FED. RD. DIST. NO.	STATE		FISCAL YEAR
10	OHIO		1938

1/14

HURON COUNTY
S.H. 455 SEC. P-PT.

STATE OF OHIO
DEPARTMENT OF HIGHWAYS

BRIDGE OVER SEYMOUR CREEK

BR. NO. HU.-99-164

S.H. 455 SEC. P-PT.

HURON COUNTY

RIDGEFIELD TOWNSHIP

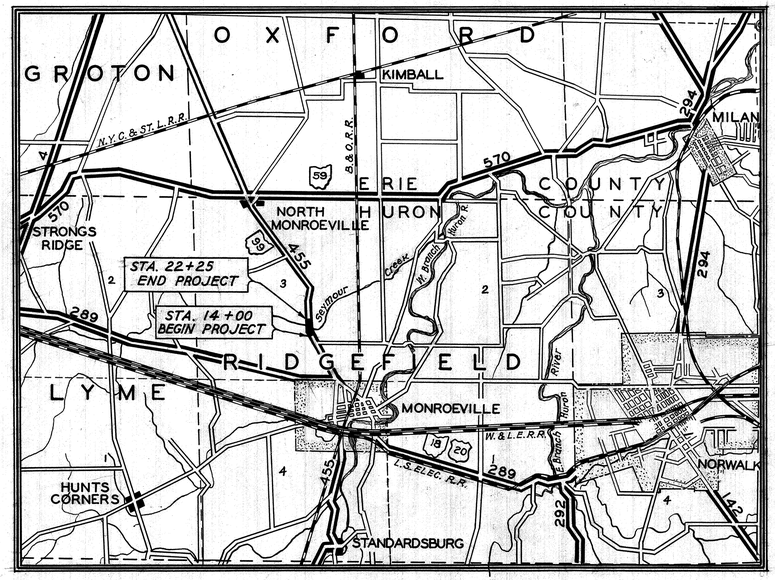
CONVENTIONAL SIGNS

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

INDEX OF SHEETS

LINE DATA

STA. 14 + 00 TO STA. 22 + 25 = 825.0 LIN. FT.
NO ADDITIONS OR DEDUCTIONS
NET LENGTH OF PROJECT = 825.0 LIN. FT.
= 0.156 MILE



DELIVERY POINT: MONROEVILLE

LOCATION PLAN

PORTION TO BE IMPROVED

STATE HIGHWAYS
IMPROVED COUNTY ROADS
UNIMPROVED COUNTY ROADS

SCALES

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

SUPPLEMENTAL PRINTS OF STANDARD CONSTRUCTION DRAWINGS	
E-5	7-12-35
I-1,2,3,4 & 5	1-1-36
I-8 C.B. No. 7	6-10-36
G-7.07	10-33
MBD-36	12-8-36
AS-35	9-6-35
WSB-35	9-6-35

FILE NO.	HURON CO. S.H. 455, SEC. P-BR.
104-44	DATE OF LETTING CONTRACT NO.

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 THE IMPROVEMENT WILL NOT REQUIRE THE CLOSING TO TRAFFIC OF THE HIGHWAY AND THAT TRAFFIC WILL BE MAINTAINED AS INDICATED ON THE PLANS.

