STATE OF OHIO
DEPARTMENT OF HIGHWAYS

F.A.P. NO. 684 (3)
F.A.P. NO. 684-A(2)

DIV.	STATE	FED. AID PROJECT	YEAR	SHEET NO.
2	OHIO	F 684 (3)	1946	1 89

ERIE COUNTY
S.H.3 SEC. HURON (PT)

RECONSTRUCTION & RE-ALIGNMENT

OF BRIDGE NO. ER-6-179 OVER HURON RIVER

SANDUSKY-CLEVELAND-EASTERN ROAD

S.H.3 SEC. HURON-PT.

ERIE COUNTY

VILLAGE OF HURON

PROPOSAL 1

FOR PROPOSAL 2 SEE FAGM 684 (3)

Structures:
ERI-6-179 — Sheets 6, 7, 51, 52, 53

CONVENTIONAL SIGNS

STATE LINE
COUNTY LINE
TOWNSHIP LINE
CENTER LINE
PROPERTY LINE
CITY OR VILLAGE LINE
FENCE LINE
STEAM RAILROAD
POLE LINE
GUARD RAIL
DRAIN PIPE-NEW
DRAIN PIPE-OLD

INDEX OF SHEETS

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LINE DATA

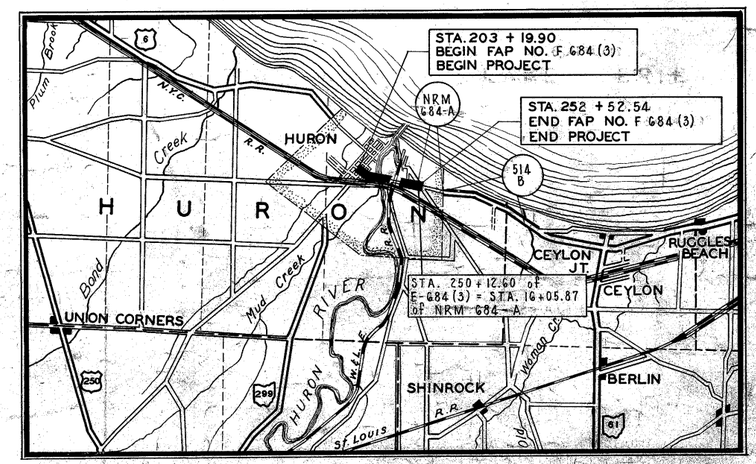
LENGTH OF WORK

STA. 203+19.90 TO STA. 258+00	=	5480.10 LIN. FT.
DEDUCT FOR F.A.G.C. NO. F.A.G.M. 684-(3)		
STA. 232+80.49 TO STA. 234+62.51	=	182.02 LIN. FT.
NET LENGTH F-684 (3)	=	5298.08 LIN. FT. OR 1.003 MI.

PROJECT Nº F-684 (3)

STA. 203+19.90 TO STA. 252+52.54	4932.64 LIN. FT.
DEDUCTION FOR F.A.G.M. 684 (3)	182.02 LIN. FT.
NET LENGTH OF F-684 (3)	4750.62 LIN. FT. OR 0.899 MILE

FILE NO.	ERIE CO. S.H. 3 SEC. HURON (PT.)
	DATE OF LETTING
	CONTRACT NO.



DELIVERY POINT HURON — AVERAGE HAUL 5 MILE

LOCATION PLAN

SCALE OF MILES 0 1 2 3

PORTION TO BE IMPROVED
STATE HIGHWAYS
OTHER ROADS

SCALES

PLAN	1" = 50'
PROFILE-VERTICAL	1" = 5'
PROFILE-HORIZONTAL	1" = 50'
CROSS SECTIONS	1 = 5 & 10'

STANDARD CONST. DRWGS.

DRAWING NO.	DATE
I-15 Nº 1	2-1-47
I-15 Nº 2	2-1-47
S-27 P.C. 1	3-1-39
S-27 P.C. 3	2-20-45
I-1, 2, 3, 4, & 5	2-20-45
I-8 C.B. I-2 A & B	12-15-41
I-8 C.B. NO. 3	12-15-41
I-15 Nº 4	2-1-47
I-8 M.H. NO. 1	3-1-39
I-12	7-1-42
I-15 Nº 5	2-1-47
I-15 Nº 6	2-1-47
G-8.07	2-1-47
B-T-50-70-71E NO. 1	12-1-43
I-15 Nº 7	2-1-47
I-15 Nº 9	2-1-47
AS-44-S	4-2-45
I-8 C.B. 2-2 A & B	12-15-41
B-T-71R	2-1-47
L-1	10-1-45

SUPPLEMENTAL SPECIFICATIONS

SPEC. NO.	DATE
	REVISED 8-3-36
	REVISED
112	REVISED 11-6-46
S-203	4-6-45
183	Revised 5-1-45
172	Revised 1-13-47
173	Revised 1-13-47

CONSTRUCTION BUREAU AUG 12 1955 GROUND PHOTO LAB

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 NOT REQUIRE THE CLOSING TO TRAFFIC OF THE HIGHWAY, AND THAT PROVISIONS FOR THE MAINTENANCE AND SAFETY OF TRAFFIC WILL BE AS SET FORTH ON THE PLANS AND ESTIMATES.

THE RIGHT OF WAY NECESSARY FOR THIS IMPROVEMENT WILL BE PROVIDED BY THE STATE OF OHIO.

APPROVED [signature]
DATE 10-29-46 ASST. TO CHIEF ENGINEER

APPROVED
DATE _____ CHIEF ENGINEER BUREAU OF MAINTENANCE

APPROVED [signature]
DATE 11-18-46 CHIEF ENGR. BUREAU OF BRIDGES & RAILROAD CROSSINGS

APPROVED [signature]
DATE 11-22-46 CHIEF ENGINEER BUREAU OF LOCATION & DESIGN

APPROVED Edison W. Fellis
DATE 11-22-46 FIRST ASSISTANT DIRECTOR & CHIEF ENGINEER

APPROVED Perry J. Ford
DATE 11-22-46 DIRECTOR OF HIGHWAYS

APPROVED FOR ERIE COUNTY

DATE _____ COUNTY COMMISSIONERS

RECOMMENDED FOR APPROVAL - DATE

DISTRICT ENGINEER
PUBLIC ROADS ADMINISTRATION
FEDERAL WORKS AGENCY

APPROVED _____ DATE

APPROVED FOR VILLAGE OF HURON

DATE _____ MAYOR

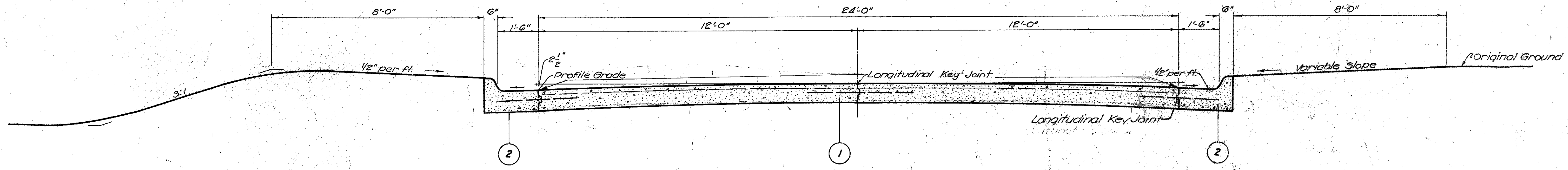
APPROVED
DIVISION ENGINEER
PUBLIC ROADS ADMINISTRATION
FEDERAL WORKS AGENCY

FED. RD. DIST. NO.	STATE	FED. AID PROJECT	FISCAL YEAR
10	OHIO	F-684(3)	1946

ERIE COUNTY
S.H. 3 SEC. HURON-PT.

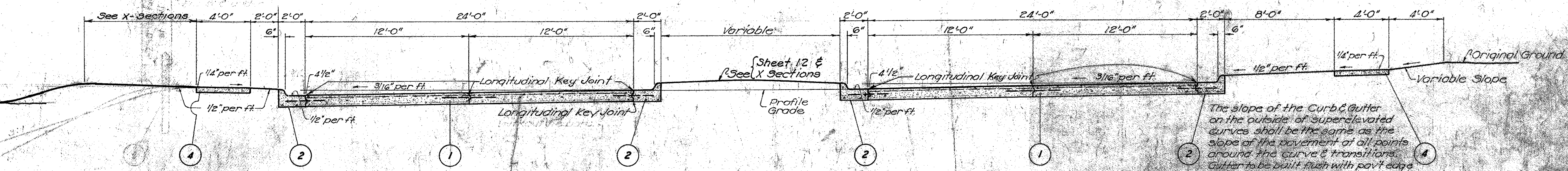
TYPICAL SECTIONS

TYPE T-71



SCHEDULE OF STATIONING:

Sta. 203+19.90 to Sta. 207+22.23 = 402.33 Lin. Ft.

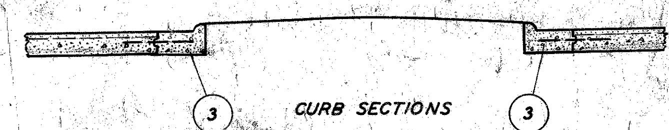


NORTH PAV'T. LANE
SCHEDULE OF STATIONING:

Sta. 1+80.96 to Sta. 6+55.67 = 474.71 Lin. Ft.

SOUTH PAV'T LANE
SCHEDULE OF STATIONING:

Sta. 207+22.23 to Sta. 215+68.23 = 846.00 Lin. Ft.



CURB SECTIONS

Sta. 5+19.5 to Sta. 6+59.26 — Sta. 214+16.37 to Sta. 215+22.23

For section of curb at driveways see sheet 35.

SEEDING: Quantities for seeding Item L-9 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 (10') from the work limits.
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 L-9 by the contractor at his own expense.

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

GENERAL NOTES

The thickened edge of pavement trench shown on cross sections shall be considered as 9" uniform thickness.

WELLS & CELLARS. All dug wells and abandoned basements appearing wholly or partly within the right-of-way limits of this project, shall be filled full width up to the elevation of the surrounding ground in accordance with Item E-1.05 of the Construction & Material Specifications.

TREE & STUMP REMOVAL. No tree shall be cut even though marked for removal unless approved by the Director. (See sheet 45 for removal list.)

CASTINGS from catch basins marked for removal or to be abandoned shall be neatly stored on the right-of-way by the contractor for disposal by the Village of Huron.

PAVEMENT removed under Item E-8 shall be placed in embankment according to Item E-1.06.

The 24 ft. portland cement concrete pavement Item T-71 shall be placed and finished in slab widths of 12 ft. as separate operations.

1. Item T-71 8" Reinforced Portland Cement Concrete Pavement
2. Type 2 Concrete Curb & Gutter, Item I-12
3. Type 4 Concrete Curb & Gutter, Item I-12.
4. 4" Portland Cement Concrete Sidewalk, Item I-13
5. Guard Rail

MAINTENANCE OF TRAFFIC & CONSTRUCTION PROCEDURE.
Two way traffic through the project shall be maintained at all times from Main St. to the end of the project.
Traffic shall be maintained over the existing road & bridges until the new bridge is completed.
All of the following work shall be complete and ready to open to traffic at the completion of the river bridge:-
The south pavement between Sta. 203+19.9 and Sta. 215+68.23
A temporary road between the left one of the river bridge at Sta. 226+24.75 and the existing pavement at Sta. 228+00
Plank bridges and mats necessary to permit traffic to cross the bridge median strip, same to be approved by the engineer.
After completion of the river bridge, traffic shall be routed over the above locations and the existing pavement east of the bridge.

The existing fill between Sta. 216 and Sta. 227 shall be used to construct the new embankment for the south pavement from the river bridge to the end of the project. The south half of the railroad structure shall be completed by the time the south pavement between the river bridge and the end of the project is finished. The following procedure shall apply between Sta. 237 and Sta. 249 during the construction of the south pavement. The existing pavement shall be widened by grading a 12 foot shoulder on the north side and surfacing 10 feet of the same with T-110 Material. Only enough of the south half of the existing pavement shall be removed to permit the placing of the new south pavement. As soon as the south pavement is complete, traffic shall be routed thereon and all remaining work shall be completed.
In all cases where the new construction limits include the existing pavement and berms the embankment need not be constructed full cross section width.
No temporary pavement shall be left within 6 inches of the finished berms or slopes.
Sufficient men, materials and equipment shall be available at all times to insure the safe and unimpeded flow of two way traffic twenty four hours daily.
Temporary roads shall be drained and guard rail erected where directed by the engineer.
Traffic bound surface shall be kept in smooth condition and calcium chloride and aggregate added as directed. And shall be removed as directed.
Payment for all of the above work with the exception of paving materials and calcium chloride shall be included in the lump sum for maintaining traffic.
Estimated quantities for temporary construction 500 Cu. yds. of T-110 & 10 Tons of Calcium chloride
The state will give consideration to any alternate construction schedule that will effect the continuous handling of two-way traffic that the contractor may wish to submit. No alternate schedule may be put into operation until it has been approved by the engineer.

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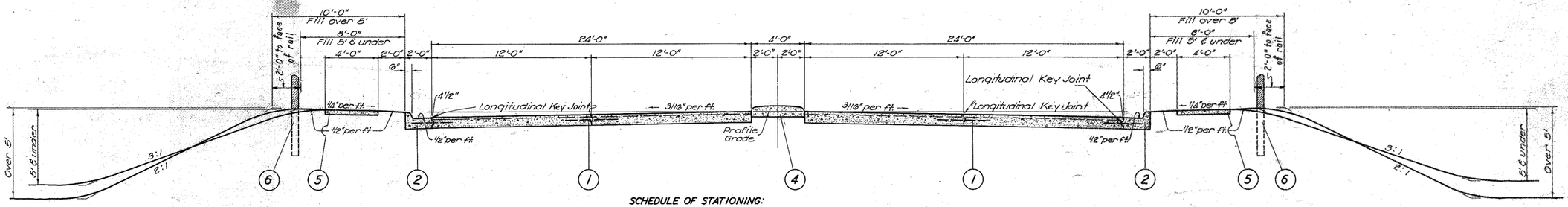
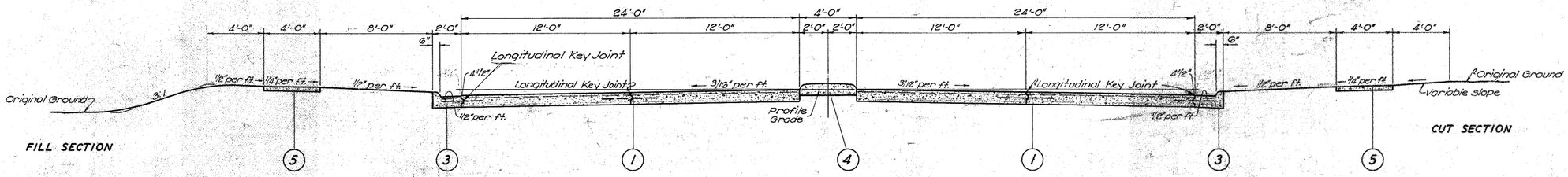
ERIE COUNTY
S.H. 3 SEC. HURON PT.

TYPICAL SECTIONS
TYPE T-71



SCHEDULE OF STATIONING:

Sta. 226+24.75 to Sta. 232+65.49 = 640.74 Lin.Ft.
Sta. 234+77.51 to Sta. 242+00.00 = 722.49 " "
Total 1,363.23 Lin.Ft.



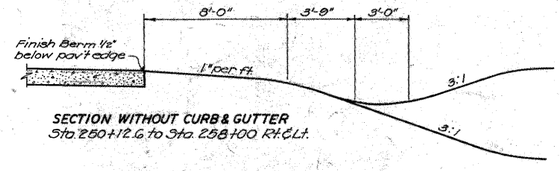
FILL SECTION

CUT SECTION

SCHEDULE OF STATIONING:

Sta. 242+00.00 to Sta. 252+52.54 = 1052.54 Lin.Ft.

Note: Blanket Course required, Sta. 244 to Sta. 252+52.54 not indicated on Typical Section. See cross sections



SECTION WITHOUT CURB & GUTTER
Sta. 250+12.6 to Sta. 258+00 Rt. & Lt.

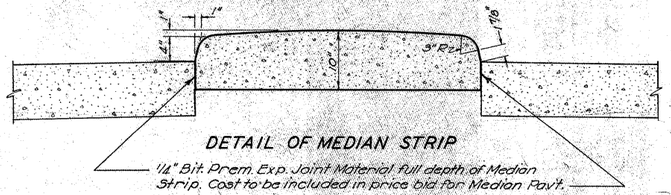
Expansion & Contraction Joints in north 24ft. of divided T-71 pavement shall be placed transversely opposite to similar joints in the south 24' of divided pavement.

I-21 Median pavement shall have full depth ¼" bituminous premolded expansion joints Sec. M-10.1 spaced at 20 foot intervals in such a manner that each third joint coincides with a contraction or expansion joint in T-71 pavement. Exp. joint material shall be the same type as used in the T-71 pavement.

The 24 ft portland cement concrete pavement item T-71 shall be placed and finished in slab widths of 12 ft. as separate operations.

Type and spacing of expansion and contraction joints in type 2 and type 4 concrete curb and gutter shall be identical with the joints in the T-71 pavement.

Note: Height of median strip above pavement to be lowered to 2" in a distance of 12" at the ends where they are exposed to traffic.



SCHEDULE OF STATIONING:

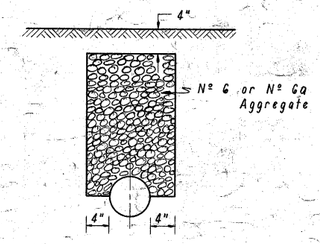
~~F.A.P. 65-7.0~~

Sta. 226+24.75 to Sta. 229+19.00 = 294.25 Lin.Ft.
Sta. 230+59.73 to Sta. 232+65.49 = 205.76 " "
Sta. 234+77.51 to Sta. 241+53.51 = 676.00 " "
Sta. 242+62.23 to Sta. 250+12.60 = 750.37 " "

~~F.A.S.~~

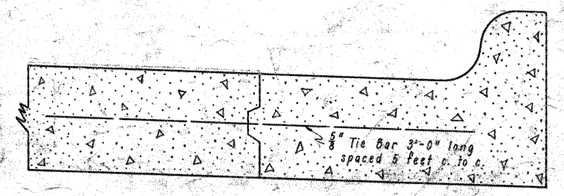
Sta. 250+12.60 to Sta. 250+48.00 = 35.40 Lin.Ft.
Sta. 252+02.00 to Sta. 252+52.54 = 50.54 " "
Total 2012.32 Lin.Ft.

1. ~~Item T-71 9" Reinforced~~ Portland Cement Concrete Pavement
2. Type 2 Concrete Curb & Gutter, Item I-12
3. Type 4 Concrete Curb & Gutter, Item I-12.
4. 10" Portland Cement Concrete Pavement for Median Strip, Item I-21
5. 4" Portland Cement Concrete Sidewalk, Item I-13.
6. Guard Rail



ROADWAY DRAINAGE

Grading for № 6a Aggregate
100% passing 3/4" inch opening
90-100 " 1/2 " "
40-70 " 3/8 " "
0-15 " № 4 Sieve
0-5 " № 8 "



TYPICAL SECTION CURB & GUTTER SHOWING TIE BAR

LONGITUDINAL JOINTS

FED. RD. DIST. Nº	STATE	FED. AID PROJECT	FISCAL YEAR	4
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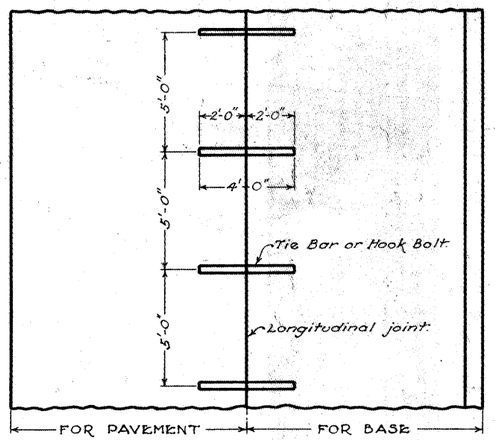
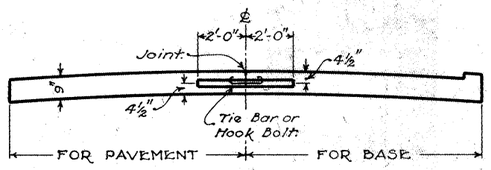
ERIE COUNTY
S. H. 3 HURON (PT.)

TIE BAR OR HOOK BOLT SPACING

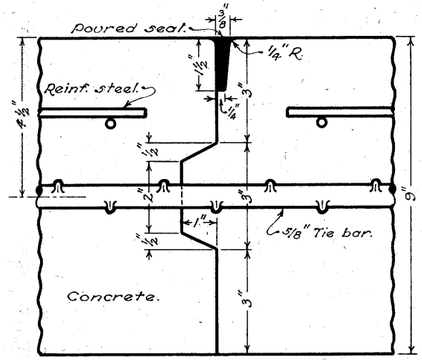


PLAN



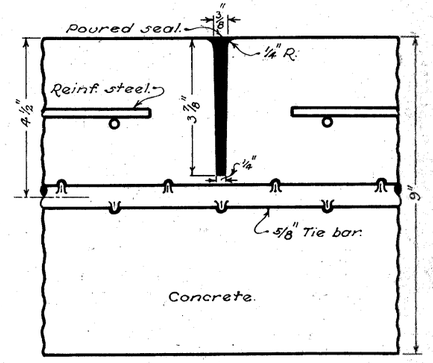
CROSS SECTION

KEY JOINT



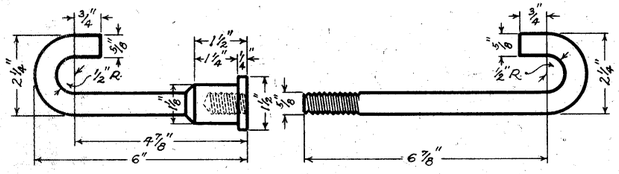
DETAIL OF JOINT

IMPRESSED JOINT



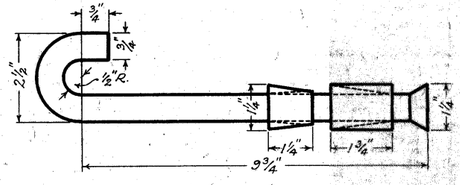
DETAIL OF JOINT

HOOK BOLT

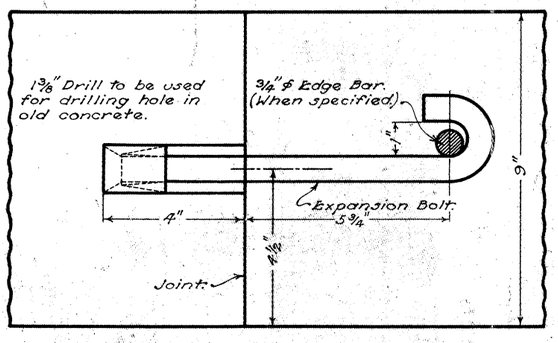


INSERT J BOLT

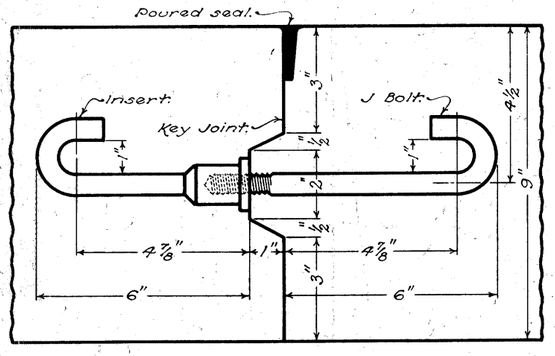
EXPANSION BOLT



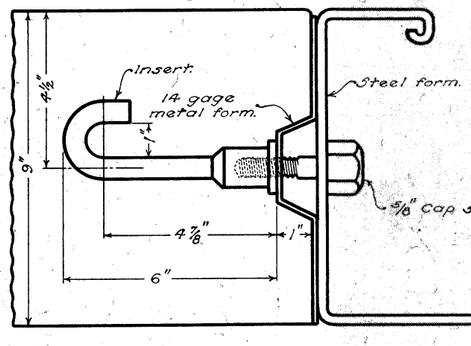
EXPANSION BOLT JOINT



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 per 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

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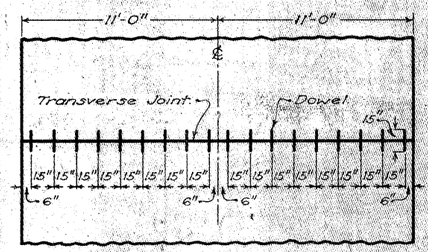
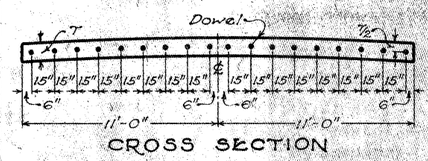
ERIE COUNTY
S. H. 3 HURON (P.T.)

PAVEMENT JOINTS

DOWEL SPACING

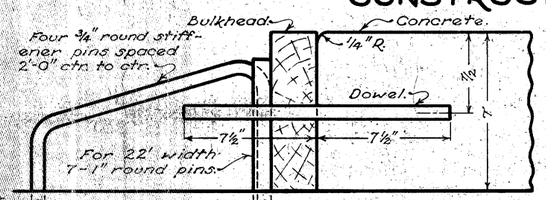


PLAN

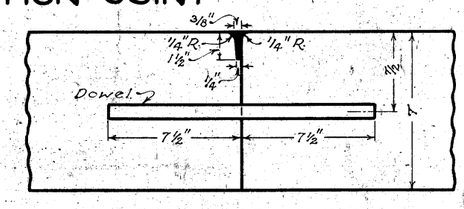


CROSS SECTION

CONSTRUCTION JOINT

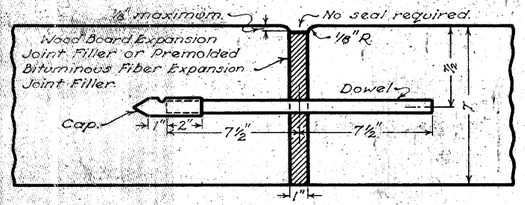


DETAIL OF BULKHEAD



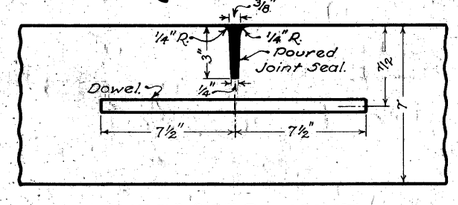
DETAIL OF JOINT

EXPANSION JOINT



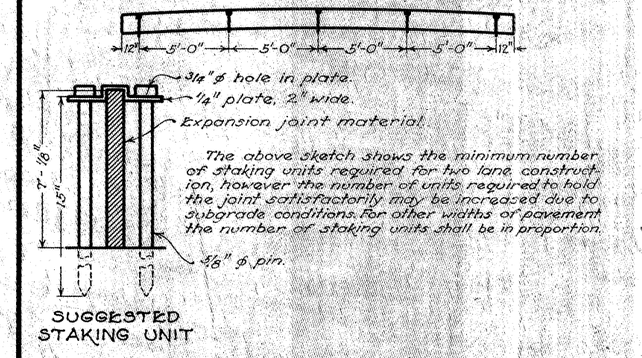
DETAIL OF JOINT

CONTRACTION JOINT



IMPRESSED JOINT

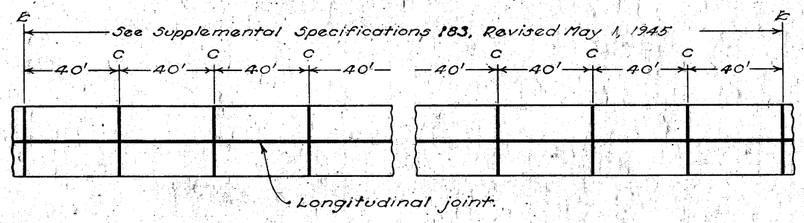
METHOD OF STAKING EXPANSION JOINT



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.

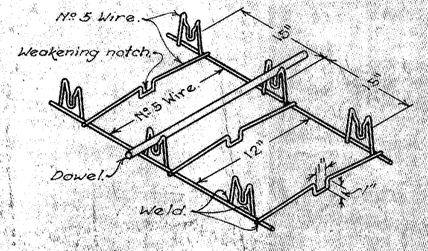
SUGGESTED STAKING UNIT

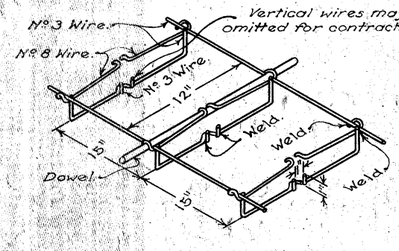
ARRANGEMENT OF TRANSVERSE JOINTS

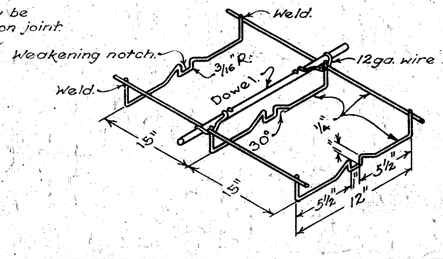


C = Contraction Joint
E = Expansion Joint

DOWEL SUPPORT UNITS







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

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 1 1/16 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 ¾ 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.

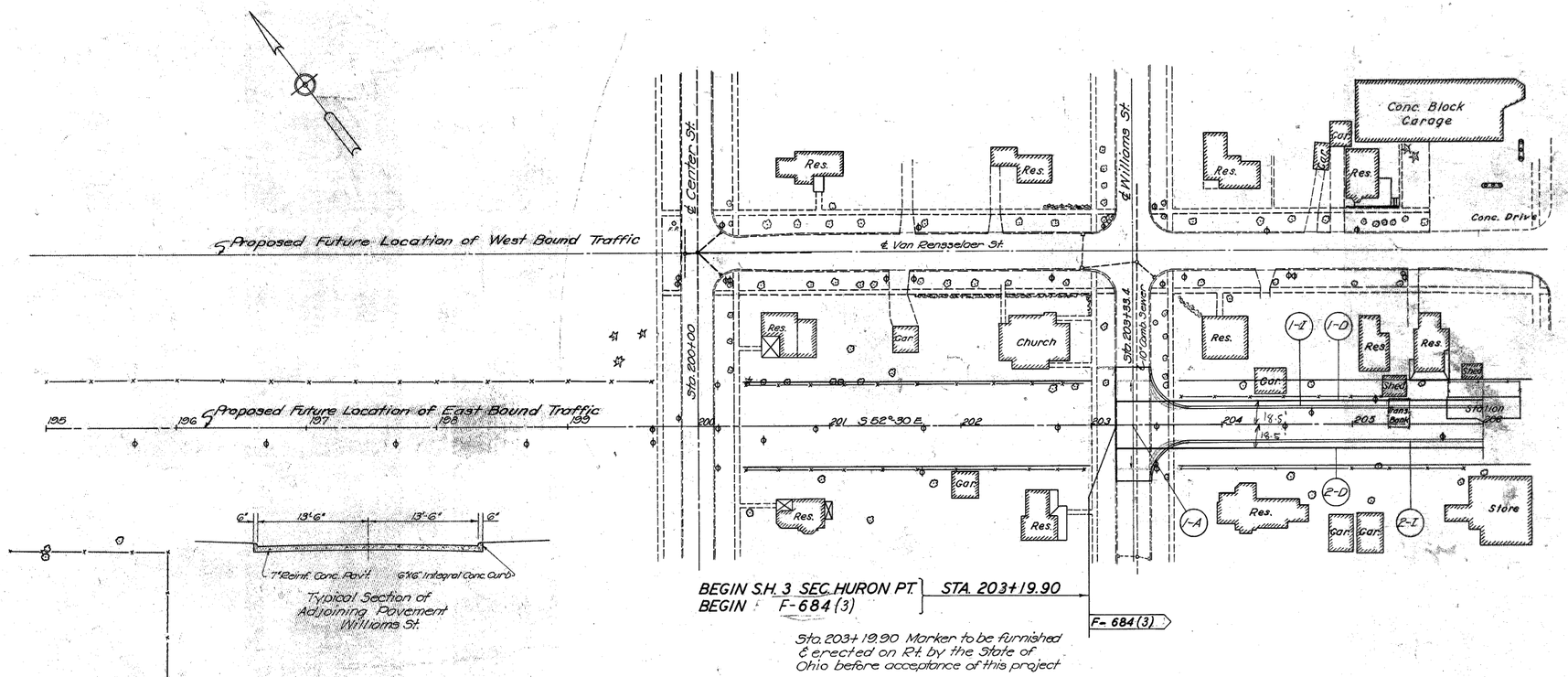
POURED JOINT SEAL:— The bituminous material for filling impressed joints shall meet the requirements of Sec. M-5.6 F-1 of the General Specifications. The filler shall be handled in such a manner that it will be confined to the joint and in nowise mar the surface.

5-1-45

FED. RD. DIST. NO.	STATE	FED. AID PROJECT	TOTAL SHEETS
10	OHIO	F-684(3)	1946

5
89

ERIE COUNTY
S.H. 3 SEC. HURON-PT.



Typical Section of Adjoining Pavement Williams St.

BEGIN S.H. 3 SEC. HURON PT. } STA. 203+19.90
BEGIN F-684(3) }

F-684(3)

Sta. 203+19.90 Marker to be furnished & erected on Rt. by the State of Ohio before acceptance of this project

CONCRETE CURB & GUTTER (I)

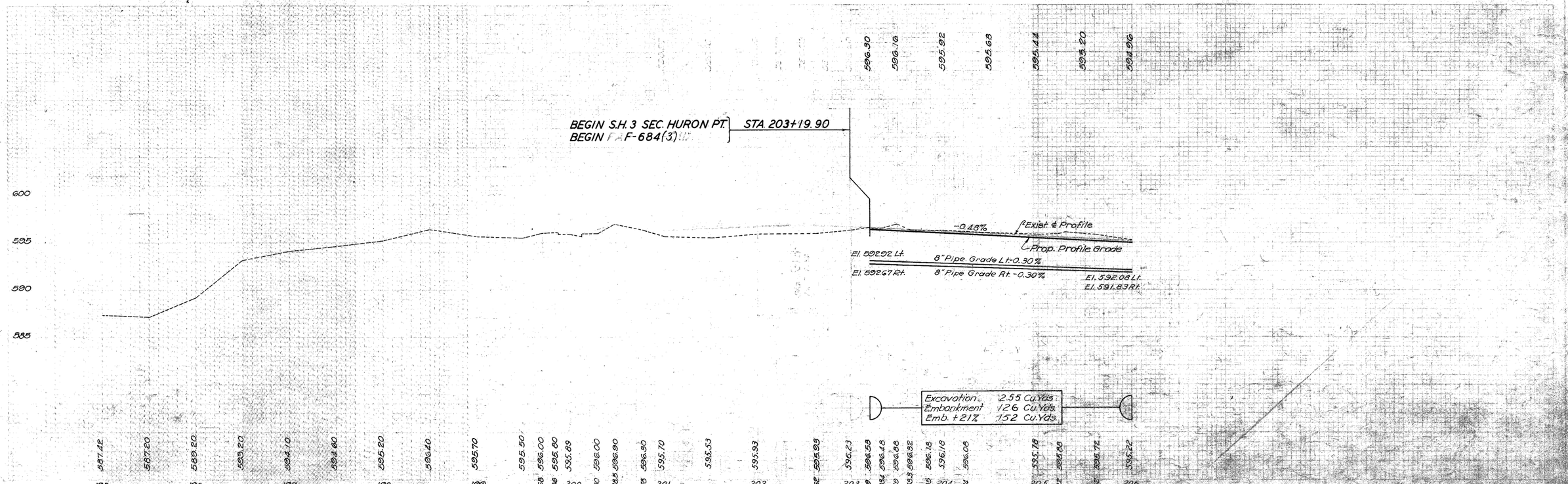
Item No.	Station From	Station To	Side	Type 2 Conc. Curb & Gutter Lin. Ft.	
1-I	203+76.94	206+00	Lt.	223.06	
2-I	203+77.06	206+00	Rt.	222.94	
	Total			446.00	

DRIVES & APPROACHES (A)

Item No.	Station	Side			For Details see Sh. No.
1-A	203+33.40	Rt. & Lt.			36

ROADWAY DRAINAGE (D)

Item No.	Station From	Station To	Side	Pipe for R.D. incl. Porous Backfill 8" Lin. Ft.	
1-D	203+20	206+00	Lt.	280	
2-D	203+20	206+00	Rt.	280	
	Total			560	

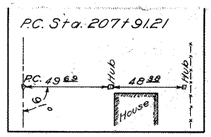


Excavation	255 Cu. Yds.
Embankment	126 Cu. Yds.
Emb. +21%	152 Cu. Yds.

		FED. AID		
10	OHIO	F-884(3)	1940	89

ERIE COUNTY
S.H. 3 SEC. HURON-PT.

P.C. Sta. 207+91.21



PAVEMENT REMOVAL (PR)

Item No.	Station From	Station To	Length Ft.	Width Ft.	Remove & Dispose of Exist 8" Reinf C. Pav. Sq. Yds.
1-PR	210+70	217+00	601.	25.	1,669.4
Total					1,669.4

CATCH BASIN REM. (CR)

Item No.	Station	Side	Exist. Catch Basin Units Aband.	Exist. Catch Basin Units From Disp.
1-CR	206+51	Rt.	1	
2-CR	206+92	Rt.	1	
3-CR	210+55	Lt.	1	
4-CR	210+65	Lt.	1	
5-CR	216+65	Lt.		1
6-CR	216+65	Lt.		1
Total			4	2

ROADWAY DRAINAGE (D)

Item No.	Station From	Station To	Side	12" Pipe for Roadw. Drain. Lin. Ft.	Pipe for R.D. Incl. Porous Backfill 8" Lin. Ft.	12" Lin. Ft.	15" Lin. Ft.	Pipe for 33" under Pav't. 12" Lin. Ft.	15" Lin. Ft.	Pipe Specials 12"x12"x12" Wye Units	12"-45° Curve Units	15"x15"x12" Tee Units	15" Outlet Pipe Lin. Ft.	15" Pipe for R.D. Lin. Ft.
1-D	206+17		Rt.					25						
2-D	206+17	206+51	Rt.	48										
3-D	206+52	206+92	Rt.					38						
4-D	207+78		Rt.	4										
5-D	208+70		Rt.					26			1			
6-D	206+94	211+00	Rt.			298		104		2				
7-D	210+28	210+60	Lt.					32						
8-D	210+62	210+97	Lt.	48										
9-D	210+97	210+96	Rt.						28					
10-D	212+60		Rt.					28			1			
11-D	211+02	212+50	Rt.				148							
12-D	212+38		Rt.					28			1			
13-D	212+50	217+00	Rt.					36				1	125	321
14-D	206+00	206+17	Lt.		16									
15-D	206+00	206+19	Rt.		19									
16-D	208+30	210+70	Lt.		196									
17-D	Cul. 9	212+50	Lt.		150									
Total				100	618	299	148	281	28	2	3	2	125	321

CATCH BASINS (C)

Item No.	Station	Side	Std. Catch Basins No. 3 Mod. Units	Std. Nat. Manhole Units
1-C	206+17	Rt.	1	
2-C	206+17	Lt.	1	
3-C	206+51	Rt.	1	
4-C	206+92	Rt.	1	
5-C	207+76	Rt.	1	
6-C	208+70	Lt.	1	
7-C	210+28	Lt.	1	
8-C	210+60	Rt.	1	
9-C	210+97	Lt.	1	
10-C	211+00	Rt.		1
11-C	212+60	Lt.	1	
12-C	214+38	Lt.	1	
Total			12	1

CONCRETE SIDEWALKS (W)

Item No.	Station From	Station To	Side	4" Thick Conc. Sidewalk Sq. Yds.	2-6" Thick Conc. Sidewalk Sq. Yds.
1-W	207+10	208+28	Rt.	160	
2-W	208+35	208+77	Rt.	168	
3-W	209+01	210+02	Rt.	412	
4-W	210+55	213+70	Rt.	1200	
5-W	213+90	215+69.65	Rt.	718.6	
6-W	215+62.65	215+87.45	Lt.		104.0
Total				3018.6	104.0

SIDEWALK REMOVAL (CSR)

Item No.	Station From	Station To	Length Ft.	Width Ft.	Remove & Dispose of Exist. Sidewalk Sq. Ft.
1-SR	210+70	217+00	620	4	2480
Total					2480

DRIVES & APPROACHES (A)

Item No.	Station	Side	6" Plain P.C. Conc for Dr's Sq. Yds.	I-17 Cu. Yds.	For Details see Sh. No.
1-A	206+11.61	Rt.			36
2-A	208+30	Rt.	17.3	1	35
3-A	208+89	Rt.	36.0	2	35
4-A	210+38.62	Rt.			37
5-A	213+80	Rt.	30.7	6	35
6-A	214+00	Lt.			37
Total			84.0	9	

CONCRETE CURB & GUTTER (T)

Item No.	Station From	Station To	Side	Type 2 Conc. Curb & Gutter Lin. Ft.	Type 4 Conc. Curb & Gutter Lin. Ft.
1-T	206+00	206+29.99	Rt.	14.99	
2-T	206+00	206+21.08	Lt.	15.08	
3-T	207+22.23	209+90.40	Lt.	268.17	
4-T	207+22.19	209+99.90	Rt.	260.51	
5-T	210+92.52	213+27.41	Lt.	222.97	
6-T	210+76.0	215+18.3	Rt.	491.22	
7-T	214+63.37	215+65.83	Lt.		145.26
Total				1276.30	145.26

PIPE REMOVAL (R)

Item No.	Station From	Station To	Side	Remove & Dispose of R.D. Pipe Various Sizes Lin. Ft.
1-R	206+34	206+51	Rt.	32
2-R	206+92	207+17	Rt.	30
3-R	209+96	210+26	Rt.	30 *
4-R	216+66		Lt.	24
Total				126

* Plug end of Pipe

REINF. CONC. APPROACH SLABS (S)

Item No.	From	To	Width	Sq. Yds.	Wt. per Sq. Yd.
1-AS	215+68.23	215+83.25	28	47	3.1
Total				47	3.1

Note: Width includes Curb & Gutter

Excavation 71.32 Cu. Yds.
Embankment 2172 Cu. Yds.
Emb. + 21% 2628 Cu. Yds.

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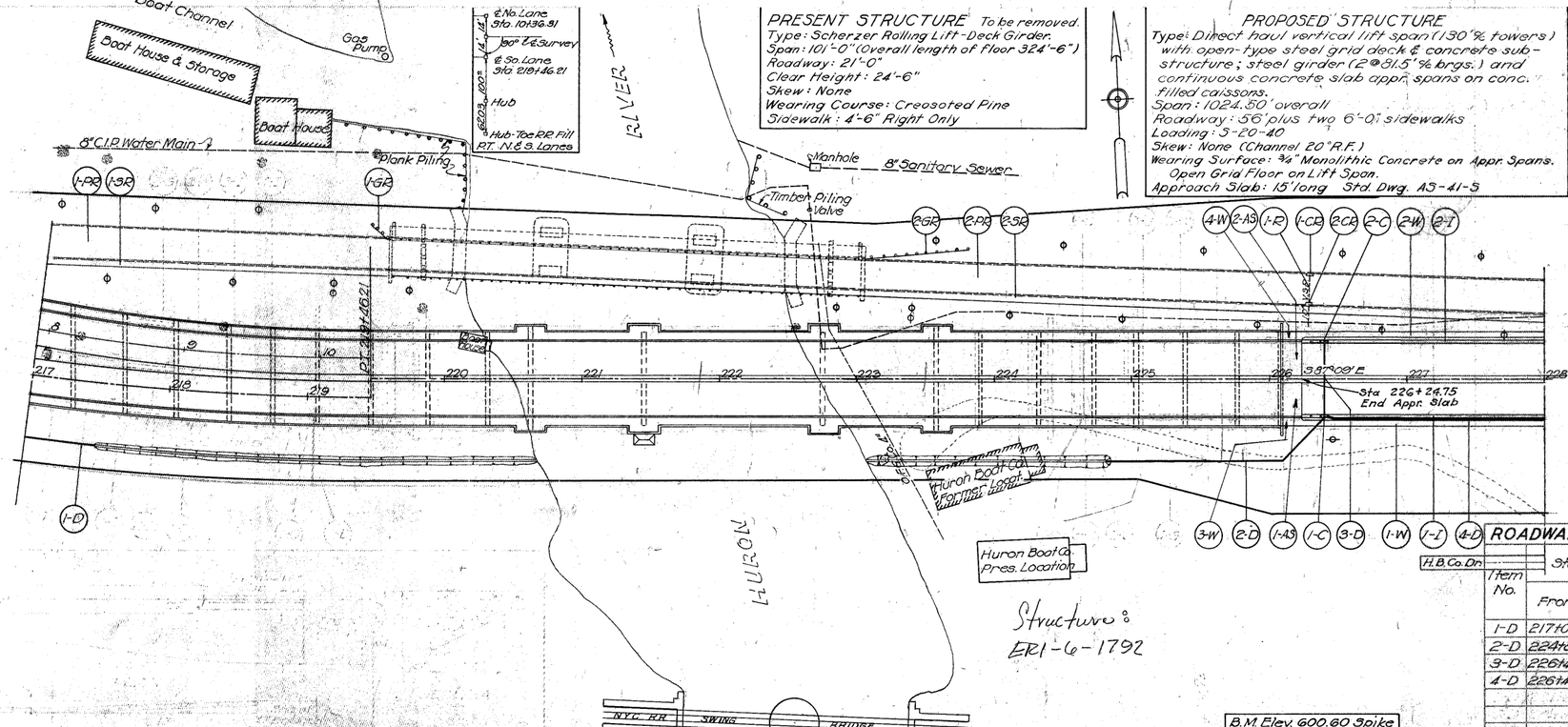
ERIE COUNTY
S.H. 3 SEC. HURON-PT.



PRESENT STRUCTURE To be removed.

Type: Scherzer Rolling Lift-Deck Girder.
Span: 101'-0" (Overall length of Floor 324'-6")
Roadway: 21'-0"
Clear Height: 24'-6"
Skew: None
Wearing Course: Creosoted Pine
Sidewalk: 4'-6" Right Only

PROPOSED STRUCTURE

Type: Direct haul vertical lift span (130'% towers) with open-type steel grid deck & concrete sub-structure; steel girder (2@81.5'% bngs.) and continuous concrete slab appr. spans on conc. filled caissons.
Span: 1024.50' overall
Roadway: 56' plus two 6'-0" sidewalks
Loading: 5-20-40
Skew: None (Channel 20° R.F.)
Wearing Surface: ¾" Monolithic Concrete on Appr. Spans. Open Grid Floor on Lift Span.
Approach Slab: 15' long Std. Dwg. AS-41-5

SIDEWALK REMOVAL (SR)

Item No.	Station From	Station To	Length Ft.	Width Ft.	Remove & Dispose of Exist. Sidewalk Sq. Ft.
1-SR	217+00	219+59	259	4	1036
2-SR	223+05	228+00	495	4	1980
		Total			3016

GUARD RAIL REMOVAL (GR)

Item No.	Station From	Station To	Side	Remove & Dispose of Exist. Guard Rail Lin. Ft.
1-GR	219+46	219+59	Lt.	16
2-GR	223+05	223+82	Lt.	77
	Total			93

PAVEMENT REMOVAL (PR)

Item No.	Station From	Station To	Length Ft.	Width Ft.	Remove & Dispose of Exist. 8" Rein. C. Pvt. Sq. Yds.
1-PR	217+00	219+59	259	25	719.4
2-PR	223+05	228+00	495	25	1375
	Total				2094.4

PIPE REMOVAL (R)

Item No.	Station From	Station To	Side	Remove & Dispose of R.C.P. Pipe Various Sizes Lin. Ft.
1-R	226+28		Lt.	36
	Total			36

ROADWAY DRAINAGE (D)

Item No.	Station From	Station To	Side	12" Pipe for Storm Sewers Lin. Ft.	12" Pipe for S.S. under Pav't. Lin. Ft.	Outlet Pipe 12" Lin. Ft.	Outlet Pipe 15" Lin. Ft.	Outlet Pipe Specials 12"-20° Bend Unit	Outlet Pipe Specials 12"-45° Bend Unit
1-D	217+00	217+50	Rt.				50		
2-D	224+80	226+40	Rt.			170		1	1
3-D	226+40		Rt. & Lt.		53				
4-D	226+42	228+00	Rt.	158					
Total				158	53	170	50	1	1

CONCRETE CURB & GUTTER (I)

Item No.	Station From	Station To	Side	Type 2 Conc. Curb & Gutter Lin. Ft.
1-I	226+24.75	228+00	Rt.	170.25
2-I	226+24.75	228+00	Lt.	170.25
Total				340.50

CONCRETE SIDEWALKS (W)

Item No.	Station From	Station To	Side	4"x4" Conc. Sidewalks Sq. Ft.	6"x6" R. Conc. Sidew'k Sq. Ft.
1-W	226+26.75	228+00	Rt.	697.0	
2-W	226+26.75	228+00	Lt.	697.0	
3-W	226+09.75	226+26.75	Rt.		* 99
4-W	226+09.75	226+26.75	Lt.		* 99
Total				1394.0	198

*See Bridge Detail Sheet

CATCH BASINS (C)

Item No.	Station	Side	Std. Catch Basin No. 3, Mod. Units
1-C	226+40	Rt.	1
2-C	226+40	Lt.	1
Total			2

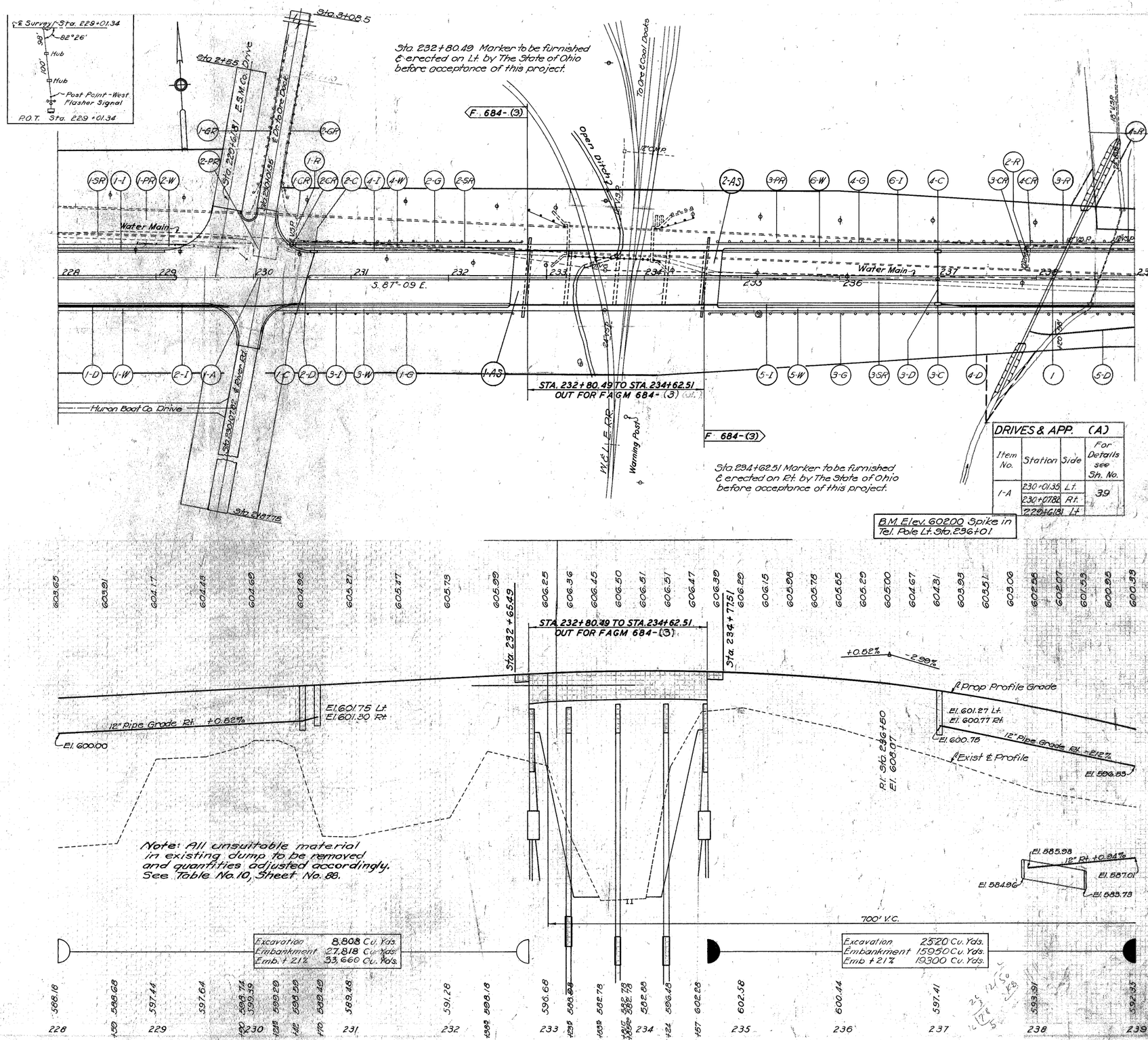
CATCH BASIN REM'L (CR)

Item No.	Station	Side	Remove & Dispose of Exist. Catch Basins
1-CR	226+28	Lt.	1
2-CR	226+28	Lt.	1
Total			2

REINF. CONC. APPROACH SLABS (AS)

Item No.	From	To	Width	Sq. Yds.	Type A Cu. Yds.
1-AS	226+09.75	226+24.75	28'	47	3.0
2-AS	226+09.75	226+24.75	28'	47	3.0
Total				94	6.0

Sta. 217+00 to Sta. 228+00



REINF. CONC. APPR. SLABS

Item	From Sta.	To Sta.	Width	Sq. yds.
1-AS	232+65.49	232+80.49	56	94
2-AS	234+62.51	234+77.51	56	94
		TOTAL		188

FED. AID 8
10 OHIO F-684(3) 1946 89
ERIE COUNTY
S.H. 3 SEC. HURON-PT.

SIDEWALK REMOVAL (SR)

Item No.	Station From	Station To	Length Ft.	Width Ft.	Remove & Dispose of Exist. Sidewalk Sq. Ft.
1-SR	228+00	229+96	196	4	784
2-SR	230+29	232+80.5	251.5	4	1006
3-SR	234+62.5	239+00	437.5	4	1750
		Total			3540

GUARD RAIL REMOVAL (GR)

Item No.	Station From	Station To	Side	Remove & Store Exist. Guard Rail Lin. Ft.
1-GR	230+00	230+29	Lt.	130
2-GR	230+35	230+48	Lt.	130
	Total			260

Store for removal by W&L.E.RR.

PAVEMENT REMOVAL (PR)

Item No.	Station From	Station To	Length Ft.	Width Ft.	Remove & Dispose of Exist. 8" Reinf. C. Pav. Sq. Yds.
1-PR	228+00	232+80.5	480.5	25	1334.7
2-PR	230+10				63
3-PR	234+62.5	235+50	87.5	25	243.0
		Total			1,640.7

PIPE REMOVAL (R)

Item No.	Station From	Station To	Side	Remove & Dispose of R.D. Pipe Var. Sizes Lin. Ft.
1-R	230+42		Lt.	40
2-R	237+34		Lt.	20
3-R	237+96	238+78	Lt.	82
4-R	238+80	239+00	Lt.	20
	Total			162

DRIVES & APP. (A)

Item No.	Station	Side	For Details see Sh. No.
1-A	230+01.35	Lt.	39
	230+07.80	Rt.	
	229+61.81	Lt.	

ROADWAY DRAINAGE (D)

Item No.	Station From	Station To	Side	12" Pipe for Rdwy. Drain. Lin. Ft.	12" Pipe for Storm Sewers Lin. Ft.	12" Pipe for S.S. under Pav't. Lin. Ft.
1-D	228+00	230+50	Rt.		160	88
2-D	230+50	230+65	Rt. & Lt.			54
3-D	237+00		Rt. & Lt.			53
4-D	237+02	239+00	Rt.		198	
5-D	237+94	239+00	Rt.		106	
	Total				464	195

CATCH BASIN REMV'L (CR)

Item No.	Station	Side	Remove & Dispose of Exist. Catch Basin Units
1-CR	230+39	Lt.	1
2-CR	230+39	Lt.	1
3-CR	237+92	Lt.	1
4-CR	237+95	Lt.	1
	Total		4

CONC. GURB & GUTTER (I)

Item No.	Station From	Station To	Side	Type 2 Conc. Curb & Gutter Lin. Ft.
1-I	228+00	229+08.97	Lt.	108.97
2-I	228+00	229+48.65	Rt.	148.65
3-I	230+44.18	232+62.97	Rt.	212.79
4-I	230+59.73	232+68.01	Lt.	202.28
5-I	234+78.99	239+00	Rt.	420.01
6-I	234+80.02	239+00	Lt.	414.98
	Total			1507.68

CONCRETE SIDEWALKS (W)

Item No.	Station From	Station To	Side	Concrete Sidewalks 4"+4" Sq. Ft.	Concrete Sidewalks 6"+6" Sq. Ft.
1-W	228+00	229+64	Rt.	656	
2-W	228+00	229+26	Lt.	504	
3-W	230+28	232+63.28	Rt.	944	96
4-W	230+44	232+67.12	Lt.	893	101.8
5-W	234+73.88	239+00	Rt.	1092	101.8
6-W	234+79.14	239+00	Lt.	1672	96
	Total			6361	395.6

GUARD RAIL (G)

Item No.	Station From	Station To	Side	Guard Rail Lin. Ft.
1-G	230+30	232+67.5	Rt.	237.5
2-G	230+50	232+77.5	Lt.	227.5
3-G	234+65	239+00	Rt.	425.0
4-G	234+75	239+00	Lt.	425.0
	Total			1315.0

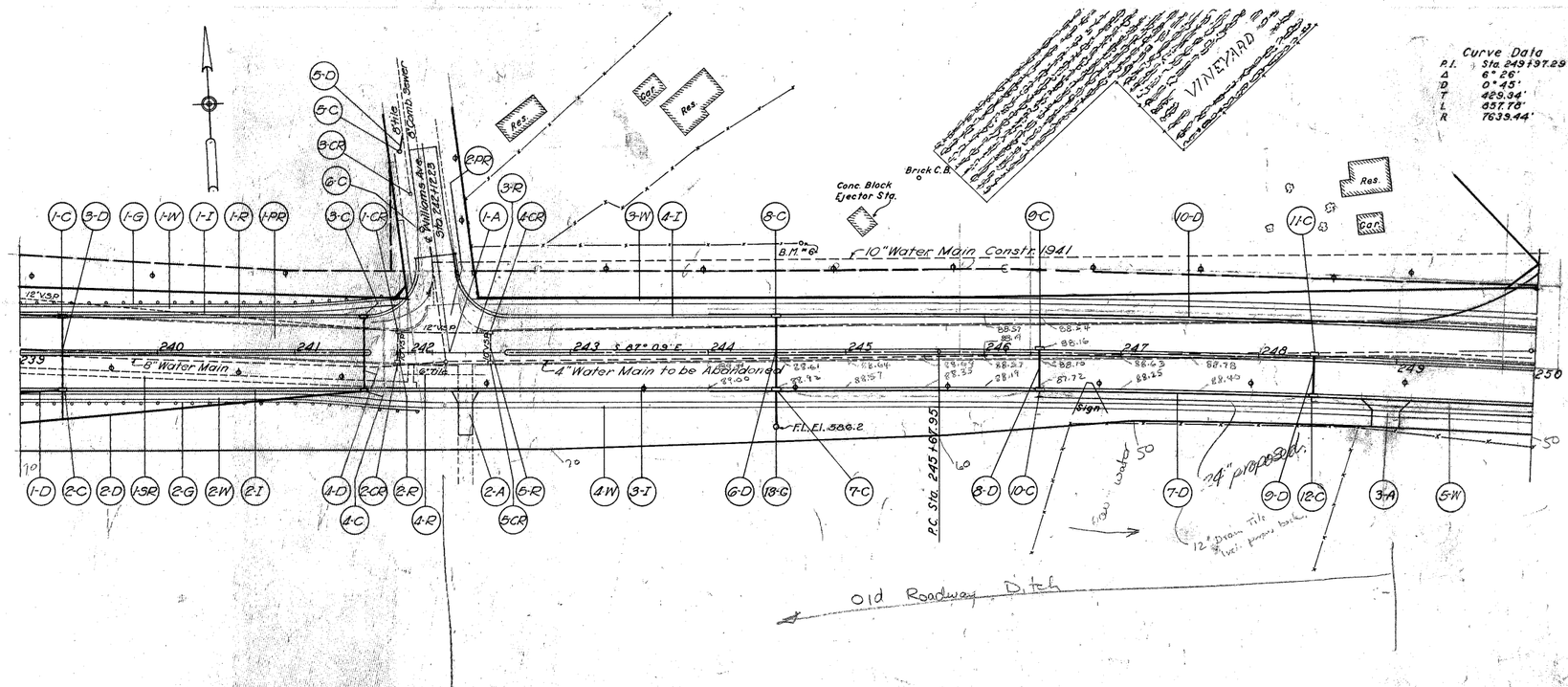
CATCH BASINS (C)

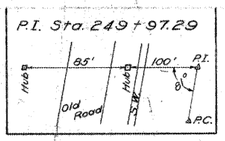
Item No.	Station	Side	Std. No. 3 Mod. Catch Basin Units
1-C	230+50	Rt.	1
2-C	230+65	Lt.	1
3-C	237+00	Rt.	1
4-C	237+00	Lt.	1
	Total		4

STRUCTURES 20 FT. SPAN & UNDER

Struct. No.	Station	Present Type	Present Size	Present Length	Proposed Type	Proposed Size	Proposed Length	For Details see Sh. No.
1	238+17.77	Pipe	18"	101	Pipe	24"	134	50

Sta. 228+00 to Sta. 239+00





FED.AID 9 89
10 OHIO F-684 (3) 1946
ERIE COUNTY
S.H.3 SEC. HURON-PT.

