FED. RD. DIST. NO.	STATE	F.A.G.C.P. No.	F.A.P. No.	FISCAL YEAR	
10	OHIO	F.A.G.H. 531-(9)	F-531-(10)	1941 1944	1/44

STATE OF OHIO
DEPARTMENT OF HIGHWAYS

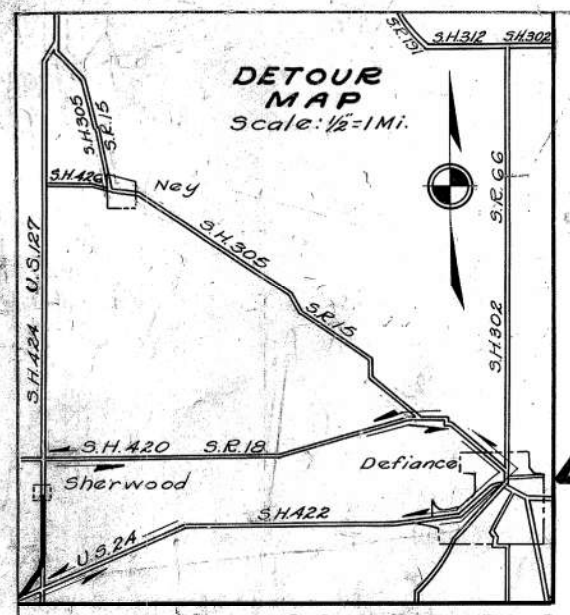
F.A.P. No. F 531-(10) Part 1
F.A.G.C.P. No. F.A.G.H. 531-(9)

DEFIANCE COUNTY
S.H. 424 SEC. "A" (PT.)
PAULDING COUNTY
S.H. 422 SEC. "Q" (PT.)

GRADE CROSSING ELIMINATION WITH N.Y.C. R.R.
PAULDING — BRYAN ROAD
S.H. 424 SEC. "A" (PT.)
DELAWARE TOWNSHIP
DEFIANCE COUNTY
DEFIANCE — FORT WAYNE ROAD
S.H. 422 SEC. "Q" (PT) EMERALD TOWNSHIP
PAULDING COUNTY

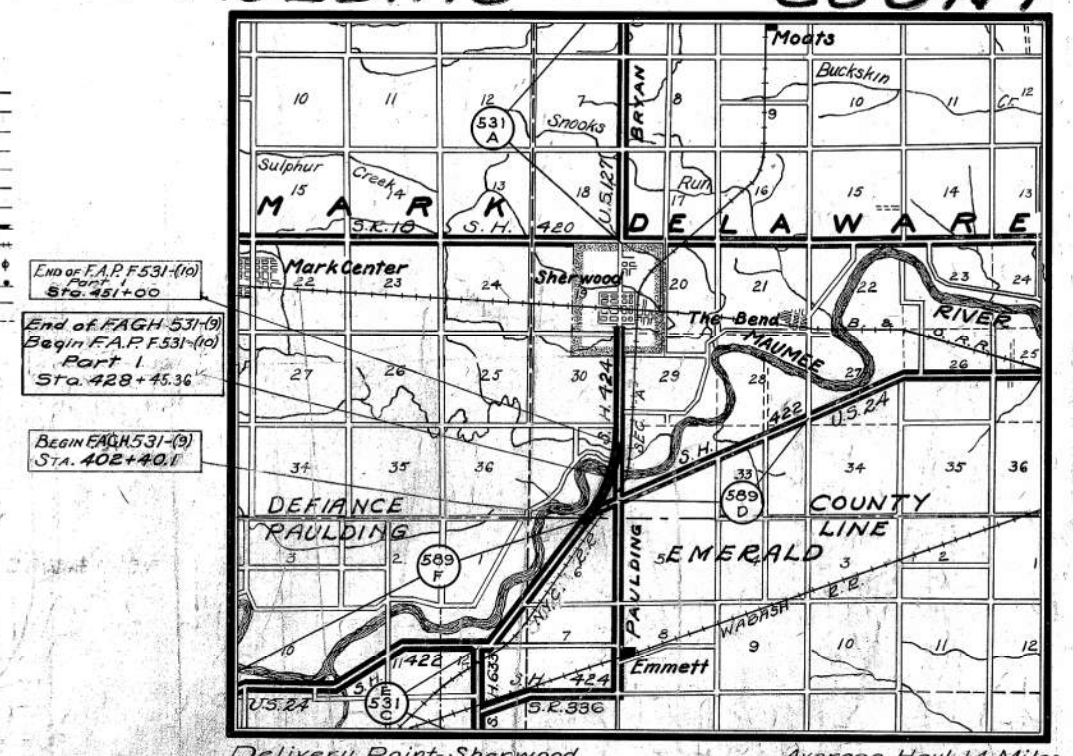
Note:- The new designations F.A.P. No. F 531-(10) and F.A.G.C.P. No. F.A.G.H. 531-(9) are shown on the title sheet and markers only.
The number F.A.G.H. 531-I(1) appearing elsewhere in this plan shall be considered as F.A.G.H. 531-(9) and the number 531-H(1) shall be considered as F-531(10).

PLAN No. 1
(For Plan No. 2 see F.A.P. F-531-(10) Part 2)



CONVENTIONAL SIGNS

STATE LINE
COUNTY LINE
TOWNSHIP LINE
SECTION LINE
PROPERTY LINE
CITY OR VILLAGE LINE
FENCE LINE
STEAM RAILROADS
ELECTRIC RAILROADS
POLE LINE
GUARD RAIL
DRAIN PIPE, NEW
DRAIN PIPE, OLD



LOCATION PLAN
SCALE OF MILES
0 1 2 3 4

PORTION TO BE IMPROVED
STATE HIGHWAYS
OTHER ROADS
DETOURS SHOWN THUS

INDEX OF SHEETS

TITLE SHEET	1
TYPICAL SECTIONS	2
JOINT DETAILS	3-3-A
PLAN AND PROFILE	4-7
CROSS SECTIONS	8-25
CHANNEL CROSS SECTIONS	26
STRUCTURE DETAILS	27-29
INTERSECTION DETAILS	30
TREE AND STUMP SCHEDULE	30-32
SUPERELEVATION SCHEDULE	33
STRUCTURES OVER 20 FT. SPAN	34-42
SUMMARY	35-43-44
APPROACH SLAB & FLARE DETAILS	33A

LINE DATA

Beginning of F.A.G.H. 531-(9) Sta. 402+40.1
End of F.A.G.H. 531-(9) Sta. 428+45.36
Net Length = Gross Length = 2605.26 Lin. Ft. or 0.493 Miles.

Beginning of Approach Sta. 399+00
End of Approach Sta. 402+40.1
Net Length of Approach 340.1 Lin. Ft. or 0.064 Miles.
Net Length of Work F.A.G.H. 531-(9) = 2945.36 Lin. Ft. or 0.557 Miles.

Beginning of F.A.P. F 531-(10) Part 1 Sta. 428+45.36
End of F.A.P. F 531-(10) Part 1 Sta. 451+00.00
Gross Length = 2254.64 Lin. Ft.
Deduction for Equation, Sta. 446+36.20 = 446+44.86 = 8.66 Lin. Ft.
Net Length F.A.P. F 531-(10) Part 1 = 2245.98 Lin. Ft. or 0.425 Miles.
Total Net Length of Work = 5191.34 Lin. Ft. or 0.983 Miles.

EQUATION—
Sta. 401+08.1 of F.A.G.H. 531(9) Approach equals Sta. 401+07 of F.A.P. 589-F

SCALES

PLAN	1" = 100'
PROFILE (VERTICAL)	1" = 10'
PROFILE (HORIZONTAL)	1" = 100'
CROSS SECTIONS	1" = 5'

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

I hereby approve these plans and declare that the making of this improvement will require the closing of the highway to traffic as noted on Sheet No. 30 and that detours will be provided as shown on the plans and estimates.

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

Approved _____
Date _____ Resident District Deputy Director

Approved R. R. Kohli
Date 6-27-41 Resident Division Deputy Director

Approved _____
Date _____ Chief Engineer, Bureau of Maintenance

Approved Guy H. Elbin
Date 3-22-46 Chief Engineer, Bureau of Bridges and Railroad Crossings

Approved Murray D. Shaffer
Date 11-12-41 Chief Engineer, Bureau of Location and Right of Way

Approved Calvin W. Collins, P.E. 547
Date 9-21-45 First Assistant Director and Chief Engineer

Approved Perry T. Ford
Date 9-21-45 Director of Highways

RECOMMENDED FOR APPROVAL: DATE [redacted]
DISTRICT ENGINEER
PUBLIC ROADS ADMINISTRATION
FEDERAL WORKS AGENCY

APPROVED FOR THE N.Y.C. R.R.
PAUL HAMILTON
DISTRICT ENGINEER
NOV. 14, 1941

APPROVED: [redacted] DATE [redacted]
DIVISION ENGINEER
PUBLIC ROADS ADMINISTRATION
FEDERAL WORKS AGENCY

STANDARDS

DRAWING	DATE	DRAWING	DATE
G-7.07	6-1-42		
S-27 P.C.1	3-1-39	A S-44-F	1-18-46
S-27 P.C.3	2-20-45	M B D-40	10-24-40
I-1,2,3,4 & 5	2-20-45	B-T-71 R.	8-24-44
I-8 C.B.1-2A & B	12-15-41	I-14 G	2-20-45
I-8 C.B.1-3 & 1-4	12-15-41	I-15 No. 4	11-1-41
I-8 C.B. No. 3	12-15-41	I-15 No. 5	11-1-41
I-8 C.B. 2-2 A & B	12-15-41	I-15 No. 6	11-1-41
I-8 M.H. No. 1	9-1-39	I-15 No. 7	9-15-45
I-12	7-1-42	I-15 No. 9	10-1-45
I-15 No. 1	11-1-41		
I-15 No. 2	6-1-41		
B.T. 50-70-71 E No. 1	12-1-43		

SUPPLEMENTAL SPECIFICATIONS

NUMBER		DATE
E-305 Revised		5-1-41
S-122		9-15-37
[illegible] Revised		[illegible]
I-117		1-15-44
112	Rev.	11-1-44
177	Rev.	4-21-44
178	Rev.	4-21-44
T-170.15		8-2-43
M-102.12		8-2-43
183	Rev.	5-1-45

FILE No.	
	DEFIANCE COUNTY, S.H. 424 SEC. A (PT.)
	PAULDING COUNTY, S.H. 422 SEC. Q (PT.)
	DATE OF LETTING _____
	CONTRACT No. _____

531-(9) 531-13

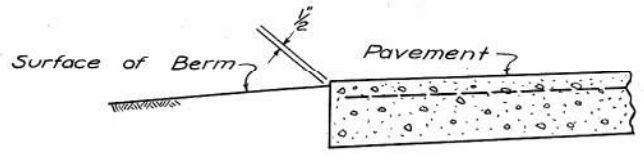
FED. RD. DIST. NO.	STATE	FAGCP NO.	FAP NO.	FISCAL YEAR
10	OHIO	FAGH 531 I(1)	531-H(1)	1944

2
44

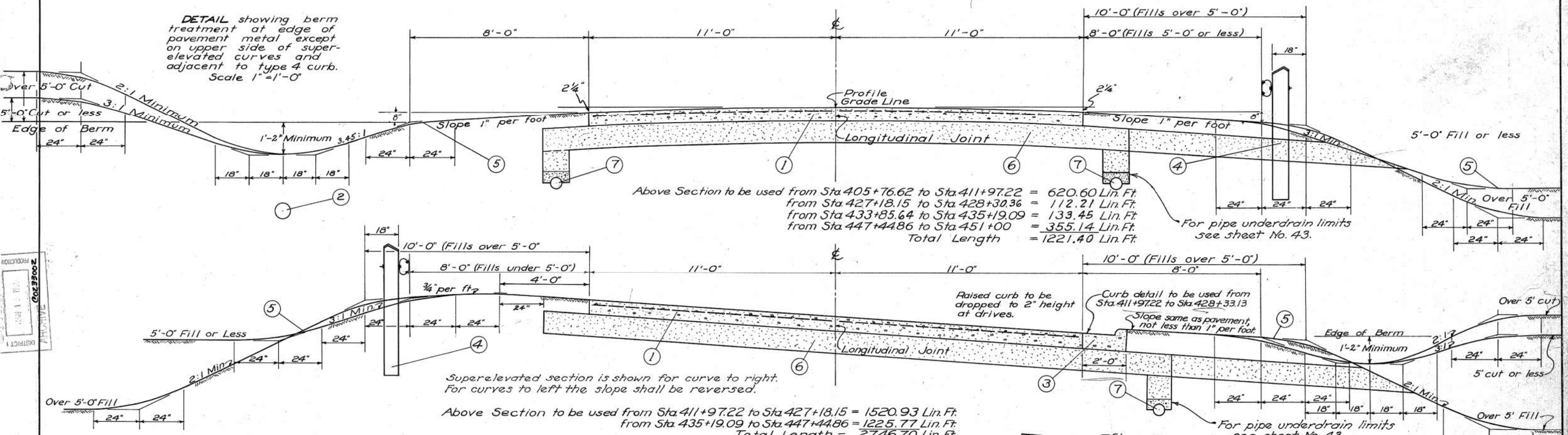
DEFIANCE COUNTY
S. H. 424, SEC. A (PT.)
PAULDING COUNTY
S. H. 422, SEC. Q (PT.)

TYPICAL SECTIONS
TYPE T-71

Scale ½" = 1'-0"



DETAIL showing berm treatment at edge of pavement metal except on upper side of super-elevated curves and adjacent to type 4 curb.
Scale 1" = 1'-0"

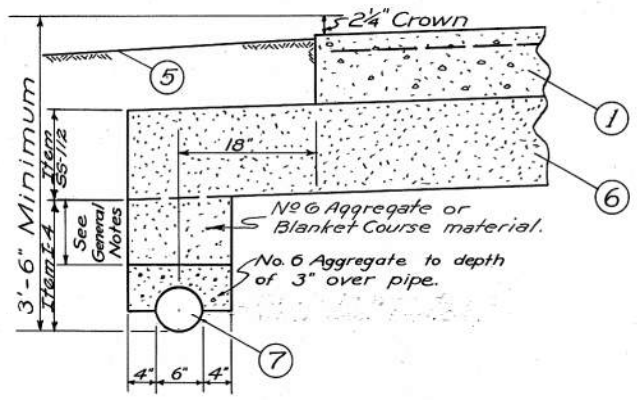


Above Section to be used from Sta. 405+76.62 to Sta. 411+97.22 = 620.60 Lin. Ft.
from Sta. 427+18.15 to Sta. 428+30.36 = 112.21 Lin. Ft.
from Sta. 433+85.64 to Sta. 435+19.09 = 133.45 Lin. Ft.
from Sta. 447+44.86 to Sta. 451+00 = 355.14 Lin. Ft.
Total Length = 1221.40 Lin. Ft.

Superelevated section is shown for curve to right.
For curves to left the slope shall be reversed.

Above Section to be used from Sta. 411+97.22 to Sta. 427+18.15 = 1520.93 Lin. Ft.
from Sta. 435+19.09 to Sta. 447+44.86 = 1225.77 Lin. Ft.
Total Length = 2746.70 Lin. Ft.
Less Deduction for Equation, Sta. 446+36.20 = 446+44.86 8.66 Lin. Ft.
Net Length = 2738.04 Lin. Ft.

1221.4
3959.44



DETAIL OF PIPE UNDERDRAIN
Scale 1" = 1'-0"
See note Sheet No. 30

1. Item T-71, 9" Reinforced Portland Cement Concrete Pavement.
2. Item I-3, Roadway Drainage.
3. Item I-12, Type 4, Concrete Curb and Gutter.
4. Item I-15, Guard Rail.
5. Item E-305, Seeding and Protecting Roadway Areas. (For limits see note on sheet 30.)
6. Item SS-112, Blanket Course (12" Minimum Depth).
7. Item I-4, 6" Pipe Underdrain (as per plan).

SUPERELEVATED CURVES

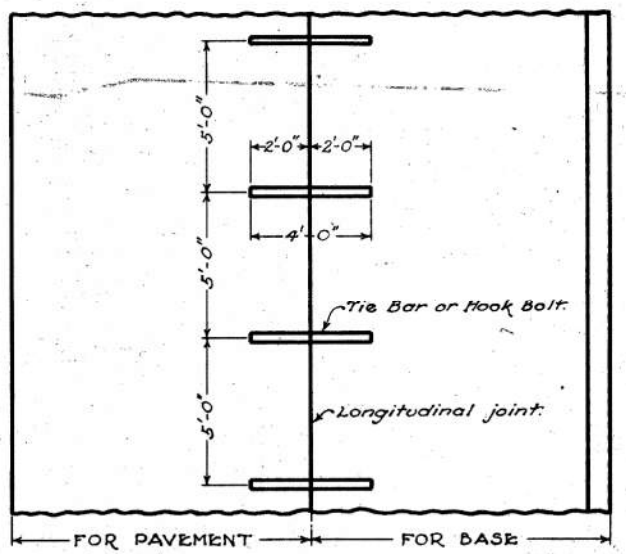
Superelevated curves shall be built without crown. The crown shall be worked out of the pavement in the portion between the beginning of the transition and the point where the superelevation equals twice the crown.

FED. RD. DIST. Nº	STATE	F.A.G.C.R.Nº	F.A.R. Nº	FISCAL YEAR	
10	OHIO	F.A.G.H. 531-(9)	F-531 (10)	1943 1944	3 / 44

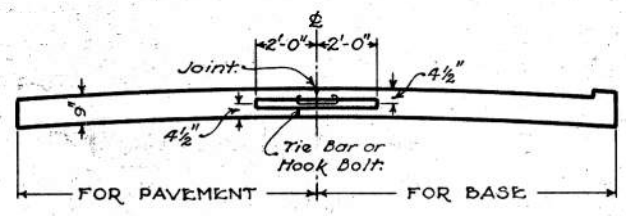
DEFIANCE COUNTY
S.H. 424 SEC. A (PT)
PAULDING COUNTY
S.H. 422 SEC. Q (PT)

LONGITUDINAL JOINTS

TIE BAR OR HOOK BOLT SPACING

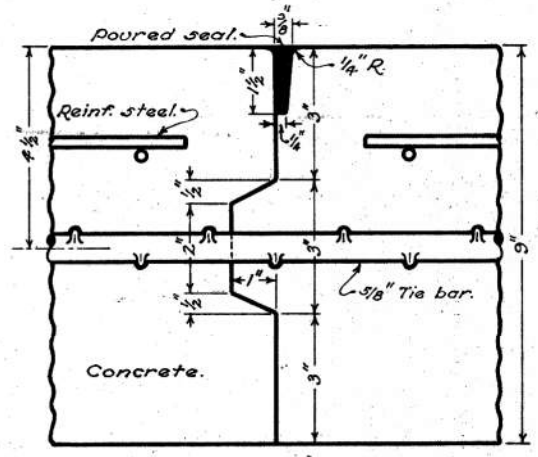


PLAN



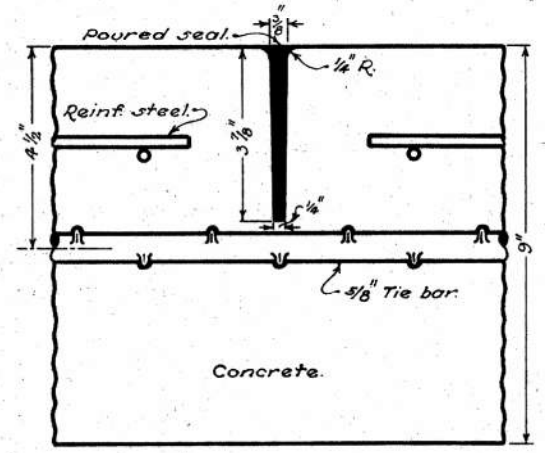
CROSS SECTION

KEY JOINT



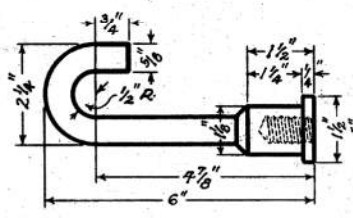
DETAIL OF JOINT

IMPRESSED JOINT

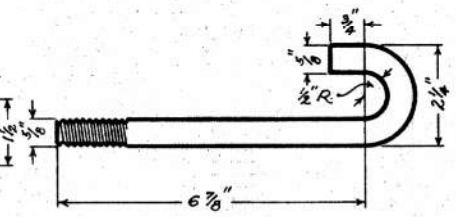


DETAIL OF JOINT

HOOK BOLT

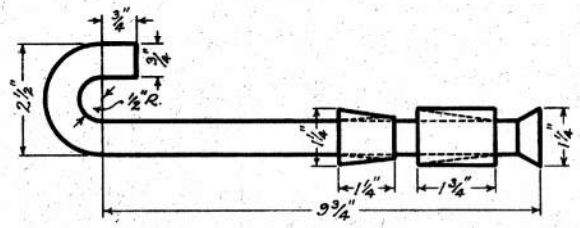


INSERT

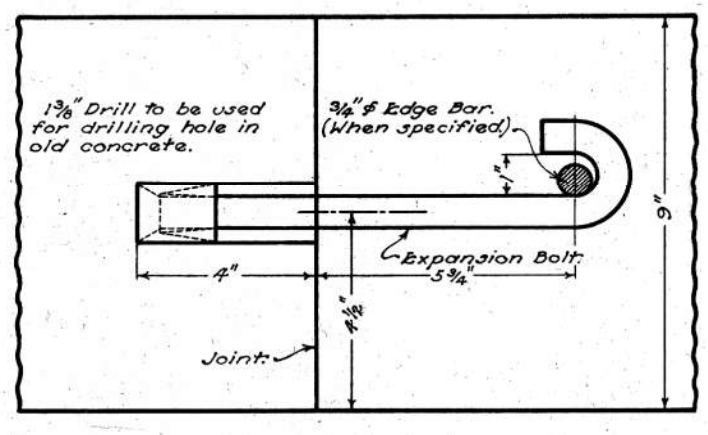


J BOLT

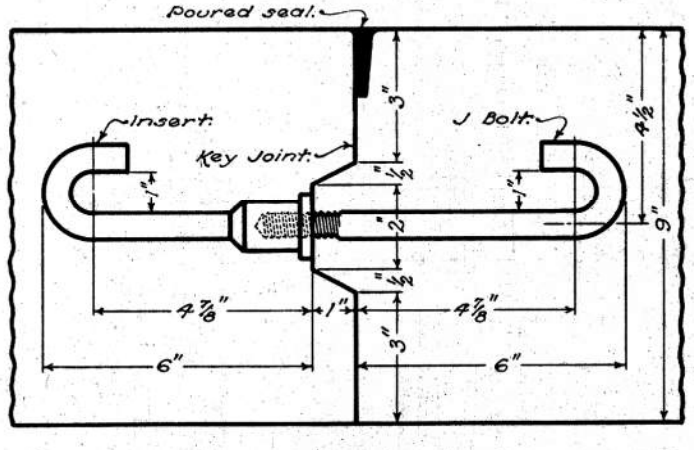
EXPANSION BOLT



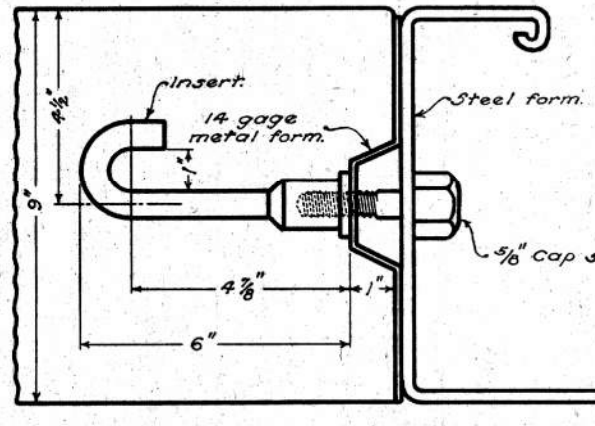
EXPANSION BOLT JOINT



HOOK BOLT AND KEY JOINT



ACCEPTABLE METHOD OF FORMING JOINT



NOTES

GENERAL:— Longitudinal joints shall be used when called for on the typical section, and shall be constructed as shown on this sheet.

Tie bars to be ⅝ inch round, deformed bars.

A satisfactory device shall be used to hold the tie bars in proper position.

The longitudinal joint between adjoining slabs poured in separate operations shall be a key joint with American hook bolts or equal, or billet steel (Sec. M-7.1) tie bars, unless otherwise shown on the plans.

If tie bars are bent no portion of the bend shall extend into the first slab poured.

Immediately prior to placing the second slab, bent tie bars shall be straightened by means of a pipe slipped over the free end of the bar.

Key joints used in part width construction shall be painted with two coats of bituminous material as par Sec. M-5.5 MS-3 before adjoining slabs are poured.

The joints shall be on the center line unless otherwise shown on the plans.

Special care shall be exercised in edging impressed joints that the width of the opening does not exceed that shown.

IMPRESSED JOINT:— This joint shall be formed by impressing a device or bar into the newly deposited concrete before initial setting. The device or bar shall be removed as soon as the concrete is in such condition as to preclude distortion or injury to the concrete. The groove thus formed shall be of the dimensions as detailed. After the joint is formed it shall be protected from dirt and foreign matter until the filler is placed.

KEY JOINT:— This joint is designed for a 9 inch slab. When a greater or less thickness is used the joint shall be proportionally designed. Other deformations may be used if approved by the engineer.

A groove for sealing shall be formed by impressing a device or bar into the newly deposited concrete adjacent to the previously poured lane. The device or bar shall be removed as soon as the concrete is in such condition as to preclude distortion or injury to the concrete. The groove thus formed shall be of the dimensions detailed.

Adjoining slabs adjacent to the longitudinal key joint shall be edged with a thin metal edger having a fourth inch radius. The depth of the vertical lip shall not exceed one-half inch.

After the joint is formed it shall be protected from dirt and foreign matter until the seal is placed.

EXPANSION BOLT JOINT:— This joint is designed for abutting new concrete construction to old when a tie is required. The tie is effected by the use of American Expansion Bolts or equal.

BITUMINOUS SEAL AND FILLER:— Material for sealing key joints and for filling impressed joints shall meet the requirements of Sec. M-5.6 F-1.

5-1-'45

Coz3003

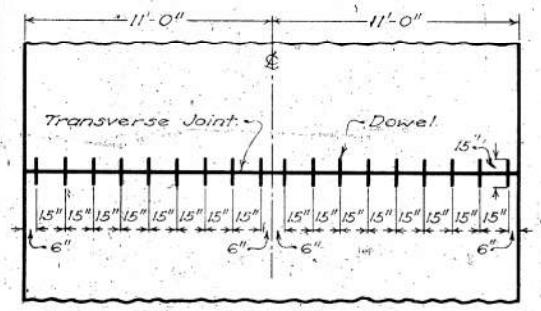
PAVEMENT JOINTS

FED. RD. DIST. Nº	STATE	F.A.G.C.P. Nº	F.A.P. Nº	FISCAL YEAR
10	OHIO	F.A.G.H. 531-(9)	F-531 (10)	1941 1944

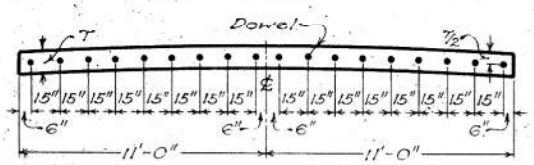
3A
44

DEFIANCE COUNTY
S.H. 424 SEC. A(PT)
PAULDING COUNTY
S.H. 422 SEC. Q(PT)

DOWEL SPACING

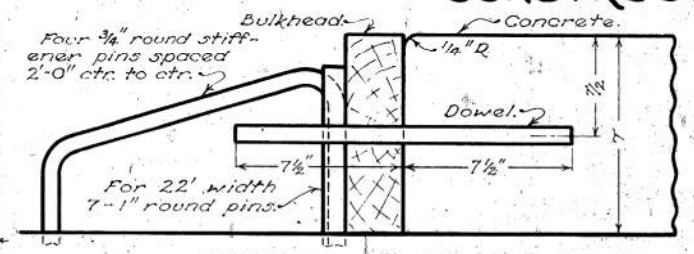


PLAN

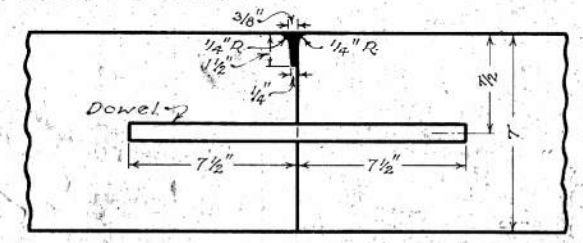


CROSS SECTION

CONSTRUCTION JOINT

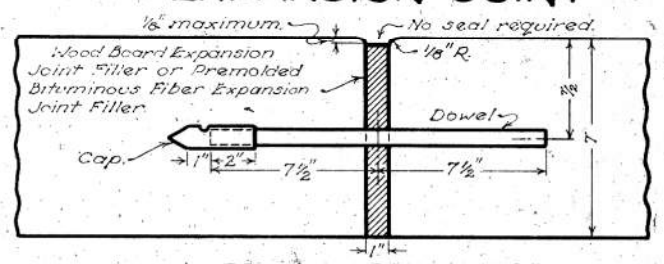


DETAIL OF BULKHEAD



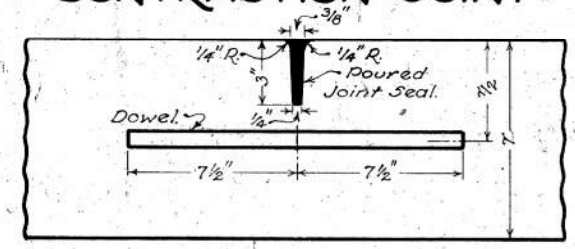
DETAIL OF JOINT

EXPANSION JOINT



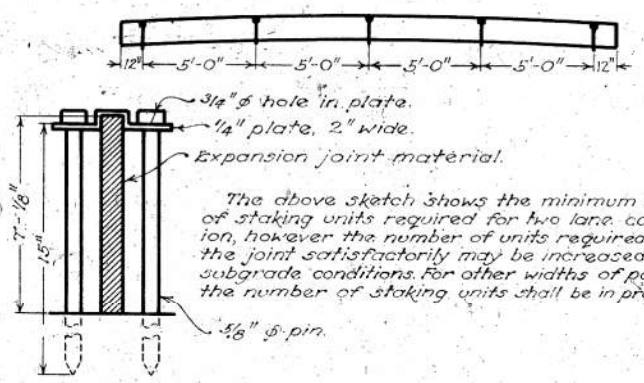
DETAIL OF JOINT

CONTRACTION JOINT



IMPRESSED JOINT

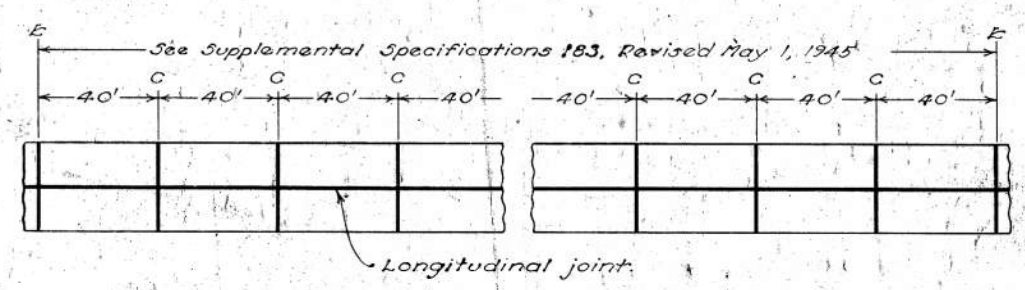
METHOD OF STAKING EXPANSION JOINT



The above sketch shows the minimum number of staking units required for two lane construction, however the number of units required to hold the joint satisfactorily may be increased due to subgrade conditions. For other widths of pavement the number of staking units shall be in proportion.

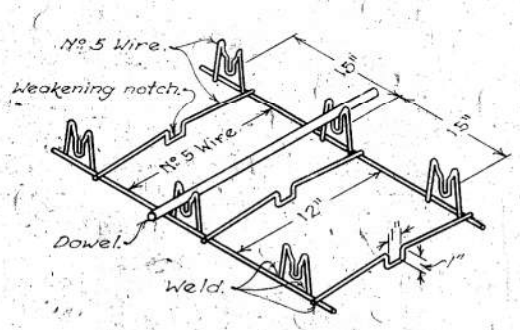
SUGGESTED STAKING UNIT

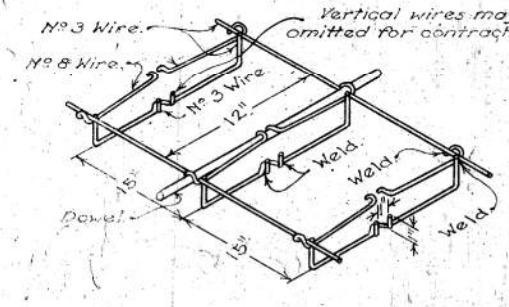
ARRANGEMENT OF TRANSVERSE JOINTS

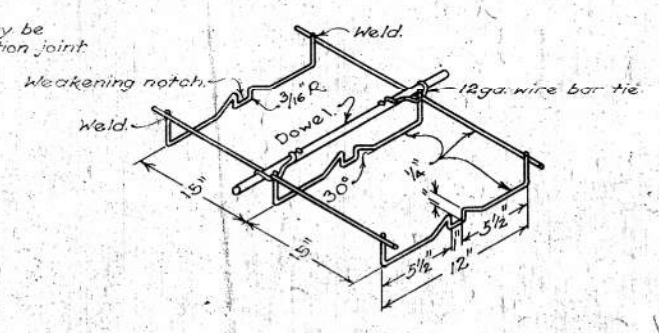


O = Contraction Joint
E = Expansion Joint.

DOWEL SUPPORT UNITS







NOTES

GENERAL:– The types of expansion joint material shown are to be considered as alternates; the type used on any project being optional with the contractor.

The type of joint selected by the contractor and all operations and materials for installing the joints shall be approved by the engineer.

The spacing of expansion joints shall be according to Supplemental Specifications 183, Revised May 1, 1945.

Joint arrangements at intersections shall be as shown on the plans or in accordance with working drawings to be furnished by the State.

Special care shall be exercised in edging joints that the width of the opening does not exceed that shown.

A positive method to maintain required alignment shall be used in connecting the expansion joints at longitudinal joints. The expansion joint material shall meet in a vertical joint. Longitudinal keys and keyways, where used, shall be omitted for the thickness of the expansion joint.

EXPANSION JOINTS:– Expansion joints shall be constructed of materials as shown herewith meeting the requirements of Supplemental Specifications 183, Revised May 1, 1945.

Expansion joint material shall be accurately and rigidly held in place by means approved by the engineer. A steel plate for holding joint material during installation will not be required.

The expansion joint material shall be shaped to fit the section of the pavement.

Dowel holes shall be punched in the filler material, and shall be 11/16 inch round holes to insure tight fitting dowels.

Each dowel bar shall be equipped with a neat fitting metal cap on one end.

Joints in monolithic curbs shall be constructed with the same type of filler material as used in the expansion joints.

DOWELS:– All dowels shall be 3/4 inch round, smooth, straight bars, free from burring and flattening at ends. The entire dowel shall be thoroughly coated before placing in the pavement using either Bituminous Material, Sec M-5.4 SC-2 (or heavier or an oil such as 600 W or equal.

Prior to placing all dowels shall be assembled in a unit which is to remain in place for construction, contraction and expansion joints. The length of the unit shall be not less than the distance between longitudinal joints and sufficient support shall be provided to hold the dowels accurately perpendicular to the joint. Expansion joint material shall be forced over the lower cross wires so as to fit snugly on the subgrade. The design of the dowel support unit may be as shown herewith or may be an approved equal and it shall be shop assembled.

When the lane width varies from 11 feet; the spacing of the dowels shall be 15 inches and the 6 inch end spaces shall be equally increased or decreased and shall be less than 10½ inches but not less than 3 inches.

CONSTRUCTION JOINTS:– A bulkhead shall be constructed to permit dowels to extend through the joint. Care shall be taken in removing bulkhead and placing adjacent concrete to see that the dowels are embedded in the concrete without being bent.

A groove for sealing shall be formed by impressing a device or bar into the newly deposited concrete placed after the removal of the bulkhead. The device or bar shall be removed as soon as the concrete is in such condition as to preclude distortion or injury to the concrete. The groove thus formed shall be of the dimensions detailed. After the joint is formed it shall be protected from dirt or foreign matter until the filler is placed.

CONTRACTION JOINTS:– Impressed contraction joints shall be formed by impressing a device or bar into the newly deposited concrete before initial setting. The device or bar shall be removed as soon as the concrete is in such condition as to preclude distortion or injury to the concrete. The groove thus formed shall be of the dimensions detailed. After the joint is formed it must be protected from dirt or foreign matter until the filler is placed.

POURED JOINT SEAL:– The bituminous material for filling impressed joints shall meet the requirements of Sec. M-5.6 F-1 of the General Specifications. The filler shall be handled in such a manner that it will be confined to the joint and in nowise mar the surface.

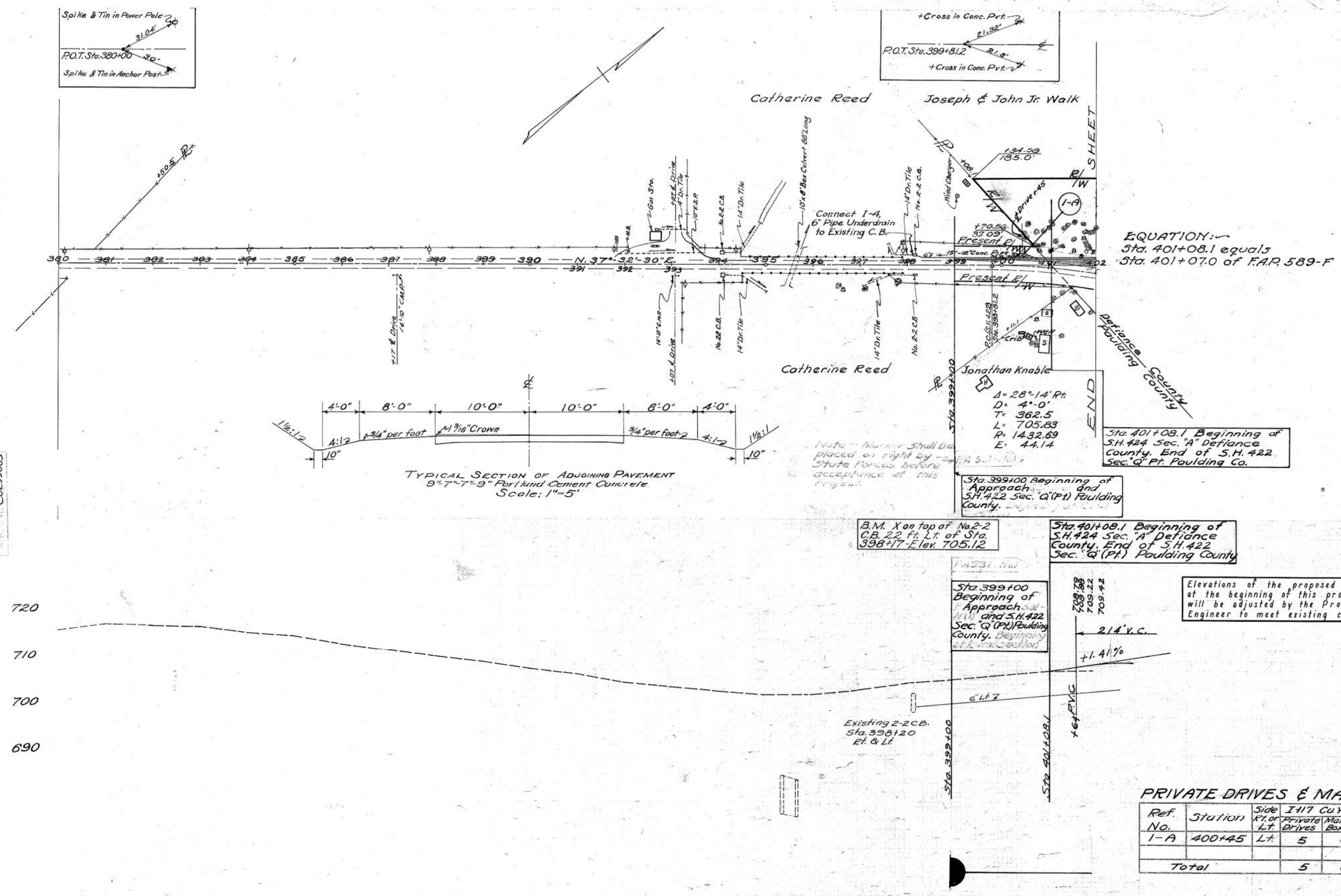
NOTE:– If wire units are not available another approved method for holding the dowels in place may be used.

5-1-45

C023300

FASCP NO. | FAP NO.
10 OHIO FAGH 531-1(1) 531-H(1) 1941 1944 44

DEFIANCE COUNTY
S.H. 424 SEC. "A" (PT.)
PAULDING COUNTY
S.H. 422 SEC. "Q" (PT.)



