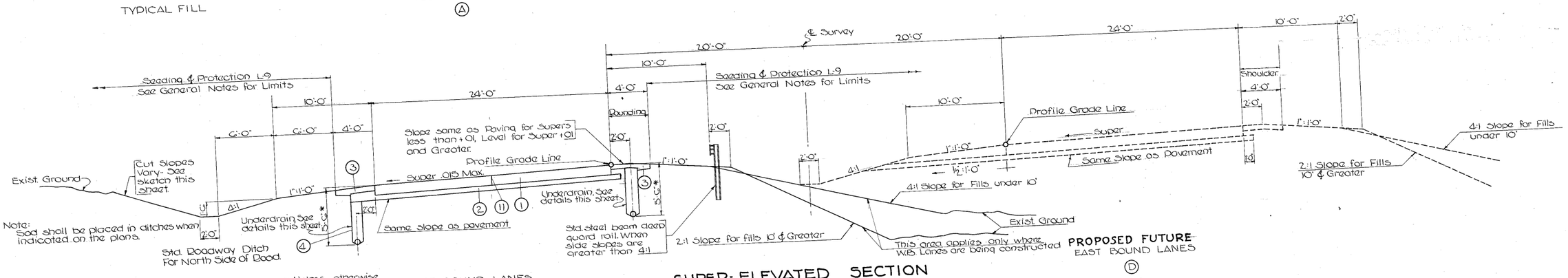
TYPICAL FILL

WEST BOUND LANES
(A)

TYPICAL CUT FOR SOUTH SIDE OF ROADWAY

TANGENT SECTION

PROPOSED FUTURE
EAST BOUND LANES
(B)



* Unless otherwise indicated on the plans.

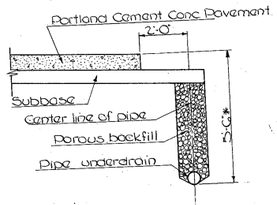
WEST BOUND LANES
(C)

SUPER-ELEVATED SECTION

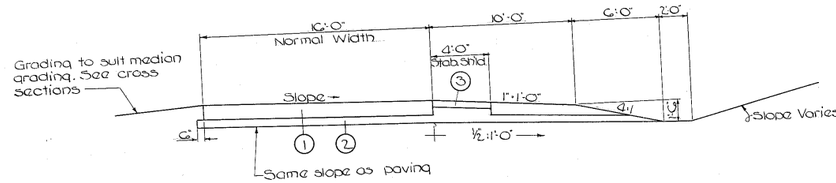
PROPOSED FUTURE
EAST BOUND LANES
(D)

LEGEND

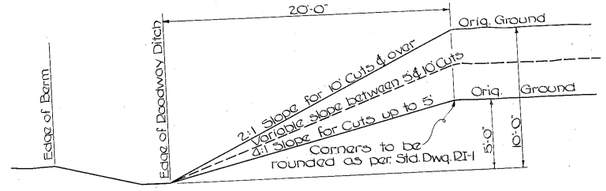
1. T-71, 9" Reinforced Portland Cement Concrete Pavement.
2. I-22, 6" Subbase
3. I-18, 6" Stabilized Crushed Aggregate Shoulders
4. I-4, Typical 6" Pipe Underdrain (Deep) (See Std. Constr. Drawing RI-1
11. Std. Longitudinal Joints.



PIPE UNDERDRAIN
Scale 1":3'



TYPICAL TRANSITION SECTION
Sta. 420+00 to 432+50
450+00 to 469+00
1148+14.62 to 1160+50
(E)



VARIABLE CUT SLOPE DESIGN
Scale : 1" = 5'-0"

TYPICAL SECTIONS

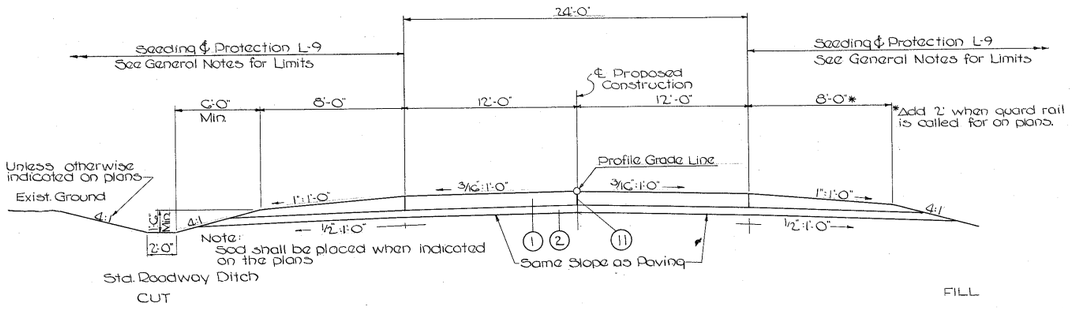
FED. R/A DIVISION	STATE	PROJECT	FISCAL YEAR
2	OHIO	F330( )	

4/109

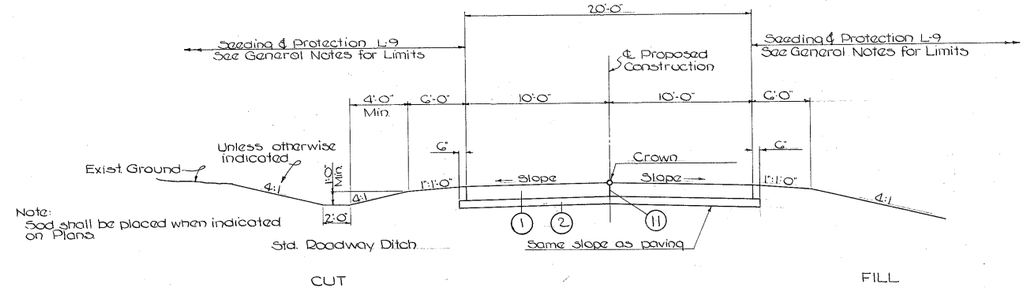
POR-224-G22

TYPICAL SECTIONS INTERSECTING ROADS

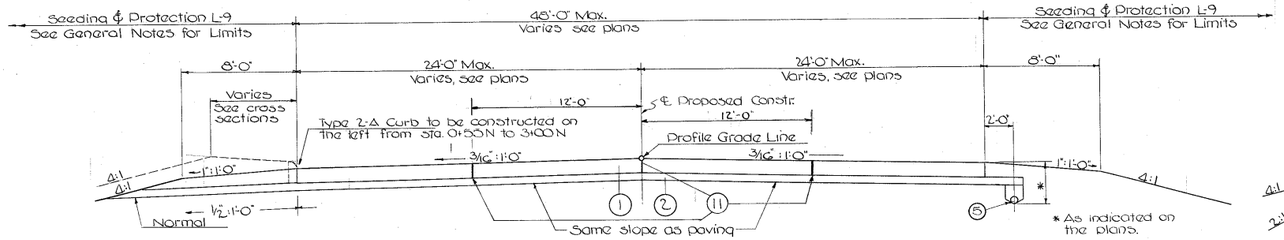
Scale 1"=5'



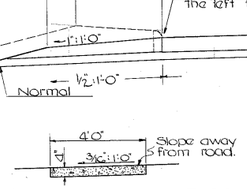
TYPICAL SECTION - EXISTING U.S. ROUTE 224
CROSSINGS AT EAST END AND WEST END OF RANDOLPH SECTION



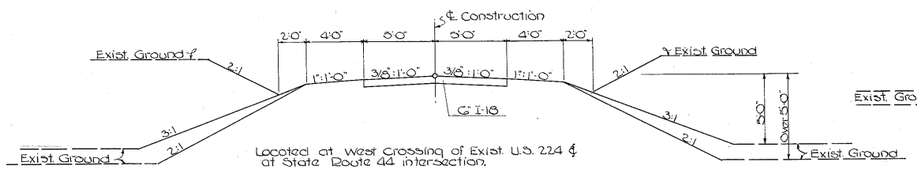
TYPICAL SECTION
COUNTY HIGHWAY # 69



TYPICAL SECTION
STATE ROUTE 44

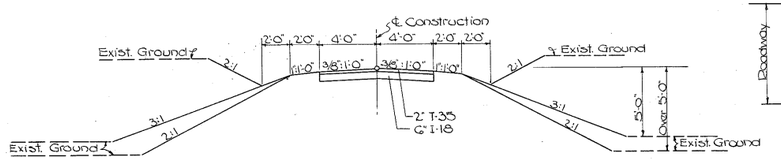


TYPICAL SIDEWALK FOR SR.44
(See plan for location)
Scale 1"=5'-0"

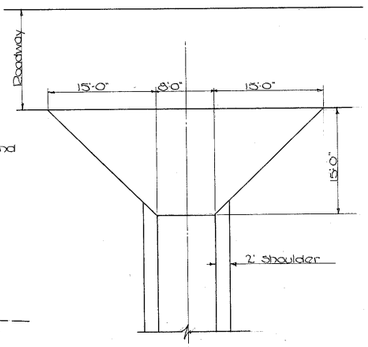


Located at West Crossing of Exist. U.S. 224 & State Route 44 intersection.

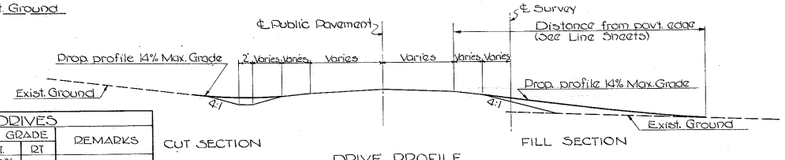
TYPICAL SERVICE DRIVE



TYPICAL SECTION
1"=5'-0"



TYPICAL DRIVE
1"=10'



CUT SECTION — DRIVE PROFILE 1"=10' — FILL SECTION

TYPICAL RESIDENTIAL DRIVEWAY

RESIDENTIAL DRIVES					
LOCATION	STATION	SIDE	% GRADE LT.	% GRADE RT.	REMARKS
Exist. U.S. 224 West Crossing	3+25 W.	Lt.	14%		
SR. 44	1+90 S.	Lt.	8%		
SR. 44	2+53 S.	Rt.		8%	
SR. 44	3+37 S.	Lt.	Exist.		
SR. 44	3+52 S.	Lt.	Exist.		
SR. 44	1+30 N.	Lt.	1%		
SR. 44	1+45 N.	Rt.		8%	
SR. 44	2+76 N.	Lt.	8%		
CH. 31	2+85 N.	Rt.		14%	
CH. 31	3+40 N.	Lt.	14%		
CH. 31	2+25 S.	Rt.		12%	
Exist. U.S. 224 East Crossing	1+75 W.	Rt.		8%	
"	4+20 W.	Rt.		12%	
"	5+85 W.	Lt.	10%		

① T-71, 9" Reinforced Portland Cement Concrete Pavement
② I-22, 6" Subbase
③ I-18, 6" Stabilized Crushed Aggregate Shoulders
④ I-4, Typical 6" Pipe Underdrain (Deep) (See Std. Construction Drawing DI-1
⑤ I-4, Typical 6" Pipe Underdrain (Shallow)
⑥ T-35, 1 1/2" Asphaltic Concrete Surface Course, Type A (70-80)
⑦ B-35, 2" Asphaltic Concrete Leveling Course. (70-80)
⑧ I-18, 8" Stabilized Crushed Aggregate Shoulders and Approaches.
⑨ T-30, Bituminous Prime Coat, Sec M-5.7 RT-2 or RT-3, or Sec. M-5.2 RC-1 or RC-2 (0.35 gal per Sq. Yd.)
⑩ T-30, Bituminous Tack Coat (0.10 gal. per S.Y.) See Note in Proposal
⑪ Std. Longitudinal Joint.

FED. DIVIS.	STATE	PROJECT	FISCAL YEAR
2	OHIO	F-360( )	

5
109

POR-224-6.22

GENERAL NOTES

BERMS & SLOPES

Berms & slopes shall be finished in accordance with the typical sections except where otherwise shown or noted on the cross sections. Although the cross sections as drawn show straight lines and angles, in construction all corners shall be rounded as shown on Stnd. Dwg. "B1-1. All transitions from Cut to Fill slopes shall be blended with the surrounding terrain as directed by the engineer.

FIELD OFFICE

The contractor shall provide a suitable field office in accordance with section 5-0.01 having a minimum floor area of 300 sq. ft. The contractor shall have a telephone installed and maintained during the construction of this project.

TREE & STUMP REMOVAL

All trees and stumps within the construction limits, which are 12" or more as measured per item E-9.01 shall be removed and paid for under item E-9 Lump Sum if marked for removal by the engineer. This number may vary from those trees shown on the plan. Payment for the removal of these additional trees or stumps is included in the Lump Sum bid for the removal of trees and stumps.

MAIL BOXES

The protecting, moving, adjusting, etc. of all mail boxes to secure satisfactory delivery of U.S. Mail shall be considered a part of Item G-7.09 "Preservation & Restoration of Property."

ITEM L-9 SEEDING & PROTECTING, L-9 12-12-12 COMMERCIAL FERTILIZER AND L-9 AGRICULTURAL LIMING MATERIALS

Quantities for these items are calculated for the soil areas between lines ten feet (10') outside the work limits as shown on the cross sections or to the R/W line if such line is less than ten feet from work limits. Seeding shall be omitted on areas to be sodded. 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.

ITEM L-10 SODDING

Areas to be sodded shall be loosened to a depth of 2" just prior to laying the sod. This work shall be included for payment in the price bid per sq. yd. of sodding.

ITEM L-9 AGRICULTURAL LIMING MATERIALS

The location and need for agricultural liming materials will be determined by laboratory tests after rough grading operations have been performed. On the areas where tests indicate the material is not needed, it will be non-performed.

SCALPING

Topsoil from the scalping operation shall be salvaged and placed on all areas to be seeded and sodded as per E-1.03(a) and E-1.05(d). The thickness of replaced topsoil shall be a minimum of 2 inches (loose measurement).

FLEXIBLE FORMS

Approved flexible forms shall be used for construction of circular pavement edges having a radius of 200' or less, circular concrete curbs and concrete curb transitions of short radii.

ITEM I-22 SUBBASE

In the finishing of slopes and ditches care shall be exercised so that the exposed edge of the sub-base (where it extends through the shoulder) be left free of earth cover that would impede free drainage.

In addition to the provisions of Sec. I-22.02, material meeting the requirements of Supplemental Specification M-103.14 (Slacker Aggregate) may be used for this project.

DRIVEWAYS

The distance shown on driveways refers to the length of cut or fill from edge of pavement to the original ground. On old drives the surface course shall extend to the point where the new work meets the existing drive. The maximum allowable grade is 14%. For proposed grades of new drives see sht #4.

CONTRACTION JOINTS

In addition to the pavement joints detailed for approaches and intersections, the maximum distance between contraction joints shall in all cases be in accordance with Stnd. Dwg. T.J.

TRAFFIC

Two way traffic shall be maintained at all times on existing U.S. Rte. 224 and on S. Rte. 44. The contractor shall so arrange this work, that a minimum of inconvenience and a maximum of safety shall be assured traffic on these routes.

The contractor shall notify the Division Traffic Supervisor at least 10 days prior to the beginning of work on any of the approaches within 300 ft. of the intersection of Reloc. U.S. Rte. 224 with Exist. Rte 224 or State Rte. 44.

The contractor shall also notify the County Engineer prior to the beginning of work on County Hwy. 69 and County Hwy. 31.

The contractor shall maintain the existing roadway and pavement by making the necessary repairs including patching the pavement with bituminous material when requested by the engineer. A quantity of asphaltic concrete has been set up as a pay item for maintaining traffic the same as for aggregate and calcium chloride. 200 cu.yd. of T-1.0, 4 tons of M-1.0 and 2.0 cu.yd. of T-3.5 have been included in the General Summary to be used as directed by the engineer for maintaining traffic on all roads.

See note this sheet concerning Sequence of Operations and Temp. Run-Around Roads.

See Sheet #20 for note concerning Barricades.

ITEM T-10: Slacker Aggregate Sec. M-103.14 may be furnished for this item.

DUST CONTROL

Five (5) tons of calcium chloride has been provided for reduction of dust near all residences. The calcium chloride will be applied at the direction of the project engineer. This quantity is provided in the General Summary.

SPRINGS

An additional quantity of (2) No. 1 MH's and 80 L.F. of 6" pipe are carried in the recap to be used as directed by the engineer for providing outlets for existing springs.

TYPE A FENCE MODIFIED shall have a height of 39" in lieu of 47" as required by Supplemental Specification № 18.

MISCELLANEOUS REMOVALS

The removal and disposal of any existing pavement, sidewalk, building foundations, steps, cellar floors, well covers, cistern covers, septic tanks, concrete bases, walls, curbs, curb and gutter, rails, ties pole stubs, headwalls, pipes, driveway and garage floors or other masonry lying within the right of way (and not specifically paid for under a separate item) shall be classified as excavation, and paid for under the excavation item of which they are a part. If lying below or outside the plan limits for excavation, additional excavation necessary to perform the above operations shall be paid for at the contract unit price bid per cu. yd. for Roadway Excavation Item E-1 or Excavation for Structures Item E-2.

Pavements, sidewalks, steps, cellar floors, or other masonry shall be excavated to a depth of (3) three feet below the proposed pavement subgrade, and to a depth of (3) three feet below the proposed finished surface if located outside the proposed pavement area. If items extend below the above units, they shall be broken up into portions not to exceed (1) one sq. ft. in area but need not be removed.

Wells, cisterns and septic tanks encountered on the project shall be filled with broken foundation masonry or rock placed as rock embankment according to section E-1.08 of the Construction and Materials Specifications.

UTILITY NOTE

Any and all work required for removing, relocating, and construction of new facilities for private or public utilities will be done by and at the expense of the respective owners unless otherwise noted on the plans.

RIGHT OF WAY

All details shown for the Right of Way Lines on the plans are referenced to the ℄ of the Right of Way Line which is not in all cases the ℄ of proposed construction.

UNDERGROUND UTILITIES

The locations of the underground utilities shown on the plans have been obtained by diligent field checks and searches of available records. It is believed they are essentially correct, but the State Of Ohio makes no guarantees as to their accuracy or completeness.

PROPERTY MARKERS

All iron pins or markers within the limits of the project shall be saved and adjusted to the new grade by the contractor as directed by the engineer. Cost of the adjusting and resetting of markers shall be included in the unit price bid for item E-1 Roadway excavation.

T-30 BITUMINOUS TACK COAT

This shall be applied at the rate of 0.1 gal. per sq. yd.

REMOVAL OF EXISTING HOUSE DRAINS

The removal of all existing house connections, which includes sanitary, yard, roof, basement or other similar pipe drains within the roadway construction limits shall be classified and paid for as Item E-1, Roadway Excavation, unless otherwise itemized for payment in the plans.

MEDIAN

Stations given for the beginning and end of the median are to the radius points.

TILE FOR SUBGRADE DRAINAGE

6" Drain tile shall be furnished and placed by the contractor in manholes, catch basins, and inlets for subgrade drainage, where as directed by the engineer. Payment for same shall be included in the price bid per "Each" for manholes, catch basins, and inlets.

SPECIAL DITCHES

For special ditch grades, see cross sections.

SPECIAL SEEDING

Recently cultivated areas located within the right of way but beyond the limits prescribed for item L-9, Seeding and Protecting, where specified on the plan, shall be seeded in accordance with the following:

The area shall be cleared of all weeds and other objectionable material and the surface shall be loosened to a depth of two inches. Red top seed shall be evenly sown in an approved manner at the rate of two pounds to each one thousand square feet. The area shall then be raked or dragged with a light drag to cover the seed. Fertilizing and mulching will not be required.

Seed shall meet the requirements of section L-9.05 of the specifications.

Special seeding shall be performed only between April 1 and May 31 or between September 1 and October 15.

Measurement and payment for item, "Special Seeding as per plan," shall be made in accordance with the applicable provisions of Sections L-9.13 and L-9.14 of the specifications.

ACCESS TO ADJACENT PROPERTIES DURING CONSTRUCTION

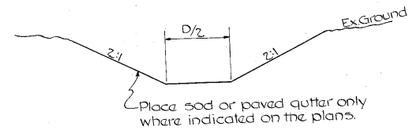
Access to all properties abutting this improvement exclusive of those within the L.A. portion, shall be provided and maintained at all times by the Contractor.

OVERHEAD SIGN ASSEMBLY

Overhead Sign Assemblies are to be placed at approximate locations shown on detail plans. The final location shall be at the direction of the Project Engineer.

UNDERGROUND PIPE FOR TRAFFIC SIGNAL INSTALLATIONS:

Underground pipe for traffic signal installations will be installed 120'± each way from the intersection of S.R. 44. The pipe will be placed perpendicular to the centerline of the highway at a depth of not less than 18" or more than 30" from the surface of the pavement and extend 2' beyond the edge of the pavement and be capped so as to keep the earth out of the pipe. Quantities are carried on the line sheet.



TYPICAL OUTLET DITCH

Not To Scale

ITEM E-4 BORROW USING GRANULAR MATERIAL

A peat bog is located left of Relocated U.S. Rte. 224 centerline between stations 3+00 and 5+50. This unsuitable material shall be completely removed from under the proposed construction with the left lateral limit being where a 3 horizontal to 1 vertical slope intersects the top of the peat, (see cross-sections). Granular backfill shall be used up to elevation 1140.0 in this area where peat is removed. Normal embankment material shall be used above this elevation.

The granular backfill material shall be in accordance with E-1.02 of the specifications modified to require at least 75% by weight of the grains or particles to be retained on the No. 200 sieve.

Two pay items of E-4 Borrow Using Granular Material have been provided for:

A. Item E-4 Borrow Using Granular Material Above Original Ground as per plan. The method of measurement shall be the volume in C.Y. completed and accepted in final position by cross-sections superimposed on the original project cross-sections and the volume computed by the average end area method plus 5% for compaction.

B. Item E-4 Borrow Using Granular Material Below Original Ground as per plan Including The Cost of Excavation of Unsuitable Material. The quantity to be paid for shall be the total quantity of granular material for borrow as measured by Section E 4.04 minus the quantity which does not include the cost of excavation as determined under par. A. above.

SEQUENCE OF OPERATIONS AND S-15 TEMP. RUN-AROUND ROAD AS PER PLAN

As previously stated traffic will be maintained at all times on Exist. U.S. 224 and S.R. 44. The following sequence of operations for accomplishing this is suggested:

1) S.R. 44 construction should be completed prior to any interruption of traffic on Exist U.S. 224. Temp. Run-Around as shown on the plans should be built to handle traffic during reconstruction of this road.

2) The Reloc. U.S. 224 construction should then be completed between the eastern & western intersections with the Exist. U.S. 224.

3) Construct the temporary run-around shown on the plans at the eastern intersection with Exist U.S. 224. Construct the intersection and its east approach along the Exist U.S. 224. The west approach along the existing road and the Reloc U.S. 224 east of the intersection can be completed once the traffic is turned over the new route.

4) The procedure at the western intersection with Exist. U.S. 224 should be as follows:

(a) Close Old U.S. 224 west of this intersection and reconstruct the exist. road as shown on the plans to a point as close to the south edge of Reloc. U.S. 224 as practical.

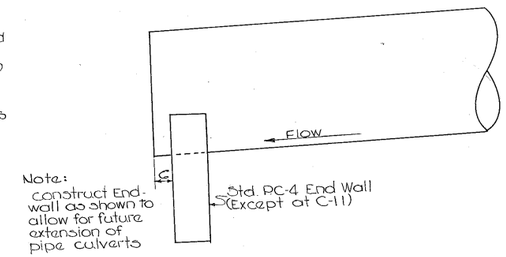
(b) Construct temporary run-around as shown on the plans between Reloc. U.S. 224 & Old U.S. 224 to the west.

(c) Turn traffic over the new route at the eastern intersection with exist. 224, thence along the new route to the western intersection with exist. 224, thence over the temp. run-around and onto the old 224 to a point designated by the Division Traffic Engineer where the traffic can be turned back onto the new route. The above described traffic pattern will allow for the closing of the western intersection with the existing road and thus the construction can be completed and the traffic turned back over the new route.

The contractor may submit any alternate plan for maintenance of traffic to the Project Engineer for his approval prior to the beginning of any construction which would disrupt the traffic on U.S. 224 or S.R. 44.

The Run-Arounds shall be in accordance with S-15 of the specifications.

The Run-Arounds shall be in accordance with S-15 of the specifications. The paving shall be Class 'A'. Grades shall be as directed by the Engineer.



Note: construct End-wall as shown to allow for future extension of pipe culverts

SPECIAL DETAIL FOR END WALL CONSTRUCTION ON SOUTH SIDE OF PROPOSED ROADWAY FOR C-2,3,4,5,6,11 & 12

Scale: 1" = 2'-0"

RECAPITULATION

PROJECT NO.	DIVISION	SHEET NO.	PROJECT	FISCAL YEAR
	2			

G-109

FOR 224-C-22

ROADWAY

SHEET NO	E-1 EARTHWORK EXCAV. C.Y.	EMB. C.Y.	EMB. %SHR C.Y.	EXCAV. UNSUIT. MATR. C.Y.	L-9 SEEDING & PROTECT. SY.	E-4 GRANULAR BORROW INCLUDING EXCAV. C.Y.	E-4 GRANULAR BORROW C.Y.	E-8 REMOVAL & DISPOSAL EXIST. PAVT. SY.	EXIST. CURB L.F.	EXIST. SIDE WALK SF	E-12 REMOVAL & DISPOSAL 15" & UNDER L.F.	E-12 REMOVAL & DISPOSAL OVER 15" L.F.	I-8 MON BOX ASSEMBLY EA.	I-15 DEEP BEAM L.F.	I-15 (Barricade) Temp. Guard Rail L.F.	SS-18 RIGHT OF WAY FENCE L.F.	S-15 TEMP RUN-AROUND ROADS Lump	S-25 3" M-G.9 STEEL PIPE L.F.	BRIDGE TYPE OVERHEAD SIGN ASSEMBLY TYPE A 40' SPAN EA.	BRIDGE TYPE OVERHEAD SIGN ASSEMBLY TYPE A 30' SPAN EA.
10	9365	13783			10500	2111	316	2544	120				1	800		1841	Lump			
11	690	1556	See		4352															
12	8895	1692	Calculation		10456						18		1			2512				
13	1362	176	Sheet		2793															
14	15423	14			9232								2			2400				
15	8025	10760		795	13674						100			500		2400				
16	16040	3767			10715								1	514.72		2400				
17	6933	4213			11633								2	100		2400				
18	26945	9132			15057			600		800	345		2	400		2288				
19	2253	197			2623										187.5	2430	Lump	232	1	2
20	34591	0			12788								1			2400			1	
21	4562	25495			20078								1	600		2400				
22	1571	39789			19729											2400				
23	3108	8044			9823								1			2400				
24	3423	2109			8187								1			2400				
25	29252				11809								1			2200				
26	2713	10232			12223															
27-28	*33373	*10222			*31370			2300			950	35	2	150	162.5	2897	Lump			
30																				
5																				
TOTALS	204524	142181		795	217042	2111	316	5644	120	800	1413	35	16	3064.72		35768		232	2	2
TO CALCULATION	204524	142181																		
TO GEN. SUMMARY				795	217042	2111	316	5644	120	800	1413	35	16	3064.72	350	35768	Lump	232	2	2

DRAINAGE

SHEET NO	I-3 6" M-64(b) RDWY. DR. L.F.	E-2 EXCAV. FOR STRUCT. C.Y.	E-3 CHANNEL EXCAV. C.Y.	I-1 12" L.F.	I-2 CLASS A 12" L.F.	12" U.P. L.F.	15" L.F.	15" U.P. L.F.	18" U.P. L.F.	21" L.F.	21" U.P. L.F.	42" U.P. M-66(a) L.F.	42" L.F.	I-4 UNDERDRAINS 6" SHALLOW L.F.	6" DEEP L.F.	8" OUTLET L.F.	I-5 6"x45° BEND EA.	I-8 STD. 1-4 C.B. EA.	STD. 2-2A C.B. EA.	STD. TYPE I M.H. EA.	SPEC. RAISED CURB INLET EA.
10															600						
11																					
12															2400					1	
13															925	126	3				
14															1850	84	2				
15															1775	84	2				
16														290	1385	480	3	2	3	2	1
17		1.5		76	88		110	22	80												
18															1890	340	2				
19															500						
20															200	84	2				
21															600						
22															1140	84	2				
23															2400						
24															1600	84	2			1	
25		1.5					34	58							1705	35				4	
26		35		112		264	24	84	62	24	66										
27-28		1556	934									496	348							2	
30	80																				
5																					
TOTALS	80	1562.5	934	188	88	264	168	164	142	24	66	496	348	290	18970	1407	18	2	8	5	1
TO CALCULATION	80	1663	934	188	88	240	168	164	142	24	66	496	348	290	18970	1407	18	2	8	5	1
TO GEN. SUMMARY																					

DRAINAGE

SHEET NO	I-14 STD. TYPE I PAVED GUTTER L.F.	I-14 SPEC. PAVED GUTTER L.F.	I-16 C.B. ABAND. EA.	I-16 M.H. ABAND. EA.	L-10 SODDING SY.	S-1 CLASS-E CONC. FOR END WALLS C.Y.
10	265				60	
11						
12	165				722	
13						
14					800	
15	575				1380	
16	305				430	
17					935	
18	40		1	1	749	0.26
19						
20					1000	
21					100	
22					1100	
23					1030	
24					1800	
25					350	
26	10				915	0.26
27-28	50				1980	0.62
30	203	105			69	33.06
5						
TOTALS	1973	105	1	1	13420	34.20
TO CALCULATION						
TO GEN. SUMMARY	1973	105	1	1	13420	34.20

PAVEMENT

SHEET NO	I-12 TYPE 2-A L.F.	I-13 4' WIDE SIDEWALK SF	I-18 6" STAB. CRUSHED AGG. CY	I-23 PRECAST CONC. TRAFFIC DIVIDERS EA.	T-35 2" CY
10			68		34
11					
12					
13					
14					
15					
16				36	
17					
18	466	664	200.9		174
19					
20				12	
21					
22					
23					
24				21	
25					
26					
27-28	580		68.4		230
30					20
5					
TOTALS	1046	664	337.3	69	638
TO CALCULATION			337.3		638
TO GEN. SUMMARY	1046	664		69	

* Includes Totals of Main Line Sta. 165+00 to 6+00 At. Exist. U.S. 224 East Crossing, ϕCH*31

CALCULATIONS

FED. RD. DIVISION	STATE	PROJECT	FISCAL YEAR	7 / 109
2	OHIO	-330( )		

POR-224-6.22

E-1 ROADWAY EXCAVATION, SUITABLE MATERIAL

Total from Recapitulation Sheet — 204,574 Cu.Yd.
Adjustment to Excavation for underdrain — -2,963 Cu.Yd.
Note:
The earthwork total shown on the recapitulation sheet was computed prior to the receipt of the recommendations for underdrain placement - therefore, the values on the cross-section sheets were not changed. The templates, however, were adjusted to show the proper grading.

Total Excavation — 201,561 Cu.Yd.
Use — 201,561 Cu.Yd.

E-1 ROADWAY EMBANKMENT

Total from Recapitulation Sheet — 142,181 Cu.Yd.
Adjustment to Embankment for underdrain (See note 972 Cu.Yd. above for explanation)
Adjustment to Embankment for placement of material above Sub-base in areas where underdrain is not to be place — +2800 Cu.Yd.

Total Adjustments — +3,772 Cu.Yd.
Total Embankment — 145,953 Cu.Yd.

Embankment + 25% Shrinkage = 145,158 × 1.25% (for Shrinkage) = **182,441 Cu.Yd.**

E-1 COMPACTED SUB-GRADE

Area for T-71 Paving (Main line & Side roads) — 72,985.0 Sq.Yd.
Area for County Hwy. 31 Paving — 2,106.5 Sq.Yd.

Total — 75,091.5 Sq.Yd.
Use — 75092 Sq.Yd.

E-11 WATER

Embankment	145,953 Cu.Yd. × 5 Gal.	729,765 Gal.
I-18	3,336 Cu.Yd. × 20 Gal.	66,720 Gal.
I-22	17,887 Cu.Yd. × 10 Gal.	178,870 Gal.
	Total	975,355 Gal.
	Use	**975 M Gal.**

I-18 STABILIZED CRUSHED AGGREGATE SHOULDERS & APPROACHES

Reloc. U.S. Rte. 224

423+81.76	To	424+38.12	56.36 × 2	112.72 Lin.Ft.
424+38.12	To	1+45.05	(Includ. Inter. Returns)	425.36 Lin.Ft.
1+45.05	To	18+82.66	1737.61 × 2	3475.22 Lin.Ft.
18+82.66	To	20+09.10	(Includ. Inter. Returns)	314.50 Lin.Ft.
20+09.10	To	60+00	3990.90 × 2	7981.80 Lin.Ft.
1000+00	To	1008+70	(Transition)	870.00 Lin.Ft.
60+00	To	68+50		850.00 Lin.Ft.
68+50	To	76+99.51	849.51 × 2	1699.02 Lin.Ft.
76+99.51	To	78+48.43	(Includ. Inter. Returns)	316.00 Lin.Ft.
78+48.43	To	80+00	151.57 × 2	303.14 Lin.Ft.
2003+95	To	2009+52.32	(Transition)	556.32 Lin.Ft.
80+00	To	84+00	400 × 2	800.00 Lin.Ft.
84+00	To	89+50		550.00 Lin.Ft.
89+50	To	PC.148+14.62	5864.62 × 2	11729.24 Lin.Ft.
3000+00	To	3007+15	(Transition)	715.00 Lin.Ft.
148+14.62	To	155+00		685.38 Lin.Ft.
155+00	To	165+68.30	1068.30 × 2	2136.60 Lin.Ft.
165+68.30	To	167+48.30	(Includ. Inter. Returns)	413.12 Lin.Ft.
167+48.30	To	172+57.89	509.59 × 2	1019.18 Lin.Ft.
172+57.89	To	2+02.08	(Includ. Inter. Returns)	666.66 Lin.Ft.
2+02.08	To	2+50	47.92 × 2	95.84 Lin.Ft.
			Total	35,675.90 Lin.Ft.
			Deduct Bridge Area 92.65 × 2	- 185.30 Lin.Ft.
				35,490.60 Lin.Ft.

Total I-18 = 35490.6 × 4 × .5 × 2.7 = 2628.9 Cu.Yd.
Total for Drives from Recap. Sheet — 537.3 Cu.Yd.
Under C.H. 31 Pavement (2217.5 S.Y. × 5/9 Yd.) = 369.6 Cu.Yd.

TOTAL — 3335.8 Cu.Yd.
USE — 3336 Cu.Yd.

L-9 12-12-12 FERTILIZER 20 lbs./1000 sq.ft.

From Recapitulation Sheet — 217,042 Sq.Yd.

$\frac{217042 \times 9 \times 20}{2000 \times 1000}$ = 19.53 Tons

Use — 19.53 Tons

L-9 AGRICULTURAL GROUND LIMESTONE 100 lbs./1000 sq.ft.

From Recapitulation Sheet — 217,042 Sq.Yd.

$\frac{217042 \times 9 \times 100}{1000 \times 2000}$ = 97.67 Tons

Use — 97.67 Tons

T-10 TRAFFIC COMPACTED SURFACE COURSE FOR MAINTAINING TRAFFIC

From General Notes — 200 Cu.Yd.

Use — 200 Cu.Yd.

I-22 SUB-BASE MATERIAL

Reloc. U.S. Rte. 224

423+81.76	To	11+00		1230.86	× 48	= 59081	SQ.FT.
11+00	To	17+00		600	× 37	= 22200	SQ.FT.
17+00	To	19+00	*(Average Width for Taper)	200	× 47	= 9400	SQ.FT.
19+00	To	20+00	*(" " " ")	100	× 49.3	= 4930	SQ.FT.
20+00	To	22+00	*(" " " ")	200	× 39.3	= 7860	SQ.FT.
22+00	To	37+00		1500	× 29.3	= 43950	SQ.FT.
37+00	To	41+00		400	× 38.7	= 15480	SQ.FT.
41+00	To	46+95		595	× 48	= 28560	SQ.FT.
47+88	To	48+50		62	× 48	= 2976	SQ.FT.
48+50	To	60+00		1150	× 29.3	= 33695	SQ.FT.
60+00	To	63+00	(Taper Area)	300	× 33.8	= 10140	SQ.FT.
63+00	To	64+00	(" ")	100	× 47.5	= 4750	SQ.FT.
64+00	To	66+00	(" ")	200	× 53.7	= 10740	SQ.FT.
66+00	To	68+50	(" ")	250	× 60.7	= 15175	SQ.FT.
68+50	To	73+50	(" ")	500	× 75.3	= 37650	SQ.FT.
73+50	To	75+00		150	× 74	= 11100	SQ.FT.
75+00	To	77+00		200	× 77.3	= 15460	SQ.FT.
77+00	To	78+50		150	× 93.3	= 13995	SQ.FT.
78+50	To	79+00		50	× 87.8	= 4390	SQ.FT.
79+00	To	84+00	(No Sub-base Material Required)				
84+00	To	85+00	(Taper Area)	100	× 90.2	= 9020	SQ.FT.
85+00	To	86+00	(" ")	100	× 55.3	= 5530	SQ.FT.
86+00	To	89+50	(" ")	350	× 35.8	= 12530	SQ.FT.
89+50	To	96+50		700	× 29.3	= 20510	SQ.FT.
96+50	To	117+00		2050	× 48	= 98400	SQ.FT.
117+00	To	121+00		400	× 29.3	= 11720	SQ.FT.
121+00	To	136+30		1530	× 48	= 73440	SQ.FT.
136+30	To	148+00		1170	× 29.3	= 34281	SQ.FT.
148+00	To	153+00	(Taper Area)	500	× 37.8	= 18900	SQ.FT.
153+00	To	155+00	(" ")	200	× 54.3	= 10860	SQ.FT.
155+00	To	158+00	(" ")	300	× 78.8	= 23640	SQ.FT.
158+00	To	161+00	(" ")	300	× 74.5	= 22350	SQ.FT.
161+00	To	165+50		450	× 66.3	= 29835	SQ.FT.
165+50	To	167+50		200	× 93.3	= 18660	SQ.FT.
167+50	To	172+50		500	× 66.3	= 33150	SQ.FT.
172+50	To	173+79		129	× 93.3	= 12036	SQ.FT.
173+79	To	*1+00	*(ATWATER)	101	× 112	= 11312	SQ.FT.
*1+00	To	*2+50		150	× 96	= 14400	SQ.FT.
			Sub-Total			802,106	SQ.FT.

Exist. U.S. Rte. 224 (West Crossing)

0+80E	To	3+25E		245	× 44	= 10780	SQ.FT.
3+25E	To	4+00E		75	× 24	= 1800	SQ.FT.
0+00W	To	2+00W		200	× 35	= 7000	SQ.FT.
2+00W	To	3+25W		125	× 44	= 5500	SQ.FT.
3+25W	To	4+00W		75	× 24	= 1800	SQ.FT.
			Sub-Total			26880	SQ.FT.

County Hwy. 69

*0+25N	To	3+00N	*(Sta. backed up to offset	275	× 21	= 5775	SQ.FT.
*0+25N	To	2+75S	fillets)	300	× 21	= 6300	SQ.FT.
			Sub-Total			12075	SQ.FT.

State Rte. 44

*0+25S	To	1+50S	*(Sta. backed up to offset fillets)	125	× 47	= 5875	SQ.FT.
1+50S	To	3+60S	*(Average Width)	210	× 48	= 10080	SQ.FT.
0+45N	To	1+00N	*(" ")	55	× 76	= 4180	SQ.FT.
1+00N	To	3+60N	*(" ")	260	× 47.7	= 12402	SQ.FT.
			Sub-Total			32537	SQ.FT.

County Hwy. 31

0+41S	To	1+08S	*(Average Width)	67	× 24	= 4288	SQ.FT.
0+54N	To	1+22.5N	*(" ")	68	× 24	= 4356	SQ.FT.
			Sub-Total			8640	SQ.FT.

Exist. U.S. Rte. 224 (East Crossing)

0+70E	To	2+00E	*(Average Width)	130	× 55	= 7150	SQ.FT.
2+00E	To	4+50E		250	× 44	= 11000	SQ.FT.
0+40W	To	1+50W	*(Average Width)	110	× 37	= 4070	SQ.FT.
1+50W	To	6+75W		525	× 44	= 23100	SQ.FT.
			Sub-Total			45320	SQ.FT.

Recapitulation
802,106
26,880
12,075
32,537
8,640
45,320
927,558 SQ.FT. × .5 ÷ 27 = 17,177 Cu.Yd.

Add for under I-18 — 710 Cu.Yd.
Total — 17,887 Cu.Yd.
Use — 17,887 Cu.Yd.

M-10 CALCIUM CHLORIDE

From General Notes:
Maintenance of Traffic — 4 Tons
Dust Control — 5 Tons
Total — 9 Tons
Use — 9 Tons

T-71 9" REINFORCED PORTLAND CEMENT CONCRETE PAVEMENT

Reloc. U.S. Rte. 224 (Includes all paving within normal outside edges)

423+81.76	To	425+12.62	130.86	× 24	=	3140.64 SQ.FT.
0+00	To	60+00	6000	× 24	=	144000.00 SQ.FT.
60+00	To	73+97.08	Transition Area		=	6033.64 SQ.FT.
73+97.08	To	80+00	Dual Construction		=	3340.16 SQ.FT.
80+00	To	89+50	Transition Area		=	4015.00 SQ.FT.
89+50	To	148+14.62	5864.62	× 24	=	140750.88 SQ.FT.
148+14.62	To	160+50	Transition Area		=	5276.48 SQ.FT.
160+50	To	173+79.93	Dual Construction		=	7184.00 SQ.FT.
0+00	To	2+50	Dual Construction		=	1566.00 SQ.FT.
			Sub-Total			522236.00 SQ.FT. ÷ 9 = 58026.66 Sq.Yd.

Intersecting Roads (Includes all paving from normal outside edges of main line paving to the limits of construction)

Exist U.S. 224 W

East Normal Edge to 4+00 E	9149.00 SQ.FT.
West Normal Edge to 4+00 W	11050.00 SQ.FT.
Sub-Total	20199.00 SQ.FT. ÷ 9 = 2244.33 Sq.Yd.

County Hwy. *69

North Normal Edge to 3+00 N	9520.00 SQ.FT.
South Normal Edge to 2+75 S	9500.00 SQ.FT.
Sub-Total	19020.00 SQ.FT. ÷ 9 = 2113.33 Sq.Yd.

State Rte. *44

North Normal Edge to 3+60 N	13040.00 SQ.FT.
South Normal Edge to 3+60 S	13040.00 SQ.FT.
Sub-Total	26080.00 SQ.FT. ÷ 9 = 2897.78 Sq.Yd.

County Hwy. *31

North Normal Edge to 1+22.45 N	2700.00 SQ.FT.
South Normal Edge to 1+08.36 S	2625.00 SQ.FT.
Sub-Total	5325.00 SQ.FT. ÷ 9 = 591.67 Sq.Yd.

Exist. U.S. 224 E

West Normal Edge to 6+75 W	15243.00 SQ.FT.
East Normal Edge to 4+50 E	11700.00 SQ.FT.
Sub-Total	26943.00 SQ.FT. ÷ 9 = 2993.67 Sq.Yd.
Deduct for I-71 Reinforced Conc. Approach Slab 50 × 24 ÷ 9 =	- 133.33 Sq.Yd.
Deduct for Bridge Area 92.65 × 24 ÷ 9	- 247.07 Sq.Yd.
Total	72931.04 Sq.Yd.
Use	**72931.00 Sq.Yd.**

T-35 ASPHALTIC CONCRETE SURFACE COURSE

2" (Drives) — 63.8 Cu.Yd.
1½" (County Hwy *31) 2106.5 S.Y. × 15/36 Yd. = 87.8 Cu.Yd.
Total — 151.6 Cu.Yd.
Use — 152.0 Cu.Yd.

B-35 ASPHALTIC CONCRETE LEVELING COURSE

2" (County Hwy *31) 2106.5 S.Y. × 2/9 Yd. = 117 Cu.Yd.
Use — 117 Cu.Yd.

T-30 BITUMINOUS TACK COAT

0.10 Gal. × 2106.5 S.Y. = 210.7 Gal.
Use — 211.0 Gal.

T-30 BITUMINOUS PRIME COAT (M-5.1 RT-2 & RT-3 or M-5.2 RC-1 & RC-2

0.35 Gal. × 2217.5 S.Y. — 776.1 Gal.
Use — 777 Gal.

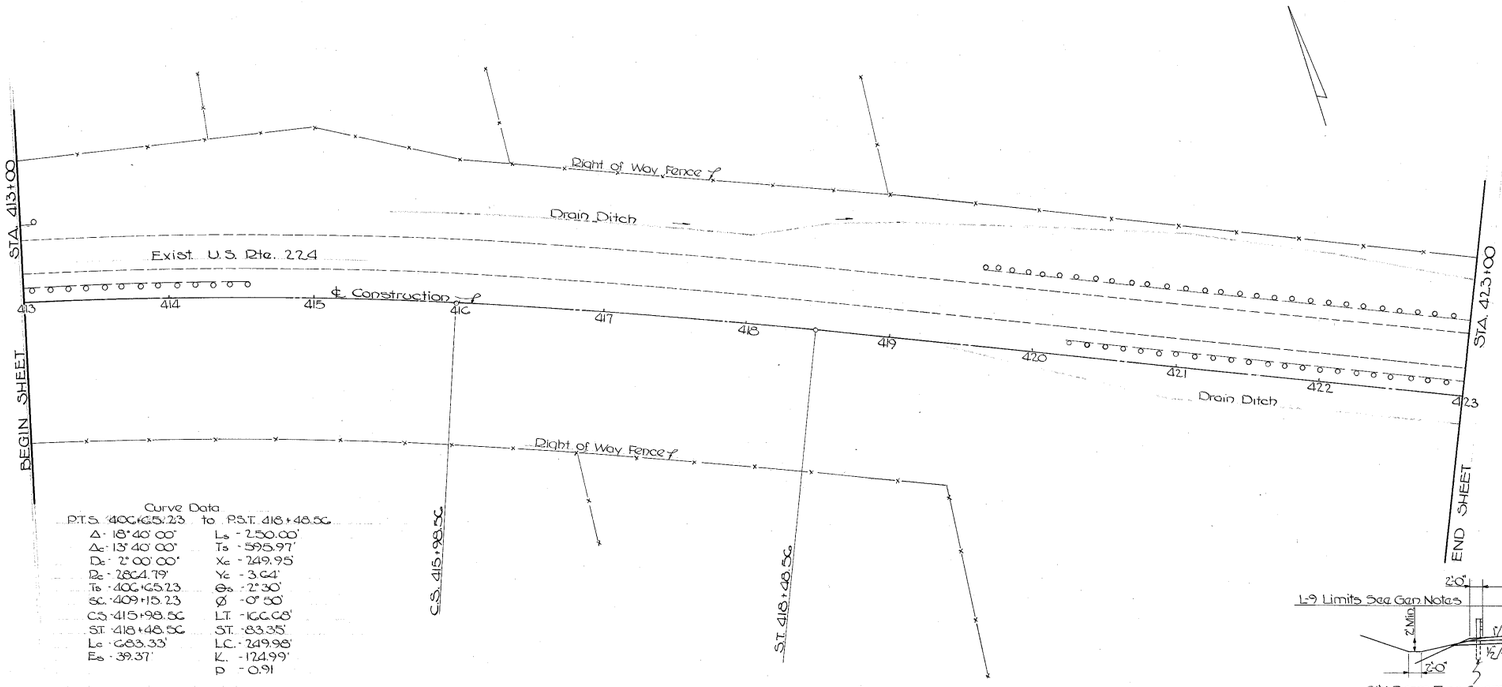
CALCULATION SHEET

GENERAL SUMMARY

ITEM NO.	QUANTITY	UNIT	DESCRIPTION
TYPE CODE 7221			ROADWAY
E-1	201561	Cu. Yds.	Roadway Excavation, Suitable Material
E-1	795	Cu. Yds.	Roadway Excavation, Unsuitable Material
E-1	75098	Sq. Yds.	Compacted Subgrade
E-4	2111	Cu. Yds.	Borrow Using Granular Material Below Original Ground As Per Plan Including Cost of Excavation Of Unsuitable Material.
E-4	316	Cu. Yds.	Borrow Using Granular Material Above Original Ground As Per Plan
E-8	5644	Sq. Yds.	Removal and Disposal of Existing Pavement.
E-8	120	Lin. Ft.	Removal and Disposal of Existing Curb.
E-8	800	Sq. Ft.	Removal and Disposal of Existing Sidewalk.
E-9	Lump Sum	L.S.	Removal of Trees and Stumps.
E-11	975	M-Gals.	Water
E-12	1413	Lin. Ft.	Pipe Removed, 15" and Under
E-12	35	Lin. Ft.	Pipe Removed, over 15"
I-8	16	Each	Monument Assembly
I-15	350	Lin. Ft.	Temporary Guard Rail As Per Plan.
T-15	3064.72	Lin. Ft.	Guard Rail, Steel Beam Type (Deep)
T-18	3536	Cu. Yds.	Stabilized Crushed Aggregate Shoulders and Approaches
L-9	217042	Sq. Yds.	Seeding and Protecting
L-9	19.53	Tons	Commercial Fertilizer (12-12-12)
L-9	97.67	Tons	Agricultural Liming Materials
Spec.	93,000	Sq. Yds.	Special Seeding As Per Plan
Spec.	2	Each	Bridge Type Overhead Sign Assembly, Type A, 40' Span
Spec.	2	Each	Bridge Type Overhead Sign Assembly, Type A, 36' Span
M-10	9	Tons	Calcium Chloride Furnished and Applied For Maintaining Traffic.
T-10	200	Cu. Yds.	Traffic Compacted Surface Course For Maintaining Traffic.
S-25	232	Lin. Ft.	3" Welded or Seamless Steel Pipe Sec. M-6.9 Galvanized As per Plan
SS-18	3576.8	Lin. Ft.	Fence, Type A Modified As per plan
S-15	Lump Sum	L.S.	Temporary Run Around, Roads Using Class A Pavement As per plan
			DRAINAGE
E-2	1563	Cu. Yds.	Excavation for Structures
E-3	934	Cu. Yds.	Channel Excavation
I-1	188	Lin. Ft.	12" Pipe for Driveways Sec. M-6.4(a)
I-2	80	Lin. Ft.	12" Class A Storm Sewers
I-2	264	Lin. Ft.	12" Class A Storm Sewers Under Pavement or Approaches, Sec. M-6.5(b) or Sec. M-6.8(b)
I-2	168	Lin. Ft.	15" Class A Storm Sewers
I-2	164	Lin. Ft.	15" Class A Storm Sewers Under Pavement or Approaches, Sec. M-6.5(b) or Sec. M-6.8(b)
I-2	142	Lin. Ft.	18" Class A Storm Sewers Under Pavement or Approaches, Sec. M-6.5(b) or Sec. M-6.8(b)
I-2	24	Lin. Ft.	21" Class A Storm Sewers
I-2	66	Lin. Ft.	21" Class A Storm Sewers Under Pavement or Approaches, Sec. M-6.6(a) or Sec. M-6.8(b)
I-3	80	Lin. Ft.	6" Helical Perforated Corrugated Metal Pipe, Sec. M-6.4(h) for Roadway Drainage
I-4	290	Lin. Ft.	6" Underdrain, Shallow
I-4	18970	Lin. Ft.	6" Underdrain, Deep
I-4	1407	Lin. Ft.	8" Outlets For Underdrains, Sec. M-6.4 (a)
I-5	18	Each	6" Pipe Specials for Underdrains
I-8	2	Each	Standard #1-4 Catch Basin
I-8	8	Each	Standard #2-2A Catch Basin
I-8	5	Each	Standard No.1 Manhole
I-8	1	Each	Special Raised Curb Inlet as Per Plan
I-14	1973	Lin. Ft.	Standard Type 1 Paved Gutter
I-14	105	Lin. Ft.	Special Paved Gutter as Per Plan
I-16	1	Each	Catch Basin, Abandoned
I-16	1	Each	Manhole, Abandoned
L-10	13420	Sq. Yds.	Sodding
S-1	342	Cu. Yds.	Concrete for Structures Class E
S-24	Lump Sum	L.S.	Removal of Existing Structures
S-27	550	Lin. Ft.	30" Std. Strength Reinforced Concrete Culvert Pipe Sec. M-6.6(b) or Extra Strength Vitrified Sewer Pipe Sec. M-6.8(b) For Roadway Culverts.
S-27	90	Lin. Ft.	36" Std. Strength Reinforced Concrete Culvert Pipe Sec. M-6.6(b) or Extra Strength Vitrified Sewer Pipe Sec. M-6.8(b) For Roadway Culverts.
I-2	496	Lin. Ft.	42" Class A Storm Sewers Under Pavement or Approaches Sec. M-6.6(a)
S-27	808	Lin. Ft.	42" Pipe for Roadway Culverts
S-27	188	Lin. Ft.	48" Standard Strength Reinforced Concrete Culvert Pipe Sec. M-6.6(b) for Roadway Culverts.
S-28	112	Lin. Ft.	12'-6" Span x 7'-11" Rise Sectional Corrugated Metal Structures, Sec. M-6.4(a) 8 and 7 gage
I-2	348	Lin. Ft.	42" Class A Storm Sewers
			PAVEMENT
I-7	134	Sq. Yds.	Reinforced Concrete Approach Slabs T=13"
I-12	1046	Lin. Ft.	Standard Concrete Curb Type 2A
I-13	664	Sq. Ft.	Sidewalks, 4" Concrete
I-22	17,887	Cu. Yds.	Subbase as Per Plan
I-23	69	Each	Precast White Portland Cement Concrete Traffic Dividers
T-30	211	Gals.	Bituminous Tack Coat as Per Plan
T-35	152	Cu. Yds.	Asphaltic Concrete Surface Course Type 'A' (70-80)
T-71	72,931	Sq. Yds.	9" Reinforced Portland Cement Concrete Pavement
B-35	117	Cu. Yds.	Asphaltic Concrete Leveling Course (70-80)
T-30	777	Gals.	Bituminous Prime Coat Sec. M-5.7 RT-2 & RT-3 or Sec. M-5.2 RC-1 & RC-2

See Sheet No.95 For Quantities OF Structures Over 20' Span

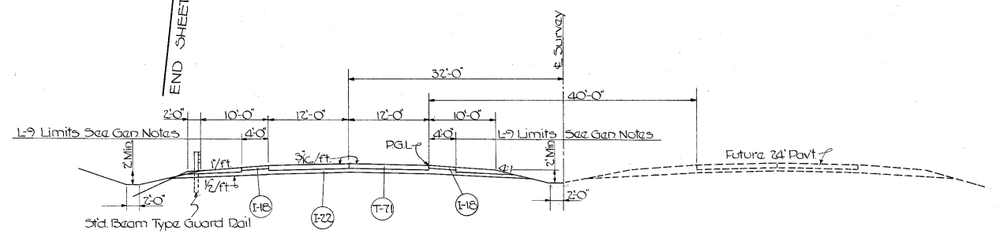
GENERAL SUMMARY



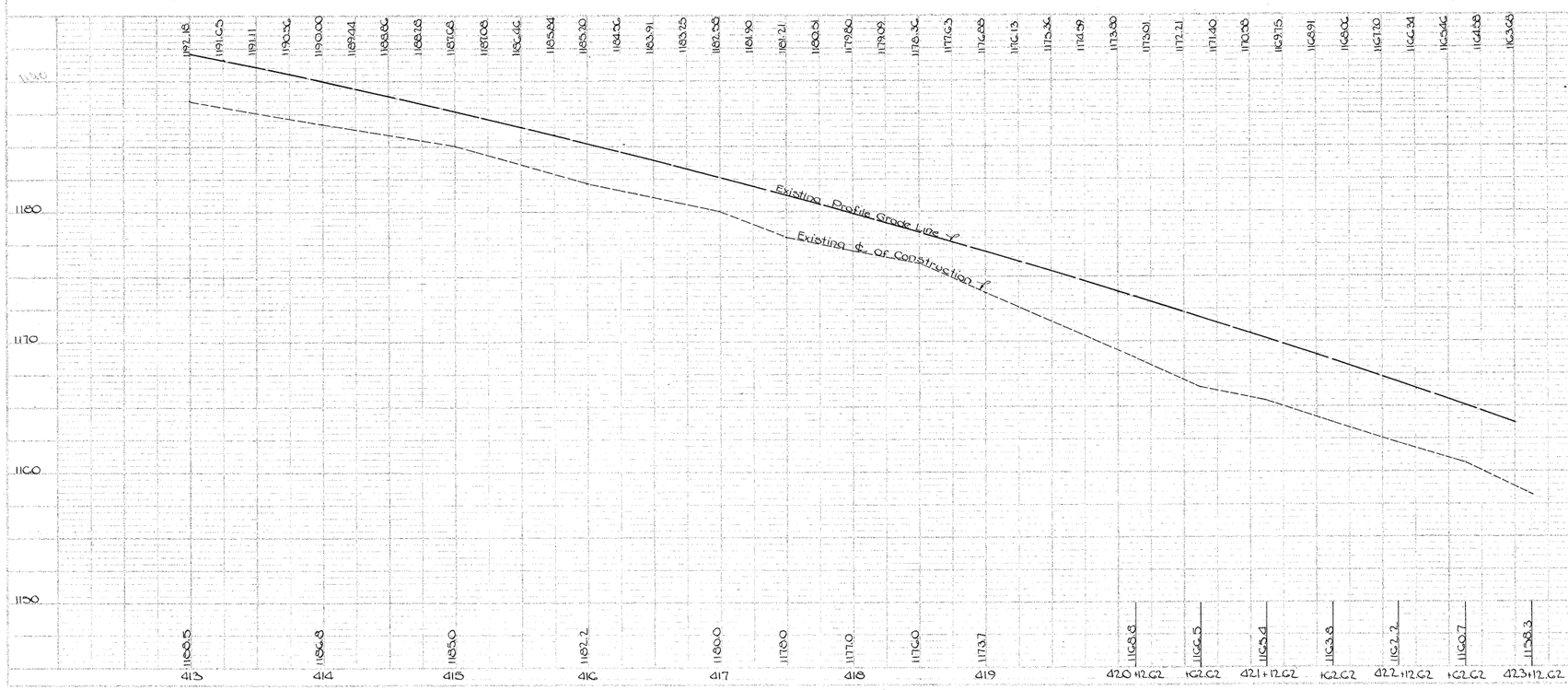
Curve Data

P.T.S. 406+65.23 to P.S.T. 418+48.56

Δ - 18° 40' 00"	Ls - 250.00'
Δc - 13° 40' 00"	Ts - 595.97'
Dc - 2° 00' 00"	Xc - 249.95'
Rc - 2864.79'	Yc - 3.64'
Ts - 406+65.23	θs - 2° 30'
SC - 409+15.23	Ø - 0° 50'
CS - 415+98.56	LT - 166.68'
ST - 418+48.56	ST - 83.35'
Lc - 683.33'	LC - 249.98'
Es - 39.37'	K - 124.99'
	P - 0.91



TYPICAL SECTION OF ROADWAY
ADJOINING THIS CONTRACT



LINE SHEET - STA. 413+00 TO STA. 423+00

Stake 'C' | Stake 'B' | Stake 'A'
G=1.95 | 89.20
153.32 | 143.60 | 209.38
38°15' | 73°06'
POT | ℄ Reloc U.S.224
Boat Spike on East Tangent POT 0+00
Ref. To POT. 0+00

Iron Pin POT. 3+78.30
Stake 'D' | 150' | 90° | 90° | 75.00' | 101.40'
Stake 'C' | Stake 'A' | Stake 'B'
Ref. To POT. 3+78.30

252°0'
265°3'
POT. G+30.53
Iron Pin
'D' IP
Stake 'C' | 180° | Stake 'B'
Ref. To POT. G+30.53

P.T. 'B' 0

P.T. 0+21.80

Adjust existing 8" Tile

Ex. 6" Drain Tile

Gate

Basin Limited Access Highway

Reloc U.S. 224

N 11° 17' 00" E

4+00 E

4+00 W

25° Calc.

30° Calc.

WEST CROSSING

C-1

Ex. 5'x5' Box Culvert

℄ Creek (6.2')

Pond

Peat Bog

U.S. 224

Cultivated Field

Trees & Brushline

End of Ultimate Paving by others Begin Paving under this Cont

BEGIN PROJECT STA. 423+81.76

F-330(3)

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

℄ Ditch

Connect prop. Guard Fence to Ex.

Remove existing Curb (5M*)

Ex. 6" C.M.P.

423

424

425

423+00

BEGIN SHEET STA.

℄ Ditch

BEGIN WORK STA. 423+75

EXIST. 24' P.C.C.

Temp. Runaround for maint. of traffic. See general notes.

425+18.62 Bk. 0+00 Ahd

P.O.T. 1+35.46

Limit of Hib.

Brush & Woods

Clean exist channel See Culvert Detail Sheet No. 33.

S 66° 32' 30" E

Bond Outlet (2' Wide)

C-2

Abandoned Orchard (Sparse)

P.O.T. 3+78.30

P.O.T. G+30.53

P.O.T. 9+11.39

Abandoned Orchard (Sparse)

END SHEET STA. 10+00

Tree & Brushline

Cultivated Field

Service Drive

Existing U.S. 224 Curve Data
Sta. 0+21.80E to 3+32.85W
Δ = 10° 10' 00"
De = 2° 52'
R = 1998.90'
T = 177.82
Lc = 354.65'
E = 7.87

R=1045.00' Service Dr.
Δ = 82° 35' 00"
D = 14° 55' 30"
T = 90'
L = 24.10
E = 45.89

Bench Mark "1 Boat Spike E. Side Pole "RD 59 in Island - 0+00
Elev. 1155.960

See next sheet for intersection details. (Sh. No. 11)

SODDING

STATION From	STATION To	Side	I-10 9' Wide S.Y.	
424+35	2+20E (Ex.)	Lt	60	Lay each side of Ditch Gutter
TOTAL			60	

FENCE

STATION From	STATION To	Side	Distance From ℄	55-18 L.F.
* 4+00 E	4+00	Lt	25'-99	170
4+00	10+00	Lt	99	600
* 1+19 W	1+69	Rt	29'-99	740
1+69	10+00	Rt	99	831
TOTAL				1841

*Ex. U.S. 224

REMOVAL

STATION From	STATION To	Side	E-8 Pavement S.Y.	E-8 Exist. Curb L.F.
4+00W	4+00E		1780	
423+81.76	Ex. U.S. 224	Lt	764	
424+60	425+05	℄		170
TOTAL			2544	170

DRAINAGE

STATION From	STATION To	Side	Ent. Std. Typ I Pav. Gutter L.F.
424+35	2+20E (Ex.)	Lt	265
TOTAL			265

STRUCTURES UNDER 20' SPAN

Mark	Station	Type	Size	Detail Sheet
C-1	2+29 E	Std. Pipe Culvert	42"x84"	33
C-2	2+50	Std. Pipe Culvert	48"x114"	33

I-15 GUARD RAIL

STATION From	STATION To	Side	I-15 L.F.
1+50	6+00	Lt	450
423+75	2+50E	Lt	350
TOTAL			800

MONUMENT BOXES

STATION	Side	I-5 Each	
425+12.62 Bk. 0+00 Ahd	℄	1	POT.
TOTAL		1	

DRIVES

STATION From	STATION To	Side	Dist. from Pavt. Edge	T-35 C.Y.	I-18 C.Y.	E-1 Ex. C.Y.	E-1 Emb. C.Y.
@20+13	23+10	Lt	29'		58		1700
3+25W	Ex. U.S. 224	Lt	38	34	10		15
TOTAL				34	68		1715

@Service Drive

Vertical Curve

Graphic Grade on Contract Por-224-0.00

END PROJECT Por. 224-0.00 Sta 423+81.76 BEG. PROJECT POR.224-G.22

Note: Adjustment has been made for transfer of profile grade elev. between this Contract and Por-224-0.00

-3.60%

-0.50%

P.I.

P.T.

400' V.C.

P.I. 1+00 Elev. 1152.24 DD. = 6.45'

423+12.62 Bk. (By Others) = 0+00 Ahd. (This Contract) Por. 0+00.12 Ahd. (Exist. U.S. 224)

P.C. Exist. U.S. Rte. 224

See Paving Plan for Beg. Paving Work in this Area Sheet No.

Peat Bog Lt. of ℄ See Cross Sections for detail of removal & E-4 Granular Borrow Book 1111

Existing Ground Line At ℄ Survey

E-4 Granular Borrow Including Excav. of Unsuitable Material = 2111 Cu.Yd.
E-4 Granular Borrow = 3166 Cu.Yd.

EXCAVATION	9365 Cu.Yd.
EMBANKMENT	13783 Cu.Yd.
SEEDING	10500 Sq.Yd.

Embankment from Cross Sections 12068 Cu.Yd.
Embankment from Drive Table 1715 Cu.Yd.
Total 13783 Cu.Yd.

SERVICE DRIVE TO EXIST. U.S. 224

20+40 Sta Dr. 1150W (6.82W) 1158.82
23+07 Sta Dr. 1150W (Proj. Const.)

-13.6%

-10.0%

P.C. 20+15 1158.27

120' V.C. P.I. 20+75 Elev. 1157.85

P.R.C. 21+35 1157.85

120' V.C. P.I. 21+95 Elev. 1145.85

P.T. 22+55 1142.95

Limit of I-18 1142.22 (23+05)

-1.50%

-3.52%

Grade is high to allow placement of drainage structure in future.

1160 | 1150 | 1140 | 1130

423+12.62 | 423+12.62 | +12.62 | 424+12.62 | +12.62 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 22 | 23

LINE SHEET - STA 423+00 TO STA 10+00

FED. RD. DIVISION	STATE	PROJECT	FISCAL YEAR
2	OHIO	F-330( )	

11 / 109

POR-224-6.22

Curve Data (Exist U.S. 224) ℄ R/W
PC 3+32.85W to PT 0+21.80E
Δ = 10°10'00"
Dc = 2°52'
R = 1998.90'
T = 177.82'
Lc = 354.65'
E = 7.87'

BEGIN PROJECT STA 423+81.76

F-330(3)

Marker will be furnished & erected on the right by the State before acceptance of this project.

BEGIN WORK STA 423+75

1+50 West ℄ R/W
20+00 ℄ Service Dr.

BEGIN LIMITED ACCESS HWY 1+18.94W

BM #1 - El 1155.960
Boat Spike in E. Side Pole #120.59 in Island 0+00

EXIST. SERVICE Dr.
Δ = 52°35'00"
Dc = 114°35'30"
R = 50'
T = 28.70'
Lc = 45.89'
PC 20+12
PT 20+57.89

RELOC. U.S. 224

U.S. 224 WEST CROSSING

U.S. 224

Pond

Pond Outlet (6' Wide)

Temporary Pavement for Traffic Maint. of Exist. Crossover (This Contract)

Tama Duroground for Maint. of Traffic See General Notes

Remove Existing Culvert

15" CMP

Connect Prop. Guard Fence to Exist.

Gate Posts

Gate

Box Culvert

Form House

Chicken House

Garage

Corn Crib

Barn

Chicken House

Conc. Blk.

Gravel Dr.

Fr. Gar.

2 Sty Fr.

Note:
See Drainage Plan for Shoulder Taper Details on East Side of Road.

Begin Shoulder Stabilization

Sta 1+57.11E

Sta 1+45.63

Sta 1+50 - Crown - PG El. 1152.86

Sta 1+60 E - Crown - PG El. 1152.23

Sta 0+92.11E

Sta 0+79.88

Sta 0+06.16E

Sta 425+05.83

PT 0+21.80E

See Intersection Detail This Sheet

Sta 424+25 - Crown PG El. 1159.18

Sta 0+03.44W

End Shoulder Stabilization

Std. Longitudinal Joint

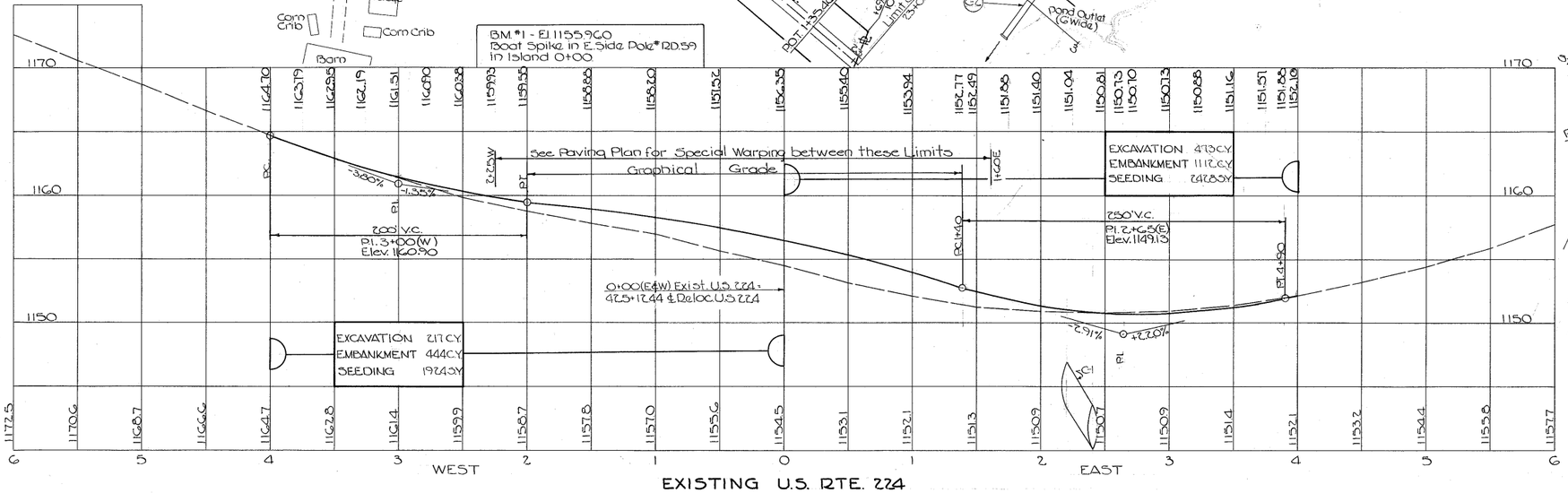
℄ Reloc. U.S. 224

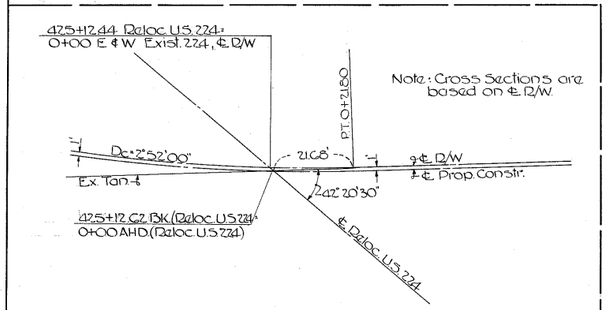
EXIST. U.S. 224

1W ℄ Prop. Construction

℄ R/W & Std. Slope Line

Sta 2+25 W - Crown PG El. 1159.95





INTERSECTION DATA

ESTIMATED QUANTITIES

S-15 Temporary Run-Around Road Using Class A Pavt — Lump Sum
E-1 Roadway Excavation — 690 Cu.Yd.
Roadway Embankment — 1356 Cu.Yd.
(Note: See Cross Sections for method of computing)
L-9 Seeding — 4352 Sq.Yd.
All other quantities are covered on Main Line Sheet or on calculation sheet.

Ⓐ Std. Key Joint without tie bars.
Ⓑ Expansion Joint without dowels.
Ⓒ Expansion Joint with dowels

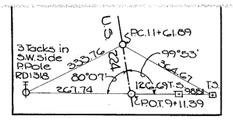
INTERSECTION PAVING PLAN

Scale: 1" = 20'-0"

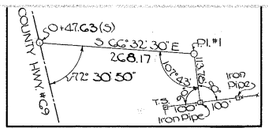
INTERSECTION DETAILS - EXIST. U.S. 224 (WEST CROSSING)

FED. RD. DIVISION	STATE	PROJECT	FISCAL YEAR	12 / 109
8	OHIO	500( )		

POR-224-6.22



REF. TO POT. Sta. 9+11.39



REF. TO PI. #1 Sta. 22+33.44 (Bk)

Curve #1
PC 11+61.89 to PT. 32+87.89
Δ = 17°43'00"
D_c = 0°50'
R = 6875.49'
L_c = 2126.00'
T = 1071.55
E = 83.00'
PI 22+33.44 BK
Superelevation = 0.015
R = 6775.49'

Cone Blk. Gar & Shop

LIMIT OF PAVING Meet Exist. Pavmt.

(End Fence) 6+00 N 30°

N 5° 59' 30" E

Std. Paved Gutter Type 2

Begin Fence 30.00' Rt.

Exist. Culvert Pipe

COUNTY HWY. #69

0+00 (N & S) & CH #69 Exist & Prop Constr.

19+52.70 & U.S. 224 R = 6775.49

STA 10+00

BEGIN SHEET

Cultivated Field

Straight Line

Mon.

Curve #1

Typical Gutter Ditch

Sta. 18+97

S 66° 32' 30" E

0+47.63 (S)

Curve #1 External Tangent S 66° 32' 30" E

R = 6975.49

Cultivated Field

Straight Line

R = 6975.49

Cultivated Field

11½ Farm Drive

BM #2

See Sheet No. 13 for Intersection and Side Road Details.

(End Fence) 14+75.5 ST

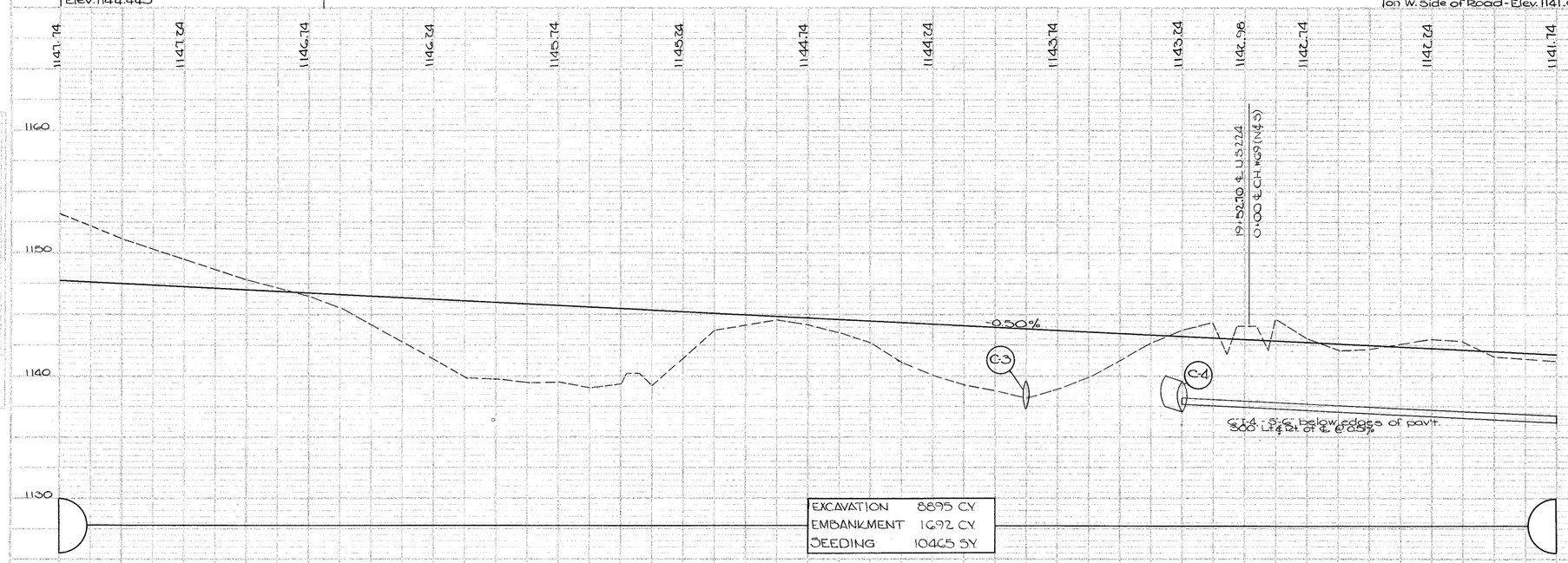
BM #3

14+75.5 (Begin Fence)

END SHEET STA. 22+00

Bench Mark #2-175' S.W. of Sta. 11+00
PK Nail in N. Side of Power Pole RD-1319
Elev. 1144.445

Bench Mark #3-170' S.W. Sta. 20+
PK Nail in N. Side of Tel. Pole #93
on W. Side of Road - Elev. 1141.698



EXCAVATION	8895 CY
EMBANKMENT	1692 CY
SEEDING	10465 SY

SODDING				
STATION		Side	L.O. Wide SY	
From	To			
13+50	17+85	Lt.	435	
2+50N*	20+50	Rt. & Lt.	250	*C.H. 69
2+50N	18+86	Lt.	37	Along Pav. Gutter
TOTAL			722	

FENCE				
STATION		Side	Dist. From ℄	35-18 L.F.
From	To			
10+00	18+75	Lt.	99-99	875
18+75	2+00N	Lt.	99-29	90
10+00	11+62	Rt.	99-99	162
11+62	14+00	Rt.	99-109	238
14+00	16+00	Rt.	109-99	200
16+00	19+00	Rt.	99-99	300
19+00	1+75.5	Rt.	99-56	90
2+00N	20+00	Lt.	29-99	115
20+00	22+00	Lt.	99	200
1+75.5	20+25	Rt.	29-99	67
20+25	22+00	Rt.	99-99	175
TOTAL				2512

STRUCTURES UNDER 20' SPAN				
MARK	STATION	TYPE	SIZE	SKEW Stat.
C-3	17+75	Std. Pipe Culvert	30"x82'	34
C-4	18+97	" " "	30"x92'	34

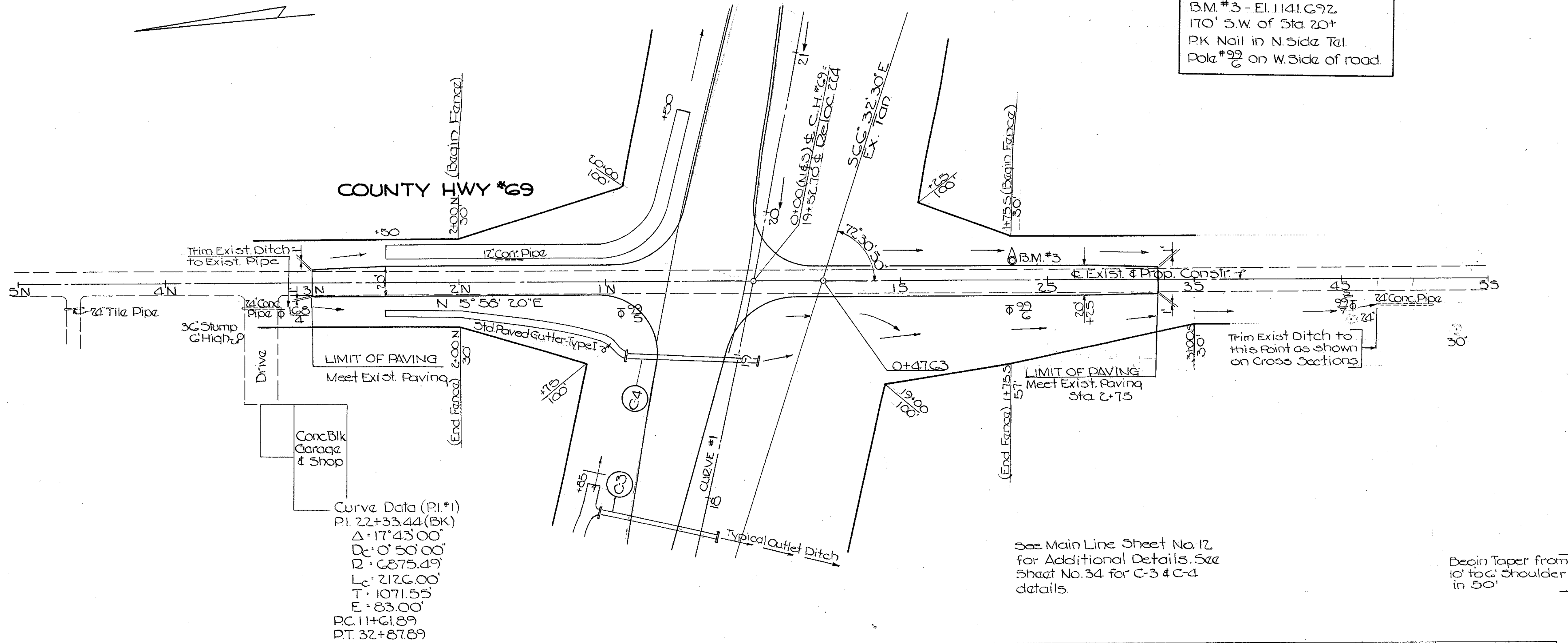
DRAINAGE				
STATIONS		18"-36" Type I Pav. Gutter L.F.	I-4 Cb Dep.	
From	To			
19+00	22+00 (Lt.)		300	
19+00	22+00 (Rt.)		300	
2+50N	18+86	165		
TOTAL		165	600	

MONUMENT BOXES			
STATION	Side	I-8 Each	
11+61.89	℄	1	PC.
TOTAL		1	

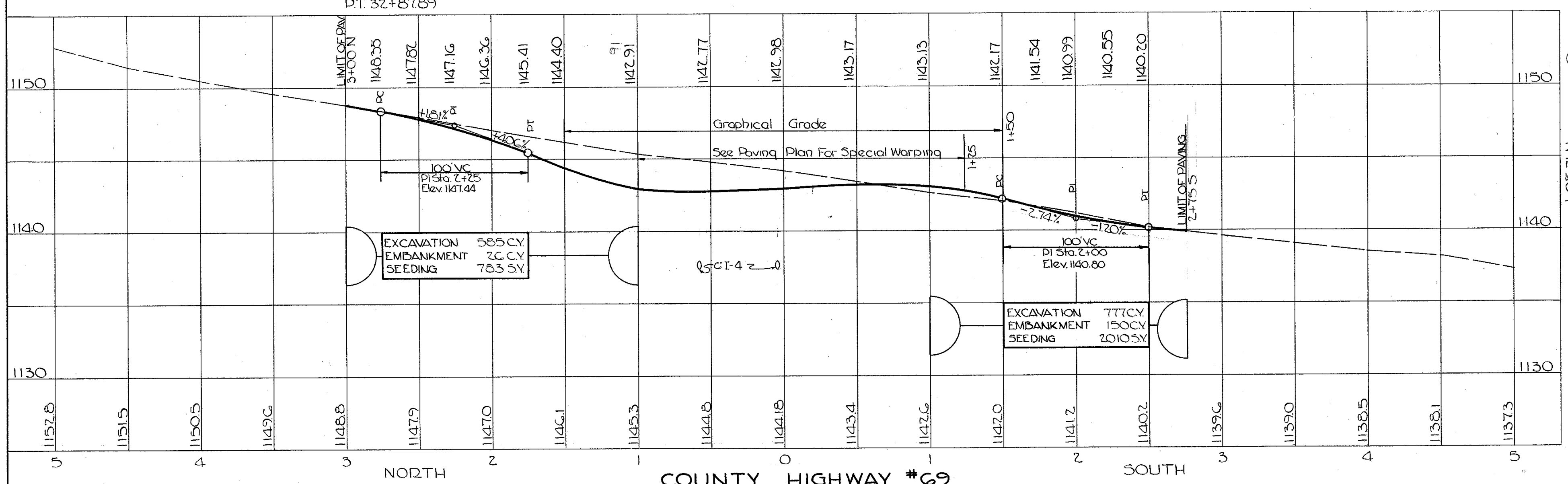
PIPE REMOVAL-15" & UNDER					
STATION		Side		Pipe Removal L.F.	
From	To				
1+75N*		Rt.		18	*C.H. 69
TOTALS				18	

LINE SHEET - STA. 10+00 TO STA. 22+00

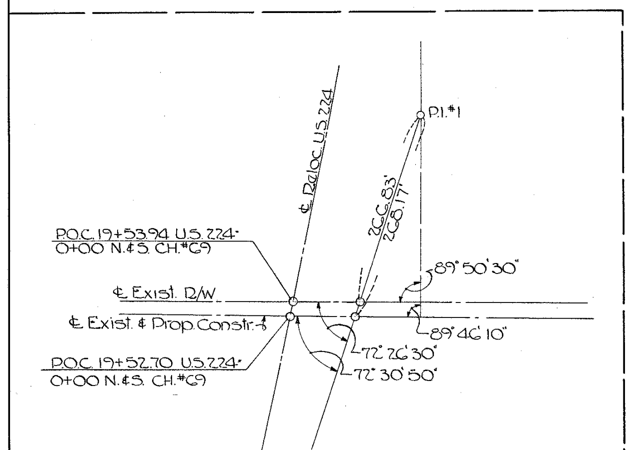
B.M. #3 - El. 1141.692
170' S.W. of Sta. 20+
P.K. Nail in N. Side Tel.
Pole #99/6 on W. Side of road.



See Main Line Sheet No. 12 for Additional Details. See Sheet No. 34 for C-3 & C-4 details.



COUNTY HIGHWAY #69

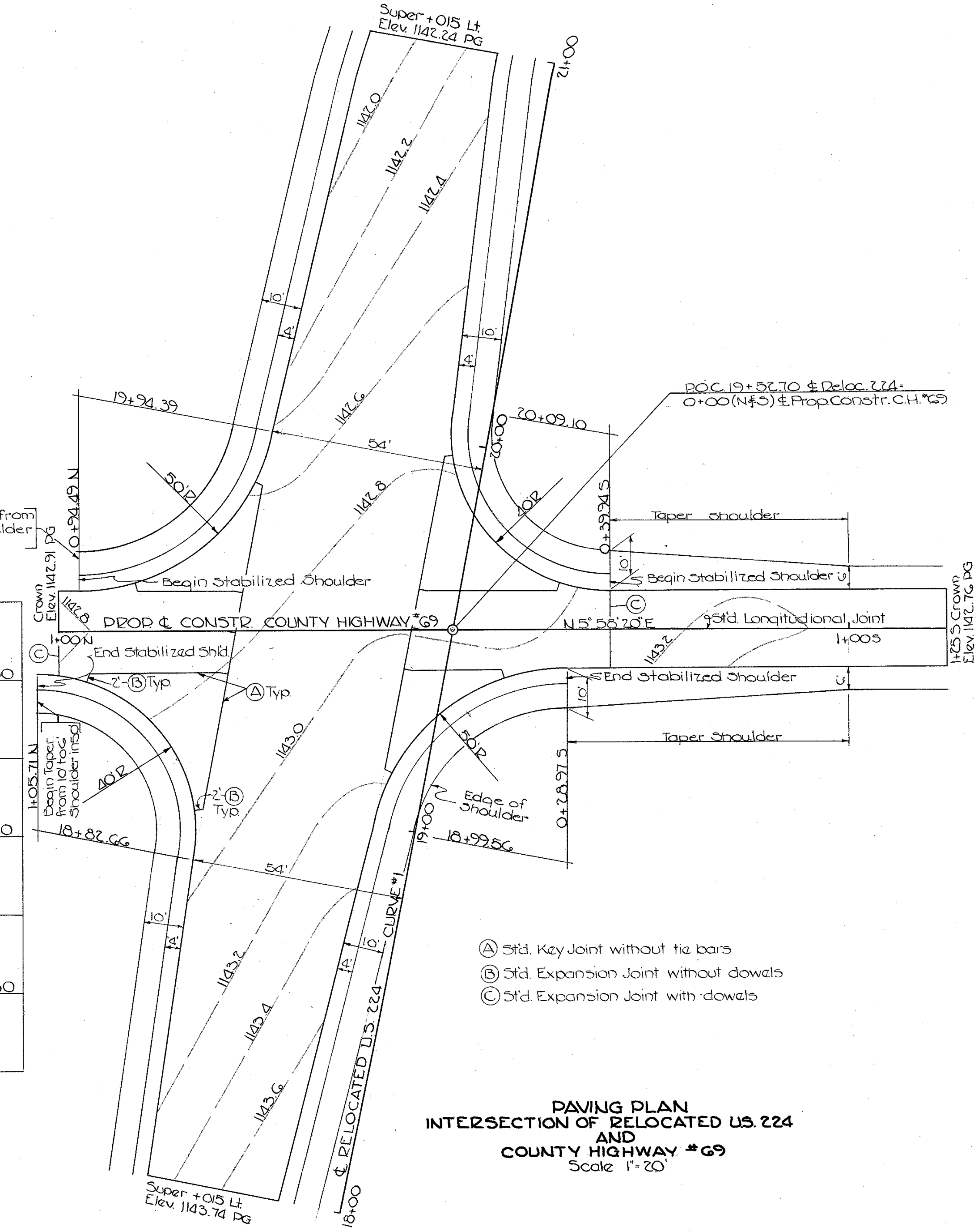


INTERSECTION DATA

ESTIMATED QUANTITIES

E-1	EXCAVATION	1362 C.Y.
	EMBANKMENT	176 C.Y.
L-9	SEEDING	2793 S.Y.

All other quantities are on Main Line sheet or Calculation sheet.



(A) Std. Key Joint without tie bars
(B) Std. Expansion Joint without dowels
(C) Std. Expansion Joint with dowels

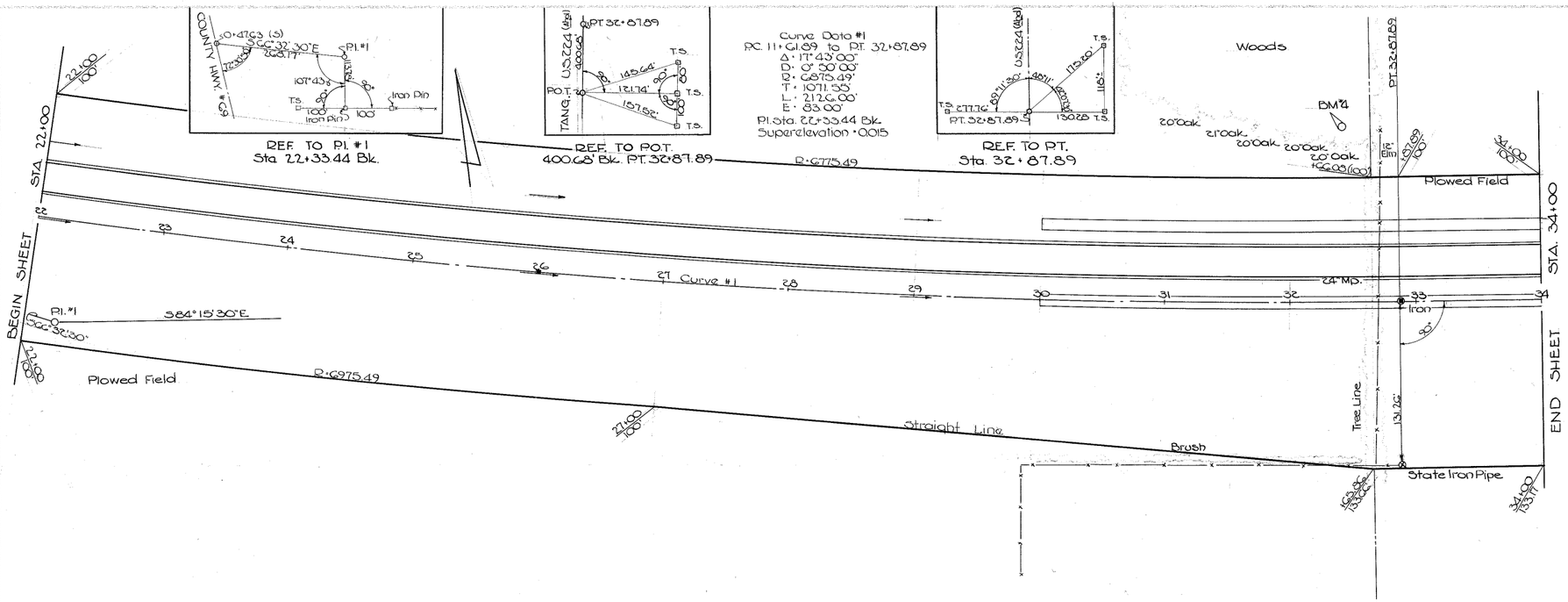
PAVING PLAN
INTERSECTION OF RELOCATED U.S. 224
AND
COUNTY HIGHWAY #69
Scale 1" = 20'

LINE SHEET - STA. 3+00(N) TO STA. 2+75(S) COUNTY HWY #69

FED. RD. DIVISION	STATE	PROJECT	FISCAL YEAR
2	OHIO	F-330( )	

14
109

POR-224-G.22



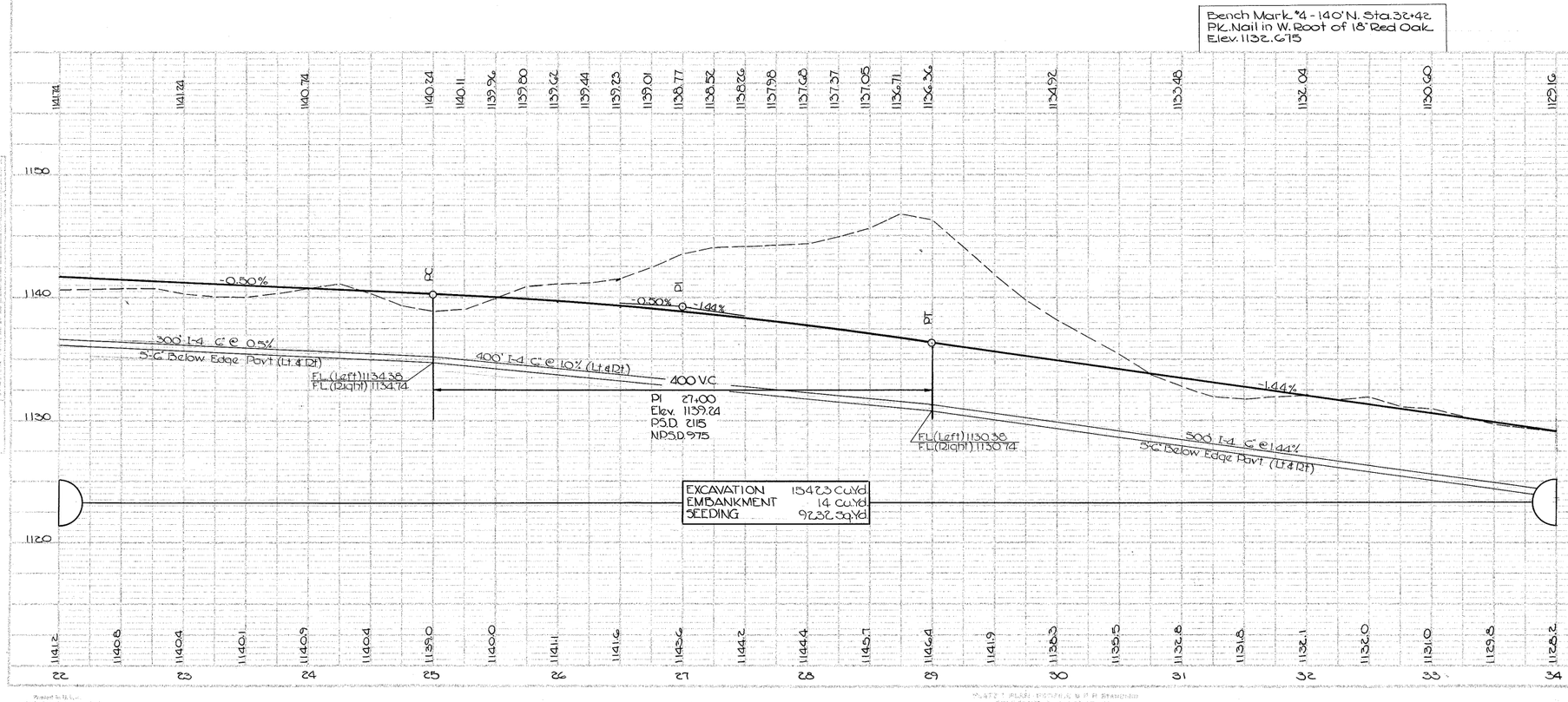
SODDING				
STATION		Side	L-10 9" Wide S.Y.	
From	To			
30+00	34+00	Lt.	400	
30+00	34+00	Rt.	400	
	TOTAL		800	

FENCE				
STATION		Side	Dist. From ℄	55-18 L.F.
From	To			
22+00	34+00	Lt.	99'	1200
22+00	27+00	Rt.	99'	500
27+00	32+66	Rt.	99'-132.7'	566
32+66	34+00	Rt.	132.7-132.2	134
	TOTAL			2400

MONUMENT BOXES			
STATION	Side	1-8 Each	
26+00	℄	1	P.O.C.
32+87.89	℄	1	P.T.
TOTAL		2	

DRAINAGE (1-4)				
STATION		Side & Pav't	1-4 6" Deep L.F.	
From	To			
22+00	34+00	L	1200	
22+00	34+00	R	1200	
TOTAL			2400	

Bench Mark #4 - 140' N. Sta. 32+42
P.K. Nail in W. Root of 18" Red Oak
Elev. 1132.675

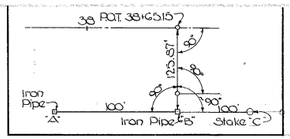


LINE SHEET - STA. 22+00 TO STA. 34+00

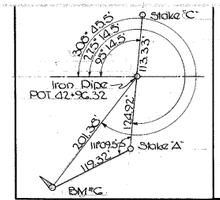
STATE	PROJECT	FISCAL YEAR	SHEET	TOTAL SHEETS
OHIO	50( )		115	109

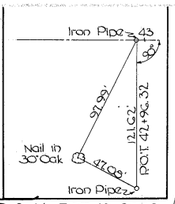
POR-224-G.22

* See std. construction drawing I-14G. Use Type I Paved Gutter, to be same as std. except that 1'-0" of sod to be placed on each side of paving.

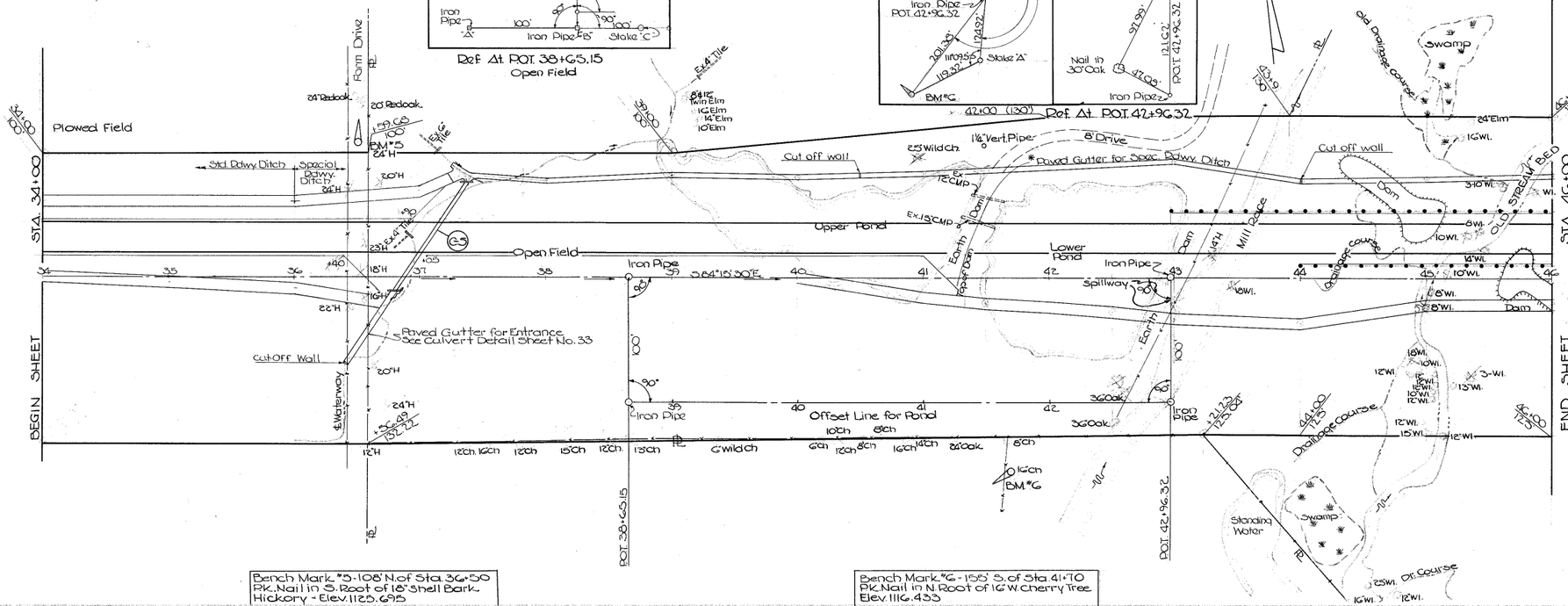


Ref. At. POT. 38+65.15
Open Field





Ref. At. POT. 42+96.32



Bench Mark "S-108' N. of Sta. 36+50
Pk. Nail in S. Root of 18" Shell Bark Hickory - Elev. 1128.695

Bench Mark "G - 155' S. of Sta. 41+70
Pk. Nail in N. Root of 16" W. Cherry Tree
Elev. 1116.435

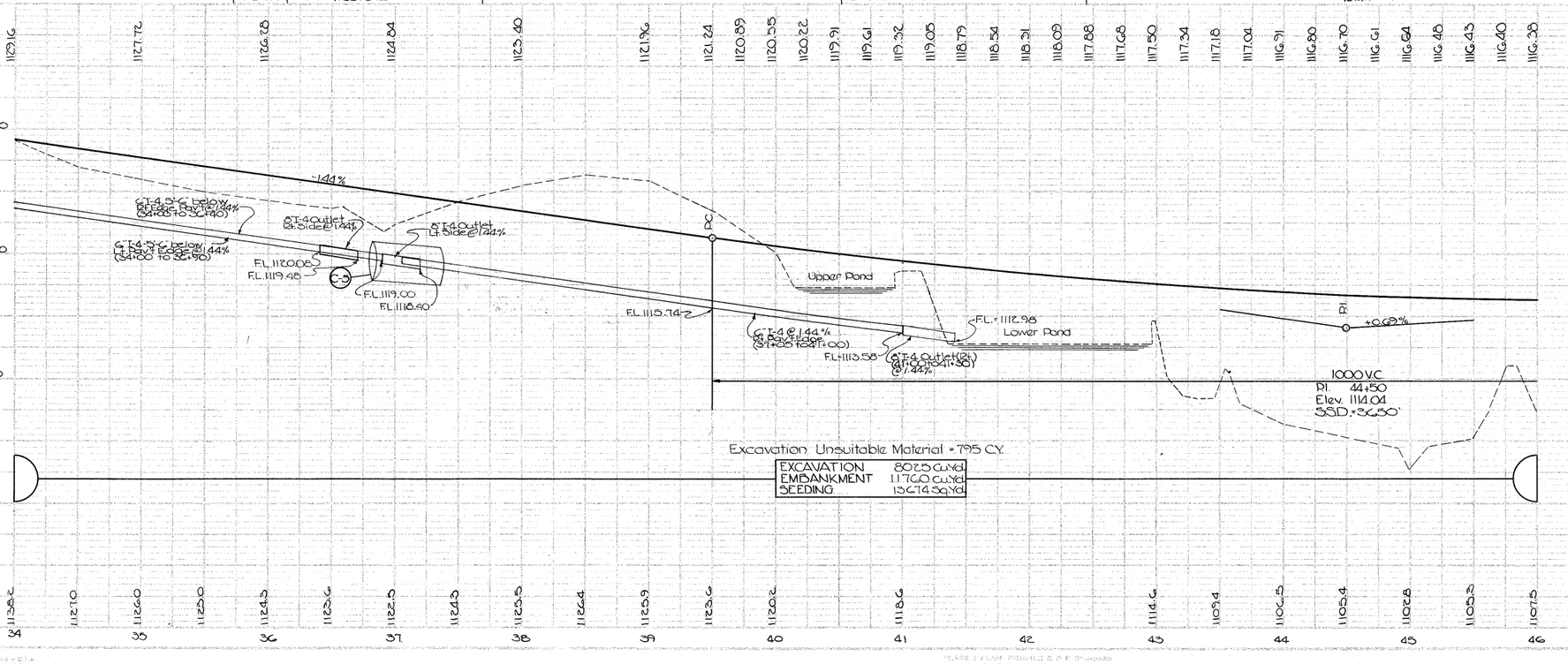
SODDING				
STATION		Side	L.I.O. 9' Wide	Remarks
From	To			
34+00	37+25	Lt.	325	
37+25	46+00	Lt.	195	Fav. Gutter
34+00	36+60	Rt.	260	
40+00	46+00	Rt.	600	
	TOTAL		1380	

STRUCTURES UNDER 20' SPAN				
Mark.	STATION	Type	Size	DETAIL SHEET
C-5	36+87	Std. Pipe Culvert	36"ø	33

I-15 GUARD RAIL			
STATION		Side	I-15 L.F.
From	To		
43+00	46+00	Lt.	300
44+00	46+00	Rt.	200
	TOTAL		500

FENCE				
STATION		Side	Dist. From ℄	55-16 LF
From	To			
34+00	39+00	Lt.	99'	500
39+00	42+00	Lt.	99' - 129'	300
42+00	46+00	Lt.	129'	400
34+00	36+56	Rt.	132.2-130.2	256
36+56	43+21	Rt.	130.22-12.4	665
43+21	44+00	Rt.	12.4-12.4	79
44+00	46+00	Rt.	12.4	200
	TOTAL			2400

DRAINAGE								
STATIONS		S.I-14 L.F.	F-4			Removal of Sundry Ent. (LF)	I-5 for I-4 C-45	
From	To		Size	Type	Ends			
37+25	46+00	Lt.	675					
36+80	37+20	Lt.				50		
41+30	41+65	Lt.				50		
34+00	37+20	Lt.		290	42		1	
34+00	36+76	Rt.		240	42		1	
37+09	41+30	Rt.		395	42		1	
TOTALS		675		925	126	100	3	



Excavation Unsuitable Material = 795 C.Y.