PAVEMENT REMOVAL (PR)

Item No.	Station From	Station To	Length Ft.	Width Ft.	Remove & Dispose of Exist. Reinf. C. Pav. Sq. Yds.
1-PR	241+50	250+00	850	25	2361.1
2-PR	242+23				63
				Total	2,424.1

SIDEWALK REMOVAL (SR)

Item No.	Station From	Station To	Length Ft.	Width Ft.	Remove & Dispose of Exist. Sidewalk Sq. Ft.
1-SR	239+00	241+88	300	4	1200
				Total	1200

PIPE REMOVAL (R)

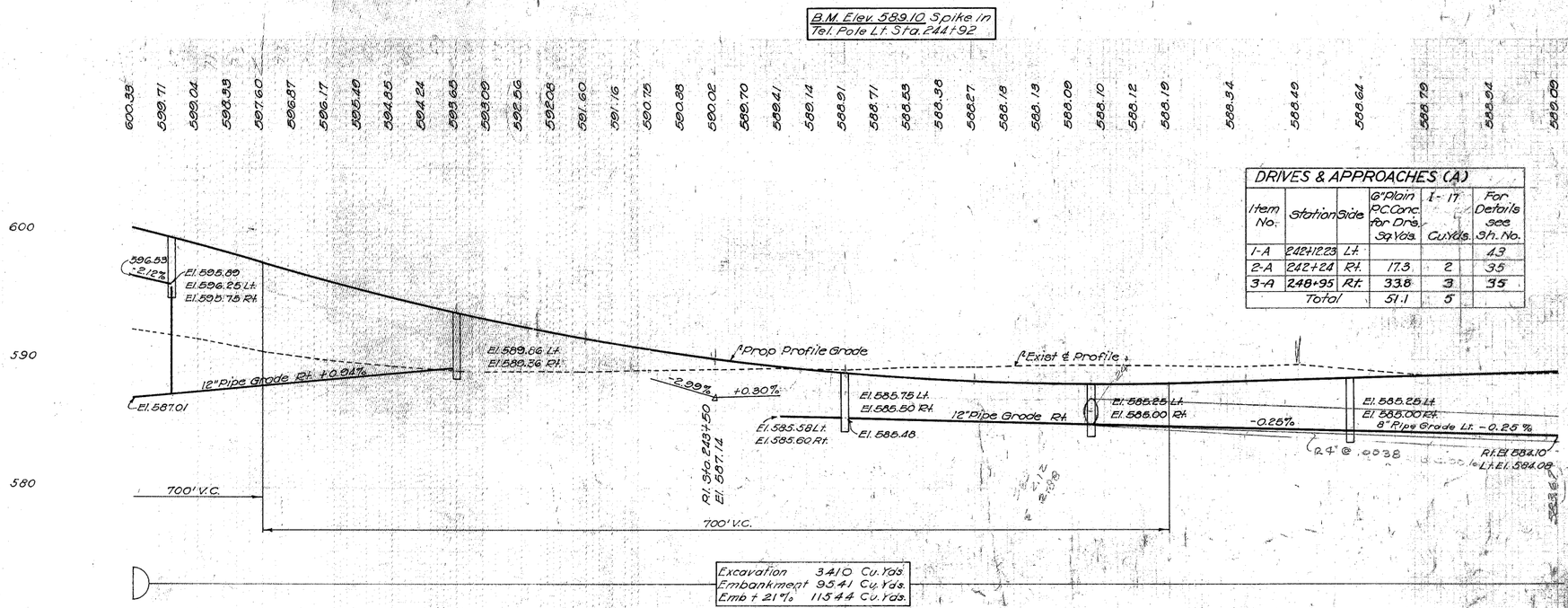
Item No.	Station From	Station To	Side	Remove & Dispose of R.D. Pipe Var. Sizes Lin. Ft.
1-R	239+00	241+74	Lt.	274
2-R	241+74		Rt. & Lt.	26
3-R	241+74	242+42	Lt.	68
4-R	241+78	242+38	Rt.	60
5-R	242+42		Rt. & Lt.	20
			Total	448

GUARD RAIL (G)

Item No.	Station From	Station To	Side	Guard Rail Lin. Ft.
1-G	239+00	241+75	Lt.	275.0
2-G	239+00	241+87.5	Rt.	287.5
		Total		562.5

ROADWAY DRAINAGE (D)

Item No.	Station From	Station To	Side	Pipe for Roadway Drain. 8" Lin. Ft.	Pipe for Roadway Drain. 12" Lin. Ft.	12" Pipe for Storm Sewers Lin. Ft.	12" Pipe for S.S. under Pav't. Lin. Ft.	Pipe for R.D. inc. Pervious Backfill 8"	Pipe for R.D. inc. Pervious Backfill 12"	Pipe Specials 12"x12"x12" Tee Units	12" Outlet Pipe Lin. Ft.	Outlet Pipe So. 12" 30° Bend Units
1-D	239+00	239+28	Rt.			28						
2-D	239+00	241+48	Rt.			247				1		
3-D	239+30		Rt. & Lt.				53				22	1
4-D	241+48		Rt. & Lt.				53					
5-D	241+75		Lt.	10								
6-D	244+50		Rt. & Lt.	24			53					
7-D	244+00	250+00	Rt.					48	540			
8-D	246+40		Rt. & Lt.				28					
9-D	248+40		Rt. & Lt.				28					
10-D	244+00	250+00	Lt.					600				
	Totals			34		275	215	648	540	1	22	1



DRIVES & APPROACHES (A)

Item No.	Station	Side	6" Plain P.C. Conc. for Drs. Sq. Yds.	I-17 Cu. Yds.	For Details see Sh. No.
1-A	242+23	Lt.			43
2-A	242+24	Rt.	17.3	2	35
3-A	248+95	Rt.	33.8	3	35
	Total		51.1	5	

CATCH BASINS (C)

Item No.	Station	Side	Std. Catch Basins No. 3 Mod. Units	Std. Catch Basins No. 1-28 Units	Manhole Casting Reset to Grade Units
1-C	239+30	Lt.	1		
2-C	239+30	Rt.	1		
3-C	241+48	Lt.	1		
4-C	241+48	Rt.	1		
5-C	241+77	Lt.		1	1
6-C	242+00	Lt.			1
7-C	244+50	Rt.	1		
8-C	244+50	Lt.	1		
9-C	246+40	Lt.	1		
10-C	246+40	Rt.	1		
11-C	248+40	Lt.	1		
12-C	248+40	Rt.	1		
13-C	244+50	Rt.		1	
Total			10	2	1

CONCRETE SIDEWALKS (W)

Item No.	Station From	Station To	Side	4" X 4" Conc. Sidewalk Sq. Ft.
1-W	239+00	241+82	Lt.	1128
2-W	239+00	242+10	Rt.	1276
3-W	242+35	250+00	Lt.	3060
4-W	242+20	248+85	Rt.	2624
5-W	248+05	250+00		
	Total			8468.0

CONCRETE CURB & GUTTER (T)

Item No.	Station From	Station To	Side	Type 2 Conc. Curb & Gutter Lin. Ft.	Type 4 Conc. Curb & Gutter Lin. Ft.
1-T	239+00	241+83.51	Lt.	241.51	
2-T	239+00	242+14.5	Rt.	302.5	
3-T	242+45	250+00	Rt.		767.5
4-T	242+88.7	250+00	Lt.		738.20
	Total			544.01	1505.70

CATCH BASIN REMOVAL (CR)

Item No.	Station	Side	Remove & Dispose of Exist. Catch Basin Units	Exist. Catch Basin to be Abandoned Units
1-CR	241+76	Lt.	1	
2-CR	241+76	Rt.	1	
3-CR	241+95	Lt.		1
4-CR	242+42	Lt.	1	
5-CR	242+42	Rt.	1	
	Total		4	1

Sta. 239+00 to Sta. 250+00

FED.AID 10

10 OHIO F-684(3) 1946 89

ERIE COUNTY

S.H. 3 SEC. HURON-PT.

Sta. 252+52.54 Marker to be furnished & erected on Lt. by the State of Ohio before acceptance of this project.

Sta. 250+12.6 = Sta. 16+05.87 N.R.M. 684-A (1935) Due to error in staking out on construction ℄ instead of survey ℄ of N.R.M. 684 A, N.R.M. 684-A began at sta. 16+05.87 instead of Sta. 15+99 as shown on the original plans.

Stake — 3' — Stake — 82' — 90° — P.T. Sta. 254+25.73

F-684(3)

Exist. 12"

Exist. 10" Water Line Const. 1941

8" V.S.P.

12" V.S.P.

Abandoned 4" Water Line

S. 80° 43' E. 258

Pavement

6" House Drain

4" Farm Tile

Brick Res.

Gar.

Res.

Sta. 252+52.54 End of F-684(3) = Sta. 18+45.14 of orig. N.R.M. 684 A.

P.T. 254+25.73

STA. 252+52.54 END PROJECT

Sta. 258+00 End of work

5' — 18' — 15' — 15' — 10'

18' — 6 1/2" Min.

7"-9"-7" P.C. Conc. Pav't — 8"-8"-10" Reinf. P.C. Con. Pav't

Note: 2½" T-35 Resurfacing in 1944.

TYPICAL SECTION ADJOINING PAVEMENT

B.M. Elev. 589.12 Spike in T.P. left Sta. 254+45

PAVEMENT REMOVAL (PR)

Item No.	Station From	Station To	Length Ft.	Width Ft.	Remove & dispose of Exist 8" Reinf. Pav. Sq. Yds.
1-PR	250+00	250+12.6	12.6	25	35.0
		Total			35.0

CONCRETE SIDEWALKS (W)

Item No.	Station From	Station To	Side	4"x4" Conc. Sidewalk Sq. Ft.	Remove & dispose of Exist. Sidewalk Sq. Yds.
1-W	250+00	250+12.6	Lt.	50.4	
2-W	250+00	250+12.6	Rt.	50.4	
3-W	250+12.6	250+19	Lt.	100.0	80
4-W	250+12.6	250+30	Rt.	69.6	
5-W	250+40	251+46	Rt.	424.0	
	Total			604.4	80

CATCH BASIN REMOVAL (CR)

Item No.	Station	Side	Remove & dispose of Exist. Catch Basin Units	Exist Catch Basin to be Abandoned Units
1-CR	250+07	Rt.	1	
2-CR	250+09	Lt.		1
F.A.P. 684-A(2)				
3-CR	250+40	Lt.		1
4-CR	251+55	Rt.	1	
5-CR	251+73	Lt.		1
6-CR	251+86	Rt.	1	
7-CR	254+06	Rt.		1
8-CR	256+07	Lt.		1
Total			3	5

CONCRETE CURB & GUTTER (I)

Item No.	Station From	Station To	Side	Type 4 Conc. Curb & Gutter Lin. Ft.
1-I	250+00	250+12.6	Lt.	12.6
2-I	250+00	250+12.6	Rt.	12.6
				25.2
3-I	250+12.6	End of Exhibit Project	Lt.	60.74
4-I	250+12.6	Return	Rt.	228.99
	Total			314.93

PIPE UNDERDRAIN (U)

Item No.	Station From	Station To	Side	6" Pipe Underdrain Lin. Ft.	Pipe Sp. 6"x90° Bend Units	Pipe Sp. 6"x6" Tee Units
F.A.P. 684-A(2)						
1-U	251+00	253+00	Rt.	202	1	
2-U	250+12.6	253+00	Lt.	288		1
F.A.P. 684-C(1)						
3-U	249+25	250+12.6	Lt.	88		
Total				578		

ROADWAY DRAINAGE (D)

Item No.	Station From	Station To	Side	Pipe for R.D. incl. Porous Backfill 8" Lin. Ft.	Pipe for R.D. incl. Porous Backfill 12" Lin. Ft.	12" Pipe for S.S. Under Pav't Lin. Ft.	V.S.P. Reladd incl. Porous Backfill 8" Lin. Ft.	V.S.P. Reladd incl. Porous Backfill 12" Lin. Ft.	12" Pipe for S.S. under Pav't Reladd Lin. Ft.	Pipe 3a. 12"x12"x6" Wye Units	Pipe 3a. 8"x8"x6" Tee Units	Wye Units
F.A.P. 684-A(2)												
1-D	250+00	250+12.6	Rt.		13							
2-D	250+00	250+12.6	Lt.	12								
F.A.P. 684-C(1)												
4-D	250+12.6	251+55	Rt.					142		1	1	
5-D	250+73	250+91	Lt.			38						
6-D	250+91		Lt.					20				
7-D	251+55	252+45	Rt.			44			44			
8-D	251+73	251+93	Lt.				20					
9-D	252+45	254+25	Rt.					180				
10-D	252+45		Rt.	14			20					
11-D	256+07	256+25	Lt.	26								
Total				52	13	82	40	342	44	1	1	1

DRIVES & APPROACHES (A)

Item No.	Station	Side	I-17 Cu. Yds.	6" Plain P.C. Conc. for Drs. Sq. Yds.	For Details see Sh. No.
1-A	250+35	Rt.	2	17.3	35
2-A	251+22.04	Rt.			44
3-A	257+20	Lt.	3	80.4	
Total			5	97.7	

CATCH-BASINS (C)

Item No.	Station	Side	Std. Catch Basins No. 1-2B Units	Std. Catch Basins No. 2-2B Units
1-C	250+13	Lt.		1
2-C	250+41	Lt.	1	
3-C	251+55	Rt.		1
4-C	251+73	Lt.	1	
5-C	252+45	Rt.		1
6-C	254+06	Rt.	1	
7-C	256+07	Lt.	1	
Total			4	3

PIPE REMOVAL (R)

Item No.	Station From	Station To	Side	V.S.P. Removed for Re-use 8" Lin. Ft.	V.S.P. Removed for Re-use 12" Lin. Ft.	12" Pipe for S.S. under Pav't Rem. for Re-use Lin. Ft.	R.D. Pipe Removed & Stored Var. Sizes Lin. Ft.	R.D. Pipe Removed & disposed of Var. Sizes Lin. Ft.
1-R	250+09	250+12.6	Rt.				4	
2-R	250+16		Rt.					20
3-R	250+126	251+55	Rt.		158			
4-R	250+55		Lt.		20			
5-R	251+55	251+86	Rt.			44		
6-R	251+73	251+93	Lt.	20				
7-R	251+86	254+25	Rt.		164		72	
8-R	251+86	252+30	Rt.	20			65	
Total				40	342	44	141	20

STA. 252+52.54
END PROJECT
F-684(3)

STA. 258+00
END OF WORK

+0.30% — +0.10% — 586.00 — Rt. 584.10 — Lt. 584.08 — Lt. 584.00 — 6" Lt. -.30% — 6" Lt. +.30% — 585.25 — 585.63 — El. 585.75 — El. 585.50 — 12" Rt. -.20% — 12" Lt. — 588.75 R.P. — 12" Rt. -0.29% — El. 583.04 — Exist. 12" Rt. -.10% — 24" @ 0.38% — Rt. Sta. 251+50.67 — Rt. Sta. 253+39.39 — El. 583.39 — 200' V.C.

Excavation 944 Cu. Yds.
Embankment 490 Cu. Yds.
Emb. + 21% 593 Cu. Yds.

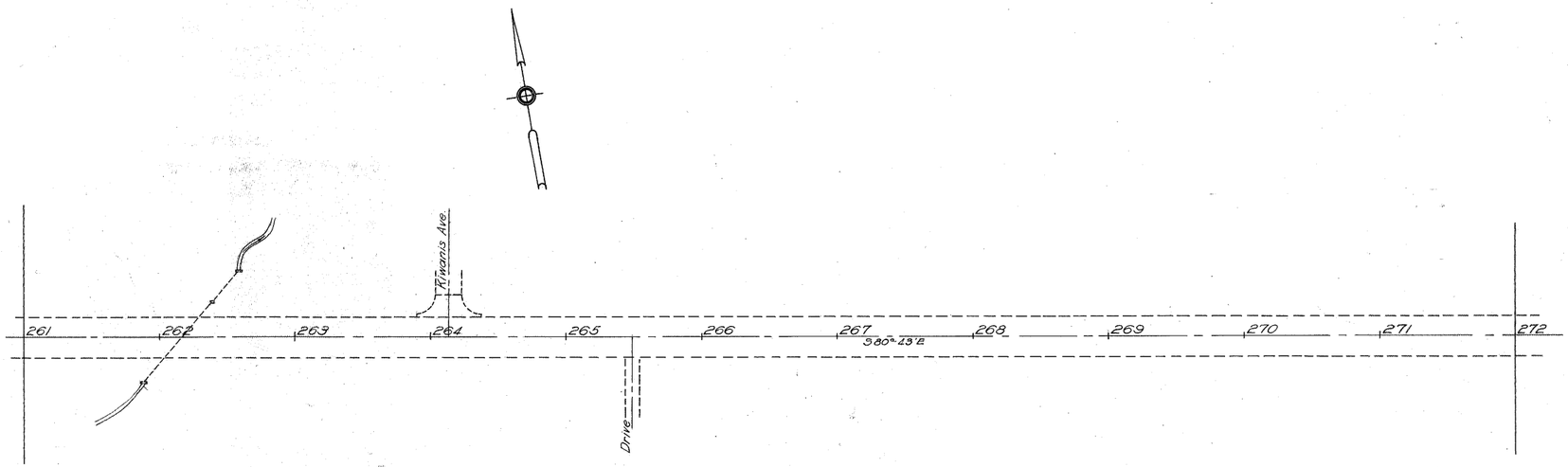
589.09 — 588.17 — 588.23 — 588.28 — 588.34 — 588.40 — 588.43 — 588.46 — 588.49 — 588.52

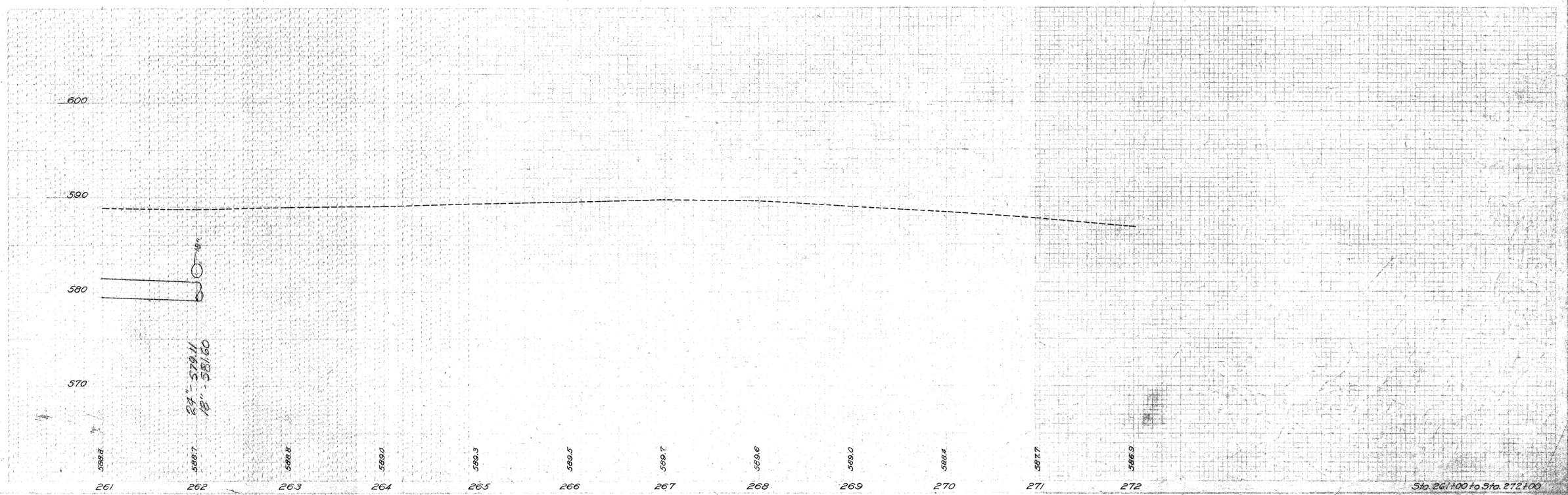
589.94 — 589.44 — 589.46 — 589.50 — 589.59 — 589.69 — 589.74 — 589.88 — 590.04 — 590.17 — 590.27 — 590.26 — 590.12 — 590.00 — 590.00 — 589.84 — 589.64 — 589.52 — 589.36 — 589.25 — 589.12

250 — 251 — 252 — 253 — 254 — 255 — 256 — 257 — 258 — 259 — 260 — 261

		FED. AID		
10	OHIO	F-684(3)	1946	11 / 89

ERIE COUNTY
S.H. 3 SEC. HURON-PT.





FED. AID

10 OHIO F-684(3) 1946

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89

ERIE COUNTY

S.H. 3 SEC. HURON-PT.

STA. 1+80.96
BEGIN NORTH PAV'T LANE

STA. 6+70.67
END NORTH PAV'T. LANE

STA. 10+36.31 = STA. 2+19+16.21

Curve Data
PI. Sta. 6+87.00
Δ - 34°-39' Lt.
D - 4°-25'-22"
T - 404.11'
L - 765.42'
R - 1295.47'

Fire Hydrant to be relocated by The Village of Huron

Ramp

Garage

8" C.I.P. Water Main No work reqd.

6" C.I.P. no work reqd.

Main St.

℄ of Huron St.

℄ Van Rensselaer St. S 62°-30' E

Res. Gar. Church Res. Gas Sta. Res.

P.C. Sta. 6+26.00

Beg. Appr. Slab 6+55.67

End Appr. Slab 6+70.67

B.M. Elev. 597.58 Drill hole at E. End Conc. Pump base Lt. Sta. 4+12

6" 13'-6" 13'-6" 6"

7"-9"-7" Reinf. Conc. Pvt. 6" X 4" Integral Curb

Typical Section of Adjoining Pavement Van Rensselaer St.

ROADWAY DRAINAGE (D)

Item No.	Station From	Station To	Side	12" Pipe for Rdway Drain. Lin. Ft.	12" Pipe for S.S. Under Pav't. Lin. Ft.
1-D	2+18	210+97	Rt.	80	
2-D	2+18	2+60	R&L		40
3-D	5+10	214+36	R&L	34	36
Total				114	76

CONCRETE CURB & GUTTER (I)

Item No.	Station From	Station To	Side	Type 2 Conc. Curb & Gutter Lin. Ft.	Type 4 Conc. Curb & Gutter Lin. Ft.
1-I	2+12.96	4+30.0	Rt.	211.64	
2-I	2+12.46	6+52.02	Lt.	427.56	
3-I	5+10.5	6+52.26	Rt.		139.76
Total				639.20	139.76

PIPE REMOVAL (R)

Item No.	Station From	Station To	Side	Remove & Dispose of R.D. Pipe Var. Sizes Lin. Ft.
1-R	4+63		Rt	26
2-R	5+90	6+15	Rt.	30
Total				56

DRIVES & APPROACHES (A)

Item No.	Station	Side	6" Plain P.C. Conc. for Drs. Sq. Yds.	I-17 Cu. Yds.	For Details see Sh. No.
1-A	1+80.96	R&L			35
2-A	3+20	Lt.	77.1	2	35
3-A	4+70	Lt.	57.3	2	35
Total			134.4	4	

PIPE UNDERDRAIN (U)

Item No.	Station From	Station To	Side	6" Pipe Under drain Lin. Ft.	4" Pipe Under drain Lin. Ft.
2-U	2+00	5+10	Lt.	310	
1-U	5+10	6+71.71	Lt.	162	
Total				472	

CATCH BASIN REMOVAL (CR)

Item No.	Station	Side	Exist. Catch Basin to be Abandoned Units
1-CR	2+06	Rt	1
2-CR	2+06	Lt.	1
3-CR	4+63	Rt	1
4-CR	5+48	Lt.	1
Total			4

CATCH BASINS (C)

Item No.	Station	Side	Std. No. 3 Mod. Catch Basin Units
1-C	2+18	Rt.	1
2-C	2+60	Lt.	1
3-C	5+10	Lt.	1
Total			3

CONCRETE SIDEWALKS (W)

Item No.	Station From	Station To	Side	4"X4' Conc. Sidewalk Sq. Ft.	6"x6' Reinf. Conc. Sidewalk Sq. Ft.
1-W	3+40	4+50	Lt.	440	
2-W	4+90	6+51.03	Lt.	644.1	
3-W	6+51.03	6+66.74	Lt.		*91.0
Total				1084.1	91.0

*See Bridge Detail Sheet 76 & 83

REINF. CONC. APPROACH SLAB

T-35 Type A

Item No	From	To	Width	Sq. Yds.	Cu. Yds.
1-AS	6+55.67	6+70.67	28'	47.0	3.1
Total				47.0	3.1

Excavation 1029 Cu. Yds.
Embankment 468 Cu. Yds.
Emb. + 21% - 590 Cu. Yds.

100' V.C. Sta. 2+59 El. 592.79

El. 591.50 El. 592.00 El. 591.00 Rt.

Elev. 590.5 Lt. Elev. 590.0 Rt.

Sta. 6+26.00 El. 592.50

100' V.C.

-0.04% +0.58% +0.52%

Exist. ℄ Profile

Prop. Profile Grade

BRIDGE LIMITS

STA. 6+70.67
END NORTH PAV'T. LANE

STA. 1+80.96
BEGIN NORTH PAV'T LANE

600 595 590 585 580 575 570

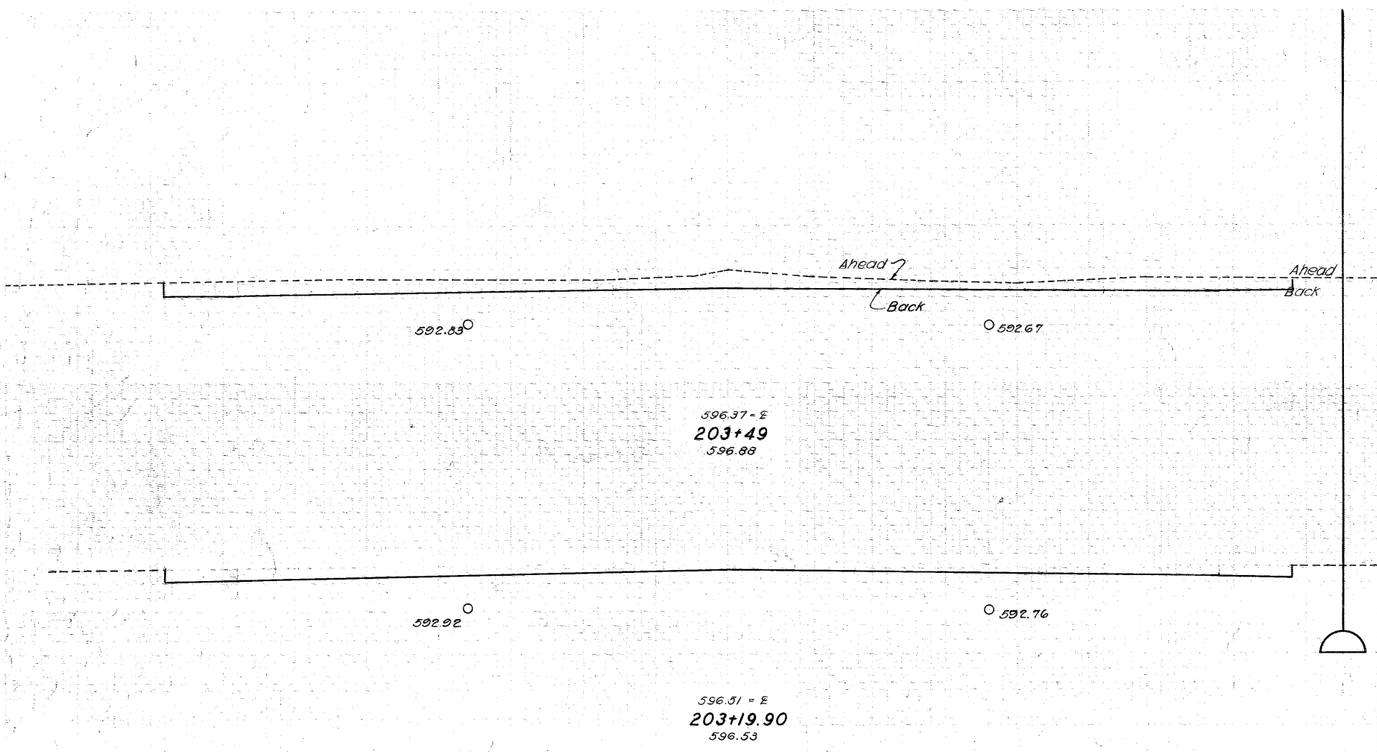
594.75 594.76 594.77 594.78 594.81 594.88 595.02 595.08 595.31 595.60 595.89 596.18 596.47 596.76 597.05 597.34 597.63 597.92 598.21 598.35 598.49 598.63 598.76 599.02 599.21

594.83 594.61 594.95 594.97 594.75 595.02 595.31 595.73 596.07 596.55 596.80 597.02 596.74 597.64 597.56 596.26 584.86 577.66 574.86 574.59 577.19 577.69 572.73 573.19

0 1 +50 2 +50 3 +50 4 +50 5 +50 6 +35.5 +60 7 +16.5 +48 +73 8 +50 9 +35 10 +16.31

NORTH PAV'T LANE
PLAN & PROFILE

Sta. 0+00 to Sta. 10+36.31



ENDAREA		CU. YDS.	
CUT	FILL	CUT	FILL
68	0		
0	0		
		0	0
0	0		

STA. 203+19.90
BEGIN PROJECT
BEGIN F.A.F.- 684(3)

ERIE COUNTY
S.H. 3
SEC. HURON-PT.
10 OHIO F-684(3) 1946
FED AID
13
89

Sta. 203+19.90 to Sta. 203+49

50 40 30 20 10 ℄ 10 20 30 40

CU. YDS.	CUT																						
	FILL		16			22			13			46			15			10			3		1
ENDAREA	CUT	26			34			29			27			20			18			18			22
	FILL	10			13			17			16			17			17			18			2
CU. YDS.	CUT		42			46			22			66			16			10			9		47
	FILL		16			22			13			46			15			10			3		1

Excavation 255 Cu. Yds.
Embankment 126 Cu. Yds.
Emb. † 21.% 152 Cu. Yds.

FED.AID 14
10 OHIO F-684 (3) 1946 89
ERIE COUNTY
S.H. 3 SEC. HURON-PT.

591.83
591.94
592.06
592.13
592.36
592.43
592.43
592.53

594.96
206+00
593.22

595.14
205+62
595.72

595.33
205+22
595.88

595.44
205+00
595.79

595.80
204+24
596.08

595.92
204+00
596.19

595.99
203+85
596.18

596.08
203+77.06
596.32

592.06
592.19
592.31
592.38
592.61
592.68
592.79
592.78

10 20 30 40 50 10 20 30 40 50

Sta. 203+67.45 to Sta. 206+00

ENDAREA	CU. YDS.
CUT	CUT FILL
12	78 7
0	0
11	10 0
0	0
71	7 0
0	0
68	26 0
0	0
113	0 0
0	0
101	275 0
0	0
59	34 1
0	0
27	6 2
	20

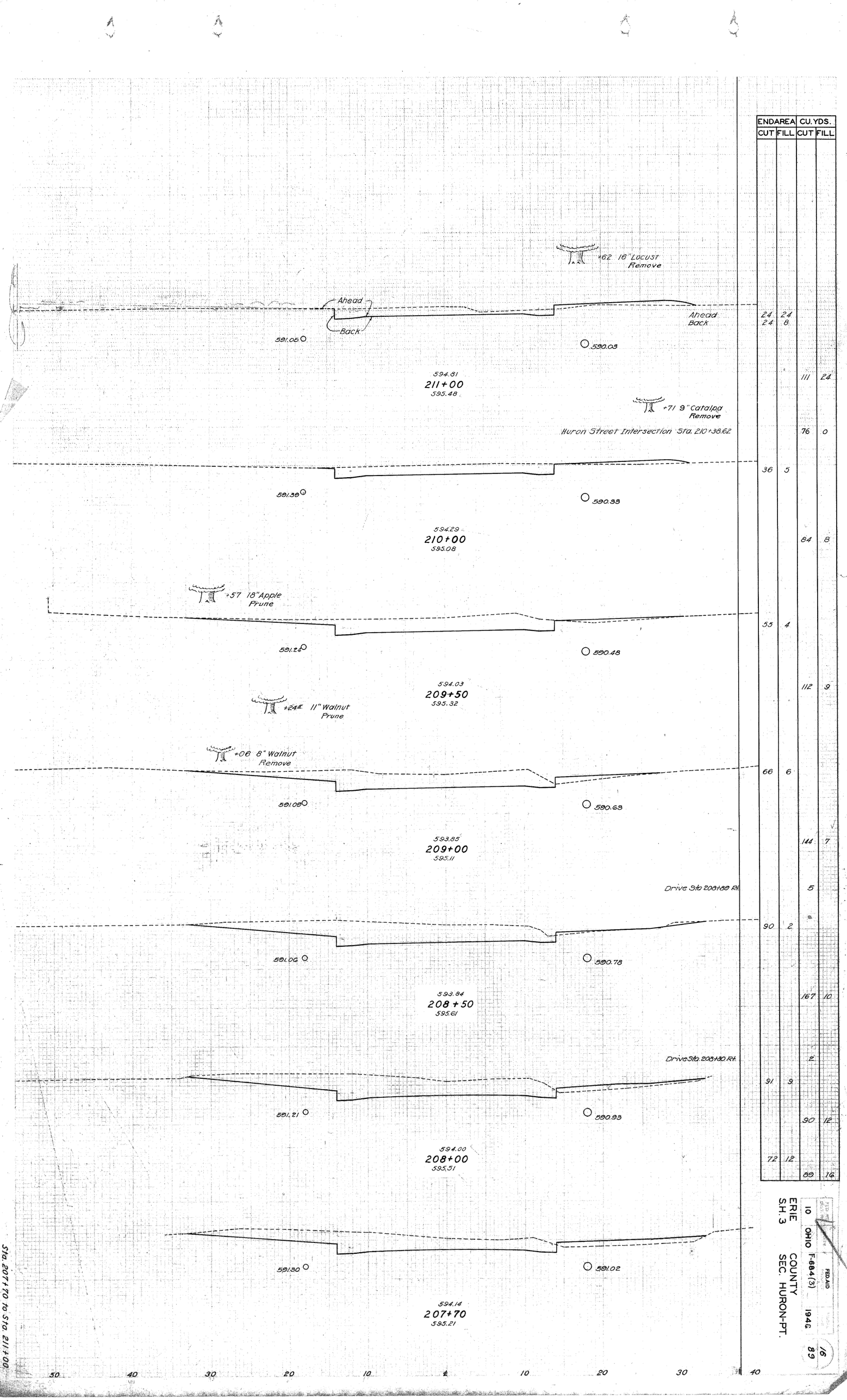
PROJECT NO.	STATE	FED. AID PROJECT	YEAR	SHEET NO.
10	OHIO	F-684 (3)	1946	15 89

ERIE COUNTY
S.H.3 SEC. HURON-PT.

591.12
594.31
207+36
595.31
591.40
591.21
594.66-℄
207+07
595.31
591.49
591.25
594.69-℄
207+02.4
595.00
591.50
591.25
594.69-℄
207+00
595.01
591.51
Ahead
Back
Ahead
Back
594.73-℄
206+92
595.22
591.54
Back
Ahead
594.93-℄
206+51
594.82
591.66
594.97-℄
206+41.7
595.10
591.69
594.80
206+20.99
595.12
591.72

40 30 20 10 0 10 20 30 40 50

Sta.206+20.99 to Sta.207+36



ENDAREA		CU. YDS.	
CUT	FILL	CUT	FILL
24	24		
24	8		
		111	24
		76	0
36	5		
		84	8
55	4		
		112	9
66	6		
		144	7
		5	
90	2		
		167	10
		2	
91	9		
		90	12
72	12		
		89	16

ERIE COUNTY
S.H. 3 SEC. HURON-PT.

10	OHIO	F-684(3)	1946	16
		FED AID		89

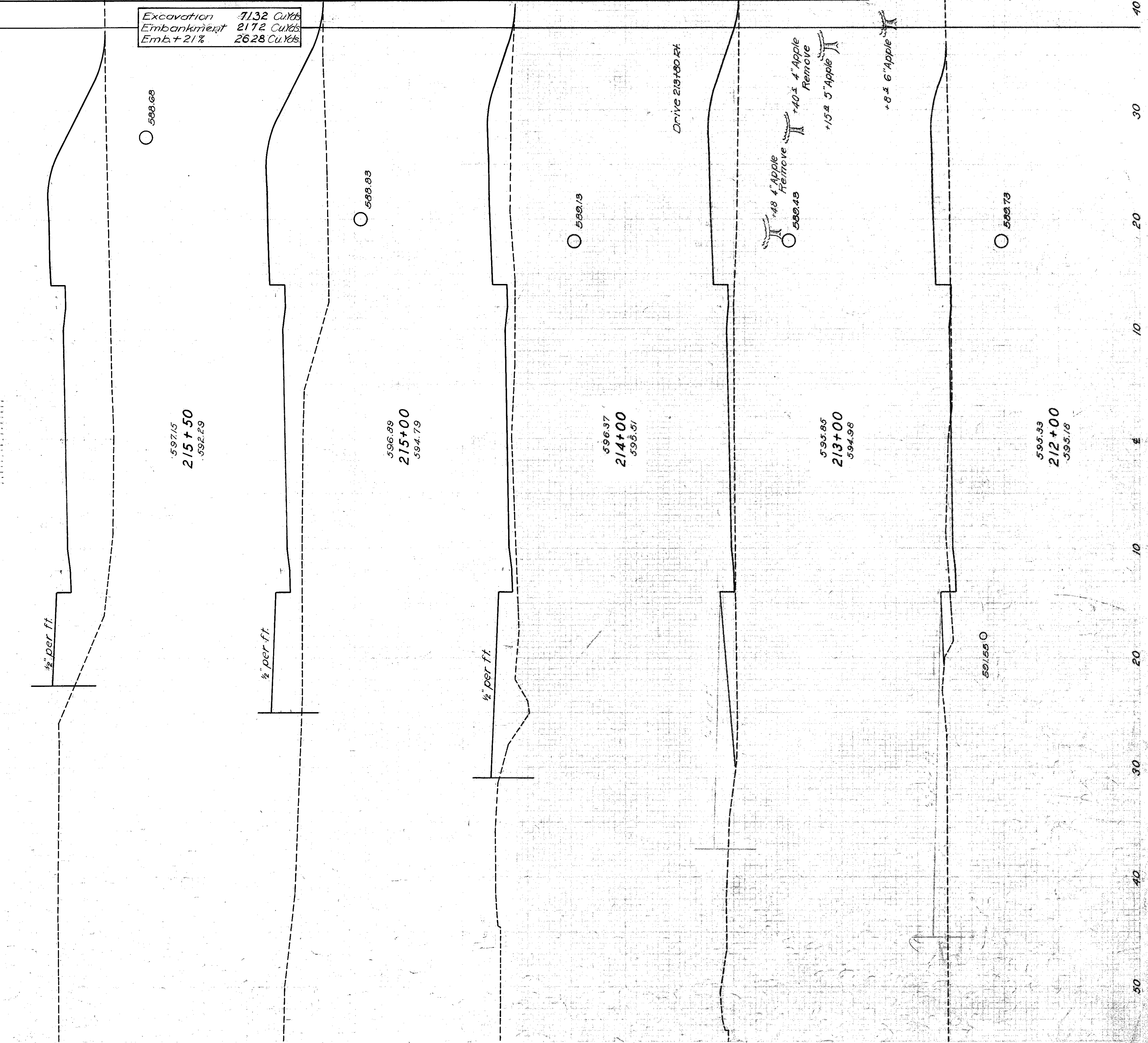
Sta. 207+70 to Sta. 211+00

10 OHIO FED. AID F-684 (3) 1946 17 / 89

ERIE COUNTY
S.H. 3 SEC. HURON-PT.

CU. YDS. FILL		390		519		357		3		296		154
CU. YDS. CUT		0		0		0		2		15		59
END AREA FILL	233		188		92		101				59	
END AREA CUT	0		0		0		0				8	

Excavation	7132 Cu.Yds.
Embankment	2172 Cu.Yds.
Emb.+21%	2628 Cu.Yds.



Sta. 212+00 to Sta. 215+50

FED. REC. DIST. NO.	STATE	FED. AID PROJECT	FISCAL YEAR
10	OHIO	F-684 (3)	1946

18
89

ERIE COUNTY
S.H. 3 SEC. HURON-PT.

END AREA CUT	END AREA FILL	CU. YDS. CUT	CU. YDS. FILL
1272	0		
		848	4
1016	12		
		454	15
		0	338

582.44

216+20
586.85

585.18

216+00
591.25

Back

Ahead

Ahead 542 38
Back 0 300

587.34

597.33
215+84.25
591.95

210 200 180 160 140 120 100 80 60 40 20 ℄ 20 40 60 80 100

Sta. 215+84.25 to Sta. 216+20

FED. RD. DIST. NO.	STATE	FED. AID PROJECT	FISCAL YEAR	19
10	OHIO	F-684 (3)	1946	89

ERIE COUNTY
S.H. 3 SEC. HURON-PT.

END AREA CUT	END AREA FILL	CU. YDS. CUT	CU. YDS. FILL
2045	0		
		7102	0
1790	0		
2011	0		
1500	0		
			2913 0

+58 10" Willow
+36 15" Willow Remove
571.48
218+00
572.54
+78 50" Willow Remove
+35 30" Willow
+32 36" Willow Remove
+01 36" Willow
+05 60" Willow Remove
571.48
217+00
575.24
+97 20" LOCUST
+94 20" LOCUST
+91.5 18" LOCUST
+89.4 10" LOCUST
+82.5 10" LOCUST
+82 14" LOCUST
+90 18" Willow
+88 48" Willow Remove
+81 28" Willow Remove
+72 48" Willow
Remove +78 16" LOCUST
+73.5 24" Ash Remove
+70 18" LOCUST
+69 12" LOCUST
576.00
216+67
581.29

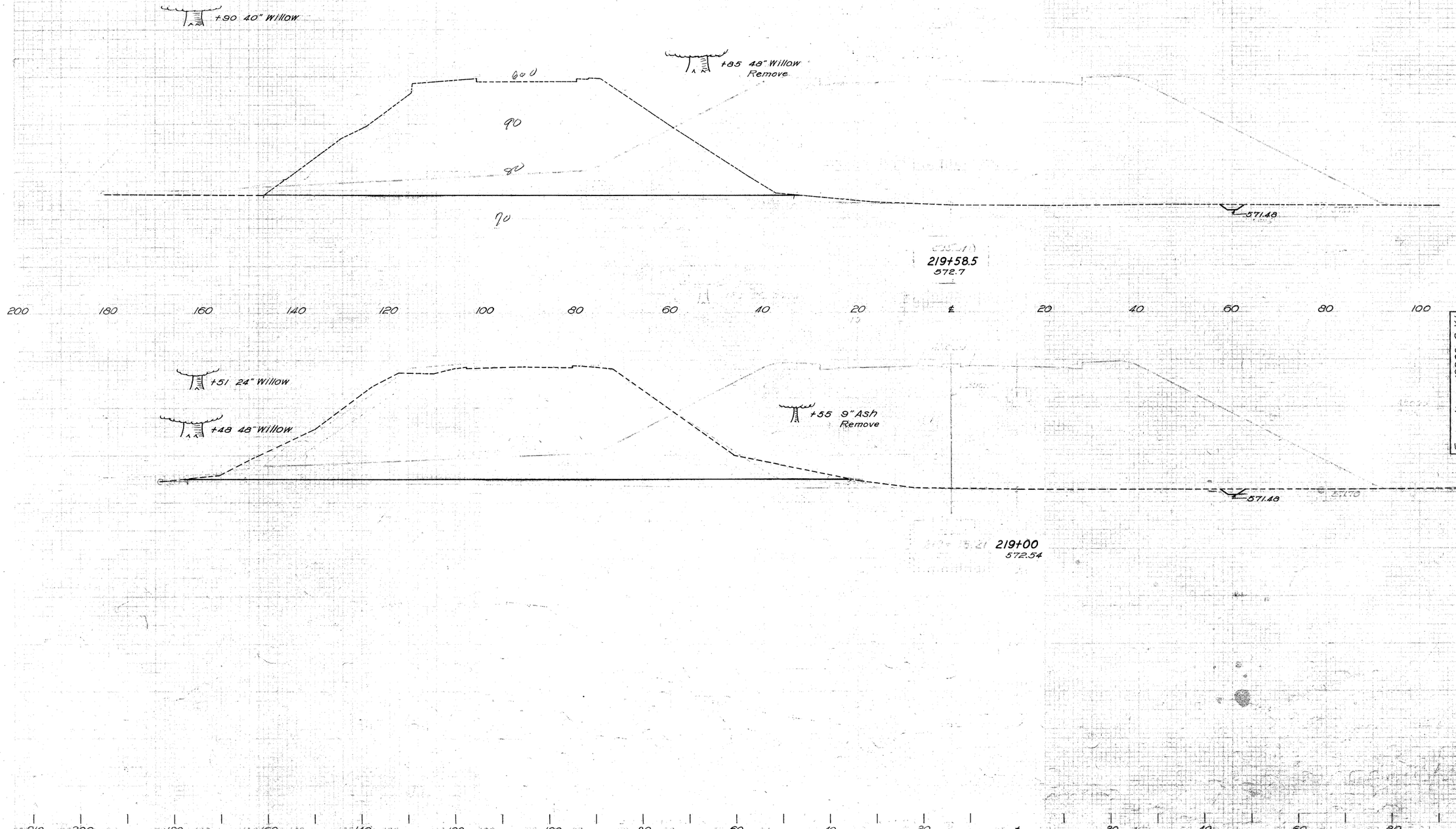
210 200 180 160 140 120 100 80 60 40 20 ℄ 20 40 60 80 100

Sta. 216+67 to Sta. 218+00

FED. AID
10 OHIO F-684(3) 1946

20
89

ERIE COUNTY
S.H. 3 SEC. HURON-PT.



ENDAREA		CU. YDS.	
CUT	FILL	CUT	FILL
1824	0		
		4079	0
		1942	0
		7384	0

Excavation 19966 Cu.Yds.
Embankment 0 Cu.Yds.
Emb. ÷ 21% 0 Cu.Yds.

Sta. 219+00 to Sta. 219+58.5

FED AID
10 OHIO F-684(3) 1946

21
89

ERIE COUNTY
S.H. 3 SEC. HURON PT.

	END AREA		CU. YDS.	
	CUT	FILL	CUT	FILL
	1141			
			634	0
Sta. 222+70	0			
Sta. 220+00	0			
			1401	0

223+00
576.0

Sta. 222+55 Remove
16" Willow

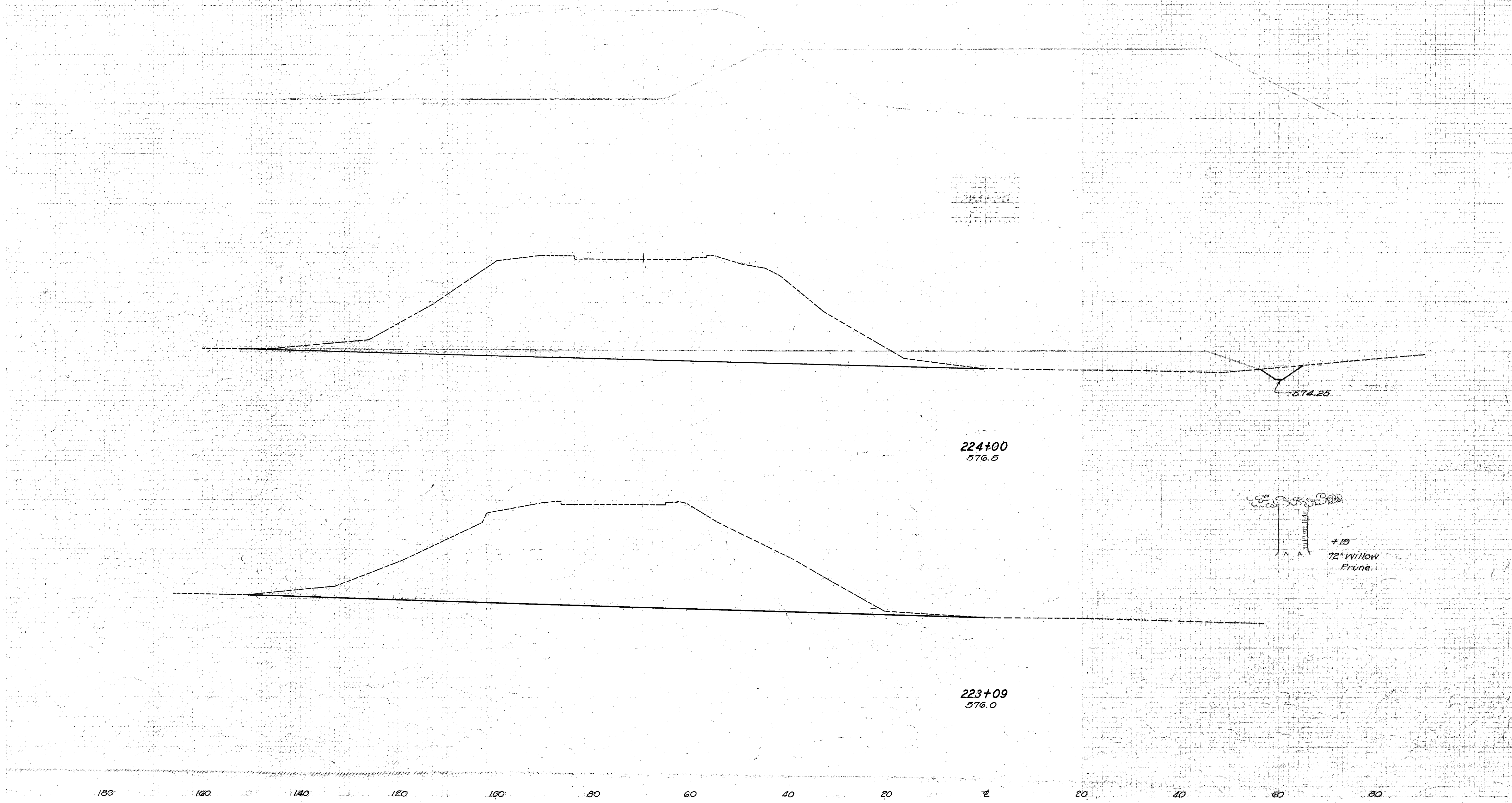
OUT FOR HURON RIVER

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

Sta. 223+00

		FED. AID		
10	OHIO	F-684 (3)	1946	22 / 89

ERIE COUNTY
S.H. 3 SEC. HURON-PT.

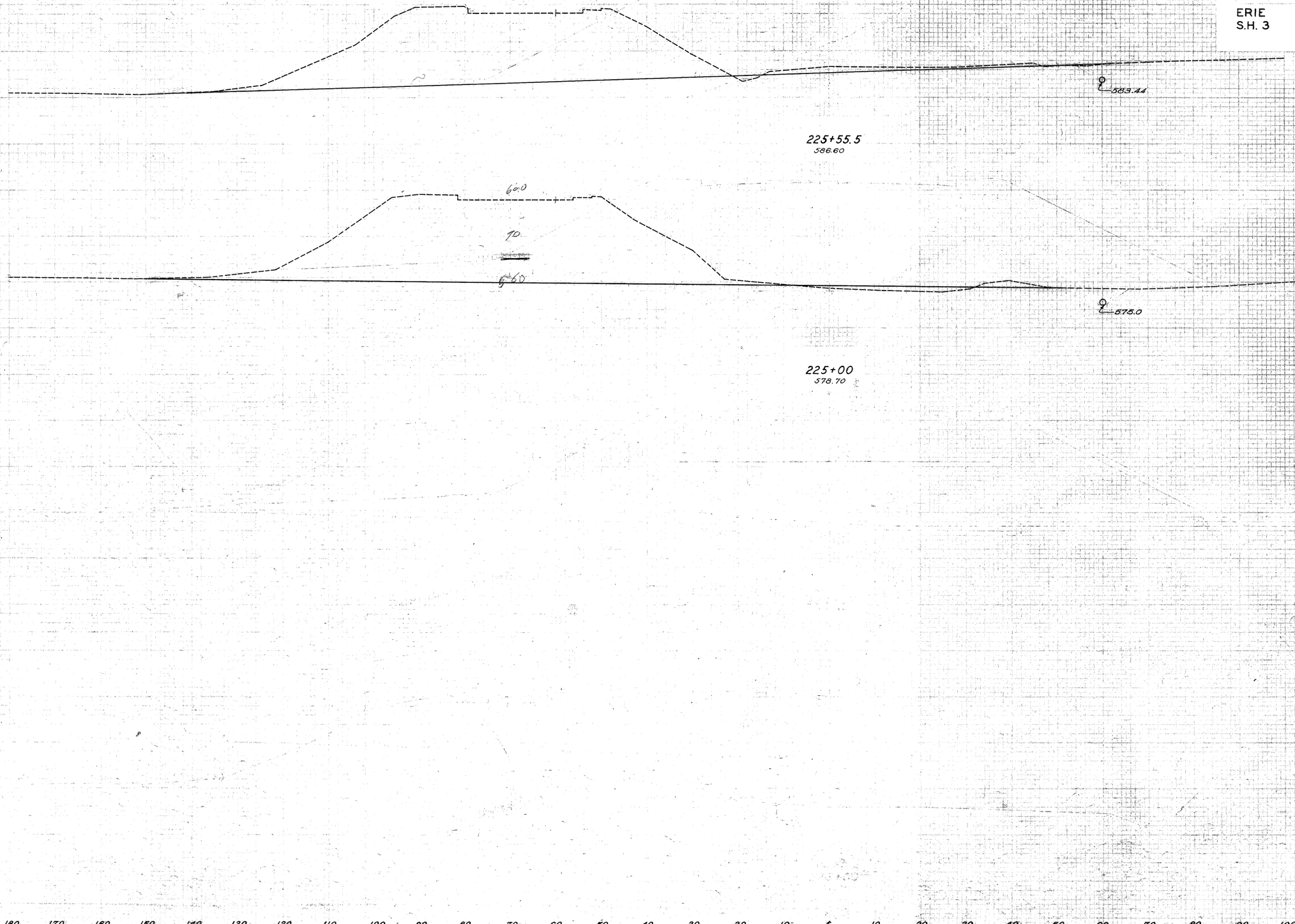


END AREA		CU. YDS.	
CUT	FILL	CUT	FILL
1742	0		
		5639	0
1605	0		
		457	0

Sta 223+09 to Sta 224+00

STATE	FED. AID		
10 OHIO	F-684(3)	1946	23 89

ERIE COUNTY
S.H. 3 SEC. HURON-PT.



END AREA		CU. YDS.	
CUT	FILL	CUT	FILL
12.19	7		
		27.56	48
14.63	40		
		59.35	74

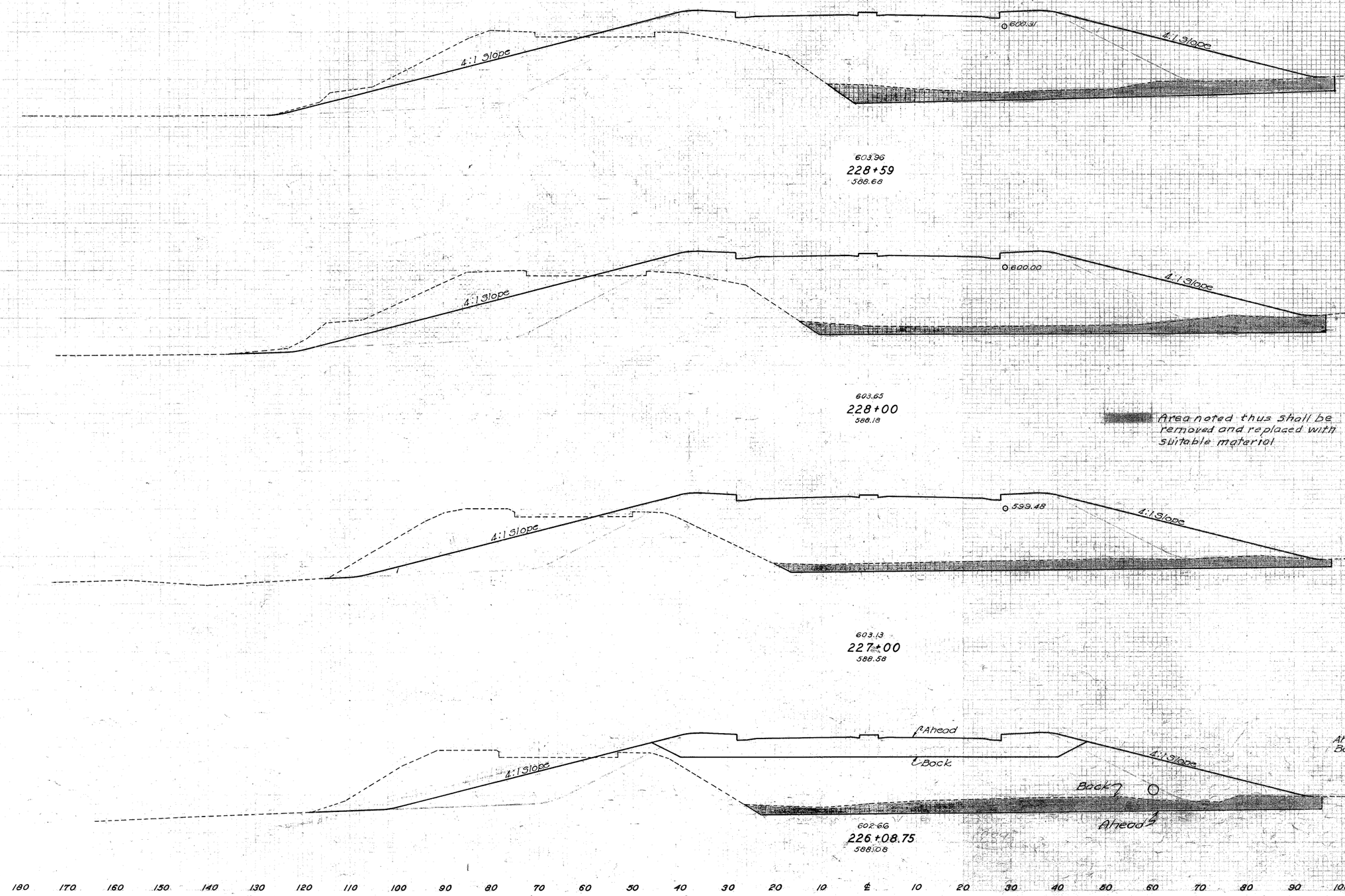
Excavation 20672 Cu. Yds.
Embankment 13243 Cu. Yds.
Emb. = 64% 16024 Cu. Yds.

Sta. 225+00 to Sta. 225+55.5

FED. NO.	STATE	FED.AID	CHECK
10	OHIO	F-684(3)	1946

24
89

ERIE COUNTY
S.H.3 SEC. HURON-PT.



ENDAREA		CU. YDS.	
CUT	FILL	CUT	FILL
448	1742		
		1070	3749
531	1687		
		1915	6210
503	1666		
		1841	5796
586	1764		
297	1183		
		1495	1115

Sta 228+59 to Sta 226+08.75

	FED.AID			25
10	OHIO	F-684(3)	1946	89

ERIE COUNTY
S.H. 3 SEC. HURON-PT.

605.05
230+70
589.48

Note: All unsuitable material in existing dump to be removed and quantities adjusted accordingly.
See Table No. 10, Sheet No. 88.

Ahead
Back

604.91
230+42
598.59

3:1

601.17

604.81
230+24
599.29

4:1 Slope

600.09

4:1 Slope

604.64
229+90
598.74

4:1 Slope

600.52

4:1 Slope

604.17
229+00
597.44

River Road Sta. 230+07.82 Rt.
Ore Dock Drive Sta. 230+01.35 Lt.
E.S.M. Co. Drive Sta. 229+61.81

Excavation 3803 Cu. Yds.
Embankment 2781 Cu. Yds.
Emb. 121% 3366 Cu. Yds.

	END AREA		CU. YDS.	
	CUT	FILL	CUT	FILL
	587	1617		
			490	1126
Ahead	184	554		
Back	349	719		
			159	444
	179	613		
			13	2033
			148	3477
			913	843
	369	725		
			1220	2702
	363	896		
			616	2063

200 190 180 170 160 150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 ℄ 10 20 30 40 50 60 70 80 90 100 110

Sta. 229+00 to Sta. 230+70

FED.AID

10 OHIO F-684(3) 1946

26
89

ERIE COUNTY
S.H.3 SEC. HURON-PT.

606.15
232+80.49
596.62

605.93
232+38.5
598.18

605.73
232+00
591.28

605.21
231+00
589.49

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 ℄ 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160

END AREA		CU. YDS.	
CUT	FILL	CUT	FILL
	608		951
		973	1622
	643	1135	
		922	1829
	650	1430	
		2315	5606
	600	1597	
		659	1786

Sta 231+00 to Sta 232+80.49

FED. AID PROJ. NO.				
10	OHIO	F-684(3)	1946	

27
89

ERIE COUNTY
S.H. 3 SEC. HURON-PT.

END AREA		CU. YDS.	
CUT	FILL	CUT	FILL
	360		854

606.33
234+62.51
602.78

CROSS SECTIONS
OUT FOR FAGM 684(3)

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 ℄ 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160

Sta. 234+62.51

FED. AID

10 | OHIO | F-684(3) | 1946 | 28 / 89

ERIE COUNTY

S.H. 3 SEC. HURON-PT.

598.68

602.58
238+00
593.91

586.07

600.75

604.31
237+00
597.41

605.55
236+00
600.44

+18 42" Oak
Remove

606.29
235+00
602.56

ENDAREA		CU. YDS.	
CUT	FILL	CUT	FILL
0	1072		
		200	3856
108	1010		
		711	3715
276	996		
		1128	3341
333	916		
		481	1229

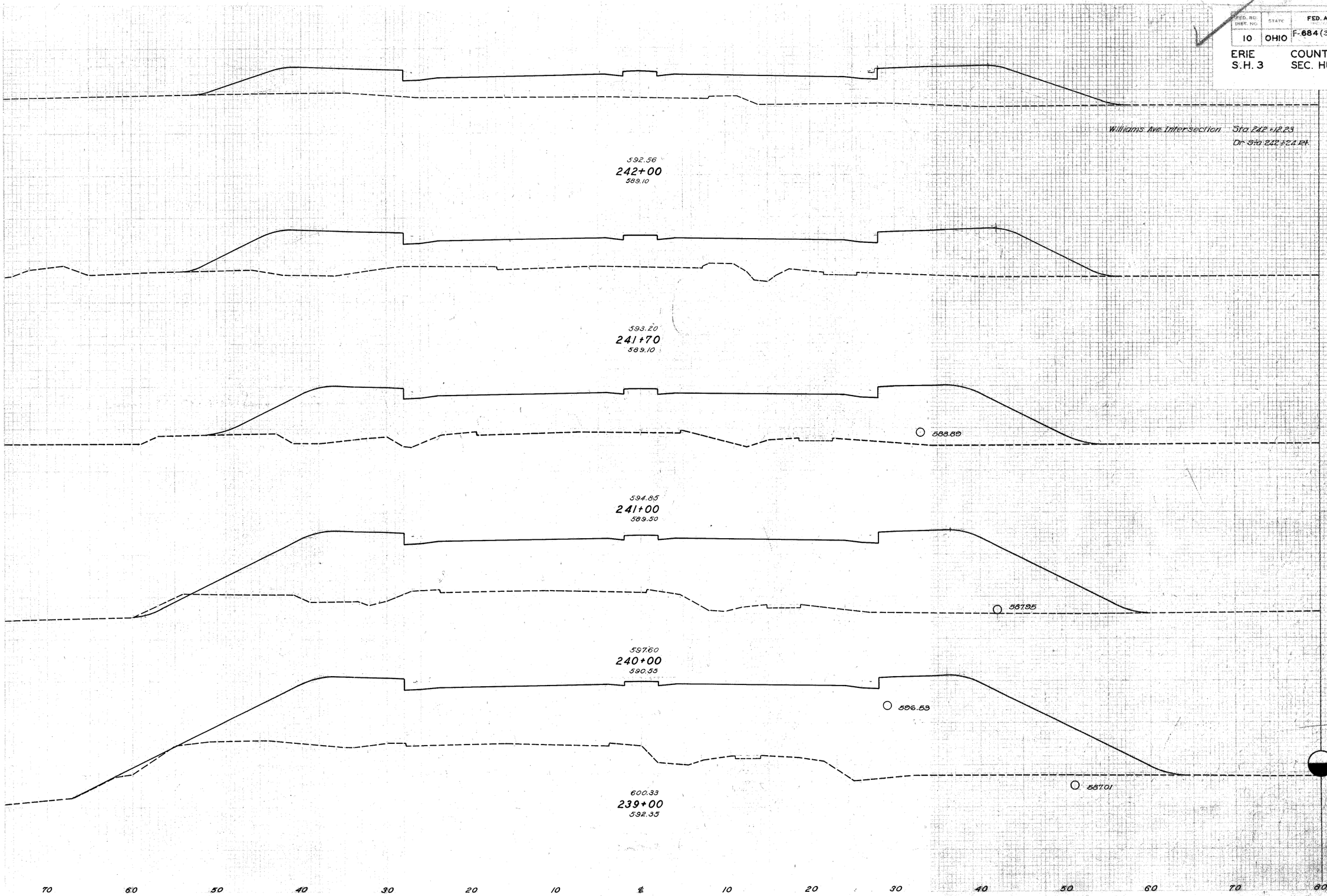
Excavation 2520 Cu.Yds.
Embankment 15950 Cu.Yds.
Emb't 2.2 19300 Cu.Yds.

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 ℄ 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160

Sta. 235+00 to Sta. 236+00

FED. RD. DIST. NO.	STATE	FED. AID	SHEET	29
10	OHIO	F-684(3)	1946	89

ERIE COUNTY
S.H. 3 SEC. HURON-PT.



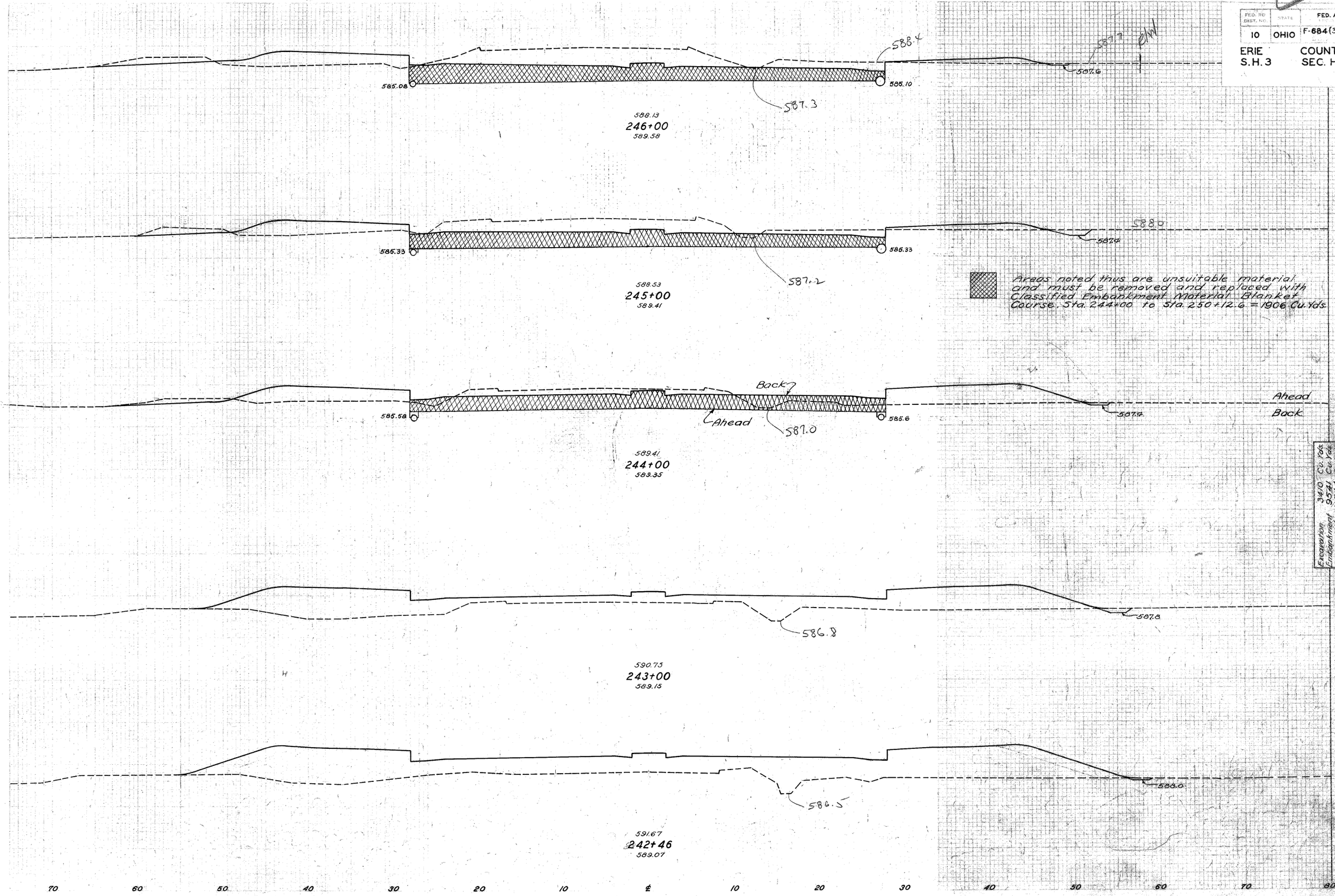
END AREA		CU. YDS.	
CUT	FILL	CUT	FILL
		15	182
		2	8
0	316		
		0	403
0	410		
		0	1187
0	506		
		6	2294
3	733		
		6	2981
0	877		
		0	3609

Williams Ave. Intersection Sta. 242+12.23
Or Sta. 242+24 Ext.