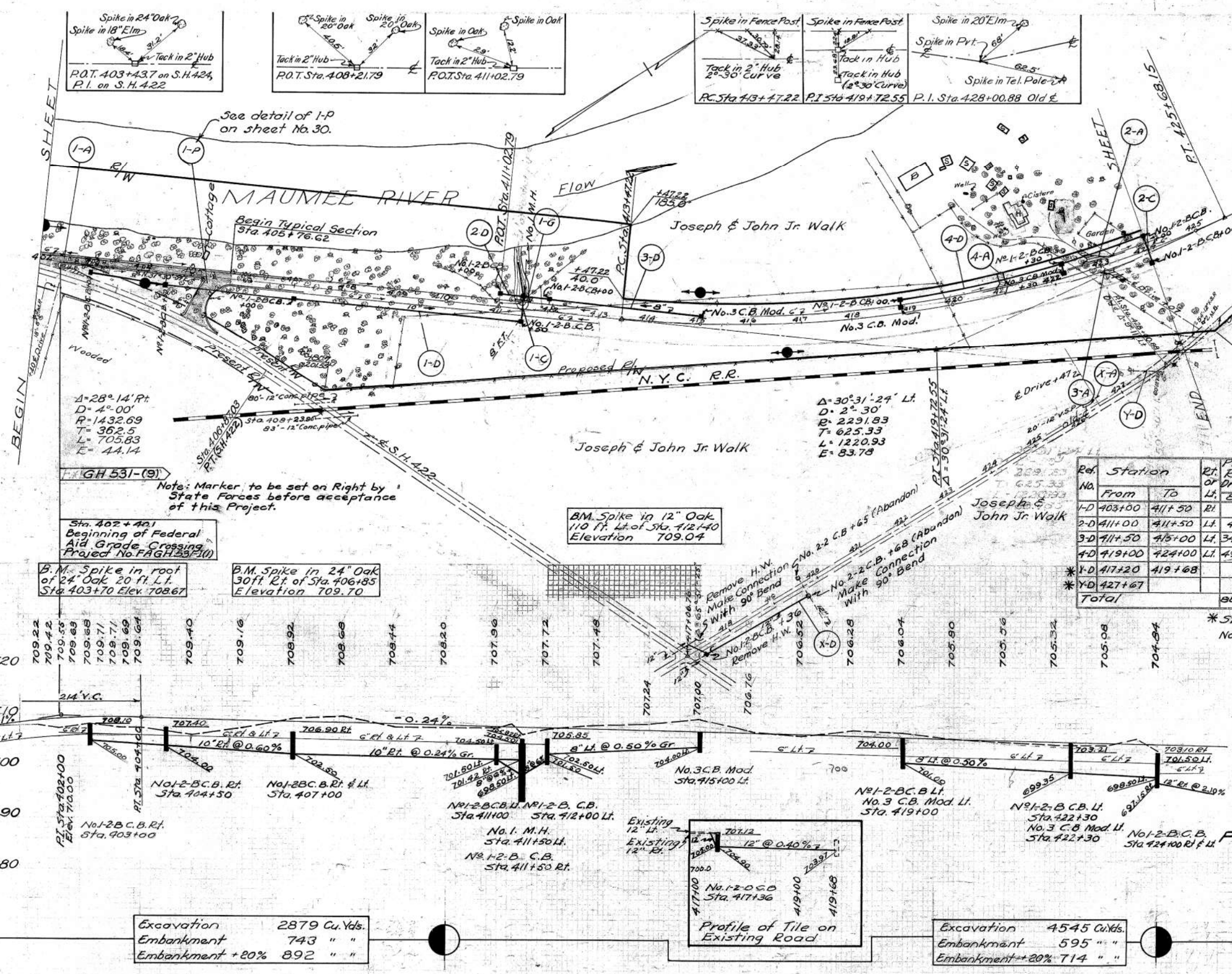
TYPICAL SECTION OF ADJOINING PAVEMENT
9"-7"-7"-9" Portland Cement Concrete
Scale: 1" = 5'

PRIVATE DRIVES & MAIL BOX APPROACHES

Ref. No.	Station	Side Rt. or Lt.	I-117 Cu. Yds. Private Drives	I-117 Cu. Yds. Mail Boxes	Remarks
1-A	400+45	Lt.	5	6	Existing Pipe Suitable. Drive & Mail Box Approach Combined
Total			5	6	

Sta. 380+00 to Sta. 402+00

DEFIANCE COUNTY
S.H. 424 SEC. "A" (PT.)
PAULDING COUNTY
S.H. 422 SEC. "Q" (PT.)



Note: Existing State Highway No. 424, from the north line of State Highway No. 422 to a point opposite Station 435+00, exclusive however, of those parts required for the new highway, but including the portion within the R/W limits of the N.Y.C. R.R. to be vacated as a public highway and closed to public travel, upon opening of the new highway to public travel.

PAVEMENT REMOVAL

Station From	Station To	Sq. Yds.	Remarks
417+18	428+60.88	2058	Reinforced Concrete Pavement Average Thickness 8" Includes 15 Sq. Yds. Extra Width, 10' Deducted at R.R.

* Station on ℄ of Existing Road

ROADWAY DRAINAGE

Ref. No.	Station From	Station To	Rt. or Lt.	Pipe for Roadway Drainage Lin. Ft. 8"	10"	12"	Pipe for Roadway Drainage Under Drives & Approaches Lin. Ft. 8"	10"		Catch Basins Each I-2-B	Mod. 3	S-122 C.B. Abandoned Each	Pipe Special 90° Bend 12"	S-22 Remove Conc. H.W. Cu. Yds.	Pipe Removed & Stored Lin. Ft. 12"	Remarks
1-D	403+00	411+50	Rt.		730			54		3						
2-D	411+00	411+50	Lt.	47						1						
3-D	411+50	415+00	Lt.	345						1	1					
4-D	419+00	424+00	Lt.	494			30			2	2					28 Ft. Pipe for Connecting Catch Basin
* 1-D	417+20	419+68				264						2	2	2.2	30	Specials located at 417+20 Lt. & 419+68 Rt.
* Y-D	427+67												1	1.3	60	Build Open Ditch Same Elev. as Pipe
Total				886	790	264	30	54		7	3	2	2	3.5	90	

* Stations on ℄ of Existing Road

Note: See Sheet No. 43 for Schedule of Item I-4, Pipe Underdrains.

STRUCTURES 20' SPAN & UNDER

Ref. No.	Station	Size	Type	Remarks
1-C	411+50	49' x 12"	Pipe	See Sheet No. 29
2-C	424+00	56' x 12"	Pipe	See Sheet No. 28

PRIVATE DRIVES & MAIL BOX APPROACHES

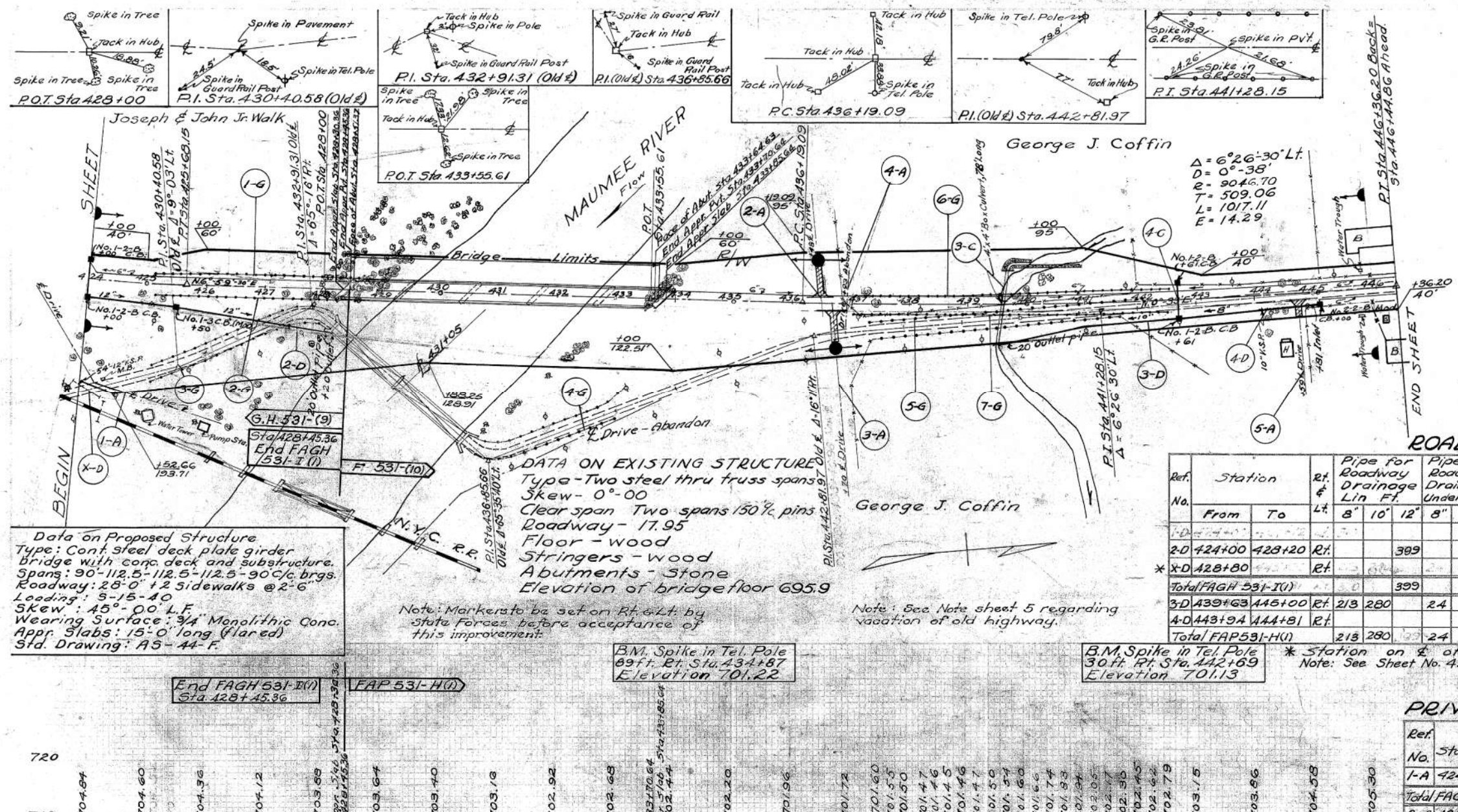
Ref. No.	Station	Side Rt. or Lt.	Fill Cu. Yds. Private Drives	Mail Boxes	Pipe 12"	Pipe 18"	Remarks
1-A	402+46	Rt.	-	6			Mail Box Only
2-A	423+07	Lt.	5	6			Drive & Mail Box Approach Combined. No Pipe Required
3-A	423+07	Rt.	7		24'		Not Required
~~4-A~~ X-A	421+00	Lt.	7			20	No Pipe Required
Total			19	12	24	20	

GUARD RAIL POSTS

Ref. No.	Station From	Station To	Side Rt. or Lt.	4'-15" Guard Rail Lin. Ft.	Remarks
1-G	411+32	411+64	Lt.	32	
Total				32	

Sta. 402+00 to Sta. 424+00

DEFIANCE COUNTY
S.H. 424 SEC. "A" (PT.)
PAULDING COUNTY
S.H. 422 SEC. "Q" (PT.)



Data on Proposed Structure
Type: Cont. steel deck plate girder bridge with conc. deck and substructure.
Spans: 90'-112.5-112.5-112.5-90 C/c. brgs.
Roadway: 28'-0" + 2 sidewalks @ 2'-6"
Loading: S-15-40
Skew: 45°-00 L.F.
Wearing Surface: 3/4" Monolithic Conc.
Appr. Slabs: 15'-0" long (flared)
Std. Drawing: AS-44-F.

PAVEMENT REMOVAL

Station From	Station To	Sq. Yds.	Remarks
424+00	428+20	999	Sta. 428+60.58 to Sta. 433+41.70 on Existing ℄ Includes 78 Sq. yds. Extra width.
Total FAGH-531-I(1)		999	
430+50	439+00	1708	Sta. 436+37.72 to 443+43 on Existing ℄ Includes 99 Sq. Yds. Extra Width
444+00	446+36.20	420	
Total FAP 531-H(1)		2128	Pavement is Reinforced Portland Cement Concrete. Average depth 8"

ROADWAY DRAINAGE

Ref. No.	Station From	Station To	Rt. or Lt.	Pipe for Roadway Drainage Lin. Ft. 8"	10"	12"	Pipe for Roadway Drainage Under Dr. Lin. Ft. 8"			Pipe for Outlets Lin. Ft. 15"	18"	Catch Basins Each Mod. 22-B	Mod. 1-3		Riprap Type A Grouted Sq. Yds.	Abandon Inlet Each S-122	Pipe Removed & Stored Lin. Ft. 10"	12"	S-22 Removal of Conc. H.W.	Remarks
2-D	424+00	428+20	Rt.			399					20		1							
* X-D	428+80		Rt.															54	1.3	Extra Pipe for alignment. Build open ditch same elevation as pipe.
Total FAGH 531-I(1)						399					20		1					54	1.3	
3-D	439+63	445+00	Rt.	213	280		24			20		1			3					Extra Pipe for alignment.
4-D	443+94	444+81	Rt.													1	86			
Total FAP 531-H(1)				213	280		24			20		1			3	1	86			

* Station on ℄ of Existing Road
Note: See Sheet No. 43 for Schedule of Item I-4, Pipe Underdrains.

PRIVATE DRIVES & MAIL BOX APPROACHES

Ref. No.	Station	Rt. or Lt.	I-117 Cu. Yds. Private Drives	Mail Boxes	Pipe for Driveways Lin. Ft.	Pipe for Drive ways Removed & Stored Lin. Ft.	Remarks
1-A	424+55	Rt.	10				Remove Pavement & build drive across Existing Road.
Total FAGH 531-I(1)			10				
2-A	436+48	Lt.	12				No Pipe Required
3-A	436+70	Rt.	11				No Pipe Required
4-A	436+98	Lt.					Abandon
5-A	444+59	Rt.	7				No Pipe Required
Total FAP 531-H(1)			30				

STRUCTURES - 20' SPAN & UNDER

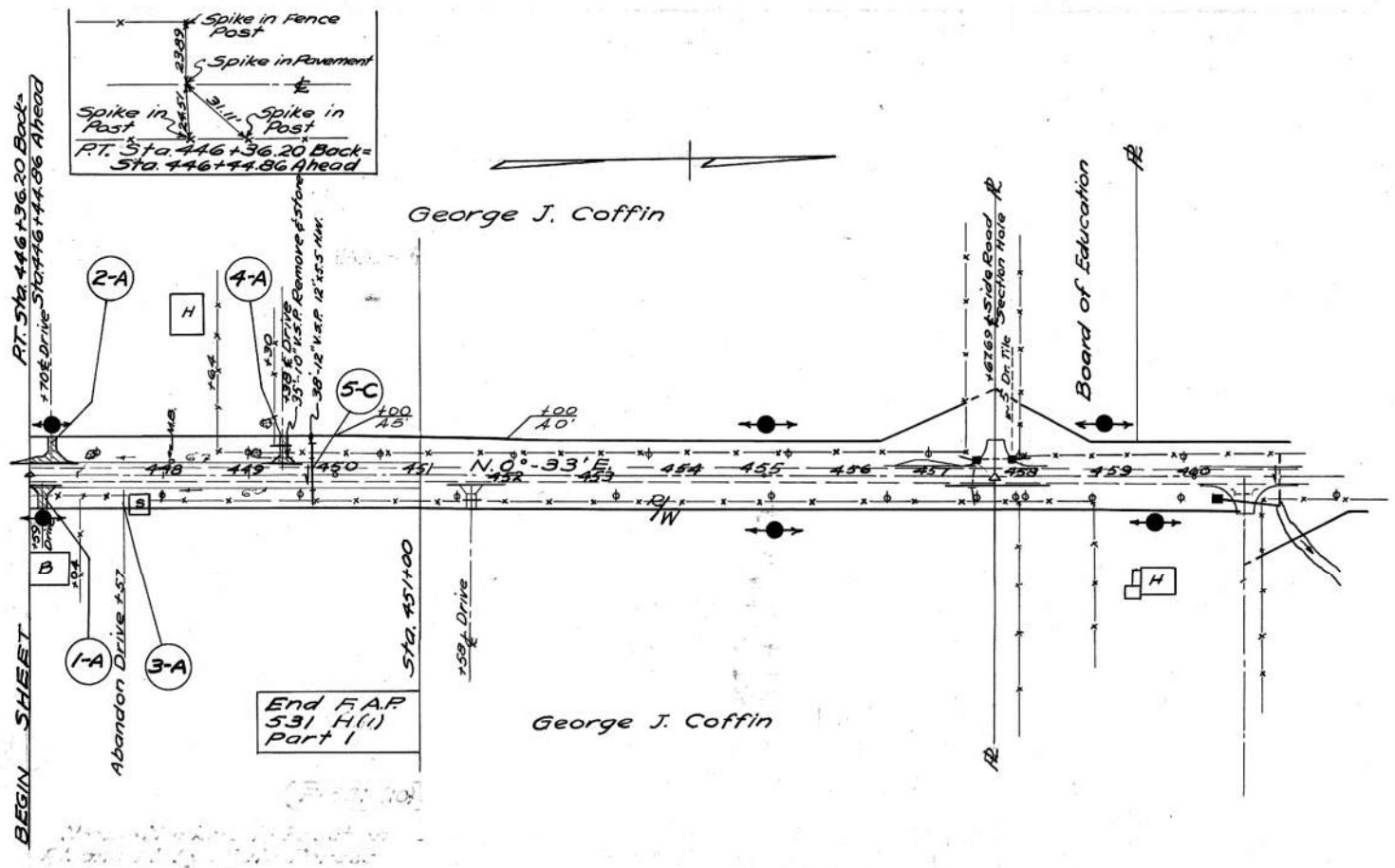
Ref. No.	Station	Size	Type	Remarks
3-C	439+61	132' x 48"	Pipe	See Sheet No. 29
4-C	442+61	59' x 12"	Pipe	See Sheet No. 28

GUARD RAIL

Ref. No.	Station From	Station To	Side Rt. or Lt.	Guard Rail Removed and Stored Lin. Ft.	I-15 Guard Rail Lin. Ft.	Remarks
1-G	425+10	428+62	Lt.	Stored in	352	
2-G	425+24	428+28	Rt.		304	
3-G	425+10	428+20	Rt.	660		
Total FAGH 531-I(1)				660	656	
4-G	430+40	433+20	Rt.	570		
5-G	437+30	442+00	Rt. & Lt.	900		
6-G	437+05	442+49	Lt.		544	
7-G	437+05	442+49	Rt.		544	
Total FAP 531-H(1)				1470	1088	

Sta. 424+00 to Sta. 446+44.86

DEFIANCE COUNTY
S.H. 424 SEC. "A" (Pt.)
PAULDING COUNTY
S.H. 422 SEC. "Q" (Pt.)



Note: See Sheet No. 43 for Schedule of Item I-4, Pipe Underdrains.

PRIVATE DRIVES & MAIL BOXES

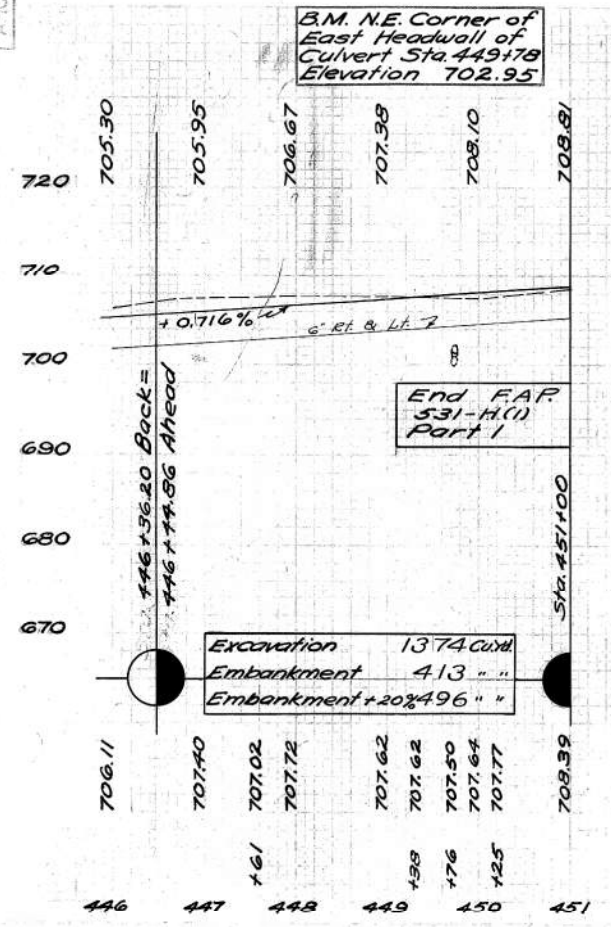
Ref. No.	Station	Rt. or Lt.	I-117 Cu. Yds. Private Drives	I-117 Cu. Yds. Mail Boxes	Pipe for Drives Lin. Ft. 12"			Pipe Removed & Stored Lin. Ft. 8"	10	12"		Remarks
1-A	446+59	Rt.	7									
2-A	446+70	Lt.	5	6								Drives Mail Box Combined
3-A	447+57	Rt.										Abandon
4-A	449+38	Lt.	7		24			35				
Total			19	6	24			35				

STRUCTURES 20' SPAN & UNDER

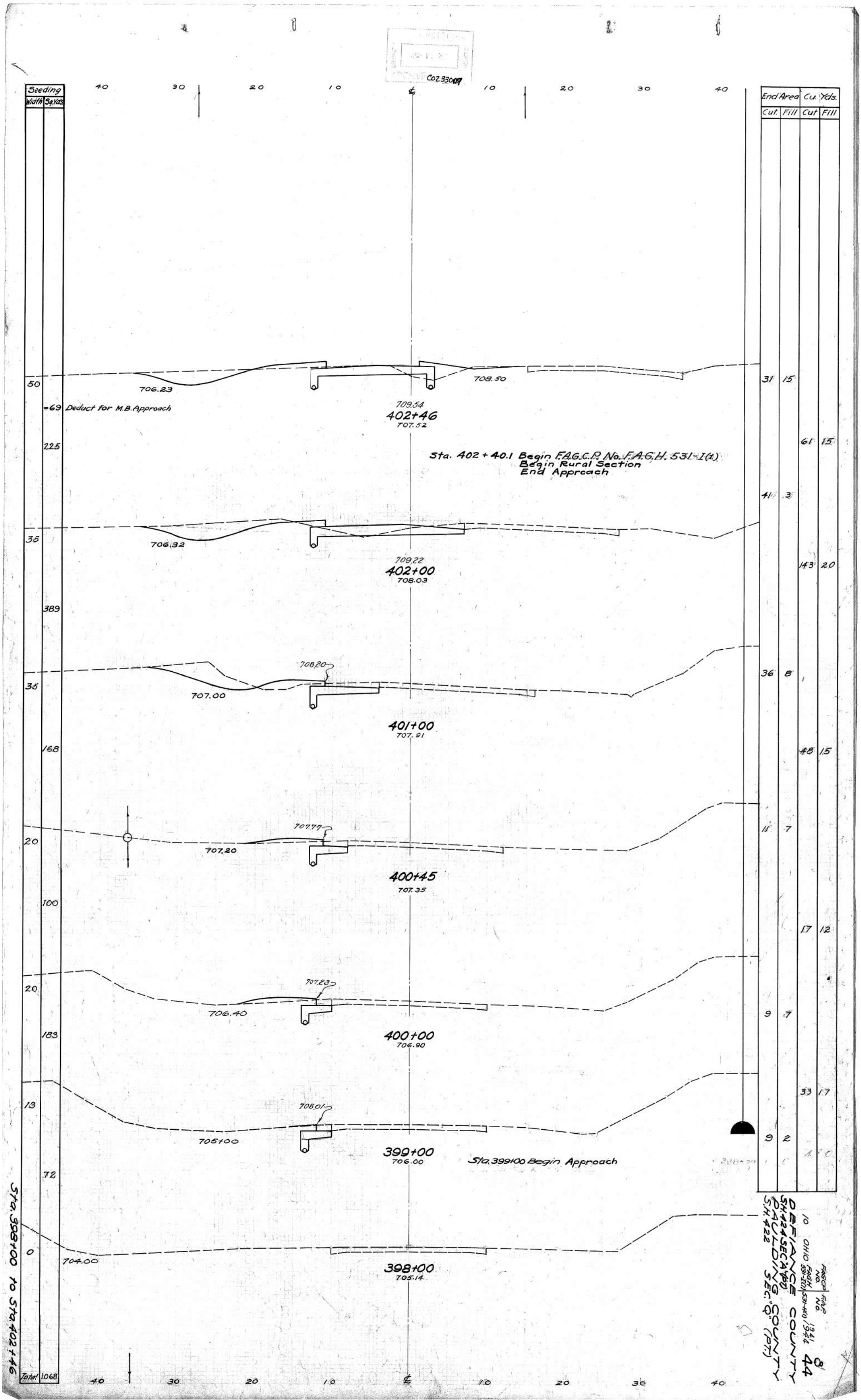
Ref. No.	Station	Size	Type	Remarks
5-C	449+76	69' x 15"	Pipe	See Sheet No. 28

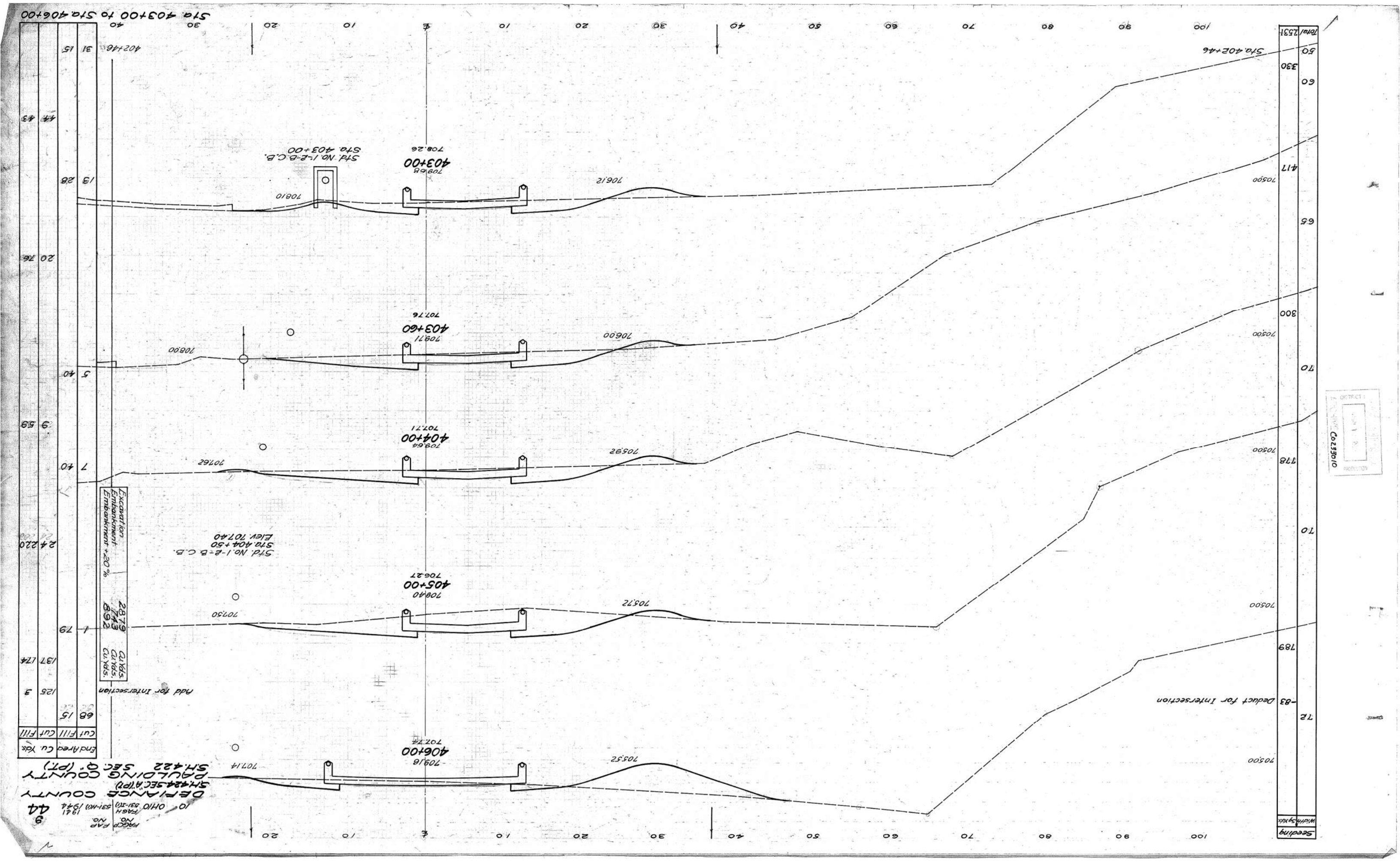
PAVEMENT REMOVAL

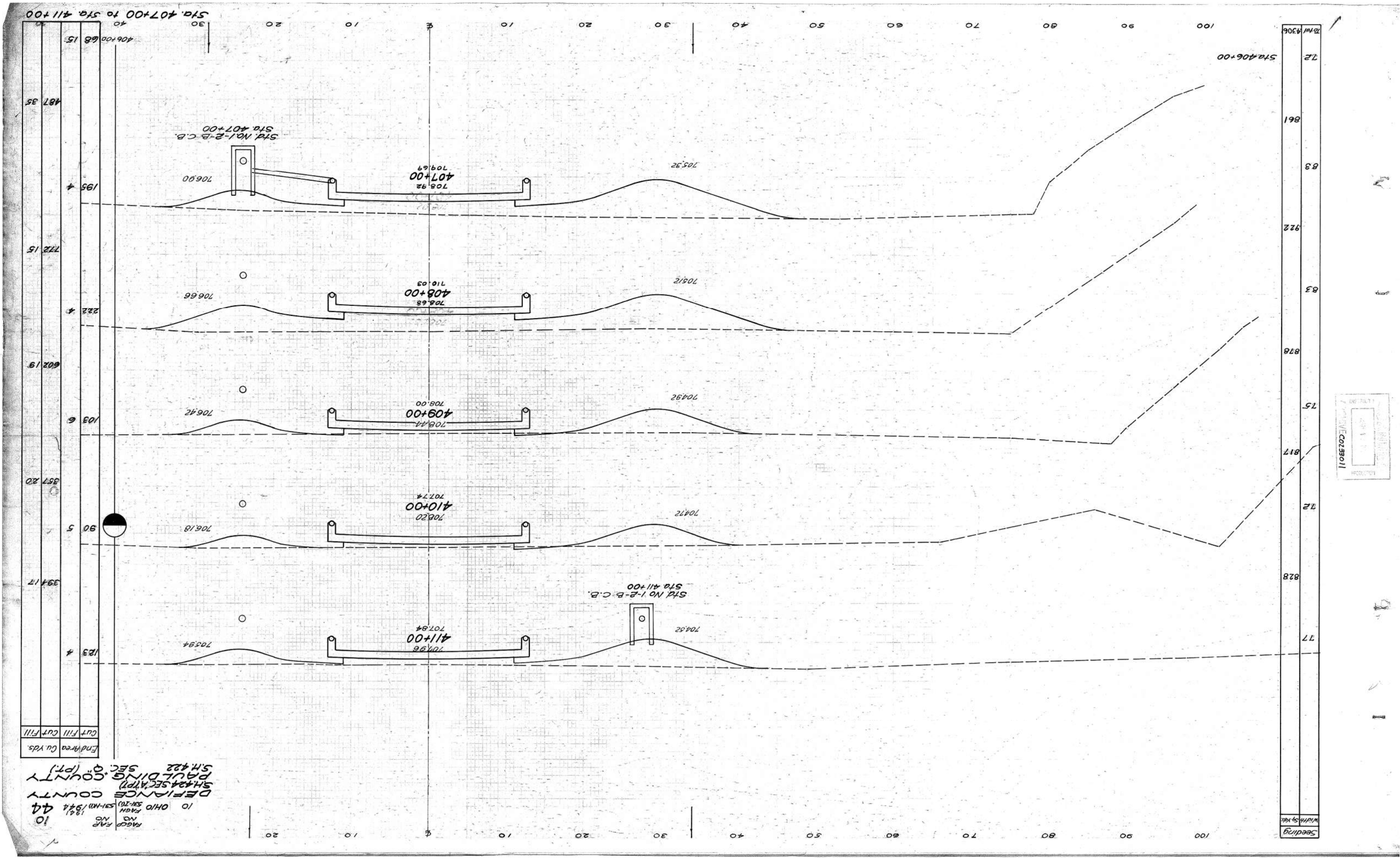
Station From	Station To	Sq. Yds.	Removal
446+44.86	451+00	809	Reinforced Concrete Pavement Average Thickness 8"
Total			

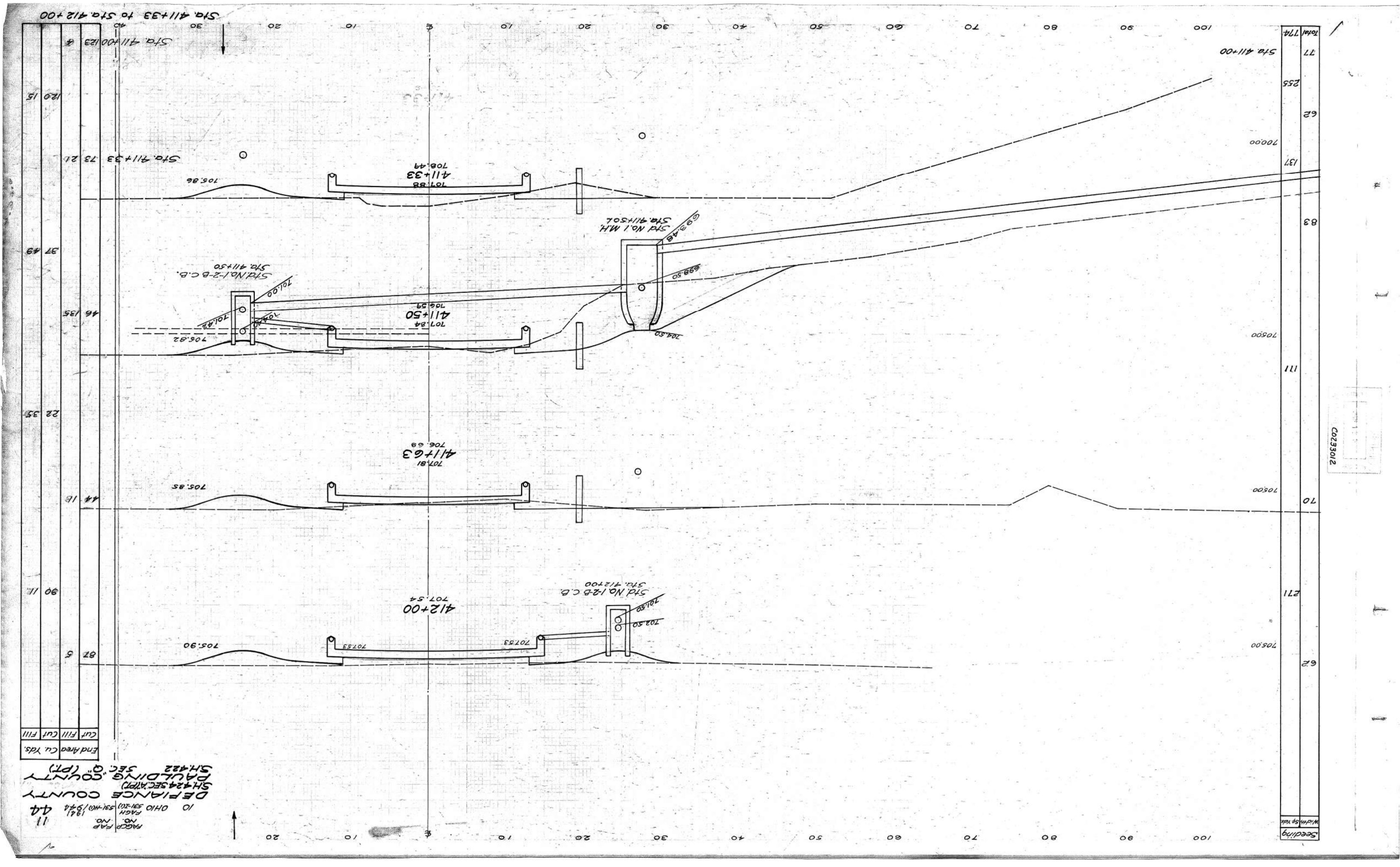


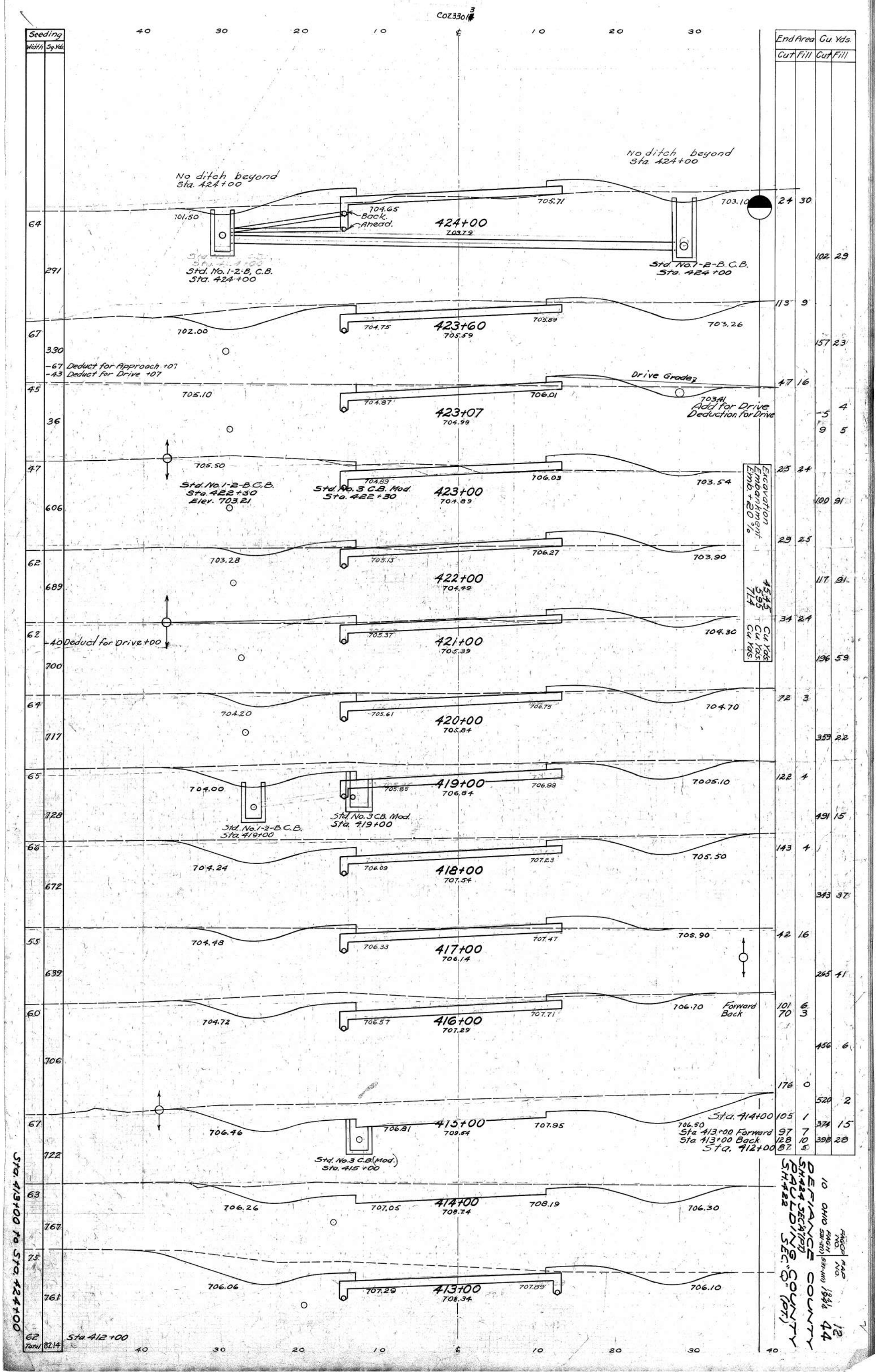
SCANNED
DISTRICT 1
ARCHIVE co233008

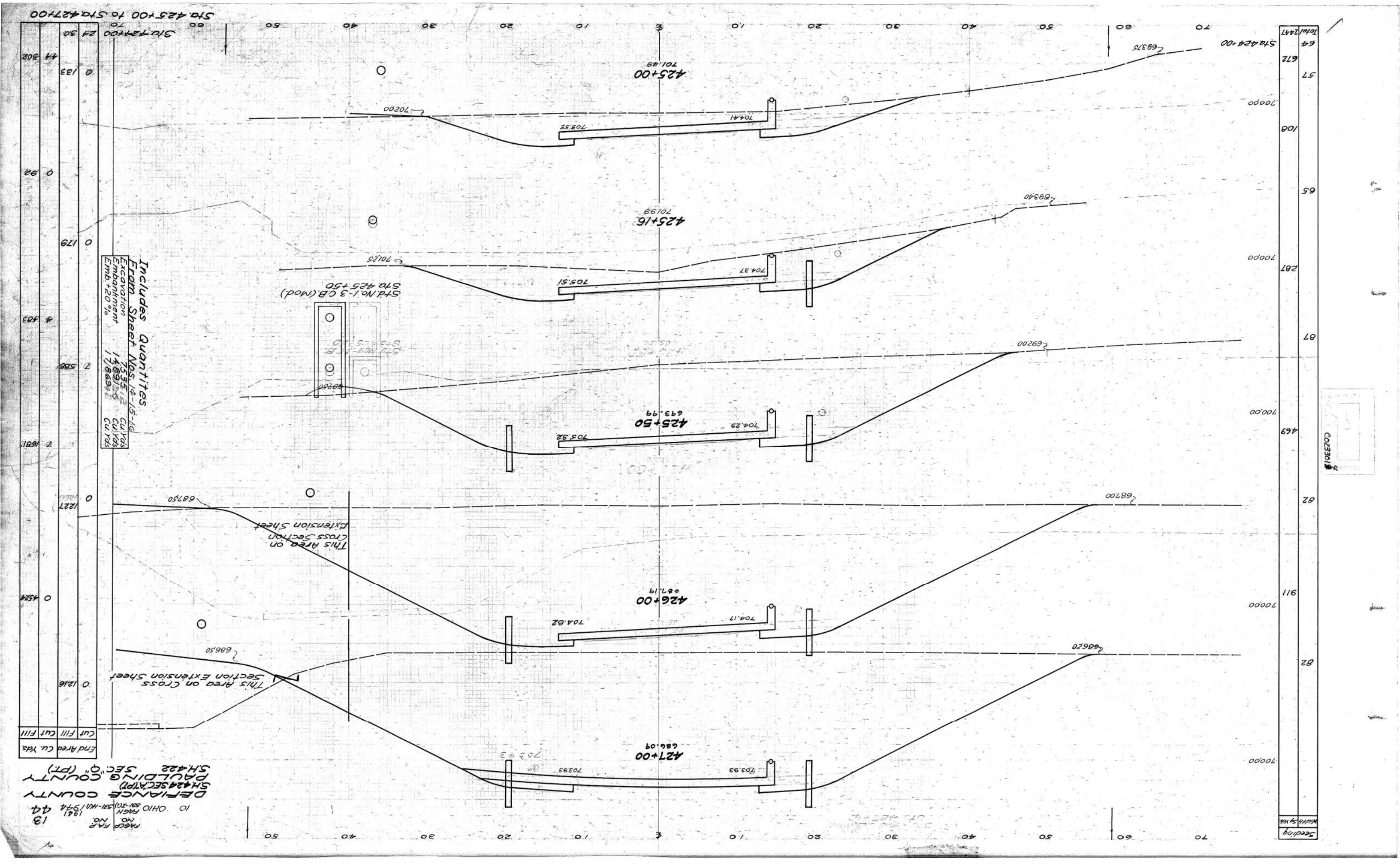

Seeding
Width
Sq. Yds.
40 30 20 10 ℄ 10 20 30 40
End Area
Cu. Yds.
Cut Fill Cut Fill
50
706.23
708.50
709.54
402+46
707.52
-69 Deduct for M.B. Approach
225
Sta. 402 + 40.1 Begin F.A.G.C.P. No. F.A.G.H. 531-I(1)
Begin Rural Section
End Approach
35
706.32
709.22
402+00
708.03
389
35
708.20
707.00
401+00
707.91
168
20
707.77
707.20
400+45
707.35
100
20
707.23
706.40
400+00
706.90
183
13
706.01
705+00
399+00
706.00
Sta. 399+00 Begin Approach
72
0
704.00
398+00
705.14
Sta. 398+00 to Sta. 402+46
Total 1068
31 15
61 15
41 3
143 20
36 8
48 15
11 7
17 12
9 7
33 17
9 2
DEFIANCE COUNTY
SH. 424 SEC. "A" (P.T.)
PAULDING COUNTY
S.H. 422 SEC. "Q" (P.T.)
10 OHIO
FAGCP NO. FAGH 531-I(1)
FAP NO. 531-H(1)
1941 1944
8
44