EXCAVATION	8025 C.Yd.
EMBANKMENT	11760 C.Yd.
SEEDING	15674 Sq.Yd.

LINE SHEET - STA. 34+00 TO STA. 46+00

FED. ROAD DIVISION	STATE	PROJECT	FISCAL YEAR
2	OHIO	BR-330( )	

16
109

POR-224-G.22

Swamp
Old Stream Bed
Drainage Course
Congress Lake Outlet
12"Wl.
8"Wl.
14"Elm
18"Wl.
18"Elm
10"Elm
24"Elm
30"Ash
38"Elm
30"W.
14"W
8"Ch
10"Ch
Dr Course
30"Elm
18"Elm
Woods
14"Ch
12"Ch
18"Ch
Sta 46+00
Expansion Joint
Approach Slab
16"Elm
22"Elm
Expansion Joint
15"Elm
15"Ch
10"Elm
8"Elm
6"Mp
6"Ch
Chip
Iron Pipe
10"A
14"Oak
9"A
9A
16"Ch
36"Elm
12"A
Sta 48+84.67
Sta 49+29.04
Stone
Edge of Swamp
20"Oak
Straight Line
Cultivated Field
Sta 58+00
End Sheet
Begin Sheet
Curve #2
P.C. Sta. 48+84.67 to P.T. 55+41.81
Δ = 8°56'00"
D = 0°56'
R = 6138.83'
L = 957.14'
T = 479.54'
E = 18.70'
P.I. Sta. 53+64.21 Bk.
Superelevation = +.015
D = 6038.83
S 84°15'30" E
N 86°48'30" E
P.I. #2
Bearings
Sta 47+51.15
P.C. 48+84.67
Sta 48+84.67
Sta 55+55.55
Sta 55+48.52
Stake "A"
Stake "B"
Stake "C"
Ref. To P.C. 48+84.67
+93.70
134.30
Bearings
P.I. #2
Sta 53+32.21 (Bk.)
Iron Pipe
Iron Pipe
Stake "C"
Bench Mark #1 - 210' N. of Sta. 51+50
Pk. Nail in West Root of 24" Red Oak
Elev. 1121.455

SODDING				
STATION From	STATION To	Side	I-10 9' Wide S.Y.	
46+00	47+50	Lt.	55	Along Pave Gutter
46+00	47+00	Rt.	100	
47+90	50+00	Lt.	47	Along Paved Gutter
50+00	50+50	Lt.	50	
47+25	49+25	Rt.	200	
	TOTAL		430	

I-15 GUARD RAIL			
STATION From	STATION To	Side	I-15 L.F.
46+00	47+06±	Lt.	106
46+00	46+85±	Rt.	85.5
47+78±	49+00	Rt.	121.86
47+96±	50+00±	Lt.	201.36
	TOTAL		514.72

FENCE				
STATION From	STATION To	Side	Dist. From ℄	55-16 L.F.
46+00	48+00	Lt.	129 - 149	200'
48+00	50+83	Lt.	149 - 99	283'
50+83	58+00	Lt.	99	717'
46+00	58+00	Rt.	124	1200'
	TOTAL			2400

MONUMENT BOXES			
STATION	Side	I-6 Ea.	
48+84.67	℄	1	P.C.
TOTAL		1	

DRAINAGE						
STATION From	STATION To	Side	I-14 Pave Gutter L.F.	I-4		I-5 for I-4 @ 45° Each
				24" RCP L.F.	30" RCP L.F.	
46+00	47+50	Lt.	155			
47+90	50+00	Lt.	210			
48+20	58+00	Rt.		900	47	1
48+70	58+00	Lt.		900	47	1
	TOTAL		365	1850	84	2

PROPOSED STRUCTURE

TYPE: Three Span Continuous Slab Bridge
With **Capped Pile Substructure**
SPANS: 28'-35'-28' c/c Bearings
ROADWAY: 44'-0" f/f of Guard Rail
LOAD FREQUENCY: CF-2000(51)
SKEW: 24°-30' LF
WEARING SURFACE: 1" Monolithic
APPROACH SLABS: AS-1-54 (25'-0" Lg)
ALIGNMENT: Tangent
Drainage Area = 23.2 Square Miles

Bridge Limits
Sta 46+80.68
℄ Bridge
Sta 47+21.00
Sta 47+73.32
1120
1110
1100
PT
+0.69%
PGL=50
ST-4 Outlet
(60.0 CFS)
Lt. EL. 1111.01
Rt. EL. 1111.30
Lt. EL. 1110.99
FL 1111.28 (Lt)
CF-4 S.C.C. Slope Pavement Lt. EL. 1110.93
(40.1 CFS to 58.0 CFS) (Rt. 58.0 CFS)
8.17% (Lt)
8.24% (Rt.)
EL. 1117.86 (Lt)
EL. 1117.96 (Rt)
Congress Lake Outlet

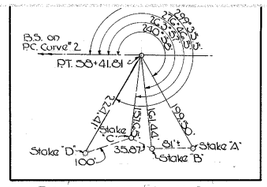
EXCAVATION	16,040 Cu.Yd.
EMBANKMENT	3767 Cu.Yd.
SEEDING	10715 Sq.Yd.

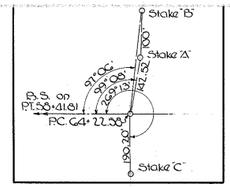
1119.38 1119.37 1119.38 1119.39 1119.44 1119.48 1119.54 1119.61 1119.70 1119.80 1119.91 1117.05 1117.18 1117.35 1117.49 1117.84 1118.53 1119.22 1119.91 1120.60 1121.29 1121.98 1122.67 1122.88 1123.01 1123.18 1123.35
46 47 48 49 50 51 52 53 54 55 56 57 58
1107.5 1110.5 1108.7 1107.1 1104.8 1111.4 1116.4 1120.2 1120.5 1120.1 1121.9 1123.9 1125.1 1125.3 1125.4 1125.0 1125.0 1125.3 1125.5 1126.1 1126.2 1126.7 1126.8 1126.9 1126.7

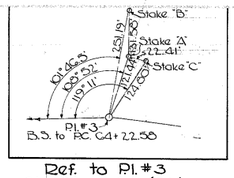
STATE	PROJECT	FISCAL YEAR
OHIO	0250( )	

17
109

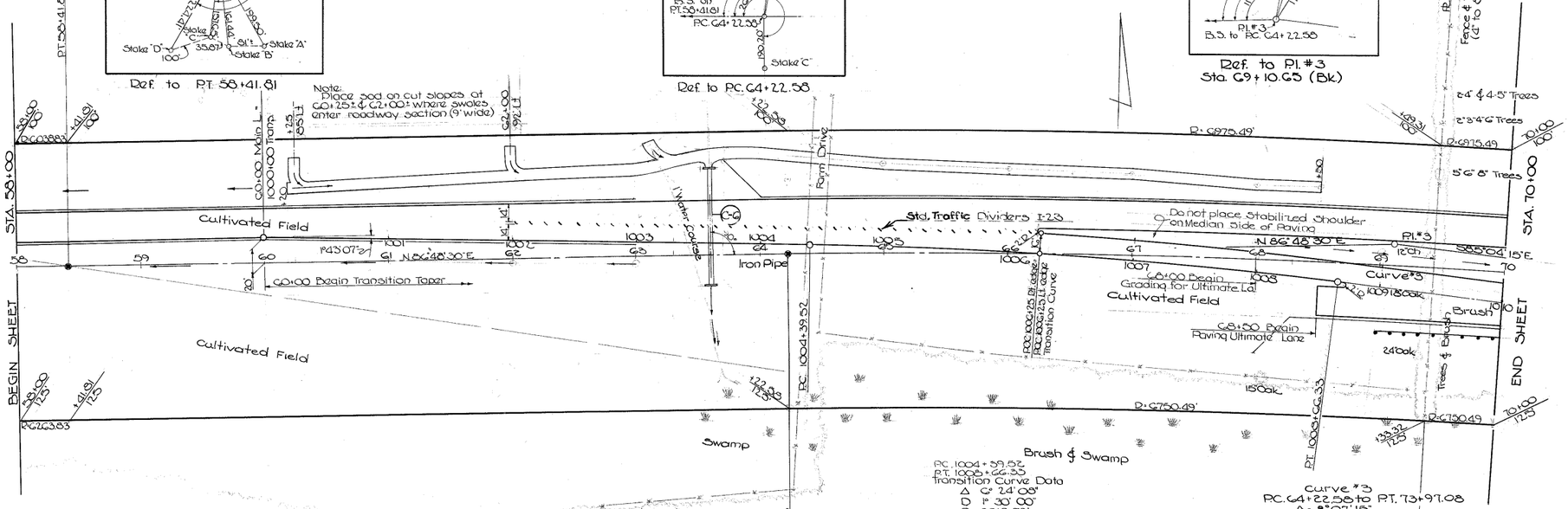
POR-224-6.22







Note:
Place sod on cut slopes at 60+25± & 62+00± where swales enter roadway section (9' wide)



SODDING				
STATION		Side	L-10 9' Wide SY.	
From	To			
60+20	68+50	Lt.	935	
	TOTAL		935	

STRUCTURES UNDER 20' SPAN				
Mark	STATION	TYPE	SIZE	DETAIL SHEET
C-6	63+61	Std. Pipe Culvert	30"ø - 90'	34

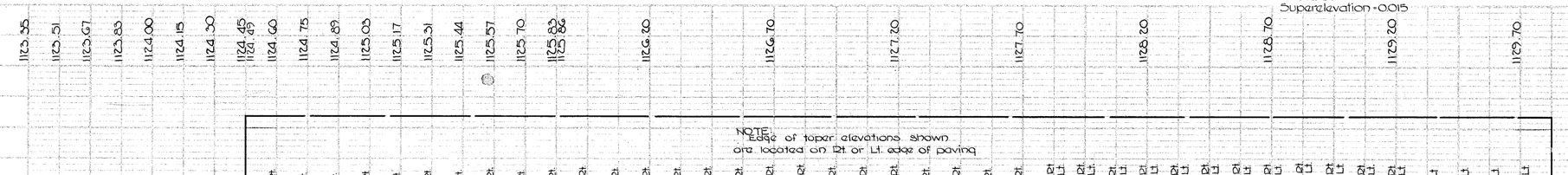
FENCE				
STATION		Side	Dist. from ℄	SS-16 L.F.
From	To			
58+00	70+00	Lt.	99	1200'
58+00	70+00	Rt.	124	1200'
	TOTAL			2400

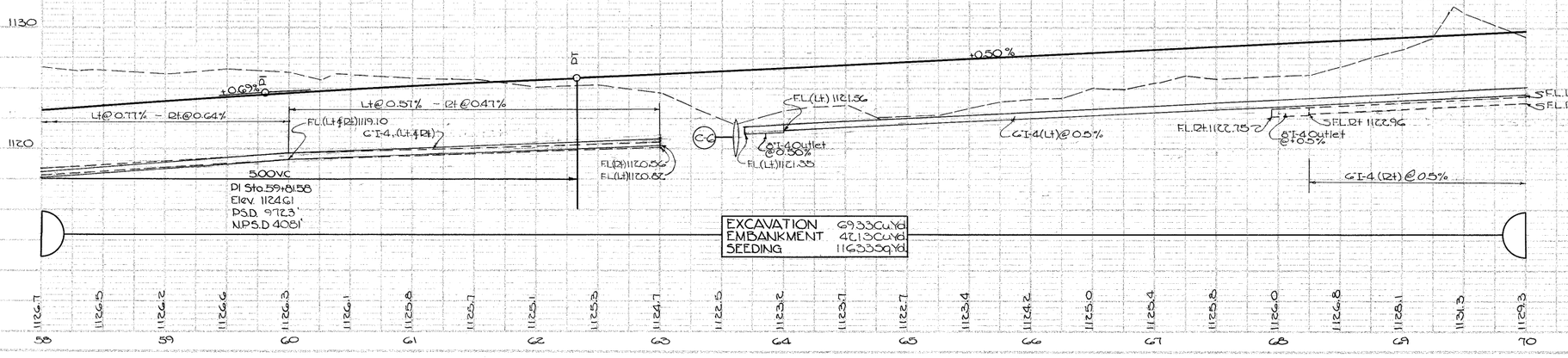
I-15 GUARD RAIL			
STATION		Side	I-15 L.F.
From	To		
69+00	70+00	Rt.	100'
	TOTAL		100'

DRAINAGE					
STATION		Side	I-4		I-5 for I-4 (24"SIDE)
From	To		C-I-4 Dep. DF	C-I-4 Outlet	
58+00	63+00	Lt.	500		
58+00	63+00	Rt.	500		
63+10	70+00	Lt.	600	42'	1
63+25	70+00	Rt.	175	42'	1
TOTALS			1775	84	2

I-23 PRECAST CONCRETE TRAFFIC DIVIDERS		
STATIONS		Dividers Each
From	To	
62+00	66+	36
	TOTAL	36

MONUMENT BOXES			
STATION	Side	I-8 Each	
58+41.81	℄	1	P.T.
64+22.58	℄	1	P.C.
TOTAL		2	





LINE SHEET - STA. 58+00 TO STA. 70+00

Pt.'B' Stake
Pt.'A' Stake
Pt. 73+97.08
Pt.'C' Stake
Ref. To Pt. 73+97.08

Curve Data
PC G4+22.58 to PT. 73+97.08
Δ = 8° 07' 15"
D = 0°30' 00"
R = 6873.49'
T = 488.07'
L = 974.50'
E = 17.34'
Pt. Sta. 69+10.65 Bk.

Note
See Sheet No. 31 for Intersection Details and Paving Plan.
See next sheet for 3.244 Plan & Profile

MONUMENT BOXES			
STATION	Side	I-8 Each	
61+00	℄	1	PROP.
73+97.08	℄	1	PT.
TOTAL		2	

SODDING			
STATION		Side	9' Wide SY.
From	To		
70+28	82+00	Lt	370
78+37	82+00	Rt	370
Along paved gutter			9
TOTAL			749

I-15 GUARD RAIL			
STATION		Side	I-15 L.F.
From	To		
70+00	74+00	Rt.	400'
TOTAL			400

FENCE				
STATION		Side	Dist. from ℄	39-18 L.F.
From	To			
70+00	74+16	Lt.	99.99	416
74+16	74+16	Lt.	99-123.5	64
74+16	77+39	Lt.	123.5-122.	323
78+07	82+00	Lt.	129.4-129.6	393
70+00	74+14	Rt.	124-124	414
74+14	75+95	Rt.	124-120.9	181
75+95	77+38	Rt.	120.9-121.5	145
78+06	82+00	Rt.	99.99	394
TOTAL				2786

STRUCTURES UNDER 20' SPAN				
MARK	STATION	TYPE	SIZE	SKEW ANGLE
C-7	74+78	Std. Pipe Culvert	30"-194'	34
C-8	-	I-2 C1.A M-6.6(A)	42"-244'	31
C-9	-	I-2 C1.A M-6.6(A)	42"-158'	31
C-10	-	I-2 C1.A	42"-248'	31

I-12 CURB		
STATION		Type 2-A L.F.
From	To	
76+97	77+40	106
78+08	78+06	106
0+50N	3+00N	254
TOTAL		466

I-13 SIDEWALK		
STATION		SF 4' Wide
From	To	
1+00N	1+00S	664
TOTAL		664

REMOVAL					
STATION		Side	Rem't S.Y.	12-12 Pipe Removal (Under) (Lf.)	5-8 Exist Sidewalk S.F.
From	To				
71+00		Lt.		75	
3+00N	3+60S		600	60	
1+00N	1+00S	Lt			800
74+	75+			210	
TOTALS			600	345	800

DRIVES									
LOCATION	STATION	Side	Dist. from Edge of Rwy't	T-35 2" C.Y.	I-16 6" C.Y.	I-1 12" L.F.	E-1 Excav.	E-1 Embk.
Sta. Pt. of Tg.	3+00S to 3+60S	Rt.	79.8	-	14.8	-	114.2	70.2
3.244	1+90S	Lt.	6.0	4.3	13.5	20	1	5
3.244	2+30S	Rt.	15	2.1	6.3	-		
3.244	2+37.5	Lt.	15	1.6	5.4	18	1	
3.244	3+26.5	Lt.	15	1.6	5.4	16	1	
3.244	1+30N	Lt.	15	2.1	6.3	-	2	
3.244	1+45N	Rt.	57	3.2	9.7	20	5	7
3.244	2+76N	Lt.	15	2.1	6.3	-	1	
TOTALS				17.4	2009	76	115.4	21.4

DRAINAGE																				
STATION		Side	I-14 Std. Type L.F.	I-16 Ramp Inlet Box Ea.	I-16 Ramp Inlet Ea.	I-2 Class A 15" L.F.	18" L.F.	24" L.F.	I-8 Std. Curb Inlet Ea.	I-8 Modified Curb Inlet Ea.	I-8 Std. Box Ea.	I-8 Modified Box Ea.	E-2 C.Y.	E-1 C.Y.	I-4 6" Base L.F.	I-4 6" Shallow Gutter L.F.	I-4 6" Gutter L.F.	I-5 Cap L.F.
From	To																			
71+00	71+00		10			54	22					1	1.5	0.26						
70+00	73+50	Lt.													350					
70+00	73+50	Rt.													350					
74+30	76+45	Rt.													345		42	1		
75+30	77+00	Lt.													540		42	1		
0+50N	3+00N	Lt.															290	20		
0+60S	80+36				36						1	1								
0+65S	78+70		20					60			1	1								
1+17N	0+85N		10					85		1	1									
2+45N				1	1				2											
78+70	82+00																382	1		
TOTALS			40	1	1	110	22	85	80	2	1	2	3	1.5	020	1385	790	486	3	

NOTE: Edge of taper elevations shown are located on Lt. edge of paving.

80+00 Main Line PC 2000+00 Transition Curve	2000	2001	2002
	1139.08 Lt.	1140.59 Lt.	1142.13 Lt.
	1139.58 Lt.	1141.10 Lt.	1143.11 Lt.
	1140.08 Lt.	1141.62 Lt.	

EDGE OF TAPER ELEVATIONS STA. 2000+00 TO 2002+00

NOTE: Edge of taper elevations shown are located on Lt. edge of paving.

80+00 Main Line PC 2000+00 Transition Curve	1010	1011	1012	1013
	1129.68 Lt.	1130.30 Lt.	1130.97 Lt.	1131.58 Lt.
	1129.98 Lt.	1130.52 Lt.	1131.09 Lt.	PT. 73+97.08 Main Line 1013+96.04 Trans. Curve
	1130.08 Lt.	1130.63 Lt.	1131.20 Lt.	
	1130.20 Lt.	1130.74 Lt.	1131.33 Lt.	
	1130.41 Lt.	1130.85 Lt.	1131.45 Lt.	

EDGE OF TAPER ELEVATIONS, STA. 1010+ TO 1013+75

Transition Curve Data
PC 2000+00 to PRC 2007+58.0
Δ = 7° 30' 00"
D = 30' 00"
R = 3819.72'
L = 250.36'
T = 125.00'

Curve Data
PC 2000+00
Δ = 7° 30' 00"
D = 30' 00"
R = 3819.72'
L = 250.36'
T = 125.00'

Curve Data
PRC 2007+58.0
Δ = 7° 30' 00"
D = 30' 00"
R = 3819.72'
L = 250.36'
T = 125.00'

EXCAVATION	26,945 C.Y.	Excav. for Drives 11.54 C.Y.
EMBANKMENT	9137 C.Y.	Embank. for Drives 214 C.Y.
SEEDING	150575 Y.	

Note:
See Drainage Profile on Sheet No. 31

Sub-base Material to be omitted between 79+00 & 84+00

SERVICE DRIVE
LT. OF STA. 1+40 SOUTH
STATE RTE. 44

30+00 Service Drive 1+40 South St. Rte. 44

500' V.C.
PI Sta 77+00
Elev. 1133.20
Headlight S.D. 2520'

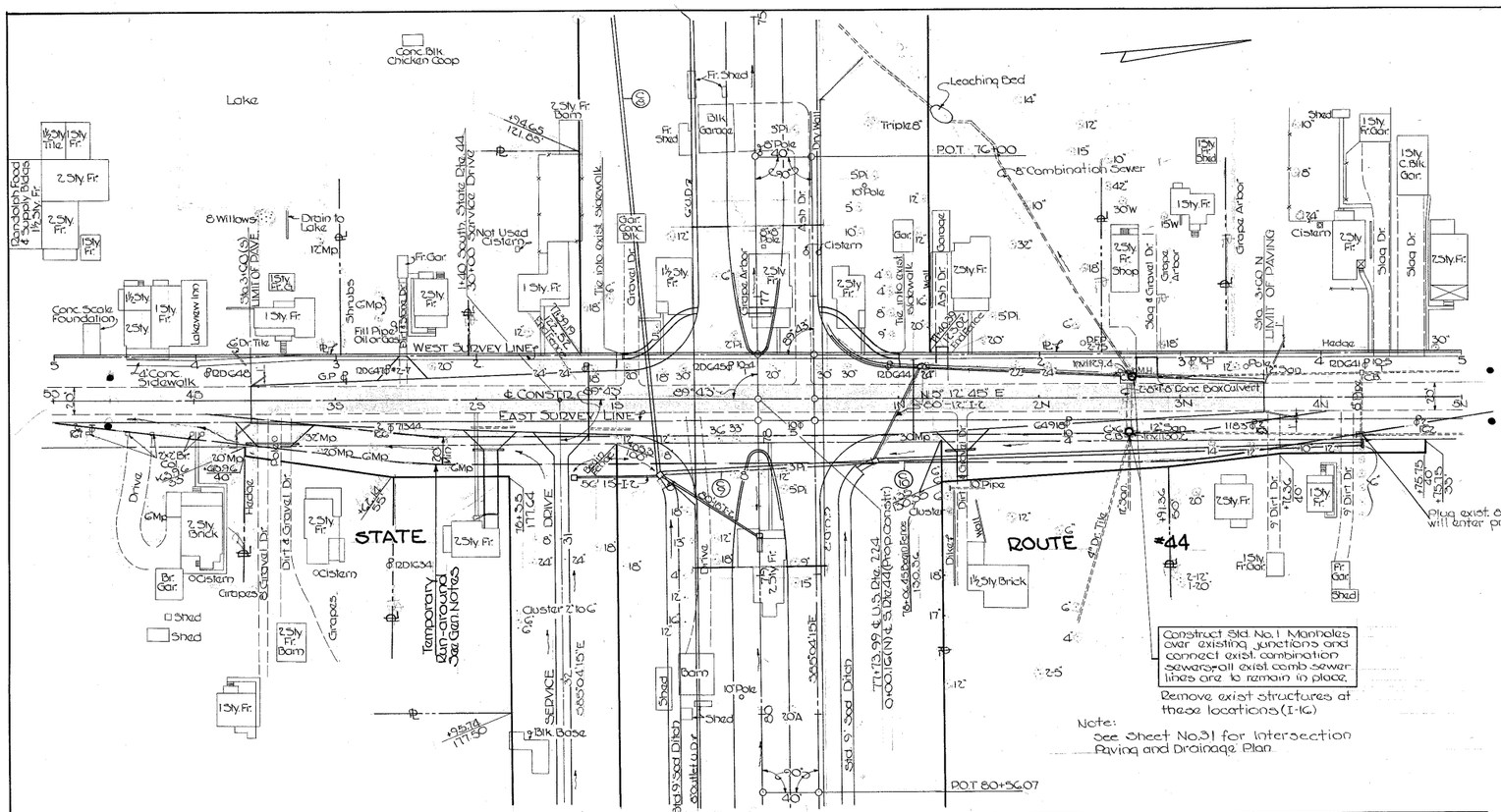
BEGIN SHEET STA 70+00
END SHEET STA 82+00

℄ State Rte. 44
Proposed Construction

FED. RD. DIVISION	STATE	PROJECT	FISCAL YEAR
2	OHIO	F-330( )	

19
109

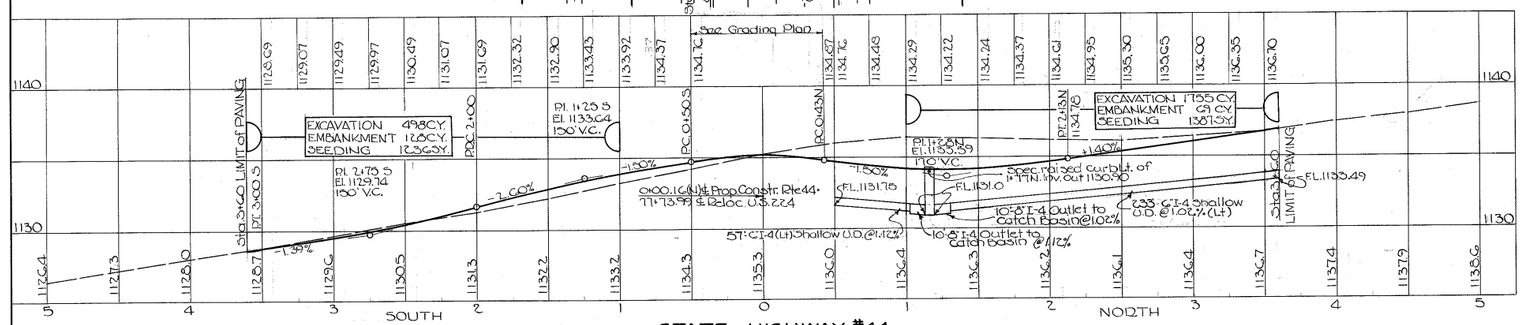
POR-224-6.22



PIPE FOR TRAFFIC SIGNALS	
STATION	*S-25.3 M-6.9 L.F.
76+50 (Reloc. 224)	61'
78+95 (" ")	61'
1+20S (S.R. 44)	55'
1+10N (" " ")	55'
TOTAL	232'

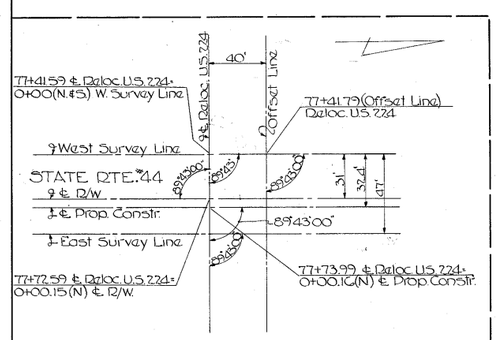
OVERHEAD SIGN ASSEMBLY					
STATION	OS-2-A				
	40' Span	36' Span	"H"	Supports	Spacing
72+75 (EBL)	1		3'	4	3', 3', 9', 9'
4+60S (S.R. 44)		1	3'	2	3', 9'
5+20N (" " ")		1	3'	2	3', 9'
TOTAL	1	2			

* Galvanizing shall meet the requirements of Sec. M-7.4(d)



STATE HIGHWAY #44

Note:
See Sheet No. for profile of Culverts & I-2



INTERSECTION DATA

ESTIMATED QUANTITIES

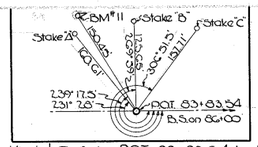
E-1	EXCAVATION	2253 Cu. Yd.
	EMBANKMENT	197 Cu. Yd.
L-9	SEEDING	2623 Sq. Yd.
S-15	TEMPORARY RUN-AROUND, CLASS A PAV'T	Lump Sum

All other quantities are on Main Line Sheet No. 18

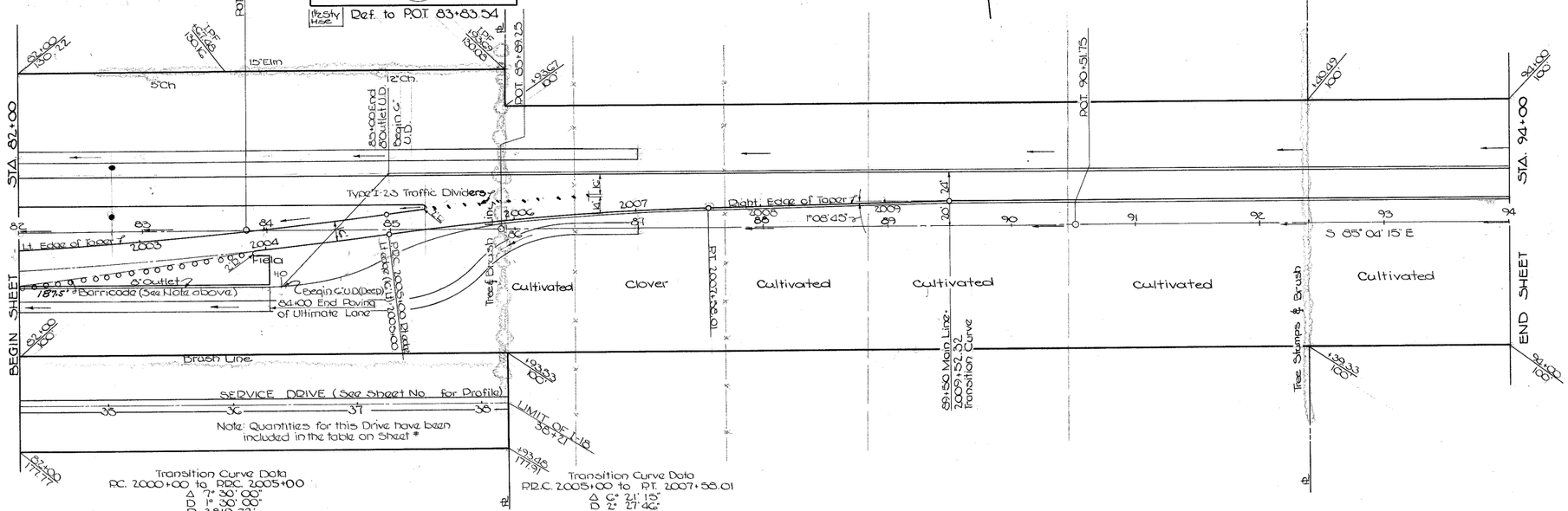
FED. DIVIS.	STATE	PROJECT	FISCAL YEARS
2	OHIO	F-500( )	

POR-224-6.22

Note: Barricade shown shall be 55 gallon drums spaced 12½ ft. c.-c. painted yellow, half full of sand, with steel beam guard rail bolted on traffic side, 2 ft. above pavement.



Ref. to P.O.T. 83+83.54



Transition Curve Data
P.C. 2000+00 to P.C.C. 2005+00
Δ 7° 30' 00"
D 1° 30' 00"
D 3819.72'
T 250.36'
L 500'

Transition Curve Data
P.R.C. 2005+00 to P.T. 2007+55.01
Δ 6° 21' 15"
D 2° 27' 46"
R 2326.47'
T 179.16'
L 255.01'

SODDING				
STATION From	STATION To	Side	L-10 9' Wide S.Y.	
82+00	87+00	Lt.	500	
82+00	87+00	Rt.	500	
	TOTAL		1000	

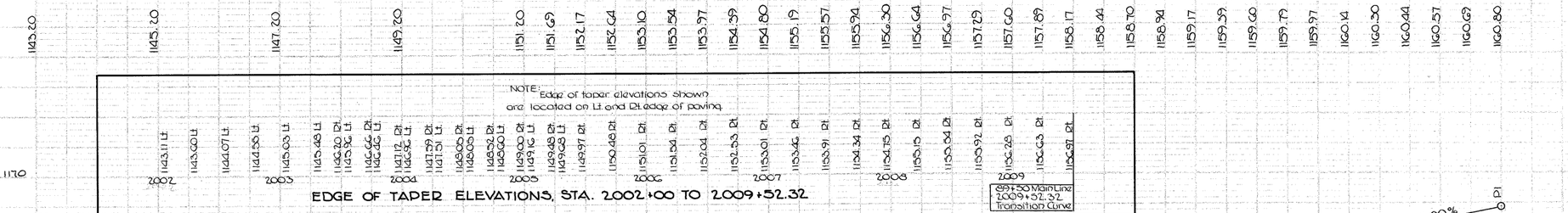
I-23 PRECAST CONC. TRAFFIC DIVIDERS		
STATION From	STATION To	Dividers Ea.
85+30	85+60	12
	TOTAL	12

FENCE				
STATION From	STATION To	Side	Dist. from ℄	55-18 L.F.
82+00	83+67	Lt.	1296-1292	167
83+67	85+93	Lt.	1292-1291	226
85+93	85+93	Lt.	129 -99	30
85+93	94+00	Lt.	99	807
82+00	94+00	Rt.	99	1200
	TOTAL			2430

OVERHEAD SIGN ASSEMBLY		
STATION	Spec. Type 1.3 A	
	40' Span	36' Span
82+75	1	
TOTAL	*1	

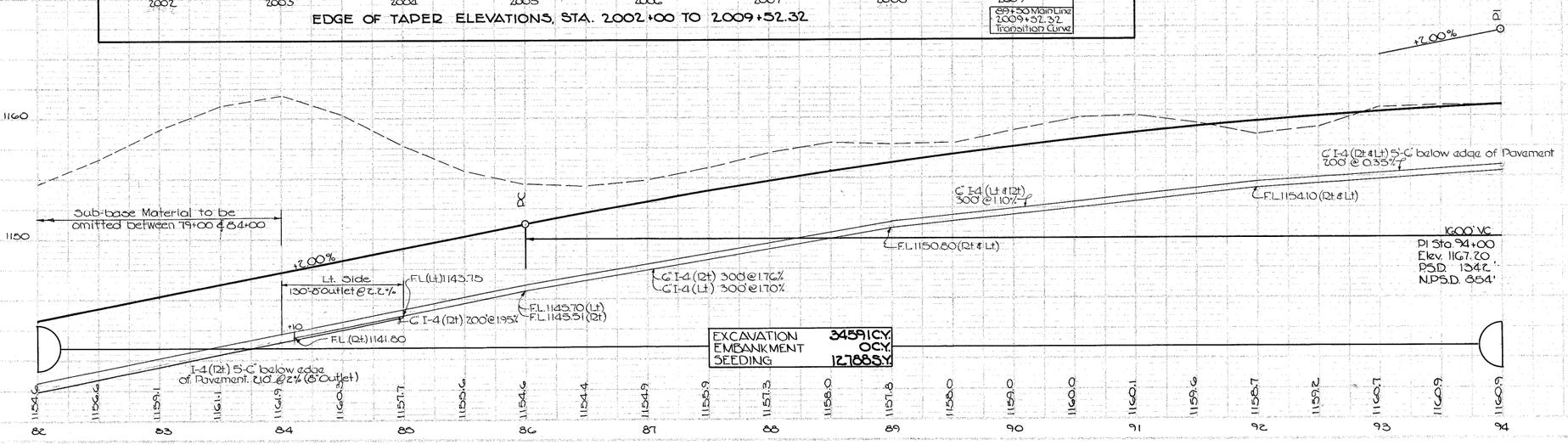
*4 Sign Supports H=3' Clamps spaced 3', 3', 9' & 9' from splice.

DRAINAGE					
STATION From	STATION To	Side & Pvt	I-4 Dasp. L.F.	I-4 ℄ Outlet L.F.	I-5 for I-4
85+00	94+00	Lt.	900		1
82+00	84+10	Rt.	-	210	
84+10	94+00	Rt.	990		1
84+10	85+00	Lt. to 18	-	130	
	TOTAL		1890	340	2

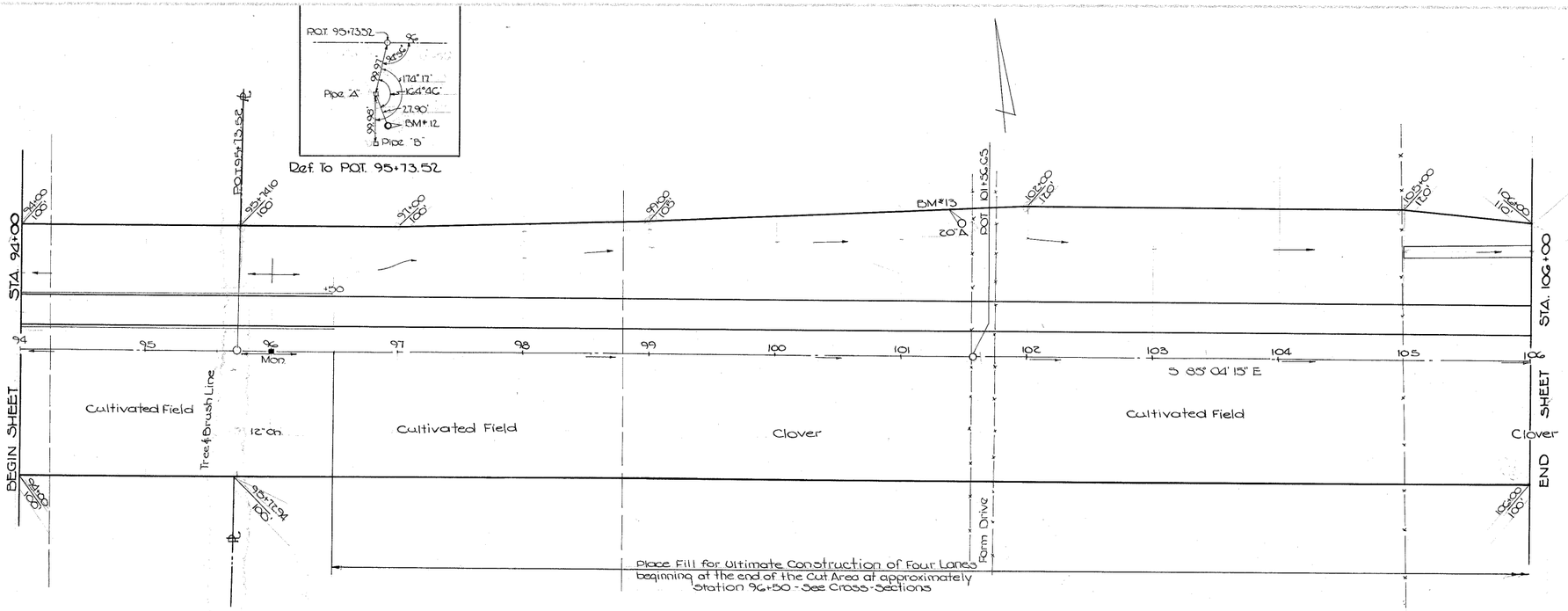


NOTE: Edge of taper elevations shown are located on Lt. and Rt. edge of paving.

EDGE OF TAPER ELEVATIONS, STA. 2002+00 TO 2009+52.32



LINE SHEET - STA. 82+00 TO STA. 94+00

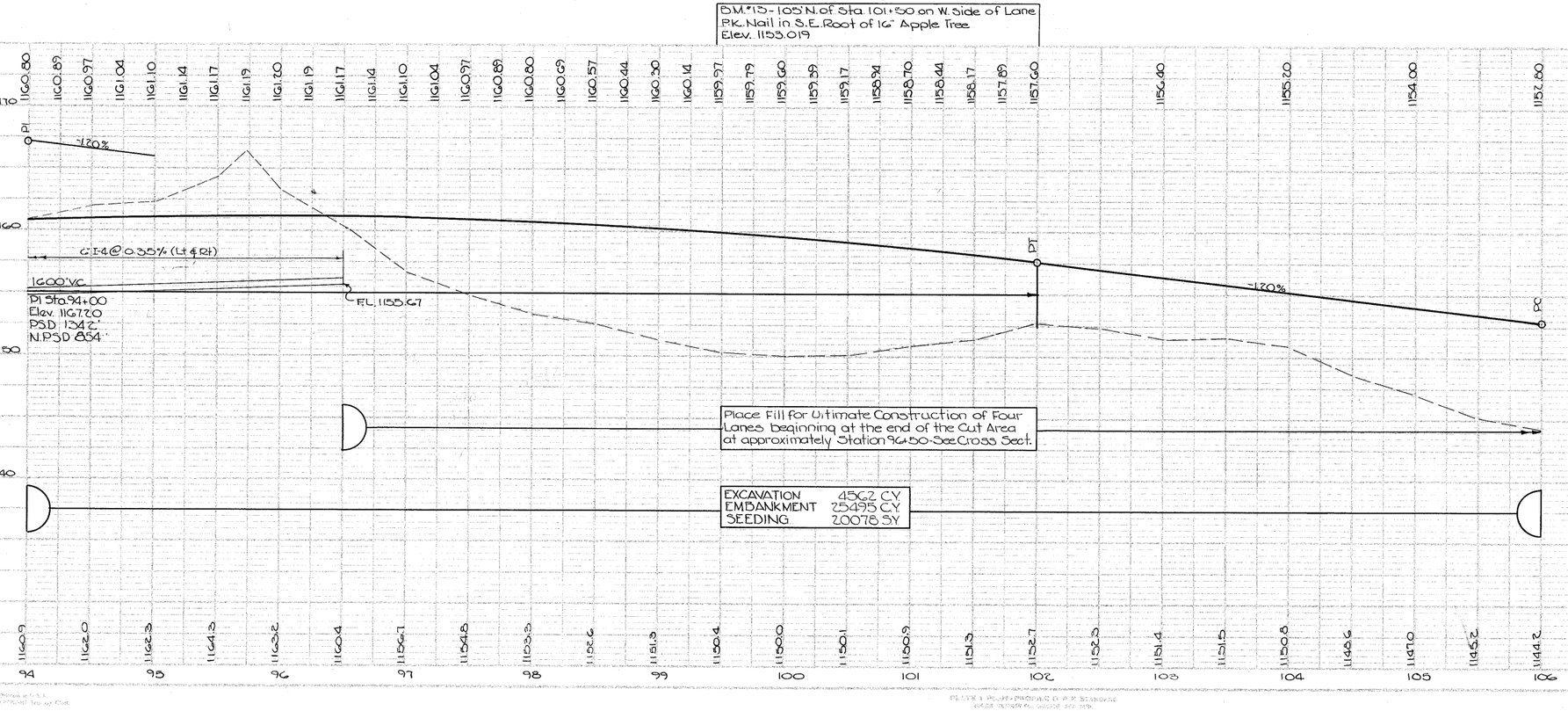


SODDING				
STATION From	STATION To	Side	L-10 9' Wide S.Y.	
105+00	106+00	Lt.	100	
Total			100	

MONUMENT BOXES			
STATION	Side	1-8 Each	
96+00	℄	1	
TOTALS		1	

FENCE				
STATION From	STATION To	Side	Dist. from ℄	SS-18 L.F.
94+00	97+00	Lt	99-99	300
97+00	99+00	Lt	99-104	200
99+00	102+00	Lt	104-119	300
102+00	105+00	Lt.	119-119	300
105+00	106+00	Lt.	119-109	100
94+00	106+00	Rt.	99-99	1200
TOTAL				2400

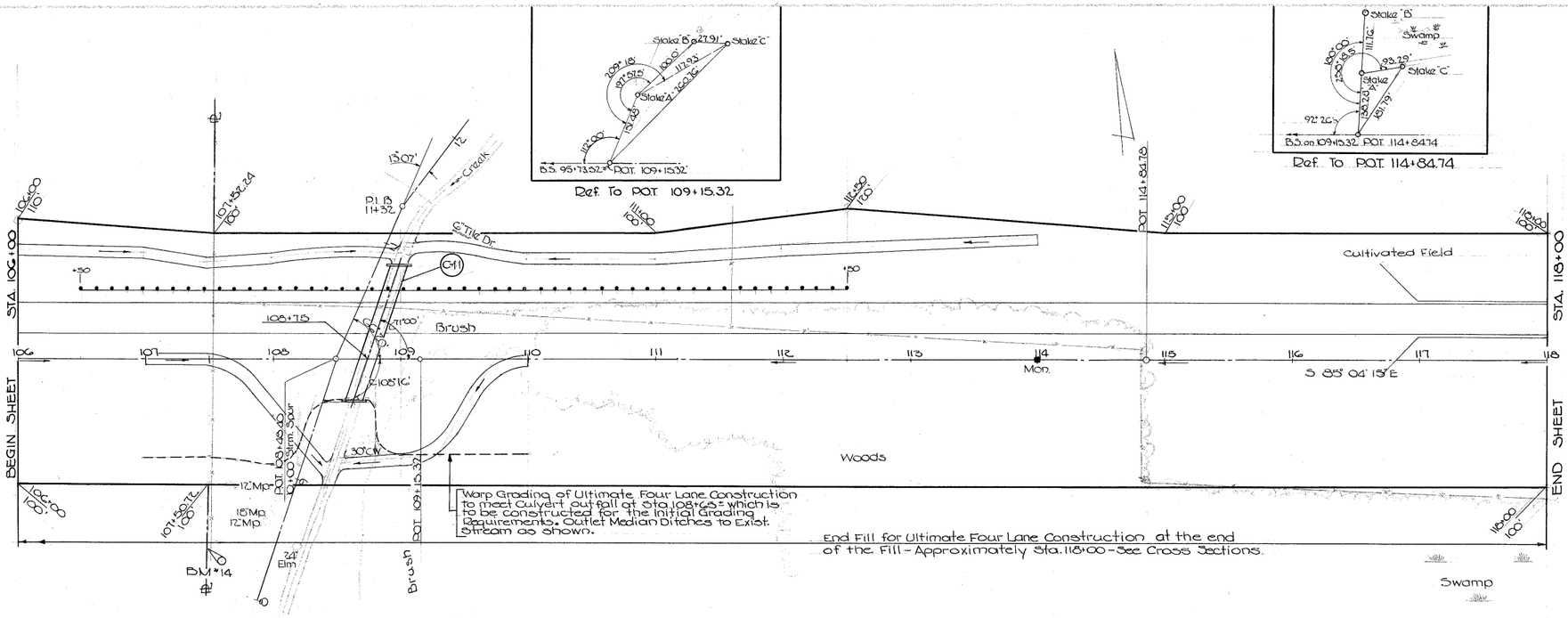
DRAINAGE			
STATION From	STATION To	Side	I-4 6" Deep L.F.
94+00	96+50	Lt.	250
94+00	96+50	Rt.	250
TOTAL			500



LINE SHEET - STA. 94+00 TO STA. 106+00

FED. DIV.	STATE	PROJECT	FISCAL YEAR	SHEET	TOTAL SHEETS
2	ILL.	I-57-1(8)350(C)		22	109

POR-224-G.22



SODDING				
STATION		Side	L-10 9' Wide SY.	
From	To			
106+00	109+00	Lt.	300	
109+00	114+00	Lt.	500	
101+00	106+50	Rt.	150	
108+50	110+00	Rt.	150	
TOTAL			1100	

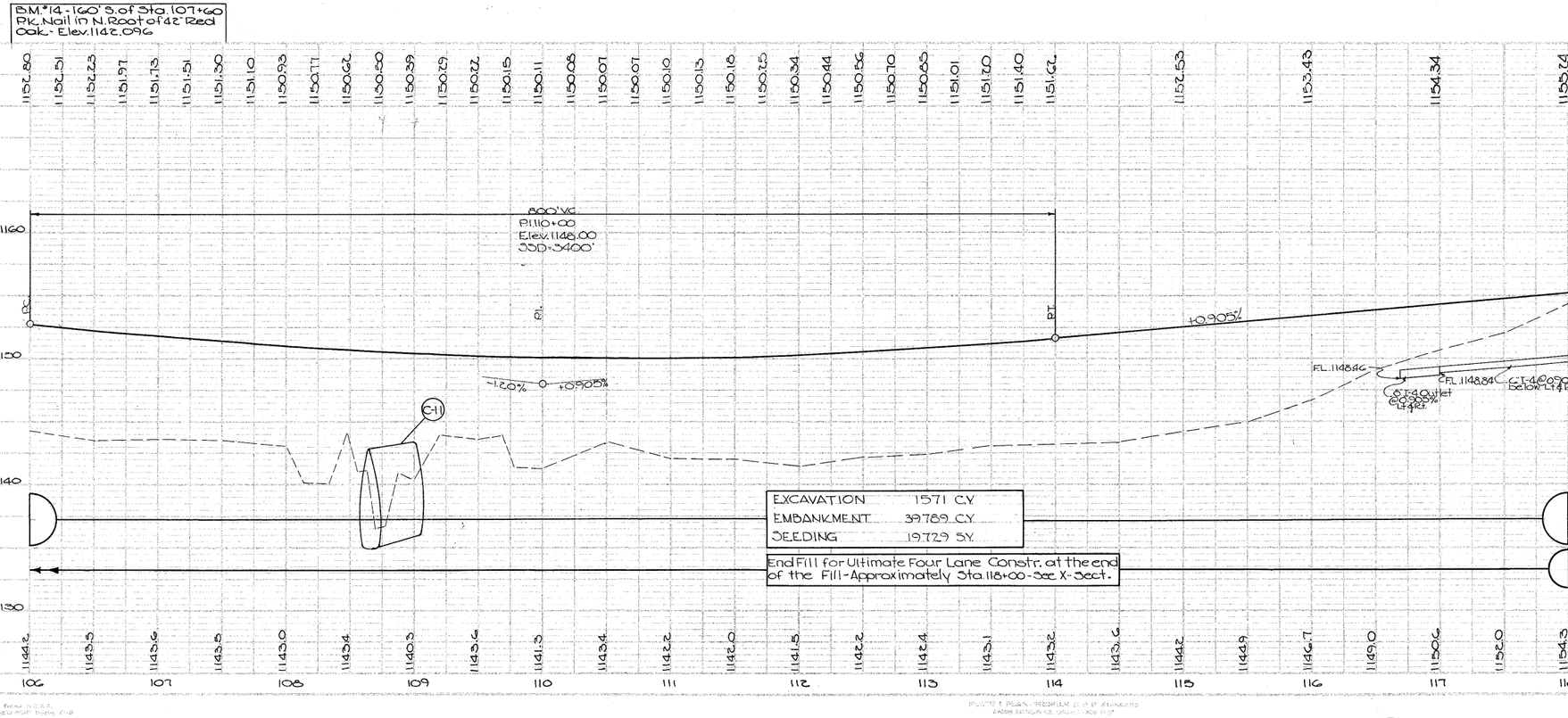
FENCE				
STATION		Side	Dist. From ℄	55-18 L.F.
From	To			
106+00	107+32	Lt.	109.99	132
107+32	111+00	Lt.	99.99	348
111+00	112+50	Lt.	99.119	150
112+50	115+00	Lt.	119.99	250
115+00	118+00	Lt.	99.99	300
106+00	118+00	Rt.	99.99	1200
TOTAL				2400

DRAINAGE					
STATION			I-4		I-5
From	To	Side	C Dep.	Outlet LF	for I-4
116+70	118+00	Lt.	100	42	1
116+70	118+00	Rt.	100	42	1
TOTAL			200	84	2

STRUCTURES UNDER 20' SPAN				
MARK	STA.	TYPE	SIZE	SKEW ANGLE
C-11	108+15	Std. Pipe-Arch Culvert	1236"-1141"R	30

I-15 GUARD RAIL			
STATION		Side	I-15 L.F.
From	To		
106+50	112+50	Lt.	600
TOTAL			600

MONUMENT BOXES		
STATION	Side	I-8 Each
114+00	℄	1
TOTALS		1

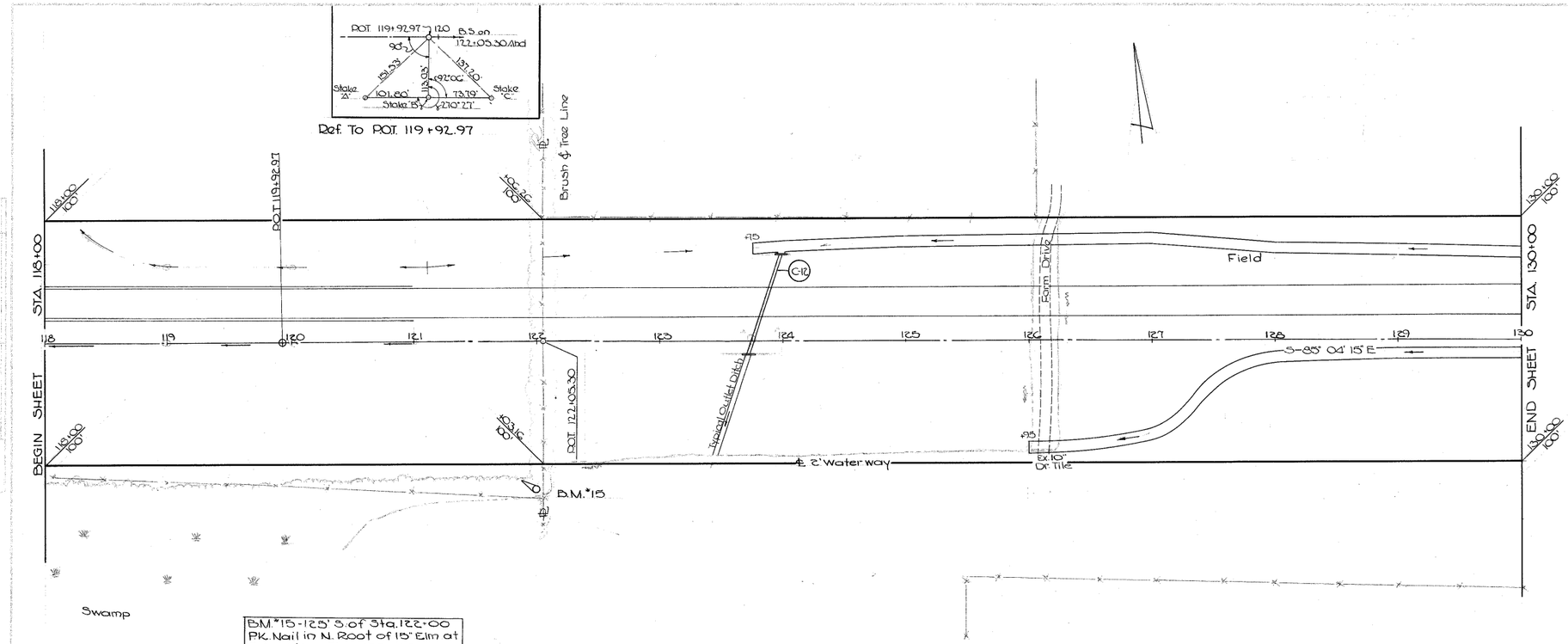


LINE SHEET - STA. 106+00 TO STA. 118+00

FROM	STATE	PROJECT	FISCAL YEAR
2	OHIO	[illegible] ( )	

23
109

POR-224-6.22

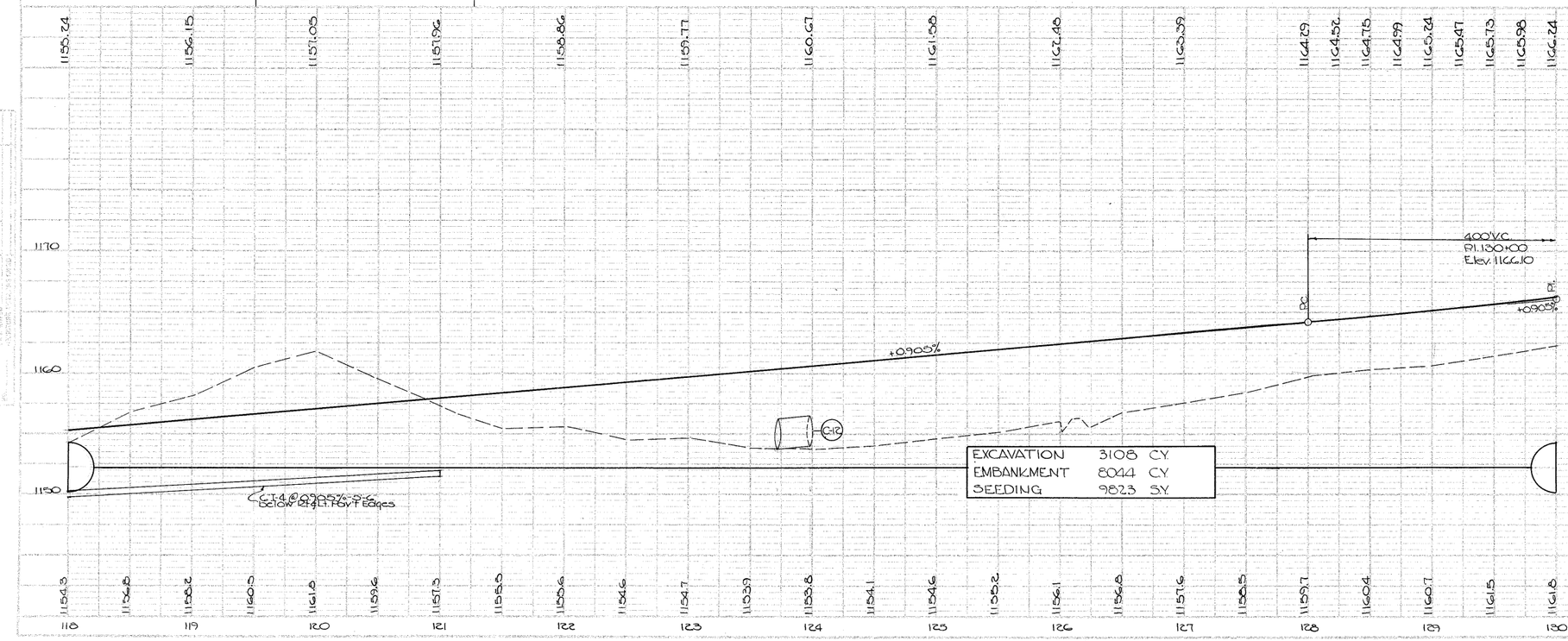


SODDING				
STATION From	STATION To	Side	L-10 9" Wide S.Y.	
123+75	130+00	Lt.	625	
125+95	130+00	Rt.	405	
	TOTAL		1030	

STRUCTURES UNDER 20' SPAN				
Mark	STATION	TYPE	SIZE	DETAIL SHEET
C-12	123+75	Std. Pipe Culvert	30"x42"	35
			80'	

FENCE				
STATION From	STATION To	Side	Dist. from ℄	SS-18 L.F.
118+00	130+00	Lt.	99'	1200
118+00	130+00	Rt.	99	1200
	TOTAL			2400

DRAINAGE			
STATION From	STATION To	Side	I-4 6' Deep L.F.
118+00	121+00	Lt.	300'
118+00	121+00	Rt.	300'
TOTAL			600'



LINE SHEET - STA. 118+00 TO STA. 130+00

DIV.	SEC.	PROJECT	FISCAL YEAR
2	CHIO	F 350( )	

24
109

POR-224-6.22

Stake "B"
150'
Stake "A"
117.00'
271° 30'
POT 130+16.39
BS on 133+26.57 Ahd.
42.17'
91° 30'
Stake "C"

Ref. To 130+16.39

BS on 139+80.52 Ahd.
POT 133+26.57
85° 54'
90° 00'
112.10'
113.99'
Stake A
BM# 16
Stake "B"
112.24'
90.39'
Stake "C"

Ref. To POT 133+26.57

Stake "C"
151.12'
BS on 133+26.57
POT 139+80.52
260.35'
Stake "A"
118.25'
Stake "B"

Ref. To POT 139+80.52

STA. 130+00
Brush & Tree Line 47'
130+13.20 100
Prop. Cor. 10' 100
POT 130+16.39
POT 133+26.57
POT 139+80.52
STA. 142+00
BEGIN SHEET
END SHEET
130
131
Mon
132
133
134
135
136
137
138
139
140
141
142
S 85° 04' 15" E
Cultivated Field
Cultivated Field
Cultivated Field
B.M. 16
24"
POT 130+16.39
130+00.30 100
Prop. Cor. Found
Farm Drive
12" A.
2"± Trees & Brush
142+00 100

B.M.#16 - 110' S. of Sta. 133+25 in East Lane of Fence
Nail Head of Insulator in W. Side of 18" Pear 2.7' above Ground - Elev. 1172.071

SODDING				
STATION		Side	L-10 9' Wide SY	
From	To			
130+00	142+00	Lt.	1200	
130+00	136+00	Rt.	600	
TOTAL			1800	

FENCE				
STATION		Side	Dist. from ℄	50-18 L.F.
From	To			
130+00	142+00	Lt.	99-99	1200
130+00	142+00	Rt.	99-99	1200
TOTAL				2400

MONUMENT BOXES			
STATION	Side	1-8 Each	
131+00	℄	1	POT
TOTALS		1	

DRAINAGE					
STATION		Side	L-4		15"x24" Endwall
From	To		6' Deep L.F.	8' Outlet L.F.	
136+00	142+00	Lt.	570	42	1
136+00	142+00	Rt.	570	42	1
TOTAL			1140	84	2

1166.24 1162.51 1166.17 1167.04 1167.32 1167.60 1167.88 1168.17 1168.46 1169.64 1170.82 1172.00 1173.18 1174.36 1175.54 1176.72 1177.90 1179.08 1180.26

1190
1180
1170
1160

400' V.C.
P.I. 130+00
Elev. 1166.10
P.I.
P.T.
+1.18%
+1.18%
ST. 4 Outlet @ 2.50%
C.I. 4 @ 1167 Rim Below Lt. & Rt. Pav't. Edges
FL. (L4 Q24) 1162.82
FL. (L3 Q24) 1168.03

EXCAVATION	3423	CY
EMBANKMENT	2109	CY
SEEDING	8187	SY

1161.8 1163.5 1164.1 1165.2 1166.6 1167.3 1168.6 1169.6 1169.7 1170.0 1170.0 1170.0 1170.2 1170.6 1170.9 1171.6 1172.2 1172.9 1173.7 1174.5 1175.9 1177.4 1179.1 1180.7 1182.5

130 131 132 133 134 135 136 137 138 139 140 141 142

LINE SHEET - STA. 130+00 TO STA. 142+00

FED. STATE	STATE	PROJECT	FISCAL YEAR
8	OHIO	P-2250( )	

POR-224-6.22

25
109

Boat Spike @ 18" Ma. W. Root

Iron Pipe

POT 144+78.65

Ref. To POT 144+78.65

Stake at fence cor.

Stake along fence line

Iron Pin @ PC 148+14.62

Ref. To PC 148+14.62

Curve Data #4
PC 148+14.62 to PT 159+46.12
Δ = 17° 43' 45"
D = 0° 50' 00"
R = 6875.49'
T = 1074.37'
L = 2131.50'
E = 83.43'
PI 158+88.99 (BK)
Superelevation = 0.015

B.M.* 17

18" Mp.

POT 143+12.03

POT 144+78.65

PC 148+14.62 M.L. 5000 N 00 Tran. Ω

B.M.* 18

BEGIN SHEET

STA. 142+00

STA. 154+00

END SHEET

R = 6775.49'

R = 6975.49'

9 Precast Concrete Traffic Dividers

S 85° 04' 15" E Ex. Tan.

Stop Grading for one Lane only - Warp to 154+00

1-Mon.

24"

10"

Small Trees & Brush

Cultivated Field

Cultivated Field

Cultivated Field

Apple Orchard

POC 153+00.30

Note:
See Profile of Taper Edges below.

B.M.* 17 - 200' N. of Sta. 144+60
PK Nail in S. Root of 16" Maple
Elev. 1188.045

B.M.* 18 - 230' N. of Sta. 152+90
PK Nail in S. Root of 20" Pin Oak - Elev. 1194.269

SODDING				
STATION		Side	L-10 9' Wide SY	
From	To			
142+00	145+50	Lt	350	
TOTAL			350	

FENCE				
STATION		Side	Dist. from ℄	35-18 L.F.
From	To			
142+00	154+00	Lt	99-99	1200
142+00	154+00	Rt	99-99	1200
TOTAL				2400

DRAINAGE			
STATION		Side	I-4 C Dep L.F.
From	To		
142+00	154+00	Lt.	1200
142+00	154+00	Rt.	1200
TOTAL			2400

MONUMENT BOXES			
STATION	Side	I-8 Each	
148+14.62 ℄		1	P.C.
TOTAL		1	

I-63 PRECAST CONCRETE TRAFFIC DIVIDERS	
STATIONS	Each
From To	
150+95 153+80	21
TOTAL	21

EXCAVATION	25252 C.Y.
EMBANKMENT	0 C.Y.
SEEDING	11809 S.Y.

TRANSITION TAPER PROFILES

Right Edge ℘

Left Edge ℘

PC 148+14.62
3000 N 00 E

400' V.C.
PI Sta. 146+00
Elev. 1184.98
PSD 2250
NPSD 1107

+1.18%

+0.30%

-1.18%

+0.30%

CI-4 @ 1.18% (Lt & Rt)

CI-4 @ 0.65% (Lt & Rt)

CI-4 @ 0.3% (Lt)

CI-4 @ 0.47% (Rt)

CI-4 @ 0.73% (Rt)

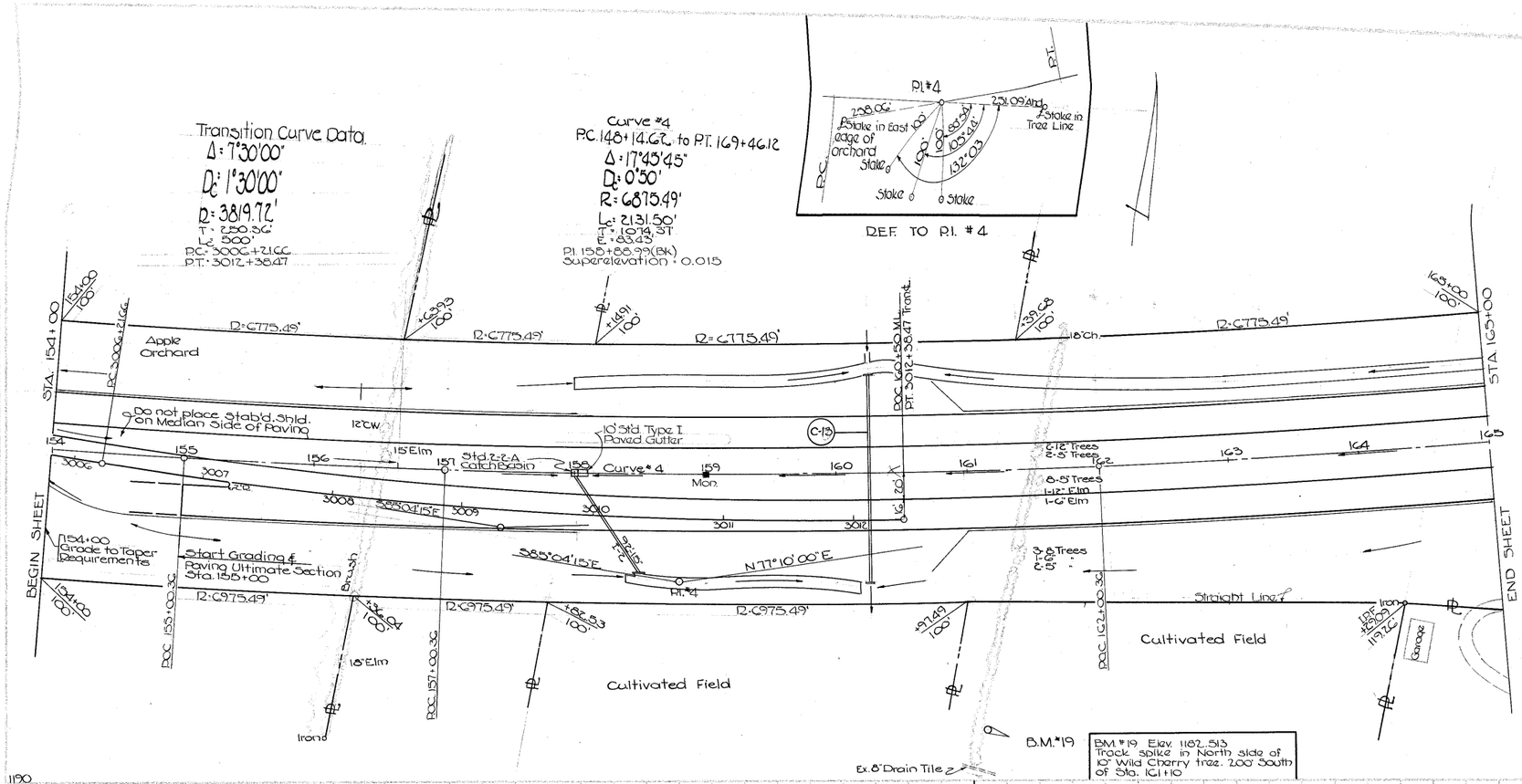
F.L. 1177.12 (Lt & Rt)

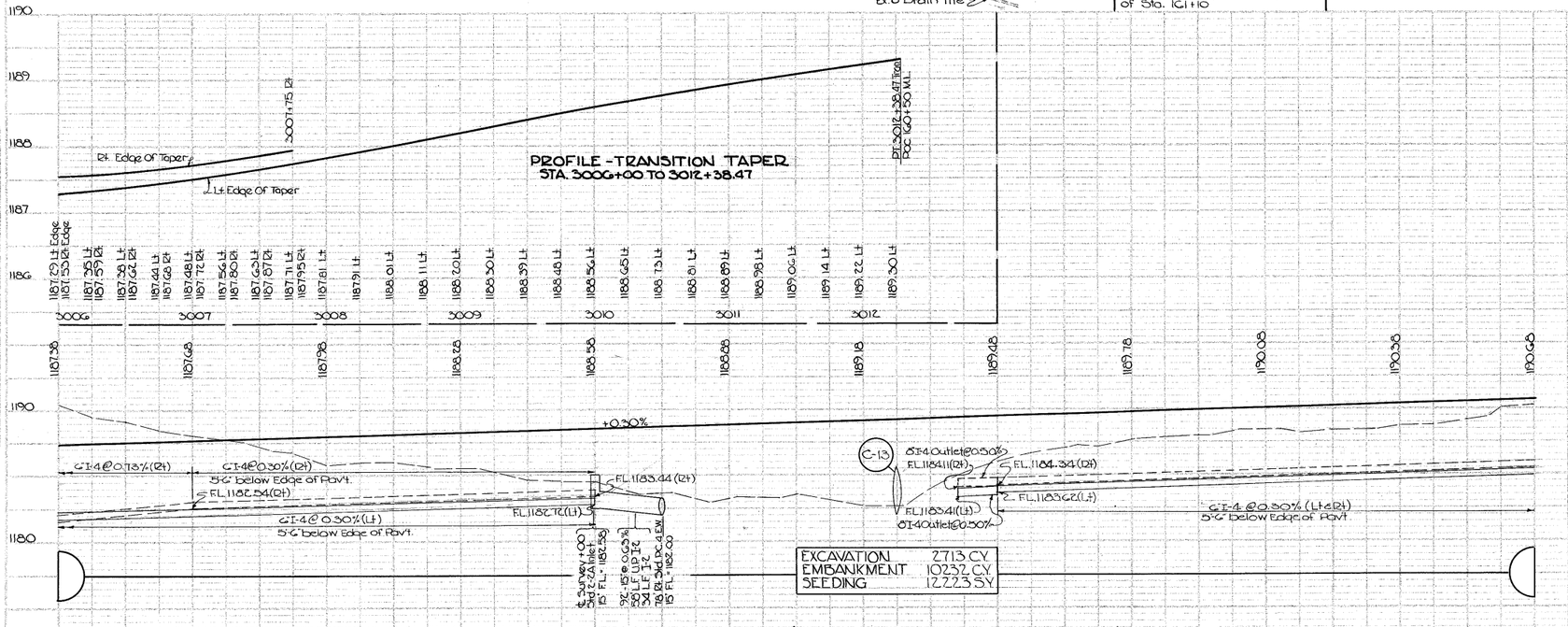
F.L. 1179.72 (Lt & Rt)

F.L. 1181.08 (Rt)

LINE SHEET - STA. 142+00 TO STA. 154+00

POR-224-622





SODDING				
STATION From	STATION To	Side	L-10 9' Wide S.Y.	
158+00	165+00	Lt.	730	
158+40	160+25	Rt	185	
TOTAL			915	

STRUCTURES UNDER 20' SPAN				
MARK	STATION	TYPE	SIZE	SHT
C-13	160+25	Std. Pipe Culvert	42"x144'	35

MONUMENT BOXES			
STATION	Side	I-8 Each	
159+00	℄	1	POC
TOTAL		1	

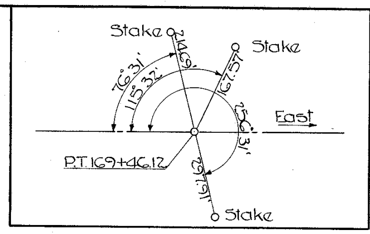
FENCE				
STATION From	STATION To	Side	Dist From ℄	SS-18 L.F.
154+00	165+00	Lt.	99-99	1100
154+00	160+97	Rt.	99-99	697
160+97	164+29	Rt	99-1183	332
164+29	165+00	Rt	1' off ℄	71
TOTAL				2200

DRAINAGE													
STATION		I-2 (CLASS A)					I-5 for I-4 6"x45° Bend Ea.	S-1 ENDWALL C.Y.	E-2 EXC. C.Y.	I-8 Std. 2-2-A Cat. Bas. Ea.	I-4 6" Deep L.F.	I-4 8" Outlet L.F.	I-14 Std. Type I L.F.
From	To	15" L.F.	18" UP L.F.										
158+00	158+50	34	58					0.26	1.5	1			10
160+70(Lt)	165+00(Lt)						1				400	42	
160+70(Rt)	165+00(Rt)						1				400	42	
154+00(Lt)	158+00(Lt)										400		
154+00(Rt)	158+00(Rt)										400		
TOTALS		34	58				2	0.26	1.5	1	1600	84	10

NOTE:
Typical section of adjoining roadway to this contract to be same as that shown on sheet No. 3 of this set of plans.

STRUCTURES UNDER 20' SPAN				
MARK	STATION	TYPE	SIZE	Detail Sht.
C-14	4+725-31	Std. Pipe Culvert	48"x74'	35
C-15	3+44	Std. Twin Pipe Culvert	42"x208'	36
C-16	2+45	Std. Twin Pipe Culvert	42"x 82'	36

REMOVAL						
STATION From	STATION To	Side	E-8 Pav't S.Y.	E-12 Pipe 15" & Under		
*6+75W	4+50E		2500			*Exist. 224
Entire Sheet				950'		
TOTAL			2500	950		

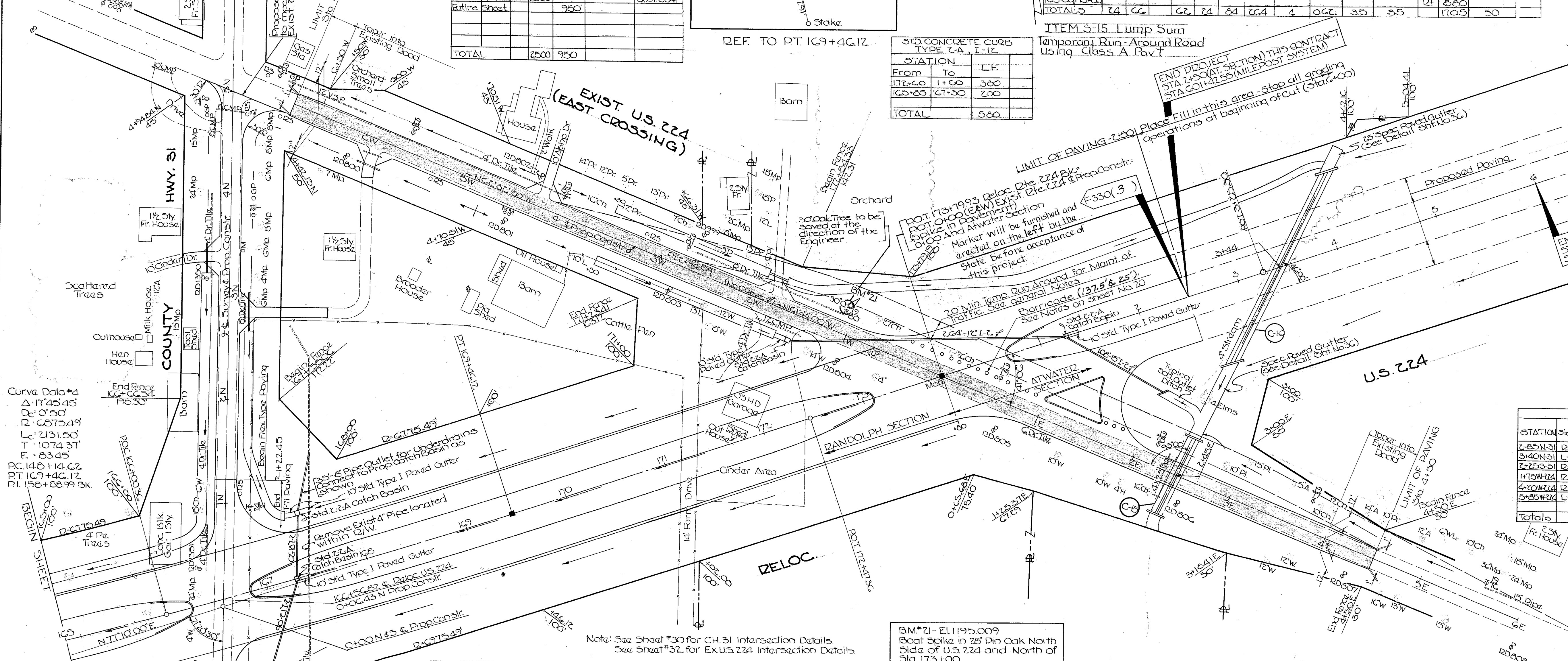


REF. TO P.T. 169+46.12

STD. CONCRETE CURB TYPE 2-A, I-12		
STATION From	STATION To	L.F.
172+60	1+50	380
165+85	167+30	200
TOTAL		580

DRAINAGE															
STATION From	STATION To	I-2 (Class A) 21" L.F.	21" U.P. L.F.	18" L.F.	18" U.P. L.F.	15" L.F.	15" U.P. L.F.	12" U.P. L.F.	I-8 Std. 2-2-A Cat. Bas.	S-1 Class E C.Y.	E-2 Endwall C.Y.	I-4, 8" Pipe Outlet for U.D.	Side	I-4, 6" Deep L.F.	I-14 Std Type I L.F.
1+50W	2+00At.					24	84	264	2	0.26	1.5				20(Ex.224)
167+50±												35'			
166+85	167+50	24	66		62				2	0.36	2				30
165+00	173+25												Lt.	825	
165+00	173+80												Rt.	880	
TOTALS		24	66		62	24	84	264	4	0.62	3.5	35		1705	50

ITEM S-15 Lump Sum
Temporary Run-Around Road Using Class A Pav't



Curve Data #4
Δ = 17°45'45"
Dc = 0°50'
R = 6875.49'
Lc = 2131.50'
T = 1074.37'
E = 83.45'
P.C. 148+14.62
P.T. 169+46.12
P.I. 158+88.99 BK.

Note: See Sheet #30 for CH. 31 Intersection Details.
See Sheet #32 for Ex. U.S. 224 Intersection Details.

B.M. #21 - El. 1195.009
Boat Spike in 28" Pin Oak North Side of U.S. 224 and North of Sta. 173+00.

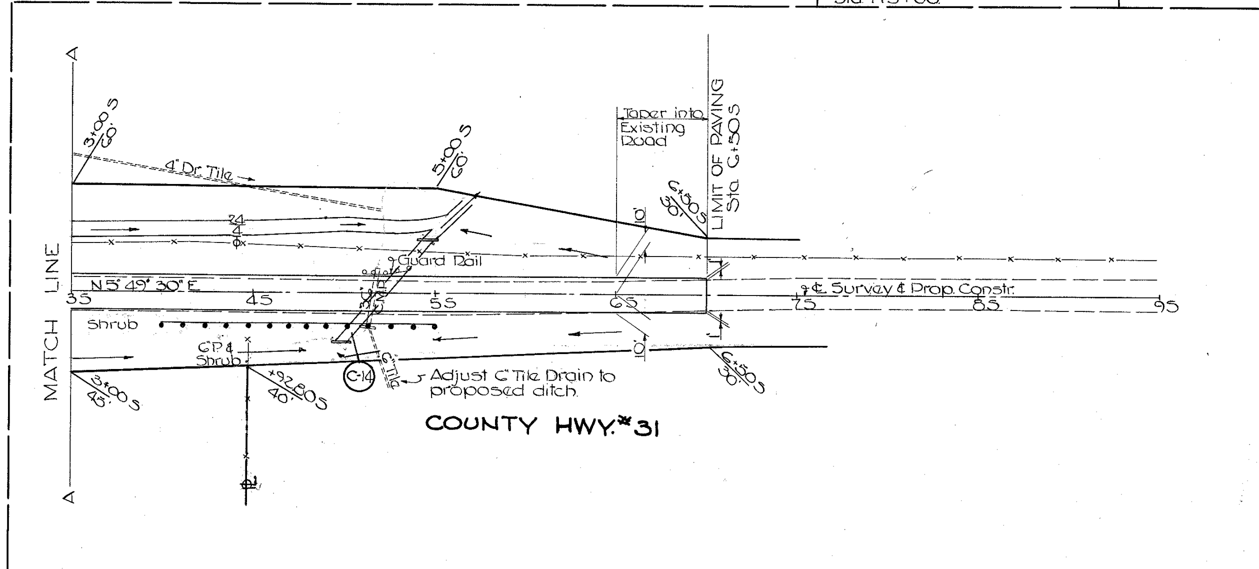
B.M. #20 - El. 1190.097
R.R. Spike in North Side of Pole 24/3 on East Side of CH. #31, 135' South of Sta. 166+40

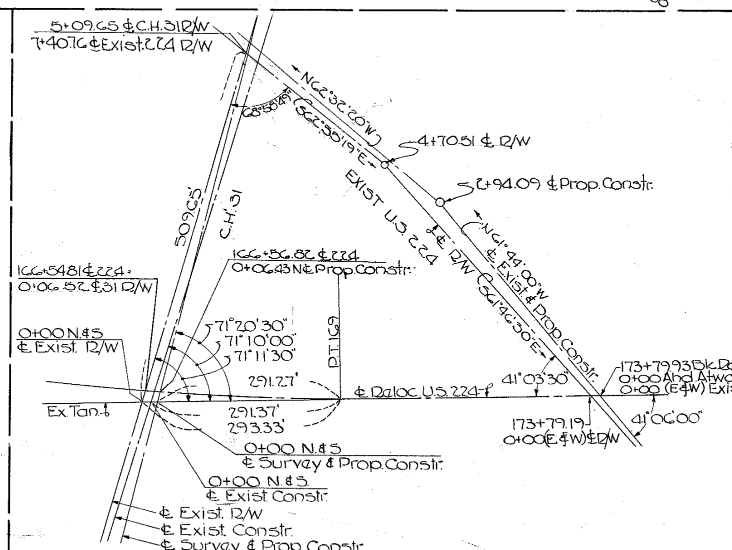
SODDING				
STATION From	STATION To	Side	L-10 9' Wide S.Y.	
165+00	3+25N*	Lt.	410	*C.H.31
167+50	2+65N*	Lt.&Rt.	205	*C.H.31
5+00S*	166+85	Lt.	450	*C.H.31
1+60W*	3+50	Lt.	190	*Exist.224
3+50W*	3+90AT.	Rt.	700	*Exist.224
2+00AT.		Rt.	25'	Outlet Ditch
TOTAL			1980	

DRIVES							
STATION	Side	Dist. From Pav't Edge	T-35 2" C.Y.	I-18 6" C.Y.	E-1 Excav. C.Y.	E-1 Emb. C.Y.	I-1 12" L.F.
2+85N-31	Rt.	85'	5.7	16.8	39		32
3+40N-31	Lt.	35'	3.1	9.4		27	32
2+25S-31	Rt.	55'	4.3	12.9		25	
1+75W-224	Rt.	38'	3.3	9.8	5	13	24
4+20W-224	Rt.	48'	3.8	11.2	12	13	0
5+85W-224	Lt.	28'	2.8	8.3	5	5	24
Totals			23.0	68.4	61	83	112

FENCE				
STATION From	STATION To	Side	Dist. From ℄	SS-18 L.F.
165+00	166+00	Lt.	99-99	100'
166+00	166+67	Lt.	99-198	120'
167+54	168+00	Lt.	176.2-99	80'
168+00	171+01	Lt.	99-99	301'
171+01	171+24	Lt.	99-163	65'
172+83	173+79	Lt.	141.3-99	108'
173+79	5+00	Lt.	99-99	500'
165+00	165+65	Rt.	R-151.6	73'
166+73	167+49	Rt.	180.2-99	115'
167+49	0+65E	Rt.	99-74.4	635
0+65E	3+18E	Rt.	74.4-49	253'
3+18E	4+49E	Rt.	49-29	131'
4+49E	2+99E	Lt.	29-54	150'
2+99E	2+99M.L.	Lt.	54-99	65'
2+99M.L.	5+00	Rt.	99-99	201'
TOTAL				2897

I-15 GUARD RAIL			
STATION From	STATION To	Side	I-15 L.F.
3+50S	5+00S	Rt.	150
(C.H. *31)			
TOTAL			150





INTERSECTION DATA

MONUMENT BOXES			
STATION	Side	I-8 Ea.	
169+46.12	℄	1	P.T.
173+79.93 0+00	℄	1	Eq'l'ty Sta.
Total		2	

(PLAN) LINE SHEET - STA 165+00(R) TO STA 7+00(A)

FED. RD. DIVISION	STATE	PROJECT	FISCAL YEAR
2	OHIO	F-330( )	

28
109

POR-224-6.22

RELOCATION OF U.S. RTE. 224

EXCAVATION	23157 C.Y.
EMBANKMENT	6792 C.Y.
SEEDING	19489 S.Y.

+79.93 0+00 RANDOLPH-ATWATER
0+00 E&W Exist. U.S. 224

400' V.C.
P.I. 3+00
Elev. 1194.22

LIMIT OF GRADING
END WORK
6+00

Note: +0.98% Grade continues to P.I. Sta 23+00 with 800' V.C.

LIMIT OF PAVING, Grading only from this Point
2+50

Grade to bottom of Sub-base Mat'l. (See X-Sections)

C-16

C-14 5-6' Under Edge of Pav't (Lt & Rt)
Rt. 165+00 to 173+80?
Lt. 165+00 to 173+82.5?

Graphic Grade: See Intersection Detail Sheet No. 32

LIMIT OF PAVING
6+75 W

300' V.C.
P.I. 4+00 W
Elev. 1202.0

0+00 Exist. 224
173+79.93 Ran. & 0+00 Atw.

100' V.C.
P.I. 2+37 E
Elev. 1191.10

LIMIT OF PAVING
4+50 E.

EXCAVATION 4332 C.Y.
EMBANKMENT 0 C.Y.
SEEDING 3690 S.Y.

C-15

EXCAVATION 462 C.Y.
EMBANKMENT 341 C.Y.
SEEDING 1809 S.Y.

EXISTING U.S. RTE. 224

Graphic Grade: See Intersection Detail Sheet No. 30

LIMIT OF PAVING-5+00 N
(West edge of) Exist. 224

180' V.C.
P.I. 4+00 N
Elev. 1196.0

0+06.54 C.H. #31 = 166+56.82 Reloc. 224

220' V.C.
P.I. 5+00 S
Elev. 1177.90

LIMIT OF PAVING-6+50 S

C-14

DRIVES
Embankment } From Line Sheet Table 83 C.Y.
Excavation } 61 C.Y.

TOTAL ESTIMATED QUANTITIES THIS SHEET
E-1 Excavation 33373 C.Y.
Embankment 10222 C.Y.
L-9 Seeding 31370 S.Y.

COUNTY HIGHWAY #31

EXCAVATION 4544 C.Y.
EMBANKMENT 0 C.Y.
SEEDING 2636 S.Y.

EXCAVATION 817 C.Y.
EMBANKMENT 3006 C.Y.
SEEDING 3746 S.Y.