Sta. 239+00 to Sta. 242+00

FED. RD. DIST. NO.	STATE	FED. AID		30
10	OHIO	F-684(3)	1946	89

ERIE COUNTY
S.H. 3 SEC. HURON-PT.



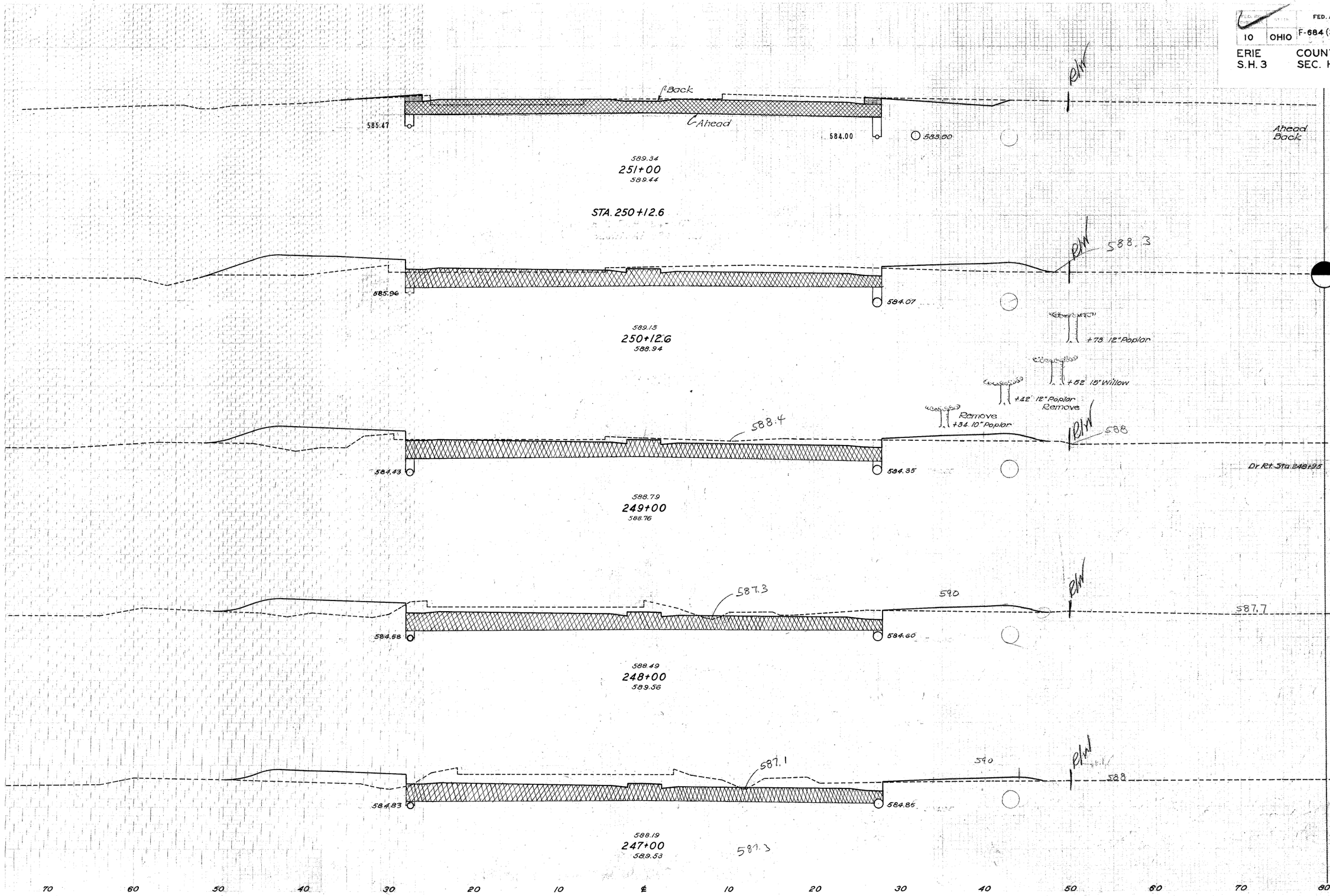
Areas noted thus are unsuitable material and must be removed and replaced with Classified Embankment Material Blanket Course. Sta. 244+00 to Sta. 250+12.6 = 1906 Cu. Yds.

	END AREA		CU. YDS.	
	CUT	FILL	CUT	FILL
	184	37		
			637	131
	160	34		
			494	204
Ahead	107	76		
Back	25	93		
			46	528
	0	192		
			0	475
	0	284		
			0	511

Excavation 3410 Cu. Yds.
Embankment 3541 Cu. Yds.
Emb. 12.6% 1154 Cu. Yds.

Sta. 242+46 to Sta. 246+00

FED. AID 31
10 OHIO F-684 (3) 1946 89
ERIE COUNTY
S.H. 3 SEC. HURON-PT.



END AREA		CU. YDS.	
CUT	FILL	CUT	FILL
114	8		
18	10		
		220	95
118	49		
		511	203
127	48		
		2	3
		493	163
139	40		
		557	130
167	30		
		641	124

Ahead
Back
Dr. Rt. Sta. 248+93

		FED. AID		
10	OHIO	F-684(3)	1946	32 89

ERIE COUNTY
S.H. 3 SEC. HURON-PT.

END AREA		CU. YDS.	
CUT	FILL	CUT	FILL
5	24		
		19	85
5	22		
		22	63
Ahead 7	12		
Back 40	9		
		119	33
Ahead 51	16		
Back 100	16		
		510	57

Excavation 944 Cu.Yds.
Embankment 492 Cu.Yds.
Emb. +21% 593 Cu.Yds.

255+00
590.04

254+00
589.74

253+00
589.38

252+52.54
589.48

589.54

589.06
585.63
585.00
583.35
585.82
584.64
583.60

Areas denoted thus \\\ are unstable silt and must be removed and replaced with Classified Embankment Material Blanket Course. Sta. 250+126 to Sta. 253+00 = 822 Cu.Yds.

Ahead
Back

708± 20" Maple Remove

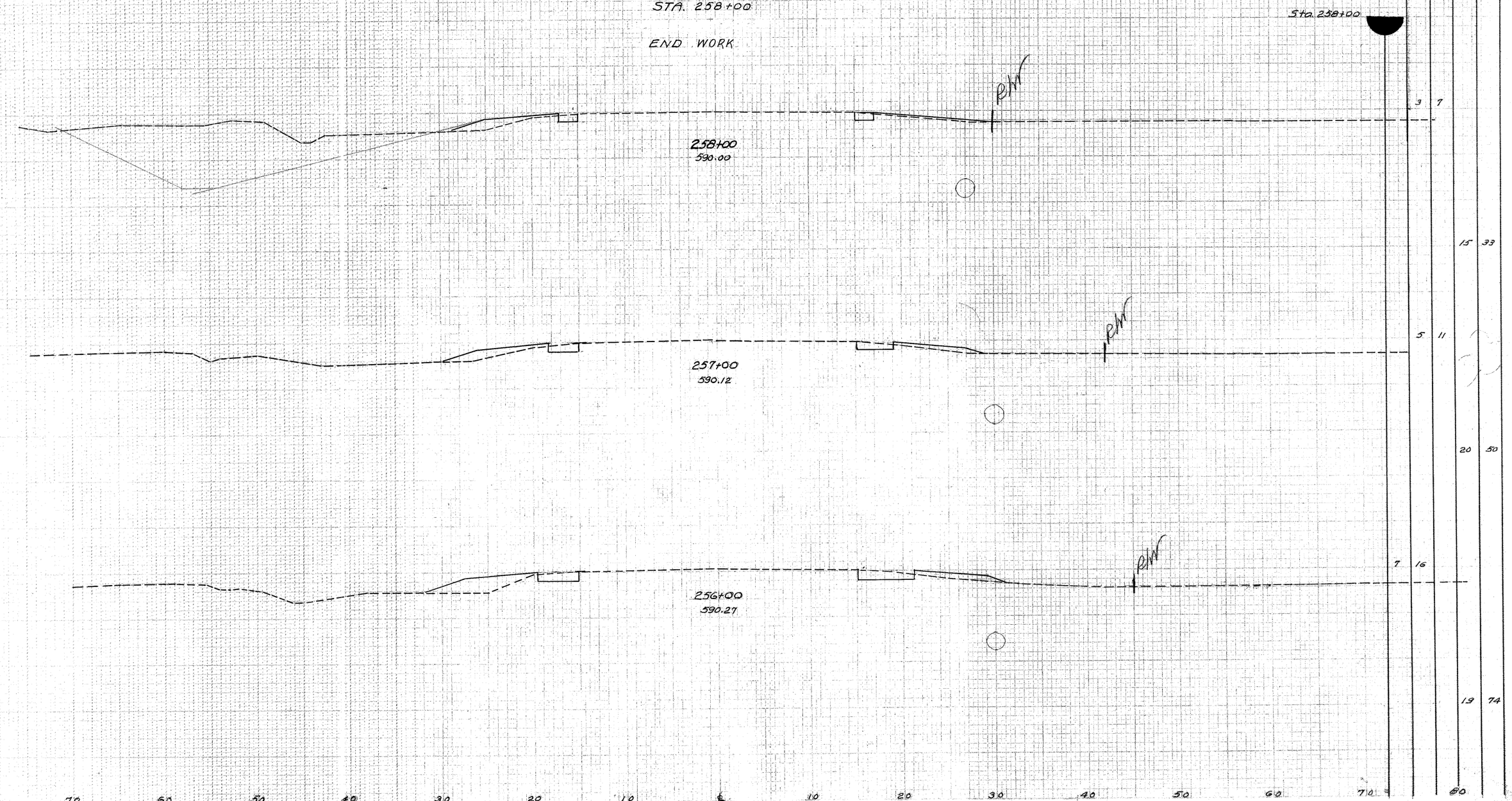
STA. 252+52.54 END PROJECT FF 684(3)

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

Sta. 252+28.83 to Sta. 255+00

FED. PROJ. NO.	STATE	FED. AID PROJECT	FISCAL YEAR	32-A
10	OHIO	F-684(3)	1946	89

ERIE COUNTY
S.H. 3 SEC. HURON (PT)



END AREA		CU YDS	
CUT	FILL	CUT	FILL
Sta. 258+00			
	3	7	
		15	33
	5	11	
		20	50
	7	16	
		13	74

	FED. AID				
10	OHIO	F-684 (3)	1946	33	89

ERIE COUNTY
S.H. 3 SEC. HURON-PT.

END AREA	CU. YDS.
CUT	FILL	CUT	FILL
61	47	32	26
60	51	219	115
70	22	276	33
71	28	7	
17	28	39	85
4		7	
5	25	18	40
5	25	8	
0		5	45
0		9	
0		2	10
		15	0

Excavation 1029 Cu.Yds
Embankment 688 Cu.Yds
Emb. + 2% 590 Cu.Yds

Areas denoted thus: are unstable silt and must be removed and replaced with Classified Embankment Material Blanket Course. Sta 4+00 to Sta 6+71 = 570 Cu.Yds.

Dr. Sta. 4+70 Lt.

Dr. Sta. 3+20 Lt.

Huron St. Intersection Sta 1+80.96

Sta. 2+00 Beg. 6" 1-4

596.76
6+00
596.74
592.5

596.68
5+85.5
597.04
597.4

596.18
5+00
596.35
592.0 Ahead
591.0 Back
591.3

595.60
4+00
595.73
591.6

595.03
3+00
595.02
591.75

594.82
2+50
594.73
591.9

594.76
2+01.98
594.97

STA. 1+80.96
BEGIN NORTH PAV'T. LANE

NORTH PAV'T LANE
CROSS SECTIONS

Sta. 2+01.98 to Sta. 6+00

FED. AID

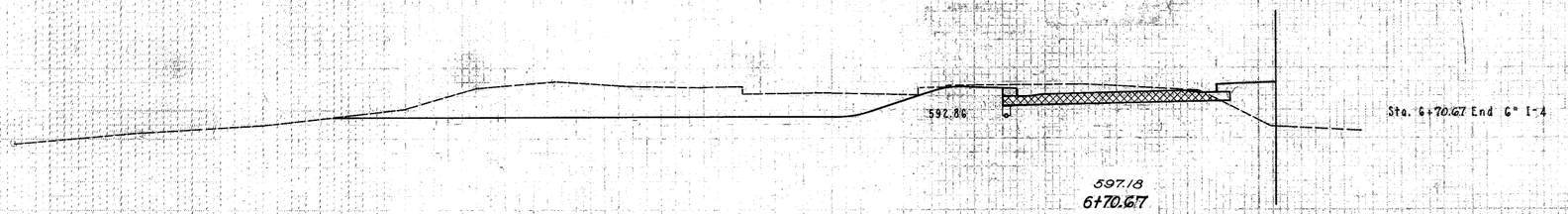
10 OHIO F-684(3) 1946

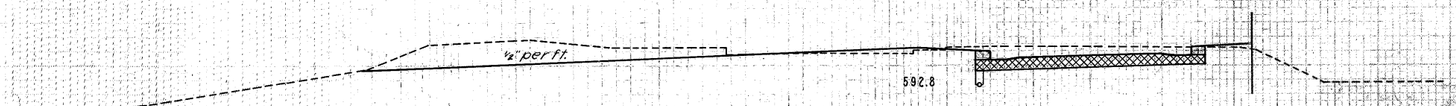
34
89

ERIE COUNTY
S.H. 3 SEC. HURON-PT.

END AREA		CU. YDS.	
CUT	FILL	CUT	FILL
		354	36
			122
		209	10
			300

STA. 6+70.67
END NORTH PAV'T. LANE





Areas denoted thus : are unstable silt and must be removed and replaced with Classified Embankment Material Blanket Course.

NORTH PAV'T LANE
CROSS SECTIONS

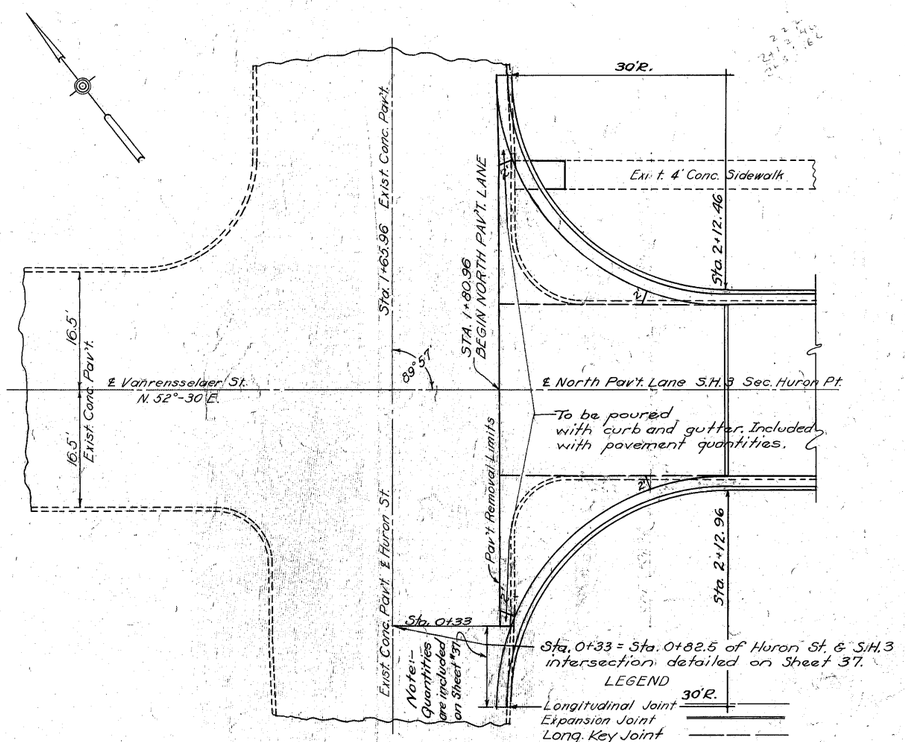
180 160 140 120 100 80 60 40 20 ℄ 20 40 60

Sta. 6+60 to Sta. 6+70.67

FED. RD. DIST. NO.	STATE	FED. AID PROJECT	FISCAL YEAR
10	OHIO	F-684(3)	1946

35
89

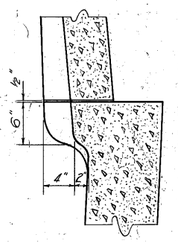
ERIE COUNTY.
S.H. 3 SEC. HURON-PT.

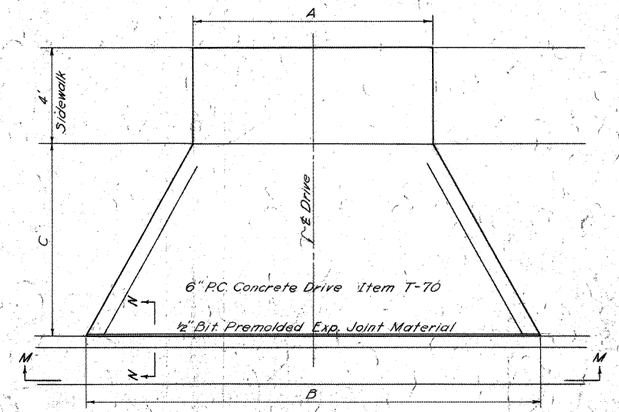


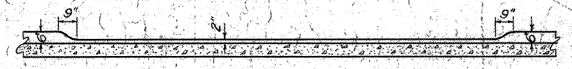
HURON ST. INTERSECTION
NORTH PAVEMENT LANE

SUMMARY OF QUANTITIES

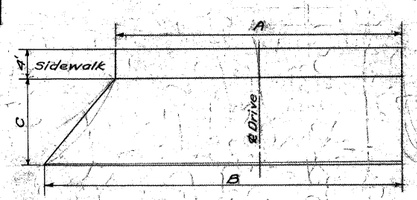
E-8	Removal & Disposal of Exist. Conc. Pavement	98	Sq. Yds.
E-8	Removal & Disposal of Exist. Conc. Sidewalk	30	Sq. Ft.
T-71	9" Reinf. Portland Cement Conc. Pav't.	47	Sq. Yds.
I-12	Type 2 Concrete Curb & Gutter	95.80	Lin. Ft.
I-13	4" Portland Cement Conc. Sidewalk	15	Sq. Ft.



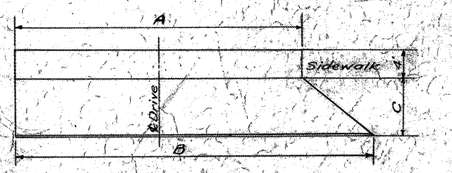




CONCRETE PRIVATE DRIVES				
Station	Side	A Ft.	B Ft.	C Ft.
208+30	Rt.	10	19	8
208+89	Rt.	24	33	8
213+80	Rt.	20	29	8
242+24	Rt.	10	19	8
3+20	Lt.	50	60	12
4+70	Lt.	85	95	2
248+95	Rt.	20	36	8
250+35	Rt.	10	19	8



West Driveway
Sta. 3+20
PLAN



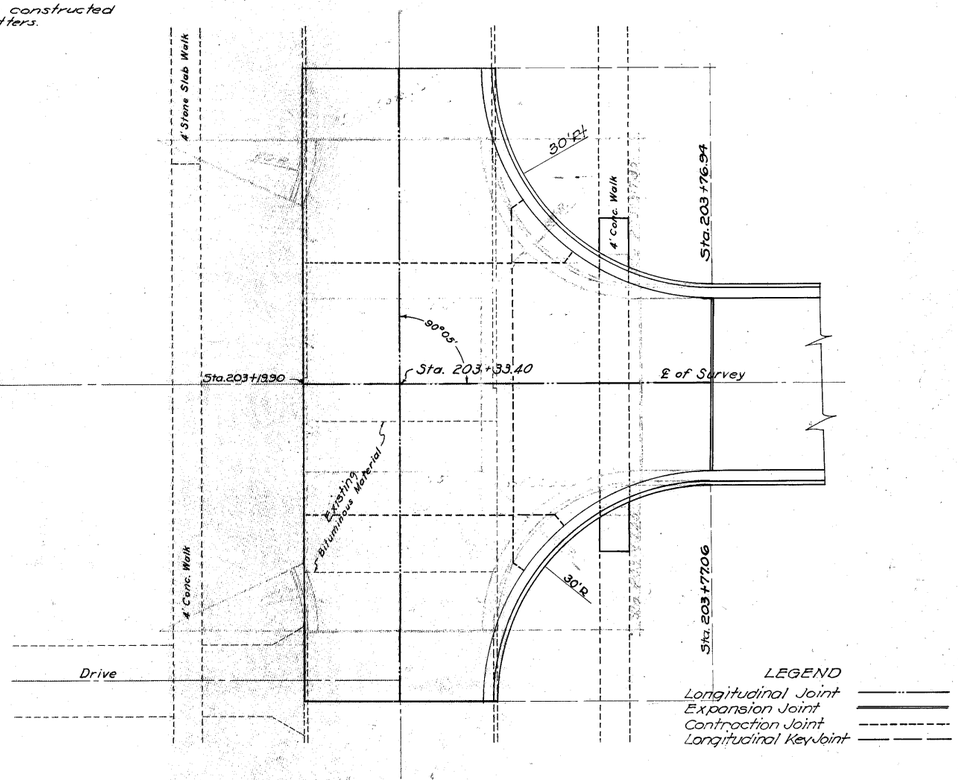
East Driveway
Sta. 4+70
PLAN

FED. RD. DIST. NO.	STATE	FED. AID PROJECT	FISCAL YEAR
10	OHIO	F-684(3)	1946

36
89

ERIE COUNTY
S.H. 3 SEC. HURON-PT.

Intersection to be constructed without valley gutters.



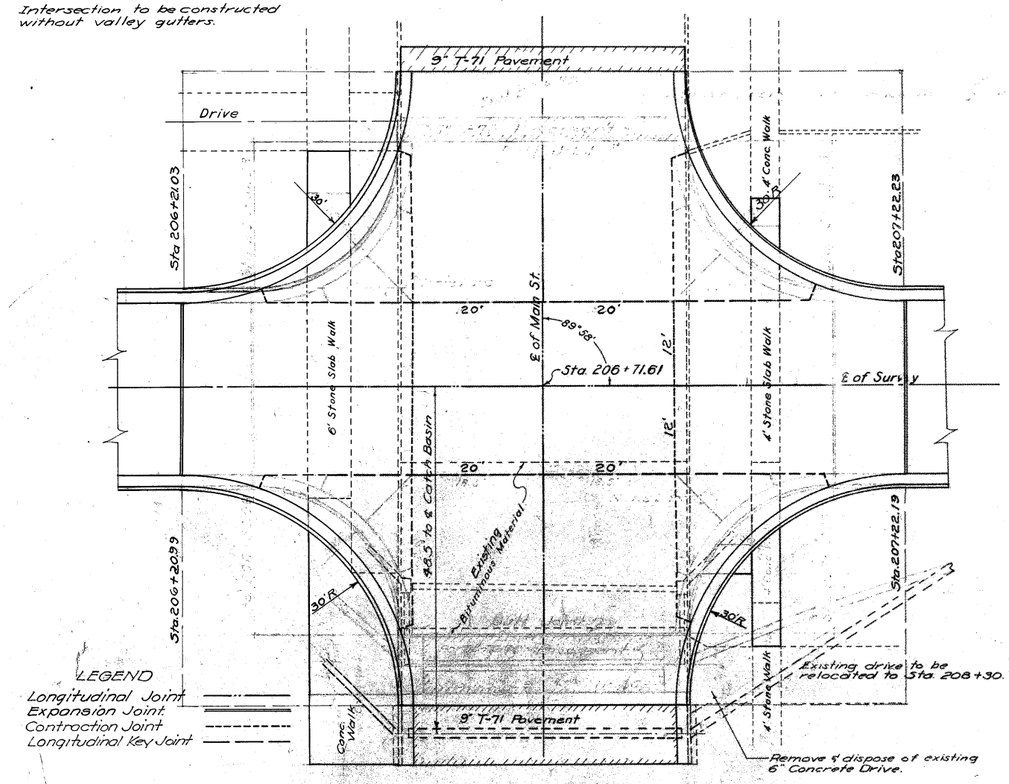
WILLIAMS ST. INTERSECTION

STA. 203+33.40

ESTIMATED QUANTITIES

ITEM				
	E-8	Removal and Disposal of Exist. Conc. Sidewalk	184.0	Sq. Ft.
	E-8	Removal and Disposal of Exist 5" Bituminous Wearing Surface	63.0	Sq. Yds.
	E-8	Removal and Disposal of Exist. 7" Concrete Pavement with 6" Curbs	198.7	Sq. Yds.
	T-71	9" Reinf. Portland Cement Concrete Pavement	227.3	Sq. Yds.
	I-12	Type 2 Concrete Curb and Gutter	95.8	Lin. Ft.
	I-13	4" Portland Cem. Conc. Sidewalk	48.0	Sq. Ft.

Intersection to be constructed without valley gutters.



MAIN ST. INTERSECTION

STA. 206+71.61

ESTIMATED QUANTITIES

ITEM				
	E-8	Removal and Disposal of Exist. 5" Macadam Wearing Surface	102.0	Sq. Yds.
	E-8	Removal and Disposal of Exist. Brick Wearing Surface	387.0	Sq. Yds.
	E-8	Removal and Disposal of Exist. 7" Conc. Base Course	387.0	Sq. Yds.
	E-8	Removal and Disposal of Exist. 6"x18" Stone Curb	192.0	Lin. Ft.
	E-8	Removal and Disposal of Exist. Sidewalks	812.0	Sq. Ft.
	E-8	Removal and Disposal of Exist. 10" Conc. Base Course	102.0	Sq. Yds.
	T-71	9" Reinf. Portland Cement Concrete Pavement	432.6	Sq. Yds.
	I-12	Type 2 Concrete Curb and Gutter	191.6	Lin. Ft.
	I-13	4" Portland Cement Concrete Sidewalks	466.0	Sq. Ft.
	E-8	Removal and Disposal of Exist. 6" Concrete Drive	8.0	Sq. Yds.

FED.RD. DIST.NO.	STATE	FED. AID PROJECT	FISCAL YEAR
10	OHIO	F-684(3)	1946

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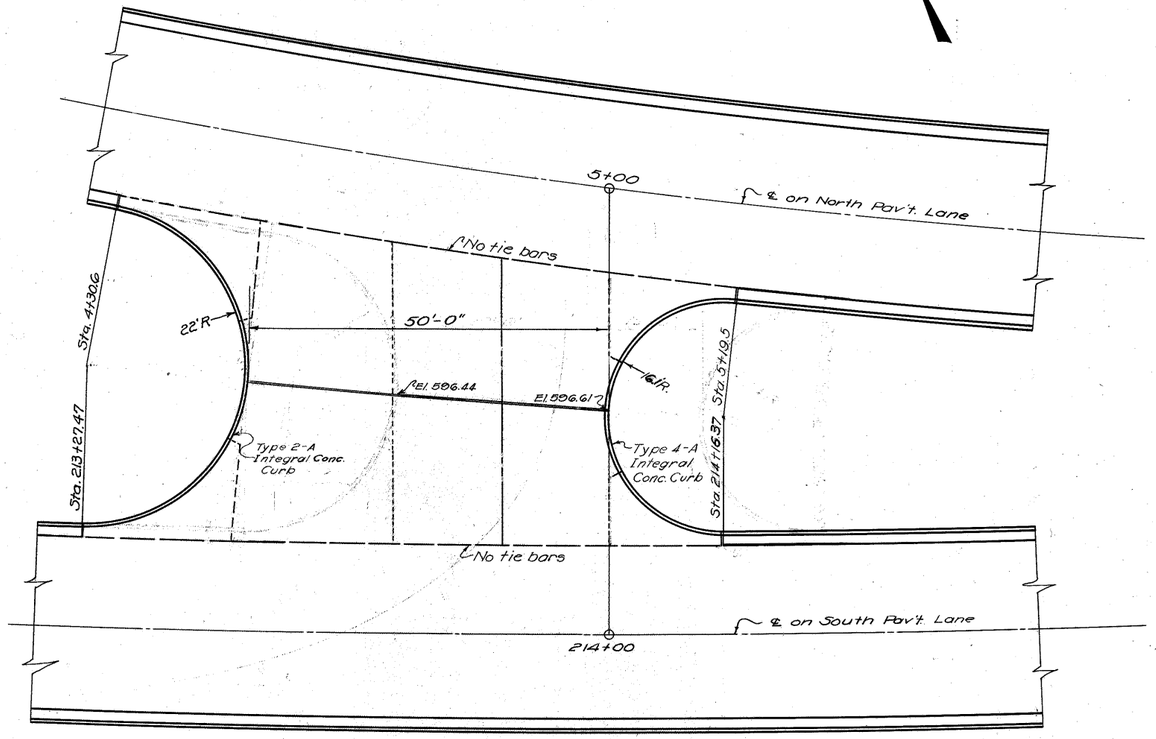
ERIE COUNTY
S.H. 3 SEC. HURON-PT.

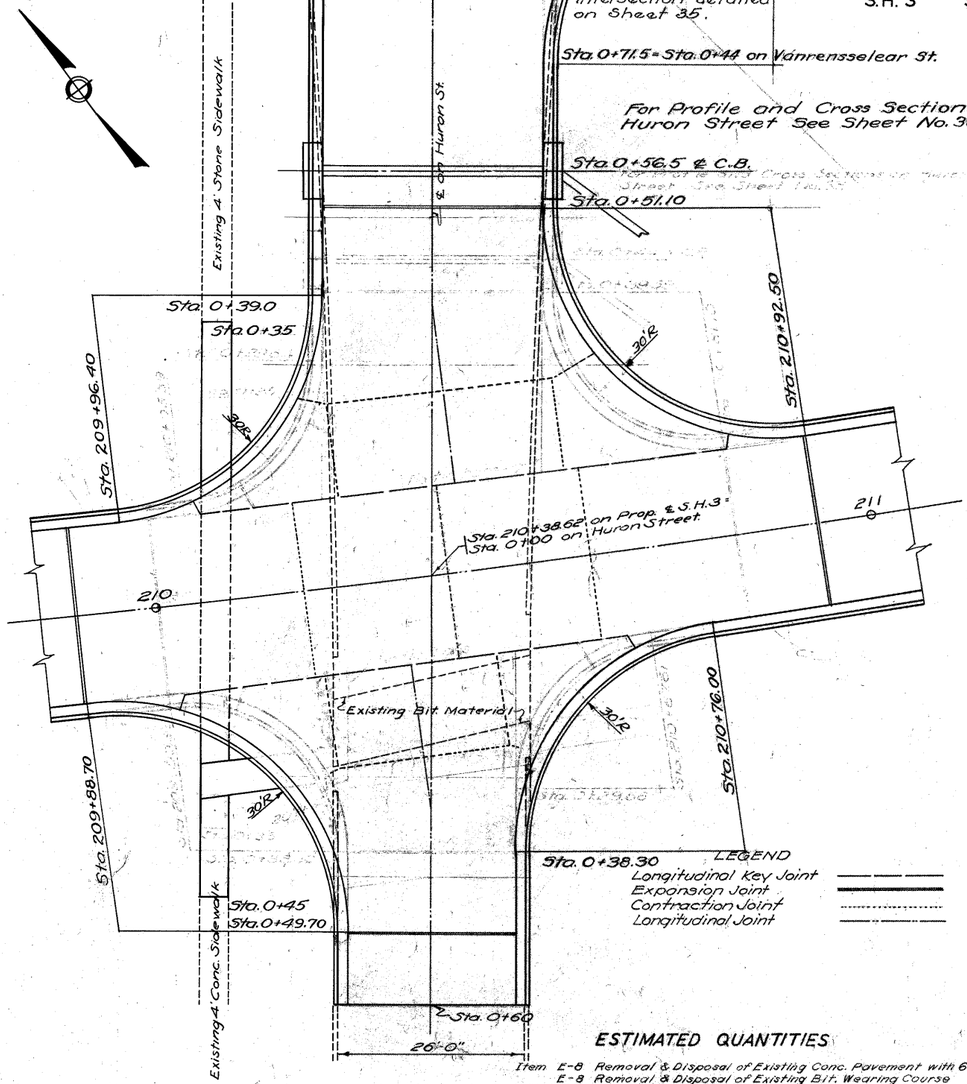


LEGEND
Longitudinal Key Joint
Expansion Joint
Longitudinal Joint
Contraction Joint

ESTIMATED QUANTITIES

Item			
T-71	9" Reinf. Portland Cement Conc. Pavement	271.5	Sq. Yds.
I-12	Type 2-A Integral Conc. Curb	68.31	Lin. Ft.
I-12	Type 4-A Integral Conc. Curb	54.2	Lin. Ft.

CROSS-OVER AT STA. 214+00

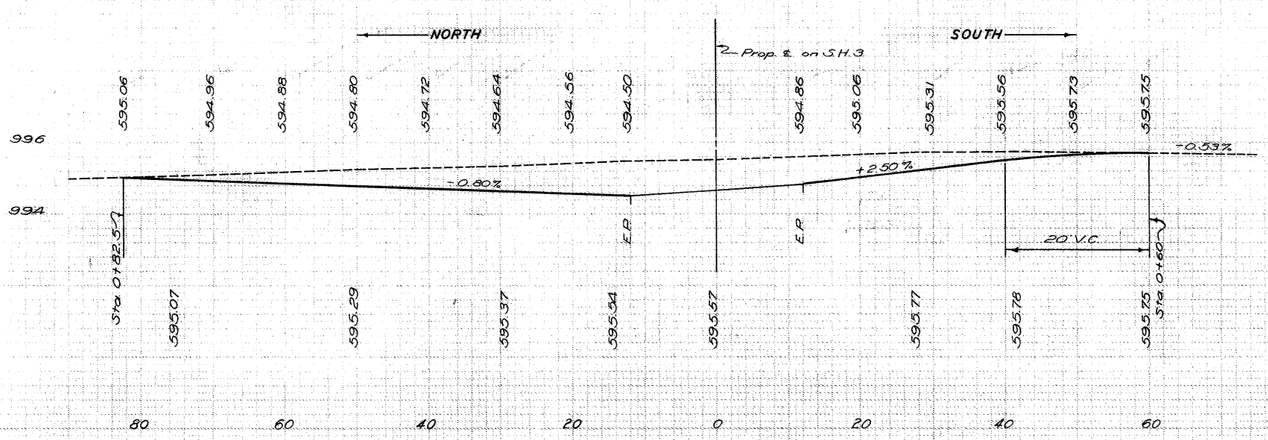


LEGEND
Longitudinal Key Joint
Expansion Joint
Contraction Joint
Longitudinal Joint

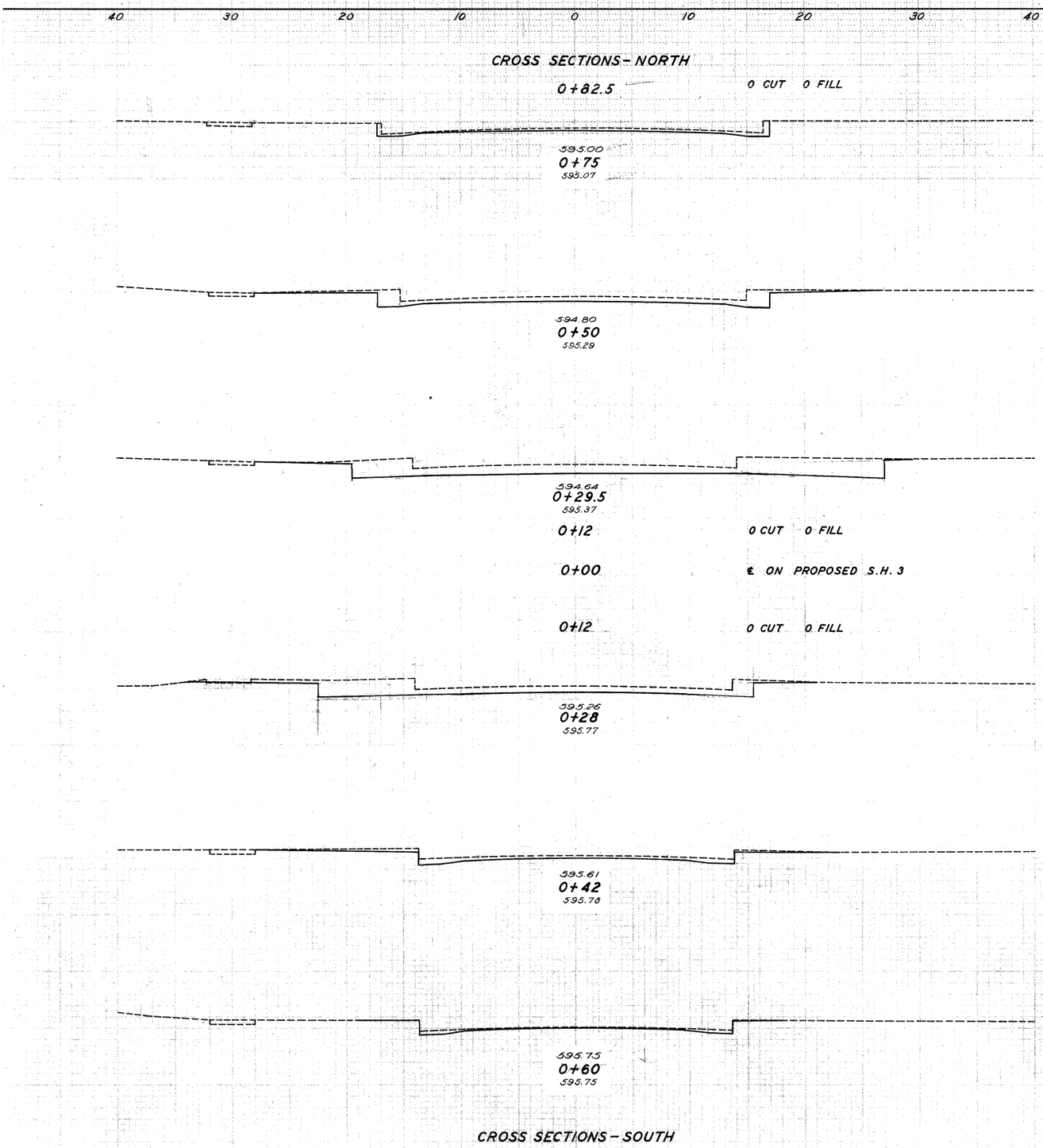
ESTIMATED QUANTITIES

Item			
E-8	Removal & Disposal of Existing Conc. Pavement with 6" Curbs	470.0	Sq. Yds.
E-8	Removal & Disposal of Existing Bit. Wearing Course	30.2	Sq. Yds.
E-8	Removal & Disposal of Existing Sidewalk	320.0	Sq. Ft.
T-71	9" Reinf. Portland Cement Conc. Pavement	470.6	Sq. Yds.
I-12	Type 2 Concrete Curb & Gutter	282.5	Lin. Ft.
I-13	4" Portland Cement Concrete Sidewalk	200	Sq. Ft.

HURON STREET INTERSECTION
STA. 210 + 38.62



PROFILE – HURON STREET



END AREA		CU. YDS.	
CUT	FILL	CUT	FILL
0	0		
		1	0
8	0		
		12	0
18	0		
		27	0
54	0		
		12	0
0	0		
0	0		
		9	0
31	0		
		10	0
12	0		
		5	0
4	0		

HURON STREET INTERSECTION
STA. 210+38.62

TOTAL EXCAVATION 76 CU.YDS.

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ERIE COUNTY
S.H. 3 SEC. HURON – PT.

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FED. RD. DIST. NO.	STATE	PROJECT	FISCAL YEAR
10	OHIO	F-684(3)	1946

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ERIE COUNTY
S.H. 3 SEC. HURON-PT.

PLAN

RIVER ROAD STA. 230+07.82

PROFILE

Scale 1"=10'

JOINT LEGEND
Long. Key
Expansion
Contraction
Longitudinal

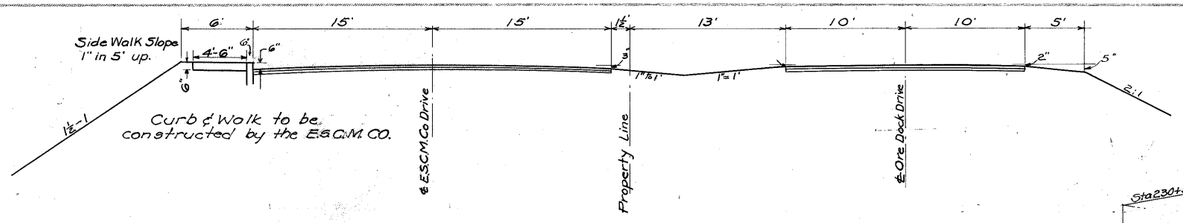
SEC. A-A

INTERSECTIONS
ORE DOCK DRIVE STA. 230+01.35 LT.
RIVER ROAD STA. 230+07.82 RT.
E.S.C.M. CO. DRIVE STA. 229+61.81 LT.

FED. RD. DIST. NO.	STATE	PROJECT	FISCAL YEAR
10	OHIO	F-684(3)	1946

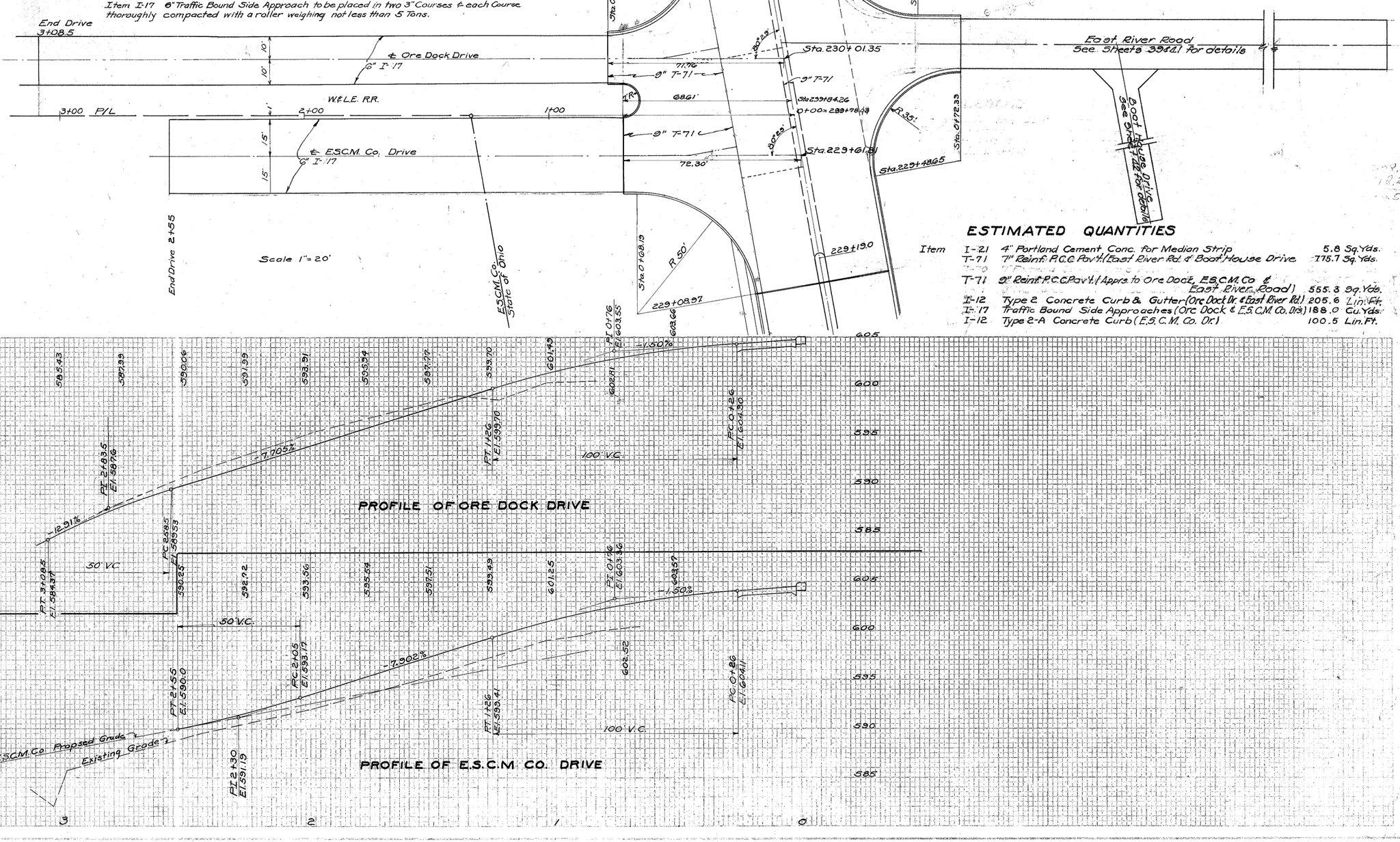
39A
89

ERIE COUNTY
S.H. 3 SEC. HURON - PT.



TYPICAL SECTION FOR ITEM I-17 SIDE APPROACH
ORE DOCK & E.S.C.M. CO. DRIVES

Item I-17 6" Traffic Bound Side Approach to be placed in two 3" Courses & each Course thoroughly compacted with a roller weighing not less than 5 Tons.



ESTIMATED QUANTITIES

Item		
I-21	4" Portland Cement Conc. for Median Strip	5.8 Sq. Yds.
T-71	7" Reinf. P.C.C. Pav't. (East River Rd. & Boat House Drive	775.7 Sq. Yds.
T-71	9" Reinf. P.C.C. Pav't. (Appro. to Ore Dock, E.S.C.M. Co & East River Road)	555.3 Sq. Yds.
I-12	Type 2 Concrete Curb & Gutter (Ore Dock Dr. & East River Rd.)	205.6 Lin. Ft.
I-17	Traffic Bound Side Approaches (Ore Dock & E.S.C.M. Co. Drs.)	188.0 Cu. Yds.
I-12	Type 2-A Concrete Curb (E.S.C.M. Co. Dr.)	100.5 Lin. Ft.

3

FED. ROAD DIST. NO.	STATE	PROJECT	FISCAL YEAR	SHEET NO.
10	OHIO	F-684(3)	1946	40 89

ERIE COUNTY
S.H. 3 SEC. HURON (PT.)

Ore Dock Drive Ends at Sta. 3+08.5

Sta. 3+08.5

587.27

2+83.5
586.5

E.S.C.M. Co. Drive Ends at Sta. 2+55

590.46

590.37

2+46
588.4

593.56

593.91

2+00
591.80

595.83

596.23

1+70
594.0

600.97

601.14

1+04.5
588.5

Curb & Walk to be constructed by E.S.C.M. Co.

601.87

602.10

0+89.5
592.0

℄ E.S.C.M. Co. Drive

Property Line

℄ Ore Dock Drive

602.18

602.38

0+84
593.5

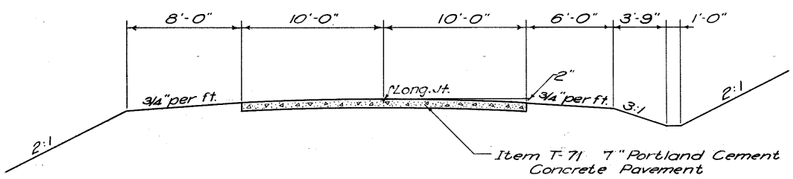
Excavation 148 Cu. Yds.
Embankment 3417 Cu. Yds.

ORE DOCK DRIVE STA. 230+01.35 LT.
E.S.C.M. Co. DRIVE STA. 229+61.81 LT.

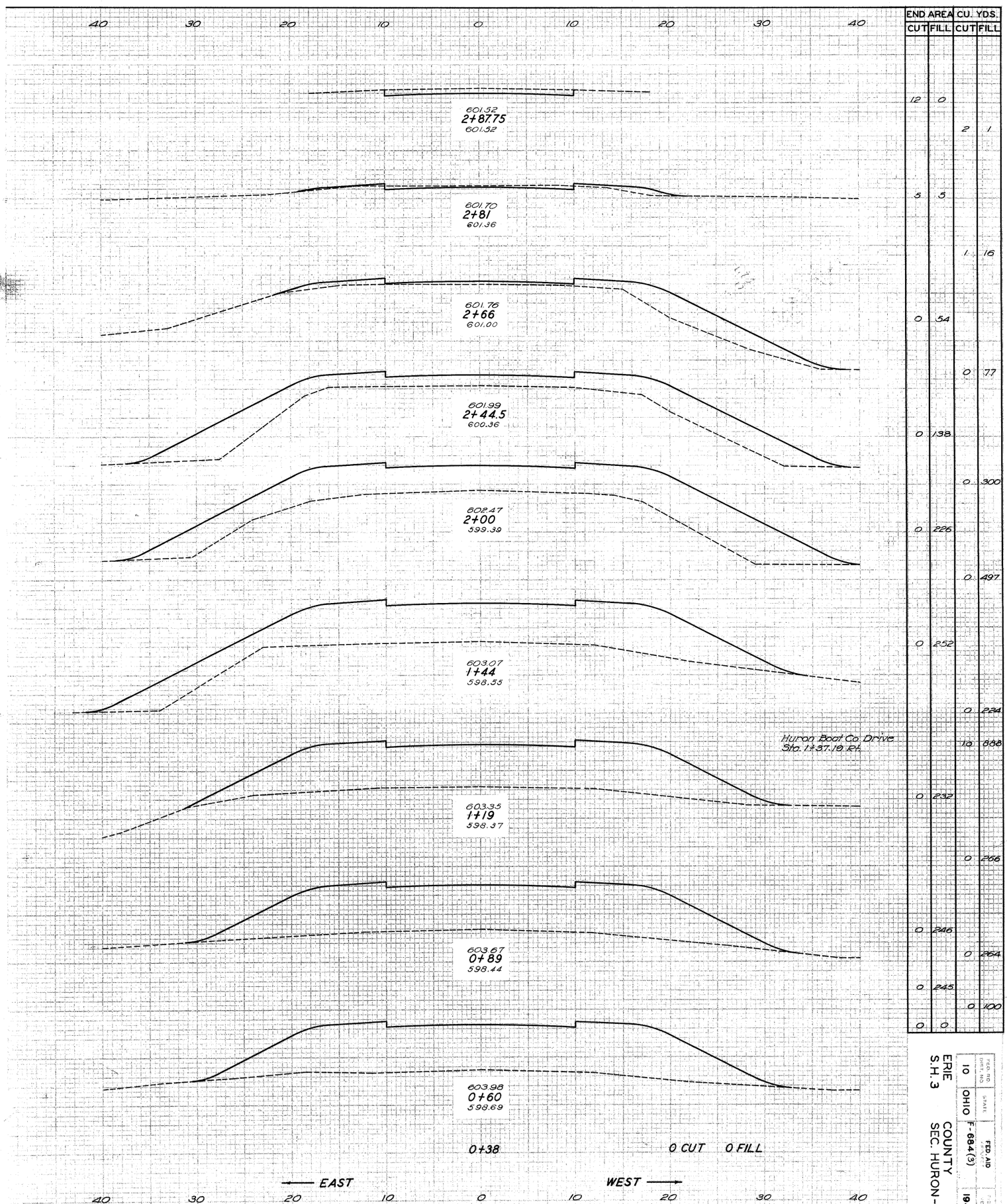
Sta. 0+38

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

	End Area		Cu. Yds.	
	Cut	Fill	Cut	Fill
	0	0		
			7	8
	15	18		
			30	65
	29	76		
			50	221
	30	183		
			31	207
	25	189		
			30	1715
	0	1225		
			0	611
	0	873		
			0	158
	0	378	0	492
	0	0		



TYPICAL SECTION ITEM T-71
PORTLAND CEMENT CONCRETE SIDE APPROACH
RIVER ROAD STA. 230 + 07.82 RT.
WILLIAMS AVE. STA. 242 + 12.23 LT.



END AREA CUT	END AREA FILL	CU. YDS. CUT	CU. YDS. FILL
12	0		
		2	1
5	5		
		1	16
0	54		
		0	77
0	138		
		0	300
0	226		
		0	497
0	252		
		0	224
		10	888
0	232		
		0	266
0	246		
		0	264
0	245		
		0	100
0	0		

CROSS SECTIONS ON RIVER ROAD
STA. 230 + 07.82 RT.

TOTAL EXCAVATION 13 CU. YDS.
TOTAL EMBANKMENT 2633 CU. YDS.

ERIE COUNTY
S.H. 3 SEC. HURON-PT.

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10	OHIO	F-684(3)	1946

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SHEET NO.	STATE	FED. AID PROJECT	SHEET NO.
10	OHIO	F-684(3)	1948

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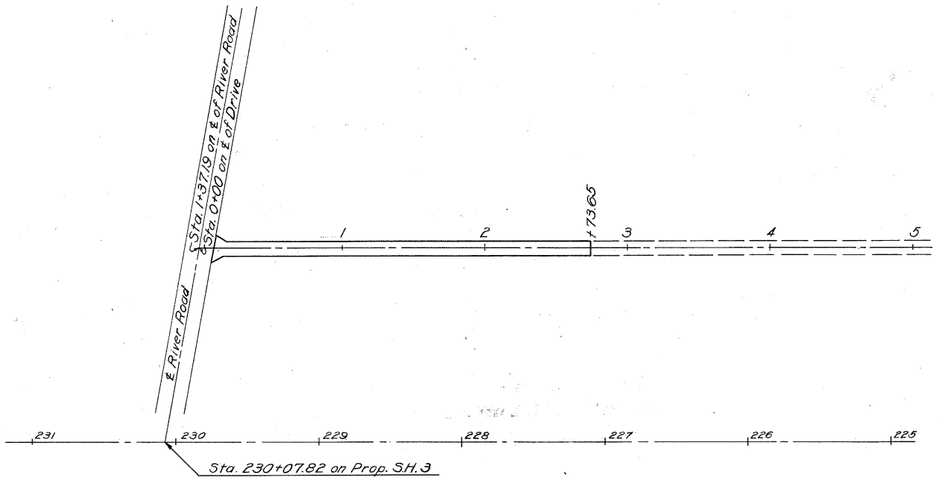
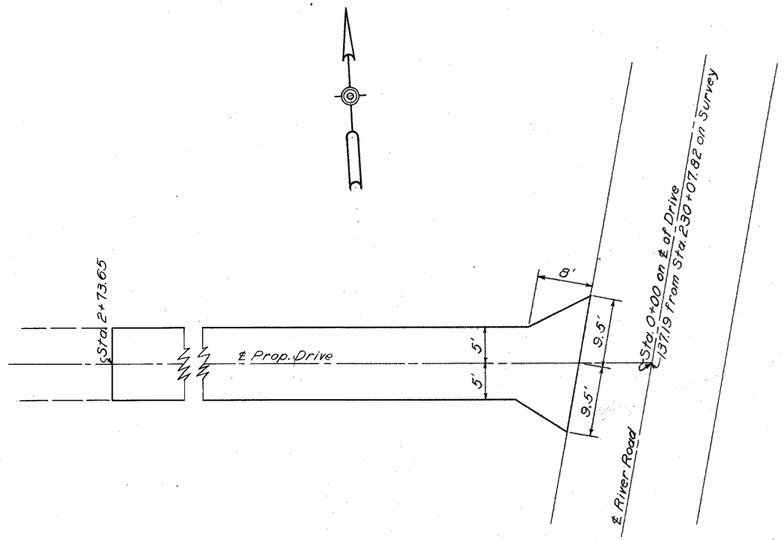
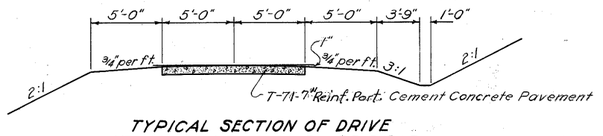
ERIE COUNTY
S.H. 3 SEC. HURON-PT.



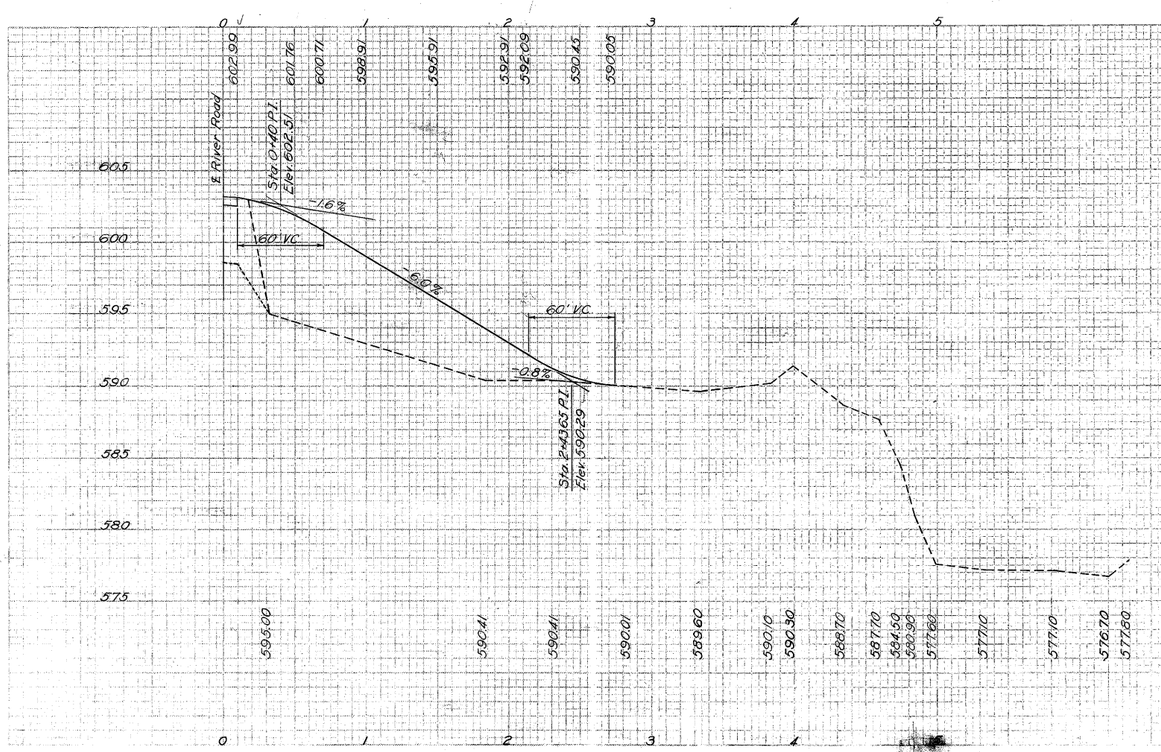


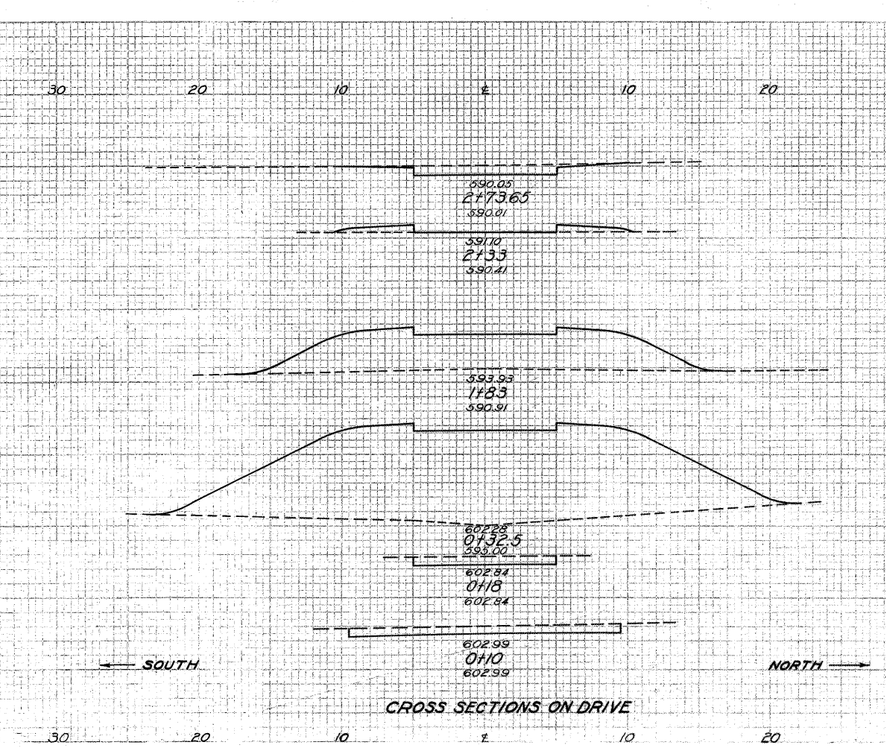
DETAIL OF DRIVE INTERSECTION



TYPICAL SECTION OF DRIVE
BOAT HOUSE DRIVE ON RIVER ROAD

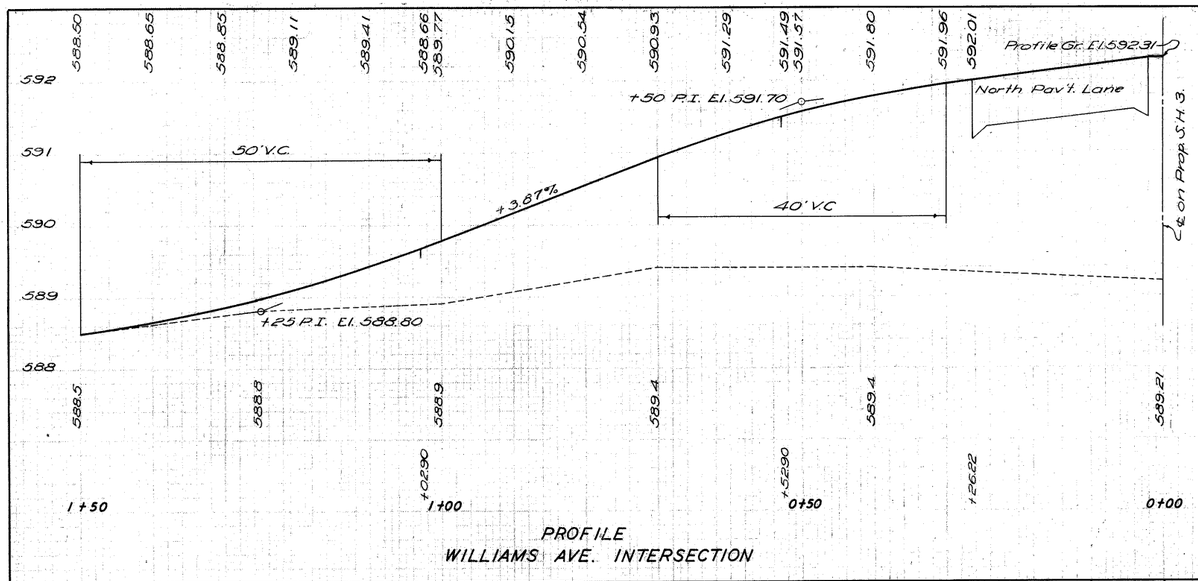
Quantities for Boat House Drive are included with River Road Quantities. See Sheet No. 39-A



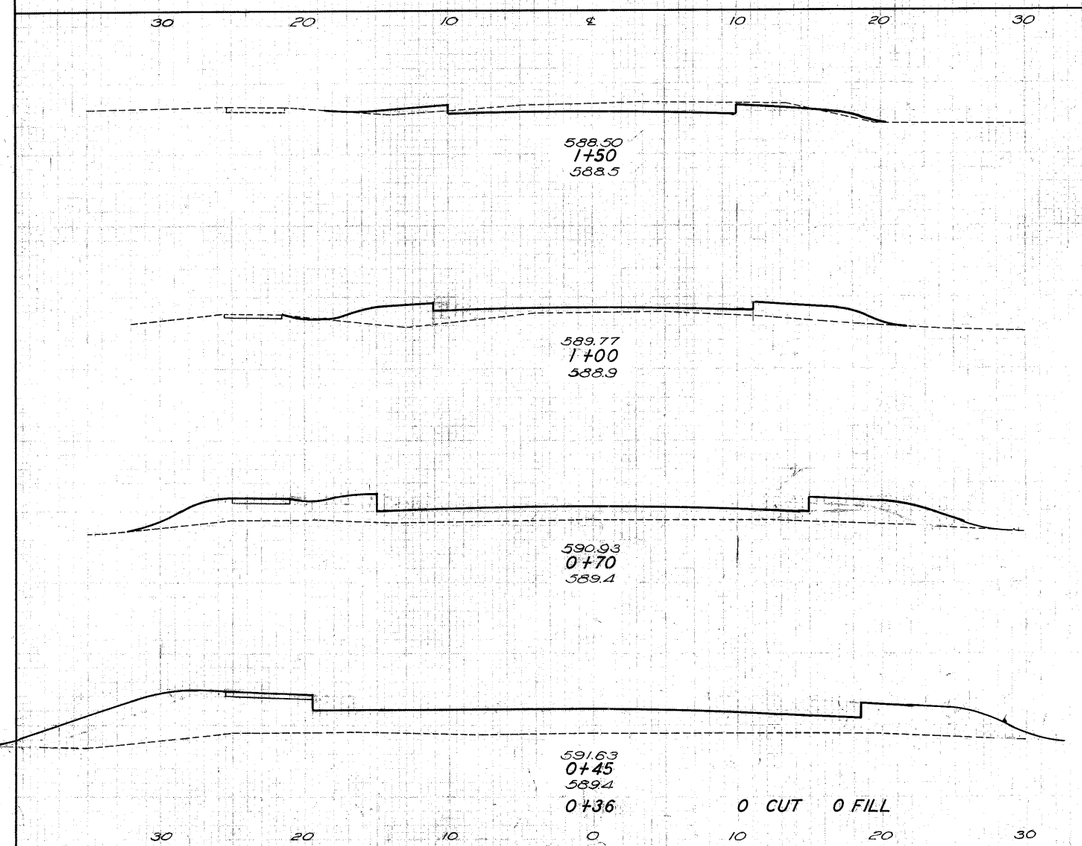


CROSS SECTIONS ON DRIVE

END AREA CUT	END AREA FILL	CU. YDS. CUT	CU. YDS. FILL
8	0		
		6	3
0	4		
		0	67
0	69		
		0	763
0	205		
		2	55
6	0		
		2	0
10	0		
TOTAL		18	888



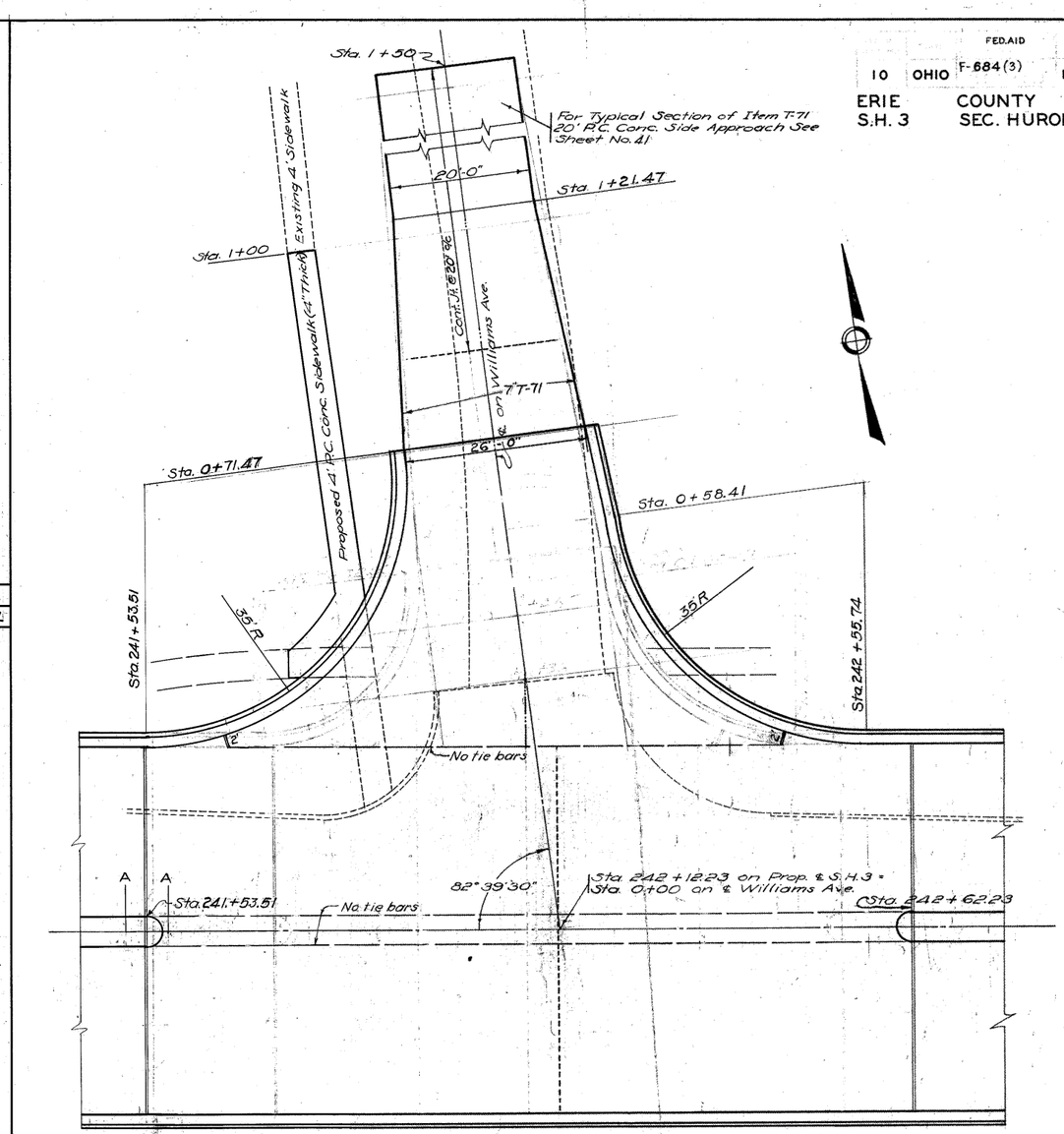
PROFILE
WILLIAMS AVE. INTERSECTION



CROSS SECTIONS
WILLIAMS AVE. INTERSECTION
STA. 242+12.23

	END AREA		CU. YDS.	
	CUT	FILL	CUT	FILL
	14	3		
			14	30
	1	29		
			1	55
	0	70		
			0	94
	0	133		
			0	22
	0	0		

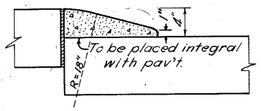
Total Excavation 15 Cu. Yds.
Total Embankment 201 Cu. Yds.
201



LEGEND
Longitudinal Key Joint
Expansion Joint
Contraction Joint
Longitudinal Joint

ESTIMATED QUANTITIES

Item E-8	Removal & Disposal of Existing Conc. Sidewalk	312	Sq. Ft.
T-71	7" Reinf. P.C. Concrete Pavement	232.4	Sq. Yds.
I-21	4" Plain Port. Cement Conc. For Median Strip	1.4	Sq. Yds.
T-71	9" Reinforced Port. Cement Conc. Pavement	161.4	Sq. Yds.
I-12	Type 2 Concrete Curb & Gutter	35.68	Lin. Ft.
I-12	Type 4 Concrete Curb & Gutter	48.74	Lin. Ft.
I-13	4" Portland Cement Concrete Sidewalk	258.0	Sq. Ft.