Sta. 403+00 to Sta. 406+00
Sta. 402+46
Std. No. I-E-B.C.B.
Sta. 403+00
Sta. No. I-E-B C.B.
Sta. 404+50
Elev. 707.40
Add for Intersection
Deduct for Intersection
Excavation
Embankment
Embankment +20%
CU. YDS.
CU. YDS.
CU. YDS.
2879
743
692
End Area
Cu. Yds.
Cut
Fill
Cut
Fill
68
15
125
3
137
174
1
79
7
40
5
40
13
28
20
76
44
43
31
15
9
59
Total
1531
Seeding
Width
Sq. Yds.
330
300
417
178
189
-83
PAGE NO.
FAR NO.
10
OHIO
FASH 331-1(1) 331-H(1)
1941
1944
44
9
DEFIANCE COUNTY
SH.424 SEC. A (PT)
PAULDING CO. (PT)
SH.422 SEC. G. (PT)
C0233010


Sta. 407+00 to Sta. 411+00
Sta. 406+00
Std. No. I-2-B C.B.
Sta. 407+00
Std. No. I-2-B C.B.
Sta. 411+00
407+00
408+00
409+00
410+00
411+00
Seeding
Width Sq. Yds.
Cut Fill Cut Fill
End Area Cu. Yds.
FAP NO. 331-20
FAGH NO. 331-H
DEFIANCE COUNTY
SH. 424 SEC. A (PT)
PAULDING COUNTY
SH. 422 SEC. Q (PT)
10 OHIO
10 44

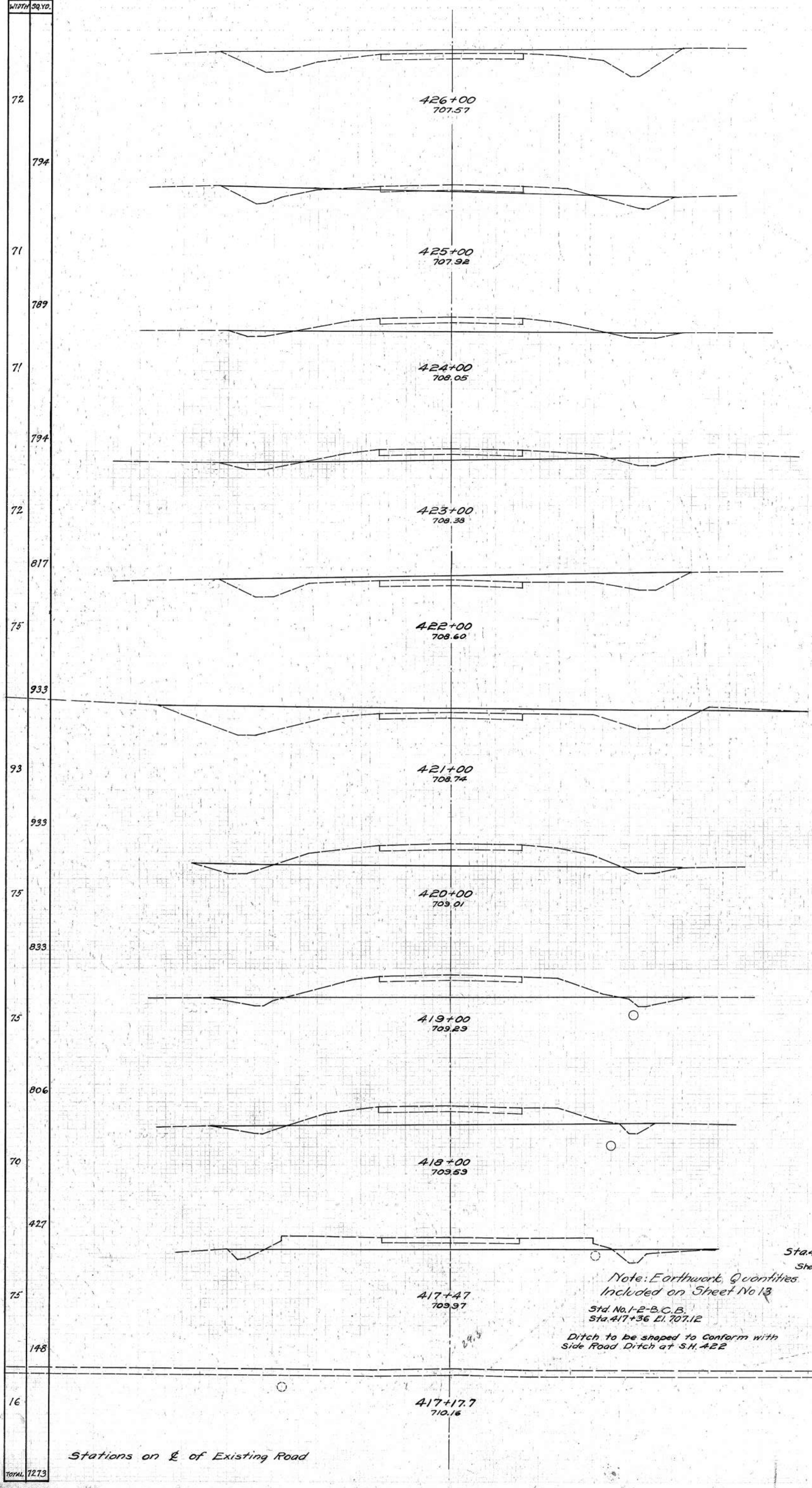

Sta. 411+33 to Sta. 412+00
Sta. 411+00
Sta. 411+33
Std No. 1-2-B C.B.
Sta. 411+30
411+50
Std No. 1 M.H.
Sta. 411+50
411+33
Sta. 411+33
411+63
412+00
Std No. 1-2-B C.B.
Sta. 412+00
Sta. 411+00
Sta. 411+00
Seeding
Width Sq. Yds.
Total 174
Cut Fill Cut Fill
End Area Cu. Yds.
PAGE NO. FAP NO. 194/
FAGH 331-1(1) 331-H(1)/944
10 OHIO
DEFIANCE COUNTY
SH 424 SEC. "A" (PT)
PAULDING COUNTY
SH 422 SEC. "Q" (PT)
11
44
C0233012


C0Z3301 3
Seeding
Width
Sq. Yds.
End Area
Cu. Yds.
Cut
Fill
No ditch beyond Sta. 424+00
Std. No. 1-2-B, C.B. Sta. 424+00
Std. No. 1-2-B.C.B. Sta. 424+00
424+00
Back.
Ahead.
-67 Deduct for Approach +07
-43 Deduct for Drive +07
Drive Grade
Add for Drive
Deduction for Drive
423+60
423+07
Std. No. 1-2-B.C.B. Sta. 422+30 Elev. 703.21
Std. No. 3 C.B. Mod. Sta. 422+30
423+00
422+00
-40 Deduct for Drive +00
421+00
420+00
Std. No. 1-2-B C.B. Sta. 419+00
Std. No. 3 C.B. Mod. Sta. 419+00
419+00
418+00
417+00
Forward
Back
416+00
Excavation
Embankment
Emb. +20%
Cu. Yds.
Cu. Yds.
Cu. Yds.
Sta. 414+00
Sta 413+00 Forward
Sta 413+00 Back
Sta. 412+00
415+00
Std. No. 3 C.B. (Mod.) Sta. 415+00
414+00
413+00
Sta. 412+00
Total
Sta. 413+00 to Sta. 424+00
DEFIANCE COUNTY
S.H. 424 SEC. "F" (PT.)
PAULDING SEC. "O" COUNTY (PT.)
S.H. 422
10 OHIO
FAP NO. 1844
FAGCP NO. 53F-MO
12
44


Sta. 425+00 to Sta. 427+00
Sta. 424+00
425+00
701.49
425+16
701.99
425+50
693.49
426+00
687.19
427+00
686.09
Sta. 427+00
Sta. 424+00
Sta. 425+50
Sta. 426+00
Sta. 427+00
Sta. 425+50
Sta. 426+00
Sta. 427+00
Sta. 425+50
Sta. 426+00
Sta. 427

C0233015

SEEDING WIDTH	SEEDING SQ.YD.	Station	Elevation	End Area Cut	End Area Fill	Cu. Yds. Cut	Cu. Yds. Fill
		426+00	707.57	0	64		
72						17	156
	794	425+00	707.92	9	20		
71						76	50
	789	424+00	708.05	32	7		
71						102	30
	794	423+00	708.38	23	9		
72						43	122
	817	422+00	708.60	0	57		
75						6	257
	933	421+00	708.74	3	82		
93						119	170
	933	420+00	709.01	61	10		
75						220	35
	833	419+00	709.29	58	9		
75						198	30
	806	418+00	709.59	49	7		
70						86	16
	427	417+47	709.97	39	10		
75						15	4
	148	Sta.417+26		0	0		
16		417+17.7	710.16				
TOTAL	7273			Sheet Totals		882	870



Existing Road Sta.417+17.7 to Sta.426+00

Note: Earthwork Quantities Included on Sheet No 13

Std. No.1-2-B.C.B.
Sta.417+36 El. 707.12

Ditch to be shaped to Conform with Side Road Ditch at S.H. 422

Stations on ℄ of Existing Road

DEFIANCE COUNTY
SH 424 SECTION
RAUL DING
SH 422
SEC. "D" (PT)

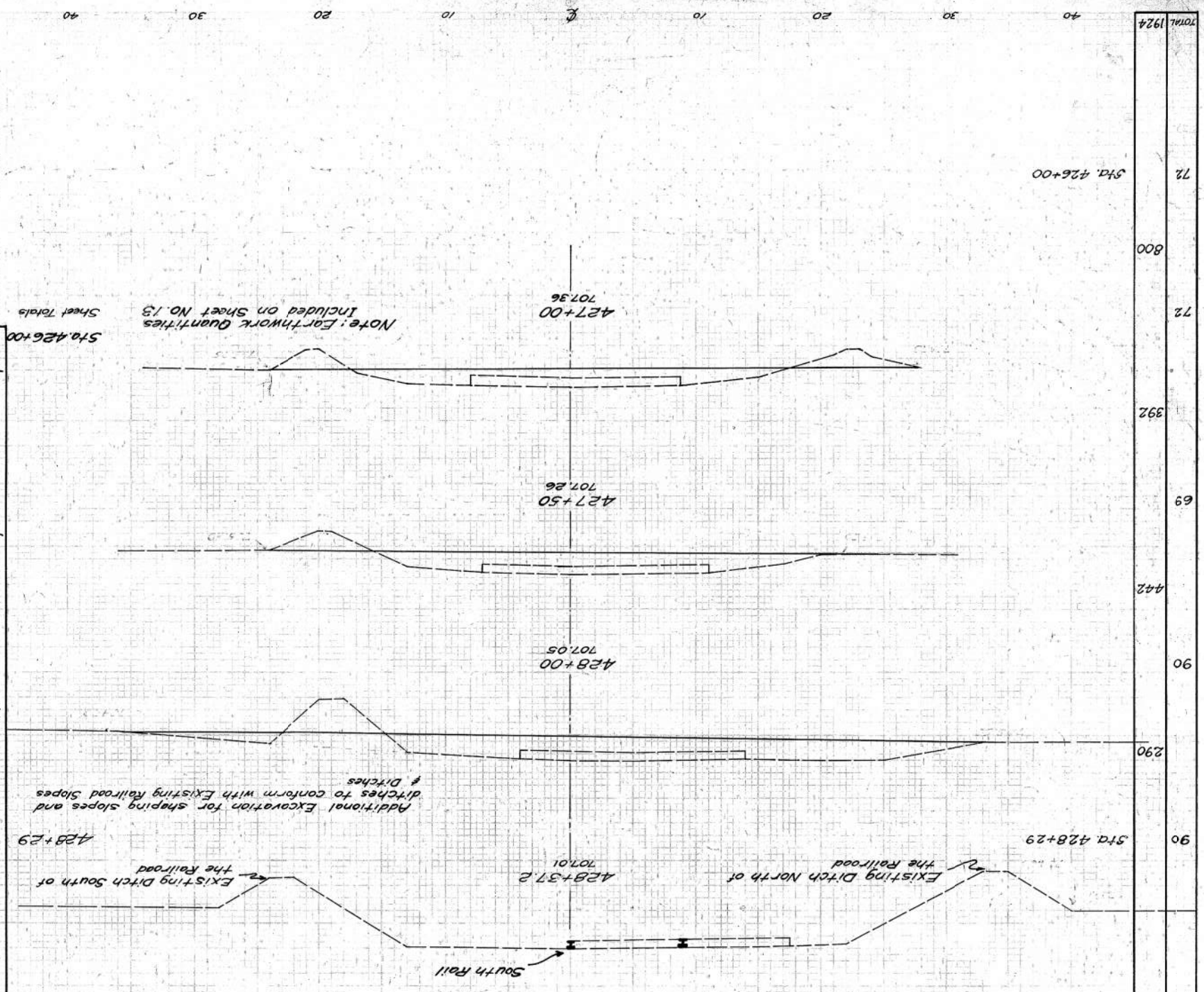
FAP NO. 1941
FAGH 531-1(10) 1944

10 OHIO

14
44

FAGCP No.	FAGH SH-210	FAP No.
10	OHIO	1941/1944

DEFIANCE COUNTY
S.H.424 SEC. "A" (PT.)
PAULDING COUNTY
S.H.422 SEC. "Q" (PT.)



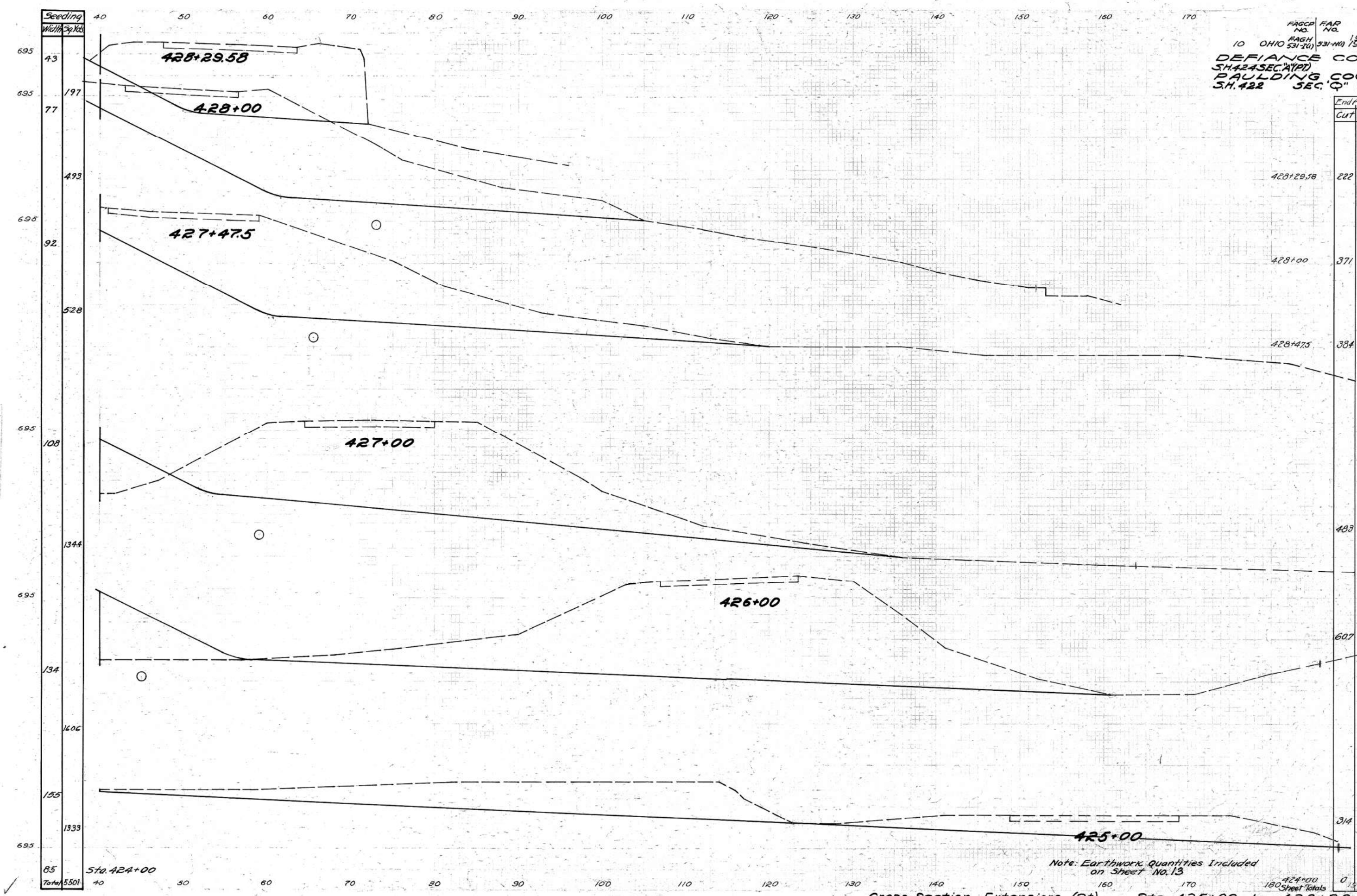
Sheet Totals						
Sta. 426+00	0	64	57	144		
	31	14				
			65	21		
	39	8				
			101	22		
	70	15				
	75	16				
	140	0				
428+29	70	15				
438	203					

End Area		Cu. Yds.	
Cut	Fill	Cut	Fill

C023301

FAGCP NO. | FAR NO. 16
10 OHIO FAGH 531-2(1) 531-H(1) 1941/1944 44

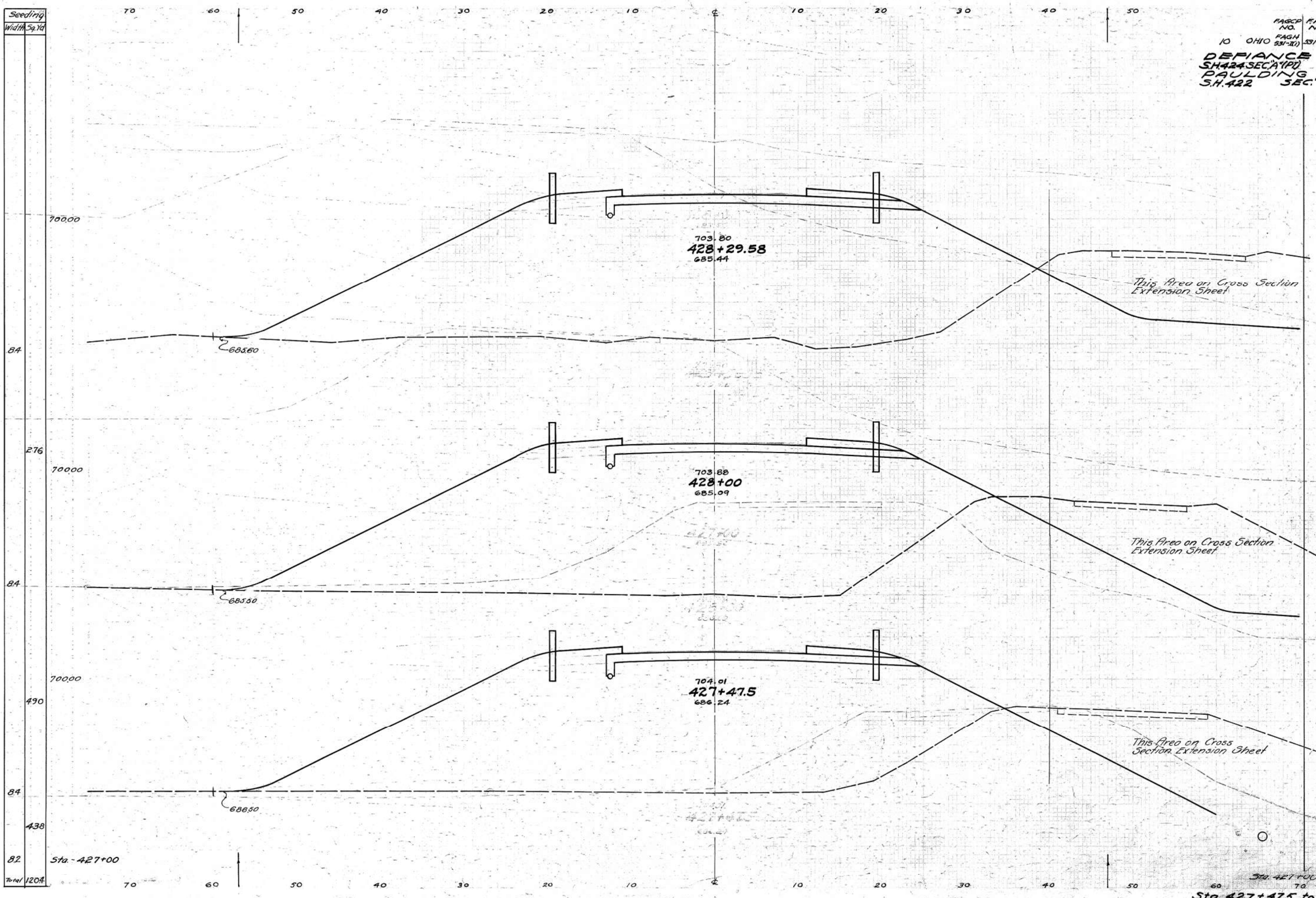
DEFIANCE COUNTY
S.H. 424 SEC. "A" (PT.)
PAULDING COUNTY
S.H. 422 SEC. "Q" (PT.)



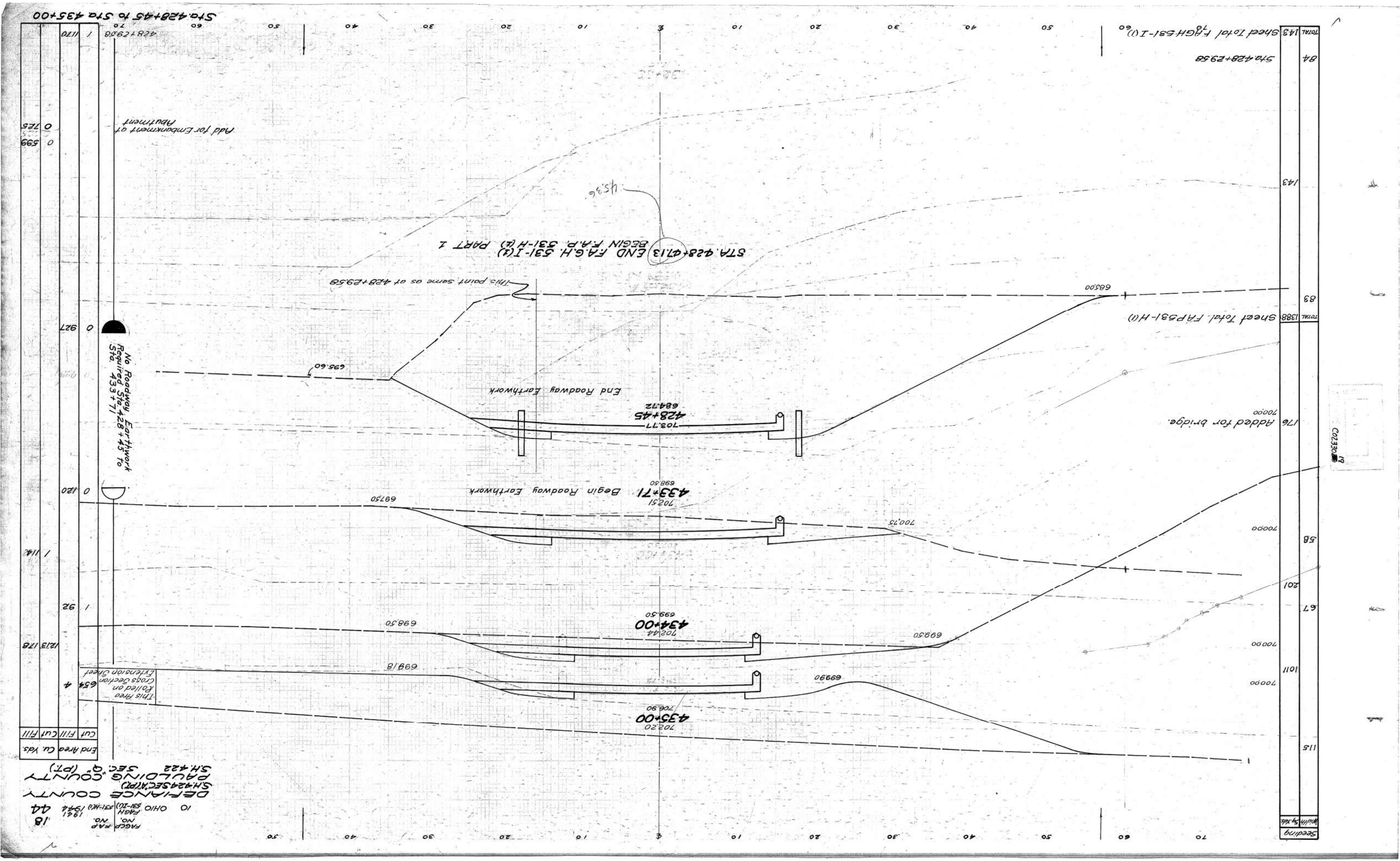
Cross Section Extensions (Rt.) Sta. 425+00 to 428+29.58

FASCP NO. | F.A.P. NO. 17
10 OHIO FAGH 531-1(1) 531-1(1) 1941/1944 44

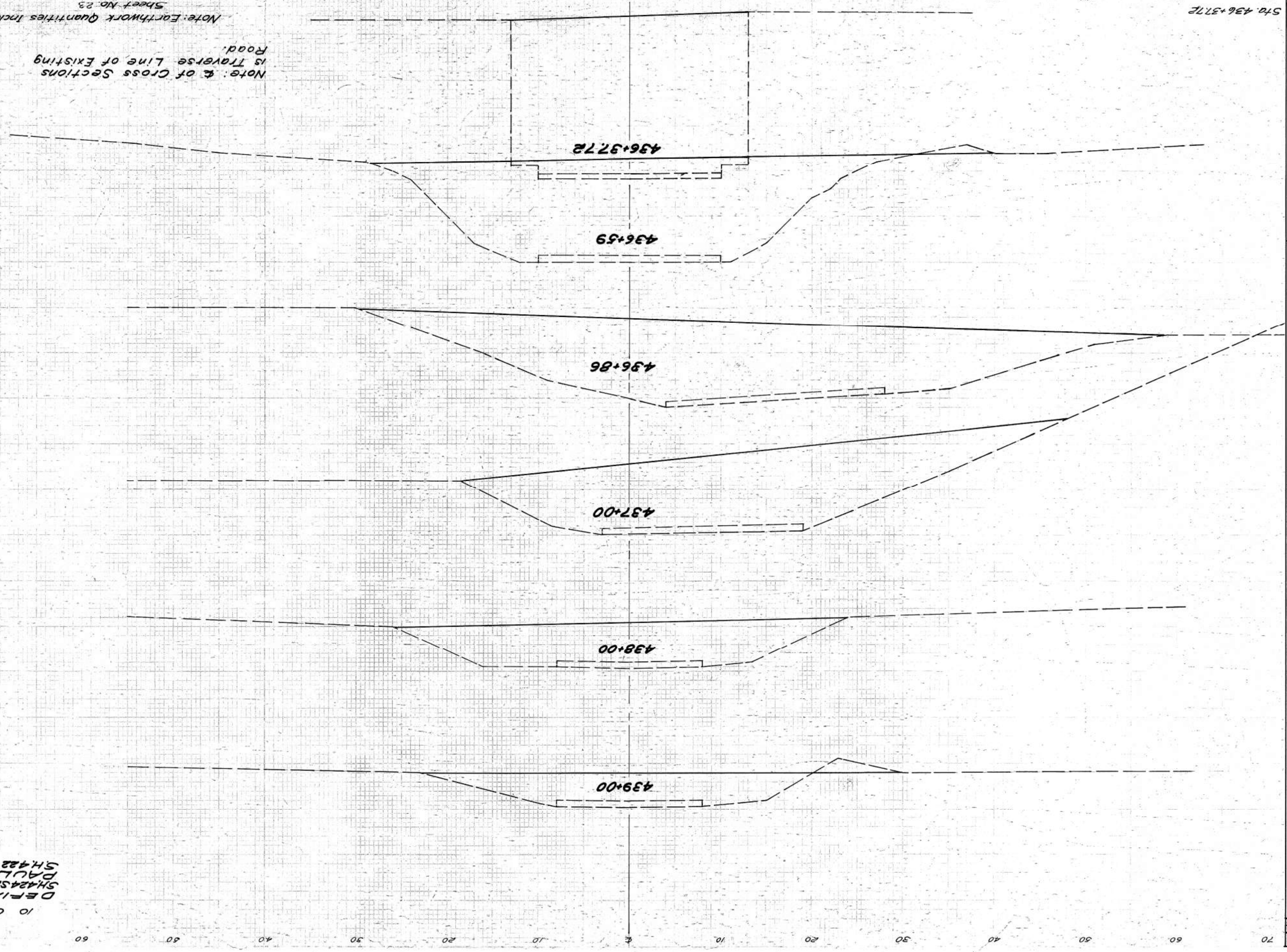
DEFIANCE COUNTY
S.H.424 SEC."A"(PT.)
PAULDING COUNTY
S.H.422 SEC."Q" (PT.)



C023018


Sta. 428+45 to Sta 435+00
428+29.58
Shed Total FAGH 531-I(1)
Sta. 428+29.58
143
Shed Total FAP 531-H(1)
83
Added for bridge.
176
700.00
End Roadway Earthwork
703.77
428+45
684.72
695.60
No Roadway Earthwork Required Sta. 428+45 To Sta. 433+71
This point same as at 428+29.58
STA. 428+47.13 END F.A.G.H. 531-I(4)
BEGIN F.A.P. 531-H(4) PART 1
Begin Roadway Earthwork
433+71
702.51
698.50
687.50
700.75
435+00
702.20
706.90
699.90
698.18
434+00
702.44
699.50
698.50
Add for Embankment of Abutment
Shed Total
143
Spacing
Width
Sq. Yds.
115
101
201
67
58
Cut
Fill
Cu. Yds.
End Area
Cut
Fill
Cut
Fill
4
654
92
1
178
1213
120
0
927
0
599
0
725
1
1170
1
1142
DEFIANCE COUNTY
S.H. 424 SEC. A (PT.)
PAULDING "COUNTY"
S.H. 422 SEC. Q (PT.)
10 OHIO
FAGH 531-I(1)
FAP 531-H(1)
1941
1944
18
44

Sections on Existing Road Sta. 436+37.72 to 439+00



Seeding Width	Seeding Sq. Yds.	Cut	Fill	Cu. Yds. Cut	Cu. Yds. Fill
695	26	436+37.72			
695	136				
695	89				
695	297				
695	109				
695	152				
695	87				
695	872				
695	70				
695	194				
695	73				
695	106	8			
		620	15		
		175	0		
		10	13	0	
		372	0		
		486	0		
		222	0		
		464	3		
		442	5		
		349	2		
		443	0		
		2265	20		
Grand Totals					

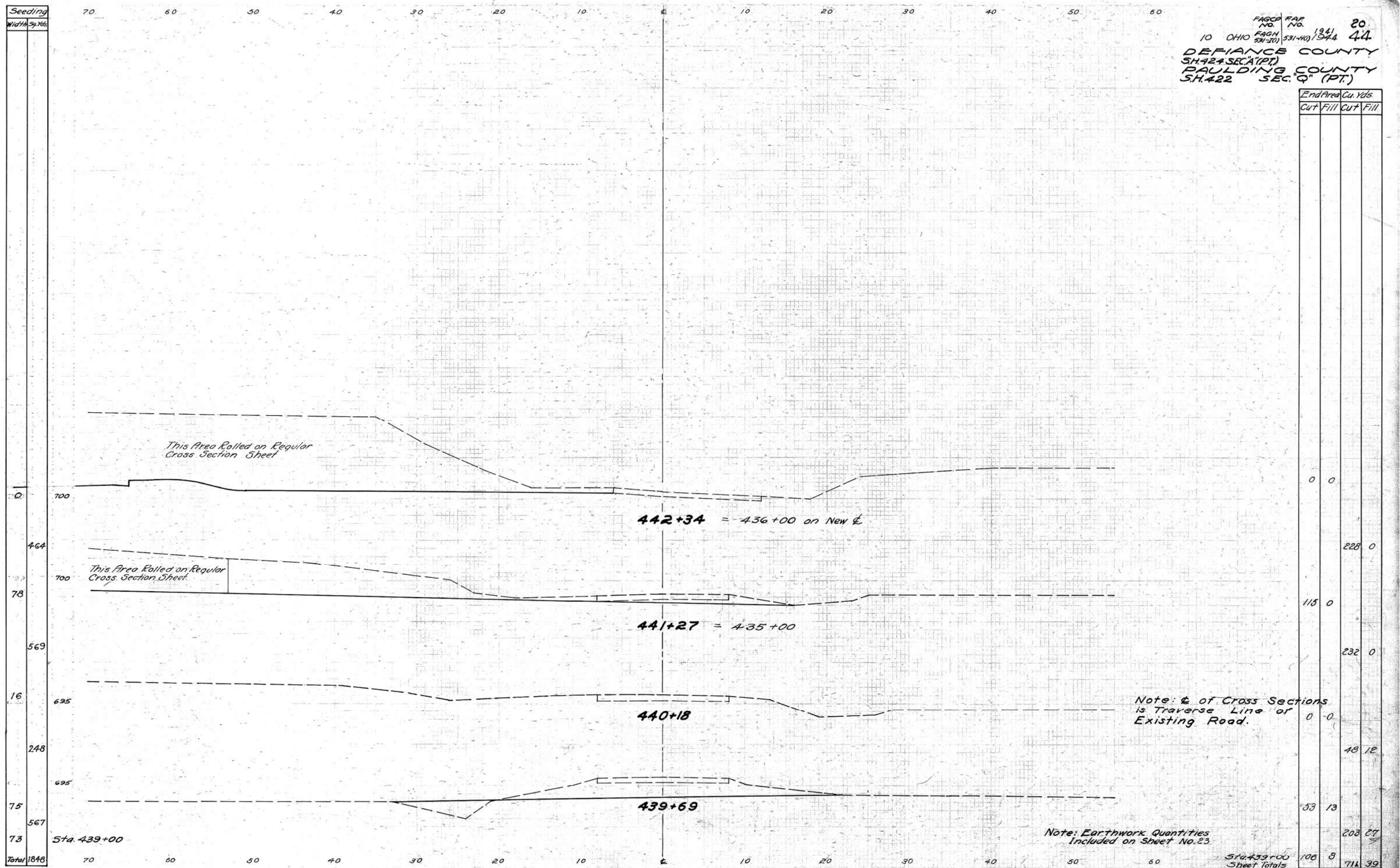
10 OHIO FAACH 531-1(1) FAAP NO. 531-H(1) 1941/1944 FACCP NO. 19 44

DEFIANCE COUNTY
SH424SEC'A'(PT)
PAULDING COUNTY
SH422 SEC. 'Q' (PT)

02013302D

FAGCP NO.	FAP NO.		
10 OHIO FAGH 531-2(1)	531-H(1)	1941/944	20 44

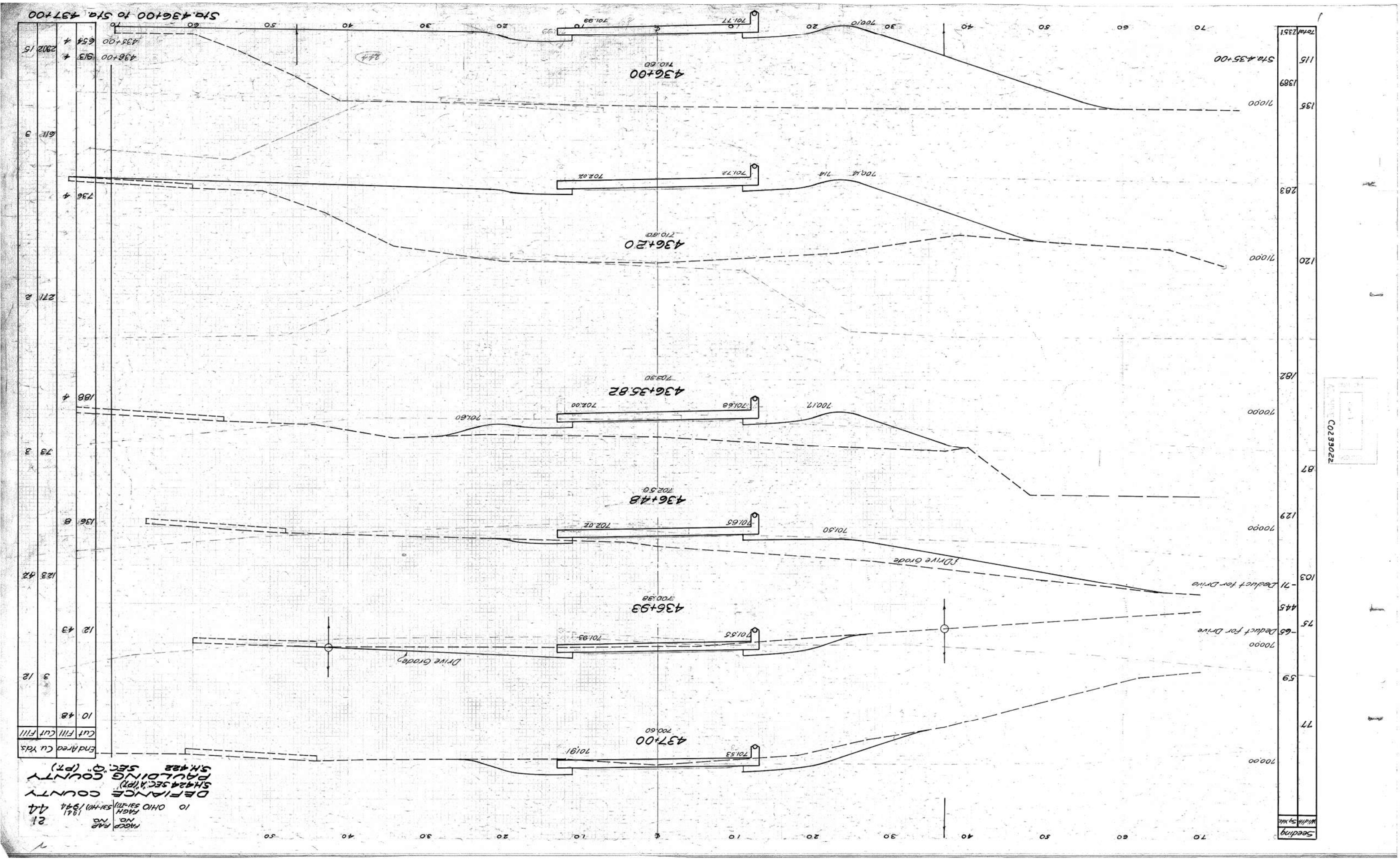
DEFIANCE COUNTY
S.H. 424 SEC. "A" (PT.)
PAULDING COUNTY
S.H. 422 SEC. "Q" (PT.)