(PROFILE) LINE SHEET - STA. 165+00 (R) TO STA. 7+00 (A)

SUPERELEVATION TABLES

FED. RD. DIVISION	STATE	PROJECT	FISCAL YEAR
2	OHIO	F-330( )	

POR-224-6.22

29
109

Curve No.1 D=0°30' P.I. Sta. 22+33.44

STATION	SUPER SLOPE	ULTIMATE WESTBOUND LANE PRESENT CONST. Lt. Edge Pave.	℄ Elev.	Rt. Edge Pave(PGL)	ULTIMATE EASTBOUND LANE FUTURE CONST. Lt. Edge Pave (PGL)	℄ Elev.	Rt. Edge Pave.
10+00	Crown	1147.74	1147.92	1147.74	1147.74	1147.92	1147.74
+25	-.01	1147.56	1147.74	1147.62	1147.62	1147.80	1147.68
+50	-.005	1147.37	1147.50	1147.49	1147.49	1147.67	1147.61
+75	Level	1147.19	1147.37	1147.37	1147.37	1147.55	1147.55
11+00	+.005	1147.00	1147.23	1147.24	1147.24	1147.42	1147.48
+25	+.01	1146.82	1147.00	1147.12	1147.12	1147.30	1147.42
+50	+.015	1146.63	1146.81	1146.99	1146.99	1147.17	1147.35
+61.89PC	+.015	1146.57	1146.75	1146.93	1146.93	1147.11	1147.29
+75	+.015	1146.51	1146.69	1146.87	1146.87	1147.05	1147.23
12+00	+.015	1146.38	1146.56	1146.74	1146.74	1146.92	1147.10
+25	+.015	1146.26	1146.44	1146.62	1146.62	1146.80	1146.98
+50	+.015	1146.13	1146.31	1146.49	1146.49	1146.67	1146.85
+75	+.015	1146.01	1146.19	1146.37	1146.37	1146.55	1146.73
13+00	+.015	1145.88	1146.06	1146.24	1146.24	1146.42	1146.60
+25	+.015	1145.76	1145.94	1146.12	1146.12	1146.30	1146.48
+50	+.015	1145.63	1145.81	1145.99	1145.99	1146.17	1146.35
+75	+.015	1145.51	1145.69	1145.87	1145.87	1146.05	1146.23
14+00	+.015	1145.38	1145.56	1145.74	1145.74	1145.92	1146.10
+25	+.015	1145.26	1145.44	1145.62	1145.62	1145.80	1145.98
+50	+.015	1145.13	1145.31	1145.49	1145.49	1145.67	1145.85
+75	+.015	1145.01	1145.19	1145.37	1145.37	1145.55	1145.73
15+00	+.015	1144.88	1145.06	1145.24	1145.24	1145.42	1145.60
+25	+.015	1144.76	1144.94	1145.12	1145.12	1145.30	1145.48
+50	+.015	1144.63	1144.81	1144.99	1144.99	1145.17	1145.35
+75	+.015	1144.51	1144.69	1144.87	1144.87	1145.05	1145.23
16+00	+.015	1144.38	1144.56	1144.74	1144.74	1144.92	1145.10
+25	+.015	1144.26	1144.44	1144.62	1144.62	1144.80	1144.98
+50	+.015	1144.13	1144.31	1144.49	1144.49	1144.67	1144.85
+75	+.015	1144.01	1144.19	1144.37	1144.37	1144.55	1144.73
17+00	+.015	1143.88	1144.06	1144.24	1144.24	1144.42	1144.60
+25	+.015	1143.76	1143.94	1144.12	1144.12	1144.30	1144.48
+50	+.015	1143.63	1143.81	1143.99	1143.99	1144.17	1144.35
+75	+.015	1143.51	1143.69	1143.87	1143.87	1144.05	1144.23
18+00	+.015	1143.38	1143.56	1143.74	1143.74	1143.92	1144.10
+25	+.015	1143.26	1143.44	1143.62	1143.62	1143.80	1143.98
+50	+.015	1143.13	1143.31	1143.49	1143.49	1143.67	1143.85
+75	+.015	1143.01	1143.19	1143.37	1143.37	1143.55	1143.73
19+00	+.015	1142.88	1143.06	1143.24	1143.24	1143.42	1143.60
+25	+.015	1142.76	1142.94	1143.12	1143.12	1143.30	1143.48
+50	+.015	1142.63	1142.81	1142.99	1142.99	1143.17	1143.35
+75	+.015	1142.51	1142.69	1142.87	1142.87	1143.05	1143.23
20+00	+.015	1142.38	1142.56	1142.74	1142.74	1142.92	1143.10
+25	+.015	1142.26	1142.44	1142.62	1142.62	1142.80	1142.98
+50	+.015	1142.13	1142.31	1142.49	1142.49	1142.67	1142.85
+75	+.015	1142.01	1142.19	1142.37	1142.37	1142.55	1142.73
21+00	+.015	1141.88	1142.06	1142.24	1142.24	1142.42	1142.60
+25	+.015	1141.76	1141.94	1142.12	1142.12	1142.30	1142.48
+50	+.015	1141.63	1141.81	1141.99	1141.99	1142.17	1142.35
+75	+.015	1141.51	1141.69	1141.87	1141.87	1142.05	1142.23
22+00	+.015	1141.38	1141.56	1141.74	1141.74	1141.92	1142.10
+25	+.015	1141.26	1141.44	1141.62	1141.62	1141.80	1141.98
+50	+.015	1141.13	1141.31	1141.49	1141.49	1141.67	1141.85
+75	+.015	1141.01	1141.19	1141.37	1141.37	1141.55	1141.73
23+00	+.015	1140.88	1141.06	1141.24	1141.24	1141.42	1141.60
+25	+.015	1140.76	1140.94	1141.12	1141.12	1141.30	1141.48
+50	+.015	1140.63	1140.81	1140.99	1140.99	1141.17	1141.35
+75	+.015	1140.51	1140.69	1140.87	1140.87	1141.05	1141.23
24+00	+.015	1140.38	1140.56	1140.74	1140.74	1140.92	1141.10
+25	+.015	1140.26	1140.44	1140.62	1140.62	1140.80	1140.98
+50	+.015	1140.13	1140.31	1140.49	1140.49	1140.67	1140.85
+75	+.015	1140.01	1140.19	1140.37	1140.37	1140.55	1140.73
25+00	+.015	1139.88	1140.06	1140.24	1140.24	1140.42	1140.60
+25	+.015	1139.75	1139.93	1140.11	1140.11	1140.29	1140.47
+50	+.015	1139.33	1139.51	1139.96	1139.96	1140.14	1140.32
+75	+.015	1139.44	1139.62	1139.80	1139.80	1139.98	1140.16
26+00	+.015	1139.26	1139.44	1139.62	1139.62	1139.80	1139.98
+25	+.015	1139.08	1139.26	1139.44	1139.44	1139.62	1139.80
+50	+.015	1138.87	1139.05	1139.23	1139.23	1139.41	1139.59
+75	+.015	1138.65	1138.83	1139.01	1139.01	1139.19	1139.37
27+00	+.015	1138.41	1138.59	1138.77	1138.77	1138.95	1139.13
+25	+.015	1138.16	1138.34	1138.52	1138.52	1138.70	1138.88

Curve No.1 (Continued)

STATION	SUPER SLOPE	ULTIMATE WESTBOUND LANE PRESENT CONST. Lt. Edge Pave.	℄ Elev.	Rt. Edge Pave(PGL)	ULTIMATE EASTBOUND LANE FUTURE CONST. Lt. Edge Pave(PGL)	℄ Elev.	Rt. Edge Pave.
27+50	+.015	1137.90	1138.08	1138.26	1138.26	1138.44	1138.62
+75	+.015	1137.62	1137.80	1137.98	1137.98	1138.16	1138.34
28+00	+.015	1137.32	1137.50	1137.68	1137.68	1137.86	1138.04
+25	+.015	1137.01	1137.19	1137.37	1137.37	1137.55	1137.73
+50	+.015	1136.69	1136.87	1137.05	1137.05	1137.23	1137.41
+75	+.015	1136.35	1136.53	1136.71	1136.71	1136.89	1137.07
29+00	+.015	1136.00	1136.18	1136.36	1136.36	1136.54	1136.72
+25	+.015	1135.64	1135.82	1136.00	1136.00	1136.18	1136.36
+50	+.015	1135.28	1135.46	1135.64	1135.64	1135.82	1136.00
+75	+.015	1134.92	1135.10	1135.28	1135.28	1135.46	1135.64
30+00	+.015	1134.56	1134.74	1134.92	1134.92	1135.10	1135.28
+25	+.015	1134.20	1134.38	1134.56	1134.56	1134.74	1134.92
+50	+.015	1133.84	1134.02	1134.20	1134.20	1134.38	1134.56
+75	+.015	1133.48	1133.66	1133.84	1133.84	1134.02	1134.20
31+00	+.015	1133.12	1133.30	1133.48	1133.48	1133.66	1133.84
+25	+.015	1132.76	1132.94	1133.12	1133.12	1133.30	1133.48
+50	+.015	1132.40	1132.58	1132.76	1132.76	1132.94	1133.12
+75	+.015	1132.04	1132.22	1132.40	1132.40	1132.58	1132.76
32+00	+.015	1131.68	1131.86	1132.04	1132.04	1132.22	1132.40
+25	+.015	1131.32	1131.50	1131.68	1131.68	1131.86	1132.04
+50	+.015	1130.96	1131.14	1131.32	1131.32	1131.50	1131.68
+75	+.015	1130.60	1130.78	1130.96	1130.96	1131.14	1131.32
32+87.89PT	+.015	1130.41	1130.59	1130.78	1130.78	1130.96	1131.14
33+00	+.015	1130.24	1130.42	1130.60	1130.60	1130.78	1130.96
+25	+.01	1129.94	1130.12	1130.24	1130.24	1130.42	1130.54
+50	+.005	1129.64	1129.82	1129.88	1129.88	1130.06	1130.12
+75	Level	1129.34	1129.52	1129.52	1129.52	1129.70	1129.70
34+00	-.005	1129.04	1129.22	1129.16	1129.16	1129.34	1129.28
+25	-.01	1128.74	1128.92	1128.80	1128.80	1128.98	1128.86
+50	Crown	1128.44	1128.62	1128.44	1128.44	1128.62	1128.44

Curve No.2 D=0°5G' P.I. Sta. 53+64.21

STATION	SUPER SLOPE	ULTIMATE WESTBOUND LANE PRESENT CONST. Lt. Edge Pave.	℄ Elev.	Rt. Edge Pave.(PGL)	ULTIMATE EASTBOUND LANE, FUTURE CONST. Lt. Edge Pave.(PGL)	℄ Elev.	Rt. Edge Pave.
47+50	Crown	1116.54	1116.72	1116.54	1116.54	1116.72	1116.54
+75	-.01	1116.55	1116.73	1116.61	1116.61	1116.79	1116.67
48+00	-.005	1116.58	1116.76	1116.70	1116.70	1116.88	1116.82
+25	Level	1116.62	1116.80	1116.80	1116.80	1116.98	1116.98
+50	+.005	1116.67	1116.85	1116.91	1116.91	1117.09	1117.15
+75	+.01	1116.73	1116.91	1117.03	1117.03	1117.21	1117.33
+84.67 PC	+.015	1116.73	1116.91	1117.09	1117.09	1117.27	1117.45
49+00	+.015	1116.82	1117.00	1117.18	1117.18	1117.36	1117.54
+25	+.015	1116.97	1117.15	1117.33	1117.33	1117.51	1117.69
+50	+.015	1117.13	1117.31	1117.49	1117.49	1117.67	1117.85
+75	+.015	1117.30	1117.48	1117.66	1117.66	1117.84	1118.02
50+00	+.015	1117.48	1117.66	1117.84	1117.84	1118.02	1118.20
+25	+.015	1117.65	1117.83	1118.01	1118.01	1118.19	1118.37
+50	+.015	1117.82	1118.00	1118.18	1118.18	1118.36	1118.54
+75	+.015	1117.99	1118.17	1118.35	1118.35	1118.53	1118.71
51+00	+.015	1118.17	1118.35	1118.53	1118.53	1118.71	1118.89
+25	+.015	1118.34	1118.52	1118.70	1118.70	1118.89	1119.06
+50	+.015	1118.51	1118.69	1118.87	1118.87	1119.05	1119.23
+75	+.015	1118.68	1118.86	1119.04	1119.04	1119.12	1119.30
52+00	+.015	1118.86	1119.04	1119.22	1119.22	1119.40	1119.58
+25	+.015	1119.03	1119.21	1119.39	1119.39	1119.57	1119.75
+50	+.015	1119.20	1119.38	1119.56	1119.56	1119.74	1119.92
+75	+.015	1119.37	1119.55	1119.73	1119.73	1119.91	1120.09
53+00	+.015	1119.55	1119.73	1119.91	1119.91	1120.09	1120.27
+25	+.015	1119.72	1119.90	1120.09	1120.09	1120.26	1120.44
+50	+.015	1119.89	1120.07	1120.25	1120.25	1120.43	1120.61
+75	+.015	1120.06	1120.24	1120.42	1120.42	1120.60	1120.78
54+00	+.015	1120.24	1120.42	1120.60	1120.60	1120.78	1120.96
+25	+.015	1120.41	1120.59	1120.77	1120.77	1120.95	1121.13
+50	+.015	1120.58	1120.76	1120.94	1120.94	1121.12	1121.30
+75	+.015	1120.75	1120.93	1121.11	1121.11	1121.29	1121.47
55+00	+.015	1120.93	1121.11	1121.29	1121.29	1121.47	1121.65
+25	+.015	1121.10	1121.28	1121.46	1121.46	1121.64	1121.82
+50	+.015	1121.27	1121.45	1121.63	1121.63	1121.81	1121.99
+75	+.015	1121.44	1121.62	1121.80	1121.80	1121.98	1122.16

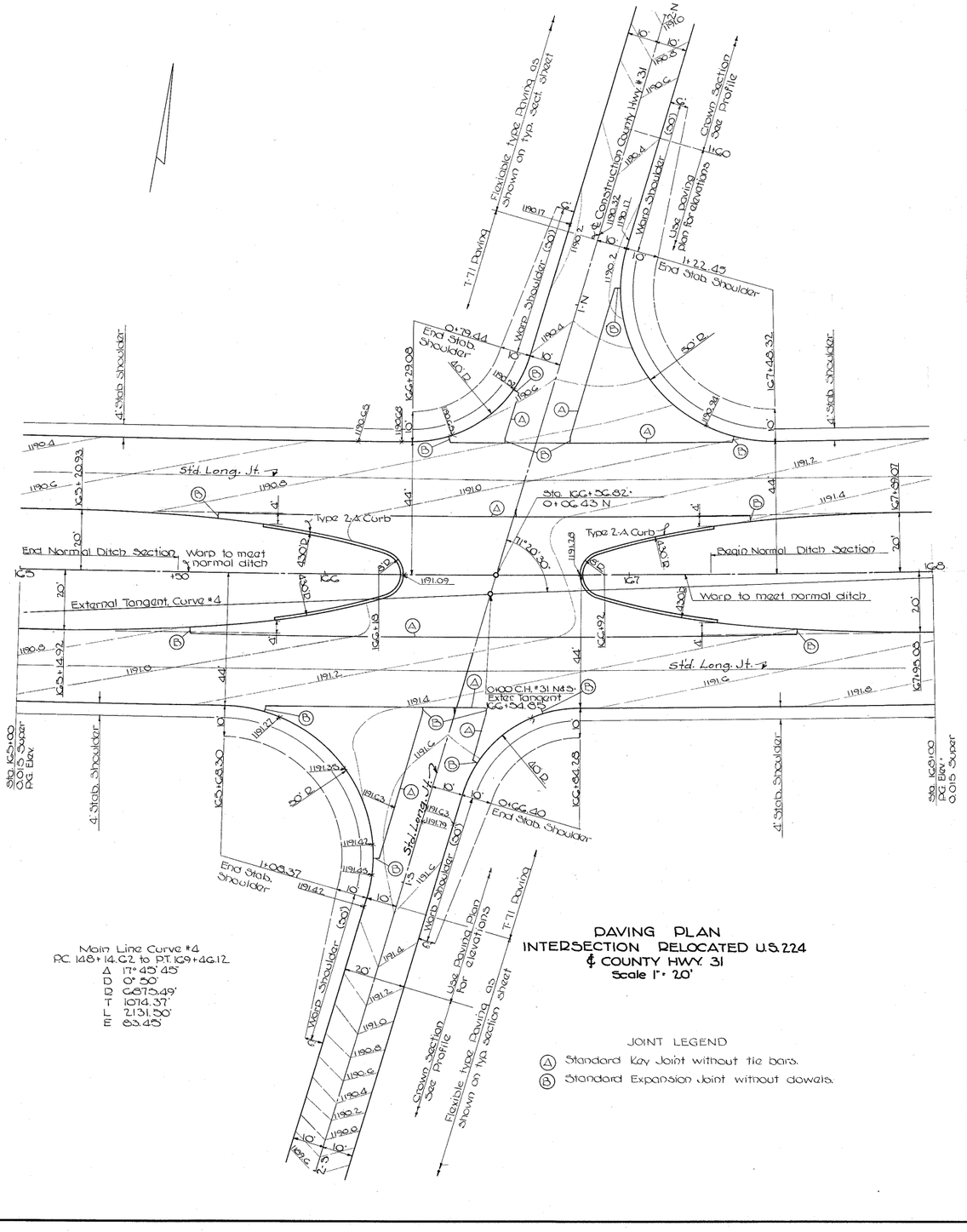
Curve No. 2 (Continued)

STATION	SUPER SLOPE	ULTIMATE WESTBOUND LANE, PRESENT CONST. Lt. Edge Pave.	℄ Elev.	Rt. Edge Pave.(PGL)	ULTIMATE EASTBOUND LANE FUTURE CONST. Lt. Edge Pave (PGL)	℄ Elev.	Rt. Edge Pave.
56+00	+.015	1121.52	1121.80	1121.98	1121.98	1122.16	1122.34
+25	+.015	1121.79	1121.97	1122.15	1122.15	1122.33	1122.51
+50	+.015	1121.96	1122.14	1122.32	1122.32	1122.50	1122.68
+75	+.015	1122.13	1122.31	1122.49	1122.49	1122.67	1122.85
57+00	+.015	1122.31	1122.49	1122.67	1122.67	1122.85	1123.03
+25	+.015	1122.48	1122.66	1122.84	1122.84	1123.02	1123.20
+50	+.015	1122.65	1122.83	1123.01	1123.01	1123.19	1123.37
+75	+.015	1122.82	1123.00	1123.18	1123.18	1123.36	1123.54
58+00	+.015	1122.99	1123.17	1123.35	1123.35	1123.53	1123.71
+25	+.015	1123.15	1123.33	1123.51	1123.51	1123.69	1123.87
+41.81 PT	+.015	1123.26	1123.44	1123.62	1123.62	1123.80	1123.98
+50	+.015	1123.31	1123.49	1123.67	1123.67	1123.85	1124.03
+75	+.01	1123.53	1123.71	1123.83	1123.83	1124.01	1124.13
59+00	+.005	1123.76	1123.94	1124.00	1124.00	1124.18	1124.24
+25	Level	1123.97	1124.15	1124.15	1124.15	1124.33	1124.33
+50	-.005	1124.18	1124.36	1124.30	1124.30	1124.48	1124.42
+75	-.01	1124.39	1124.57	1124.45	1124.45	1124.63	1124.51
60+00	Crown	1124.60	1124.78	1124.60	1124.60	1124.78	1124.60

Curve No. 3 D=0°50.00" P.I. Sta. 69+10.65

STATION	SUPER SLOPE	ULTIMATE WESTBOUND LANE, PRESENT, CONST. Lt. Edge Pave.	℄ Elev.	Rt. Edge Pave.(PGL)	ULTIMATE EASTBOUND LANE, FUTURE CONST. Lt. Edge Pave.(PGL)	℄ Elev.	Rt. Edge Pave.
62+50	Crown	1125.95	1126.13	1125.95	1125.95	1126.13	1125.95
+75	-.01	1126.14	1126.26	1126.08	1126.08	1126.20	1126.02
63+00	-.005	1126.32	1126.38	1126.20	1126.20	1126.26	1126.08
+25	Level	1126.51	1126.51	1126.33	1126.33	1126.33	1126.15
+50	+.005	1126.69	1126.63	1126.45	1126.45	1126.39	1126.21
+75	+.01	1126.88	1126.76	1126.58	1126.58	1126.46	1126.28
64+00	+.015 RT	1127.06	1126.88	1126.70	1126.70	1126.52	1126.34
PC +22.58	+.015	1127.17	1126.99	1126.81	1126.81	1126.63	1126.45
+25	+.015	1127.19	1127.01	1126.83	1126.83	1126.65	1126.47
+50	+.015	1127.31	1127.13	1126.95	1126.95	1126.77	1126.59
+75	+.015	1127.44	1127.26	1127.08	1127.08	1126.90	1126.72
65+00	+.015	1127.56	1127.38	1127.20	1127.20	1127.02	1126.84
+25	+.015	1127.69	1127.51	1127.33	1127.33	1127.15	1126.97
+50	+.015	1127.81	1127.63	1127.45	1127.45	1127.27	1127.09
+75	+.015	1127.94	1127.76	1127.58	1127.58	1127.40	1127.22
66+00	+.015	1128.06	1127.88	1127.70	1127.70	1127.52	1127.34
+25	+.015	1128.19	1128.01	1127.83	1127.83	1127.65	1127.47
+50	+.015	1128.31	1128.13	1127.95	1127.95	1127.77	1127.59
+75	+.015	1128.44	1128.26	1128.08	1128.08	1127.90	1127.72
67+00	+.015	1128.56	1128.38	1128.20	1128.20	1128.02	1127.84
+25	+.015	1128.69	1128.51	1128.33	1128.33	1128.15	1127.97
+50	+.015	1128.81	1128.63	1128.45	1128.45	1128.27	1128.09
+75	+.015	1128.94	1128.76	1128.58	1128.58	1128.40	1128.22
68+00	+.015	1129.06	1128.88	1128.70	1128.70	1128.52	1128.34
+25	+.015	1129.19	1129.01	1128.83	1128.83	1128.65	1128.47
+50	+.015	1129.31	1129.13	1128.95	1128.95	1128.77	1128.59
+75	+.015	1129.44	1129.26	1129.08	1129.08	1128.90	1128.72
69+00	+.015	1129.56	1129.38	1129.20	1129.20	1129.02	1128.84
+25	+.015	1129.69	1129.51	1129.33	1129.33	1129.15	1128.97
+50	+.015	1129.81	1129.63	1129.45	1129.45	1129.27	1129.09
+75	+.015	1129.94	1129.76	1129.58	1129.58	1129.40	1129.22
70+00	+.015	1130.06	1129.88	1129.70	1129.70	1129.52	1129.34
+25	+.015	1130.19	1130.01	1129.83	1129.83	1129.65	1129.47
+50	+.015	1130.31	1130.13	1129.95	1129.95	1129.77	1129.59
+75	+.015	1130.44	1130.26	1130.08	1130.08	1129.90	1129.72
71+00	+.015	1130.56	1130.38	1130.20	1130.20	1130.02	1129.84
+25	+.015	1130.69	1130.51	1130.33	1130.33	1130.15	1129.97
+50	+.015	1130.81	1130.63	1130.45	1130.45	1130.27	1130.09
+75	+.015	1130.94	1130.76	1130.58	1130.58	1130.40	1130.22
72+00	+.015	1131.06	1130.88	1130.70	1130.70	1130.52	1130.34
+25	+.015	1131.19	1131.01	1130.83	1130.83	1130.65	1130.47
+50	+.015	1131.31	1131.13	1130.95	1130.95	1130.77	1130.59
+75	+.015	1131.44	1131.26	1131.08	1131.08	1130.90	1130.72
73+00	+.015	1131.56	1131.38	1131.20	1131.20	1131.02	1130.84
+25	+.015	1131.69	1131.51	1131.33	1131.33	1131.15	1130.97
+50	+.015	1131.81	1131.63	1131.45	1131.45	1131.27	1131.09
+75	+.015	1131.94	1131.76	1131.58	1131.58	1131.40	1131.22
PT +97.08	+.015	1132.05	1131.87	1131.69	1131.69	1131.51	1131.33
74+00	+.015	1132.06	1131.88	1131.70	1131.70	1131.52	1131.34
+25	+.01	1132.13	1132.01	1131.83	1131.83	1131.71	1131.53
+50	+.005	1132.19	1132.13	1131.95	1131.95	1131.89	1131.71
+75	Level	1132.27	1132.27	1132.09	1132.09	1132.09	1131.91
75+00	-.005	1132.36	1132.42	1132.24	1132.24	1132.30	1132.12
+25	-.01	1132.47	1132.59	1132.41	1132.41	1132.53	1132.35
+50	Crown	1132.60	1132.78	1132.60	1132.60	1132.78	1132.60

Note:
Superelevation Table for Curve #4 is on next Sheet No. 30



SUPERELEVATION TABLES (CONT.)

FED. RD. DIVISION	STATE	PROJECT	FISCAL YEAR
2	OHIO	F-330 ( )	

30
109

POR-224-G.22

Curve No. 4. D_c = 0° 50' 00" P.I. Sta. 158+88.99

STATION	SUPER SLOPE	ULTIMATE WESTBOUND LANE - PRESENT CONSTRUCTION			ULTIMATE EASTBOUND LANE, FUTURE CONSTRUCTION		
		LT. EDGE PAVT.	℄ ELEV.	RT. EDGE PAVT. (P.G.L.)	LT. EDGE PAVT. (P.G.L.)	℄ ELEV.	RT. EDGE PAVT.
KG+50	Crown	1184.88	1185.06	1184.88	1184.88	1185.06	1184.88
+75	-.01	1184.98	1185.16	1185.04	1185.04	1185.22	1185.10
K47+00	-.005	1185.05	1185.23	1185.17	1185.17	1185.54	1185.29
+25	Level	1185.12	1185.30	1185.30	1185.30	1185.48	1185.48
+50	+.005	1185.16	1185.34	1185.40	1185.40	1185.58	1185.64
+75	+.01	1185.20	1185.38	1185.50	1185.50	1185.68	1185.80
K48+00	+.015	1185.22	1185.40	1185.58	1185.58	1185.76	1185.94
RC. +14.62	+.015	1185.26	1185.44	1185.62	1185.62	1185.80	1185.98
+25	+.015	1185.30	1185.48	1185.66	1185.66	1185.84	1186.02
+50	+.015	1185.37	1185.55	1185.73	1185.73	1185.91	1186.09
+75	+.015	1185.45	1185.63	1185.81	1185.81	1185.99	1186.17
149+00	+.015	1185.52	1185.70	1185.88	1185.88	1186.06	1186.24
+25	+.015	1185.60	1185.78	1185.96	1185.96	1186.14	1186.32
+50	+.015	1185.67	1185.85	1186.03	1186.03	1186.21	1186.39
+75	+.015	1185.75	1185.93	1186.11	1186.11	1186.29	1186.47
150+00	+.015	1185.82	1186.00	1186.18	1186.18	1186.36	1186.54
+25	+.015	1185.90	1186.08	1186.26	1186.26	1186.44	1186.62
+50	+.015	1185.97	1186.15	1186.33	1186.33	1186.51	1186.69
+75	+.015	1186.05	1186.23	1186.41	1186.41	1186.59	1186.77
151+00	+.015	1186.12	1186.30	1186.48	1186.48	1186.66	1186.84
+25	+.015	1186.20	1186.38	1186.56	1186.56	1186.74	1186.92
+50	+.015	1186.27	1186.45	1186.63	1186.63	1186.81	1186.99
+75	+.015	1186.35	1186.53	1186.71	1186.71	1186.89	1187.07
152+00	+.015	1186.42	1186.60	1186.78	1186.78	1186.96	1187.14
+25	+.015	1186.50	1186.68	1186.86	1186.86	1187.04	1187.22
+50	+.015	1186.57	1186.75	1186.93	1186.93	1187.11	1187.29
+75	+.015	1186.65	1186.83	1187.01	1187.01	1187.19	1187.37
153+00	+.015	1186.72	1186.90	1187.08	1187.08	1187.26	1187.44
+25	+.015	1186.80	1186.98	1187.16	1187.16	1187.34	1187.52
+50	+.015	1186.87	1187.05	1187.23	1187.23	1187.41	1187.59
+75	+.015	1186.95	1187.13	1187.31	1187.31	1187.49	1187.67
154+00	+.015	1187.02	1187.20	1187.38	1187.38	1187.56	1187.74
+25	+.015	1187.10	1187.28	1187.46	1187.46	1187.64	1187.82
+50	+.015	1187.17	1187.35	1187.53	1187.53	1187.71	1187.89
+75	+.015	1187.25	1187.43	1187.61	1187.61	1187.79	1187.97
155+00	+.015	1187.32	1187.50	1187.68	1187.68	1187.86	1188.04
+25	+.015	1187.40	1187.58	1187.76	1187.76	1187.94	1188.12
+50	+.015	1187.47	1187.65	1187.83	1187.83	1188.01	1188.19
+75	+.015	1187.55	1187.73	1187.91	1187.91	1188.09	1188.27
156+00	+.015	1187.62	1187.80	1187.98	1187.98	1188.16	1188.34
+25	+.015	1187.70	1187.88	1188.06	1188.06	1188.24	1188.42
+50	+.015	1187.77	1187.95	1188.13	1188.13	1188.31	1188.49
+75	+.015	1187.85	1188.03	1188.21	1188.21	1188.39	1188.57
157+00	+.015	1187.92	1188.10	1188.28	1188.28	1188.46	1188.64
+25	+.015	1188.00	1188.18	1188.36	1188.36	1188.54	1188.72
+50	+.015	1188.07	1188.25	1188.43	1188.43	1188.61	1188.79
+75	+.015	1188.15	1188.33	1188.51	1188.51	1188.69	1188.87
158+00	+.015	1188.22	1188.40	1188.58	1188.58	1188.76	1188.94
+25	+.015	1188.30	1188.48	1188.66	1188.66	1188.84	1189.02
+50	+.015	1188.37	1188.55	1188.73	1188.73	1188.91	1189.09
+75	+.015	1188.45	1188.63	1188.81	1188.81	1188.99	1189.17
159+00	+.015	1188.52	1188.70	1188.88	1188.88	1189.06	1189.24
+25	+.015	1188.60	1188.78	1188.96	1188.96	1189.14	1189.32
+50	+.015	1188.67	1188.85	1189.03	1189.03	1189.21	1189.39
+75	+.015	1188.75	1188.93	1189.11	1189.11	1189.29	1189.47
160+00	+.015	1188.82	1189.00	1189.18	1189.18	1189.36	1189.54
+25	+.015	1188.90	1189.08	1189.26	1189.26	1189.44	1189.62
+50	+.015	1188.97	1189.15	1189.33	1189.33	1189.51	1189.69
+75	+.015	1189.05	1189.23	1189.41	1189.41	1189.59	1189.77
161+00	+.015	1189.12	1189.30	1189.48	1189.48	1189.66	1189.84
+25	+.015	1189.20	1189.38	1189.56	1189.56	1189.74	1189.92
+50	+.015	1189.27	1189.45	1189.63	1189.63	1189.81	1189.99
+75	+.015	1189.35	1189.53	1189.71	1189.71	1189.89	1190.07
162+00	+.015	1189.42	1189.60	1189.78	1189.78	1189.96	1190.14
+25	+.015	1189.50	1189.68	1189.86	1189.86	1190.04	1190.22
+50	+.015	1189.57	1189.75	1189.93	1189.93	1190.11	1190.29
+75	+.015	1189.65	1189.83	1190.01	1190.01	1190.19	1190.37
163+00	+.015	1189.72	1189.90	1190.08	1190.08	1190.26	1190.44
+25	+.015	1189.80	1189.98	1190.16	1190.16	1190.34	1190.52
+50	+.015	1189.87	1190.05	1190.23	1190.23	1190.41	1190.59
+75	+.015	1189.95	1190.13	1190.31	1190.31	1190.49	1190.67

Curve No. 4 Cont.

STATION	SUPER SLOPE	ULTIMATE WESTBOUND LANE, PRESENT CONSTRUCTION			ULTIMATE EASTBOUND LANE, FUTURE CONSTRUCTION		
		LT. EDGE PAVT.	℄ ELEV.	RT. EDGE PAVT. (P.G.L.)	LT. EDGE PAVT. (P.G.L.)	℄ ELEV.	RT. EDGE PAVT.
KG4+00	+.015	1190.02	1190.20	1190.38	1190.38	1190.56	1190.74
+25	+.015	1190.10	1190.28	1190.46	1190.46	1190.64	1190.82
+50	+.015	1190.17	1190.35	1190.53	1190.53	1190.71	1190.89
+75	+.015	1190.25	1190.43	1190.61	1190.61	1190.79	1190.97
KG5+00	+.015	1190.32	1190.50	1190.68	1190.68	1190.86	1191.04
+25	+.015	1190.40	1190.58	1190.76	1190.76	1190.94	1191.12
+50	+.015	1190.47	1190.65	1190.83	1190.83	1191.01	1191.19
+75	+.015	1190.55	1190.73	1190.91	1190.91	1191.09	1191.27
KG6+00	+.015	1190.62	1190.80	1190.98	1190.98	1191.16	1191.34
+25	+.015	1190.70	1190.88	1191.06	1191.06	1191.24	1191.42
+50	+.015	1190.77	1190.95	1191.13	1191.13	1191.31	1191.49
+75	+.015	1190.85	1191.03	1191.21	1191.21	1191.39	1191.57
KG7+00	+.015	1190.92	1191.10	1191.28	1191.28	1191.46	1191.64
+25	+.015	1191.00	1191.18	1191.36	1191.36	1191.54	1191.72
+50	+.015	1191.07	1191.25	1191.43	1191.43	1191.61	1191.79
+75	+.015	1191.15	1191.33	1191.51	1191.51	1191.69	1191.87
KG8+00	+.015	1191.22	1191.40	1191.58	1191.58	1191.76	1191.94
+25	+.015	1191.30	1191.48	1191.66	1191.66	1191.84	1192.02
+50	+.015	1191.37	1191.55	1191.73	1191.73	1191.91	1192.09
+75	+.015	1191.45	1191.63	1191.81	1191.81	1191.99	1192.17
KG9+00	+.015	1191.52	1191.70	1191.88	1191.88	1192.06	1192.24
+25	+.015	1191.60	1191.77	1191.96	1191.96	1192.14	1192.32
PT. +46.12	+.015	1191.66	1191.84	1192.02	1192.02	1192.20	1192.38
+50	+.015	1191.67	1191.85	1192.03	1192.03	1192.21	1192.39
+75	+.01	1191.81	1191.99	1192.11	1192.11	1192.29	1192.41
170+00	Level	1192.00	1192.18	1192.18	1192.18	1192.36	1192.36
+25	-.005	1192.14	1192.32	1192.26	1192.26	1192.44	1192.38
+50	-.01	1192.27	1192.45	1192.33	1192.33	1192.51	1192.39
+75	Crown	1192.41	1192.59	1192.41	1192.41	1192.59	1192.41

FED. RD. DIVISION	STATE	PROJECT	FISCAL YEAR
2	OHIO	F-330 ( )	

31
109

POR-224-6.22

MATCH LINE @ 'A'

4:1 — 24' — 4' Stab'ld. Shoulder — 20' — 20' — 24' — 4' Stab'ld. Shoulder — 4:1

℄ RELOC. U.S. Rte. 224

Edge of Shoulder

Std. PC-4 Endwall Inv. El. 1122.03 101 Lt. Sta. 74+84

Typical Outlet Ditch Length = 75'

42" @ 0.6%

Std. PC-4 Endwall Inv. El. 1132.4 34' Rt. of 4+30 N

348'-42" @ 1.78% Class A I-2

Trim channel to prop. culvert Std. Type I Paved gutter

Taper Prop shoulder to exist. shoulder

50' Taper

8' Shoulder

Taper 1:20

Pipe for Traffic Signal

N 5° 12' 45" E

4N — 3N — 2N

Std. Long. Jt.

℄ SR. 44

End Curb @ 3+00 (N)

Special raised curb inlet Lt. of 1+17 (N) S Rte. 44 Inv. 1130.90

Shoulder varies, see cross sections

I-4 C Underdrain (Shallow)

Place 10' of 8" U.D. Outlet

Meet existing sidewalk @ 1+00 N

Warp shoulder area to suit curb, sidewalk and roadway elevations

3+60 LIMIT OF PAVING

Normal Crown Section (79+50)

Sta. 9' Sod Ditch — 10' Shoulder — 4' Stab'ld. Shoulder — +16.08 — Pipe for Traffic Signal — 430' D — 10' Std. Type I Pav Gutter — 2'-B Typ — 6'-I-4 Underdrain Outlet — Std. Long. Jt. — Std. 9' Sod Ditch — 10' Shoulder — 4' Stab'ld. Shoulder — +16.08 — 430' D

℄ Sta. 78+70 Std. 2-2-A C.B. Normal ditch El. 1133.6 Inv. 1130.35

54' Lt. of 0+69 (S) S Rte. 44 Std. 1-4 C.B. Normal Ditch El. 1133.00 Inv. 42" (In) 1124.88 Inv. 42" (Out) 1124.76 Inv. 15" (In) 1126.88 Inv. 15" (In) 1127.13

46' Rt of 0+83 N (S Rte. 44 Std. 1-4 C.B. Normal Ditch El. 1131.6 Inv. 42" (In) = 1126.2 Inv. 42" (Out) 1126.1 Inv. 12" (In) 1128.7

78+48.43 (95' D) — 78+47.51 (95' D)

10' Std. Type I Pav Gutter — 2'-B Typ — 0+94.53 (N) — 0+93.47 (S)

I-2 — 152'-42" @ 0.6% — SC — 15" @ 1.55% (I-2)

Class A Under Pavt

78+10 Type 2A Curb

Sta. 30+35 (9' Lt. of ℄) Std. 2-2A C.B. Ditch El. = 1131.0 Inv. = 1127.75

℄ Proposed Construction 0+00 I.C. ℄ S Rte 44 77+73.99 ℄ U.S. Rte 224

West Survey Line 0+00 N 4° 51' S Rte 44 77+41.39 ℄ U.S. Rte 224

Pipe for Traffic Signal

℄ Proposed Const. S Rte 44 1+40 S Rte. 44 = 30+00 Sw. Drive

Taper 1:20

Shoulder varies, see cross sections.

Meet existing sidewalk at 1+00 S

End stab'ld shoulder at PT of Return

Warp shoulder area to suit curb, sidewalk and roadway elevations

0+94.23

Type 2A Curb 77+32

77+00.43

* Stop curb 10' off normal edge of U.S. Rte. 224 pavt.

77+08

4:1 — 76+99.51

4' Stab'ld. Shoulder — 4' Stab'ld. Shoulder — 10' Shoulder — Edge of Shoulder — 4:1 — 4:1 — 10' Shoulder — 0.6%

Pipe for Traffic Signal

℄ RELOC. U.S. Rte. 224 — S 85° 04' 15" E — Std. Long. Jt. — I-2

+32.08 — +32.08

MATCH LINE 'A' — Normal Crown Section

(A) Std. Key Joint without tie bars.
(B) Expansion Joint without dowels
(C) Expansion Joint with dowels

ESTIMATE OF QUANTITIES C-10, C-9, & C-8

ITEM	DESCRIPTION	QUANTITIES C-8	C-9	C-10
I-2.	42" Class A Storm Sewers			348 LF
E-3	Channel Excavation	14 CY		6 CY
T-14	Paved Gutter (Std. Type I)			30 LF
L-10	Sodding (along paved gutter)			7 SY
S-1	Concrete for Structure, Class 'E'	0.7 C.Y.		0.7 C.Y.
I-2.	42" M-C.C (a) Class A Under Pavt	344 L.F.	152 L.F.	

(All other Quantities, see line sheet)

PROFILE CULVERT C-10, C-9, AND C-8

Scale: Hor. 1"=50'
Vert. 1"=5'

348' — 152' — 344'

83' — 69' — 54' — 290'

1140 — 1135 — 1130 — 1125 — 1120

Special Raised Curb Inlet Lt. of 1+17 (N) S Rte. 44

Existing Ground

Std. Type I Paved Gutter

Cut off Wall

30'

Trim Channel to Proposed Culvert Inv.

Inv. 1132.4 Std. PC-4 Endwall

Slope 1.78% Proposed 42" Class A I-2

Spec. raised curb inlet

17" Inv. 1130.90

Slope 2.73%

I-2

12" Inv. 1128.7

Inv. 1126.2

Inv. 1126.1

Std. 1-4 CB 26' Rt of 0+83 (N)

Std. 2-2-A CB 15" Inv. 1130.55

I-4 Underdrain

Slope 4.32%

Proposed 42" I-2 CLASS A UNDER PAVT Slope 0.6%

M-C.C (a)

Inv. 1127.15

Inv. 1124.88

℄ Reloc. U.S. Rte. 224

℄ Sta. 78+10

℄ S. Rte. 44

54' Lt. of 0+69 (S)

97' Lt of 30+35 Serv. Drive

Std. 1-4 CB

Slope 1.55%

I-2

15" Inv. 1126.88

Std. 2-2-A. CB 15" Inv. 1127.75

Prop. Sidewalk

Proposed 42" I-2 M-C.C (a) Slope 0.6%

Inv. 1124.78

Inv. 1122.03 Std. PC-4 Endwall

Typical Outlet Ditch 0.6% Grade

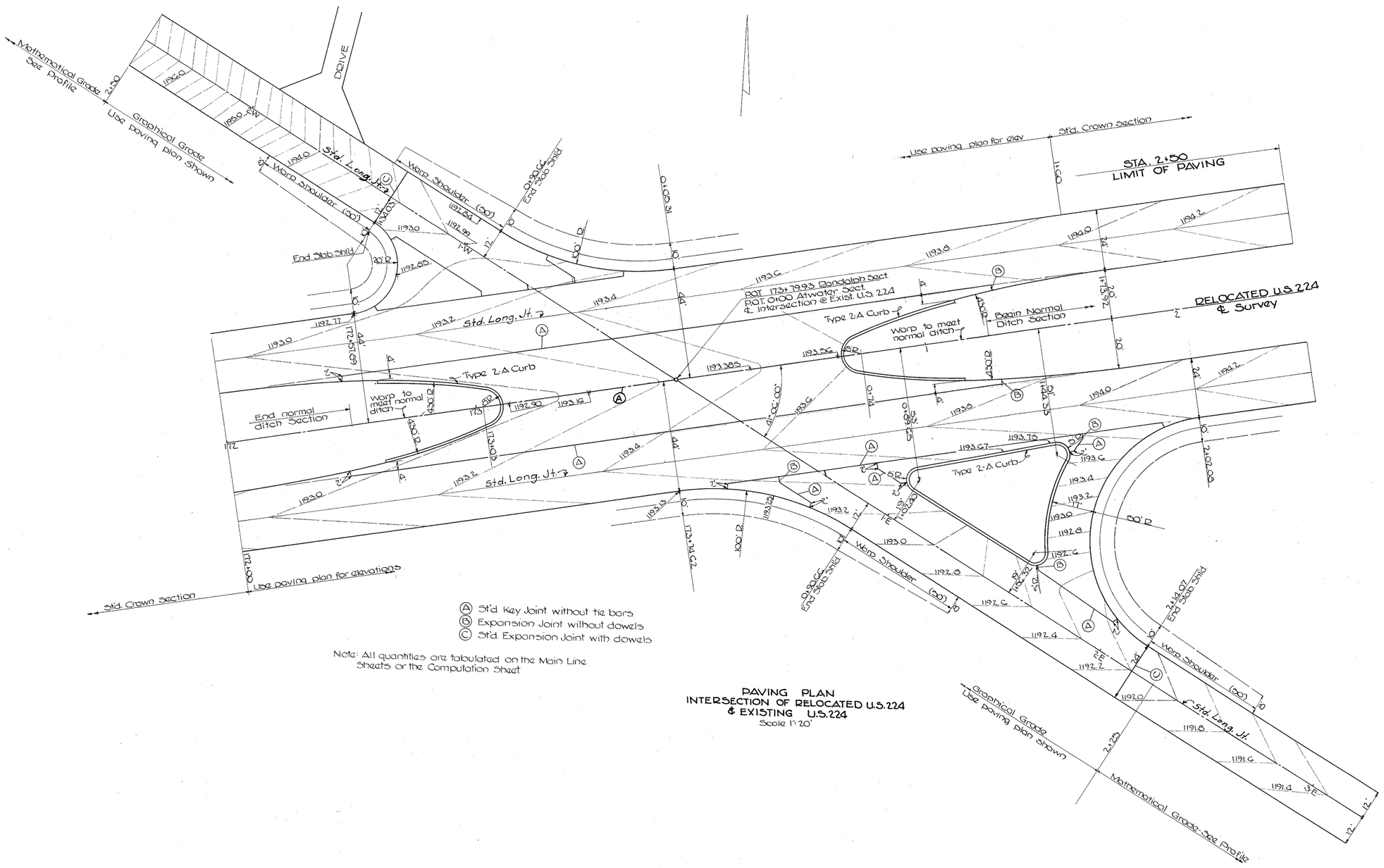
PLAN
GRADING AND DRAINAGE
INTERSECTION U.S. Rt. 224 & State Rt. 44
Scale 1" = 20'

INTERSECTION PAVING AND DRAINAGE PLAN - RELOC. U.S. 224 AND STATE RTE. 44

FED. RD. DIVISION	STATE	PROJECT	FISCAL YEAR
2	OHIO	F-330( )	

32
109

POR-224-6.22



(A) Std. Key Joint without tie bars
(B) Expansion Joint without dowels
(C) Std. Expansion Joint with dowels

Note: All quantities are tabulated on the Main Line Sheets or the Computation Sheet

PAVING PLAN
INTERSECTION OF RELOCATED U.S. 224 & EXISTING U.S. 224

Scale 1" 20'

FED. RD. DIVISION	STATE	PROJECT	FISCAL YEAR
2	OHIO	F-330( )	

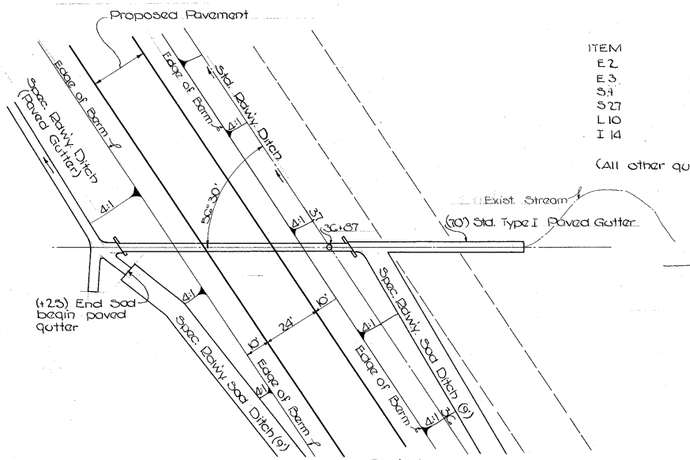
33
109

POR-224-G.22

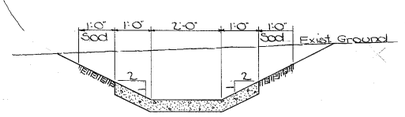
ESTIMATE OF QUANTITIES

ITEM	DISCRIPTION	QUANTITY	
E.2	Excavation For Structures	116	C.Y.
E.3	Channel Excavation	155	C.Y.
S.1	Concrete For Structures (Class E)	1.18	C.Y.
S.27	36" M-6.6(b) or M-6.8(b) Pipe Culverts	8C	L.F.
L.10	Seeding	16	S.Y.
I.14	Paved Gutter	70	L.F.

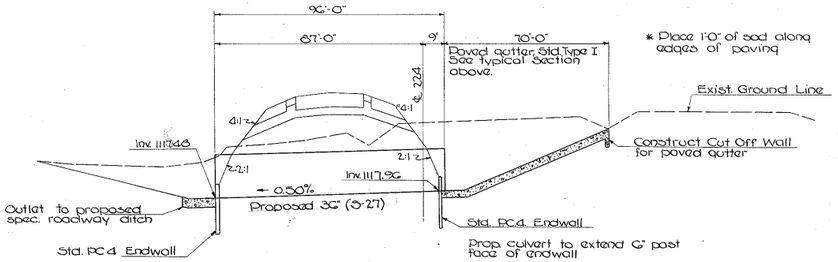
(All other quantities are on Line Sheet)



PLAN
Scale 1"=30'

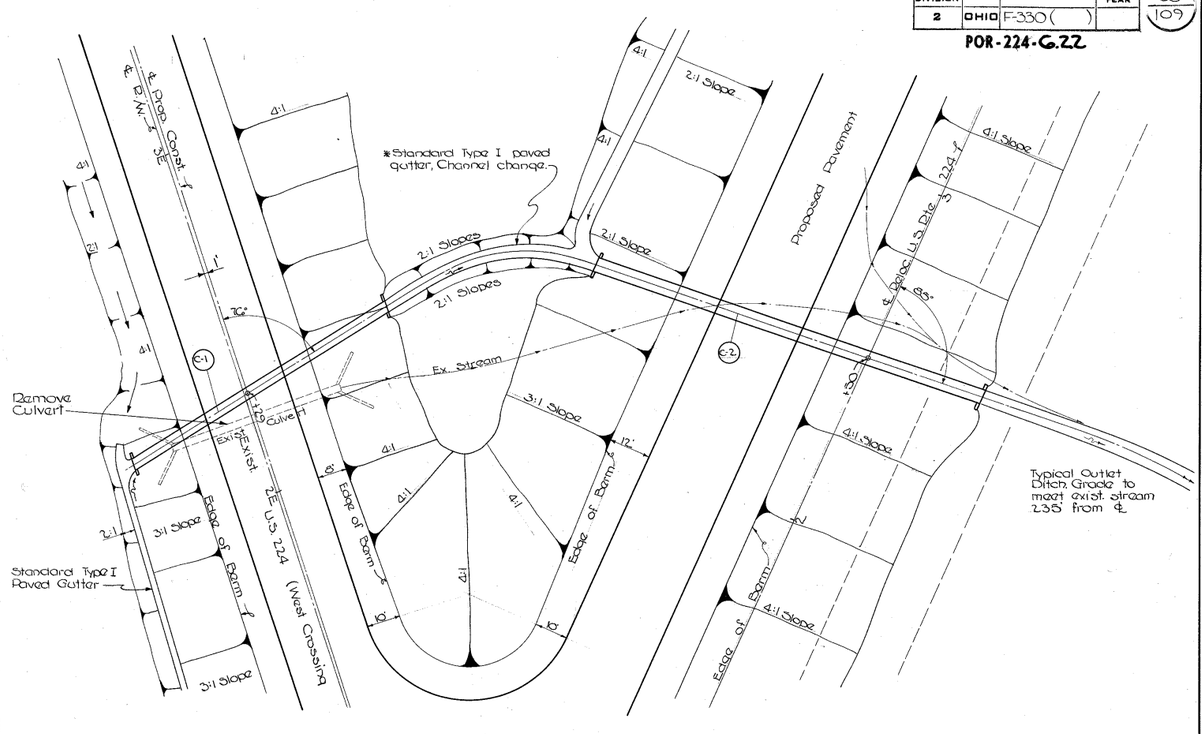


TYPICAL SECTION
FOR INLET CHANNEL
Scale 1"=3'



PROFILE
CULVERT C-5 STA. 3C+87
Scale Vert 1"=5'
Horz. 1"=30'

Drainage Area (C-5)
= 16 Acres
Q 25 = 33 C.F.S.



PLAN
CULVERT NO. 1 & NO. 2
Scale 1"=20'

ESTIMATE OF QUANTITIES

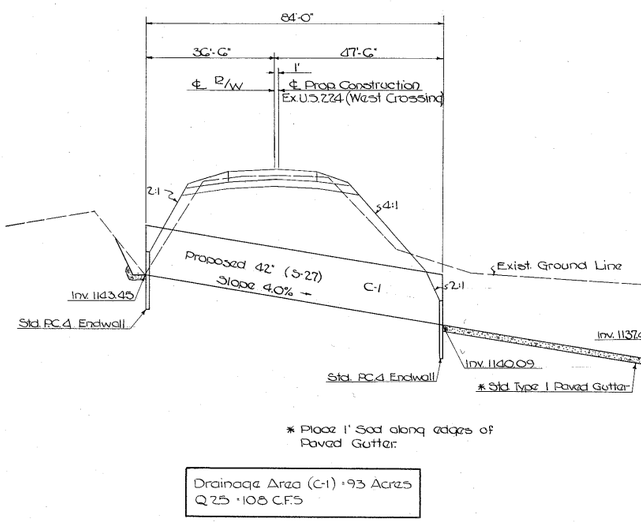
C-1

ITEM	DESCRIPTION	QUANTITY	
E-2	Excavation for structures	160	C.Y.
E-3	Channel excavation	111	C.Y.
S-1	Concrete for structures (Class E)	1.52	C.Y.
S-27	42" Pipe for Roadway Culverts	84	L.F.
S-24	Removal of exist. Structures		L.S.
L-10	Seeding	14	S.Y.
I-14	Paved gutter (Std)	63	L.F.

(C-1 estimate includes all quantities up to face of North End Wall of C-2)

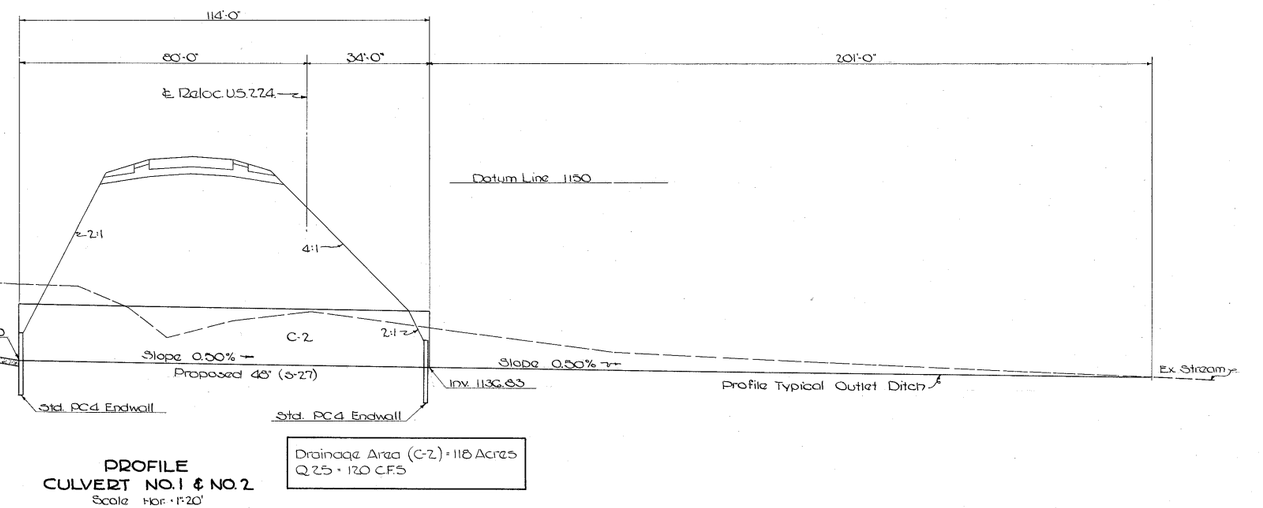
C-2

E-2	Excavation for structures	145	C.Y.
E-3	Channel excavation	50	C.Y.
S-1	Concrete for structures (Class E)	1.72	C.Y.
S-27	48" M-6.6(b)	114	L.F.



* Place 1' Sod along edges of Paved Gutter.

Drainage Area (C-1) = 93 Acres
Q 25 = 108 C.F.S.



PROFILE
CULVERT NO. 1 & NO. 2
Scale Hor. 1"=20'
Vert. 1"=5'

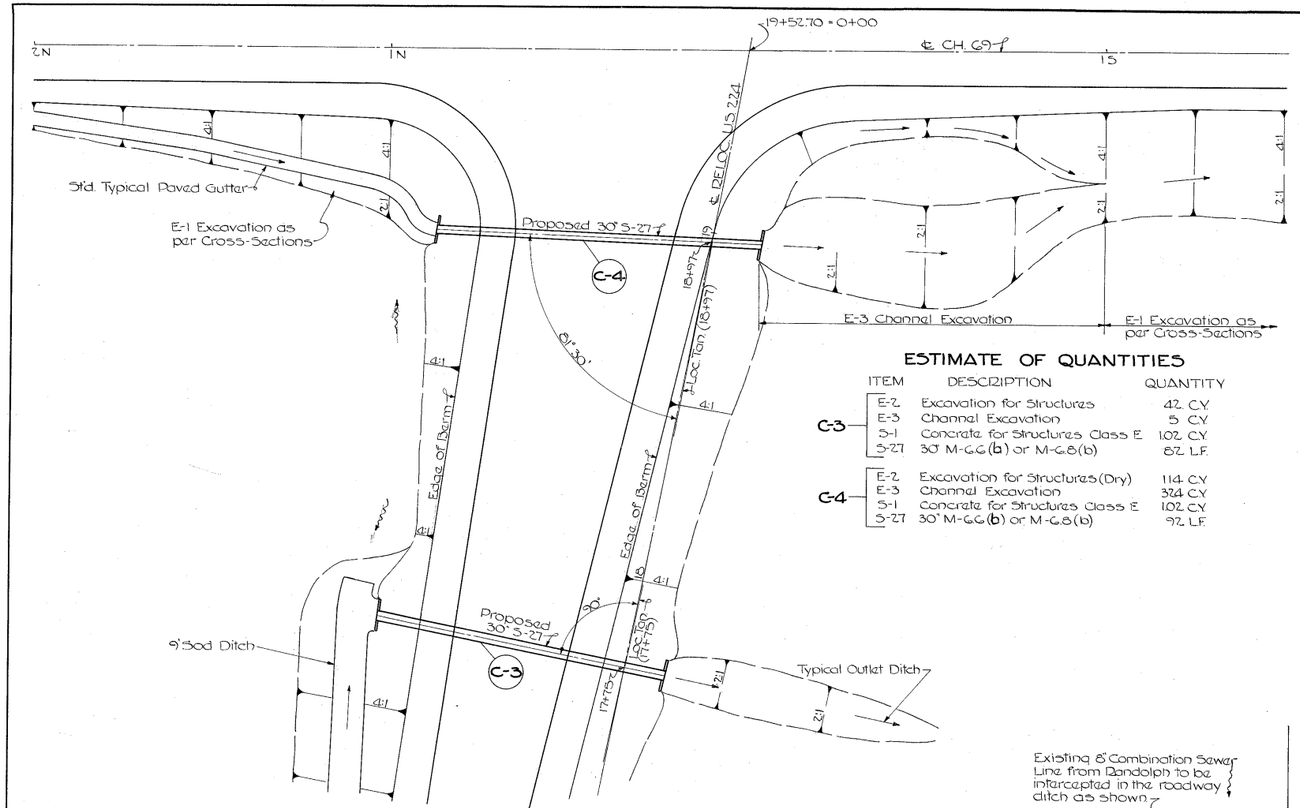
Drainage Area (C-2) = 118 Acres
Q 25 = 120 C.F.S.

CULVERT DETAILS C-1, C-2, & C-5

FED. RD. DIVISION	STATE	PROJECT	FISCAL YEAR
2	OHIO	F-330( )	

34
109

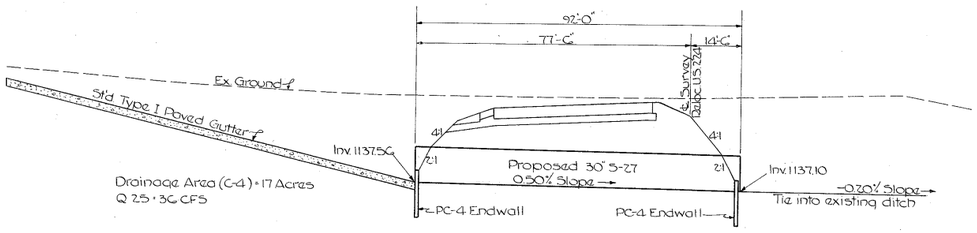
POR-224-6.22



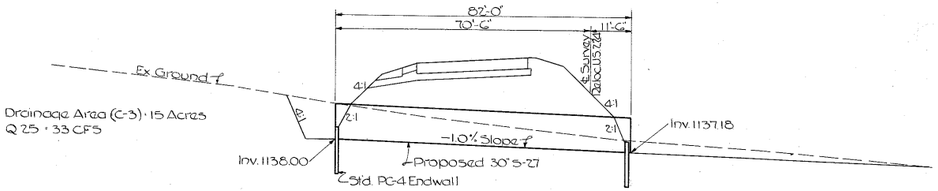
ESTIMATE OF QUANTITIES

	ITEM	DESCRIPTION	QUANTITY
C-3	E-2	Excavation for Structures	42 C.Y.
	E-3	Channel Excavation	5 C.Y.
	S-1	Concrete for Structures Class E	1.02 C.Y.
	S-27	30" M-66(b) or M-68(b)	82 L.F.
C-4	E-2	Excavation for Structures (Dry)	114 C.Y.
	E-3	Channel Excavation	324 C.Y.
	S-1	Concrete for Structures Class E	1.02 C.Y.
	S-27	30" M-66(b) or M-68(b)	92 L.F.

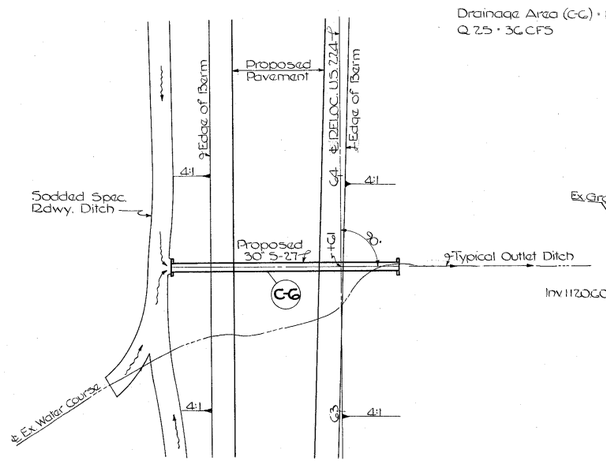
PLAN
INTERSECTION RELOC. U.S. 224 & RTE. 69
Scale 1"=20'



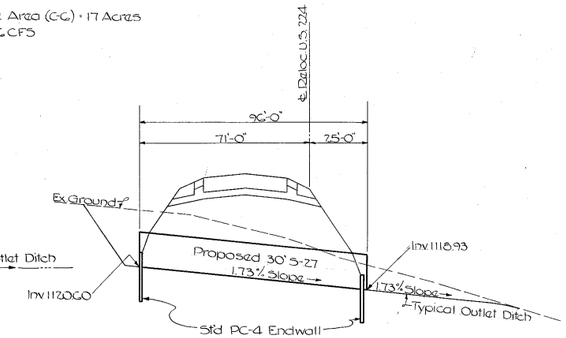
CULVERT C-4 PROFILE
Scale: Hor. 1"=20'
Ver. 1"=5'



CULVERT C-3 PROFILE
Scale: Hor. 1"=20'
Ver. 1"=5'



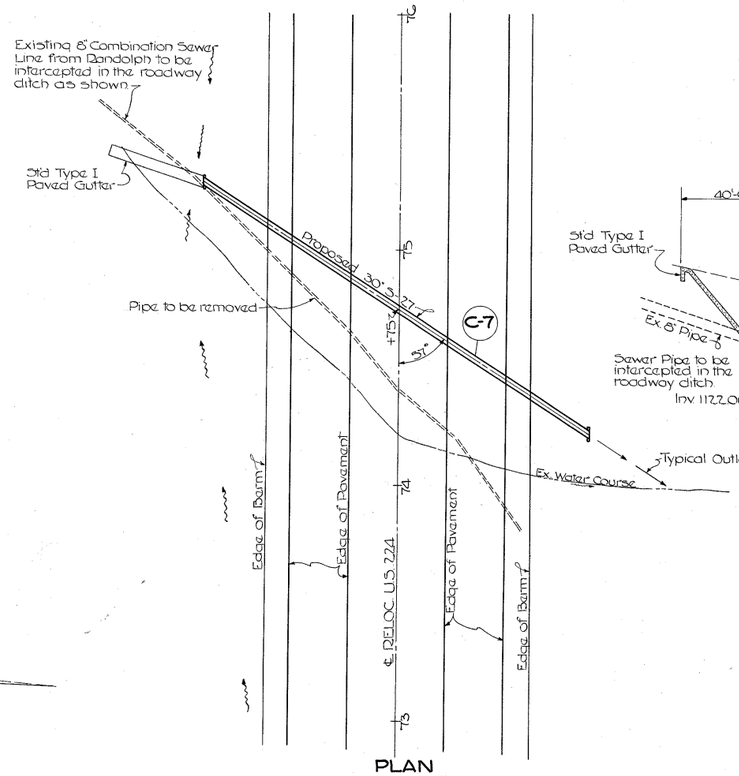
PLAN
Scale 1"=30'



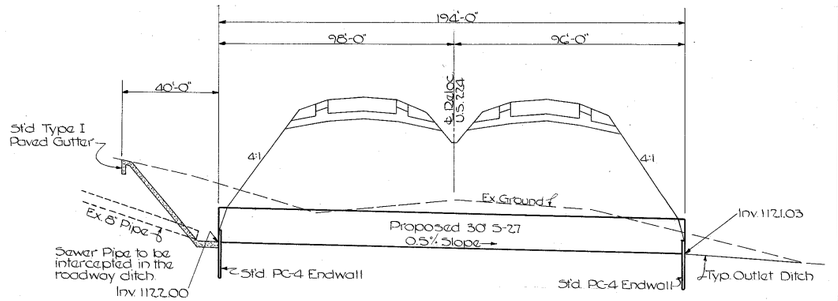
CULVERT C-6 PROFILE
Scale: Hor. 1"=30'
Ver. 1"=5'

ESTIMATE OF QUANTITIES

ITEM	DESCRIPTION	QUANTITY
E-2	Excavation for Structures	80 C.Y.
S-27	30" M-68(b) or M-66(b)	96 L.F.
E-3	Channel Excavations	13 C.Y.
S-1	Concrete for Structures Class E	1.02 C.Y.



PLAN
Scale 1"=30'



CULVERT C-7 PROFILE
Scale: Hor. 1"=30'
Ver. 1"=5'

ESTIMATE OF QUANTITIES

ITEM	DESCRIPTION	QUANTITY
E-2	Excavation for Structures	111 C.Y.
E-3	Channel Excavation	66 C.Y.
S-27	30" M-68(b) or M-66(b)	194 L.F.
F-14	Paved Gutter	40 L.F.
L-10	Sodding	9 S.Y.
S-1	Concrete for Structures Class E	1.02 C.Y.

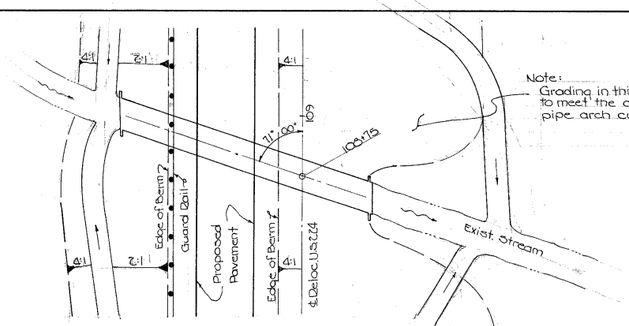
Drainage Area (C-7) = 12 Acres
Q 25 = 27 CFS

CULVERT DETAILS C-3, C-4, C-6 & C-7

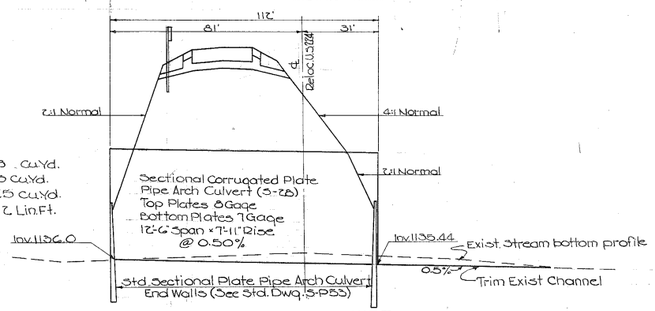
FED. RTE. DIVISION	STATE	PROJECT	FISCAL YEAR
2	OHIO	E-330 ( )	

35
109

POR-224-6.22



PLAN
Scale: 1"=30'-0"



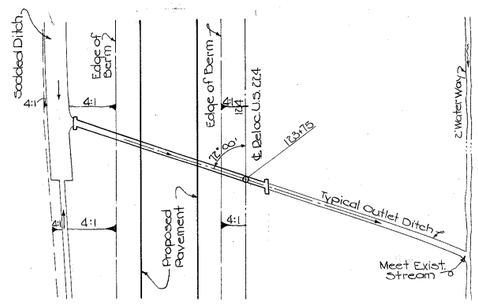
PROFILE
Scale: Hor. 1"=30'-0"
Vert. 1"=5'-0"

C-11
ESTIMATE OF QUANTITIES

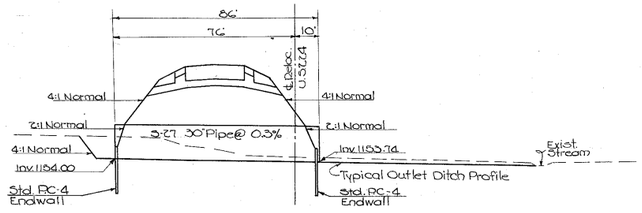
E-2	Structure Excavation	43 Cu.Yd.
E-3	Channel Excavation	15 Cu.Yd.
S-1	Concrete for Structures (Class 'E')	11.5 Cu.Yd.
S-28	12'-6" Span × 7'-11" Rise M-6.4(6)	112 Lin.Ft.

Drainage Area 915 Acres
Q_{25} 480 C.F.S.

CULVERT C-11 STA. 108+75



PLAN
Scale: 1"=30'-0"



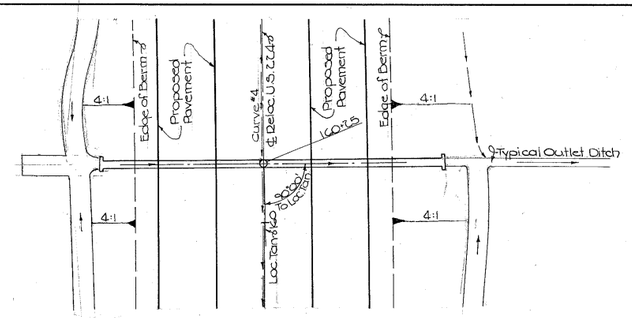
PROFILE
Scale: Vert. 1"=5'-0"
Hor. 1"=30'-0"

C-12
ESTIMATE OF QUANTITIES

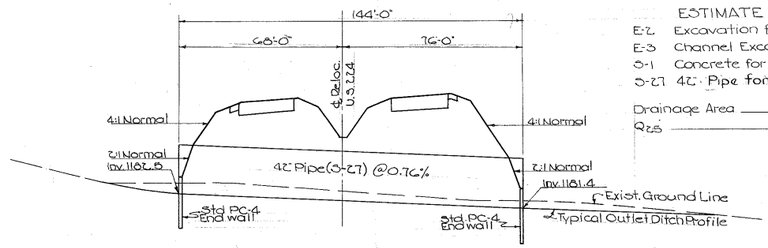
E-2	Excavation for Structure	27 Cu.Yd.
E-3	Channel Excavation	5 Cu.Yd.
S-27	30" M-6.8(b) or M-6.6(b)	86 Lin.Ft.
S-1	Concrete for Structure (Class 'E')	1.0 Cu.Yd.

Drainage Area 15 Acres
Q_{25} 33 C.F.S.

CULVERT C-12 STA. 123+75



PLAN
Scale: 1"=30'-0"



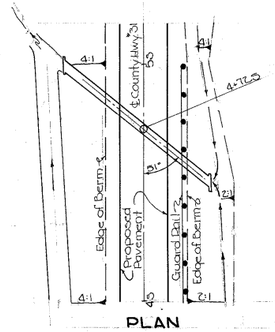
PROFILE
Scale: Hor. 1"=30'-0"
Vert. 1"=5'-0"

C-13
ESTIMATE OF QUANTITIES

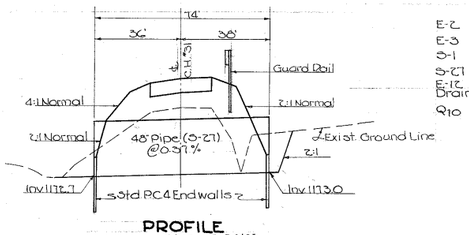
E-2	Excavation for Structure	36 Cu.Yd.
E-3	Channel Excavation	5 Cu.Yd.
S-1	Concrete for Structure (Class 'E')	1.5 Cu.Yd.
S-27	42" Pipe for Roadway Culverts	144 Lin.Ft.

Drainage Area 38 Acres
Q_{25} 57 C.F.S.

CULVERT C-13 STA. 160+25



PLAN



PROFILE
Scale: Hor. 1"=30'-0"
Vert. 1"=5'-0"

C-14
ESTIMATE OF QUANTITIES

E-2	Excavation for Structure	77 Cu.Yd.
E-3	Channel Excavation	4 Cu.Yd.
S-1	Concrete for Structure (Class 'E')	1.7 Cu.Yd.
S-27	48" M-6.6(b)	74 Lin.Ft.
E-12	Pipe Removal, Over 15"	35 Lin.Ft.

Drainage Area 60 Acres
Q_{10} 70 C.F.S.

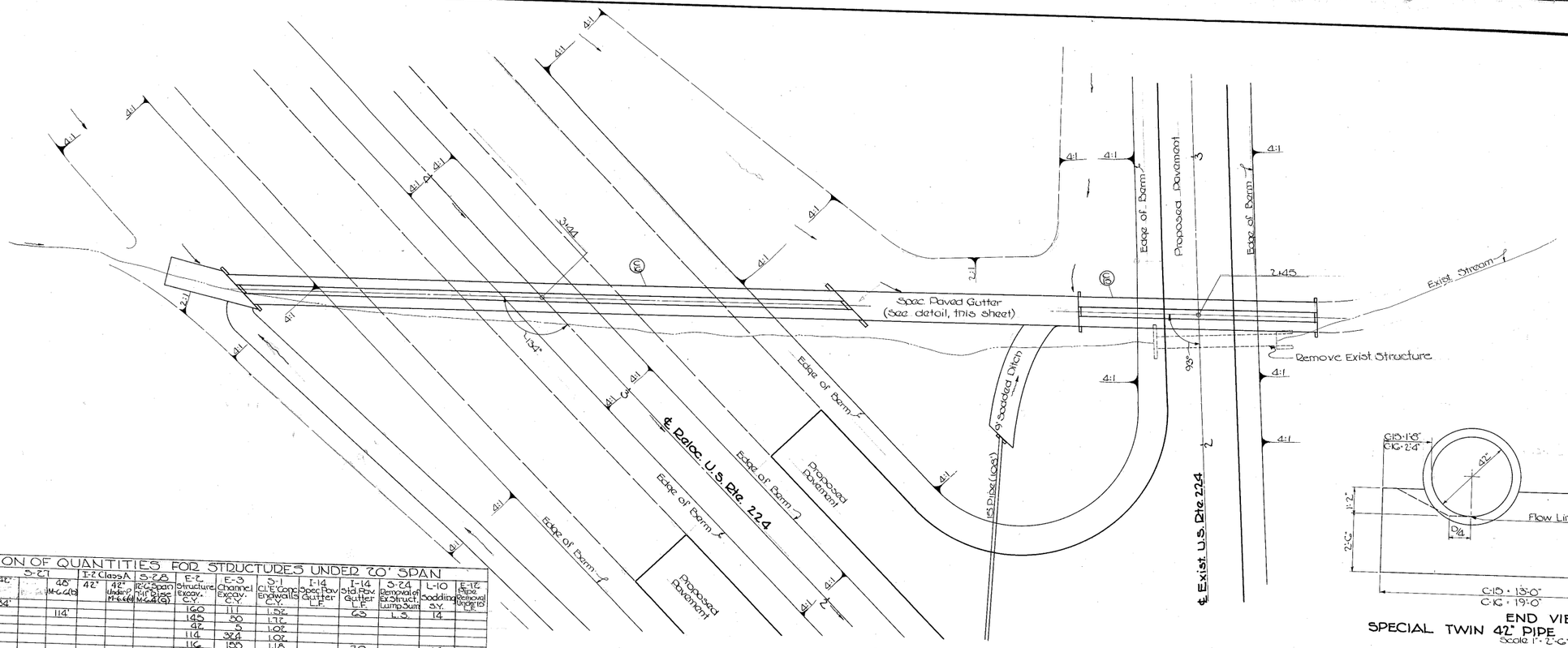
CULVERT C-14 STA. 4+72.5 (COUNTY HWY. #31)

CULVERT DETAILS C-11, C-12, C-13 & C-14

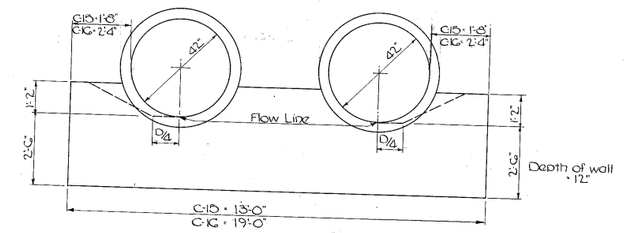
FED. RD. DIVISION	STATE	PROJECT	FISCAL YEAR
2	OHIO	F-330( )	

36
109

POR-224-6.22



PLAN
CULVERT C-16 & C-15
Scale 1" = 30'

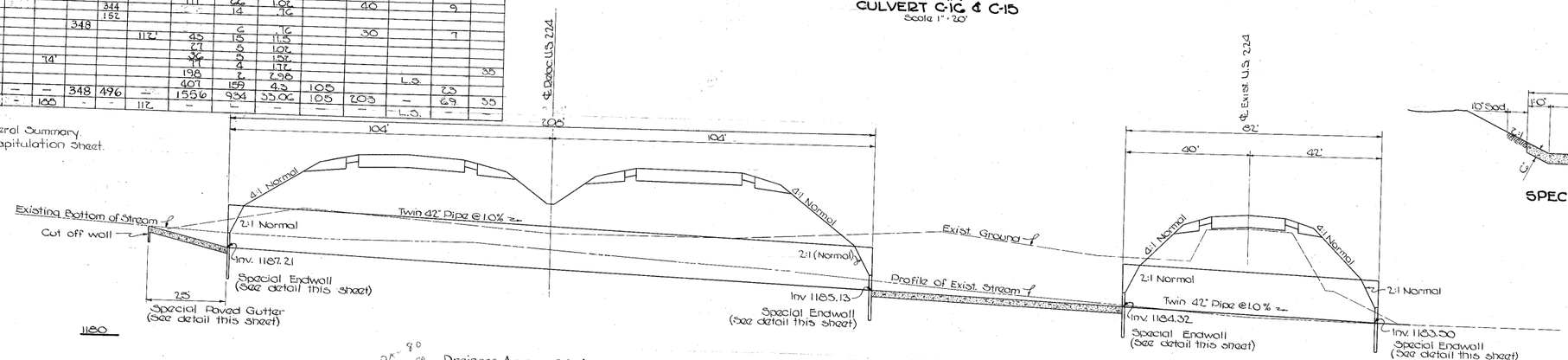


END VIEW
SPECIAL TWIN 42" PIPE ENDWALL FOR C15 & C16
Scale 1" = 2'-6"

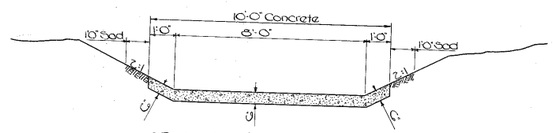
RECAPITULATION OF QUANTITIES FOR STRUCTURES UNDER 20' SPAN

Culvert No.	5-27 36" M-6.4(b) M-6.6(b)	5-27 36" M-6.4(a) M-6.6(a)	5-27 40"	5-27 45" M-6.4(b)	I-2 Class A 42"	42" Under Pipe M-6.4(a)	RC&PSpan 2'-0" Base M-6.4(a)	E-2 Structure Excav. C.Y.	E-3 Channel Excav. C.Y.	S-1 C.I.P. Conc. Endwalls C.Y.	I-14 Spec. Pav Gutter L.F.	I-14 Std. Pav. Gutter L.F.	S-24 Removal of Exist. Struct. Lump Sum	L-10 Sodding S.Y.	E-12 Pipe Removal Under 60 L.F.
C-1			84'					160	111	1.52		65	L.S.	14	
C-2				114'				145	50	1.12					
C-3	82'							42	5	1.08					
C-4	92'							114	384	1.07					
C-5		96'						116	150	1.18		70		16	
C-6	96'							80	15	1.02					
C-7	134'							111	66	1.04		40		9	
C-8						344			14	.16					
C-9						152									
C-10															
C-11					348				6	.76					
C-12	86'						112'	45	18	1.18		30		7	
C-13			144'					27	5	1.07					
C-14				74'				36	9	1.09					
C-15			164'					11	4	1.12					
C-16			416					198	72	2.98			L.S.		35
***	—	—	—	—	—	348	496	—	407	159	4.3	105		23	
TOTAL**	550	96	808	-	185	-	-	112	1556	934	33.06	105	205	—	69	35

** To be carried to General Summary.
*** To be carried to Recapitulation Sheet.



PROFILE
CULVERT C-16 & C-15
Scale Hor. 1"=20'
Vert. 1"=5'



SPECIAL PAVED GUTTER
Scale 1" = 5'

DA = 80
Drainage Area = 8.0 Acres
Q25 = 99 CFS

DA = 111
Drainage Area = 111 Acres
Q25 = 120 CFS

ESTIMATE OF QUANTITIES C-16 & C-15

C-16

ITEM	DESCRIPTION	QUANTITY
E-2	Excavation for structures	407 CY.
S-1	Concrete for structures (Class E)	430 CY.
S-27	Twin 42" Pipe for Roadway Culverts	416 L.F.
I-14	Special paved gutter	105 L.F.
L-10	Sodding	23 S.Y.
E-3	Channel excavation	159 C.Y.

Estimate for this Culvert includes everything up to the North End Wall for C-15.

C-15

ITEM	DESCRIPTION	QUANTITY
E2	Excavation for structures (Dry)	198 C.Y.
S1	Concrete for structures (Class E)	2.98 C.Y.
S27	Twin 42" Pipe for Roadway Culverts	164 L.F.
E-3	Channel excavation	7.0 C.Y.
S-24	Removal exist. structure	Lump Sum

RAISED CURB INLET

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	F-330( )	

37
109

POR-224-6.22

~NOTES~

Castings shall be of cast iron in accordance with Material Details. The design shall be essentially the same and equally as strong as those shown hereon, and shall be given one coat of asphaltum paint as per specifications. Weight approximately 645 pounds.

After casting has been set the spacing between the webs shall be filled with 1-2 cement mortar.

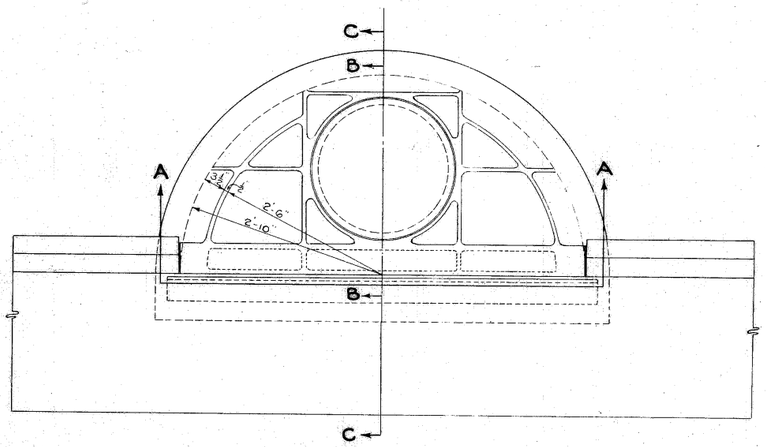
CONSTRUCTION :- Inlets shall be constructed of brick laid in Portland Cement mortar, with every sixth course a stretcher course.

Bottom of inlet to slope to outlet pipe, 1/2 diameter of the pipe.

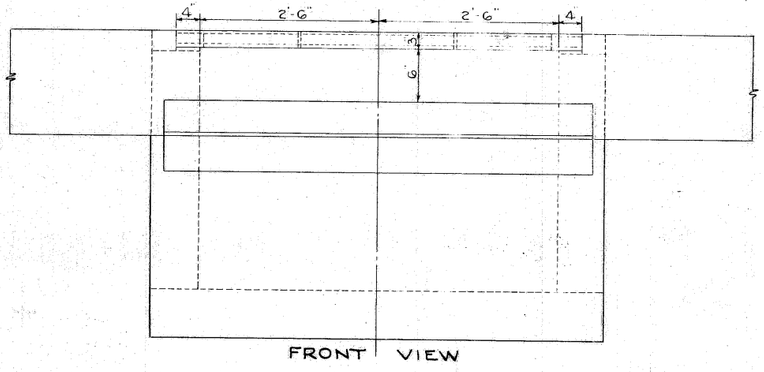
All inside joints are to be struck.

Drain tile incorporated in inlet is included in unit cost of inlet.

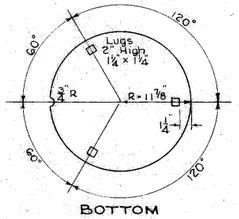
Monolitic construction for combination Curb and Gutter will be permitted as part of this plan. Bottom of Curb shall be on same plane as bottom of Gutter.



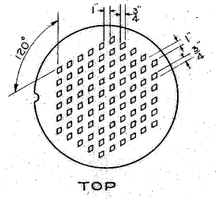
PLAN VIEW



FRONT VIEW

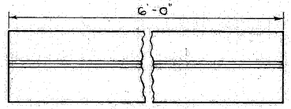


BOTTOM

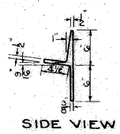


TOP

COVER DETAIL

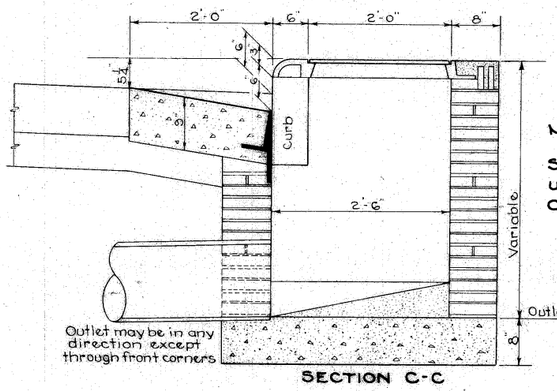


FRONT VIEW

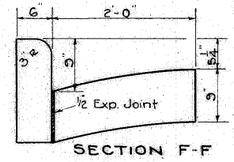


SIDE VIEW

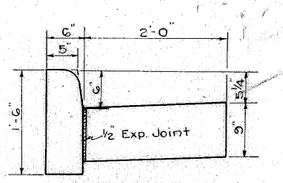
DETAIL OF PAVEMENT SUPPORT FOR OPENINGS
Approximate Weight 160 lbs.



SECTION C-C

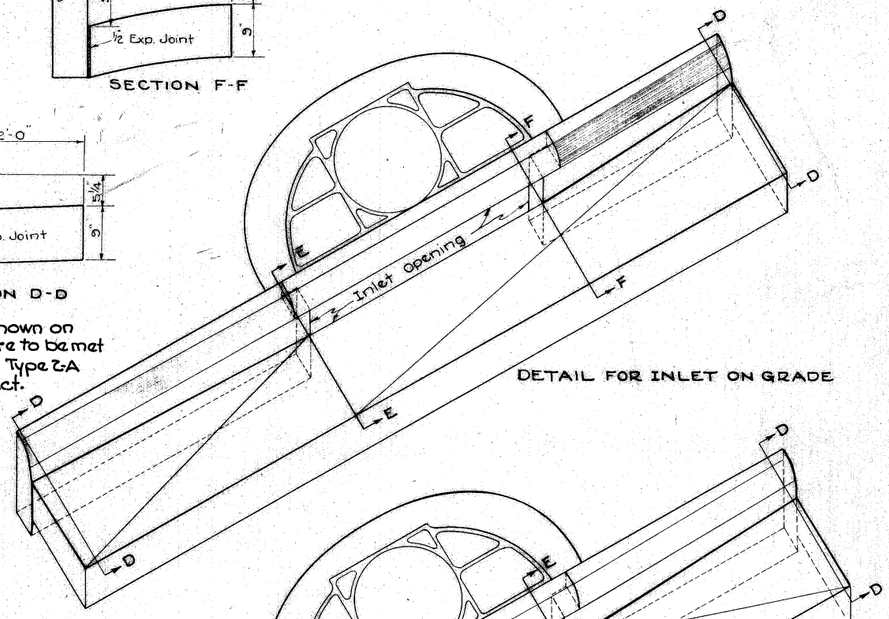


SECTION F-F

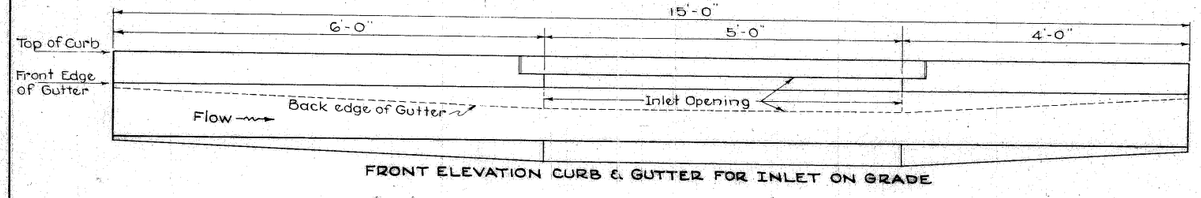


SECTION D-D

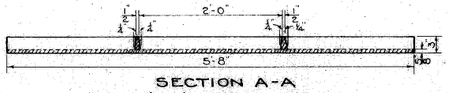
Note:
The conditions shown on Sections D-D & F-F are to be met using the proposed Type 2-A curb for this project.



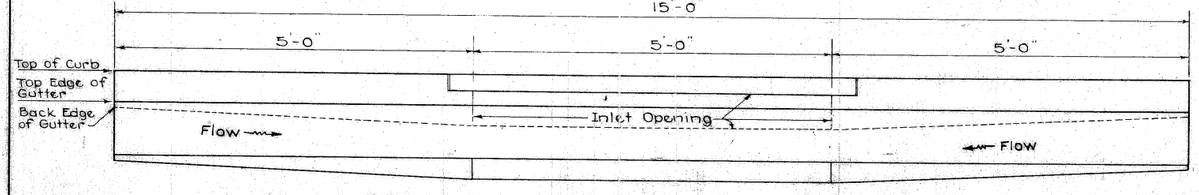
DETAIL FOR INLET ON GRADE



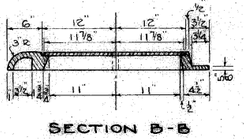
FRONT ELEVATION CURB & GUTTER FOR INLET ON GRADE



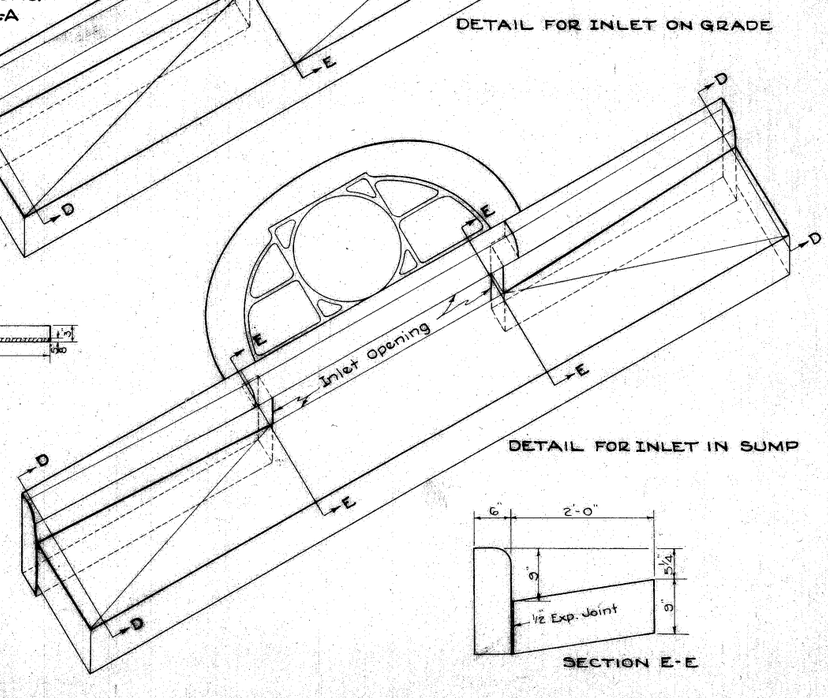
SECTION A-A
Approximate Weight 485 lbs.



FRONT ELEVATION CURB & GUTTER FOR INLET IN SUMP



SECTION B-B



DETAIL FOR INLET IN SUMP

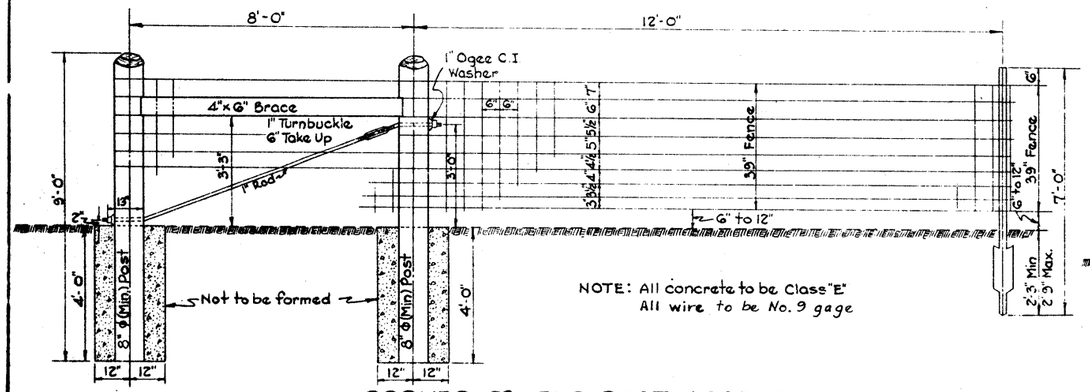
SECTION E-E

SPECIAL RAISED CURB INLET

TYPE "A" FENCE DETAIL

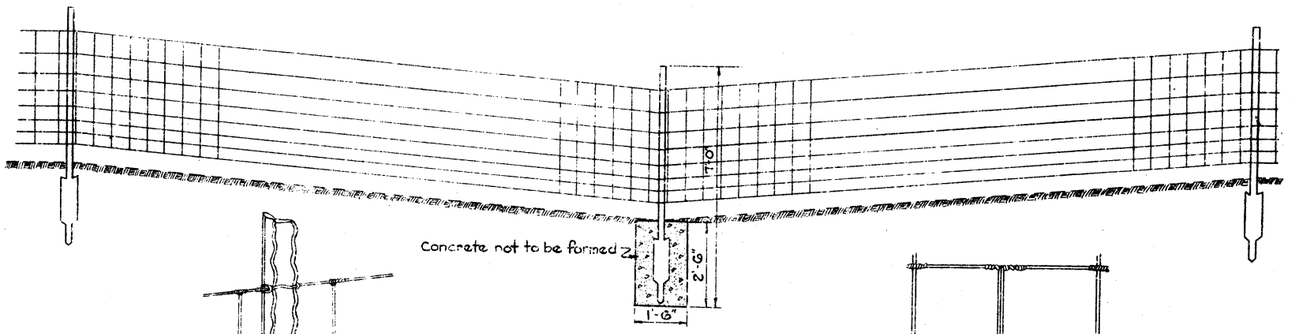
FED RD DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

37A 109

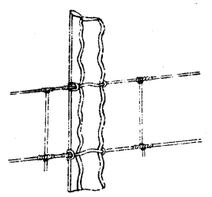


NOTE: All concrete to be Class "E"
All wire to be No. 9 gage

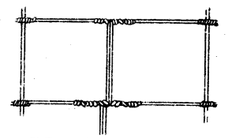
CORNER OR END POST ASSEMBLY



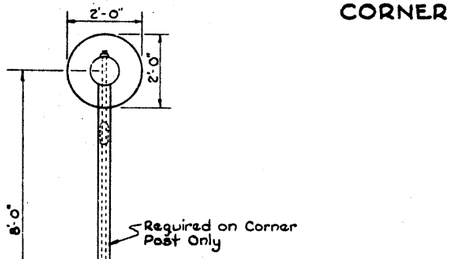
LINE POST IN DIP SECTION



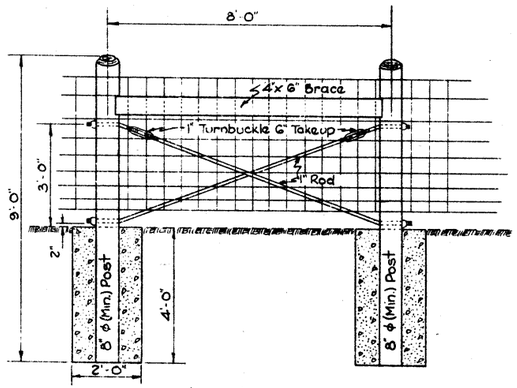
METHOD OF FASTENING FENCE AT LINE POST



SPLICE DETAIL

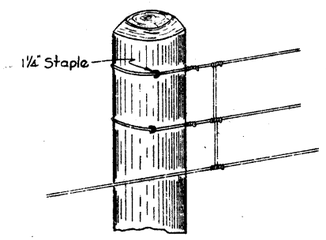


PLAN OF CORNER OR END POST ASSEMBLY

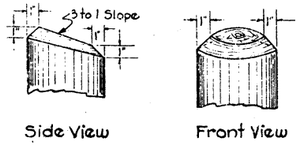


To be placed at locations shown on Plan or shifted if directed by the Engineer.

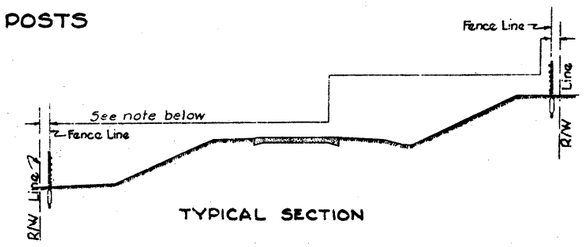
INTERMEDIATE ANCHOR POST ASSEMBLY



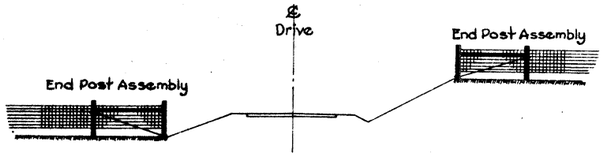
METHOD OF FASTENING FENCE AT END, CORNER POST AND ONE POST OF INTERMEDIATE ANCHOR POST ASSEMBLY



TOP OF POSTS



TYPICAL SECTION



R/W FENCE TREATMENT AT DRIVES

R/W FENCE TREATMENT AT CULVERTS

Notes:

Maximum spacing between intermediate anchor post assemblies or between end post assemblies and intermediate post assemblies shall be 660 Lin. Ft.

At points where individual spans of fence change alignment in excess of 4 degrees and less than 30 degrees, an intermediate anchor post assembly shall be built. If the change in alignment is 30 degrees or more a corner post assembly shall be built at the point of change.

In lieu of the requirement of Supplemental Specification No. 18 the End Posts, Corner Posts, and Intermediate Anchor Posts or Pull Posts shall be placed so that the side of the posts toward the highway is two feet from the Right-of-Way line.

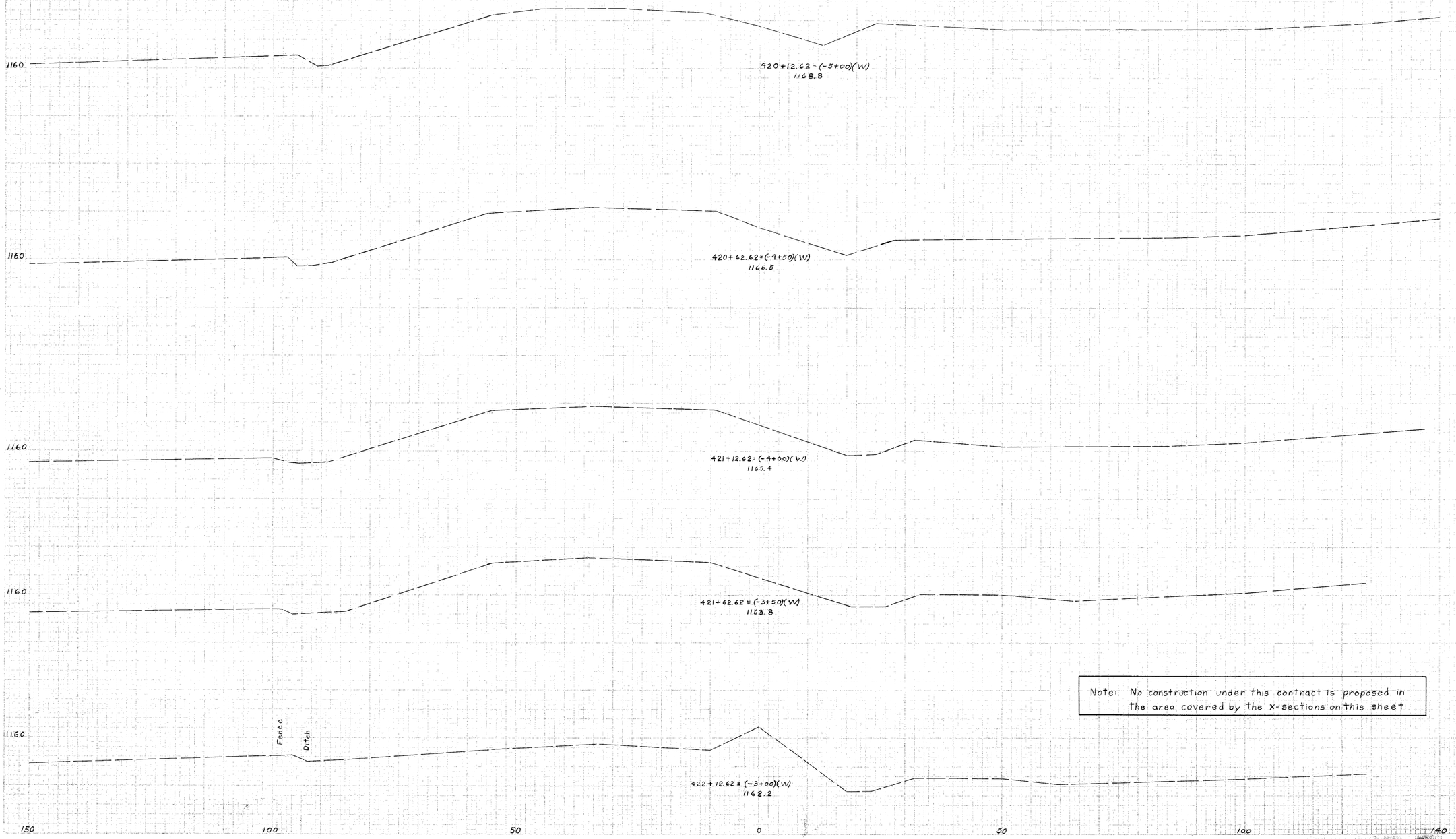
REV. 7-26-56

TYPE "A" FENCE DETAIL

FED. RD. DIVISION	STATE	PROJECT	FISCAL YEAR	SHEET
2	OHIO	F 330 ( )		38 / 109

POR-224-6.22

SEEDING		END AREA		CU. YDS.	
LB.	SY.	CUT	FILL	EXC.	EMB.

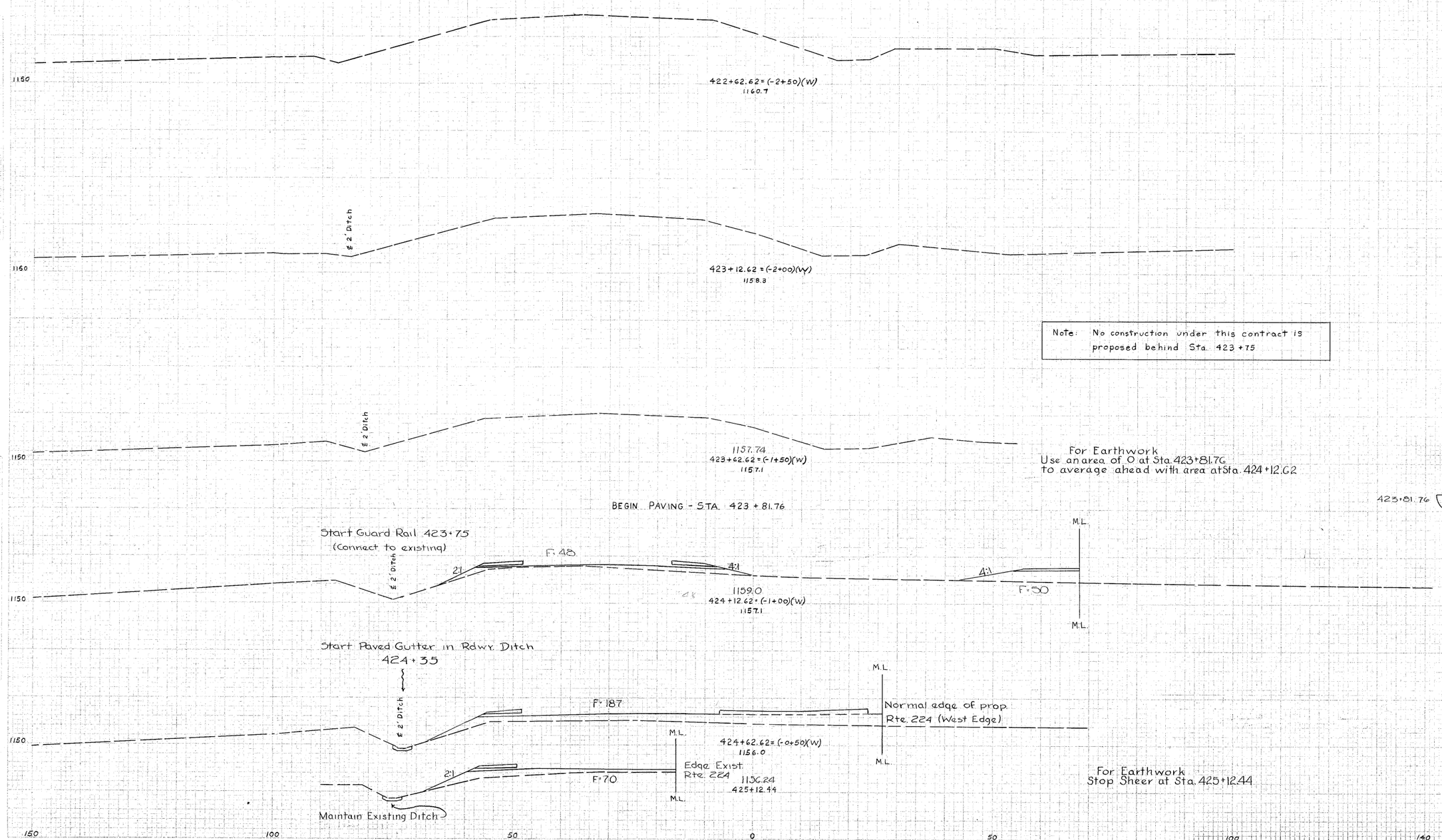


Note: No construction under this contract is proposed in the area covered by the x-sections on this sheet

E.F.T.
DLM + C.T.C.
4-56
5-8-56
RA-3

CROSS SECTIONS - STA 420+12.62 TO STA 422+12.62

FED. ROAD DIVISION 2 | STATE OHIO | PROJECT F-330 ( ) | FISCAL YEAR
39/109
POR-224-6.22



SEEDING LF.	SEEDING SY.	END AREA CUT	END AREA FILL	CU. YDS. EXC.	CU. YDS. EMB.
0		0	0		
	150			0	56
55		0	98		
	327			0	263
63		0	187		
	267			0	238
32		0	70		

E.F.T. 4-56
D.L.M. + C.T.C. 5-7-56
C.R.L. + J.F.W. 6-19-56
M.S.B. 8-13-56
C.R.L. 8-14-56

RA-3

CROSS SECTIONS - STA 422+62.62 TO STA 425+12.44

SEEDING END AREA CU. YDS.

LF	SY	CUT	FILL	EXC	EMB
85		13	487		
1044				44	2444
102		11	724		
1211				65	2730
116		23	750		
1244				44	2870
107		0	800		
572				0	1210
98		0	505		
366				0	648
34		0	194		
172		0	198		
27		0	19		

D/W

Top of Peat — Water Elev. 1139.47 — 2:1 — W.E. Pond — F-487 — 4:1 — ℄ C-10 — 1144.0

C-3 — 1137.4 — Limits of E-4 Borrow Including Exc. — Approx. bottom of peat bed — E-4 Granular Borrow

1130

1150.24
5+00
1144.2

Note: Granular Borrow to be placed in peat bog area to elevation 1140.00

(Pond water to drain)

Stations	E-4 Granular Borrow Including Excavation		E-4 Granular Borrow	
	End Area	Cu. Yds.	End Area	Cu. Yds.
3+00	0		0	
		778		46
4+00	420		25	
		1148		196
5+00	200		80	
		185		74
5+50	0		0	
TOTAL		2111		316

E-4 Granular Borrow = 316 C.Y.
E-4 Granular Borrow including allow. of unsuitable material

EXCAVATION	9365 C.Y.
EMBANKMENT	12068 C.Y.
SEEDING	110500 S.Y.

Top of Peat — 2:1 — E-4 Granular Borrow — Water Elev. 1139.52 — W.E. Pond — F-724 — 4:1 — ℄ C-6 — 1142.0

C-6 — 1137.4 — Limits of E-4 Borrow including Exc. — Approx. bottom of peat bed

1130

1150.74
4+00
1141.0

D/W 230' Lt.

230 Lt.

2:1 — F-750 — 4:1 — ℄ C-3 — 1140.0

C-20 — 1137.4

Begin Spec. Rdwy. Ditch at Sta. 2+43

1130

1151.24
3+00

Stnd. Rdwy Ditch

2:1 Side Slope · 2+50

T.B. — ℄ Creek — 3:1 — T.B. — F-800 — 4:1

1130

1152.13
2+00
1140.5

D/W

Normal rdwy. slope · 4:1 @ 1+50

F-505 — 4:1

Begin guard rail @ 1+50

1140

1152.86
1+50
1143.9

124.68' Rt. — ℄ SERVICE DRIVE — D/W 145' Rt.

Quantities for Service Drive are shown on line sheet.

℄ Exist. U.S. 224 — M.L. — T.B. — ditch 0.5' Deep — F-194 — 4:1

Edge Exist. Rte. 224 → — M.L.

1140

1153.79
1+00
1148.9

M.L. — Edge Existing Rte. 224 → — F-19 — 4:1 — Exist. Gr. — M.L.

1150

1154.91
0+50
1152.9

For Earthwork Start sheer at sta. 0+50

D/W

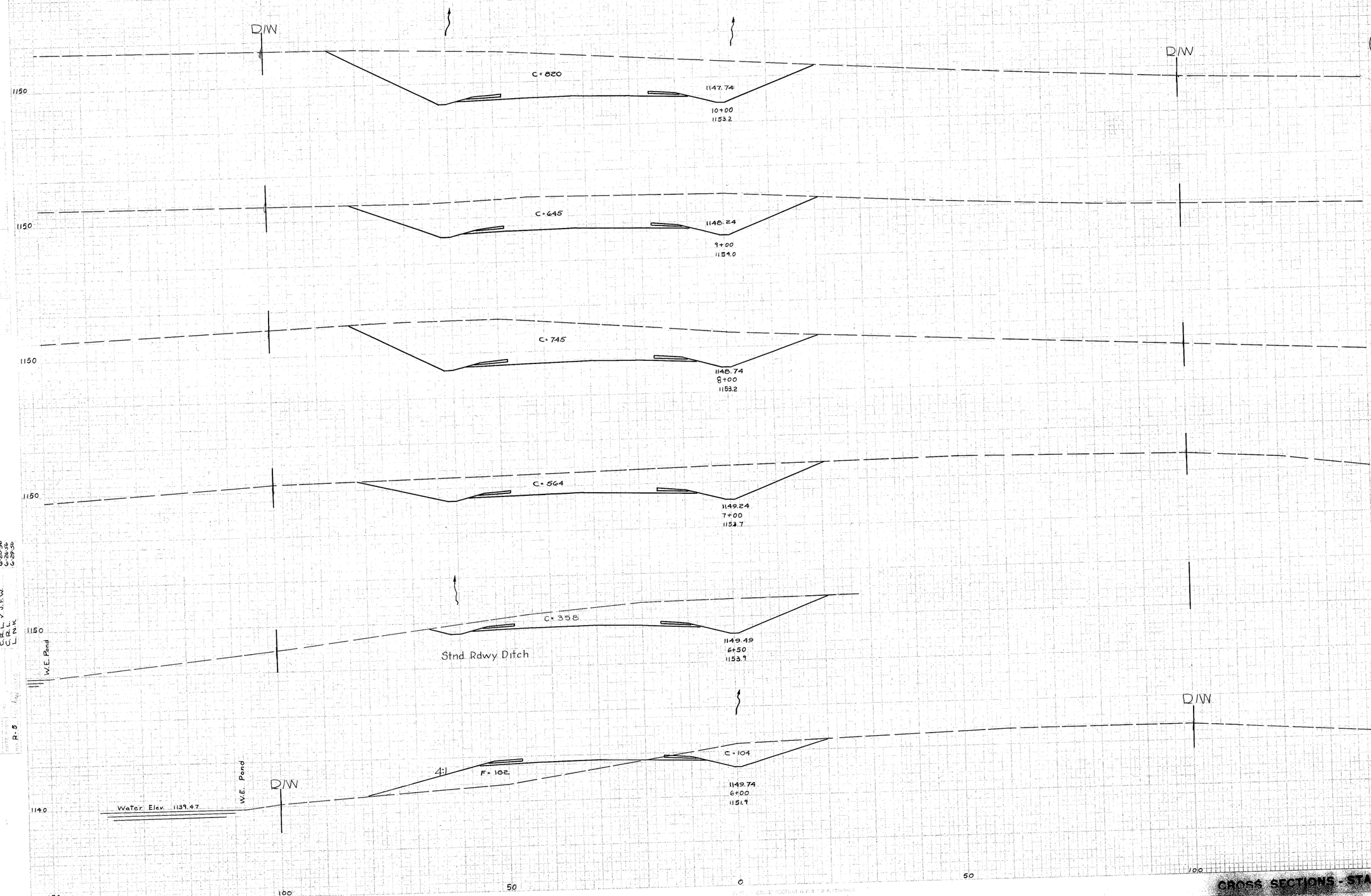
150 100 50 0 50 100 140

E.F.T.
R.M. - RJB
R.R.C. - JFW
C.N.K.