SEC. A-A

WILLIAMS AVE. INTERSECTION
STA. 242+12.23

FED. RD. DIST. NO.	STATE	FED.AID PROJECT	FISCAL YEAR
10	OHIO	F-684(3)	1946

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ERIE COUNTY
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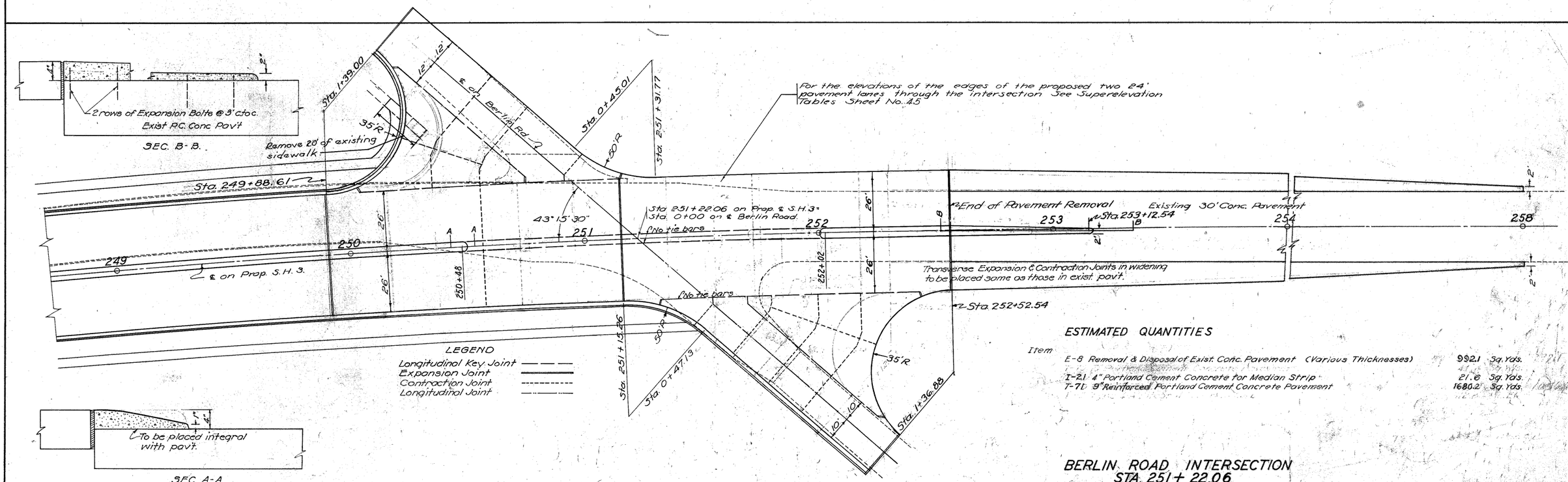

ESTIMATED QUANTITIES

Item		
E-8	Removal & Disposal of Exist. Conc. Pavement (Various Thicknesses)	992.1 Sq. Yds.
I-21	4" Portland Cement Concrete for Median Strip	21.6 Sq. Yds.
T-71	9" Reinforced Portland Cement Concrete Pavement	1680.2 Sq. Yds.

BERLIN ROAD INTERSECTION
STA. 251+22.06

FED. RD. DIST. NO.	STATE	FED. AID PROJECT	FISCAL YEAR
10	OHIO	F-684(3)	1946

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ERIE COUNTY
S.H. 3 SEC. HURON-PT.

SUPERELEVATION TABLES

STATION	LEFT EDGE & PROFILE GRADE	ADD TO LEFT EDGE	ELEV. ℄ OF PAVT.	RIGHT EDGE GRADE
207+16.21	594.40	0.00	594.61	594.40
+25	594.36	0.00	594.57	594.36
+50	594.24	0.04	594.45	594.28
+70	594.14	0.10	594.35	594.24
+75	594.12	0.12	594.33	594.24
+91.21	594.04	0.19	594.25	594.23
208+00	594.00	0.23	594.21	594.23
+20	593.91	0.31	594.11	594.22
+25	593.90	0.32	594.10	594.22
+50	593.64	0.38	594.03	594.22
+66.21	593.83	0.38	594.02	594.21
+75	593.83			594.21
209+00	593.85			594.23
+25	593.92			594.30
+50	594.03			594.41
+70	594.13			594.51
+75	594.16			594.54
210+00	594.29			594.67
+25	594.42			594.80
+50	594.55			594.93
+75	594.68			595.06
211+00	594.81			595.19
+25	594.94			595.32
+50	595.07			595.45
+75	595.20			595.58
212+00	595.33			595.71
+25	595.46			595.84
+50	595.59			595.97
+75	595.72			596.10
213+00	595.85			596.23
+25	595.98			596.36
+50	596.11			596.49
+75	596.24			596.62
214+00	596.37			596.75
+25	596.50			596.88
+50	596.63			597.01
+75	596.76			597.14
215+00	596.89			597.27
+25	597.02			597.40
+50	597.15			597.53
+75	597.28			597.66
216+00	597.41			597.79
+20	597.51			597.89
+25	597.54			597.92
+50	597.67			598.05
+75	597.80			598.18
217+00	597.93			598.31
+25	598.06			598.44
+50	598.19			598.57
+75	598.32			598.70
218+00	598.45			598.83
+25	598.58	*		598.96
+50	598.71			599.09
+75	598.84			599.22
+96.21	598.95	0.38		599.33
219+00	598.97	0.38	DEDUCT	599.35
+25	599.10	0.30	FROM	599.40
+46.21	599.21	0.21	LEFT EDGE	599.42
+50	599.23	0.18		599.41
+71.21	599.34	0.00	0.00	599.34
+75	599.36		0.04	599.32
220+00	599.49		0.24	599.25
+25	599.62		0.35	599.27
+46.21	599.73		0.38	599.35

STATION	LEFT EDGE GRADE	DEDUCT FROM RT. EDGE	RT. EDGE & PROFILE GRADE
2+02.89	594.76	0.00	594.76
+25	594.76	0.02	594.78
+50	594.74	0.08	594.82
+52.89	594.74	0.08	594.82
+75	594.73	0.18	594.91
3+00	594.75	0.28	595.03
+25	594.82	0.35	595.17
+32.89	594.95	0.38	595.33
+75	595.08		595.46
4+00	595.22		595.60
+25	595.36		595.74
+50	595.51		595.89
+75	595.65		596.03
5+00	595.80		596.18
+25	595.94		596.32
+50	596.09		596.47
+75	596.23		596.61
+85.5	596.30		596.68
6+00	596.38		596.76
+25	596.52		596.90
+50	596.67		597.05
+60	596.73		597.11
+75	596.81		597.19
7+00	596.96		597.34
+16.5	597.05		597.43
+25	597.10		597.48
+48	597.24		597.62
+50	597.25		597.63
+73	597.38		597.76
+75	597.39		597.77
8+00	597.54	*	597.92
+25	597.68		598.06
+50	597.83		598.21
+75	597.97		598.35
9+00	598.11		598.49
+25	598.25		598.63
+35	598.30		598.68
+50	598.38		598.76
+75	598.51		598.89
10+00	598.64		599.02
+25	598.77		599.15
+36.31	598.83	0.38	599.21

STATION	NORTH LANE LEFT EDGE GRADE	NORTH LANE DEDUCT FROM RT. EDGE GRADE	NORTH LANE ADD TO RIGHT EDGE GRADE	NORTH LANE RIGHT EDGE GRADE	NORTH LANE ADD TO PROFILE GRADE	SOUTH LANE LEFT EDGE & PROFILE GRADE	SOUTH LANE DEDUCT FROM PROFILE GRADE	SOUTH LANE RIGHT EDGE GRADE
244+17.98	588.82	0.38		589.20	0.00	589.20	0.38	588.82
+25	588.76	0.38		589.14	0.00	589.14		588.76
+50	588.61	0.31		588.92	0.01	588.91		588.53
+75	588.58	0.15		588.73	0.02	588.71		588.33
245+00	588.64		0.07	588.57	0.04	588.53		588.15
+25	588.68		0.25	588.43	0.05	588.38		588.00
+50	588.69		0.36	588.33	0.06	588.27		587.89
+67.95	588.64		0.38	588.26	0.06	588.20		587.82
+75	588.62			588.24		588.18		587.80
246+00	588.57			588.19		588.13		587.75
+25	588.53			588.15		588.09		587.71
+50	588.54			588.16		588.10		587.72
+75	588.56			588.18		588.12		587.74
247+00	588.63			588.25		588.19		587.81
+25	588.69			588.31		588.26		587.88
+50	588.78			588.40		588.34		587.96
+75	588.85			588.47		588.41		588.03
248+00	588.93			588.55		588.49		588.11
+25	589.00			588.62		588.56		588.18
+50	589.08			588.70		588.64		588.26
+75	589.15			588.77		588.71		588.33
249+00	589.23			588.85		588.79		588.41
+25	589.30			588.92		588.86		588.48
+50	589.38			589.00		588.94		588.56
+75	589.45			589.07		589.01		588.63
250+00	589.53		0.38	589.15	0.06	589.09	0.38	588.71
+25	589.54			589.19		589.15		588.77
+50	589.51			589.24		589.23		588.82
+75	589.44			589.29		589.29		588.87
251+00	589.35			589.34		589.34		588.92
+25	589.24			589.38		589.38		588.97
+50	589.17			589.43		589.43		589.02
+75	589.12			589.46		589.46		589.07
252+00	589.11			589.49		589.49		589.10
+25	589.13			589.49		589.49		589.13
+28.83	589.14			589.49		589.49		589.14

Elevations from Sta. 250+25 to Sta 252+28.83 obtained graphicly.

REMOVAL OF TREES & STUMPS

Station	Side	Dist. from ℄ Survey	Kind	Size	No.
210+71	Rt.	26	Catalpa	9"	1
211+62	Rt.	16	Locust	16"	1
216+73.2	Rt.	28.5	Ash	24"	1
+78	Rt.	54.2	Locust	16"	1
+81	Lt.	28	Willow	28"	1
+88	Lt.	51	Willow	48"	1
217+05	Lt.	15	Willow	60"	1
+32	Lt.	36	Willow	36"	1
+78	Lt.	50	Willow	50"	1
218+36	Lt.	52	Willow	15"	1
219+55	Lt.	47	Ash	9"	1
+85	Lt.	52	Willow	48"	1
222+55	Lt.	36	Willow	16"	1
235+18	Rt.	36	Oak	42"	1
249+34	Rt.	35	Poplar	10"	1
+42	Rt.	42	Poplar	12"	1
210+12	Lt.	22	Maple	18"	1
210+65	Lt.	33	Maple	24"	1
252+08.2	Rt.	45.2	Maple	20"	1
Total					19

* Elevations shown on Bridge Sheets govern between:
Sta. 216+75 & 220+46.21; and Sta. 6+75 & 10+36.31

FED. RD. DIST. NO.	STATE	FED. AID PROJECT	FISCAL YEAR	46 89
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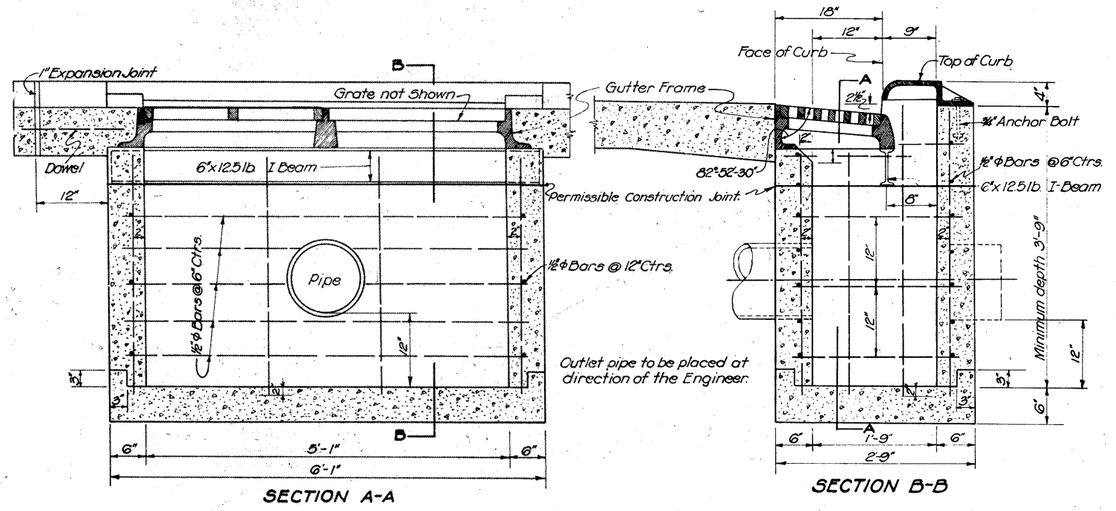
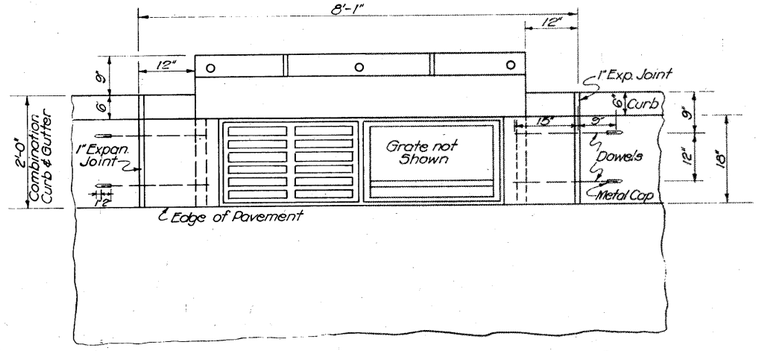
ERIE COUNTY
S.H. 3 SEC. HURON - P.T.

STD. NO.3 COMBINATION CATCH BASIN MODIFIED



SECTION A-A

SECTION B-B



PLAN OF CATCH BASIN AND PAVEMENT JOINTS
Scale ¾"= 1'-0"

NOTES

CASTINGS shall be of cast iron in accordance with Material Details. The design shall be essentially the same and equally as strong as those shown hereon, and shall be given one coat of Asphaltum paint as per Specifications. Weights approximately are, Curb castings - 340 lbs. Two Grates - 880 lbs. Gutter Frame - 650 lbs.

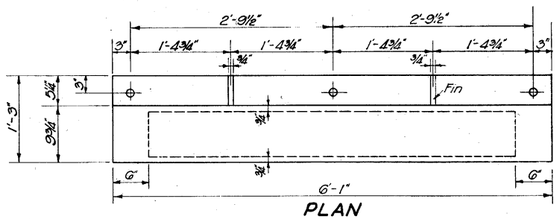
BEARING AREAS of frame and grate shall be so fitted and finished as to provide a firm and even seat for all portions of the grate in the frame. No projections shall exist on bearing areas of either casting, and each grate shall seat in its frame without rocking. Frames and Grates shall be fitted, matched, and marked before delivery to the project.

REINFORCE side walls with deformed bars vertical in each corner. Other bars, horizontal & vertical to be placed as shown hereon.

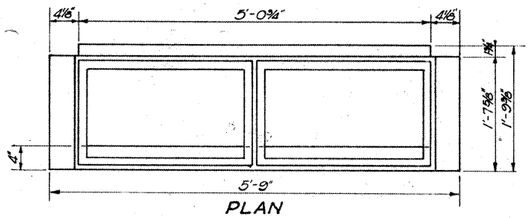
CONCRETE to be class 'C'.

BRICK SIDEWALLS, when used in place of reinforced concrete, shall be 8" in thickness and be plastered on the inside and outside with 1:2 cement mortar.

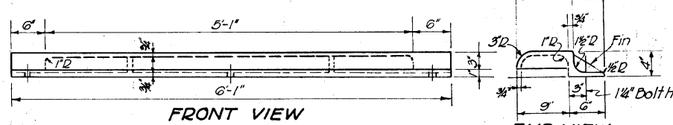
DOWELS to be ½ round smooth bars 24" long spaced as shown hereon. The entire dowel shall be thoroughly coated before placing, using either Bituminous Material Sec. M-5.11 3C.2 or heavier, or an oil such as 600W or equal.



PLAN



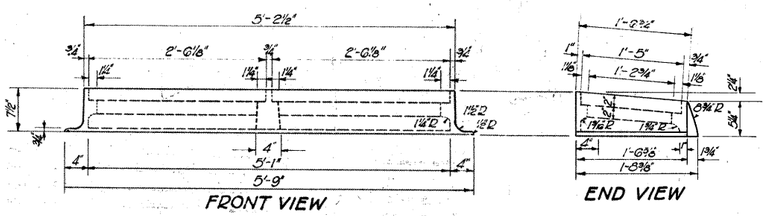
PLAN



FRONT VIEW

END VIEW

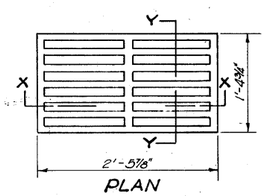
CURB CASTINGS
Scale 1"= 1'-0"



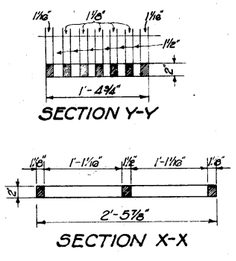
FRONT VIEW

END VIEW

GUTTER FRAME
Scale 1"= 1'-0"



PLAN



SECTION Y-Y

SECTION X-X

GRATE
Scale 1"= 1'-0"

FED. RD. DIST. NO.	STATE	FED. AID. PROJECT	FISCAL YEAR
10	OHIO	F-684(3)	1946

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ERIE COUNTY
S.H. 3 SEC. HURON-PT.

SEEDING:- All areas indicated on plans for seeding shall be seeded according to supplemental specification L-9 The entire seeded area shall have the following formula:

55% Meadow Fescue 5% Lespedeza (19604 strain)
10% Perennial Rye Grass 25% Red Top
5% Alsike Clover

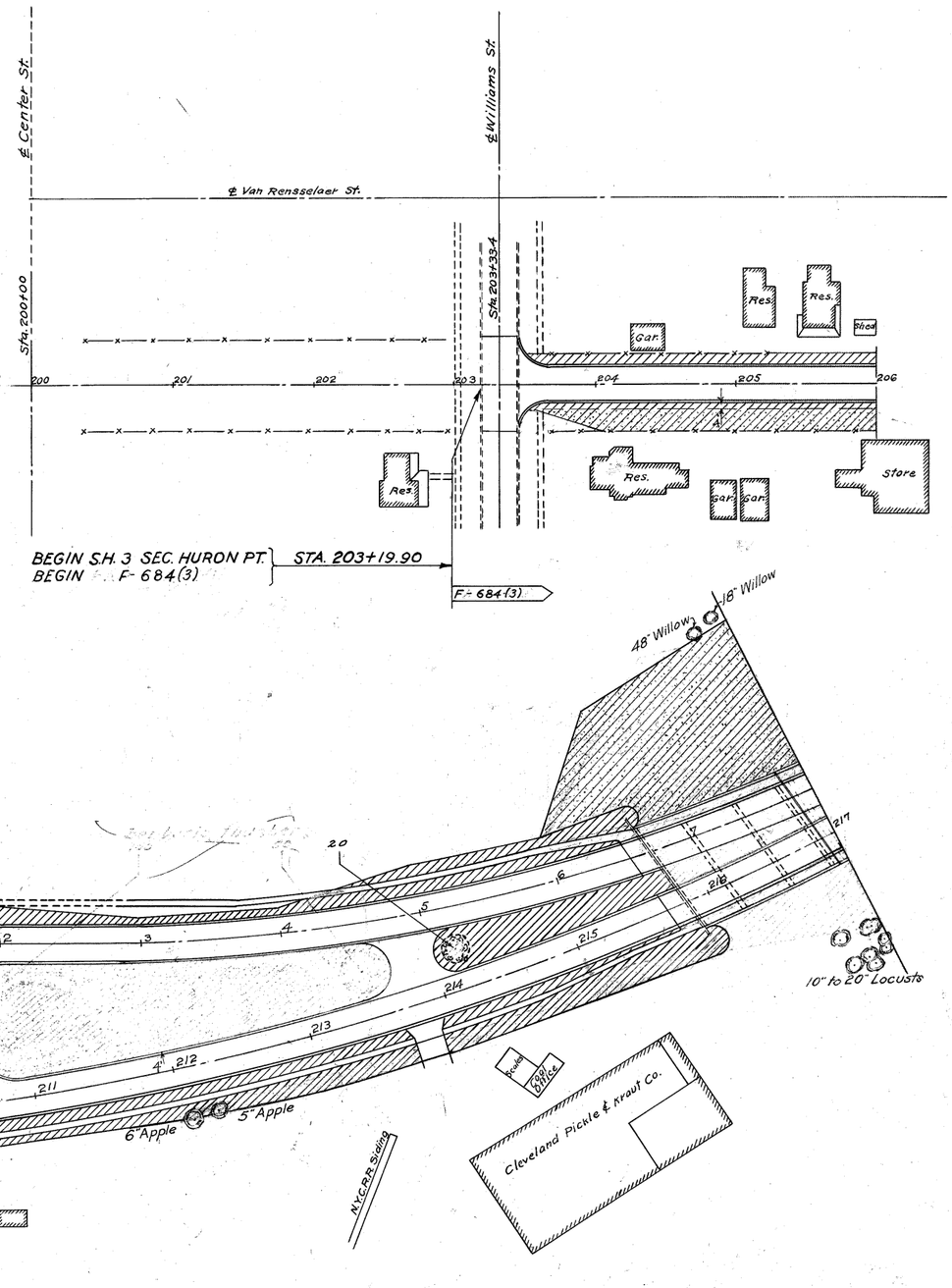
sown at the rate of four (4) pounds per 1000 sq. ft. Legumes to be inoculated. Straw shall be applied for mulching immediately after covering seed.
Top 4 inches of fill on berms shall not be compacted.

PLANTING SHRUBS:- Shrubs shall be pruned as prescribed under Item L-17.03. Straw shall be used for mulching and placed immediately after planting.

TREE AND STUMP REMOVAL:- No tree shall be cut even though marked for removal unless approved by the Landscape Architect.

COMMERCIAL FERTILIZER:- Entire seeded areas shall be fertilized using a formula of 4-12-4 applied at the rate of 20 pounds per 1000 sq. ft. and incorporated into the soil 2 inches deep prior to seeding.

TREE TRIMMING:- Tree branches, less than 20 feet above the pavement and berms, shall be removed according to specification E-1.02 in a manner acceptable to the Landscape Architect and the cost shall be included with Item E-1 Roadway Excavation.



SHEET SUMMARY

SIGNS	QUANTITY	DESCRIPTION	ITEM
	7341	Sq. Yd. Seeding and Protecting, Type A	L-9
	20	Units Berberis thunbergii - Japanese Barberry 18" to 24" in. Spaced 3½' to 4 Ft.	L-13
	1	unit Pruning of Existing Trees. Pay size 12"	L-17
	1	units " " " " 20"	L-17

FED. RD. DIST. NO.	STATE	FED. AID PROJECT	FISCAL YEAR
10	OHIO	F-684(3)	1948

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ERIE COUNTY
S.H. 3 SEG. HURON-PT.

SHEET SUMMARY

ITEM	DESCRIPTION	UNIT	QUANTITY
L-9	Seeding and Protecting, Type A	SQ. YD.	32875
L-17	Pruning of Existing Tree Pay size 36"	Unit	1
SIGNS			

3

FED. RD. DIST. NO.	STATE	FED. AID PROJECT	FISCAL YEAR
10	OHIO	F-684 (3)	1948

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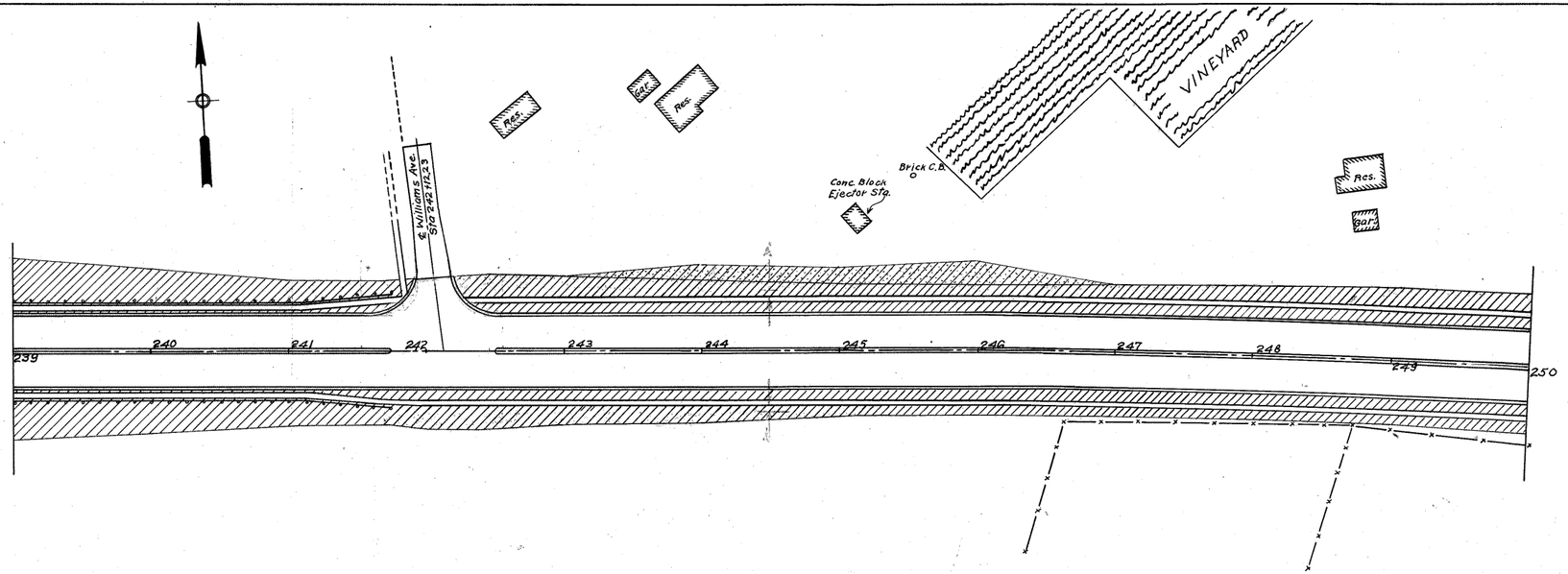
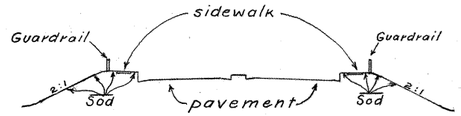
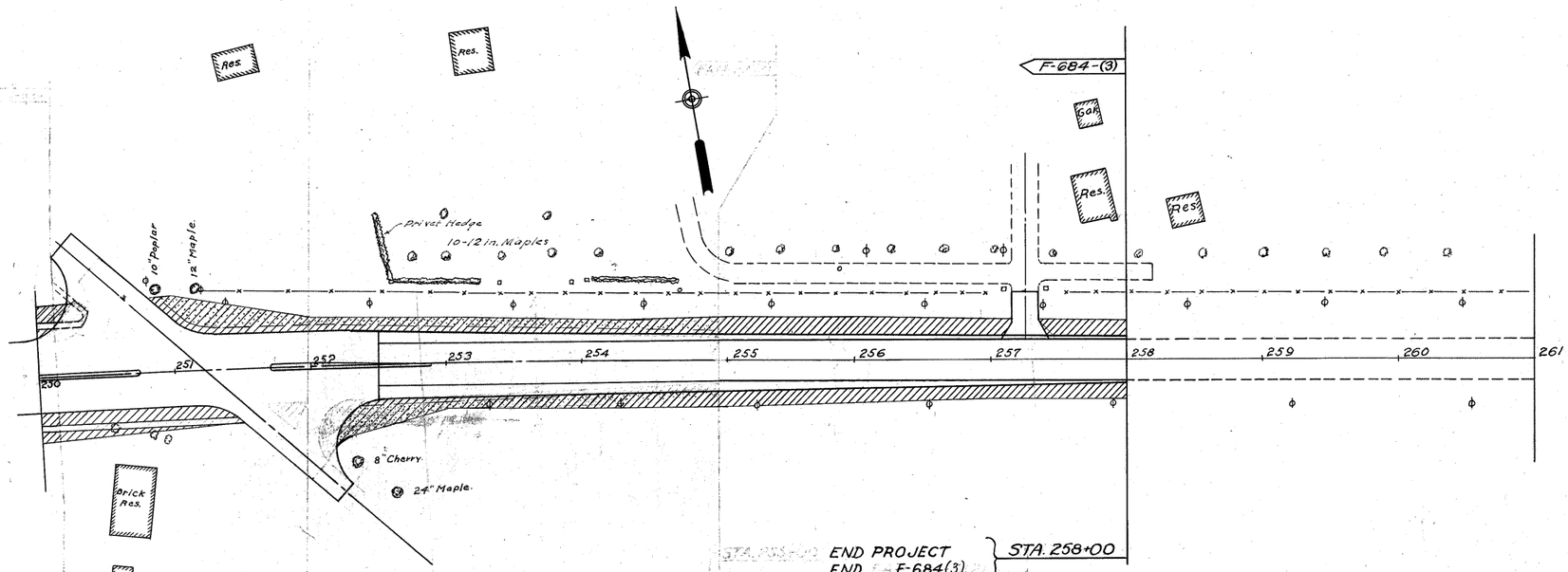
ERIE COUNTY
S.H.3 SEC. HURON-PT.





TYPICAL SECTION
Station 240+00.
1"=20'-0"



SHEET SUMMARY

ITEM	DESCRIPTION	UNIT	QUANTITY
E-9	Seeding and Protecting, Type A	SQ.YD.	10832

FED. RD. DIST. NO.	STATE	FED. AID PROJECT	FISCAL
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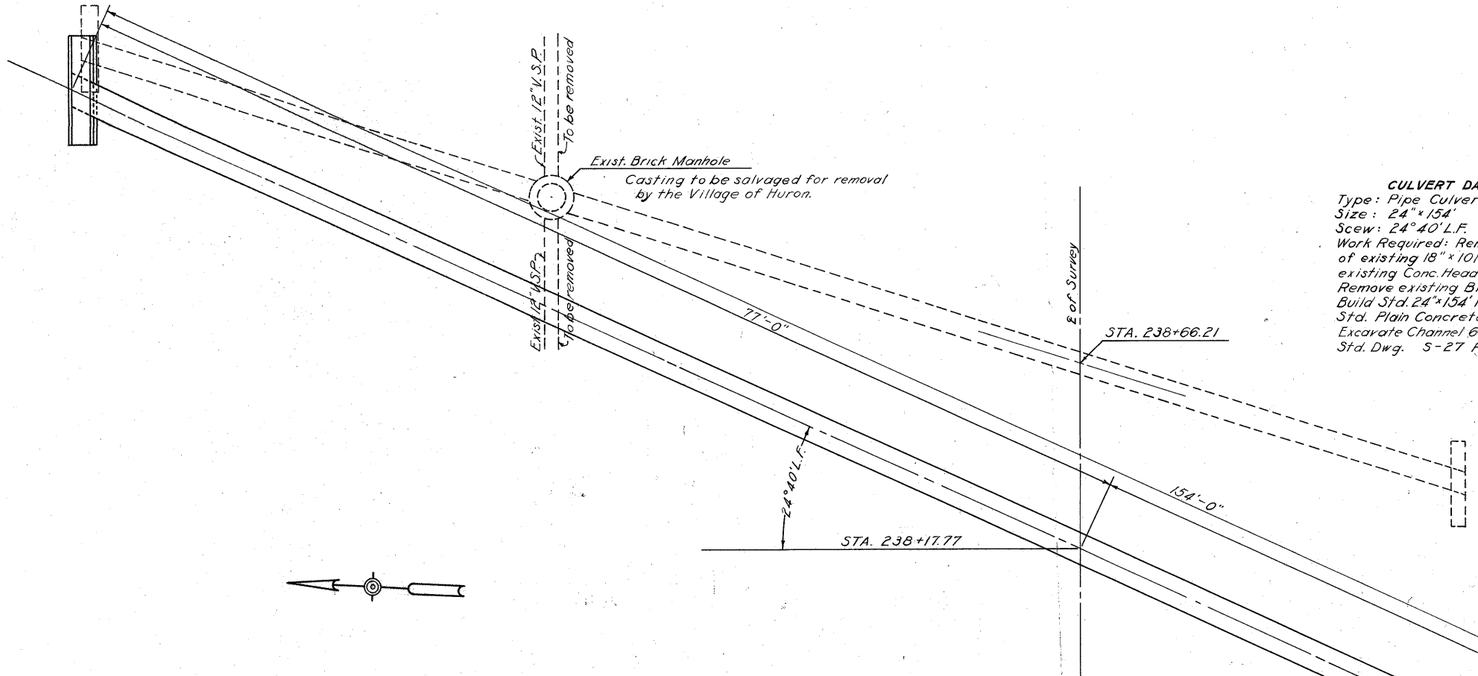
ERIE COUNTY
S.H. 3 SEC. HURON-PT.

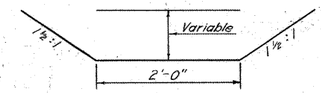


PLAN
Scale 1"=5'

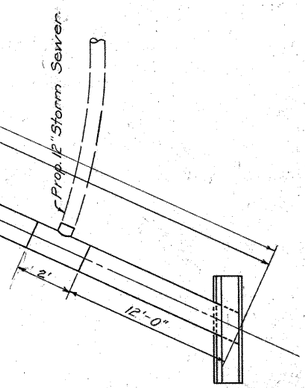
CULVERT DATA
Type: Pipe Culvert
Size: 24"x154'
Skew: 24°
40' L.F.
Work Required: Remove & Dispose of existing 18"x101' V.S. Pipe. Remove existing Conc. Headwalls Rt. & Lt.
Remove existing Brick Manhole.
Build Std. 24"x154' Pipe Culvert with Std. Plain Concrete Headwalls Rt. & Lt.
Excavate Channel 67' Rt. & 81' Lt.
Std. Dwg. S-27 P.C. 1 & 3

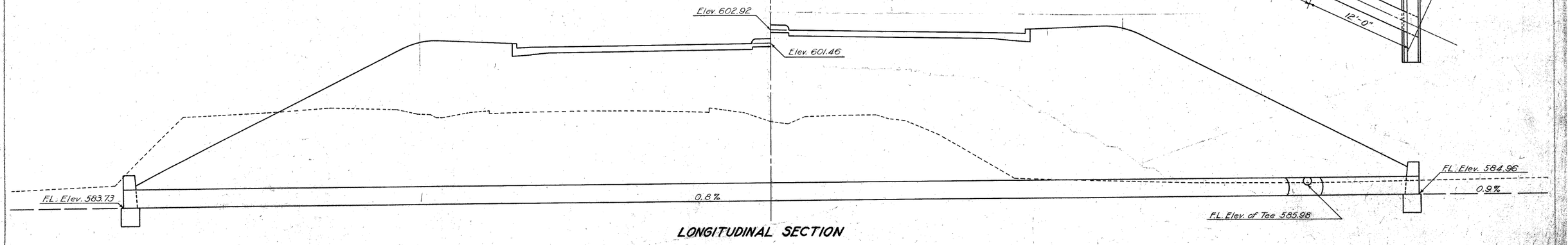
ESTIMATED QUANTITIES

Excavation for Structure	172 Cu. Yds.
Channel Excavation	44 Cu. Yds.
Class 'E' Conc. for Headwalls	4.6 Cu. Yds.
Removal of Exist. Structures	Lump
24"x12" Tee	1 Unit
24" Pipe for Roadway Culvert	152 Lin. Ft.



TYPICAL SECTION FOR CHANNEL





LONGITUDINAL SECTION

STRUCTURE NO. 1
STA. 238+17.77

FED. RD. DIV. NO.	STATE	FED. AID PROJECT	FISCAL YEAR
2	OHIO	F-684-(3)	1946

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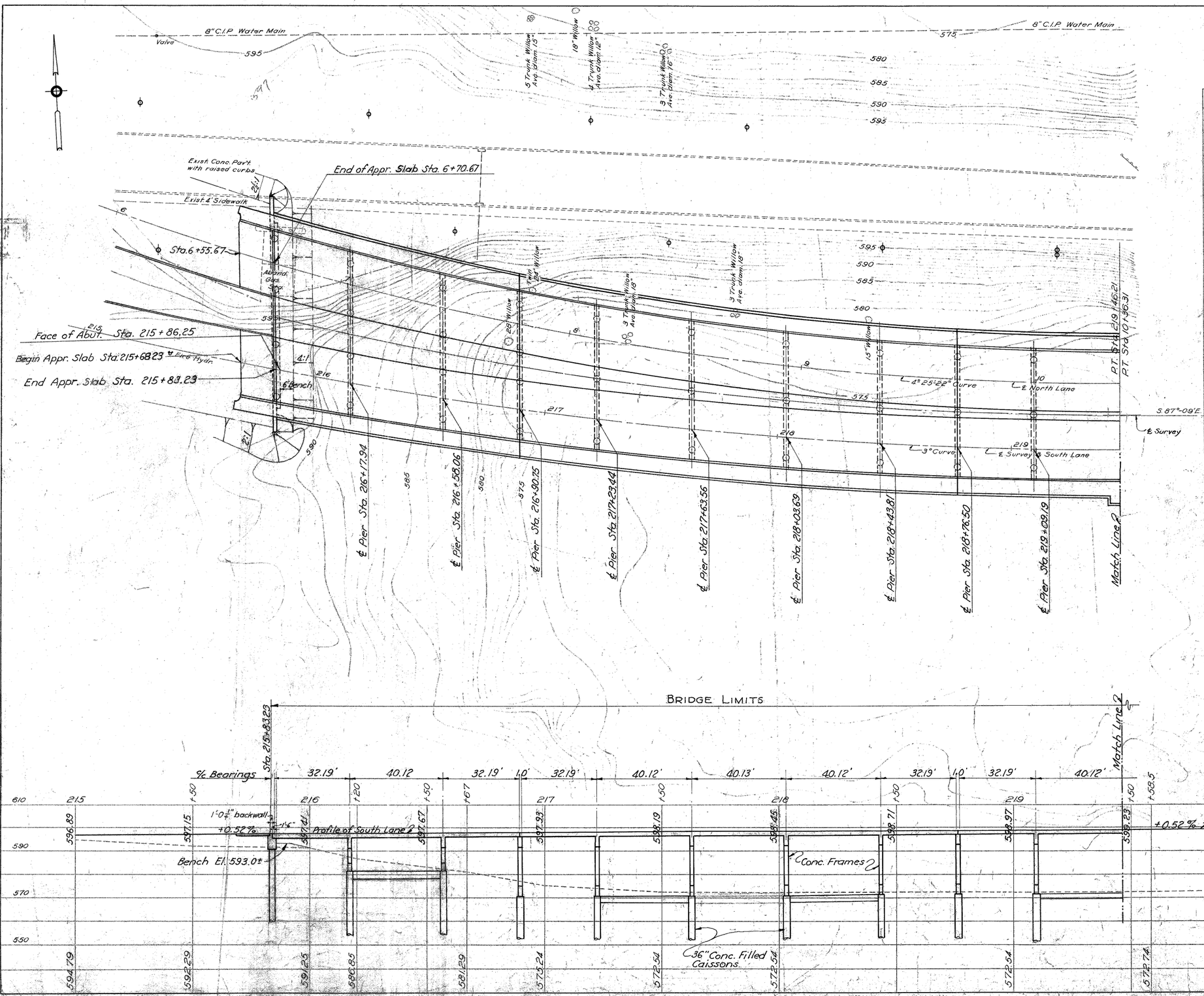
ERIE COUNTY
S.H.3 SEC. HURON-PT.



FOUNDATION INFORMATION			
STATION	OFFSET	GROUND ELEV	TOP of ROCK ELEV
215 + 71	61' lt.	597.6	552.6
215 + 87	18' rt.	592.3	555.8
216 + 03	59' lt.	597.8	551.4
216 + 17	17' rt.	587.5	551.5
216 + 75	50.5' lt.	581.7	551.1
216 + 88	16' rt.	575.7	551.2
217 + 61	47' lt.	575.6	551.2
217 + 67	16' rt.	572.3	551.5
218 + 39	46' lt.	578.9	549.6
218 + 43	15' lt.	573.8	549.6
218 + 43	15' rt.	572.3	549.2
218 + 82	45' lt.	577.1	546.8
218 + 82	19' lt.	572.2	544.9
219 + 16	56' lt.	577.1	538.8
219 + 17	16' lt.	577.6	531.7
219 + 17	15' rt.	572.0	531.8
219 + 90	36' lt.	573.1	530.0
219 + 90	36' rt.	572.0	528.7
220 + 29	on ℄	573.4	533.0
220 + 63	35' lt.	556.4	529.8
220 + 63	34' rt.	573.5	530.4
221 + 45	38' lt.	545.0	529.8
221 + 45	on ℄	549.0	531.3
221 + 45	38' rt.	549.0	533.7
222 + 75	38' lt.	578.6	537.2
222 + 75	38' rt.	563.4	535.4
222 + 80	on ℄	576.6	537.9
223 + 58	35' lt.	592.0	538.9
223 + 58	35' rt.	576.0	540.8
224 + 30	55' lt.	599.3	544.1
224 + 30	36' rt.	576.4	547.8
224 + 97	28' lt.	581.7	546.3
224 + 97	30' rt.	578.±	546.0
225 + 39	28' lt.	584.3	546.2
225 + 39	30' rt.	584.6	545.1
226 + 08	30' lt.	588.9	545.3
226 + 08	30' rt.	588.5	544.1

AUGER BORINGS - STA. 220+29 ON CENTER LINE	
ELEVATION	DESCRIPTION
573.4 - 572.5	Top soil
572.5 - 571.7	Brown organic silt
571.7 - 554.0	Gray organic silt
554.0 - 542.2	Gray silt with fine sand
542.2 - 537.2	Gray sandy silt and gravel
537.2 - 536.7	Gray sandy silt and gravel
536.7 - 533.0	Gray sandy silt and gravel
	Hole stopped on limestone or shale

The above information was obtained by diligent effort by means of rod soundings and auger borings, but the State of Ohio assumes no responsibility for its accuracy.

Revision 11-18-46 Elevations in Auger Boring Schedule.

Rev. 11-18-46

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

FAP-684-(3)

SITE PLAN

BR. NO. ER-6-179
OVER
HURON RIVER
S.H.3 SEC. HURON PT
ERIE COUNTY

SCALE 1"-20' ℄ CHANNEL SPAN STA. 222+10.00

Pres. Topography			Proposed Work		
Surveyed	Drawn	Designed	Drawn	Checked	Review
R. Smith	R. Granger	C.F.B.	C.F.B.	C.H.A. 2-6-47	

ERI-6-1792

FED. RD. DIV. NO.	STATE	FED. AID PROJECT	FISCAL YEAR
2	OHIO	F-604-(3)	1946

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ERIE COUNTY
S.H. 3 SEC. HURON (PT.)

8" C.I.P. Water Main
8" Timber Sheet Piling
8" Timber Piling
8" Sanitary Sewer
Valve
RIVER
Abandoned L.S.E.R.Y. Bridge
Exist. Conc. Pavt. with raised curbs
Exist. 4' sidewalk
15" Willow
20" Willow
Sta. 219+49.31 ℄ Pier
Sta. 219+89.44 ℄ Pier
Sta. 220+29.56 ℄ Pier
End of Conc. Slab of Appr. Span Sta. 220+62.5
Sta. 221+45.00 ℄ Tower
Fender Line
80' Clear 40'
40'
Sta. 222+25.00 ℄ Tower
Control House
Sta. 16+00 County Survey 2
End of Conc. Slab of Appr. Span Sta. 223+57.5
Sta. 223+30.25 ℄ Pier
Sta. 224+30.25 ℄ Pier
Sta. 224+80.25 ℄ Pier
Door No. 1 (Sh. Metal)
Match Line 2
3° Curve
219 ℄ Survey & So. Lane
Sta. 223+13.63
S 87°-08' E
℄ Survey
20°
Huron Boat Co. (Sheet Metal) Former Location
Huron Boat Co. (Sheet Metal) New Location

Soundings indicate a rock foundation for this structure. See Sheet No. 51 for elevation

PROPOSED STRUCTURE

TYPE: Direct haul vertical lift span (130'℄ towers) with open-type steel grid deck & concrete substructure; steel girder (2@81.5' ℄ brgs.) and continuous concrete slab approach spans on concrete filled caissons.
SPAN: 1021.50 ℄ end bearings. (1026.52' Bridge Limit.)
ROADWAY: 56' plus two 6'-0" sidewalks.
LOADING: S-20-40
SKEW: None (Channel 20° R.F.)
WEAR. SURF.: 2½" Asphaltic concrete on approach spans; open grid floor on lift span.
APPR. SLABS: 15' long, 2½" Asphaltic concrete wear. surf.

Overhead trusses, towers, gates, fenders and control house not a part of this contract.

PRESENT STRUCTURE (To Be Removed)
Type: Scherger Rolling Lift-Deck Girder
Span: 101'-0" (Overall length of floor 321'6")
Roadway: 21'-0"
Clear Height: 24'-6"
Skew: None
Wearing Course: Creosoted Pine
Sidewalk: 4'-6" Right Only

El. 702.91? Drive Shaft
Operating Motor
El. 702.91? Emergency Engine
HURON
4' Emergency Lift
76'-0" Lift (Normal)
98.5' Clear (Max.)
102.5' (Max.)
℄ Br. Sta. 222+10.00 El. 600.58
50' BRIDGE LIMITS
130.0'
81.5'
1.75'
32.0'
40.0'
40.0'
32.0'
℄ Bearings
40.13'
40.12'
32.19'
1.75'
81.5'
Prop. ℄ Profile Grade
40.52%
598.71
598.97
599.23
599.49
599.75
600.01
600.27
600.53
600.79
601.05
601.31
High Water 1929 El 574.27
Mean Surface El 571.86
Low Water Datum El. 570.50
22.5'
All foundations shall extend into rock. See Sheet No. 51 for rock elevation.
Match Line 2
36" Conc. Filled Caissons
54" Conc. Filled Caissons
54" Conc. Filled Caissons
Future Channel dredged to El. 540±
572.54
573.14
571.9
549.4
550.0
561.0
564.6
576.3
576.0
Rock elev. notes revised 8-15-46
Revised 6-23-46
7/22/41 Revised 1-29-41

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

FAP-604-(3)

SITE PLAN

BR. NO. ER-6-179
OVER
HURON RIVER
S.H. 3 SEC. HURON PT.
ERIE COUNTY

SCALE 1"=20' ℄ CHANNEL SPAN STA. 222+10.00

Pres. Topography		Proposed Work			
Surveyed	Drawn	Designed	Drawn	Checked	Reviewed
R. Smith	E. Toberen	C.E.R. C.T.J.	C.T.J.	R.L.K.	8/10 7-10-46

FED. RD. DIV. NO.	STATE	FED. AID PROJECT	FISCAL YEAR
2	OHIO	FAP-684-(3)	1946

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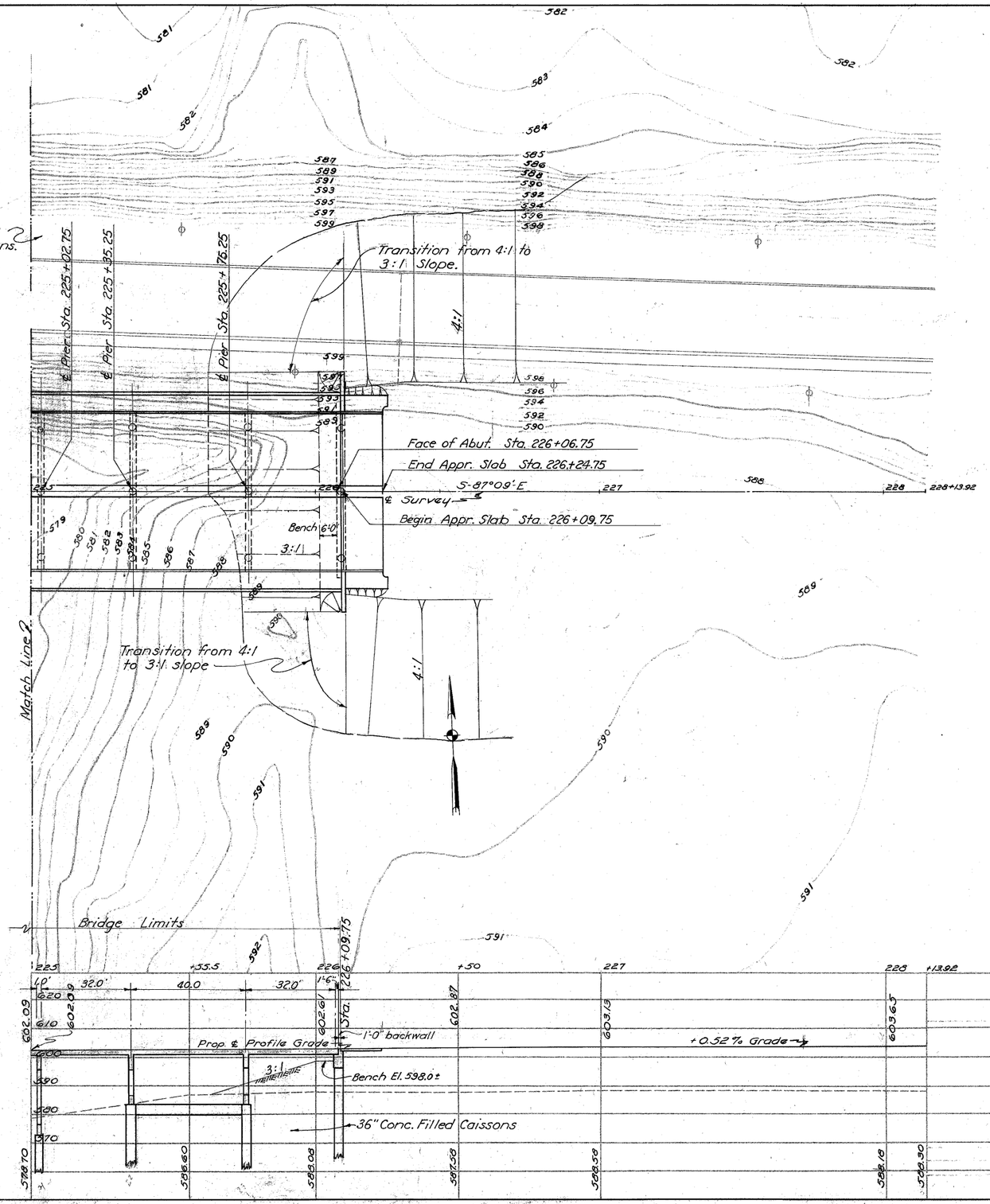
89

ERIE COUNTY
S.H. 3 SEC. HURON-PT.



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

FAP-684-(3)

SITE PLAN

BR. NO. ER.– 6 – 179

OVER

HURON RIVER
S.H. 3 SEC. HURON PT.
ERIE COUNTY

SCALE 1" = 20' ℄ CHANNEL SPAN STA. 222+10.00

Pres. Topography		Proposed Work		
Surveyed	Drawn	Designed	Drawn	Checked Reviewed
E. Smith	D. Heffelfinger	C.F.B.	C.F.B.	C.N.Q. E.E. & 8/10/46

ER1-6-1792

FED. RD. DIV. NO.	STATE	FED. AID PROJECT	FISCAL YEAR
2	OHIO	FAP-684-(3)	1946

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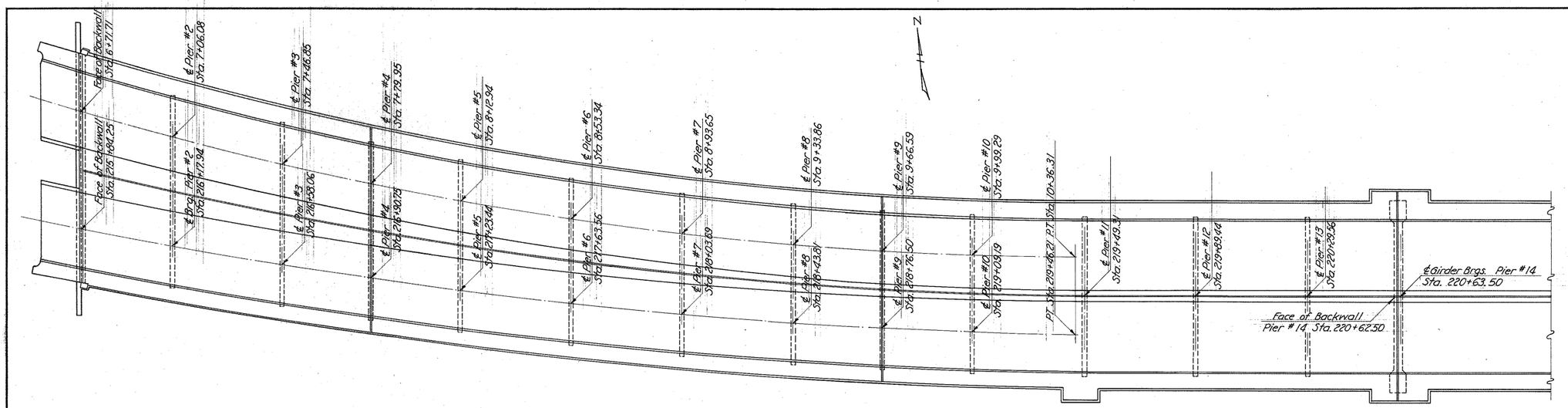
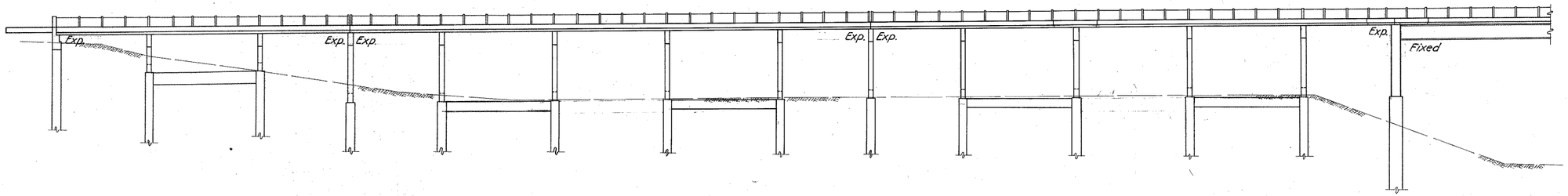
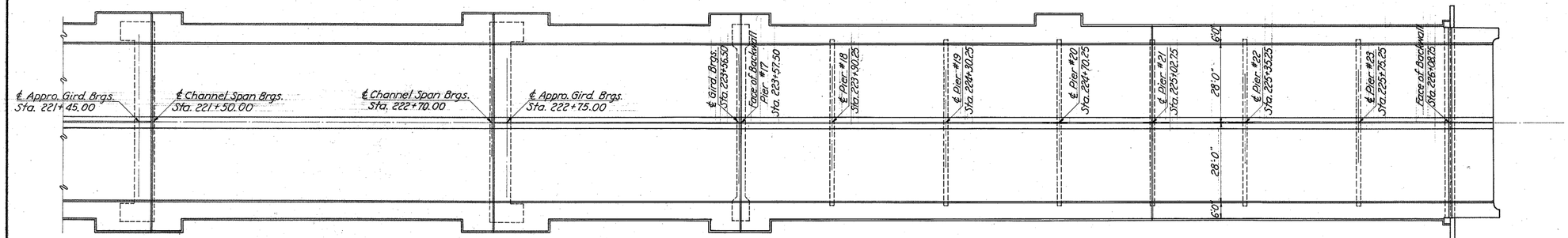
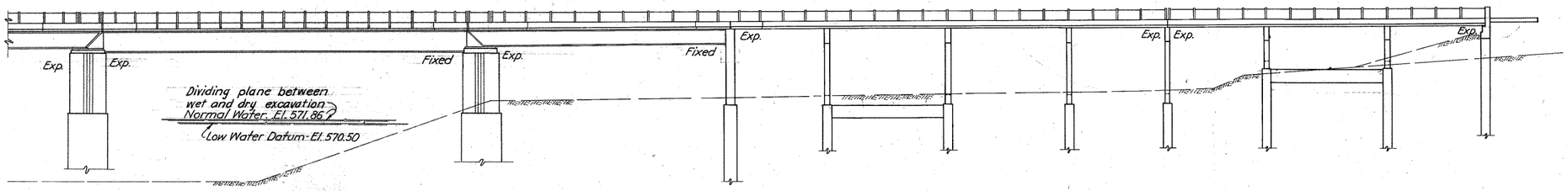
ERIE COUNTY
S.H. 3 SEC. HURON (PT.)









STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

GENERAL PLAN & ELEVATION

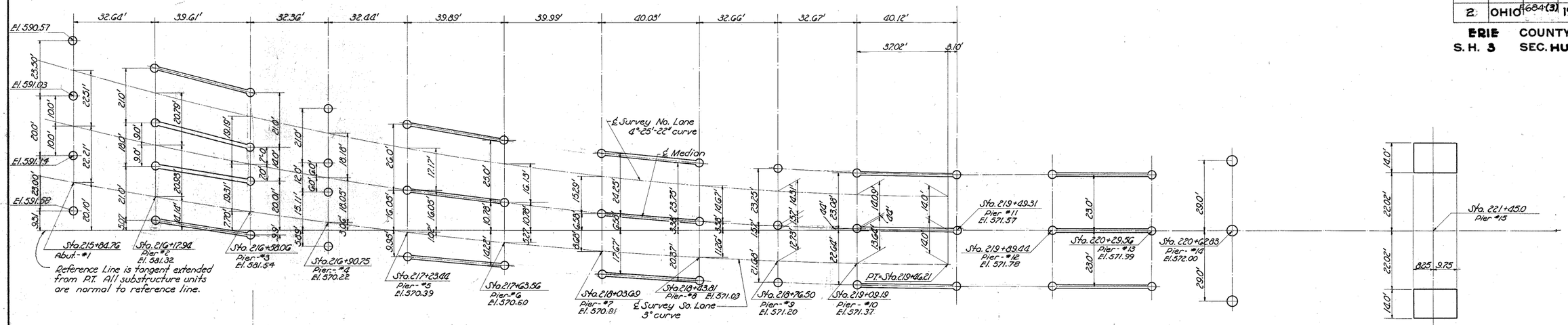
BRIDGE NO. ER-6-179 OVER HURON RIVER

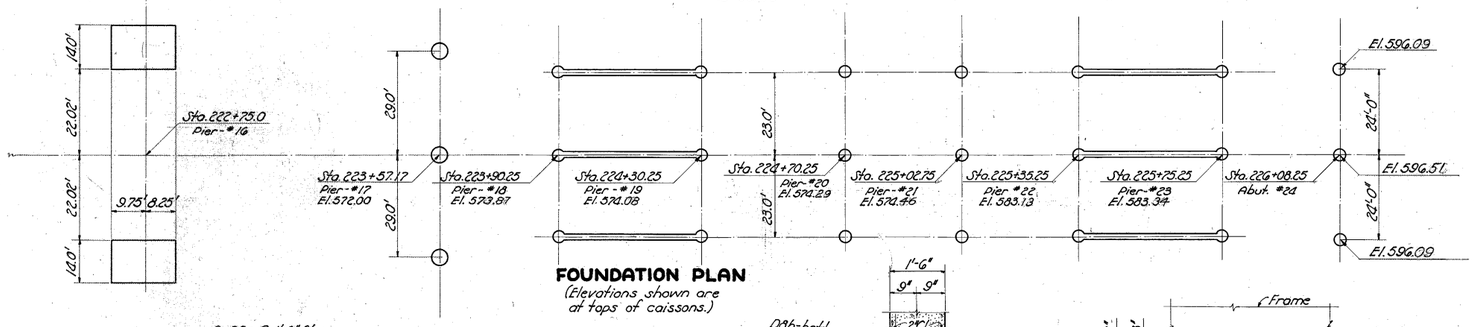
ERIE COUNTY S.H. 3
SEC. HURON STA. 222+10
FAP-684-(3)

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
WCB	WCB	GWS	FHS	DSH	7-10-46	

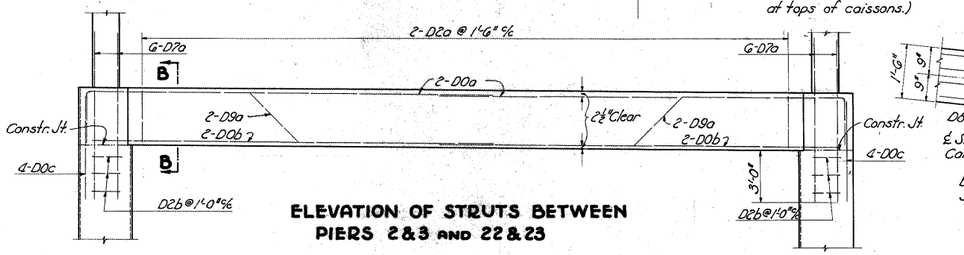
FED. RD. DIV. NO.	STATE	FED. AID PROJECT	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
2	OHIO	FAP 684 (3)	1946	55	89

ERIE COUNTY
S. H. 3 SEC. HURON (P.T.)