End Area Cut	End Area Fill	Cu. Yds. Cut	Cu. Yds. Fill
0	0		
		228	0
115	0		
		232	0
0	0		
		48	12
53	13		
		203	27
106	8	711	39

Sections on Existing Road Sta. 439+69 to 442+34

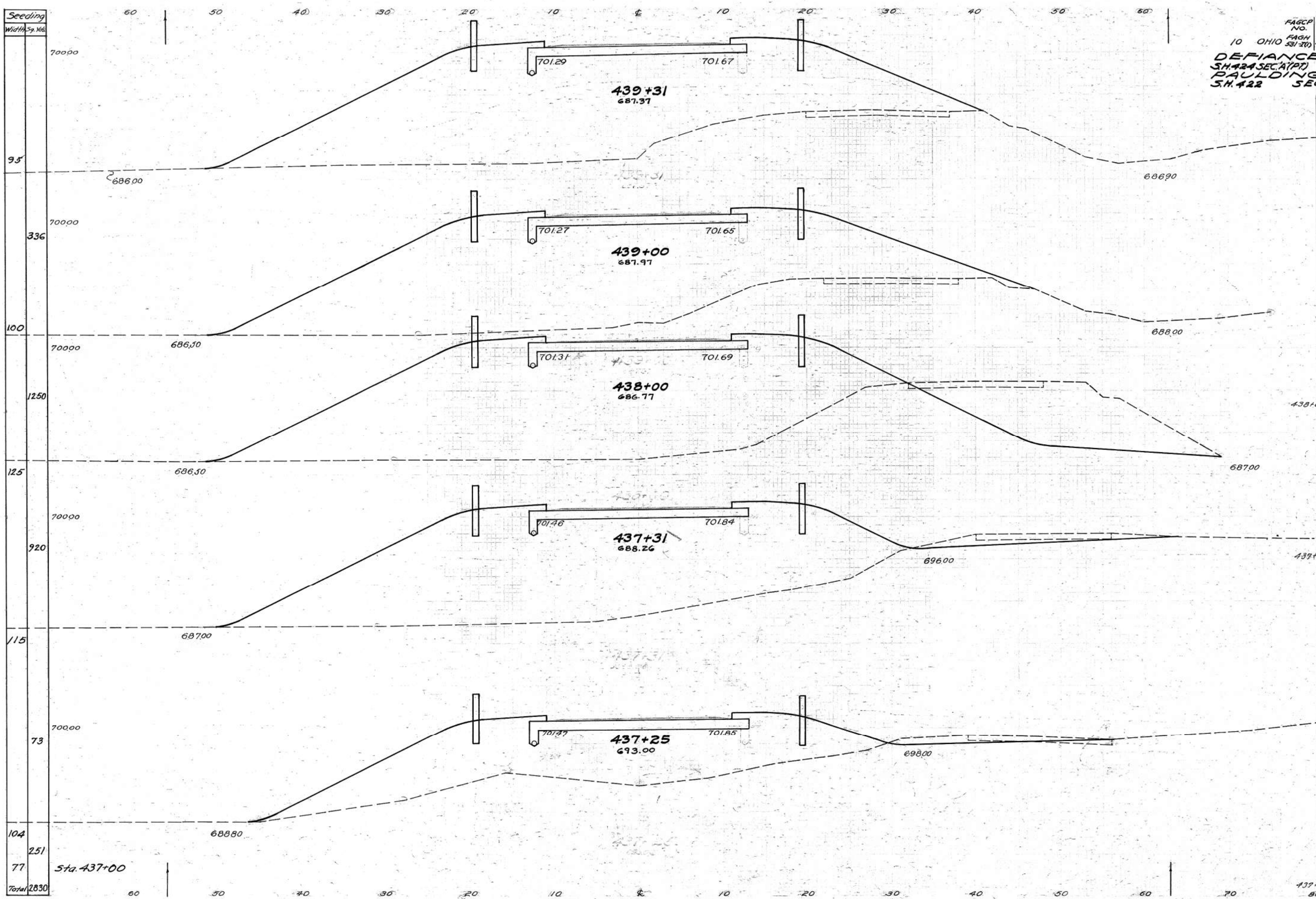
ARCHIVE C023302


Sta. 436+00 to Sta. 437+00
Sta. 435+00
436+00
436+20
436+35.82
436+48
436+93
437+00
Drive Grade
Deduct for Drive
Drive Grade
Deduct for Drive
Deduct for Drive
Seeding
Width
Station
Cut
Fill
Cut
Fill
End Area
Cu. Yds.
PAGE NO.
PAGE NO.
DEFIANCE COUNTY
SH 424 SEC. A (PT)
PAULDING COUNTY
SH 424 SEC. "Q" (PT)
10
OHIO
SH-HM
1941
SH-HM
1944
21
44
C0330222

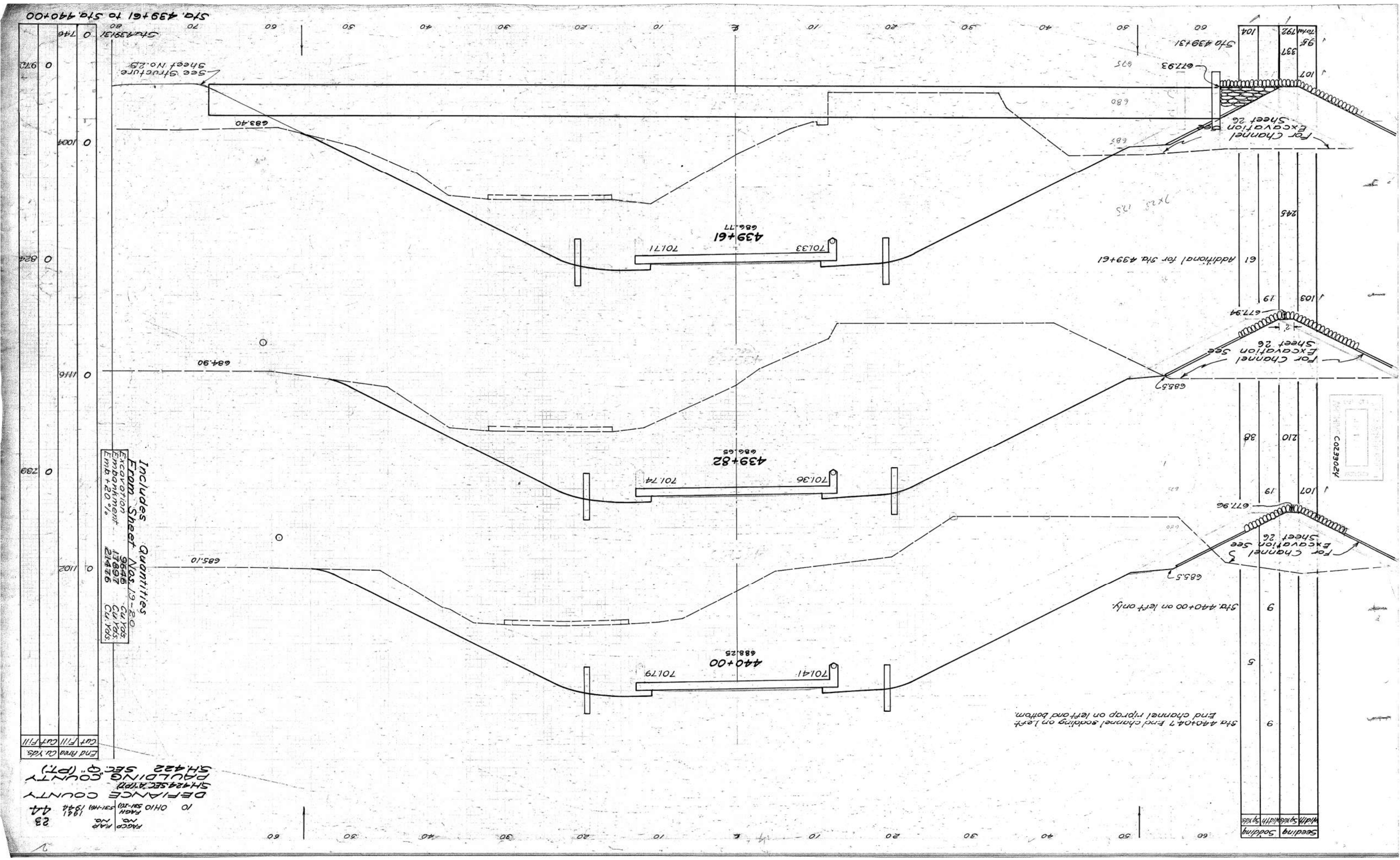
FAGCP NO. | FAP NO. 22

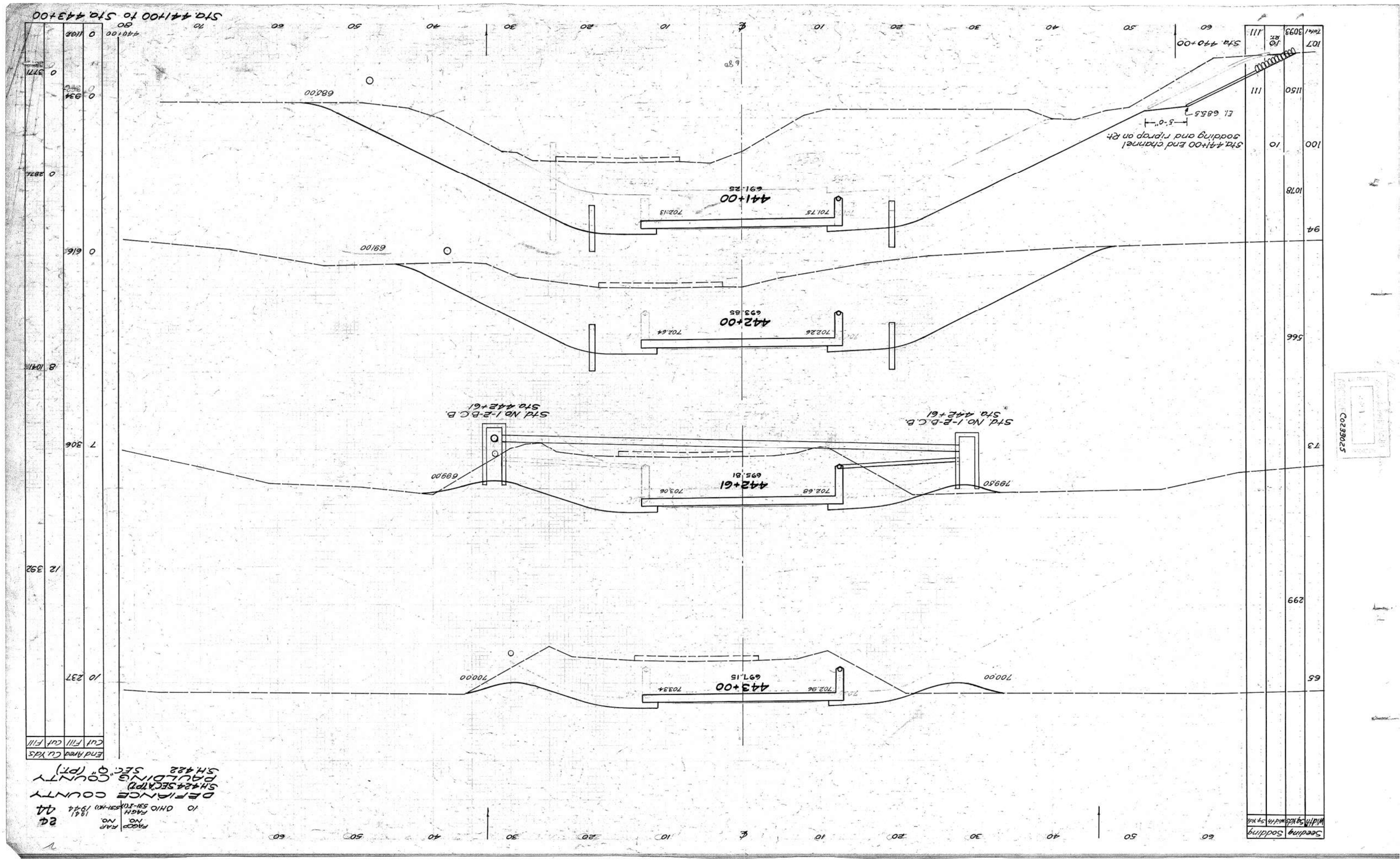
10 OHIO FAGH 531-2(1) (531-H(1)) 1941 1944 44

DEFIANCE COUNTY
S.H. 424 SEC. "A" (PT.)
PAULDING COUNTY
S.H. 422 SEC. "Q" (PT.)

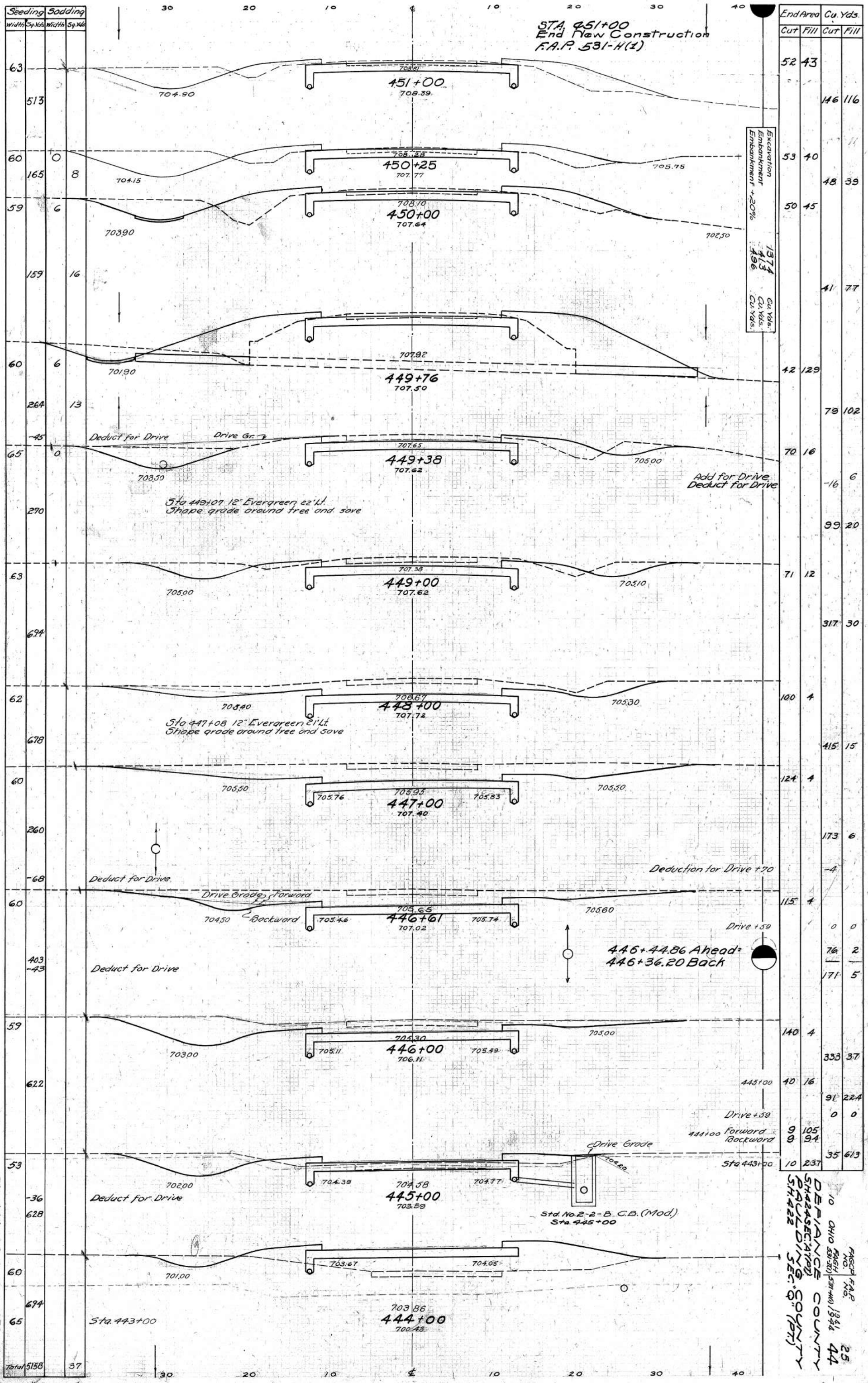


	End Area Cut	End Area Fill	Cu. Yds. Cut	Cu. Yds. Fill
	0	746		
			0	871
	0	770		
			289	2858
438+00	156	773		
			219	1929
437+31	15	736		
			3	124
	9	379		
			9	198
437+00	10	48		


Sta. 439+61 to Sta. 440+00
Sta 439+31
See Structure Sheet No. 28
677.93
For Channel Excavation See Sheet 26
683.40
439+61
686.77
701.33
701.71
684.90
677.94
For Channel Excavation See Sheet 26
439+82
686.65
701.36
701.74
685.10
677.96
For Channel Excavation See Sheet 26
440+00
688.25
701.41
701.79
Sta. 440+00 on left only.
Sta 440+47 End channel sodding on left
End channel riprap on left and bottom.
61 Additional for Sta. 439+61
Includes Quantities From Sheet Nos. 19-20
Excavation 9646 Cu Yds
Embankment 13897 Cu Yds
Emb +20% 21476 Cu Yds
Seeding
Sodding
Width
Sides
Width
Sides
End Area
Cu Yds.
Cut
Fill
Cut
Fill
DEFIANCE COUNTY
SH 424 SEC A (PT)
PAULDING COUNTY
SH 422 SEC Q (PT)
FACCP No. 10
FAGH No. 341-1(0)
OHIO 341-1(0)
FAAP No. 1941
1944
23
44
C0253024

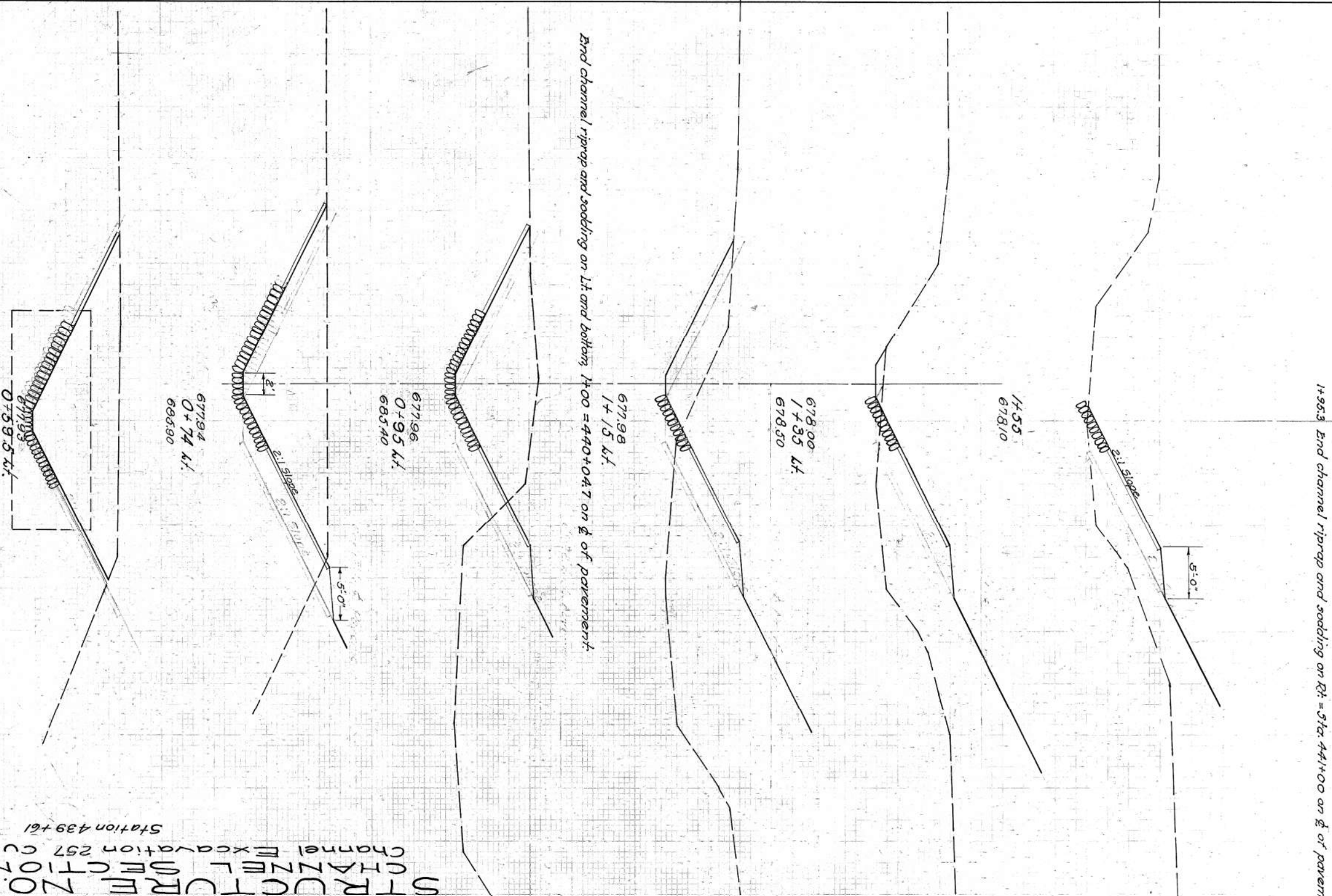

Sta. 441+00 to Sta. 443+00
Sta. 440+00
Sta. 441+00 End channel
Sodding and riprap on Rt.
El. 685.5
5'-0"
441+00
691.25
701.75
702.13
685.00
691.00
442+00
693.85
702.26
702.64
442+61
695.81
702.68
703.06
Std. No. 1-2-B.C.B.
Sta. 442+61
699.80
689.00
443+00
697.15
702.96
703.34
700.00
Seeding
Sodding
Width
Sq. Yds.
Width
Sq. Yds.
107
10 Rt.
1241
Tot.
3093
111
1150
111
100
10
1078
94
566
73
299
65
Station
Cut
Fill
Cu. Yds.
Cut
Fill
End Area
440+00
0
1108
0
934
0
3771
0
2874
0
616
8
1041
7
306
12
392
10
237
FAAP NO.
1841
FAGH 531-1(13)(531-1(10))
1944
10 OHIO
44
24
DEFIANCE COUNTY
PAULDING COUNTY
S.H. 424 SECTION
SH 422 SEC. "Q" (PT)
C0235025

C0233026


STA. 451+00
End New Construction
F.A.P. 531-H(1)
Seeding
Sodding
Width
Sq. Yds.
End Area
Cu. Yds.
Cut
Fill
451+00
450+25
450+00
449+76
449+38
449+00
448+00
447+00
446+61
446+00
445+00
444+00
Deduct for Drive
Drive Gr.
Add for Drive
Deduct for Drive
Sta 449+07 12" Evergreen 22' Lt.
Shape grade around tree and save
Sta 447+08 12" Evergreen 21' Lt.
Shape grade around tree and save
Deduction for Drive +70
Drive Grade Forward
Backward
446+44.86 Ahead=
446+36.20 Back
Drive +59
Drive Grade
Std. No. 2-2-B. C.B. (Mod.)
Sta. 445+00
Sta. 443+00
Sta. 444+00 to Sta. 451+00
Excavation
Embankment
Embankment +20%
1374 Cu. Yds.
413 Cu. Yds.
496 Cu. Yds.
DEFIANCE COUNTY
STA. 422 SEC. "A" (PT.)
PAULDING SEC. "C" (PT.)
STA. 422
OHIO
FAGCP NO. 1944
FAP NO. 44
25

Sta 439+61

Sodding Width Sq. Yds.	
Total	Sodding Quantities Shown on Sheet No. 23-24



	End of Area	Cu. Yds.	
	Cut	Fill	Cut	Fill
+59.5	146	0	78	0
+74	147	0		
+95	115	0	102	0
1+15	44	0	59	0
1+35	3	0	17	0
1+55	0	0	1	0

STRUCTURE NO. 3-C
CHANNEL SECTIONS
Channel Excavation 257 Cu.Yds.
Station 439+61

DEFIANCE COUNTY
PAULDING COUNTY
SH 424 SEC. A (PT)
SH 422 SEC. Q (PT)

FAGCP NO.	FAP NO.		
10 OHIO	FAGH 531-1(1)	531-1(1)	1941/1944	26 44

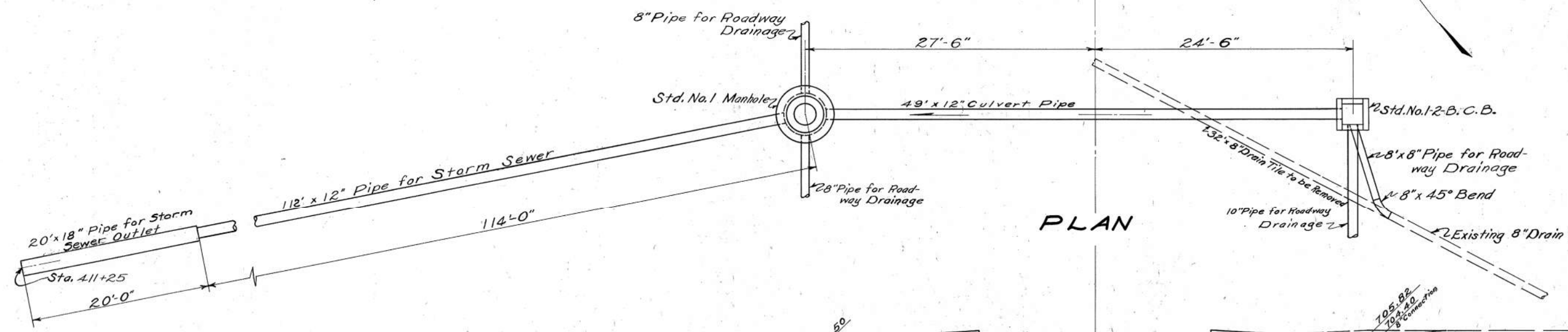
C0233027

FED. RD. DIST. NO.	STATE	FAGCP NO.	F.A.R NO.	FISCAL YEAR
10	OHIO	FASH 531-1(1)	531-H(1)	1943 1944

27
44

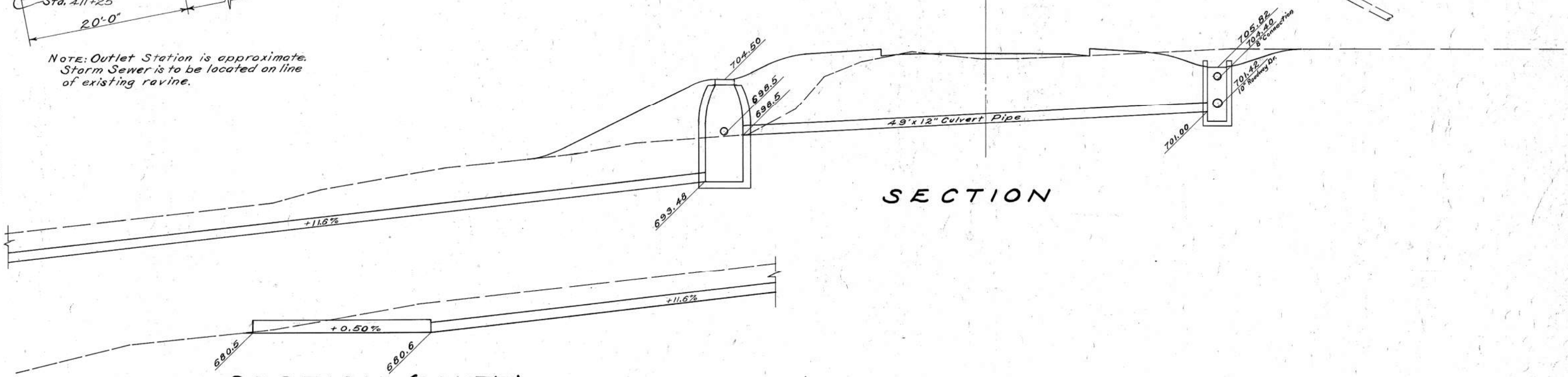
DEFIANCE COUNTY
S.H. 424 SEC. A (PT.)
PAULDING COUNTY
S.H. 422 SEC. Q (PT.)

STRUCTURE No. 1-C
STA. 411 + 50
SCALE: 1" = 5'



PLAN

NOTE: Outlet Station is approximate. Storm Sewer is to be located on line of existing ravine.



SECTION

SECTION (CONT'D.)

WORK REQUIRED

Build 49' x 12" Culvert Pipe to grade shown. Build Std. No. 1 Manhole on Left. Lay 112' x 12" Pipe for Storm Sewer and 20' x 18" Pipe for Storm Sewer Outlet on Left. Make all connections as shown. Build Std. No. 1-2B Catch Basin on Right and connection to existing 8" Drain Tile with 8" x 8" Pipe for Roadway Drainage and 8" x 45° Bend. Remove and store 32' x 8" Existing Drain Tile.

See Std. Drawings Nos. S-27 P.C.3; I-8 C.B. 1-2 A & B; I-8 M.H. No. 1; I-1, 2, 3, 4, & 5

ESTIMATED QUANTITIES

E-2, Excavation for Structures, Unclassified	32	Cu. Yds.
I-8, Std. No. 1 Manhole	1	Each
I-8, Std. No. 1-2B Catch Basin	1	Each
S-27, 12" Pipe for Roadway Culverts	49	Lin. Ft.
I-2, 12" Pipe for Storm Sewer	112	Lin. Ft.
I-2, 18" Pipe for Storm Sewer Outlet	20	Lin. Ft.
I-5, Pipe Special, 8" 45° Bend for Roadway Drainage	1	Each
I-3, 8" Pipe for Roadway Drainage	8	Lin. Ft.
E-12, 8" Pipe Removed and Stored	32	Lin. Ft.

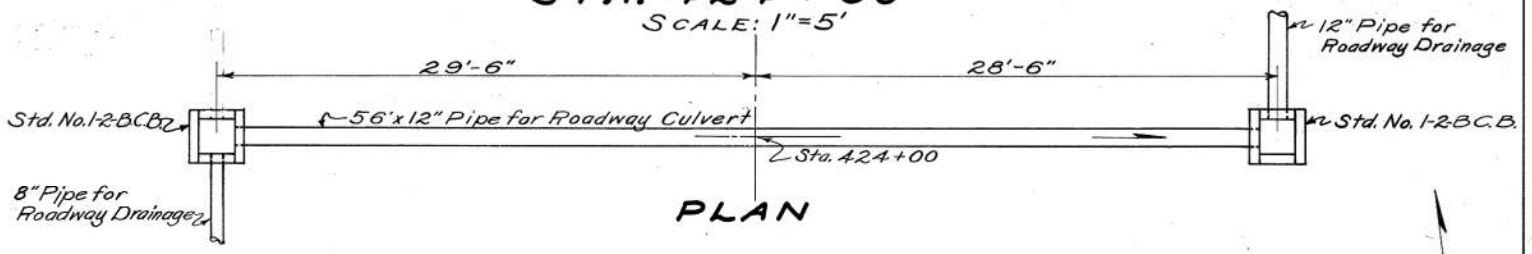
FED. RD. DIST. NO.	STATE	FAGCP NO.	FAP NO.	FISCAL YEAR
10	OHIO	FAGH 531-1(1)	531-H(1)	1941 1944

28
44

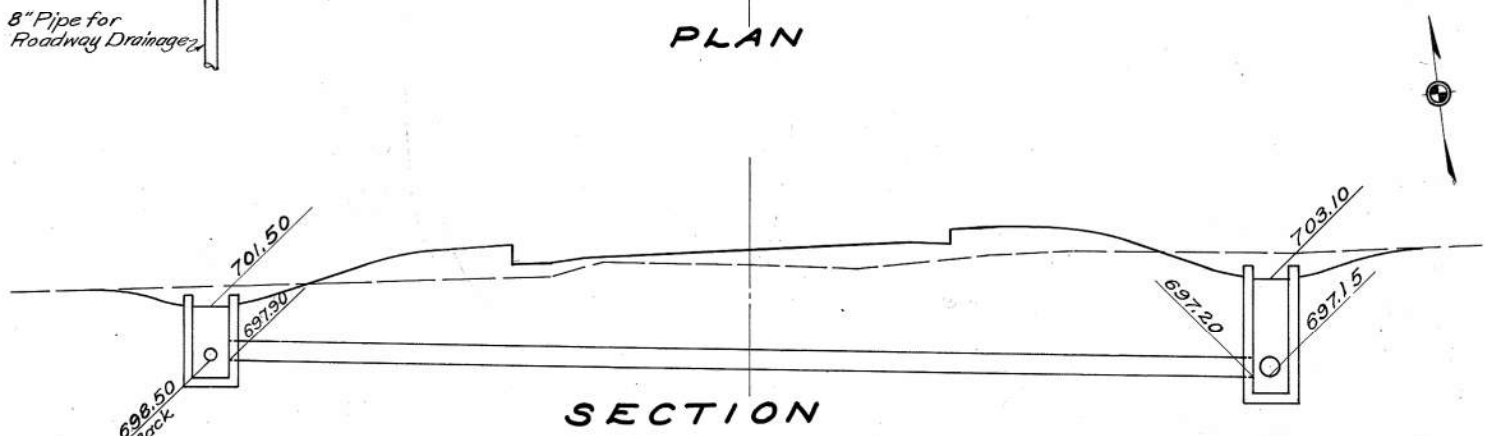
DEFIANCE COUNTY
S.H. 424 Sec. A (Pt.)
PAULDING COUNTY
S.H. 422 SEC. Q (Pt.)

STRUCTURE No. 2-C
STA. 424 + 00

SCALE: 1" = 5'



PLAN



SECTION

WORK REQUIRED

Build Std. 56' x 12" Roadway Culvert to grade shown and Std. No. 1-2 B Catch Basins on right and left. Make all connections as shown.

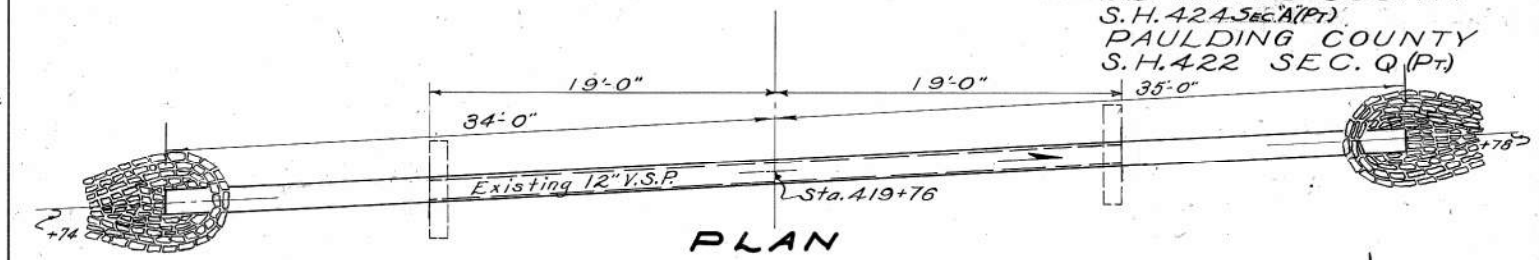
See Std. Drawings Nos. S-27 P.C. 3, I-8 C.B. 1-2 & 2-2.

ESTIMATED QUANTITIES

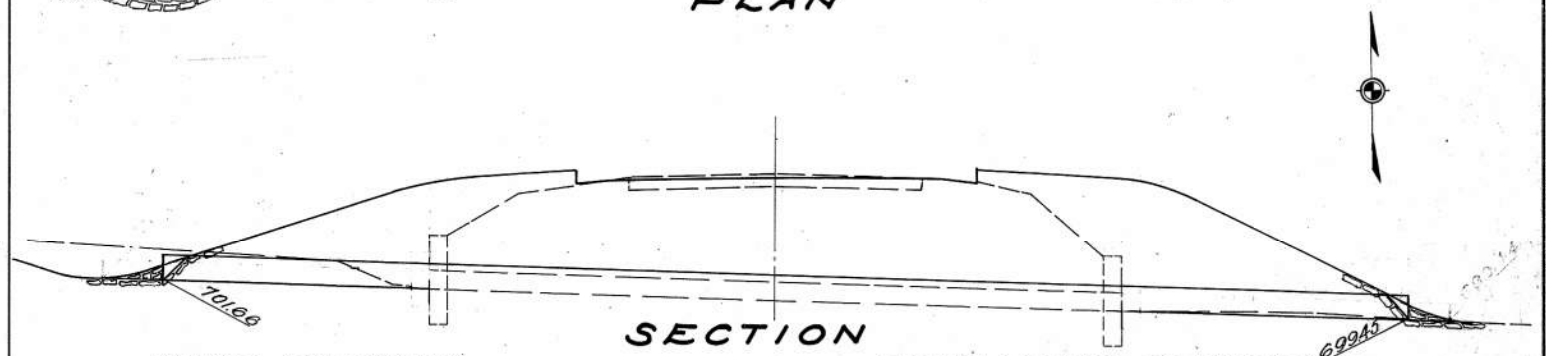
E-2, Excavation for Structures, Unclassified	34 Cu. Yds.
I-8, Std. No. 1-2 B Catch Basins	2 Each
S-27, 12" Pipe for Roadway Culverts	56 Lin. Ft.

STRUCTURE No. 5-C
STA. 449 + 76

SCALE: 1" = 5'



PLAN



SECTION

WORK REQUIRED

Remove and Store 38' Lin. Ft. of 12" V.S.P. Remove 2 Headwalls. Build Std 69' x 15" Roadway Culvert to grade as shown and place Type "A" Riprap (grouted) at ends as shown.

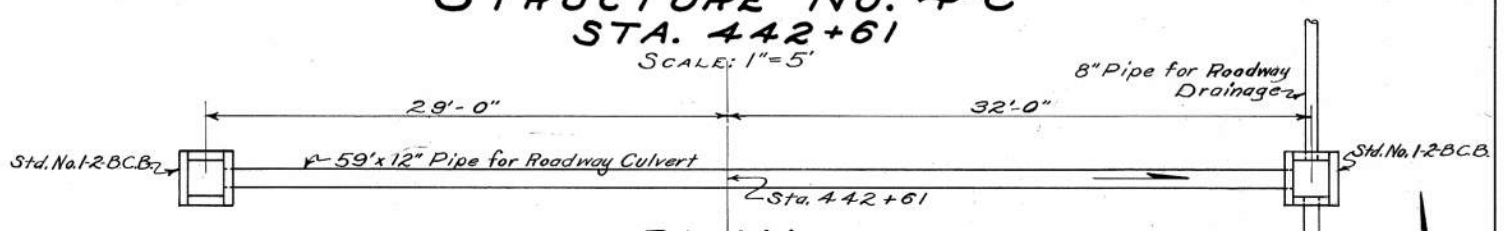
See Std. Drawing No. S-27 P.C. 3

ESTIMATED QUANTITIES

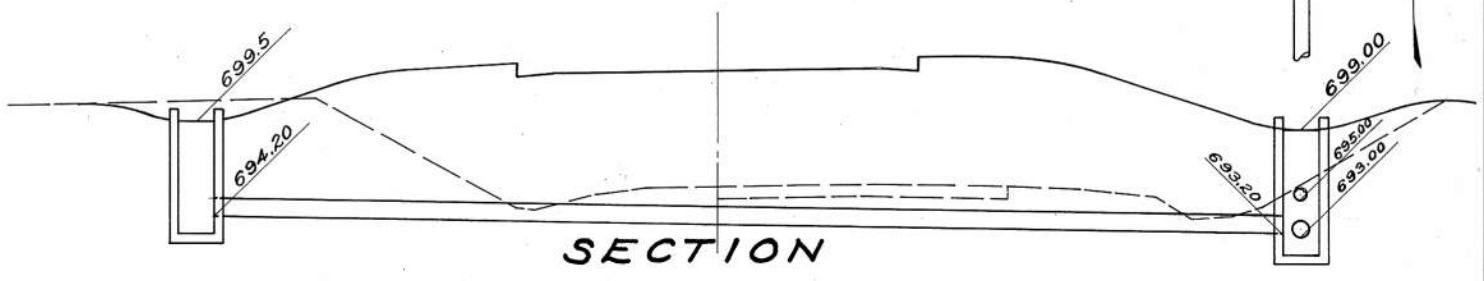
E-2, Excavation for Structures, Unclassified	6 Cu. Yds.
S-27, 15" Pipe for Roadway Culverts	69 Lin. Ft.
I-10 Riprap Type "A" (Grouted)	10 Sq. Yds.
E-12 12" Pipe Removed and Stored	38 Lin. Ft.
S-22 Remove Portion of Existing Structure	1.3 Cu. Yds.

STRUCTURE No. 4-C
STA. 442 + 61

SCALE: 1" = 5'



PLAN



SECTION

WORK REQUIRED

Build Std. 59' x 12" Roadway Culvert to grade shown and Std. No. 1-2 B Catch Basins on right and left. Make all connections as shown.

See Std. Drawings Nos. S-27 P.C. 3, I-8 C.B. 1-2 A & B

ESTIMATED QUANTITIES

E-2, Excavation for Structures, Unclassified	16 Cu. Yds.
I-8, Std. No. 1-2 B Catch Basins	2 Each
S-27, 12" Pipe for Roadway Culvert	59 Lin. Ft.

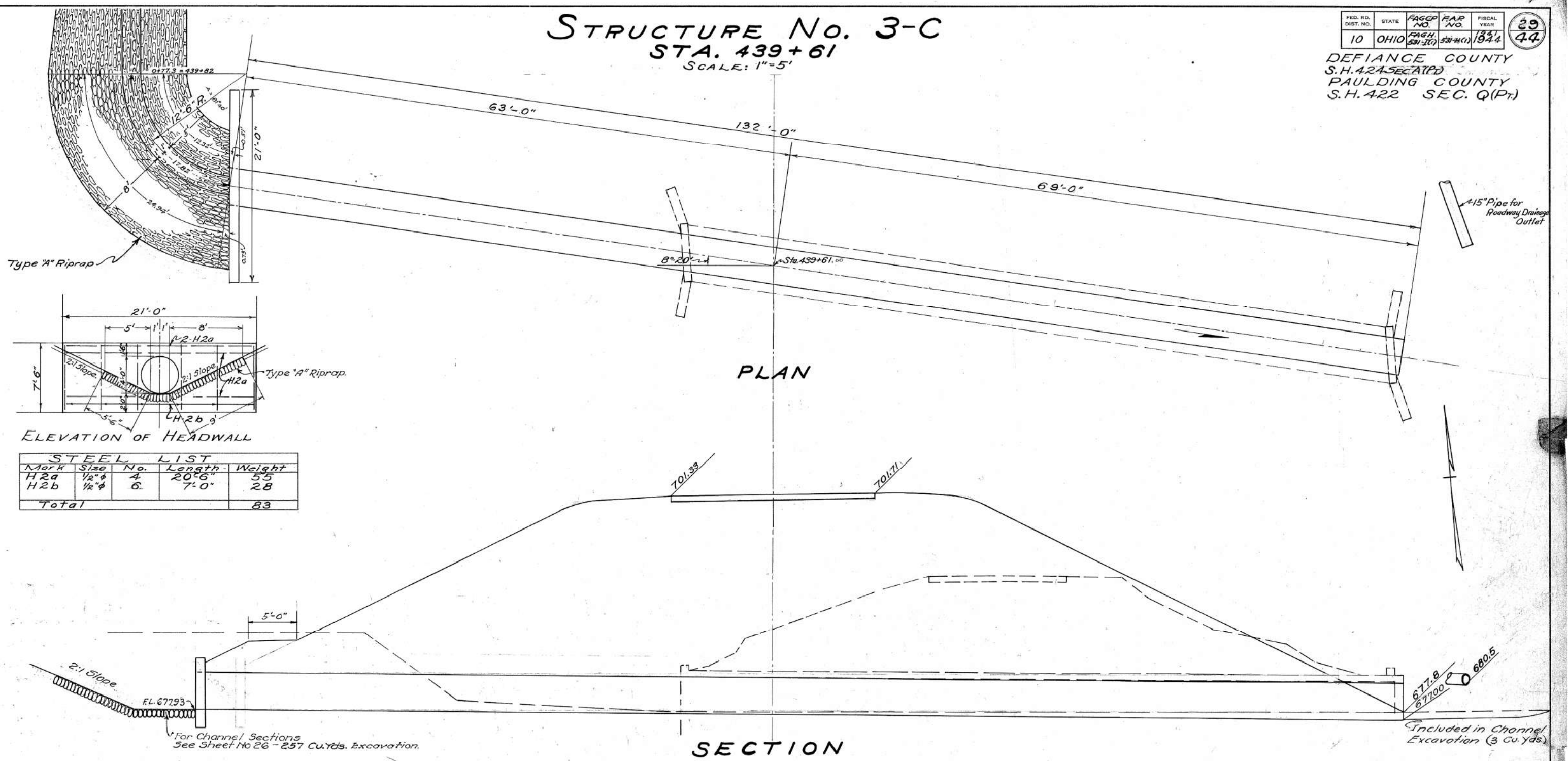
C02 3 30 29

FED. RD. DIST. NO.	STATE	FAGCP NO.	F.A.P. NO.	FISCAL YEAR
10	OHIO	FAGH 531-1(7)	531-H(1)	1944

29
44

DEFIANCE COUNTY
S.H. 424 SEC. A(PT.)
PAULDING COUNTY
S.H. 422 SEC. Q(PT.)