1+50
2+00
2+18.56
2+20.56
2+28.56

R-5

CROSS SECTIONS STA 0+50 TO STA 5+00



SEEDING LF.	SEEDING SY.	END AREA CUT	END AREA FILL	CU. YDS EXC.	CU. YDS EMB.
101		820	0		
	1078			2715	0
93		645	0		
	1055			2574	0
96		745	0		
	1055			2426	0
93		564	0		
	478			853	0
79		358	0		
	481			427	1
94		104	182		
	1000			219	1

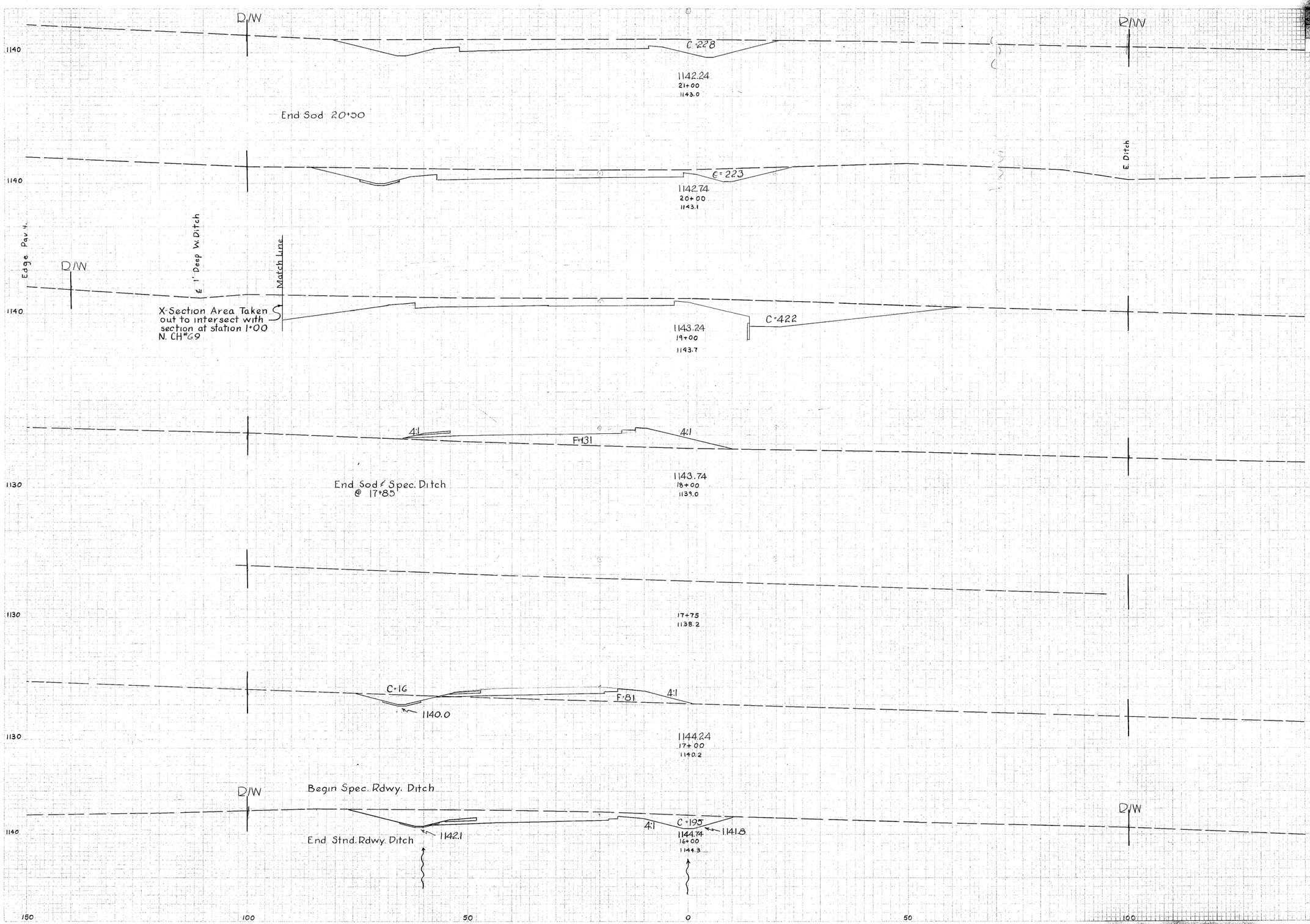
CROSS SECTIONS - STA 6+00 TO STA 10+00

POR 274-622

EXCAVATION	EMBANKMENT	SEEDING
8,895 CY	1,692 CY	10,456 SY

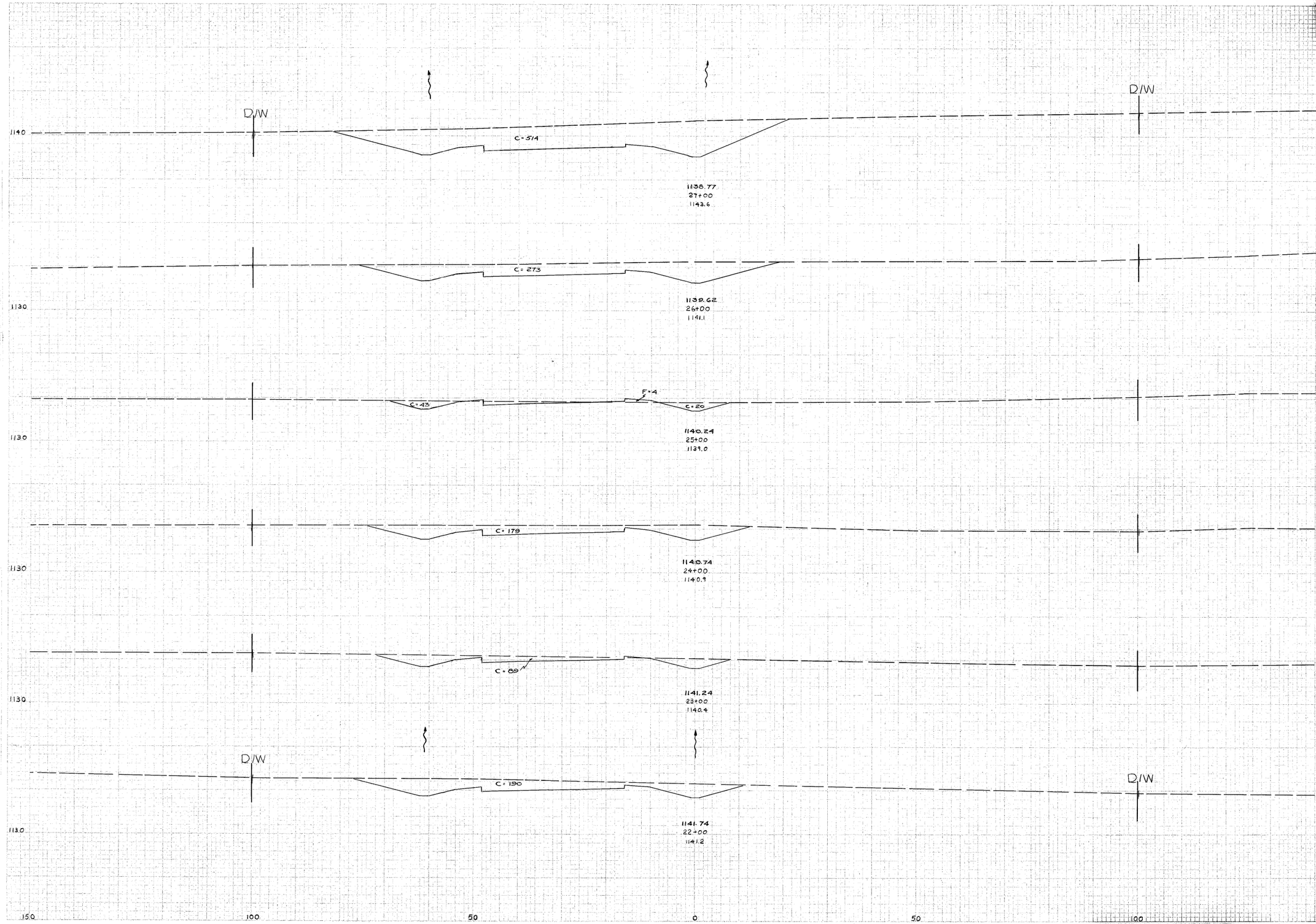
SEEDING LF	SEEDING SY	END AREA CUT	END AREA FILL	CU YDS EXC	CU YDS EMB
54		60	37		
	689			167	307
69		30	128		
	800			189	382
74		72	77		
	867			552	144
82		225	0		
	335			368	0
75		296	0		
	591			816	0
96		416	0		
	1100			2289	0

CROSS SECTIONS - STA 11+00 TO STA 15+00



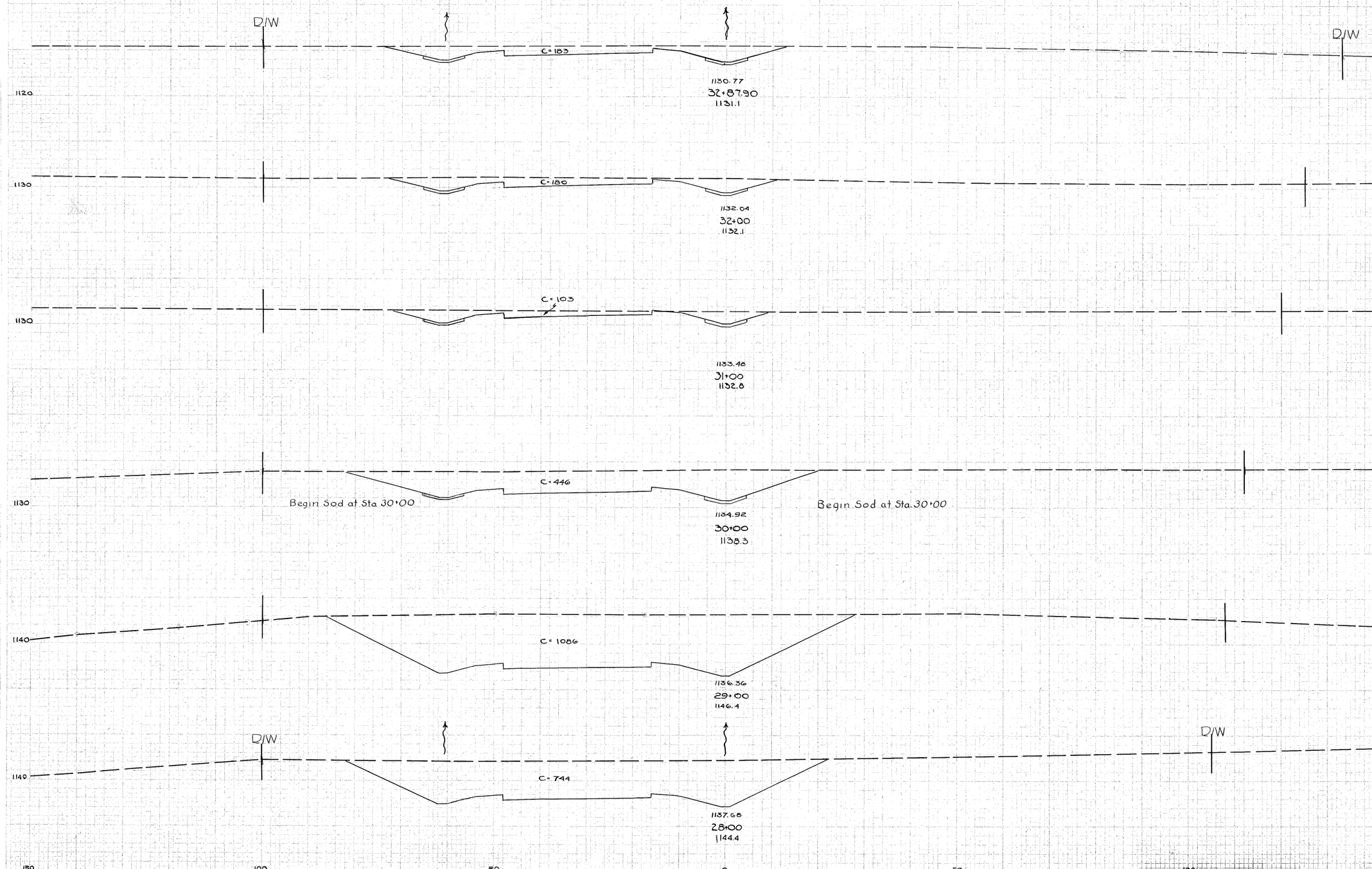
SEEDING LF.	SEEDING SY.	END AREA CUT	END AREA FILL	CU. YDS. EXC.	CU. YDS. EMB.
82		228	0		
	878			837	0
75		223	0		
	1230			1196	0
170		422	0		
	1110			782	244
52		0	131		
	611			59	393
58		16	81		
	700			392	152
67		195	0		
	667			474	70

CROSS SECTIONS STA 16+00 TO STA 21+00



SEEDING		END AREA		CU. YDS.	
MI.	RT.	CUT	FILL	EXC.	EMB.
76		514	0		
	822			1459	0
72		273	0		
	755			622	7
64		63	4		
	778			448	7
75		179	0		
	800			496	0
69		89	0		
	811			519	0
76		190	0		
	878			774	0

CROSS SECTIONS - STA 22+00 TO STA 27+00



SEEDING LF.	SEEDING SY.	END AREA CUT	END AREA FILL	CU. YDS. EXC.	CU. YDS. EMB.
60		183	0		
	566			592	0
56		180	0		
	611			526	0
53		103	0		
	711			1019	0
74		446	0		
	911			2837	0
90		1086	0		
	944			3389	0
79		744	0		
	867			2330	0

EXCAVATION 15423 CY
EMBANKMENT 14 CY
SEEDING 9232 SY

E.F.T. 4-5-56
D.L.M. & R.J.B. 4-25-56
M.S.B. 6-28-56
C.R.L. 6-29-56
L.N.K. 6-29-56

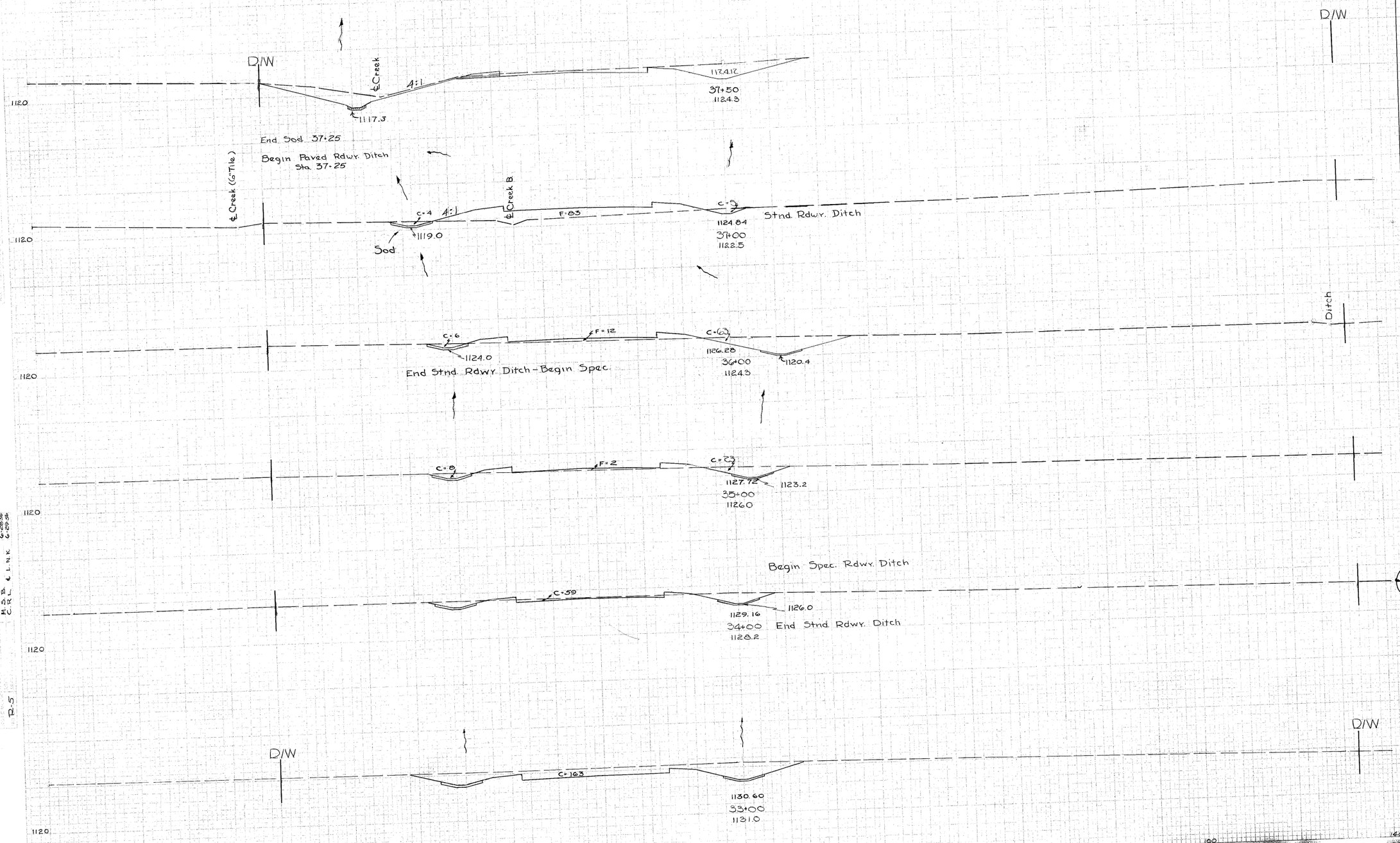
R-5

CROSS SECTIONS STA 28+00 TO STA 32+87.90

FED. RD. DIVISION	STATE	PROJECT	SHEET
2	OHIO	330	

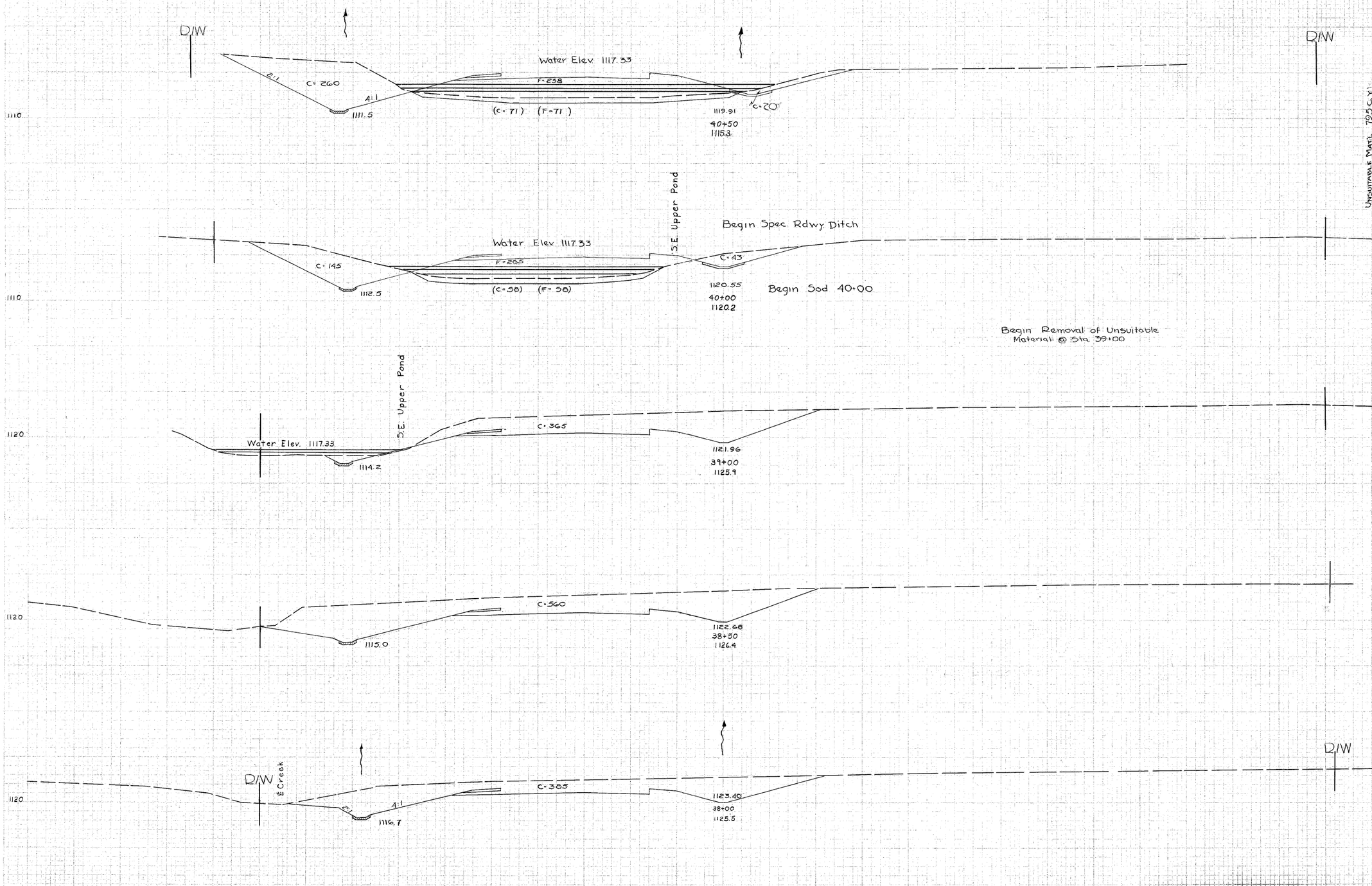
POR 224-622

SEEDING		END AREA		CU YDS	
LF	SY	CUT	FILL	EXC	EMB
57		9	83		
	556			144	178
42		69	12		
	478			185	26
43		31	2		
	500			167	4
47		59	0		
	578			411	0
57		163	0		
	78			775	



CROSS SECTIONS - STA 33+00 TO STA 37+50

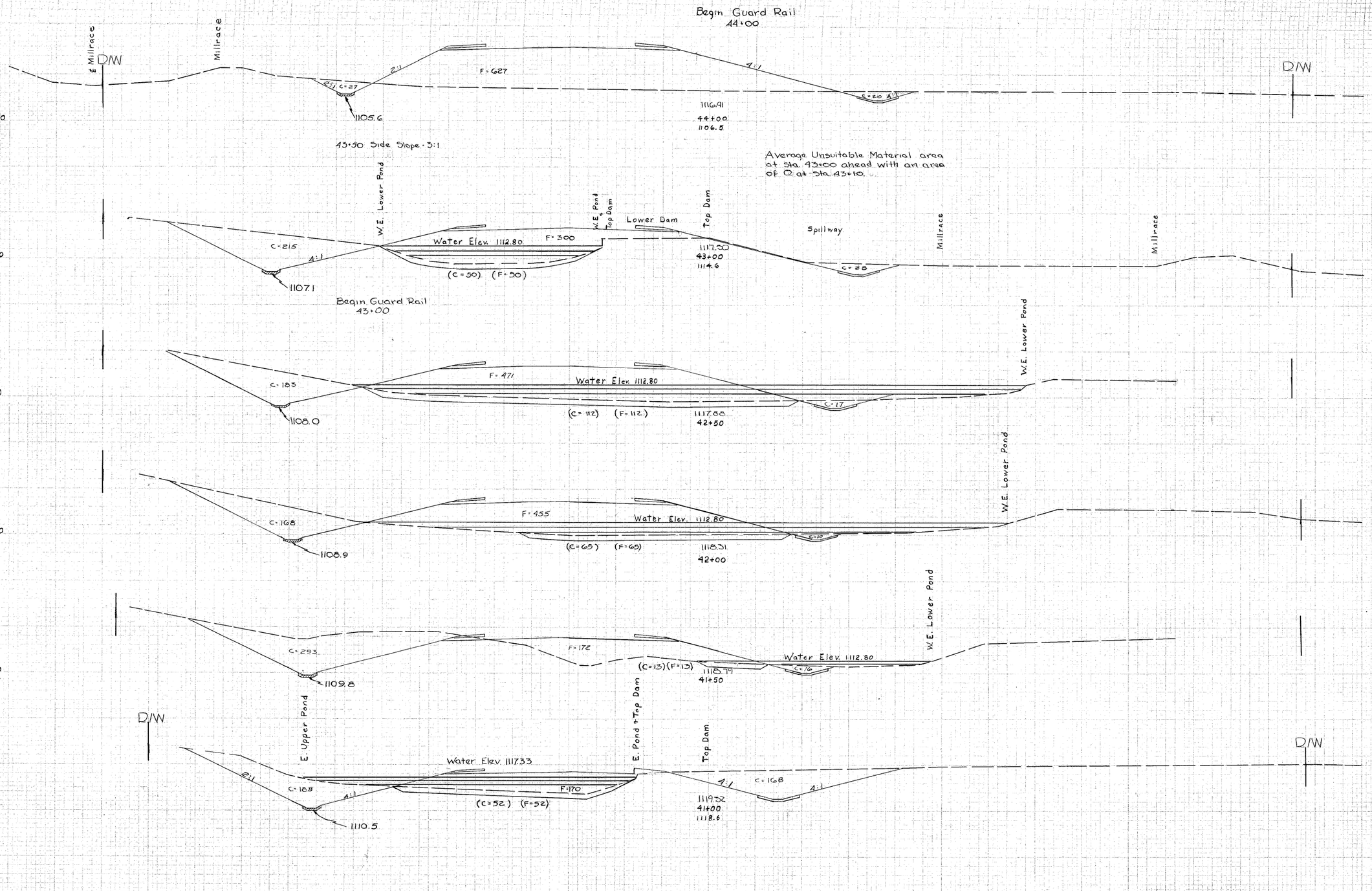
POR-ZZA-6.22



Unsuitable Mat'l. 795 C.Y.	
Excavation	8025 C.Y.
Embankment	11760 C.Y.
Seeding	13674 S.Y.

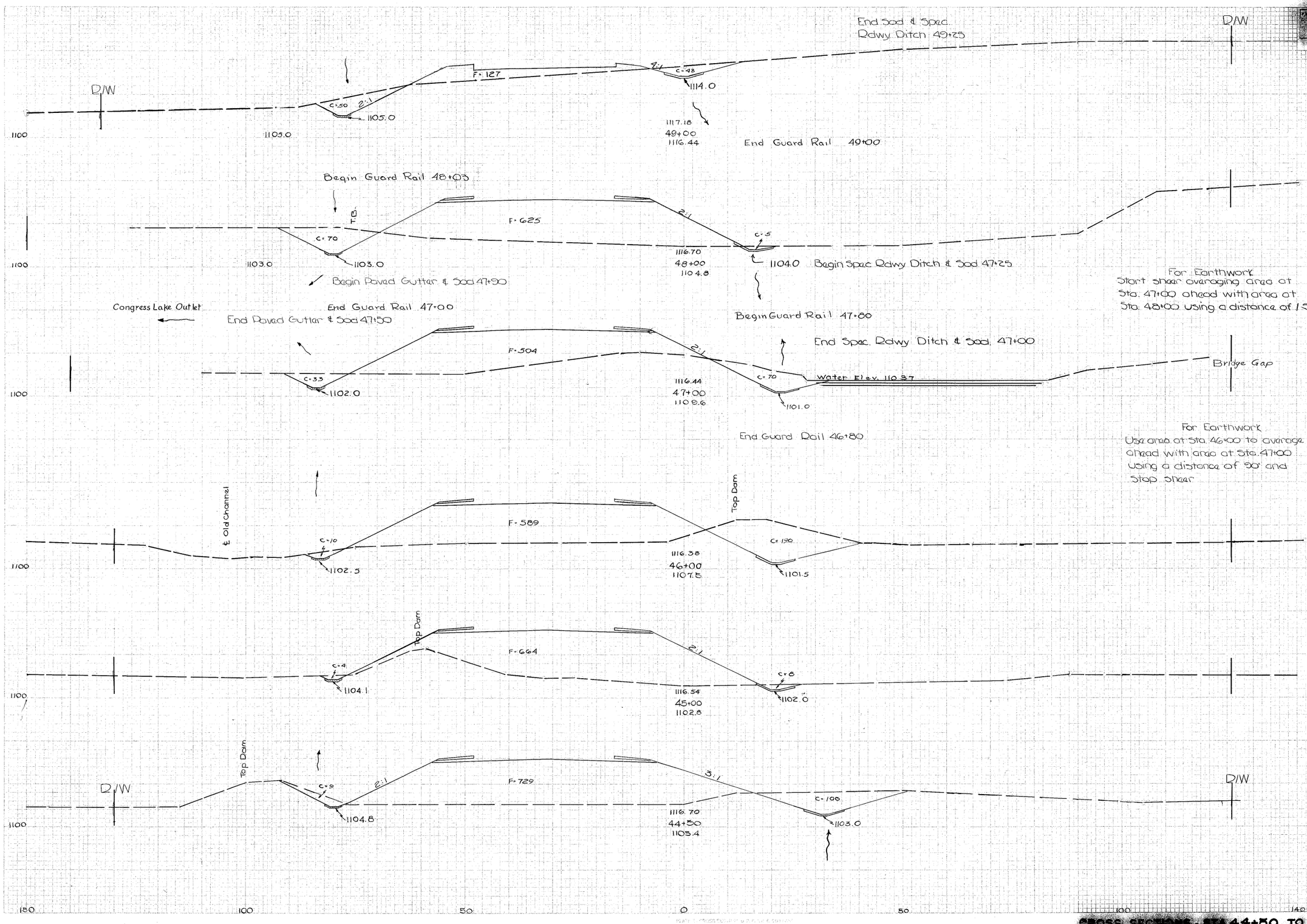
Seeding LF	Seeding SY	End Area Cut	End Area Fill	Cu Yds Exc	Cu Yds Emb
113		280 (71)	238 (71)		
	584			434 (119)	411 (119)
96		188 (58)	205 (58		
	1222			1026 (107)	382 (107)
124		365 (0)	0 (0)		
	645			857	0
108		560	0		
	567			876	0
95		385	0		
	844			730	156

CROSS SECTIONS STA 38+00 TO STA 40+50



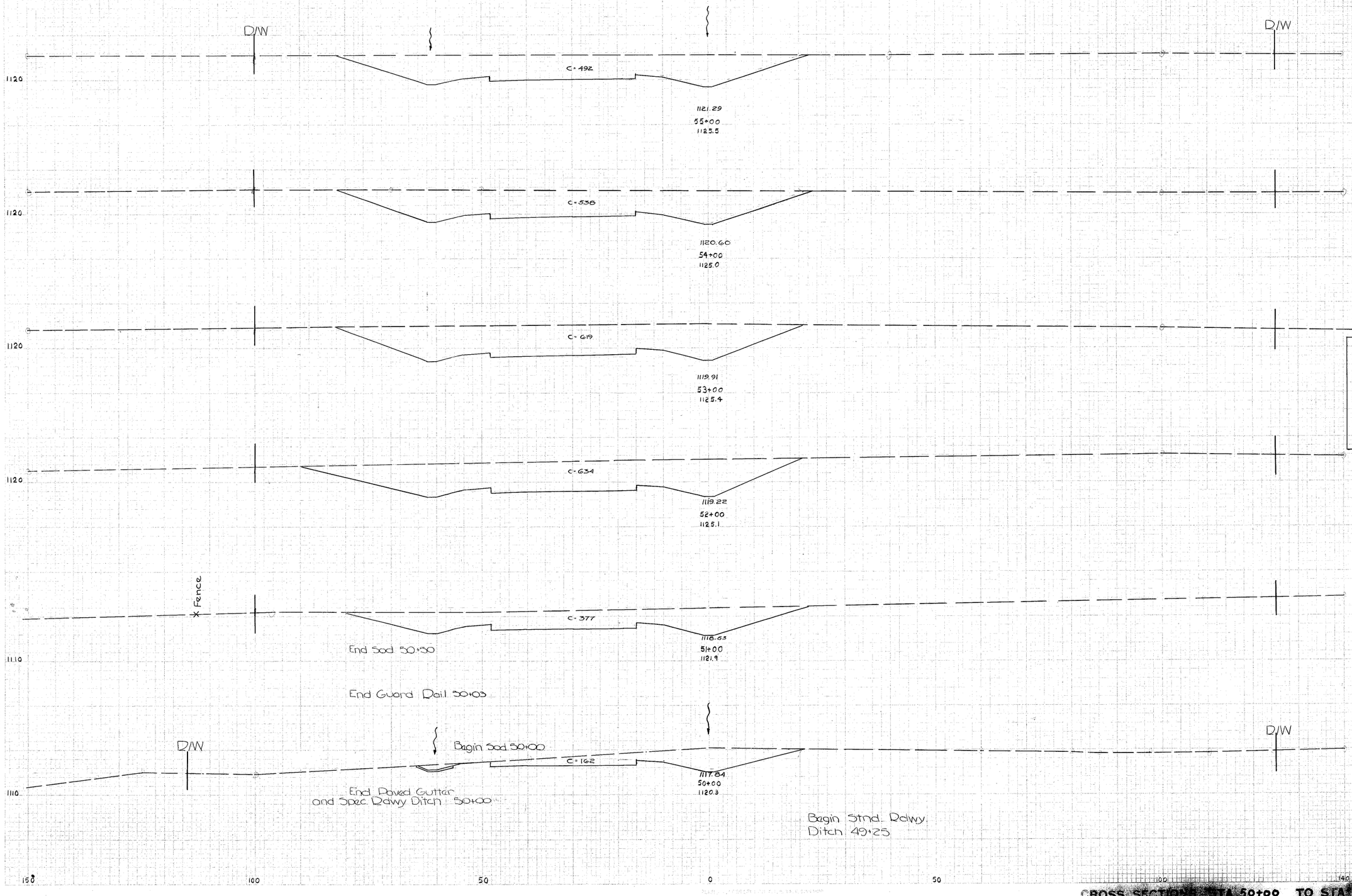
SEEDING LF	SEEDING SY	END AREA CUT	END AREA FILL	CU. YDS. EXC.	CU. YDS. EMB.
	1722			144	1258
127		47	627		
	1355			537	2089
		(0)	(0)		
				(9)	(9)
116		243 (50)	300 (50)		
	650			411 (150)	715 (150)
117		200 (112)	471 (112)		
	684			350 (164)	858 (164)
128		178 (65)	455 (65)		
	689			452 (72)	582 (72)
119		309 (13)	172 (13)		
	700			617 (60)	317 (60)
132		356 (52)	170 (52)		
	684			589 (114)	378 (114)

48
109



SEEDING LF.	SEEDING SY.	END AREA CUT	END AREA FILL	CU YDS EXC.	CU YDS EMB.
92		93	127		
	1333			311	1393
148		75	625		
	225			49	314
122		103	504		
	1170			507	1823
111		200	589		
	1155			393	2322
96		12	664		
	639			113	1291
132		109	729		

CROSS SECTIONS - STA 44+50 TO STA 49+00



SEEDING	END AREA	CUT YDS.			
SY.	CUT	FILL	EXC.	EMB.	
76	492	0			
844			1907	0	
76	538	0			
844			2144	0	
76	619	0			
889			2322	0	
83	634	0			
878			1874	0	
74	377	0			
711			996	0	
53	162	0			
811			385	237	

EXCAVATION 16,040 CY
EMBANKMENT 376.7 CY
SEEDING 16,715 SY

CROSS SECTIONS STA 50+00 TO STA 55+00

SEEDING LF	SEEDING SY.	END AREA CUT	END AREA FILL	CU. YDS. EXC.	CU. YDS. EMB.
89		347	0		
	1000			1333	0
91		372	0		
	1022			880	0
93		433	0		
	1033			680	0
93		462	0		
	1033			1782	0
93		500	0		
	1033			1889	0
93		519	0		
	944			1874	0

OHIO

POR-224-6.22

51 / 109

SURVEY R-G

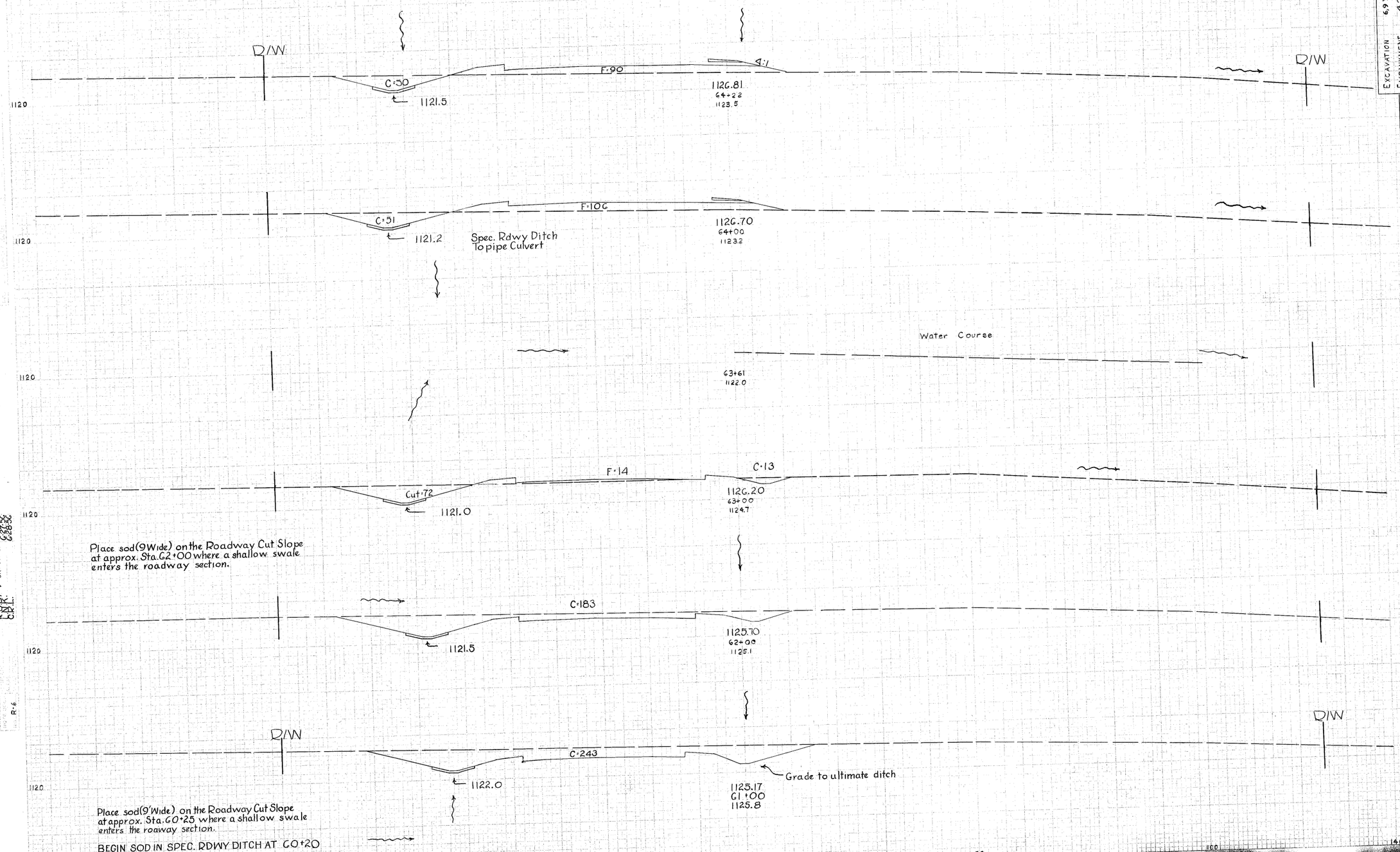
M.M. 4-56
D.L.M. & R.J.B. 4-20-56
C.R.L. & J.F.W. 7-9-56
M.S.B. 7-11-56
L.N.K. 7-11-56

CROSS SECTIONS - STA 56+00 TO STA 60+00

2	OHIO	F-330 C	

POR-274-6.22

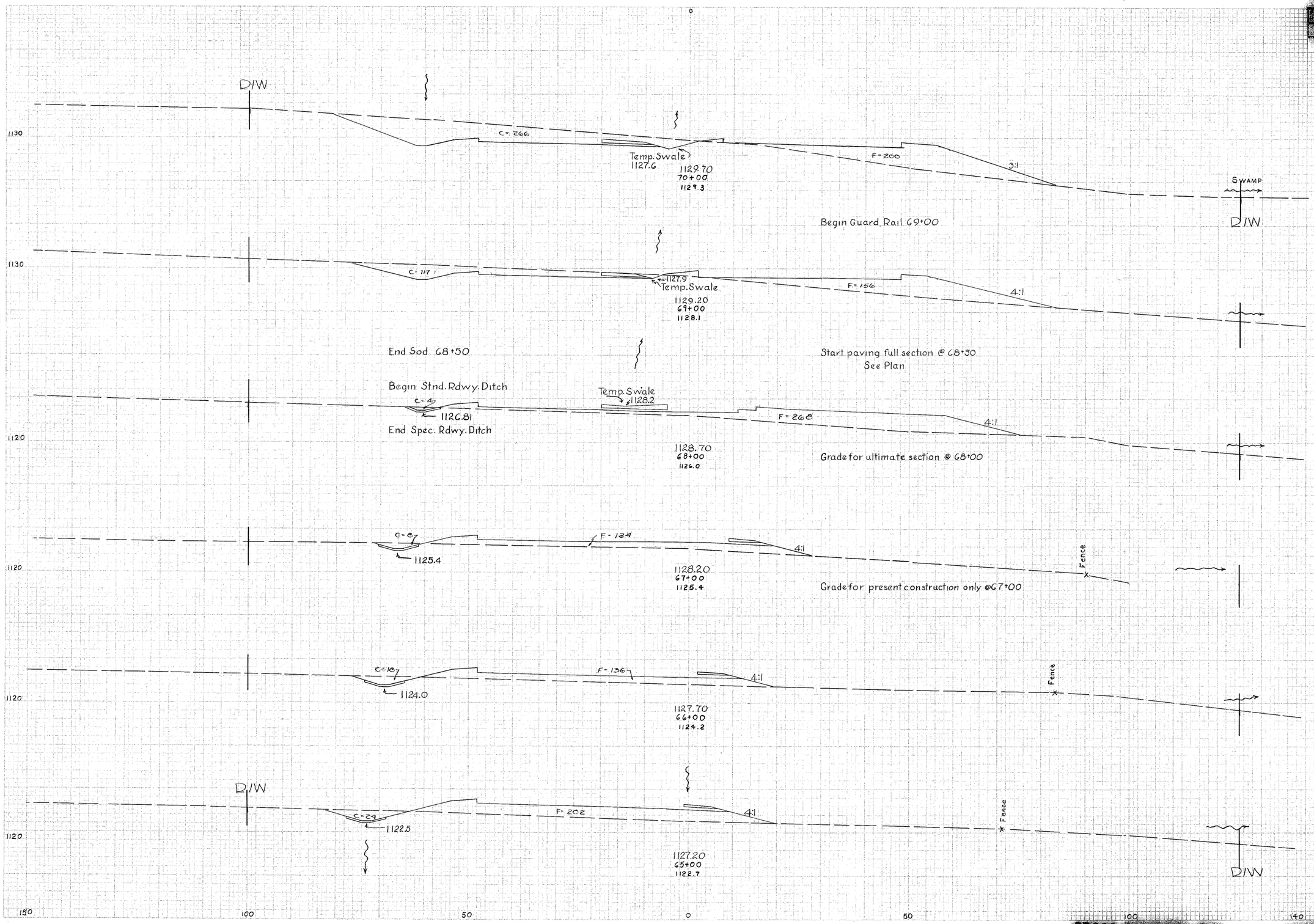
52
109



	SEEDING LF	SEEDING SY	END AREA CUT	END AREA FILL	CU. YDS. EXC.	CU. YDS. EMB.
EXCAVATION 6,933 CY	67		50	90		
EMBANKMENT 4,213 CY		164			207	80
SEEDING 11,633 SY	67		51	106		
		767			252	407
	71		85	14		
		800			496	26
	73		183	0		
		822			789	0
	75		243	0		
		911			1093	0

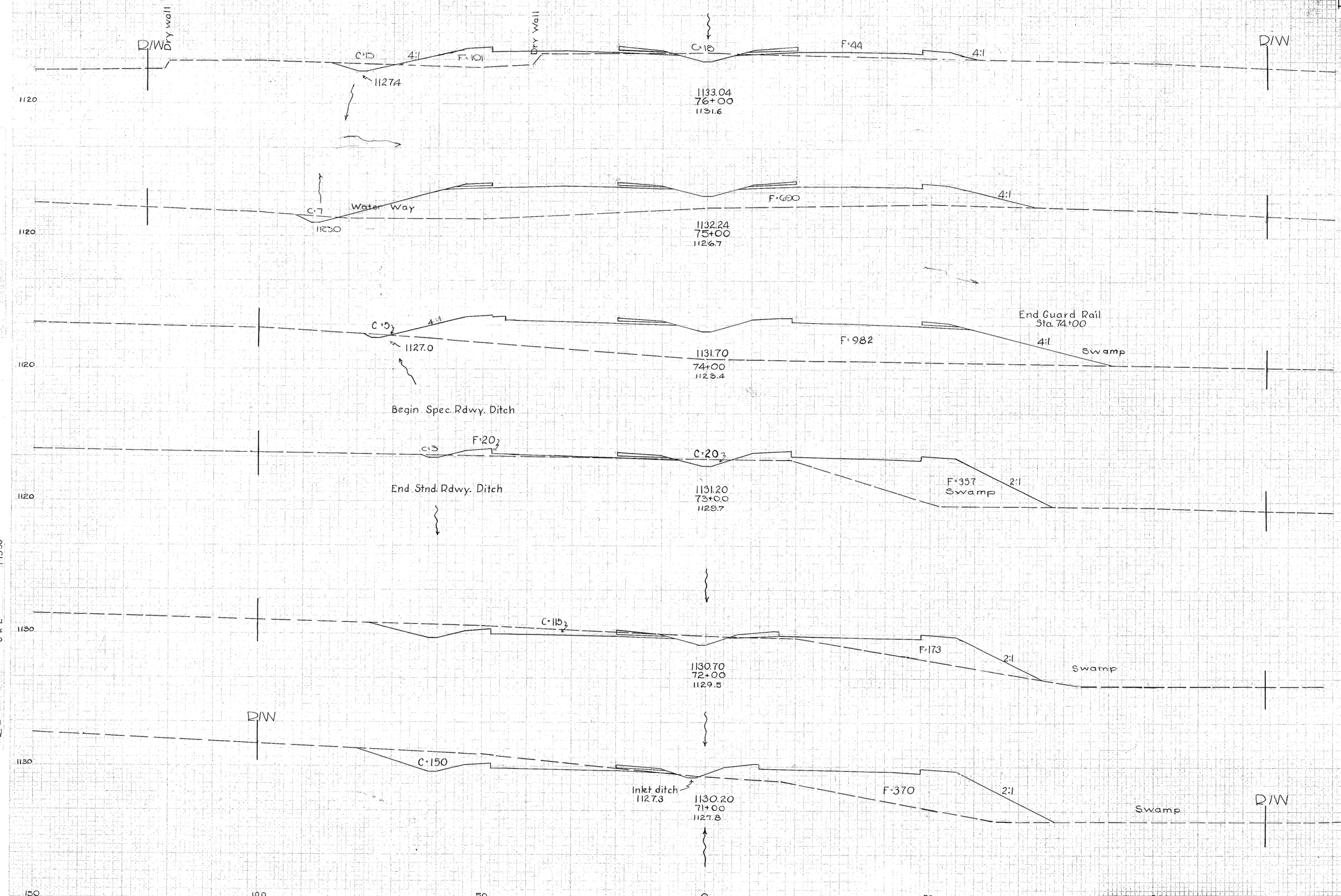
M.M. 4-5-56
D.M. + R.J.B. 4-20-56
R.B.B. ✓ J.F.W. 6-25-56
L.N.K. 6-27-56
C.R.L. 6-28-56

R-6



SEEDING LF.	SEEDING SY.	END AREA CUT	END AREA FILL	CU. YDS. EXC.	CU. YDS. EMB.
120		266	200		
	1267			711	659
107		117	156		
	1083			226	785
88		4	268		
	783			22	726
53		8	124		
	611			48	482
57		18	136		
	689			89	626
67		24	202		
	681			107	422

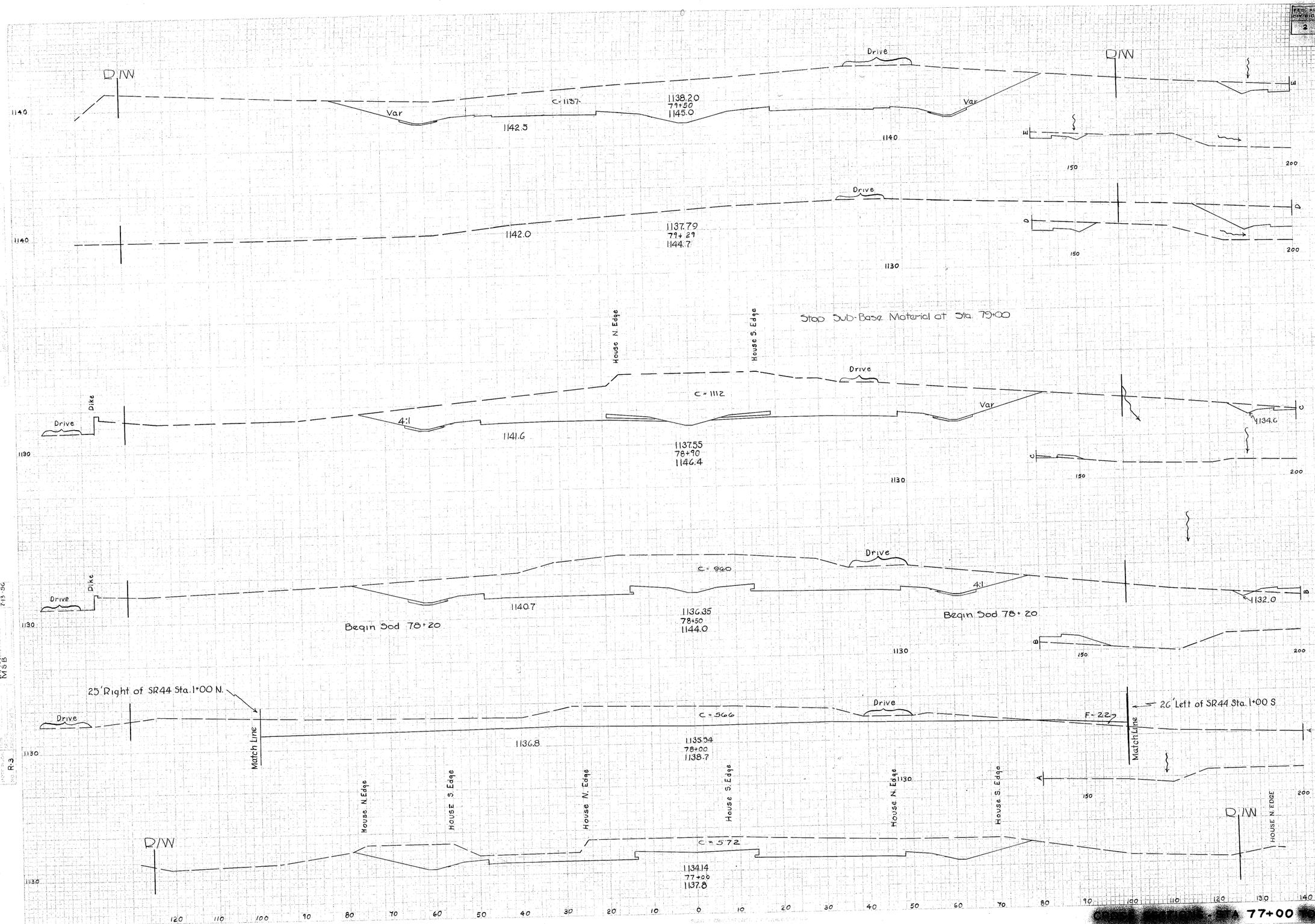
CROSS SECTIONS STA 65+00 TO STA 70+00



SEEDING LF	SEEDING SY	END AREA CUT	END AREA FILL	CU YDS EXC.	CU YDS EMB.
103		33	145		
	1311			74	1546
132		7	690		
	1478			22	3096
133		5	982		
	1367			37	863
112		23	377		
	1256			256	1019
113		115	173		
	1300			493	1007
120		150	370		
	1333			770	1056

EXCAVATION 25791 C.Y.
EMBANKMENT 8918 C.Y.
SEEDING 13057 S.Y.

CROSS SECTIONS STA 71+00 TO STA 76+00



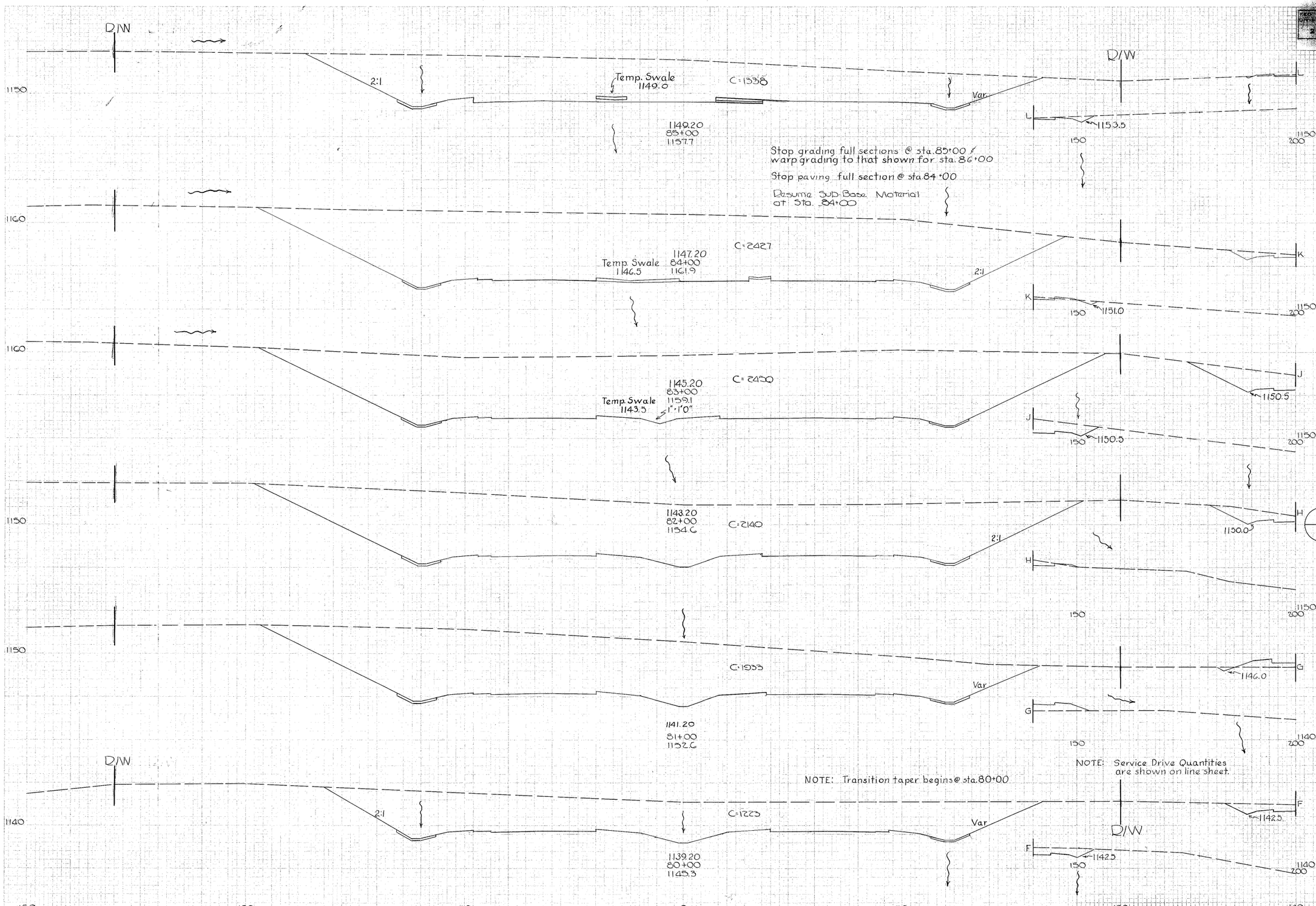
FED. RD. DIVISION	ST.	PROJECT	SHEET NO.	TOTAL SHEETS
2				109

FOR 1984 6.22

SECTIONS LT.	SECTIONS SY.	END AREA CUT	END AREA FILL	CU. YDS. EXC.	CU. YDS. EMB.
124		1137	0		
	820			2389	0
122		1112	0		
	518			1535	0
111		960	0		
	311			1413	20
0		566	22		
	622			2107	41
111		572	0		
	1189			1122	220

CROSS SECTIONS - STA 77+00 TO STA 79+50

FED. RD. DIVISION 2 | STATE OHIO | PROJECT 330 (...) | FISCAL YEAR | 56 / 109
POR-224-6.22



SEEDING LF.	SEEDING SY.	END AREA CUT	END AREA FILL	CU YDS. EXC.	CU YDS. EMB.
127		1388	0		
	1394			7077	0
124		2427	0		
	1461			9052	0
139		2450	0		
	1844			8500	0
143		2140	0		
	1518			7544	0
130		1933	0		
	1367			5844	0
116		1223	0		
	667			2185	0

M.M. & R.J.B. 4-20-56
D.L.M. ✓ J.F.W. 7-12-56
C.R.L. 7-12-56
M.S.B. 7-13-56
C.R.L.
D-G

[redacted] STA. 80+00 TO STA. 85+00

FED. RD. DIVISION	STATE	PROJECT	FINAL SEAL
2	OHIO	F 330 ( )	

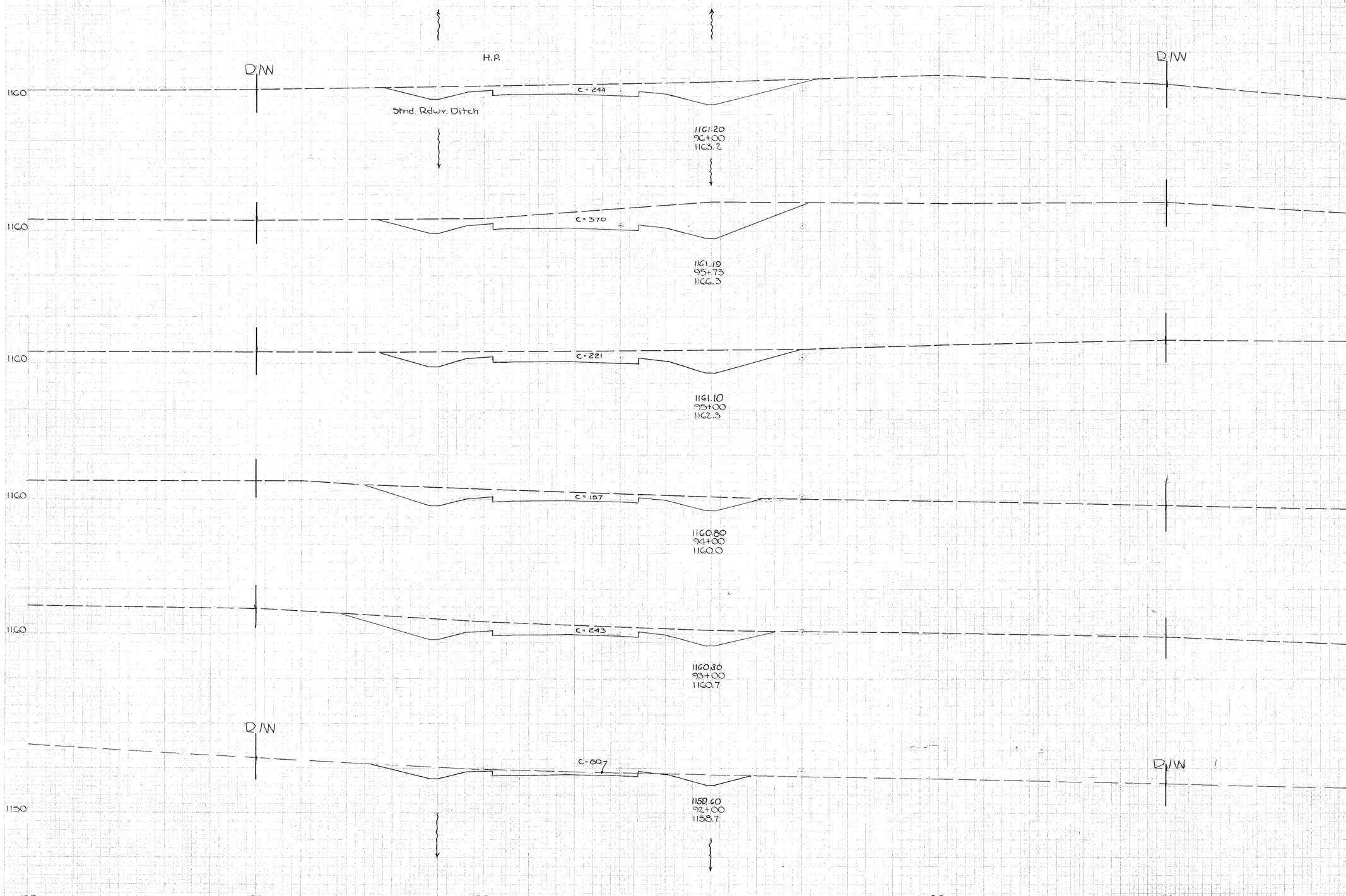
POR-384-6.22

SEEDING LF	SEEDING SY	END AREA CUT	END AREA FILL	CU YDS EXC	CU YDS EMB
83		239	0		
	911			848	0
81		219	0		
	883			804	0
78		214	0		
	878			926	0
80		285	0		
	878			993	0
77		250	0		
	822			907	0
71		540	0		
	1100			3570	0

EXCAVATION 34091 CY
EMBANKMENT 0 CY
SEEDING 12788 SY

M.M. 4-20-56
R.J.B. 4-20-56
J.F.M. 7-12-56
M.S.P. 7-15-56
C.R.P. 7-15-56

[redacted] SECTIONS - STA 86+00 TO STA 91+00



SECTIONS		END AREA		CU YDS	
LF	ST	CUT	FILL	EXC	EMB
83		244	0		
	252			307	0
85		370	0		
	681			798	0
82		221	0		
	878			700	0
76		157	0		
	900			741	0
86		243	0		
	867			600	0
70		80	0		
	850			593	0

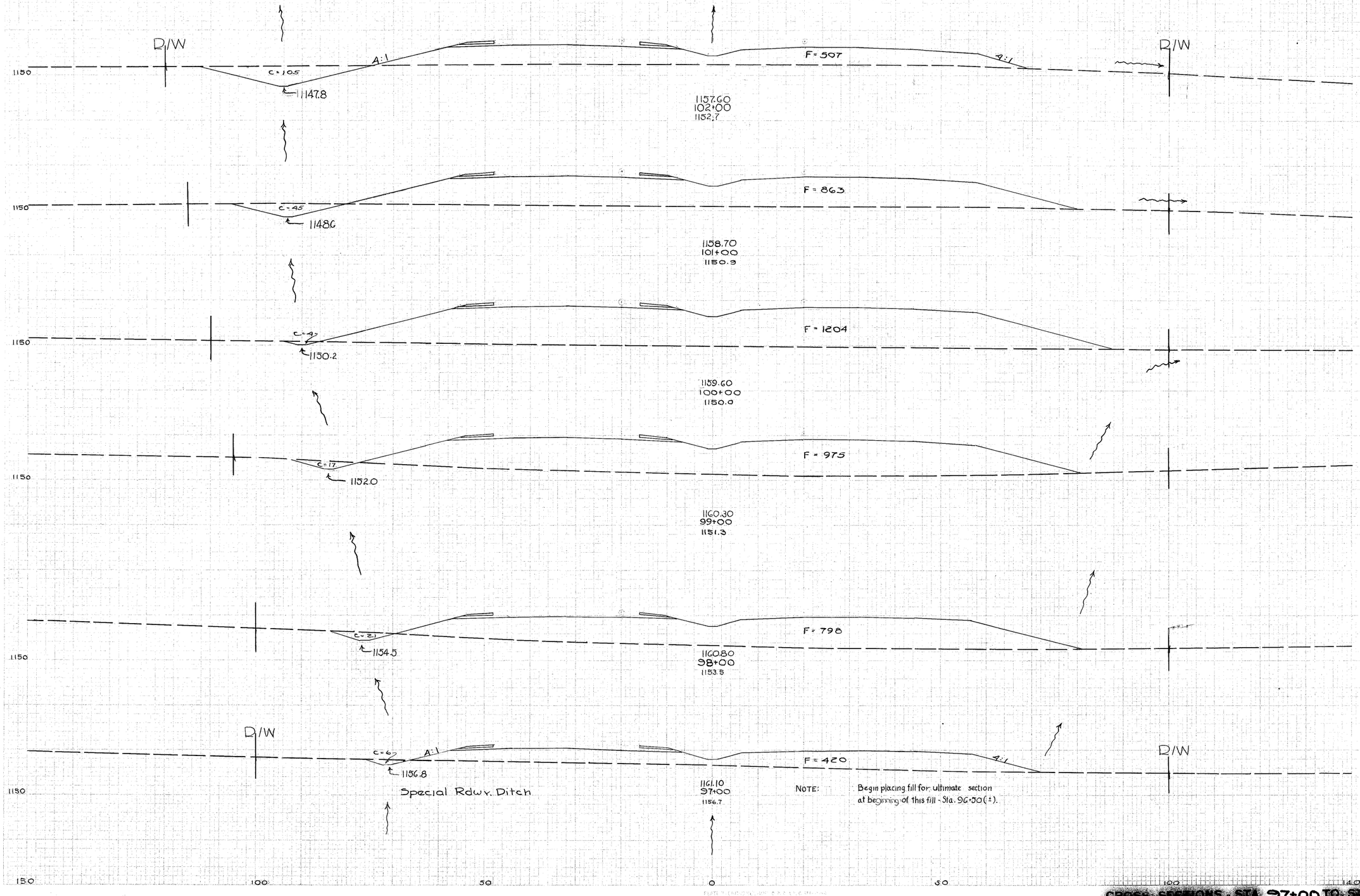
M.M. 4-56
R.J.B. & D.L.M. 4-20-56
C.R.L. & J.F.W. 6-28-56
C.R.L. 6-29-56
L.N.K. 7-2-56

R.G.

CROSS SECTIONS STA 92+00 TO STA 96+00

FEDERAL DIVISION	STATE	PROJECT	FISCAL YEAR	59 / 69
2	OHIO	330 ( )		

POR-224-6.22



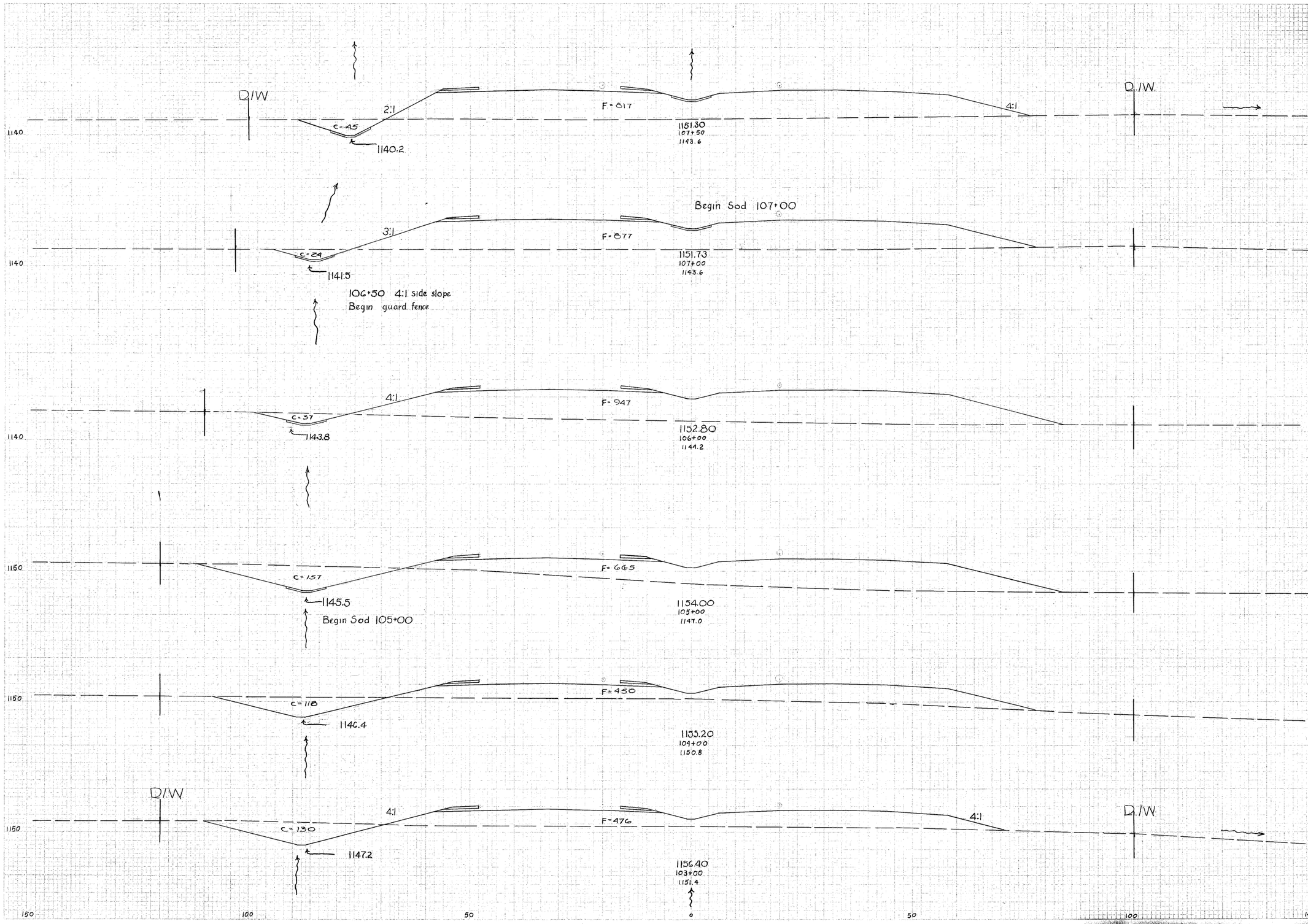
SEEDING LF.	SEEDING SY.	END AREA CUT	END AREA FILL	CU. YDS. EXC.	CU. YDS. EMB.
173		105	507		
	1944			278	2537
177		45	863		
	1939			93	3830
172		4	1204		
	1867			39	4037
164		17	975		
	1778			70	3285
156		21	798		
	1633			52	2256
138		6	420		
	1228			463	778

EXCAVATION 4562 C.Y.
EMBANKMENT 25495 C.Y.
SEEDING 20078 S.Y.

M.M. 4-30-56
D.L.M. & R.J.B. 4-20-56
C.R.L. - J.F.W. 6-28-56
C.R.L. 6-29-56
L.N.R. 6-29-56

R-6

CROSS SECTIONS - STA. 97+00 TO STA. 102+00



FED. RD. DIVISION	STATE	PROJECT	SHEET NO.	TOTAL SHEETS
2	OHIO	330		60 / 109

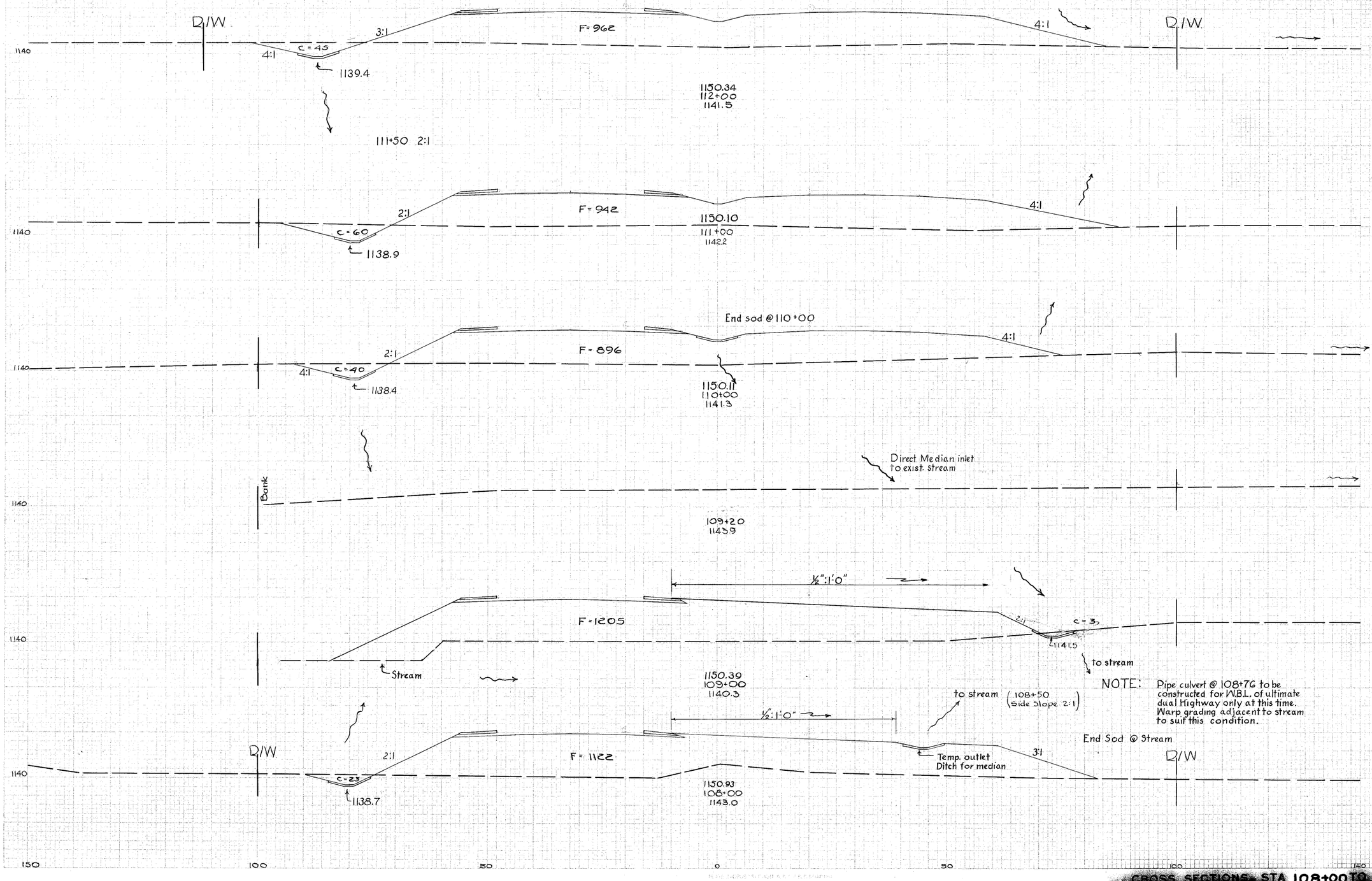
POR 124-6.22

SEEDING TF	SEEDING SY	END AREA CUT	END AREA FILL	CU. YDS. EXC.	CU. YDS. EMB.
148		45	817		
	811			64	1569
144		24	877		
	1728			112	3378
167		37	947		
	1906			359	2983
176		157	665		
	1983			509	2067
181		118	450		
	2017			459	1900
182		130	476		
	1972			435	1820

M.M. 4.56
D/M + R.V.B. 4-20-56
RBB + JFW 6-25-56
CRL 6-29-56
ENK 7-2-56

R-6

CROSS SECTIONS STA 103+00 TO STA 107+50



NOTE: Pipe culvert @ 108+76 to be constructed for W.B.L. of ultimate dual Highway only at this time. Warp grading adjacent to stream to suit this condition.

SEEDING LF.	SEEDING SY.	END AREA CUT	END AREA FILL	CU. YDS. EXC.	CU. YDS. EMB.
176		45	962		
	1989			196	3526
162		60	942		
	1678			185	3404
140		40	896		
	1667			82	3893
160		3	1205		
	1800			48	4317
164		23	1122		
	867			630	1914

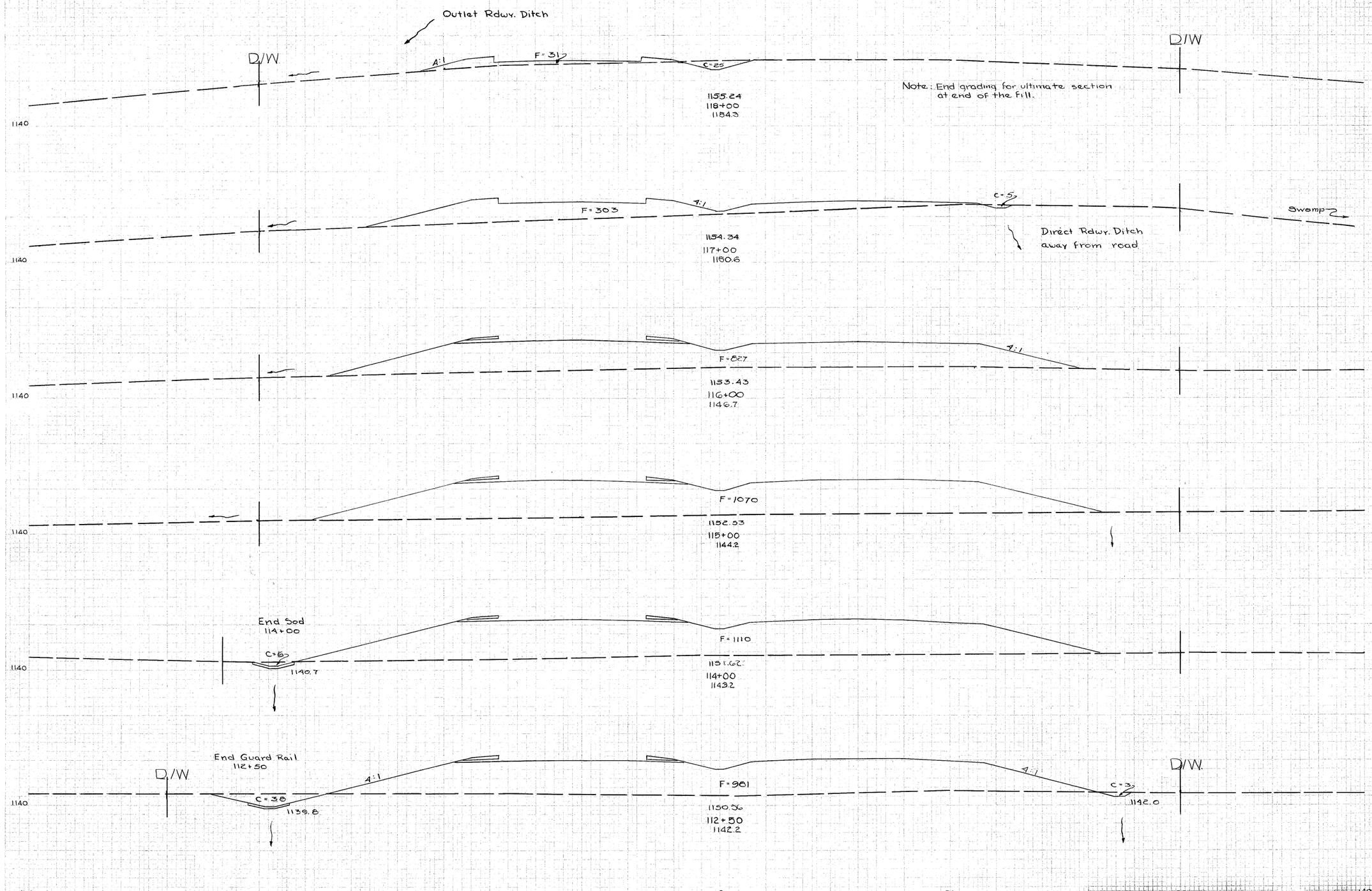
EXCAVATION 1571 C.Y.
EMBANKMENT 39789 C.Y.
SEEDING 19729 S.Y.

M.M. 4 5C
R.L.M. & R.J.B. 4 20 56
C.R.L. ✓ J.F.W. 4 22 56
L.N.R. 4 26 56
C.R.L. 4 24 56

R-6

CROSS SECTIONS STA 108+00 TO STA 112+00

PROJECT 330( )
62
109
POR 224 6.22



SEEDING LBS	SEEDING SY	END AREA CUT	END AREA FILL	CU. YDS EXC	CU. YDS EMB
62		25	31		
	1067			19	619
131		5	303		
	1578			11	1985
152		0	827		
	1756			0	3515
163		0	1070		
	1810			11	4048
163		6	1110		
	1961			133	5822
190		41	981		
	1017			80	1800

M.M. 4-56
D.L.M. & R.J.B. 4-20-56
C.R.L. & J.F.W. 6-22-56
L.N.K. 6-26-56
C.R.L. 7-2-56

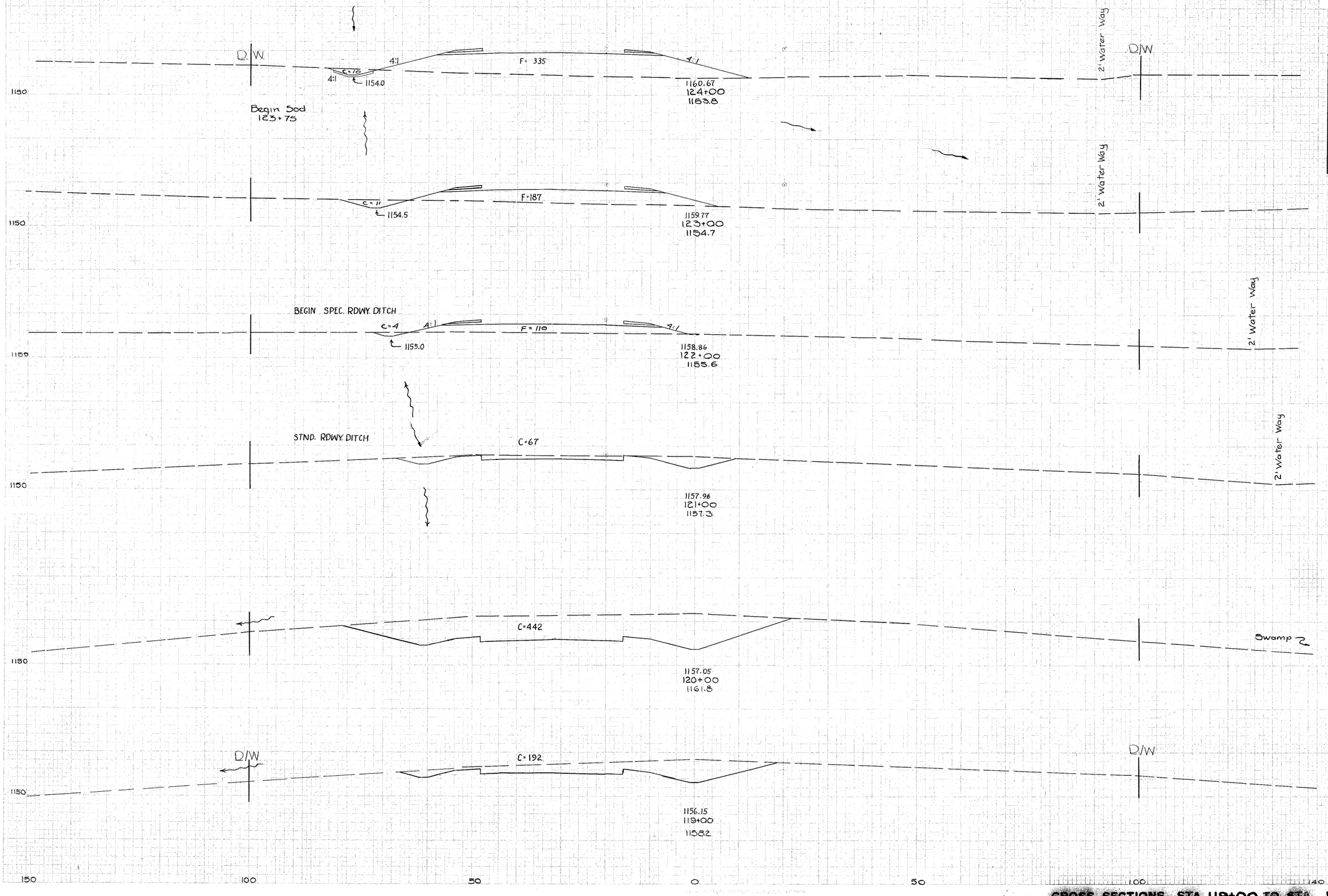
R-7

CROSS SECTIONS - STA 112+50 TO STA 118+00

FED. RD. DIVISION	STATE	PROJECT	FISCAL YEAR
2	[illegible]	S 330 ( )	

63
109

POR 724 6.22



EXCAVATION 3108 C.Y. / EMBANKMENT 8044 C.Y. / SEEDING 9825 S.Y.	SEEDING LF	SEEDING SY	END AREA CUT	END AREA FILL	CU YDS EXC	CU YDS EMB
	77		10	335		
		833			41	967
	73		11	187		
		744			30	552
	61		4	110		
		689			126	204
	63		67	0		
		844			944	0
	89		442	0		
		911			1174	0
	74		192	0		
		755			404	59

M.M. 4-56
D.L.M. 4-20-56
C.R.L. 6-25-56
L.N.K. 6-26-56
C.R.L. 7-2-56

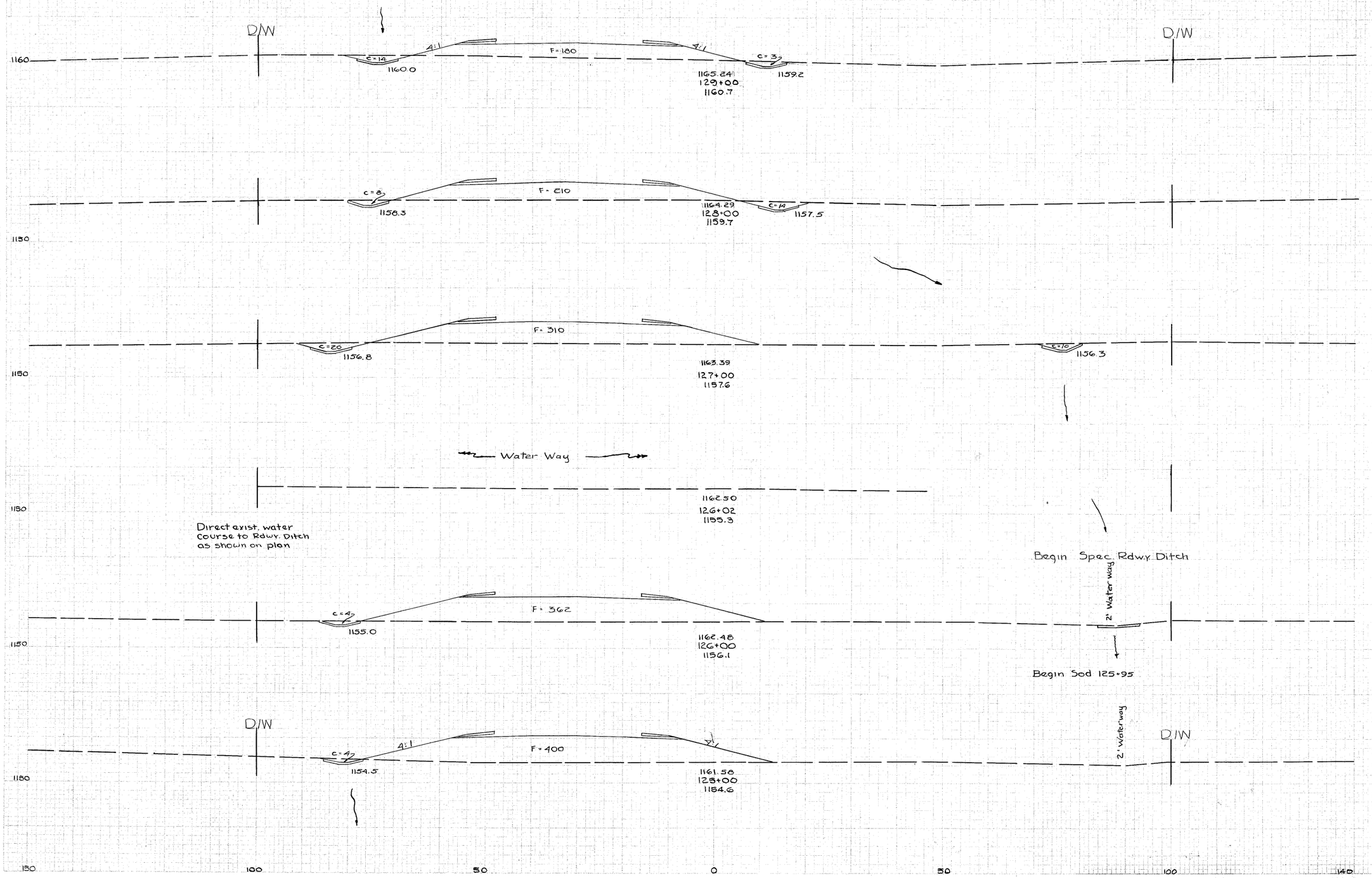
R-7

CROSS SECTIONS - STA 119+00 TO STA 124+00

FED. RD. DIVISION	STATE	PROJECT	FISCAL YEAR
2	OHIO	F-330 ( )	

64
109

POR-224-6.22



SEEDING LF.	SEEDING SY.	END AREA CUT	END AREA FILL	CU. YDS. EXC.	CU. YDS. EMB.
68		17	180		
	779			74	722
73		22	210		
	867			100	963
82		30	310		
	889			59	1244
78		4	362		
	867			15	1411
78		4	400		
	867			26	1363

M.M. 4-56
D.L.M. & R.J.B. 4-20-56
C.R.L. & J.F.W. 6-25-56
L.N.K. 6-26-56
M.S.B. 7-10-56

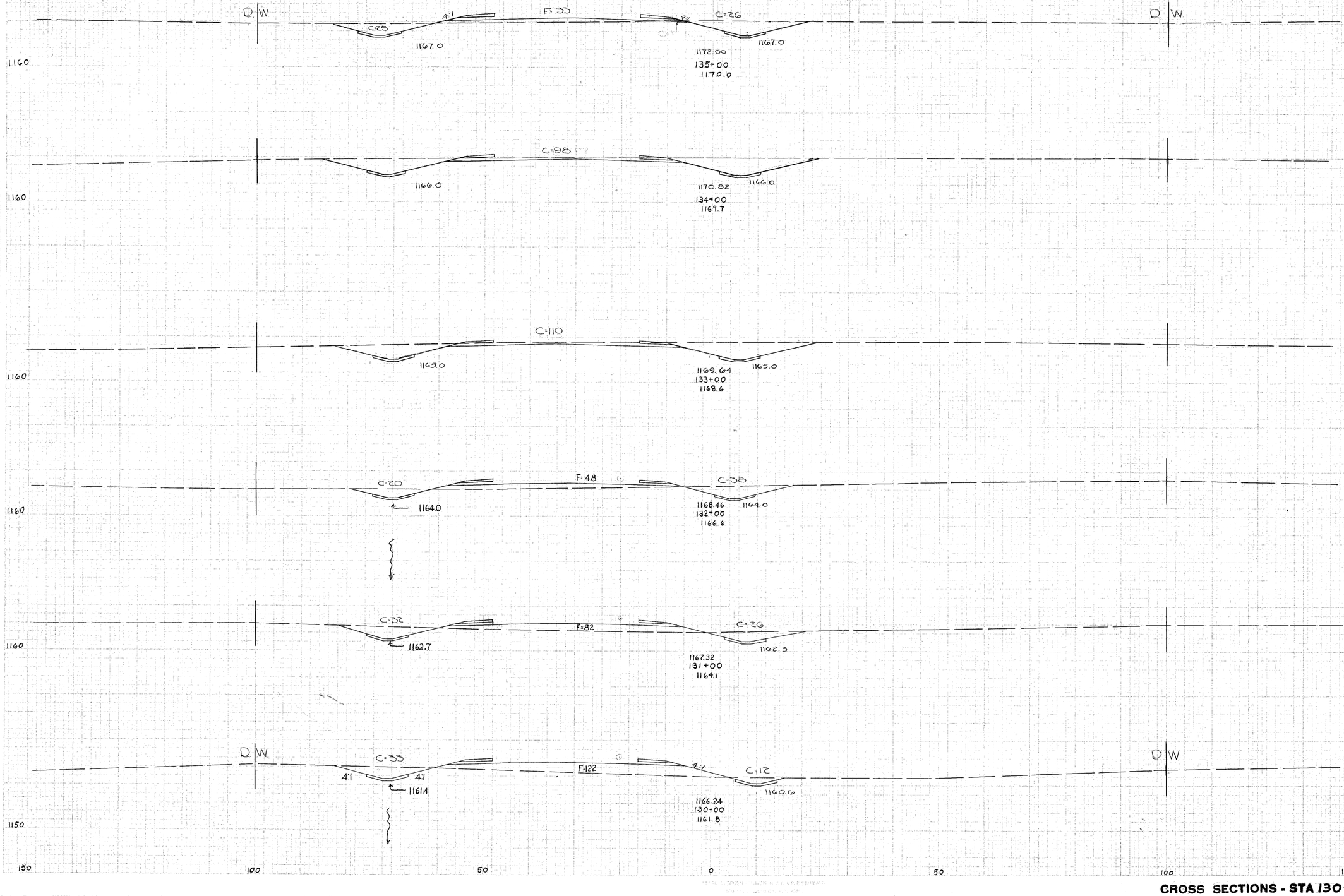
R-7

CROSS SECTIONS - STA 125+00 TO STA 129+00

FED. RD. DIVISION	STATE	PROJECT	FISCAL YEAR
2	OHIO	F-330 ( )	

65
109

POR-224-6.22



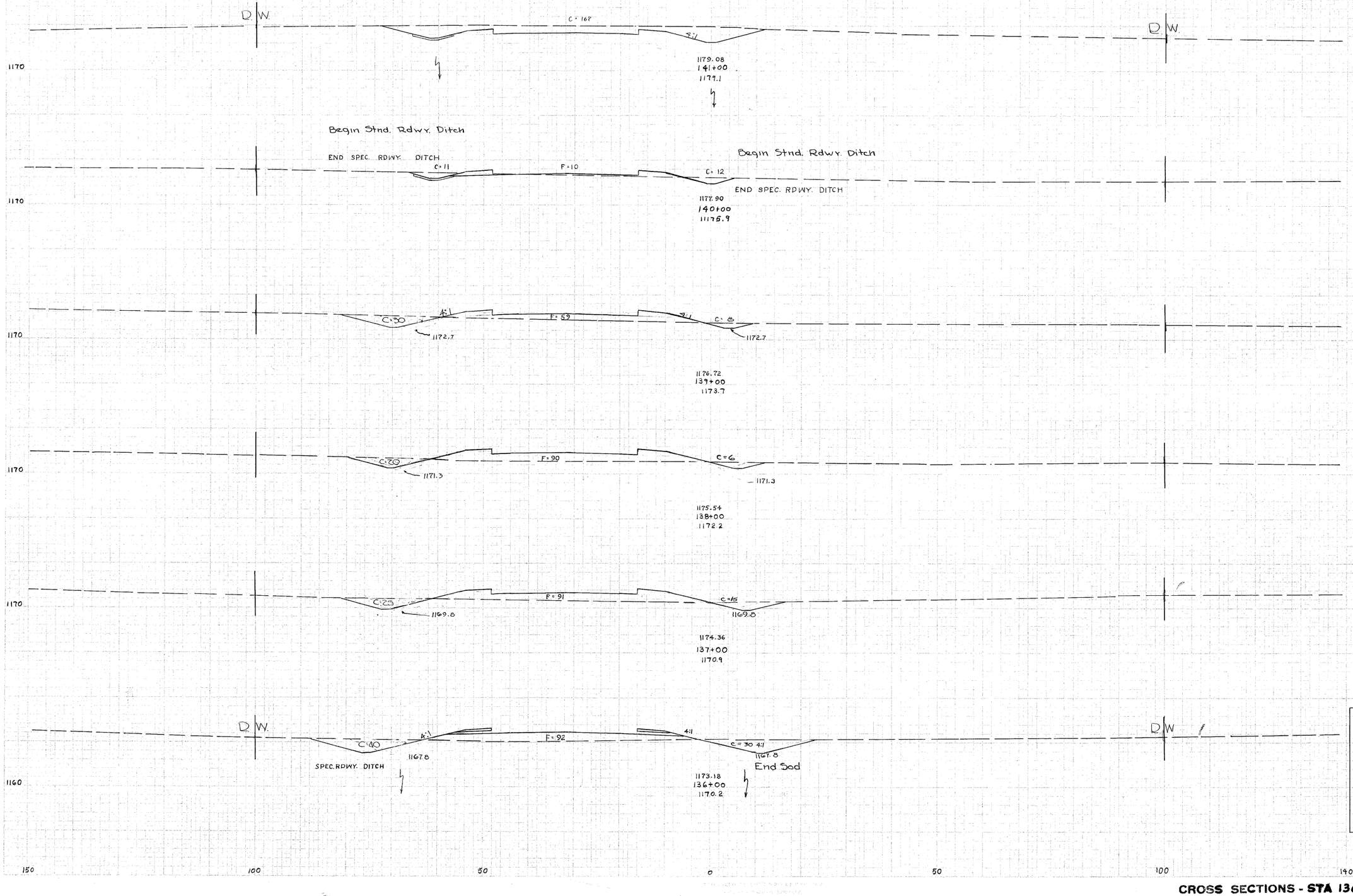
SEEDING LF.	SEEDING SY.	END AREA CUT	END AREA FILL	CU. YDS. EXC.	CU. YDS. EMB.
59		51	33		
	700			278	63
66		98	0		
	755			385	0
69		110	0		
	778			311	89
70		58	48		
	800			215	241
73		58	82		
	811			193	378
72		45	122		
	778			115	559

CROSS SECTIONS - STA 130+00 TO STA 135+00

FED. RD. DIVISION	STATE	PROJECT	FISCAL YEAR
2	OHIO	F-330 ( )	

66
109

POR-224-6.22



SEEDING LF.	SEEDING SY.	END AREA CUT	END AREA FILL	CU. YDS. EXC.	CU. YDS. EMB.
56		167	0		
	544			352	19
43		23	10		
	544			111	130
55		38	59		
	600			119	278
53		26	90		
	600			122	337
54		40	91		
	655			204	341
66		70	92		
	700			222	233

EXCAVATION 3423 C.Y.
EMBANKMENT 2109 C.Y.
SEEDING 8187 S.Y.

CROSS SECTIONS - STA 136+00 TO STA 141+00

FED. RD. DIVISION	STATE	PROJECT	FISCAL YEAR
2	OHIO	F-330 ( )	

67
109

POR-224-622

SEEDING LF.	SEEDING SY.	END AREA CUT	END AREA FILL	CU. YDS. EXC.	CU. YDS. EMB.
93		496	0		
	1022			1541	0
90		335	0		
	911			1063	0
74		238	0		
	867			1174	0
81		396	0		
	878			1693	0
76		518	0		
	811			1559	0
70		324	0		
	700			911	0

CROSS SECTIONS - STA 142+00 TO STA 147+00

FED. RD. DIVISION	STATE	PROJECT	FISCAL YEAR
2	OHIO	F-330( )	

68
109

POR-224.6.22

SEEDING LF.	SEEDING SY.	END AREA CUT	END AREA FILL	CU. YDS. EXC.	CU. YDS. EMB.
53		889	0		
	1033			3189	0
52		833	0		
	1022			2815	0
52		747	0		
	1067			2663	0
100		682	0		
	1088			2569	0
95		702	0		
	1055			2356	0
94		570	0		
	1044			1974	0

EXCAVATION	25257 C.Y.
EMBANKMENT	0 C.Y.
SEEDING	11809 S.Y.