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

APPROVED _____
DATE _____ RESIDENT DISTRICT DEPUTY DIRECTOR

APPROVED _____
DATE 5-23-38 RESIDENT DIVISION DEPUTY DIRECTOR

APPROVED _____
DATE _____ CHIEF ENGINEER, BUREAU OF MAINTENANCE

APPROVED J.R. Bursley P.E. #45
DATE 8-17-38 CHIEF ENGR., BUREAU OF BRIDGES & R.R. CROSSINGS

APPROVED H.L. Pittenger P.E. #83
DATE 8/20/38 CHIEF ENGINEER, LOCATION & DESIGN

APPROVED _____
DATE 8-30-38 FIRST ASS'T. DIRECTOR & CHIEF ENGINEER

APPROVED John Jastin Jr.
DATE 8-30-38 DIRECTOR OF HIGHWAYS

RECOMMENDED FOR APPROVAL _____
DATE _____ DISTRICT ENG'R., BUREAU OF PUBLIC ROADS

RECOMMENDED FOR APPROVAL _____
DATE _____ CHIEF ENGINEER, BUREAU OF PUBLIC ROADS

APPROVED _____
DATE _____ CHIEF OF BUREAU

CONSTRUCTION BUREAU
AUG 22 1955
GROUND PHOTOLAB

SUPPLEMENTAL SPECIFICATIONS
NONE

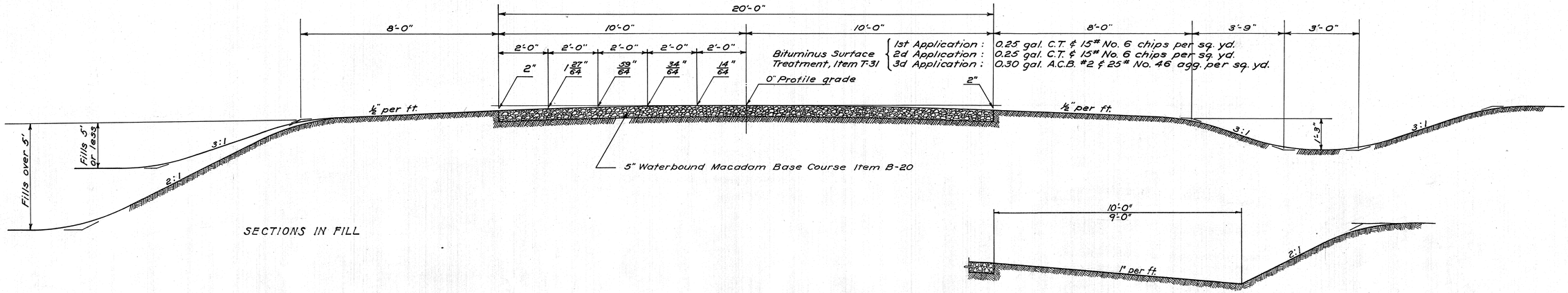
FED. RD. DIST. NO.	STATE		FISCAL YEAR
10	OHIO		1938

2/14

HURON COUNTY
S.H. 455 SEC. P-PT.

TYPICAL SECTION

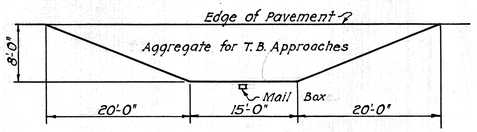
TYPES: T-31 & B-20



SECTIONS IN FILL

SECTIONS IN CUT

See cross-sections for stationing of above sections and for special sections



DETAIL OF MAIL BOX APPROACH

3.5 Cu. Yds. aggregate req'd. for each approach

Note: After completion of shoulders the Mail Box Approaches are to be excavated to a 4" depth and 4" of aggregate placed. Cost of resetting the boxes according to sketch above and the cost of excavation to be included in unit price bid for "Aggregate for Traffic Bound Side Approaches."

GENERAL NOTES

Between Stations 14+00 and 15+50 and between Stations 19+00 and 22+25 the pavement shall be constructed one half at a time. One way traffic over these locations shall be maintained by the contractor, who shall provide lights, signs, barricades, and watchmen 24 hour service.

The material obtained from the removal of the temporary bridge approaches shall be used in construction of shoulders and shall be deducted from the borrow quantities.

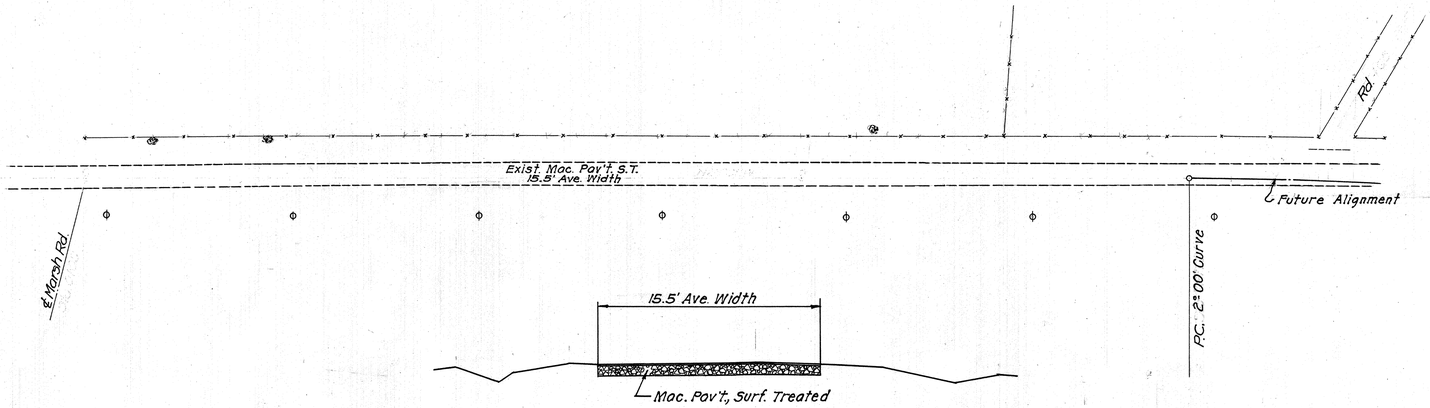
Riprap shall be obtained from salvaged stone abutments.