STRUCTURE No. 3-C
STA. 439+61
SCALE: 1"=5'



STEEL LIST				
Mark	Size	No.	Length	Weight
H2a	1/2"φ	4	20'-6"	55
H2b	1/2"φ	6	7'-0"	28
Total				83

WORK REQUIRED

Remove and dispose of existing 4'x4'x78' Concrete Slab Top Culvert. Build Std. 128'x48" Roadway Culvert to grade shown and Spec. Reinforced Concrete Headwall on left. Excavate channel and place Riprap as shown above and on Cross Sections, Sheet No. 26.

See Std. Drawings Nos. S-27 P.C.1; S-27 P.C.3

ESTIMATED QUANTITIES

E-2, Excavation for Structures, Unclassified	273 Cu. Yds.
E-3, Channel Excavation	290 Cu. Yds.
S-24, Removal of Existing Structure	Lump
I-10, Type "A" Riprap (Grouted)	133.5 Sq. Yds.
S-27, 48" Pipe for Roadway Culvert	132 Lin. Ft.
S-1, Concrete for Structures, Class "C"	5.3 Cu. Yds.
S-4, Reinforcing Steel	83 Lbs.

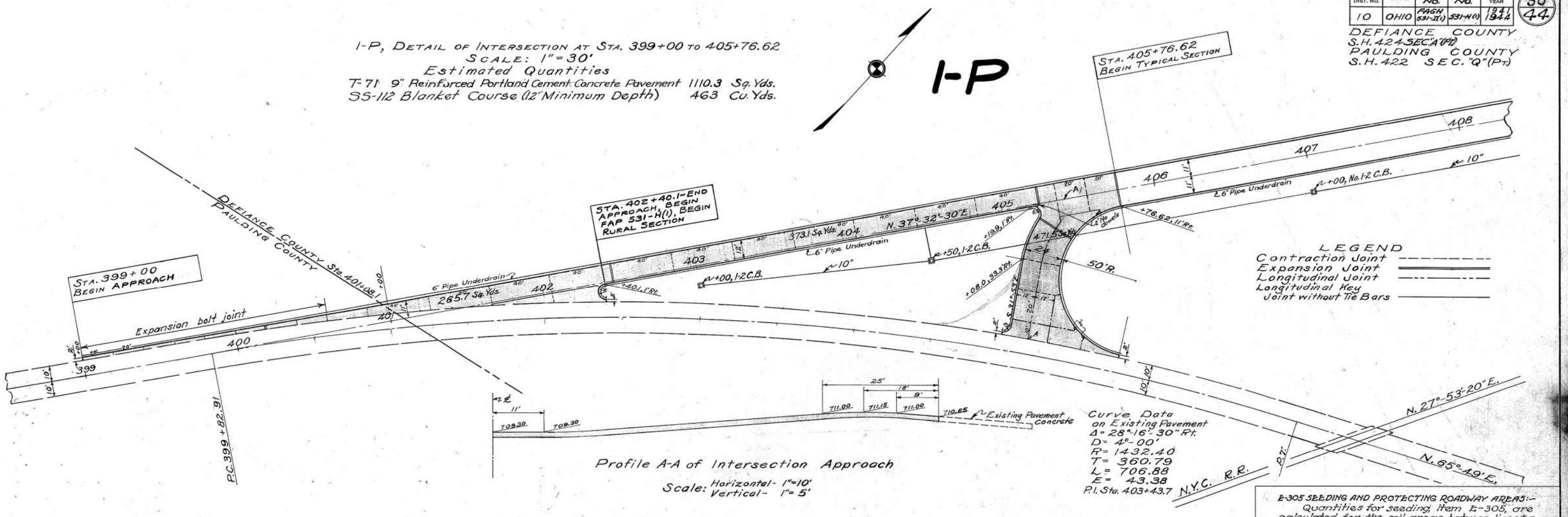
RECEIVED
DISTRICT 1
ARCHIVE Co 29030

FED. RD. DIST. NO.	STATE	FAGCP NO.	F.A.P. NO.	FISCAL YEAR
10	OHIO	FAGCP 531-2(1)	531-H(1)	1941 / 1942

30 / 44

DEFIANCE COUNTY
S.H. 424 SEC."A"(PT)
PAULDING COUNTY
S.H. 422 SEC. "Q"(PT)

1-P, DETAIL OF INTERSECTION AT STA. 399+00 TO 405+76.62
SCALE: 1" = 30'
Estimated Quantities
T-71 9" Reinforced Portland Cement Concrete Pavement 1110.3 Sq. Yds.
SS-112 Blanket Course (12" Minimum Depth) 463 Cu. Yds.



Profile A-A of Intersection Approach

Scale: Horizontal - 1" = 10'
Vertical - 1" = 5'

Curve Data on Existing Pavement
Δ = 28°-16'-30" Rt.
D = 4°-00'
R = 1432.40
T = 360.79
L = 706.88
E = 43.38
P.I. Sta. 403+43.7

E-305 SEEDING AND PROTECTING ROADWAY AREAS:-
Quantities for seeding, Item E-305, 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 the work limits. (Calculations were made with respect to the R/W limits of the existing road from Sta. 415+00 to Sta. 437+00).

All areas outside these limits where the vegetative growth has been injuriously disturbed or destroyed by contractor shall be restored and seeded in accordance with the provisions of Item E-305 by the contractor at his own expense.

CLASSIFIED EMBANKMENT MATERIAL ÷ The material required for the construction of Blanket Course may be a natural or manufactured product, and shall meet the requirements of Supplemental Specification SS-112.

E-305, SEEDING –
Seeding shall be performed at rate of 4# per 1000 sq. ft. All legumes shall be inoculated.

L-9, COMMERCIAL FERTILIZER –
Formula 4-12-4 shall be applied to all areas to be seeded or sodded at rate of 20# per 1000 sq. ft.

SODDING –
Excavation required to place sod at the finished surface shown on cross-sections is included in the unit price bid of "Sodding" for payment. The time limitations on laying sod as outlined under Item L-10 may be cancled by the Director.

TREE & STUMP SCHEDULE

Continued from Sheet No. 32

Sta.	Description	Dist. Rt. or Lt.	Disposal
437+27	10" Walnut	20' Lt.	Remove E-9
+42	18" Oak	2' Lt.	Remove E-9
439+85	30" Willow	15' Lt.	Remove E-9
440+00	15" Elm	26' Lt.	Remove E-9
+27	9" Cottonwood	40' Lt.	Remove E-9
+27	9" "	41' Lt.	Remove E-9
+27	9" "	42' Lt.	Remove E-9
+27	12" "	43' Lt.	Remove E-9
+39	36" "	48' Lt.	Remove E-9
444+06	12" Elm	63' Rt.	No Work
+26	4" "	35' Rt.	No Work
+33	42" Oak	16' Lt.	Remove E-9
+36	4" Elm	27' Rt.	No Work
+51	4" "	26' Rt.	No Work
+56	26" Oak	16' Lt.	Remove E-9
446+73	4" Elm	23' Rt.	Remove E-1
447+08	12" Evergreen	21' Lt.	Shape Grade to Save
449+07	12" "	22' Lt.	Shape Grade to Save
Total Removals E-9 F.A.P. 531-H(1)			49

GENERAL NOTES

UTILITIES ÷ (On Rural Section) All work required to relocate or adjust, etc. all Gas, Oil, Telephone and(or) Telegraph, Electric, Water or other Services to the new grade and alignment shall be completed by the Utilities in question.

TREE REMOVALS ÷ No trees shall be removed until specifically marked for removal by the Project Engineer. Particular care shall be taken to protect all trees not marked for removal.

RIP RAP ÷ The suitable material resulting from the removal of Existing Structures, or portions thereof may be used in the Construction of the new Riprap Type "A" (Grouted)

INTERSECTION QUANTITIES ÷ The excavation, embankment, seeding and sodding quantities for intersections are shown on the cross section sheets.

PIPE & GUARD RAIL STORAGE ÷ All pipe and guard rail listed for removal and storage shall be stored within the limits of the Right of Way between Sta. 399+00 & Sta. 400+00 for disposal by the State forces.

CATCH BASINS ÷ The side inlets on all No. 2-2B Catch Basins shall be omitted. The Top of the Catch Basin shall be the inlet and shall be set to the elevation indicated. The No's. 1-3, & 3 Catch Basins shall be modified to include a one (1) foot sump.

COMPACTION OF SHOULDERS ÷ The compaction of Embankment as per Sec. E-105 shall not apply to the upper four (4) inches of the Berm Areas. In lieu thereof the upper four (4) inches of the Berm Areas shall be compacted with an approved hand roller.

PIPE LAYING ÷ Whenever pipes 1-2, 1-3 and 1-4 are to be placed within or beneath an embankment, and the upper extremity of the pipe or drain will be less than two (2) feet below the Surface of the original ground, the embankment shall be constructed to an elevation of at least two (2) feet above the upper extremity of the pipe or drain, before laying. The trench shall then be excavated to the minimum width necessary for placing of pipe and proper backfilling. The pipe or drain shall then be laid and the trench backfilled before more embankment is placed thereon.

SCALPING ÷ All soil from scalping operations shall be incorporated in the upper 4" of shoulders, slopes and ditches. The cost of same shall be included in the price bid for E-1 roadway excavation.

TRAFFIC ÷ Traffic shall be maintained over the existing pavement on this project until the bridge construction has proceeded to the point where the contractor must remove the existing roadway in order to complete the embankment and pavement quantities at about the same time that the bridge will be finished.

The director shall decide when the road will be closed to traffic and the detour put into operation.

BACKFILL OVER PIPE UNDERDRAINS ÷ The material for porous backfill over pipe underdrains and below the bottom of the Blanket Course is included in the price bid for Item 1-4, Pipe Underdrains. That portion of the porous backfill above the No. 6 Aggregate and below the blanket course shall be of No. 6 Aggregate or of any material acceptable under S.S. 112

FED. RD. DIST. NO.	STATE	FAGCP NO.	FAP NO.	FISCAL YEAR
10	OHIO	FAGH 531-1(1)	531-H(1)	1941/1944

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TREE & STUMP SCHEDULE

DEFIANCE COUNTY
S.H. 424 SEC. "A" (PT.)
PAULDING COUNTY
S.H. 422 SEC. "Q" (PT.)

Sta.	Description	Dist. Rt. or Lt.	Disposal
400+13	14" Oak	123'Lt.	No Work
+16	20" Stump	107'Lt.	
+17	6" Ash	100'Lt.	
+20	16" Oak	140'Lt.	
+24	24" Stump	107'Lt.	
+25	24" Oak	118'Lt.	
+29	11" "	100'Lt.	
+30	4" "	122'Lt.	
+30	3" Maple	122'Lt.	
+32	4" "	101'Lt.	
+37	9" Oak	98'Lt.	
+38	4" Ash	86'Lt.	
+38	18" Oak	126'Lt.	
+39	18" Stump	160'Rt.	
+46	23" Oak	130'Lt.	
+49	20" "	63'Lt.	
+50	20" Maple	70'Lt.	
+53	4" Wild Cherry	99'Lt.	
+56	9" Oak	90'Lt.	
+57	3" Wild Cherry	73'Lt.	
+58	4" " "	81'Lt.	
+59	3" " "	99'Lt.	
+65	18" Elm	169'Rt.	
+68	7" Walnut	102'Rt.	
+69	20" Oak	43'Lt.	
+72	5" "	58'Lt.	
+72	6" "	76'Lt.	
+75	4" Maple	74'Lt.	
+75	14" Stump	113'Rt.	
+76	16" Hickory	72'Lt.	
+78	9" Ash	103'Rt.	
+79	10" Elm	43'Lt.	
+82	6" Oak	56'Lt.	
+84	24" Stump	31'Lt.	
+86	5" Ash	32'Lt.	
+87	3" Hickory	53'Lt.	
+89	5" "	48'Lt.	
+90	6" Oak	63'Lt.	
+91	18" Hickory	77'Lt.	
+92	9" Oak	42'Lt.	
+95	4" Hickory	63'Lt.	
+96	7" "	52'Lt.	
401+01	15" Stump	83'Lt.	
+02	6" Elm	47'Lt.	
+02	7" Walnut	83'Rt.	
+06	10" Cherry	33'Lt.	
+06	2" Ash	46'Lt.	
+08	9" Maple	94'Lt.	
+10	10" Walnut	71'Rt.	
+12	9" Elm	34'Lt.	
+12	9" Hickory	89'Lt.	
+14	5" "	80'Lt.	
+15	6" Maple	47'Lt.	
+16	17" Oak	50'Lt.	
+17	9" "	112'Lt.	
+18	10" "	39'Lt.	
+21	16" Stump	71'Lt.	
+27	5" Maple	79'Lt.	
+28	6" Hickory	54'Lt.	
+28	14" Oak	106'Lt.	
+28	16" Elm	58'Rt.	No Work

Sta.	Description	Dist. Rt. or Lt.	Disposal
401+28	10" Ash	154'Rt.	No Work
+30	18" Stump	44'Rt.	Remove E-9
+31	12" "	46'Lt.	No Work
+33	14" "	55'Lt.	
+33	4" Hickory	63'Lt.	
+34	18" Oak	110'Lt.	
+35	4" Hickory	59'Lt.	
+38	9" Oak	82'Lt.	
+39	4" Hickory	63'Lt.	
+39	5" Maple	73'Lt.	
+42	16" Ash	114'Lt.	
+42	12" Oak	86'Lt.	
+42	5" "	44'Lt.	No Work
+42	4" Stump	29'Lt.	Remove E-1
+43	7" Oak	46'Rt.	No Work
+47	20" "	53'Rt.	
+47	5" Hickory	64'Lt.	
+48	27" Oak	76'Lt.	
+52	6" "	75'Lt.	
+53	20" "	54'Lt.	
+53	5" Maple	56'Rt.	
+55	20" Oak	92'Lt.	
+55	22" "	59'Rt.	
+57	2-6" Hickory	83'Lt.	
+58	15" Stump	75'Lt.	
+59	4" Maple	68'Lt.	
+63	9" Oak	106'Lt.	
+71	2-2" Oak trees	93'Lt.	
+72	6" "	91'Lt.	
+72	7" "	103'Lt.	
+73	7" Hickory	72'Lt.	
+73	9" Oak	83'Lt.	
+76	10" "	90'Lt.	
+81	11" "	40'Lt.	
+83	7" "	90'Lt.	
+87	13" Stump	37'Lt.	
+87	4" Hickory	84'Lt.	
+88	6" Maple	55'Lt.	
+91	22" Oak	101'Rt.	
+92	7" Hickory	86'Lt.	No Work
+93	15" Stump	34'Lt.	Remove E-9
+95	5" Hickory	58'Lt.	No Work
+97	12" Hickory	107'Rt.	
402+02	10" Oak	79'Lt.	
+03	7" Elm	54'Lt.	
+06	20" Stump	108'Rt.	
+06	9" Oak	47'Lt.	
+09	17" "	46'Lt.	No Work
+10	7" Stump	34'Lt.	Remove E-1
+17	5" Maple	73'Lt.	No Work
+18	10" Oak	72'Lt.	
+19	5" Maple	71'Lt.	No Work
+21	28" Oak	13'Lt.	Remove E-9
+28	5" Maple	75'Lt.	No Work
+29	18" Oak	64'Lt.	
+31	6" "	55'Lt.	
+35	11" Hickory	73'Lt.	
+37	3" Oak	40'Lt.	
+40	13" "	81'Lt.	No Work
+42	12" Stump	19'Lt.	Remove E-9
+43	4" Oak	49'Lt.	No Work

Sta.	Description	Dist. Rt. or Lt.	Disposal
402+43	6" Oak	54'Lt.	No Work
+46	4" Hickory	76'Lt.	No Work
+47	20" Ash	87'Lt.	No Work
+57	6" Oak	33'Lt.	Remove E-1
+59	9" "	8'Lt.	Remove E-9
+62	6" Hickory	28'Lt.	Remove E-1
+62	5" Wild Cherry	54'Lt.	No Work
+63	4" Hickory	38'Lt.	No Work
+64	6" Oak	26'Lt.	Remove E-1
+67	4" Hickory	49'Lt.	No Work
+69	2-5" Hickory	42'Lt.	No Work
+69	28" Stump	8'Lt.	Remove E-9
+74	7" Hickory	67'Lt.	No Work
+78	5" "	59'Lt.	No Work
+79	4" "	71'Lt.	No Work
+79	21" Oak	32'Lt.	Remove E-9
+81	6" Hickory	45'Lt.	No Work
+83	20" Oak	49'Lt.	
+84	9" "	70'Lt.	
+85	9" "	61'Lt.	
+86	3" Hickory	67'Lt.	
+87	6" Oak	60'Lt.	No Work
+88	15" "	3'Rt.	Remove E-1
+88	9" Stump	10'Lt.	Remove E-9
+89	9" Hickory	5'Lt.	Remove E-9
+89	3" "	40'Lt.	No Work
+90	4" Oak	43'Lt.	No Work
+90	7" Hickory	29'Lt.	Remove E-1
+97	14" Stump	56'Lt.	No Work
+97	9" Oak	61'Lt.	
+98	9" "	67'Lt.	
+99	9" Twin Oak	73'Lt.	
403+01	4" Hickory	50'Lt.	
+04	4" Oak	61'Lt.	No Work
+04	7" Hickory	25'Lt.	Remove E-1
+05	5" "	58'Lt.	No Work
+06	9" Oak	66'Lt.	No Work
+07	11" Hickory	7'Lt.	Remove E-9
+12	10" "	22'Lt.	Remove E-9
+12	13" Stump	4'Lt.	Remove E-9
+12	6" Hickory	45'Lt.	No Work
+12	3" "	52'Lt.	
+13	9" "	60'Lt.	
+13	9" Twin Oak	72'Lt.	
+13	3" Hickory	52'Lt.	No Work
+15	7" Stump	15'Rt.	Remove E-1
+18	10" Oak	63'Rt.	No Work
+18	4" "	71'Lt.	No Work
+21	3" Hickory	65'Lt.	No Work
+22	7" "	10'Rt.	Remove E-1
+22	12" "	46'Lt.	No Work
+23	9" Stump	4'Lt.	Remove E-9
+24	10" Stump	8'Lt.	Remove E-9
+24	10" Oak	61'Lt.	No Work
+27	4" Elm	29'Lt.	Remove E-1
+28	5" Hickory	62'Lt.	No Work
+29	7" Oak	12'Lt.	Remove E-1
+30	10" Hickory	8'Rt.	Remove E-9
+30	4" Oak	69'Lt.	No Work
+31	5" Hickory	55'Lt.	No Work
+32	4" Oak	66'Lt.	No Work

Sta.	Description	Dist. Rt. or Lt.	Disposal
403+32	26" Oak	5'Rt.	Remove E-9
+32	16" "	22'Lt.	Remove E-9
+33	7" "	17'Lt.	Remove E-1
+35	4" Maple	45'Lt.	No Work
+35	4" Elm	36'Lt.	
+40	7" Oak	53'Lt.	
+42	7" Stump	77'Lt.	
+43	6" Oak	76'Lt.	No Work
+44	10" Stump	10'Lt.	Remove E-9
+45	14" "	68'Lt.	No Work
+47	15" Oak	84'Lt.	No Work
+47	11" Hickory	20'Lt.	Remove E-9
+49	15" Stump	14'Lt.	Remove E-9
+49	21" Oak	46'Lt.	No Work
+52	10" "	27'Lt.	Remove E-9
+52	6" Twin Hickory	33'Lt.	Remove E-1
+52	4" Oak	74'Lt.	No Work
+54	18" "	78'Lt.	No Work
+54	26" Ash	53'Lt.	No Work
+57	17" Elm	15'Lt.	Remove E-9
+57	10" Stump	31'Lt.	Remove E-9
+58	4" Oak	29'Lt.	Remove E-1
+63	5" "	30'Lt.	Remove E-1
+63	9" "	45'Lt.	No Work
+65	3" "	27'Lt.	Remove E-1
+74	6" Hickory	73'Lt.	No Work
+75	28" Oak	3'Lt.	Remove E-9
+76	18" Maple	40'Lt.	No Work
+76	22" Oak	74'Lt.	No Work
+79	9" Hickory	16'Lt.	Remove E-9
+83	7" "	72'Lt.	No Work
+94	5" "	58'Lt.	No Work
+94	18" Stump	6'Rt.	Remove E-9
+94	10" "	9'Rt.	Remove E-9
+95	5" Oak	61'Lt.	No Work
+95	9" "	22'Lt.	Remove E-9
+96	10" "	74'Lt.	No Work
404+03	9" Hickory	56'Lt.	No Work
+04	6" "	69'Lt.	No Work
+06	5" Oak	32'Lt.	Remove E-1
+09	7" Hickory	53'Lt.	No Work
+09	7" "	22'Lt.	Remove E-1
+11	5" Walnut	36'Lt.	No Work
+15	20" Oak	9'Lt.	Remove E-9
+17	7" Hickory	54'Lt.	No Work
+21	4" Oak	51'Lt.	
+25	3" Hickory	52'Lt.	
+31	5" "	59'Lt.	No Work
+35	16" "	30'Lt.	Remove E-9
+36	4" "	17'Lt.	Remove E-1
+36	22" Oak	43'Rt.	No Work
+41	4" Hickory	14'Lt.	Remove E-1
+45	15" "	45'Rt.	No Work
+49	14" "	25'Lt.	Remove E-9
+52	12" Elm	27'Lt.	Remove E-9
+57	23" Oak	50'Lt.	No Work
+58	6" "	66'Lt.	
+59	7" Hickory	36'Lt.	
+59	15" "	33'Rt.	No Work
+59	28" Oak	10'Lt.	Remove E-9
+65	17" Elm	35'Rt.	No Work

Sta.	Description	Dist. Rt. or Lt.	Disposal
404+69	26" Oak	42'Lt.	No Work
+69	7" Hickory	36'Lt.	
+70	9" Oak	71'Lt.	
+71	3" Hickory	59'Rt.	No Work
+74	12" "	34'Lt.	Remove E-9
+76	14" Stump	53'Rt.	No Work
+78	6" Oak	67'Lt.	No Work
+78	12" Hickory	15'Rt.	Remove E-9
+79	9" Oak	61'Rt.	No Work
+87	15" Stump	24'Rt.	Remove E-9
+89	12" Oak	66'Lt.	No Work
+91	5" Hickory	21'Lt.	Remove E-1
+95	12" Oak	13'Rt.	Remove E-9
+96	7" "	8'Lt.	Remove E-1
+96	6" "	67'Lt.	No Work
+97	9" "	42'Lt.	No Work
+97	9" "	41'Rt.	No Work
+98	14" Elm	13'Lt.	Remove E-9
405+00	4" Hickory	12'Rt.	Remove E-1
+02	10" Oak	62'Lt.	No Work
+03	13" Hickory	40'Lt.	No Work
+04	6" Twin Oak	63'Lt.	No Work
+07	6" Hickory	41'Lt.	No Work
+09	30" Oak	66'Rt.	Remove E-9
+11	30" Stump	31'Rt.	Remove E-9
+13	10" Oak	59'Lt.	No Work
+21	12" "	74'Rt.	No Work
+21	14" Hickory	74'Rt.	Remove E-9
+21	23" "	4'Rt.	Remove E-9
+24	6" "	9'Rt.	Remove E-1
+26	3" "	15'Lt.	Remove E-1
+26	20" Oak	64'Lt.	No Work
+26	6" Wild Cherry	52'Rt.	Remove E-1
+34	15" Oak	63'Lt.	No Work
+39	7" "	62'Lt.	No Work
+39	12" Hickory	4'Lt.	Remove E-9
+41	7" Stump	52'Lt.	No Work
+43	3" Elm	15'Rt.	Remove E-1
+45	4" Hickory	63'Rt.	Remove E-1
+48	20" Stump	3'Lt.	Remove E-9
+48	4" Hickory	17'Lt.	Remove E-1
+49	27" Oak	72'Rt.	Remove E-9
+50	9" "	7'Rt.	Remove E-9
+53	7" Hickory	48'Lt.	No Work
+57	7" "	22'Lt.	Remove E-1
+58	4" Oak	47'Lt.	No Work
+58	6" "	66'Rt.	Remove E-1
+60	20" Twin Oak	61'Lt.	No Work
+64	6" Hickory	26'Lt.	Remove E-1
+65	24" Oak	22'Rt.	Remove E-9
+68	9" "	66'Rt.	No Work
+70	3" "	71'Rt.	Remove E-1
+72	9" "	88'Rt.	No Work
+72	4" Hickory	42'Lt.	Remove E-1
+73	9" Stump	23'Rt.	Remove E-9
+76	20" Oak	62'Rt.	No Work
+77	6" Elm	53'Rt.	No Work
+77	20" Oak	22'Rt.	Remove E-9
+78	12" "	61'Lt.	No Work
+79	32" "	17'Lt.	Remove E-9
+81	4" Elm	49'Rt.	No Work

Sta.	Description	Dist. Rt. or Lt.	Disposal
405+83	7" Hickory	17'Lt.	Remove E-1
+85	15" Oak	60'Lt.	No Work
+87	15" "	54'Lt.	No Work
+91	7" Hickory	3'Lt.	Remove E-1
+92	17" Oak	82'Rt.	No Work
+93	15" "	30'Lt.	Remove E-9
+93	4" "	22'Lt.	Remove E-1
+94	14" "	63'Lt.	No Work
+95	12" Elm	15'Rt.	Remove E-9
+97	6" Hickory	35'Lt.	Remove E-1
+98	17" Oak	66'Rt.	No Work
406+02	18" "	89'Rt.	
+03	24" "	93'Rt.	
+03	11" Elm	71'Rt.	No Work
+06	16 Oak	3'Lt.	Remove E-9
+07	14" Hickory	20'Rt.	Remove E-9
+08	6" "	3'Lt.	Remove E-1
+08	5" Oak	60'Lt.	No Work
+10	15" Elm	60'Rt.	
+11	18" "	68'Rt.	
+11	18" "	60'Lt.	
+11	7" Hickory	55'Lt.	No Work
+16	4" "	14'Lt.	Remove E-1
+17	7" "	38'Lt.	Remove E-1
+17	4" "	13'Lt.	Remove E-1
+17	9" Oak	65'Lt.	No Work
+20	5" Elm	60'Rt.	No Work
+22	18" Oak	11'Lt.	Remove E-9
+22	6" "	52'Lt.	No Work
+24	18" Elm	99'Rt.	No Work
+26	5" Hickory	5'Lt.	Remove E-1
+27	6" Oak	55'Lt.	No Work
+27	24" Stump	36'Lt.	Remove E-9
+27	9" Elm	110'Rt.	No Work
+28	7" Oak	56'Lt.	No Work
+28	9" "	30'Lt.	Remove E-9
+28	20" Hickory	17'Rt.	Remove E-9
+30	19" Elm	90'Rt.	No Work
+36	7" Oak	75'Lt.	No Work
+37	15" Hickory	50'Rt.	No Work
+37	12" "	20'Lt.	Remove E-9
+38	3" Oak	74'Lt.	No Work
+43	20" "	13'Lt.	Remove E-9
+43	30" Stump	71'Lt.	No Work
+44	12" "	122'Rt.	
+44	4" Oak	57'Lt.	
+45	23" Stump	111'Rt.	No Work
+51	7" Oak	6'Rt.	Remove E-1
+51	12" Hickory	5'Rt.	Remove E-9
+52	17" Elm	93'Rt.	No Work
+52	18" Hickory	135'Rt.	No Work
+60	19" Oak	63'Lt.	No Work
+61	13" "	40'Lt.	Remove E-9
+65	18" Hickory	64'Rt.	No Work
+68	24" Elm	82'Rt.	No Work
+72	14" Stump	76'Lt.	No Work
+75	7" Hickory	8'Rt.	Remove E-1
+76	19" Elm	149'Rt.	No Work
+76	21" Oak	2'Rt.	Remove E-9
+78	7" "	33'Lt.	Remove E-1
+78	19" Elm	61'Rt.	No Work

Continued on Sheet No. 32

C0239032

FED. RD. DIST. NO.	STATE	FAGCP NO.	F.A.P. NO.	FISCAL YEAR
10	OHIO	FAGH 531-2(1)	531-H(1)	1971/1974

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DEFIANCE COUNTY
S.H. 424 SEC. "A" (PT.)
PAULDING COUNTY
S.H. 422 SEC. "Q" (PT.)

TREE & STUMP SCHEDULE

Continued from Sheet No. 46

Sta.	Description	Dist. Rt. or Lt.	Disposal
406+79	12" Hickory	11' Lt.	Remove E-9
+79	3" Oak	52' Lt.	No Work
+81	7" "	42' Lt.	Remove E-1
+82	10" Hickory	85' Rt.	No Work
+83	15" Elm	129' Rt.	No Work
+83	7" Oak	41' Lt.	Remove E-1
+84	12" "	137' Rt.	No Work
+84	24" "	53' Lt.	
+87	14" Stump	102' Rt.	
+87	9" Oak	74' Lt.	No Work
+89	14" Hickory	25' Lt.	Remove E-9
+89	16" Oak	150' Rt.	No Work
+92	15" Elm	89' Rt.	No Work
+96	7" Oak	39' Lt.	Remove E-1
+99	16" Stump	77' Lt.	No Work
407+01	11" Hickory	5' Lt.	Remove E-1
+01	12" "	132' Rt.	No Work
+06	7" Elm	121' Rt.	
+08	18" Oak	59' Rt.	
+09	16" Elm	54' Rt.	
+10	27" "	105' Rt.	No Work
+18	9" Oak	34' Rt.	Remove E-9
+18	18" Stump	48' Rt.	No Work
+26	7" Elm	156' Rt.	
+26	10" Oak	129' Rt.	
+28	9" Elm	154' Rt.	No Work
+28	18" Oak	8' Lt.	Remove E-9
+29	4" Elm	35' Rt.	Remove E-1
+34	6" Hickory	65' Lt.	No Work
+35	24" Stump	123' Rt.	
+35	10" Oak	131' Rt.	No Work
+36	6" Hickory	40' Lt.	Remove E-1
+37	18" Oak	59' Rt.	No Work
+37	18" "	33' Rt.	Remove E-9
+37	12" Hickory	23' Lt.	Remove E-9
+39	9" "	58' Lt.	No Work
+41	28" Stump	127' Rt.	
+43	3" Hickory	148' Rt.	
+43	18" "	63' Rt.	No Work
+45	12" Oak	1' Lt.	Remove E-9
+45	18" "	81' Rt.	No Work
+47	9" "	102' Rt.	
+47	9" Stump	71' Rt.	No Work
+48	17" "	29' Rt.	Remove E-9
+48	5" Hickory	59' Lt.	No Work
+54	7" Elm	64' Rt.	
+54	16" Oak	108' Rt.	
+57	10" Elm	190' Rt.	No Work
+58	13" Oak	3' Rt.	Remove E-9
+60	4" Elm	194' Rt.	No Work
+61	6" "	178' Rt.	No Work
+64	4" "	196' Rt.	
+65	4" "	196' Rt.	
+65	18" Stump	68' Lt.	No Work
+67	17" Oak	21' Lt.	Remove E-9
+68	9" Stump	73' Rt.	No Work
+68	13" Hickory	28' Lt.	Remove E-9
+70	13" Stump	3' Lt.	Remove E-9
+72	14" Elm	114' Rt.	No Work
+74	10" "	125' Rt.	
+74	10" Hickory	172' Rt.	No Work

Sta.	Description	Dist. Rt. or Lt.	Disposal
707+74	15" Oak	196' Rt.	No Work
+76	12" Elm	132' Rt.	
+79	12" Hickory	69' Rt.	No Work
+79	14" Oak	38' Lt.	Remove E-9
+80	15" "	58' Lt.	No Work
+80	19" "	198' Rt.	No Work
+85	19" "	20' Rt.	Remove E-9
+87	16" "	74' Rt.	No Work
+89	12" Stump	5' Lt.	Remove E-9
+91	2" Oak	27' Rt.	Remove E-1
+92	16" "	193' Rt.	No Work
+93	14" Hickory	14' Rt.	No Work
+94	19" Oak	18' Rt.	Remove E-9
+96	28" "	5' Rt.	Remove E-9
+98	9" Hickory	50' Lt.	No Work
408+01	20" Oak	35' Lt.	Remove E-9
+01	3" "	189' Rt.	No Work
+02	36" "	79' Rt.	No Work
+02	10" Hickory	24' Rt.	Remove E-9
+04	18" "	159' Rt.	No Work
+05	24" Oak	102' Rt.	
+06	14" "	77' Rt.	
+07	20" Stump	44' Rt.	No Work
+10	12" Hickory	98' Rt.	No Work
+12	10" Stump	33' Lt.	Remove E-9
+14	16" "	176' Rt.	No Work
+17	12" Hickory	38' Lt.	Remove E-9
+20	4" Oak	33' Rt.	Remove E-1
+26	30" Elm	187' Rt.	No Work
+27	7" Stump	42' Lt.	Remove E-1
+32	11" Hickory	26' Rt.	Remove E-9
+38	20" Stump	184' Rt.	No Work
+39	16" Oak	156' Rt.	
+39	15" "	71' Rt.	
+39	15" "	80' Rt.	
+42	10" Hickory	163' Rt.	No Work
+42	11" "	44' Lt.	Remove E-9
+42	12" Dogwood	21' Rt.	Remove E-9
+43	15" Hickory	59' Rt.	No Work
+47	22" Oak	3' Rt.	Remove E-9
+47	21" "	36' Lt.	Remove E-9
+48	10" Hickory	36' Lt.	Remove E-9
+49	18" Oak	102' Rt.	No Work
+52	20" "	185' Rt.	
+54	15" "	170' Rt.	
+55	9" Hickory	135' Rt.	
+57	15" "	83' Lt.	
+57	10" "	46' Lt.	No Work
+57	5" "	7' Rt.	Remove E-1
+58	16" "	73' Lt.	No Work
+59	9" "	52' Lt.	
+63	14" Oak	159' Rt.	No Work
+68	16" Hickory	12' Lt.	Remove E-9
+72	12" "	28' Rt.	Remove E-9
+72	10" "	138' Rt.	No Work
+74	31" Oak	137' Rt.	
+75	11" Hickory	45' Lt.	No Work
+75	12" Stump	42' Rt.	Remove E-9
+77	15" Hickory	70' Rt.	No Work
+81	10" Oak	125' Rt.	
+81	20" Hickory	53' Lt.	No Work

Sta.	Description	Dist. Rt. or Lt.	Disposal
408+82	12" Elm	37' Rt.	Remove E-9
+86	19" Oak	98' Rt.	No Work
+86	16" Hickory	24' Lt.	Remove E-9
+87	12" "	26' Rt.	Remove E-9
+89	11" "	92' Rt.	No Work
+91	12" "	8' Lt.	Remove E-9
+91	14" "	6' Lt.	Remove E-9
+96	13" "	14' Rt.	Remove E-9
+99	22" Stump	126' Rt.	No Work
+99	11" Elm	31' Lt.	Remove E-9
409+04	17" Oak	21' Lt.	Remove E-9
+06	16" Hickory	31' Rt.	Remove E-9
+10	4" Elm	68' Rt.	No Work
+12	12" Hickory	9' Lt.	Remove E-9
+18	18" Oak	140' Rt.	No Work
+23	22" "	95' Lt.	
+29	10" Hickory	87' Lt.	No Work
+30	14" "	15' Lt.	Remove E-9
+32	16" "	79' Lt.	No Work
+35	19" Stump	90' Lt.	
+38	16" Hickory	43' Lt.	No Work
+43	12" "	18' Lt.	Remove E-9
+45	11" "	12' Lt.	Remove E-9
+45	2-5" Beech	87' Lt.	No Work
+51	16" Hickory	37' Lt.	Remove E-9
+51	16" "	7' Rt.	Remove E-9
+53	15" "	1' Rt.	Remove E-9
+53	3" "	81' Lt.	No Work
+59	5" Oak	87' Lt.	
+61	16" Hickory	83' Lt.	
+62	12" Oak	98' Lt.	No Work
+72	14" Hickory	11' Lt.	Remove E-9
+80	12" Stump	70' Lt.	No Work
+80	5" Dogwood	70' Lt.	
+86	17" Oak	96' Lt.	No Work
+89	22" Hickory	29' Lt.	Remove E-9
+91	14" Stump	30' Lt.	Remove E-9
+94	16" Oak	105' Lt.	No Work
+95	12" Hickory	66' Lt.	
410+06	12" "	61' Lt.	
+07	12" "	69' Lt.	
+07	14" Stump	92' Lt.	
+08	5"&7" Oak	74' Lt.	No Work
+11	18" Hickory	1' Rt.	Remove E-9
+13	16" "	7' Lt.	Remove E-9
+20	16" "	26' Lt.	Remove E-9
+25	24" Stump	66' Lt.	No Work
+25	3" Maple	66' Lt.	
+30	15" Stump	87' Lt.	
+31	19" Oak	102' Lt.	
+33	4" Dogwood	65' Lt.	
+33	16" Oak	98' Lt.	
+37	12" Hickory	71' Lt.	
+39	10" Oak	59' Lt.	
+41	10" Stump	92' Lt.	
+43	22" Hickory	80' Lt.	
+45	6" Ash	69' Lt.	
+50	4" Dogwood	92' Lt.	
+53	5" Oak	76' Lt.	No Work
+54	19" Hickory	15' Lt.	Remove E-9
+57	3" Beech	72' Lt.	No Work

Sta.	Description	Dist. Rt. or Lt.	Disposal
410+59	14" Stump	64' Lt.	No Work
+60	14" Hickory	58' Lt.	
+61	4" "	67' Lt.	
+63	4" "	81' Lt.	
+63	4" "	70' Lt.	
+66	13" "	10' Lt.	
+70	4" "	74' Lt.	
+71	2-4" Hickory	56' Lt.	No Work
+72	4" "	38' Lt.	Remove E-1
+73	3" "	33' Lt.	Remove E-1
+73	4" "	81' Lt.	No Work
+73	14" "	32' Lt.	Remove E-9
+75	21" Oak	9' Lt.	Remove E-9
+76	4" Hickory	69' Lt.	No Work
+81	5" Oak	79' Lt.	
+82	3" Hickory	77' Lt.	
+82	20" Oak	98' Lt.	No Work
+82	9" "	42' Lt.	Remove E-9
+85	5" Wild Cherry	44' Lt.	No Work
+85	6" Oak	87' Lt.	
+85	3" Elm	73' Lt.	
+88	5" Hickory	75' Lt.	
+89	12" "	58' Lt.	
+91	6" Elm	61' Lt.	
+91	4" Wild Cherry	65' Lt.	No Work
+92	5" Elm	28' Lt.	Remove E-1
+93	2-4" Elm trees	27' Lt.	Remove E-1
+99	3" Elm	31' Lt.	Remove E-1
+99	11" Twin Ash	42' Lt.	Remove E-9
+99	22" Oak	11' Lt.	Remove E-9
411+06	3" Hickory	61' Lt.	No Work
+10	18" Beech	75' Lt.	No Work
+11	4" Elm	41' Lt.	Remove E-1
+13	10" "	40' Lt.	Remove E-9
+13	9" Oak	50' Lt.	No Work
+14	5" Elm	58' Lt.	No Work
+14	6" Hickory	21' Lt.	Remove E-1
+15	6" Elm	38' Lt.	Remove E-1
+15	4" "	38' Lt.	Remove E-1
+16	9" "	60' Lt.	No Work
+22	4" Oak	63' Lt.	
+23	4" Elm	53' Lt.	
+25	4" Dogwood	60' Lt.	No Work
+27	12" Ironwood	32' Lt.	Remove E-9
+31	9" Wild Cherry	17' Lt.	Remove E-9
+40	5" Elm	13' Lt.	Remove E-1
+43	18" Stump	111' Lt.	No Work
+49	30" Sycamore	13' Lt.	Remove E-9
+54	24" Oak	74' Lt.	No Work
+56	3" "	71' Lt.	
+56	10" Wild Cherry	122' Lt.	No Work
+56	20" Oak	30' Lt.	Remove E-9
+58	18" "	94' Lt.	No Work
+61	12" "	87' Lt.	No Work
+64	24" Stump	25' Lt.	Remove E-9
+70	3" Oak	58' Lt.	No Work
+72	23" "	86' Lt.	No Work
+73	11" Hickory	35' Lt.	Remove E-9
+75	10" Oak	79' Lt.	No Work
+85	6" "	88' Lt.	
+93	13" Hickory	95' Lt.	No Work

Sta.	Description	Dist. Rt. or Lt.	Disposal
411+95	26" Hickory	59' Lt.	No Work
+95	7" "	62' Lt.	
412+00	26" Stump	87' Lt.	
+02	30" Beech	111' Lt.	
+02	25" Elm	34' Lt.	
+04	4" Beech	105' Lt.	
+05	4" Wild Cherry	81' Lt.	
+10	5" Oak	86' Lt.	
+12	7" Beech	105' Lt.	
+17	3" Oak	82' Lt.	
+18	10" "	94' Lt.	
+19	9" "	106' Lt.	
+26	7" "	112' Lt.	
+28	21" "	127' Lt.	
+28	6" "	94' Lt.	
+31	6" "	106' Lt.	
+37	7" "	115' Lt.	
+41	12" "	109' Lt.	
+43	7" "	134' Lt.	
+63	26" Twin Oak	120' Lt.	
+72	7" Oak	119' Lt.	
+72	7" "	112' Lt.	
+77	7" "	126' Lt.	
414+08	14" Hickory	64' Lt.	
422+36	4" Apple	42' Lt.	
+37	3" Peach	51' Lt.	No Work
+55	3" "	30' Lt.	Remove E-1
+55	3" "	32' Lt.	No Work
+65	1" "	10' Lt.	Remove E-1
+68	2" Apple	20' Lt.	Remove E-1
+76	10" "	6' Rt.	Remove E-9
+77	6" "	51' Lt.	No Work
+93	4" Peach	44' Lt.	
+95	3" "	50' Lt.	No Work
423+06	7" Apple	25' Rt.	Remove E-1
+06	2" Peach	2' Rt.	Remove E-1
+26	4" Apple	50' Rt.	No Work
+48	3" Peach	25' Rt.	Remove E-1
+56	2" "	50' Lt.	No Work
+59	2" Apple	47' Lt.	
+60	2" Peach	47' Lt.	
+60	28" Apple	43' Rt.	No Work
+70	24" Stump	36' Lt.	Remove E-9
+70	2" Mulberry	35' Lt.	Remove E-1
+73	4" Peach	25' Rt.	Remove E-1
+89	30" Apple	10' Rt.	Remove E-9
+90	28" "	20' Lt.	Remove E-9
424+93	24" "	17' Rt.	Remove E-9
425+12	1" "	36' Rt.	Remove E-1
+22	24" "	25' Rt.	Remove E-9
427+01	22" Elm	7' Lt.	Remove E-9
+80	9" Mulberry	97' Rt.	Remove E-9
+86	30" Elm	25' Rt.	Remove E-9
428+05	9" "	17' Lt.	Remove E-9
+12	10" "	17' Lt.	Remove E-9
+18	10" "	35' Lt.	Remove E-9
+20	10" Ash	20' Rt.	Remove E-9
+29	36" Maple	37' Lt.	Remove E-9
+30	13" Elm	47' Lt.	Remove E-9
+32	10" Ash	21' Lt.	Remove E-9
+33	10" "	23' Lt.	Remove E-9

Sta.	Description	Dist. Rt. or Lt.	Disposal
428+33	12" Ash	23' Lt.	Remove E-9
+35	12" "	12' Lt.	Remove E-9
+36	9" Elm	49' Lt.	Remove E-9
+38	9" Ash	45' Lt.	Remove E-9
+39	10" "	37' Lt.	Remove E-9
+40	9" "	51' Lt.	Remove E-9
Total Removals E-9 F.A.G.H. 531-2(1)			153
+42	11" Maple	60' Lt.	No Work
+43	10" Ash	47' Lt.	Remove E-9
+43	14" "	36' Lt.	Remove E-9
+54	7" "	9' Rt.	Remove E-1
+55	9" "	60' Lt.	No Work
+60	12" Maple	15' Lt.	Remove E-9
+60	14" "	15' Lt.	Remove E-9
+61	18" Ash	3' Lt.	Remove E-9
+68	12" "	63' Lt.	No Work
+72	10" "	16' Lt.	Remove E-9
+73	10" Maple	15' Lt.	Remove E-9
+74	9" "	14' Lt.	Remove E-9
+77	16" "	3' Lt.	Remove E-9
+77	18" "	3' Lt.	Remove E-9
+78	12" "	6' Lt.	Remove E-9
+78	18" "	6' Lt.	Remove E-9
+79	10" "	20' Lt.	Remove E-9
+80	9" Ash	50' Lt.	Remove E-9
+81	9" Elm	45' Lt.	Remove E-9
+81	14" Maple	24' Lt.	Remove E-9
+81	14" "	24' Lt.	Remove E-9
428+83	9" Ash	47' Lt.	Remove E-9
+99	20" Willow	31' Lt.	Remove E-9
429+00	12" "	31' Lt.	Remove E-9
+04	14" "	28' Lt.	Remove E-9
+05	14" Maple	21' Lt.	Remove E-9
+07	16" Willow	32' Lt.	Remove E-9
+08	9" Ash	44' Lt.	Remove E-9
+10	18" "	56' Lt.	Remove E-9
+10	9" Maple	34' Lt.	Remove E-9
+11	9" "	25' Lt.	Remove E-9
+20	12" "	58' Lt.	No Work
+20	14" "	58' Lt.	
+20	16" Elm	72' Lt.	
+23	30" Sycamore	65' Lt.	
+31	20" Stump	69' Lt.	
+32	10" Maple	70' Lt.	
+51	17" Willow	50' Lt.	
+89	10" Maple	59' Lt.	
+90	20" Willow	75' Lt.	No Work
433+16	21" Elm	19' Lt.	Remove E-9
+27	12" Locust	16' Lt.	Remove E-9
+58	6" Elm	3' Rt.	Remove E-1
+58	9" "	3' Lt.	Remove E-9
+58	12" "	2' Lt.	Remove E-9
+58	12" "	1' Lt.	Remove E-9
+58	18" "	5' Rt.	Remove E-9
+59	18" "	10' Rt.	Remove E-9
+66	14" Buckeye	6	Remove E-9
+86	12" Locust	25' Lt.	Remove E-9
+87	18" "	25' Lt.	Remove E-9
+89	10" "	25' Lt.	Remove E-9
+90	9" "	25' Lt.	Remove E-9
+99	12" Elm	26' Lt.	Remove E-9
434+10	12" "	56' Lt.	No Work

Continued on Sheet No. 30

ARCHIVE C0233033

FED. RD. DIST. NO.	STATE	FAGCP NO.	FAP NO.	FISCAL YEAR
10	OHIO	FAGH 531-2(1)	531-4(1)	1961/1964

33/44

DEFIANCE COUNTY
S.H. 424 SEC. "A" (P.T.)
PAULDING COUNTY
S.H. 422 SEC. "Q" (P.T.)