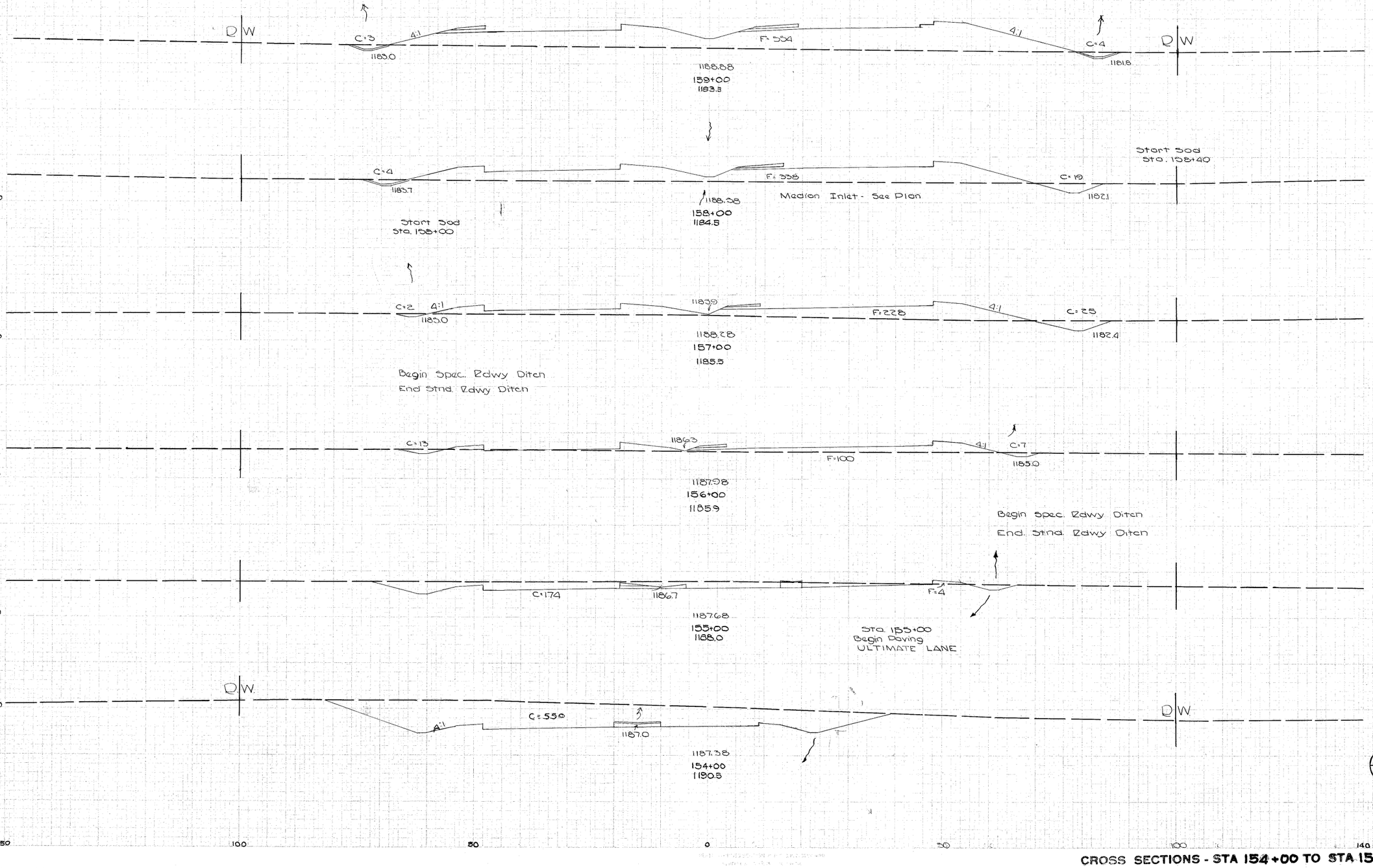
CROSS SECTIONS - STA 148+00 TO STA 153+00

FED. RD. DIVISION	STATE	PROJECT	FISCAL YEAR
2	OHIO	F-330( )	

69
109

POR-226-6.22

SEEDING		END AREA		CU. YDS.	
LF.	SY.	CUT	FILL	EXC.	EMB.
110		7	554		
	1167			56	1602
99		23	338		
	1033			55	1048
86		27	228		
	933			89	607
81		20	108		
	867			359	193
74		174	4		
	900			1341	7
88		550	0		
	1011			2667	0

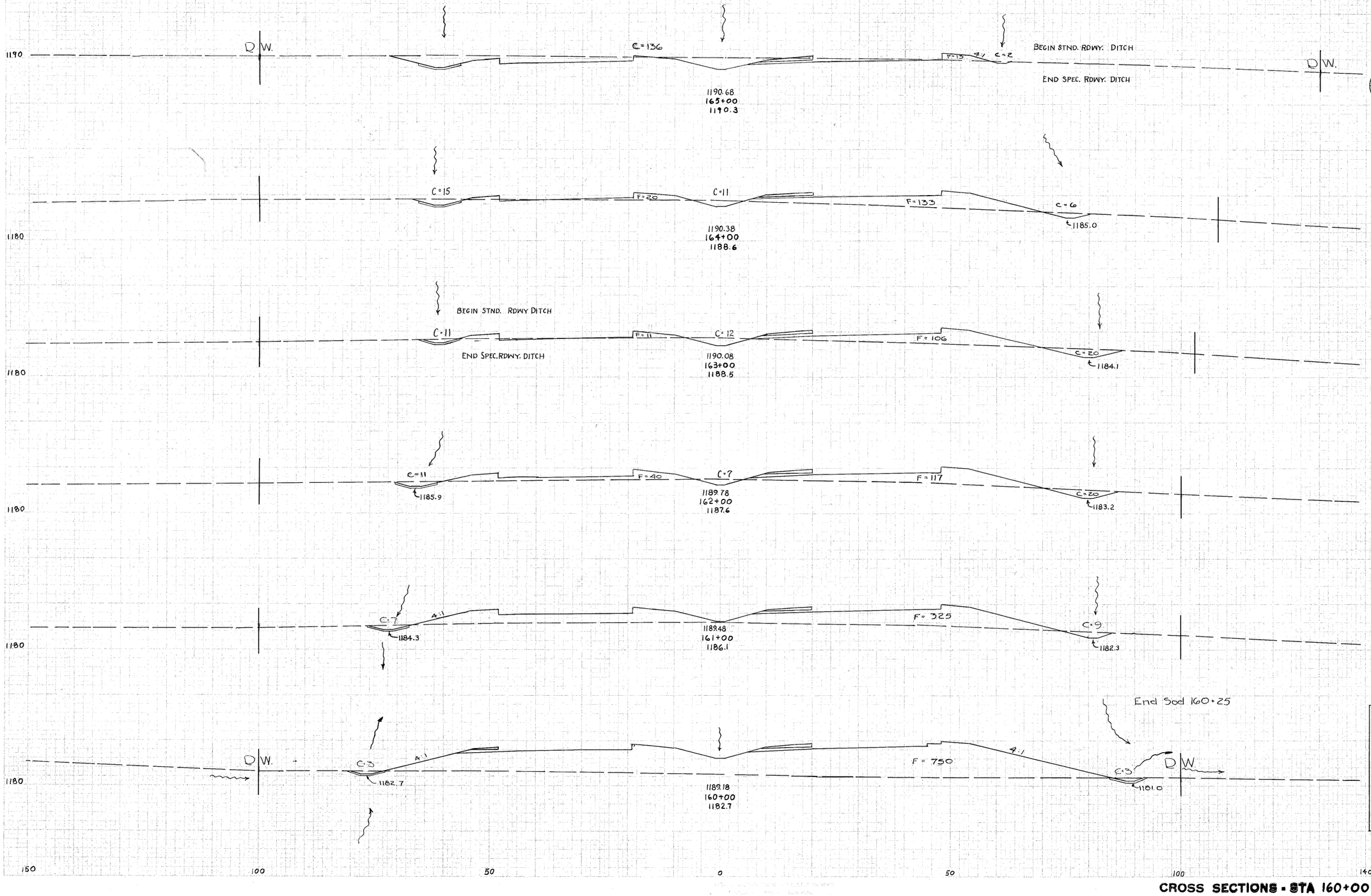


CROSS SECTIONS - STA 154+00 TO STA 159+00

FED. RD. DIVISION	STATE	PROJECT	FISCAL YEAR
2	OHIO	F-330( )	

70
109

POR-224-6.22



SEEDING LF.	SEEDING SY.	END AREA CUT	END AREA FILL	CU. YDS. EXC.	CU. YDS. EMB.
91		138	13		
	1089			315	307
104		32	153		
	1178			141	500
108		43	117		
	1233			152	507
114		38	157	100	893
	1267				
114		16	325		
	1289			41	2048
118		6	780		
	1267			26	2470

EXCAVATION 2713 C.Y.
EMBANKMENT 10232 C.Y.
SEEDING 12223 S.Y.

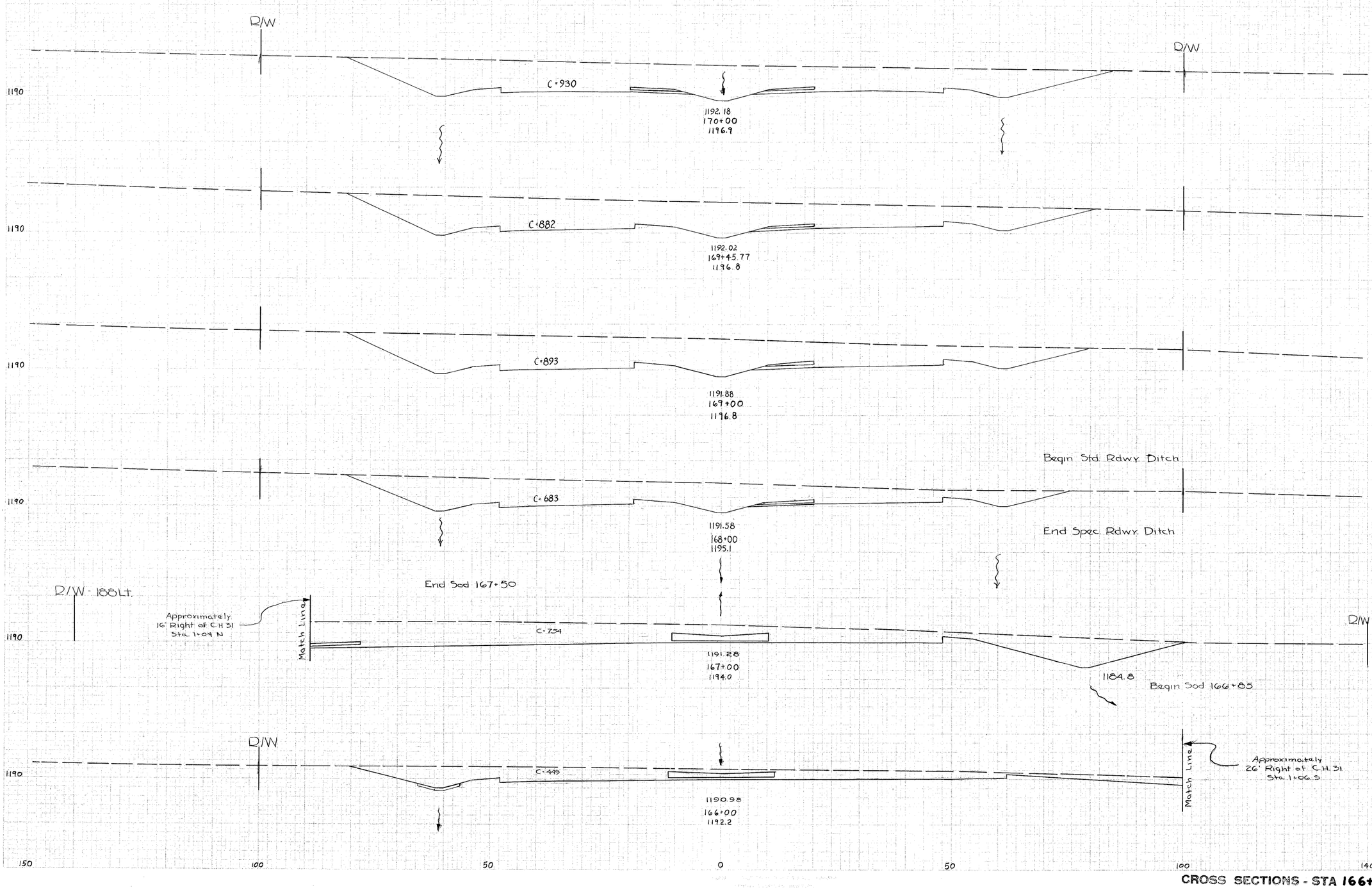
M.M. & DLM.
RJB. & J.F.W.
RJB.
LNK.
CRL.
4-56
4-23-56
6-23-56
6-27-56
7-3-56

R-7

CROSS SECTIONS - STA 160+00 TO STA 165+00

FED. RD. DIVISION	STATE	PROJECT	FISCAL YEAR
2	OHIO	F-330 ( )	

POR-224-6.22



SEEDING LF.	SEEDING SY.	END AREA CUT	END AREA FILL	CU. YDS. EXC.	CU. YDS. EMB.
126		930	0		
	747			1812	0
122		882	0		
	620			1513	0
121		893	0		
	1322			2918	0
116		683	0		
	1078			2663	0
77		754	0		
	1122			2230	0
124		449	0		
	1200			1089	22

CROSS SECTIONS - STA 166+00 TO STA 170+00

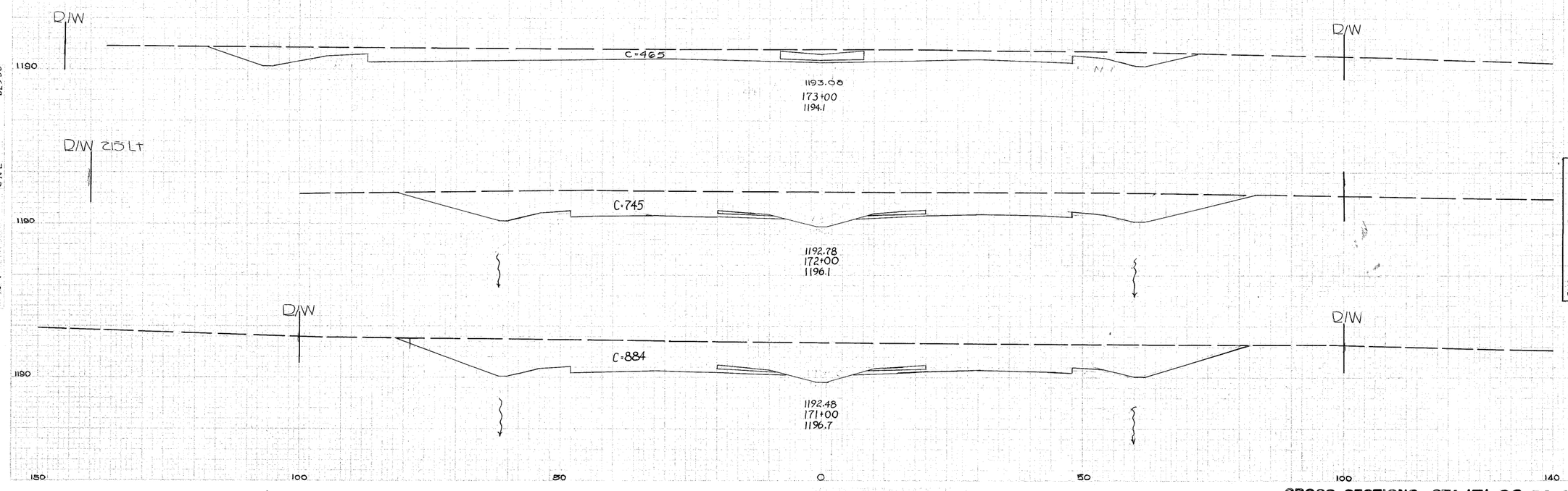
FED. RD. DIVISION	STATE	PROJECT	FISCAL YEAR
2	OHIO	F-330 ( )	

72
109

POR-224-6.22

Method Of Computing Earthwork At The Intersection Of Existing Rte.224(East) & Relocated Rte.224.

Average end area at sta.173+00(Randolph) with end area at sta. 1+00(Atwater) using a distance of 180'.
Start sheer at sta. 1+50 W(Existing 224) & go to the West normally,
Start sheer at sta. 2+00 E(Existing 224) & go to the East normally..
The area missed between sta. 1+60 E & 2+00 E is compensated for by the assumed extra width used between sta. 173+00 (Randolph) & sta. 1+00 (Atwater).



SEEDING LF.	SEEDING SY.	END AREA CUT	END AREA FILL	CU. YDS. EXC.	CU. YDS. EMB.
	1167			1560	927
97		465	0		
	1222			2241	0
122		745	0		
	1355			3016	0
122		884	0		
	1378			3356	0

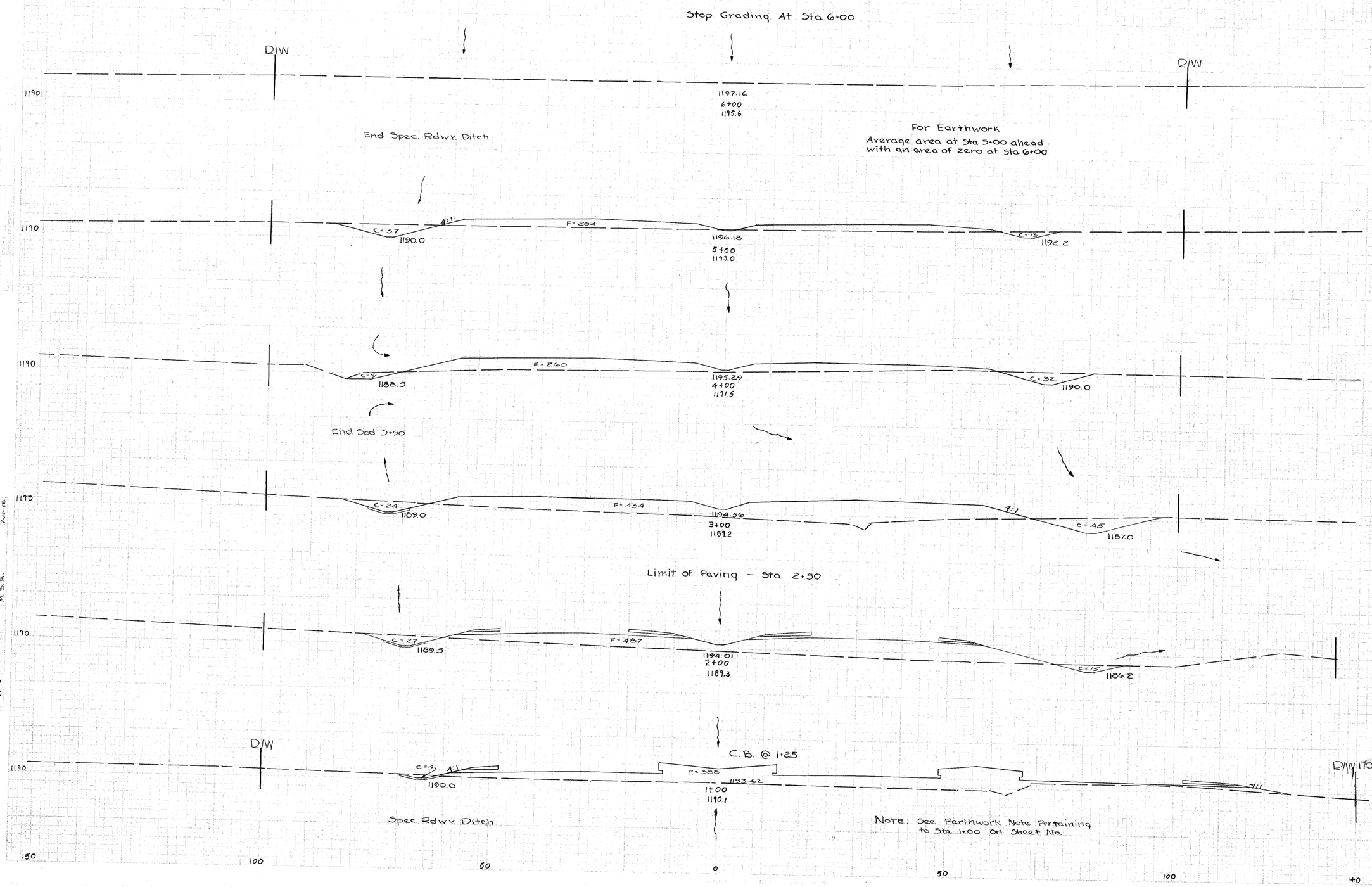
EXCAVATION 23157 C.Y.
EMBANKMENT 6792 C.Y.
SEEDING 19489 S.Y.

CROSS SECTIONS - STA 171+00 TO STA 173+00

FED. RD. DIVISION	STATE	PROJECT	FISCAL YEAR
2	OHIO	F-330 ( )	

73
109

POR-224-



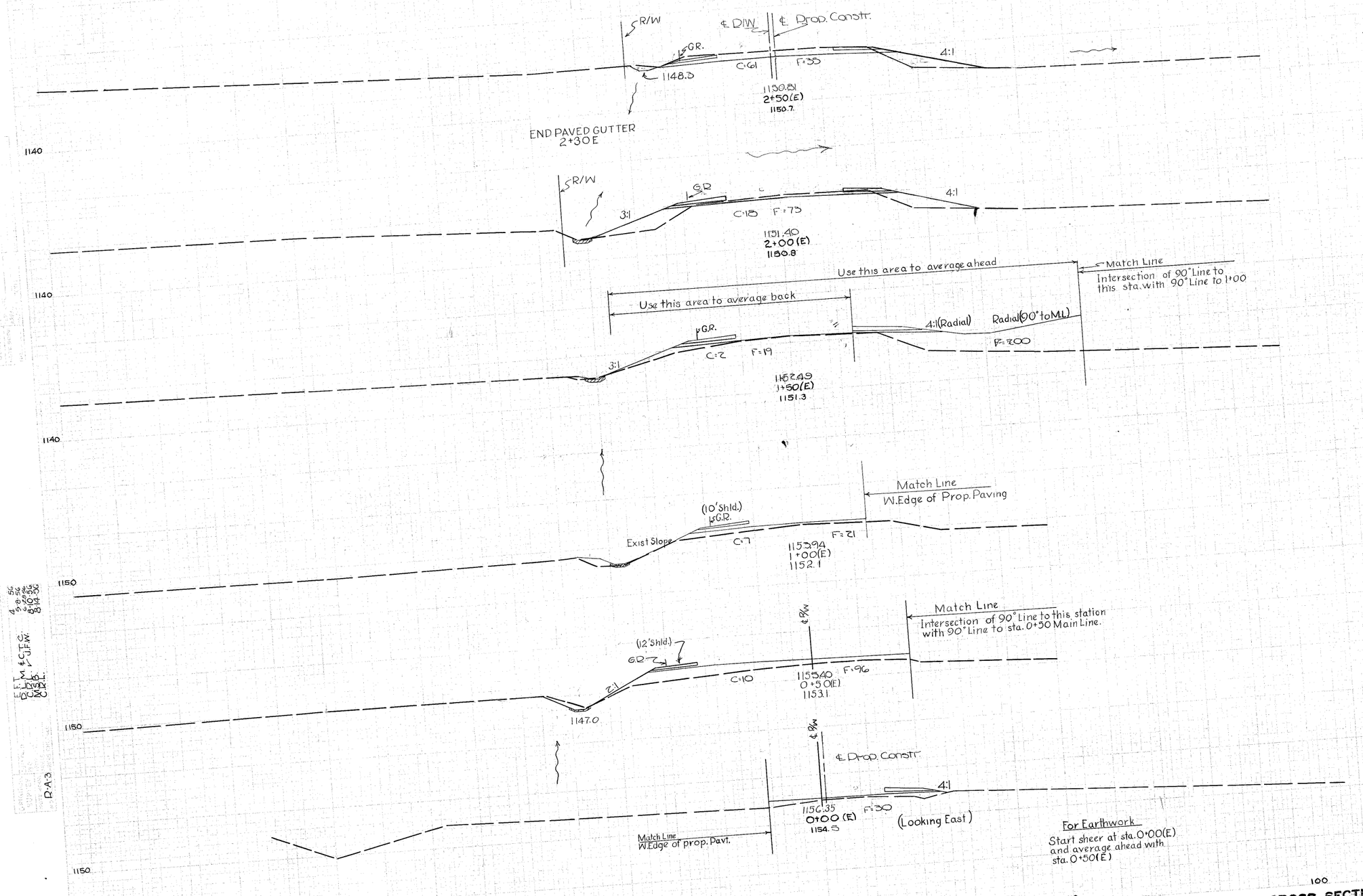
SEEDING LF.	SEEDING SY.	END AREA CUT	END AREA FILL	CU. YDS. EXC.	CU. YDS. EMB.
0		0	0		
	1006			93	378
181		50	204		
	2061			170	859
190		41	260		
	2133			204	1285
194		69	434		
	1789			207	1707
128		42	487		
	1289			85	1614
112		4	388		

CROSS SECTIONS STA. 1+00 (R) TO STA. 6+00 (R)

FED. RD. DIVISION	STATE	PROJECT	FISCAL YEAR
2	OHIO	F-330( )	

74/109

POR-224-6.22



For Earthwork
Start sheer at sta. 0+00(E) and average ahead with sta. 0+50(E)

	SEEDING LF.	SEEDING SY.	END AREA CUT	END AREA FILL	CU. YDS. EXC.	CU. YDS. EMB.
		358			157	122
	62		61	35		
		364			74	100
	69		18	73		
		308			19	85
			2	19		
ahead area	42		0	200		
back area	90					
		369			17	30
	43		7	21		
		231			17	
	40		10	96		
		178			9	
	23		0	30		

EXCAVATION 473 CY
EMBANKMENT 1112 CY
SEEDING 2428 SY

E.F.T. 4-56
P.L.M. & C.T.C. 5-8-56
C.R.L. ✓ J.F.W. 6-29-56
M.S.B. 8-10-56
C.R.L. 8-14-56

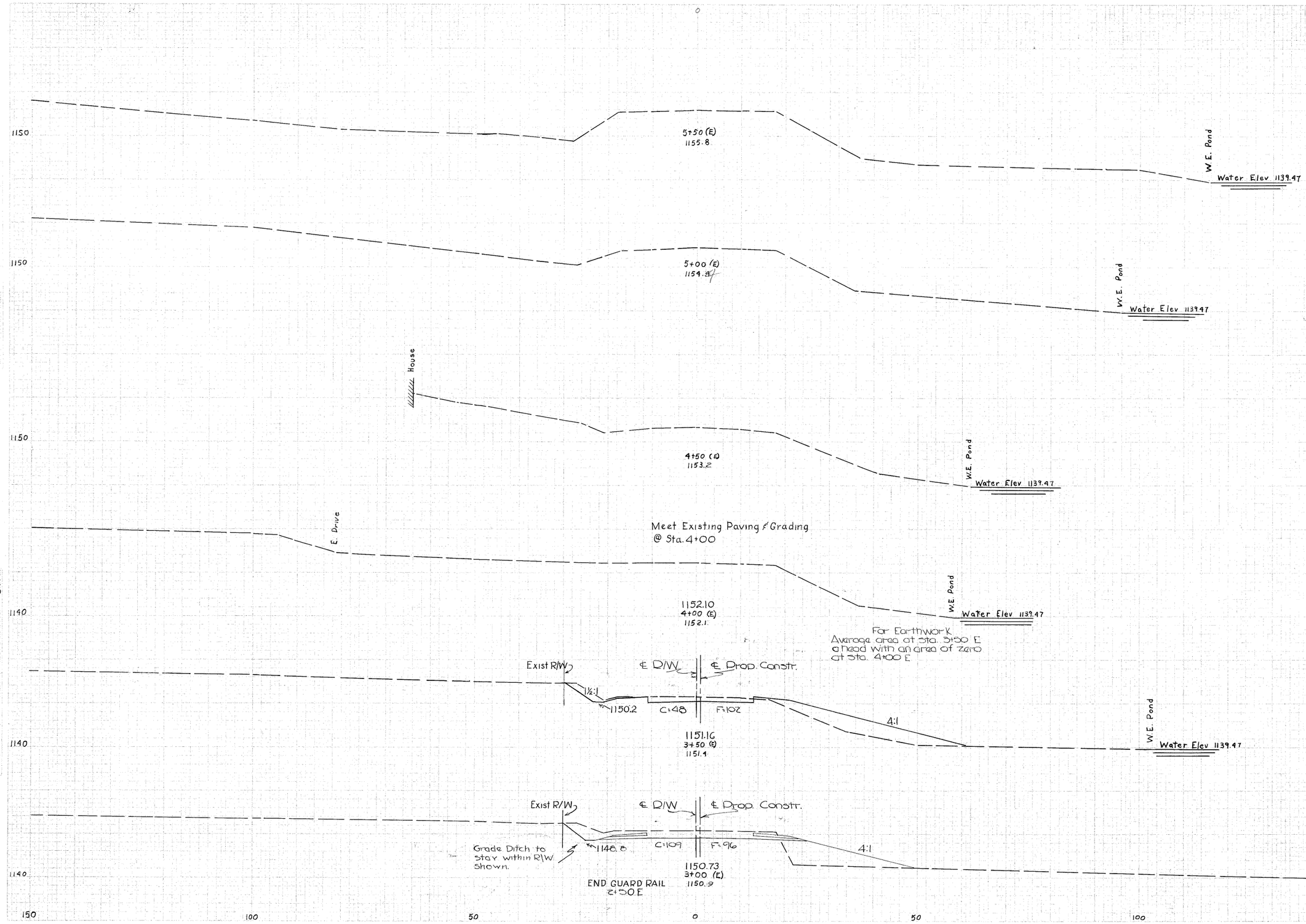
R-A-3

CROSS SECTIONS - STA 0+00(E) TO STA 2+50(E)

FED. RD. DIVISION	STATE	PROJECT	FISCAL YEAR
2	OHIO	F-330 ( )	

75
109

POR-224-



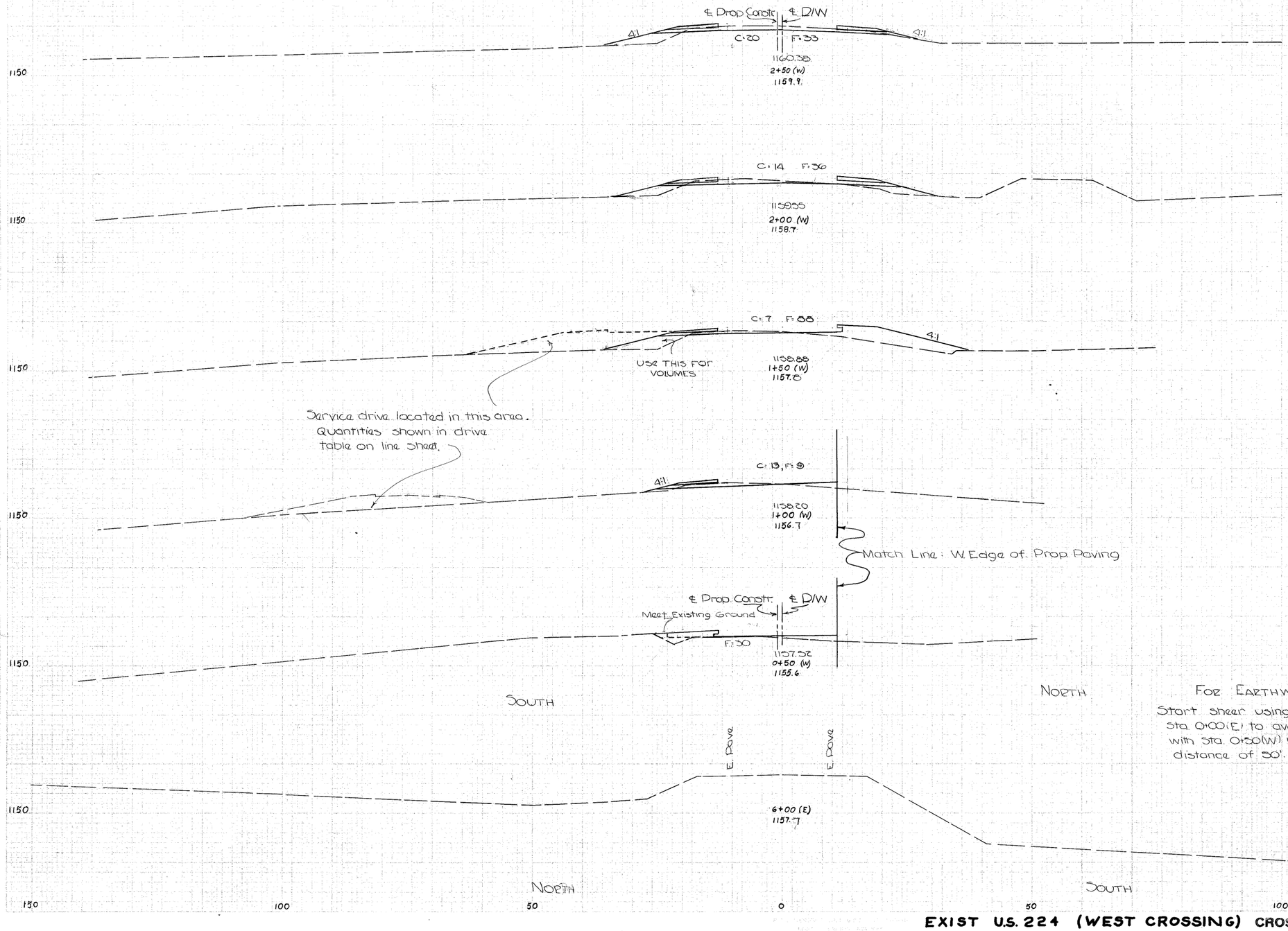
SEEDING LF.	SEEDING SY.	END AREA CUT	END AREA FILL	CU. YDS. EXC.	CU. YDS. EMB.
0		0	0		
	214			44	94
79		48	102		
	406			146	179
67		109	96		

EXIST. U.S. 224 (WEST CROSSING) CROSS SECTIONS - STA 3+00 (E) TO STA 5+50 (E)

FED. RD. DIVISION	STATE	PROJECT	FISCAL YEAR
2	OHIO	F-330(---)	

76
109

POR-224-6.22



	SEEDING		END AREA		CU. YDS.	
	LF.	SY.	CUT	FILL	EXC.	EMB.
		319			41	43
	61		20	33		
		342			31	63
	62		14	36		
		369			20	115
	71		7	88		
		267			19	91
	25		13	9		
		133			12	44
	23		0	38		
		188			0	63
0+00(E)	23		0	30		

EXCAVATION 217 C.Y.
EMBANKMENT 444 C.Y.
SEEDING 1924 SY

For Earthwork
Start sheer using area at sta. 0+00(E) to average ahead with sta. 0+50(W) using a distance of 50'.

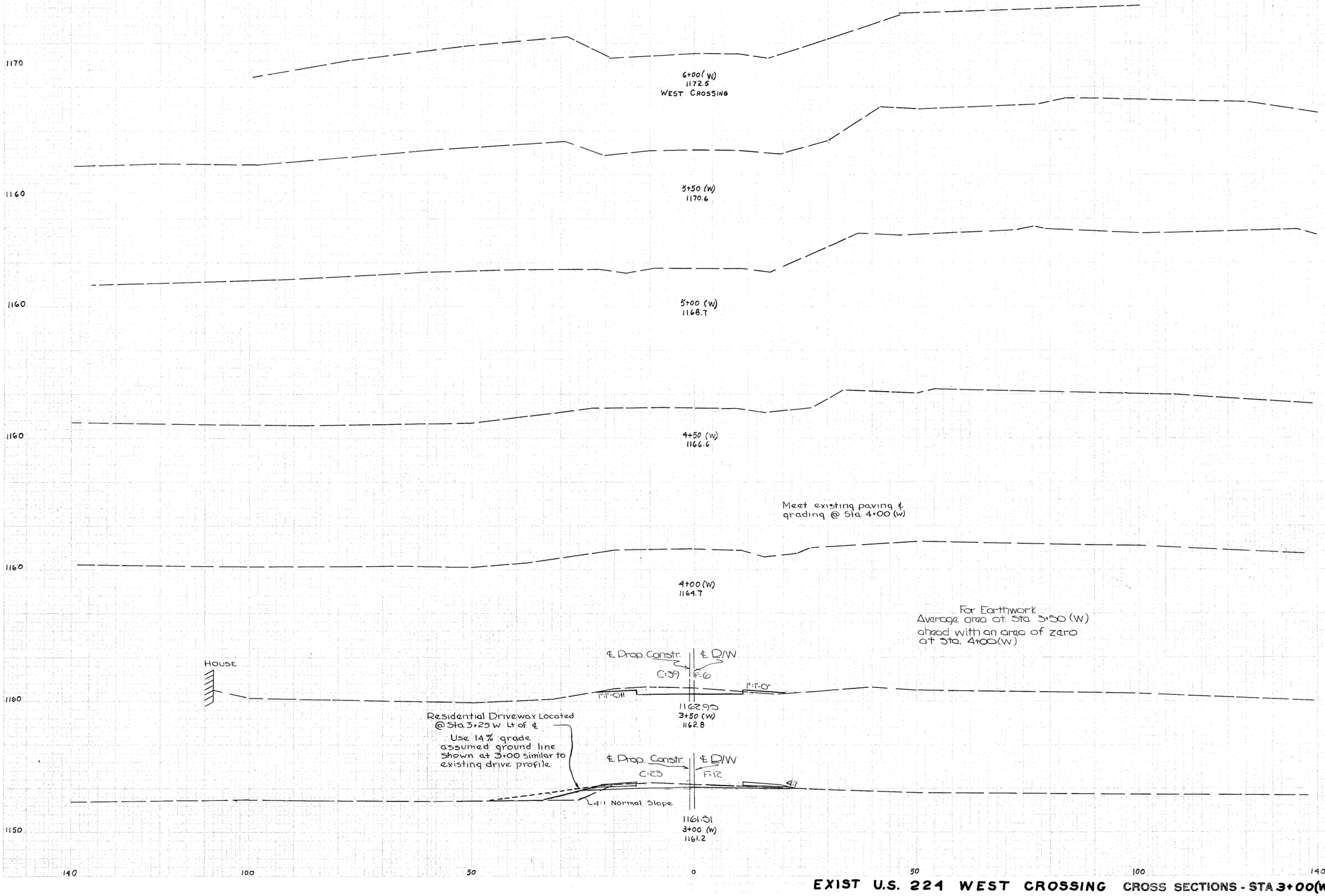
EXIST U.S. 224 (WEST CROSSING) CROSS SECTIONS - STA 6+00 (E) TO STA 2+50 (W)

FED. RD. DIVISION	STATE	PROJECT	FISCAL YEAR
2	OHIO	F-330 ( )	

77
109

POR-224.

SEEDING		END AREA		CU. YDS.	
LF.	SY.	CUT	FILL	EXC.	EMB.
		0	0	0	
		108		37	6
		39		39	6
		258		37	17
		54		23	12



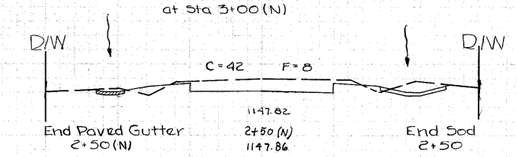
EXIST U.S. 224 WEST CROSSING CROSS SECTIONS - STA 3+00(W) TO STA 6+00 (W)

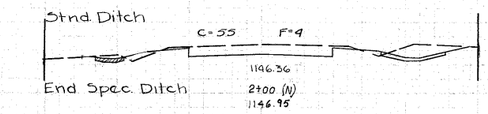
FED. RD. DIVISION	STATE	PROJECT	FISCAL YEAR
2	OHIO	F-330-( )	

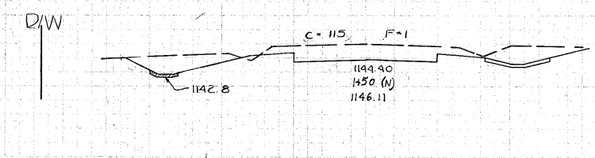
POR-224-6.22

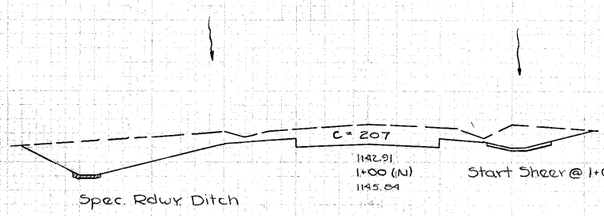
78
109

For Earthwork
Average area at Sta 2+50(N)
ahead with an area of zero
at Sta 3+00(N)

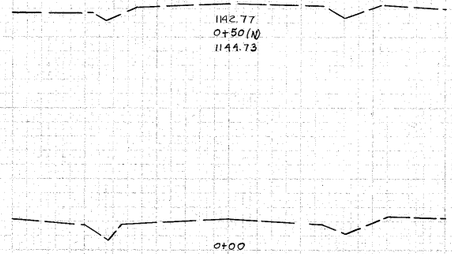








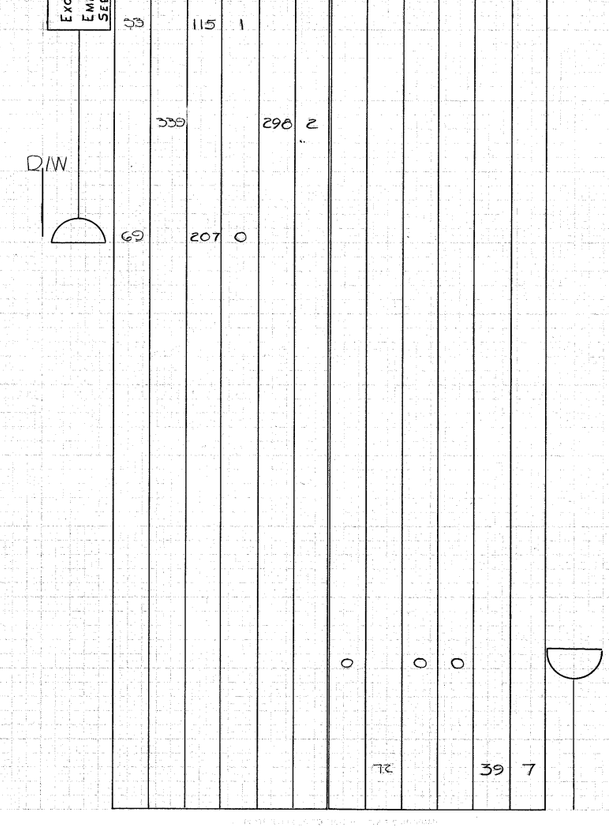
ML. Sections cover C.H. 69 Intersection

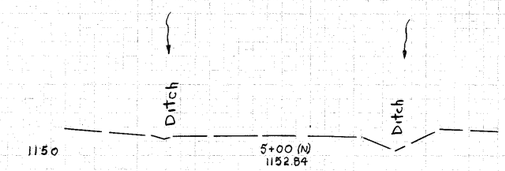


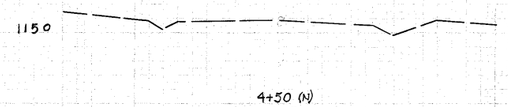
SEEDING		END AREA		CU. YDS.	
LF.	SY.	CUT	FILL	EXC.	EMB.
26		42	8		
	130			91	11
27		55	4		
	222			157	6
28		115	1		
	339			298	2
69		207	0		
				0	
				0	
				0	
	72				39 7

SEEDING		END AREA		CU. YDS.	
LF.	SY.	CUT	FILL	EXC.	EMB.

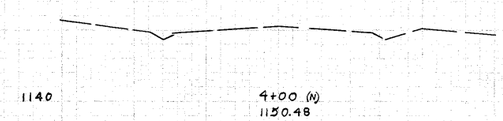
EXCAVATION 585 C.Y.
EMBANKMENT 26 C.Y.
SEEDING 785 S.Y.

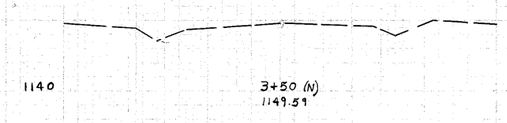


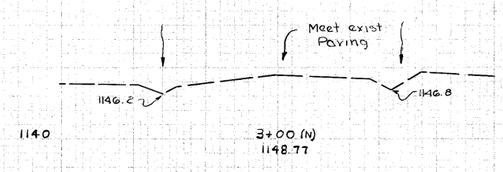




4+50 (N)
1151.54







Limit Of Paving 3+00(N)

30 20 10 0 10 20 30

C.H. 69 CROSS SECTIONS - STA 0+00(N) TO STA 5+00(N)

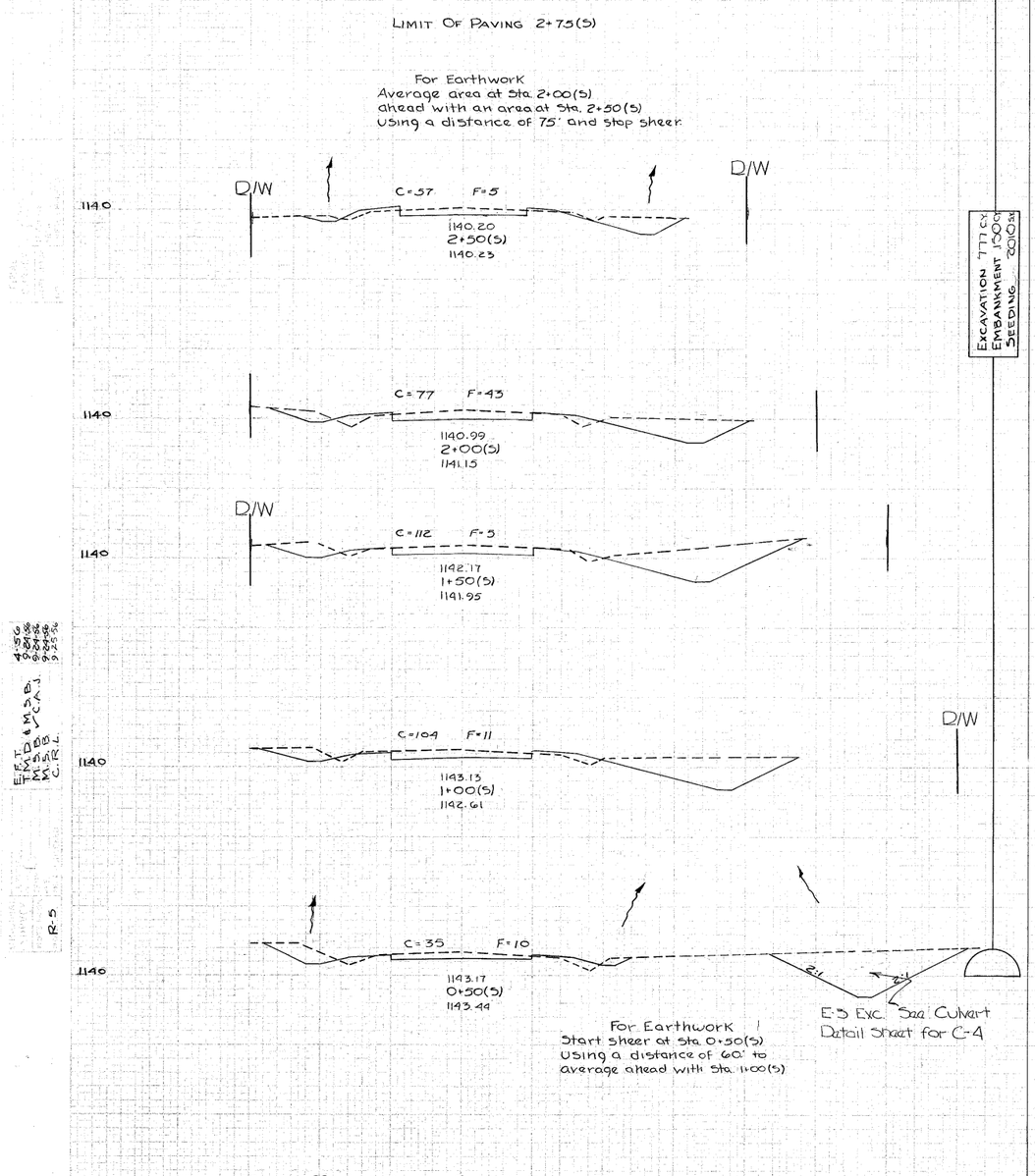
E.F.T.
D.L.M. + CTC.
M.S.B. ✓ CH. J
C.R.L.

1-56
5-24-56
6-28-56
9-25-56

OHIO DEPARTMENT OF HIGHWAYS
R. 5

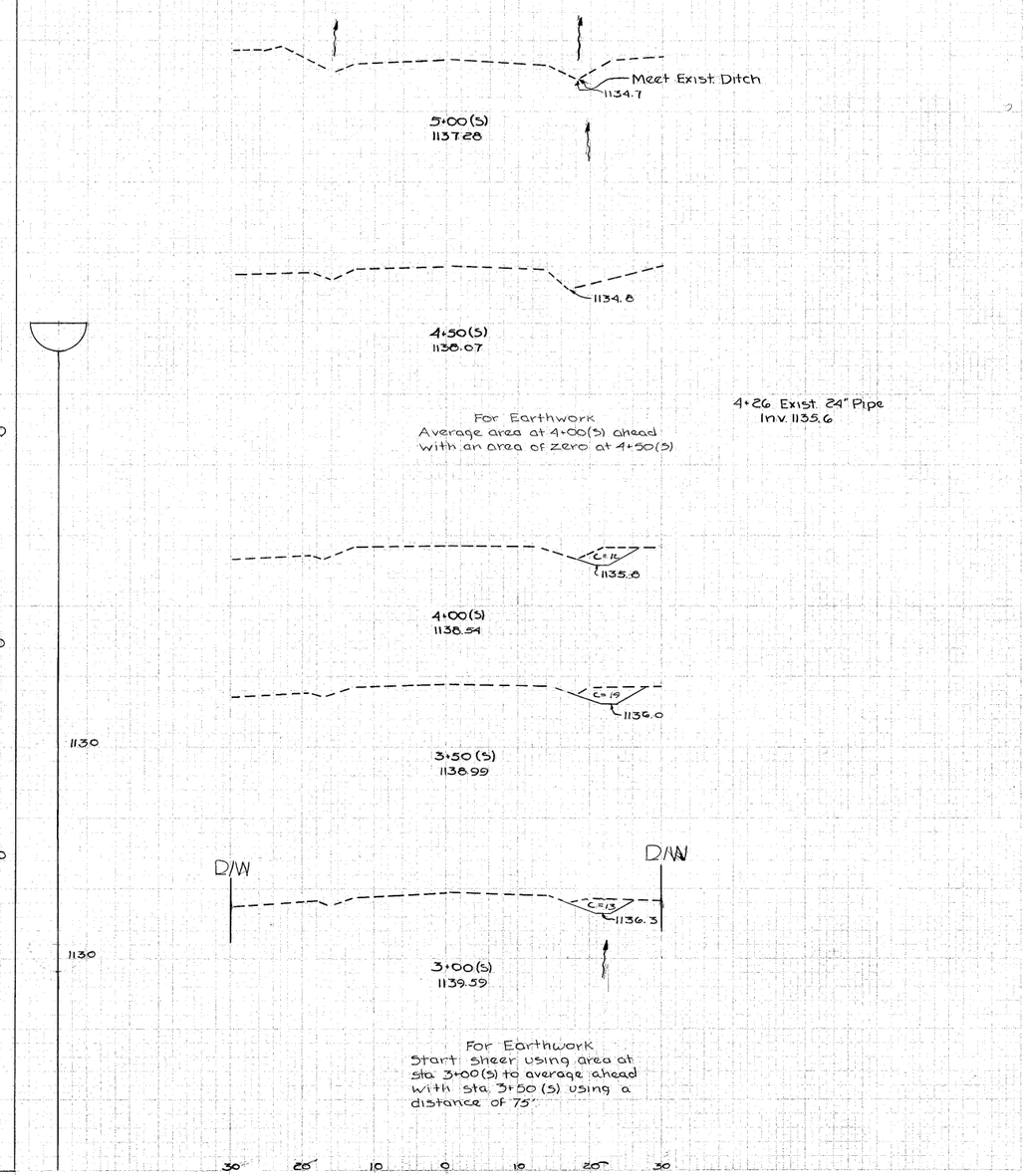
FED. RD. DIVISION	STATE	PROJECT	FISCAL YEAR	79 / 109
2	OHIO	F-330( )		

POR-224



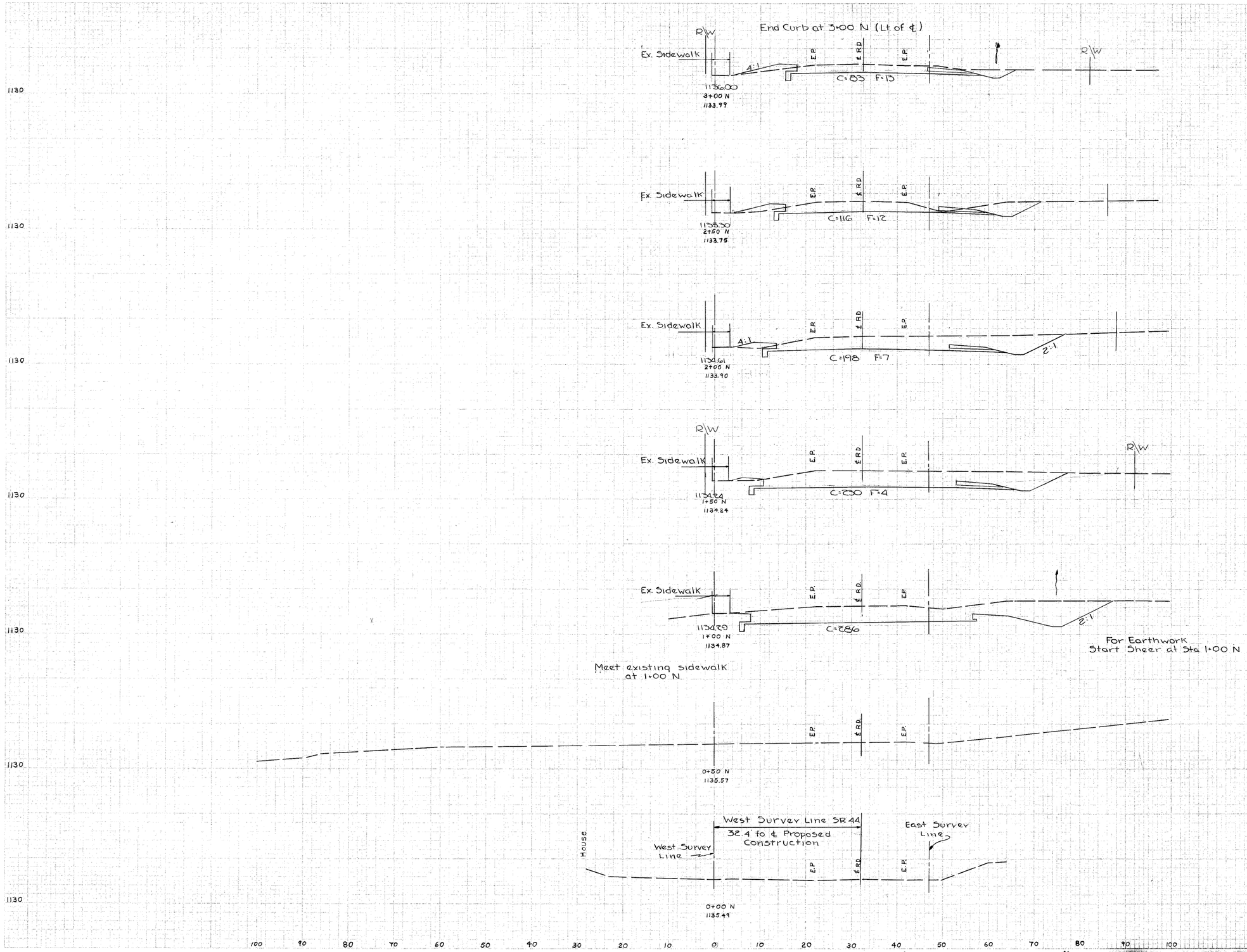
EXCAVATION 777 CY
EMBANKMENT 150 CY
SEEDING 2010 SY

SEEDING LF.	SEEDING SY.	END AREA CUT	END AREA FILL	CU. YDS. EXC.	CU. YDS. EMB.	SEEDING LF.	SEEDING SY.	END AREA CUT	END AREA FILL	CU. YDS. EXC.	CU. YDS. EMB.
55		57	5								
	492			186	67						
						0		0	0		
63		77	43								
							36			11	0
	372			176	44						
71		112	5			13		12	0		
	394			200	15		72			30	0
70		104	11			13		19	0		
	527			130	24		117			44	0
87		35	10			15		13	0		



CH 69 CROSS SECTIONS - STA 0+50(S) TO STA 5+00(S)

FED. RD. DIVISION 2 | STATE OHIO | PROJECT E 330 ( ) | FISCAL YEAR | 88 / 109
POR-224-6.22



SEEDING LF.	SEEDING SY.	END AREA CUT	END AREA FILL	CU. YDS. EXC.	CU. YDS. EMB.
45		83	13		
	247			184	23
44		116	12		
	253			291	18
47		198	7		
	250			396	10
43		230	4		
	247			477	4
46		286	0		
	128			265	0
0		0	0		

EXCAVATION 1755 C.Y.
EMBANKMENT 69 C.Y.
SEEDING 1387 SY

M.M. & J.F.W. 4-56
L.N.K. 7-6-56
J.F.W. 8-23-56
M.S.B. 9-25-56
T.M.D. 9-25-56

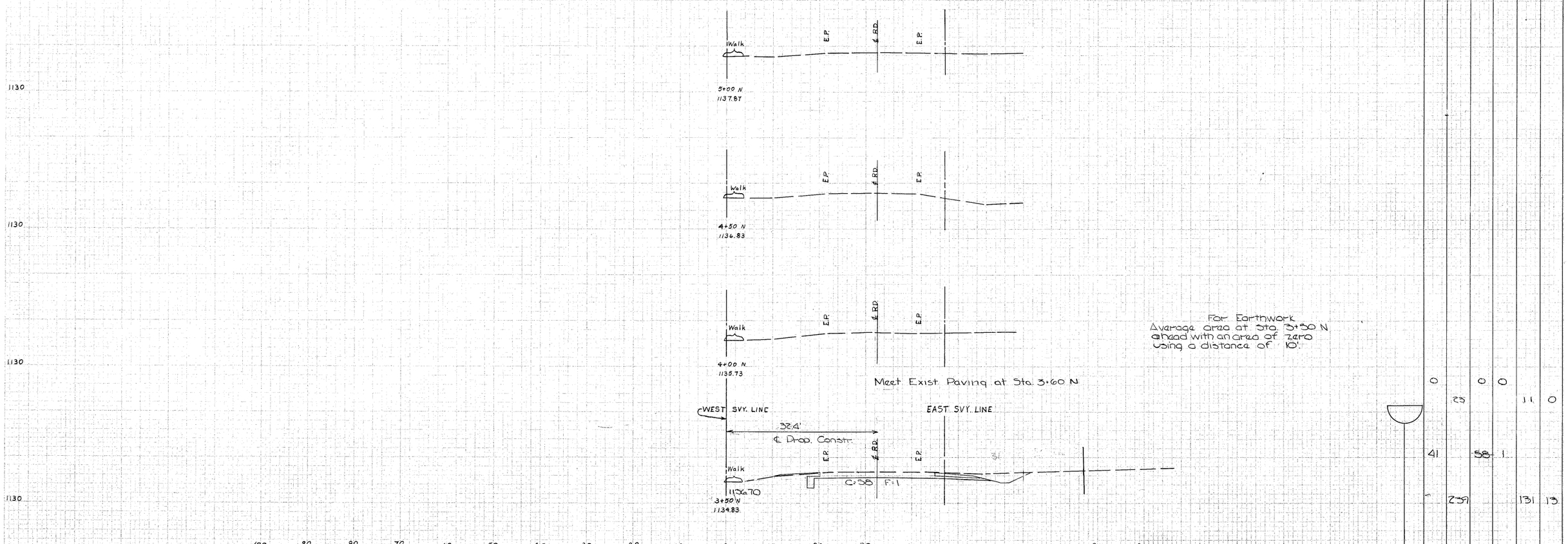
R-3

STATE ROUTE #44 CROSS SECTIONS - STA 0+00 N TO STA 3+00 N

2	OHIO	330		

POR-224-6.22

SEEDING		END AREA		CU YDS.	
LF	SY	CUT	FILL	EXC	EMB



For Earthwork
Average area at Sta. 3+50 N
ahead with an area of zero
using a distance of 10'.

0		0	0		
	23			11	0
41		58	1		
	239			131	13

M.M. 9-56
LNK + J.F.W. 7-9-56
J.F.W. 8-23-56
M.S.B. 9-25-56
T.M.D. 9-26-56

R-3

STATE ROUTE #44 CROSS SECTIONS STA 3+50 N TO STA 5+00 N

FED. RD. DIV. SIGN.	STATE	PROJECT	FISCAL YEAR	
2	OHIO	F-330 ( )		82 / 109

POR-224-6.22

EXCAVATION 498 CY
EMBANKMENT 128 CY
SEEDING 1236 SY

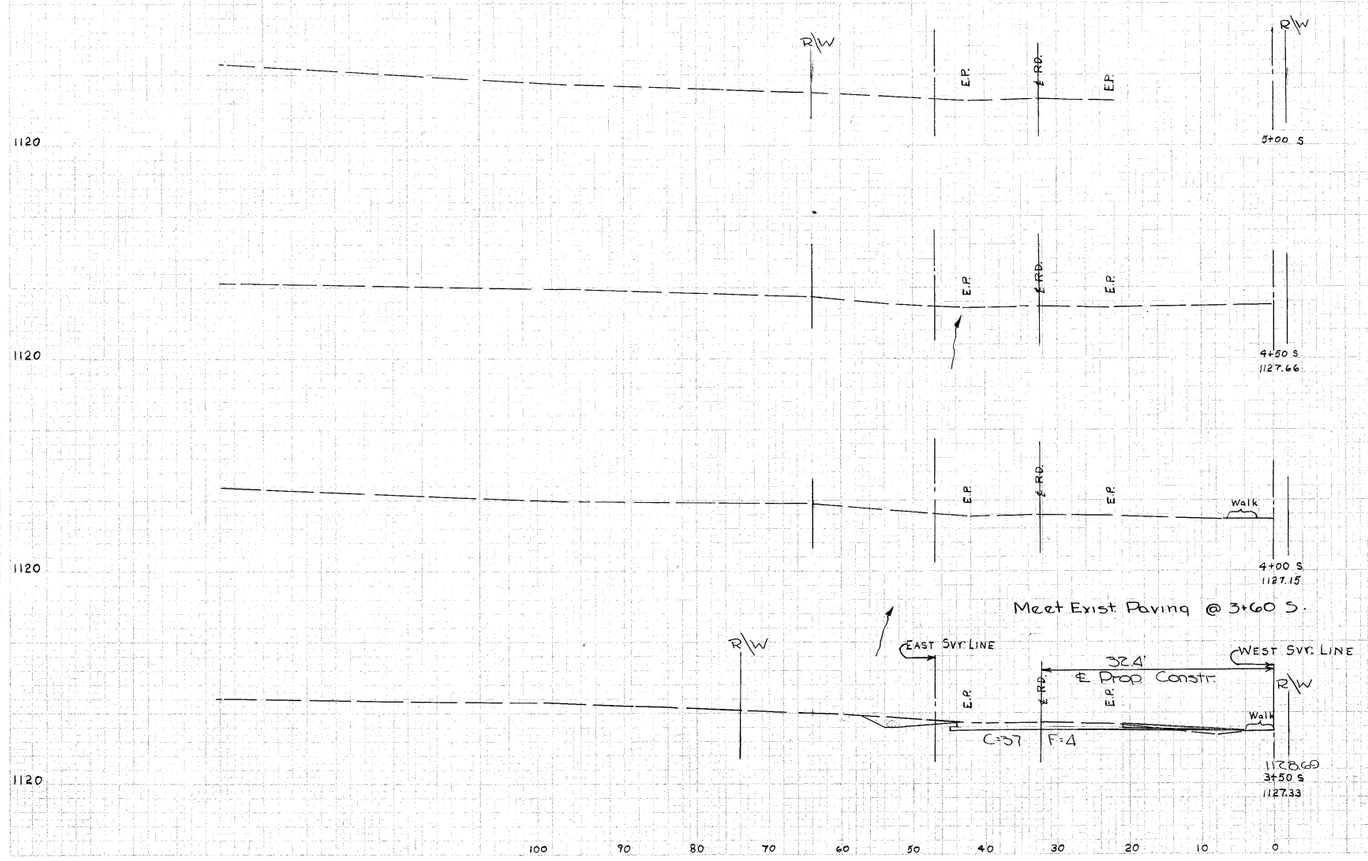
SEEDING LF.	SEEDING SY.	END AREA CUT	END AREA FILL	CU. YDS. EXC.	CU. YDS. EMB.
45		70	3		
	250			136	3
45		77	0		
	244			127	0
43		60	0		
	217			83	20
35		30	22		
	181			37	57
30		10	40		
	83			9	37
0		0	0		

STATE ROUTE #44 CROSS SECTIONS - STA 0+50 S TO STA 3+00 S

FED. RD. DIVISION	STATE	PROJECT	FISCAL YEAR	
2	OHIO	F-330( )		83 / 109

POR-224-6.22

SEEDING LF.	SEEDING SY.	END AREA CUT	END AREA FILL	CU. YDS. EXC.	CU. YDS. EMB.
0		0	0		
	23			7	1
41		37	4		
	239			99	7



For Earthwork
Average area at Sta. 3+50 S ahead with an area of zero using a distance of 10'.

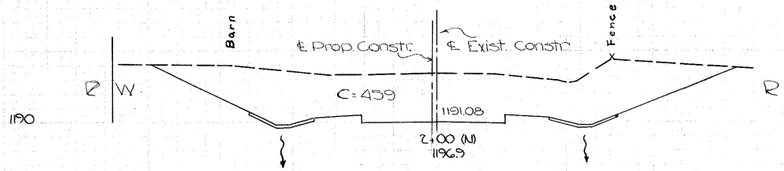
M.M. 4-56
L.N.K. + J.F.W. 7-9-56
J.F.W. 8-23-56
M.S.B. 9-26-56
T.M.D. 9-26-56

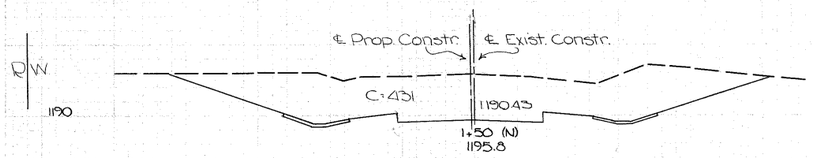
R-3

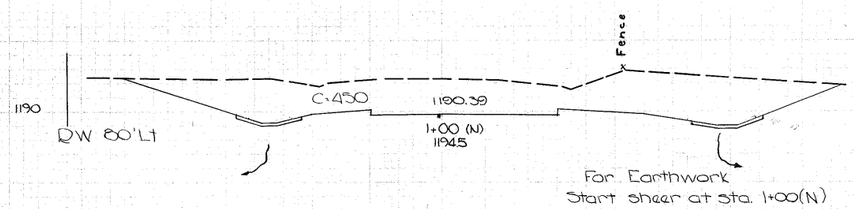
STATE ROUTE #44 CROSS SECTIONS - STA 3+50 S TO STA 5+00 S

FED. RD. DIVISION	STATE	PROJECT	FISCAL YEAR
2	OHIO	E-330( )	

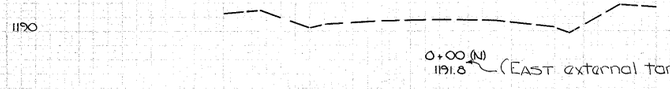
POR-224-G.22







For Earthwork
Start sheer at sta. 1+00(N)



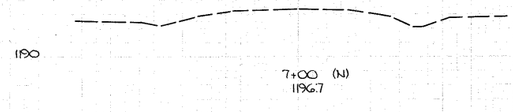
30 20 10 0 10 20 30

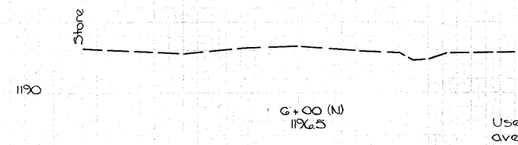
RW 100' Rt.

EXCAVATION 4346 CY
EMBANKMENT 0 CY
SEEDING 2636 SY

SEEDING LF.	SEEDING SY.	END AREA CUT	END AREA FILL	CU. YDS. EXC.	CU. YDS. EMB.
	325			812	0
57		459	0		
	339			824	0
65		431	0		
	403			817	0
80		450	0		

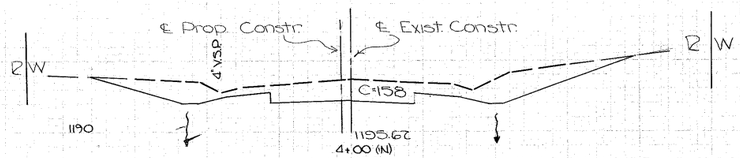
SEEDING LF.	SEEDING SY.	END AREA CUT	END AREA FILL	CU. YDS. EXC.	CU. YDS. EMB.
0		0	0		
	422			293	0
76		158	0		
	794			1037	0
67		402	0		
	353			761	0
60		419	0		



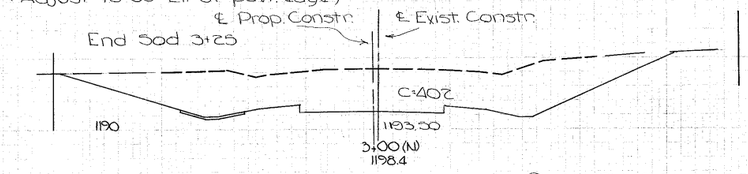


For Earthwork
Use area at Sta 4+00(N) to average ahead with an area of zero using a distance of 100

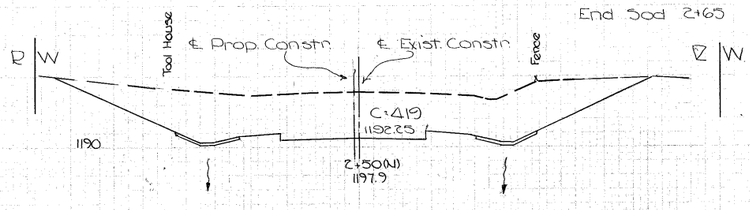
Note:
Proposed paving to meet South edge of Exist. 224 paving



Drive - Lt. of Sta. 3+40 N
14 % Grade
(Adjust to 35' Lt. of pavt. edge)



Drive - Rt. of Sta. 2+85 N
14 % Grade
(Adjust to 85' Rt. of pavt edge)



30 20 10 0 10 20 30

C.H. 31 CROSS SECTIONS - STA 0+00(N) TO STA 7+00 (N)

4-56
7-56
5-06
8-15-06

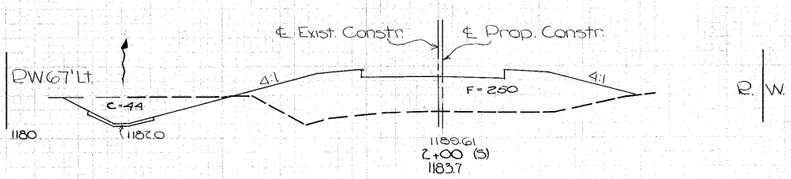
FILE: DLM...
HLS D
DZN D
MSB

RA-3

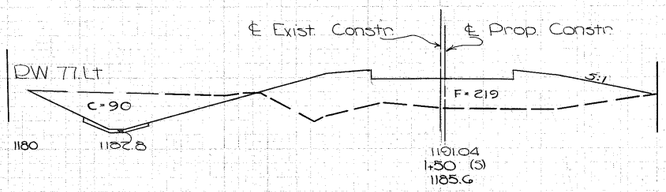
FED. RD. DIVISION	STATE	PROJECT	FISCAL YEAR
2	OHIO	F-330( )	

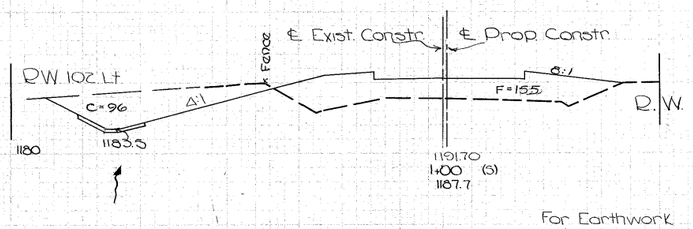
55
109

POR-224-G.22



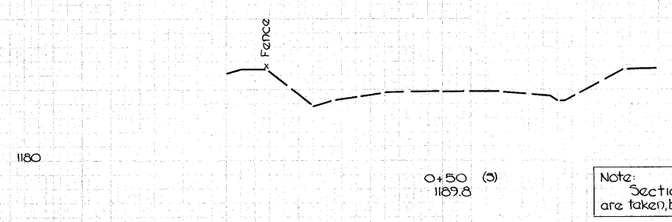
Drive Rt. of Sta. 1+55 (S)
Adjust to 25' of pavt. edge



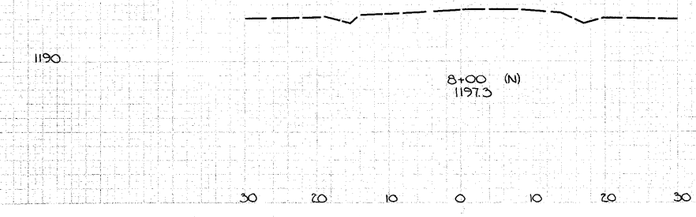


Spec. Rdwy. Ditch

For Earthwork
Start Shear at Sta. 1+00 (S)



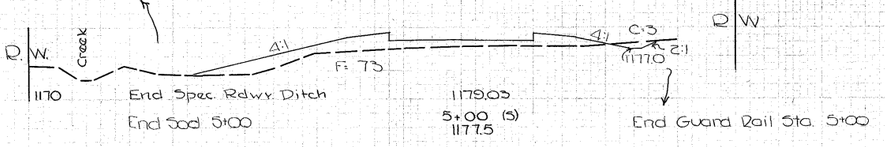
Note:
Sections from 0+00(S) to 2+00(S) are taken based on ℄ Exist. Constr. as ℄.

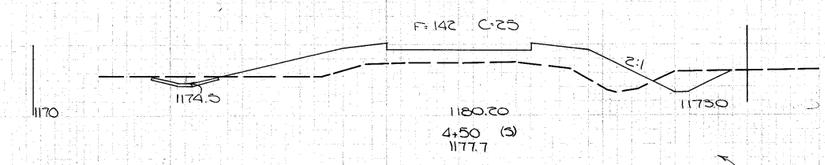


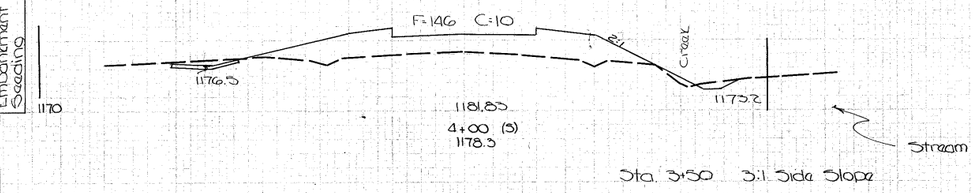
SEEDING LF.	SEEDING SY.	END AREA CUT	END AREA FILL	CU. YDS. EXC.	CU. YDS. EMB.
	406			76	480
72		44	250		
	394			124	435
70		90	219		
	381			172	346
67		96	155		

SEEDING LF.	SEEDING SY.	END AREA CUT	END AREA FILL	CU. YDS. EXC.	CU. YDS. EMB.
55		3	73		
	336			26	200
66		25	142		
	375			33	267
69		10	146		
	761			35	715
68		9	240		
	394			43	470
74		37	267		

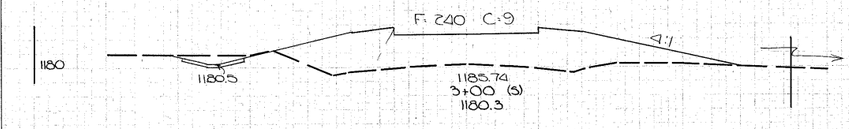
Excavation 817 C.Y.
Embankment 2006 C.Y.
Seeding 5746 S.Y.

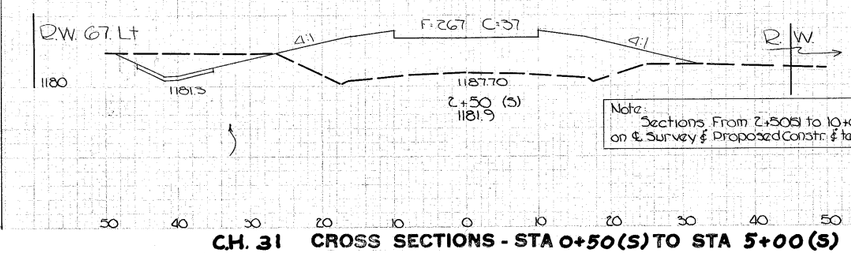






Sta. 3+50 3:1 Side Slope
Begin Guard Rail





Note:
Sections From 2+50(S) to 10+00(S) are based on ℄ Survey & Proposed Constr. & taken as ℄.

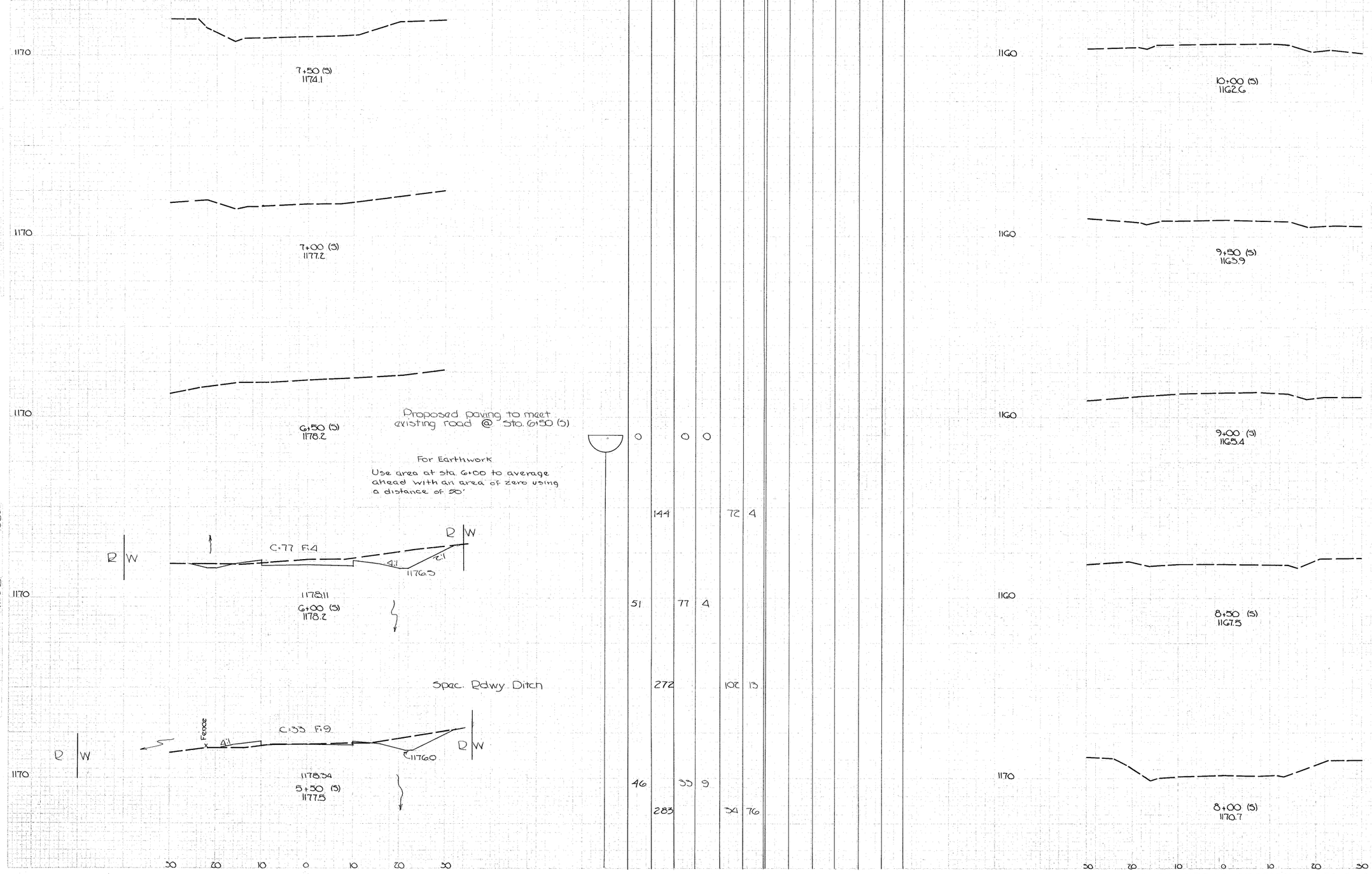
30 20 10 0 10 20 30 40 50

C.H. 31 CROSS SECTIONS - STA 0+50(S) TO STA 5+00(S)

FED. RD. DIVISION	STATE	PROJECT	FISCAL YEAR
2	OHIO	F-330( )	

86/109

POR-224-6.22



SEEDING LF.	SEEDING SY.	END AREA CUT	END AREA FILL	CU. YDS. EXC.	CU. YDS. EMB.
0		0	0		
	144			72	4
51		77	4		
	272			102	13
46		33	9		
	283			34	76

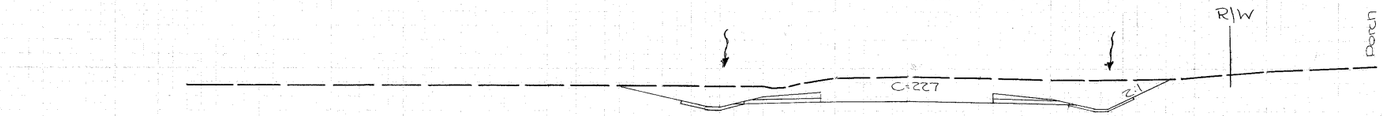
CH. 31 CROSS SECTIONS - STA 5+50(S) TO STA 10+00(S)

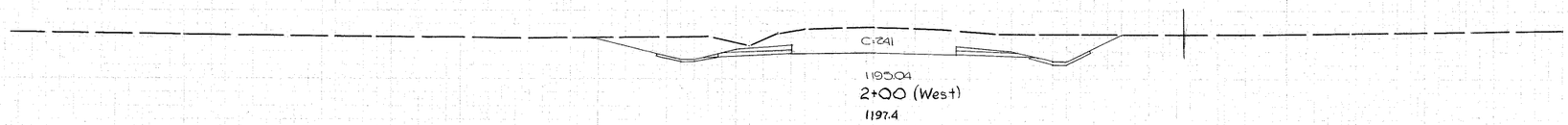
FED. RD. DIVISION	STATE	PROJECT	FISCAL YEAR
2	OHIO	F-330( )	

87
109

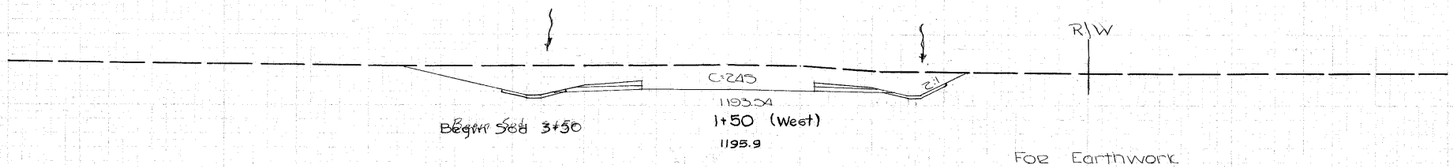
POR-224-6.22

SEEDING		END AREA		CU. YDS.	
LF.	SY.	CUT	FILL	EXC.	EMB.
57		227	0		
	315			433	0
56		241	0		
	317			450	0
58		245	0		

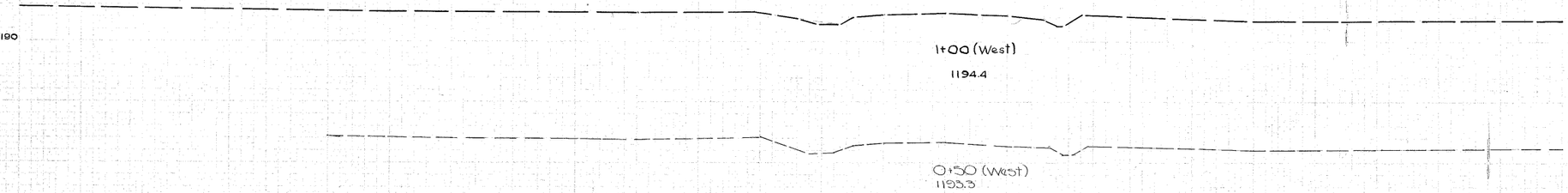




Drive located on Rt. - Sta. 1+75(±)
8% Slope
Tie in 38' Rt. of edge paving



For Earthwork.
Start sheer at sta. 1+50 W
(See Note on sheet No.)



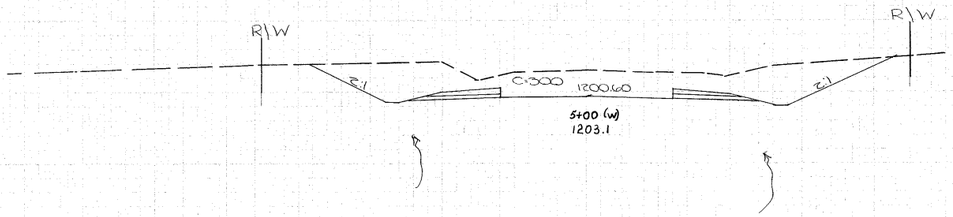
150 100 50 0 50 100 140

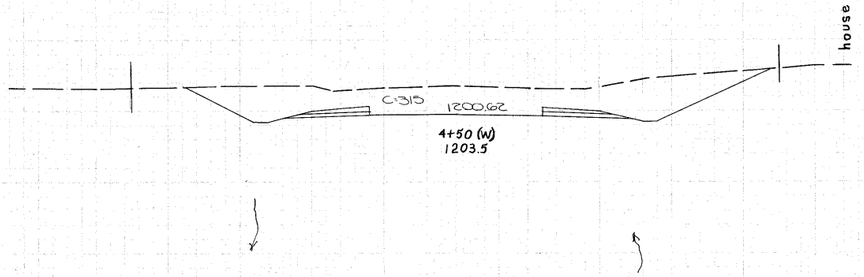
EXIST. U.S. 224 (EAST CROSSING) CROSS SECTIONS - STA 0+50(W) TO STA 2+50(W)

FED. RD. DIVISION	STATE	PROJECT	FISCAL YEAR
2	OHIO	E-339( )	

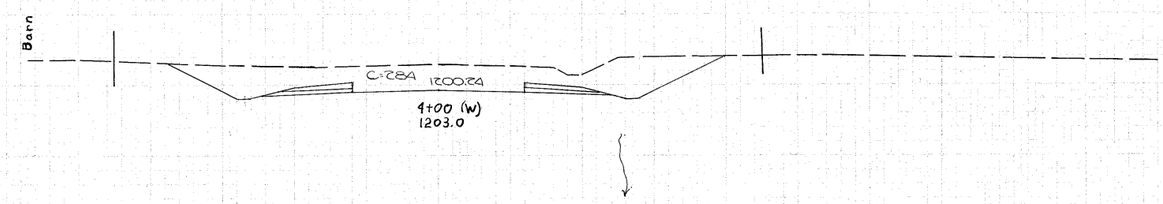
88
109

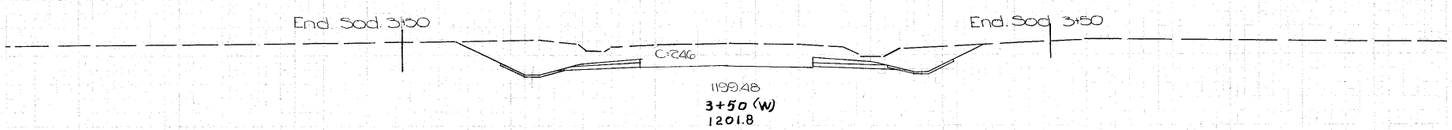
POR-224-6.22

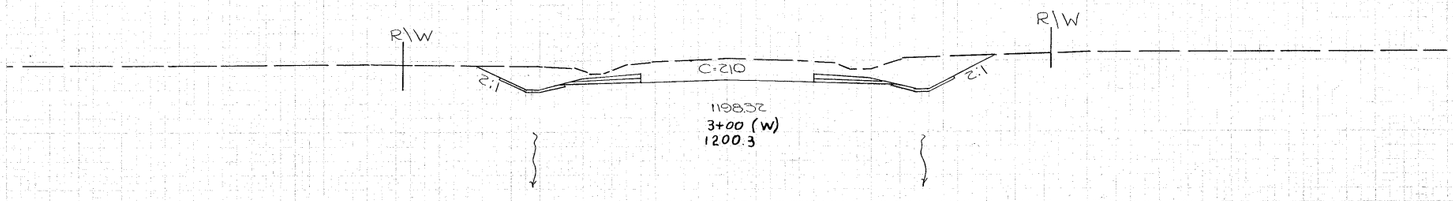




Drive located on Rt. - Sta. 4+20
12% Slope
Tie in 48' Rt. of edge paving



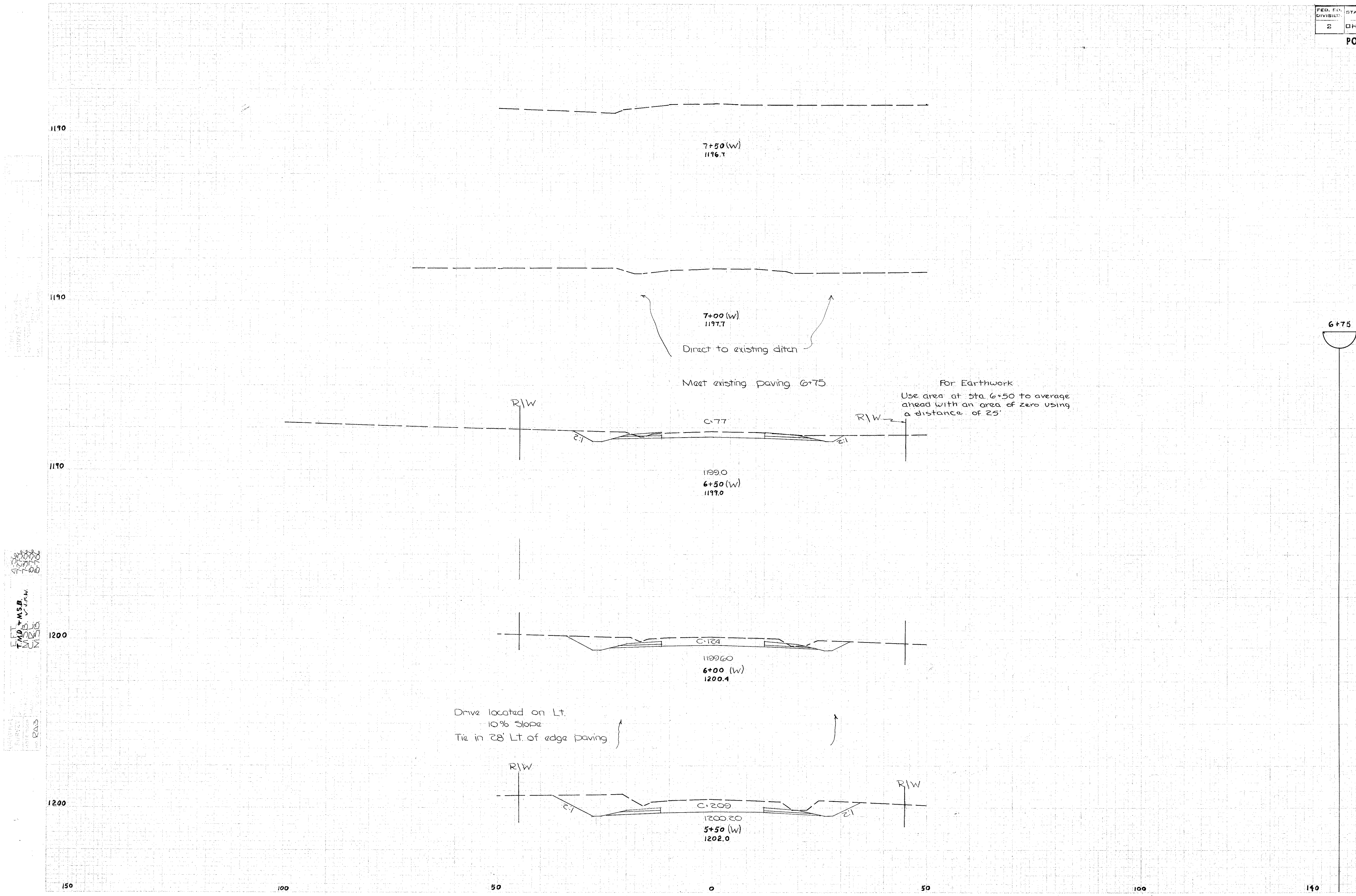




EXCAVATION 4332 C.Y.
EMBANKMENT 0 C.Y.
SEEDING 3690 S.Y.

SEEDING LF.	SEEDING SY.	END AREA CUT	END AREA FILL	CU. YDS. EXC.	CU. YDS. EMB.
80		300	0		
	447			570	0
81		315	0		
	436			556	0
76		284	0		
	361			491	0
54		246	0		
	295			422	0
52		210	0		
	303			406	0

EXIST. U.S. 224 (EAST CROSSING) CROSS SECTIONS - STA 3+00(W) TO STA 5+00 (W)



Station	SEEDING L.F.	SEEDING S.Y.	END AREA CUT	END AREA FILL	CU. YDS. EXC.	CU. YDS. EMB.
6+75	0		0	0		
		83			36	0
	60		77	0		
		344			187	0
	64		124	0		
		372			309	0
	70		209	0		
		417			472	0

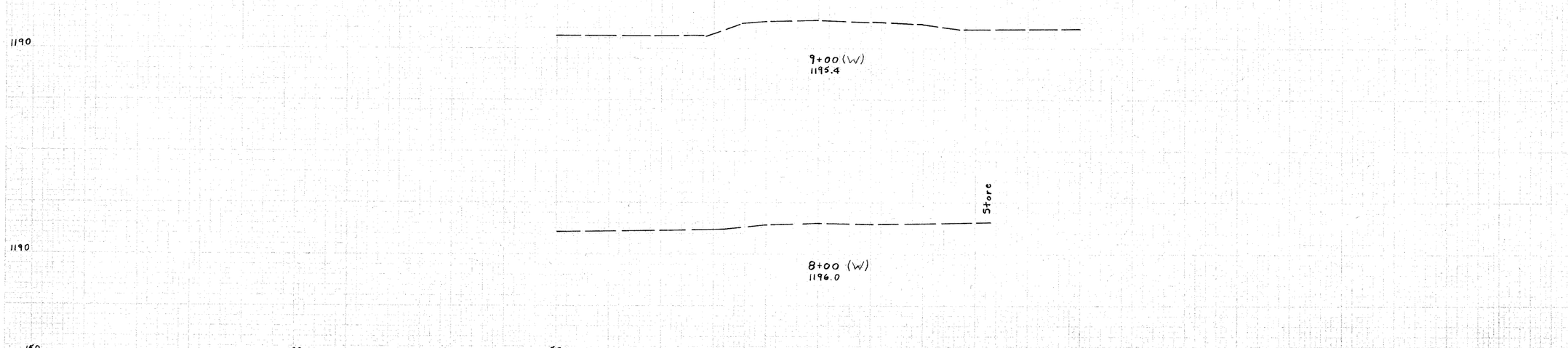
EXIST. U.S. 224 (EAST CROSSING) CROSS SECTIONS - STA 5+50(W) TO STA 7+50(W)

FED. RD. DIVISION	STATE	PROJECT	FISCAL YEAR
2	OHIO	F-330 ( )	

90
109

POR-224-6.22

SEEDING		END AREA		CU. YDS.	
LF.	SY.	CUT	FILL	EXC.	EMB.



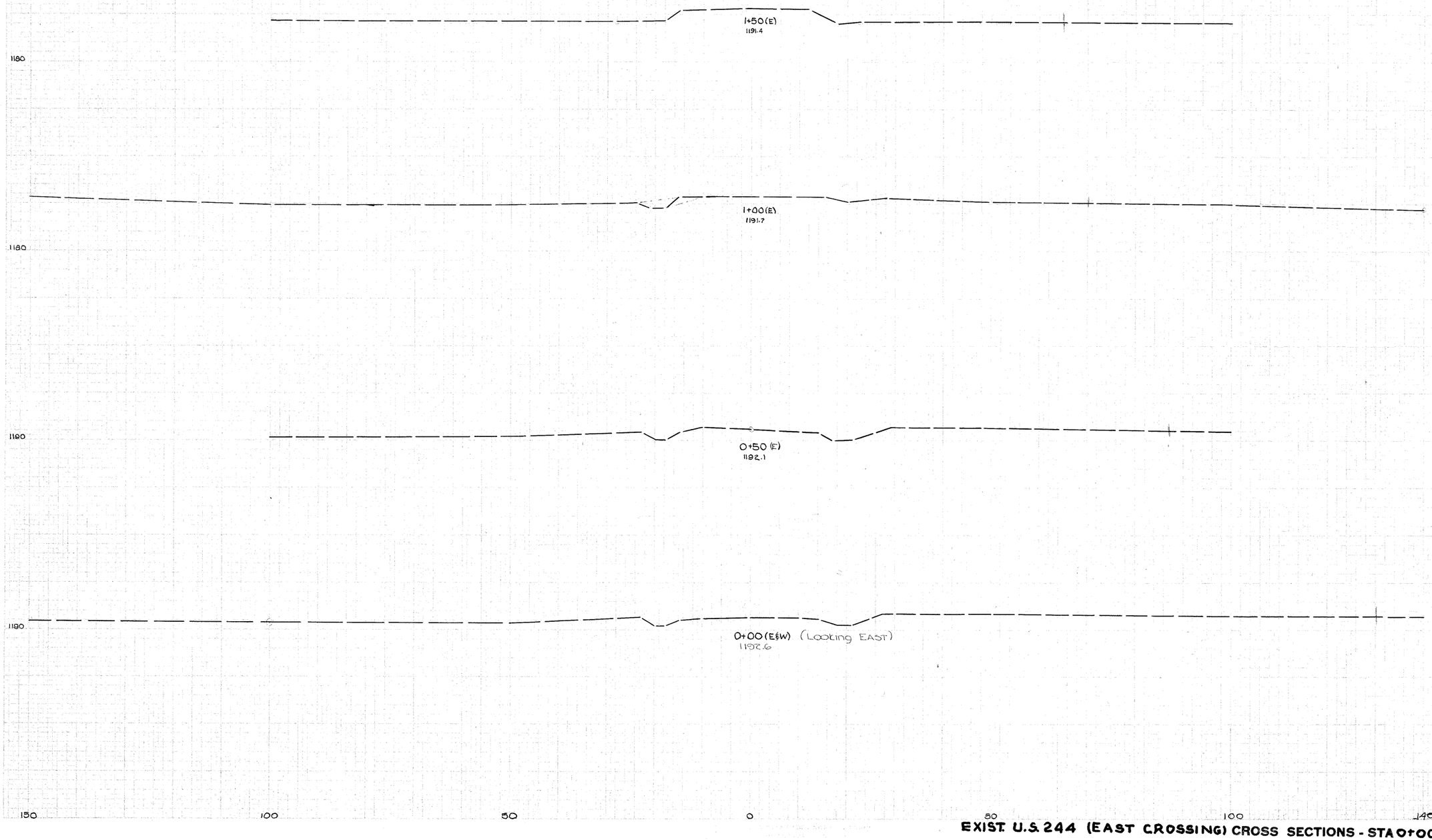
EXIST. U.S. 224 (EAST CROSSING) CROSS SECTIONS - STA 8+00(W) TO STA 9+00(W)

FED. RD. DIVISION	STATE	PROJECT	FISCAL YEAR
8	OHIO	F-330( )	

91
109

POR-224-6.22

SEEDING		END AREA		CU. YDS.	
LF.	SY.	CUT	FILL	EXC.	EMB.



EXIST. U.S. 244 (EAST CROSSING) CROSS SECTIONS - STA 0+00(E) TO STA 1+50(E)

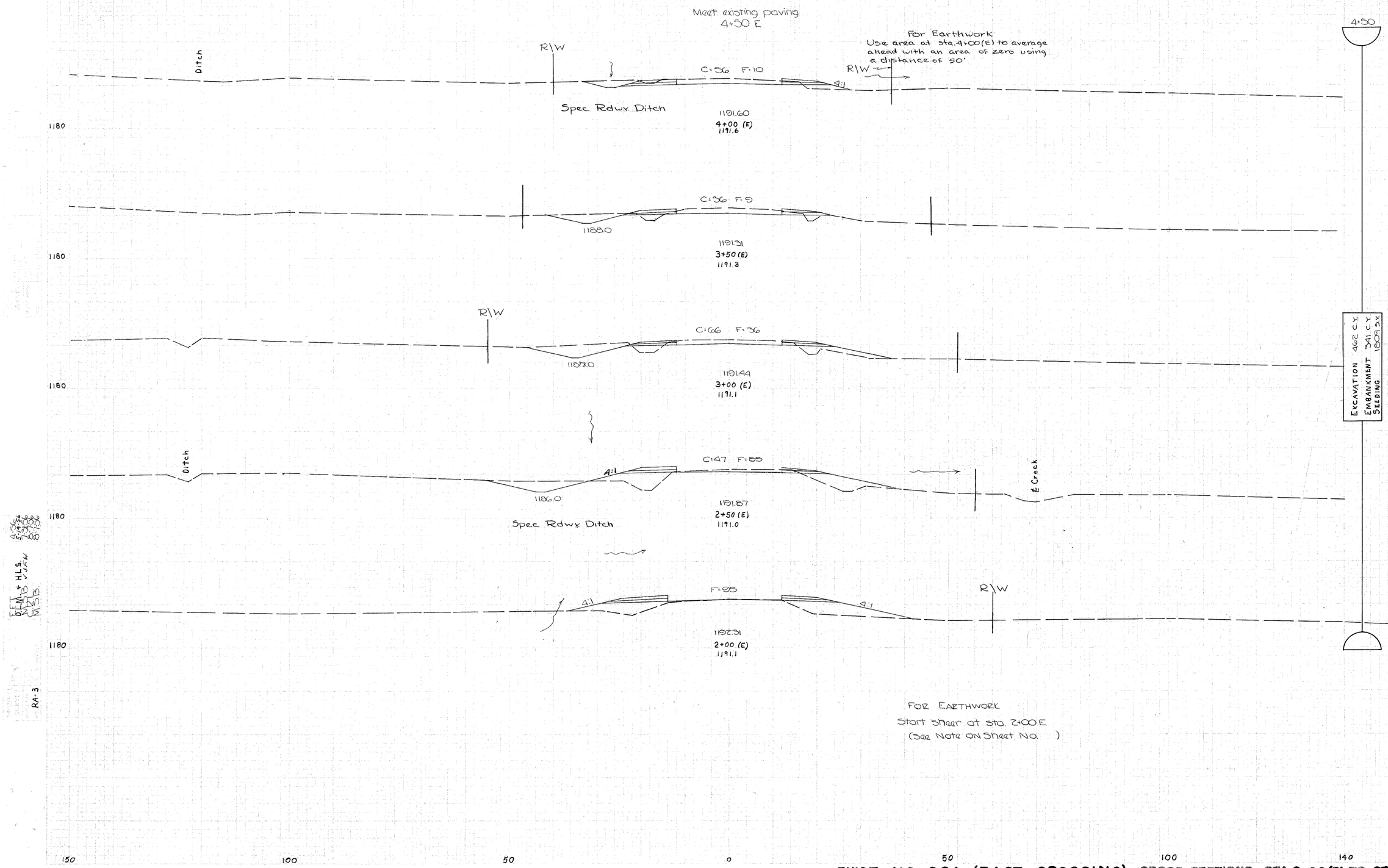
EFI
H.L.S & D.L.M. 4-76 5-2456

RA3

FED. RD. DIVISION	STATE	PROJECT	FISCAL YEAR
2	OHIO	F-330( )	

92
109

POR-224-6.22



SEEDING LF.	SEEDING SY.	END AREA CUT	END AREA FILL	CU. YDS. EXC.	CU. YDS. EMB.
	161			52	9
58		56	10		
	331			104	19
61		56	9		
	391			113	43
80		66	36		
	465			106	113
91		47	85		
	461			87	157
75		0	95		

FOR EARTHWORK
Start sheet at sta. 2+00 E
(See Note on Sheet No.)