FED. RD. DIST. NO.	STATE		FISCAL YEAR
10	OHIO		1938

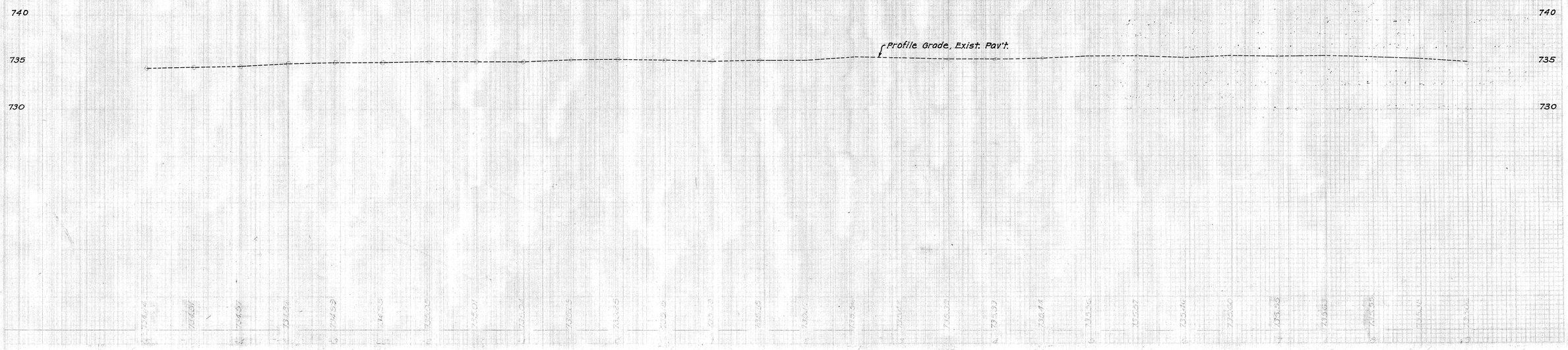
3
14

HURON
S.H. 455

COUNTY
SEC. P-PT.



TYPICAL SECTION - ADJOINING PAV'T.