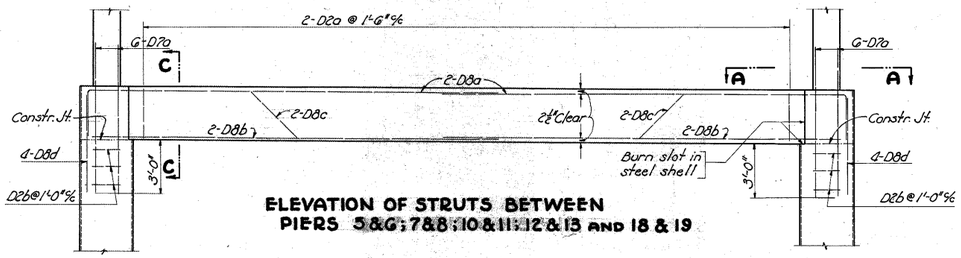




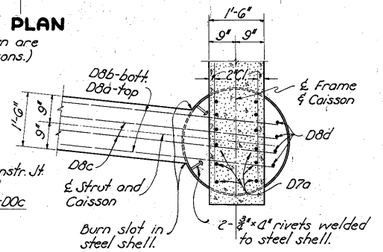
FOUNDATION PLAN
(Elevations shown are at tops of caissons.)



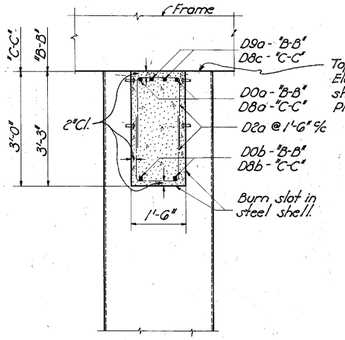
ELEVATION OF STRUTS BETWEEN PIERS 2&3 AND 22&23



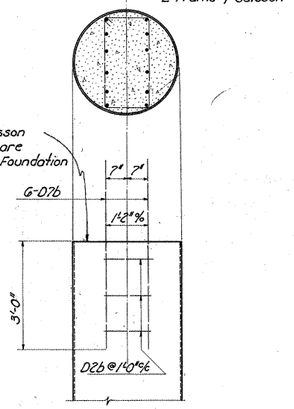
ELEVATION OF STRUTS BETWEEN PIERS 5&6; 7&8; 10&11; 12&13 AND 18&19



SECTION A-A
Note: This section is typical for all joints between struts and caissons.



SECTION B-B & C-C



CAISSON DETAILS
(At points where no struts occur.)

For details of caissons at piers 14 & 17 see sheet No G7

All other caissons shall be 36" inside diameter steel shells with a minimum thickness of 3/8". The shells shall be driven to solid rock and then filled with Class "E" concrete. Concrete shall extend at least 6" into solid rock.

Concrete in struts shall be Class "E."

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

FOUNDATION PLAN - CAISSON AND STRUT DETAILS

BRIDGE NO ER-G-179
OVER HURON RIVER

ERIE CO. S.H. 3
SEC. HURON STA. 222+10
FAP-684-(3)

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
WD	WD	C.E.J.	E.E.S.	G.G.P. 6910	7-10-46	11-18-46

Revision 11-18-46 Min. thickness of shells in notes.

FED. RD. DIV. NO.	STATE	FED. AID PROJECT	FISCAL YEAR
2	OHIO	F 684-(3)	1946

56
89

ERIE COUNTY
S. H. 3 SEC. HURON (PT.)

ESTIMATED QUANTITIES

Item	Description	Concr. Slab Superstructure	Steel Girder Superstructure	Piers 15 & 16	Piers 14 & 17	Abutments	Remaining Substructure	General	Total	AS BUILT Change Orders	AS BUILT Final Quantities
E-2	Cofferdams and Pumping.			Lump					Lump Sum		Lump Sum
E-2	Excavation for Structures, Wet.			1110			200		1310 Cu. Yds.	#2,+7,+7,-30.8	1286.2
E-2	Excavation for Structures, Dry.			80		65	405		550 Cu. Yds.		550
E-2	Excavation for Structures, Rock.			19					19 Cu. Yds.	#2,+4.33,+6.8844,+7,+30.8	84.79
S-1	Class "C" Concrete.	2612	277		148		704		3741 Cu. Yds.	#7,+95	3836
S-1	Class "E" Concrete.			1365		110	141		1616 Cu. Yds.	#2,+33.3,+41.866	1657.99
S-4	Reinforcing Steel.	678,930	72,970	60,170	24,140	13,970	189,320	1540	1,042,040 Lbs.		1,042,040
S-7	Structural Steel.	42,000	1,024,200	27,600					1,093,800 Lbs.		1,093,800
S-8	Field Painting of Structural Steel.	42,000	1,024,200						1,066,200 Lbs.		1,066,200
S-8	Field Painting of Open Grid Floor.		6215						6215 Sq. Ft.		6215
S-8	Field Painting of Sidewalk Grating.		2340						2340 Sq. Ft.		2340
S-9	Cast Leaded Bronze Sliding Plates.	2010							2010 Lbs		2010
S-9	½" Premolded Joint Filler.					200	480		680 Sq. Ft.		680
S-14	Bridge Railing, Steel, including painting	1480	640						2120 Lin. Ft.		2120
S-24	Removal of Existing Structure.							Lump	Lump Sum		Lump Sum
S-25	Bridge Lighting System, Complete.							Lump	Lump Sum		Lump Sum
SS-172	Sidewalk Grating.		2340						2340 Sq. Ft.		2340
SS-173	Open Grid Floor.		6215						6215 Sq. Ft.		6215
SS-174	Concrete-Filled Caissons, 36" Diameter					310	1740		2050 Lin. Ft.		2050
SS-174	Concrete-Filled Caissons, 54" Diameter				250				250 Lin. Ft.		250
	[illegible]								[illegible]		
T-35	Asphaltic Concrete, Type A.	292	68						360 Cu. Yds.		360
S-203	Waterproofing for bridge deck	4256	994						5250 Sq. Yds.		5250
Special	Repair of railing due to damage done by car hitting rail									#8, +lump sum	Lump Sum

Note:- The Federal Government pays no part of the cost of this item.

GENERAL NOTES

STANDARD DRAWINGS AND SUPPLEMENTAL SPECIFICATIONS
For concrete deck waterproofing see supplemental specification No. S-203, dated 4-6-45
For aggregate for concrete specification M-102.12, dated 8-2-45
GENERAL DRAWINGS AND SUPPLEMENTAL SPECIFICATIONS
For approach slab details not shown on these drawings reference shall be made to Std. Drawing AS-44-5, dated 4-2-45 (Type II).
For specification for open steel grid floor see Supplemental Specification Nº 173, revised 1-13-47.
For Specification for sidewalk grating see Supplemental Specification Nº 172, revised 1-13-47.
For specification for caissons see Supplemental Specification Nº 174, revised 1-13-47.

REMOVAL OF EXISTING BRIDGE
Existing superstructure shall be removed. The stringers and floor beams shall be piled on the site at the disposal of the State. The remainder of the superstructure shall become the property of the contractor as part payment for its removal.
Existing substructure shall be removed and masonry shall be wasted in embankment or removed from the site by the contractor.

WELDING
All welding shall be Class "A".

PAINTING
Paint for shop coat on structural steel and sidewalk grating shall meet the requirements of Sec. M-9.9, Sec. M-9.20 or Sec. M-9.21.
Paint for shop coat and first field coat on open steel grid floor shall meet the requirements of Sec. M-9.9, Sec. M-9.20 or Sec. M-9.21. This shall be followed by two field coats of black graphite as per Sec. 9.11.
Field paint for the sidewalk grating and structural steel shall be two coats of aluminum paint, as per Sec. M-9.12,
Steel railing shall be given two field coats of aluminum paint, as per Sec. M-9.12.

FIELD OFFICE
The contractor shall provide a field office for the exclusive use of the engineers and inspectors, as described under "Structures (General)" in the specifications. The office shall have at least two rooms, each having a minimum floor area of 150 sq. ft. and shall be equipped with heating facilities, light and furniture. Payment shall be considered to be included in the contract price bid for the various items.

SLAB DRAINS
Drains shall be placed through the slabs as per Sec. S-29.07.

END FINISH
End finish, gutters and scuppers shall be copper-bearing steel.

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

TEST BORINGS
Test borings shall be made at each of the footings for piers 15 & 16, at each of the caissons at piers 14 & 17, and at one of the caissons at piers 2, 6, 10, 20, & 23 to an elevation at least six feet below the bottom of the footing or caisson in order to determine the character and extent of the rock stratum. No footing or caisson concrete shall be placed until the Engineer has approved the sub-foundation. Test borings shall be included in the contract unit price bid per lineal foot of caissons for payment.

FALSEWORK PLANS
Not less than fifteen days prior to construction of false-work for the concrete slab approach spans, the contractor shall submit three blueprints of falsework plans to the Director for approval by the Bureau of Bridges.
Falsework may not be supported on the longitudinal or transverse struts of the substructure. (See note ⊛)

⊛ Falsework shall be supported on piling designed to carry the superimposed loads and driven in accordance with an approved pile-driving formula.

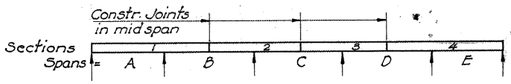
UNIT STRESSES
Maximum concrete unit design stresses for this structure are as follows:
fs = 18,000 #/□"
fc = 1,200 #/□" (Class "C" Concrete)
fc = 900 #/□" (Class "E" Concrete)
n = 10
Maximum unit stresses for structural steel are those given in the Specifications for the Design of Highway Structures, published July 1940.

MAINTENANCE OF TRAFFIC
Two-way traffic shall be maintained at all times to the satisfaction of the Engineer.

CONSTRUCTION PROCEDURE
Deck concrete, between successive construction joints of the slab approach span, shall be placed in one continuous operation. Construction joints, other than those shown, will not be permitted without the special permission of the Director. (See Note ⊙).

PROVISIONS FOR MOVABLE SPAN
Provisions have been made and plans have been completed for the addition of towers, machinery, control house etc. which will make it possible to convert the channel span into a vertical lift span. These plans may be examined at the Central Office of the Highway Department at Columbus.

⊙ The procedure for the forming, placing of concrete and removal of forms for each half width of roadway of concrete slab spans shall be as follows:



Complete forms and falsework for Spans A, B and C before Sec 1. is placed.
Complete forms and falsework for Span D before Sec. 2. is placed.
Forms and falsework may be removed from Span A when concrete in Sec. 2. has met requirements for removal as per Item S-0.01.
Complete forms and falsework for Span E before Sec. 3. is placed.
Forms and falsework may be removed from Span B when concrete in Sec. 3. has met requirements for removal as per Item S-0.01.
Forms and falsework may be removed from Spans C, D, and E when concrete in Sec. 4 has met requirements for removal as per Item S-0.01.

Revised As-Built RDH 11-16-50

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

GENERAL NOTES
ESTIMATED QUANTITIES

BRIDGE NO. ER-6-179 OVER HURON RIVER
ERIE COUNTY S.H. 3
SEC. HURON STA. 222+10
FAP-684-(3)

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
WB	WB	GWS	FHS	AJP	8-10 7-10-46	8-15-46 1-18-46 1-13-47

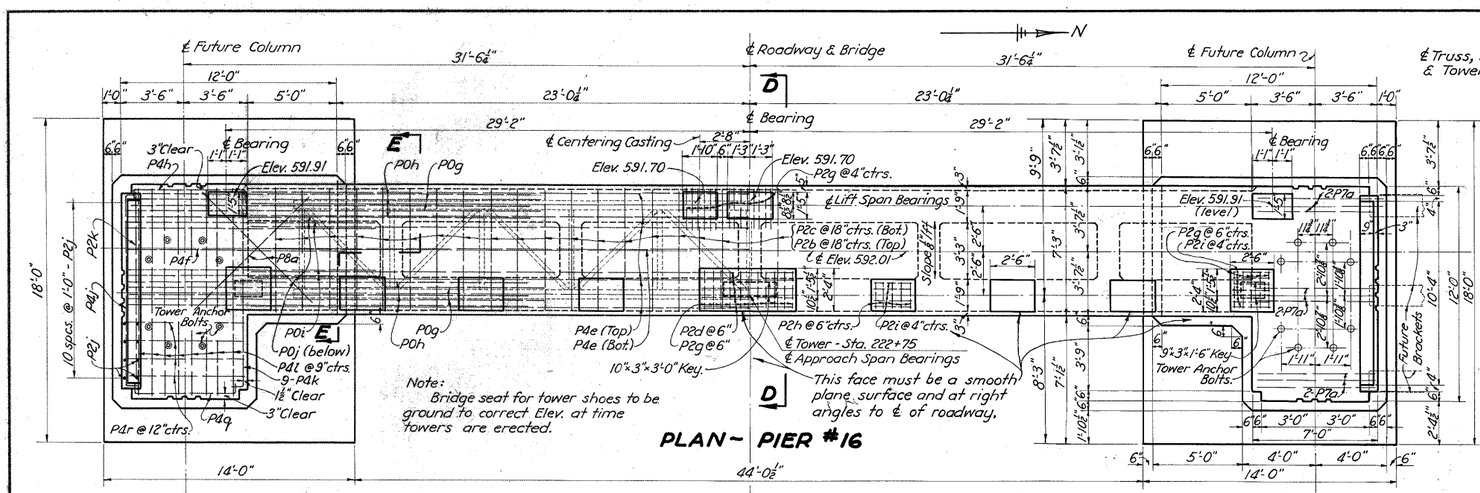
Revision 1-13-47, 35-172 173 174 revised. Hauling deleted. Revision 11-18-46 Revision date for SS-174.

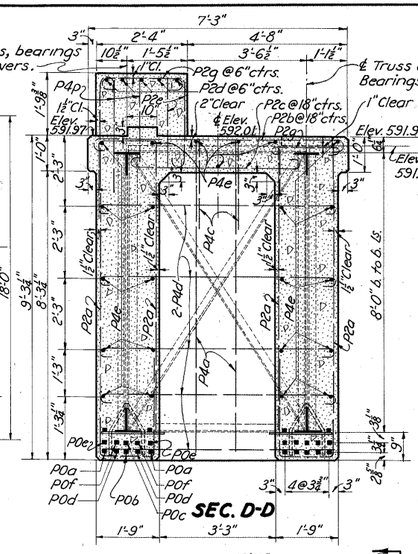
Revision 8-15-46 Procedure notes for concrete placing & form removal added.

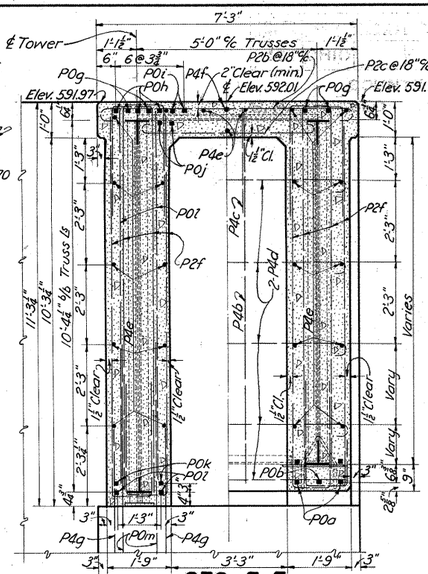
FISCAL YEAR	1946
FED.AID PROJECT	684(3)
STATE	OHIO
FED. RD. DIV. NO.	2

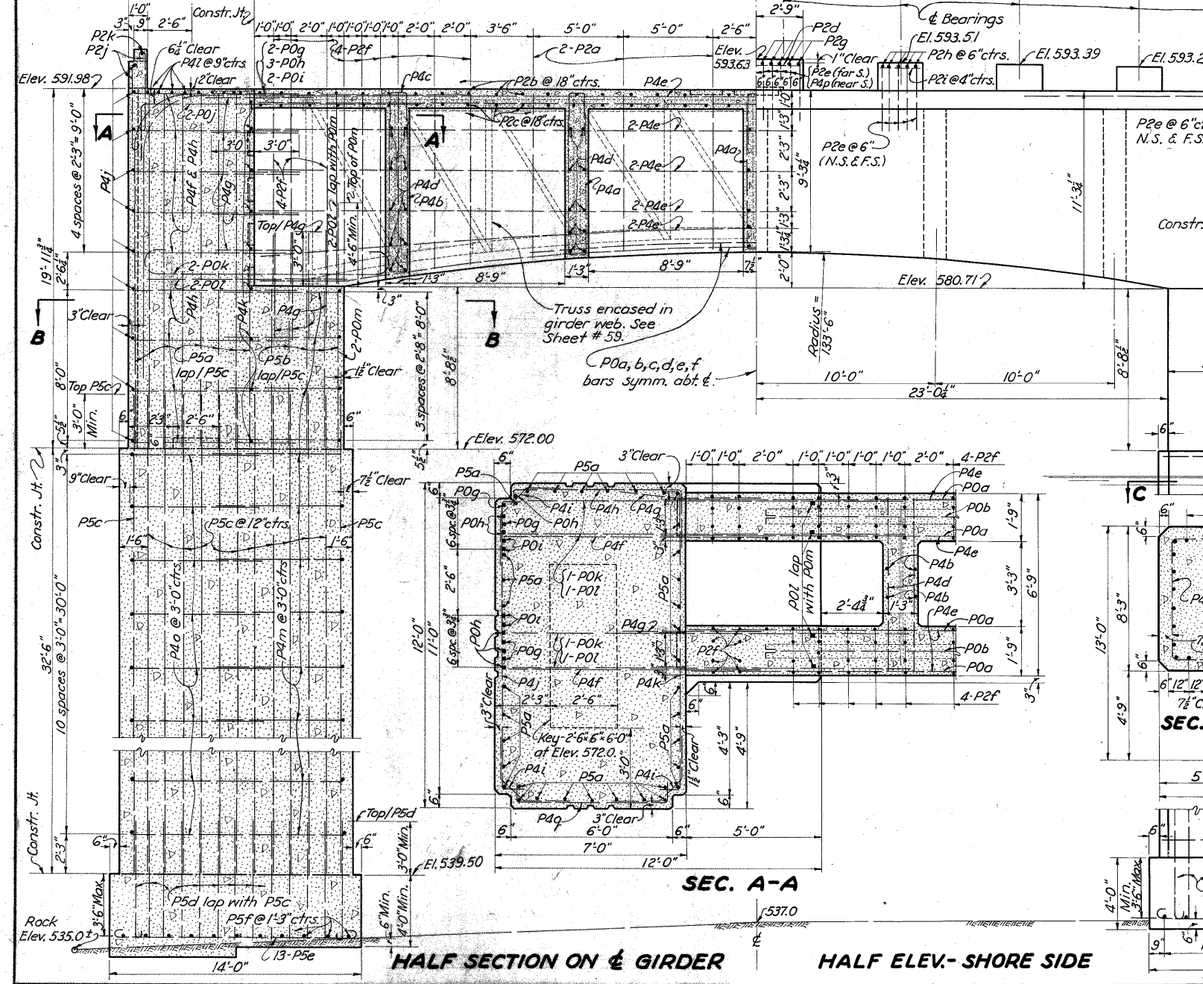
ERIE COUNTY
S.H. 3 SEC. HURON
Pt.

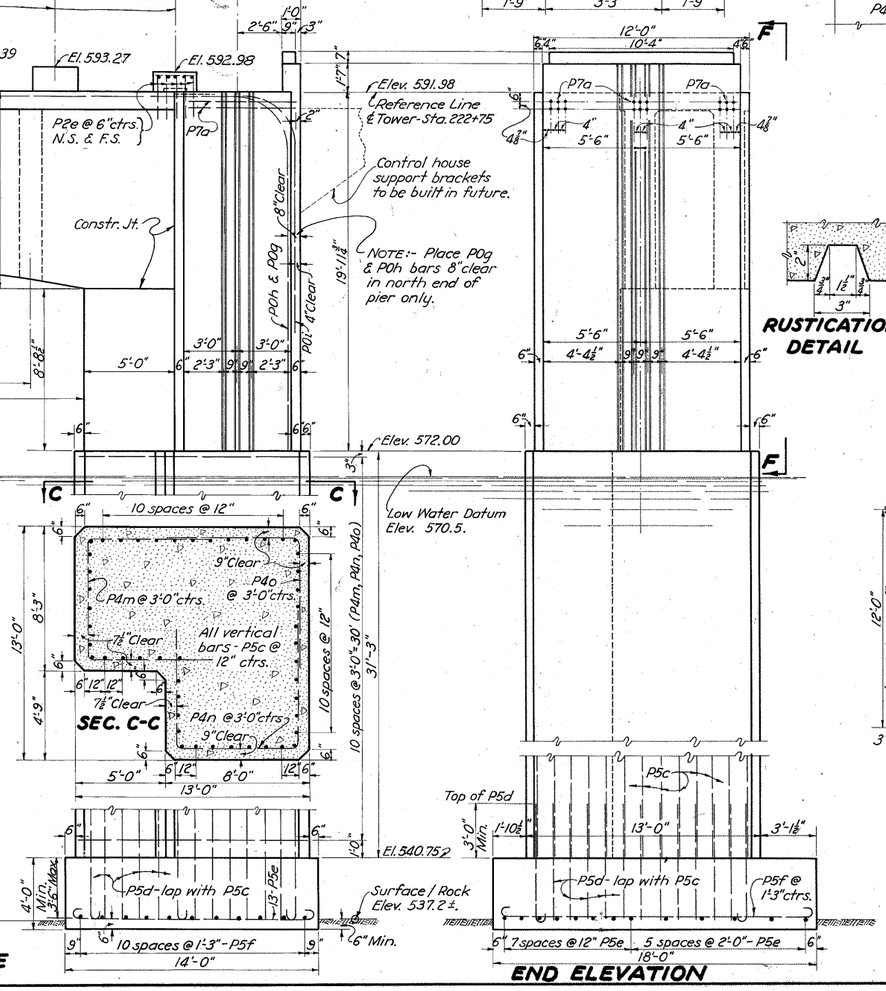
PLAN - PIER #16

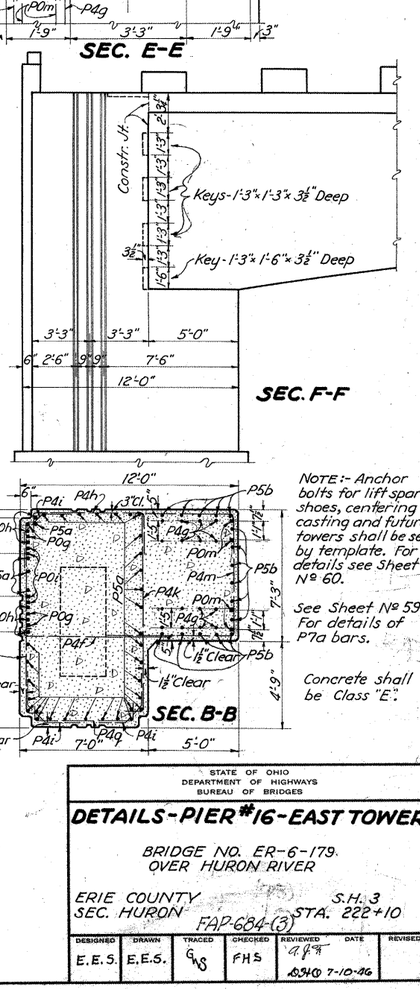












Note:- Anchor bolts for lift span shoes, centering casting and future towers shall be set by template. For details see Sheet № 60.

See Sheet № 59 For details of P7a bars.

Concrete shall be Class "E".

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

DETAILS - PIER #16 - EAST TOWER

BRIDGE NO. ER-6-179.
OVER HURON RIVER

ERIE COUNTY S.H. 3
SEC. HURON STA. 222+10
FAP-684-(3)

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
E.E.S.	E.E.S.	GNS	FHS		7-10-46	

FED. RD. DIV. NO.	STATE	FED. AID PROJECT	FISCAL YEAR	58/89
2	OHIO	684-(3)	1946	

ERIE COUNTY
S.H. 3 SEC. HURON PT.

PLAN - PIER #15

NOTE:- Bridge seat for tower shoes to be ground to correct Elev. at time towers are erected.

For Sec. "E-E" See Sheet #57. Reinforcing steel in girder same as for Pier #16, Sheet #57.

SEC. D-D

SEC. B-B

SEC. A-A

HALF SECTION ON ℄ GIRDER

HALF ELEVATION - SHORE SIDE

SEC. C-C

SEC. F-F

RUSTICATION DETAIL

END ELEVATION

Concrete shall be Class "E".

NOTE:- Anchor bolts for lift span shoes, centering casting and future towers shall be set by template. For details see Sheet #60.

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

DETAILS PIER #15 - WEST TOWER

BRIDGE NO. ER-6-179
OVER HURON RIVER

ERIE COUNTY S.H. 3
SEC. HURON STA. 222+10

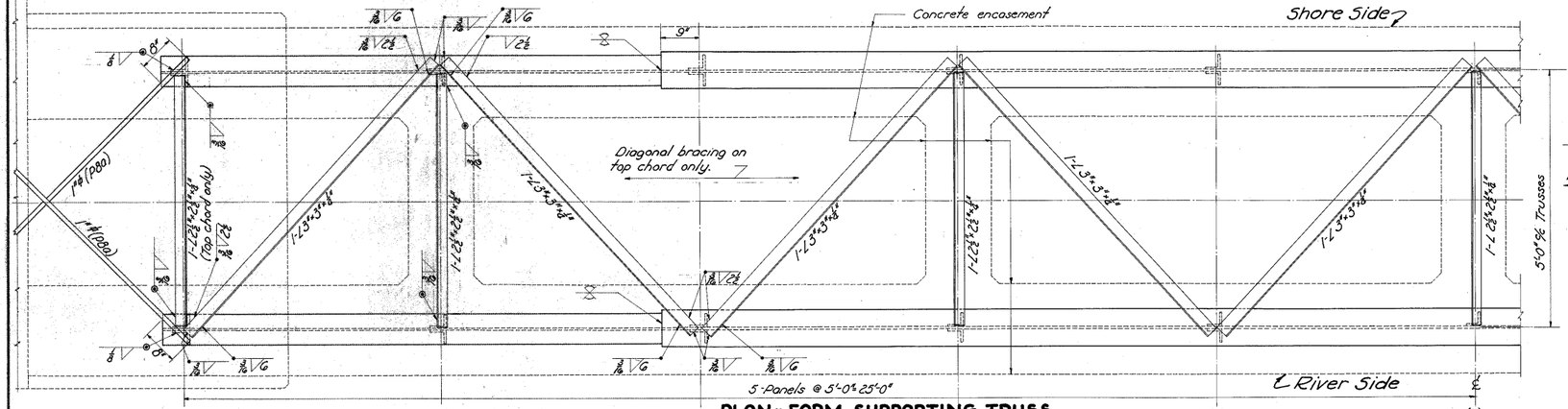
FAP 684-(3)

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
E.E.S.	E.E.S.	GWS	FHS	A.J.K. BWB	7-10-46	

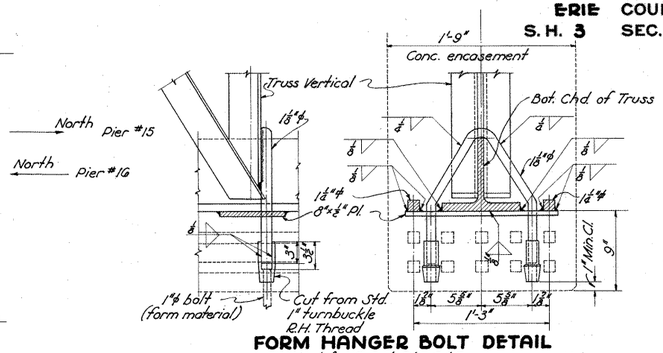
FED. RD. DIV. NO.	STATE	FED. AID PROJECT	FISCAL YEAR
2	OHIO	FAP 684-(3)	1946

59
89

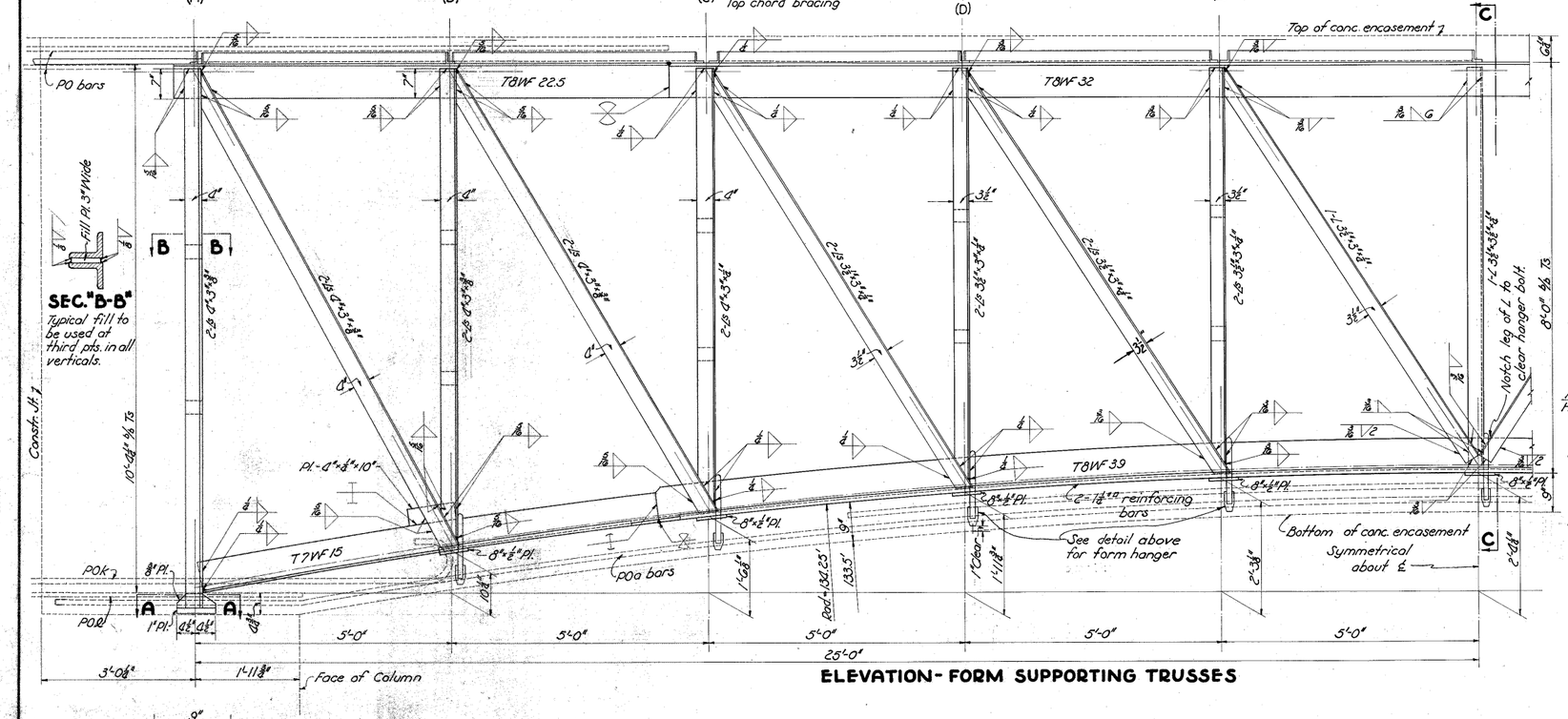
ERIE COUNTY
S.H. 3 SEC. HURON PT.



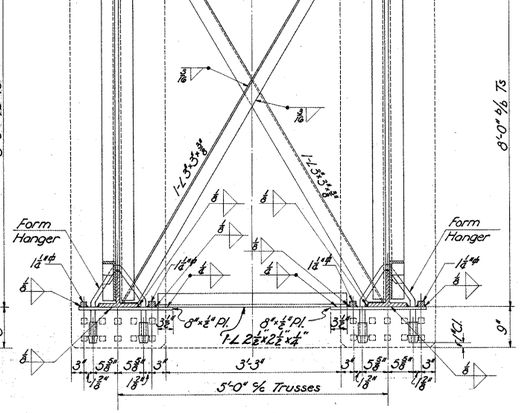
PLAN - FORM SUPPORTING TRUSS
Top chord bracing



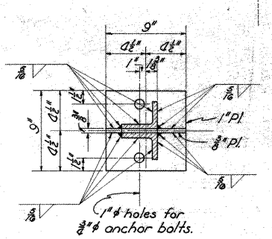
FORM HANGER BOLT DETAIL
Typical for Panel Pts. C & E



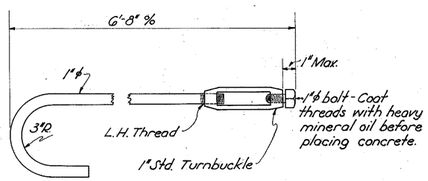
ELEVATION - FORM SUPPORTING TRUSSES



SEC. "C-C"
Typical for Panel Pts. B, D & F



SEC. "A-A"



DETAIL - P7a BAR
18 - Reqd.

NOTE:- Trusses to be used as supports for form-work and be encased in the pier cross girder as part of the reinforcement.
Working center lines of truss members are the center of gravity lines of the members.

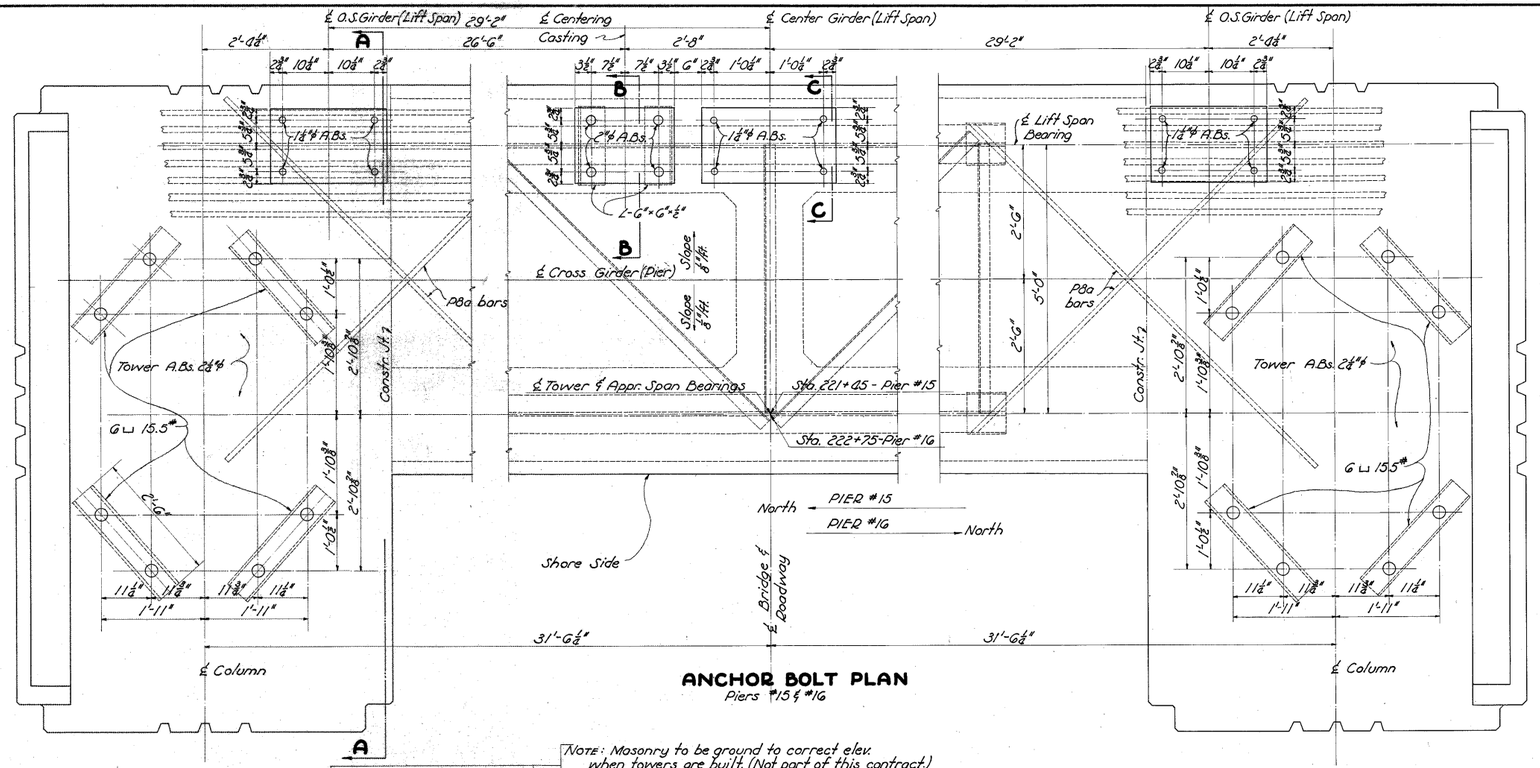
STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

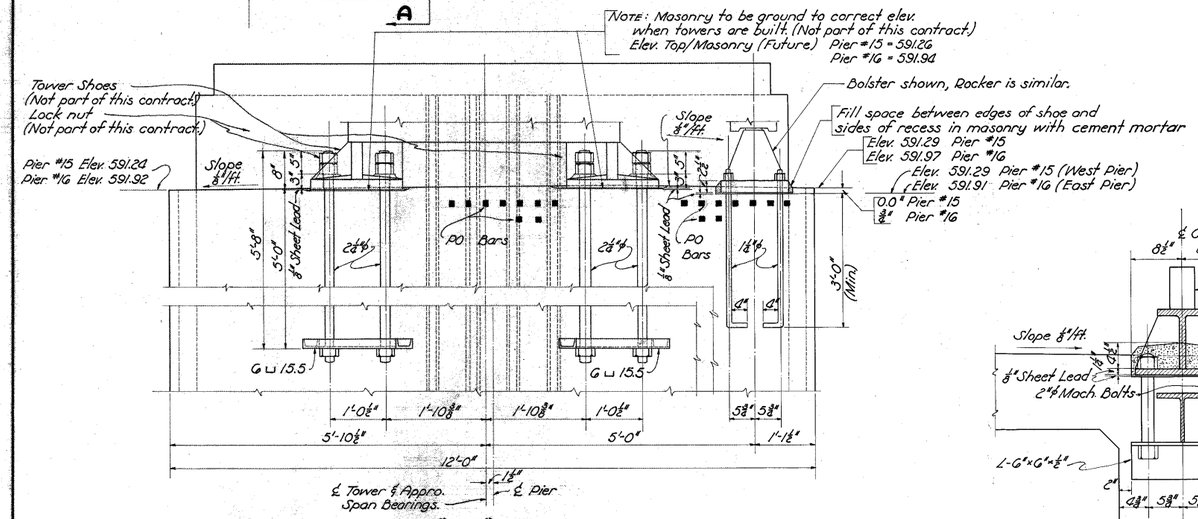
PIER #15 & #16
DETAILS - FORM SUPPORTING TRUSSES
BRIDGE NO ER-G-179
OVER HURON RIVER
FAP-684-(3) S.H. 3
ERIE CO. STA. 222+10
SEC. HURON

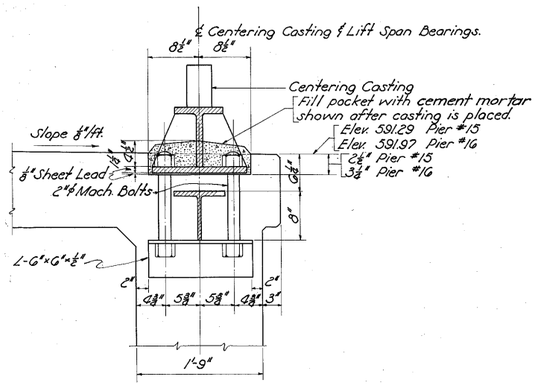
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
E.E.S.	E.E.S.	C.E.J.	F.H.S.	A.J.T.	7-10-46	

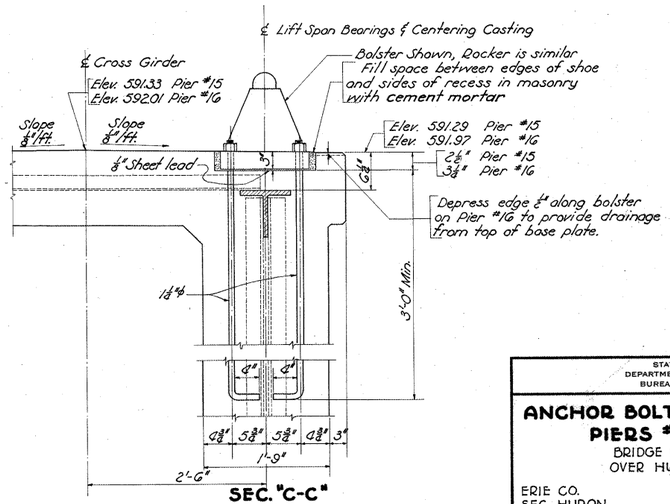
FED. RD. DIV. NO.	STATE	FED. AID PROJECT	FISCAL YEAR	60 / 89
2	OHIO	FAP-684-(3)	1946	

ERIE COUNTY
S. H. 3 SEC. HURON PT.









STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

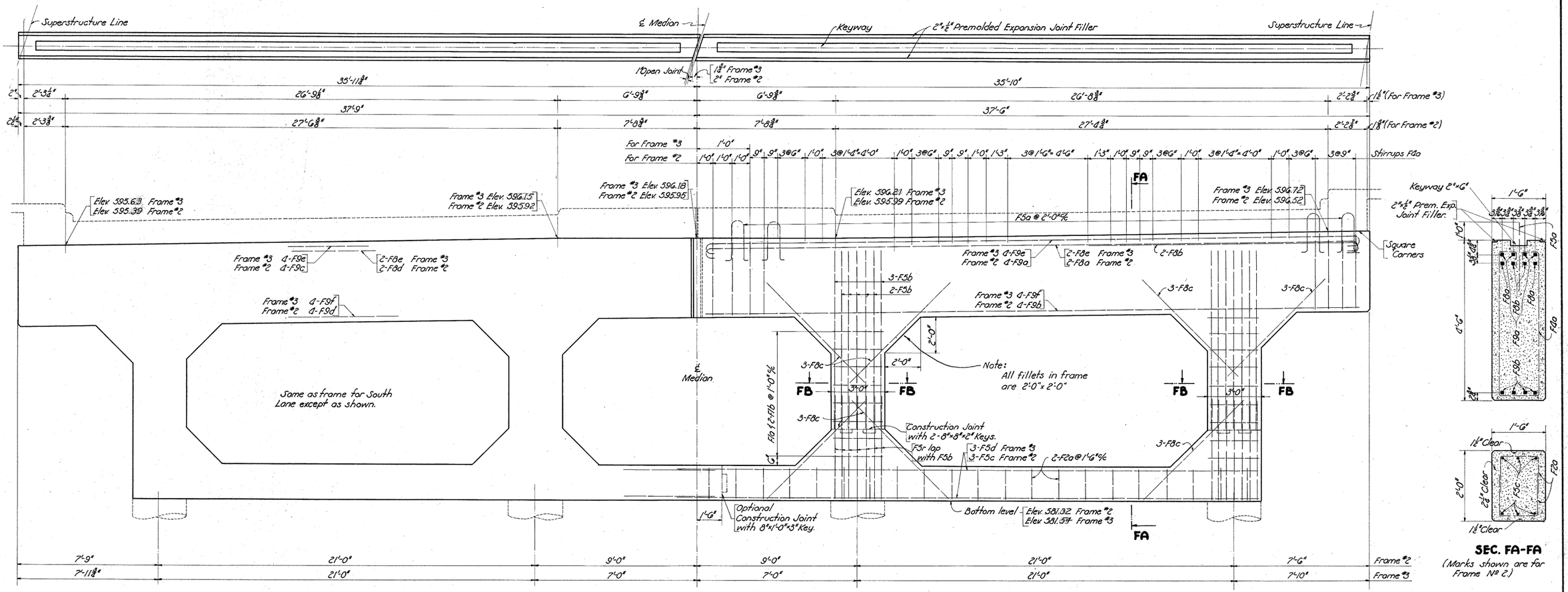
ANCHOR BOLT PLAN & DETAILS
PIERS #15 & #16
BRIDGE Nº ER-G-179
OVER HURON RIVER

ERIE CO. S.H.3
SEC. HURON STA. 222+10
FAP-684-(3)

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
E.E.S.	E.E.S.	C.E.J.	F.H.S.	A.J.T.	7-10-46	

FED. RD. DIV. NO.	STATE	FED. AID PROJECT	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
2	OHIO	684-(3)	1946	61	89

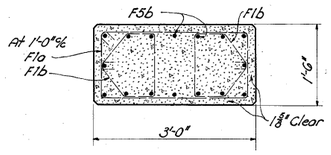
ERIE COUNTY
S. H. 3 SEC. HURON PT.



NORTH LANE

SOUTH LANE

SEC. FA-FA
(Marks shown are for Frame № 2.)



SEC. FB-FB

Chamfer exposed edges ¾" except as noted.

Concrete in frames shall be Class "C."

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

FRAMES №2 & №3
CONCRETE APPRO. SUBSTRUCTURE

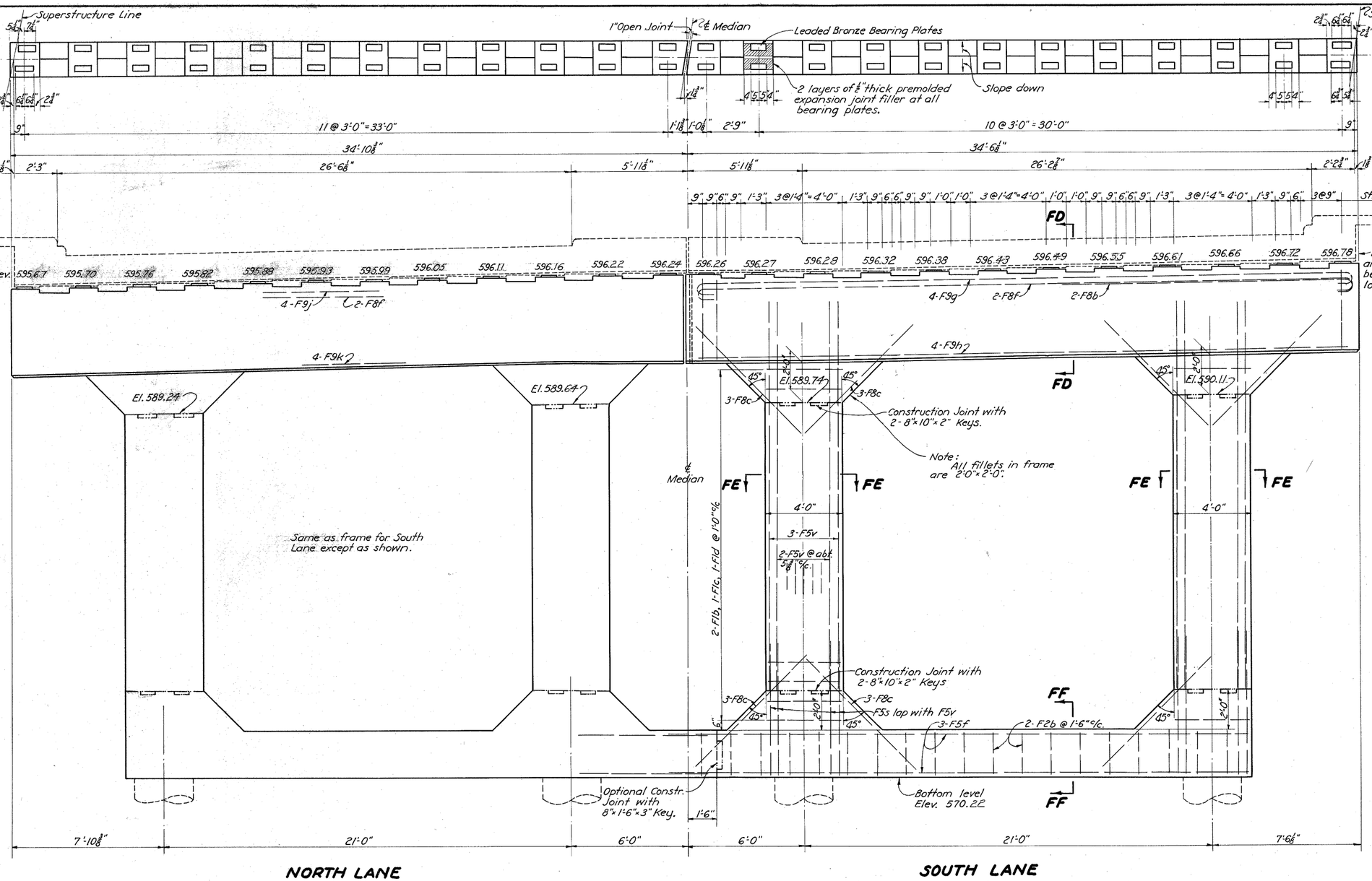
BRIDGE № ER-G-179
OVER HURON RIVER
FAP-684-(3)

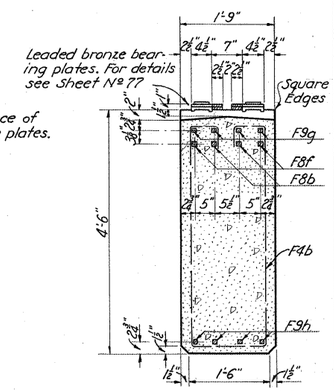
ERIE CO. S.H. 3
SEC. HURON STA. 222+10

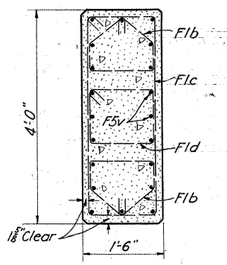
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
CWK	CWK	C.E.J.	L.E.D.	L.E.D.	1946 7-10-46	

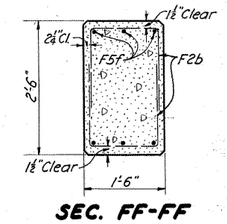
FED. RD. DIV. NO.	STATE	FED. AID PROJECT	FISCAL YEAR	62 / 89
2	OHIO	FAP 684-(3)	1946	

ERIE COUNTY
S.H. 3 SEC. HURON PT.









Chamfer exposed edges ¾" except as shown.

Concrete in frame shall be Class "C".

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

FRAME NO. 4
CONCRETE APPR. SUBSTRUCTURE

BRIDGE NO. ER-6-17.9 OVER HURON RIVER

ERIE COUNTY S.H. 3
SEC. HURON STA. 222+10
FAP-684-(3)

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
CWR	[illegible]	GWS	LEV	A.J.T. 10310	7-10-46	

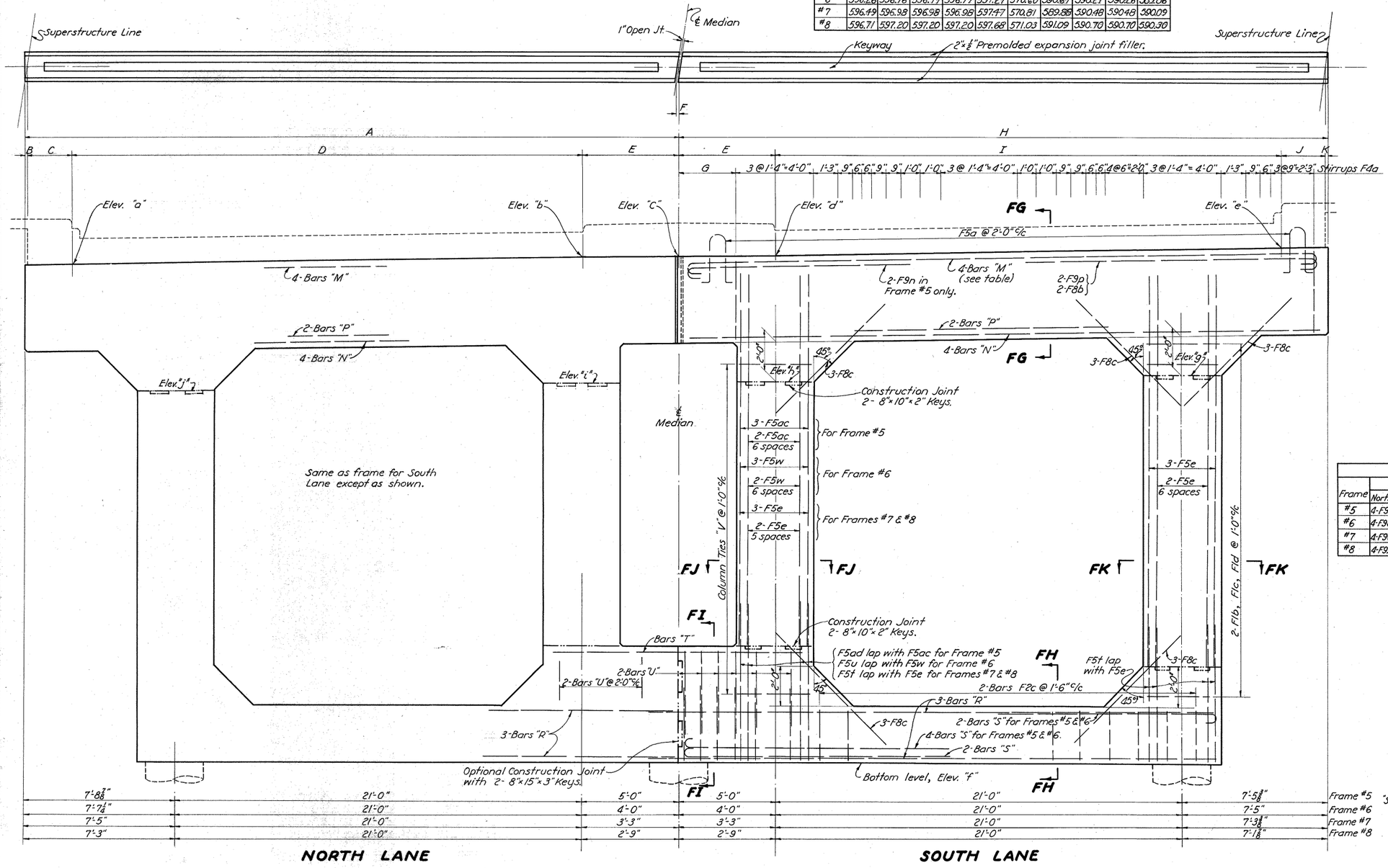
FED. RD. DIV. NO.	STATE	FED. AID PROJECT	FISCAL YEAR	
2	OHIO	FAP 684-(3)	1946	G5 89

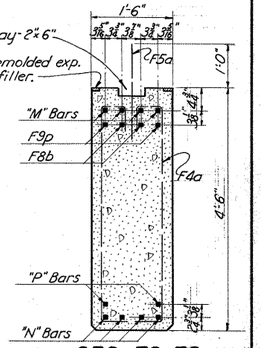
ERIE COUNTY
S.H. 3 SEC. HURON PT.

TABLE OF ELEVATIONS											
Frame	"a"	"b"	"c"	"d"	"e"	"f"	"g"	"h"	"i"	"j"
#5	596.02	596.52	596.64	596.56	597.06	570.39	590.45	590.06	590.02	589.62
#6	596.26	596.76	596.77	596.77	597.27	570.60	590.67	590.27	590.26	589.86
#7	596.49	596.98	596.98	596.98	597.47	570.81	589.58	590.48	590.48	590.09
#8	596.71	597.20	597.20	597.20	597.68	571.03	591.09	590.70	590.70	590.30

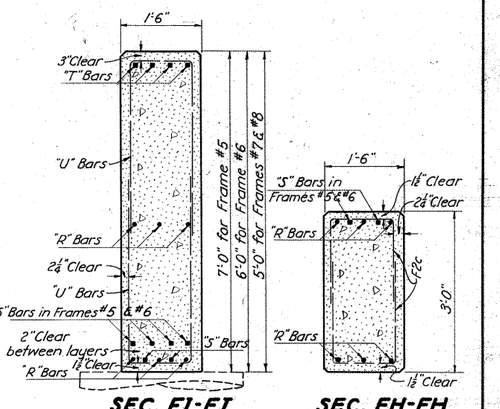
TABLE OF DIMENSIONS											
Frame	A	B	C	D	E	F	G	H	I	J	K
#5	33'-6⅞"	⅛"	2'-2½"	26'-4⅝"	4'-11⅝"	⅛"	4@9"=3'-0"	33'-5⅛"	26'-2"	2'-2⅜"	1"
#6	32'-7¼"	⅛"	2'-2½"	26'-3⅛"	4'-0"	⅛"	3@8"=2'-0"	32'-5"	26'-1½"	2'-2⅜"	⅜"
#7	31'-8"	1"	2'-2½"	26'-1⅝"	3'-2½"	⅜"	2@7½"=1'-3"	31'-6⅝"	26'-1"	2'-2½"	⅝"
#8	31'-0"	⅜"	2'-2½"	26'-1⅛"	2'-7½"	⅝"	9"	30'-10⅜"	26'-0⅝"	2'-2½"	⅝"

TABLE OF REINFORCING BAR MARKS											
	M		N		P		R		S	T	U	V
Frame	North	South	North	South	North	South	North	South				
#5	4-F9s	4-F9m	4-F9t	4-F9r	—	—	F5k	F5g	F0c	4-F0a	F2f	2-F1b, 1-F1c, 1-F1d
#6	4-F9u	4-F9u	4-F8h	4-F8h	2-F7g	2-F7g	F5x	F5h	F8r	4-F0b	F2d	1-F1e, 2-F1f, 1-F1g
#7	4-F9v	4-F9v	4-F8j	4-F8j	2-F8k	2-F8k	F5y	F5j	F9ae	4-F9w	F2e	2-F1b, 1-F1h, 1-F1j
#8	4-F9x	4-F9x	4-F9y	4-F9y	2-F7a	2-F7a	F5z	F5k	F7d	4-F9z	F2e	2-F1b, 1-F1h, 1-F1j



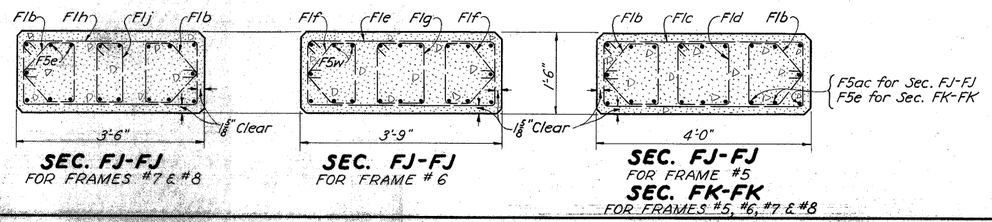


SEC. FG-FG



SEC. FI-FI

SEC. FH-FH



SEC. FJ-FJ FOR FRAMES #7 & #8

SEC. FJ-FJ FOR FRAME #6

SEC. FJ-FJ FOR FRAME #5

SEC. FK-FK FOR FRAMES #5, #6, #7 & #8

Chamfer exposed edges 2" unless otherwise noted.

Concrete in frames shall be Class "C".

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

FRAMES Nº 5, 6, 7, & 8 CONCRETE APPR. SUBSTRUCTURE

BRIDGE NO. ER-6-179 OVER HURON RIVER

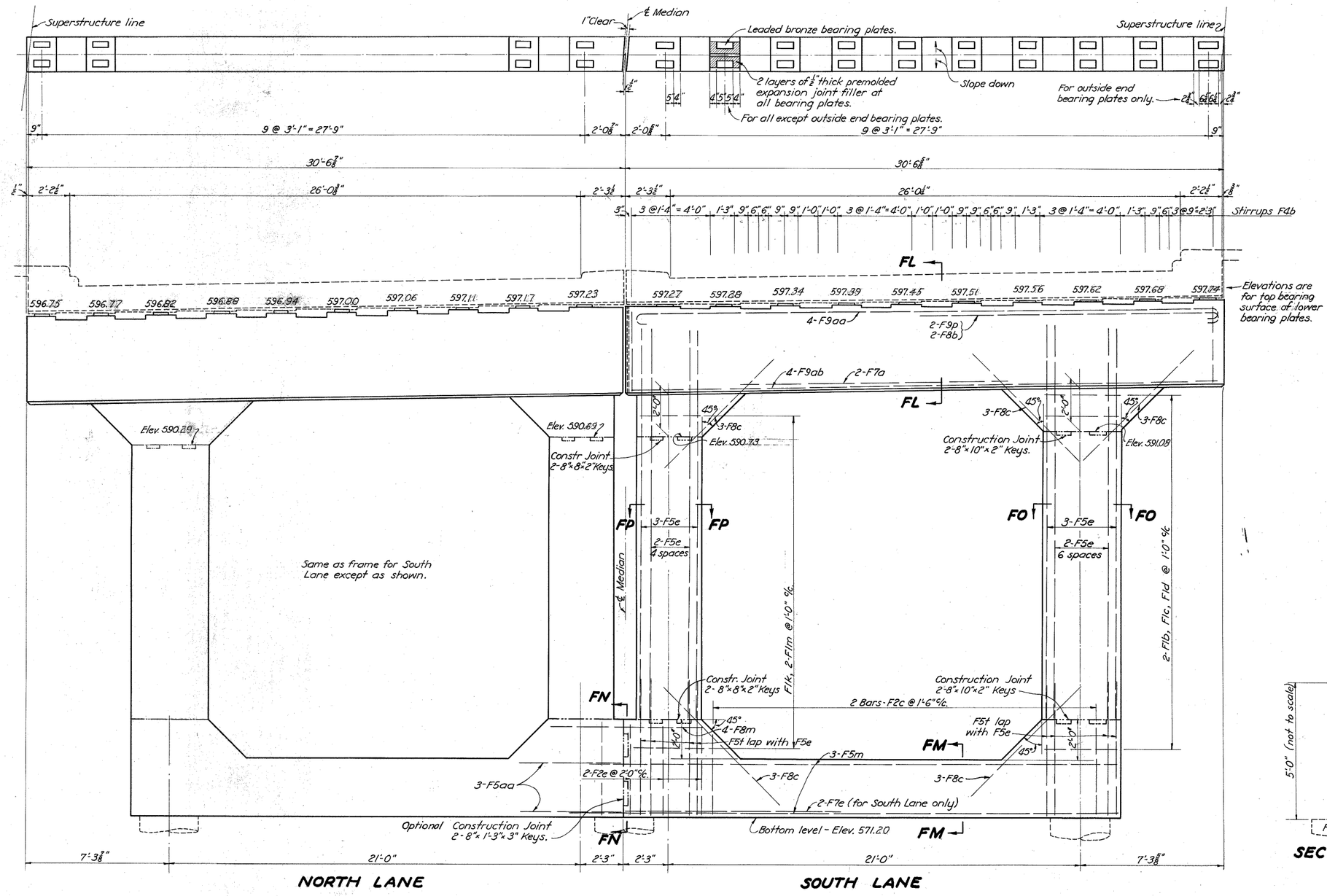
ERIE COUNTY SEC. HURON — S.H. 3 STA. 222+10

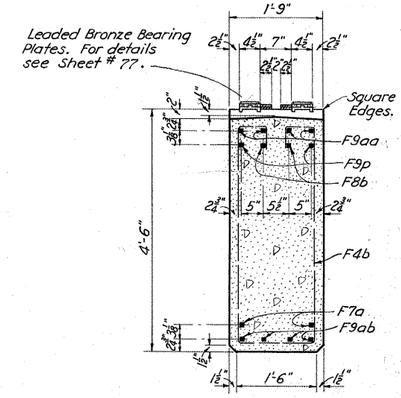
FAP 684-(3)

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
CWB	CWB	GNS	LEV	9-9-46 1946	7-10-46	

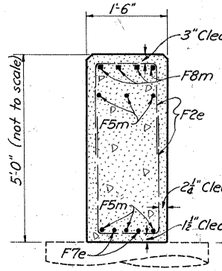
FED. RD. DIV. NO.	STATE	FED. AID PROJECT	FISCAL YEAR	
2	OHIO	F684-(3)	1946	64 / 89

ERIE COUNTY
S.H. 3 SEC. HURON P.T.

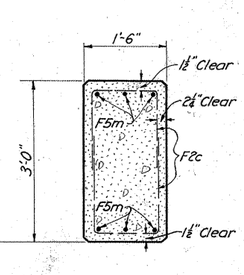




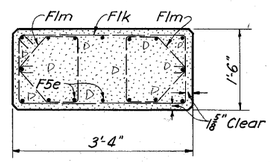
SECTION FL-FL



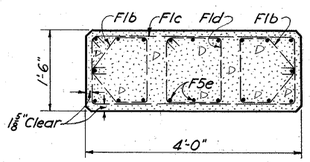
SECTION FN-FN



SECTION FM-FM



SECTION FP-FP



SECTION FO-FO

Chamfer exposed edges ¾" except as noted.

Concrete in frame shall be Class "C".