SUPER ELEVATION TABLES

D = 2°-30'
P.C. = Sta. 413+47.22 P.T. Sta. 425+68.15

Station	℄ Grade	Crown Deduction	Left Edge Elevation	Add to Left Edge	Right Edge Elevation	Remarks
411+97.22	707.73	.19	707.54	.00	707.54	
412+00	707.72		707.53	.00	707.53	
+25	707.66		707.47	.04	707.51	
+50	707.60		707.41	.16	707.57	
+75	707.54		707.35	.34	707.69	
413+00	707.48		707.29	.60	707.89	
+25	707.42		707.23	.84	708.07	
+50	707.36		707.17	1.10	708.27	
+75	707.30		707.11	1.14	708.25	
+97.72	707.25		707.06	1.14	708.20	
414+00	707.24		707.05		708.19	
+25	707.18		706.99		708.13	
+50	707.12		706.93		708.07	
+75	707.06		706.87		708.01	
415+00	707.00		706.81		707.95	
+25	706.94		706.75		707.89	
+50	706.88		706.69		707.83	
+75	706.82		706.63		707.77	
416+00	706.76		706.57		707.71	
+25	706.70		706.51		707.65	
+50	706.64		706.45		707.59	
+75	706.58		706.39		707.53	
417+00	706.52		706.33		707.47	
+25	706.46		706.27		707.41	
+50	706.40		706.21		707.35	
+75	706.34		706.15		707.29	
418+00	706.28		706.09		707.23	
+25	706.22		706.03		707.17	
+50	706.16		705.97		707.11	
+75	706.10		705.91		707.05	
419+00	706.04		705.85		706.99	
+25	705.98		705.79		706.93	
+50	705.92		705.73		706.87	
+75	705.86		705.67		706.81	
420+00	705.80		705.61		706.75	
+25	705.74		705.55		706.69	
+50	705.68		705.49		706.63	
+75	705.62		705.43		706.57	
421+00	705.56		705.37		706.51	
+25	705.50		705.31		706.45	
+50	705.44		705.25		706.39	
+75	705.38		705.19		706.33	
422+00	705.32		705.13		706.27	
+25	705.26		705.07		706.21	
+50	705.20		705.01		706.15	
+75	705.14		704.95		706.09	
423+00	705.08		704.89		706.03	
+25	705.02		704.83		705.97	
+50	704.96		704.77		705.91	
+75	704.90		704.71		705.85	
424+00	704.84		704.65		705.79	
+25	704.78		704.59		705.73	
+50	704.72		704.53		705.67	
+75	704.66		704.47		705.61	
425+00	704.60		704.41		705.55	
+18.15	704.56		704.37	1.14	705.51	
+25	704.54		704.35	1.12	705.47	
+50	704.48		704.29	1.03	705.32	
+75	704.42		704.23	.88	705.11	
426+00	704.36		704.17	.65	704.82	
+25	704.30		704.11	.38	704.49	
+50	704.24		704.05	.18	704.23	
+75	704.18		703.99	.06	704.06	
427+00	704.12		703.93	.00	703.93	
+18.15	704.08	.19	703.89	.00	703.89	

Note ~ ℄ grades as shown in above tables are not to be used in staking out pavement in field.

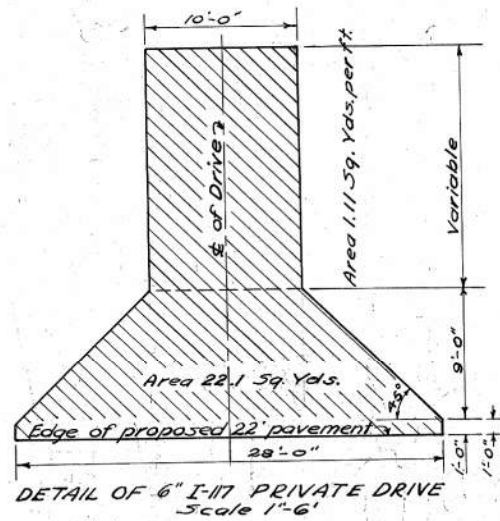
D = 0°-38'
P.C. = Sta. 436+19.09 P.T. Sta. 446+36.20

Station	℄ Grade	Crown Deduction	Left Edge Elevation	Add to Left Edge	Right Edge Elevation	Remarks
435+19.09	702.15	.19	701.96	.00	701.96	
+25	702.14		701.95	.00	701.95	
+50	702.08		701.89	.03	701.92	
+75	702.02		701.83	.11	701.94	
436+00	701.96		701.77	.22	701.99	
+25	701.90		701.71	.31	702.02	
+50	701.84		701.65	.37	702.02	
+63.09	701.79		701.60	.38	701.98	
+75	701.78		701.59		701.97	
437+00	701.72		701.53		701.91	
+25	701.66		701.47		701.85	
+50	701.60		701.41		701.79	
+75	701.55		701.36		701.74	
438+00	701.50		701.31		701.69	
+25	701.47		701.28		701.66	
+50	701.46		701.27		701.65	
+75	701.45		701.26		701.64	
439+00	701.46		701.27		701.65	
+25	701.47		701.28		701.66	
+50	701.50		701.31		701.69	
+75	701.54		701.35		701.73	
440+00	701.60		701.41		701.79	
+25	701.66		701.47		701.85	
+50	701.74		701.55		701.93	
+75	701.83		701.64		702.02	
441+00	701.94		701.75		702.13	
+25	702.05		701.86		702.24	
+50	702.17		701.98		702.36	
+75	702.30		702.11		702.49	
442+00	702.45		702.26		702.64	
+25	702.62		702.43		702.81	
+50	702.79		702.60		702.98	
+75	702.97		702.78		703.16	
443+00	703.15		702.96		703.34	
+25	703.33		703.14		703.52	
+50	703.51		703.32		703.70	
+75	703.69		703.50		703.88	
444+00	703.86		703.67		704.05	
+25	704.04		703.85		704.23	
+50	704.22		704.03		704.41	
+75	704.40		704.21		704.59	
445+00	704.58		704.39		704.77	
+25	704.76		704.57		704.95	
+50	704.94		704.75		705.13	
+75	705.12		704.93		705.31	
+86.20	705.20		705.01	.38	705.39	
446+00	705.30		705.11	.38	705.49	
+25	705.48		705.29	.33	705.62	
* +50	705.59		705.40	.28	705.68	
+75	705.77		705.58	.16	705.74	
447+00	705.95		705.76	.07	705.83	
+25	706.13		705.94	.01	705.95	
+44.86	706.27	.19	706.08	.00	706.08	

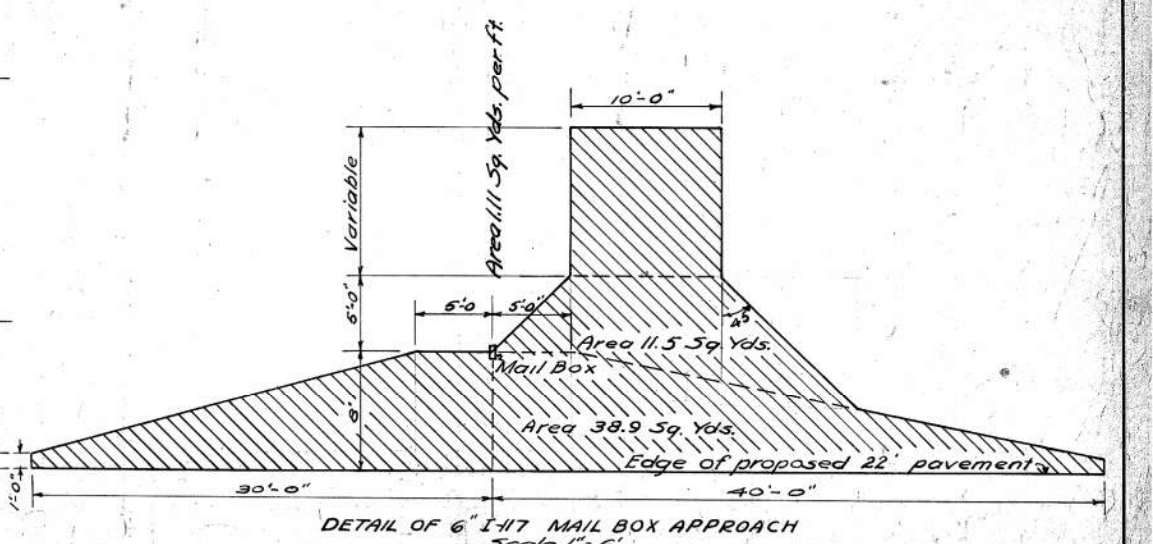
* 446+36.20 = 446+44.86 (Equation)

DETAIL OF STONE DRIVES AND MAIL BOX APPROACHES

Note:- Where feasible, drive and mail box approaches shall be combined as shown



DETAIL OF 6" I-117 PRIVATE DRIVE
Scale 1"=6'



DETAIL OF 6" I-117 MAIL BOX APPROACH
Scale 1"=6'

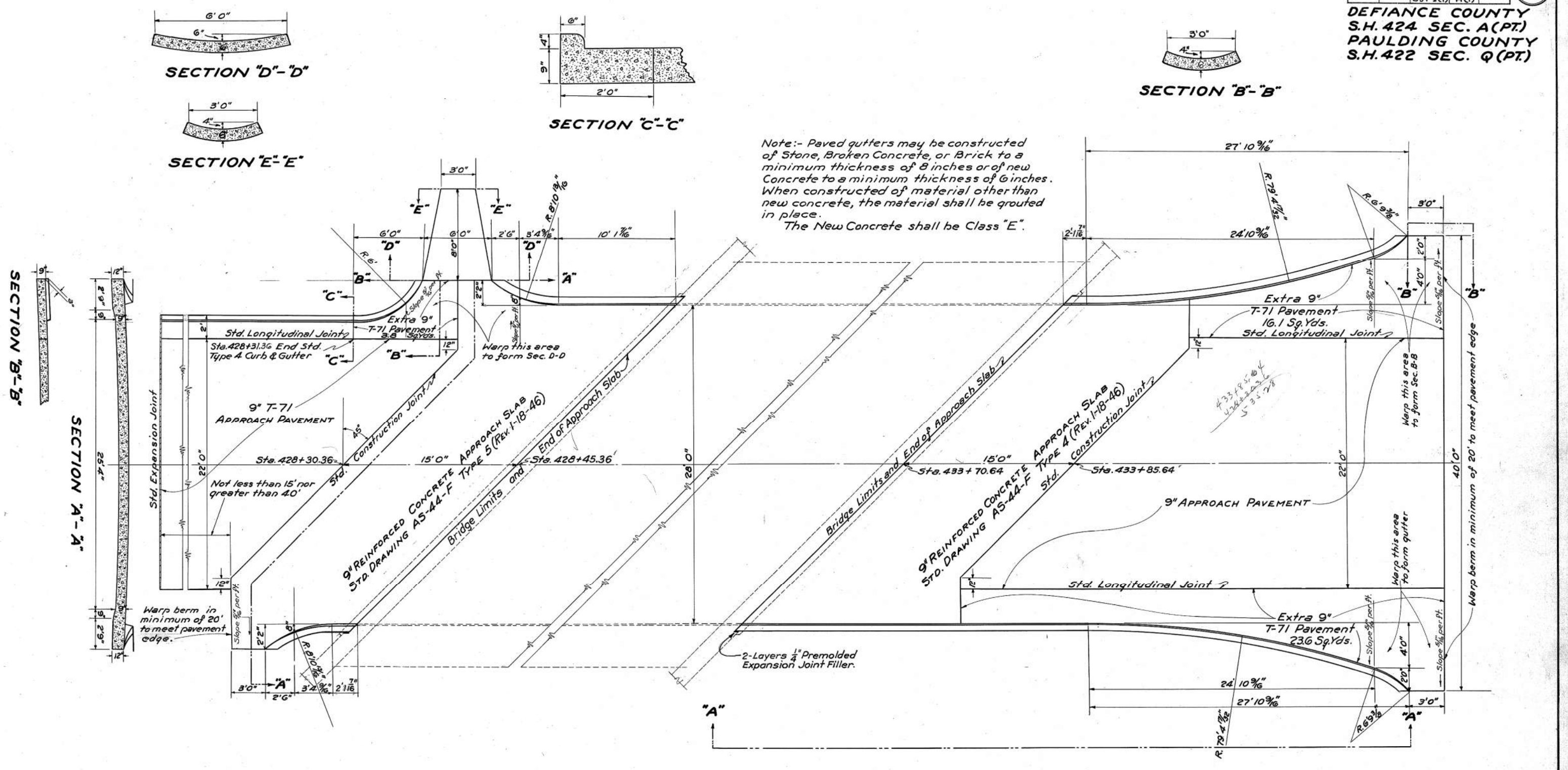
Note:- After the completion of the shoulders the Contractor shall excavate the Private Drive or Mail Box Approach as indicated, place the required amount of aggregate and complete all work as per Item I-117. The payment for any relocation of Mail Boxes as directed by the Engineer is included in the unit price bid for Item I-117 as indicated in these details.

SCANNED ARCHIVE 0223037

FED. RD. DIST. NO.	STATE	F.A.G.C.P. Nº	F.A.P. Nº	FISCAL YEAR
10	OHIO	F.A.G.H. 531 I(1)	531-H(1)	1941 1944

33A
44

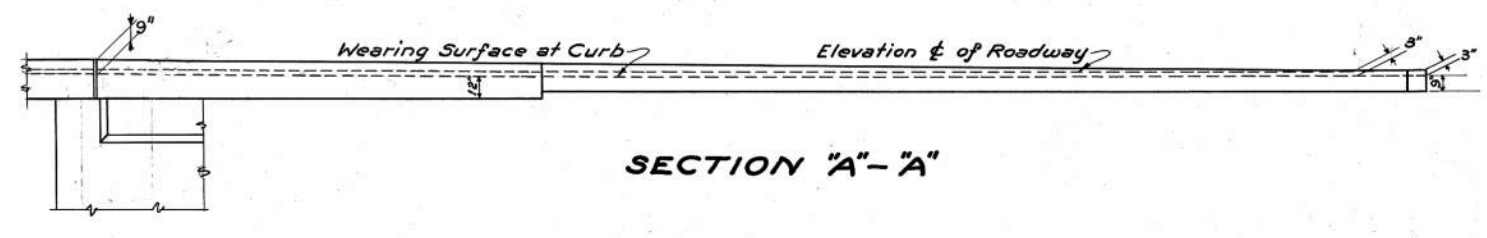
DEFIANCE COUNTY
S.H. 424 SEC. A(PT.)
PAULDING COUNTY
S.H. 422 SEC. Q(PT.)



ESTIMATED QUANTITIES

Item S-5 Reinforced Concrete Approach Slabs	137.4 Sq.Yds.
Item T-71 Reinforced Portland Cement Concrete Pavement	43.5 Sq.Yds.
Item I-14 Paved Gutter	76.0 Lin.Ft.
Item I-14 Variable width Paved Gutter (as per plan)	8.0 Lin.Ft.

Note:- For details not shown and Approach Slab Reinforcing Steel, see Std. Drawing AS-44-F. Payment for 8" variable heighth curb on flares to be included in unit price bid for T-71 reinforced concrete pavement.



SECTION "A"-"A"

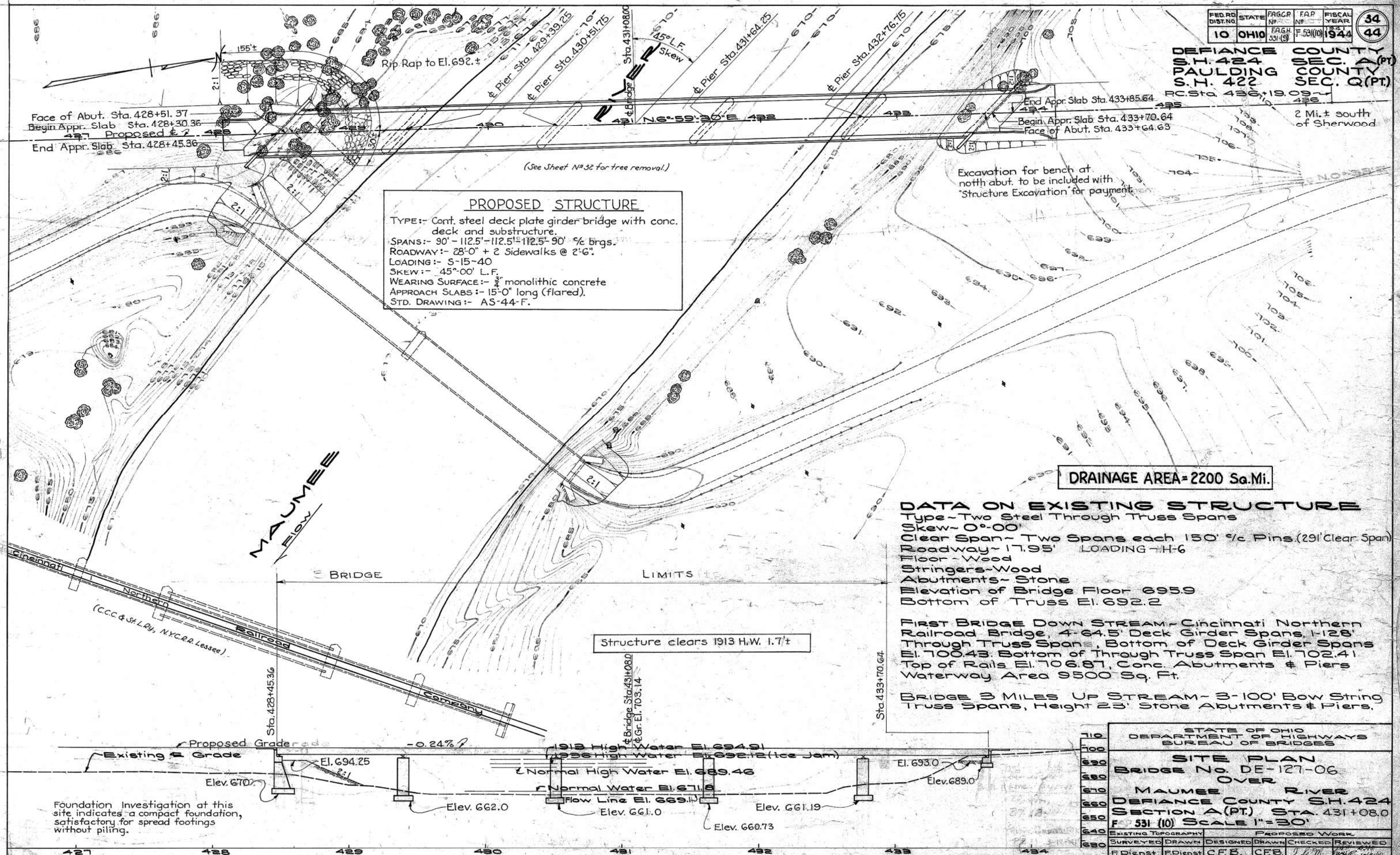
Revised 3-20-46

APPROACH SLAB AND FLARE DETAILS

SCANNED MAR 17 1997 DISTRICT 1 ARCHIVE COPY 3035

FED. RD. DIST. NO.	STATE	F.A.G.C.P. No.	F.A.P. No.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
10	OHIO	F.A.G.H. 531-(9)	F.531(10)	1944	34	44

DEFIANCE COUNTY
S.H. 424 SEC. A (PT.)
PAULDING COUNTY
S.H. 422 SEC. Q (PT.)



PROPOSED STRUCTURE

TYPE:- Cont. steel deck plate girder bridge with conc. deck and substructure.
SPANS:- 90'-112.5'-112.5'-112.5'-90' c/c brgs.
ROADWAY:- 28'-0" + 2 Sidewalks @ 2'-6".
LOADING:- S-15-40
SKEW:- 45°-00' L.F.
WEARING SURFACE:- 2½" monolithic concrete
APPROACH SLABS:- 15'-0" long (flared).
STD. DRAWING:- AS-44-F.

DRAINAGE AREA = 2200 Sq. Mi.

DATA ON EXISTING STRUCTURE

Type ~ Two Steel Through Truss Spans
Skew ~ 0°-00'
Clear Span ~ Two Spans each 150' c/c Pins. (291' Clear Span)
Roadway ~ 17.95' LOADING ~ H-6
Floor ~ Wood
Stringers ~ Wood
Abutments ~ Stone
Elevation of Bridge Floor 695.9
Bottom of Truss El. 692.2

FIRST BRIDGE DOWN STREAM ~ Cincinnati Northern Railroad Bridge, 4-64.5' Deck Girder Spans, 1-128' Through Truss Span, Bottom of Deck Girder Spans El. 700.43. Bottom of Through Truss Span El. 702.41 Top of Rails El. 706.87, Conc. Abutments & Piers Waterway Area 9500 Sq. Ft.

BRIDGE 3 MILES UP STREAM ~ 3-100' Bow String Truss Spans, Height 23' Stone Abutments & Piers.

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

SITE PLAN
BRIDGE No. DE-127-06
OVER
MAUMEE RIVER
DEFIANCE COUNTY S.H. 424
SECTION A (PT.) STA. 431+08.0
F. 531 (10) SCALE 1" = 30'

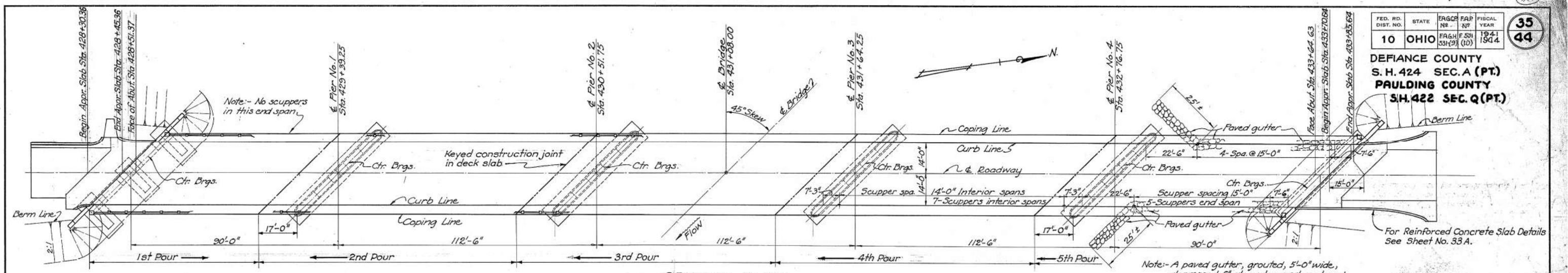
EXISTING TOPOGRAPHY		PROPOSED WORK			
SURVEYED	DRAWN	DESIGNED	DRAWN	CHECKED	REVIEWED
F. Dienst	F. Dienst	C.F.B.	C.F.B.	J.L.M.	W.H.E. 10/21/44

Revised 3-20-46

FED. RD. DIST. NO.	STATE	FAGCP No.	FAP No.	FISCAL YEAR
10	OHIO	FAGH 531-(9)	F.S.H. 531 (10)	1941 1944

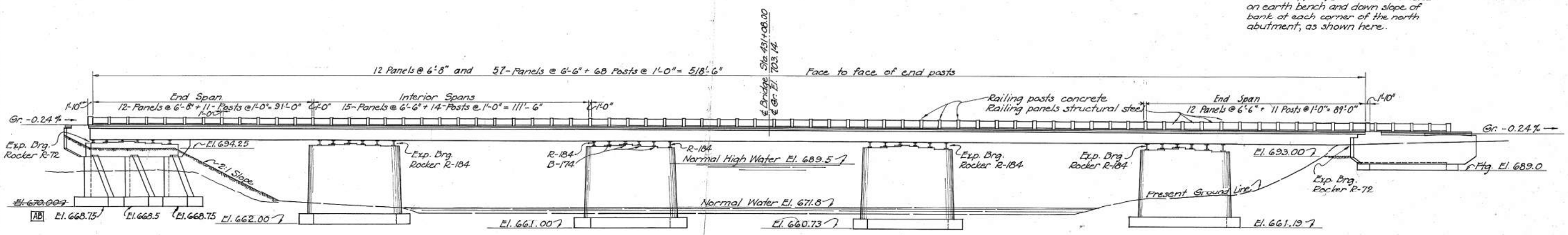
35
44

DEFIANCE COUNTY
S. H. 424 SEC. A (PT.)
PAULDING COUNTY
S.H. 422 SEC. Q (PT.)



GENERAL PLAN

Note:- A paved gutter, grouted, 5'-0" wide, depressed 6" at center, and centered under scuppers, shall be constructed on earth bench and down slope of bank at each corner of the north abutment, as shown here.



GENERAL ELEVATION

GENERAL NOTES

FOR DETAILS NOT SHOWN on these drawings, reference shall be made to Std. Drwgs. MBD-40, dated 10-24-40 and AS-44-F, dated (1-18-46)

EXISTING SUPERSTRUCTURE shall be removed when no longer needed to maintain traffic, and shall become the property of the contractor as part payment for removal and shall be removed from the site by him.

EXISTING PIERS shall be removed to flow line. Existing abutments shall be removed to 1'-0" below proposed ground line (see Site Plan). Banks shall be dressed to 2:1 slopes. Payment for dressing slopes shall be included with "Removal of Existing Structure." Suitable stone may be used as riprap at the location shown on the Site Plan or where directed by the Engineer.

WELDING:- All welding shall be Class "A."

DECK CONSTRUCTION PROCEDURE: Deck slab shall be placed in sections, between transverse construction joints, in the numerical order and in the direction indicated in the structural plan, in order that the major portion of dead load deflection may occur prior to placing concrete over each pier.

PAINTING:- Paint for shop coat shall meet the provisions of Sec. M-9.20, Sec. M-9.21, or Sec. M-9.9.

Field paint shall be two coats of aluminum paint, as per Sec. M-9.12.

CHAMFER all exposed edges of concrete ¾" unless otherwise detailed.

EXCAVATION:- Excavation quantity includes the removal of all fill material between top of embankment and bottom of abutment cap.

DIVIDING PLANE between wet and dry excavation is taken as Elev. 671.80.

ESTIMATED QUANTITIES

	Item No.	Description	South Abut.	Pier No. 1	Pier No. 2	Pier No. 3	Pier No. 4	North Abut.	Super-structure	Gen'l.	Total	As Built
	E-2	Cofferdams and pumping								Lump	Lump Sum	
AB	E-2	Excavation for structures, wet	48	226	237	218	244				~~968~~ Cu. Yds.	1074 C-1, C-2
AB	E-2	Excavation for structures, dry	389	28			97	185			~~699~~ Cu. Yds.	841 C-1, C-2
	S-1	Class "C" concrete, superstructure							574		574 Cu. Yds.	
AB	S-1	Class "E" concrete, walls & columns	152	230	235	235	230	67			~~1149~~ Cu. Yds.	1047.9 C-1, C-2, C-3
AB	S-1	Class "E" concrete, footings	80	74	89	76	74	38			~~431~~ Cu. Yds.	446 C-2
AB	S-4	Reinforcing steel	13,120	5,170	6,120	5,170	5,170	3,890	98830	120	~~137,590~~ Lbs.	138,881 C-1, C-2, C-6
AB ◊	S-7	Structural steel							724600		~~724600~~ Lbs.	746,848 C-4
AB	S-8	Field painting of structural steel							724600		~~724600~~ Lbs.	746,848 C-4
	S-14	Bridge railing (steel with conc. posts)							1040.3		1040.3 Lin. Ft.	
	S-24	Removal of existing structure								Lump	Lump Sum	
AB	I-10	Riprap								410	~~410~~ Sq. Yds.	371 C-6
AB	I-14	Paved gutter ~~(stone, grouted)~~	~~(Reinf. concrete)~~							180	~~180~~ Lin. Ft.	216 C-1

◊ The estimated quantity of structural steel includes the steel required for the "Optional Splices" in the girder webs as shown on Sheet 40. If these optional splices are not used, the estimated quantity of structural steel will be 706,100 lbs.

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

GENERAL PLAN AND ELEVATION NOTES AND ESTIMATED QUANTITIES

BRIDGE NO. DE-127-06
OVER MAUMEE RIVER

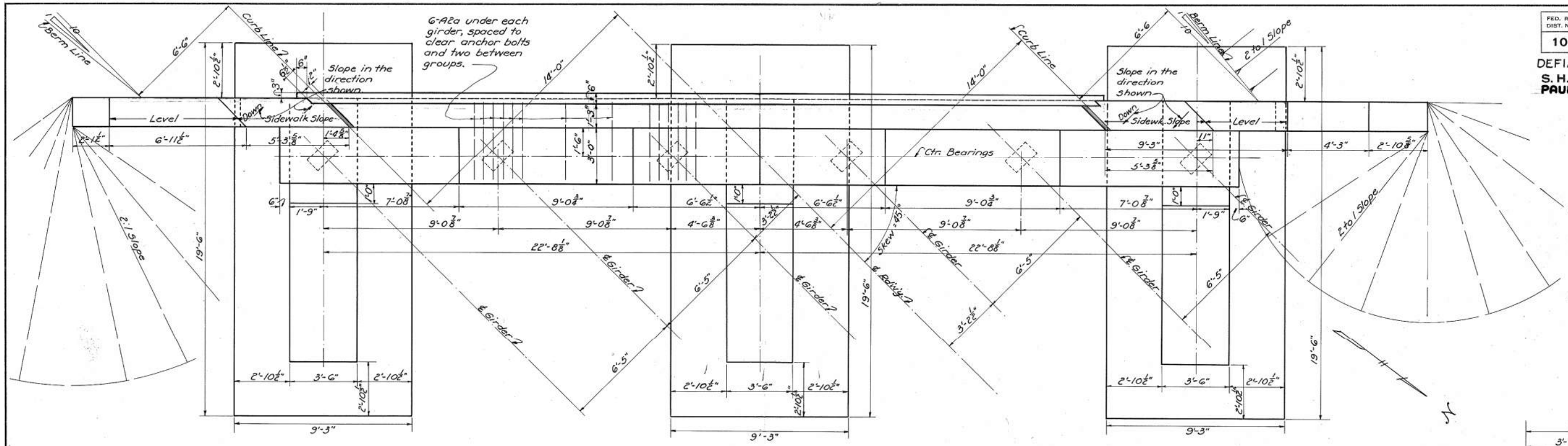
DEFIANCE COUNTY S. H. 424
SECTION A (PT.) STA. 431+08.00
F.S.H. 531-(10)

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
G.E.S.	G.E.S.	J.C.P.	J.A.B.	B.H.S. W.H.C.	10/21/41	12/29/41 5/20/42

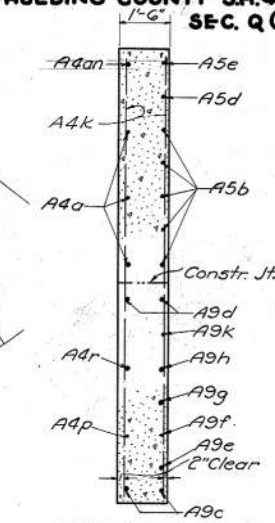
SCANNED JUN 1 1 1999 ARCHIVE C0230037

FED. RD. DIST. NO.	STATE	FAS.C.P. No.	FAP No.	FISCAL YEAR	36 / 44
10	OHIO	FAS.H. 531-(9)	F 531 (10)	1941 1944	

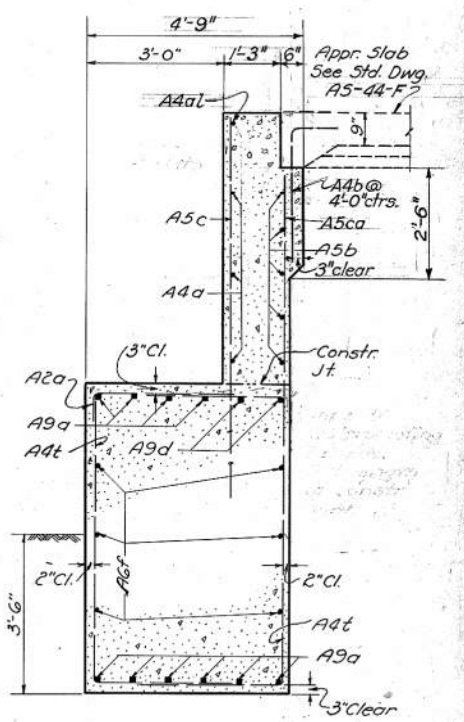
DEFIANCE COUNTY
S.H. 424 SEC. A (PT.)
PAULDING COUNTY S.H. 422 SEC. Q (PT.)



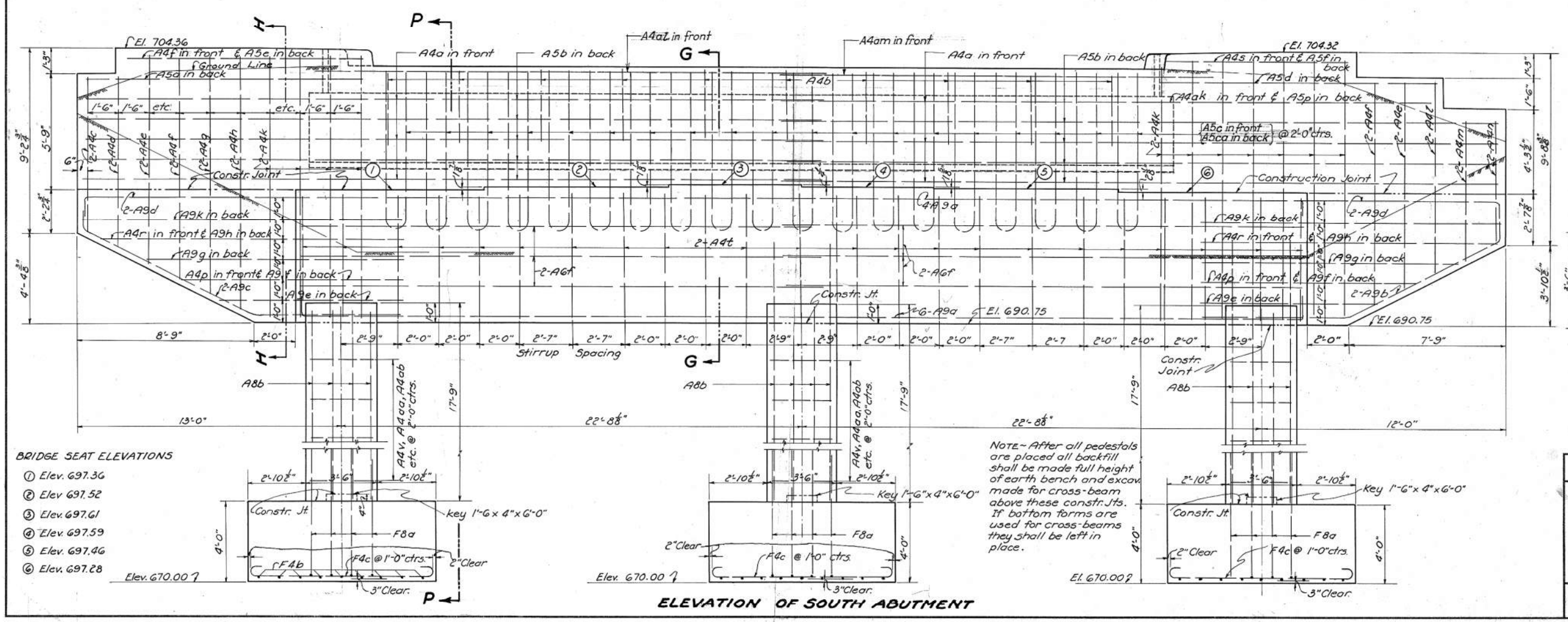
PLAN OF SOUTH ABUTMENT



SECTION H-H



SECTION G-G



ELEVATION OF SOUTH ABUTMENT

BRIDGE SEAT ELEVATIONS

1. Elev. 697.36
2. Elev. 697.52
3. Elev. 697.61
4. Elev. 697.59
5. Elev. 697.46
6. Elev. 697.28

NOTE - After all pedestals are placed all backfill shall be made full height of earth bench and excav. made for cross-beam above these constr. Jts. If bottom forms are used for cross-beams they shall be left in place.