FED. RD. DIST. NO.	STATE		FISCAL YEAR
10	OHIO		1938

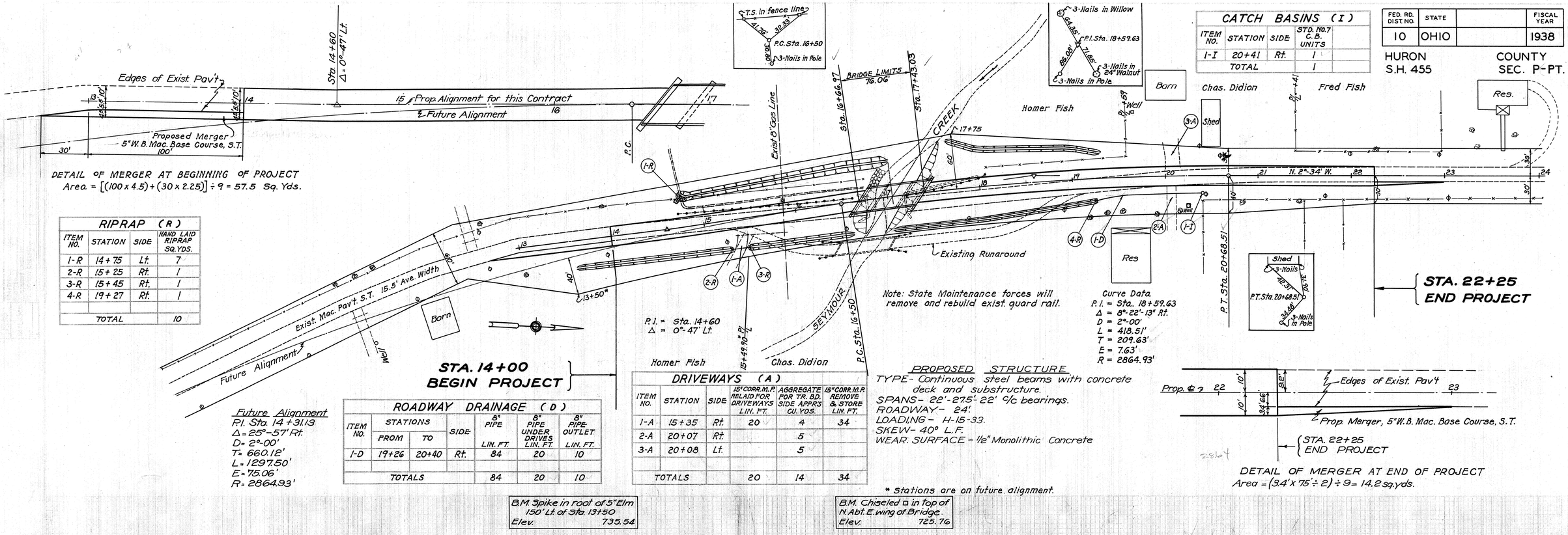
4
14

HURON
S.H. 455

COUNTY
SEC. P-PT.

CATCH BASINS (I)

ITEM NO.	STATION	SIDE	STD. NO.7 C.B. UNITS
1-I	20+41	Rt.	1
TOTAL			1



DETAIL OF MERGER AT BEGINNING OF PROJECT
Area = [(100 x 4.5) + (30 x 2.25)] ÷ 9 = 57.5 Sq. Yds.

RIPRAP (R)

ITEM NO.	STATION	SIDE	HAND LAID RIPRAP SQ. YDS.
1-R	14+75	Lt.	7
2-R	15+25	Rt.	1
3-R	15+45	Rt.	1
4-R	19+27	Rt.	1
TOTAL			10

Future Alignment
P.I. Sta. 14+31.13
Δ = 25°-57' Rt.
D = 2°-00'
T = 660.12'
L = 1297.50'
E = 75.06'
R = 2864.93'

ROADWAY DRAINAGE (D)

ITEM NO.	STATIONS FROM	STATIONS TO	SIDE	8" PIPE LIN. FT.	8" PIPE UNDER DRIVES LIN. FT.	8" PIPE OUTLET LIN. FT.
1-D	19+26	20+40	Rt.	84	20	10
TOTALS				84	20	10

DRIVEWAYS (A)

ITEM NO.	STATION	SIDE	15" CORR. M.P. RELAID FOR DRIVEWAYS LIN. FT.	AGGREGATE FOR TR. BD. SIDE APPRS CU. YDS.	15" CORR. M.P. REMOVE & STORE LIN. FT.
1-A	15+35	Rt.	20	4	34
2-A	20+07	Rt.		5	
3-A	20+08	Lt.		5	
TOTALS			20	14	34

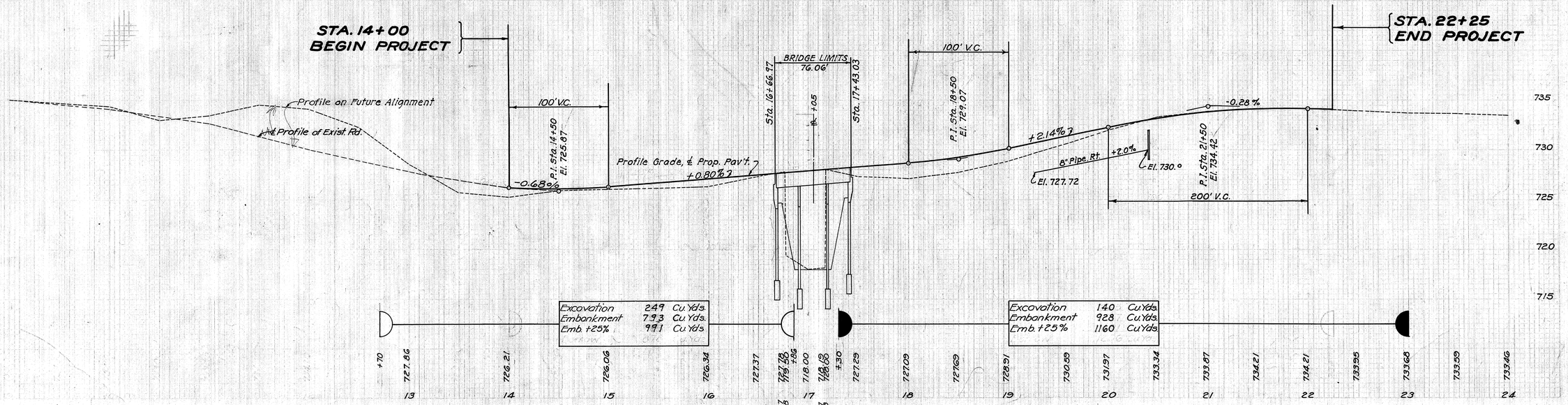
* Stations are on future alignment.