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

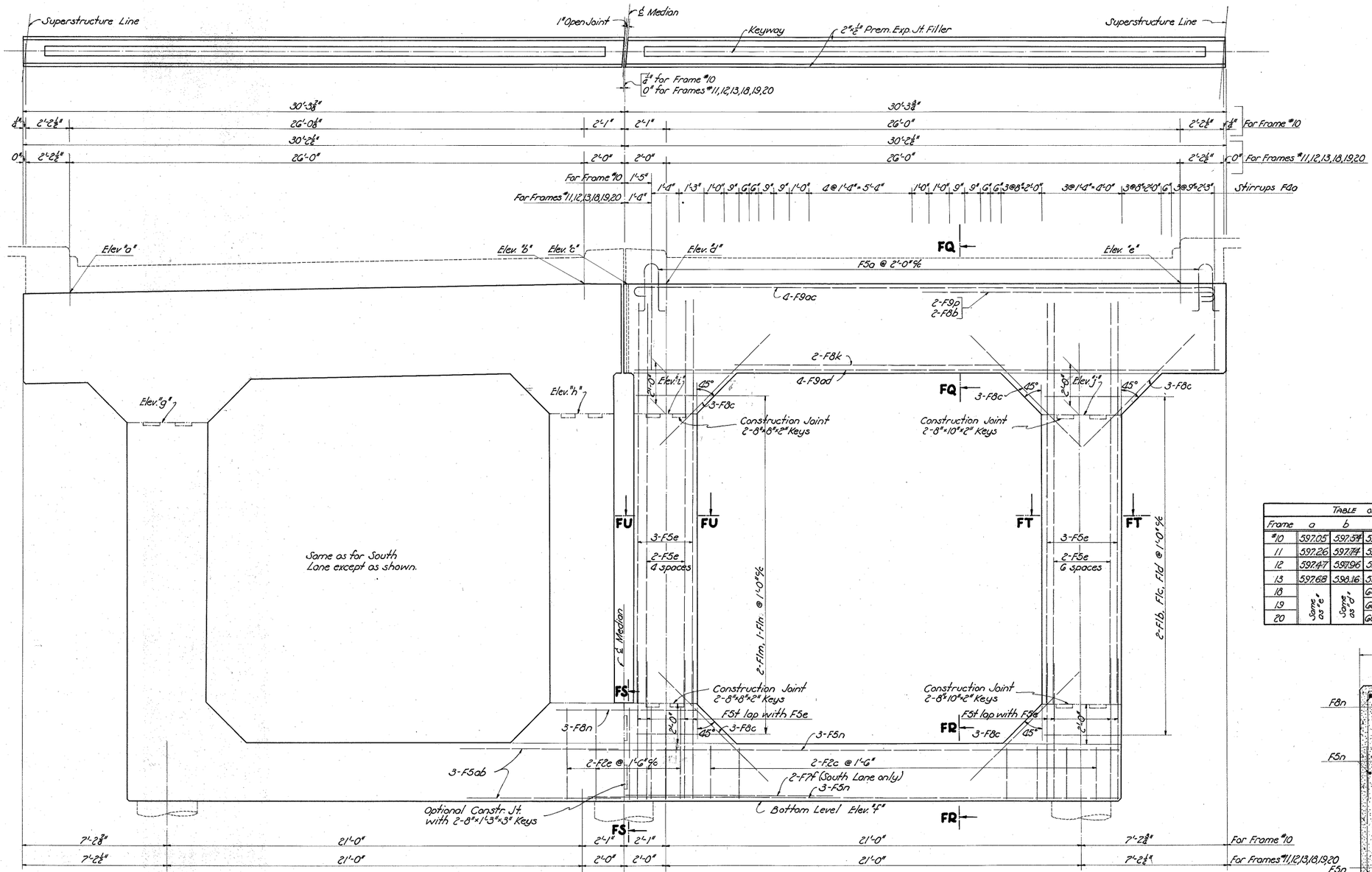
FRAME NO. 9
CONCRETE APPR. SUBSTRUCTURE

BRIDGE NO. ER-6-179 OVER HURON RIVER FAP-684-(3)
ERIE COUNTY S.H. 3
SEC. HURON STA. 222 + 10

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
C.A.B.	C.W.K.	G.W.S.	L.E.U.	A.F.H.	7-10-46	

FED. RD. DIV. NO.	STATE	FED. AID PROJECT	FISCAL YEAR	
2	OHIO	F684-(3)	1946	G5 89

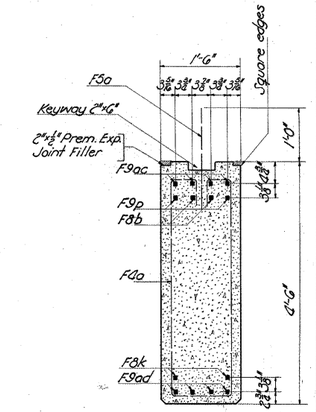
ERIE COUNTY
S. H. 3 SEC. HURON PT.



Same as for South Lane except as shown.

NORTH LANE

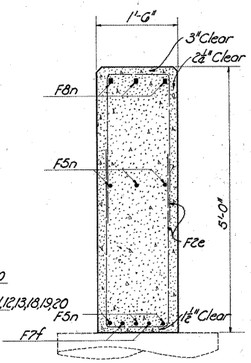
SOUTH LANE



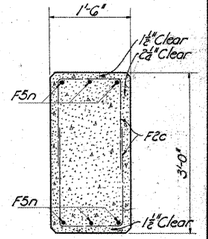
SEC. FQ-FQ

TABLE OF ELEVATIONS

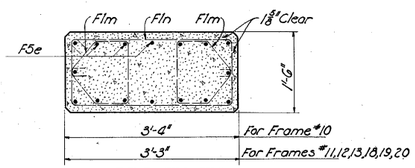
Frame	a	b	c	d	e	f	g	h	i	j
#10	597.05	597.54	597.54	597.54	598.00	571.37	590.64	591.04	591.04	591.41
11	597.26	597.74	597.74	597.74	597.97	571.57	590.83	591.14	591.74	591.43
12	597.47	597.96	597.96	597.96	597.76	571.78	591.06	591.46	591.46	591.30
13	597.68	598.16	598.16	598.16	597.71	571.99	591.26	591.66	591.66	591.30
18	Same as 2	Same as 2	600.04	600.04	599.56	573.87	593.15	593.54	593.54	593.15
19			600.25	600.25	599.77	574.08	593.36	593.75	593.76	593.36
20			600.46	600.46	599.98	574.29	593.57	593.96	593.96	593.57



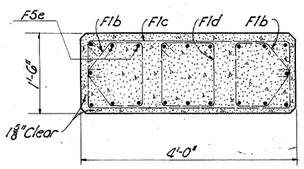
SEC. FS-FS



SEC. FR-FR



SEC. FU-FU



SEC. FT-FT

Chamfer edges ¾" unless otherwise noted.

Concrete in frames shall be Class C.

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

FRAMES #10,11,12,13,18,19,20 CONCRETE APPRO. SUBSTRUCTURE

BRIDGE NO ERI-G-179
OVER HURON RIVER
FAP-684-(3)

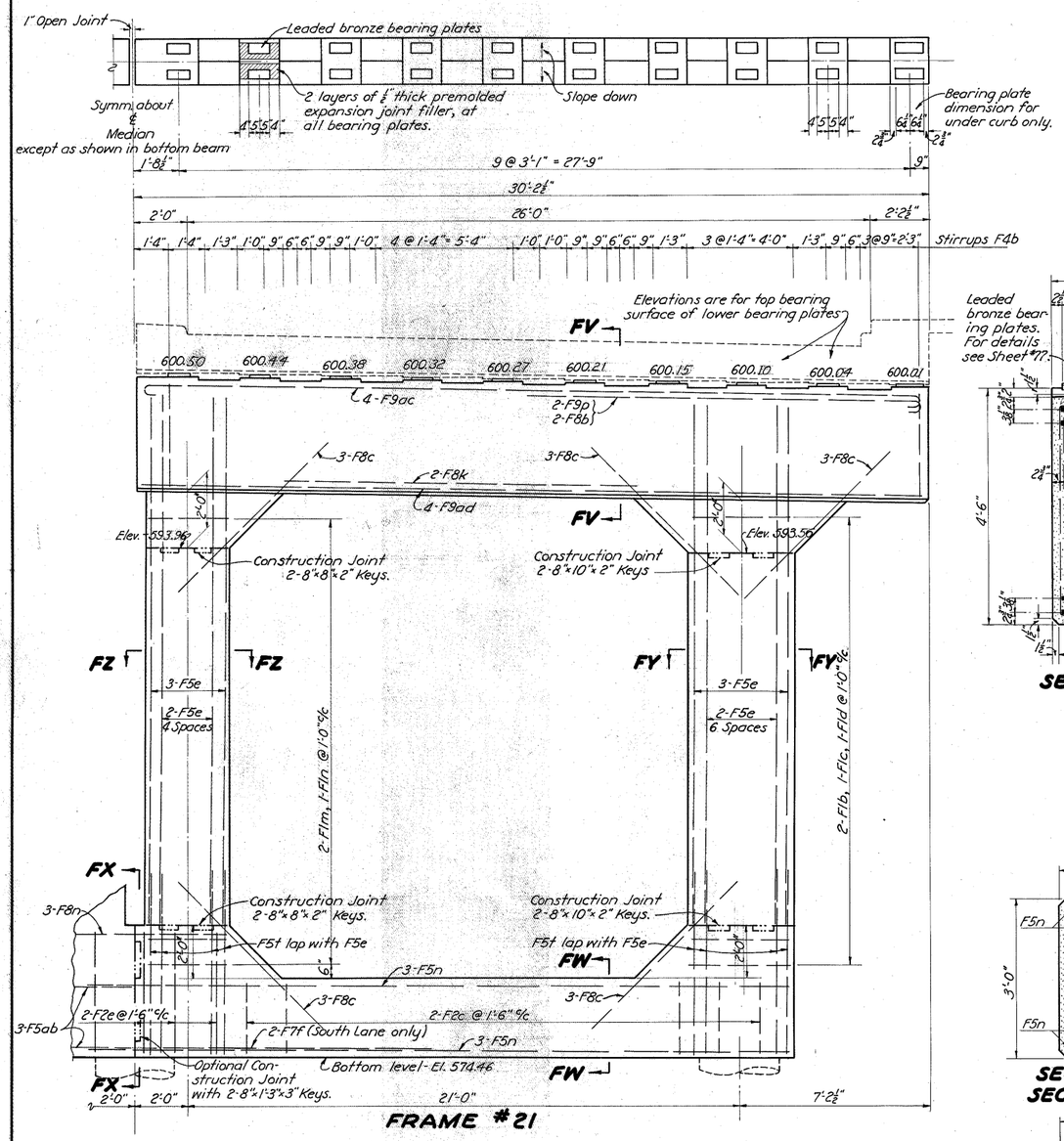
ERIE CO. SEC. HURON
S.H. 3 STA. 222+10

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
C.W.E.	C.W.E.	C.E.J.	L.E.V.	A.J.T. B.M.D	7-10-46	

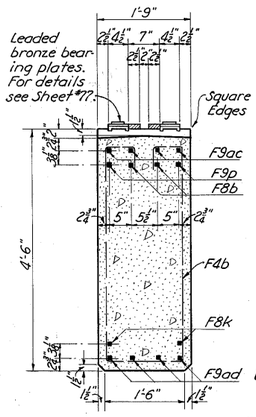
45

FED. RD. DIV. NO.	STATE	FED. AID PROJECT	FISCAL YEAR	GG 89
2	OHIO	FAP 684-(3)	1946	

ERIE COUNTY
S.H. 3 SEC. HURON PT.

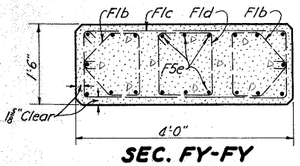


FRAME #21



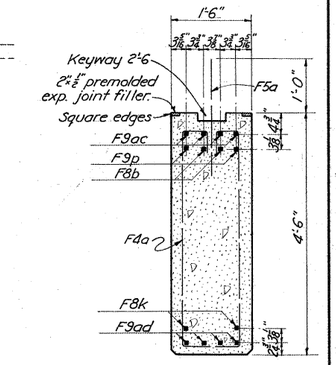
SEC. FV-FV

SEC. FZ-FZ
SEC. FAD-FAD

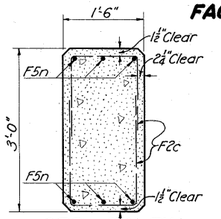


SEC. FY-FY

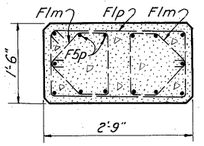
FRAMES #22 & #23



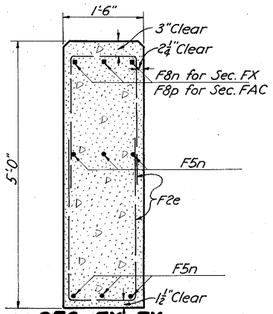
SEC. FAA-FAA



SEC. FW-FW
SEC. FAB-FAB



SEC. FAE-FAE



SEC. FX-FX
SEC. FAC-FAC

Chamfer edges ¾" except as shown.

Concrete in frames shall be Class "C".

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

FRAMES Nº 21, 22, 23 CONCRETE APPR. SUBSTRUCTURE

BRIDGE NO. ER-6-179 OVER HURON RIVER

ERIE COUNTY S.H. 3
SEC. HURON STA. 222+10
FAP-684-(3)

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
CWR	CWR	GMS	L.E.V.	A.P.R.	7-10-46	

FED. RD. DIV. NO.	STATE	FED. AID PROJECT	FISCAL YEAR	67 / 89
2	OHIO	FAP 684-(3)	1946	

ERIE COUNTY
S.H. 3 SEC. HURON PT

PLAN

ELEVATION - PIERS #14 & #17

END ELEVATION

SEC. A-A

SEC. B-B

SEC. C-C
Bottom of Caisson

SEC. D-D
Top of Caisson
TYPICAL FOR PIERS #14 & #17

ELEV. BOTTOM OF CAISSON
TYPICAL FOR PIERS #14 & #17

Concrete in caissons shall be Class "E".
All concrete above Elev. 572.00 shall be Class "C".

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

DETAILS - PIERS #14 & #17

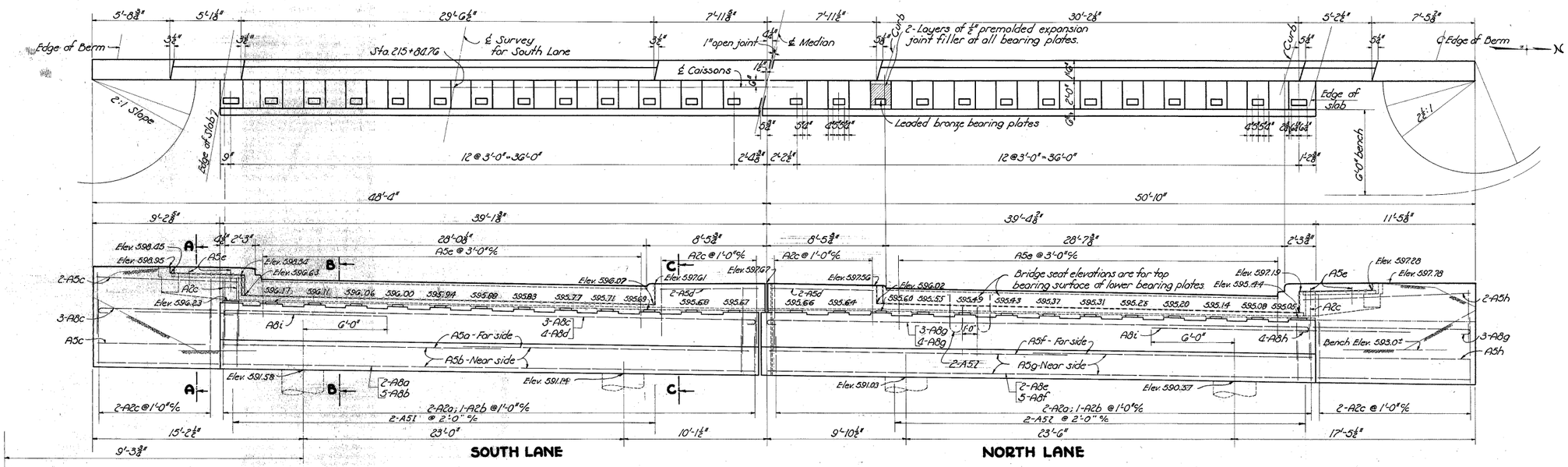
BRIDGE NO. ER-6-179 OVER HURON RIVER
ERIE COUNTY S.H. 3
SEC. HURON STA. 222+10
FAP-684-(3)

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
E.E.S.	E.E.S.	G.W.S.	F.H.S.	A.J.P.	7-10-46	11-18-46

11-18-46 Revision Min. thickness of shells in pictures.

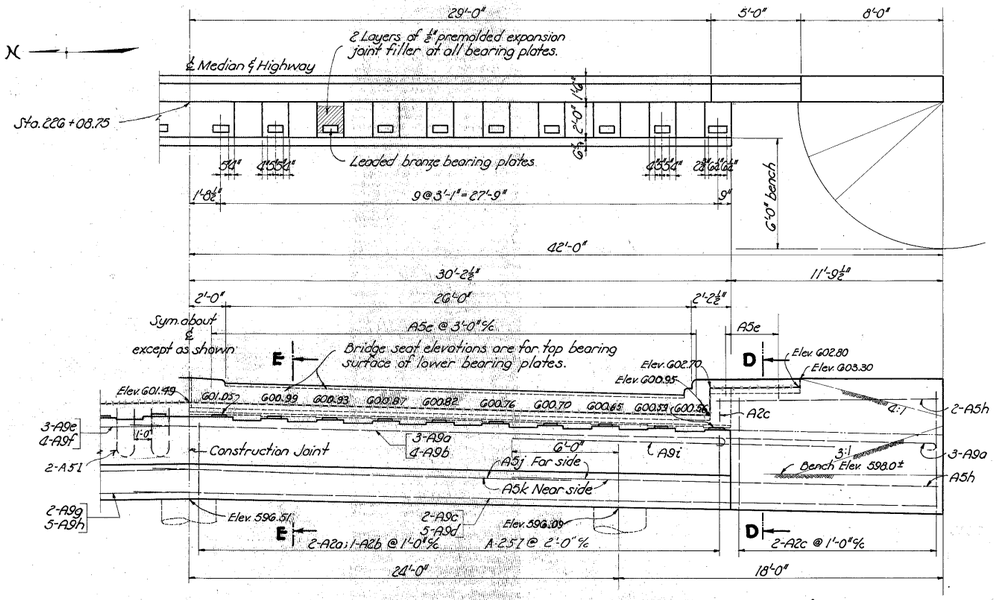
FED. RD. DIV. NO.	STATE	FED. AID PROJECT	FISCAL YEAR	
2	OHIO	684-(3)	1946	68 / 89

ERIE COUNTY
S. H. 3 SEC. HURON PT.

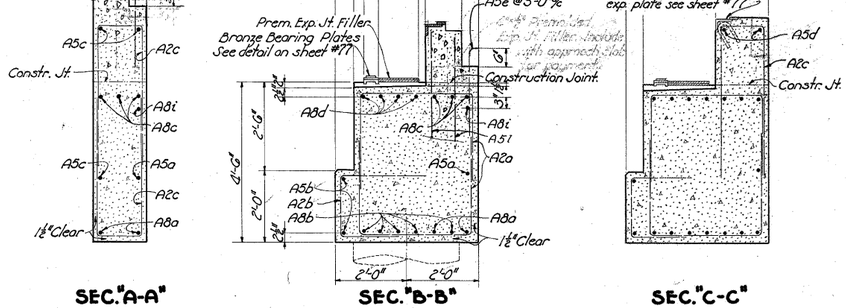


Reference Line - See "Foundation Plan" Sheet #55

WEST ABUTMENT (SUBSTRUCTURE Nº 1)



EAST ABUTMENT (SUBSTRUCTURE Nº 24)

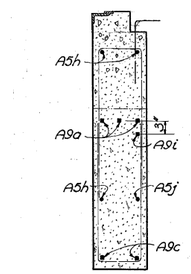


SEC. "A-A"

SEC. "B-B"

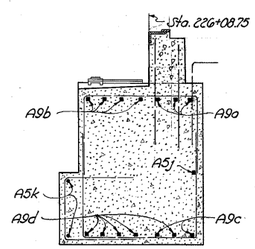
SEC. "C-C"

ENLARGED ELEVATION
PART OF ABUTMENT BRIDGE SEAT



SEC. "D-D"

Details not shown same as Sec. "A-A"



SEC. "E-E"

Details not shown same as Sec. "B-B"

All backfill around abutments shall be made full height of earth bench, caissons then driven and the earth excavated for the abutment cap. If bottom forms for abutment cap are used they shall be left in place.

Concrete above bridge seat construction joint shall not be placed until after concrete deck slab is poured.

Abutment concrete shall be Class "E".

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

ABUTMENTS - SUBSTRUCTURES Nº 1 & 24
CONCRETE APPRO. SUBSTRUCTURE

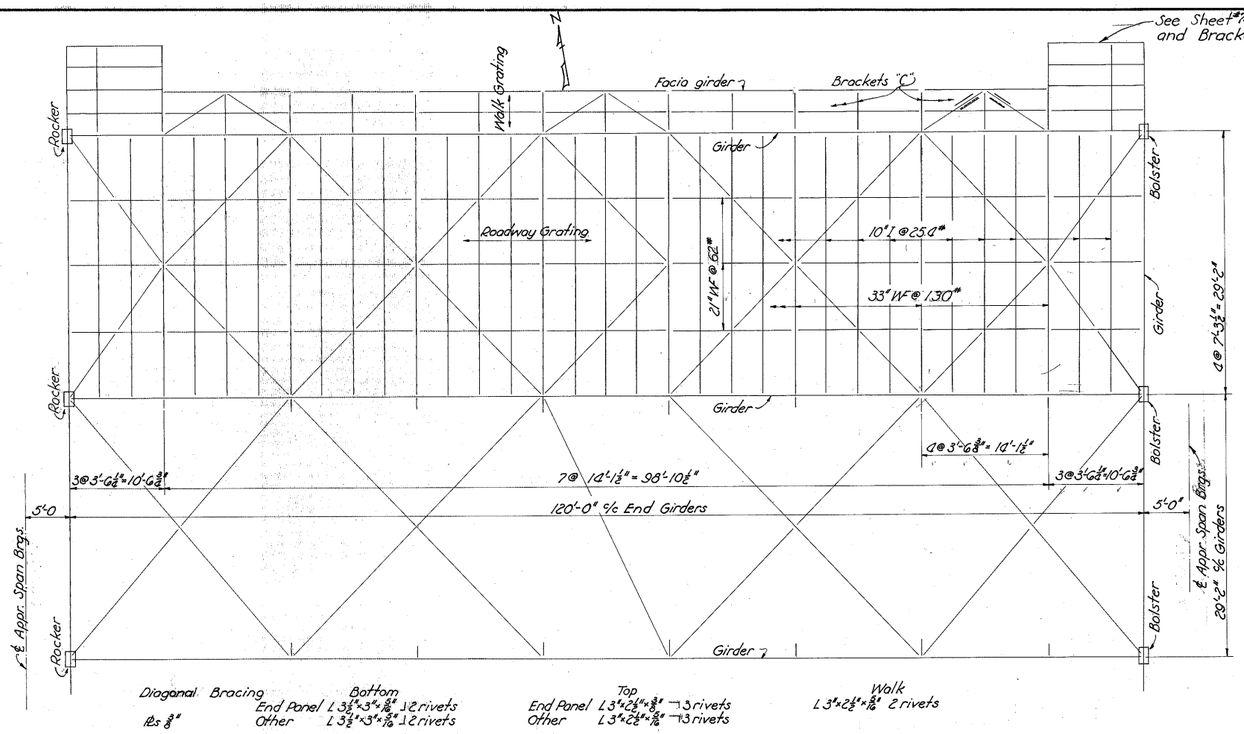
BRIDGE Nº ER-G-179
OVER HURON RIVER

ERIE CO. SEC. HURON FAP-684-(3) S.H.3 STA. 222+10

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
C.A.F.	D.A.K.	C.E.J.	E.E.S.	A.H.O.	7-10-46	

FED. RD. DIV. NO.	STATE	FED. AID PROJECT	FISCAL YEAR	
2	OHIO	F 684-(3)	1946	69 / 89

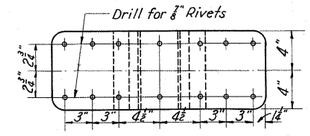
ERIE COUNTY
S. H. 3 SEC. HURON PT.

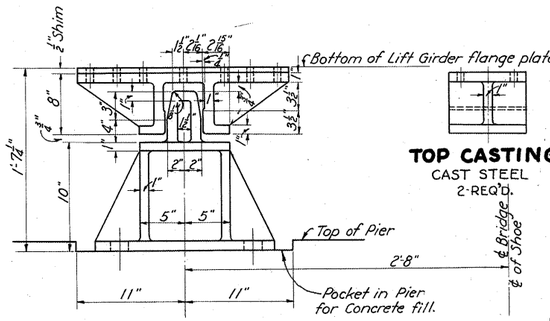


HALF PLAN AT TOP FLANGE

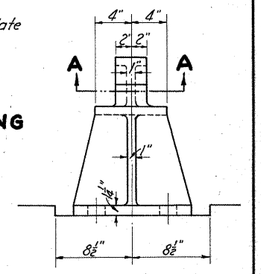
HALF PLAN AT BOTTOM FLANGE

STRUCTURAL STEEL FRAMING PLAN FOR CHANNEL SPAN



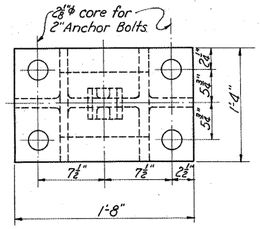


TOP CASTING
CAST STEEL
2-REQ'D.

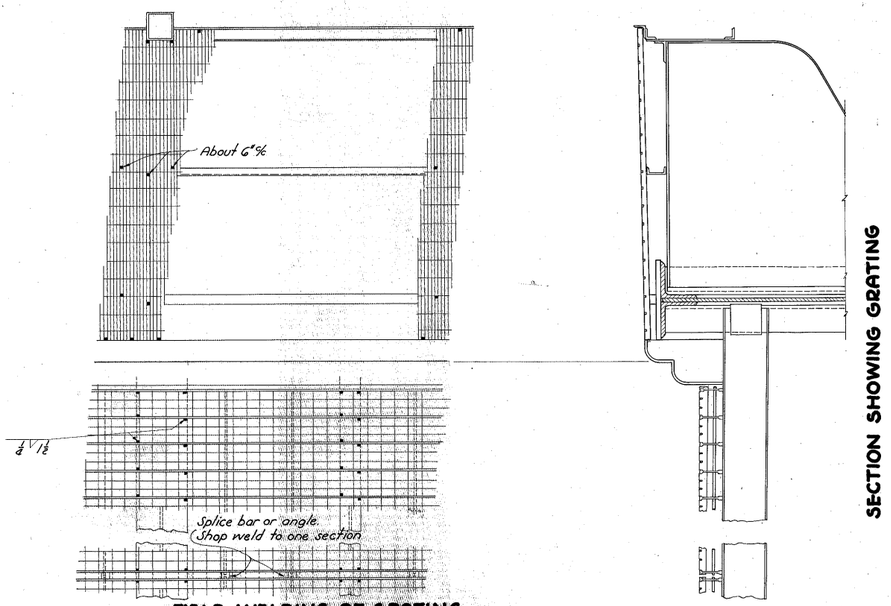


BOTTOM CASTING
CAST STEEL
2-REQ'D

SEC. A-A

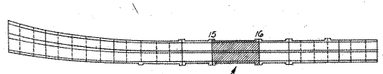


CENTERING CASTING FOR LIFT SPAN



FIELD WELDING OF GRATING

SECTION SHOWING GRATING



STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

STRUCTURAL STEEL FRAMING PLAN & GRATING DETAILS-CHANNEL SPAN

BRIDGE No. ER-G-179
Over HURON RIVER

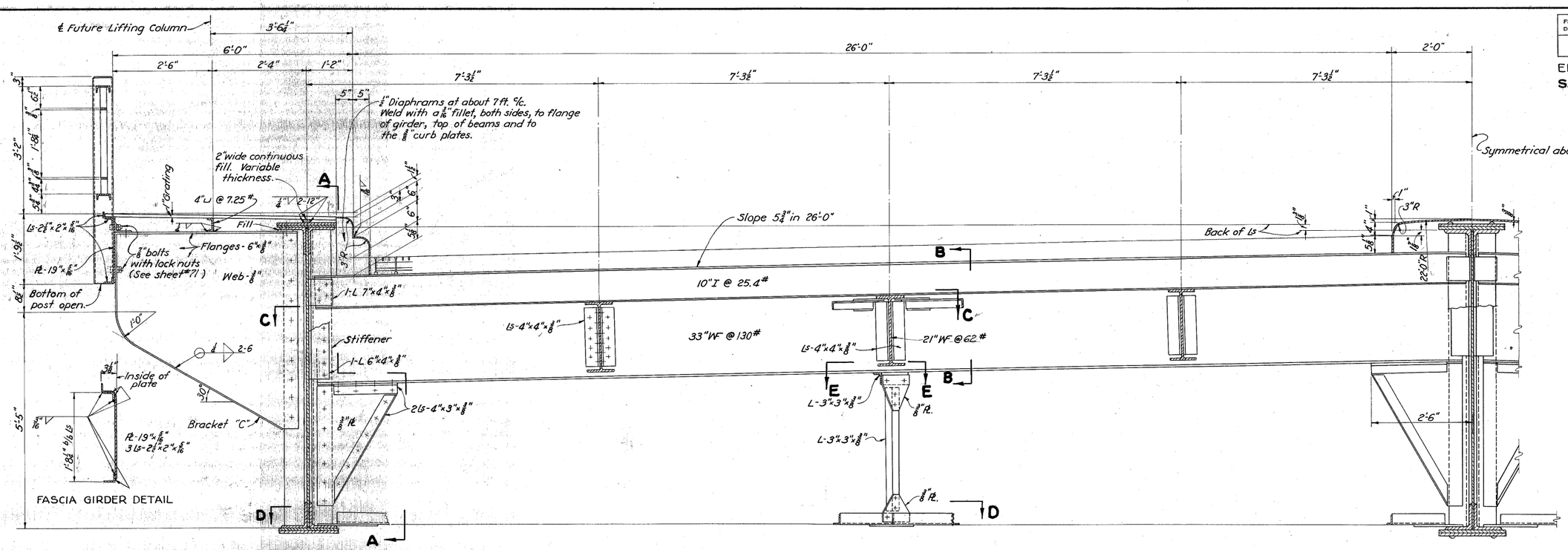
ERIE CO. S.H. 3
SEC. HURON STA. 222+10

FAP-684-(3)

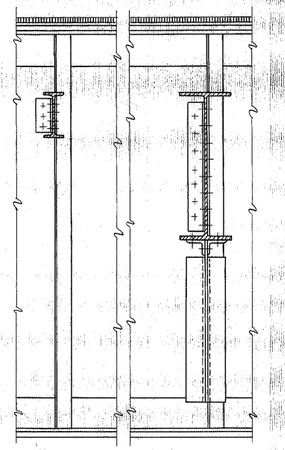
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
EWR PHS	EWR PHS	C.E.J.	WB	A.J.T.	1946 7-10-46	

FED. RD. DIV. NO.	STATE	FED. AID PROJECT	FISCAL YEAR	70 / 89
2	OHIO	FAP 684-(3)	1946	

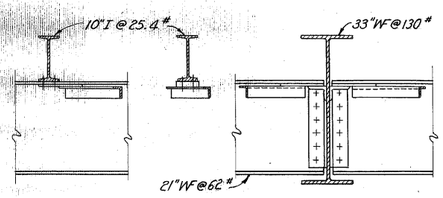
ERIE COUNTY
S. H. 3 SEC. HURON PT



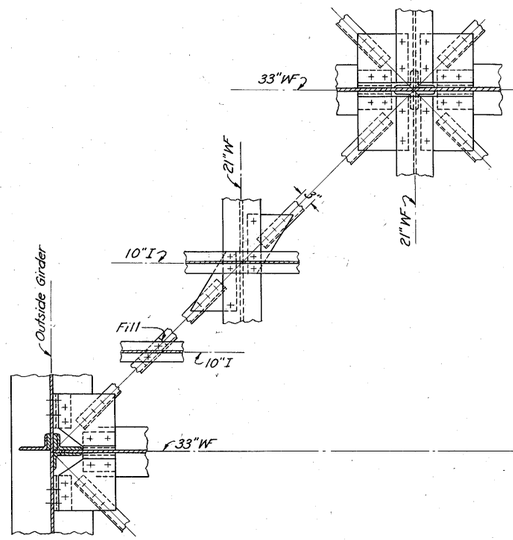
HALF CROSS SECTION



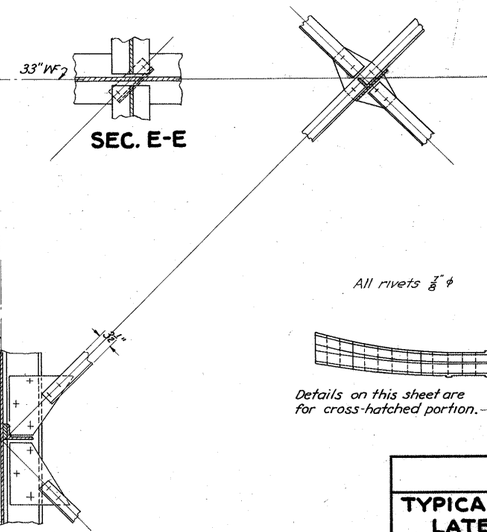
SEC. A-A



SEC. B-B

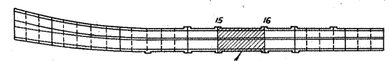


SECTIONAL PLAN C-C
TOP LATERAL CONNECTIONS
All Gusset Pls - ⅜"



SECTIONAL PLAN D-D
BOTTOM LATERAL CONNECTIONS
All Gusset Pls - ⅜"

All rivets ⅞" ϕ



Details on this sheet are for cross-hatched portion.

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

TYPICAL CROSS SECTION & LATERAL CONNECTIONS CHANNEL SPAN

BRIDGE NO. ER-6-179 OVER HURON RIVER
ERIE COUNTY FAP-684-(3) S.H. 3
SEC. HURON STA. 222+10

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
CWP	CWP	GWS	WD	A.B.P.A.	7-10-46	

FED. RD. DIV. NO.	STATE	FED. AID PROJECT	FISCAL YEAR	71 / 89
2	OHIO	F-684-(3)	1946	

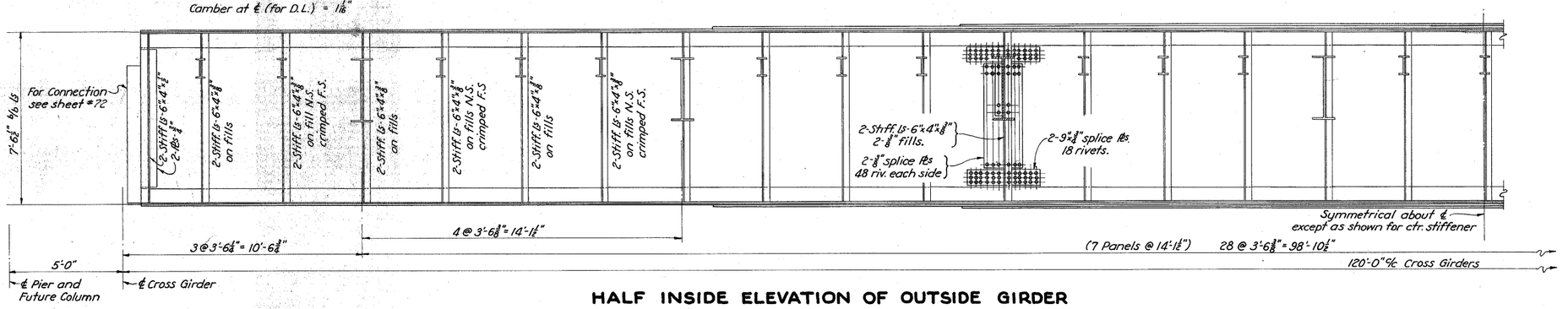
ERIE COUNTY
S.H. 3 SEC. HURON PT.

Max. Mom. 6,070,000 ft. lb.
Max. Shear 209,000 lb.

Max. flange rivet spacing at end = 4¼"
Max. flange rivet spacing at ¼ point = 5"

Camber at ℄ (for D.L.) = 1 1/16"

Web 90"×⅞"
Flg. 4 ls-8"×8"×⅞"
2-Cov. Pls-18"×½" F.L.
2-Cov. Pls-18"×½"×68'
2-Cov. Pls-18"×⅜"×46'



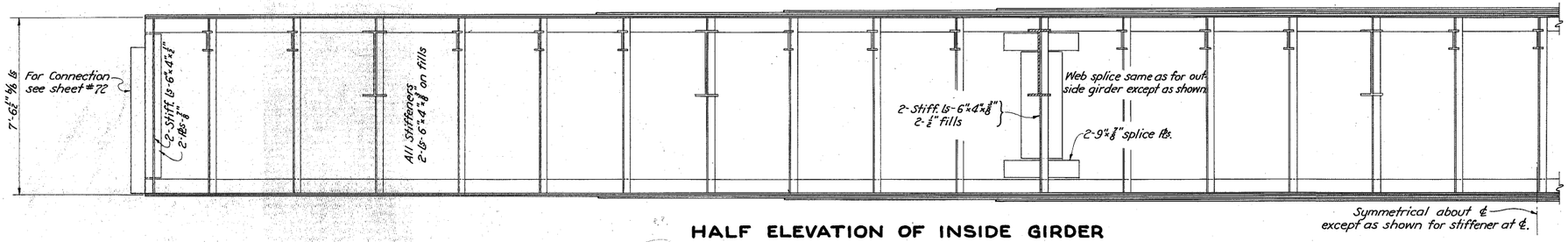
HALF INSIDE ELEVATION OF OUTSIDE GIRDER

Max. Mom. 8,110,000 ft. lb.
Max. Shear 289,000 lb.

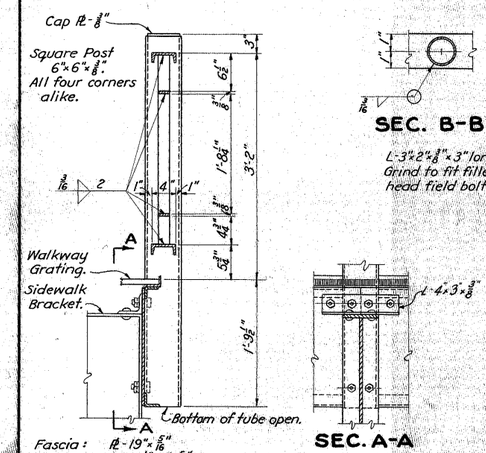
Max. flange rivet spacing at end = 3"
Max. flange rivet spacing at ¼ point = 4¾"
Camber at ℄ (for D.L.) = 1⅛"

Web 90"×⅞"
Flg. 4 ls-8"×8"×⅞"
2-Cov. Pls-20"×½" F.L.
2-Cov. Pls-20"×½"×84'
2-Cov. Pls-20"×½"×70'
2-Cov. Pls-20"×⅜"×50'

All rivets ⅞" ϕ



HALF ELEVATION OF INSIDE GIRDER

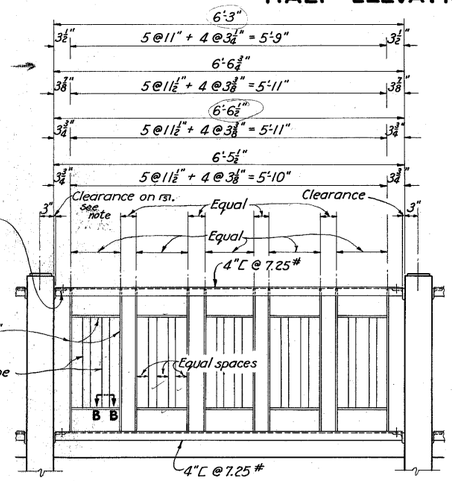


Fascia: Pl-19"×5/16"
3 ls-2½"×2"×5/16"

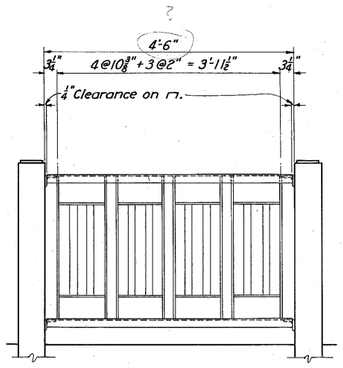
Post Fastenings: 4-⅞" bolts with lock nuts. Holes in tube 1 1/16" ϕ
Provide ⅛" shims for aligning and plumbing the posts.

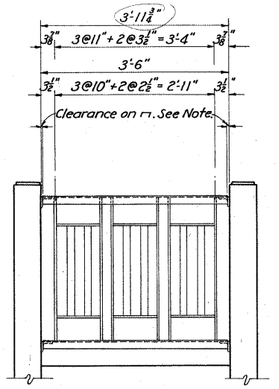
TYPICAL RAILING DETAIL FOR CHANNEL SPAN

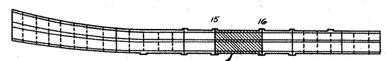
L-3"×2"×⅜"×3" long with 11/16"×1⅛" slot. Grind to fit fillet of L. ⅝" hex. head field bolt with lock washer.



Clearance between posts and ⊏s shall be ¼" except for panels spanning expansion joints where it shall be ½".
All vertical elements shall be truly vertical.
All horizontal elements shall be parallel to the grade.







Details on this sheet are for cross-hatched portion.

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

LONGITUDINAL GIRDER AND RAILING DETAILS
CHANNEL SPAN

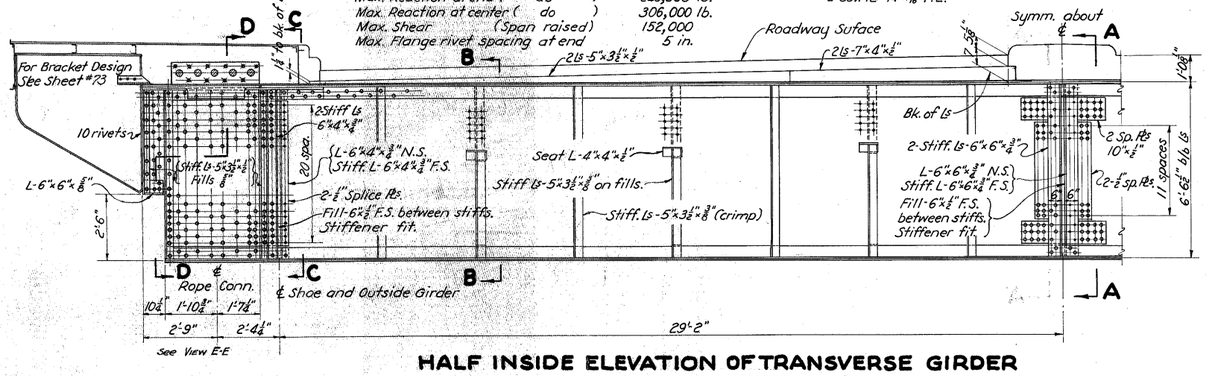
BRIDGE NO. ER-6-179 OVER HURON RIVER
ERIE COUNTY FAP-684-(3) S.H.3
SEC. HURON STA. 222+10

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
CJW	CAE	GWS	WB	GJF BWH	7-10-46	

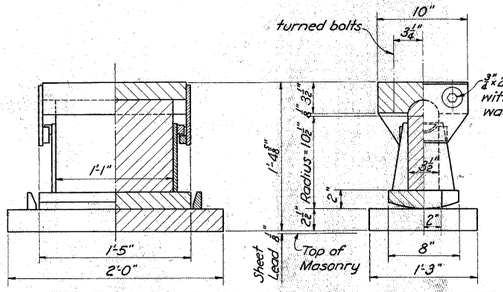
FED. RD. DIV. NO.	STATE	FED. AID PROJECT	FISCAL YEAR	
2	OHIO	684-(3)	1946	72 / 89

ERIE COUNTY
S.H. 3 SEC. HURON PT.

Girder		Girder Section
Max. Pos. Mom. (Span raised, D.L.)	2,129,000 ft. lb.	Web 78"×⅞" (splice optional)
Max. Neg. Mom. (Span seated, D.L.+L.L.+I)	425,000	Flg. 4 ls - 6"×6"×⅞"
Max. Reaction at end (do)	243,500 lb.	2 Cov. Pls - 14"×⅞" F.L.
Max. Reaction at center (do)	306,000 lb.	
Max. Shear (Span raised)	152,000	
Max. Flange rivet spacing at end	5 in.	

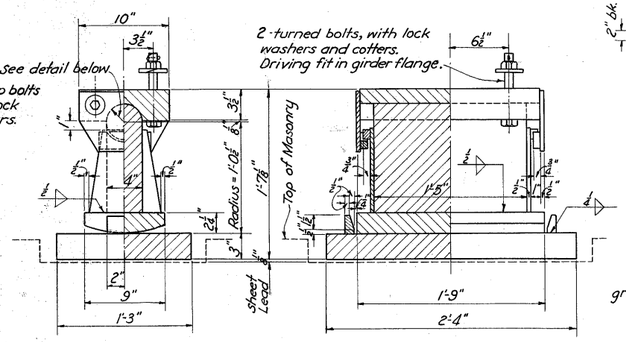


HALF INSIDE ELEVATION OF TRANSVERSE GIRDER



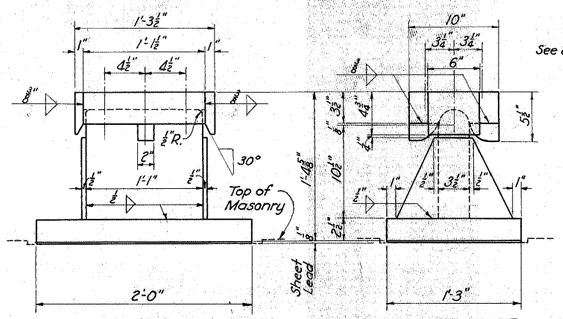
EXPANSION SHOE FOR OUTSIDE GIRDER

For dimensions not given see shoe for inside girder.

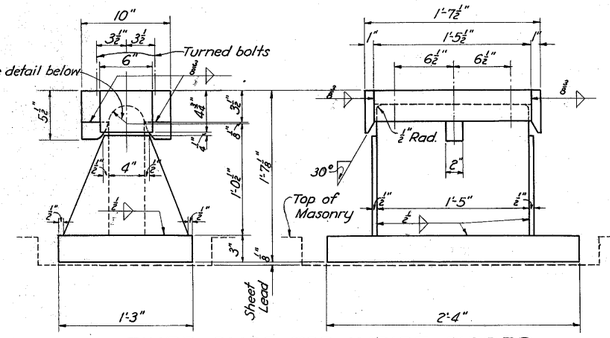


EXPANSION SHOE FOR INSIDE GIRDER

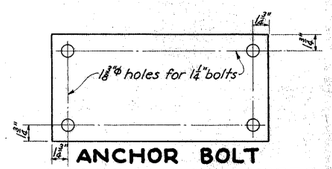
All plates 2" thick or over, in all shoes, shall be Rolled Base Plate Material, ASTM designation A-7-39.



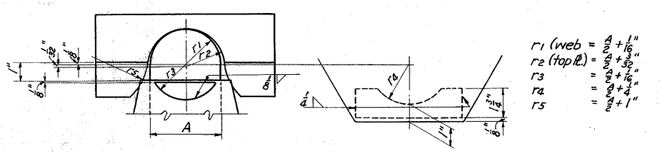
FIXED SHOE FOR OUTSIDE GIRDER



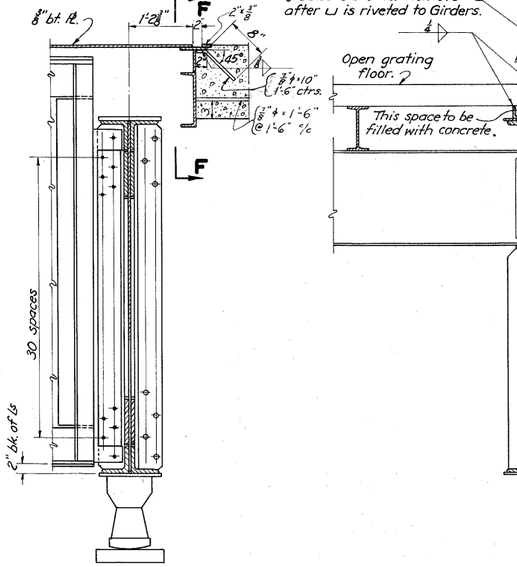
FIXED SHOE FOR INSIDE GIRDER



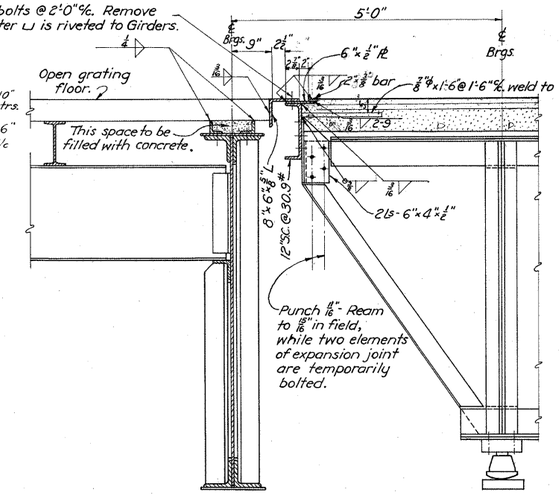
ANCHOR BOLT HOLES FOR ALL SHOES



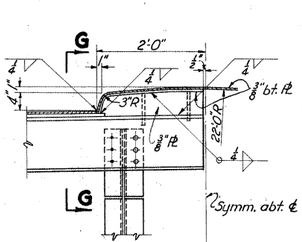
DETAIL FOR ALL SHOES



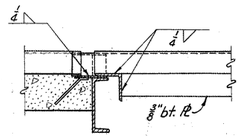
SEC. A-A



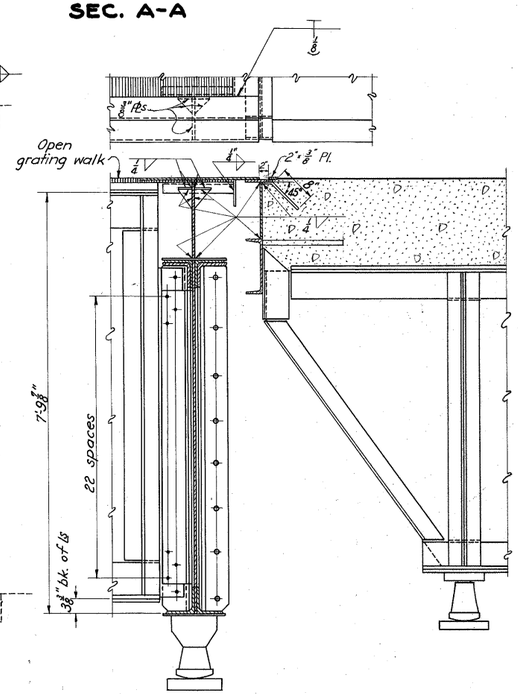
SEC. B-B



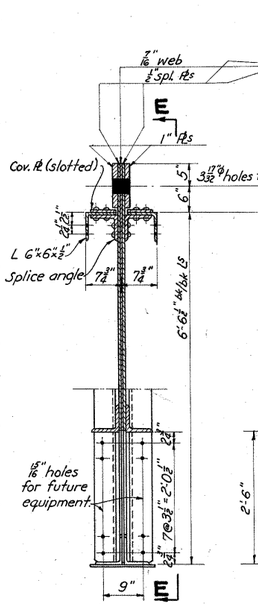
SEC. F-F



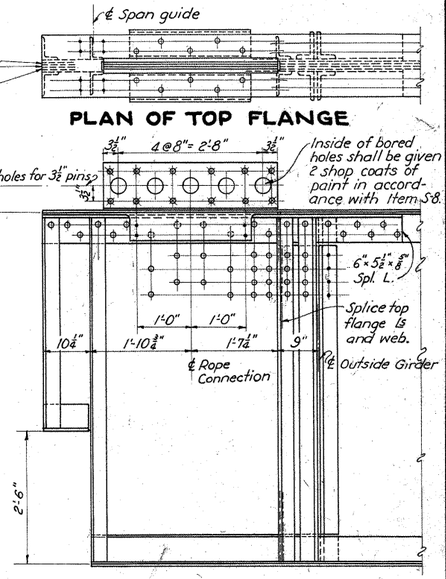
PART SEC. G-G



SEC. C-C

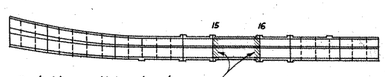


SEC. D-D



VIEW E-E

PLAN OF TOP FLANGE



Details on this sheet are for these portions.

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

END GIRDER DETAILS & SHOES CHANNEL SPAN

BRIDGE NO. ER-6-17.9 OVER HURON RIVER

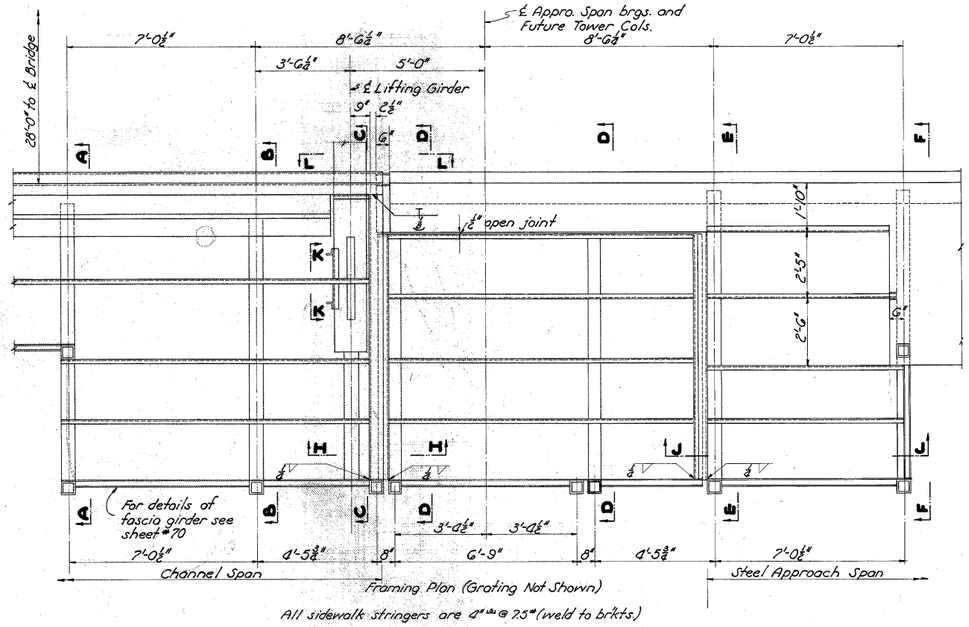
ERIE COUNTY S.H. 3
SEC. HURON STA. 222+10

FAP-684-(3)

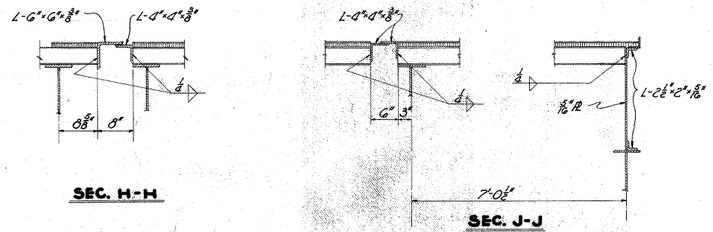
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
CWP	CWP	GMS	WO	APR	7-10-46	

FED. RD. DIV. NO.	STATE	FED. AID PROJECT	FISCAL YEAR	
2	OHIO	FAP 684-(3)	1946	73 / 89

ERIE COUNTY
S. H. 3 SEC. HURON PT.

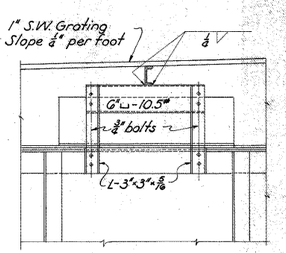


All sidewalk stringers are 4" ᶜʰˢ @ 7.5" (weld to brkts.)

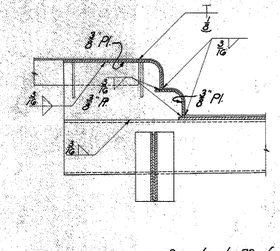


SEC. H-H

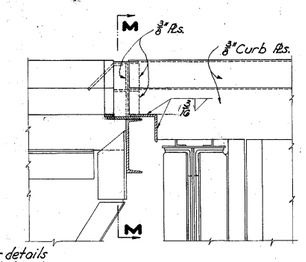
SEC. J-J



SEC. K-K

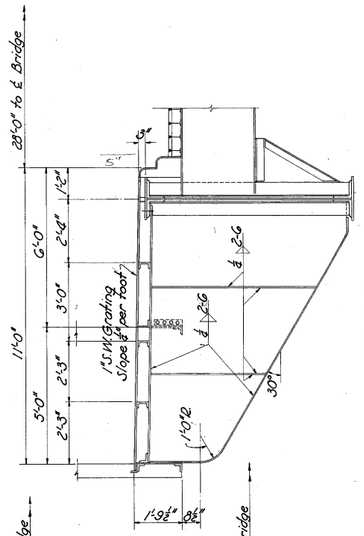


SEC. M-M

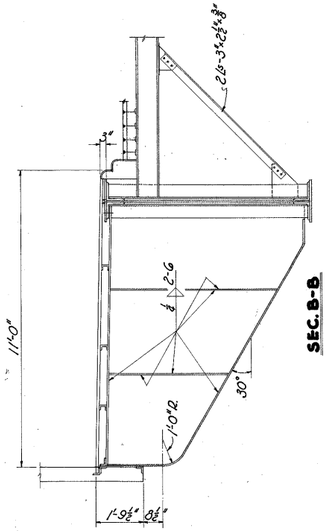


SEC. L-L

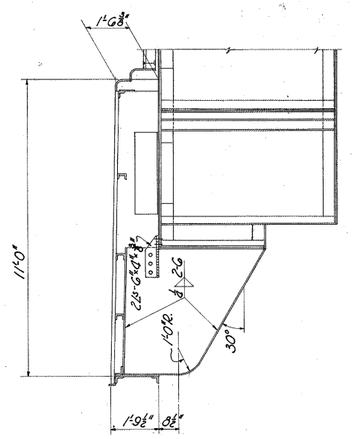
See sheet #72 for details of roadway end finish.



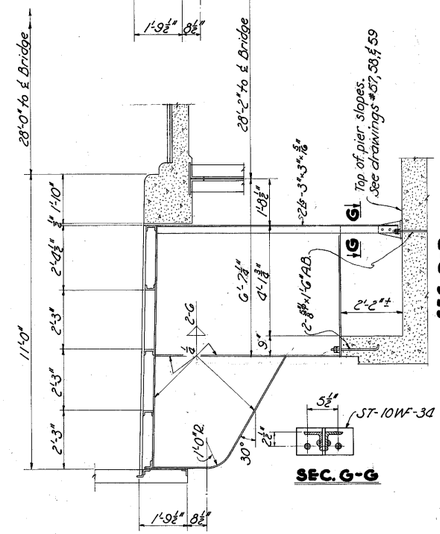
SEC. A-A



SEC. B-B

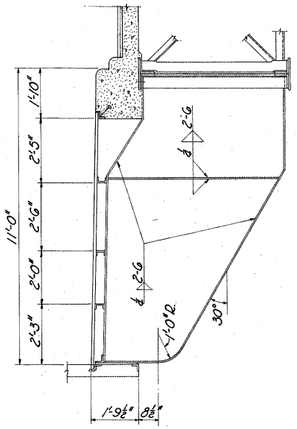


SEC. C-C

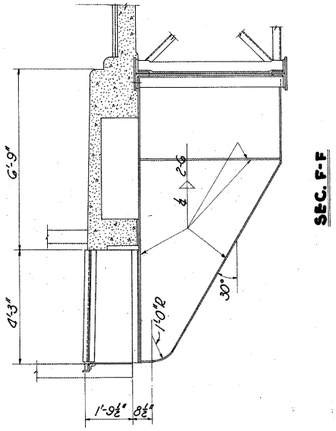


SEC. D-D

SEC. G-G

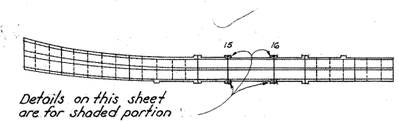


SEC. E-E



SEC. F-F

Material in brackets
Webs - ⅜" Rs.
Flges. - 6"×⅜" Bar
Stiffs. - 2½"×⅜" bars



Details on this sheet are for shaded portion

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BALCONIES AT PIERS 15 & 16
CHANNEL SPAN & STEEL APPRO. SPANS

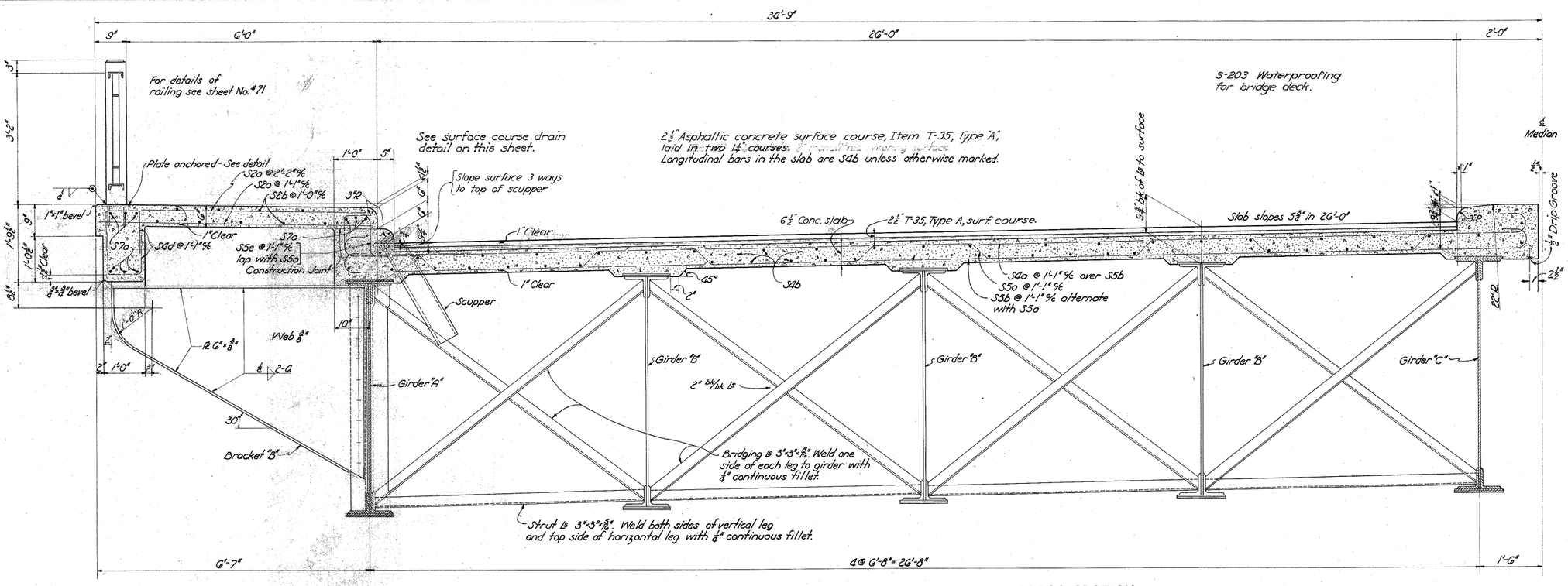
BRIDGE No. ER-G-179
OVER HURON RIVER

ERIE CO. S.H. 3
SEC. HURON FAP-684-(3) STA. 222+10

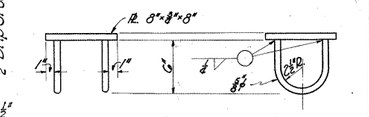
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
WB	WB	C.E.J.	[illegible]	A.C.F.A.	1940 7-10-46	

FED. RD. DIV. NO.	STATE	FED. AID PROJECT	FISCAL YEAR	74 89
2	OHIO	684-(3)	1946	

ERIE COUNTY
S. H. 5 SEC. HURON PT.

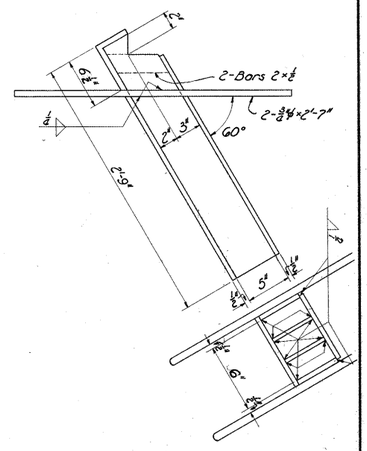


HALF CROSS SECTION



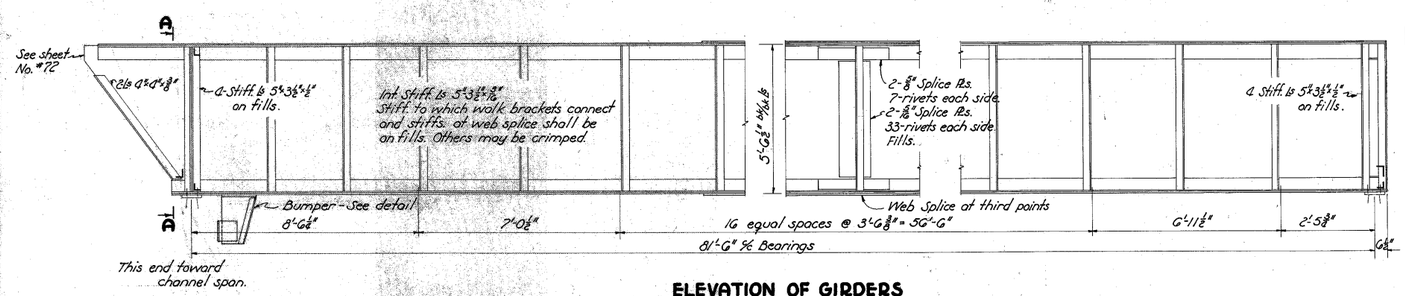
RAILING POST ANCHOR

(included with struct. steel for payment)

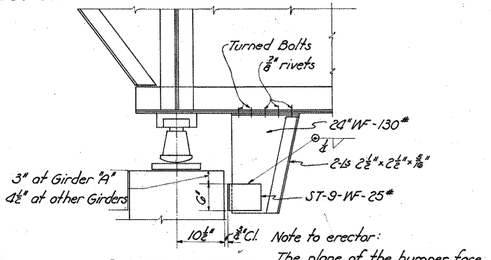


SCUPPER

See Framing Plan for Location



ELEVATION OF GIRDERS

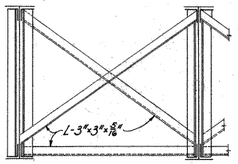


BUMPER DETAIL

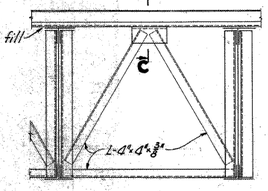
Note to erector: The plane of the bumper face must be parallel to the plane of the pier face.