EXIST. U.S. 224 (EAST CROSSING) CROSS SECTIONS - STA 2+00(E) TO STA 4+00 (E)

RA-3

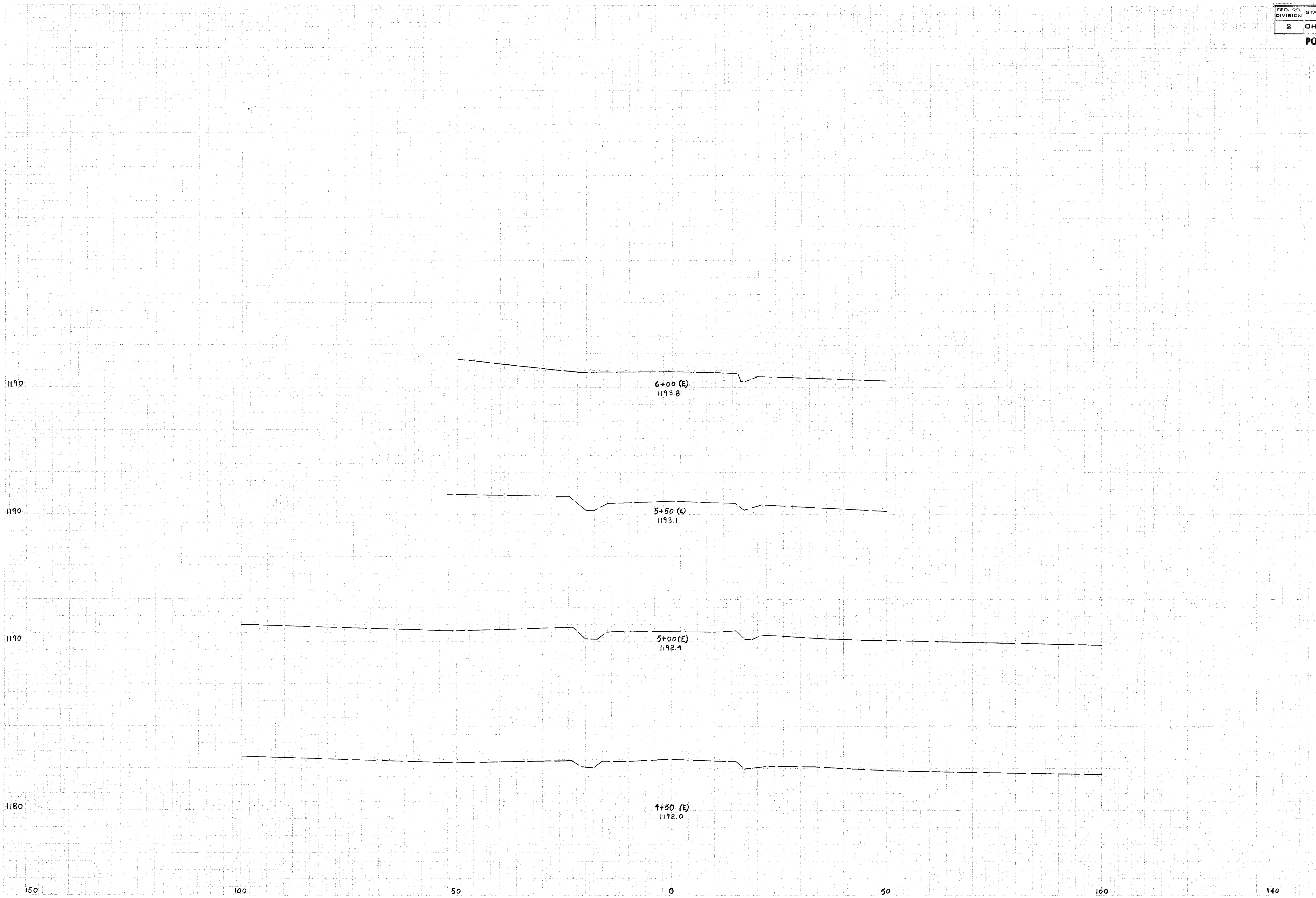
FED. RD. DIVISION	STATE	PROJECT	FISCAL YEAR
2	OHIO	F-330 ( )	

93/109

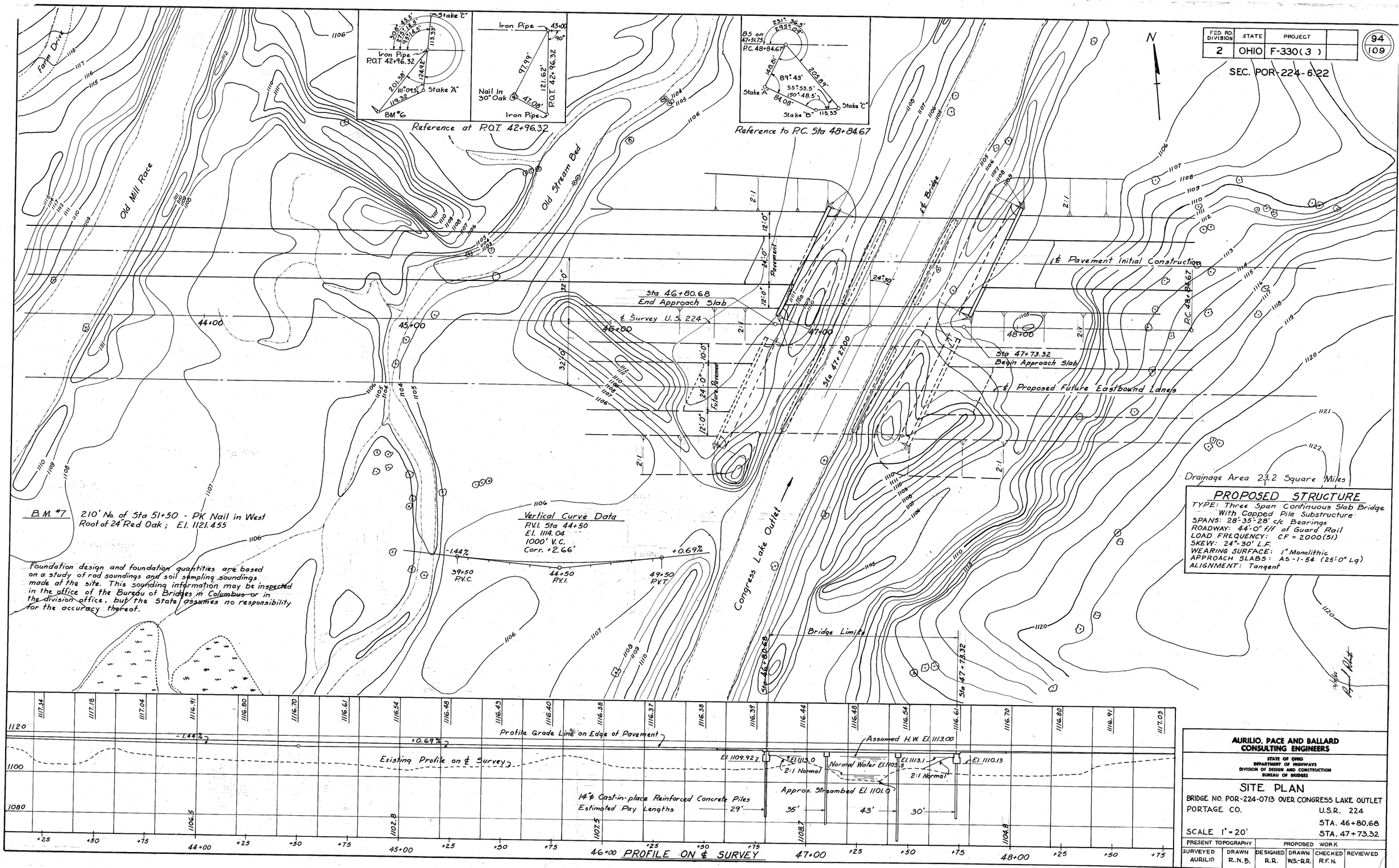
POR-224-6.22

SEEDING		END AREA		CU. YDS.	
LF.	SY.	CUT	FILL	EXC.	EMB.
0			0	0	

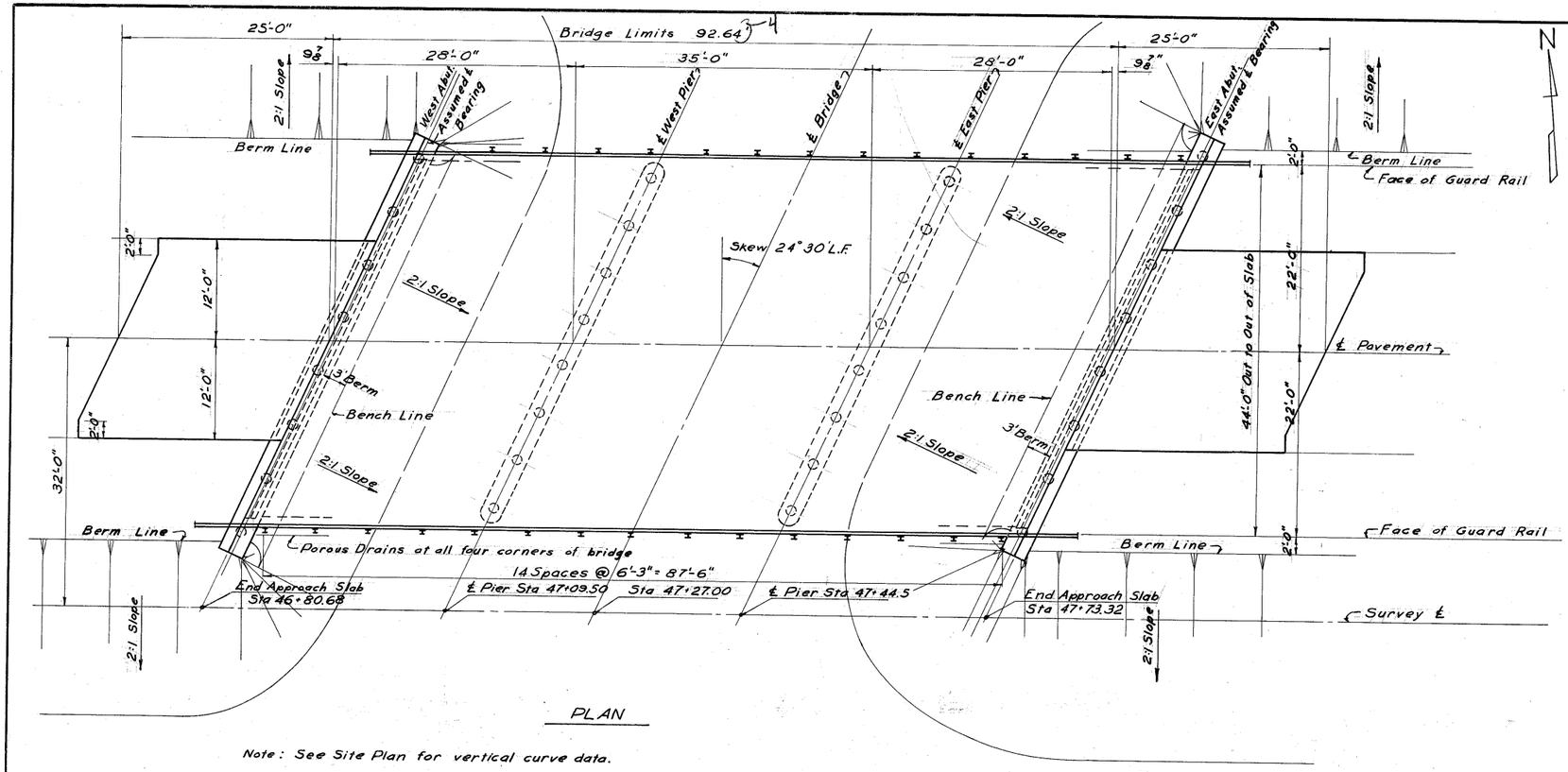
E.F.T.
D.L.M. + H.L.S.
4-56
5-14-56
RA-3



EXIST. U.S. 224 (EAST CROSSING) CROSS SECTIONS - STA 4+50(E) TO STA 6+00 (E)

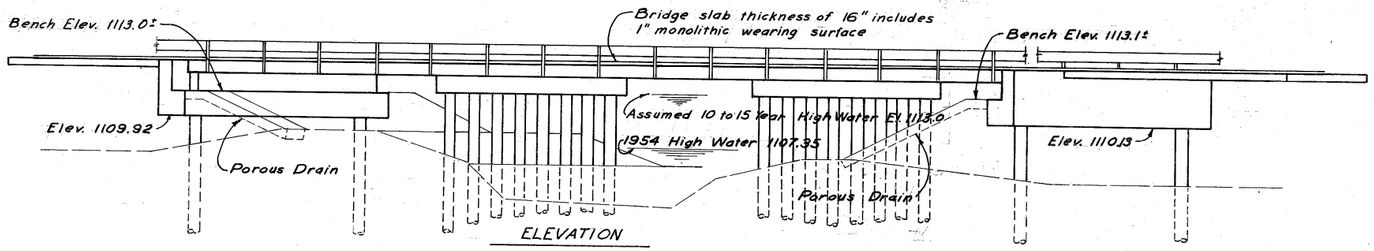


FED. RD. DIVISION 2
STATE OHIO
PROJECT F-330(3)
94/109
SEC. POR-224-6.22
N
Reference at P.O.T. 42+96.32
Iron Pipe
P.O.T. 42+96.32
Stake "C"
Stake "A"
Stake "B"
Nail In 30" Oak
BM #6
Reference to P.C. Sta 48+84.67
BS on 47+51.75
P.C. 48+84.67
Farm Drive
Old Mill Race
Old Stream Bed
Sta 46+80.68
End Approach Slab
℄ Survey U.S. 224
℄ Pavement Initial Construction
℄ Bridge
Sta 47+73.32
Begin Approach Slab
℄ Proposed Future Eastbound Lanes
Sta 47+27.00
Future Pavement
Pavement
Congress Lake Outlet
Drainage Area 23.2 Square Miles
B.M. #7 210' No. of Sta 51+50 - PK Nail in West Root of 24" Red Oak; El. 1121.455
Vertical Curve Data
P.V.I. Sta 44+50
El. 1114.04
1000' V.C.
Corr. +2.66'
-1.44%
+0.69%
39+50 P.V.C.
44+50 P.V.I.
49+50 P.V.T.
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.
Bridge Limits
Sta 46+80.68
Sta 47+73.32
PROPOSED STRUCTURE
TYPE: Three Span Continuous Slab Bridge With Capped Pile Substructure
SPANS: 28'-35'-28' c/c Bearings
ROADWAY: 44'-0" f/f of Guard Rail
LOAD FREQUENCY: CF = 2000(51)
SKEW: 24°-30' L.F.
WEARING SURFACE: 1" Monolithic
APPROACH SLABS: AS-1-54 (25'-0" Lg)
ALIGNMENT: Tangent
Profile Grade Line on Edge of Pavement
Existing Profile on ℄ Survey
Assumed H.W. El. 1113.00
El. 1109.92
El. 1113.0
2:1 Normal
Normal Water El. 1103.5
El. 1113.1
El. 1110.13
Approx. Streambed El. 1101.0
14"φ Cast-in-place Reinforced Concrete Piles
Estimated Pay Lengths
29'
35'
43'
30'
PROFILE ON ℄ SURVEY
U.S.R. 224 12'-24'-12' Initial Construction
Pavement Type T-71
Future Construction 10'-24'-12'
AURILIO, PACE AND BALLARD CONSULTING ENGINEERS
STATE OF OHIO
DEPARTMENT OF HIGHWAYS
DIVISION OF DESIGN AND CONSTRUCTION
BUREAU OF BRIDGES
SITE PLAN
BRIDGE NO. POR-224-0713 OVER CONGRESS LAKE OUTLET
PORTAGE CO.
U.S.R. 224
STA. 46+80.68
STA. 47+73.32
SCALE 1" = 20'
PRESENT TOPOGRAPHY
PROPOSED WORK
SURVEYED AURILIO
DRAWN R.N.B.
DESIGNED R.R.
DRAWN W.S.-R.R.
CHECKED R.F.N.
REVIEWED



PLAN

Note: See Site Plan for vertical curve data.



ELEVATION

ESTIMATED QUANTITIES									
Item	Total	Unit	Description	Superstr.	Abut.	Piers	Gen'r'l		
E 2	37	Cu. Yd.	Unclassified excavation		37				
S1	219	Cu. Yd.	Class "C" concrete superstructure and pier caps	202		17			
S1	57	Cu. Yd.	Class "E" concrete abutments		57				
S4	62,200	Lb.	Reinforcing steel	51,050	6060	4940	150		
S14	185.28	Lin. Ft	Railing (Type I 15.13 with galvanized steel posts)	185.28					
S16	Lump	Sum	First test pile				Lump Sum		
S18	1096	Lin. Ft.	14"ϕ Cast-in-place reinforced concrete piles		472	624			
S29	16	Cu. Yds.	Porous backfill		16				
S29	10	Cu. Yds.	Porous drains on embankment slopes				10		

FED RD DIVISION	STATE	PROJECT		95 / 109
2	OHIO	F-330(3)		

SEC POR-224-6.22

GENERAL NOTES

REFERENCE shall be made to Standard Drawings A-1-54 dated 7-1-54, P-1-54 dated 7-1-54 and CS-1-54 revised 7-16-56.

POROUS DRAINS, extending from face of abutment to existing ground shall be placed on and flush with embankment slopes at all four corners of the bridge. The drains shall be four feet wide and one foot thick.

PILING shall be driven to a minimum bearing capacity of 37 tons per pile. Piles shall be 14" diameter cast-in-place.

PIER PILE ENCASEMENT as shown on Standard Drawing P-1-54 may be omitted provided that the tapered portion, if any, of all piers 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 atleast one foot below the propose surface of the ground.

12/21/56
Raymond Ballard

AURILIO, PACE AND BALLARD
CONSULTING ENGINEERS

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

GENERAL PLAN AND ESTIMATED QUANTITIES

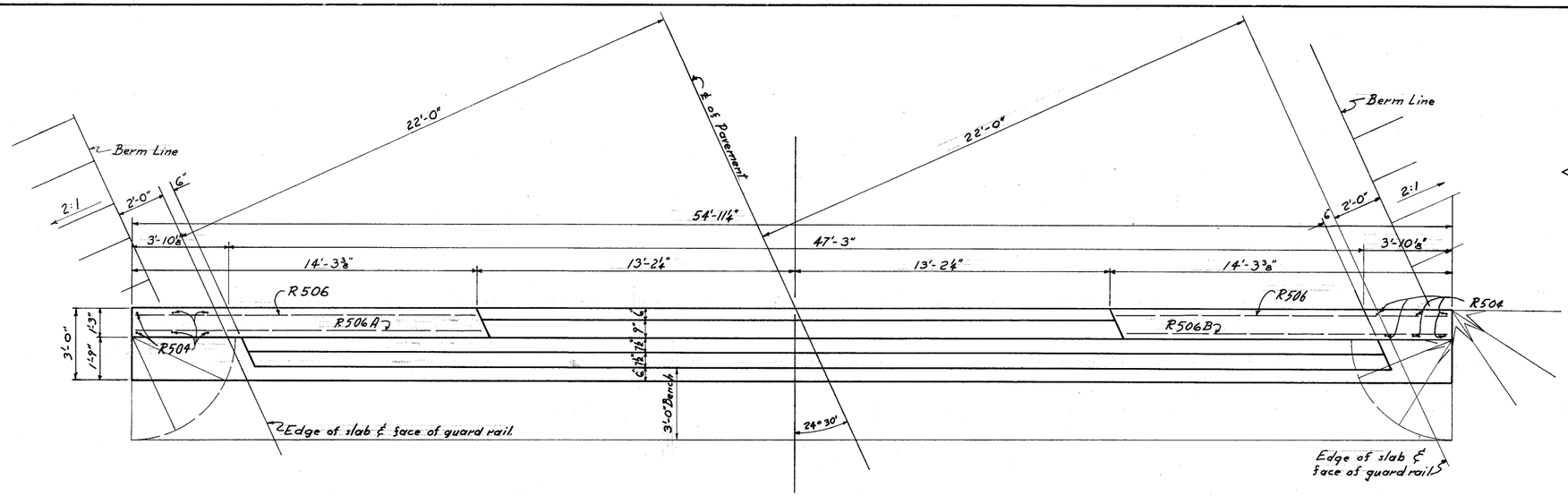
BRIDGE No. POR. 224-0713 OVER CONGRESS LAKE OUTLET
PORTAGE CO.
U.S.R. 224
STA. 46+80.68
STA. 47+73.32

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
W.S.	W.S.	J.W.C.	R.R.			

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	F-330(3)	

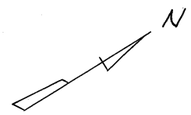
96
109

SEC. POR-224-6.22

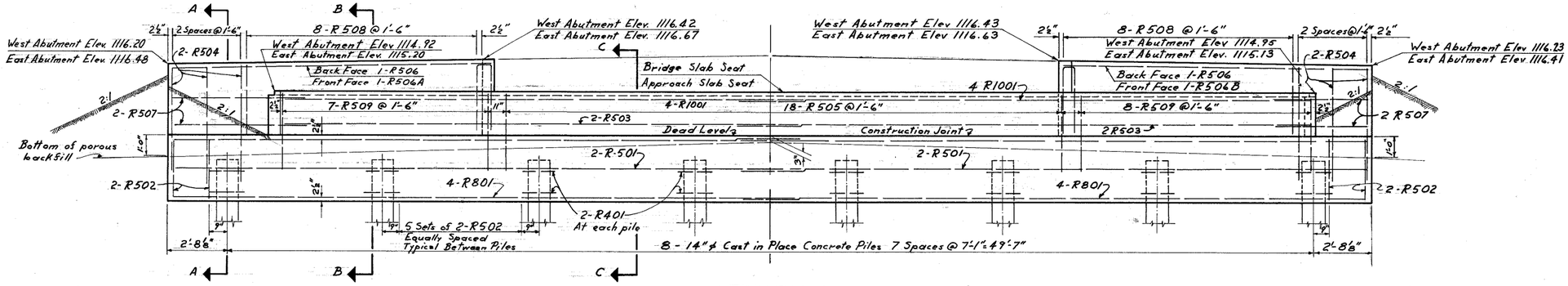


PLAN

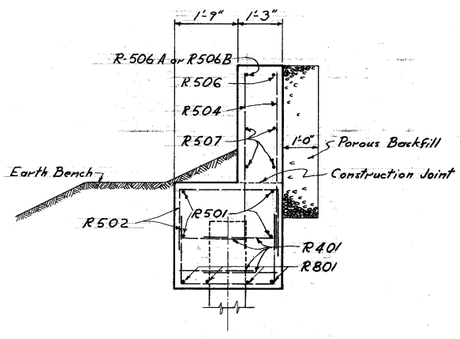
West Abutment Shown
East Abutment Similar by Rotation



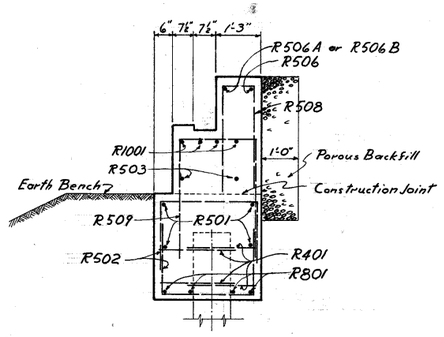
REINFORCING STEEL shall clear face of concrete 2" unless otherwise noted.



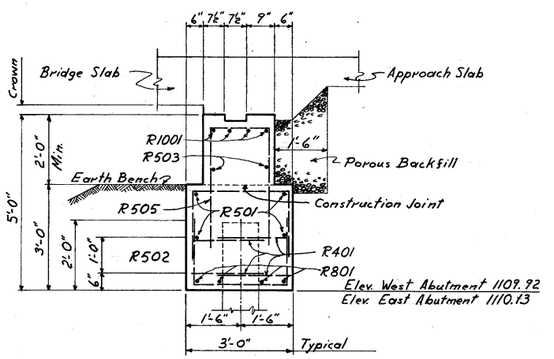
ELEVATION



SECTION A-A



SECTION B-B



SECTION C-C

12/31/56
Raymond Roberts

AURILIO, PACE AND BALLARD
CONSULTING ENGINEERS

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

ABUTMENT DETAILS

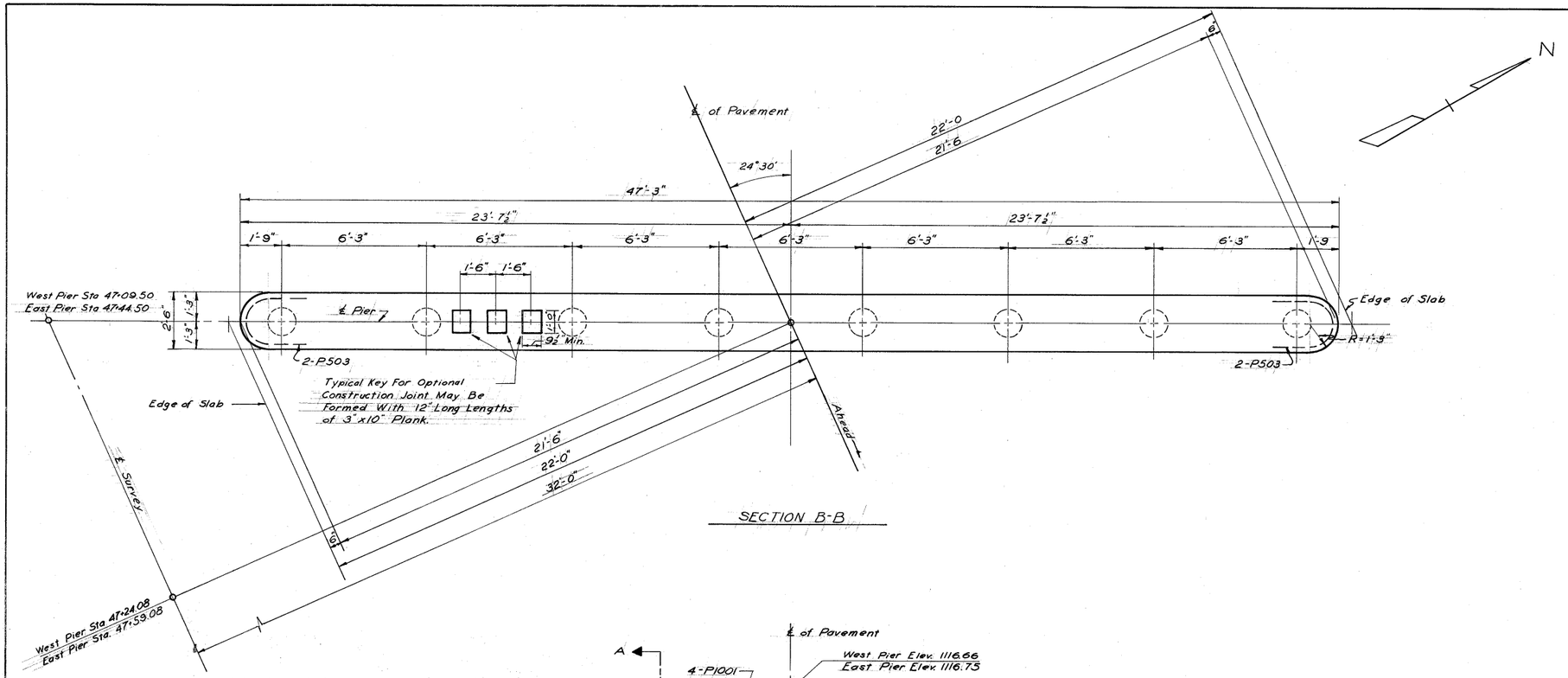
BRIDGE No. POR. 224-0713 OVER CONGRESS LAKE OUTLET
PORTAGE CO. U.S.R. 224
STA. 46+80.68
STA. 47+73.32

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISE
W.S.	W.S.	J.M.	R.R.			

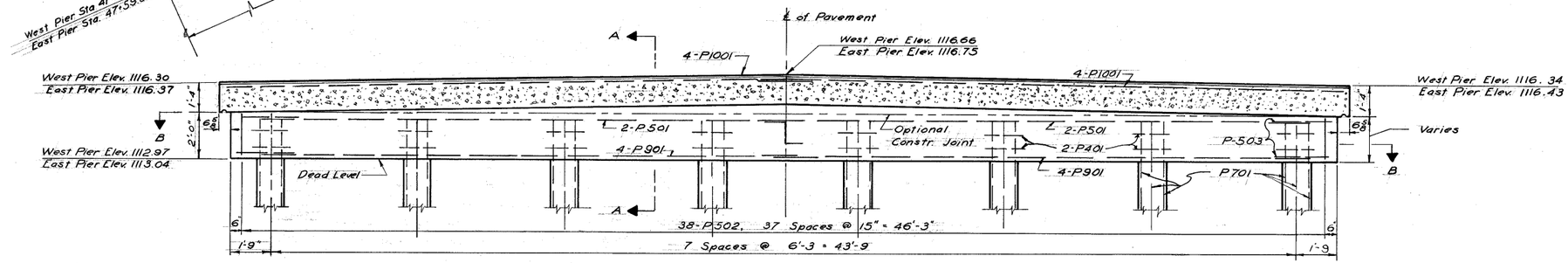
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	F-330(3)	

97
109

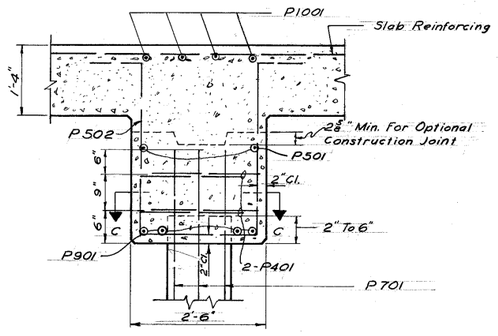
SEC. POR-224-6.22



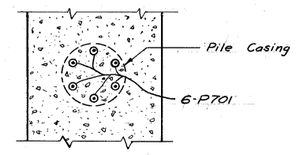
SECTION B-B



ELEVATION



SECTION A-A



SECTION C-C

12/31/52
Raymond Pratt

AURILIO, PACE AND BALLARD
CONSULTING ENGINEERS

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

PIER DETAILS

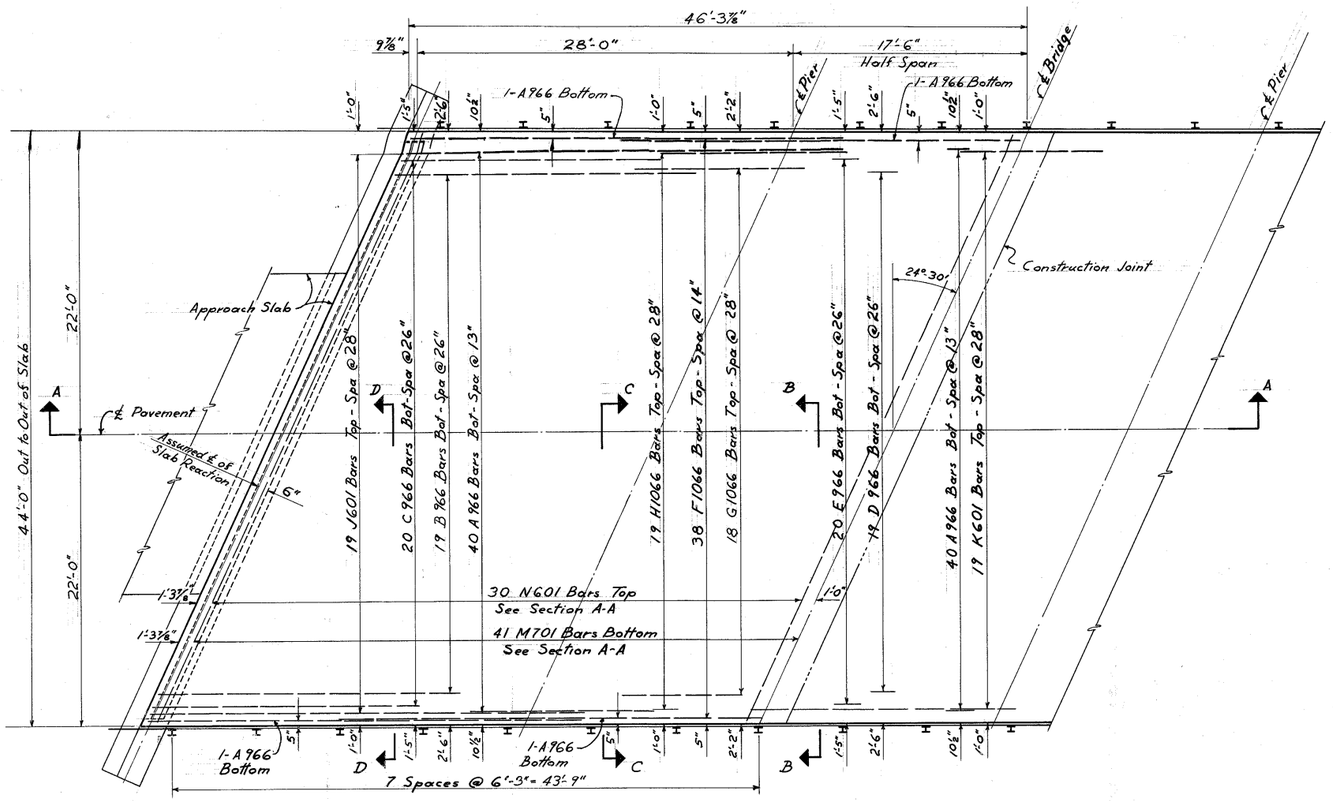
BRIDGE No. POR. 224-0713 OVER CONGRESS LAKE OUTLET
PORTAGE Co.
U.S.R. 224
STA. 46+80.68
STA. 47+73.32

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
W.S.	W.S.	P.C.	R.R.			

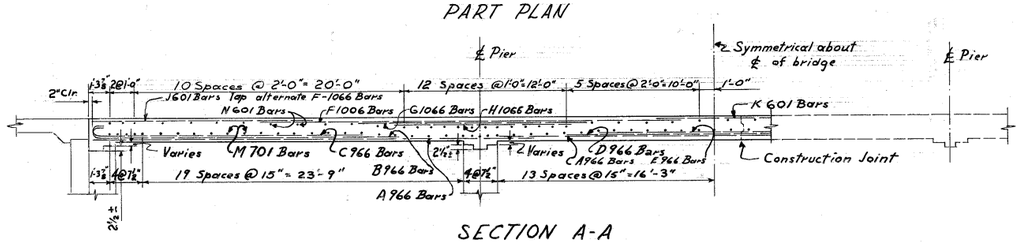
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	F-330(3)	

98
109

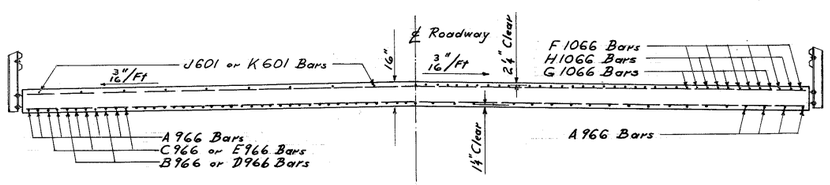
SEC. POR-224-6.22



PART PLAN



SECTION A-A



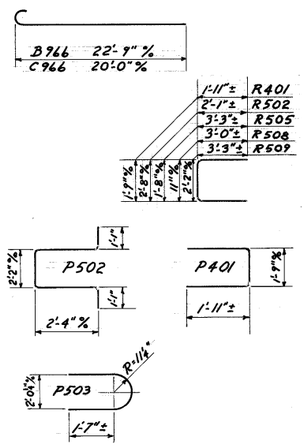
SECTION BB & DD

SECTION CC

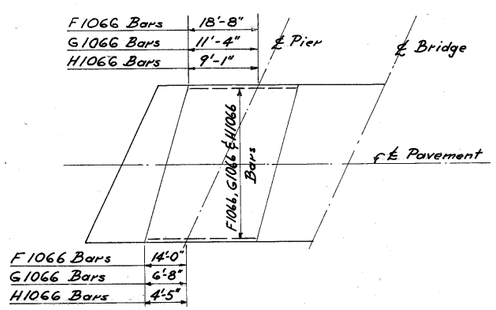
REINFORCING STEEL LIST

MARK	NO.	LENGTH	WEIGHT	SHP.
SUPERSTRUCTURE				
A966	126	32'-8"	13,995	S
B966	38	23'-10"	3079	B
C966	40	21'-1"	2867	B
D966	19	22'-0"	1421	S
E966	20	17'-2"	1167	S
F1066	76	31'-3"	10,220	S
G1066	36	16'-11"	2621	S
H1066	38	13'-6"	2207	S
J601	38	16'-6"	942	S
K601	19	9'-0"	257	S
M701	81	48'-0"	7947	S
N601	60	48'-0"	4326	S
PIERS				
P1001	16	25'-6"	1756	S
P901	16	23'-7"	1283	S
P701	96	4'-0"	785	S
P501	8	23'-5"	195	S
P502	76	8'-0"	634	B
P503	8	6'-4"	53	B
P401	64	5'-5"	232	B

BENDING DIAGRAMS



MARK	NO.	LENGTH	WEIGHT	SHP.
ABUTMENTS				
R1001	16	25'-2"	1735	S
R801	16	28'-9"	1228	S
R501	16	28'-2"	470	S
R502	156	6'-7"	1071	B
R503	8	24'-4"	203	S
R504	24	5'-4"	134	S
R505	36	7'-11"	297	B
R506	4	13'-11"	58	S
R506A	2	14'-6"	30	S
R506B	2	13'-4"	28	S
R507	16	5'-5"	90	S
R508	32	6'-8"	222	B
R509	30	8'-5"	263	B
R401	61	5'-5"	232	B
REPLACEMENT BARS				
RE401	1	5'-5"	4	B
RE501	1	5'-7"	6	S
RE601	1	5'-11"	9	S
RE701	1	6'-2"	13	S
RE801	1	6'-6"	17	S
RE901	2	6'-10"	46	S
RE1001	1	7'-2"	31	S



PLACEMENT DIAGRAM FOR F, G & H BARS

12/31/56

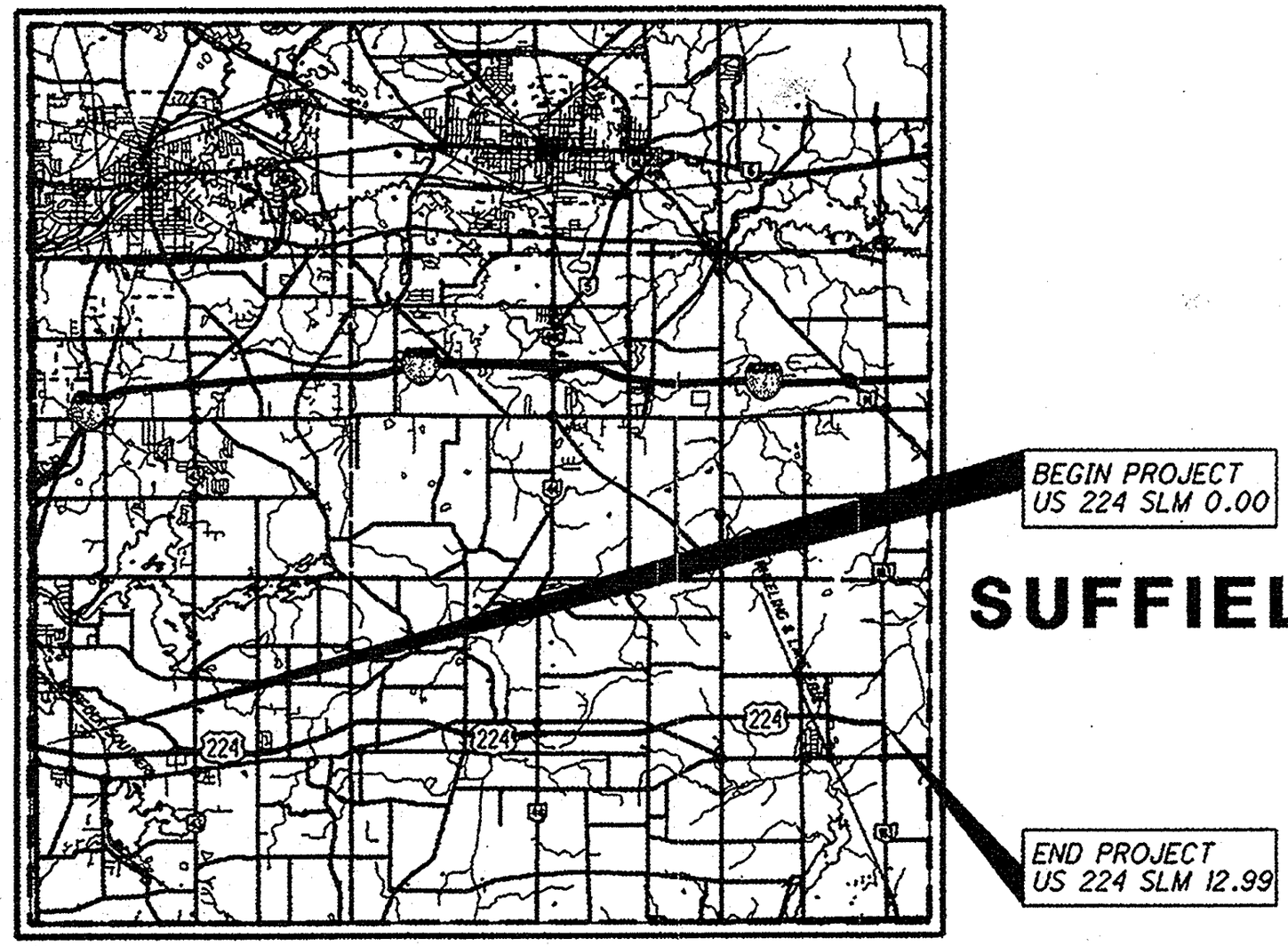
AURILIO, PACE AND BALLARD CONSULTING ENGINEERS

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

SUPERSTRUCTURE DETAILS

BRIDGE NO. POR. 224-0713 OVER CONGRESS LAKE OUTLET
PORTAGE CO.
U.S.R. 224
STA. 46+80.68
STA. 47+73.32

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
R.R.	R.R.	J.M.	R.F.N.			



LOCATION MAP

LATITUDE: 41°01'51" LONGITUDE: 81°16'18"

SCALE IN MILES

0 2 4 6 8

N

PORTION TO BE IMPROVED

INTERSTATE HIGHWAY

FEDERAL ROUTES

STATE O

DEPARTMENT OF T

POR-22

PAR

SUFFIELD, RANDOLPH & PORTAGE

FOR PART 2, SEE

INDEX OF SHEETS:

TITLE SHEET
TYPICAL SECTIONS
GENERAL NOTES
MAINTENANCE OF TRAFFIC
GENERAL SUMMARY
PAVEMENT CALCULATIONS
GUARDRAIL SUBSUMMARY
PLAN & PROFILE US 224 & SR 43
CROSS SECTIONS US 224 & SR 43

POR - US-224,0.00, PART 1;POR-2
130160 PID - 82919
Dist 4 3/14/2013

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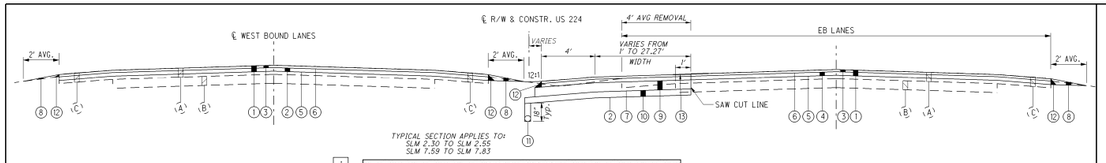
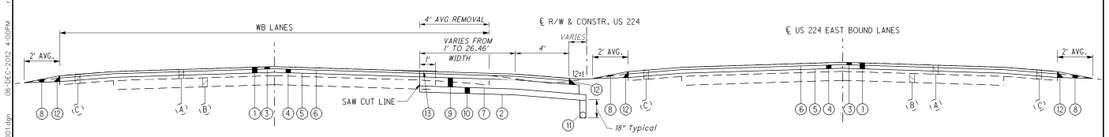


1

SECTION APPLIES:					
ROUTE	STATION		LENGTH	WIDTH	
	FROM	TO	FT	FROM	TO
US 224 AT SR 43	217+12.50	217+66.50	54.00	1	13.52
US 224 AT SR 43	217+66.50	221+23.73	357.23	13.52	13.33
US 224 AT SR 43	221+23.73	222+35.73	112.00	13.33	27.27
US 224 AT SR 43	222+35.73	223+11.35	75.62	27.27	median
Total			598.85		
US 224 AT SR 44	71+33.70	71+92.50	58.80	2.12	14.12
US 224 AT SR 44	71+92.50	75+50.70	358.20	14.12	13.3
US 224 AT SR 44	75+50.70	76+62.70	112.00	13.3	26.72
US 224 AT SR 44	76+62.70	77+44.00	81.30	26.72	median
Total			610.30		



TYPICAL SECTION APPLIES TO:
SLM 2.30 TO SLM 2.55
SLM 7.59 TO SLM 7.83

2

SECTION APPLIES:					
ROUTE	STATION		LENGTH	WIDTH	
	FROM	TO	FT	FROM	TO
US 224 AT SR 43	223+70.00	224+44.59	74.59	median	
US 224 AT SR 43	224+44.59	225+56.59	112.00	26.46	13.42
US 224 AT SR 43	225+56.59	229+69.00	412.41	13.42	13
US 224 AT SR 43	229+69.00	230+24.20	55.20	13	1
Total			654.20		
US 224 AT SR 44	78+04.00	78+77.67	73.67	median	26.17
US 224 AT SR 44	78+77.67	79+89.67	112.00	26.17	13.12
US 224 AT SR 44	79+89.67	83+48.10	358.43	13.12	13.07
US 224 AT SR 44	83+48.10	84+04.20	56.10	13.07	1.32
Total			600.20		

LEGEND

1. 254, PAVEMENT PLANING 3"
2. 204, SUBGRADE COMPACTION
3. 448, 1¼" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG70-22M, AS PER PLAN
4. 448, 1¾" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, PG64-22
5. 407, TACK COAT @ 0.075 GAL/SQ.YD.
6. 407, TACK COAT FOR INTERMEDIATE COURSE @ 0.04 GAL/SQ.YD.
7. 408, PRIME COAT @ 0.4 GAL/SQ.YD.
8. 617, COMPACTED AGGREGATE, AS PER PLAN
9. 301, ASPHALT CONCRETE BASE, PG64-22 (T=9")
10. 304, AGGREGATE BASE, AS PER PLAN (T=6")
11. ITEM 605, 6" BASE PIPE UNDERDRAIN WITH FABRIC WRAP
12. SAFETY EDGE, SEE SHEETS 5-6 FOR DETAILS
13. SPECIAL, MISC.: REINFORCEMENT MESH FOR LONGITUDINAL JOINTS (Center Over Saw Cut)

- (A) EXISTING ASPHALT PAVEMENT
- (B) EXISTING REINFORCED CONCRETE PAVEMENT
- (C) EXISTING SHOULDERS
- (D) EXISTING CONCRETE MEDIAN
- (E) EXISTING CONCRETE CURB
- (F) EXISTING ASPHALT CURB

TYPICAL SECTIONS

POR-224-0.00

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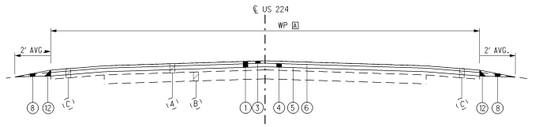

3

US 224			
SLM		AVG WP	LENGTH
FROM	TO	(FT)	(MILES)
0.00	0.10	46.00	0.10
0.10	0.32	31.00	0.22
0.32	0.78	45.00	0.46
0.78	2.30	31.00	1.52
2.55	3.16	31.00	0.61
3.16	3.57	44.00	0.41
3.57	6.02	31.00	2.45
6.02	6.41	44.00	0.39
6.41	6.55	31.00	0.14
6.55	6.66	48.00	0.11
6.66	7.59	31.00	0.93
7.83	9.06	31.00	1.23
9.06	9.15	48.00	0.09
9.69	9.76	48.00	0.07
9.76	10.47	31.00	0.71
10.47	10.60	46.00	0.13
10.60	12.08	31.00	1.48
12.08	12.19	50.00	0.11
12.19	12.83	31.00	0.64
12.83	12.91	48.00	0.08

NOTES:
A WP IS THE AVERAGE WIDTH OF PAVEMENT INCLUDING SHOULDERS.

SEE SHEET 2 FOR LEGEND

TYPICAL SECTIONS

POR-224-0.00

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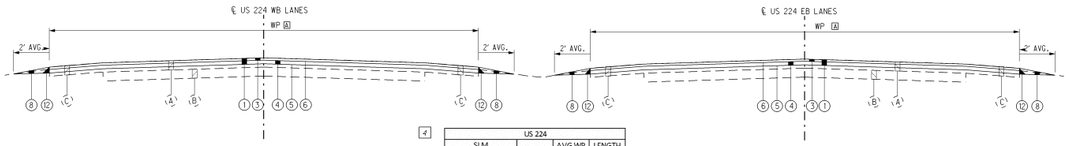
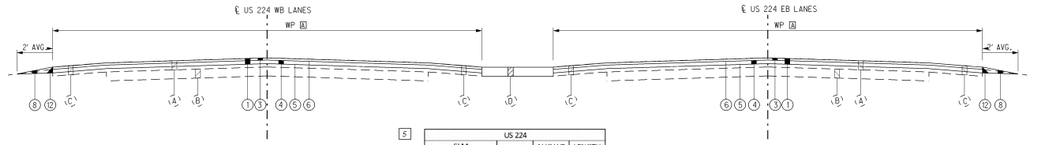


4

US 224				
SLM		SIDE	AVG WP (FT)	LENGTH (MILES)
FROM	TO			
9.15	9.69	EB	31.00	0.54
9.15	9.69	WB	31.00	0.54



5

US 224				
SLM		SIDE	AVG WP (FT)	LENGTH (MILES)
FROM	TO			
12.91	12.99	EB	19.00	0.08
12.91	12.99	WB	24.00	0.08

NOTES:
A WP IS THE AVERAGE WIDTH OF PAVEMENT INCLUDING SHOULDERS.

SEE SHEET 2 FOR LEGEND

TYPICAL SECTIONS

POR-224-0.00

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SAFETY EDGE (ASPHALT CONCRETE)

IN ADDITION TO THE REQUIREMENTS OF 401.12, ATTACH A DEVICE TO THE SCREED OF THE PAVER THAT CONFINES THE MATERIAL AT THE END GATE AND EXTRUDES THE ASPHALT MATERIAL IN SUCH A WAY THAT RESULTS IN A COMPACTED WEDGE SHAPE PAVEMENT EDGE OF APPROXIMATELY 30 DEGREES (NOT STEEPER THAN 40 DEGREES). ENSURE THE DEVICE MAINTAINS CONTACT WITH THE EXISTING SURFACE, AND ALLOW FOR AUTOMATIC TRANSITION TO CROSS ROADS, DRIVEWAYS AND OBSTRUCTIONS. DO NOT USE CONVENTIONAL SINGLE PLATE STRIKE OFF.

CONSTRUCTION OF SAFETY EDGE CAN BE OMITTED AT LOCATIONS WHERE EXISTING WIDTH OF GRADED SHOULDER OR BERM IS LESS THAN 12". PROJECTS WITH VARYING CONDITIONS SHOULD USE SAFETY EDGE WHERE POSSIBLE. PLAN PREPARATION HAS MADE EVERY REASONABLE ATTEMPT TO IDENTIFY POSSIBLE SAFETY EDGE LOCATIONS.

USE THE TRANSTECH SHOULDER WEDGE MAKER, THE CARLSON SAFETY EDGE END GATE, THE ADVANT-EDGER, THE TROXLER SAFETY SLOPE OR A SIMILAR APPROVED-EQUAL DEVICE THAT PRODUCES THE SAME WEDGE CONSOLIDATION RESULTS. CONTACT INFORMATION FOR THESE WEDGE SHAPE COMPACTION DEVICES IS THE FOLLOWING:

TRANSTECH SYSTEMS, INC.
1594 STATE STREET
SCHENECTADY, NY 12304
1-800-724-6306
WWW.TRANSTECHSYS.COM

ADVANT-EDGE PAVING EQUIPMENT LLC
P.O. BOX 9163
NISKAYUNA, NY 12309-0163
518-280-6090
WWW.ADVANTAEDGEPAVING.COM

CARLSON SAFETY EDGE END GATE
18425 50TH AVENUE EAST
TACOMA, WA 98446
253-875-8000

TROXLER ELECTRONIC LABORATORIES, INC.
3008 E. CORNWALLIS RD.
RESEARCH TRIANGLE PARK, NC 27709
1-877-TROXLER
WWW.TROXLERLABS.COM

IF ELECTING TO USE A SIMILAR DEVICE, PROVIDE PROOF THAT THE DEVICE HAS BEEN USED ON PREVIOUS PROJECTS WITH ACCEPTABLE RESULTS OR CONSTRUCT A TEST SECTION PRIOR TO THE BEGINNING OF WORK AND DEMONSTRATE WEDGE COMPACTION TO THE SATISFACTION OF THE ENGINEER. SHORT SECTIONS OF HANDWORK WILL BE ALLOWED WHEN NECESSARY FOR TRANSITIONS AND TURNOUTS OR OTHERWISE AUTHORIZED BY THE ENGINEER.

IN ADDITION TO THE REQUIREMENTS OF 401.16, MAKE THE FIRST ROLLER PASS 8 TO 12 INCHES AWAY FROM TAPERED EDGE. DO NOT ROLL THE TAPER.

ITEM 209, PREPARING SUBGRADE FOR SHOULDER PAVING, AS PER PLAN.

PREPARE THE SHOULDER FOR PAVING A CONSISTENT SAFETY EDGE IN BOTH THICKNESS AND WIDTH.

PRIOR TO PAVING THE SAFETY EDGE, GRADE AN AREA 10 INCHES WIDE, BEGINNING AT THE EDGE OF THE PAVED ROADWAY, TO PROVIDE A LEVEL SURFACE FREE OF VEGETATION FOR CONSTRUCTION OF THE SAFETY EDGE. IF NECESSARY, EXCAVATE THE GRADED AREA TO THE DEPTH NECESSARY TO CONSTRUCT THE SAFETY EDGE. COMPACT THE GRADED SHOULDER ACCORDING TO 617.05, OR AS DIRECTED BY THE ENGINEER.

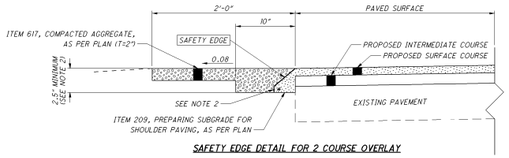
NOTES:

1.) SAFETY EDGES ARE REQUIRED AT THE OUTSIDE EDGES OF THE PAVED ROADWAY (EDGE OF TRAVEL LANE OR EDGE OF PAVED SHOULDER).

2.) CONSTRUCT THE SAFETY EDGE THE FULL ASPHALT CONCRETE OVERLAY THICKNESS OR 2.5" WHICHEVER IS GREATER, NOT TO EXCEED THE MAXIMUM SAFETY EDGE THICKNESS OF 6". CONSTRUCT A NEAR-VERTICAL FACE BELOW THE SAFETY EDGE FOR THICKNESS GREATER THAN 6".

3.) BLADE AND SHAPE EXISTING SHOULDER MATERIAL TO FORM A UNIFORM SURFACE UNDER THE SAFETY EDGE PRIOR TO PLACEMENT OF THE ASPHALT CONCRETE OVERLAY.

** 40° MAX*



SAFETY EDGE DETAIL FOR 2 COURSE OVERLAY

ESTIMATED QUANTITIES

ROUTE	SAFETY EDGE THICKNESS (IN.)	S.L.M TO S.L.M.			SIDE	209 PREPARING SUBGRADE FOR SHOULDER PAVING, AS PER PLAN	448 ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG70-22, AS PER PLAN
						STATION	CU YD
224	3	0.00	TO	2.28	L/R	240.8	32.99
224EB	3	2.28	TO	2.42	R	7.4	1.01
224EB	3	2.42	TO	2.59	L/R	18.0	2.46
224WB	3	2.28	TO	2.42	L/R	14.8	2.03
224WB	3	2.42	TO	2.59	L	9.0	1.23
224	3	2.59	TO	3.85	L/R	133.1	18.23
224	3	3.85	TO	7.59	L/R	394.9	54.12
224EB	3	7.59	TO	7.83	L/R	25.3	3.47
224WB	3	7.59	TO	7.83	L	12.7	1.74
224	3	7.83	TO	9.15	L/R	139.4	19.10
224WB	3	9.15	TO	9.69	L/R	57.0	7.81
224EB	3	9.15	TO	9.69	L/R	57.0	7.81
224	3	9.69	TO	12.91	L/R	340.0	46.60
224	3	12.91	TO	12.99	L/R	8.4	1.16
TOTALS CARRIED TO GENERAL SUMMARY						1458	200

REVISED: 6/25/12

DISTRICT 4 - PLANNING & ENGINEERING

DATE	MADE	CHECKED
06/25/12	TJP	TJP

SAFETY EDGE DETAIL (RESURFACING)

POR-224-0.00

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SAFETY EDGE (ASPHALT CONCRETE)

IN ADDITION TO THE REQUIREMENTS OF 401.12, ATTACH A DEVICE TO THE SCREED OF THE PAVER THAT CONFINES THE MATERIAL AT THE END GATE AND EXTRUDES THE ASPHALT MATERIAL IN SUCH A WAY THAT RESULTS IN A COMPACTED WEDGE SHAPE PAVEMENT EDGE OF APPROXIMATELY 30 DEGREES (NOT STEEPER THAN 40 DEGREES). ENSURE THE DEVICE MAINTAINS CONTACT WITH THE EXISTING SURFACE, AND ALLOW FOR AUTOMATIC TRANSITION TO CROSS ROADS, DRIVEWAYS AND OBSTRUCTIONS. DO NOT USE CONVENTIONAL SINGLE PLATE STRIKE OFF.

USE THE TRANSTECH SHOULDER WEDGE MAKER, THE CARLSON SAFETY EDGE END GATE, THE ADVANT-EDGER, THE TROXLER SAFETY SLOPE OR A SIMILAR APPROVED-EQUAL DEVICE THAT PRODUCES THE SAME WEDGE CONSOLIDATION RESULTS. CONTACT INFORMATION FOR THESE WEDGE SHAPE COMPACTION DEVICES IS THE FOLLOWING:

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ADVANT-EDGE PAVING EQUIPMENT LLC
P.O. BOX 9163
NISKAYUNA, NY 12309-0163
518-280-6090
WWW.ADVANTAEDGEPAVING.COM

CARLSON SAFETY EDGE END GATE
18425 50TH AVENUE EAST
TACOMA, WA 98446
253-875-8000

TROXLER ELECTRONIC LABORATORIES, INC.
3008 E. CORNWALLIS RD.
RESEARCH TRIANGLE PARK, NC 27709
1-877-TROXLER
WWW.TROXLERLABS.COM

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IN ADDITION TO THE REQUIREMENTS OF 401.16, MAKE THE FIRST ROLLER PASS 8 TO 12 INCHES AWAY FROM TAPERED EDGE. DO NOT ROLL THE TAPER

ITEM 451, REINFORCED CONCRETE PAVEMENT, AS PER PLAN
ITEM 452, NON-REINFORCED CONCRETE PAVEMENT, AS PER PLAN

THE SAFETY EDGE SHALL BE INCIDENTAL TO THE 451 OR 452 CONCRETE PAVEMENT PAY ITEM. ALL ADDITIONAL MATERIAL, LABOR, EQUIPEMENT, AND INCIDENTALS NECESSARY TO COMPLETE THIS WORK SHALL BE INCLUDED.

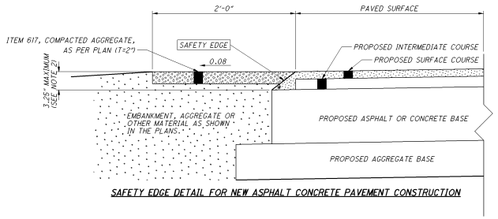
NOTES:

1.) SAFETY EDGES ARE REQUIRED AT THE OUTSIDE EDGES OF THE PAVED ROADWAY (EDGE OF TRAVEL LANE OR EDGE OF PAVED SHOULDER).

2.) FOR NEW ASPHALT CONCRETE PAVEMENT, CONSTRUCT THE SAFETY EDGE THE FULL THICKNESS OF THE SURFACE AND INTERMEDIATE COURSES, NOT TO EXCEED 3.25".

3.) FOR NEW CONCRETE PAVEMENT, CONSTRUCT THE SAFETY EDGE 4" THICK. CONSTRUCT A NEAR-VERTICAL FACE BELOW THE SAFETY EDGE.

* 40° MAX



SAFETY EDGE DETAIL FOR NEW ASPHALT CONCRETE PAVEMENT CONSTRUCTION

ESTIMATED QUANTITIES (FOR ASPHALT CONCRETE PAVEMENT)

ROUTE	SAFETY EDGE THICKNESS (IN.)	STATION TO STATION			SIDE	448 ASPHALT CONCRETE SURFACE COURSE, TYPE I, PG70-22M, AS PER PLAN
						CU YD
224 EB	3	71+33.70	TO	77+44.00	L	0.84
224 EB	3	217+12.50	TO	223+11.35	L	0.82
224WB	3	78+04.00	TO	84+04.20	R	0.82
224 WB	3	223+70.00	TO	230+24.20	R	0.90
TOTALS CARRIED TO GENERAL SUMMARY						4

DISTRICT 4 - PLANNING & ENGINEERING

SCALE: NONE	DESIGNED: T.P.
DATE: 09/25/12	DRAWN: T.P.
	CHECKED:

SAFETY EDGE DETAIL (NEW CONSTRUCTION)

POR-224-0.00

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REVISED: 6/25/12

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UTILITIES

THE CONTRACTOR SHALL USE THE FOLLOWING PROCEDURE AT EACH LOCATION WHERE WORK IS PERFORMED, IN ACCORDANCE WITH SECTIONS 105.07 AND 107.16 IN THE CONSTRUCTION AND MATERIALS SPECIFICATIONS:

THE CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER, THE OHIO UTILITIES PROTECTION SERVICE (OUPS), THE OHIO & GAS PROCEDURES UNDERGROUND PROTECTION SERVICE (OGPUPS), THE OHIO DEPARTMENT OF TRANSPORTATION DISTRICT 4 HEAD-QUARTERS AND ALL NON REGISTERED UTILITY OWNERS AT LEAST TWO (2) WORKING DAYS PRIOR TO COMMENCING CONSTRUCTION OPERATIONS IN ALL AREAS.

OUPS 1-800-362-2764 (CONTACT LIMITED BASIS PARTICIPANTS DIRECTLY)
OGPUPS 1-800-925-0988
ODOT 330-786-3145 KEN GREENE

THE LOCATION OF THE UNDERGROUND UTILITIES SHOWN ON THE PLANS ARE AS OBTAINED FROM THE OWNERS AS REQUIRED BY SECTION 153.64 O.R.C.

THE FOLLOWING UTILITIES AND OWNERS ARE LOCATED WITHIN THE WORK LIMITS OF THIS PROJECT:

AT&T
The Ohio Bell Telephone Company
ATTN: Cindy Zuchegno
50 W. Bowery St.
4th Floor
Akron, OH 44308
330-384-3561

Dominion East Ohio Gas
ATTN: Mary Long
320 Springside Drive
Suite 320
Akron, OH 44333
330-664-2419
888-504-0126 Fax

Portage County
Water Resources
County Administration
Building, 3rd Floor
ATTN: Louie Munoz
449 South Meridian Street
Ravenna, OH 44266
330-297-3670
330-297-3680 Fax

Belden and Blake Oil and Gas
ATTN: Keith Kerstetter
1148 Saltwell Road
Dover, OH 44622
330-602-5551 ext: 227
330-602-5554 Fax

Ohio Edison
ATTN: Jeff Knapp
1910 W. Market Street
Building #1
Akron, OH 44313
330-436-4051
Time Warner Cable
ATTN: Ron Ferdinand
5520 Whipple Ave. NW
North Canton, OH 44720
330-494-9200 ext.3305553003

THE UNDERGROUND UTILITIES ON THIS PLAN HAVE BEEN LOCATED BY SO DEEP, A SUBSURFACE UTILITY ENGINEERING COMPANY. IF THERE ARE ANY DISCREPANCIES BETWEEN FIELD MARKINGS AND WHAT THE PLAN INDICATES, PLEASE CONTACT STEVE JONES, DISTRICT UTILITY COORDINATOR, PHONE 330-786-4818, PRIOR TO ANY SUBSURFACE WORK BEING INITIATED.

PROFILE AND ALIGNMENT

PLACE THE PROPOSED PAVEMENT TO FOLLOW THE ALIGNMENT AND PROFILE OF THE EXISTING PAVEMENT. PLACE THE PROPOSED ASPHALT CONCRETE OVERLAY AS SHOWN ON THE TYPICAL SECTIONS.

CLEARING AND GRUBBING

ALTHOUGH THERE ARE NO TREES OR STUMPS SPECIFICALLY MARKED FOR REMOVAL WITHIN THE LIMITS OF THE PROJECT, A LUMP SUM QUANTITY IS INCLUDED IN THE GENERAL SUMMARY FOR ITEM 201, CLEARING AND GRUBBING. ALL PROVISIONS AS SET FORTH IN THE SPECIFICATIONS UNDER THIS ITEM ARE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 201, CLEARING AND GRUBBING.

WORK LIMITS

ALL PHYSICAL WORK SHALL BE COMPLETED WITHIN THE STATE RIGHT-OF-WAY ONLY. PROVIDE THE INSTALLATION AND OPERA-TION OF ALL WORK ZONE TRAFFIC CONTROL AND WORK ZONE TRAFFIC CONTROL DEVICES REQUIRED BY THESE PLANS WHETHER INSIDE OR OUTSIDE THESE WORK LIMITS.

PAVEMENT MARKING LANE WIDTHS

THE NORMAL LANE WIDTH FOR THE PAVEMENT MARKINGS ON THIS PROJECT SHALL BE AS FOLLOWS (AT LEAST 3 DAYS PRIOR TO PERFORMING THE WORK CONTACT THE TRAFFIC OFFICE AT 330-786-3147 TO CONFIRM THE WIDTHS):

ROUTE	S.L.M. TO S.L.M.	LANE WIDTH
224	0.00 TO 2.99	12'

A QUANTITY OF 300 FT OF ITEM 642 STOP LINE HAS BEEN ADDED TO THE GENERAL SUMMARY FOR SIDE ROAD STOP LINES ON US 224.

PAVEMENT MARKING DETAILS

THE PAVEMENT MARKING DETAIL SHEETS WILL BE SUPPLIED TO THE CONTRACTOR AT THE PRE-CONSTRUCTION MEETING.

ITEM 203 - EXCAVATION (FOR PAVEMENT REPAIR)

THIS ITEM OF WORK SHALL CONSIST OF REMOVING AND DISPOSING OF ALL UNSUITABLE MATERIAL BY EXCAVATING THE EXISTING SUBGRADE AND SUBBASE TO AN AVERAGE DEPTH OF 6 INCHES OR AS DIRECTED BY THE ENGINEER. EXACT LIMITS OF REMOVAL SHALL BE DETERMINED BY THE ENGINEER. ALL EQUIPMENT, LABOR, TOOLS, AND INCIDENTALS NECESSARY TO COMPLETE THIS ITEM SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 203 EXCAVATION (FOR PAVEMENT REPAIR). THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY:

203, EXCAVATION (FOR PAVEMENT REPAIR) 167 CU YD

ITEM 304 - AGGREGATE BASE, AS PER PLAN (FOR PAVEMENT REPAIR)

THE FOLLOWING ESTIMATED QUANTITY HAS BEEN PROVIDED AND SHALL BE USED AS DIRECTED BY THE ENGINEER TO BACKFILL AREAS WHICH WERE EXCAVATED UNDER ITEM 203 EXCAVATION (FOR PAVEMENT REPAIR). GRANULATED SLAG (GS) SHALL NOT BE PERMITTED FOR THIS ITEM. ALL OTHER REQUIREMENTS OF SECTIONS 304 AND 703.17 OF THE CONSTRUCTION AND MATERIAL SPECIFICATIONS SHALL STILL BE APPLICABLE. THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY:

304, AGGREGATE BASE, AS PER PLAN (FOR PAVEMENT REPAIR) 167 CU YD

ITEM 252 - FULL DEPTH RIGID PAVEMENT REMOVAL & FLEXIBLE REPLACEMENT

A QUANTITY OF THIS ITEM SHALL BE PROVIDED FOR USE AS DIRECTED BY THE ENGINEER. THIS ITEM SHALL CONSIST OF CUTTING AND REMOVING DETERIORATED PAVEMENT FULL DEPTH AND PLACING 12"± 301 ASPHALT CONCRETE BASE, PG64-22. THE MAXIMUM COMPACTED DEPTH OF ANY ONE LAYER SHALL BE 6 INCHES. UNLESS OTHERWISE DIRECTED BY THE ENGINEER, THIS ITEM SHALL BE PERFORMED AFTER THE PLACEMENT OF THE TYPE 2 INTERMEDIATE COURSE. IT ISN'T THE INTENT TO REPAIR EVERY DETERIORATED AREA WITHIN THE PROJECT. THE ENGINEER SHALL DETERMINE WHICH AREAS ARE TO BE REPAIRED. PAYMENT SHALL BE BASED ON THE ACTUAL NUMBER OF SQUARE YARDS OF PAVEMENT REMOVED AND REPLACED TO THE LIMITS DESIGNATED BY THE ENGINEER. THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY:

252, FULL DEPTH PAVEMENT SAWING, 6000 FT
252, FULL DEPTH RIGID PAVEMENT REMOVAL & FLEXIBLE REPLACEMENT, 1000 SQ YD

ITEM SPECIAL - PIPE CLEANOUT - SLM'S 1.32 & 3.91

THIS WORK SHALL CONSIST OF REMOVING SEDIMENT AND DEBRIS FROM THE EXISTING CULVERTS AT SLM'S 1.32 & 3.91. ALL MATERIAL REMOVED SHALL BE DISPOSED OF AS PER 105.16 AND 105.17. ALL CULVERTS SHALL BE CLEANED OUT TO THE SATISFACTION OF THE ENGINEER.

CLEANOUT OF THE PIPE SHALL BE PAID FOR AT THE UNIT PRICE BID FOR ITEM SPECIAL - PIPE CLEANOUT. THIS PRICE SHALL INCLUDE THE COST FOR MATERIAL, EQUIPMENT, LABOR, AND ALL INCIDENTALS REQUIRED TO COMPLETE THE CLEANOUT.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY FOR THE ABOVE NOTED WORK:

SPECIAL, PIPE CLEANOUT 184 FT.

ITEM 603 - FIELD PAVING OF EXISTING PIPE - SLM 1.32

FIELD PAVE THE EXISTING 120" CORRUGATED METAL PIPE INVERT AT SLM 1.32 (1360' EAST OF THE RAIL ROAD). THE CONTRACTOR WILL PAVE THE BOTTOM OF THE EXISTING PIPE WITH CLASS C PORTLAND CEMENT CONCRETE AS PER CMS 603.15.

AREAS TO BE PAVED WILL BE CLEANED TO REMOVE ALL DEBRIS AND SEDIMENT AND WILL BE PAID FOR UNDER ITEM SPECIAL - PIPE CLEANOUT.

THE CONTRACTOR WILL BE REQUIRED TO USE ITEM 503 - COFFERDAMS AND EXCAVATION BRACING (CRIBS, AND SHEETING) TO DEWATER THE EXISTING PIPE PRIOR TO THE PREPARATION AND FIELD PAVING. AFTER THE PIPE HAS BEEN CLEANED OF ALL DEBRIS AND SEDIMENT, NO WATER WILL BE ALLOWED TO CONTAMINATE THE PIPE. IF ANY CONTAMINATION OCCURS, THE CONTRACTOR WILL RESEAL THE AREA AND RECLEAN THE PIPE AT NO ADDITIONAL COST.

ALL EROSION UNDER THE PIPE AND IN THE VOIDS WHERE THE PIPE IS RUSTED THROUGH WILL BE FILLED WITH ITEM 613 - LOW STRENGTH MORTAR BACKFILL.

ANY TREES LOCATED WITHIN 10' OF THE HEADWALLS THAT MAY POTENTIALLY DAMAGE THE CULVERT IN THE FUTURE OR ENCROACH UPON THE STREAM BEAD OR FIELD PAVING OPERATIONS WILL BE REMOVED. REMOVAL WILL BE DETERMINED BY THE PROJECT ENGINEER AND REMOVED UNDER ITEM 201 - CLEARING AND GRUBBING.

ITEM 603 - FIELD PAVING OF EXISTING PIPE 90 FT

ITEM 613 - LOW STRENGTH MORTAR - SLM 3.91

ALL EROSION UNDER THE PIPE AND IN THE VOIDS WHERE THE PIPE IS RUSTED THROUGH WILL BE FILLED WITH ITEM 613 - LOW STRENGTH MORTAR BACKFILL.

ITEM 613 - LOW STRENGTH MORTAR BACKFILL 5 CU. YD.

SEEDING AND MULCHING

THE FOLLOWING QUANTITIES ARE PROVIDED TO PROMOTE GROWTH AND CARE OF PERMANENT SEEDED AREAS: ITEM PROVIDED TO REPAIR CONTRACTOR DISTURBED AREAS AND EMBANKMENT SLOPES. THE CONTRACTOR IS RESPONSIBLE FOR ANY AREAS DISTURBED BEYOND AN ACRE.

THE FOLLOWING QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY:

659, SOIL ANALYSIS TEST 2 EACH
659, TOPSOIL 656 CU. YD.
659, SEEDING AND MULCHING 5904 SQ. YD.
659, REPAIR SEEDING AND MULCHING 296 SQ. YD
659, COMMERCIAL FERTILIZER 0.80 TON
659, LIME 1.22 ACRES
659, WATER 32 M. GAL.

SEEDING AND MULCHING CALCULATIONS:

CARRIED FROM CROSS SECTIONS FOR	
WIDENING AT SR 43:	1048 SQ YD
WIDENING AT SR 44:	1049 SQ YD
PAVEMENT REMOVAL AT SR 43:	1469 SQ YD
PAVEMENT REMOVAL AT SR 44:	2235 SQ YD
CULVERT AT SLM 2.89:	75 SQ YD
EXTRA FOR CULVERT AT SLM 3.91:	28 SQ YD
TOTAL=	5904 SQ YD

SEEDING AND MULCHING SHALL BE APPLIED TO ALL AREAS OF EXPOSED SOIL BETWEEN THE RIGHT-OF-WAY LINES, AND WITHIN THE CONSTRUCTION LIMITS FOR AREAS OUTSIDE THE RIGHT-OF-WAY LINES COVERED BY WORK AGREEMENT OR SLOPE EASEMENT. QUANTITY CALCULATIONS FOR SEEDING AND MULCHING ARE BASED ON THESE LIMITS.

LINER PIPE - SLM 3.91

THE 42" CORRUGATED METAL PIPE LOCATED AT SLM 3.91 WILL BE LINED WITH A 38"X24" CORRUGATED STEEL SPIRAL RIB CONDUIT. INSTALL PIPE LINERS ACCORDING TO SUPPLEMENTAL SPECIFICATION 837.

837, 38"X24" LINER PIPE, TOT.12 94 FT
837, BACK FILL FOR LINER PIPE 14 CU. YD.

CULVERT DETAILS SLM 3.91 (270' EAST OF MAY RD.)

THE CONTRACTOR SHOULD REMOVE BOTH END SECTIONS (7' EACH END) AND HEADWALLS FROM CULVERT POR-224-3.91. THE HEADWALLS SHOULD BE REPLACED ACCORDING TO STANDARD CONSTRUCTION DRAWING HW-2.1. THE HEADWALLS SHOULD BE PLACED AROUND THE PROPOSED LINER PIPE.

202, HEADWALL REMOVED 2 EACH
202, PIPE REMOVED, OVER 24" 14 FT
601, ROCK CHANNEL PROTECTION, TYPE C WITH FABRIC FILTER 2 CU YD
602, CONCRETE MASONRY 0.86 CU YD

EARTHWORK

THE FOLLOWING QUANTITES ARE TAKEN FROM THE CROSS SECTIONS AND WILL BE CARRIED TO THE GENERAL SUMMARY.

SR 43 : STA 217+00 TO STA 235+00
203, EXCAVATION 1017 CU YD
203, EMBANKMENT 253 CU YD

SR 44 : STA 70+00 TO STA 85+50
203, EXCAVATION 586 CU YD
203, EMBANKMENT 578 CU YD

Licensed Professional Engineer

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ITEM 617 - COMPACTED AGGREGATE, AS PER PLAN

IN LOW SHOULDER AREAS EXCEEDING 1', AND ADJACENT TO THE SAFETY EDGE, OR AS DIRECTED BY THE ENGINEER, RECYCLED ASPHALT PAVEMENT (RAP) SHALLBE USED IN AREAS ADJACENT TO THE PAVED BERM. THE RAP SHALL HAVE A MINIMUM PC CONTENT OF 4.5% AND MEET THE FOLLOWING GRADATION. ONCE THE STOCKPILE MEETS THE GRADATION, THE PG CONTENT OF THE RAP SHALL BE DETERMINED PER 441.03. THE RAP ANALYSIS MUST BE SUBMITTED TO THE ENGINEER FOR APPROVAL 2 WEEKS PRIOR TO USE. METHOD OF MEASUREMENT SHALL BE AS PER 617.06. PLACEMENT AND COMPACTION SHALL MEET THE REQUIREMENTS OF ITEM 617. ALL MATERIALS, LABOR, EQUIPMENT, TOOLS AND INCIDENTALS NECESSARY TO COMPLETE THE WORK SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 617 COMPACTED AGGREGATE, AS PER PLAN.

MODIFIED GRADATION SHALL APPLY:

SIEVE	TOTAL PERCENT PASSING
1-½"	100
¾"	50-100
NO. 4	35-70
NO. 30	9-33
NO. 200	0-13

ITEM SPECIAL - FILL AND PLUG EXISTING CONDUIT

THIS ITEM SHALL CONSIST OF THE CONSTRUCTION OF BULKHEADS IN AN EXISTING 36 IN DIAMETER CONDUIT AND FILLING THE AREA THUS SEALED OFF WITH ITEM 613, SAND OR OTHER MATERIAL APPROVED BY THE ENGINEER.

BULKHEADS SHALL BE LOCATED AT THE LIMITS OF THE AREA TO BE FILLED AS INDICATED ON THE PLANS. THE BULKHEADS SHALL CONSIST OF BRICK OR CONCRETE MASONRY WITH A MINIMUM THICKNESS OF 12 INCHES.

THE FILL MATERIAL SHALL BE PUMPED INTO PLACE, OR PLACED BY OTHER MEANS APPROVED BY THE ENGINEER, SO THAT, AFTER SETTLEMENT, AT LEAST 90 PERCENT OF THE CROSS-SECTIONAL AREA OF THE CONDUIT, FOR ITS ENTIRE LENGTH, SHALL BE FILLED. THE LENGTH OF FILLED AND PLUGGED CONDUIT TO BE PAID FOR SHALL BE THE ACTUAL NUMBER OF FEET (MEASURED ALONG THE CENTERLINE OF EACH CONDUIT FROM OUTER FACE TO OUTER FACE OF BULKHEADS) FILLED AND PLUGGED AS DESCRIBED ABOVE.

IN LIEU OF FILLING AND PLUGGING THE EXISTING CONDUIT, THE PIPE MAY BE CRUSHED AND BACKFILLED IN ACCORDANCE WITH THE PROVISIONS OF 203, OR IT MAY BE REMOVED. THE LENGTH, MEASURED AS PROVIDED ABOVE, SHALL BE PAID FOR AT THE CONTRACT PRICE PER FOOT FOR, ITEM SPECIAL, FILL AND PLUG EXISTING CONDUIT.

ITEM 603 - CONDUIT BORED OR JACKED

WHERE IT IS SPECIFIED THAT A CONDUIT BE INSTALLED BY THE METHOD OF BORING OR JACKING, NO TRENCH EXCAVATION SHALL BE CLOSER THAN 8 FEET TO THE (EDGE OF PAVEMENT) (NEAREST RAIL). PROVIDE A 0.50 INCH UNGALVANIZED CASING PIPE CONFORMING TO 748.06 THAT HAS JOINTS WITH A CIRCUMFERENCIAL FULLY PENETRATING 8-1/4B WELD THAT IS PERFORMED BY AN ODOT APPROVED FIELD WELDER. THE INSTALLED CASING PIPE IS THE STORM WATER CONVEYANCE CARRIER UNLESS OTHERWISE SPECIFIED IN THE PLANS. HYDROSTATIC TESTING IS NOT REQUIRED FOR THE CASING PIPE.

PAVEMENT RESTORATION FOR PIPE INSTALLATIONS AND REMOVALS

THE FOLLOWING QUANTITY HAS BEEN PROVIDED FOR PAVEMENT RESTORATION FOLLOWING INSTALLATION AND/OR REMOVAL OF THE PIPE AT SLM 2.81.

ITEM 301 ASPHALT CONCRETE BASE, PG64-22 7 CU. YDS.
ITEM 304 AGGREGATE BASE, AS PER PLAN 5 CU. YD.
ITEM 407 PRIME COAT 11 GAL

THE ABOVE QUANTITY IS BASED ON A 301 THICKNESS OF 9 INCHES AND A PAVEMENT RESTORATION WIDTH THAT INCLUDES THE TRENCH WIDTH PLUS TWO FEET ON EACH SIDE OF THE TRENCH. SEE STANDARD CONSTRUCTION DRAWING DM-1.4 FOR TRENCH WIDTH FORMULA AND CALCULATION.

PROVIDE ANY MATERIALS USED OUTSIDE THE LIMITS STATED ABOVE AT NO ADDITIONAL COST.

(30.5' WIDE PAVEMENT X 8' WIDE TRENCH X 9"/12 1/27 = 7 CU YD
(30.5' WIDE PAVEMENT X 8' WIDE TRENCH X 6"/12 1/27 = 5 CU YD
(30.5' WIDE PAVEMENT X 8' WIDE TRENCH)/9 X 0.4 GAL = 11 GAL

INTERSECTIONS

INTERSECTIONS WILL BE RESURFACED 2 FT. BEYOND THE EDGE LINE, UNLESS OTHERWISE DIRECTED BY THE ENGINEER OR INDICATED IN THE PLAN. INTERSECTIONS SHALL BE PAVED AFTER COMPLETION OF THE SURFACE COURSE OR WITH THE MAINLINE PAVEMENT IF THIS CAN BE ACCOMPLISHED WITHOUT CHANGING THE VELOCITY AND DIRECTION OF THE PAVER. USE THE SAME ASPHALT CONCRETE AS THE MAINLINE PAVEMENT. PROVIDE A SMOOTH TRANSITION TO THE EXISTING PAVEMENT. ANY GRADING OR PRIME NECESSARY TO ACCOMPLISH THIS WORK SHALL BE INCLUDED IN THE COST OF THE PERTINENT BID ITEM.

INTERSECTIONS

THE FOLLOWING INTERSECTIONS SHALL BE RESURFACED BEYOND THE EDGE LINE AS NOTED BELOW, UNLESS OTHERWISE DIRECTED BY THE ENGINEER OR INDICATED IN THE PLAN. INTERSECTIONS SHALL BE PAVED AFTER COMPLETION OF THE SURFACE COURSE. A BUTT JOINT, AS PER STANDARD CONSTRUCTION DRAWING BP-3.1, SHALL BE USED TO PROVIDE A SMOOTH TRANSITION TO THE EXISTING PAVEMENT. USE THE SAME ASPHALT CONCRETE AS THE MAINLINE PAVEMENT UNLESS SHOWN OTHERWISE ON THE ASPHALT CONCRETE CALCULATIONS SHEET. ANY GRADING OR PRIME NECESSARY TO ACCOMPLISH THIS WORK SHALL BE INCLUDED IN THE COST OF THE PERTINENT BID ITEM.

INTERSECTION	SIDE	DISTANCE BEYOND EDGE LINE
US 224 AND HARTVILLE RD	N	55 FT
US 224 AND HARTVILLE RD	S	80 FT
US 224 AND INDUSTRY RD	N	45 FT
US 224 AND INDUSTRY RD	S	53 FT
US 224 AND BANK ST	N	50 FT
US 224 AND BANK ST	S	40 FT

ITEM 606 - ANCHOR ASSEMBLY, TYPE E

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING ANY OF THE GUARDRAIL END TERMINALS AS LISTED ON ROADWAY ENGINEERING'S WEB PAGE UNDER ROADSIDE SAFETY DEVICES FOR APPROVED GUARDRAIL END TREATMENTS. INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS, IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.

THE FACE OF THE TYPE E IMPACT HEAD SHALL BE COVERED WITH A SHEET OF TYPE G REFLECTIVE SHEETING, PER CMS 730.18.

REFER TO THE MANUFACTURER'S INSTRUCTIONS REGARDING THE INSTALLATION OF, AND THE GRADING AROUND THE FOUNDATION TUBES AND GROUND STRUT. THE TOP OF ANY FOUNDATION TUBE SHOULD BE LESS THAN 4 INCHES ABOVE THE GROUND. THE PLACEMENT OF THE FOUNDATION TUBES SHOULD BE AN APPROPRIATE DEPTH BELOW THE LEVEL LINE IN ORDER TO MAINTAIN THE FINISHED GUARDRAIL HEIGHT OF 27.75 INCHES FROM THE EDGE OF THE SHOULDER.

ON-SITE GRADING IS REQUIRED IF THE TOP OF THE FOUNDATION TUBES OR TOP OF THE GROUND STRUT DOES PROJECT MORE THAN 4 INCHES ABOVE THE GROUND LINE.

PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT PRICE BID FOR ITEM 606, ANCHOR ASSEMBLY, TYPE E, EACH, AND SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT AND MATERIALS NECESSARY TO CONSTRUCT A COMPLETE AND FUNCTIONAL ANCHOR ASSEMBLY SYSTEM, INCLUDING ALL RELATED TRANSITIONS, REFLECTIVE SHEETING, HARDWARE, GRADING, EMBANKMENT AND EXCAVATION NOT SEPARATELY SPECIFIED, AS REQUIRED BY THE MANUFACTURER.

CONNECTION BETWEEN EXISTING AND PROPOSED GUARDRAIL

WHEN IT IS NECESSARY TO SPLICE PROPOSED GUARDRAIL TO EXISTING GUARDRAIL, ONLY THE EXISTING GUARDRAIL SHALL BE CUT, DRILLED, OR PUNCHED. THE CONNECTION SHALL BE MADE USING A "W-BEAM RAIL SPLICE" AS SHOWN IN AASHTO M 180. PAYMENT SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE RESPECTIVE GUARDRAIL ITEMS.

SURVEYING PARAMETERS (AT SR 43 AND CULVERT AT SLM 2.81)

USE THE FOLLOWING VERTICAL POSITIONING AND HORIZONTAL POSITIONING PARAMETERS FOR ALL SURVEYING:

VERTICAL POSITIONING

ORTHOMETRIC HEIGHT DATUM: NAVD 88
GEOID: 2009

HORIZONTAL POSITIONING

REFERENCE FRAME: NAD 83 (CORS96) (EPOCH:2002.0000)
ELLIPSOID: GRS80
MAP PROJECTION: LAMBERT CONFORMAL CONIC
COORDINATE SYSTEM: OHIO NORTH ZONE (3401)
COMBINED SCALE FACTOR: .99988767202

UNITS ARE IN U.S. SURVEY FEET. USE THE FOLLOWING CONVERSION FACTOR: 1 METER = 3.280833333 U.S. SURVEY FEET.

SURVEYING PARAMETERS (AT SR 44) (SLM 7.71)

USE THE FOLLOWING VERTICAL POSITIONING AND HORIZONTAL POSITIONING PARAMETERS FOR ALL SURVEYING:

VERTICAL POSITIONING

ORTHOMETRIC HEIGHT DATUM: NAVD 88
GEOID: 2009

HORIZONTAL POSITIONING

REFERENCE FRAME: NAD 83 (CORS96) (EPOCH2002.0000)
ELLIPSOID: GRS80
MAP PROJECTION: LAMBERT CONFORMAL CONIC
COORDINATE SYSTEM: OHIO NORTH ZONE (3401)
COMBINED SCALE FACTOR: .99989069995

UNITS ARE IN U.S. SURVEY FEET. USE THE FOLLOWING CONVERSION FACTOR: 1 METER = 3.280833333 U.S. SURVEY FEET.

SURVEYING PARAMETERS (CULVERT AT SLM 4.71)

USE THE FOLLOWING VERTICAL POSITIONING AND HORIZONTAL POSITIONING PARAMETERS FOR ALL SURVEYING:

VERTICAL POSITIONING

ORTHOMETRIC HEIGHT DATUM: NAVD 88
GEOID: 2003

HORIZONTAL POSITIONING

REFERENCE FRAME: NAD 83 (CORS96) (EPOCH2002.0000)
ELLIPSOID: GRS80
MAP PROJECTION: LAMBERT CONFORMAL CONIC
COORDINATE SYSTEM: OHIO NORTH ZONE (3401)
COMBINED SCALE FACTOR: .99988823035

UNITS ARE IN U.S. SURVEY FEET. USE THE FOLLOWING CONVERSION FACTOR: 1 METER = 3.280833333 U.S. SURVEY FEET.

ITEM 448- ASPHALT CONCRETE SURFACE COURSE, TYPE 1 PG70-22M, AS PER PLAN

703.05 DO NOT USE ANY FINE OR COARSE AGGREGATE WITH A 'SR' OR 'SRH' DESIGNATION ACCORDING TO THE OFFICE OF MATERIALS MANAGEMENT (OMM) IN ANY JOB MIX FORMULA (JMF) FOR THIS ITEM.

ITEM 202 - PAVEMENT REMOVED

THE CONTRACTOR SHALL REMOVE THE PAVEMENT AS SHOWN ON THE PLAN AND PROFILE SHEETS 24-29 AND 34A-40. PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT PRICE BID FOR ITEM 202, PAVEMENT REMOVED & SHALL INCLUDE AND ALL LABOR, TOOLS, EQUIPMENT AND MATERIALS NECESSARY TO PERFORM THE ABOVE WORK.

THE FOLLOWING QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY:

ITEM 202 PAVEMENT REMOVED	1834 SQ.YD.
ITEM 203 EXCAVATION	1464 CU.YD.
ITEM 203 EMBANKMENT	1544 CU.YD.

(QUANTITIES FOR PAVEMENT REMOVED FOR THE WIDENING SECTION ARE INCLUDED IN THIS QUANTITY)

ACCEPTED
ODOT
ENGINEER

GENERAL NOTES

POR-224-0.00

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PIPE CONNECTIONS TO CORRUGATED METAL STRUCTURES

CONNECTIONS OF PROPOSED LONGITUDINAL DRAINAGE TO CORRUGATED METAL STRUCTURES SHALL BE MADE BY MEANS OF A SHOP FABRICATED OR FIELD WELDED STUB ON THE STRUCTURE. THE STUB SHALL MEET THE REQUIREMENTS OF 707 AND HAVE A MINIMUM LENGTH OF 2 FEET AND A MINIMUM WALL THICKNESS OF 0.064 INCHES.

THE LOCATION AND ELEVATION OF THE STUB ARE TO BE CONSIDERED APPROXIMATE AND MAY BE ADJUSTED BY THE ENGINEER TO AVOID CUTTING THROUGH JOINTS IN THE STRUCTURE.

THE FIELD WELDED JOINT, IF USED, SHALL BE THOROUGHLY CLEANED AND REGALVANIZED OR OTHERWISE SUITABLY REPAIRED. WELDING SHALL MEET THE REQUIREMENTS OF 513.21.

A MASONRY COLLAR, AS PER STANDARD DRAWING DM-1.1, WILL BE REQUIRED TO CONNECT THE LONGITUDINAL DRAINAGE TO THE STUB, WHEN PIPE OTHER THAN CORRUGATED METAL IS PROVIDED FOR THE LONGITUDINAL DRAINAGE.

PAYMENT FOR CUTTING INTO THE STRUCTURE AND PROVIDING THE CONNECTION DESCRIBED, SHALL BE INCLUDED IN THE CONTRACT PRICE FOR ITEM 603 OR 522.

FARM DRAINS

ALL FARM DRAINS, WHICH ARE ENCOUNTERED DURING CONSTRUCTION, SHALL BE PROVIDED WITH UNOBSTRUCTED OUTLETS. EXISTING COLLECTORS WHICH ARE LOCATED BELOW THE ROADWAY DITCH ELEVATIONS, AND WHICH CROSS THE ROADWAY, SHALL BE REPLACED WITHIN THE (RIGHT OF WAY) (CONSTRUCTION) LIMITS BY ITEM 603 CONDUIT, TYPE B, ONE COMMERCIAL SIZE LARGER THAN THE EXISTING CONDUIT.

EXISTING COLLECTORS AND ISOLATED FARM DRAINS, WHICH ARE ENCOUNTERED ABOVE THE ELEVATION OF ROADWAY DITCHES, SHALL BE OUTLETTED INTO THE ROADWAY DITCH BY 603 TYPE F CONDUIT. THE OPTIMUM OUTLET ELEVATION SHALL BE ONE FOOT ABOVE THE FLOWLINE ELEVATION OF THE DITCH. LATERAL FIELD TILES WHICH CROSS THE ROADWAY SHALL BE INTERCEPTED BY 603, TYPE E CONDUIT, AND CARRIED IN A LONGITUDINAL DIRECTION TO AN ADEQUATE OUTLET OR ROADWAY CROSSING.

THE LOCATION, TYPE, SIZE AND GRADE OF REPLACEMENTS SHALL BE DETERMINED BY THE ENGINEER AND PAYMENT SHALL BE MADE ON FINAL MEASUREMENTS.

EROSION CONTROL PADS AND ANIMAL GUARDS SHALL BE PROVIDED AT THE OUTLET END OF ALL FARM DRAINS AS PER STANDARD CONSTRUCTION DRAWING DM-1.1, EXCEPT WHEN THEY OUTLET INTO A DRAINAGE STRUCTURE. PAYMENT FOR THE EROSION CONTROL PADS AND ANIMAL GUARDS AND ANY NECESSARY BENDS OR BRANCHES SHALL BE INCLUDED FOR PAYMENT IN THE PERTINENT CONDUIT ITEMS.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY FOR THE WORK NOTED ABOVE:

603 6" CONDUIT, TYPE B 200 FT.

603 6" CONDUIT, TYPE E 200 FT.

603 6" CONDUIT, TYPE F 200 FT.

REVIEW OF DRAINAGE FACILITIES

BEFORE ANY WORK IS STARTED ON THE PROJECT AND AGAIN BEFORE FINAL ACCEPTANCE BY THE STATE, REPRESENTATIVES OF THE STATE AND THE CONTRACTOR, ALONG WITH LOCAL REPRESENTATIVES, SHALL MAKE AN INSPECTION OF ALL EXISTING SEWERS WHICH ARE TO REMAIN IN SERVICE AND WHICH MAY BE AFFECTED BY THE WORK. THE CONDITION OF THE EXISTING CONDUITS AND THEIR APPURTENANCE SHALL BE DETERMINED FROM FIELD OBSERVATIONS. RECORDS OF THE INSPECTION SHALL BE KEPT IN WRITING BY THE STATE.

ALL NEW CONDUITS, INLETS, CATCH BASINS, AND MANHOLES CONSTRUCTED AS A PART OF THE PROJECT SHALL BE FREE OF ALL FOREIGN MATTER AND IN A CLEAN CONDITION BEFORE THE PROJECT WILL BE ACCEPTED BY THE STATE.

ALL EXISTING SEWERS INSPECTED INITIALLY BY THE ABOVE MENTIONED PARTIES SHALL BE MAINTAINED AND LEFT IN A CONDITION REASONABLY COMPARABLE TO THAT DETERMINED BY THE ORIGINAL INSPECTION. ANY CHANGE IN THE CONDITION RESULTING FROM THE CONTRACTOR5/32S OPERATIONS SHALL BE CORRECTED BY THE CONTRACTOR TO THE SATISFACTION OF THE ENGINEER.

PAYMENT FOR ALL OPERATIONS DESCRIBED ABOVE SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE PERTINENT 603 CONDUIT ITEMS.

ENDANGERED SPECIES HABITAT

WHENEVER PRACTICABLE, UNAVOIDABLE CUTTING OF LIVING OR DEAD TREES OR SNAGS WITH EXFOLIATING, PEELING OR LOOSE BARK, SPLIT TRUNKS AND/OR BRANCHES OR CAVITIES TREES SHALL BE PERFORMED AFTER SEPTEMBER 30 AND BEFORE APRIL 1. IF AT ALL POSSIBLE, TREES CONTAINING SUITABLE INDIANA BAT ROOST HABITAT, THAT MUST BE REMOVED BY THE PROJECT BETWEEN APRIL 1 AND SEPTEMBER 30, SHALL BE MARKED BY THE CONTRACTOR FOR AVOIDANCE DURING THESE MONTHS.

WETLANDS IMPACT AND AVOIDANCE CULVERT NO. POR-224-1.32

THE PROPOSED IMPROVEMENT AT CULVERT NO. POR-224-1.32 WILL TEMPORARILY IMPACT 0.007 ACRE OF EXISTING PALUSTRINE EMERGENT WETLAND AREA NORTH OF US ROUTE 224. A PALUSTRINE EMERGENT WETLAND IS ALSO PRESENT SOUTH OF US ROUTE 224 IN THE SOUTHWEST QUADRANT OF THE POR-224-1.32 CULVERT. WETLAND AREAS AT CULVERT NO. POR-224-1.32 SHALL BE FLAGGED IN THE FIELD BY ODOT, DISTRICT 4 ENVIRONMENTAL SECTION PERSONNEL. THE CONTRACTOR SHALL AVOID THE FLAGGED WETLAND AREA IN THE SOUTHWEST QUADRANT OF THE POR-224-1.32 CULVERT. THE CONTRACTOR MAY STAGE EQUIPMENT AND MATERIALS DIRECTLY SOUTH OF THE CULVERT OUTLET AND IN THE SOUTHEAST QUADRANT OF THE POR-224-1.32 CULVERT. BEST MANAGEMENT PRACTICES FOR SOIL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE EMPLOYED TO MINIMIZE IMPACTS TO THE REMAINING PORTION OF WETLANDS AT THE POR-224-1.32 CULVERT. TO PROTECT AND DELINEATE THE BOUNDARIES OF THE EXISTING REMAINING WETLANDS, TEMPORARY CONSTRUCTION FENCE AND PERIMETER FILTER FABRIC FENCE SHALL BE INSTALLED WITHIN THE US ROUTE 225 RIGHT-OF-WAY ALONG THE PROPOSED CONSTRUCTION LIMITS WITHIN THE NORTHERN WETLAND AREA AND ADJACENT TO THE SOUTHERN WETLAND AREA MAINTAINING A MINIMUM ONE-FOOT BUFFER BETWEEN THE SOUTHERN WETLAND BOUNDARY IDENTIFIED BY ODOT, DISTRICT 4 ENVIRONMENTAL SECTION PERSONNEL. THE TEMPORARY CONSTRUCTION FENCE AND PERIMETER FILTER FABRIC FENCE SHALL BE INSTALLED BY THE CONTRACTOR PRIOR TO THE START OF ANY CONSTRUCTION ACTIVITIES INCLUDING ANY NECESSARY CLEARING AND GRUBBING ACTIVITIES. UNDER NO CIRCUMSTANCES SHALL THE CONTRACTOR IMPACT THE REMAINING NORTHERN WETLANDS BEYOND A 0.007 ACRE AREA AT THE POR-224-1.32 CULVERT INLET. UNDER NO CIRCUMSTANCES SHALL THE CONTRACTOR STORE CONSTRUCTION EQUIPMENT AND/OR MATERIALS WITHIN THE REMAINING WETLANDS AREAS. THE TEMPORARY CONSTRUCTION FENCE AND PERIMETER FILTER FABRIC FENCE SHALL BE MAINTAINED BY THE CONTRACTOR THROUGHOUT THE DURATION OF THE PROJECT.

WETLANDS IMPACT AND AVOIDANCE CULVERT NO. POR-224-2.81

THE PROPOSED REPLACEMENT OF CULVERT NO. POR-224-2.81 WILL RESULT IN PERMANENT IMPACTS TO 93 LINEAR FEET (0.006 ACRE) OF CLASS 1 PRIMARY HEADWATER HABITAT STREAM AND 0.0011 ACRE OF PALUSTRINE EMERGENT WETLAND AREA AS SHOWN IN THE CONSTRUCTION PLAN. BEST MANAGEMENT PRACTICES FOR SOIL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE EMPLOYED TO MINIMIZE IMPACTS TO THE REMAINING PORTION OF THE STREAM WETLANDS AT THE POR-224-2.81 CULVERT. TO PROTECT AND DELINEATE THE BOUNDARIES OF THE EXISTING REMAINING WETLANDS AREA, TEMPORARY CONSTRUCTION FENCE AND PERIMETER FILTER FABRIC FENCE SHALL BE INSTALLED WITHIN THE RIGHT-OF-WAY ALONG THE PROPOSED CONSTRUCTION LIMITS WITHIN THE WETLANDS AREA. THE TEMPORARY CONSTRUCTION FENCE AND PERIMETER FILTER FABRIC FENCE SHALL BE INSTALLED BY THE CONTRACTOR PRIOR TO THE START OF ANY CONSTRUCTION ACTIVITIES INCLUDING ANY NECESSARY CLEARING AND GRUBBING ACTIVITIES. UNDER NO CIRCUMSTANCES SHALL THE CONTRACTOR IMPACT THE STREAM BEYOND THE CONSTRUCTION LIMITS AND/OR THE REMAINING WETLANDS AREA. UNDER NO CIRCUMSTANCES SHALL THE CONTRACTOR STORE CONSTRUCTION EQUIPMENT AND/OR MATERIALS WITHIN THE STREAM AND/OR REMAINING WETLANDS AREA. THE TEMPORARY CONSTRUCTION FENCE AND PERIMETER FILTER FABRIC FENCE SHALL BE MAINTAINED BY THE CONTRACTOR THROUGHOUT THE DURATION OF THE PROJECT.

ITEM SPECIAL - MISC.: REINFORCEMENT MESH FOR LONGITUDINAL JOINTS

DESCRIPTION:
THIS WORK CONSISTS OF PLACEMENT OF A SELF ADHESIVE GLASS FIBER MESH OVER JOINTS DESIGNATED IN THE PLAN AND/OR BY THE ENGINEER PRIOR TO PLACEMENT OF ASPHALT CONCRETE.