PROPOSED STRUCTURE
TYPE- Continuous steel beams with concrete deck and substructure.
SPANS- 22'-27.5'-22' c/c bearings.
ROADWAY- 24'.
LOADING- H-15-33.
SKEW- 40° L.F.
WEAR. SURFACE - 1/2" Monolithic Concrete

DETAIL OF MERGER AT END OF PROJECT
Area = (3.4' x 75' ÷ 2) ÷ 9 = 14.2 sq. yds.

B.M. Spike in root of 5" Elm 150' Lt. of Sta. 13+50 Elev. 735.54

B.M. Chiseled □ in top of N. Abt. E. wing of Bridge. Elev. 725.76

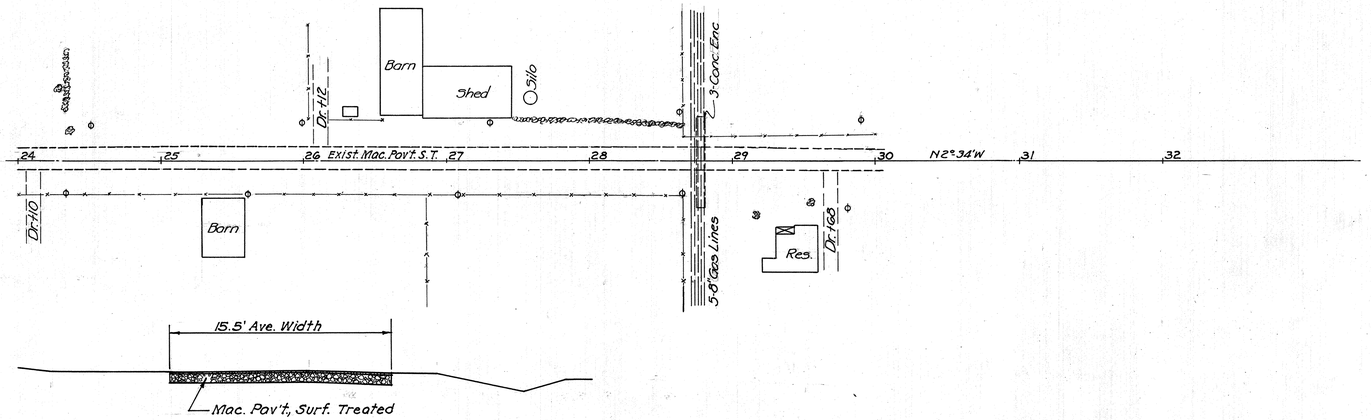


FED. RD. DIST. NO.	STATE		FISCAL YEAR
10	OHIO		1938

5
14

HURON
S.H. 455

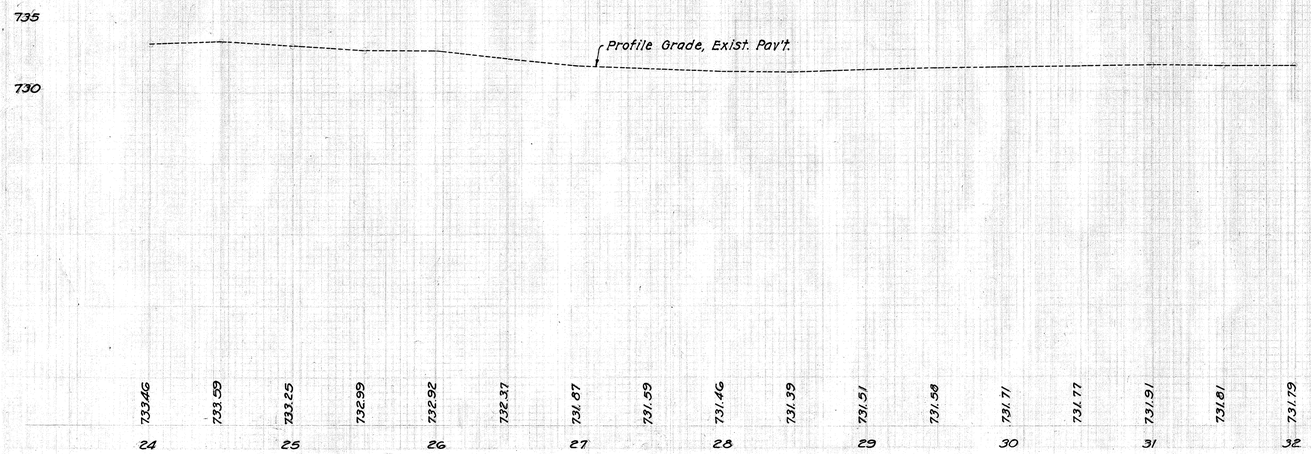
COUNTY
SEC. P-PT.



TYPICAL SECTION - ADJOINING PAV'T.

P.C. STA. 16+50.0 P.T. STA. 20+68.51
D = 2° 0' Rt.

LEFT		CENTER		RIGHT	
Add To Rt. Edge Grade	El. Edge	Station	℄ Grade	El. Edge	Deduct From ℄ Grade
.00	726.10	15+00	726.27	726.10	.17
.05	726.35	+25	726.47	726.30	
.19	726.69	+50	726.67	726.50	
.42	727.12	+75	726.87	726.70	
.65	727.55	16+00	727.07	726.90	
.79	727.89	+25	727.27	727.10	
.84	728.14	+50	727.47	727.30	
	728.28	16+66.97	727.61	727.44	
	728.88	17+43.03	728.21	728.04	
	728.94	+50	728.27	728.10	
	729.14	+75	728.47	728.30	
	729.34	18+00	728.67	728.50	
	729.58	+25	728.91	728.74	