	Girder "A"	Girder "B"	Girder "C"
Max. Moment	2,582,000'#	1,810,000'#	1,458,000'#
Max. Shear	123,000#	97,000#	78,000#
Web	12. 66"×⅜"	12. 66"×⅜"	12. 66"×⅜"
Flg.	4-Lls 6"×6"×⅝"	4-Lls 6"×6"×⅝"	4-Lls 6"×6"×⅝"
Cov. Pls.	2-Cov. Pls. 14"×½" F.L.	2-Cov. Pls. 14"×⅝" F.L.	2-Cov. Pls. 14"×⅝" F.L.
Cov. Pls.	2-Cov. Pls. 14"×½"×42'	2-Cov. Pls. 14"×⅝"×35'	
Max. Flange Rivet Pitch at End	= 4"	= 5"	= 5"
Camber for DL at ℄	= 1⅛"	= ⅜"	= 1⅜"

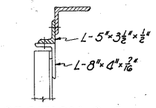
All rivets ⅞" ϕ



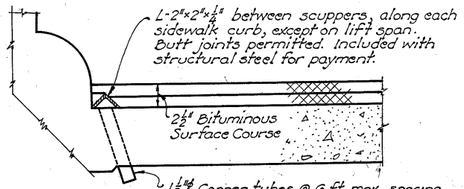
SECTION A-A



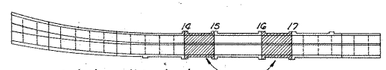
SECTION B-B



SECTION C-C



SURFACE COURSE DRAIN DETAIL



STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

CROSS SECTION & GIRDER DETAILS STEEL APPROACH SPANS

BRIDGE No. ER-G-179
OVER HURON RIVER

ERIE CO. S.H.3
SEC. HURON STA. 222+10

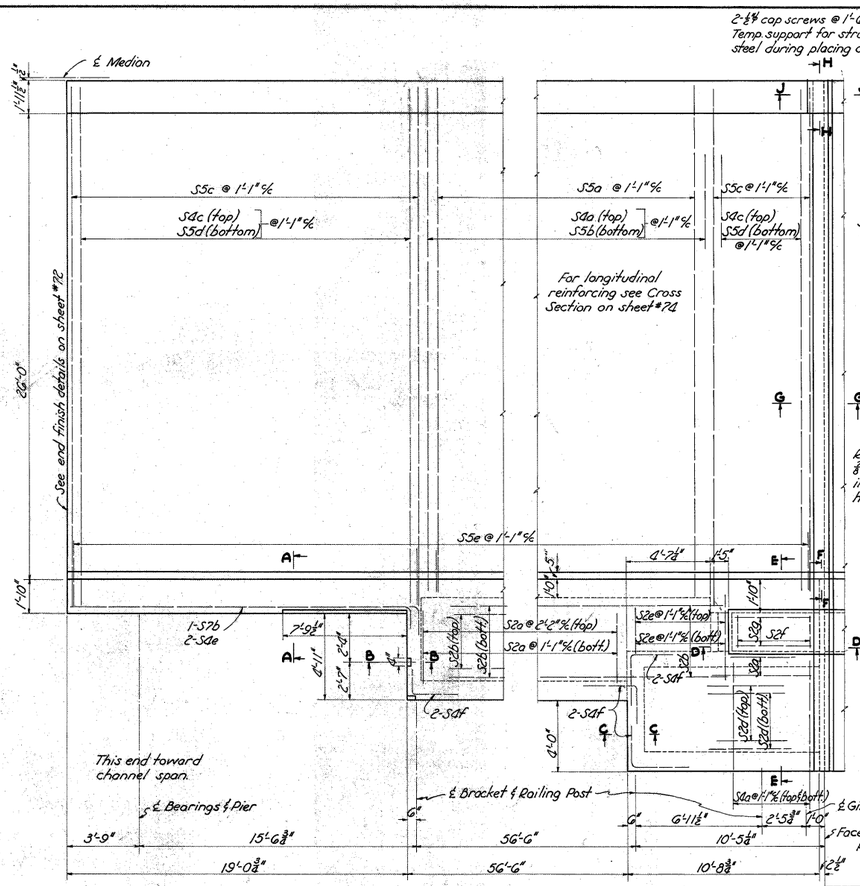
FAP-684-(3)

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
C.A.H.	C.A.H.	C.E.J.	M.B.	A.J.M.	7-10-46	8-15-46

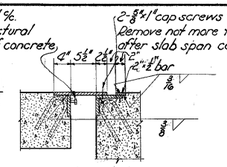
Revised 8-15-46 Drip groove added.

FED. RD. DIV. NO.	STATE	FED. AID PROJECT	FISCAL YEAR	
2	OHIO	FAP 684-(3)	1946	75 / 89

ERIE COUNTY
S. H. 3 SEC. HURON PT.

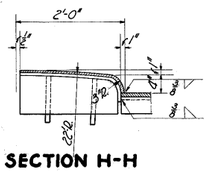


PART PLAN OF SLAB

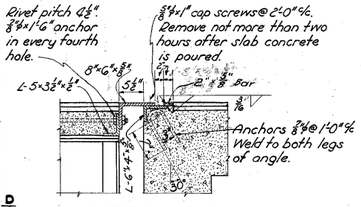


SECTION J-J

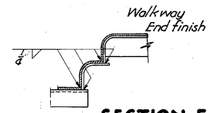
Plates for median expansion joint shall be ½" thick, anchors same as for roadway end finish.



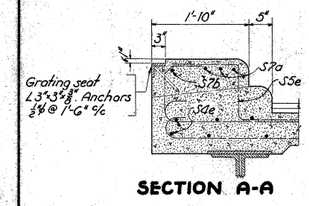
SECTION H-H



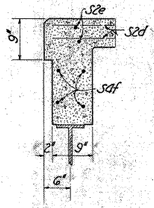
SECTION G-G



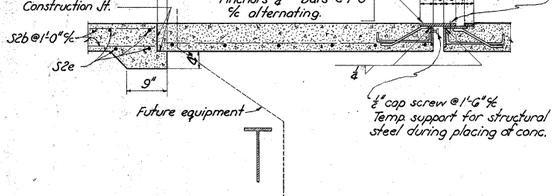
SECTION F-F



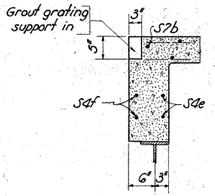
SECTION A-A



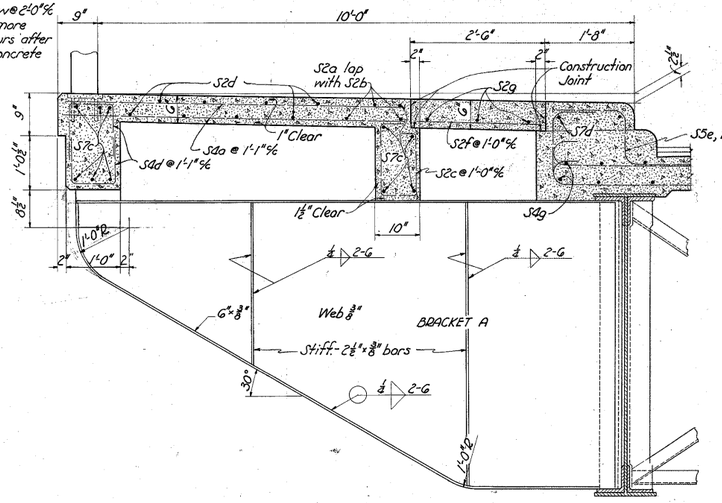
SECTION C-C



SECTION D-D

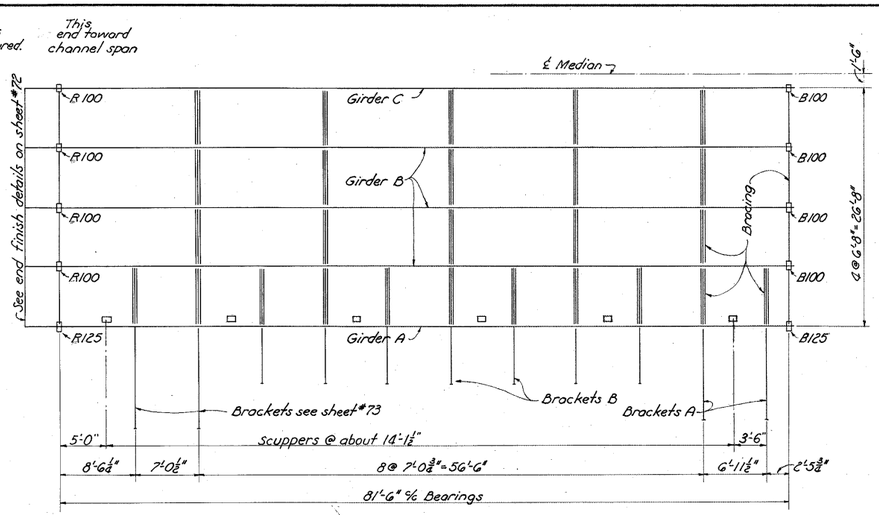


SECTION B-B

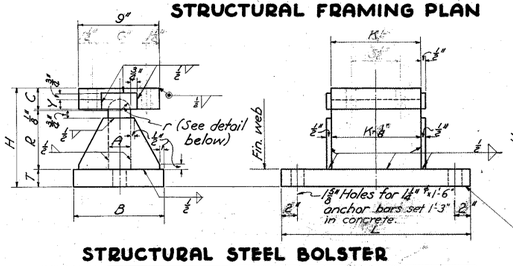


SECTION E-E

This end toward channel span

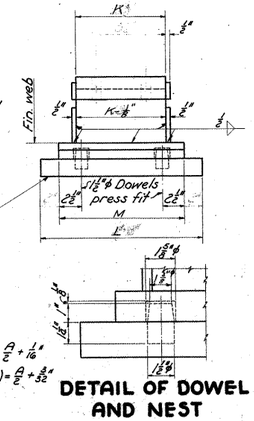


STRUCTURAL FRAMING PLAN



STRUCTURAL STEEL BOLSTER

Bolster No.	B	T	H	R	Y	C	A	L	Weight Each	K
B-100	10"	1 3/8"	10 3/8"	6 5/8"	1 3/8"	2 5/8"	25°	18"	238 lb.	11"
B-125	11"	2"	12 5/8"	7 1/8"	1 7/8"	3"	3"	20"	307 lb.	11"

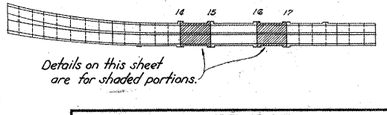


DETAIL OF DOWEL AND NEST

STRUCTURAL STEEL ROCKER

Rocker No.	B	T	H	R	A	D	G	Y	C	L	M	Weight Each	K
R-100	10"	1⅜"	10⅜"	6⅝"	2½"	2"	7½"	1⅜"	2½"	18"	16"	275 lb.	11"
R-125	11"	2"	12⅝"	7⅛"	3"	2"	8"	1⅛"	3"	20"	17½"	352 lb.	11"

Weights include sheet lead



STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

STRUCTURAL STEEL FRAMING PLAN & DETAILS, STEEL APPROACH SPANS

BRIDGE No. ER-G-179
OVER HURON RIVER

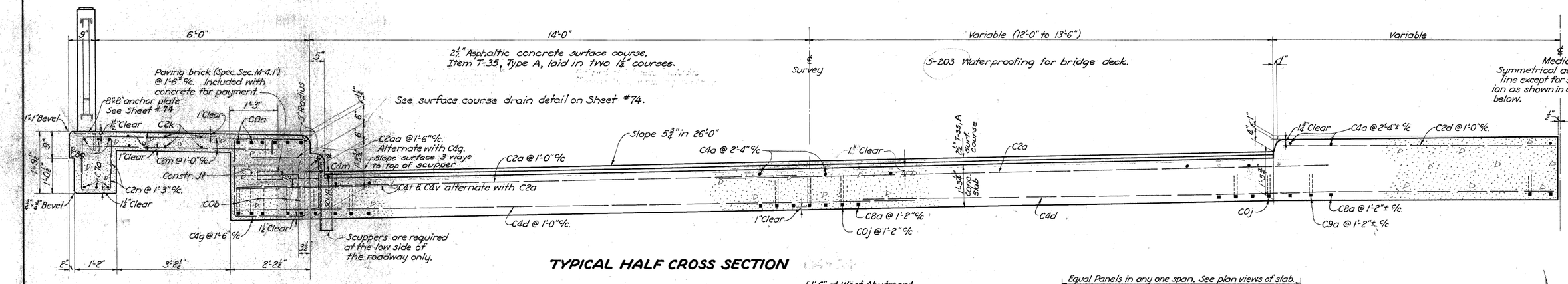
ERIE CO. S.H.3
SEC. HURON STA. 222+10

FAP-684-(3)

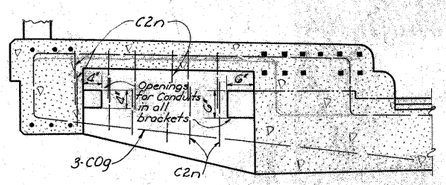
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
CWK	WDR	C.E.J.	WB	A.G.A. BHO	7-10-46	

FED. RD. DIV. NO.	STATE	FED. AID PROJECT	FISCAL YEAR	
2	OHIO	F 684-(3)	1946	76 / 89

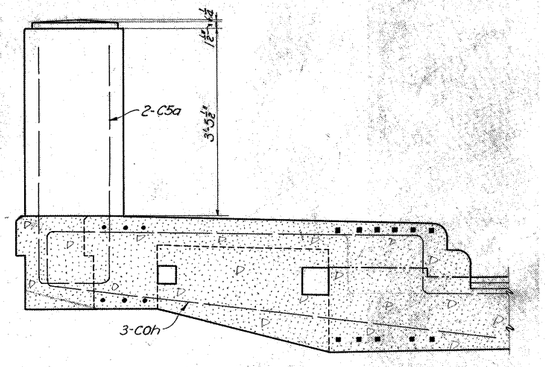
ERIE COUNTY
S.H. 3 SEC. HURON PT.



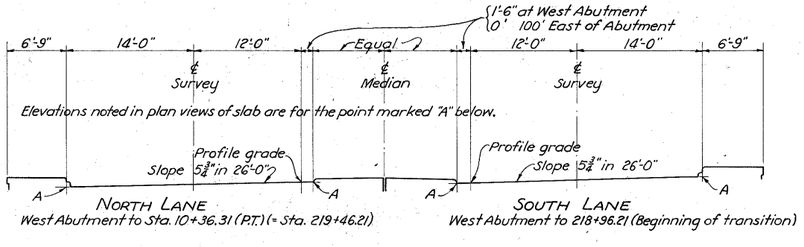
TYPICAL HALF CROSS SECTION

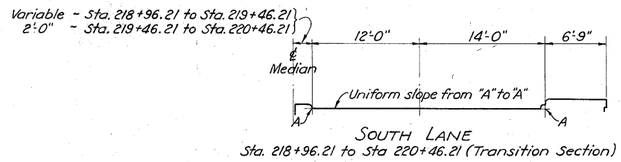


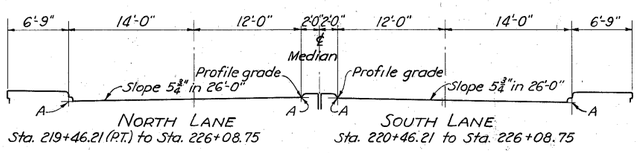
SECTION AT INTERMEDIATE BRACKET



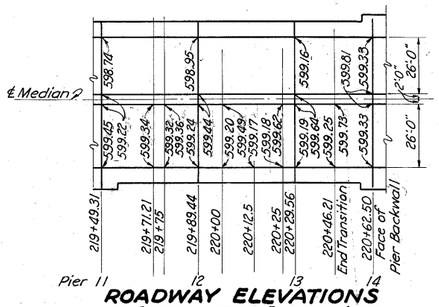
SECTION AT END BRACKET





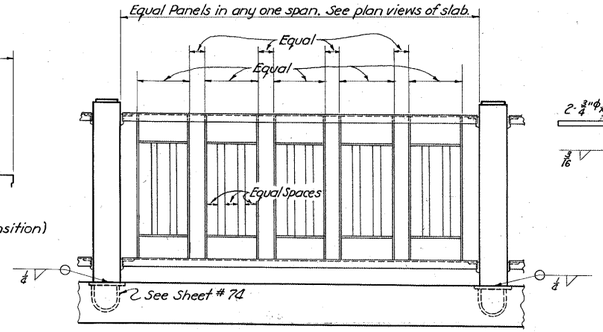


SUPERELEVATION DIAGRAM



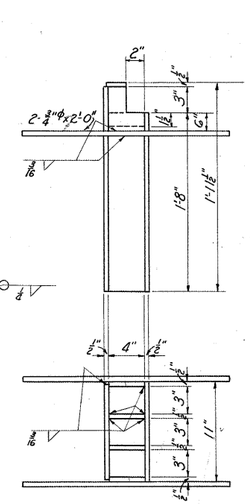
ROADWAY ELEVATIONS

See Superelevation Diagram Above

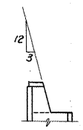


ELEVATION OF RAILING

For Other Details See Sheet #71



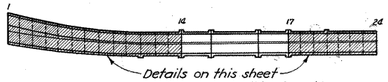
SCUPPER



SCUPPER

For Median

Parts not shown shall be the same as scupper detailed at left.



Details on this sheet are for cross-hatched portions.

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

SECTIONS
CONCRETE APPR. SUPERSTRUCTURE

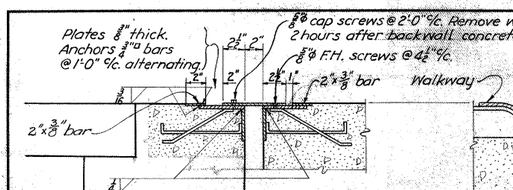
BRIDGE Nº ER-6-179
OVER HURON RIVER

ERIE COUNTY SEC. HURON
S.H. 3 STA. 222+10
FAP-684-(3)

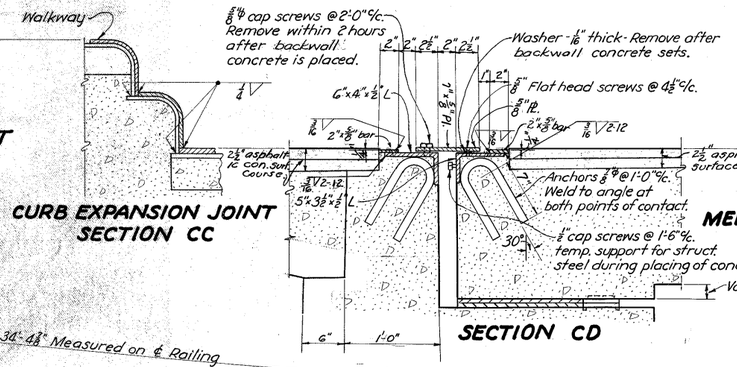
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
C.A.F.	C.A.F.	G.W.S.	F.E.U.	G.P.T. D.S.O.	7-10-46	

FED. RD. DIV. NO.	STATE	FED. AID PROJECT	FISCAL YEAR	
2	OHIO	684-(3)	1946	77 / 89

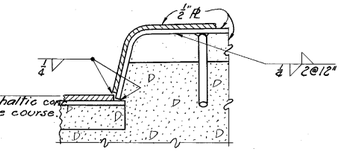
ERIE COUNTY
S.H. 3 SEC. HURON PT.



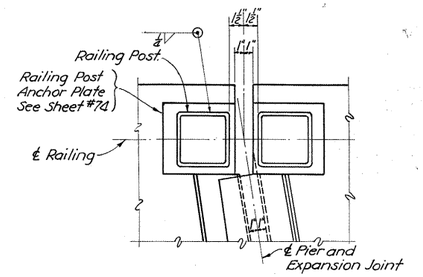
WALKWAY EXPANSION JOINT SECTION CB



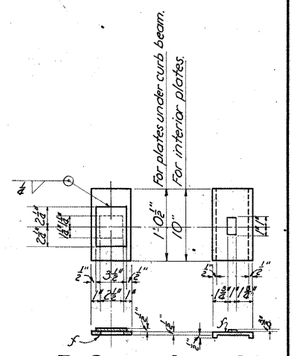
CURB EXPANSION JOINT SECTION CC



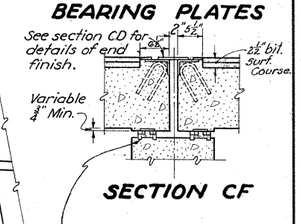
MEDIAN CURB EXPANSION JOINT SECTION CE



PLAN OF RAILING POSTS OVER PIERS

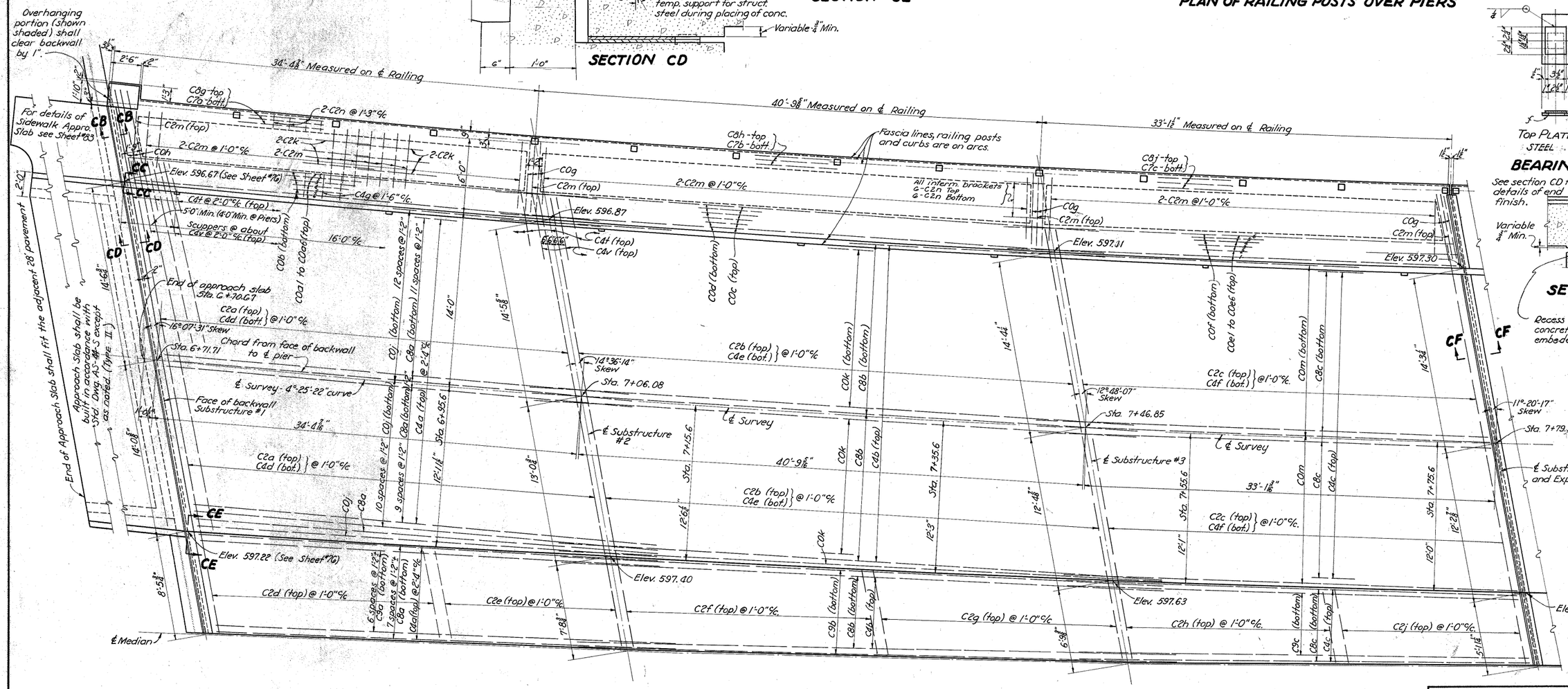


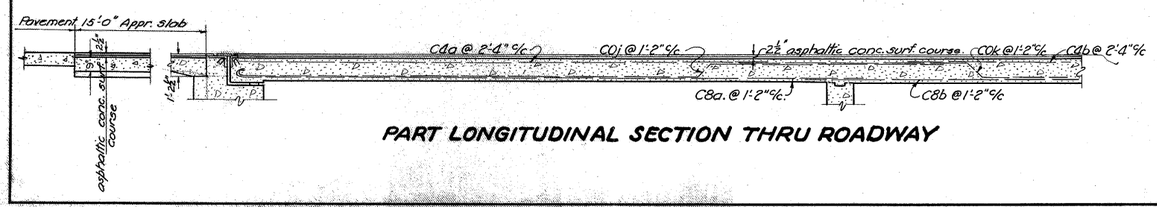
BEARING PLATES



SECTION CF

Recess may be made in concrete and bottom plate embedded in mortar.





PART LONGITUDINAL SECTION THRU ROADWAY

Details on this sheet are for cross-hatched portion.

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

PLAN OF NORTH LANE FROM WEST ABUT. TO PIER #4 CONCRETE APPR. SUPERSTRUCTURE

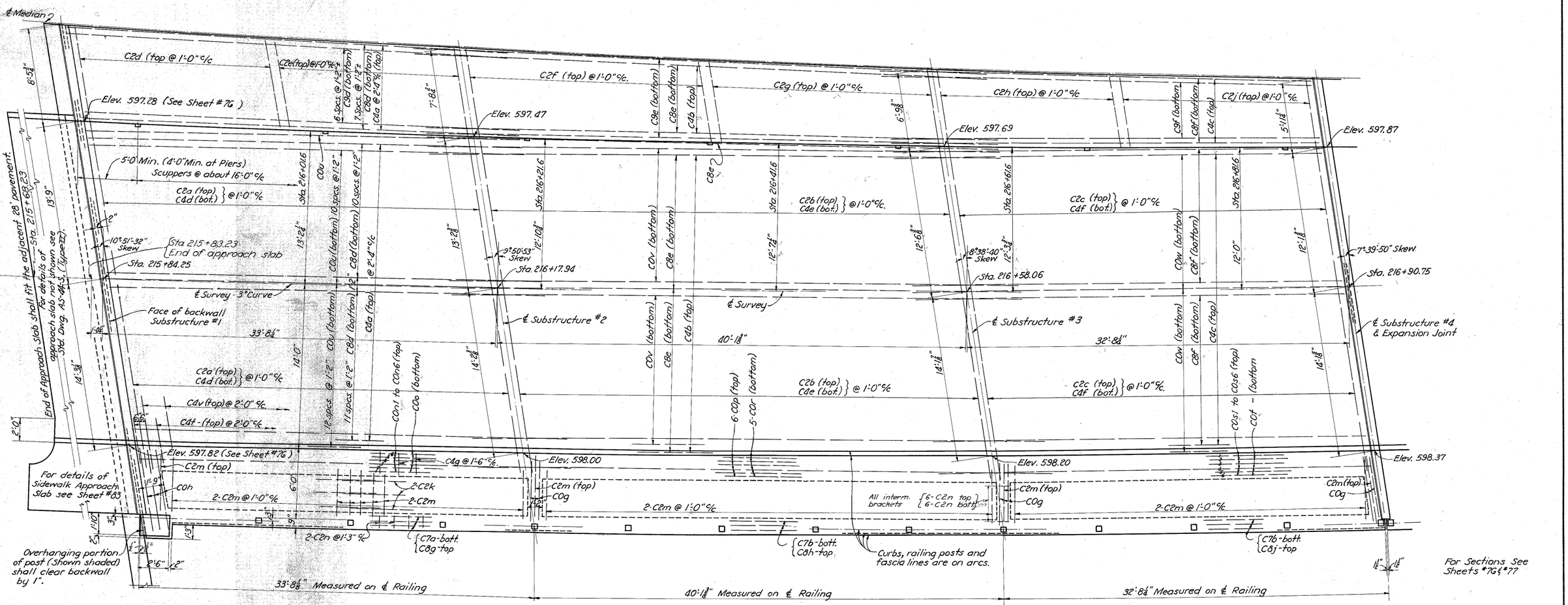
BRIDGE NO. ER-6-179 OVER HURON RIVER
FAP-684-(3) S.H. 3
ERIE COUNTY STA. 222+10
SEC. HURON

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
CAB	CAB	GWS	LLV	GFK	7-10-46	

FED. RD. DIV. NO.	STATE	FED. AID PROJECT	FISCAL YEAR
2	OHIO	FAP-684-(3)	1946

78
89

ERIE COUNTY
S. H. 3 SEC. HURON PT.



STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

PLAN OF SOUTH LANE FROM WEST ABUT. TO PIER # 4 CONCR. APPR. SUPERSTRUCTURE

BRIDGE NO. ER-6-179 OVER HURON RIVER
ERIE COUNTY FAP-684-(3) S.H. 3
SEC. HURON STA. 222+10

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
C.M.B.	C.M.B.	G.N.S.	L.C.V.	A.P.S.	7-10-46	

FED. RD. DIV. NO.	STATE	FED. AID PROJECT	FISCAL YEAR	79 / 89
2	OHIO	684-(3)	1946	

ERIE COUNTY
S.H. 3 SEC. HURON P.T.

33'-0⅛" Measured on ℄ Railing
2-C2n @ 1'-3"℅
{C8j-top C7c-bott.
C2m (top)
C0g
2-C2m
2-C2k
2-C2m @ 1'-0"℅
Elev. 597.30 (See Sheet #76)
C4g @ 1'-6"℅
C0e1 to C0e6 (top)
C0f (bottom)
Scuppers @ about 16"℅
Elev. 597.50
C2c (top) C4f (bot.) @ 1'-0"℅
11°20'-17" Skew
Sta. 7+79.95
℄ Survey - 4°25'-22" curve
℄ Substructure #4 and Expansion Joint
32'-11⅞"
C2c (top) C4f (bot.) @ 1'-0"℅
C2o @ 1'-0"℅
Elev. 597.87 (See Sheet #76)
Scuppers @ about 16"℅.
C2c (top) C4f (bot.) @ 1'-0"℅.
7°39'-50" Skew
Sta. 216+90.75
℄ Survey - 3° Curve
32'-8½"
C2c (top) C4f (bot.) @ 1'-0"℅
C0s1 to C0s6 (top)
C0t (bot.)
Elev. 597.81 (See Sheet #76)
C4g @ 1'-6"℅
2-C2m @ 1'-0"℅
C2m (top
C0g
2-C2k
2-C2m
2-C2n @ 1'-3"℅
{C7c-bott. C8j-top
32'-8½" Measured on ℄ Railing
18 spaces @ 1'-2" C0m (bottom)
11 spaces @ 1'-2" C8c (bottom)
C4c (top) @ 2'-4"℅
14'-0"
14'-2½"
12'-0"
12'-2⅝"
10 spaces @ 1'-2" C0m (bottom)
9 spaces @ 1'-2" C8c (bottom)
C4c (top) @ 2'-4"℅
4 spc. @ 1'-2" C3c (bot.)
5 spaces C8c (bot.)
C4c (top) @ 2'-4"℅
C2p @ 1'-0"℅
4'-1⅛"
6'-0"
9"
All interm. brackets
C2n top C2n bott.
40'-4⅜" Measured on ℄ Railing
{C8h-top C7b-bott.
Fascia lines, railing posts and curbs are on arcs.
2-C2m @ 1'-0"℅.
C0p (top) C0r (bot.)
C2c (top) C4h (bot.) @ 1'-0"℅
9°52'-45" Skew
Sta. 8+12.94
℄ Substructure #5
40'-4⅜"
C2c (top) C4h (bot.) @ 1'-0"℅
Curb is on an arc.
Elev. 598.00
C2r @ 1'-0"℅
Elev. 598.04
Curb is on an arc
C2c (top) C4h (bot.) @ 1'-0"℅.
C4v (top) @ 2'-0"℅
C4t (top) @ 2'-0"
C0p (top) C0r (bot.)
Elev. 598.54
2-C2m @ 1'-0"℅
C0g
C2m (top)
{C7b-bott. C8h-top
Curbs, railing posts and fascia lines are on arcs.
40'-1½" Measured on ℄ Railing
C0v (bottom) C8e (bottom) C4b (top)
C2s @ 1'-0"℅.
4 spcs. C3e C8e C4b
4'-0"
12'-1½"
14'-1⅜"
C4t (top) @ 2'-0"
C4v (top) @ 2'-0"
8°05'-33" Skew
Sta. 8+53.34
℄ Substructure #6
Elev. 598.24
C2t @ 1'-0"℅
C2t @ 1'-0"℅
Elev. 598.25
C2u @ 1'-0"℅
2 spcs. C3e C8e C4b
40'-3⅛"
℄ Substructure #7
C2c (top) C4j (bot.) @ 1'-0"℅
C0p (top) C0r (bot.)
Elev. 598.75
2-C2m @ 1'-0"℅
C0g
C2m (top)
{C8h-top C7b-bott.
40'-1⅛" Measured on ℄ Railing
14'-0⅝"
5°28'-46" Skew
Sta. 217+63.56
40'-1½"
For sections see Sheets #76 & #77
Details on this sheet are for shaded portion.

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

PLAN OF BOTH LANES FROM PIER #4 TO PIER #7 CONCRETE APRR. SUPERSTRUCTURE

BRIDGE NO. ER-6-179 OVER HURON RIVER
ERIE COUNTY FAP-684-(3) S.H. 3
SEC. HURON STA. 222+10

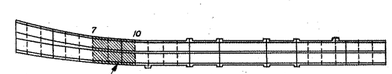
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
[illegible]	[illegible]	GWS	[illegible]	[illegible]	7-10-46	

FED. RD. DIV. NO.	STATE	FED. AID PROJECT	FISCAL YEAR	80 / 89
2	OHIO	684-A-(3)	1946	

ERIE COUNTY
S. H. 3 SEC. HURON PT.

40'-2⅝" Measured on ℄ Railing
2-C2n @ 1'-3"%
C8h-top
C7b-bott.
C2m (top)
C2k
C0g
2-C2m
C4g @ 1'-6"%
Elev. 597.97 (See Sheet #76).
C0p (top)
C0r (bot.)
Scuppers @ about 16'%.
14'-1⅝"
6'-0"
3"
2-C2m @ 1'-0"%
1'-2"
6-C2n-top
6-C2n-bott.
All interm. brackets.
32'-8⅜" Measured on ℄ Railing
C8j-top
C7c-bott.
C0s1 to C0s6 (top)
C0t (bottom)
Elev. 598.19
Elev. 598.36
Elev. 598.53
C4t @ 2'-0"% (top)
C4v @ 2'-0"% (top)
2"
C2m (top)
C0g
14'-0"
C2c (top)
C4j (bot.) } @ 1'-0"%
6°-18'-35" Skew
Sta. 8+93.65
℄ Survey - 4°25'-22" Curve
40'-2⅝"
12'-0⅝"
11 spcs. @ 1'-2" C0r (bottom)
12 spcs. @ 1'-2" C8e (bottom)
C4b (top) @ 2'-4"%
14'-0⅝"
C0v (bottom)
C8f (bottom)
4°31'-52" Skew
Sta. 9+33.86
3°05'-01" Skew
Sta. 9+66.59
1°38'-14" Skew
Sta. 9+99.29
12'-0"
9 spcs. @ 1'-2" C0v (bottom)
10 spcs. @ 1'-2" C8e (bottom)
12'-0⅝"
32'-8⅜"
C4c (top)
12'-0⅛"
3'-2⅝"
C2u @ 1'-0"% (top)
C2v @ 1'-0"%
Elev. 598.46 (See Sheet #76).
Elev. 598.68
C2w @ 1'-0"% (top)
Elev. 598.85
C2x @ 1'-0"% (top)
Elev. 599.02
℄ Substructure #7
Scuppers @ about 16'%.
℄ Substructure #8
℄ Substructure #9 and Expansion Joint
℄ Substructure #10
4°16'-32" Skew
Sta. 218+03.69
℄ Survey - 3° Curve
40'-1⅛"
3°04'-19" Skew
Sta. 218+43.81
2°05'-29" Skew
Sta. 218+76.50
1°06'-38" Skew
Sta. 219+09.19
Sta. 218+96.21 Begin Transition
Sta. 219+00
Elev. 598.95 (See Sheet #76).
Elev. 599.16
Elev. 599.33
Elev. 599.43
Elev. 599.45
Elev. 599.48
C0p (top)
C0r (bot.)
C4g @ 1'-6"%
2-C2k
2-C2n @ 1'-3"%
C7b-bott.
C8h-top
40'-1⅝" Measured on ℄ Railing
C8c-bott.
C8j-top
32'-8⅜" Measured on ℄ Railing
C7c-bott.
C8j-top
32'-8⅜"
Curbs, railing posts and fascia lines are on arcs.

For sections see Sheets #76 & #77



Details on this sheet are for shaded portion

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

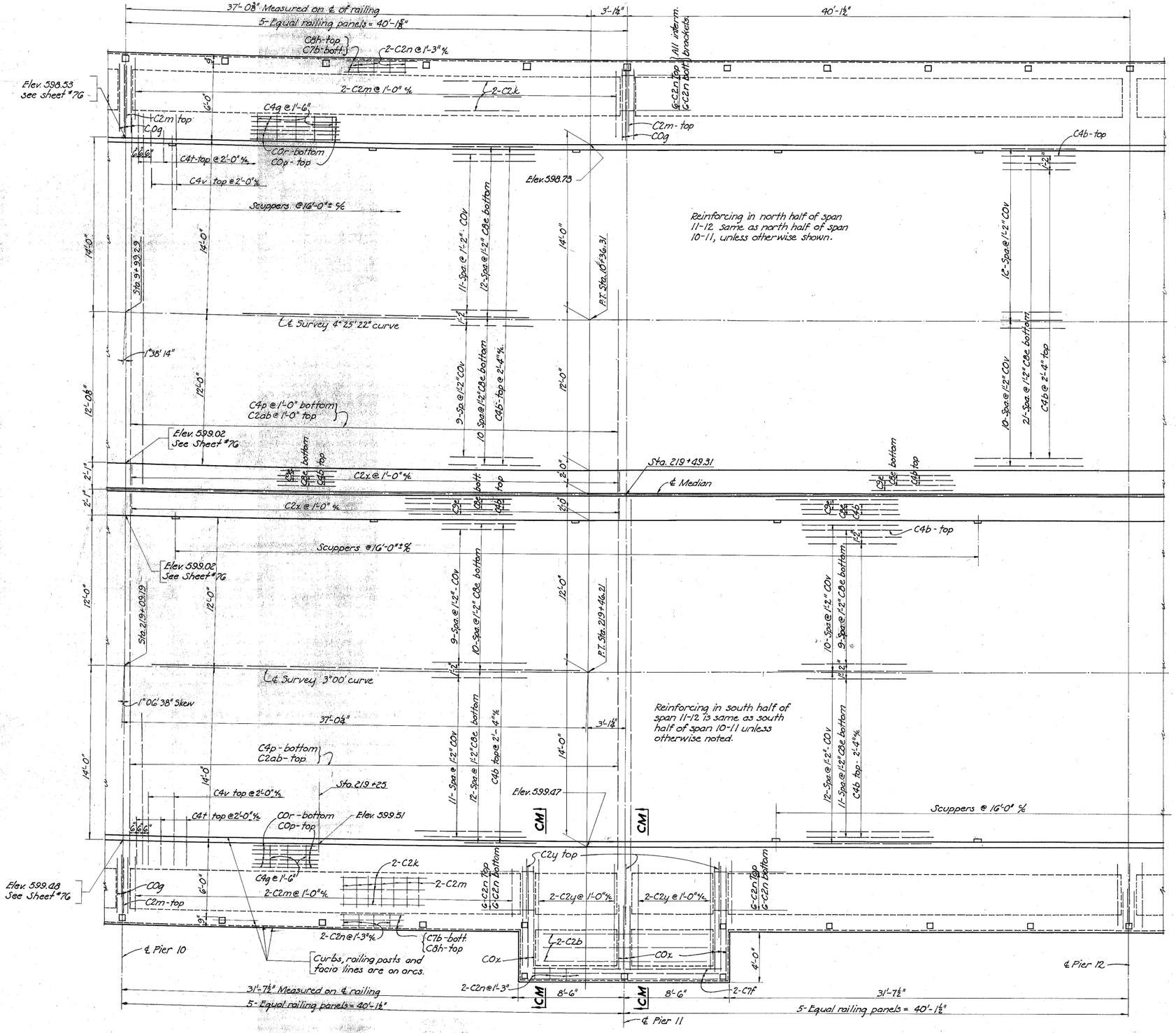
PLAN OF BOTH LANES FROM PIER #7 TO PIER #10 CONCRETE APPR. SUPERSTRUCTURE

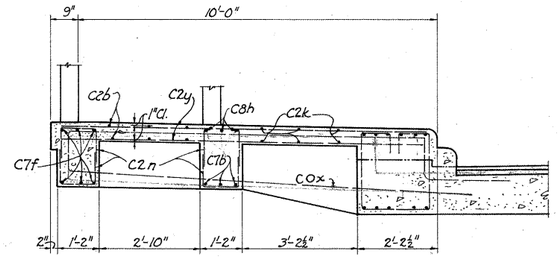
BRIDGE NO. ER-6-179 OVER HURON RIVER
FAP-684-(3)
ERIE COUNTY S.H. 3
SEC. HURON STA 222+10

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
CWP	CWP	GWS	EEU	AJP	7-10-46	

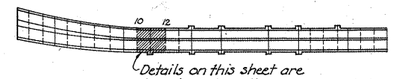
FED. RD. DIV. NO.	STATE	FED. AID PROJECT	FISCAL YEAR	81
2	OHIO	684-(3)	1946	89

ERIE COUNTY
S.H. 3 SEC. HURON PT





SECTION CM-CM



Details on this sheet are for shaded portion.

Note:- For elevations see diagram on Sheet #76 For additional sections through structure see Sheets #76 & #77

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

PLAN - PIER 10 TO PIER 12
CONCRETE APPROACH SUPERSTRUCTURE

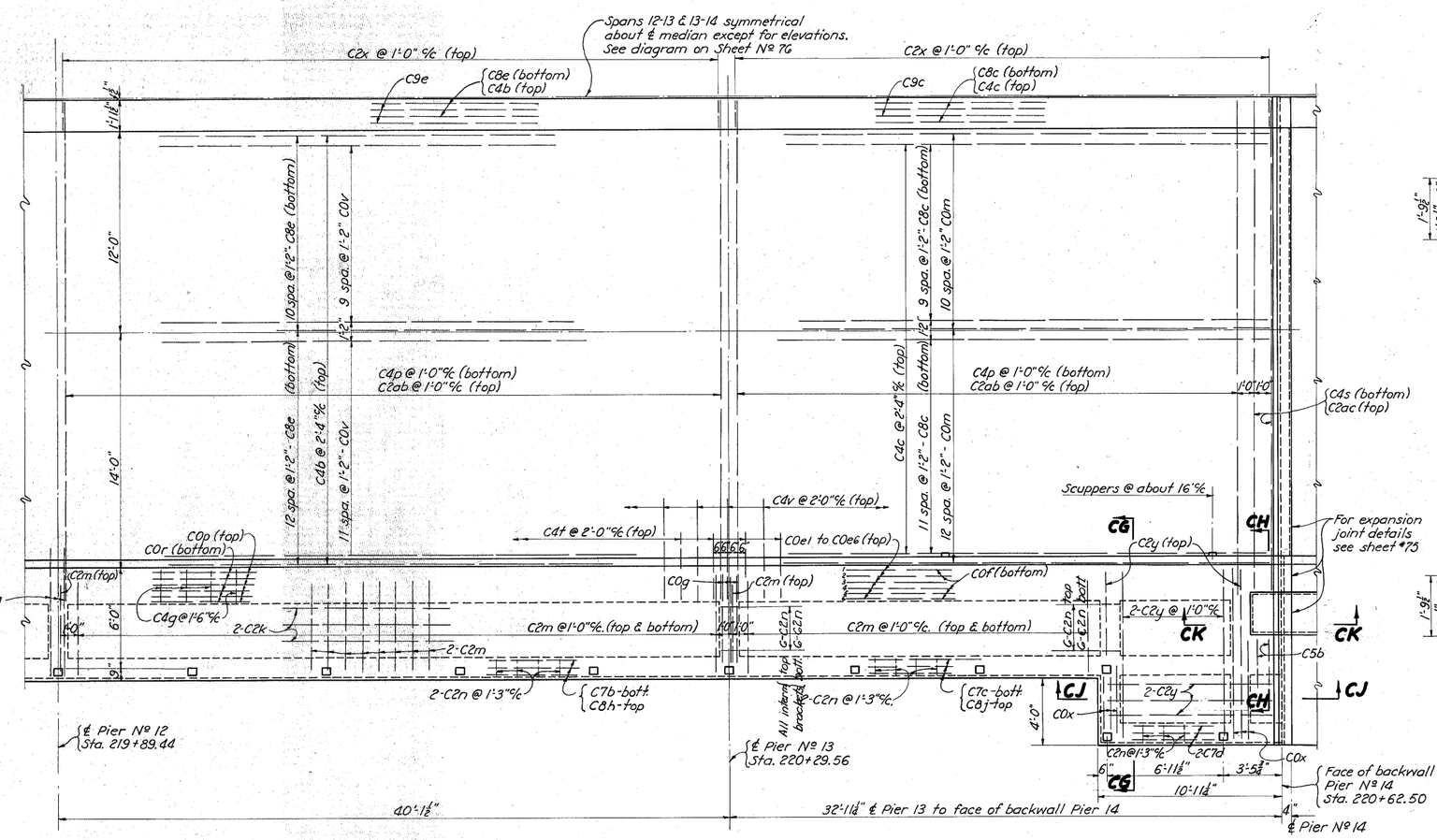
BRIDGE NO. ER-6-17.79
OVER HURON RIVER
FAP-684-(3)

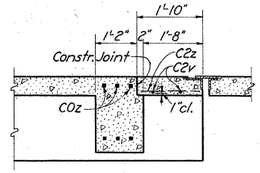
ERIE COUNTY S.H. 3
SECTION HURON STA. 222+10.

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
CAP	CAK	JRF	L.E.U.	A.J.H. BWB	7-10-46	

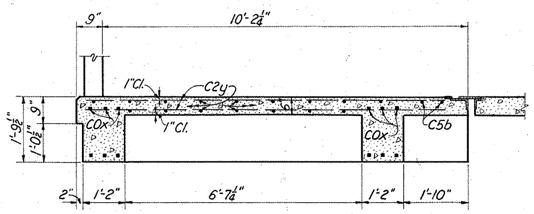
FED. RD. DIV. NO.	STATE	FED. AID PROJECT	FISCAL YEAR	82 / 89
2	OHIO	F 684-(3)	1946	

ERIE - COUNTY
S. H. 3 SEC. HURON PT.

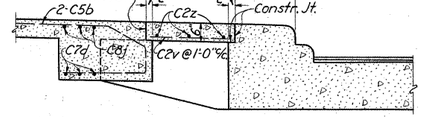




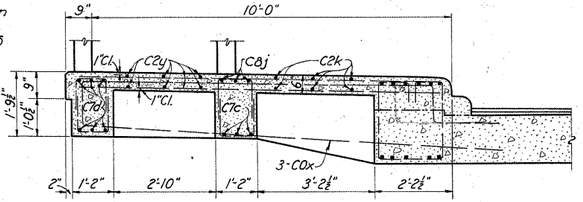
SECTION CK-CK



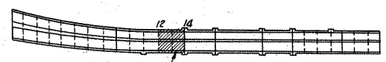
SECTION CJ-CJ



SECTION CH-CH



SECTION CG-CG



Details on this sheet are for cross-hatched portion.

Note:
For other sections through structure sheets #76 #77
For elevations see diagram on sheet #76

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

PLAN FROM PIER 12 TO PIER 14 CONCR. APPR. SUPERSTRUCTURE

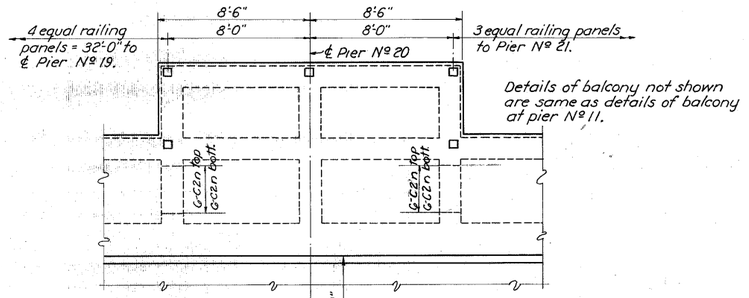
BRIDGE NO. ER-6-17.9 OVER HURON RIVER

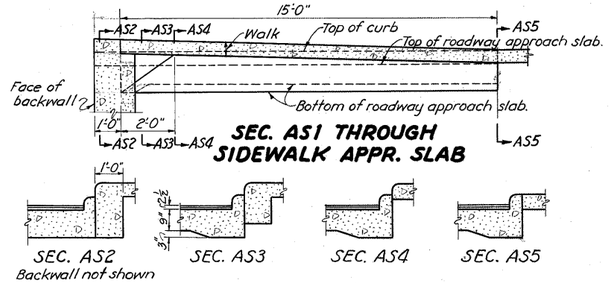
ERIE COUNTY S.H. 3
SEC. HURON STA. 222+10
FAP 684-(3)

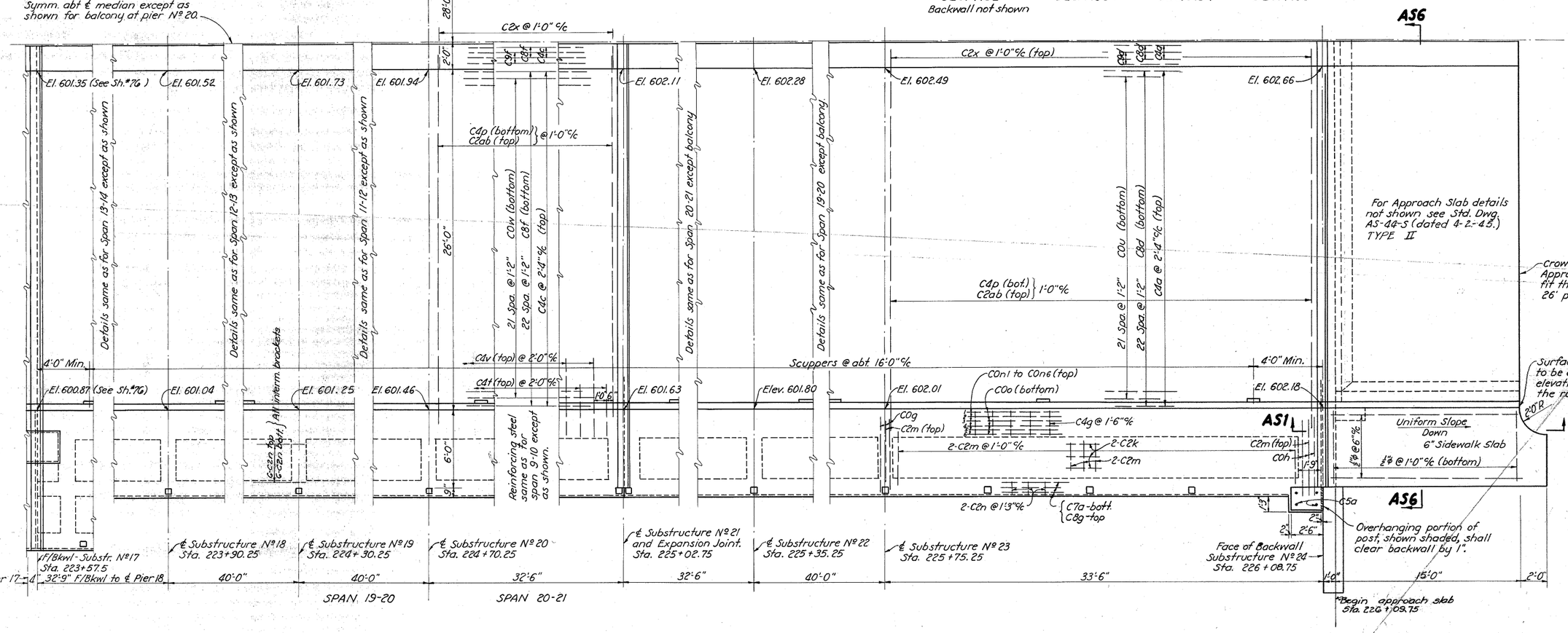
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
C.H.K.	C.H.K.	G.W.S.	S.C.U.	A.J.T.	7-10-46	

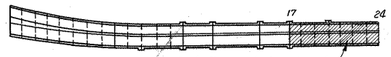
FED. RD. DIV. NO.	STATE	FED. AID PROJECT	FISCAL YEAR	83 / 89
2	OHIO	FAP 684-(3)	1946	

ERIE COUNTY
S.H. 3 SEC. HURON PT.









STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

PLAN FROM PIER 17 TO E. ABUT. CONCR. APPR. SUPERSTRUCTURE

BRIDGE NO. ER-6-179 OVER HURON RIVER

ERIE COUNTY S.H. 3
SEC. HURON STA. 222+10

FAP-684-(3)

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
C.W.R.	C.A.F.	G.W.S.	L.P.V.	A.G.F.	7-10-46	

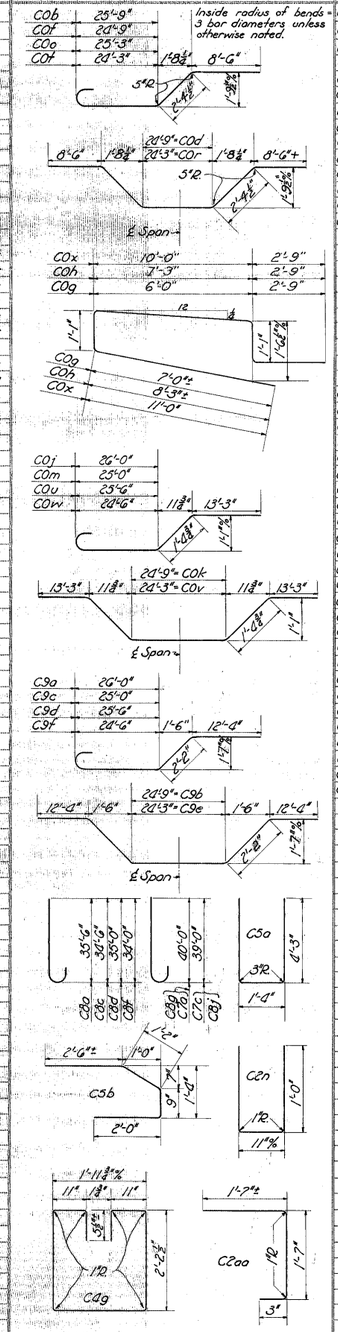
FED. RD. DIV. NO.	STATE	FED. AID PROJECT	FISCAL YEAR	84 / 89
2	OHIO	F 684-(3)	1946	

ERIE COUNTY
S. H. 3 SEC. HURON PT.

SUPERSTRUCTURE STEEL LIST FOR CONCRETE SLAB SPANS

Mark	Number on Sheet 77	78	79	80	81	82	83	Total Number	Size	Length	Weight	Shape
C0a1	1							1	1⅛"sq	27'-6"	150	Str.
C0a2	1							1	1⅛"sq	30'-9"	160	Str.
C0a3	1							1	1⅛"sq	34'-0"	180	Str.
C0a4	1							1	1⅛"sq	37'-3"	200	Str.
C0a5	1							1	1⅛"sq	40'-6"	220	Str.
C0a6	1							1	1⅛"sq	43'-9"	230	Str.
C0e1	1		1			2	2	6	1⅛"sq	26'-6"	850	Str.
C0e2	1		1			2	2	6	1⅛"sq	29'-9"	950	Str.
C0e3	1		1			2	2	6	1⅛"sq	33'-0"	1050	Str.
C0e4	1		1			2	2	6	1⅛"sq	36'-3"	1160	Str.
C0e5	1		1			2	2	6	1⅛"sq	39'-3"	1250	Str.
C0e6	1		1			2	2	6	1⅛"sq	42'-9"	1360	Str.
C0n1		1					2	3	1⅛"sq	26'-9"	430	Str.
C0n2		1					2	3	1⅛"sq	30'-0"	480	Str.
C0n3		1					2	3	1⅛"sq	33'-3"	530	Str.
C0n4		1					2	3	1⅛"sq	36'-6"	580	Str.
C0n5		1					2	3	1⅛"sq	39'-9"	630	Str.
C0n6		1					2	3	1⅛"sq	43'-0"	690	Str.
C0s1		1	1	4			4	10	1⅛"sq	26'-0"	1,380	Str.
C0s2		1	1	4			4	10	1⅛"sq	29'-3"	1,550	Str.
C0s3		1	1	4			4	10	1⅛"sq	32'-6"	1,730	Str.
C0s4		1	1	4			4	10	1⅛"sq	35'-9"	1,900	Str.
C0s5		1	1	4			4	10	1⅛"sq	39'-0"	2,070	Str.
C0s6		1	1	4			4	10	1⅛"sq	42'-3"	2,240	Str.
C0b	5							5	1⅛"sq	37'-9"	1,010	Bt.
C0c	6							6	1⅛"sq	48'-0"	1,530	Str.
C0d	5							5	1⅛"sq	46'-6"	1,240	Bt.
C0f	5		5			10	10	30	1⅛"sq	36'-9"	5,060	Bt.
C0g	9	9	18	30	9	6	39	120	1⅛"sq	17'-0"	10,830	Bt.
C0h	3	3					6	12	1⅛"sq	19'-6"	1,240	Bt.
C0j	21							21	1⅛"sq	42'-0"	5,360	Bt.
C0k	23							23	1⅛"sq	54'-0"	6,600	Bt.
C0m	23		23			46	46	138	1⅛"sq	41'-0"	30,080	Bt.
C0o		5					10	15	1⅛"sq	37'-3"	2,970	Bt.
C0p		6	24	12	24	12	36	114	1⅛"sq	46'-0"	27,960	Str.
C0r		5	20	10	20	10	30	95	1⅛"sq	46'-0"	23,220	Bt.
C0t		5	5	20			20	50	1⅛"sq	36'-3"	9,630	Bt.
C0u		22					44	66	1⅛"sq	41'-6"	13,000	Bt.
C0v		23	88	44	90	44	136	425	1⅛"sq	33'-6"	120,890	Bt.
C0w		23	23	92			88	226	1⅛"sq	40'-6"	48,630	Bt.
C0x					9	12	21	42	1⅛"sq	25'-0"	5,570	Bt.
C9a	7							7	1⅛"sq	41'-6"	1,250	Bt.
C9b	8							8	1⅛"sq	33'-9"	1,350	Bt.
C9c	7		5			4	4	20	1⅛"sq	40'-6"	3,490	Bt.
C9d		7					4	11	1⅛"sq	41'-0"	1,940	Bt.
C9e		8	16	6	8	4	12	54	1⅛"sq	33'-3"	12,380	Bt.
C9f		7	5	8			8	28	1⅛"sq	40'-0"	4,820	Bt.
C8a	31							31	1"sq	36'-9"	3,870	Bt.
C8b	30							30	1"sq	43'-9"	4,060	Str.
C8c	30		28			48	48	154	1"sq	35'-9"	18,720	Bt.
C8d		31					50	81	1"sq	36'-3"	10,000	Bt.
C8e		31	102	50	98	50	146	477	1"sq	43'-3"	70,140	Str.
C8f		31	28	96			100	255	1"sq	35'-3"	30,560	Bt.
C8g	3	3					6	12	1"sq	41'-0"	1,670	Bt.
C8h	3	3	12	6	12	6	18	60	1"sq	50'-0"	10,200	Str.
C8j	3	3	6	12		6	18	48	1"sq	40'-0"	6,520	Bt.
C7a	3	3					6	12	1⅛	41'-0"	1310	Bt.
C7b	3	3	12	6	12	6	18	60	1⅛	50'-0"	8000	Str.
C7c	3	3	6	12		6	18	48	1⅛	40'-0"	5120	Bt.
C7d						12	12	24	1⅛	10'-6"	670	Str.
C7f					6		6	12	1⅛	16'-6"	530	Str.
C5a	2	2					4	8	⅞"	9'-6"	110	Bt.
C5b						4	4	8	⅞"	7'-0"	80	Bt.

Bending Diagrams

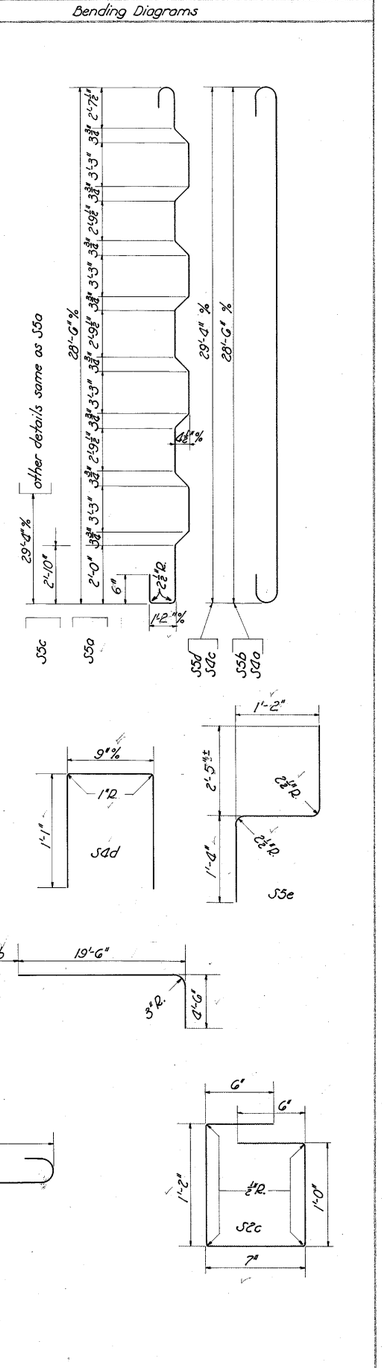


Mark	Number on Sheet 77	78	79	80	81	82	83	Total Number	Size	Length	Weight	Shape
C2a	13	13						13	⅝"	16'-0"	1,350	Str.
C2b	82	82				6	6	176	⅝"	15'-6"	1,820	Str.
C2c	66	66	160	128				1020	⅝"	15'-0"	10,220	Str.
C2d	17	17						34	⅝"	8'-0"	180	Str.
C2e	17	17						34	⅝"	7'-6"	170	Str.
C2f	20	20						40	⅝"	7'-0"	190	Str.
C2g	21	21						42	⅝"	6'-6"	180	Str.
C2h	16	16						32	⅝"	6'-0"	130	Str.
C2j	17	17						34	⅝"	5'-6"	130	Str.
C2k	36	36	72	72	48	48	168	480	⅝"	20'-0"	6,400	Str.
C2m	210	200	450	410	283	260	910	2,717	⅝"	5'-3"	9,520	Str.
C2n	198	196	412	412	344	288	1100	2830	⅝"	2'-9"	5,310	Bt.
C2o			32					32	⅝"	3'-0"	110	Str.
C2p			34					34	⅝"	4'-6"	100	Str.
C2r			40					40	⅝"	4'-0"	110	Str.
C2s			42					42	⅝"	3'-6"	100	Str.
C2t			40					40	⅝"	3'-0"	80	Str.
C2u			42	40				82	⅝"	2'-9"	150	Str.
C2v				42		4	4	50	⅝"	2'-3"	80	Str.
C2w				66				66	⅝"	2'-0"	90	Str.
C2x				66	160	140	300	860	⅝"	1'-9"	1010	Str.
C2y					31	44	44	119	⅝"	10'-0"	790	Str.
C2z						6	6	12	⅝"	1'-6"	10	Str.
C2aa	72	71	152	142	108	108	338	991	⅝"	3'-3"	2,180	Bt.
C2ab					160	142	496	798	⅝"	29'-9"	15,800	Str.
C2ac					4	4		8	⅝"	29'-3"	160	Str.

STEEL LIST FOR DECK GIRDER APPROACH SPAN

Mark	Size	No.	Length	Weight	Shape
S7a	1/4	82	30'-3"	6780	Str.
S7b	1/4	4	25'-9"	250	Bt.
S7c	1/4	44	12'-3"	1,440	Bt.
S7d	1/4	4	5'-9"	60	Str.
S5a	3/4	220	31'-6"	10,000	Bt.
S5b	3/4	224	30'-0"	10,080	Bt.
S5c	3/4	100	32'-3"	4,850	Bt.
S5d	3/4	92	30'-9"	4,250	Bt.
S5e	3/4	320	4'-6"	2,160	Bt.
S4a	3/4	224	30'-0"	7,030	Bt.
S4b	3/4	352	29'-9"	12,140	Str.
S4c	3/4	92	30'-9"	2,960	Bt.
S4d	3/4	496	2'-9"	1,430	Bt.
S4e	3/4	8	24'-0"	200	Bt.
S4f	3/4	32	8'-0"	270	Bt.
S4g	3/4	8	5'-9"	50	Str.
S2a	1/4	320	6'-3"	1,350	Str.
S2b	1/4	108	21'-6"	1,550	Str.
S2c	1/4	40	3'-6"	90	Bt.
S2d	1/4	32	10'-0"	220	Str.
S2e	1/4	48	10'-3"	330	Str.
S2f	1/4	20	2'-0"	40	Str.
S2g	1/4	12	4'-6"	40	Str.