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

SOUTH ABUTMENT DETAILS

BRIDGE No. DE-127-06
OVER MAUMEE RIVER

DEFIANCE COUNTY S.H. 424
SEC. A (PT.) STA 431+08.00
F.A.P. 531-(10)

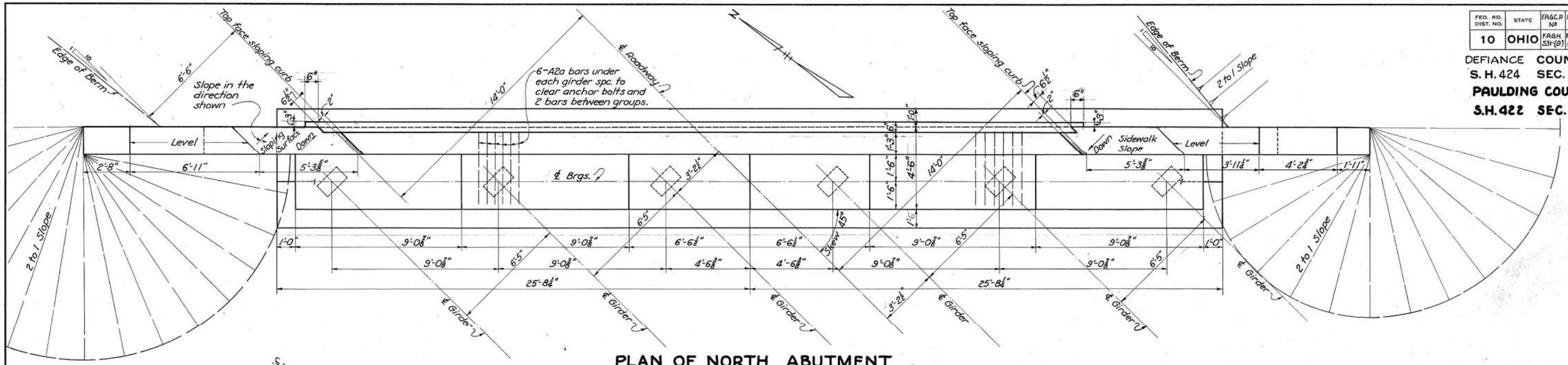
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
R.C.J.	R.C.J.	R.S.H.	J.H.G.	J.H.G. / H.H.G.	10/21/41	9/20/46

SCANNED ARCHIVE PROJECTION MASTERCO 2139538

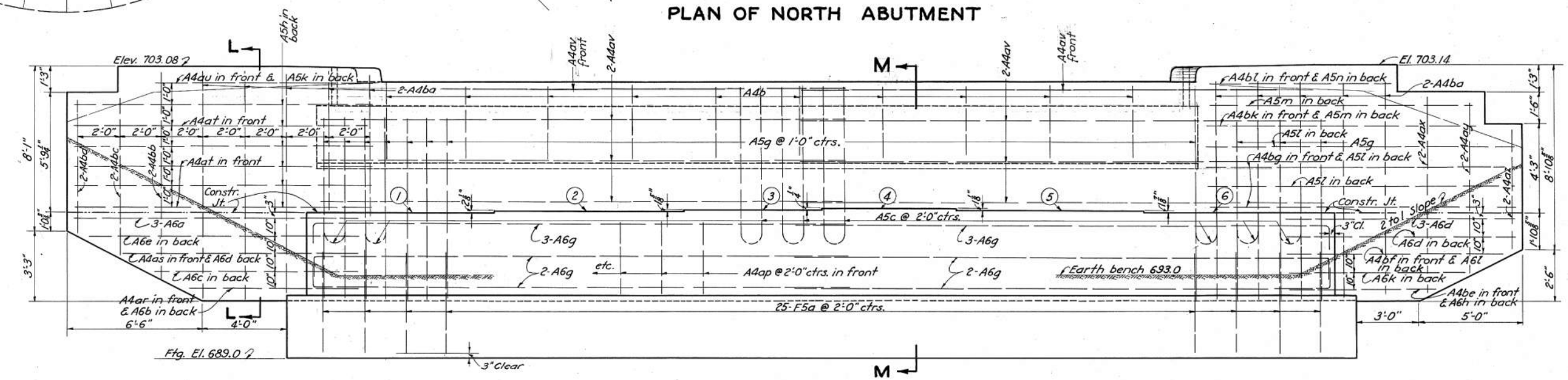
FED. RD. DIST. NO.	STATE	FAGC.P. Nº	FAP Nº	FISCAL YEAR
10	OHIO	FAGH. 531-(9)	F.531 (10)	1943 1944

37
44

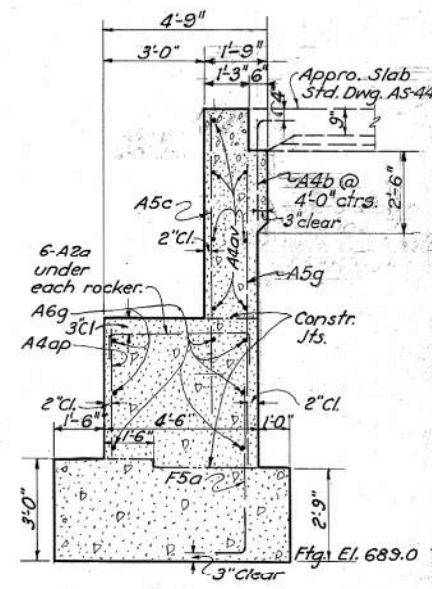
DEFIANCE COUNTY
S. H. 424 SEC. A (PT.)
PAULDING COUNTY
S.H. 422 SEC. Q (PT.)



PLAN OF NORTH ABUTMENT



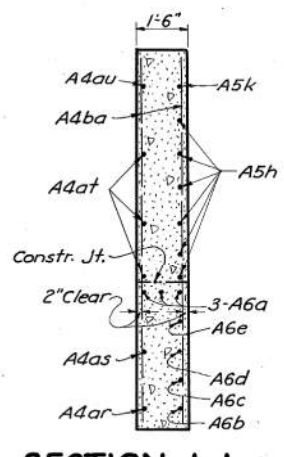
ELEVATION OF NORTH ABUTMENT



SECTION M-M

BRIDGE SEAT ELEVATIONS

1	Elev. 696.05
2	Elev. 696.23
3	Elev. 696.36
4	Elev. 696.38
5	Elev. 696.29
6	Elev. 696.13



SECTION L-L

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

NORTH ABUTMENT DETAILS

BRIDGE NO. DE-127-06
OVER MAUMEE RIVER

DEFIANCE COUNTY
SEC. A (PT.)
F. 531 (10)

S.H. 424
STA. 431+08.00

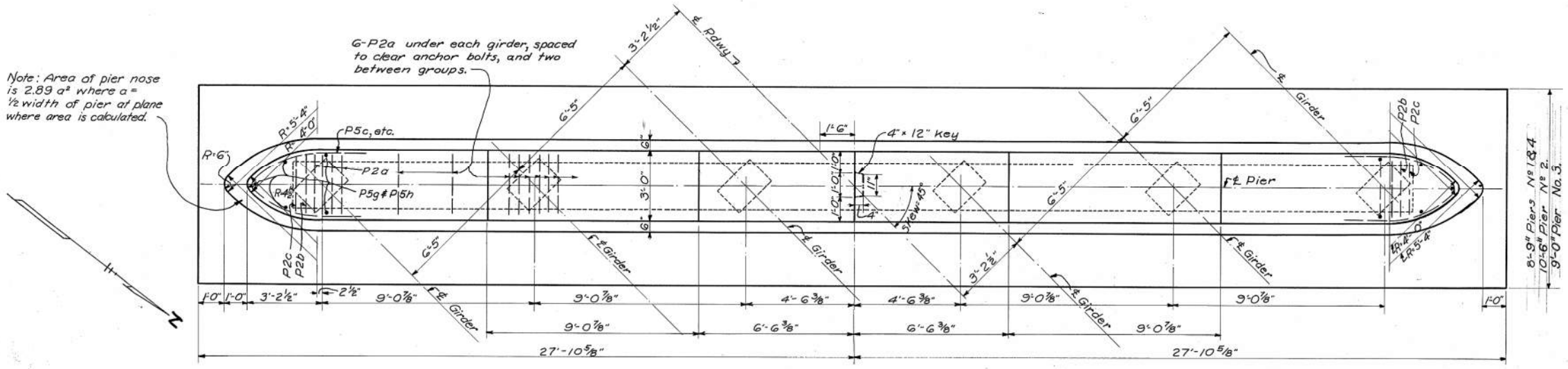
DESIGNED	DRAWN	TRACED	CHECKED	REVISED	DATE	REVISED
G.E.S.	G.E.S.	G.W.S.	H.H.B.	12-4-43 H.H.B.	10/21/41	3/20/46

SCANNED
ARCHIVE Co 23039
DISTRICT 1

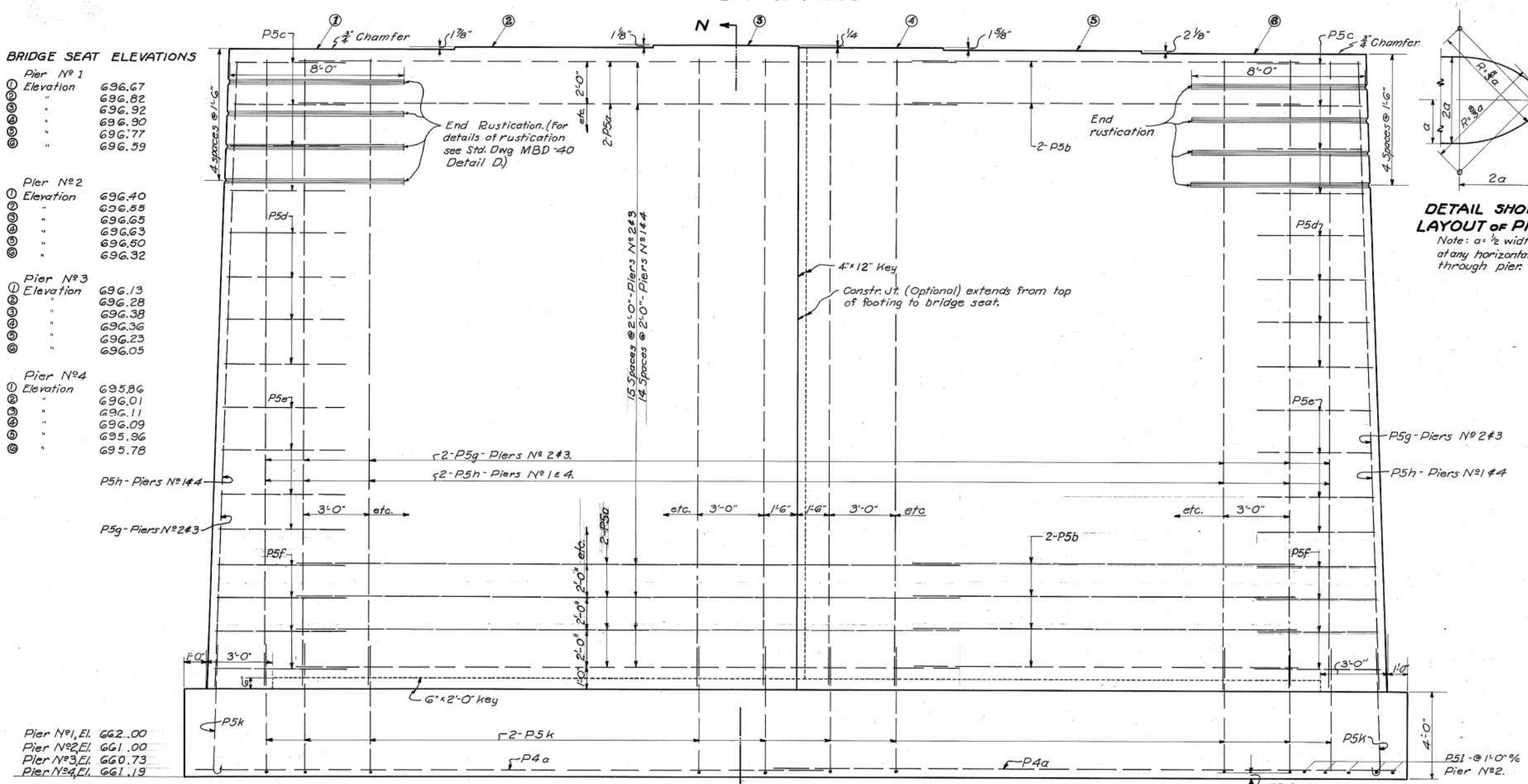
FED. RD. DIST. NO.	STATE	FAGCP Nº	FAP Nº	FISCAL YEAR
10	OHIO	FAGH 531-(9)	F 531 (10)	1941 1944

38
44

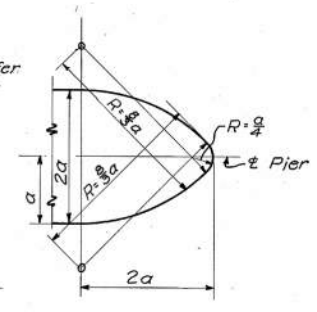
DEFIANCE COUNTY
S.H.-424 SEC.-A (PT.)
PAULDING COUNTY
S.H.422 SEC. Q (PT.)



PLAN OF PIERS

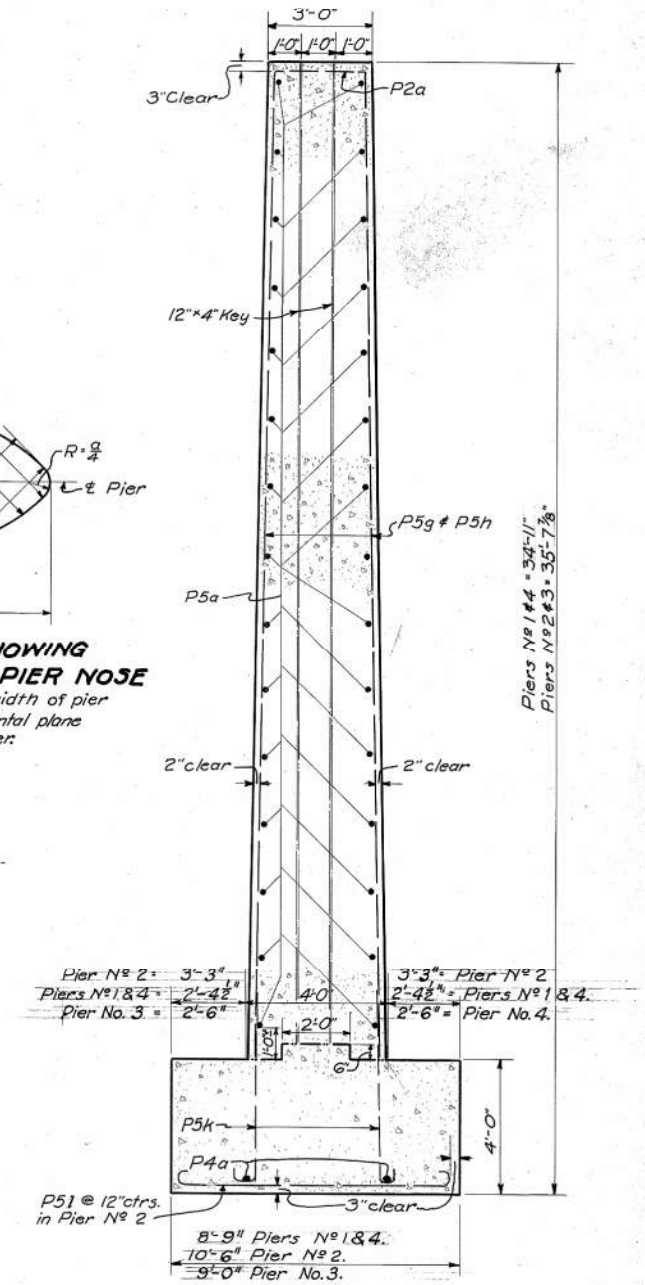


ELEVATION OF PIERS



DETAIL SHOWING LAYOUT OF PIER NOSE

Note: a = ½ width of pier at any horizontal plane through pier.



SECTION - "N-N"

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

PIER DETAILS
BRIDGE Nº DE-127-06
OVER MAUMEE RIVER

DEFIANCE CO. S.H.-424
SECTION A (PT.) STA-431+08.00
F 531-(10)

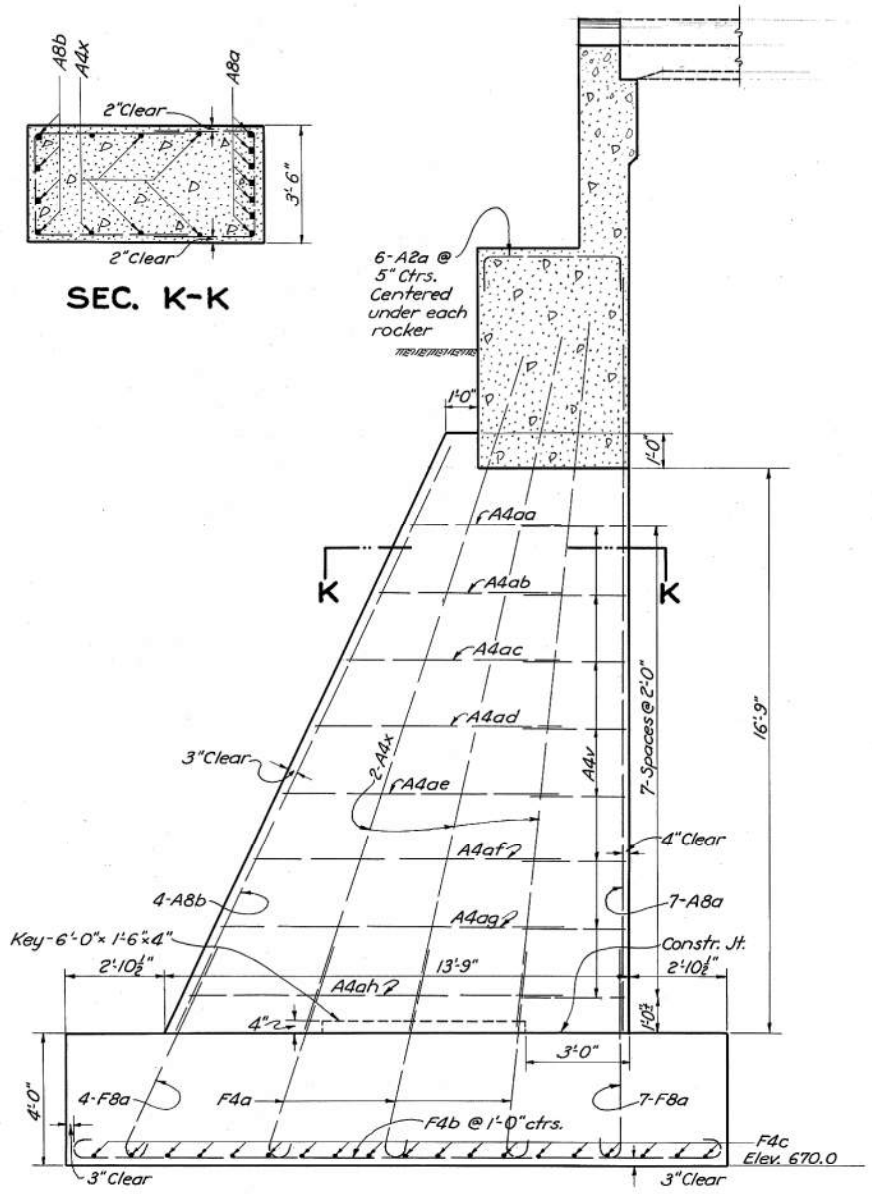
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
G.E.S.	G.E.S.	J.H.	J.H.B.	D.H.O. / H.H.G.	10/24/41	3/20/46

FED. RD. DIST. NO.	STATE	FAGCP Nº	FAP Nº	FISCAL YEAR
10	OHIO	FAGH 531(9)	F531 (10)	1941 1944

39
44

DEFIANCE COUNTY
S. H. 424 SEC. A (PT.)
PAULDING COUNTY
S.H.422 SEC. Q (PT.)

SEC. K-K

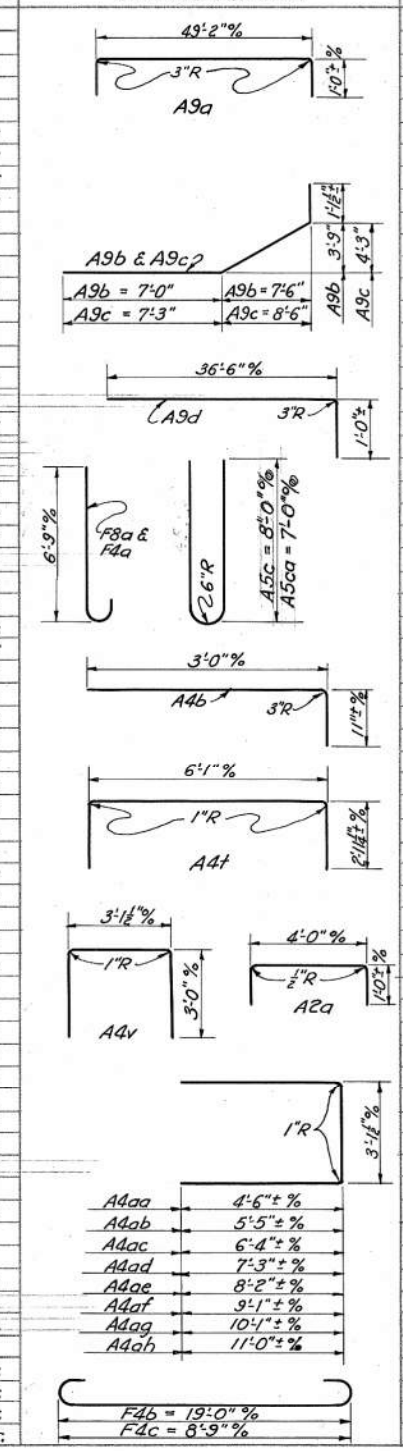


SECTION P-P

SUBSTRUCTURE STEEL LIST

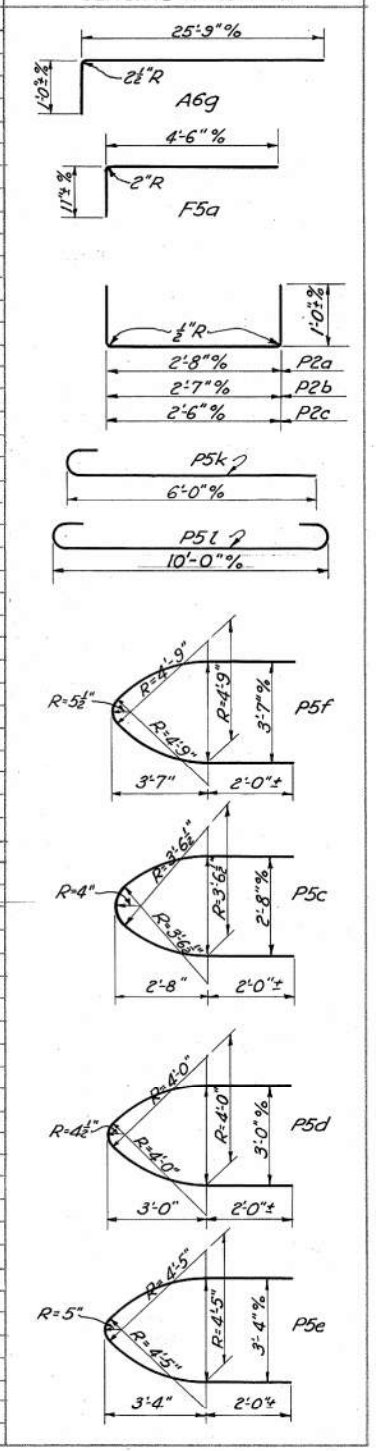
MARK	SIZE	NO.	LENGTH	WEIGHT	SHAPE
SOUTH ABUTMENT					
A9a	18"□	10	50'-9"	2190	Bt.
A9b	18"□	2	16'-6"	140	Bt.
A9c	18"□	2	17'-9"	150	Bt.
A9d	18"□	4	37'-3"	640	Bt.
A9e	18"□	2	8'-9"	80	Str.
A9f	18"□	2	10'-9"	90	Str.
A9g	18"□	2	12'-9"	110	Str.
A9h	18"□	2	14'-6"	130	Str.
A9k	18"□	2	15'-0"	130	Str.
A8a	1"□	21	23'-0"	1640	Str.
A8b	1"□	12	18'-9"	770	Str.
F8a	1"□	33	7'-9"	870	Bt.
A6f	⅞"φ	12	25'-9"	630	Str.
A5a	¾"φ	1	11'-9"	20	Str.
A5b	¾"φ	9	36'-6"	490	Str.
A5c	¾"φ	19	16'-6"	470	Bt.
A5d	¾"φ	1	13'-6"	20	Str.
A5e	¾"φ	1	10'-0"	20	Str.
A5f	¾"φ	1	9'-3"	10	Str.
A5p	¾"φ	1	32'-6"	50	Str.
A5ca	¾"φ	19	14'-6"	410	Bt.
A4a	⅝"φ	5	36'-6"	190	Str.
A4b	⅝"φ	10	3'-9"	40	Bt.
A4c	⅝"φ	2	7'-6"	20	Str.
A4d	⅝"φ	2	8'-3"	20	Str.
A4e	⅝"φ	4	10'-3"	40	Str.
A4f	⅝"φ	5	11'-3"	60	Str.
A4g	⅝"φ	2	11'-9"	20	Str.
A4h	⅝"φ	2	12'-6"	30	Str.
A4k	⅝"φ	22	13'-3"	300	Str.
A4l	⅝"φ	2	9'-9"	20	Str.
A4m	⅝"φ	2	7'-3"	20	Str.
A4n	⅝"φ	2	6'-3"	10	Str.
A4p	⅝"φ	2	10'-9"	20	Str.
A4r	⅝"φ	2	14'-6	30	Str.
A4s	⅝"φ	1	9'-0"	10	Str.
A4t	⅝"φ	46	11'-9"	570	Bt.
A4v	⅝"φ	24	9'-0"	230	Bt.
A4x	⅝"φ	18	21'-0"	400	Str.
A4aa	⅝"φ	3	12'-0"	40	Bt.
A4ab	⅝"φ	3	13'-9"	40	Bt.
A4ac	⅝"φ	3	15'-9"	50	Bt.
A4ad	⅝"φ	3	17'-6"	50	Bt.
A4ae	⅝"φ	3	19'-3"	60	Bt.
A4af	⅝"φ	3	21'-3"	70	Bt.
A4ag	⅝"φ	3	23'-3"	70	Bt.
A4ah	⅝"φ	3	25'-0"	80	Bt.
A4ak	⅞"φ	1	32'-6"	30	Str.
F4a	⅝"φ	18	7'-6"	140	Bt.
F4b	⅝"φ	27	20'-3"	570	Bt.
F4c	⅝"φ	57	10'-0"	600	Bt.
A2a	½"φ	46	6'-0"	180	Bt.
A4al	⅝"φ	1	25'-0"	30	Str.
A4am	⅝"φ	1	21'-0"	20	Str.
NORTH ABUTMENT					
A6a	⅞"φ	3	14'-0"	90	Str.
A6b	⅞"φ	1	8'-3"	20	Str.
A6c	⅞"φ	1	9'-9"	20	Str.
A6d	⅞"φ	5	11'-6"	120	Str.

BENDING DIAGRAMS



MARK	SIZE	NO.	LENGTH	WEIGHT	SHAPE
NORTH ABUTMENT CONT'D					
A6e	⅞"φ	1	13'-0"	30	Str.
A6g	⅞"φ	14	26'-6"	760	Bt.
A6h	⅞"φ	1	8'-0"	20	Str.
A6k	⅞"φ	1	9'-0"	20	Str.
A6l	⅞"φ	1	10'-3"	20	Str.
A5c	¾"φ	24	16'-6"	600	Bt.
A5g	¾"φ	46	8'-9"	610	Str.
A5h	¾"φ	6	13'-6"	120	Str.
A5k	¾"φ	1	11'-6"	20	Str.
A5l	¾"φ	4	14'-6"	90	Str.
A5m	¾"φ	2	12'-6"	40	Str.
A5n	¾"φ	1	8'-6"	10	Str.
F5a	¾"φ	25	5'-3"	200	Bt.
A4b	⅝"φ	10	3'-9"	40	Bt.
A4ap	⅝"φ	25	3'-3"	80	Str.
A4ar	⅝"φ	1	8'-3"	10	Str.
A4as	⅝"φ	1	11'-6"	10	Str.
A4at	⅝"φ	3	14'-0"	40	Str.
A4au	⅝"φ	1	11'-6"	10	Str.
A4av	⅝"φ	14	26'-9"	390	Str.
A4ba	⅝"φ	20	10'-6"	220	Str.
A4bb	⅝"φ	2	9'-6"	20	Str.
A4bc	⅝"φ	2	7'-3"	20	Str.
A4bd	⅝"φ	2	6'-3"	10	Str.
A4be	⅝"φ	1	5'-6"	10	Str.
A4bf	⅝"φ	1	8'-9"	10	Str.
A4bg	⅝"φ	2	14'-6"	30	Str.
A4bk	⅝"φ	1	12'-6"	10	Str.
A4bl	⅝"φ	1	8'-6"	10	Str.
A2a	½"φ	46	6'-0"	180	Bt.
PIERS					
P5a	⅞"φ	128	30'-0"	5770	Str.
P5b	⅞"φ	128	17'-6"	3370	Str.
P5c	⅞"φ	32	10'-9"	520	Bt.
P5d	⅞"φ	32	11'-3"	540	Bt.
P5e	⅞"φ	32	12'-0"	580	Bt.
P5f	⅞"φ	32	12'-6"	600	Bt.
P5g	⅞"φ	76	31'-0"	3,540	Str.
P5h	⅞"φ	76	30'-0"	3,430	Str.
P5k	⅞"φ	152	6'-9"	1540	Bt.
P5l	⅞"φ	55	11'-6"	950	Bt.
P4a	⅞"φ	8	29'-0"	240	Str.
P2a	½"φ	168	4'-6"	510	Bt.
P2b	½"φ	8	4'-6"	20	Bt.
P2c	½"φ	8	4'-3"	20	Bt.
REPLACEMENT BARS					
RE9	18"□	1	8'-6"	40	Str.
RE8	1"□	1	8'-0"	30	Str.
RE6	⅞"φ	1	7'-6"	20	Str.
RE5	⅞"φ	1	7'-0"	10	Str.
RE4	⅞"φ	1	6'-6"	10	Str.
RE2	½"φ	1	6'-0"	10	Str.

BENDING DIAGRAMS



STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

SOUTH ABUTMENT DETAILS
SUBSTRUCTURE STEEL LIST

BRIDGE NO. DE-127-06
OVER MAUMEE RIVER

DEFIANCE COUNTY S.H. 424
SEC. A (PT.) STA. 431+08
F 531- (10)

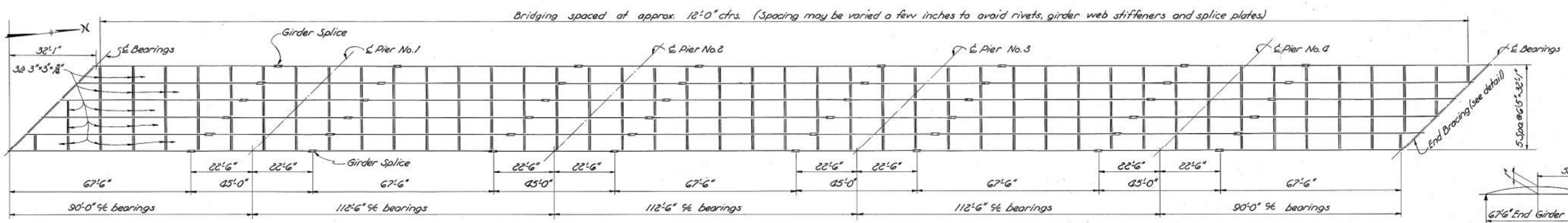
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
P.C.S.	P.C.S.	G.A.S.	J.H.B.	J.S.K.O. / W.H.E.	10/21/41	3/20/46

C023304H1

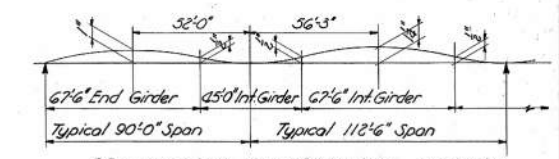
FED. RD. DIST. NO.	STATE	FAGCR Nº	FAR Nº	FISCAL YEAR
10	OHIO	FAGCR 331-H(3)	F 531 (10)	1944

40
44

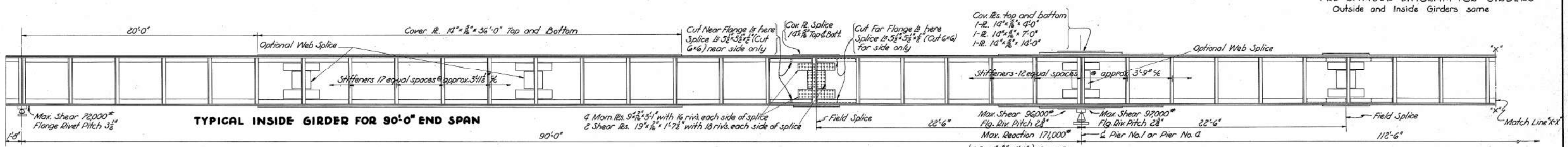
DEFIANCE COUNTY
S.H. 424 SEC. A (PT.)
PAULDING COUNTY
S.H. 422 SEC. Q (PT.)

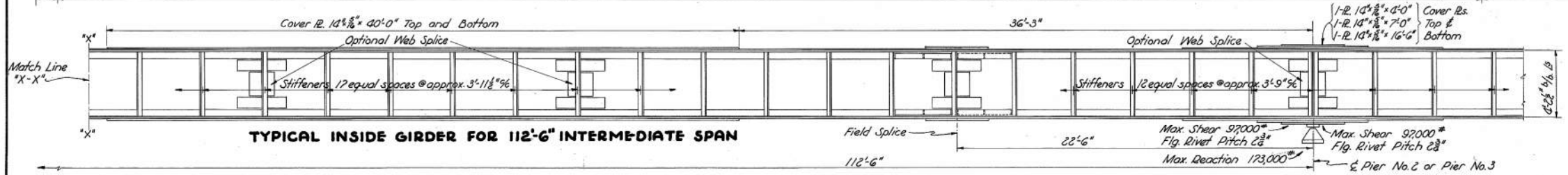


STRUCTURAL STEEL LAYOUT



PRE-CAMBER DIAGRAM FOR GIRDERS
Outside and Inside Girders same

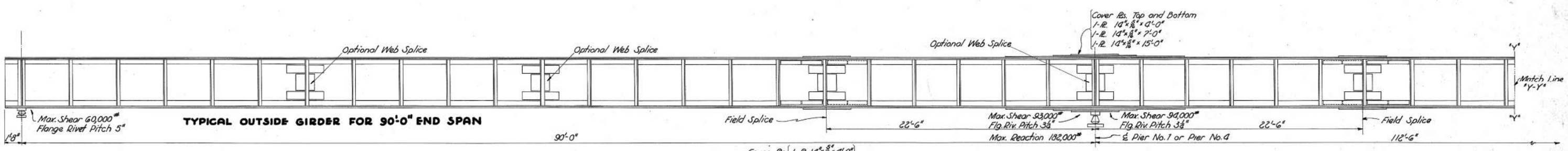


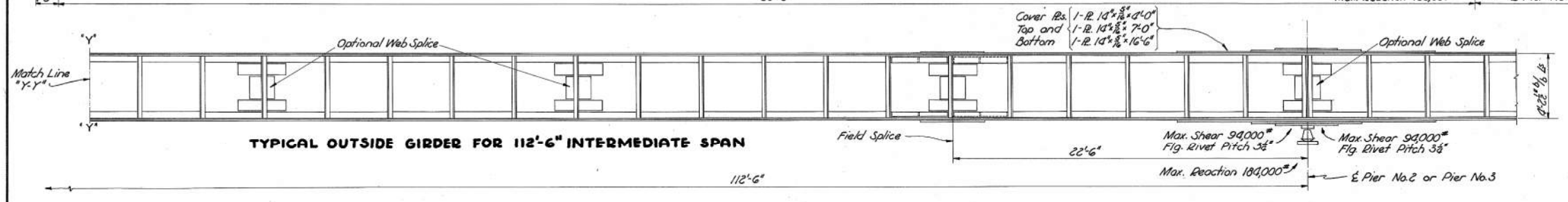


DETAIL OF TYPICAL INSIDE GIRDERS

DATA FOR INSIDE GIRDERS

Web Plate 50"×3/8"
4 Flange ∠s 6"×6"×3/8"
2 Cover Plates 14"×3/8"
} Full Length of Girder for both 90'-0" and 112'-6" spans.
Additional Cover Plates 14"×3/8" where shown.
Web Stiffeners at abutments 4 ∠s 5"×3 1/2"×3/8" on fills.
Web Stiffeners at piers 4 ∠s 5"×3 1/2"×3/8" on fills.
Intermediate Web Stiffeners 2 ∠s 5"×3 1/2"×3/8" (crimped except at web splices).
All Field Splices similar.





DETAIL OF TYPICAL OUTSIDE GIRDERS

DATA FOR OUTSIDE GIRDERS

Web Plate 50"×3/8"
4 Flange ∠s 6"×6"×3/8"
2 Cover Plates 14"×3/8"
} Full Length of Girder for both 90'-0" and 112'-6" spans.
Additional 14"×3/8" Cover Plates where shown.
Web Stiffeners at abutments 4 ∠s 5"×3 1/2"×3/8" on fills.
Web Stiffeners at piers 4 ∠s 5"×3 1/2"×3/8" on fills.
Intermediate Web Stiffeners 2 ∠s 5"×3 1/2"×3/8" (crimped except at web splices)
All Field Splices similar to splice shown for Inside Girders.
All stiffener spacings same as shown for Inside Girders.

Rivets 7/8" ϕ unless otherwise noted.
For additional notes see Sheet No. 35.

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

GIRDER DETAILS
BRIDGE NO. DE-127-06
OVER
MAUMEE RIVER
FAP 531-H(1)
DEFIANCE CO. S.H. 424
SEC. A (PT.) F 531 (10) STA. 431+08.0

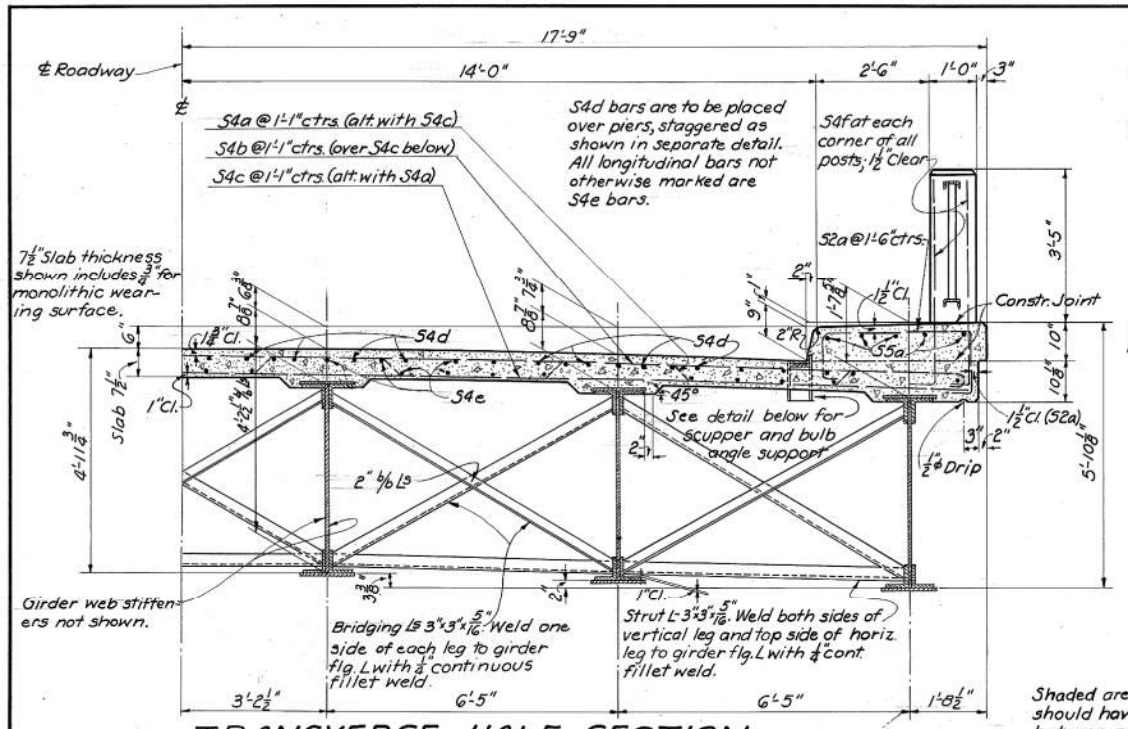
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
BFG	BFG	C.E.J.	J.H.G.	D.S.H. / W.H.S.	10/01/41	3/20/46

SCANNED ARCHIVE C0233042

FED. RD. DIST. NO.	STATE	FED. AID PROJECT	FISCAL YEAR
10	OHIO		

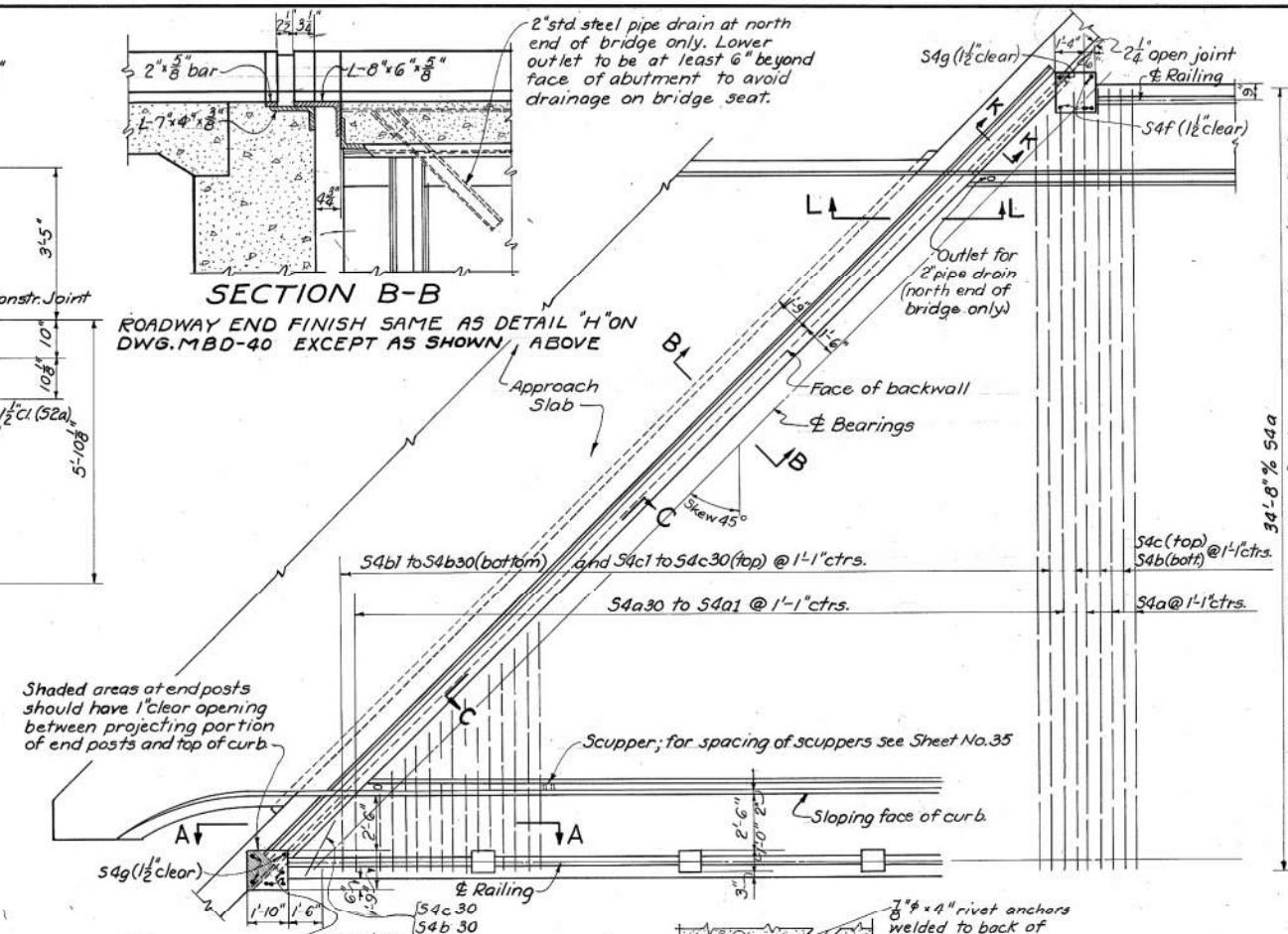
41/44

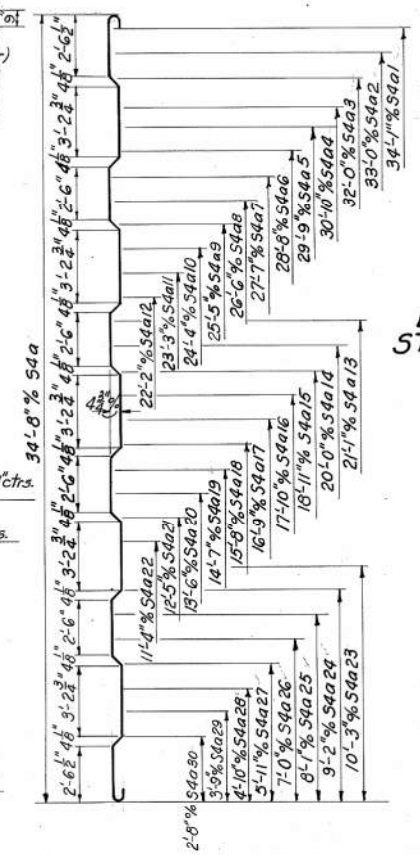
DEFIANCE COUNTY
S.H. 424 SEC. A (PT.)
PAULDING COUNTY
S.H. 422 SEC. Q (PT.)