MATERIAL:
FURNISH GLASGRID KNITTED GLASS FIBER STRAND MESH MEETING THE FOLLOWING PROPERTIES:

PROPERTIES	GlasGrid No. 0260
Material Width	5 ft.
Material - Self Adhesive fiberglass strand coated with elastomeric polymer per ASTM 4963	25% minimum dry pickup
Tensile Strength per G.R.I. GG 1-87	1120 lbs/in, 560 lbs/in
Elongation at break (min)	<5%
Melting Point (min) ASTM D276	>425 °F
Mass/ Unit Area (min) ASTM D5261-92	16 oz/sq yd
Grid pattern	0.5 in x 0.5 in

BEFORE INSTALLATION SUBMIT A LETTER TO THE PROJECT ENGINEER WITH A STATEMENT CERTIFYING MATERIAL RECEIVED MEETS THE ABOVE PROPERTIES. SUBMIT TO THE PROJECT ENGINEER ACTUAL DATED (SALES FLYER DATA NOT ACCEPTABLE) TEST DATA WITH THE CERTIFICATION LETTER.

CONSTRUCTION:
PERFORM ALL REQUIRED REPAIRS PRIOR TO PLACING MESH.

ENSURE ALL AREAS WHERE MESH IS TO BE PLACED ARE FREE OF ALL DIRT AND OTHER LOOSE MATERIALS BY SWEEPING OR OTHER APPROVED METHOD. PLACE TACK COAT FOR INTERMEDIATE COURSE AT A RATE OF 0.02 GAL./SQ. YD. AND WAIT 2 HOURS BEFORE PLACING THE MESH ON A PAVEMENT SURFACE THAT IS BETWEEN 40° F AND 140° F.

PLACE MESH UNDER TENSION TO PREVENT RIPPLING. REMOVE RIPPLES BY PULLING, OR IF NECESSARY (IN CURVES FOR EXAMPLE), BY CUTTING AND FLATTENING THE MESH. OVERLAP TRANSVERSE JOINTS OF THE MESH 3 TO 6 INCHES. OVERLAP LONGITUDINAL JOINTS OF THE MESH BY 1 INCH MINIMUM. ROLL THE MESH SURFACE 2 PASSES WITH A RUBBER COATED DRUM ROLLER, RUBBER TIRED ROLLER OR OTHER METHOD ACCEPTABLE TO THE MANUFACTURER. CLEAN RUBBER ROLLER IF BUILDUP ON THE RUBBER SURFACE INTERFERES WITH MESH PLACEMENT. DO NOT USE A STEEL DRUM ROLLER. PLACED MESH WILL HANDLE SPEED CONTROLLED EMERGENCY OR CONSTRUCTION TRAFFIC BUT DAMAGED SECTIONS MUST BE REMOVED AND/ OR REPAIRED, AT THE CONTRACTOR'S EXPENSE. DO NOT ALLOW MUD OR OTHER MATERIAL TO COLLECT ON THE MESH PRIOR TO ASPHALT CONCRETE PLACEMENT. COVER MESH WITH ASPHALT CONCRETE THE SAME DAY UNLESS WEATHER BECOMES UNSUITABLE.

MEASUREMENT:
MEASURE MESH PLACEMENT BY THE LINEAL FEET OF JOINT COVERED. DO NOT ALLOW FOR MESH OVERLAP.

PAYMENT:
THE DEPARTMENT WILL PAY FOR ACCEPTED QUANTITIES, COMPLETED IN PLACE, AT THE CONTRACT PRICES, AS DESCRIBED ABOVE, AS FOLLOWS:

ITEM	UNIT	DESCRIPTION
SPECIAL	FT.	MISC.: REINFORCEMENT MESH FOR LONGITUDINAL JOINTS

CALCULATED RMB CHECKED

GENERAL NOTES

POR-224-0.00

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MAINTENANCE OF TRAFFIC

THIS ITEM SHALL CONSIST OF MAINTENANCE OF TRAFFIC ON EXISTING ROADWAYS AND RAMPS IN ACCORDANCE WITH THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS, CURRENT EDITION, LATEST REVISION, THE SPECIFICATIONS AND THE FOLLOWING:

1. A MINIMUM OF ONE TEN FOOT BIDIRECTIONAL LANE SHALL BE MAINTAINED ON THE EXISTING PAVEMENT AND COMPLETED PAVEMENT DURING CONSTRUCTION OF THE WORK.

2. THE CONTRACTOR SHALL INFORM THE DISTRICT OFFICE (330) 786-2208, EIGHTEEN (18) DAYS PRIOR TO THE BEGINNING OF WORK.

3. CONES SHALL NOT BE ACCEPTABLE TRAFFIC CONTROL DEVICES FOR LANE RESTRICTIONS OR LANE REDUCTIONS THAT ARE IN OPERATION ONE-HALF HOUR AFTER SUNSET OR ONE HALF-HOUR BEFORE SUNRISE. ALL NIGHTTIME LANE RESTRICTIONS SHALL REQUIRE DRUMS OR BARRICADES AT A MAXIMUM SPACING OF FIFTY (50) FEET. WEIGHTED CHANNELIZERS MAY BE USED IN ACCORDANCE WITH THE STANDARD CONSTRUCTION DRAWINGS.

4. FOR RESURFACING WORK:
LANE RESTRICTIONS OR LANE REDUCTIONS SHALL NOT BE PERMITTED AFTER NORMAL WORKING HOURS. NORMAL WORKING HOURS SHALL BE THOSE HOURS DURING WHICH THE CONTRACTOR HAS A FULL COMPLEMENT OF EMPLOYEES AND EQUIPMENT ACTIVELY REMOVING AND/OR PLACING PAVEMENT MATERIALS.

5. THE CONTRACTOR SHALL FURNISH, ERECT, MAINTAIN AND SUBSEQUENTLY REMOVE ALL FLAGS, BARRICADES, SIGNS, SIGN SUPPORTS AND FURNISH AND MAINTAIN ALL FLAGGERS, WATCHERS AND INCIDENTALS RELATED THERETO.

6. ALL FULL DEPTH PAVEMENT REMOVAL AND REPLACEMENT OPERATIONS SHALL BE COMPLETED THE SAME DAY THE EXCAVATION IS MADE. IF THE CONTRACTOR CANNOT COMPLETE THE WORK, THE EXCAVATION SHALL BE BACKFILLED.

7. TRUCK MOUNTED ATTENUATORS (TMA'S) SHALL BE USED AS SHOWN IN THE STANDARD CONSTRUCTION DRAWINGS.

8. IN ADDITION TO THE REQUIREMENTS OF 614.11 WORK ZONE PAVEMENT MARKINGS, AT THE END OF EACH DAY OF WORK, THE CONTRACTOR SHALL REPLACE (WITH WORK ZONE MARKINGS) ALL LANE, CENTER, STOP OR CHANNELIZING LINES THAT WERE REMOVED OR COVERED DURING THE PAVEMENT REMOVAL OR PLACEMENT OPERATIONS. QUANTITIES FOR SUCH PLACEMENT ARE CARRIED AS PART OF THE ITEMS LISTED UNDER 614 WORK ZONE PAVEMENT MARKINGS.

9. A QUANTITY OF 50 CU. YDS. OF 614 ASPHALT CONCRETE FOR MAINTAINING TRAFFIC SHALL BE PROVIDED FOR USE IN MAINTAINING PAVEMENT, SHOULDERS AND OTHER LOCATIONS AS DIRECTED BY THE ENGINEER.

10. PRIOR TO OPENING TO TRAFFIC EACH LANE SHALL BE IN A SAFE, PASSABLE CONDITION. ALL TRANSVERSE JOINTS SHALL EXTEND ACROSS THE FULL LANE AND SHOULDER WIDTH AND EACH LANE SHALL BE FREE FROM UNEVEN LONGITUDINAL JOINTS. THE CONTRACTOR SHALL PROVIDE ASPHALT WEDGES FOR TRANSVERSE JOINTS WHEREVER THERE ARE PAVEMENT ELEVATION DIFFERENCES.

11. NO TRAFFIC SHALL BE PLACED ON A PLANED SURFACE.

12. A QUANTITY OF ITEM 614 WORK ZONE MARKING SIGN HAS BEEN INCLUDED IN THE PLAN. THIS QUANTITY MAY INCLUDE, BUT NOT BE LIMITED TO, THE FOLLOWING SIGNS: W8-1 (BUMP), W6-3 (TWO-WAY TRAFFIC), W8-H13 (NO EDGE LINES), R4-1 (DO NOT PASS), R4-2 (PASS WITH CARE), W8-11 (UNEVEN LANES). THESE QUANTITIES SHALL BE AS PER 614.04.

THE FOLLOWING QUANTITIES SHALL BE USED FOR THE MAINTENANCE OF TRAFFIC ON THIS PROJECT:

PHASE I- PLANED SURFACE
614, WORK ZONE CENTER LINE, CLASS II, 13.39 MILE
614 WORK ZONE LANE LINE, CLASS II, 1.72 MILE
614, WORK ZONE STOP LINE, CLASS I, 281 FT
614, WORK ZONE CHANNELIZING LINE, CLASS I, 5388 FT
614, WORK ZONE MARKING SIGN (ALL PHASES) 60 EACH

PHASE II- INTERMEDIATE COURSE
614, WORK ZONE CENTER LINE, CLASS II, 13.39 MILE
614, WORK ZONE LANE LINE, CLASS II, 1.72 MILE
614, WORK ZONE STOP LINE, CLASS I, 281 FT
614, WORK ZONE CHANNELIZING LINE, CLASS I, 5388 FT

PHASE III- SURFACE COURSE
614, WORK ZONE CENTER LINE, CLASS III, 642 PAINT, 13.39 MILE
614, WORK ZONE LANE LINE, CLASS III, 642 PAINT, 1.72 MILE
614, WORK ZONE STOP LINE, CLASS III,642 PAINT, 281 FT
614, WORK ZONE CHANNELIZING LINE, CLASS III, 642 PAINT,5388 FT

TO BE USED AS DIRECTED BY THE ENGINEER
614, WORK ZONE EDGE LINE, CLASS III, 642 PAINT, 28 MILE

ADVANCED NOTICE TO PAVE

THE CONTRACTOR SHALL SUBMIT FOR APPROVAL TO THE DISTRICT CONSTRUCTION ENGINEER A DETAILED SCHEDULE 15 DAYS PRIOR TO THE PLACEMENT OF THE OVERLAY COURSES, ON HOW THEY PROPOSE TO PROSECUTE THE PAVING OPERATIONS. THE DETAILS SHALL SHOW THE ORDER OF PERFORMANCE OF EACH STAGE (START TO FINISH) OF THE WORK INCLUDING THE MAINTENANCE OF TRAFFIC THAT WILL BE USED.

TRAFFIC CONTROL INSPECTOR

THE CONTRACTOR SHALL DESIGNATE AN INDIVIDUAL OTHER THAN THE SUPERINTENDENT AND SUBJECT TO THE APPROVAL OF THE ENGINEER, TO CONTINUOUSLY INSPECT ALL TRAFFIC CONTROL DEVICES WHENEVER CONSTRUCTION WORK IS BEING PERFORMED WITHIN THE WORK LIMITS OF THE PROJECT. THE DESIGNATED INDIVIDUAL SHALL ALSO INSPECT ALL TRAFFIC DEVICES AT THE BEGINNING AND AT THE END OF EACH WORK DAY. THE DESIGNATED INDIVIDUAL OR A QUALIFIED REPRESENTATIVE SHALL ALSO BE AVAILABLE ON AN AROUND THE CLOCK BASIS TO REPAIR AND/OR REPLACE DAMAGED OR MISSING TRAFFIC CONTROL DEVICES. THESE INDIVIDUALS SHALL BE EQUIPPED WITH CELLULAR PHONES AND THEIR NAMES AND PHONE NUMBERS SHALL BE GIVEN TO THE PROJECT ENGINEER AT THE PRE-CONSTRUCTION MEETING. THE DESIGNATED INDIVIDUAL MAY HAVE OTHER CONSTRUCTION RELATED DUTIES AS LONG AS IMMEDIATE ATTENTION IS GIVEN TO TRAFFIC CONTROL. PAYMENT FOR THE SERVICES OF THE TRAFFIC CONTROL INSPECTOR SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 614 MAINTAINING TRAFFIC.

DETOUR NOTIFICATION- POR-224-2.81

THE CONTRACTOR SHALL ADVISE THE ODOT DISTRICT OFFICE (330-786-3148) EIGHTEEN (18) DAYS IN ADVANCE OF WHEN THE DETOUR ROUTE SHOULD BE IN EFFECT. ALL WORK ZONE DEVICES REQUIRED SHALL BE FURNISHED, ERECTED, MAINTAINED, AND SUBSEQUENTLY REMOVED BY THE CONTRACTOR. PAYMENT FOR ALL WORK ASSOCIATED WITH THE DETOUR SHALL BE INCLUDED UNDER THE LUMP SUM BID FOR ITEM 614, DETOUR SIGNING.

ITEM 614, MAINTAINING TRAFFIC (TIME LIMITATION ON A DETOUR) POR-224-2.81

A MINIMUM OF ONE LANE OF TRAFFIC IN EACH DIRECTION SHALL BE MAINTAINED AT ALL TIMES, EXCEPT FOR A PERIOD NOT TO EXCEED 7 CONSECUTIVE CALENDAR DAYS, WHEN THROUGH TRAFFIC MAY BE DETOURED AS SHOWN ON SHEETS 11-12. A DISINCENTIVE SHALL BE ASSESSED IN THE AMOUNT OF $2000 FOR EACH CALENDAR DAY THE ROADWAY REMAINS CLOSED TO TRAFFIC BEYOND THE SPECIFIED LIMIT.

DETOUR COORDINATION

THE DETOUR FOR POR-224-2.81 SHALL NOT BE CONCURRENT WITH THE INTERSECTION WIDENING WORK AT THE SR-43 AND SR-44 INTERSECTIONS.

DUST CONTROL

THE CONTRACTOR SHALL FURNISH AND APPLY WATER FOR DUST CONTROL AS DIRECTED BY THE ENGINEER. THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED FOR DUST CONTROL PURPOSES:

ITEM 616, WATER 7 M. GAL

ITEM 614, MAINTAINING TRAFFIC (NOTICE OF CLOSURE SIGN) POR-224-2.81

NOTICE OF CLOSURE SIGNS, AS DETAILED IN THESE PLANS, SHALL BE ERECTED BY THE CONTRACTOR AT LEAST ONE WEEK IN ADVANCE OF THE SCHEDULED ROAD CLOSURE AT SLM 1.86. THE SIGNS SHALL BE ERECTED ON THE RIGHT-HAND SIDE OF THE ROAD FACING TRAFFIC. THEY SHALL BE PLACED SO AS NOT TO INTERFERE WITH THE VISIBILITY OF ANY OTHER TRAFFIC CONTROL SIGNS, ON ROADWAYS, THEY SHOULD BE ERECTED AT THE POINT OF CLOSURE. THE SIGNS MAY BE ERECTED ANYWHERE ON RAMPS AS LONG AS THEY ARE VISIBLE TO THE MOTORISTS USING THE RAMP. ON ENTRANCE RAMPS, THE SIGN SHALL BE ERECTED WELL IN ADVANCE OF THE MERGE AREA TO AVOID DISTRACTING MOTORISTS.

W20-H14-60

CONTRACTOR'S EQUIPMENT - OPERATION AND STORAGE

A QUALIFIED FLAGGER SHALL BE EMPLOYED WHERE THE CONTRACTOR'S EQUIPMENT MUST MERGE WITH THE TRAFFIC STREAM. THE CONTRACTOR'S EQUIPMENT SHALL BE EQUIPPED WITH AT LEAST ONE AMBER FLASHING LIGHT. PAVERS, ROLLERS AND OTHER EQUIPMENT MAY BE PARKED IN AREAS ALONG THE HIGHWAY WHEN PAVING OPERATIONS ARE SCHEDULED TO CONTINUE WITHIN THE NEXT WORKDAY. OTHERWISE THE EQUIPMENT SHALL BE STORED AT A STORAGE AREA OUTSIDE THE R/W, THE LOCATION OF WHICH SHALL HAVE PRIOR APPROVAL OF THE ENGINEER. WHEN PARKING ALONG THE HIGHWAY THE EQUIPMENT SHALL BE PLACED AND DELINEATED AS PER 614.03. ADEQUATE BARRICADES AND LIGHTS SHALL BE PLACED ON THE PAVEMENT SIDE OF THE EQUIPMENT TO IDENTIFY THE LIMITS OF THE EQUIPMENT. ALL OTHER EQUIPMENT, INCLUDING PRIVATE VEHICLES, SHALL BE STORED AT THE APPROVED CONTRACTOR'S STORAGE AREA. NO EQUIPMENT SHALL BE PARKED ON PRIVATE PROPERTY UNLESS PRIOR APPROVAL OF THE OWNER AND THE PROJECT ENGINEER/SUPERVISOR HAS BEEN GRANTED.

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OVERNIGHT TRENCH CLOSING

THE BASE WIDENING SHALL BE COMPLETED TO A DEPTH OF NO MORE THAN 3 INCHES BELOW THE EXISTING PAVEMENT BY THE END OF EACH WORK DAY. NO TRENCH IN THE VINCITY OF THE INTERSECTION OF US 224 AND SR 43, AND THE INTERSECTION OF US 224 AND SR 44 SHALL BE LEFT OPEN OVERNIGHT EXCEPT FOR A SHORT LENGTH (25 FEET OR LESS) OF A WORK SECTION AT THE END OF THE TRENCH. IN CASE WORK MUST BE SUSPENDED BECAUSE OF INCLEMENT WEATHER OR OTHER REASONS, THE TRENCH FOR THE UN-COMPLETED BASE WIDENING SHALL BE BACKFILLED AT THE DIRECTION OF THE ENGINEER.

PORTABLE CONCRETE BARRIER (PCB)

THE PORTABLE CONCRETE BARRIER SHALL BE PLACED ACCORDING TO THE DETAIL BELOW UNLESS OTHERWISE DIRECTED BY THE PROJECT ENGINEER.

ALL LABOR, EQUIPMENT, AND INCIDENTALS NEEDED TO PERFORM THIS WORK SHALL BE PAID FOR UNDER ITEM 614 MAINTENANCE OF TRAFFIC EXCEPT FOR THOSE LISTED BELOW.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY:

614, WORK ZONE IMPACT ATTENUATOR (BIDIRECTIONAL), 8 EACH
622, PORTABLE CONCRETE BARRIER, 32", 2775 FT

614, WORK ZONE EDGE LINE, CLASS 1, 0.55 MILE

ITEM 614, BARRIER REFLECTORS AND/OR OBJECT MARKERS

BARRIER REFLECTORS AND/OR OBJECT MARKERS SHALL BE INSTALLED ON ALL PORTABLE BARRIER (PB) USED FOR TRAFFIC CONTROL. BARRIER REFLECTORS, OBJECT MARKERS AND THEIR INSTALLATION SHALL CONFORM TO CMS 626, EXCEPT THAT THE SPACING SHALL BE 50 FEET. AN ESTIMATED QUANTITY OF 58 EACH OF ITEM 614 BARRIER REFLECTOR, TYPE B AND 58 EACH OF ITEM 614 OBJECT MARKER, 1-WAY HAVE BEEN PROVIDED AND CARRIED TO THE GENERAL SUMMARY.

ITEM 614, WORK ZONE IMPACT ATTENUATOR FOR 24" WIDE HAZARDS (BIDIRECTIONAL)

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING A NON-GATING IMPACT ATTENUATOR. FURNISH AN IMPACT ATTENUATOR FROM THE OFFICE OF ROADWAY ENGINEERING APPROVED LIST FOR WORK ZONE IMPACT ATTENUATORS. THE APPROVED LIST IS AVAILABLE AT THE "ROADWAY STANDARDS: PROPRIETARY ROADSIDE SAFETY DEVICES" WEB PAGE ON THE OFFICE OF ROADWAY ENGINEERING WEBSITE.

INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.

THE CONTRACTOR SHALL REPAIR OR REPLACE A DAMAGED UNIT WITHIN 24 HOURS OF A DAMAGING IMPACT.

WHEN BIDIRECTIONAL DESIGNS ARE SPECIFIED, THE CONTRACTOR SHALL SUPPLY APPROPRIATE TRANSITIONS.

WHEN GATING IMPACT ATTENUATORS ARE DESIRED, THE CONTRACTOR SHALL SUBMIT DOCUMENTATION TO THE ENGINEER FOR ACCEPTANCE.

THE COST FOR THE ADDITIONAL BARRIER REQUIRED FOR A GATING IMPACT ATTENUATOR SHALL BE INCLUDED IN THE COST OF THE GATING IMPACT ATTENUATOR.

PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT PRICE BID AND SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT AND MATERIALS NECESSARY TO CONSTRUCT AND MAINTAIN A COMPLETE AND FUNCTIONAL IMPACT ATTENUATOR SYSTEM, INCLUDING ALL RELATED BACKUPS, TRANSITIONS, LEVELING PADS, HARDWARE AND GRADING, NOT SEPARATELY SPECIFIED, AS REQUIRED BY THE MANUFACTURER.

EXISTING TRAFFIC SIGNALS

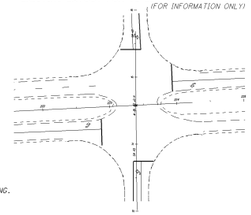
MOVE SIGNAL HEADS DURING CONSTRUCTION OF INTERSECTION WIDENINGS TO PROVIDE PROPER ALIGNMENT PER OMUTCD FIGURE 4D-2. PAYMENT FOR THE ABOVE WORK SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 614 MAINTAINING TRAFFIC.

ITEM 614, MAINTAINING TRAFFIC (TIME LIMITATION)

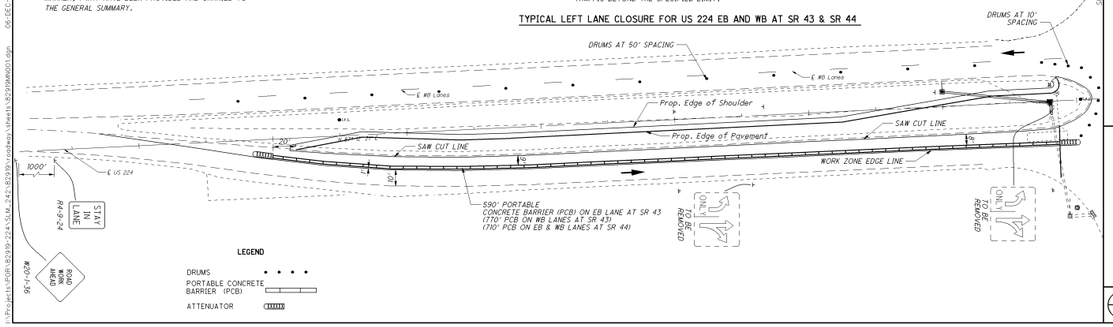
A MINIMUM OF ONE LANE OF TRAFFIC IN EACH DIRECTION SHALL BE MAINTAINED AT ALL TIMES, AS SHOWN BELOW, FOR A PERIOD NOT TO EXCEED 14 CONSECUTIVE CALENDAR DAYS FOR EACH WIDENING.

A DISINCENTIVE SHALL BE ASSESSED IN THE AMOUNT OF $2000 FOR EACH CALENDAR DAY THE LANE REMAINS CLOSED TO TRAFFIC BEYOND THE SPECIFIED LIMIT.

EXISTING LAYOUT FOR US 224 AT SR 43 & SR 44
(FOR INFORMATION ONLY)



TYPICAL LEFT LANE CLOSURE FOR US 224 EB AND WB AT SR 43 & SR 44



MAINTENANCE OF TRAFFIC GENERAL NOTES

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ITEM 614 - LAW ENFORCEMENT OFFICER (WITH PATROL CAR) FOR ASSISTANCE DURING CONSTRUCTION OPERATIONS

USE OF LAW ENFORCEMENT OFFICERS (LEOS) BY CONTRACTORS OTHER THAN THE USES SPECIFIED BELOW WILL NOT BE PERMITTED AT PROJECT COST. LEOS SHOULD NOT BE USED WHERE THE OMUTCD INTENDS THAT FLAGGERS BE USED.

IN ADDITION TO THE REQUIREMENTS OF CMS 614 AND THE OMUTCD, A UNIFORMED LEO WITH AN OFFICIAL PATROL CAR (CAR WITH TOP-MOUNTED EMERGENCY FLASHING LIGHTS AND COMPLETE MARKINGS OF THE APPROPRIATE LAW ENFORCEMENT AGENCY) SHALL BE PROVIDED FOR THE FOLLOWING TRAFFIC CONTROL TASKS:

DURING THE ENTIRE ADVANCE PREPARATION AND CLOSURE SEQUENCE WHERE COMPLETE BLOCKAGE OF TRAFFIC IS REQUIRED.

FOR LANE CLOSURES: DURING INITIAL SET-UP PERIODS, TEAR DOWN PERIODS, SUBSTANTIAL SHIFTS OF A CLOSURE POINT OR WHEN NEW LANE CLOSURE ARRANGEMENTS ARE INITIATED FOR LONG-TERM LANE CLOSURES/SHIFTS (FOR THE FIRST AND LAST DAY OF MAJOR CHANGES IN TRAFFIC CONTROL SETUP). IN GENERAL, LEOS SHOULD BE POSITIONED AT THE POINT OF LANE RESTRICTION OR ROAD CLOSURE AND TO MANUALLY CONTROL TRAFFIC MOVEMENTS THROUGH INTERSECTIONS IN WORK ZONES.

WHEN CONSTRUCTION VEHICLES ARE ENTERING/EXITING THE ZONE DIRECTLY FROM/INTO AN OPEN LANE OF TRAFFIC. IF A LANE HAS BEEN CLOSED TO PROVIDE AN ACCELERATION/ DECELERATION LANE FOR THE VEHICLE, THE LEO WILL NOT BE REQUIRED.

LEOS SHOULD NOT FORGO THEIR TRAFFIC CONTROL RESPONSIBILITIES TO APPREHEND MOTORISTS FOR ROUTINE TRAFFIC VIOLATIONS. HOWEVER, IF A MOTORIST'S ACTIONS ARE CONSIDERED TO BE RECKLESS, THEN PURSUIT OF THE MOTORIST IS APPROPRIATE.

THE LEOS WORK AT THE DIRECTION OF THE ENGINEER. THE CONTRACTOR IS RESPONSIBLE FOR SECURING THE SERVICES OF THE LEOS WITH THE APPROPRIATE AGENCIES AND COMMUNICATING THE INTENTIONS OF THE PLANS WITH RESPECT TO DUTIES OF THE LEOS. THE ENGINEER SHALL HAVE FINAL CONTROL OVER THE LEOS' DUTIES AND PLACEMENT, AND WILL RESOLVE ANY ISSUES THAT MAY ARISE BETWEEN THE TWO PARTIES.

THE LEO SHALL REPORT IN TO THE CONTRACTOR PRIOR TO THE START OF THE SHIFT, IN ORDER TO RECEIVE INSTRUCTIONS REGARDING SPECIFIC WORK ASSIGNMENTS DURING HIS/HER SHIFT. THE LEO IS EXPECTED TO STAY AT THE PROJECT SITE FOR THE ENTIRE DURATION OF HIS/HER SHIFT. THE LEO SHALL REPORT TO THE CONTRACTOR AT THE END OF HIS/HER SHIFT. ONCE THE LEO HAS COMPLETED THE DUTIES DESCRIBED ABOVE AND STILL HAS TIME REMAINING ON HIS/HER SHIFT, THE LEO MAY BE ASKED TO PATROL THROUGH THE WORK ZONE (WITH FLASHING LIGHTS OFF) OR BE PLACED AT A LOCATION TO DETER MOTORISTS FROM SPEEDING. SHOULD IT BE NECESSARY TO LEAVE THE PROJECT SITE, THE LEO SHALL NOTIFY THE ENGINEER. THE CONTRACTOR SHALL PROVIDE THE LEO WITH A TWO-WAY COMMUNICATION DEVICE WHICH SHALL BE RETURNED TO THE CONTRACTOR AT THE END OF HIS/HER SHIFT.

LEOS (WITH PATROL CAR) REQUIRED BY THE TRAFFIC MAINTENANCE TASKS ABOVE SHALL BE PAID FOR ON A UNIT PRICE (HOURLY) BASIS UNDER ITEM 614, LAW ENFORCEMENT OFFICER (WITH PATROL CAR) FOR ASSISTANCE. THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY.

ITEM 614, LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE 200 HOURS

THE HOURS PAID SHALL INCLUDE ANY MINIMUM SHOW-UP TIME REQUIRED BY THE LAW ENFORCEMENT AGENCY INVOLVED.

ANY ADDITIONAL COSTS (ADMINISTRATIVE OR OTHERWISE) INCURRED BY THE CONTRACTOR TO OBTAIN THE SERVICES OF AN LEO ARE INCLUDED WITH THE BID UNIT PRICE FOR ITEM 614, LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE.

ACCEPTED SEE DATED

MAINTENANCE OF TRAFFIC GENERAL NOTES

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DETOUR ROUTE FOR: POR-224-2.81

- ***OFFICIAL DETOUR ROUTE: SR 43 / IR 76 / SR 44***
- ***CLOSED AS PER SCD MT-101.60***
- ***LOCAL DETOUR ROUTE: SR 43 / TTRARES RD / CONGRESS LAKE RD***

REFER TO THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, FIGURE 6H-8 (TYPICAL APPLICATION 8), FOR SIGN SPACING.

 # ON TYPE III BARRICADE WITH TYPE B FLASHER MOUNTED PER MT 101.60

A

W20-2-36

B #

R11-3A-60
M4-10L-48

C

M4-8-24
M1-4-24-3
M5-1L-21

D

M4-8-24
M1-4-24-3
M6-1L-21

E

M4-8-24
M1-4-24-3
M5-1R-21

F

M4-8-24
M1-4-24-3
M6-1R-21

G

M4-8-24
M3-2-24
M1-4-24-3

H

M4-8-24
M3-4-24
M1-4-24-3

I

M4-8-30
M1-4-36-3

LOCATING DESCRIPTION

DETOUR PLAN POR-224-2.81

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FACILITIES DEVELOPMENT

DETOUR PLAN POR-224-2.81

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SHEET NUMBER											PARTICIPATION			ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
5	7	8	21	22	26	28	37	38	47	48	01/STR/ PV/	02/NHS/ PV/	03/S>2/ PV						
																		ROADWAY	
	LUMP										LUMP			201	11000	LUMP		CLEARING AND GRUBBING	
	2										2			202	20010	2	EACH	HEADWALL REMOVED	
		1834						104	105		1165	427	242	202	23000	1834	SQ YD	PAVEMENT REMOVED	
											209			202	32000	209	FT	CURB REMOVED	
					20	200		11			11	20	200	202	35100	231	FT	PIPE REMOVED, 24" AND UNDER	
	14								83	20	34		83	202	35200	117	FT	PIPE REMOVED, OVER 24"	
				28994							19337.5	7712.5	1944	202	38000	28994	FT	GUARDRAIL REMOVED	
					1	1		1			1	1	1	202	58100	3	EACH	CATCH BASIN REMOVED	
	184									127	127			SPEC	20270000	127	FT	FILL AND PLUG EXISTING CONDUIT	8
												90	94	SPEC	20270100	184	FT	PIPE CLEANOUT	7
	1770	1464								32	1186	1125	955	203	10000	3266	CU YD	EXCAVATION	
	831	1544									1509	497	369	203	20000	2375	CU YD	EMBANKMENT	
										5	5			203	40000	5	CU YD	BORROW	
			3634								1660	829	1145	204	10000	3634	SQ YD	SUBGRADE COMPACTION	
1458				25485							1033	281	144	209	72001	1458	STATION	PREPARING SUBGRADE FOR SHOULDER PAVING, AS PER PLAN	5
											16510	7300	1675	606	13000	25485	FT	GUARDRAIL, TYPE 5	
				70							44	16	10	606	28100	70	EACH	ANCHOR ASSEMBLY, TYPE E	
				6							4	2		606	26500	6	EACH	ANCHOR ASSEMBLY, TYPE T	
				8							8			606	35000	8	EACH	BRIDGE TERMINAL ASSEMBLY, TYPE 1	
				4							4			606	35140	4	EACH	BRIDGE TERMINAL ASSEMBLY, TYPE 4	
				4								4		606	35170	4	EACH	BRIDGE TERMINAL ASSEMBLY, TYPE BR-1	

LOCATED OVER WATER

GENERAL SUMMARY

POR-224-0.00

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SHEET NUMBER											PART.			ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
7	8A	21	26	28	38	47	48				01/STR/ PV/	02/NHS/ PV/	03/S>2/ PV						
																		EROSION CONTROL	
2							13				15			601	32104	15	CU YD	ROCK CHANNEL PROTECTION, TYPE B WITH FABRIC FILTER	
2											2			659	00100	2	EACH	SOIL ANALYSIS TEST	
656											368	158	130	659	00300	656	CU YD	TOPSOIL	
5904											3312	1414	1178	659	10000	5904	SQ YD	SEEDING AND MULCHING	
296											166	71	59	659	14000	296	SQ YD	REPAIR SEEDING AND MULCHING	
0.8											0.45	0.19	0.16	659	20000	0.8	TON	COMMERCIAL FERTILIZER	
1.22											0.66	0.3	0.26	659	31000	1.22	ACRE	LIME	
32											18	8	6	659	35000	32	M GAL	WATER	
											1400	400	200	832	30000	2000	EACH	EROSION CONTROL	
																		DRAINAGE	
0.86						1.12	9.42				10.28		1.12	602	20000	11.4	CU YD	CONCRETE MASONRY	
	200										100	50	50	603	00900	200	FT	6" CONDUIT, TYPE B	
	200										100	50	50	603	01400	200	FT	6" CONDUIT, TYPE E	
	200	127									140	61	126	603	01500	327	FT	6" CONDUIT, TYPE F	
			8									8		603	01800	8	FT	8" CONDUIT, TYPE B	
			10	200								10	200	603	04400	210	FT	12" CONDUIT, TYPE B	
			91									91		603	05900	91	FT	15" CONDUIT, TYPE B	
					97						97			603	10600	97	FT	24" CONDUIT, TYPE C	
						79							79	603	13200	79	FT	30" CONDUIT, TYPE A	
90												90		603	96550	90	FT	FIELD PAVING OF EXISTING PIPE, 120" CMP	
							135				135			603	96600	135	FT	CONDUIT, BORED OR JACKED:, 42" TYPE A, 748.06	
			1									1		604	02000	1	EACH	CATCH BASIN, NO. 6	
			1									1		604	04100	1	EACH	CATCH BASIN, NO. 2-2A	
				1									1	604	04500	1	EACH	CATCH BASIN, NO. 2-2B	
					2						2			604	04900	2	EACH	CATCH BASIN, NO. 2-3	
		2404									1211	568	625	605	14020	2404	FT	6" BASE PIPE UNDERDRAINS WITH FABRIC WRAP	
5											5			613	41200	5	CU YD	LOW STRENGTH MORTAR BACKFILL	
94											94			837	10000	94	FT	38" X 24" LINER PIPE, 707.12	
14											14			837	20000	14	CU YD	BACK FILL FOR LINER PIPE	

CALCULATED CNC CHECKED

GENERAL SUMMARY

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SHEET NUMBER											PART.			ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
5	6	7	8	18	19	20	21				01/STR/PV/	02/NHS/PV/	03/S>2/PV						
																		PAVEMENT	
		1000									700	190	110	252	01000	1000	SQ YD	FULL DEPTH RIGID PAVEMENT REMOVAL AND FLEXIBLE REPLACEMENT	
		6000									4200	1140	660	252	01500	6000	FT	FULL DEPTH PAVEMENT SAWING	
				166626	82814	3219	14766				187275	49419	30731	254	01000	267425	SQ YD	PAVEMENT PLANING, ASPHALT CONCRETE	
			7				1412				665	330	424	301	46000	1419	CU YD	ASPHALT CONCRETE BASE, PG64-22	
		167	5				974				576	260	310	304	20001	1146	CU YD	AGGREGATE BASE, AS PER PLAN	
				24994	12423	483	2639				28290	7512	4737	407	10000	40539	GALLON	TACK COAT	
				6666	3313	129	814				7596	2030	1296	407	14000	10922	GALLON	TACK COAT FOR INTERMEDIATE COURSE	
			11				2337				1100	548.00	700	408	10000	2348	GALLON	PRIME COAT	
				8100	4026	157	989				9228	2468	1576	448	46050	13272	CU YD	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, PG64-22	
200	4			5786	2876	112	706				6735	1804	1146	448	46905	9684	CU YD	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG70-22M, AS PER PLAN	8
				1110	573		107				1270	321	199	617	10101	1790	CU YD	COMPACTED AGGREGATE, AS PER PLAN	8
							2404				1210	569	625	SPEC	69096100	2404	FT	MISC.: REINFORCEMENT MESH FOR LONGITUDINAL JOINTS	8A

FOR AS-BUILT DATA

GENERAL SUMMARY

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SHEET NUMBER								PART.			ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.	LOCATED BY DESIGN / BUILT
7	22	49	51	52	53	56	57	01/STR/PV/	02/NHS/PV/	03/S>2/PV							
															TRAFFIC CONTROL		
							907	593	199	115	621	10000	907	EACH	RPM, LOW PROFILE, YELLOW/YELLOW		
							58	32	21	5	621	10010	58	EACH	RPM, LOW PROFILE, WHITE		
							247	138	51	58	621	10020	247	EACH	RPM, LOW PROFILE WHITE/RED		
							1212	763	271	178	621	54000	1212	EACH	RAISED PAVEMENT MARKER REMOVED		
	305							202	81	22	626	00100	305	EACH	BARRIER REFLECTOR		
				135	135			135	67.5	67.5	630	02100	270	FT	GROUND MOUNTED SUPPORT, NO. 2 POST		
				74				37		37	630	03100	74	FT	GROUND MOUNTED SUPPORT, NO. 3 POST		
				14	10			10	5	9	630	08600	24	EACH	SIGN POST REFLECTOR		
				65	40			46.25	20	38.75	630	80100	105	SQ FT	SIGN, FLAT SHEET		
				6	7			7	3	3	630	84900	13	EACH	REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL		
				8	8			8	4	4	630	85100	16	EACH	REMOVAL OF GROUND MOUNTED SIGN AND REERECTION		
				10	15			15	6	4	630	86002	25	EACH	REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL		
300								200	50	50	642	00490	300	FT	STOP LINE		
						28.00		20.30	4.84	2.86	644	00100	28	MILE	EDGE LINE, 4"		
						1.72		1.72			644	00200	1.72	MILE	LANE LINE, 4"		
						13.39		9.54	2.42	1.43	644	00300	13.39	MILE	CENTER LINE		
						5388		2325.00	1607	1456	644	00400	5388	FT	CHANNELIZING LINE, 8"		
						281		124.00	93	64	644	00500	281	FT	STOP LINE		
						1784		772.00	576	436	644	00700	1784	FT	TRANSVERSE/DIAGONAL LINE		
						72		27	24	21	644	01300	72	EACH	LANE ARROW		
															TRAFFIC SIGNALS		
			1290					419	461	410	625	25300	1290	FT	CONDUIT, 1-1/2", 725.04		
			48					48			625	25900	48	FT	CONDUIT, JACKED OR DRILLED, 3"		
			1290					419	461	410	625	29000	1290	FT	TRENCH		
			9					3	3	3	625	30701	9	EACH	PULL BOX, 725.08, 18", AS PER PLAN	49	
			12					4	4	4	625	31510	12	EACH	PULL BOX REMOVED		
			1290					419	461	410	625	36000	1290	FT	PLASTIC CAUTION TAPE		
			4					2	1	1	632	05087	4	EACH	VEHICULAR SIGNAL HEAD, (LED), BLACK, 5-SECTION, 12" LENS, 1-WAY, POLYCARBONATE, WITH BACKPLATE, AS PER PLAN	49	
			4					2	1	1	632	25000	4	EACH	COVERING OF VEHICULAR SIGNAL HEAD		
			2						2		632	26000	2	EACH	PEDESTRIAN PUSHBUTTON		
			14					8	3	3	632	26500	14	EACH	DETECTOR LOOP		
			2					2			632	27005	2	EACH	LOOP DETECTOR UNIT, AS PER PLAN	49	
			241						241		632	40300	241	FT	SIGNAL CABLE, 3 CONDUCTOR, NO. 14 AWG		
			232					102	130		632	40500	232	FT	SIGNAL CABLE, 5 CONDUCTOR, NO. 14 AWG		
			455					121		334	632	40700	455	FT	SIGNAL CABLE, 7 CONDUCTOR, NO. 14 AWG		
			5157					2750	1745	662	632	65200	5157	FT	LOOP DETECTOR LEAD-IN CABLE		
			4					2	1	1	632	90020	4	EACH	REMOVAL OF MISCELLANEOUS TRAFFIC SIGNAL ITEM: 3-SECTION SIGNAL HEAD	49	
		164	147					72	184	55	632	90500	311	FT	SIGNALIZATION, MISC.: REMOVE AND REINSTALL LASHING ROD	49	
															STRUCTURES		
															FOR STRUCTURE POR-244-0106 ESTIMATED QUANTITY	60	
															FOR STRUCTURE POR-244-0831 ESTIMATED QUANTITY	60	
															FOR STRUCTURE POR-244-1171 ESTIMATED QUANTITY	60	
															FOR STRUCTURE POR-244-1189 ESTIMATED QUANTITY	60	

GENERAL SUMMARY

POR-224-0.00

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GENERAL SUMMARY

SHEET NUMBER 9	10	10A	PARTICIPATION 01/STR/ PV/	02/NHS/ PV/	03/S>2/ PV	ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
										MAINTENANCE OF TRAFFIC	
		200	140	38	22	614	11110	200	HOUR	LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE	
	8		4	2	2	614	12338	8	EACH	WORK ZONE IMPACT ATTENUATOR (BIDIRECTIONAL)	
LUMP				LUMP		614	12420	LUMP		DETOUR SIGNING	
60			42	12	6	614	12460	60	EACH	WORK ZONE MARKING SIGN	
50			30	10	10	614	13000	50	CU YD	ASPHALT CONCRETE FOR MAINTAINING TRAFFIC	
	58		30	12	16	614	13300	58	EACH	BARRIER REFLECTOR, TYPE B	
	58		30	12	16	614	13350	58	EACH	OBJECT MARKER, ONE WAY	
3.44			3.44			614	20400	3.44	MILE	WORK ZONE LANE LINE, CLASS II	
1.72			1.72			614	20550	1.72	MILE	WORK ZONE LANE LINE, CLASS III, 642 PAINT	
26.78			19.08	4.84	2.86	614	21400	26.78	MILE	WORK ZONE CENTER LINE, CLASS II	
13.39			9.54	2.42	1.43	614	21550	13.39	MILE	WORK ZONE CENTER LINE, CLASS III, 642 PAINT	
	0.55		0.27	0.14	0.14	614	22000	0.55	MILE	WORK ZONE EDGE LINE, CLASS I	
28			24.15	2.42	1.43	614	22350	28	MILE	WORK ZONE EDGE LINE, CLASS III, 642 PAINT	
10776			4650	3214	2912	614	23000	10776	FT	WORK ZONE CHANNELIZING LINE, CLASS I	
5388			2325	1607	1456	614	23680	5388	FT	WORK ZONE CHANNELIZING LINE, CLASS III, 642 PAINT	
562			248	186	128	614	26000	562	FT	WORK ZONE STOP LINE, CLASS I	
281			124	93	64	614	26610	281	FT	WORK ZONE STOP LINE, CLASS III, 642 PAINT	
7			6	1		616	10000	7	M GAL	WATER	
	2780		1420	590	770	622	40020	2780	FT	PORTABLE CONCRETE BARRIER, 32"	
						614	11000	LUMP		MAINTAINING TRAFFIC	
			6			619	16010	6	MONTH	FIELD OFFICE, TYPE B	
						623	10000	LUMP		CONSTRUCTION LAYOUT STAKES	
						624	10000	LUMP		MOBILIZATION	

CALCULATED CNC CHECKED

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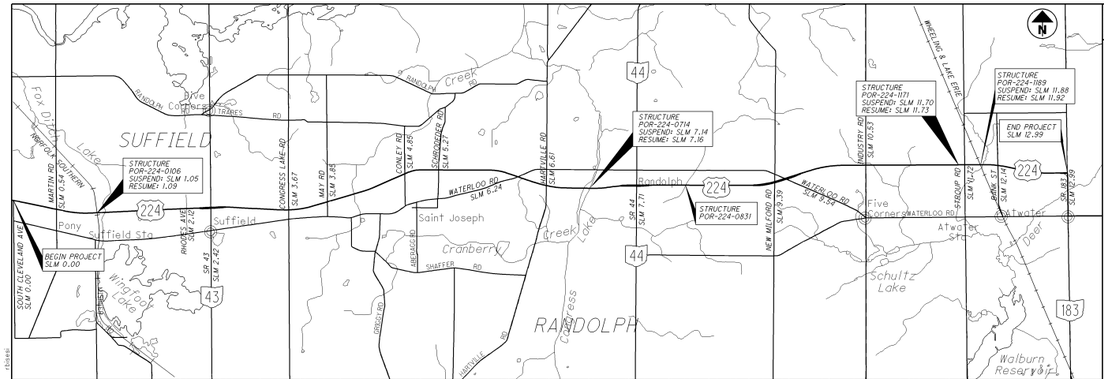

SLM RANGE			TYPICAL SECTION	SIDE	DISTANCE (D)	AVERAGE WIDTH (W)	SURFACE AREA (A) A=D(W)/9	CADD GENERATED AREA			254 PAVEMENT PLANING, ASPHALT (T = 3")	407 TACK COAT @ 0.15 GAL/SY	407 TACK COAT FOR INTERMEDIATE COURSE @ 0.04 GAL/SY	448 ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, PG64-22 (T= 1 3/4")	448 ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG70-22M, AS PER PLAN (T = 1 1/4")	617 COMPACTED AGGREGATE, AS PER PLAN										
					FT	FT	SQ YD	SQ YD			SQ YD	GALLON	GALLON	CU YD	CU YD	CU YD										
0.00	TO	0.10	3		528.00	46.00	2698.67				2698.67	404.80	107.95	131.19	93.70	13.04										
0.10	TO	0.32	3		1161.60	31.00	4001.07				4001.07	600.16	160.04	194.50	138.93	28.68										
0.32	TO	0.78	3		2428.80	45.00	12144.00				12144.00	1821.60	485.76	590.33	421.67	59.97										
0.78	TO	1.05	3		1425.60	31.00	4910.40				4910.40	736.56	196.42	238.70	170.50	35.20										
1.09	TO	2.30	3		6388.80	31.00	22005.87				22005.87	3300.88	880.23	1069.73	764.09	157.75										
2.55	TO	3.16	3		3220.80	31.00	11093.87				11093.87	1664.08	443.75	539.29	385.20	79.53										
3.16	TO	3.57	3		2164.80	44.00	10583.47				10583.47	1587.52	423.34	514.47	367.48	53.45										
3.57	TO	6.02	3		12936.00	31.00	44557.33				44557.33	6683.60	1782.29	2165.98	1547.13	319.41										
6.02	TO	6.41	3		2059.20	44.00	10067.20				10067.20	1510.08	402.69	489.38	349.56	50.84										
6.41	TO	6.55	3		739.20	31.00	2546.13				2546.13	381.92	101.85	123.77	88.41	18.25										
6.55	TO	6.66	3		580.80	48.00	3097.60				3097.60	464.64	123.90	150.58	107.56	14.34										
6.66	TO	7.14	3		2534.40	31.00	8729.60				8729.60	1309.44	349.18	424.36	303.11	62.58										
			3																							
7.16	TO	7.59	3		2270.40	31.00	7820.27				7820.27	1173.04	312.81	380.15	271.54	56.06										
7.83	TO	9.06	3		6494.40	31.00	22369.60				22369.60	3355.44	894.78	1087.41	776.72	160.36										
								SUBTOTALS	0.00	0.00	166625.07	24993.76	6665.00	8099.83	5785.59	1109.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
								TOTALS CARRIED TO GENERAL SUMMARY	0	0	166626	24994	6666	8100	5786	1110	0	0	0	0	0	0	0	0	0	0

PAVEMENT CALCULATIONS

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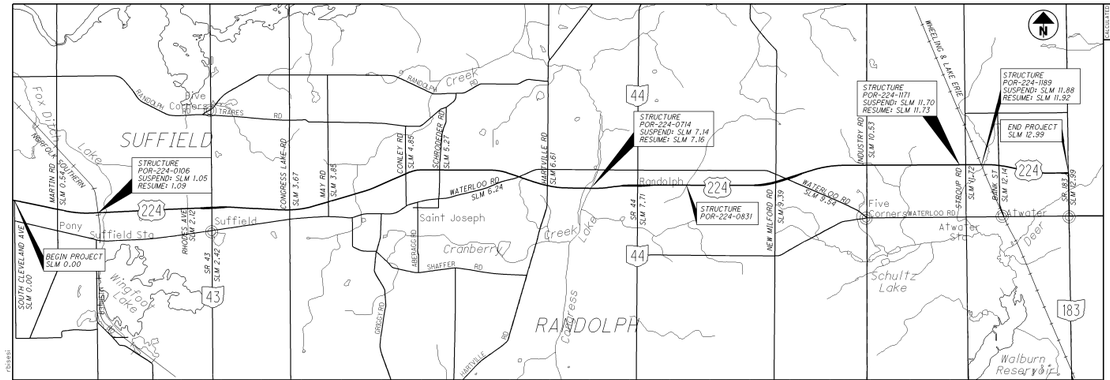

SLM RANGE			TYPICAL SECTION	SIDE	DISTANCE (D)	AVERAGE WIDTH (W)	SURFACE AREA (A) A=D(W/9)	CADD GENERATED AREA			254 PAVEMENT PLANING, ASPHALT (T = 3")	407 TACK COAT @ 0.15 GAL/SY	407 TACK COAT FOR INTERMEDIATE COURSE @ 0.04 GAL/SY	448 ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, PG64-22 (T= 1 3/4")	448 ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG70-22M, AS PER PLAN (T = 1 1/4")	617 COMPACTED AGGREGATE, AS PER PLAN										
					FT	FT	SQ YD	SQ YD			SQ YD	GALLON	GALLON	CU YD	CU YD	CU YD										
9.06	TO	9.15	3		475.20	48.00	2534.40				2534.40	380.16	101.38	123.20	88.00	11.73										
9.15	TO	9.69	4	L	2851.20	31.00	9820.80				9820.80	1473.12	392.83	477.40	341.00	70.40										
9.15	TO	9.69	4	R	2851.20	31.00	9820.80				9820.80	1473.12	392.83	477.40	341.00	70.40										
9.69	TO	9.76	3		369.60	48.00	1971.20				1971.20	295.68	78.85	95.82	68.44	9.13										
9.76	TO	10.47			3748.80	31.00	12912.53				12912.53	1936.88	516.50	627.69	448.35	92.56										
10.47	TO	10.60	3		686.40	46.00	3508.27				3508.27	526.24	140.33	170.54	121.81	16.95										
10.60	TO	11.70	3		5808.00	31.00	20005.33				20005.33	3000.80	800.21	972.48	694.63	143.41										
11.73	TO	11.88	3		792.00	31.00	2728.00				2728.00	409.20	109.12	132.61	94.72	19.56										
11.92	TO	12.08			844.80	31.00	2909.87				2909.87	436.48	116.39	141.45	101.04	20.86										
12.08	TO	12.19	3		580.80	50.00	3226.67				3226.67	484.00	129.07	156.85	112.04	14.34										
12.19	TO	12.83	3		3379.20	31.00	11639.47				11639.47	1745.92	465.58	565.81	404.15	83.44										
12.83	TO	12.91	3		422.40	48.00	2252.80				2252.80	337.92	90.11	109.51	78.22	10.43										
12.91	TO	12.99	5	L	422.40	24.00	1126.40				1126.40	168.96	45.06	54.76	39.11	10.43										
12.91	TO	12.99	5	R	422.40	19.00	891.73				891.73	133.76	35.67	43.35	30.96	10.43										
							SUBTOTALS		0.00	0.00	82813.87	12422.08	3312.55	4025.67	2875.48	572.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
							TOTALS CARRIED TO GENERAL SUMMARY		0	0	82814	12423	3313	4026	2876	573	0	0	0	0	0	0	0	0	0	0

PAVEMENT CALCULATIONS

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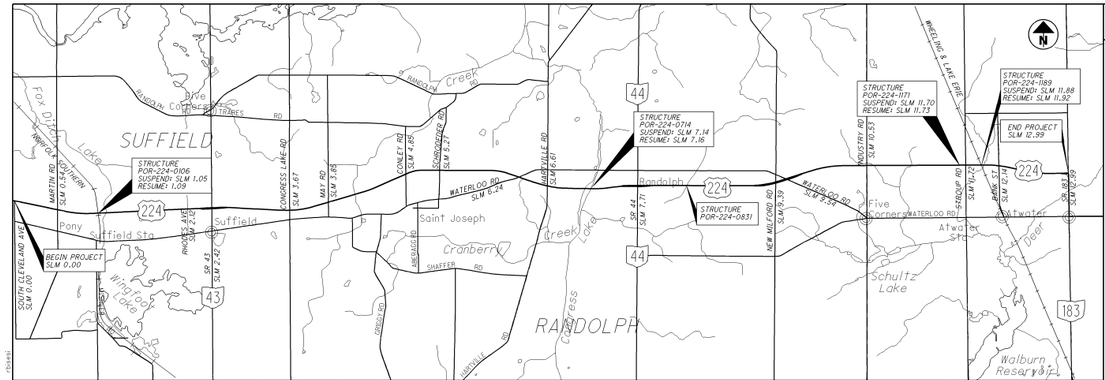

SLM RANGE			TYPICAL SECTION	SIDE	DISTANCE (D)	AVERAGE WIDTH (W)	SURFACE AREA (A) A=D(W)/9	CADD GENERATED AREA			254 PAVEMENT PLANING, ASPHALT (T = 3")	407 TACK COAT @ 0.15 GAL/SY	407 TACK COAT FOR INTERMEDIATE COURSE @ 0.04 GAL/SY	448 ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, PG64-22 (T= 1 3/4")	448 ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG70-22M, AS PER PLAN (T = 1 1/4")	617 COMPACTED AGGREGATE, AS PER PLAN											
					FT	FT	SQ YD	SQ YD			SQ YD	GALLON	GALLON	CU YD	CU YD	CU YD											
INTERSECTIONS																										
0.00	TO	2.42			2.00	VARIES		74.89			74.89	11.23	3.00	3.64	2.60												
2.42	TO	3.85			2.00	VARIES		79.78			79.78	11.97	3.19	3.88	2.77												
3.85	TO	12.99			2.00	VARIES		257.78			257.78	38.67	10.31	12.53	8.95												
HARTVILLE RD (SLM 6.61)					25.00	VARIES		953.89			953.89	143.08	38.16	46.37	33.12												
INDUSTRY RD (SLM 10.53)					25.00	VARIES		613.00			613.00	91.95	24.52	29.80	21.28												
BANK ST (SLM 12.14)					25.00	VARIES		572.78			572.78	85.92	22.91	27.84	19.89												
CROSS OVER @ SLM 9.39								186.89			186.89	28.03	7.48	9.08	6.49												
CROSS OVER @ SLM 9.56								480.00			480.00	72.00	19.20	23.33	16.67												
SUBTOTALS									0.00	0.00	3219.00	482.85	128.76	156.48	111.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTALS CARRIED TO GENERAL SUMMARY									0	0	3219	483	129	157	112	0	0	0	0	0	0	0	0	0	0	0

PAVEMENT CALCULATIONS

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STATION RANGE			TYPICAL SECTION	SIDE	DISTANCE (D)	AVERAGE WIDTH (W)	SURFACE AREA (A) A=D(W/9)	CADD GENERATED AREA	254 PAVEMENT PLANING, ASPHALT CONCRETE (T = 3")	301 ASPHALT CONCRETE BASE, PG64-22	304 AGGREGATE BASE, AS PER PLAN	407 TACK COAT @ 0.08 GAL/SY	407 TACK COAT @ 0.15 GAL/SY	407 TACK COAT FOR INTERMEDIATE COURSE	408 PRIME COAT	448 ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, PG64-22	448 ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG70-22M		603 6" CONDUIT, TYPE F	605 6" BASE PIPE UNDERDRAINS WITH FABRIC WRAP		617 COMPACTED AGGREGATE, AS PER PLAN	SPEC MISC.: REINFORCEMENT MESH FOR LONGITUDINAL JOINTS	204 SUBGRADE COMPACTION		
					FT	FT	SQ YD	SQ YD	SQ YD	CU YD	CU YD	GALLON	GALLON	GALLON	GALLON	CU YD	CU YD		FT	FT		CU YD	FT	SQ YD		
WIDENING																										
217+12.50	TO	217+66.50	1		54.00	7.26	43.56			17.39	12.34	5.22		2.70	29.62	3.28	2.35			54.00			54.00	43.56		
217+66.50	TO	221+23.73	1		357.23	13.43	533.07			176.27	122.47	52.88		27.67	293.93	33.63	24.02			357.23			357.23	533.07		
221+23.73	TO	222+35.73	1		112.00	20.30	252.62			76.64	52.65	22.99		12.10	126.35	14.70	10.50			112.00			112.00	252.62		
222+35.73	TO	223+11.35	1		75.62			236.56		59.63	40.49	17.89		9.46	97.17	11.50	8.21		11.00	45.00			45.00			
223+70.00	TO	224+44.59	1		74.59			244.00		61.42	41.57	18.43		9.76	99.77	11.86	8.47			45.00			45.00			
224+44.59	TO	225+56.59	1		112.00	39.88	496.28			137.55	93.26	41.27		21.84	223.82	26.54	18.96			112.00			112.00	496.28		
225+56.59	TO	229+69.00	1		412.41	13.21	605.33			200.97	139.71	60.29		31.54	335.30	38.34	27.38			412.41			412.41	605.33		
229+69.00	TO	230+24.20	1		55.20	7.00	42.93			17.38	12.35	5.21		2.70	29.64	3.28	2.34			55.20			55.20	42.93		
230+24.20		230+99.37	N/A		75.17														76.00							
70+99.20	TO	71+33.70	N/A																37.00							
71+33.70	TO	71+92.50	2		58.80	8.12	53.05			20.34	14.38	6.10		3.17	34.50	3.85	2.75			58.80			58.80	53.05		
71+92.50	TO	75+50.70	2		358.20	13.73	546.26			179.68	124.76	53.90		28.22	299.43	34.29	24.49			358.20			358.20	546.26		
75+50.70	TO	76+62.70	2		112.00	20.03	249.20			75.78	52.08	22.73		11.96	124.98	14.53	10.38			112.00			112.00	249.20		
76+62.70	TO	77+44.00	2		81.30			251.00		63.15	42.70	18.94		10.04	102.47	12.20	8.72			81.30			81.30			
78+04.00	TO	78+77.67	2		73.67			236.56		59.50	40.21	17.85		9.46	96.50	11.50	8.21		3.00	73.67			73.67			
78+77.67	TO	79+89.67	2		112.00	19.65	244.47			74.60	51.29	22.38		11.77	123.09	14.30	10.22			112.00			112.00	244.47		
79+89.67	TO	83+48.10	2		358.43	13.10	521.52			173.52	120.66	52.06		27.23	289.58	33.10	23.64			358.43			358.43	521.52		
83+48.10	TO	84+04.20	2		56.10	7.20	44.85			17.96	12.76	5.39		2.79	30.61	3.39	2.42			56.10			56.10	44.85		
RESURFACING																										
217+12.50	TO	217+66.50			54.00	43.00	258.00		258.00				38.70	10.32		12.54	8.96					2.67				
217+66.50	TO	221+23.73			357.23	46.65	1851.64		1851.64				277.75	74.07		90.01	64.29					17.64				
221+23.73	TO	222+35.73			112.00	50.50	628.44		628.44				94.27	25.14		30.55	21.82					5.53				
222+35.73	TO	223+11.35			75.62			844.98	844.98				126.75	33.80		41.08	29.34									
223+70.00	TO	224+44.59			74.59		0.00	854.39	854.39				128.16	34.18		41.53	29.67									
224+44.59	TO	225+56.59			112.00	49.80	619.73		619.73				92.96	24.79		30.13	21.52					5.53				
225+56.59	TO	229+69.00			412.41	46.50	2130.79		2130.79				319.62	85.23		103.58	73.99					20.37				
229+69.00	TO	230+24.20			55.20	45.00	276.00		276.00				41.40	11.04		13.42	9.58					2.73				
71+33.70	TO	71+92.50			58.80	44.90	293.35		293.35				44.00	11.73		14.26	10.19					2.90				
71+92.50	TO	75+50.70			358.20	47.60	1894.48		1894.48				284.17	75.78		92.09	65.78					17.69				
75+50.70	TO	76+62.70			112.00	49.30	613.51		613.51				92.03	24.54		29.82	21.30					5.53				
76+62.70	TO	77+44.00			81.30		0.00	874.89	874.89				131.23	35.00		42.53	30.38									
78+04.00	TO	78+77.67			73.67		0.00	884.78	884.78				132.72	35.39		43.01	30.72									
78+77.67	TO	79+89.67			112.00	49.40	614.76		614.76				92.21	24.59		29.88	21.35					5.53				
79+89.67	TO	83+48.10			358.43	46.65	1857.86		1857.86				278.68	74.31		90.31	64.51					17.70				
83+48.10	TO	84+04.20			56.10	43.00	268.03		268.03				40.21	10.72		13.03	9.31					2.77				
									SUBTOTALS	1411.78	973.67	423.53	2214.84	813.05	2336.80	988.08	705.77	0.00	127.00	2403.34	0.00	106.59	2403.34	3633.13	0.00	0.00
									TOTALS CARRIED TO GENERAL SUMMARY	1412	974	424	2215	814	2337	989	706	0	127	2404	0	107	2404	3634	0	0

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PAVEMENT QUANTITIES - WIDENING

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GUARDRAIL SUBSUMMARY

POR-224-0.00

ROUTE	SIDE	SLM TO SLM				202 GUARDRAIL REMOVED		606 GUARDRAIL, TYPE 5		606 ANCHOR ASSEMBLY, TYPE E	606 ANCHOR ASSEMBLY, TYPE T		606 BRIDGE TERMINAL ASSEMBLY, TYPE 1	606 BRIDGE TERMINAL ASSEMBLY, TYPE 4	606 BRIDGE TERMINAL ASSEMBLY, TYPE BR-1		626 BARRIER REFLECTOR									
						FT		FT		EACH	EACH		EACH	EACH	EACH		EACH									
224	RT	0.32	TO	0.50		1012.5		962.5		2							11									
224	LT	0.33	TO	0.53		1025		925		2							11									
224	RT	0.94	TO	1.35		1962.5		1800		2					2		20									
224	LT	0.94	TO	1.35		1987.5		1825		2					2		20									
224	RT	1.64	TO	1.64		450		450		2							5									
224	LT	1.67	TO	1.74		412.5		312.5		2							5									
224	RT	1.79	TO	1.92		687.5		562.5		2	2						7									
224	LT	1.81	TO	1.92		175		462.5		2							2									
224	RT	3.18	TO	3.28		500		400		2							5									
224	LT	3.19	TO	3.26		144		275		2							2									
224	LT	3.38	TO	3.49		550		450		2							6									
224	RT	3.72	TO	3.80		425		325		2							5									
224	LT	3.73	TO	3.80		325		225		2							4									
224	RT	3.87	TO	3.94		350		250		2							4									
224	LT	3.89	TO	3.94		300		200		2							3									
224	LT	4.09	TO	4.25		812.5		712.5		2							9									
224	RT	4.10	TO	4.24		700		600		2							7									
224	LT	4.60	TO	4.83		1237.5		1137.5		2							13									
224	RT	4.65	TO	4.83		950		850		2							10									
224	LT	4.88	TO	5.12		1275		1175		2							13									
224	RT	4.88	TO	5.12		1225		1125		2							13									
224	LT	5.42	TO	5.74		1637.5		1512.5		2	2						17									
224	RT	5.42	TO	5.74		1725		1600		2	2						18									
224	RT	5.92	TO	5.99		362.5		262.5		2							4									
224	LT	5.95	TO	6.02		387.5		287.5		2							4									
224	LT	6.12	TO	6.24		825		725		2							9									
224	RT	6.14	TO	6.22		425		325		2							5									
224	RT	6.26	TO	6.33		375		275		2							4									
224	LT	6.26	TO	6.36		487.5		387.5		2							5									
224	LT	7.04	TO	7.19		700		575		2				2			7									
224	RT	7.06	TO	7.18		500		375		2				2			5									
224	RT	7.53	TO	7.63		562.5		462.5		2							6									
224	LT	8.25	TO	8.38		567.5		59.5		2							6									
224	LT	11.67	TO	12.13		2000		1837.5		2			4				20									
224	RT	11.69	TO	12.13		1912.5		1775		2			4				20									
TOTALS CARRIED TO GENERAL SUMMARY					0	28994	0	25485	0	70	6	0	8	4	4	0	305	0	0	0	0	0	0	0	0	

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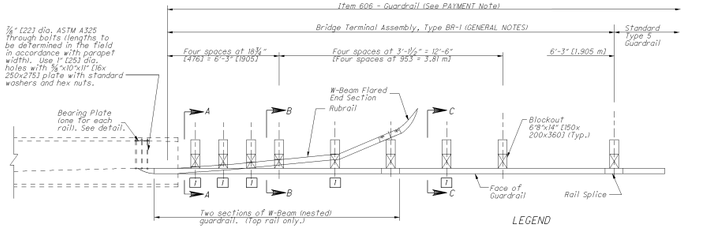
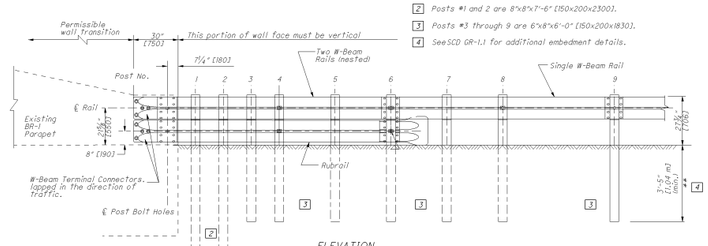


PLAN

LEGEND

1. Guardrail not attached to Posts. Blockout fastened to Post with Standard Post Bolt.
2. Posts #1 and 2 are 8"x8"x7'-6" [150x200x2300].
3. Posts #3 through 9 are 6"x8"x6'-0" [150x200x1830].
4. See SCD GR-1.1 for additional embedment details.



ELEVATION

NOTES

GENERAL: This design is intended to be used to upgrade bridge terminal assemblies utilizing 27" [786] BR-1 Bridge parapets in effect from 1979 to 1989. This assembly design is approved to NCHRP Report 350, Test Level 3.

This guardrail transition is only appropriate for connection to a vertical concrete end; it should not be connected directly to a concrete safety shape or single slope shape. If attached to a vertical concrete wall (other than a parapet), the wall must be adequately reinforced to resist the lateral and longitudinal forces transmitted through the terminal connectors. If the height of the vertical connection is 32" [813], use Bridge Terminal Assembly, Type 1 (SCD GR-3.1).

This design utilizes a lower rail (rubrail), and it cannot be used if there is a curb present.

RUBRAIL: The rubrail is a 12'-6" [3.81 m] standard 12 ga. W-Beam rail element. The last 3' [1 m] of the rubrail may be shop bent to facilitate field installation. Field drill rubrail hole at Post 6.

POST ATTACHMENTS: Posts No. 1, 2, 3, 4 and 6 require an additional 1" [25] dia. hole to attach the lower block and/or rubrail.

Do not bolt nested W-Beam or Rubrail to Posts and Blockouts on Posts No. 1, 2, 3, 5 and 7. Bolt blockouts directly to posts at those locations.

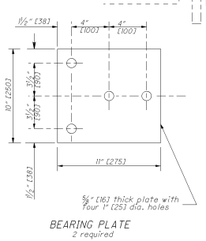
Center drill wood block for rubrails to sit squarely on Posts 1 through 4. Secure blocks to Posts No. 1, 2, & 3 with ⅝" [16] carriage bolts. See WOOD BLOCK FOR RUBRAIL Detail.

Use Wood posts only. Steel or plastic blockouts are not permitted. Use of rectangular plate washers is optional.

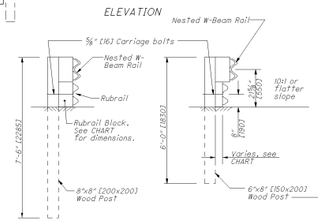
GUARDRAIL CONNECTION: At least one 12'-6" [3.81 m] section of Standard W-Beam Guardrail must be present before attaching any End Anchors. See SCD GR-2.1 for standard guardrail details.

PAYMENT: Item 606 - Bridge Terminal Assembly, Type BR-1, Each, includes the cost of the extra components, in excess of normal guardrail, for additional and different sizes of posts and blockouts, nested rail and rubrail, Bearing Plates, End Section and Connectors, and other hardware.

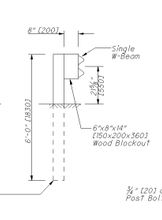
All metric dimensions (in brackets [1]) are in millimeters unless otherwise noted.



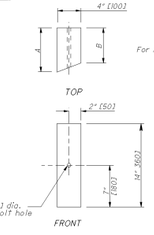
BEARING PLATE
2 required



SECTION A-A



SECTION B-B



SECTION C-C

For A and B dimensions see CHART.

TOP

FRONT

WOOD BLOCK FOR RUBRAIL

RUBRAIL BLOCK CHART

POST	A	B
1	6½" [164]	6¼" [158]
2	5⅛" [131]	4⅞" [125]
3	3⅞" [99]	3⅝" [93]
4	2⅝" [67]	2⅜" [61]
5	No Block	No Block

OFFICE OF ROADWAY ENGINEERING

REVISION DATE 10-20-08 | DESIGNED | CHECKED | REVIEWED

PLAN INSERT SHEET

BRIDGE TERMINAL ASSEMBLY, TYPE BR-1

POR-224-0.00

1/1

23/62

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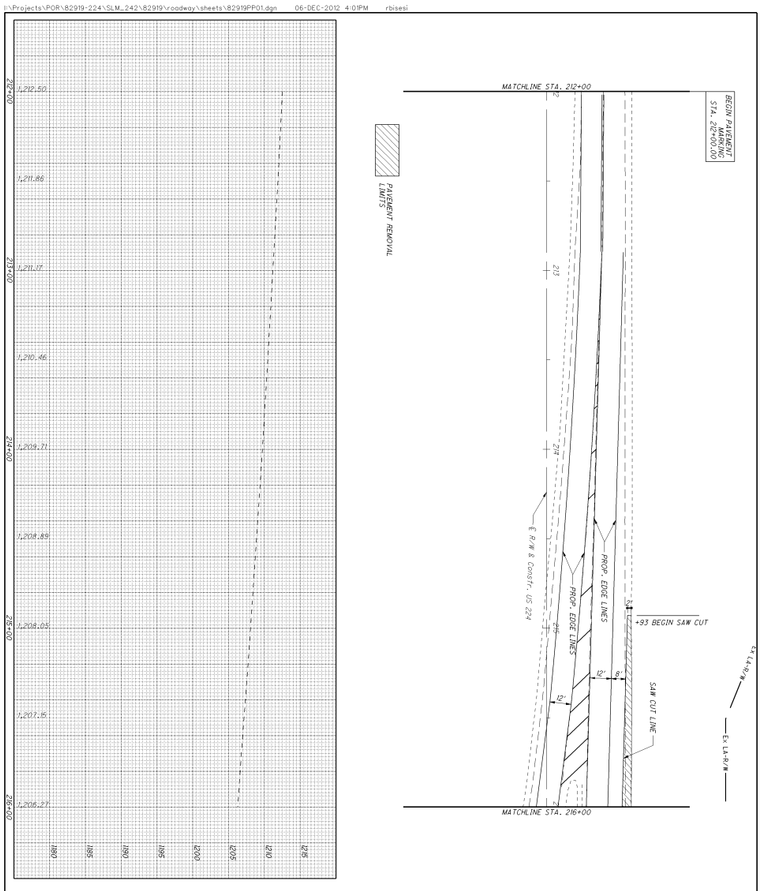

62 / 24	POR-224-0.00	PLAN AND PROFILE STA 212+00 TO 216+00 US 224 & SR 43	CALCULATED RMB CHECKED	HORIZONTAL SCALE IN FEET

HORIZONTAL SCALE IN FEET

DESIGNED	DRAWN
CHECKED	

PLAN AND PROFILE
STA 216+00 TO 220+00 US 224 & SR 43

POR-224-0.00

25
62

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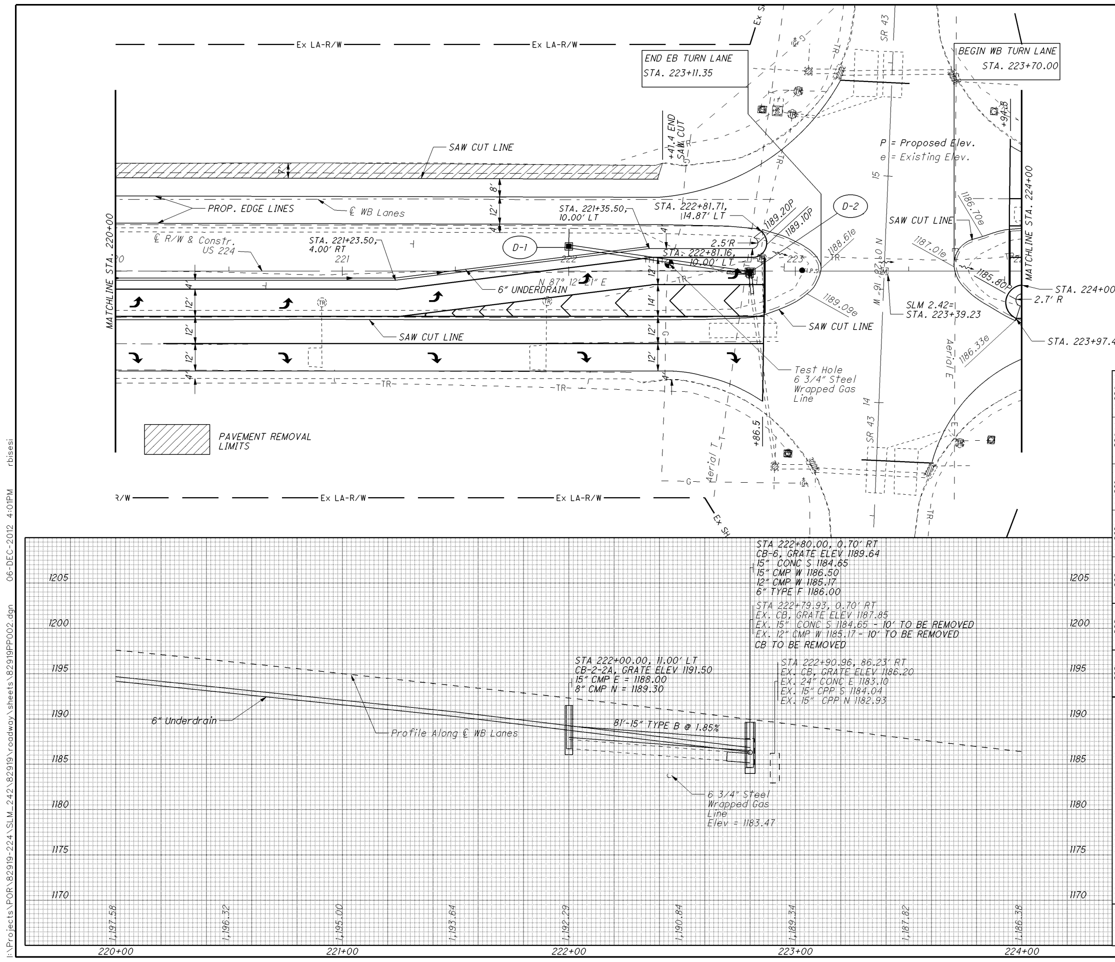

REF NO.	STATION TO STATION		202 CATCH BASIN REMOVED (EACH)	202 PIPE REMOVED, 24" AND UNDER (FT)	603 8" CONDUIT, TYPE B (FT)	603 12" CONDUIT, TYPE B (FT)	603 15" CONDUIT, TYPE B (FT)	604 CATCH BASIN, NO. 6 (EACH)	604 CATCH BASIN, NO. 2-2A (EACH)
		TO							
D-1	222+00.00 11'LT	222+80.00 0.7'RT			8		81		1
D-2	222+80.00 0.7'RT	222+81.00 11'RT	1	20		10	10	1	
TOTALS CARRIED TO GENERAL SUMMARY			1	20	8	10	91	1	1

N

HORIZONTAL SCALE IN FEET 0 10 20 40

CALCULATED RMB CHECKED

PLAN AND PROFILE US 224 & SR 43

STA. 220+00 TO 224+00

POR-224-0.00

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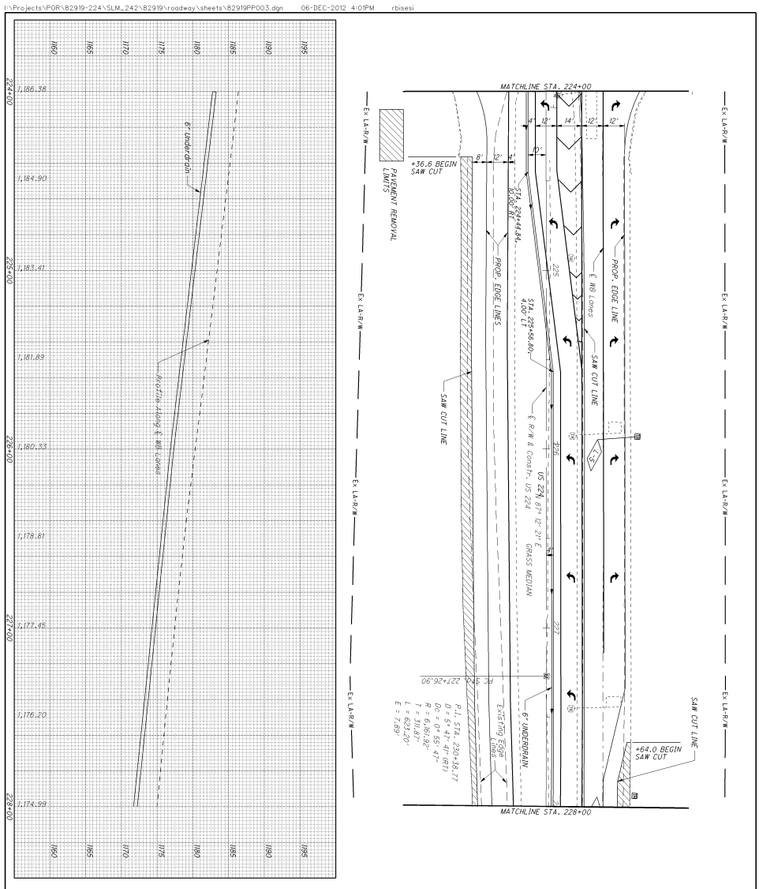

62 / 27	POR-224-0.00	PLAN AND PROFILE STA 224+00 TO 228+00 US 224 & SR 43	CALCULATED RMB CHECKED HORIZONTAL SCALE IN FEET

REF NO	STATION TO STATION			202 PIPE REMOVED 24" AND UNDER FT	203 CATCH BASIN REMOVED EACH	603 12" CONDUIT, TYPE B FT	604 CATCH BASIN NO. 2.28 EACH
D-3	229+00.00	TO 229+69.37	13.41 LT	200	1	200	1
	229+00.00	2.28RT		200			

TOTALS CARRIED TO GENERAL SUMMARY: 200 | 1 | 200 | 1

HORIZONTAL SCALE IN FEET: 0 20 40

DESIGN	DRAWN	CHECKED
LA-0661(113)	REVISED	

PLAN AND PROFILE
STA 228+00 TO 232+00 US 224 & SR 43

POR-224-0.00

28
62

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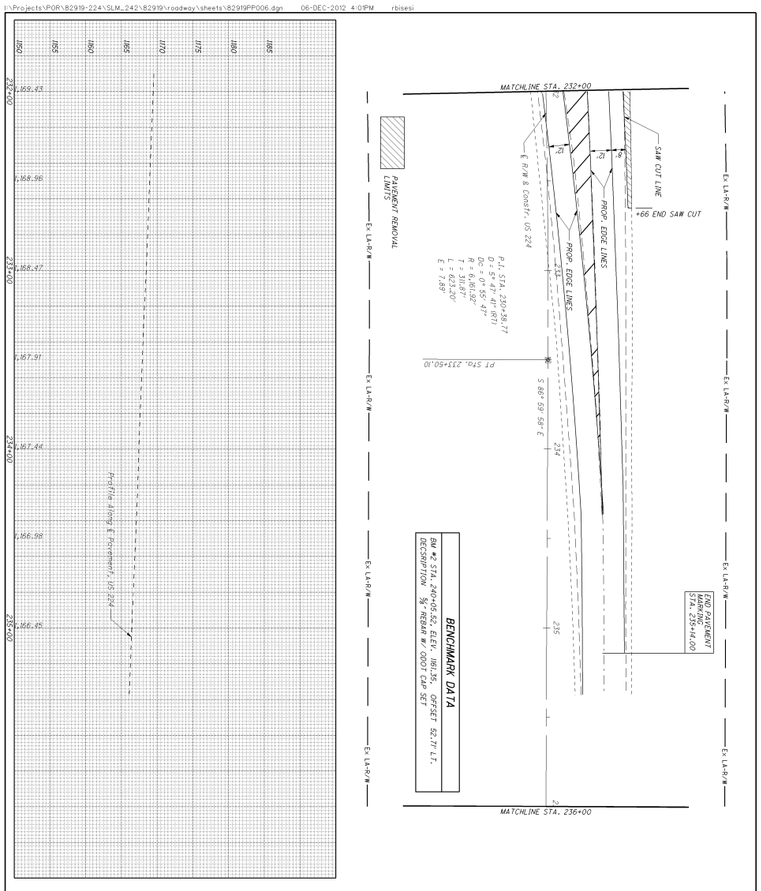
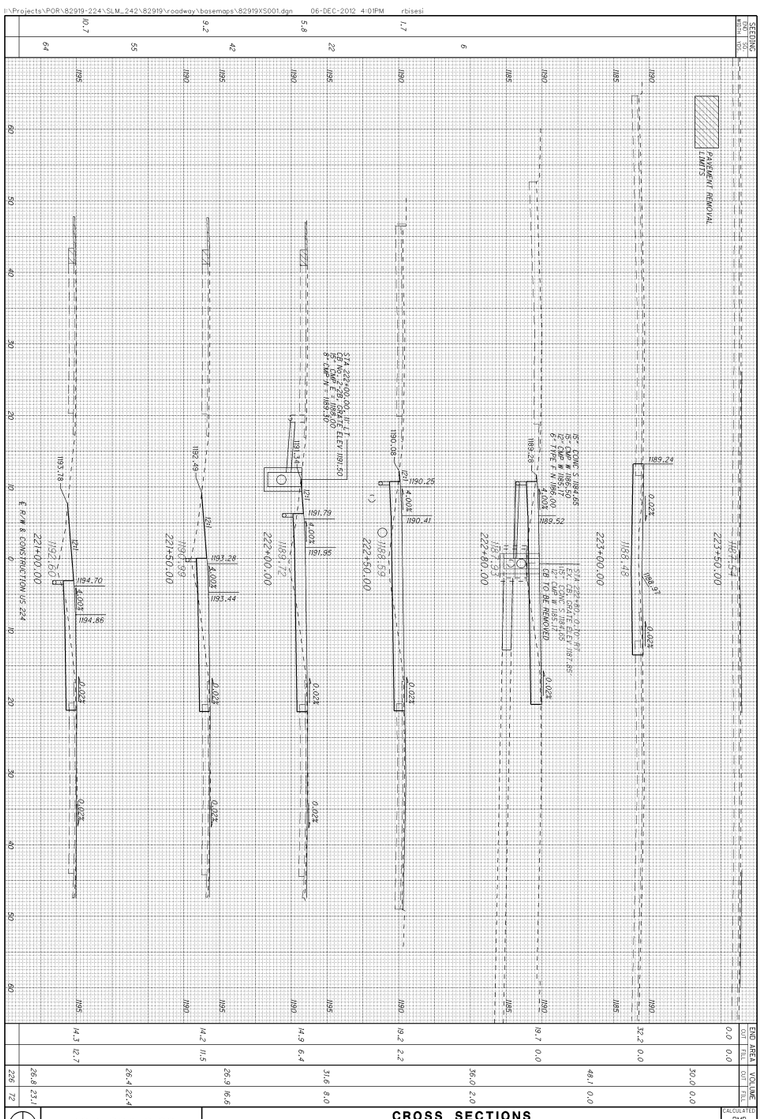


62 / 29	POR-224-0.00	PLAN AND PROFILE STA 232+00 TO 236+00 US 224 & SR 43	CALCULATED RMB CHECKED HORIZONTAL SCALE IN FEET

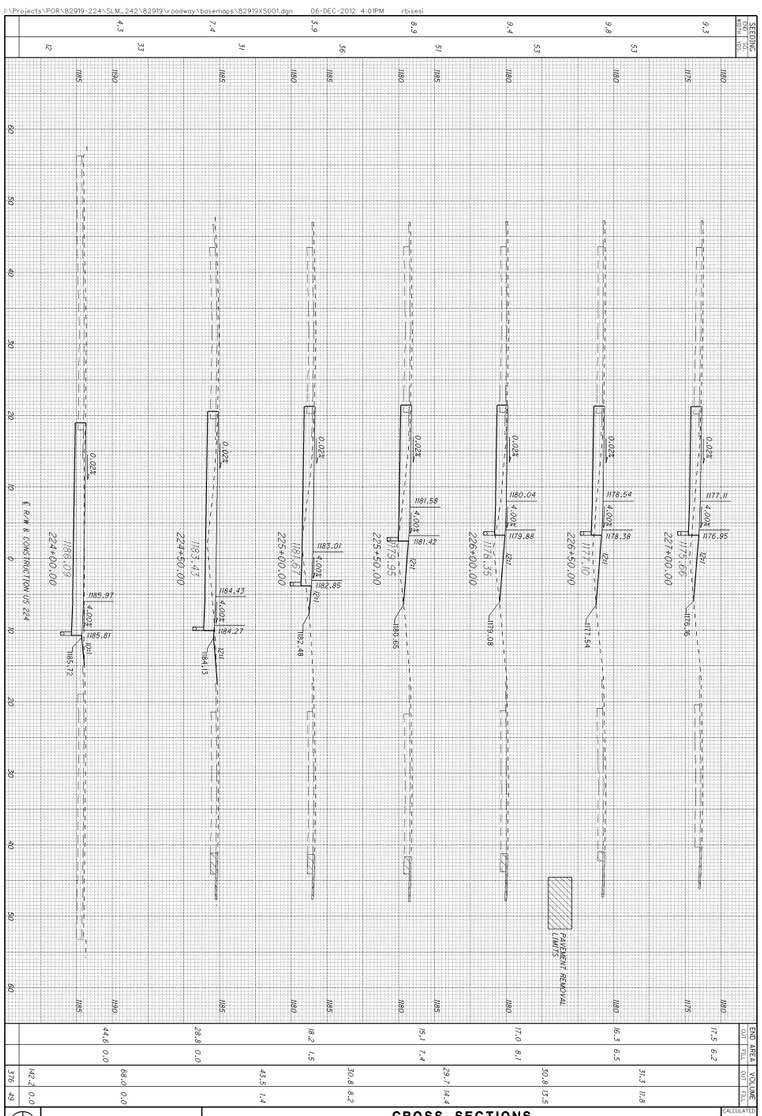
SEEDING
END WIDTH
SEEDING
SQ. YDS.
℄ R/W & CONSTRUCTION US 224
PAVEMENT REMOVAL LIMITS
END AREA
CUT
FILL
VOLUME
CUT
FILL
CROSS SECTIONS
STA 217+00 TO 220+50 US 224 & SR 43
POR-224-0.00
30
62
220+50.00
220+00.00
219+50.00
219+00.00
218+50.00
218+00.00
217+50.00
217+00.00



POR-224-0.00

CROSS SECTIONS
STA 221+00 TO 223+50 US 224 & SR 43

CALCULATED RMB
CHECKED



62	32	POR-224-0.00	CROSS SECTIONS STA 224+00 TO 227+00 US 224 & SR 43

CALCULATED RMB
CHECKED

SEEDING
END WIDTH
SQ. YD.
PAVEMENT REMOVAL LIMITS
END AREA
OUT
FILL
VOLUME
OUT
FILL
Roadway Design
1170
1175
1180
6" TYPE F
1170.00
230+50.00
12" CONC
1171.96
0.02%
4.00%
12H
1171.85
1171.50
1171.13
1170.58
230+00.00
1171.83
1171.67
1171.52
229+50.00
STA 229+00.53, 4.23' LT
EX. CB, GRATE ELEV 1171.13
12" CONC E 1168.42
CB TO BE REMOVED
STA 229+00.00, 2.2' RT
CB No. 2-28, GRATE ELEV 1172.19
12" CONC E = 1168.42
1172.68
1171.83
1172.02
229+00.00
1173.56
1173.42
1173.00
228+50.00
1174.66
1174.50
1173.96
228+00.00
1175.67
1175.71
1174.97
227+50.00
℄ R/W & CONSTRUCTION US 224
60
50
40
30
20
10
0
10
20
30
40
50
60
5.8
3.5
5.7
4.5
6.1
8.5
16
26
28
29
41
49
14.0
1.5
24.0
0.0
17.7
1.0
19.8
1.8
18.6
3.5
18.0
5.4
13.0
1.4
34.4
1.4
38
1.0
34.7
2.6
35.6
4.9
33.9
8.2
32.9
10.7
223
30
POR-224-0.00
CROSS SECTIONS
STA 227+50 TO 230+50 US 224 & SR 43
33
62
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END AREA OUT	END AREA FILL	VOLUME OUT	VOLUME FILL

CROSS SECTIONS
STA 231+00 TO 235+00 US 224 & SR 43

POR-224-0.00

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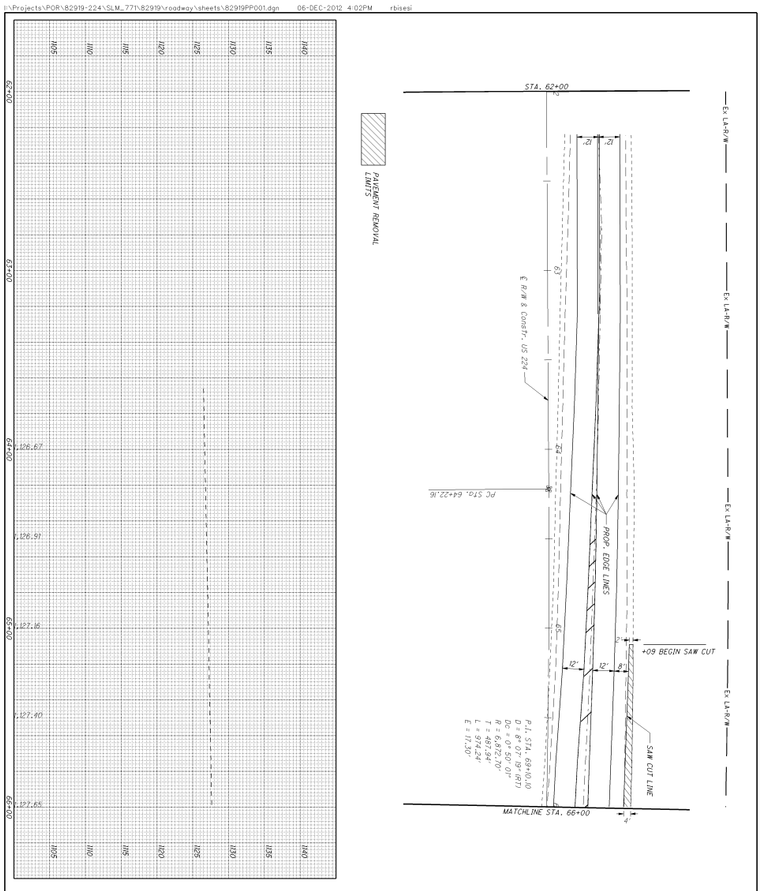

34A 62	POR-224-0.00	PLAN AND PROFILE STA 62+00 TO 66+00 US 224 & SR 44	CALCULATED CHECKED	HORIZONTAL SCALE IN FEET

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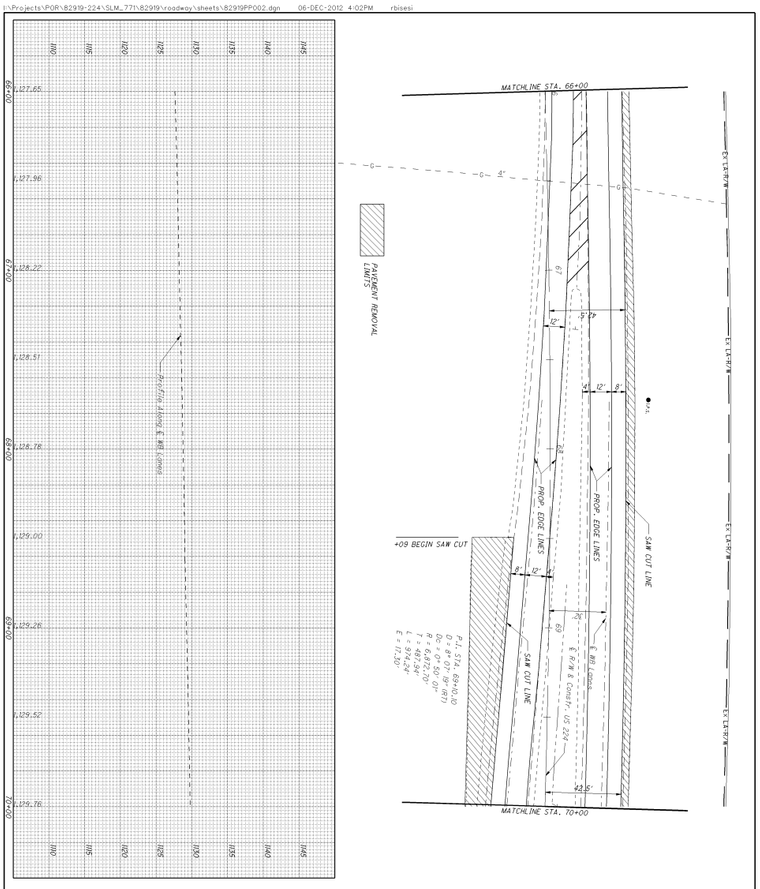

35 / 62	POR-224-0.00	PLAN AND PROFILE STA. 66+00 TO 70+00 US 224 & SR 44	CALCULATED RMB CHECKED	HORIZONTAL SCALE IN FEET

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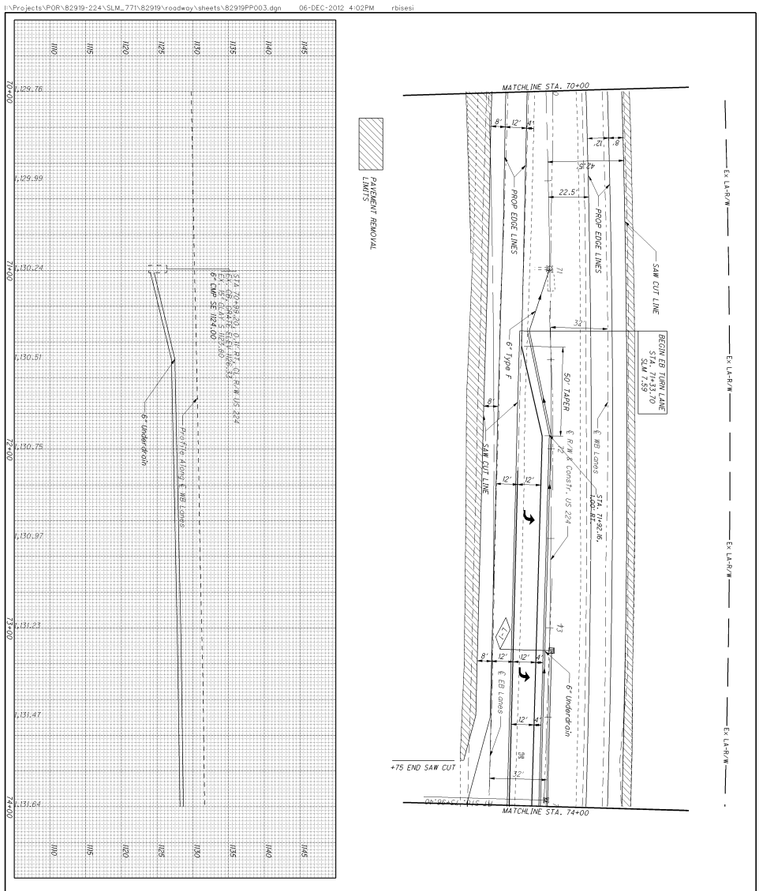

36 / 62	POR-224-0.00	PLAN AND PROFILE STA. 70+00 TO 74+00 US 224 & SR 44	CALCULATED RMB CHECKED	HORIZONTAL SCALE IN FEET

\\Projects\POR\82939-224-SLM_77\82939\roadway\sheets\82939PP004.dgn 06-DEC-2012 4:02PM rbiesi

REF NO	STATION TO STATION			202 PIPE REMOVED, 24" AND UNDER	202 CURB REMOVED	202 CATCH BASIN REMOVED	603 24" CONDUIT, TYPE C	604 CATCH BASIN, NO. 2.3
		TO		FT	FT	EACH	FT	EACH
C-4	78+65.00	79+50.00	41.5RT	11	105	1	97	2
R-1	78+69.90	78+56.10	15.5RT					
R-2	78+55.43	78+52.37	15.6Lt					
TOTALS CARRIED TO GENERAL SUMMARY				11	105	1	97	2

HORIZONTAL SCALE IN FEET

NO.	DATE	REVISION
1	04/2021	ADDED

PLAN AND PROFILE
STA. 78+00 TO 82+00 US 224 & SR 44

POR-224-0.00

38
62

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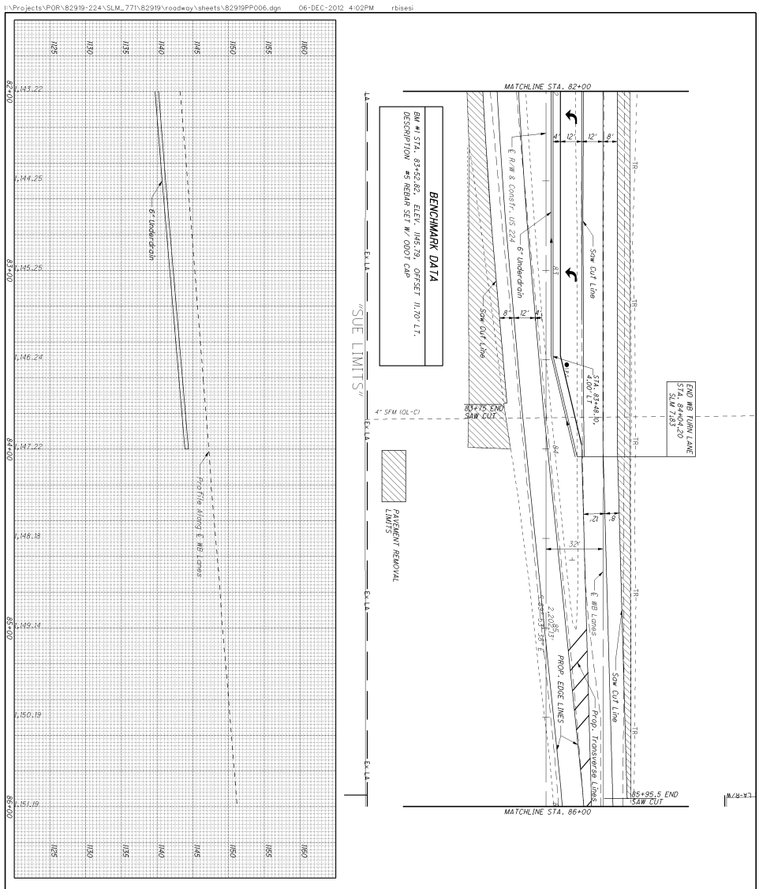

39 / 62	POR-224-0.00	PLAN AND PROFILE STA. 82+00 TO 86+00 US 224 & SR 44	CALCULATED RMB CHECKED	HORIZONTAL SCALE IN FEET

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HORIZONTAL SCALE IN FEET

PLANS FOR BID	DESIGN

PLAN AND PROFILE
STA 86+00 TO 90+00 US 224 & SR 44

POR-224-0.00

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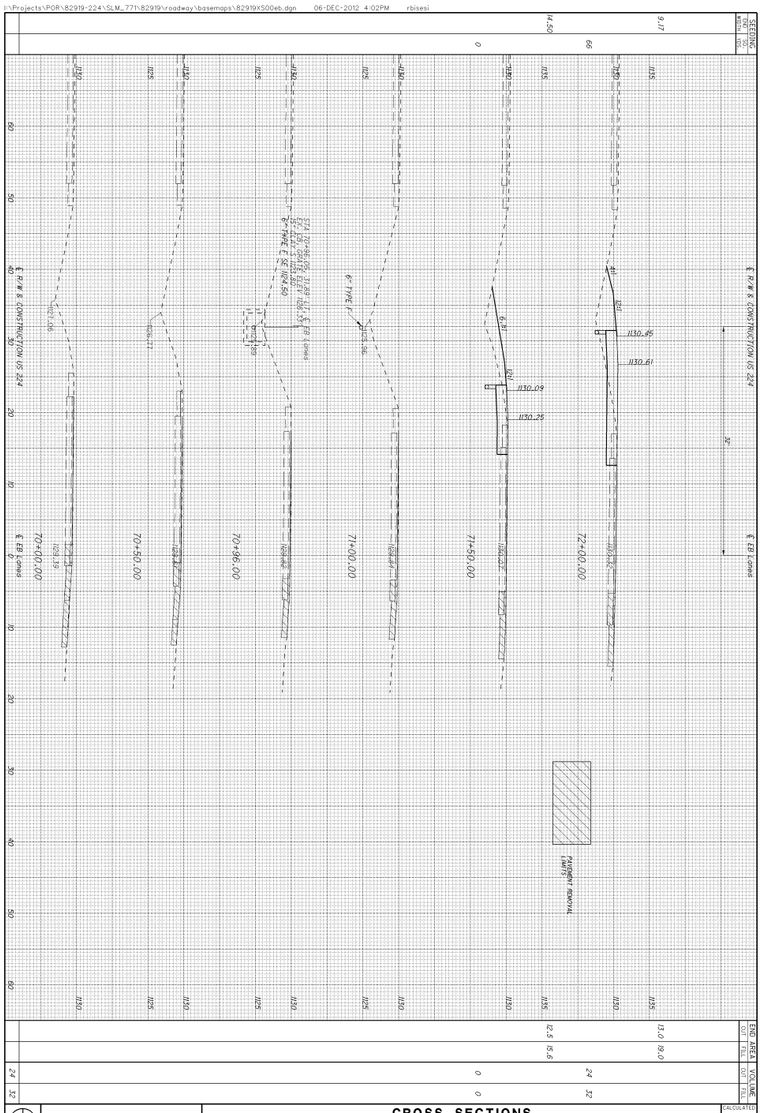

62 41	POR-224-0.00	CROSS SECTIONS STA 70+00 TO 72+00 US 224 & SR 44

SEEDING
END WIDTH
SO. YDS.
℄ R/W & CONSTRUCTION US 224
32'
℄ EB Lanes
END AREA
OUT
FILL
VOLUME
OUT
FILL
CALCULATED
CHECKED
10.73
10.70
10.69
12.99
10.68
10.34
1135
1130
1130.33
1129.93
1129.64
1129.37
1129.22
1129.15
4:1
12:1
75+00.00
74+50.00
74+00.00
73+50.00
73+00.00
72+50.00
60
50
40
30
20
10
0
10
20
30
40
50
60
12.3
15.4
11.8
19.4
12.6
19.6
12.5
18.9
12.3
18.7
12.5
18.5
22
32
23
36
23
36
23
35
23
34
24
35
138
208
PAVEMENT REMOVAL LIMITS
POR-224-0.00
CROSS SECTIONS
STA 72+50 TO 75+00 US 224 & SR 44
42
62
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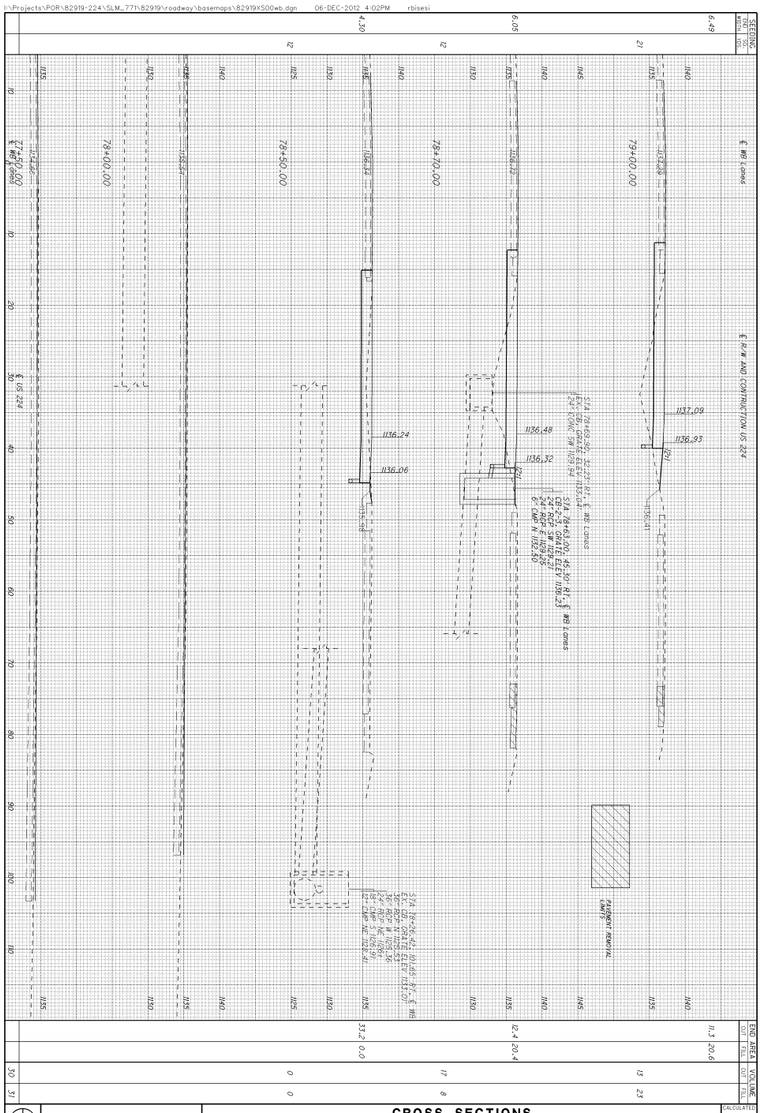

62 44	POR-224-0.00	CROSS SECTIONS STA 77+50 TO 79+00 US 224 & SR 44

CALCULATED

CHECKED

SEEDING
END AREA
VOLUME
CALCULATED
CHECKED
℄ WB Lanes
℄ US 224
PAVEMENT REMOVAL LIMITS
82+00.00
81+50.00
81+00.00
80+50.00
80+00.00
79+50.00
STA 79+50.00, 41.5' RT. ℄ WB Lanes
CB-2-3, GRATE ELEV. 1137.15
24" RCP @ 1.92.00
℄ WB Lanes
℄ R/W AND CONTRUCTION US 224
CROSS SECTIONS
STA 79+50 TO 82+00 US 224 & SR 44
POR-224-0.00
45
62

SEEDING
END WIDTH
SIDE OFFSET
℄ WB Lanes
℄ US 224
END AREA
OUT
FILL
VOLUME
OUT
FILL
CALCULATED
EDITED
PAVEMENT REMOVAL LIMITS
85+50.00
85+00.00
84+50.00
84+00.00
83+50.00
83+00.00
82+50.00
1149.21
1147.85
1146.52
1145.66
1144.55
1143.41
1145.98
1145.82
1144.92
1144.76
1144.91
1144.81
12:1
9.2 0.0
22.1 0.0
21.1 0.3
19.4 1.7
29 0
40 0
38 2
32 8
139 10
CROSS SECTIONS
STA 82+50 TO 85+50 US 224 & SR 44
POR-224-0.00
46
62
℄ WB Lanes
℄ R/W & CONSTRUCTION US 224
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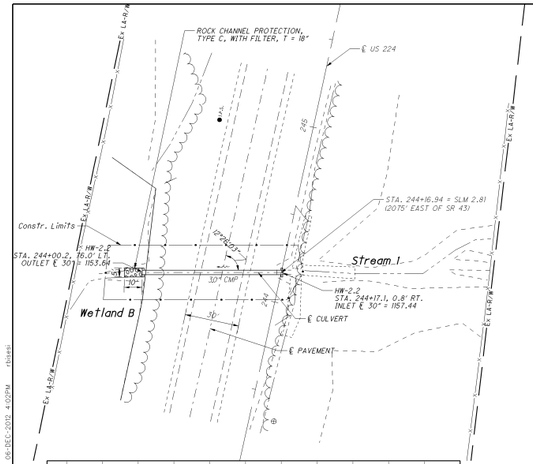

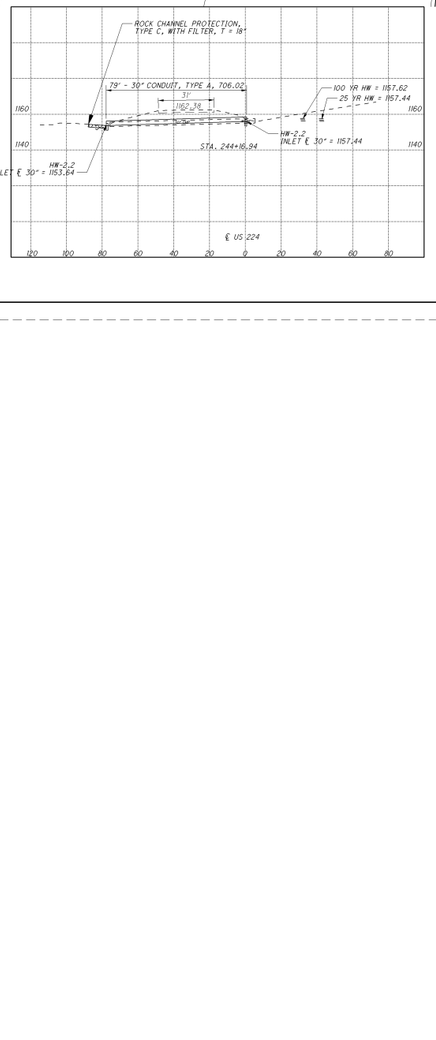

BENCHMARK DATA

BM #1 STA. 243+34.86, ELEV. 1159.42, OFFSET 13.82' RT.
DESCRIPTION SPIKE SET IN TREE
BM #2 STA. 244+92.78, ELEV. 1162.40, OFFSET 52.03' LT.
DESCRIPTION ⅝" REBAR W/ ODOT CAP SET

NOTES

EARTHWORK LIMITS SHOWN ARE APPROXIMATE.