Bending Diagrams



STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

SUPERSTRUCTURE STEEL LIST

BRIDGE No. ER-G-179
OVER HURON RIVER

ERIE CO. S.H.3
SEC. HURON STA. 222+10

FA P-684-(3)

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
CAK	CWB	CEJ	LEV	A.J.F.	1946 7-10-46	

FED. RD. DIV. NO.	STATE	FED. AID PROJECT	FISCAL YEAR	85 / 89
2	OHIO	F684-(3)	1946	

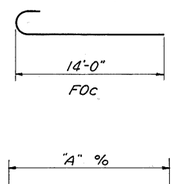
ERIE COUNTY
S.H. 3 SEC. HURON PT.

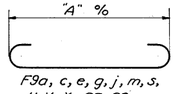
REINFORCING STEEL LIST FOR SUBSTRUCTURE FRAMES 2-13 AND 18-23

Number of Bars Required for Frames

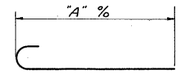
#2 N.	#2 S.	#3 N.	#3 S.	#4 N.	#4 S.	#5 N.	#5 S.	#6 N.	#6 S.	#7 N.	#7 S.	#8 N.	#8 S.	#9 N.	#9 S.	#10 N.	#10 S.	11,12,13 18,19,20 N.	11,12,13 18,19,20 S.	#21 N.	#21 S.	#22 N.	#22 S.	#23 N.	#23 S.	Total	Mark	Size	Length	Weight	Str. or Bt.	"A"
						4																				4	F0a	1⅛"sq	13'-0"	280	Str.	
							4																			4	F0b	1⅛"sq	11'-0"	230	Str.	
						8																				8	F0c	1⅛"sq	15'-3"	650	Bt.	
4																										4	F9a	⅛"sq	38'-9"	670	Bt.	36'-9"
4																										4	F9b	⅛"sq	36'-9"	630	Str.	
4																										4	F9c	⅛"sq	39'-0"	670	Bt.	37'-0"
4																										4	F9d	⅛"sq	37'-0"	640	Str.	
		4	4																							8	F9e	⅛"sq	37'-3"	1290	Bt.	35'-3"
		4	4																							8	F9f	⅛"sq	35'-3"	1220	Str.	
				4																						4	F9g	⅛"sq	36'-0"	620	Bt.	34'-0"
				4																						4	F9h	⅛"sq	34'-0"	590	Str.	
				4																						4	F9j	⅛"sq	36'-3"	620	Bt.	34'-3"
				4																						4	F9k	⅛"sq	34'-3"	590	Str.	
						4																				4	F9m	⅛"sq	34'-9"	600	Bt.	32'-9"
						2	2																			4	F9n	⅛"sq	12'-6"	220	Bt.	11'-6"
						2	2	2	2	2	2	2	2	2	2	12	12	2	2	2	2	2	2			60	F9p	⅛"sq	16'-0"	4130	Bt.	15'-0"
						4																				4	F9r	⅛"sq	32'-9"	570	Str.	
						4																				4	F9s	⅛"sq	35'-0"	600	Bt.	33'-0"
						4																				4	F9t	⅛"sq	33'-0"	570	Str.	
								4	4																	8	F9u	⅛"sq	33'-9"	1160	Bt.	31'-9"
										4	4															8	F9v	⅛"sq	33'-0"	1140	Bt.	31'-0"
										4																4	F9w	⅛"sq	9'-0"	160	Str.	
												4	4													8	F9x	⅛"sq	32'-3"	1110	Bt.	30'-3"
												4	4													8	F9y	⅛"sq	30'-3"	1040	Str.	
												4														4	F9z	⅛"sq	8'-6"	150	Str.	
														4	4											8	F9aa	⅛"sq	32'-0"	1100	Bt.	30'-0"
														4	4											8	F9ab	⅛"sq	30'-0"	1030	Str.	
																4	4	24	24	4	4	4	4	4	4	80	F9ac	⅛"sq	31'-9"	10930	Bt.	29'-9"
																4	4	24	24	4	4	4	4	4	4	80	F9ad	⅛"sq	29'-9"	10240	Str.	
									2																	2	F9ae	⅛"sq	13'-6"	120	Bt.	12'-6"
2																										2	F8a	1"sq	38'-6"	260	Bt.	36'-9"
2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	12	12	2	2	2	2	2	2	72	F8b	1"sq	16'-0"	3910	Bt.	15'-0"
21	21	21	21	21	21	15	15	15	15	15	15	15	15	15	15	15	15	90	90	15	15	15	15	15	15	576	F8c	1"sq	8'-0"	15670	Str.	
2																										2	F8d	1"sq	38'-9"	260	Bt.	37'-0"
		2	2																							4	F8e	1"sq	37'-0"	500	Bt.	35'-3"
				2																						2	F8f	1"sq	35'-9"	240	Bt.	34'-0"
				2																						2	F8g	1"sq	36'-0"	240	Bt.	34'-3"
						4	4																			8	F8h	1"sq	31'-9"	860	Str.	
								4	4																	8	F8j	1"sq	31'-0"	840	Str.	
								2	2							2	2	12	12	2	2	2	2	2	2	44	F8k	1"sq	14'-0"	2090	Str.	
												4														4	F8m	1"sq	7'-6"	100	Str.	
																3		18		3						24	F8n	1"sq	7'-0"	570	Str.	
																						3		3		6	F8p	1"sq	6'-9"	140	Str.	
										8																8	F8r	1"sq	15'-0"	410	Bt.	14'-0"
													2	2	2	2										8	F7a	1"ϕ	14'-0"	300	Str.	
													2													2	F7d	1"ϕ	12'-9"	70	Bt.	
												2														2	F7e	1"ϕ	11'-3"	60	Str.	
																2		12		2		2		2		20	F7f	1"ϕ	11'-0"	590	Str.	
						2	2																			4	F7g	1"ϕ	13'-0"	140	Str.	

Shape

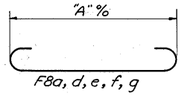




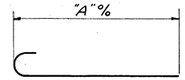
F9a, c, e, g, j, m, s, u, v, x, aa, ac



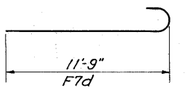
F9n, p, ae



F8a, d, e, f, g



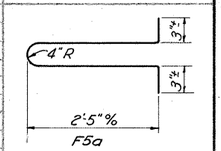
F8b, r

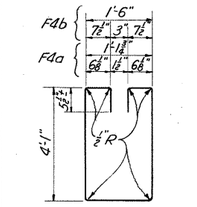


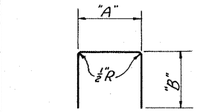
Number of Bars Required for Frames

#2 N.	#2 S.	#3 N.	#3 S.	#4 N.	#4 S.	#5 N.	#5 S.	#6 N.	#6 S.	#7 N.	#7 S.	#8 N.	#8 S.	#9 N.	#9 S.	#10 N.	#10 S.	11,12,13 18,19,20 N.	11,12,13 18,19,20 S.	#21 N.	#21 S.	#22 N.	#22 S.	#23 N.	#23 S.	Total	Mark	Size	Length	Weight	Str. or Bt.	"A"	"B"	"C"
18	18	17	17			16	16	16	16	15	15	15	15			15	15	90	90			15	15	15	15	464	F5a	⅞"sq	5'-9"	4010	Bt.			
32	32	32	32																							128	F5b	⅞"sq	9'-9"	1870	Str.			
6	6																									12	F5c	⅞"sq	32'-6"	590	Str.			
		6	6																							12	F5d	⅞"sq	30'-6"	550	Str.			
						20	20	20	20	38	38	38	38	36	36	36	36	216	216	36	36					880	F5e	⅞"sq	20'-3"	26730	Str.			
				6	6																					12	F5f	⅞"sq	29'-9"	540	Str.			
							6																			6	F5g	⅞"sq	30'-0"	270	Str.			
									6																	6	F5h	⅞"sq	29'-0"	260	Str.			
											6															6	F5j	⅞"sq	28'-3"	250	Str.			
						6							6													12	F5k	⅞"sq	27'-9"	500	Str.			
															6											6	F5m	⅞"sq	27'-3"	250	Str.			
																		6		36		6		6	6	60	F5n	⅞"sq	27'-0"	2440	Str.			
																						30	30	30	30	120	F5p	⅞"sq	11'-6"	2070	Str.			
32	32	32	32																							128	F5r	⅞"sq	6'-0"	1150	Str.			
				40	40																					80	F5s	⅞"sq	6'-6"	780	Str.			
						20	20			38	38	38	38	36	36	36	36	216	216	36	36	30	30	30	30	960	F5t	⅞"sq	7'-0"	10090	Str.			
								20	20																	40	F5u	⅞"sq	8'-0"	480	Str.			
				40	40																					80	F5v	⅞"sq	20'-9"	2490	Str.			
								20	20																	40	F5w	⅞"sq	19'-3"	1160	Str.			
								6																		6	F5x	⅞"sq	26'-9"	240	Str.			
										6																6	F5y	⅞"sq	26'-0"	240	Str.			
												6														6	F5z	⅞"sq	25'-6"	230	Str.			
														6												6	F5aa	⅞"sq	25'-0"	230	Str.			
																6		36		6		6		6		60	F5ab	⅞"sq	24'-6"	2210	Str.			
						20	20																			40	F5ac	⅞"sq	18'-3"	1100	Str.			
						20	20																			40	F5ad	⅞"sq	9'-0"	540	Str.			
41	41	39	39			35	35	34	34	33	33	32	32			33	33	198	198			33	33	33	33	1022	F4a	⅞"sq	10'-9"	11460	Bt.			
				36	36									32	32					31	31					198	F4b	⅞"sq	11'-4"	2340	Bt.			
42	42	40	40																							164	F2a	½"sq	3'-9"	410	Bt.	1'-1½"	1'-4½"	
				38	38																					76	F2b	½"sq	4'-3"	220	Bt.	1'-1½"	1'-7½"	
						28	28	28	28	28	28	28	28	28	28	28	28	168	168	28	28	28	28	28	28	840	F2c	½"sq	4'-9"	2660	Bt.	1'-1½"	1'-10½"	
								6	10																	16	F2d	½"sq	7'-9"	80	Bt.	1'-1½"	3'-4½"	
										4	8	4	6	4	6	4	6	24	36	4	6	4	6	4	6	132	F2e	½"sq	6'-9"	600	Bt.	1'-1½"	2'-10½"	
						6	12																			18	F2f	½"sq	8'-9"	110	Bt.	1'-1½"	3'-10½"	
16	17	16	17																							66	F1a	⅜"sq	8'-3"	210	Bt.	2'-8¾"		
32	34	32	34	74	76	72	74	36	38	72	74	72	74	36	38	36	36	216	216	36	36					1444	F1b	⅜"sq	4'-3"	2300	Bt.	6"	6"	9½"
				37	38	36	37	18	19	18	19	18	19	18	19	18	18	108	108	18	18					584	F1c	⅜"sq	10'-6"	2310	Bt.	3'-6¾"		
				37	38	36	37	18	19	18	19	18	19	18	19	18	18	108	108	18	18					584	F1d	⅜"sq	4'-6"	990	Bt.	1'-0"		
								18	18																	36	F1e	⅜"sq	9'-9"	130	Bt.	3'-5¾"		
								36	36																	72	F1f	⅜"sq	4'-0"	110	Bt.	5½"	5½"	9½"
								18	18																	36	F1g	⅜"sq	4'-9"	60	Bt.	1½"		
										18	18	18	18													72	F1h	⅜"sq	9'-3"	250	Bt.	3'-2½"		
										18	18	18	18													72	F1j	⅜"sq	4'-0"	110	Bt.	6½"		
														18	18											36	F1k	⅜"sq	9'-0"	120	Bt.	3'-0½"		
														36	36	36	36	216	216	36	36	40	40	40	40	808	F1m	⅜"sq	4'-3"	1290	Bt.	7⅛"	7⅛"	10⅛"
																18	18	108	108	18	18	10	10	10	10	328	F1n	⅜"sq	8'-9"	1080	Bt.	2'-1⅛"		
																						10	10	10	10	40	F1p	⅜"sq	7'-9"	120	Bt.	2'-5⅛"		

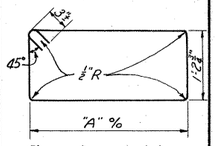
Shape



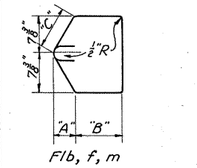




F2a, b, c, d, e, f



F1a, c, d, e, g, h, j, k, n, p



F1b, f, m

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

REINFORCING STEEL LIST
SUBSTRUCTURE FRAMES 2-13 & 18-23

BRIDGE NO. ER-6-179 OVER HURON RIVER

ERIE COUNTY S.H. 3
SEC. HURON STA. 222+10
FAP-684-(3)

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
CAR	CAR	GNS	LEV WB	A.J.T. BHC	7-10-46	

FED. RD. DIV. NO.	STATE	FED. AID PROJECT	FISCAL YEAR
2	OHIO	684-(3)	1946

86
89

ERIE COUNTY
S.H. 3 SEC. HURON PT.

REINFORCING STEEL LIST

ABUTMENTS (SUBSTRUCTURES Nº 1 & 24)

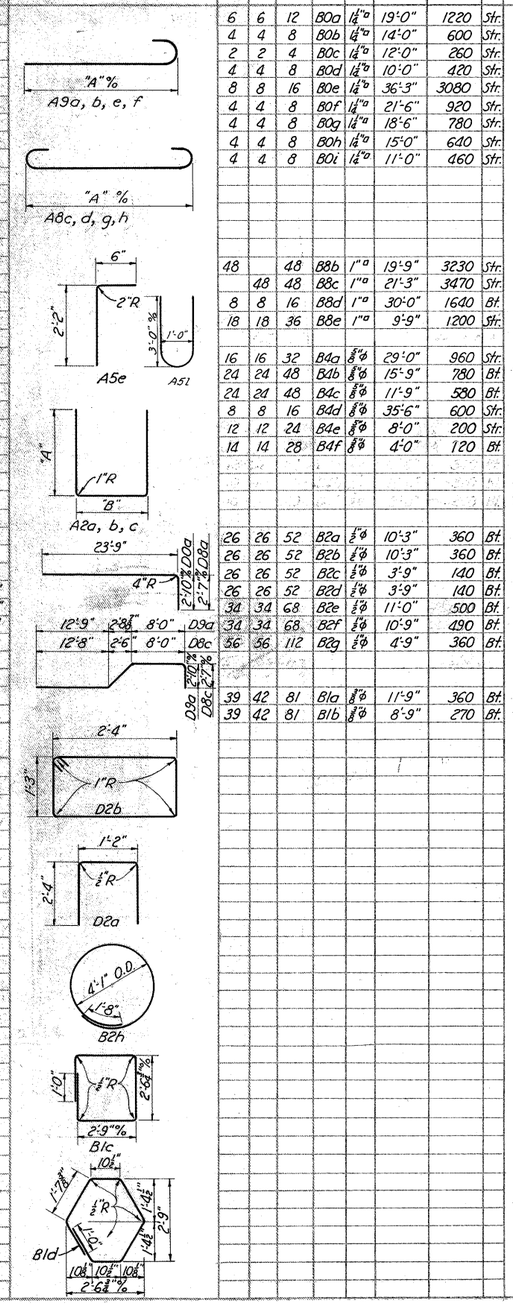
Nº Bars in Abut. West N.	West S.	East N.	East S.	Total	Mark	Size	Length	Weight	Str. or Bt.	"A"	"B"
		3	3	3	A9a	1⅛"□	46'-6"	600	Bt.	45'-6"	
		4	4	4	A9b	1⅛"□	34'-9"	600	Bt.	33'-9"	
		2	2	2	A9c	1⅛"□	45'-6"	390	Str.		
		5	5	5	A9d	1⅛"□	33'-9"	730	Str.		
	3		3	3	A9e	1⅛"□	42'-9"	550	Bt.	41'-9"	
	4		4	4	A9f	1⅛"□	31'-0"	540	Bt.	30'-0"	
	2		2	2	A9g	1⅛"□	41'-9"	360	Str.		
	5		5	5	A9h	1⅛"□	30'-0"	650	Str.		
	1	1	2	2	A9i	1⅛"□	18'-0"	160	Str.		
	2		2	2	A8a	1"□	48'-0"	330	Str.		
	5		5	5	A8b	1"□	38'-3"	650	Str.		
	3		3	3	A8c	1"□	50'-0"	510	Bt.	48'-0"	
	4		4	4	A8d	1"□	40'-0"	550	Bt.	38'-3"	
2			2	2	A8e	1"□	50'-0"	340	Str.		
5			5	5	A8f	1"□	39'-0"	660	Str.		
3			3	3	A8g	1"□	51'-9"	530	Bt.	50'-0"	
4			4	4	A8h	1"□	40'-9"	550	Bt.	39'-0"	
1	1		2	2	A8i	1"□	18'-0"	120	Str.		
	2		2	2	A5a	⅝"Φ	25'-0"	80	Str.		
	4		4	4	A5b	⅝"Φ	20'-0"	120	Str.		
	3		3	3	A5c	⅝"Φ	10'-6"	50	Str.		
2	2		4	4	A5d	⅝"Φ	7'-6"	50	Str.		
12	12	12	12	48	A5e	⅝"Φ	2'-6"	180	Bt.		
2			2	2	A5f	⅝"Φ	26'-3"	80	Str.		
4			4	4	A5g	⅝"Φ	20'-6"	120	Str.		
3		3	3	9	A5h	⅝"Φ	12'-0"	160	Str.		
	2	2	4	4	A5j	⅝"Φ	23'-0"	140	Str.		
	4	4	8	8	A5k	⅝"Φ	17'-0"	200	Str.		
28	28	26	26	108	A5l	½"Φ	6'-6"	1050	Bt.		
80	78	60	60	278	A2a	¾"Φ	9'-0"	1670	Bt.	2'-10½"	3'-3"
40	39	30	30	139	A2b	¾"Φ	6'-0"	560	Bt.	2'-2"	1'-9"
31	28	25	25	109	A2c	¾"Φ	9'-6"	690	Bt.	4'-2"	1'-3"

CAISSONS & STRUTS

28	D0a	1⅛"□	26'-3"	3900 Bt.
28	D0b	1⅛"□	23'-3"	3460 Str.
28	D9a	1⅛"□	27'-3"	3280 Bt.
60	D8a	1"□	26'-0"	5300 Bt.
60	D8b	1"□	23'-0"	4700 Str.
60	D8c	1"□	26'-6"	5400 Bt.
1100	D2a	⅝"Φ	5'-9"	4230 Bt.
56	D0c	1⅛"□	6'-0"	Str.
120	D8d	1"□	5'-9"	Str.
528	D7a	1"Φ	9'-0"	Str.
240	D7b	1"Φ	6'-0"	Str.
192	D2b	⅝"Φ	7'-6"	Bt.
48	B0j	1⅛"□	12'-6"	Str.
90	B9a	1⅛"□	9'-0"	Str.
36	B8a	1"□	10'-6"	Str.
24	B2h	⅝"Φ	14'-3"	Bt.
36	B1c	⅝"Φ	11'-6"	Bt.
36	B1d	⅝"Φ	9'-3"	Bt.

Included with Caissons for payment

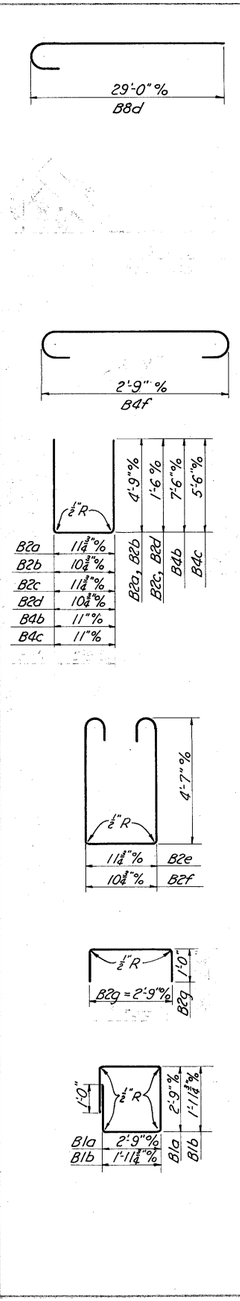
Shape



PIERS Nº 14 & 17

Nº Bars in Pier #14	#17	Total	Mark	Size	Length	Weight	Str. or Bt.
6	6	12	B0a	1¼"□	19'-0"	1220	Str.
4	4	8	B0b	1¼"□	14'-0"	600	Str.
2	2	4	B0c	1¼"□	12'-0"	260	Str.
4	4	8	B0d	1¼"□	10'-0"	420	Str.
8	8	16	B0e	1¼"□	36'-3"	3080	Str.
4	4	8	B0f	1¼"□	21'-6"	920	Str.
4	4	8	B0g	1¼"□	18'-6"	780	Str.
4	4	8	B0h	1¼"□	15'-0"	640	Str.
4	4	8	B0i	1¼"□	11'-0"	460	Str.
48		48	B8b	1"□	19'-9"	3230	Str.
	48	48	B8c	1"□	21'-3"	3470	Str.
8	8	16	B8d	1"□	30'-0"	1640	Bt.
18	18	36	B8e	1"□	9'-9"	1200	Str.
16	16	32	B4a	⅞"Φ	29'-0"	960	Str.
24	24	48	B4b	⅞"Φ	15'-9"	780	Bt.
24	24	48	B4c	⅞"Φ	11'-9"	580	Bt.
8	8	16	B4d	⅞"Φ	35'-6"	600	Str.
12	12	24	B4e	⅞"Φ	8'-0"	200	Str.
14	14	28	B4f	⅞"Φ	4'-0"	120	Bt.
26	26	52	B2a	¾"Φ	10'-3"	360	Bt.
26	26	52	B2b	¾"Φ	10'-3"	360	Bt.
26	26	52	B2c	¾"Φ	3'-9"	140	Bt.
26	26	52	B2d	¾"Φ	3'-9"	140	Bt.
34	34	68	B2e	¾"Φ	11'-0"	500	Bt.
34	34	68	B2f	¾"Φ	10'-9"	490	Bt.
56	56	112	B2g	¾"Φ	4'-9"	360	Bt.
39	42	81	B1a	⅞"Φ	11'-9"	360	Bt.
39	42	81	B1b	⅞"Φ	8'-9"	270	Bt.

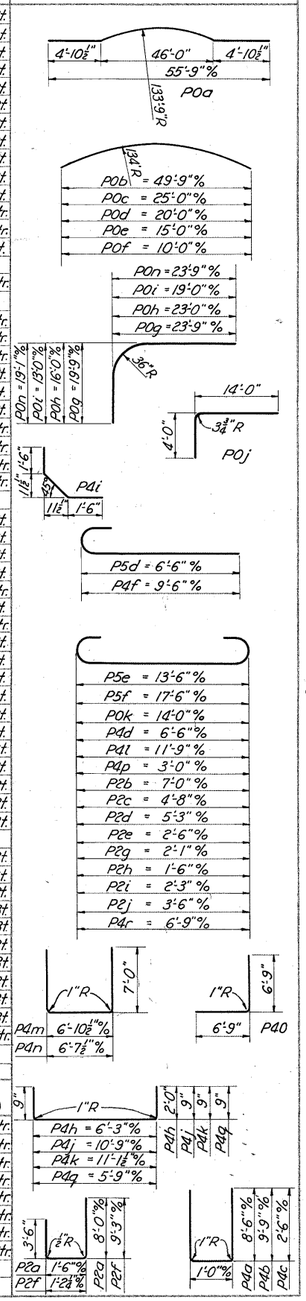
Shape



PIERS Nº 15 & 16

Nº Bars in Pier #15	#16	Total	Mark	Size	Length	Weight	Str. or Bt.
4	4	8	P0a	1¼"□	56'-0"	2380	Bt.
2	2	4	P0b	1¼"□	50'-0"	1060	Bt.
2	2	4	P0c	1¼"□	25'-0"	540	Bt.
4	4	8	P0d	1¼"□	20'-0"	860	Bt.
4	4	8	P0e	1¼"□	15'-0"	640	Bt.
4	4	8	P0f	1¼"□	10'-0"	420	Bt.
	8	8	P0g	1¼"□	42'-3"	1800	Bt.
12	12	24	P0h	1¼"□	37'-9"	4820	Bt.
8	8	16	P0i	1¼"□	30'-9"	2610	Bt.
8	8	16	P0j	1¼"□	18'-0"	1540	Bt.
8	8	16	P0k	1¼"□	16'-3"	1380	Bt.
16	16	32	P0l	1¼"□	11'-0"	1880	Str.
8	8	16	P0m	1¼"□	13'-3"	1120	Str.
8		8	P0n	1¼"□	41'-9"	1780	Bt.
4	4	8	P8a	1"□	9'-0"	240	Str.
	72	72	P5a	⅝"Φ	19'-9"	2140	Str.
	32	32	P5b	⅝"Φ	8'-6"	410	Str.
	96	96	P5c	⅝"Φ	37'-0"	5340	Str.
96	96	192	P5d	⅝"Φ	7'-3"	2100	Bt.
26	26	52	P5e	⅝"Φ	15'-0"	1180	Bt.
22	22	44	P5f	⅝"Φ	19'-0"	1280	Bt.
72		72	P5g	⅝"Φ	19'-0"	2060	Str.
32		32	P5h	⅝"Φ	7'-9"	370	Str.
48		48	P5i	⅝"Φ	42'-6"	3070	Str.
48		48	P5j	⅝"Φ	39'-3"	2830	Str.
6	6	12	P4a	⅝"Φ	18'-0"	220	Bt.
4	4	8	P4b	⅝"Φ	20'-6"	180	Bt.
10	10	20	P4c	⅝"Φ	6'-0"	120	Bt.
50	50	100	P4d	⅝"Φ	7'-9"	800	Bt.
46	46	92	P4e	⅝"Φ	29'-3"	2800	Str.
30	30	60	P4f	⅝"Φ	10'-9"	680	Bt.
52	52	104	P4g	⅝"Φ	6'-0"	660	Str.
18	18	36	P4h	⅝"Φ	9'-0"	340	Bt.
54	54	108	P4i	⅝"Φ	4'-3"	480	Bt.
20	20	40	P4j	⅝"Φ	12'-3"	520	Bt.
18	18	36	P4k	⅝"Φ	12'-9"	480	Bt.
16	16	32	P4l	⅝"Φ	13'-0"	440	Bt.
33	30	63	P4m	⅝"Φ	21'-0"	1380	Bt.
25	22	47	P4n	⅝"Φ	20'-9"	1020	Bt.
25	22	47	P4o	⅝"Φ	13'-6"	660	Bt.
13	13	26	P4p	⅝"Φ	4'-3"	120	Bt.
18	18	36	P4q	⅝"Φ	7'-3"	280	Bt.
8	8	16	P4r	⅝"Φ	8'-0"	140	Bt.
24	24	48	P2a	¾"Φ	13'-0"	420	Bt.
37	37	74	P2b	¾"Φ	8'-0"	400	Bt.
37	37	74	P2c	¾"Φ	5'-6"	280	Bt.
5	5	10	P2d	¾"Φ	6'-3"	40	Bt.
93	93	186	P2e	¾"Φ	3'-6"	440	Bt.
144	144	288	P2f	¾"Φ	14'-0"	2700	Bt.
35	35	70	P2g	¾"Φ	3'-0"	140	Bt.
30	30	60	P2h	¾"Φ	2'-6"	100	Bt.
44	44	88	P2i	¾"Φ	3'-3"	200	Bt.
44	44	88	P2j	¾"Φ	4'-6"	260	Bt.
2	2	4	P2k	¾"Φ	10'-0"	20	Str.

Shape



REPLACEMENT BARS
(SUBSTRUCTURE & SUPERSTRUCTURE)

19	RE0	1¼"□	9'-0"	910	Str.
4	RE9	1⅛"□	8'-6"	150	Str.
11	RE8	1"□	8'-0"	300	Str.
2	RE7	1"Φ	8'-0"	40	Str.
6	RE5	⅞"Φ	7'-0"	60	Str.
8	RE4	⅞"Φ	6'-6"	50	Str.
4	RE2	¾"Φ	6'-6"	20	Str.
1	RE1	⅞"Φ	5'-6"	10	Str.

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

REINFORCING STEEL LIST
CAISSONS, ABUTMENTS, PIERS 14-17, 15-16

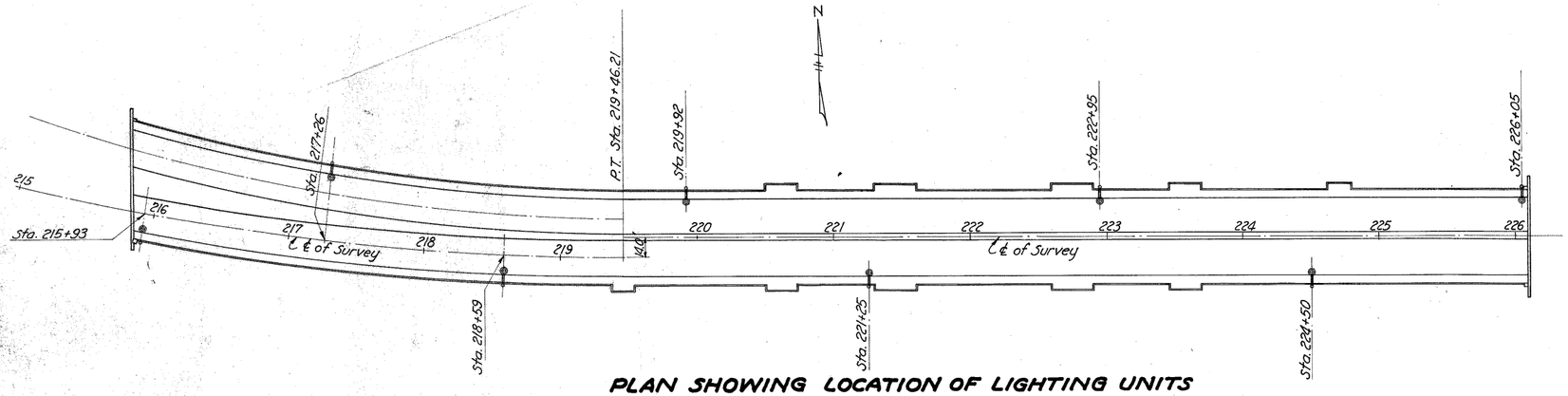
BRIDGE NO. ER-6-179 OVER HURON RIVER

ERIE COUNTY — S.H. 3
SEC. HURON — STA. 222+10
FAP 684-(3)

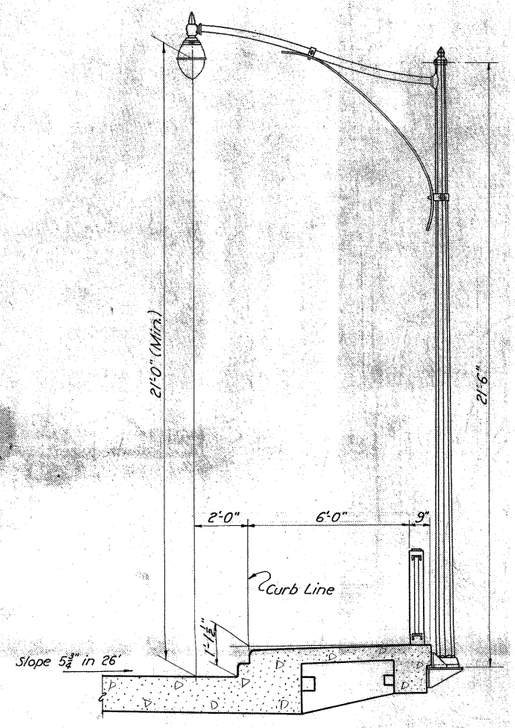
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
E.E.S.	E.E.S.	GWS	E.E.S.	A.P.T.	1946 7-10-46	

FED. RD. DIV. NO.	STATE	FED. AID PROJECT	FISCAL YEAR	87 89
2	OHIO	684-(3)	1946	

ERIE COUNTY
S. H. 3 SEC. HURON PT.

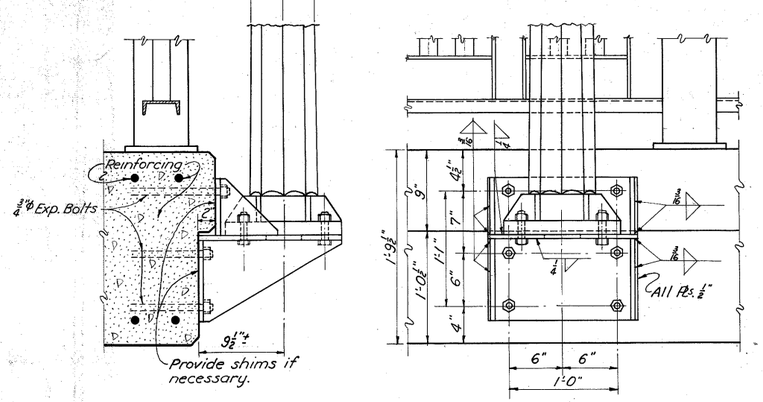


PLAN SHOWING LOCATION OF LIGHTING UNITS



ELEVATION OF LIGHTING UNIT

SECTION THRU POLE



BRACKET DETAILS

LIGHTING SYSTEM GENERAL NOTES

SYSTEM :- The system shall be 60 cycle, consisting of one constant current series loop circuit operated from one transformer with 6.6 ampere primary and 20 ampere secondary. All in accordance with Item 5-25.

CONDUIT :- A 2" diameter galvanized, standard full weight, conduit system shall be installed with suitable expansion joints and drains with suitable outlet boxes to serve the lighting units. This item shall include the run to the transformer on the service pole which is to be located approximately 50 ft. from the northwest corner of the bridge, or as directed by the engineer.

CABLE :- Cable shall be Nº 6 B. & S. gage copper conductor with rubber insulation for 2500 volts, lead covered, Telurium, Anhydrex or equal.

TRANSFORMER :- The transformer shall be 3 kva. type S.L. with G.E. type S.L. transformer cutout, including Thyrite by-pass. The transformer shall be located on the service pole.

LIGHTING UNITS shall be as shown on the plans, and shall consist of eight one lamp luminaires (Control Light Jr. or equal) with reflector, film cutout series receptacle for each lamp. Poles shall be tapered and fluted as shown on the plans.

LAMPS :- There shall be eight 6000 lumen Mazda, 20 ampere series type lamps for base up burning.

PAINT :- All metal standards shall be given two shop coats of paint meeting the provisions of Sec. M-9.9, Sec. M-9.20, or Sec. M-9.21, and shall be given two field coats in accordance with color chart to be furnished by the Chief Engineer of Bridges.

POWER AND MAINTENANCE :- The power for this bridge lighting system and the maintenance of the system in good physical condition is to be furnished by the Village of Huron.

WORKING PLANS :- The contractor shall submit a working plan for approval before work on the lighting system is begun, showing the location of all conduit on the structure and how he proposes to fasten the same to the structure. All in accordance with Item 5-25.05.

BASIS FOR PAYMENT shall be the Lump Sum price bid for Item 5-25, Lighting System Complete.

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

LIGHTING DETAILS

BRIDGE NO. ER-6-179 OVER HURON RIVER

ERIE COUNTY S.H. 3
SEC. HURON STA. 222+10
FAP-684-(3)

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
E.E.S.	E.E.S.	G.W.S	W.B.	4.F.T.	1-9-46 7-10-46	

SUMMARY TABLES

FED. RD. DIST. NO.	STATE	FED. AID PROJECT	FISCAL YEAR
10	OHIO	F-684(3)	1946

ERIE COUNTY
S.H. 3 SEC. HURON-PT.

TABLE NO. 1

DRIVES & APPROACHES

Station	Details on Sh. No.	Remove & Dispose of Exist. Wear. Course: 5" Bitum. Sq. Yds.	Remove & Dispose of Exist. Wear. Course: Brick Sq. Yds.	Remove & Dispose of Exist. Pavement: 6" Conc. for Drs. Sq. Yds.	Remove & Dispose of Exist. Pavement: 7" P.C. Conc. (Var. Th.) Sq. Yds.	Remove & Dispose of Exist. Pavement: P.C. Con. (Var. Th.) Sq. Yds.	Remove & Dispose of Exist. Base Course: 7" P.C. Concrete Sq. Yds.	Remove & Dispose of Exist. Base Course: 10" P.C. Concrete Sq. Yds.	Remove & Dispose of Exist. Sidewalk Sq. Ft.	Remove & Dispose of Exist. 6"x18" Stone Curb Lin. Ft.	P.C. Conc. Pavement Sq. Yds.	P.C. Conc. Pavement Sq. Yds.	4" P.C. Conc. for Median Strip Sq. Yds.	6" P.C. Concrete for Drives Sq. Yds.	9" Reinf. P.C. Conc. Pov't. Sq. Yds.	7" Reinf. P.C. Conc. Pov't. Sq. Yds.	Integral Concrete Curb: Type 2-A Lin. Ft.	Integral Concrete Curb: Type 4-A Lin. Ft.	Conc. Curb & Gutter: Type 2 Lin. Ft.	Conc. Curb & Gutter: Type 4 Lin. Ft.	4" P.C. Concrete Sidewalks Sq. Ft.	I-17 Cu. Yds.
RAMP C(1)																							
203+33.40	36	63			196.7				184						227.3				95.8		48	
206+71.61	36	102	387	8			387	102	812	192					432.6				191.6		466.0	
208+30	6													17.3								1
208+89	6													36.0								2
210+38.62	37	30.2			470.0				320						470.6				282.5		200	
213+80	6													30.7								6
214+00	37														271.5		68.31	54.2				
230+01.35																						188
230+07.82	39-A												6.0		555.3	775.7	100.5		205.6			
242+12.23	43								312				1.4		161.4	232.4			35.68	48.74	258	
242+24 / 242+35	9													51.1								5
1+80.96	35				98				30						47.0				95.60		15	
3+20	12													77.1								2
4+70	12													57.3								2
RAMP D(1)																						
250+35	10													97.7								5
251+20													21.6		1680.2							
251+22.06	44					992.1							29.0	367.2	3845.9	1008.1	168.81	54.2	906.98 ⊗	48.74 ⊗	987+	211
Totals		195.2	387		774.7 *	992.1+		489 *	1658 ‡	192												

*Quantities carried to Table No. 7 ‡Quantities carried to Table No. 3
+Quantities carried to Table No. 2 ⊗Quantities Carried to Table No. 9

TABLE NO. 2

CONC. SIDEWALKS

Totals from Sheet No.	4"X4' Conc. Sidewalk Sq. Ft.	6"X6' Reinf. Conc Sidewalk Sq. Ft.
6	3018.6	104.0
7	1394.0	198.0
8	6361.0	395.6
9	8468.0	
10	694.4	
12	1084.1	91.0
Table No.1	987.0	
Total	22007.1+	783.6

TABLE NO. 3

SIDEWALK R'M'L

Totals from Sheet No.	Remove & Dispose of Exist. Sidewalk Sq. Ft.
6	2480
7	3016
8	3540
9	1200
Table No.1	1658
10	80
Total	11974

TABLE NO. 4

GUARD RAIL R'M'L

Totals from Sheet No.	Remove, Disp. & Remove of Exist. G. Rail Lin. Ft.	Remove & Store Exist. G. Rail Lin. Ft.
7	93	
8		260
Total	93	260

TABLE NO. 5

GUARD RAIL

Totals from Sheet No.	Guard Rail Lin. Ft.
8	1315.0
9	562.5
Total	1877.5

TABLE NO. 6

ROADWAY DRAINAGE

Totals from Sheet No.	Pipe for R.D. incl Porous Backfill: 8" Lin. Ft.	12" Lin. Ft.	15" Lin. Ft.	Pipe for S.S. under Pov't.: 12" Lin. Ft.	15" Lin. Ft.	V.S.P. Rebid. inc. 12" Porous Bkf.: 8" Lin. Ft.	12" Lin. Ft.	12" Pipe for Storm Sewers Lin. Ft.	12" Pipe for S.S. under Pov't. Rebid Lin. Ft.	Pipe for Roadway Drainage 3" Lin. Ft.	Pipe for Drainage 12" Lin. Ft.	15" Lin. Ft.	Outlet Pipe 12" Lin. Ft.	Outlet Pipe 15" Lin. Ft.	Outlet Pipe Specials 12" Bends Units 20°	30°	45°	Pipe Specials 12"x12"x6" Wye Units	12" Tee Units	12"x12"x18" Wye Un.	12" Tee Un.	12"-45° Curve Units	15"x15"x12" Tee Units	8"x8" Wye Units
5	560										100	321		125						2		3	2	
6	618	299	148	261	28			386					170	50	1	1								
7				55																				
8				195				464																
9	648	540		215				275		34			22			1				1				1
10	12	13		82		40	342		44									1	1					
12				76							114													
RAMP C(1)																								
RAMP D(1)																								
10																								
Totals	1878	852	148	902	28	40	342	897	44	34	214	321	192	175	3			8				2	1	

TABLE NO. 7

PAVEMENT R'M'L

Totals from Sheet No.	Remove & Dispose of Exist. P.C. Conc Pov't Sq. Yds.
6	1669.4
7	2094.4
8	1640.7
9	2424.1
10	350
Table No 1	2255.8
Total	10119.4

TABLE NO. 9

CONC. CURB & GUTTER

Totals from Sheet No.	Type 2 Conc Curb & Gutter Lin. Ft.	Type 4 Conc Curb & Gutter Lin. Ft.
5	446.00	
6	1276.30	144.46
7	340.50	
8	1507.68	
9	544.01	1505.76
10		314.93
12	639.20	139.76
Table No.1	906.98	48.74
Total	5660.67	2153.65

TABLE NO. 10

EXCAVATION & EMBANKMENT

Totals from Sheet No.	Excavation Cu. Yds.	Embankment Cu. Yds.	Emb. + 21% Cu. Yds.	Waste Cu. Yds.
5	255	126	152	
6	7138	2172	2628	
7	40638	13243	16024	
8	11328	43768	52960	
9	3410	9541	11544	
10	2500	2500	3025	2500
12	1089	488	590	
Table No.1	906.98	48.74	59.0	
10	944	490	593	
Total	67,236	72323	87516	2500

87516 Cu Yds. - (67236-2500.) = 22780 Cu Yds.
Displacement for Pavement Removal

9722.4 Sq Yds X 9/36 = 2160 Cu Yds.
FAGM 684-(3)
258.3 Sq Yds X 9/36 = 57 Cu Yds.
Surplus Excavation
FAGCP No. FAGM 684-(3) 3507 Cu Yds.
Total 5724 Cu Yds.
Net Borrow 170.56 Cu Yds.
Borrow for F-684(3) 17056 Cu Yds.

* Estimated quantities of existing dump. Sta 2281+59 to Sta 2301+10. All unsuitable material to be removed and quantities adjusted accordingly.

TABLE NO. 11

CATCH BASINS

Totals from Sheet No.	Std. No. 3 Mod. Units	Std. No. 1-28 Units	Std. No. 2-28 Units	Manholes No. 1 Units	Manholes Cast, Reset & Or Units
6	11			1	
7	2				
8	4				
9	10	2			1
12	3				
10		4	3		
Total	30	6	3	1	1

TABLE NO. 12

CATCH BASIN REMOVAL

Totals from Sheet No.	Exist. Catch Basin to be Abandoned Units	Remove & Dispose of Exist. Catch Basin Units
6	4	2
7		2
8		4
9	1	4
10	1	1
12	4	
10	4	2
Total	14	15

TABLE NO. 13

PIPE REMOVAL

Totals from Sheet No.	Remove & Dispose of R.D. Pipe Var. Sizes Lin. Ft.	Remove & Store R.D. Pipe Var. Sizes Lin. Ft.	Remove for Re-use 12" S.S. Pipe under Pov. Lin. Ft.	V.S.P. Removed for Re-use 8" Lin. Ft.	V.S.P. Removed for Re-use 12" Lin. Ft.
6	126				
7	30				
8	162				
9	448				
10	20	141	44	40	342
12	56				
Total					
Total	848	141	44	40	342

TABLE NO. 15

REINF. CONC. APPR. SLABS

Totals from Sheet No.	Conc. Appr. Slabs Sq. Yds.	T-35 Cu. Yds.
6	47	3.1
7	94	6.0
12	47	3.1
8	188	
Total	376	12.2

use 10 gal. Sec. M-5.5 MS-1 per sq. yd. of approach slab. estimated quantity 38 gal.

CLASSIFIED EMBANKMENT

Totals from Sheet No.	55 112 Cu. Yds.
32	822
35	570
30	1906
Total	3298

TABLE NO. 14

STRUCTURES - 20 FT. SPAN & UNDER

Struct. No.	Station	Type	Size	Standard Drawing	For Details see Sh. No.	Excavation: Struct. Cu. Yds.	Excavation: Channel Cu. Yds.	Class E Conc. for Headwalls Cu. Yds.	24" Pipe for Rdwy Culverts Lin. Ft.	Pipe Spec. 24"x24"x12" Tee Unit	Removal of Exist. Structure
1	238+17.77	Pipe	24"X154"	S-27.PC 1.3	50	172	* 44	4.6	152	1	Lump

* Included as Roadway Item.

PIPE UNDERDRAINS

Totals from Sheet No.	6" Pipe Under-drain Lin. Ft.	Pipe Under-drain Lin. Ft.	Pipe 6"x90° Bend Units	Pipe 6" Tee Units
10		578	1	1
12		472		
Total		1050	1	1

LINE	CALCULATIONS	TOTAL	UNITS
1	NET LENGTH OF PROJECT — See Sheet No. 1	0.947	Miles
2			
3	9" REINFORCED PORTLAND CEMENT CONCRETE PAVEMENT		
4	See Sheet No. 2 — 402.33 + 846.00 + 474.71 = 1723.04 Lin. Ft.		
5	1723.04 x 24 ÷ 9 = 4594.8 Sq. Yds.		
6	See Sheet No. 3 — 1363.23 + 812.60 = 2175.83 Lin. Ft.		
7	2175.83 x 24 x 2 ÷ 9 = 11604.4 Sq. Yds.		
8	See Sheet No. 3		
9	239.94 x 24 x 2 ÷ 9 = 1279.68 Sq. Yds.		
10	From Sheet No. 38, Table No. 1 = 3845.9 Sq. Yds.		
11			
12	5 + 7 + 9 + 10 = 21,324.78 Sq. Yds. Use 21,324.8 Sq. Yds.	21324.8	Sq. Yds.
13			
14			
15			
16	10" PLAIN PORTLAND CEMENT CONCRETE MEDIAN		
17	See Sheet No. 3		
18	1926.36 x 4 ÷ 9 = 856.2 Sq. Yds.		
19	85.94 x 4 ÷ 9 = 38.2 Sq. Yds.		
20	Total 894.4 Sq. Yds.	894.4	Sq. Yds.

SUMMARY

ITEM	TOTAL	UNITS	DESCRIPTION	CODE 7021	TYPE 7221	TYPE 6708
			ROADWAY			
E-1	67236	Cu. Yds.	Roadway Excavation (Unclassified)	63,171	4065	
E-3	44	Cu. Yds.	Channel Excavation	44		
				16,916		140
E-4	17056	Cu. Yds.	Borrow			
E-8	195	Sq. Yds.	Removal & disposal of existing 5" Bituminous Wearing Course	195		
E-8	387	Sq. Yds.	Removal & disposal of existing Brick Wearing Course	387		
E-8	10119	Sq. Yds.	Removal & disposal of concrete Pavement & Base	9,043	992	84
E-8	11974	Sq. Ft.	Removal & disposal of existing Sidewalks	11,894	80	
E-8	192	Lin. Ft.	Removal & disposal of existing 6"X18" Stone Curb	192		
SS-112	3298	Cu. Yds.	Classified Embankment Material	570	2728	
				17	2	
E-9	19	Units	Removal of Trees & Stumps.	337	5	
E-11	342	M Gals.	Water			
				828	20	
E-12	848	Lin. Ft.	Roadway Drainage Pipe Removed & disposed of (Under 15")	5	136	
E-12	141	Lin. Ft.	Roadway Drainage Pipe Removed & Stored. (Under 15")		40	
E-12	40	Lin. Ft.	8" V.S.P. Removed for Re-use	172	170	
E-12	342	Lin. Ft.	12" V.S.P. Removed for Re-use		44	
E-12	44	Lin. Ft.	12" Pipe for Storm Sewers under Pavement Removed for Re-use			
				897		
I-2	897	Lin. Ft.	12" Pipe for Storm Sewers	739	163	
I-2	902	Lin. Ft.	12" Pipe for Storm Sewers under Pavement		28	
I-2	28	Lin. Ft.	15" Pipe for Storm Sewers under Pavement	10	24	
I-3	34	Lin. Ft.	8" Pipe for Roadway Drainage	214		
I-3	214	Lin. Ft.	12" Pipe for Roadway Drainage			
				321		
I-3	321	Lin. Ft.	15" Pipe for Roadway Drainage	1204	674	
I-3	1878	Lin. Ft.	8" Pipe for Roadway Drainage including Porous Backfill	299	553	
I-3	852	Lin. Ft.	12" Pipe for Roadway Drainage including Porous Backfill	148		
I-3	148	Lin. Ft.	15" Pipe for Roadway Drainage including Porous Backfill	172		20
I-3	192	Lin. Ft.	12" Outlet Pipe for Roadway Drainage	158		17
I-3	175	Lin. Ft.	15" Outlet Pipe for Roadway Drainage	6	2	
I-3	8	Units	12" Pipe Specials for Roadway Drainage		2	
I-3	2	Units	6" Pipe Specials for Pipe Underdrain	570	480	
I-4	1050	Lin. Ft.	6" Pipe Underdrain	2		
I-5	2	Units	15" Pipe Specials for Roadway Drainage		1	
I-5	1	Units	8" Pipe Special for Roadway Drainage			
				3		
I-5	3	Units	12" Pipe Specials for Outlet Pipe			
					40	
I-6	40	Lin. Ft.	8" V.S.P. Reloid including 12" Porous Backfill for roadway drainage	172	170	
I-6	342	Lin. Ft.	12" V.S.P. Reloid including 12" Porous Backfill for roadway drainage		44	
I-6	44	Lin. Ft.	12" Pipe for Storm Sewers under Pavement Reloid			
				24	6	
I-8	30	Units	Std. No. 3 Catch Basins (Mod.)	2	4	
I-8	6	Units	Std. No. 1-2 B Catch Basins		3	
I-8	3	Units	Std. No. 2-2 B Catch Basins	1		
I-8	1	Units	Std. No. 1 Manhole	1		
I-8	1	Units	Manhole Castings Reset to Grade.			
				464		325
I-13	789	Sq. Ft.	6" Reinforced Portland Cement Concrete Sidewalks	21,314	694	
I-13	22063	Sq. Ft.	4" Portland Cement Concrete Sidewalks	93		
I-15	93	Lin. Ft.	Guard Rail Removed & disposed of	260		
I-15	260	Lin. Ft.	Guard Rail Removed & Stored.	1877.5		
I-15	1877.5	Lin. Ft.	Guard Rail, steel beam, type (deep)	206	5	
I-17	211	Cu. Yds.	Side Approaches, Mail Box Turnouts and Berm Material			
				12	3	
S-22	15	Units	Existing Catch Basins Removed & disposed of.	12	2	
I-16	14	Units	Existing Catch Basins Abandoned.	500		
T-110	500	Cu. Yds.	Aggregate for Traffic Compacted Surface Course for Maintaining Traffic.	10		
M-10	10	Tons	Calcium Chloride Sec. M-10.3, for Maintaining Traffic.			
L-13	20	Units	Berberis thunbergii - Japanese Barberry 18" to 24"	20		
L-17	1	Units	Pruning of Existing Trees (Pay Size 12")	1		
L-17	1	Units	Pruning of Existing Trees (Pay Size 20")	1		
L-17	1	Units	Pruning of Existing Trees (Pay Size 36")	1		
L-9	50306	Sq. Yds.	Seeding and protecting, Type A	47,461	2,367	480
L-9	4.55	Tons	Commercial Fertilizer 4-12-4	4.30	0.21	.04
			PAVEMENT			
T-21	29.0	Sq. Yds.	4" Portland Cement Concrete Median	29.0		
T-21	894.4	Sq. Yds.	10" Portland Cement Concrete Median	583.9	310.5	
T-70	367.2	Sq. Yds.	6" Portland Cement Concrete Pavement for Drives	316.1	51.1	
T-30	338	Gals.	Bituminous Prime Coat Sec. M-5.5 MS-1	38		
T-71	21324.8	Sq. Yds.	9" Reinforced Portland Cement Concrete Pavement	15,097.7	6,227.1	
T-71	1307.2	Sq. Yds.	7" Reinforced Portland Cement Concrete Pavement	1,008.1		
I-12	5661	Lin. Ft.	Type 2 Concrete Curb & Gutter	5661		
I-12	2154	Lin. Ft.	Type 4 Concrete Curb & Gutter	1533	621	
I-12	169	Lin. Ft.	Type 2-A Integral Concrete Curb	169		
I-12	54	Lin. Ft.	Type 4-A Integral Concrete Curb	54		
I-7	376	Sq. Yds.	9" Reinforced Concrete Approach Slab	188		188
T-35	12.2	Cu. Yds.	Asphaltic Concrete Surface Course Type A			12.2
			STRUCTURES 20FT. SPAN & UNDER			
E-2	172	Cu. Yds.	Excavation for Structures (Unclassified)	172		
S-1	4.6	Cu. Yds.	Class E Concrete for Headwalls	4.6		
S-24	Lump	Lump	Removal of Existing Structure (1)	Lump		
S-27	152	Lin. Ft.	24" Pipe for Roadway Culverts	152		
I-5	1	Units	24"X24"X12" Tee Pipe Special for Roadway Culverts	1		
			STRUCTURES OVER 20FT. SPAN			
			For estimated quantities See sheet No. 56			

ERIE COUNTY
S.H. 3 SEC. HURON PT.

FED. DIST. NO.	STATE	FED. AID PROJECT	FISCAL YEAR
10	OHIO	F-684(3)	1946

89
85

HURON TWP.
SEC. 1 TWP. 6 RA. 21

NOTE SUPERSEDED BY

FED. RD. DIST. NO.	STATE	PROJECT	FISCAL YEAR

1/4

ERIE COUNTY
S. H. 3 SEC.-HURON-PT

Hatched Area Vacated by Ordinance No. 1961-7 and adopted Dec. 11, 1961 by City of Huron Council.

Superseded by Proposed Relocation through South Huron (1947)

Superseded by ERI-6-17.41 1963

Superseded by ERI-6 (Huron St.) 2003

Superseded by ERI-6-14.97 (1960)

Superseded by ERI-6 (Huron St.) 2002

Curve Data
North Lane
Δ = 34° 39' Lt.
D = 4° 27' 22"
T = 404.11'
L = 783.42'
R = 1285.47'

Curve Data
P.I. Sta. 213+86.97
Δ = 34° 39' Lt.
D = 3° 0'
T = 393.76'
L = 1135.00
R = 1909.86'

OL 144

OL 143

Cont. 1027 Sq. Ft. (0.024 Ac.)

SCALE 1" = 30'

Rev. 9-18-63 - Added Vacated Area
6-5-57
REVISED 9-11-47
REVISED 2-6-47
REVISED 11-23-46

Rev. 11-4-74 Rev. Bearing, Distances, Callouts, Part 3 J.R.Y.

ERIE COUNTY S.H. 3 SEC. HURON-PT
SR-2-6-17.74-18.61

HURON TWP.
SEC. 1 TWP. 6 RA. 21

NOTE SUPERSEDED BY

FED. RD. DIST. NO.	STATE	PROJECT	FISCAL YEAR

2
4

ERIE COUNTY
~~S.H. 3~~ SEC. HURON-PT.
USR6

Entire sheet superseded by
ERI-6-17.41 (1983)

HATCHED AREA VACATED BY ORDINANCE No. 1967-13 AND ADOPTED APRIL 10, 1967 BY CITY OF HURON COUNCIL

SEE NOTE, SHEET #1

Boat House & Storage
Gas Pump
Boat Ch.
Boat Ho.

MYRLE G. SHEROD
OL 143
8
494.59'
511.06'
30.8°
LOT LINE N84°48'W N.Y.C. R.R. R/W 937.29'
213
220
45°
215+00
S66°39'35"E (R.R. Brg.)
109.93'
60'
216+00
Chord S 81°57'25"E 357.03'
356.60'
R=1909.86'
74'
219+46.21
9
OL 144
NEW YORK CENTRAL RAILROAD

RIVER
℄ 221+66
M.G. Sherod E.S.C.M. corp.
S17°30'E 149.88'
S16°48'E 139.34'
℄ 219+46.21
S87°09'E 246.21'
74'
+92.42
S87°09'E 307.38'
74'
225+00
S72°34'33"E 103.33'
100'
226+00
HURON
New York Central R.R.
N 16°48' W
N 16°48' W
R.M.
R.M.
R.M.
R.M.
HURON

EASTERN STATES FARMERS EXCHANGE INC.
10
Proposed Bldg.
Proposed Garage
Manchester Line
Tank Line
223+00
111.46'
S 89°-18' W 300.57'
130
226+00
393.82'
N 87°09W
329°09'E 3.58
96.43'
+39.56
+41.38
93.35'
441.75'
S84°48'E
253.12'
S84°48'E
633.7'
N84°48'W
N29°09'W 3.59
205.82'
N84°43'W
20.28'
+82.85
230
225
S87°09'E
364.43'
S87°09'E.
R.R. No 1
N13°01'E
122.2'
WHEELING & LAKE ERIE RAILROAD
Huron Boat Co.
Huron Boat Co. Drive
100'
+49.19
15A
100'
+30.59
N 87°09'W
E.S.F.E. Inc. W. & L.E. R.R.
N12°28'E
223+28.80
Sta. 3+08.5
Sta. 2+55
Sta. 2+10
Sta. 1+00
Sta. 0+00 Lake
Rt. to Dock
90'
229+93.14
130
+39.82
+39.66
+39.50
+39.34
+39.18
+39.02
+38.86
+38.70
+38.54
+38.38
+38.22
+38.06
+37.90
+37.74
+37.58
+37.42
+37.26
+37.10
+36.94
+36.78
+36.62
+36.46
+36.30
+36.14
+35.98
+35.82
+35.66
+35.50
+35.34
+35.18
+35.02
+34.86
+34.70
+34.54
+34.38
+34.22
+34.06
+33.90
+33.74
+33.58
+33.42
+33.26
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+32.94
+32.78
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+18.22
+18.06
+17.90
+17.74
+17.58
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+17.10
+16.94
+16.78
+16.62
+16.46
+16.30
+16.14
+15.98
+15.82
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+15.34
+15.18
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+14.86
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+10.06
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+8.94
+8.78
+8.62
+8.46
+8.30
+8.14
+7.98
+7.82
+7.66
+7.50
+7.34
+7.18
+7.02
+6.86
+6.70
+6.54
+6.38
+6.22
+6.06
+5.90
+5.74
+5.58
+5.42
+5.26
+5.10
+4.94
+4.78
+4.62
+4.46
+4.30
+4.14
+3.98
+3.82
+3.66
+3.50
+3.34
+3.18
+3.02
+2.86
+2.70
+2.54
+2.38
+2.22
+2.06
+1.90
+1.74
+1.58
+1.42
+1.26
+1.10
+0.94
+0.78
+0.62
+0.46
+0.30
+0.14
R.R. No 8
R.R. No 7
N13°01'E 20.72'
Bulkhead Line
N13°01'E 122.61'
S13°01'W
N13°01'E 126.64'
S13°01'W
N15°01'E 130.54'
Rail Line
Easterly
Westerly
R=5135.35'
S13°01'W 126.64'
N15°01'E 130.54'
S76°59'E
221+87.75
NEW YORK CENTRAL RAILROAD
9A
+17.66
216+17
9B
+96.40
+20.29
15
15A
16
16A

1

S. H. 3 SEC. HURON-PT ERIE COUNTY

Rev. 11-4-74 - Added Additional Vacated Area J.R.Y.

6-5-52

HURON TWP.
SEC. 1 TWP. 6 RA. 21

NOTE SUPERSEDED BY

FED. RD. DIST. NO.	STATE	PROJECT	FISCAL YEAR

3
4

ERIE COUNTY
S. H. 3 SEC. HURON-PT.

USR 6

WHEELING & LAKE ERIE RAILROAD

E.S.F.E. Inv. N 12° 28' E 2239+79.0

Sta. 3+08.5

Sta. 2+55

2+10

To Ore & Coal Docks

R.R. No 4

superseded

N87°09'W 316.58'

315.87'

S84°48'E

S87°09'E 169.58'

R.R. No 5

435.59'
N84°48'W

S83°51'10"E 260.8'

R.R. No 10

TOLEDO EDISON COMPANY

Superseded by ERI-G-17,41 (983)

13

S84°48E 319'

S84°48'E 285.63'

S87°09'E

S84°48'E 100.15'

S84°48E. 450.50'

R.R. No 3

R.R. No 2

R.R. No 6

R.R. No 7

R.R. No 8

R.R. No 9

S.89°10'15"W 467.51'

N87°09'W 296.25'

N87°09'W 100.47'

S87°09'E 198'

N84°48'W 198'

N84°48'W 119.78'

S4°26'E 119'

S87°09'E 119'

S4°26'E

S4°28'E

N87°41'W 472.05'

S88°56'E 321.11'

WHEELING & LAKE ERIE RAILROAD

WHEELING & LAKE ERIE RAILROAD

A. F. HARRIS DEC'D

WRIGHT M. STEIN

WRIGHT M. STEIN & FLORENCE OREBAUGH

TOLEDO EDISON COMPANY

350' N 87°-41' E

CAMILLA ILLENARDO

ROSE

ROSSI

WRIGHT M. STEIN & FLORENCE OREBAUGH

Lot 31

Lot 32

Warning Post

Insert

Westerly

Easterly

154 155 156 157 158 159 160 161 165 166 167 168 169 170 171

14 15 16 18

ERIE COUNTY S. H. 3 SEC. HURON PT.

3-19-58
6-5-52

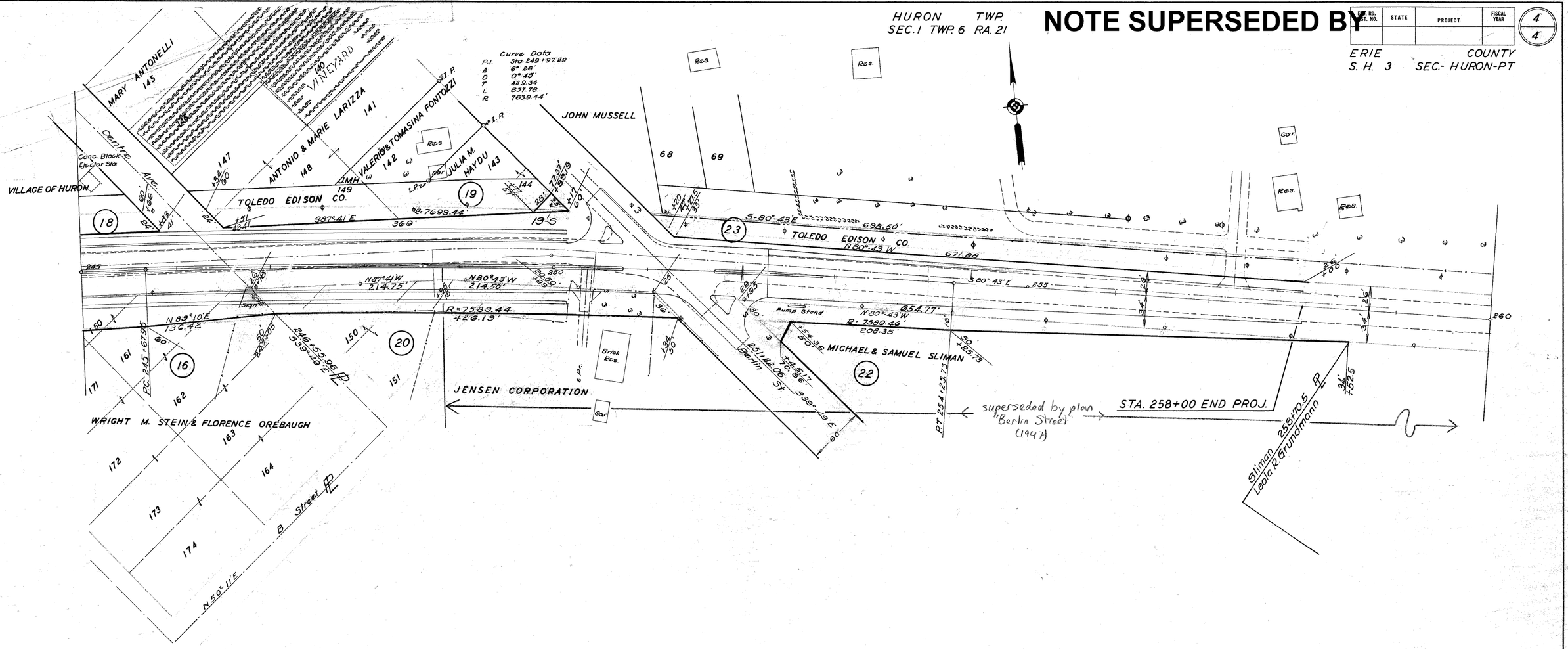
HURON TWP.
SEC. 1 TWP. 6 RA. 21

NOTE SUPERSEDED BY

FED. RD. DIST. NO.	STATE	PROJECT	FISCAL YEAR

4
4

ERIE COUNTY
S. H. 3 SEC.- HURON-PT



ERIE COUNTY S. H. 3 SEC. HURON-PT.

3-19-58
6-5-52