TRANSVERSE HALF SECTION
SYMMETRICAL ABOUT ℄ OF ROADWAY

SECTION B-B
ROADWAY END FINISH SAME AS DETAIL "H" ON DWG. MBD-40 EXCEPT AS SHOWN ABOVE





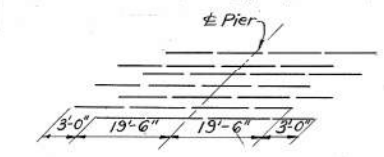
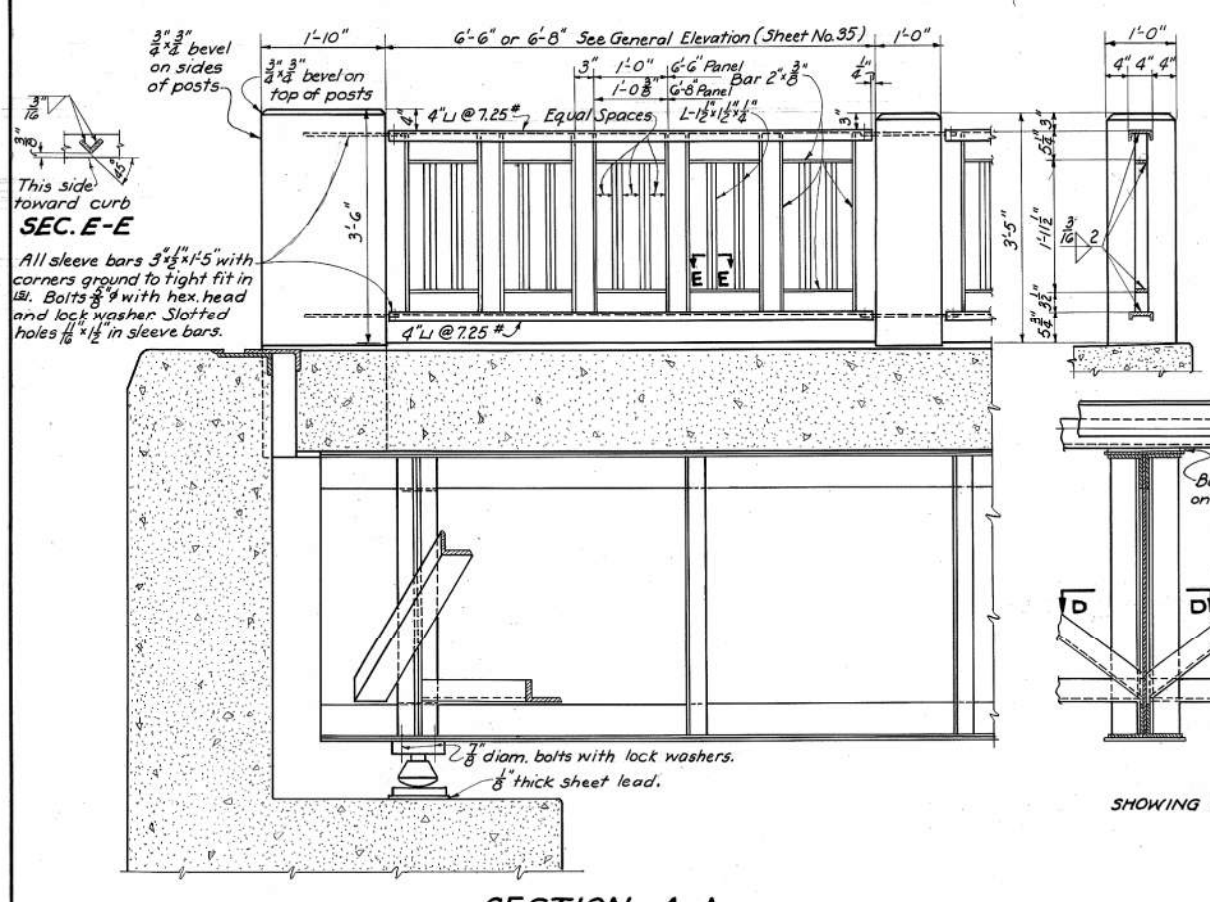
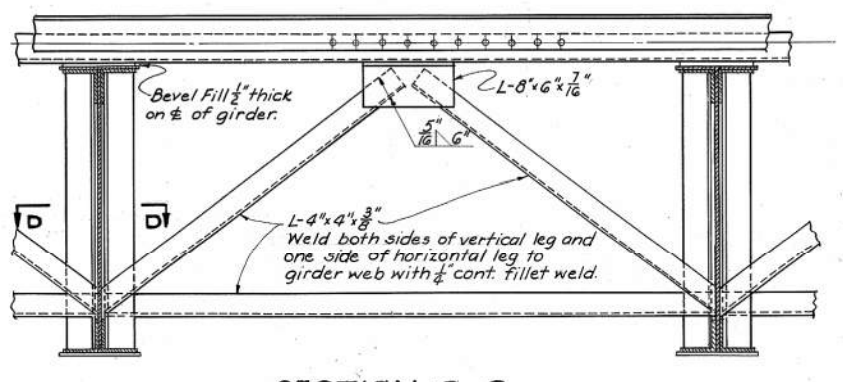


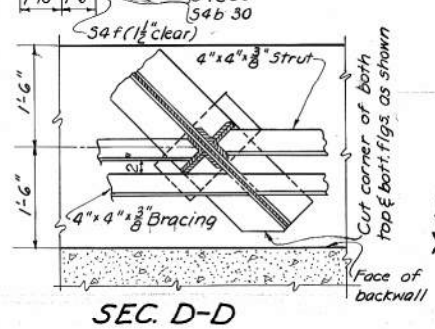
DIAGRAM SHOWING STAGGER OF S4d BARS



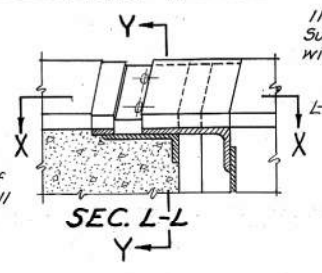
SECTION A-A



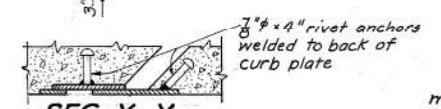
SECTION C-C
SHOWING END BRACING AND STRUTS, AND END FINISH SUPPORT



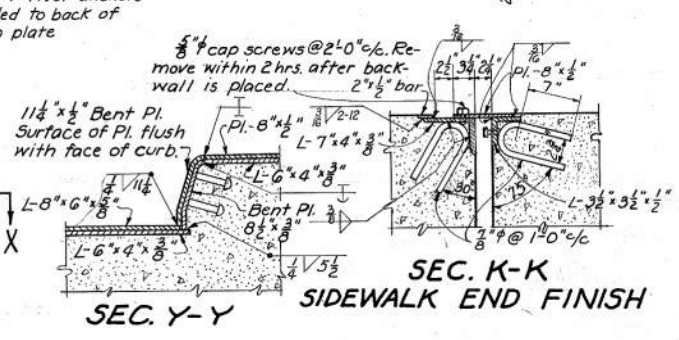
SEC. D-D



SEC. L-L

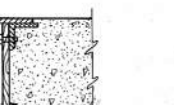


SEC. X-X

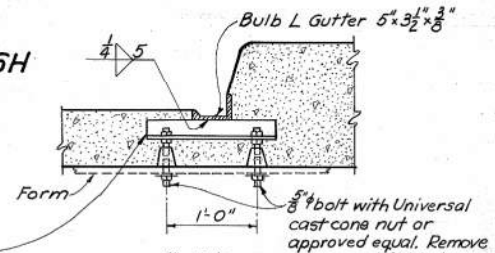


SEC. Y-Y

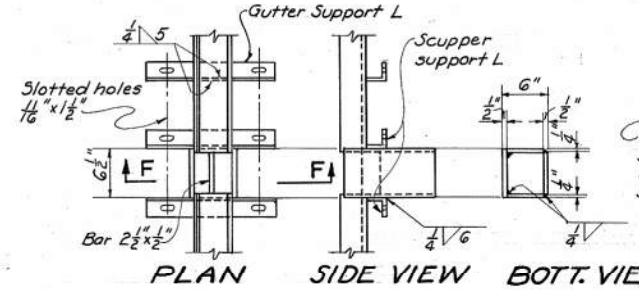
SEC. K-K
SIDEWALK END FINISH

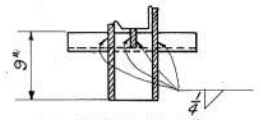


METHOD OF SUPPORTING 8" x ½" PL.



STEEL GUTTER SUPPORT





SEC. F-F

DETAILS OF SCUPPERS

Rivets 7/8" ϕ unless otherwise noted.
For additional notes see Sheet No. 35.

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

SUPERSTRUCTURE DETAILS

BRIDGE NO. DE-127-06
OVER MAUMEE RIVER

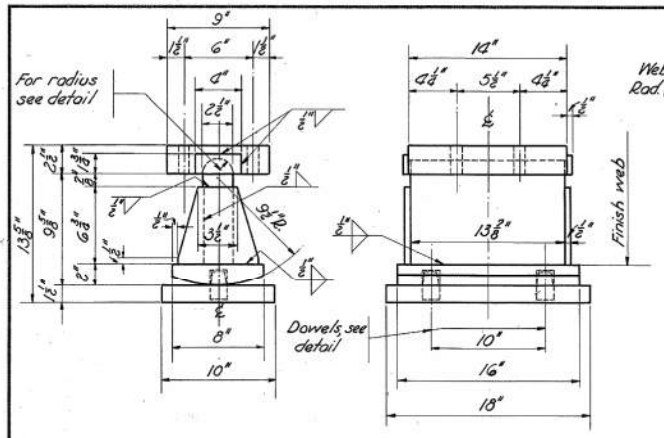
DEFIANCE CO. S.H. 424
SEC. A (PT.) STA. 431 + 08.0

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
BFG	BFG J.V.G.	K.E.T.	R.M.G.		10/21/41	3/20/46

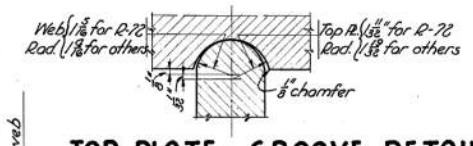
SCANNED ARCHIVE Coe 33643

FED. RD. DIST. NO.	STATE	FAGCP Nº	FAP Nº	FISCAL YEAR	
10	OHIO	FAGH 531-(8)	F 531 (10)	1943 1944	42 44

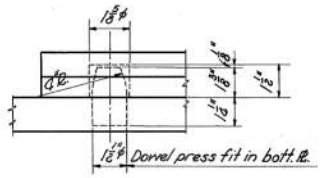
DEFIANCE COUNTY
S. H. 424 SEC. A (PT.)
PAULDING COUNTY
S.H.422 SEC. Q(PT.)



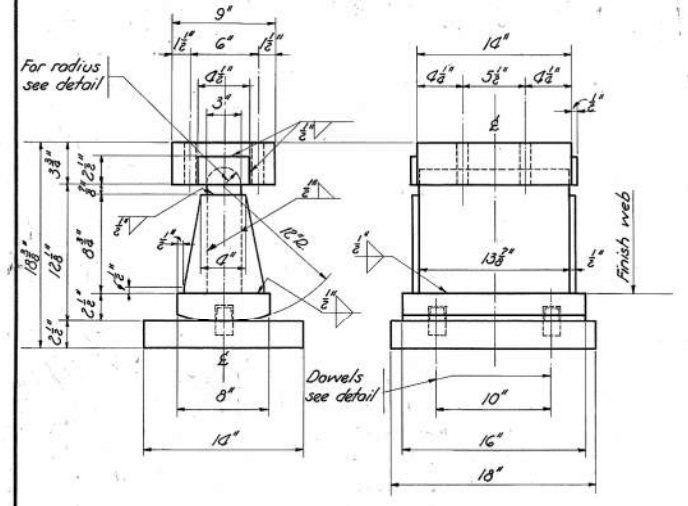
ABUTMENT ROCKER R-72
12 REQUIRED



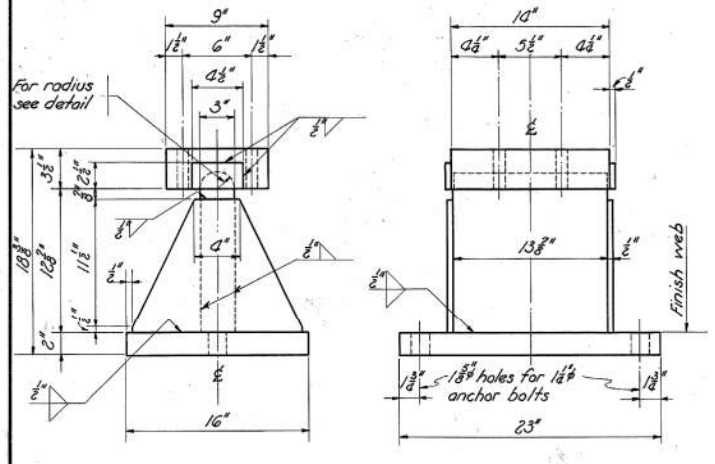
TOP PLATE GROOVE DETAIL



DOWEL & NEST DETAIL



PIER ROCKER R-184
20 REQUIRED



PIER BOLSTER B-174
4 REQUIRED

REINFORCING STEEL LIST - SUPERSTRUCTURE

Mark	Size	No.	Length	Weight	Shape
Sda	5/16"	488	37'-3"	17,420	Bt.
Sda1	5/16"	2	36'-0"	80	Bt.
Sda2	5/16"	2	35'-0"	70	Bt.
Sda3	5/16"	2	34'-0"	70	Bt.
Sda4	5/16"	2	32'-9"	70	Bt.
Sda5	5/16"	2	31'-9"	70	Bt.
Sda6	5/16"	2	30'-6"	60	Bt.
Sda7	5/16"	2	29'-3"	60	Bt.
Sda8	5/16"	2	28'-3"	60	Bt.
Sda9	5/16"	2	27'-0"	60	Bt.
Sda10	5/16"	2	26'-0"	50	Bt.
Sda11	5/16"	2	24'-9"	50	Bt.
Sda12	5/16"	2	23'-0"	50	Bt.
Sda13	5/16"	2	22'-6"	50	Bt.
Sda14	5/16"	2	21'-6"	50	Bt.
Sda15	5/16"	2	20'-3"	40	Bt.
Sda16	5/16"	2	19'-3"	40	Bt.
Sda17	5/16"	2	18'-0"	40	Bt.
Sda18	5/16"	2	17'-0"	40	Bt.
Sda19	5/16"	2	15'-9"	30	Bt.
Sda20	5/16"	2	14'-9"	30	Bt.
Sda21	5/16"	2	13'-6"	30	Bt.
Sda22	5/16"	2	12'-6"	30	Bt.
Sda23	5/16"	2	11'-3"	20	Bt.
Sda24	5/16"	2	10'-3"	20	Bt.
Sda25	5/16"	2	9'-0"	20	Bt.
Sda26	5/16"	2	8'-0"	20	Bt.
Sda27	5/16"	2	6'-9"	10	Bt.
Sda28	5/16"	2	5'-9"	10	Bt.
Sda29	5/16"	2	4'-6"	10	Bt.
Sda30	5/16"	2	3'-6"	10	Bt.
Sdb	5/16"	488	33'-9"	16,760	Bt.
Sdb1	5/16"	2	34'-3"	70	Bt.
Sdb2	5/16"	2	33'-3"	70	Bt.
Sdb3	5/16"	2	32'-0"	70	Bt.
Sdb4	5/16"	2	31'-0"	70	Bt.
Sdb5	5/16"	2	30'-0"	60	Bt.
Sdb6	5/16"	2	28'-9"	60	Bt.
Sdb7	5/16"	2	27'-9"	60	Bt.
Sdb8	5/16"	2	26'-9"	60	Bt.
Sdb9	5/16"	2	25'-6"	50	Bt.
Sdb10	5/16"	2	24'-6"	50	Bt.
Sdb11	5/16"	2	23'-6"	50	Bt.
Sdb12	5/16"	2	22'-3"	50	Bt.
Sdb13	5/16"	2	21'-3"	40	Bt.
Sdb14	5/16"	2	20'-3"	40	Bt.
Sdb15	5/16"	2	19'-0"	40	Bt.
Sdb16	5/16"	2	18'-0"	40	Bt.
Sdb17	5/16"	2	17'-0"	40	Bt.
Sdb18	5/16"	2	15'-9"	30	Bt.
Sdb19	5/16"	2	14'-9"	30	Bt.
Sdb20	5/16"	2	13'-9"	30	Bt.
Sdb21	5/16"	2	12'-6"	30	Bt.
Sdb22	5/16"	2	11'-6"	20	Bt.

Bending Diagrams

For bending diagrams of bars Sda and Sda1 to Sda30 see Sheet No. 41.

Mark	Size	No.	Length	Weight	Shape
Sdb23	5/16"	2	10'-6"	20	Bt.
Sdb24	5/16"	2	9'-3"	20	Bt.
Sdb25	5/16"	2	8'-3"	20	Bt.
Sdb26	5/16"	2	7'-3"	20	Bt.
Sdb27	5/16"	2	6'-0"	10	Bt.
Sdb28	5/16"	2	5'-0"	10	Bt.
Sdb29	5/16"	2	4'-0"	10	Bt.
Sdb30	5/16"	2	2'-9"	10	Bt.
Sdc	5/16"	488	34'-9"	16,290	St.
Sdc1	5/16"	2	33'-6"	70	St.
Sdc2	5/16"	2	32'-6"	70	St.
Sdc3	5/16"	2	31'-3"	70	St.
Sdc4	5/16"	2	30'-3"	60	St.
Sdc5	5/16"	2	29'-3"	60	St.
Sdc6	5/16"	2	28'-0"	60	St.
Sdc7	5/16"	2	27'-0"	60	St.
Sdc8	5/16"	2	26'-0"	50	St.
Sdc9	5/16"	2	24'-9"	50	St.
Sdc10	5/16"	2	23'-9"	50	St.
Sdc11	5/16"	2	22'-9"	50	St.
Sdc12	5/16"	2	21'-6"	50	St.
Sdc13	5/16"	2	20'-6"	40	St.
Sdc14	5/16"	2	19'-6"	40	St.
Sdc15	5/16"	2	18'-3"	40	St.
Sdc16	5/16"	2	17'-3"	40	St.
Sdc17	5/16"	2	16'-3"	30	St.
Sdc18	5/16"	2	15'-0"	30	St.
Sdc19	5/16"	2	14'-0"	30	St.
Sdc20	5/16"	2	13'-0"	30	St.
Sdc21	5/16"	2	11'-9"	30	St.
Sdc22	5/16"	2	10'-9"	20	St.
Sdc23	5/16"	2	9'-9"	20	St.
Sdc24	5/16"	2	8'-6"	20	St.
Sdc25	5/16"	2	7'-6"	20	St.
Sdc26	5/16"	2	6'-6"	10	St.
Sdc27	5/16"	2	5'-3"	10	St.
Sdc28	5/16"	2	4'-3"	10	St.
Sdc29	5/16"	2	3'-3"	10	St.
Sdc30	5/16"	2	2'-0"	10	St.
Sdd	5/16"	62	42'-0"	2810	St.
Sde	5/16"	672	39'-6"	22,720	St.
Sdf	5/16"	356	5'-3"	3,040	Bt.
Sdg	3/8"	8	3'-0"	30	St.
Sda	1/2"	692	6'-0"	2,770	Bt.
SSa	3/4"	100	40'-0"	8,220	St.

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

ROCKER & BOLSTER DETAILS AND STEEL LIST

BRIDGE NO. DE-127-06
OVER
MAUMEE RIVER
FAP 531-H(1)
DEFIANCE CO.
S.H.424
SECT. A(PT) F 531(10) STA.431+08.0

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
BFG	BFG	C.E.J.	J.H.R.	8/40		3/20/46

SCANNED
ARCHIVE 00230044

FED. RD. DIST. NO.	STATE	FAGCP NO.	F.A.P. NO.	FISCAL YEAR	
10	OHIO	FAGH 531-I(1)	531-H(1)	1971 1944	43 / 44

DEFIANCE COUNTY
S.H. 424 SEC. "A" (Pt.)
PAULDING COUNTY
S.H. 422 SEC. "Q" (Pt.)

SUMMARY OF QUANTITIES

STRUCTURES 20' SPAN & UNDER "C"

Sheet No.	Structure No.	E-2 Excavation for Structure Unclassified	E-3 Channel Excavation	E-12 Remove & Store Existing Pipe Lin. Ft.		Item S-1 Concrete for Structures Cu. Yds.				S-3 Waterproofing Type B	S-4 Reinforcing Steel	S-9 3/4" Pre-molded Bit. Expan. Joint Material	S-22 Removal of Portions of Existing Structure	S-22 Removal of Existing Catch Basin	S-23 3/4" Dowel Holes	S-24 Removal of Existing Structure	S-27 Pipe for Roadway Culverts Lin. Ft.					S-29 Porous Backfill	S-122 Abandon Existing Catch Basin	I-2 Storm Sewer Lin. Ft.		I-3 Pipe for Roadway Drainage Lin. Ft.			I-2 Pipe for Storm Sewer Outlets Lin. Ft.		I-5 Pipe Specials Each 45° Bend for Roadway Drainage			15"x24" Tee for Roadway Culverts	I-8 Standard Manholes and Catch Basin Each				I-10 Riprap Type "A" (Grouted)
		Cu. Yds.	Cu. Yds.	Under 15"	Over 15"	Class C	Class C slab	Class C Walls	Class C Footings	Sq. Yds.	Lbs.	Sq. Ft.	Cu. Yds.	Each	Lin. Ft.	Lump	10"	12"	15"	24"	48"	Cu. Yds.	Each	12"		6"	8"	12"	18"		6"	8"	12"		M.H.	CB.1-8B	CB.6Mod.		Sq. Yds.
27	1-C	32		32														49																1	1			
28	2-C	34																56								8		20		1					2			
Total FAGH 531-I(1)		66																105						112				20		1				1				
Total to Recap				32																						8									3			
29	3-C	273	290			5.3					83					1					132																	133
28	4-C	16																59																	2				
28	5-C	6		38									1.3						69																			10
Total FAP-531-H(1)		295	290			5.3					83					1		59	69		132																	
Total to Recap				38									1.3																						2			143

ROADWAY DRAINAGE "D"

Sheet No.	E-12 Remove & Store Exist. Pipe Lin. Ft.		S-22 Removal of Portions of Existing Structure	S-122 Abandon Existing Catch Basins	Item I-3 Pipe for Roadway Drainage Lin. Ft.					I-3 Pipe for Roadway Drainage Under Drives Lin. Ft.			I-3 Pipe for Roadway Drainage Outlets Lin. Ft.			I-5 Pipe Specials for Roadway Drainage Each						I-9 Standard Catch Basins Each				I-10 Riprap Type "A" (Grouted)
																12" Specials 90° Bend	45° Bend	8" Y	10" Specials 45° Bend	8" Y	I-2-B	I-3 (Mod)	2-2-B (Mod)	3 (Mod)	
	Under 15"	over 15"	Cu. Yds.	Each	6"	8"	10"	12"	15"	8"	10"	12"	12"	15"	18"										Sq. Yds.
5	90		3.5	2		886	790	264		30	54					2					7			3	
6	54		1.3					399							20							1			
Total FAGH 531-I(1)				2			790	663		30	54				20	2						1		3	
Total to Recap	144		4.8			886															7				
6	86			1		213	280			24				20									1		3
Total FAP 531-H(1)				1			280			24				20									1		
Total to Recap	86					213																			3

SIDE APPROACHES "A" GUARD RAIL

Sheet No.	E-12 Remove & Store Exist. Pipe Lin. Ft.		I-1 Pipe for Driveways Lin. Ft.		I-117 Traffic Bound Side Approaches Ea. Yd.		
	Under 18"	Over 18"	12"		Mail Boxes	Drives	
4					6	5	
5	20		24		12	19	
6						10	
Total FAGH 531-I(1)			24		18	34	*
Total to Recap	20						
6						30	
7	35		24		6	19	
Total FAP 531-H(1)			24		6	49	*
Total to Recap	35						

Sheet No.	I-13 Guard Rail Removed & Stored	I-15 Guard Rail
	Lin. Ft.	Lin. Ft.
5		32
6	660	656
Total FAGH 531-I(1)	660	688
6	1470	1088
Total FAP 531-H(1)	1470	1088

PAVEMENT REMOVAL

Sheet No.	Item E-8 Removal of Existing Pavement
	Sq. Yds
5	2058
6	999
Total FAGH 531-I(1)	3057
6	2128
7	809
Total FAP 531-H(1)	2937

SEEDING & SODDING

Sheet No.	E-305 Seeding Sq. Yds.	L-10 Sodding Sq. Yds.
8	1068	
9	2531	
10	4306	
11	774	
12	8214	
13	2447	
14	7273	
15	1924	
16	5501	
17	1204	
18	143	
Total FAGH 531-I(1)	35,385	
18	1388	
19	2251	
20	1848	
21	2351	
22	2830	
23	792	104
24	3093	111
25	5158	37
Total FAP 531-H(1)	19,711	252

EARTHWORK

Station From	Station To	Excavation Cu. Yds.	Embankment	Embankment +20% Cu. Yds.	Borrow Cu. Yds.
399+00	410+00	2879	743	892	
410+00	424+00	4545	595	714	
424+00	428+45	7535	14891	17869	
Total FAGH 531-I(1)		14959	16229		
Pavement Removal Material		683			
Net FAGH 531-I(1)		15642	16229	19475	3833
433+71	446+36.20	9646	17897	21476	
446+44.86	451+00	1374	413	496	
Total FAP 531-H(1)		11020	18310		
Channel excavation at Sta. 439+61		260			
Pavement Removal Material		656			
Net FAP 531-H(1)		11936	18310	21972	10036

RECAP TABLE

From Table	E-12 Remove & store Exist. Pipe Lin. Ft.		S-22 Removal of Portions of Exist. Structure	I-3 Pipe for Roadway Drainage Lin. Ft.		I-8 Standard Catch Basins Each		I-10 Riprap Type "A" (Grouted)
	Under 15"	Over 15"	Cu. Yds.	8"		I-2-B		
A	20							
D	144		4.8	886		7		
C	32			8		3		
Total FAGH 531-I(1)	196		4.8	894		10		
A	35							
D	86			213				3
C	38		1.3			2		143
Total FAP 531-H(1)	159		1.3	213		2		146

PIPE UNDERDRAINS

Station From	Station To	Side	I-4 6" Pipe Underdrain Lin. Ft. 6"	I-6 Pipe Special Each 6"x6"	6" Stopper	Remarks
398+15	413+00	Lt.	1493	1 "Tee"	1	Tee at Sta. 412+00
402+40	405+26	Rt.	397	1 "Tee"	2	Tee at Sta. 404+30 Includes 90 lin. ft. for Approach.
405+76	413+00	Rt.	853	1 "Tee"	2	Tee at Sta. 411+50 Includes 120 lin. ft. for Approach.
416+00	428+50	Lt.	1262	2 45° Bends	3	45° Bends at Sta. 423+85.5 and Sta. 424+14.8 includes 41 lin. ft. for connections into C.B. Sta. 424+
Total F.A.G.H. 531-I(1)			4005	13		
433+70	451+00	Lt.	1747	1 "Tee"	2	Tee at Sta. 442+61
445+00	451+00	Rt.	607	1 "Tee"	1	Tee at Sta. 445+00
Total F.A.P. 531-H(1) Part 1			2354	5		

* Item I-117, Side Approaches, and Mail Box Turnouts.
From Table "A" FAGH 531-I(1) = 52 Cu. Yds.
Total including Compaction = 52 x 115% = 60 Cu. Yds.
From Table "A" FAP 531-H(1) = 55 Cu. Yds.
Total including Compaction = 55 x 115% = 63 Cu. Yds.

PAVEMENT COMPUTATIONS

I-71, 9" Reinforced Portland Cement Concrete Pavement
F.A.G.H. 531-I(1) (Pavement 22'-0" width)
Sta. 405+76.62 to Sta. 428+30.36 = 2253.74 Lin. Ft.
2253.74 x 22 ÷ 9 = 5509 Sq. Yds.
Additions — Intersection I-P, 1110 Sq. Yds. & Bridge Flares, 4 Sq. Yds. Sheet No. 2 = 1114 Sq. Yds.
Total = 6623 Sq. Yds.
F.A.P. 531-H(1) (Part 1) (Pavement 22'-0" width)
Sta. 428+30.36 to Sta. 451+00 = 2269.64 Lin. Ft.
Deductions Bridge, Sta. 428+30.36 to Sta. 433+85.64 = 555.28 Lin. Ft.
Equation, Sta. 446+36.20 = 446+44.86 = 8.66 Lin. Ft.
Net Length = 1705.70 Lin. Ft.
(Bridge Flares, 40 Sq. Yds. Sheet No. 2) + (1705.70 x 22 ÷ 9) = 4210 Sq. Yds.

I-12, Type 4 Combination Curb and Gutter
F.A.G.H. 531-I(1)
Sta. 411+97.22 to Sta. 428+31.36 = 1634.14 Lin. Ft.
Use 1634.00 Lin. Ft.

S-5, 9" Reinforced Concrete Approach Slabs
F.A.G.H. 531-I(1)
Bridge No. DE-127-06 = 69 Sq. Yds.
F.A.P. 531-H(1)
Bridge No. DE-127-06 = 69 Sq. Yds.

SS-112 Classified Embankment Material
From Sta. 399+00 to Sta. 405+76.62 (Intersection I-P) Volume = 463.0 Cu. Yds.
From Sta. 405+76.62 to Sta. 406+00 = 23.38 Lin. Ft.
Average end area = 19 Sq. Ft. Volume = (23.38 x 19) ÷ 27 = 7.8 Cu. Yds.

From Sta. 406+00 to Sta. 413+00, From Sta. 416+00 to Sta. 425+00
Length = 1600 Lin. Ft. Average end area = 28 Sq. Ft.
Volume = (1600 x 28) ÷ 27 = 1659.3 Cu. Yds.
From Sta. 425+00 to Sta. 428+45 Length = 345 Lin. Ft. End area = 43 sq. Ft.
Volume = (345 x 43) ÷ 27 = 549.4 Cu. Yds.
Total F.A.G.H. 531-I(1) = 463.0 + 7.8 + 1659.3 + 549.4 = 2679.5 Cu. Yds.
From Sta. 433+71 to Sta. 434+00 = 29 Lin. Ft.
Equation deduction = 8.66 Lin. Ft. Length = 29 − 8.66 = 20.34 Lin. Ft.
End area = 43 Sq. Ft. Volume = (20.34 x 43) ÷ 27 = 32.4 Cu. Yds.
From Sta. 434+00 to Sta. 451+00 Length = 1700 Lin. Ft. End area = 28 Sq. Ft.
Volume = (1700 x 28) ÷ 27 = 1762.9 Cu. Yds.
Total F.A.P. 531-H(1) (Part 1) = 32.4 + 1762.9 = 1795.3 use 1796 Cu. Yds.

FED. RD. DIST. NO.	STATE	F.A.G.P. NO.	F.A.P. NO.	FISCAL YEAR
10	OHIO	F.A.G.H. 531-I(1)	531-H(1)	1943 & 1944

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DEFIANCE COUNTY
S.H. 424 SEC. "A" (Pt.)
PAULDING COUNTY
S.H. 422 SEC. "Q" (Pt.)

GENERAL SUMMARY

Item	Description	F.A.P. 531-H(1) Rural Part 1 (Plan 1)	Rural Part 2 (Plan 2)	Rural Total	Total Municipal Part 2 (Plan 2)	Total F.A.G.H. 531-I(1) (Plan 1)	Project Total	Unit
	Roadway							
E-1	Roadway Excavation (Unclassified)	11020	3510	14530	1550	14559	31039	Cu.Yds.
E-4	Borrow (Contractor to furnish)	10036	1659	11695	366	3833	15894	Cu.Yds.
E-8	Removal and Disposal of Existing Pavement	2937	3	2940	392	3057	6389	Sq.Yds.
E-9	Removal of Trees and Stumps	49	2	51	4	153	208	Each
E-11	Water	97	24	121	11	90	222	M.Gal.
E-12	6" to 12" Pipe Removed and Stored	159	210	369	26	196	591	Lin. Ft.
E-305	Seeding and Protecting Roadway Areas	19711	29406	49117.0	11027	35385	95529	Sq.Yds.
I-1	12" Pipe for Driveways	24	24	48		24	72	Lin. Ft.
I-2	12" Pipe for Storm Sewer					112	112	Lin. Ft.
I-2	18" Pipe for Storm Sewer Outlet					20	20	Lin. Ft.
I-3	6" Pipe for Roadway Drainage		34	34			34	Lin. Ft.
I-3	8" Pipe for Roadway Drainage	213	167	380	76	894	1350	Lin. Ft.
I-3	10" Pipe for Roadway Drainage	280	10	290		790	1080	Lin. Ft.
I-3	12" Pipe for Roadway Drainage		20	20	111	663	794	Lin. Ft.
I-3	15" Pipe for Roadway Drainage		43	43			43	Lin. Ft.
I-3	8" Pipe for Roadway Drainage Under Drives	24	24	48		30	78	Lin. Ft.
I-3	10" Pipe for Roadway Drainage Under Drives					54	54	Lin. Ft.
I-3	12" Pipe for Roadway Drainage Under Drives		55	55			55	Lin. Ft.
I-3	12" Pipe for Roadway Drainage Outlets				18		18	Lin. Ft.
I-3	15" Pipe for Roadway Drainage Outlets	20		20			20	Lin. Ft.
I-3	18" Pipe for Roadway Drainage Outlets		40	40	38	20	98	Lin. Ft.
I-5	6" Pipe Specials for Roadway Drainage		2	2			2	Each
I-5	8" Pipe Specials for Roadway Drainage					1	1	Each
I-5	10" Pipe Specials for Roadway Drainage		4	4			4	Each
I-5	12" Pipe Specials for Roadway Drainage		5	5	2	2	9	Each
I-8	Std. No. 1 Manhole					1	1	Each
I-8	Std. No. 6 Catch Basin (Modified) using Heavy No. 1 M.H. Frame & Cover.		2	2	1		3	Each
I-8	Std. No. 1-2-8 Catch Basin	2	10	12	3	10	25	Each
I-8	Std. No. 1-3 Catch Basin (Modified)					1	1	Each
I-8	Std. No. 2-2-8 Catch Basin (Modified)	1	4	5	1		6	Each
I-8	Std. No. 3 Catch Basin (Modified)					3	3	Each
I-10	Riprap, Type "A" (Grouted)	146	47	193	11		204	Sq.Yds.
I-15	Guard Rail Removed and Stored	1470		1470		660	2130	Lin. Ft.
SS-112	Classified Embankment Material	1796		1796	215	2680	4691	Cu.Yds.
I-117	Side Approaches, Mail Box Turnouts and Berm Material	63	109	172	21	60	253	Cu.Yds.
L-10	Sodding	252	191	443			443	Sq.Yds.
I-15	Guard Rail (Standard Strength Flexible Steel Plate Tension Type, Sec. I-1503 or Steel Beam Type without bracket Sec. I-15.05A)	1088	176	1264	208	688	2160	Lin. Ft.
I-4	6" Pipe Underdrains (As per plan)	2354		2354	401	4005	6760	Lin. Ft.
I-5	6" Pipe Specials for Pipe Underdrains	5		5		13	18	Each
I-14	Paved Gutter (as per plan)	55		55		21	76	Lin. Ft.
I-14	Variable width Paved Gutter (as per plan)					8	8	Lin. Ft.
I-9	Commercial Fertilizer (4-12-4)	3593	5328	8921	1985	6369	17275	Lbs.
	PAVEMENT							
S-5	9" Reinforced Concrete Approach Slabs	69		69		69	138	Sq.Yds.
T-71	9" Reinforced Portland Cement Concrete Pavement	4210	221	4431	539	6623	11593	Sq.Yds.
T-71	5½" Minimum Thickness Reinforced Portland Cement Concrete Pavement		2276	2276	745		3021	Cu.Yds.
I-12	Std. Type 4 Concrete Curb and Gutter					1634	1634	Lin. Ft.
	Structures, 20' Span & Under							
E-2	Excavation for Structures, Unclassified	295	59	354	285	66	705	Cu.Yds.
E-3	Channel Excavation	290		290	130		420	Cu.Yds.
I-5	24" Pipe Special for Roadway Culverts		1	1			1	Each
S-1	Concrete for Structures, Class "C"	6	4	10	0.5		10.5	Cu.Yds.
S-1	Concrete for Structures, Class "C" Slab				43.6		43.6	Cu.Yds.
S-1	Concrete for Structures, Class "E" Walls				77.6		77.6	Cu.Yds.
S-1	Concrete for Structures, Class "E" Footings				50.2		50.2	Cu.Yds.
S-3	Type "B" Waterproofing				45		45	Sq.Yds.
S-4	Reinforcing Steel	83	45	128	8869		8997	Lbs.
S-9	½" Premolded Bituminous Expansion Joint Material				25		25	Sq.Ft.
S-22	Removal of Portions of Existing Structure	1	4	5		5	10	Cu.Yds.
S-23	¾" Dowel Holes		15	15			15	Lin. Ft.
S-24	Removal of Existing Structures (2 Units)	Lump		Lump	Lump		Lump	Lump Sum
S-27	10" Pipe for Roadway Culverts		4	4			4	Lin. Ft.
S-27	12" Pipe for Roadway Culverts	59	118	177	53	105	335	Lin. Ft.
S-27	15" Pipe for Roadway Culverts	69	14	83			83	Lin. Ft.
S-27	24" Pipe for Roadway Culverts		27	27			27	Lin. Ft.
S-27	48" Pipe for Roadway Culverts	132		132			132	Lin. Ft.
S-29	Porous Backfill				75		75	Cu.Yds.
S-122	Abandon Existing Catch Basins	1	6	7	2	2	11	Each

STRUCTURES OVER 20 FT. SPAN

For Estimated Quantities – See Sheet No. 35 PLAN 1

RAILROAD FORCE ACCOUNT PLAN 1

Remove crossing material and surface track.
Cutting ditch through old roadbed each side of track.
Rebuild fence east side - 18 rods.
Construct barricade west side.