DESIGN TRAFFIC:
2010 ADT = 8210
DIRECTIONAL DISTRIBUTION = 50%

HYDRAULIC DATA

DRAINAGE AREA = 0.0113 SQ. MILES
Q (25) = 10.60 CFS V (25) = 9.07 FT/S
Q (100) = 12.90 CFS V (100) = 9.58 FT/S
STRUCTURE CLEARS THE 100 YEAR
DESIGN HW BY 0.80 FEET.

EXISTING CULVERT

TYPE: 30" CMP
LENGTH: 83'
ROADWAY: 30'± EOS/EOS
SKEW: 12°26'03"
ALIGNMENT: TANGENT
CROWN: ⅜"/FT
DISPOSITION: TO BE REMOVED
CULVERT FILE NUMBER: 672240080

PROPOSED CULVERT

TYPE: 30" RCP
LENGTH: 83'
ROADWAY: 30.4' EOS/EOS
SKEW: 12°26'03"
ALIGNMENT: TANGENT
CROWN: ⅜"/FT FT/FT
COORDINATES: LATITUDE 41°01'38"
LONGITUDE 81°20'24"

	STATION TO STATION			202 PIPE REMOVED, OVER 24" FT	602 CONCRETE MASONRY CU YD	603 30" CONDUIT, TYPE A FT				
		TO								
				83	1.12	79				
TOTALS CARRIED TO GENERAL SUMMARY				83	1.12	79.0	0	0	0	0

HORIZONTAL SCALE IN FEET
0 20 40

CULVERT PLAN
US 224 SLM 2.81

POR-224-0.00

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62

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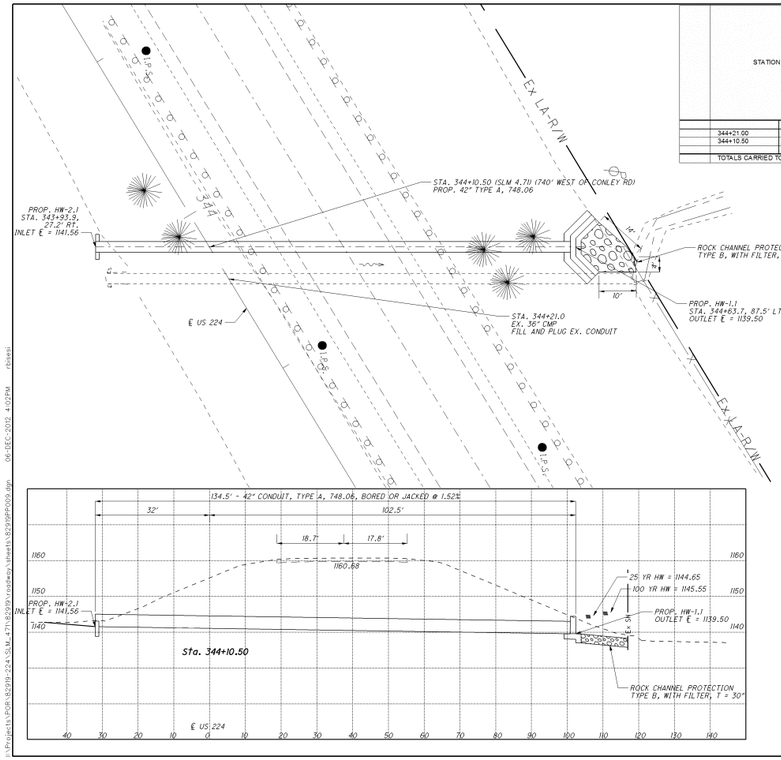

STATION TO STATION			202 PIPE REMOVED, OVER 24"	SPEC 203 FILL AND PLUG EXISTING CONDUIT	203 EXCAVATION	203 BORROW	601 ROCK CHANNEL PROTECTION TYPE B WITH AGGREGATE FILTER	602 CONCRETE MASONRY	603 CONDUIT, BORED OR JACKED, 42" TYPE A, 748.06
	TO		FT	FT	CU YD	CU YD	CU YD	CU YD	FT
344+21.00			20	127					
344+10.50					32	5	13	9.42	135
TOTALS CARRIED TO GENERAL SUMMARY			20	127	32	5	13	9.42	135

N

HORIZONTAL SCALE IN FEET
0 20

FILE NAME	USER NAME	SCALED
5299PP009.dgn	rbiesi	

BENCHMARK DATA

BM #1 STA. 345+06.60, ELEV. 1161.12, OFFSET 50.47' LT.
DESCRIPTION ⅝" Rebar Set W/ ODOT Cap
BM #2 STA. 351+59.26, ELEV. 1170.76, OFFSET 8.42' RT.
DESCRIPTION ⅝" Rebar Found w/o ODOT Cap

HYDRAULIC DATA

DRAINAGE AREA = 0.04 SQ. MILES
Q (25) = 40 CFS V (25) = 12.81 FT/S
Q (100) = 56.6 CFS V (100) = 18.04 FT/S

EXISTING CULVERT

TYPE: 36" CMP
LENGTH: 147'
ROADWAY: 31.2' EOS/EOS
SKEW: 31°17'48"
ALIGNMENT: TANGENT
CROWN: ⅜"/FT
DISPOSITION: TO BE ABANDONED
CULVERT FILE NUMBER: 6722401.30

PROPOSED CULVERT

TYPE: 42" CONDUIT, TYPE A, 748.06
LENGTH: 148'
ROADWAY: 31.2'
SKEW: 31°17'48"
ALIGNMENT: TANGENT
CROWN: ⅜"/FT FT./FT
COORDINATES: LATITUDE 41°01'55"
LONGITUDE 81°18'17"

CULVERT PLAN
US 224 SLM 4.71

POR-224-0.00

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ITEM 625 PULL BOX, 725.08, AS PER PLAN

ENSURE THAT THE PORTLAND CONCRETE PULL BOX IS CONSTRUCTED OF REINFORCED PORTLAND CEMENT CONCRETE. WHEN THE BOX IS PRECAST, ONLY PROVIDE PULL BOXES FROM SUPPLIERS CERTIFIED TO SUPPLEMENT 1073. ENSURE THAT THE PULL BOX COVER IS CONSTRUCTED ACCORDING TO 725.08 AND AS SHOWN ON THE PLANS.

FURNISH METAL PULL BOX COVERS THAT CONFORM TO THE FOLLOWING REQUIREMENTS:

1. FURNISH 1/4-INCH (6mm) THICK STEEL PLATE FOR THE STEEL COVER CONFORMING TO 711.01 WITH 1-1/2-INCH (13mm) MINIMUM FLANGE AROUND THE EDGE AND GALVANIZED TO CONFORM TO 711.02. DISPLAY ON THE STEEL COVER OR ON AN ATTACHED BRASS OR STAINLESS STEEL PLATE (TAG) CLEARLY LEGIBLE BLOCK LETTERS 1 INCH TO 2 INCHES (25mm-50mm) IN HEIGHT WITH THE WORD "TRAFFIC", "LIGHTING", "ELECTRIC" OR "TELEPHONE" TO DESIGNATE THE CIRCUIT(S) CONTAINED. ENSURE THAT THE WORD DESIGNATING THE USE IS IN RAISED LETTERS THAT ARE EITHER INTEGRAL TO THE STEEL COVER OR INTEGRAL TO A BRASS OR STAINLESS STEEL PLATE 1/16-INCH (1.6mm) IN THICKNESS SECURELY MECHANICALLY ATTACHED TO THE STEEL COVER AT THE FOUR CORNERS OF THE TAG AND AT INTERVALS 2 - 3 INCHES (50 - 75mm) ALONG THE PERIMETER BETWEEN CORNERS.

2. FURNISH GRAY IRON OR DUCTILE IRON WITH A MINIMUM THICKNESS OF 3/8-INCH (9mm) CONFORMING TO ASTM A 48 OR ASTM 536. CERTIFICATION IS REQUIRED. ENSURE THAT THE WORD "TRAFFIC", "LIGHTING", "ELECTRIC", OR "TELEPHONE" IS CAST IN THE TOP SURFACE OF THE COVER FORMING LETTERS 1 TO 2 INCHES (25 TO 30mm) IN HEIGHT.

ITEM 632 REMOVAL OF MISCELLANEOUS TRAFFIC SIGNAL ITEM: 3 SECTION SIGNAL HEAD

THIS WORK WILL REQUIRE THE CONTRACTOR TO REMOVE EXISTING SIGNAL HEAD AS INDICATED ON THE SIGNAL PLANS.

PAYMENT FOR THIS ITEM OF WORK SHALL BE PER EACH SIGNAL HEAD REMOVED & INCLUDE ALL LABOR AND EQUIPMENT, INCLUDING TRAFFIC CONTROL, TO PERFORM THE WORK DESCRIBED ABOVE.

HEADS SHALL BE STORED FOR SALVAGE BY ODOT. CONTACT DISTRICT TRAFFIC OFFICE, 330-786-3145, TO ARRANGE TRANSFER.

ITEM 632 SIGNALIZATION, MISC.: REMOVE AND REINSTALL LASHING RODS

THIS WORK WILL REQUIRE THE CONTRACTOR TO CAREFULLY REMOVE THE LASHING RODS ACROSS AN EXISTING SIGNAL SPAN SO THAT NEW CABLE(S) CAN BE INSTALLED IN ORDER TO RELOCATE SIGNAL HEADS TO ALIGN WITH THE CENTER OF THE NEW LANE LOCATIONS AND IN ORDER TO INSTALL 3 CONDUCTOR CABLE FOR PEDESTRIAN PUSH BUTTONS. AS THE CABLE(S) IS INSTALLED IT SHALL BE CAREFULLY LASHED WITH THE OTHER EXISTING CABLES UTILIZING THE REMOVED LASHING RODS.

PAYMENT FOR THIS ITEM OF WORK AND FOR RELOCATING THE NEW SIGNAL HEADS WILL BE PER FOOT OF LASHING ROD REMOVED AND INCLUDE ALL LABOR AND EQUIPMENT, INCLUDING TRAFFIC CONTROL, TO PERFORM THE WORK DESCRIBED ABOVE.

THE FOLLOWING QUANITY AS BEEN CARRIED TO THE GENERAL SUMMARY:

ITEM 632 SIGNALIZATION, MISC.: REMOVE AND REINSTALL LASHING RODS 164 FT

LOOP DETECTOR UNITS, BY TYPE

IN ADDITION TO THE REQUIREMENTS OF CMS ITEM 632 AND CMS 732.07 OR 732.08, LOOP DETECTOR UNITS SHALL HAVE THE FOLLOWING REQUIREMENTS OR FEATURES:

THE OUTPUT DEVICE SHALL BE A RELAY, AND ALL CONTACTS SHALL BE IN THE WIRING HARNESS.

THE UNIT SHALL BE SELF TUNING.

THE UNIT'S ELECTRICAL CONNECTION PLUGS OR WIRING HARNESS SHALL ALLOW READY REPLACEMENT WITH A SINGLE CHANNEL AMPLIFIER AS DESCRIBED IN CMS 732.07.

EACH UNIT SHALL BE LABELED TO CORRESPOND TO ITS PHASE AND DIRECTION.

DELAY INHIBIT SHALL BE CONNECTED ON ALL DETECTOR HARNESSES FOR THEIR RESPECTIVE PHASE GREENS.

ONE UNIT SHALL BE PROVIDED FOR EACH LOOP.

632 LOOP DETECTOR UNITS, AS PER PLAN

IN ADDITION TO THE REQUIREMENTS OF CMS ITEM 632 AND CMS 732.07 OR 732.08, THE CONTRACTOR SHALL PROVIDE LOOP DETECTOR HARNESSES AND AMPLIFIERS IN THE CABINET.

PAYMENT FOR THIS ITEM OF WORK SHALL BE PER EACH LOOP DETECTOR & INCLUDE ALL LABOR AND EQUIPMENT TO PERFORM THE WORK DESCRIBED ABOVE.

ITEM 632 - VEHICULAR SIGNAL HEAD, (LED), BLACK, BY SECTION, 12" LENS, BY WAY, POLYCARBONATE, WITH BACKPLATE, AS PER PLAN

IN ADDITION TO THE REQUIREMENTS OF CMS ITEM 632 AND CMS 732, THE FOLLOWING REQUIREMENTS SHALL APPLY:

SIGNAL SECTIONS:

1. SIGNAL HEADS AND VISORS SHALL BE CONSTRUCTED OF POLYCARBONATE PLASTIC AND MEET ITE SPECIFICATIONS.
2. PIPE, SPACERS AND FITTINGS CONSTRUCTED OF POLYCARBONATE PLASTIC MAY BE USED IN LIEU OF GALVANIZED STEEL OR ALUMINUM.
3. PROPER EXTERIOR COLORS SHALL BE OBTAINED BY USE OF COLORED PLASTIC MATERIAL RATHER THAN PAINTING.

MOUNTING HARDWARE:

1. ALL UPPER SIGNAL SUPPORT HARDWARE AND PIPING UP TO AND INCLUDING THE WIRE INLET FITTING SHALL BE FERROUS METAL FOR SIGNAL DISPLAYS OF TWO OR MORE SECTIONS.
2. BALANCE ADJUSTERS SHALL NOT BE USED ON ONE-WAY HEADS
3. THE ENTRANCE FITTING SHALL BE OF THE TRI-STUD DESIGN WITH SERRATED RINGS IN ORDER TO ACHIEVE POSITIVE LOCKING.

THE DEPARTMENT WILL MEASURE VEHICULAR SIGNAL HEAD, (LED), BLACK, BY SECTION, 12" LENS, BY WAY, POLYCARBONATE, WITH BACKPLATE, AS PER PLAN BY THE NUMBER OF COMPLETE UNITS FURNISHED AND INSTALLED, AND WILL INCLUDE ALL SUPPORT AND MOUNTING HARDWARE, DISCONNECT HANGERS, CLOSURE CAPS, DIMMERS, AND LAMPS AS SPECIFIED.

TRAFFIC SIGNAL NOTES

POR-224-0.00

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MAINTENANCE OF TRAFFIC SIGNAL/FLASHER INSTALLATION

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING TRAFFIC SIGNAL INSTALLATIONS ONCE SIGNAL WORK HAS COMMENCED, WITHIN THE PROJECT UNDER THE FOLLOWING CONDITIONS :

A) EXISTING SIGNAL INSTALLATIONS WHICH THE PLANS REQUIRE THE CONTRACTOR TO ADJUST, MODIFY, ADD ONTO OR REMOVE, OR WHICH THE CONTRACTOR ACTUALLY ADJUSTS, MODIFIES OR OTHERWISE DISTURBS INCLUDING DAMAGE DUE TO UTILITY RELOCATION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE ENTIRE INSTALLATION AT AN INTERSECTION FROM THE TIME THE INSTALLATION IS FIRST DISTURBED, WHETHER FROM UTILITY WORK OR FROM THE CONTRACTOR UNTIL THE INSTALLATION HAS BEEN SUBSEQUENTLY REMOVED OR MODIFIED AND THE WORK IS ACCEPTED.

B) NEW OR REUSED SIGNAL INSTALLATIONS OR DEVICES, INSTALLED BY THE CONTRACTOR. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTENANCE OF THESE FROM THE TIME OF INSTALLATION UNTIL THE WORK IS ACCEPTED.

THE CONTRACTOR SHALL CORRECT AS QUICKLY AS POSSIBLE ALL OUTAGES OR MALFUNCTIONS. AT THE PRE-CONSTRUCTION MEETING, THE CONTRACTOR SHALL PROVIDE THE MAINTAINING AGENCY AND THE PROJECT ENGINEER SUCH ADDRESSES AND PHONE NUMBERS WHERE HIS MAINTENANCE FORCES CAN BE CONTACTED. THE CONTRACTOR SHALL PROVIDE ONE OR MORE PERSONS TO RECEIVE ALL CALLS AND DISPATCH THE NECESSARY MAINTENANCE FORCES TO CORRECT OUTAGES. SUCH A PERSON OR PERSONS MAY BE USED TO PERFORM OTHER DUTIES AS LONG AS PROMPT ATTENTION IS GIVEN TO THESE CALLS AND A PERSON IS READILY AVAILABLE CONTINUOUSLY 24 HOURS A DAY, 7 DAYS A WEEK. THE CONTRACTOR SHALL HAVE THE MALFUNCTION CORRECTED AND/OR REPAIRED TO THE SATISFACTION OF THE ENGINEER WITHIN EIGHT HOURS OF THE NOTIFICATION OR DISINCENTIVES OF $500 PER HOUR SHALL BE ASSESSED THE CONTRACTOR.

ALL LAMP OUTAGES, CABLE OUTAGES, ELECTRICAL FAILURES, EQUIPMENT MALFUNCTIONS AND MISALIGNED SIGNAL HEADS SHALL BE CORRECTED TO THE SATISFACTION OF THE PROJECT ENGINEER WITH THE SIGNAL BACK IN SERVICE WITHIN FOUR HOURS AFTER THE CONTRACTOR HAS BEEN NOTIFIED OF THE OUTAGES

IN THE EVENT NEW SIGNALS ARE DAMAGED PRIOR TO ACCEPTANCE, ALL DAMAGED EQUIPMENT EXCEPT POLES AND CONTROL EQUIPMENT SHALL BE REPLACED BY THE CONTRACTOR TO THE SATISFACTION OF THE PROJECT ENGINEER WITH THE SIGNAL BACK IN SERVICE WITHIN EIGHT HOURS AFTER THE CONTRACTOR IS NOTIFIED OF THE OUTAGE. THE CONTRACTOR SHALL ARRANGE FOR FULL TRAFFIC CONTROL UNTIL THE SIGNAL IS BACK IN OPERATION.

IF POLES AND/OR CONTROL EQUIPMENT ARE DAMAGED AND MUST BE REPLACED, THE CONTRACTOR SHALL MAKE TEMPORARY REPAIRS AS NECESSARY TO BRING THE SIGNAL BACK INTO FULL OPERATION WITHIN THE ALLOWED EIGHT HOUR PERIOD, AND SHALL MAKE PERMANENT REPAIRS OR REPLACEMENT AS SOON AS POSSIBLE.

NONE OF THE ABOVE SHALL BE CONSTRUED AS COLLECTIVE OR CONSECUTIVE OUTAGE TIME PERIODS AT ANY ONE LOCATION. THAT IS, WHERE MORE THAN ONE OUTAGE OCCURS AT ANY ONE LOCATION, THEN THE ALLOTTED TIME LIMIT SHALL BE FOR THE WORST SINGLE OUTAGE.

WHERE OUTAGES ARE THE DIRECT RESULT OF A VEHICLE ACCIDENT THE RESPONSE OF THE CONTRACTOR SHALL BE AS OUTLINED ABOVE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COLLECTION OF ANY COMPENSATION FOR THIS WORK FROM THOSE PARTIES RESPONSIBLE FOR THE DAMAGES AS PER 107.15.

WHERE THE CONTRACTOR HAS FAILED TO, OR CANNOT RESPOND TO, AN OUTAGE OR SIGNAL EQUIPMENT MALFUNCTION, AT THESE LOCATIONS WITHIN HIS RESPONSIBILITY, WITHIN PERIODS AS SPECIFIED ABOVE, THE PROJECT ENGINEER MAY INVOKE THE PROVISIONS OF SECTION 105.15 AND ANY SUBSEQUENT BILLINGS TO THE STATE OR THE CITY FOR POLICE SERVICES AND MAINTENANCE SERVICES BY STATE OR CITY FORCES SHALL BE DEDUCTED FROM MONEYS DUE OR TO BECOME DUE THE CONTRACTOR IN ACCORDANCE WITH PROVISIONS OF SECTION 105.15. IN ADDITION TO THESE BILLINGS, THE CONTRACTOR SHALL BE ASSESSED DISINCENTIVES OF $500/HOUR FOR EACH HOUR BEYOND THE ALLOWED EIGHT HOUR PERIOD THAT THE SIGNAL IS INOPERATIVE.

THE CONTRACTOR SHALL PROVIDE THE MAINTENANCE SERVICES ENTIRELY WITH HIS FORCES OR HE MAY CHOOSE TO ENTER INTO A MUTUALLY ACCEPTABLE AGREEMENT WITH THE STATE MAINTAINING AGENCY TO PROVIDE THE MAINTENANCE.

THE CONTRACTOR SHALL INFORM THE PROJECT ENGINEER, IN WRITING, OF THE MAINTENANCE METHOD SELECTED.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO ANY TRAFFIC SIGNAL COMPONENTS REQUIRED TO BE HANDLED DURING THE RELOCATION OF POLES AND REVISIONS TO THE SIGNAL SYSTEM.

WHEN A TRAFFIC SIGNAL MUST BE TAKEN OUT OF SERVICE BY THE CONTRACTOR, DUE TO CONSTRUCTION PROCEDURES, THIS OUTAGE SHALL NOT EXCEED FOUR HOURS AND SHALL NOT INCLUDE THE HOURS OF 6:00AM TO 9:00AM AND 4:00PM TO 6:00PM. ANY SIGNALIZED INTERSECTION, WHERE THE SIGNAL IS OUT OF SERVICE DUE TO CONSTRUCTION PROCEDURES, OR DUE TO AN OUTAGE OR MALFUNCTION OF EQUIPMENT AS DESCRIBED ABOVE, SHALL BE PROTECTED BY OFF-DUTY POLICE, HIRED BY THE CONTRACTOR.

ANY VEHICULAR TRAFFIC SIGNAL HEAD, EITHER NEW OR EXISTING WHICH WILL BE OUT OF OPERATION SHALL BE COVERED, AS DESCRIBED IN 632.25.

THE CONTRACTOR SHALL MAINTAIN COMPLETE RECORDS OF MALFUNCTIONS INCLUDING: 1. TIME OF NOTIFICATION OF MALFUNCTION; 2. TIME OF WORK CREWS ARRIVAL TO CORRECT THE MALFUNCTION; 3. ACTIONS TAKEN TO CORRECT THE MALFUNCTION, INCLUDING A LIST OF PARTS REPAIRED OR REPLACED; 4. A DIAGNOSIS OF REASON FOR THE MALFUNCTION AND PROBABILITY OF REOCCURRENCE; AND 5. TIME OF COMPLETION OF REPAIR AND SYSTEM RESTORED TO FULL SERVICE. A COPY OF THESE RECORDS SHALL BE PROVIDED TO THE ENGINEER WITHIN THREE (3) WORKING DAYS FOLLOWING COMPLETION OF EACH REPAIR.

ALL COSTS RESULTING FROM THE ABOVE REQUIREMENTS SHALL BE CONSIDERED TO BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 614 - MAINTAINING TRAFFIC.

ITEM 614 - MAINTAINING TRAFFIC

ALL WORK AND TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH 614 AND OTHER APPLICABLE PORTIONS OF THE SPECIFICATIONS, AS WELL AS THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, CURRENT EDITION, LATEST REVISION.

LENGTH AND DURATION OF LANE CLOSURE AND RESTRICTIONS SHALL BE AT THE APPROVAL OF THE ENGINEER. IT IS THE INTENT TO MINIMIZE THE IMPACT TO THE TRAVELING PUBLIC. LANE CLOSURES OR RESTRICTIONS OVER SEGMENTS OF THE PROJECT IN WHICH NO WORK IS ANTICIPATED WITHIN A REASONABLE TIME FRAME, AS DETERMINED BY THE ENGINEER, SHALL NOT BE PERMITTED. THE LEVEL OF UTILIZATION OF MAINTENANCE OF TRAFFIC DEVICES SHALL BE COMMENSURATE WITH THE WORK IN PROGRESS.

IF IT IS NECESSARY TO STOP ALL TRAFFIC FOR THE ERECTION OF SPAN WIRE, THE WORK SHALL BE SO ARRANGED THAT THE STOPPAGE IS LESS THAN TEN (10) MINUTES IN ANY ONE (1) THIRTY (30) MINUTE PERIOD. NO STOPPAGE OF TRAFFIC SHALL OCCUR FOR THE ERECTION OF SIGNAL SUPPORTS, CUTTING AND INSTALLING LOOP DETECTOR WIRE, OR HANGING SPAN WIRE AND SIGNAL HEADS, WITHOUT A LAW ENFORCEMENT OFFICER WITH A PATROL CAR AT THE SITE FOR ASSISTANCE IN CONTROLLING TRAFFIC. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE THE SERVICES AND SCHEDULING OF SAID LAW ENFORCEMENT OFFICER WITH PATROL CAR.

THE CONTRACTOR SHALL FURNISH AND MAINTAIN ALL FLAGS, FLAGGERS, WATCHERS, BARRICADES, SIGNS, SIGN SUPPORTS AND INCIDENTALS RELATED TO TRAFFIC CONTROL.

SIGNS FURNISHED SHALL BE IN NEW OR LIKE NEW CONDITIONS. LIKE NEW SIGNS SHALL BE SUBJECT TO THE APPROVAL OF THE PROJECT ENGINEER. THE CONTRACTOR SHALL BE RESPONSIBLE AT ALL TIMES FOR PROVIDING AND MAINTAINING LIGHTS, SIGNS, AND BARRICADES FOR THE MAINTENANCE OF TRAFFIC AND SAFETY OF HIS/HER WORK AT THE LOCATIONS SHOWN ON THESE PLANS OR AS DIRECTED BY THE ENGINEER.

TWO-WAY TRAFFIC ON A MINIMUM OF TWO 11-FOOT LANES SHALL BE MAINTAINED BY USE OF THE EXISTING PAVEMENT.

NO LANE CLOSURE SHALL BE IMPLEMENTED DURING THE HOURS OF 6:00am TO 9:00am OR 4:00pm TO 6:00pm WEEKDAYS. ALL ADVANCE WARNING SIGNS FOR ANY CONDITION WHICH RESTRICTS TRAFFIC SHALL BE ERECTED BEFORE ANY SUCH RESTRICTION IS PUT INTO EFFECT. ALL SUCH SIGNS SHALL BE COVERED OR REMOVED FROM THE VIEW OF TRAFFIC WHEN THEY ARE NOT APPLICABLE, AS DETERMINED BY THE ENGINEER. FOR WORK WHICH IS CONFINED TO THE SHOULDER, TRAFFIC CONTROL SHALL CONFORM TO FIGURES 6H-1, 6H-3 AND 6H-4 OF THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (OMUTCD).

IF THE CONTRACTOR FAILS TO COMPLY WITH THE PROVISIONS FOR TRAFFIC CONTROL AS SET FORTH IN THESE PLANS AND PROVISIONS OF THE OMUTCD AND THE FAILURE RESULTS IN A CONDITION AT THE WORK SITE WHICH IS UNSAFE FOR TRAFFIC, THE ENGINEER SHALL SUSPEND WORK UNTIL THE CONTRACTOR COMPLIES WITH THE NECESSARY REQUIREMENTS.

TRAFFIC SIGNAL NOTES

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SIGNAL SUBSUMMARY

POR-224-0.00

REF NO.	SHEET NO.	STATION TO STATION				CONDUIT, 1-1/2", 725.04			CONDUIT, JACKED OR DRILLED	TRENCH	PULL BOX, 725.06, 18", AS PER PLAN	PLASTIC CAUTION TAPE	PULL BOX REMOVED	VEHICULAR SIGNAL HEAD (LED), BACK PLATE, 4 SECTION, 12", LENS, 1-WAY, POLYCARBONATE WITH BACKPLATE	COVERING OF VEHICULAR SIGNAL HEAD	DETECTOR LOOP	LOOP DETECTOR UNIT, AS PER PLAN	SIGNAL CABLE, 5 CONDUCTOR, NO. 14 AWG	SIGNAL CABLE, 7 CONDUCTOR, NO. 14 AWG	LOOP DETECTOR LEAD-IN CABLE	REMOVAL OF MISCELLANEOUS TRAFFIC SIGNAL ITEM - 3 SEC SIGNAL SIGNAL HEAD	SIGNALIZATION, MISC., REMOVE, 15" STEEL MAST ARM SIGNAL LASHING ROD	PEDESTRIAN PUSHBUTTON	SIGNAL CABLE, 3 CONDUCTOR, NO. 14 AWG		
			TO			625			625	625	625	625	625	632	632	632	632	632	632	632	632	632	632	632		
						FT			FT	FT	EACH	FT	EACH	EACH	EACH	EACH	EACH	EACH	FT	FT	FT	EACH	FT	EACH	FT		
SR 43																										
L-1		218+87.00 2.5'Lt		220+87.50 5'Lt		201				201	1	201				1				206						
L-1/2		220+87.50 5'Lt		222+77.00 13'Lt		190				190	1	190				1				390						
L-1/2/3		222+77.00 13'Lt		222+74.30 52.4'Lt		40				40	1	40				1				135						
L-1/2/3		222+74.30 52.4'Lt		222+98.60 69'Lt		30				30		30								105						
L-1/2/3		222+98.60 69'Lt		222+92.80 73'Lt																51						
L-4/5/6		222+92.80 73'Lt		222+98.60 69'Lt																36						
L-4/5/6		222+98.60 69'Lt		222+85.70 71'Lt																150						
L-4/5/6		222+85.70 71'Lt		223+87.80 70'Lt																672						
L-4/5/6		223+87.80 70'Lt		223+97.50 62'Lt		13				13	1	13				1				54						
L-5/6		223+97.50 62'Lt		225+93.00 51'Lt		196				196	1	196				1				402						
L-6		225+93.00 51'Lt		227+94.00 50'Lt		201				201	1	201				1				206						
H-1/2		222+85.70 71'Lt		223+86.00 74'Rt										1	1			130	150		1	55				
H-3/4		222+85.70 71'Lt		223+86.00 74'Rt										1	1				184		1	20				
PB Rem		219+39.00 14'Rt		220+91.00 14'Rt									2													
PB Rem		221+90.00 13'Rt		222+85.00 5'Lt									2													
PB Rem		224+02.00 7'Lt		224+93.00 14'Lt									2													
PB Rem		225+93.00 15'Lt		227+45.00 14'Lt									2													
PED		222+92.8 73' Lt.																					1	11		
PED		222+96 80.5' Rt.																					1	230		
SR 44																										
L-1		73+13.00 1'Lt		75+13.00 1'Lt		200				200	1	200				1				205						
L-1/2		75+13.00 1'Lt		76+94.00 13'Lt		182				182	1	182				1				374						
L-1/2/3/4		76+94.00 13'Lt		76+94.00 51'Lt					38		1					2	1			172						
L-1/2/3/4		76+94.00 51'Lt		77+37.00 68'Lt		37			10	37		37								208						
L-1/2/3/4		77+37.00 68'Lt		77+15.00 72'Lt																152						
L-5/6/7/8		77+15.00 72'Lt		78+30.00 63'Lt																1084						
L-5/6/7/8		78+30.00 63'Lt		78+35.00 55'Lt												2	1			60						
L-7/8		78+35.00 55'Lt		79+94.00 51'Lt												1				328						
L-8		79+94.00 51'Lt		81+56.00 49'Lt												1				167						
H-1/2		77+15.00 72'Lt		78+21.00 79'Rt										1	1			102	121		1	52				
H-3/4		77+15.00 72'Lt		78+21.00 79'Rt										1	1						1	20				
PB Rem		73+72.00 15'Rt		75+59.00 14'Rt									2													
PB Rem		76+24.00 14'Rt		77+09.00 7'Rt									2													
TOTALS CARRIED TO GENERAL SUMMARY						1290	0	0	48	1290	9	1290	12	4	4	14	2	232	455	5157	4	147	2	241	0	0

Federal Highway Administration

rbirkel
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REF NO.	SHEET NO.	STATION	SIDE	CODE * PLYWOOD ## YELLOW/GREEN ### WHITE ON BROWN	SIZE (INCHES)				630 GROUND MOUNTED, SUPPORT, NO. 2 POST	630 ONE WAY SUPPORT, NO. 3 POST	630 GROUND MOUNTED, SUPPORT, NO. 3 POST		630 SIGN, FLAT SHEET	630 SIGN POST REFLECTOR	630 REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL	630 REMOVAL OF GROUND MOUNTED SIGN AND REERECTION	630 REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL											COMMENTS
									FT	FT	FT		SQ FT	EACH	EACH	EACH	EACH											
			SR 43																									
S-1		220+00, 6' Lt.	LT	R3-H8B-48	30"48				27				10															
S-4		220+00, 6' Lt.	LT	R5-1A-36	24"36									2		1	1											
S-2		220+00, 53' Rt.	RT	R3-H8B-48	30"48				27				10															
S-6		220+00, 53' Rt.	RT	R5-1A-36	36"24									2		1												
S-3		220+67	LT	R3-H8BH-36	36"36										1		2											
S-5		220+67	RT	R3-H8BH-36	36"36										1													
S-7		222+50, 51' Lt.	LT	R5-1-30	30"30				13.5					1		1	1											
S-8				NOT USED																								
S-9				NOT USED																								
S-10		222+80, 12.5 Lt.	LT	R4-7B-24	24"30											1												
S-11		222+84	RT	R3-H8BH-36	36"36										1		2											
S-12				NOT USED																								
S-13		224+01, 13.5' Rt.	RT	R4-7B-24	24"30											1												
S-14				NOT USED																								
S-15				NOT USED																								
S-16		224+08	LT	R3-H8BH-36	36"36										1		2											
S-17				NOT USED																								
S-18		224+34, 48 Lt.	LT	R5-1-30	30"30				13.5					1		1	1											
S-20		225+97.4, 6' Lt.	LT	R3-H8BH-36	36"36										1		1											
S-22		225+97.4, 6' Rt.	RT	R3-H8BH-36	36"36										1													
S-23		227+35, 53' Lt.	LT	R3-H8B-48	30"48				27				10															
S-19		227+35, 53' Lt.	LT	R5-1A-36	36"24									2		1												
S-24		227+35, 4' Rt.	RT	R3-H8B-48	30"48				27				10															
S-21		227+35, 4' Rt.	RT	R5-1A-36	36"24									2		1												
		CONGRESS LAKE (SLM 3.67)	LT	R1-1-30	30"30						18.5		6.25	1														STOP SIGN TO BE ADDED TO NE QUADRANT
		CONGRESS LAKE (SLM 3.67)	LT	R-1-30	30"30						18.5		6.25	1														STOP SIGN TO BE ADDED TO SW QUADRANT
		CONLEY RD (SLM 4.85)	LT	R1-1-30	30"30						18.5		6.25	1														STOP SIGN TO BE ADDED TO NE QUADRANT
		CONLEY RD (SLM 4.85)	LT	R1-1-30	30"30						18.5		6.25	1														STOP SIGN TO BE ADDED TO SW QUADRANT
TOTALS CARRIED TO SHEET 9999						0	0	0	135	0	74	0	65	14	6	8	10	0	0	0	0	0	0	0	0	0		

LOCATED BY / DATE

SIGNING SUBSUMMARY

POR-224-0.00

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SIGNING SUBSUMMARY

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CALCULATED CNC
CHECKED

REF NO.	SHEET NO.	STATION	SIDE	CODE * PLYWOOD # YELLOW/GREEN ## WHITE ON BROWN	SIZE (INCHES)				630 GROUND MOUNTED SUPPORT, NO. 2 POST FT	630 ONE WAY SUPPORT, NO. 3 POST FT	630 GROUND MOUNTED SUPPORT, NO. 3 POST FT		630 SIGN, FLAT SHEET SQ FT	630 SIGN POST REFLECTOR EACH	630 REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL EACH	630 REMOVAL OF GROUND MOUNTED SIGN AND REERECTION EACH	630 REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL EACH
			SR 44														
S-1		74+00,4'Lt.	LT	R3-H8B-48	30*48				27				10				
S-3		74+00, 4' Lt.	LT	R5-1A-36	24*36									2		1	1
S-2		74+95	LT	R3-H8BH-36	36*36										1		2
S-4		78+73, 50' Lt.	LT	R5-1-30	30*30				13.5					1		1	1
S-5			NOT USED														
S-6			NOT USED														
S-7		76+97, 13' Lt.	LT	R4-7B-24	24*30											1	
S-8		78+28, 6' Lt.	LT	R10-6-24											1		1
S-9		78+60	LT	R3-H8BH-36											1		2
S-10		74+00, 54' Rt.	RT	R3-H8B-48	30*48				27				10				
S-12		74+00, 54' Rt.	RT	R5-1A-36	24*36									2		1	
S-11		75+00	RT	R3-H8BH-36	36*36										1		2
S-13		77+11.20	RT	R10-6-24											1		1
S-14		78+58, 13' Rt.	RT	R4-7B-24	24*30											1	
S-15			NOT USED														
S-16			NOT USED														
S-18		80+79	LT	R3-H8BH-36	36*36										1		2
S-17		81+14, 54' Lt.	RT	R5-1A-36	24*36									2		1	
S-19		81+14, 54' Lt.	LT	R3-H8B-48	30*48				27				10				
S-20		77+00, 47' Rt.	RT	R5-1-30	30*30				13.5					1		1	1
S-22		80+78	RT	R3-H8BH-36	36*36										1		2
S-23		81+14, 4' Rt.	RT	R3-H8B-48	30*48				27				10				
S-21		80+78, 4' Rt.	RT	R5-1A-36	24*36									2		1	
TOTALS CARRIED TO SHEET 9999						0	0	0	135	0	0	0	40	10	7	8	15

TOTALS CARRIED TO SHEET 9999	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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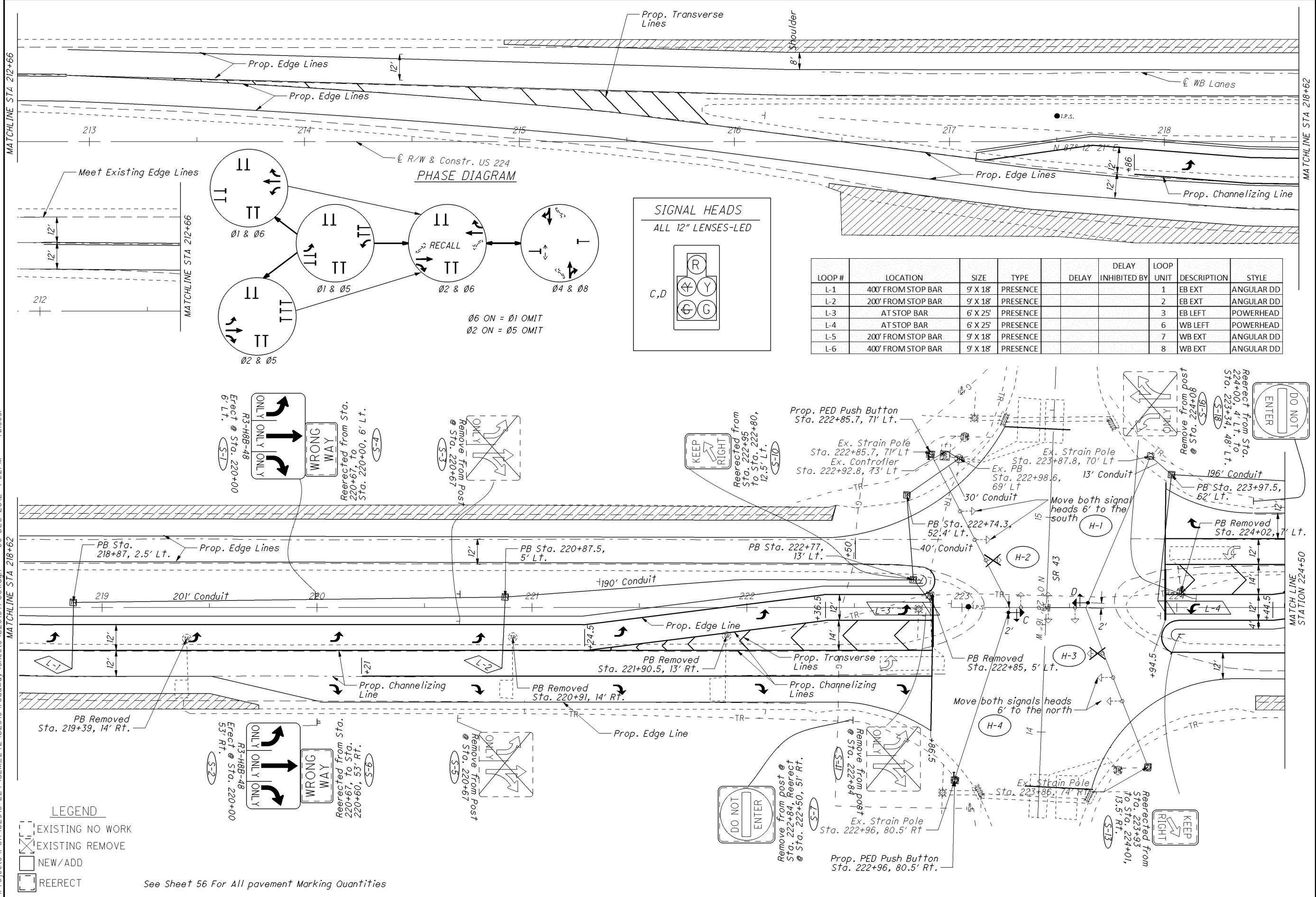

LOOP #	LOCATION	SIZE	TYPE		DELAY	DELAY INHIBITED BY	LOOP UNIT	DESCRIPTION	STYLE
L-1	400' FROM STOP BAR	9' X 18'	PRESENCE				1	EB EXT	ANGULAR DD
L-2	200' FROM STOP BAR	9' X 18'	PRESENCE				2	EB EXT	ANGULAR DD
L-3	AT STOP BAR	6' X 25'	PRESENCE				3	EB LEFT	POWERHEAD
L-4	AT STOP BAR	6' X 25'	PRESENCE				6	WB LEFT	POWERHEAD
L-5	200' FROM STOP BAR	9' X 18'	PRESENCE				7	WB EXT	ANGULAR DD
L-6	400' FROM STOP BAR	9' X 18'	PRESENCE				8	WB EXT	ANGULAR DD

See Sheet 56 For All pavement Marking Quantities

HORIZONTAL SCALE IN FEET 0 10 20 40

CALCULATED CNC CHECKED

SIGNAL, PAVEMENT MARKING & SIGNING PLAN US 224 AND SR 43

POR-224-0.00

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See Sheet 56 For All pavement Marking Quantities

SIGNAL, PAVEMENT MARKING & SIGNING PLAN
US 224 AND SR 43

POR-224-0.00

HORIZONTAL SCALE IN FEET

54A
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See Sheet 56 For All pavement Marking Quantities

HORIZONTAL SCALE IN FEET

SIGNAL, PAVEMENT MARKING & SIGNING PLAN
US 224 AND SR 44

POR-224-0.00

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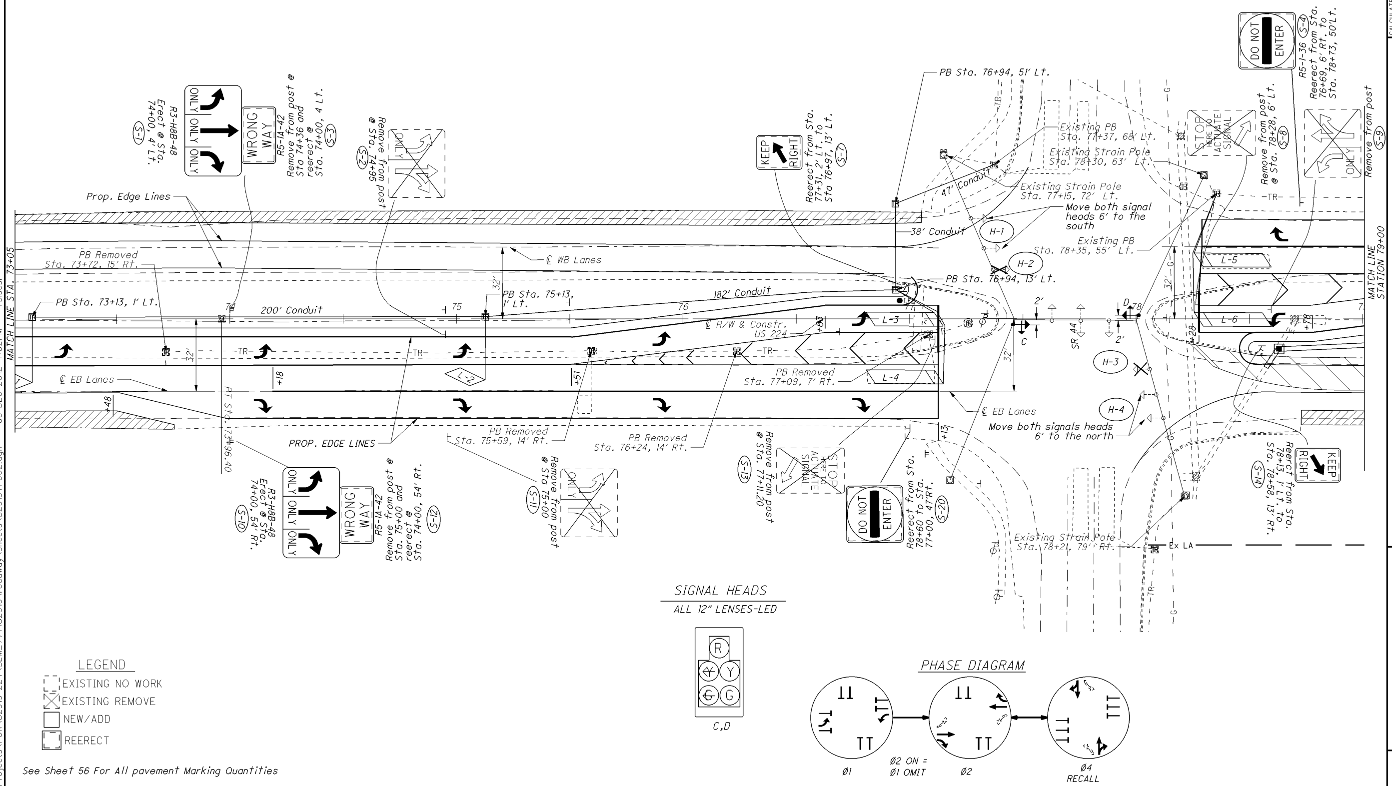
LOOP #	LOCATION	SIZE	TYPE		DELAY	DELAY INHIBITED BY	LOOP UNIT	DESCRIPTION	STYLE
L-1	400' FROM STOP BAR	9' X 18'	PRESENCE				1	EB EXT	ANGULAR DD
L-2	200' FROM STOP BAR	9' X 18'	PRESENCE				2	EB EXT	ANGULAR DD
L-3	AT STOP BAR	6' X 25'	PRESENCE		5	ϕ1	3	EB LEFT	POWERHEAD
L-4	AT STOP BAR	6' X 30'	PRESENCE		5	ϕ2	4	EB THRU	POWERHEAD
L-5	AT STOP BAR	6' X 30'	PRESENCE		5	ϕ2	5	WB THRU	POWERHEAD
L-6	AT STOP BAR	6' X 25'	PRESENCE		5	ϕ1	6	WB LEFT	POWERHEAD
L-7	205' FROM STOP BAR	9' X 18'	PRESENCE				7	WB EXT	ANGULAR DD
L-8	330' FROM STOP BAR	9' X 18'	PRESENCE				8	WB EXT	ANGULAR DD



See Sheet 56 For All pavement Marking Quantities

HORIZONTAL SCALE IN FEET

CALCULATED CNC

CHECKED

SIGNAL, PAVEMENT MARKING & SIGNING PLAN US 224 AND SR 44

POR-224-0.00

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HORIZONTAL SCALE IN FEET

SIGNAL, PAVEMENT MARKING & SIGNING PLAN
US 224 AND SR 44

POR-224-0.00

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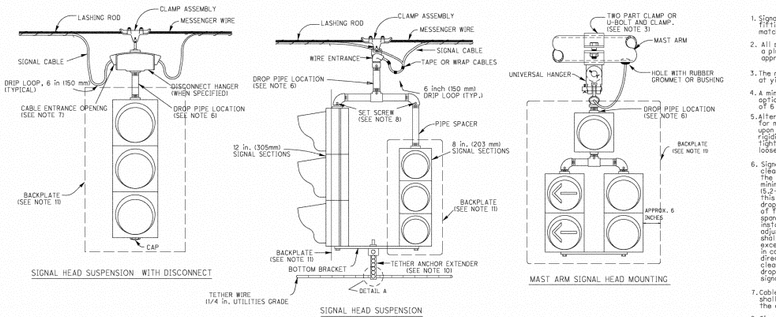
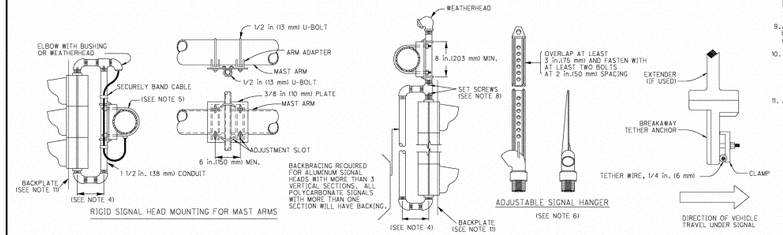


NOTES

1. Signal head conduit brackets and conduit fittings shall be galvanized and painted to match the body of the signal head.
2. All signal head assemblies shall be installed in a plumb position and perpendicular to the approach lane.
3. The mast arm clamp shall have a minimum strenght at yield to support a 200 pound (900 Kilogramsl load.
4. A minimum of 17 inches (430 millimeters) is required for optically programmed signal heads and a minimum of 6 inches (150 millimeters) for standard signal heads.
5. Alternate rigid signal head mounting devices for mast arms may be approved by The Engineer upon demonstration that they provide adequate rigidity, equal range of adjustment and can be tightened sufficiently to prevent movement and loosening under vibration.
6. Signal heads shall be installed with a clearance above pavement elevation at the center of the roadway of 16 feet (4.9 meters) minimum, 18 feet (5.5meters) maximum, 17-19 feet (5.2-5.8 meters) if tethered. It is intended that this clearance be obtained by the use of mast arm drop pipes of proper length, the careful selection of foundation heights, attachment heights, arm rise, span wire sag, and other factors during the installation. If the installation cannot be adjusted to the proper clearance the contractor shall advise the engineer of all signals which exceed the maximum. The engineer will, in consultation with the maintaining agency, direct the use of drop pipes or waive the maximum clearance requirement for each head. If drop pipes are necessary, adjustable signal hangers as detailed may be used.
7. Cable entrance openings on disconnect hangers shall rigidly clamp cable to prevent movement of the cable within the enclosure.
8. Signal head rotation shall be prevented by the use of serrated rigns, set screws or other positive devices incorporated in the signal housing and at critical locations in the supporting hardware.
9. All conductors shall have adequate clearance between hangers, thimbles, bullrings, etc. in order to avoid damage from rubbing.
10. When tether wire is used, breakaway tether anchor shall be installed in bottom bracket as shown, directly beneath signal hanger. Tether anchor extender shall be used if there is interference between backplate and tether wire. See detail.
11. All backplates shall have 2 inch (0.50 millimeters) yellow reflective border



LAM

01-15-10	OVERHEAD SIGNAL ATTACHMENTS
OFFICE OF TRAFFIC ENGINEERING	SIGNAL DETAILS
TC-85.20	1 / 1
POR-224-0.00	558 / 62

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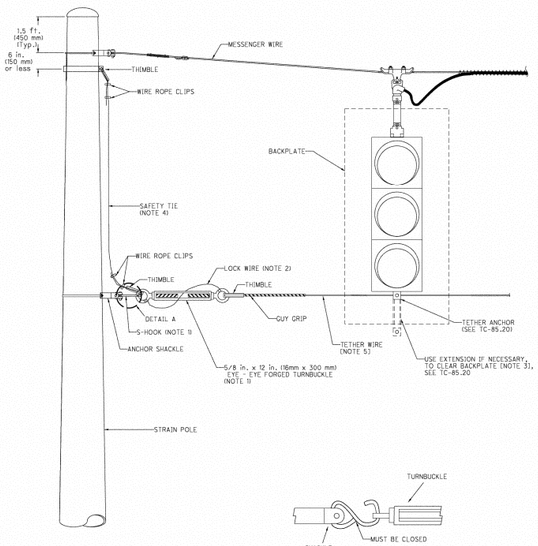

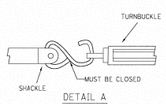

DETAIL A

(TOP VIEW)

NOTES

1. S-Hook is matched to the strain pole design number (see Table). S-Hook and Turnbuckle are required only at one end of simple spans, all ends of complex spans. S-hook shall be closed at pole end.
2. Lock wire shall be stainless steel, 1/8 inch (3 millimeters) soft temper, wound to prevent turning of turnbuckle body.
3. If signal orientation is not perpendicular to span and Tether wire, Then use an anchor extension.
4. Install safety tie at each turnbuckle. This wire shall be 1x19, 1/8 inch (3 millimeters) stainless steel. Tie should be slack, but not so slack as to contact pole. Use 2 clips per end at 3-1/4 inch (80 millimeters) spacing.
5. Tether wire shall be ASTM A475 Utilities Grade 1/4 inch (6 millimeters). On all spans, install Tether horizontally. Maintain clearance of 17 feet (5.2 meters) to 19 feet (5.8 meters) over roadway.

Strain Pole Design No.	Galvanized Mild Steel S-Hook Wire Diameter (Inches)	Galvanized Mild Steel S-Hook Wire Diameter (mm)
1	1/4	6
2	1/4	6
3	1/4	6
4	1/4	6
5	1/4	6
6	3/8	10
7	3/8	10
8	3/8	10
9	3/8	10
10	3/8	10
11	1/2	13
12	1/2	13

SIGNAL TETHER ATTACHMENTS

1-15-10

OFFICE OF TRAFFIC ENGINEERING

TC-85.21

1 / 1

KRS

SIGNAL DETAILS

POR-224-0.00

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LOCATED USE DETAIL

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GENERAL SPEC: 640
MATERIAL TYPE: 644

CALCULATED CNC
CHECKED

CENTER LINE

CTY	ROUTE	TRUE LOG	FROM	TRUE LOG	TO	TOTAL MILES	EQUIVALENT SOLID LINE	COMMENTS
POR	224	0.00	SUMMIT COUNTY LINE	12.99	JCT. SR 183	13.39	13.03	
TOTAL						13.39	13.03	

LANE LINE

CTY	ROUTE	TRUE LOG	FROM	TRUE LOG	TO	TOTAL MILES	4" LANE LINE DASHED	4" LANE LINE SOLID	COMMENTS
POR	224	7.50	BEGIN 4 LANE	7.82	END 4 LANE	0.64			
POR	224	9.15	BEGIN 4 LANE	9.69	END 4 LANE	1.08			
TOTAL						1.72			

EDGE LINE

CTY	ROUTE	TRUE LOG	FROM	TRUE LOG	TO	WHITE EDGE LINE TOTAL	WHITE EDGE LINE HIGHWAY	WHITE EDGE LINE RAMP	YELLOW EDGE LINE TOTAL	YELLOW EDGE LINE HIGHWAY	YELLOW EDGE LINE RAMP	COMMENTS
POR	224	0.00	SUMMIT COUNTY LINE	7.50	BEGIN 4 LANE	15.00	15.00					
POR	224	7.50	BEGIN 4 LANE	7.82	END 4 LANE	0.64	0.64		0.64	0.64		
POR	224	7.82	END 4 LANE	9.15	BEGIN 4 LANE	2.66	2.66					
POR	224	9.14	BEGIN 4 LANE	9.69	END 4 LANE	1.10	1.10		1.10	1.10		
POR	224	9.69	END 4 LANE	12.92	BEGIN CONC. ISLAND	6.46	6.46					
POR	224	12.92	BEGIN CONC. ISLAND	12.99	JCT. SR 183	0.20	0.14	0.06	0.20	0.14	0.06	
TOTAL						26.06	26.00	0.06	1.94	1.88	0.06	

AUXILIARY

CTY	ROUTE LOCATION	TRUE LOG	CHANNEL LINE	STOP LINE	TRANSVERSE DIAGONAL LINES WHITE	TRANSVERSE DIAGONAL LINES YELLOW	CROSS WALK LINES	WORD ON PVMT ONLY 72"	WORD ON PVMT ONLY 96"	LANE ARROWS TURN LEFT	LANE ARROWS TURN RIGHT	LANE ARROWS THRU	LANE ARROWS COMB.	SYMBOL MARKINGS RxR	SYMBOL MARKINGS SCHOOL 72"	SYMBOL MARKINGS SCHOOL 96"	ISLAND MARKING	DOTTED LINES	COMMENTS
			FT	FT	FT	FT	FT	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	SQ FT	FT	
POR	US 224 @ SR 532	0.000	130	29		100				3									
POR	US 224 @ MARTIN RD.	0.533	615			380				8									
POR	US 224 @ SR 43	2.416	1723	128		192				16	10								
POR	US 224 CONGRESS LAKE	3.364	595			340				8									
POR	US 224 @ WATERLOO	6.242	685			380				8									
POR	US 224 @ SR 44	7.701	1640	100		192				12	7								
POR	US 224 @ NEW MILFORD	9.410				80													
POR	US 224 @ WATERLOO	9.550				120													
POR	US 224 @ SR 183	12.990		24															
TOTAL			5388	281		1784				55	17								

PAVEMENT MARKING SUB SUMMARY

POR-224-0.00

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LOCATION								621	621	621	621		621	
COUNTY	ROUTE	SECTION (S.L.M.)						RPM, LOW PROFILE, YELLOW/YELLOW	RPM, LOW PROFILE WHITE/RED	RPM, LOW PROFILE, WHITE	RPM, LOW PROFILE YELLOW/RED		RAISED PAVEMENT MARKER REMOVED	REMARKS
		FROM	TO					EACH	EACH	EACH	EACH		EACH	
POR	224	0.00	0.11					19	6	16			41	
POR	224	0.11	0.32					14					14	
POR	224	0.32	0.76					48	15				63	
POR	224	0.76	2.22					100					100	
POR	224	2.22	2.42					18	30	5			53	
POR	224	2.42	2.62					19	43	5			67	
POR	224	2.62	3.17					36					36	
POR	224	3.17	3.58					42	15				57	
POR	224	3.58	3.85					18					18	
POR	224	3.85	6.01					143					143	
POR	224	6.01	6.47					47	16				63	
POR	224	6.47	7.43					63					63	
POR	224	7.43	7.90					37	42	32			111	
POR	224	7.90	9.10					80					80	
POR	224	9.10	9.76					10	80				90	
POR	224	9.76	12.99					213					213	
TOTALS CARRIED TO GENERAL SUMMARY				0	0	0	0	907	247	58	0	0	1212	

CALCULATED BY: VIC
CHECKED BY: KEITH

RAISED PAVEMENT MARKING SUB SUMMARY

POR-224-0.00

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STANDARD DRAWINGS AND SUPPLEMENTAL SPECIFICATIONS

REFER TO THE FOLLOWING SUPPLEMENTAL SPECIFICATIONS:

843 DATED 04/18/03

DESIGN SPECIFICATIONS

DESIGN SPECIFICATIONS: THIS STRUCTURE CONFORMS TO "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 17TH, INCLUDING THE 2002 INTERIM SPECIFICATIONS AND THE ODOT BRIDGE DESIGN MANUAL.

EXISTING STRUCTURE VERIFICATION

EXISTING STRUCTURE VERIFICATION: DETAILS AND DIMENSIONS SHOWN ON THESE PLANS PERTAINING TO THE EXISTING STRUCTURE HAVE BEEN OBTAINED FROM PLANS OF THE EXISTING STRUCTURE AND FROM FIELD OBSERVATIONS AND MEASUREMENTS. CONSEQUENTLY, THEY ARE INDICATIVE OF THE EXISTING STRUCTURE AND THE PROPOSED WORK BUT THEY SHALL BE CONSIDERED TENTATIVE AND APPROXIMATE. THE CONTRACTOR IS REFERRED TO CMS SECTIONS 102.05, 105.02 AND 513.04.

BASE CONTRACT BID PRICES UPON A RECOGNITION OF THE UNCERTAINTIES DESCRIBED ABOVE AND UPON A PREBID EXAMINATION OF THE EXISTING STRUCTURE. HOWEVER, THE DEPARTMENT WILL PAY FOR ALL PROJECT WORK BASED UPON ACTUAL DETAILS AND DIMENSIONS WHICH HAVE BEEN VERIFIED IN THE FIELD.

PROPOSED WORK - POR-224-0106 (OVER WLE RR)

- PATCH THE EXISTING CONCRETE WEARING SURFACE ON THE BRIDGE DECK
- SEAL THE REPAIRED WEARING SURFACE WITH SRS CONCRETE TREATMENT
- REMOVE THE EXISTING ASPHALT CONCRETE OVERLAY ON THE APPROACH SLABS
- PLACE NEW ASPHALT CONCRETE OVERLAY ON THE APPROACH SLABS
- CLEANOUT THE EXISTING SCUPPERS
- REPAIR DEFECTS AND LOSS OF SECTION IN THE STEEL BEAMS
- PAINT THE LAST 10' OF THE BEAM ENDS
- PATCH ALL UNSOUND AREAS OF THE CONCRETE SUBSTRUCTURE
- REPAIR EROSION BEHIND THE REAR WING WALLS
- SEAL ALL EXPOSED CONCRETE SURFACES OF THE PARAPETS, ABUTMENTS, BACK WALLS, WING WALLS AND PIERS WITH EPOXY-URETHANE
- CLEARING AND GRUBBING 15' OF THE STRUCTURE FOR SEALING OPERATIONS
- PROVIDE NEW STRUCTURE IDENTIFICATION SIGNS

PROPOSED WORK - POR-224-0831 (OVER BR CONGRESS LAKE OUTLET)

- SEE ROADWAY PLANS FOR PAVING DETAILS
- PAVE THE EXISTING INVERT WITH CONCRETE
- CHANNEL CLEANOUT 20' AT THE INLET AND OUTLET
- CLEARING AND GRUBBING 15' OF THE STRUCTURE
- PROVIDE NEW STRUCTURE IDENTIFICATION SIGNS

PROPOSED WORK - POR-224-1171 (OVER STROUP ROAD)

- PATCH THE EXISTING CONCRETE WEARING SURFACE ON THE BRIDGE DECK AND APPROACH SLABS
- SEAL THE REPAIRED WEARING SURFACE AND APPROACH SLABS WITH SRS CONCRETE TREATMENT
- PATCH ALL UNSOUND AREAS OF THE CONCRETE SUBSTRUCTURE
- SEAL ALL EXPOSED CONCRETE SURFACES OF THE PARAPETS, ABUTMENTS, WING WALLS AND PIERS WITH EPOXY-URETHANE
- CLEARING AND GRUBBING 15' OF THE STRUCTURE
- PROVIDE NEW STRUCTURE IDENTIFICATION SIGNS

PROPOSED WORK - POR-224-1189 (OVER NS RR)

- PATCH THE EXISTING CONCRETE WEARING SURFACE ON THE BRIDGE DECK
- SEAL THE REPAIRED WEARING SURFACE WITH SRS CONCRETE TREATMENT
- REMOVE THE EXISTING ASPHALT CONCRETE OVERLAY ON THE APPROACH SLABS
- PLACE NEW ASPHALT CONCRETE OVERLAY ON THE APPROACH SLABS
- CLEANOUT THE EXISTING SCUPPERS
- PAINT THE LAST 10' OF THE BEAM ENDS
- PATCH ALL UNSOUND AREAS OF THE CONCRETE SUBSTRUCTURE
- SEAL ALL EXPOSED CONCRETE SURFACES OF THE PARAPETS, ABUTMENTS, BACK WALLS, WING WALLS AND PIERS WITH EPOXY-URETHANE
- CLEARING AND GRUBBING 15' OF THE STRUCTURE
- PROVIDE NEW STRUCTURE IDENTIFICATION SIGNS

CLEARING AND GRUBBING

ALTHOUGH THERE ARE NO TREES OR STUMPS SPECIFICALLY MARKED FOR REMOVAL WITHIN THE LIMITS OF THE PROJECT, A LUMP SUM QUANTITY IS INCLUDED IN THE GENERAL SUMMARY FOR ITEM 201, CLEARING AND GRUBBING. ALL PROVISIONS AS SET FORTH IN THE SPECIFICATIONS UNDER THIS ITEM ARE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 201, CLEARING AND GRUBBING.

ITEM 202, REMOVAL MISC.: CHANNEL CLEANOUT

THIS WORK SHALL CONSIST OF RE-ESTABLISHING THE ORIGINAL CHANNEL PROFILE BY REMOVING SEDIMENT BUILDUP, VEGETATION, AND DEBRIS FROM THE EXISTING CHANNEL WITHIN STATE RIGHT-OF-WAY LIMITS AS SPECIFIED IN THE PLANS FOR STRUCTURES POR-224-0831. ANY TREES LOCATED WITHIN CHANNEL OR BANK LIMITS SHALL BE INCLUDED UNDER ITEM 201, CLEARING AND GRUBBING. ALL MATERIALS REMOVED SHALL BE DISPOSED OF IN ACCORDANCE WITH 105.16 AND 105.17 OF THE CMS WITH THE APPROVAL OF THE ENGINEER. NO AREAS OF EXISTING CHANNEL PROTECTION SHALL BE REMOVED IN ORDER TO RESTORE THE ORIGINAL CHANNEL PROFILE. AFFECTED CHANNEL AREAS SHALL BE CLEANED OUT TO THE SATISFACTION OF THE ENGINEER.

CHANNEL CLEANOUT SHALL BE PAID FOR AT THE UNIT PRICE BID FOR ITEM 202 REMOVAL MISC.: CHANNEL CLEANOUT. THIS PRICE SHALL INCLUDE THE COST FOR LABOR, EQUIPEMENT, AND ALL INCIDENTALS REQUIRED TO COMPLETE THE CHANNEL CLEANOUT.

ITEM SPECIAL - PIPE CLEANOUT

THIS WORK SHALL CONSIST OF REMOVING SEDIMENT AND DEBRIS FROM THE EXISTING DRAINAGE CONDUITS SPECIFIED IN THE PLANS. ALL MATERIAL REMOVED SHALL BE DISPOSED OF AS PER 105.16 AND 105.17. ALL SEWERS SHALL BE CLEANED OUT TO THE SATISFACTION OF THE ENGINEER.

CLEANOUT OF THE PIPE SHALL BE PAID FOR AT THE UNIT PRICE BID FOR ITEM SPECIAL - PIPE CLEANOUT. THIS PRICE SHALL INCLUDE THE COST FOR MATERIAL, EQUIPMENT, LABOR, AND ALL INCIDENTALS REQUIRED TO COMPLETE THE CLEANOUT.

ITEM 203, BORROW

THIS ITEM WILL BE USED TO REPAIR EROSION BEHIND THE LEFT AND RIGHT REAR WING WALLS AT STRUCTURE POR-224-0106

BORROW WILL BE PAID FOR AT THE UNIT PRICE BID IN CUBIC YARDS FOR ITEM 203, BORROW. THIS PRICE WILL INCLUDE THE COST FOR MATERIAL, LABOR, EQUIPMENT AND ALL INCIDENTALS REQUIRED TO COMPLETE THIS WORK.

ITEM 448 - ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG70-22M, AS PER PLAN

703.05 DO NOT USE ANY FINE OR COARSE AGGREGATE WITH A 'SR' OR 'SRH' DESIGNATION ACCORDING TO THE OFFICE OF MATERIALS MANAGEMENT (OMM) IN ANY JOB MIX FORMULA (JMF) FOR THIS ITEM.

ITEM 513 - STRUCTURAL STEEL, MISC.: STEEL BEAM REPAIRS

AFTER ABRASIVE BLASTING OF THE STRUCTURAL STEEL HAS BEEN COMPLETED IN PREPARATION FOR PAINTING AND THE PRIME COAT OF PAINT APPLIED (WORK WILL CONFORM TO CMS 514) THE CONTRACTOR WILL EXAMINE THE CONDITION OF THE EXISTING BEAMS AT THE ABUTMENTS AND INTERMEDIATE JOINTS (IF THEY EXIST) AND MAKE THE NECESSARY REPAIR RECOMMENDATIONS.

THE STRUCTURAL STEEL REPAIR WORK WILL CONSIST OF REPAIRING THE DETERIORATED BEAMS BY THE ADDITION OF WELDED STEEL PLATES, STIFFENERS, ANGLES, ETC. ALL WORK WILL CONFORM TO CMS 513.

THESE TASKS, AS DIRECTED BY THE ENGINEER, WILL BE COMPLETED BEFORE THE INTERMEDIATE COAT OF PAINT IS APPLIED. THE CONTRACTOR WILL PROVIDE THE ENGINEER WITH THE REPAIR PROCEDURE AND FIELD MEASUREMENT CALCULATIONS IN DETERMINING THE ACTUAL QUANTITY OF WORK REQUIRED PER THE REQUIREMENTS NOTED BELOW.

1. THE POTENTIAL REPAIR AREAS WILL BE LIMITED TO 10 FEET FROM THE ABUTMENT BEARINGS AND 10 FEET IN EACH DIRECTION FROM INTERMEDIATE JOINTS (IF THEY EXIST).
2. FLANGE AREA PERFORATIONS WILL BE REPAIRED.
3. USING A UT THICKNESS GAUGE, THE CONTRACTOR WILL QUANTIFY THE AREA OF SECTION LOSS FOR EACH BRIDGE. THE REPAIR AREA WILL BE IDENTIFIED USING A 4" x 4" WEB GRID. THE THINNEST STEEL WITHIN EACH GRID AREA WILL BE NOTED. MEASUREMENTS WILL BE RECORDED AND A COPY SUBMITTED TO THE ENGINEER.
4. ANY AREA 8" HIGH x 4" WIDE WITH 30% AVERAGE SECTION LOSS ON THE WEB WILL BE REPAIRED.
5. SECTION LOSS MORE THAN 50% FOR AN AREA GREATER THAN 8" HIGH x 4" WIDE WILL BE REPAIRED FOR THE FULL HEIGHT OF THE WEB.
6. USE THE MOST READILY AVAILABLE STEEL MATERIAL THICKNESS THAT IS AT MINIMUM EQUAL TO THE ORIGINAL THICKNESS OF THE BEAM/GIRDER SECTION TO BE REPAIRED.
7. NEW STEEL MATERIAL WILL BE SHOP PRIMED.
8. AREAS OF SECTION LOSS LOCATED BEHIND THE BACK SIDE OF THE BEARING, BETWEEN THE BEARING LOAD PLATE AND BACKWALL WILL NOT BE REPAIRED.
9. AFTER THE REPAIRS HAVE BEEN COMPLETED, REPAIR ALL DAMAGED AREAS OF THE PRIME COAT IN ACCORDANCE WITH CMS 514.22.

THE DEPARTMENT WILL PAY FOR THE ACCEPTED QUANTITIES BASED UPON ACTUAL DETAILS AND DIMENSIONS AT UNIT PRICE (POUND) BID FOR ITEM 513 - STRUCTURAL STEEL, MISC.: STEEL BEAM REPAIRS.

DESIGN AGENCY
ODOT -- DISTRICT 4
PLANNING & ENGINEERING

DESIGNED	DRAWN	CHECKED	QUANTITIES	DATE
			STRUCTURE FILE NUMBER	09/2012
BEAM LAYOUT	KOTHE			
CHECKED	CHECKED			
LUMP				

STRUCTURE GENERAL NOTES

BRIDGE NO.: POR-224-0106, POR-224-0831, POR-224-1171 & POR-224-1189
SFN: 6703755, 6703844, 6703908 & 6703933

POR-224-0.00
PID No. 82818

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ITEM 514 - PARTIAL PAINTING OF STRUCTURAL STEEL

PAINT THE LAST 10' OF EACH BEAM/GIRDER END ADJACENT TO THE ABUTMENTS INCLUDING ALL CROSS FRAMES AND OTHER STEEL WITHIN THESE LIMITS

THE COLOR FOR THE FINISHED COAT OF STRUCTURE(S) POR-224-0106 AND POR-224-1189 WILL CONFORM TO FEDERAL COLOR NUMBER 595B-25526 (BLUE).

ITEM 518 - SCUPPER MISC.: CLEANOUT

THIS WORK WILL CONSIST OF REMOVING ALL DEBRIS FROM ON TOP AND INSIDE OF THE SCUPPERS. SCUPPER CLEANOUT WILL BE PAID FOR AT THE UNIT PRICE BID FOR ITEM 518, SCUPPER MISC.: CLEANOUT. THIS PRICE WILL INCLUDE THE COST FOR LABOR, EQUIPMENT, AND ALL INCIDENTALS REQUIRED TO COMPLETE THIS WORK.

ITEM 519 - PATCHING CONCRETE STRUCTURES, AS PER PLAN

ITEM 519 - PATCHING CONCRETE STRUCTURES, AS PER PLAN: PRIOR TO THE SURFACE CLEANING SPECIFIED IN 519.04 AND WITHIN 24 HOURS OF PLACING PATCHING MATERIAL, BLAST CLEAN ALL SURFACES TO BE PATCHED INCLUDING THE EXPOSED REINFORCING STEEL. ACCEPTABLE METHODS INCLUDE HIGH-PRESSURE WATER BLASTING WITH OR WITHOUT ABRASIVES IN THE WATER, ABRASIVE BLASTING WITH CONTAINMENT, OR VACUUM ABRASIVE BLASTING.

ITEM 603 - FIELD PAVING OF EXISTING PIPE - POR-224-0831

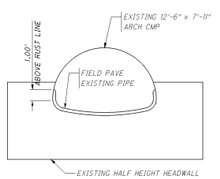
FIELD PAVE THE EXISTING 12'-6"x7'-11" SECTIONAL CORRUGATED PLATE PIPE ARCH CULVERT. THE CONTRACTOR WILL PAVE THE BOTTOM OF THE EXISTING PIPE AS SHOWN IN THE DETAIL WITH CLASS C PORTLAND CEMENT CONCRETE AS PER CMS 603.13.

AREAS TO BE PAVED WILL BE CLEANED TO REMOVE ALL DEBRIS AND SEDIMENT AND WILL BE PAID FOR UNDER ITEM SPECIAL - PIPE CLEANOUT.

THE CONTRACTOR WILL BE REQUIRED TO USE ITEM 503 - COFFERDAMS AND EXCAVATION BRACING (CRIBS, AND SHEETING) TO DEWATER THE EXISTING PIPE PRIOR TO THE PREPARATION AND FIELD PAVING. AFTER THE PIPE HAS BEEN CLEANED OF ALL DEBRIS AND SEDIMENT, NO WATER WILL BE ALLOWED TO CONTAMINATE THE PIPE. IF ANY CONTAMINATION OCCURS, THE CONTRACTOR WILL RESEAL THE AREA AND RECLEAN THE PIPE AT NO ADDITIONAL COST.

ALL EROSION UNDER THE PIPE AND IN THE VOIDS WHERE THE PIPE IS RUSTED THROUGH WILL BE FILLED WITH ITEM 613 - LOW STRENGTH MORTAR BACKFILL.

ANY TREES LOCATED WITHIN 15' OF THE HEADWALLS THAT MAY POTENTIALLY DAMAGE THE CULVERT IN THE FUTURE OR ENCROACH UPON THE STREAM BED OR FIELD PAVING OPERATIONS WILL BE REMOVED. REMOVAL WILL BE DETERMINED BY THE PROJECT ENGINEER AND REMOVED UNDER ITEM 201 - CLEARING AND GRUBBING.



OBJECT MARKERS AND STRUCTURE IDENTIFICATION SIGNS

OBJECT MARKERS WILL BE PLACED ON EACH APPROACH OFF THE LEFT AND RIGHT SHOULDER, FACING TRAFFIC, AND BEHIND THE GUARDRAIL IF APPLICABLE. ONE OM-3L AND ONE OM-3R WILL BE INSTALLED AT EACH APPROACH. THE SIGNS WILL BE MOUNTED ON NEW NO. 2 POSTS AND SHALL BE INSTALLED AS PER STANDARD CONSTRUCTION DRAWING TC-41.20, MOST CURRENT REVISION. EACH POST WILL BE 10.5 FT IN LENGTH.

STRUCTURE IDENTIFICATION SIGNS (I-H25a) WILL BE INSTALLED ON THE SAME POST AND DIRECTLY BELOW THE OBJECT MARKER OFF THE RIGHT SHOULDER ON EACH APPROACH. A QUANTITY OF ONE SIGN WILL BE INSTALLED AT EACH APPROACH. THE SIGNS WILL HAVE A NON-REFLECTIVE WHITE SHEETING BACKGROUND.

INSTALL SIGNS FOR THE FOLLOWING STRUCTURES:
POR-224-0106 (2 APPROACHES)
POR-224-1171 (2 APPROACHES)
POR-224-1189 (2 APPROACHES)

THE FOLLOWING QUANTITIES HAVE BEEN INCLUDED FOR EACH APPROACH:
ITEM 630 - SIGN, FLAT SHEET, 730.20, 1 SQ FT
ITEM 630 - SIGN, FLAT SHEET, 6 SQ FT
ITEM 630 - GROUND MOUNTED SUPPORT, NO. 2 POST, 21 FT
ITEM 630 - REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL, 1 EACH
ITEM 630 - REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL, 2 EACH

STRUCTURE IDENTIFICATION SIGNS

STRUCTURE IDENTIFICATION SIGNS (I-H25a) WILL BE PLACED ON EACH APPROACH OFF THE RIGHT SHOULDER, FACING TRAFFIC, AND BEHIND THE GUARDRAIL IF APPLICABLE. A QUANTITY OF ONE SIGN PER APPROACH WILL BE INSTALLED. THE SIGNS WILL HAVE A NON-REFLECTIVE WHITE SHEETING BACKGROUND.

THE SIGNS WILL BE MOUNTED ON NEW NO. 2 POSTS AND WILL BE INSTALLED AS PER STANDARD CONSTRUCTION DRAWING TC-41.20, MOST CURRENT REVISION. EACH POST WILL BE 7.5' IN LENGTH.

INSTALL SIGNS FOR THE FOLLOWING STRUCTURES:
POR-224-0831 (2 APPROACHES)

THE FOLLOWING QUANTITIES HAVE BEEN INCLUDED FOR EACH APPROACH:
ITEM 630 - SIGN, FLAT SHEET, 730.20, 1 SQ FT
ITEM 630 - GROUND MOUNTED SUPPORT, NO. 2 POST, 7.5 FT
ITEM 630 - REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL, 1 EACH
ITEM 630 - REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL, 1 EACH

CORRECTING BRIDGE IDENTIFICATION SIGN NUMBERS:

SOME OF THE EXISTING BRIDGE NUMBER SIGNS HAVE INCORRECT BRIDGE NUMBERS ON THEM. THE FOLLOWING BRIDGE NUMBERS ARE THE CORRECT ONES AND WILL BE USED ON THE NEW BRIDGE IDENTIFICATIONS SIGNS.

STRUCTURE POR-224-0106 (SFN#6703755) THE EXISTING SIGN SHOWS 0104. THE CORRECT BRIDGE IDENTIFICATION NUMBER IS 0106.

STRUCTURE POR-224-0831 (SFN#6703844) THE EXISTING SIGN SHOWS 830. THE CORRECT BRIDGE IDENTIFICATION NUMBER IS 0831.

STRUCTURE POR-224-1171 (SFN#6703909) THE EXISTING SIGN SHOWS 1172. THE CORRECT BRIDGE IDENTIFICATION NUMBER IS 1171.

WATERWAY PERMIT DETERMINATION (404/401) - ODOT PROJECTS

ALL PROJECTS INVOLVING JURISDICTIONAL WATERS OF THE UNITED STATES (STREAMS, RIVERS, NON-ISOLATED WETLANDS) AND/OR ISOLATED WETLANDS ARE SUBJECT TO REGULATION UNDER SECTIONS 404 AND 401 OF THE CLEAN WATER ACT, AND POSSIBLY OHIO EPA ISOLATED WETLAND LAW. THE ODOT-OES WATERWAY PERMIT UNIT DETERMINED THE PROJECT MEETS THE CRITERIA FOR REGIONAL GENERAL PERMIT (RGP)-SECTION B (MAINTENANCE) AND SECTION C (TEMPORARY CONSTRUCTION, ACCESS, AND DEWATERING) BASED UPON THE ANTICIPATED IMPACTS TO STREAMS AND WETLANDS. THE WATERWAY PERMIT CONDITIONS ARE PROVIDED IN THE SPECIAL PROVISIONS PACKAGE. ALL CONDITIONS SHALL BE ADHERED TO DURING CONSTRUCTION. ALSO, PER CONDITION 9 OF THE WATERWAY PERMIT CONDITIONS, A COPY OF THE RGP IS TO BE KEPT AT THE WORK SITE AT ALL TIMES. A COPY OF THE RGP WILL BE PROVIDED TO THE CONTRACTOR BY ODOT PERSONNEL AT THE PRECONSTRUCTION MEETING.

BEST MANAGEMENT PRACTICES

ALL MATERIALS REMOVED FROM STREAM CHANNELS, WETLANDS AND DITCHES SHALL BE IMMEDIATELY REMOVED TO AN UPLAND SITE AND STABILIZED (I.E., SEEDED) TO PREVENT REDISTRIBUTION INTO ANY WATERS OF THE UNITED STATES. THE CONTRACTOR SHALL UTILIZE AN APPROVED DISPOSAL SITE FOR THE DISPOSAL OF ALL WASTE FILL MATERIAL. THE APPROVED DISPOSAL SITE SHALL NOT INCLUDE ANY WETLANDS, STREAM BANKS OR RIVERBANKS OR ANY 100-YEAR FLOOD PLAINS.

ADJACENT RIPARIAN HABITAT SHALL BE MAINTAINED TO THE MAXIMUM EXTENT PRACTICABLE. EQUIPMENT AND MATERIAL STAGING AREAS SHALL BE KEPT AWAY FROM STREAMS, RIVERS, WETLANDS AND OTHER WATERS OF THE UNITED STATES TO EXTENT PRACTICABLE AND ALL AREAS DISTURBED BY THE PROJECT SHALL BE STABILIZED TO DECREASE THE POTENTIAL FOR EROSION. ALL DISTURBED AREAS SHALL BE MULCHED AND REVEGETATED WITH NATIVE PLANTS.

THE MECHANICAL EQUIPMENT USED TO EXECUTE THE WORK IN STREAM CHANNELS AND WETLANDS SHALL BE OPERATED IN SUCH A MANNER AS TO MINIMIZE TURBIDITY THAT COULD DEGRADE WATER QUALITY AND ADVERSELY AFFECT AQUATIC PLANT AND ANIMAL LIFE.

THE CONTRACTOR SHALL TAKE PRECAUTIONS TO AVOID AND/OR LIMIT CONSTRUCTION AND DEMOLITION DEBRIS FROM ENTERING STREAMS AND WETLANDS. ANY DEBRIS THAT DOES FALL INTO THE STREAMS SHALL BE REMOVED AS SOON AS POSSIBLE.

PAINTING AND SEALING OPERATIONS

THE CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO PREVENT EPOXY-URETHANE SEALER, PAINT, OR OTHER MATERIALS USED TO REPAIR, CLEAN, SEAL, OR TREAT ANY BRIDGE STRUCTURE FROM ENTERING ANY STREAMS, WETLANDS OR OTHER WATERS OF THE UNITED STATES AND TAKE THE APPROPRIATE ACTIONS IN THE EVENT OF A RELEASE.

STREAM AVOIDANCE AT BRIDGE NO. POR-224-1171

STREAM 5 FLOWS EAST ALONG THE NORTH SIDE OF US ROUTE 224 PRIOR TO DISCHARGING INTO THE CONCRETE-LINED DITCH ON THE WEST SIDE OF STROUP ROAD. FROM THERE, STREAM 5 FLOWS SOUTH WITHIN THE CONCRETE-LINED DITCH, TRAVELS UNDER BRIDGE NO. POR-224-1171 AND EVENTUALLY LEAVES THE ROADWAY RIGHT-OF-WAY AND TURNS INTO A NATURAL CHANNEL AGAIN. NO EXCAVATION, GRADING, OR FILLING OPERATIONS SHALL BE PERFORMED BELOW THE ORDINARY HIGH WATER MARK OF STREAM 5. UNDER NO CIRCUMSTANCES SHALL THE CONTRACTOR STORE EQUIPMENT AND/OR MATERIAL IN, OR OTHERWISE IMPACT STREAM 5.

DESIGN AGENCY: ODOT -- DISTRICT 4 PLANNING & ENGINEERING

REVISED	DATE	STRUCTURE FILE NUMBER

DRAWN AS NOTED	STRUCTURE FILE NUMBER

CLASSIFIED	STRUCTURE FILE NUMBER
CHECKED	LMP

STRUCTURE GENERAL NOTES

BRIDGE NO.: POR-224-0106, POR-224-0831, POR-224-1171 & POR-224-1189
SFN: 6703755, 6703844, 6703909 & 6703933

POR-224-0.00
PID No. 82919

CALC: AAG DATE: 6/8/2012
CHECKED: LMP DATE: 6/22/2012

ESTIMATED QUANTITIES

BRIDGE NO. / STRUCTURE FILE NO.								ITEM	EXTENSION	UNIT	DESCRIPTION	SEE SHEET
POR-224-0106 SFN 6703755 04/NHS/BR/		POR-224-0831 SFN 6703844 05/STR/BR/		POR-224-1171 SFN 6703969 05/STR/BR/		POR-224-1189 SFN 6703933 05/STR/BR/						
LUMP		LUMP		LUMP		LUMP		201	11000		CLEARING AND GRUBBING	
173						239		202	23500	SQ YD	WEARING COURSE REMOVED	
		112						SPEC	20270100	FT	PIPE CLEANOUT	1 / 5
		40						202	98200	FT	REMOVAL, MISC.: CHANNEL CLEANOUT	1 / 5
10								203	40000	CU YD	BORROW	
14						20		407	10000	GALLON	TACK COAT	
6						9		448	46901	CU YD	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG70-22, AS PER PLAN	1 / 5
		LUMP						503	11100		COFFERDAMS AND EXCAVATION BRACING	
548				483		732		512	10100	SQ YD	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	
509				747		831		512	10400	SQ YD	TREATING OF CONCRETE BRIDGE DECK WITH SRS	
548				483		732		512	74000	SQ YD	REMOVAL OF EXISTING COATINGS FROM CONCRETE SURFACES	
600								513	90000	POUND	STRUCTURAL STEEL, MISC.: STEEL BEAM REPAIRS	1 / 5
LUMP						LUMP		514	00100		SURFACE PREPARATION OF EXISTING STRUCTURAL STEEL	
LUMP						LUMP		514	00200		FIELD PAINTING OF EXISTING STRUCTURAL STEEL, PRIME COAT	
LUMP						LUMP		514	00300		FIELD PAINTING STRUCTURAL STEEL, INTERMEDIATE COAT	
LUMP						LUMP		514	00400		FIELD PAINTING STRUCTURAL STEEL, FINISH COAT	
2						2		514	00504	MAN HOUR	GRINDING FINS, TEARS, SLIVERS ON EXISTING STRUCTURAL STEEL	
1						1		514	10000	EACH	FINAL INSPECTION REPAIR	
16						16		518	12500	EACH	SCUPPER, MISC.: CLEANOUT	2 / 5
16				23		25		SPEC	51912304	SQ YD	PATCHING CONCRETE BRIDGE DECK - TYPE C	
150				100		150		519	11101	SQ FT	PATCHING CONCRETE STRUCTURE, AS PER PLAN	2 / 5
		112						603	96550	FT	FIELD PAVING OF EXISTING PIPE, 12'-6"x7'-11" SECTIONAL CORRUGATED PLATE PIPE ARCH	2 / 5
		1						613	41200	CU YD	LOW STRENGTH MORTAR BACKFILL	
42		15		42		42		630	02100	FT	GROUND MOUNTED SUPPORT, NO. 2 POST	
2		2		2		2		630	80100	SQ FT	SIGN, FLAT SHEET, 730.20	
12				12		12		630	80100	SQ FT	SIGN, FLAT SHEET	
6		2		6		6		630	84900	EACH	REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL	
4		2		4		4		630	86002	EACH	REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL	
100				75		100		843	50000	SQ FT	PATCHING CONCRETE STRUCTURES WITH TROWELABLE MORTAR	

STRUCTURE ESTIMATED QUANTITIES
BRIDGE NO.: POR-224-0106, POR-224-0831, POR-224-1171 & POR-224-1189
SFN: 6703755, 6703844, 6703969 & 6703933

POR-224-0.00
PID No. 82818

3 / 5

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DESIGN AGENCY
ODOT — DISTRICT 4
PLANNING & ENGINEERING

	DATE	REVISED	STRUCTURE FILE NUMBER
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QUANTITIES AAG			
CHECKED LMP			

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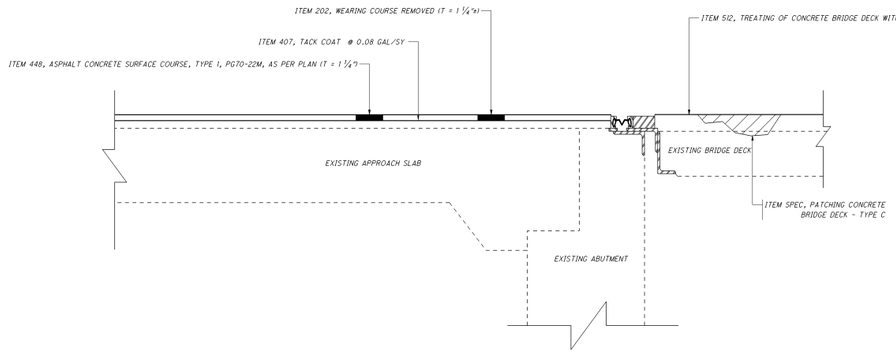

POR-224-0106 & POR-224-1189

APPROACH SHOWN;
TRAILING SIMILAR

BRIDGE NUMBER	BRIDGE DECK													APPROACH SLABS															
	LENGTH (BRIDGE LIMITS)	BRIDGE WIDTH	DECK AREA	512 TREATING OF CONCRETE BRIDGE DECK WITH SRS	SPEC PATCHING CONCRETE BRIDGE DECK - TYPE C									LENGTH (APPROACH SLABS)	APPROACH SLAB WIDTH	APPROACH SLAB AREA	APPROACH (FORWARD / REAR)	202 WEARING COURSE REMOVED (T = 1 ¼")	407 TACK COAT @ 0.08 GAL/SY	448 ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG70-22M, AS PER PLAN (T = 1 ¼")	512 TREATING OF CONCRETE BRIDGE DECK WITH SRS	SPEC PATCHING CONCRETE BRIDGE DECK - TYPE C							
	FT	FT	SQ YD	SQ YD	SQ YD									FT	FT	SQ YD		SQ YD	GALLON	CU YD	SQ YD	SQ YD							
POR-224-0106	147.54	31.00	508.19	508.19	15.25									25.00	31.00	86.11	FWD	86.11	6.89	2.99									
														25.00	31.00	86.11	REAR	86.11	6.89	2.99									
POR-224-1171	125.00	43.33	601.85	601.85	18.06									15.00	43.33	72.22	FWD				72.22	2.17							
														15.00	43.33	72.22	REAR				72.22	2.17							
POR-224-1189	173.88	43.00	830.74	830.74	24.92									25.00	43.00	119.44	FWD	119.44	9.56	4.15									
														25.00	43.00	119.44	REAR	119.44	9.56	4.15									

STRUCTURE DETAILS

BRIDGE NO.: POR-224-0106, POR-224-0831, POR-224-1171 & POR-224-1189
SFN: 6703705, 6703844, 6703909 & 6703933

POR-224-0.00
PID No. 82919

DESIGN AGENCY
ODOT — DISTRICT 4
PLANNING & ENGINEERING

DESIGNED: AAG
DETAILED: LMP
DRAWN: AAG
REVISED:
CHECKED:
REVISED:
STRUCTURE FILE NUMBER
DATE

4 / 5

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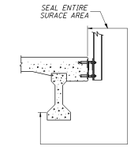
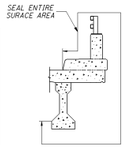
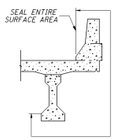


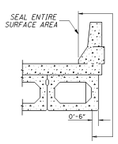
DETAIL A
CONCRETE DECKS WITH OVER THE SIDE DRAINAGE



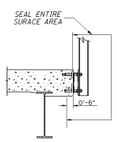
DETAIL B
CONCRETE DECKS WITH CURBS, SIDEWALKS AND PARAPET



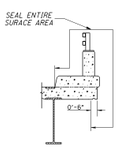
DETAIL C
CONCRETE DECK WITH DEFLECTOR PARAPET



DETAIL D
PRESTRESSED BOX BEAM DECK WITH DEFLECTOR PARAPET



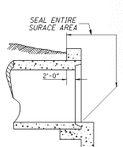
DETAIL E
CONCRETE DECKS WITH OVER THE SIDE DRAINAGE



DETAIL F
CONCRETE DECKS WITH CURBS, SIDEWALKS AND PARAPET

DETAIL G
CONCRETE DECK WITH DEFLECTOR PARAPET

DETAIL H
PRESTRESSED BOX BEAM DECK WITH OVER THE SIDE DRAINAGE



DETAIL I
PRECAST REINFORCED CONCRETE BOX CULVERT

BRIDGE NUMBER	STRUCTURE TYPE	PROPOSED SEALING	FEDERAL COLOR NUMBER	ESTIMATED QUANTITIES ABUT (SQ YD)	PIER (SQ YD)	SUPER (SQ YD)	GENERAL (SQ YD)	TOTAL (SQ YD)
POR-224-0106	3 SPAN CONTINUOUS STEEL BEAM	SEAL PARAPETS OER DETAIL G SEAL ALL EXPOSED CONCRETE AT ABUTMENTS SEAL ALL EXPOSED CONCRETE AT PIERS	PER CMS	94	205	249		548
POR-224-1171	3 SPAN CONTINUOUS SLAB BRIDGE	SEAL PARAPETS OER DETAIL G SEAL ALL EXPOSED CONCRETE AT ABUTMENTS SEAL ALL EXPOSED CONCRETE AT PIERS	PER CMS	47	170	266		483
POR-224-1189	3 SPAN CONTINUOUS STEEL BEAM	SEAL PARAPETS OER DETAIL G SEAL ALL EXPOSED CONCRETE AT ABUTMENTS SEAL ALL EXPOSED CONCRETE AT PIERS	PER CMS	121	271	340		732

NOTES:
- EPOXY-URETHANE SEALER SHALL BE USED UNLESS SHOWN OTHERWISE
- DETAILS E, F, G AND H ALSO APPLY TO CONCRETE SLAB BRIDGES

DESIGN AGENCY
ODOT --- DISTRICT 4
PLANNING & ENGINEERING

REVIEWED | DATE
STRUCTURE FILE NUMBER

DESIGNED AAG | DRAWN AAG | REVIEWED
CHECKED LMP | REVISED

SEALING CONCRETE SURFACES DETAILS
BRIDGE NO.: POR-224-0106, POR-224-0831, POR-224-1171 & POR-224-1189
SFN: 6703755, 6703844, 6703909 & 6703933

POR-224-0.00
PID No. 82919

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62 / 62

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