	729.91	+50	729.24	729.07	
	730.31	+75	729.64	729.47	
	730.81	19+00	730.14	729.97	
	731.34	+25	730.67	730.50	
	731.88	+50	731.21	731.04	
	732.41	+75	731.74	731.57	
	732.95	20+00	732.28	732.11	
	733.45	+25	732.78	732.61	
	733.87	+50	733.20	733.03	
.84	734.13	+68.51	733.46	733.29	
.84	734.22	+75	733.55	733.38	
.76	734.40	21+00	733.81	733.64	
.60	734.44	+25	734.01	733.84	
.35	734.31	+50	734.13	733.96	
.14	734.14	+75	734.17	734.00	
.03	734.00	22+00	734.14	733.97	
.00	733.92	+18.51	734.09	733.92	.17



45 40 35 30 25 20 15 10 5 ℄ 5 10 15 20 25 30 35 40

End Area		Cu. Yds.	
Cut	Fill	Cut	Fill
0	0		
		11	13
22	75		
		9	40
22	122		
		13	54
35	120		
		60	232
25	112		
		78	298
17	49		
		54	119
12	15		
4	15		
		20	35
7	4		
		4	2
0	0		

Excavation 249 Cu Yds
Embankment 793 Cu Yds
Emb +25% 991 Cu Yds

Sta. 17+05
Sta. 16+86

R/W

R/W exceeds 50'

727.69
16+77
727.78

El. 720.12

R/W exceeds 50'

726.60
16+66
727.7

El. 720.17

R/W exceeds 50'

727.50
16+54
727.61

El. 720.23

El. 721.75

R/W exceeds 50'

727.07
16+00
726.34

El. 720.30

El. 722.0

R/W

726.27
15+00
726.06

El. 721.0

14+75 - 15" Walnut

Sta. 14+78 Begin Ditch

El. 722.5

R/W

R/W

Ahead

Back

R/W exceeds 50'

726.21
14+00
726.21

El. 722.75

Ahead
Back

STA. 14+00 BEGIN PROJECT

R/W

R/W

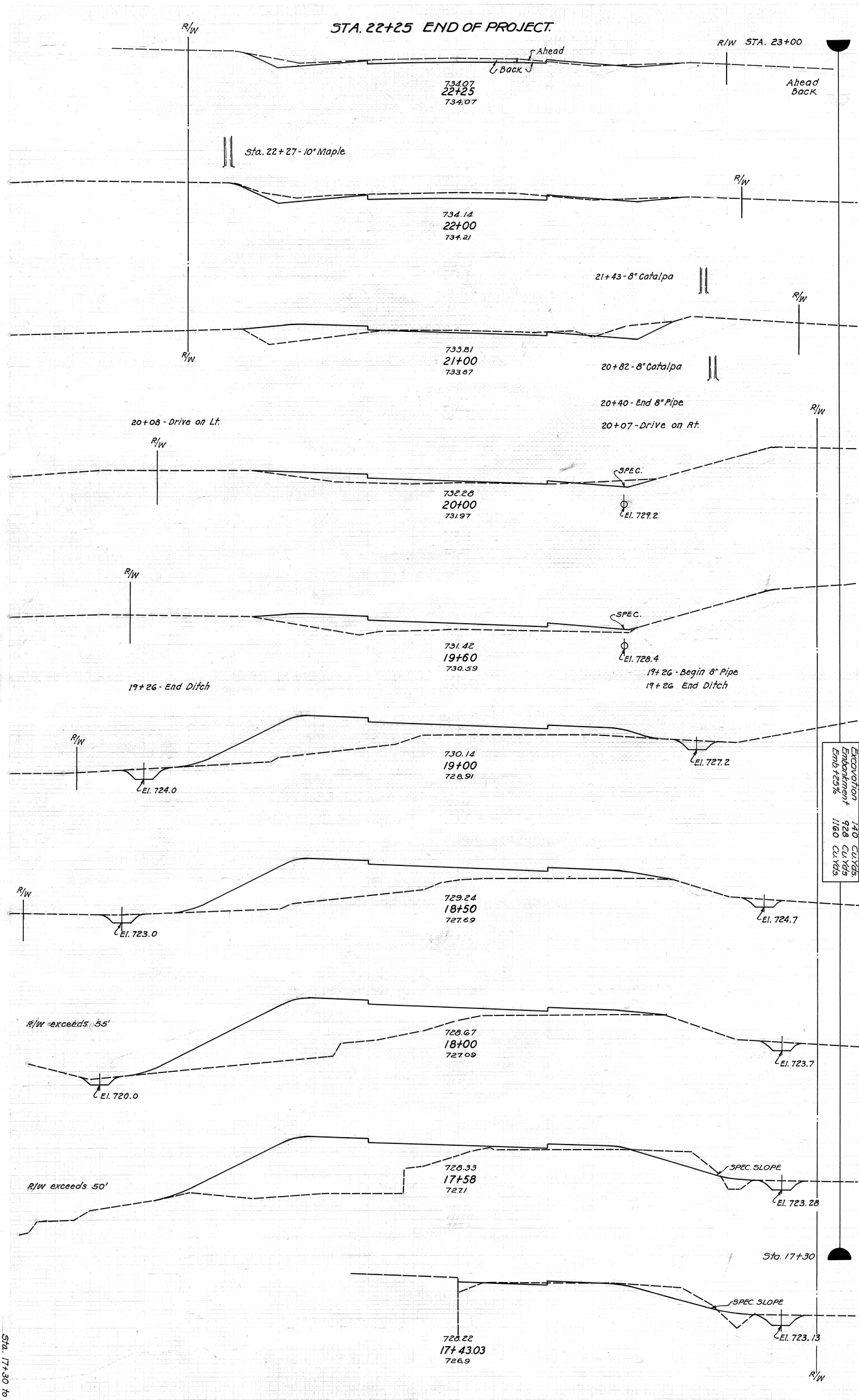
13+00
727.86

STA. 12+70

Sta. 12+70 to Sta. 16+86

40 35 30 25 20 15 10 5 ℄ 5 10 15 20 25 30 35 40

10 OHIO
HURON
S.H. 455
COUNTY
SEC. P-PT.
1938
14
6



END AREA		CU YDS.	
CUT	FILL	CUT	FILL
0	0		
		2	2
1	1		
15	1		
		15	1
18	1		
		54	39
11	20		
		28	54
4	9		
		3	31
0	33		
0			131
		2	
5	85		
		8	181
4	111		
		6	231
3	139		
		11	217
11	140		
		7	40
16	6		
		4	1
0	0		

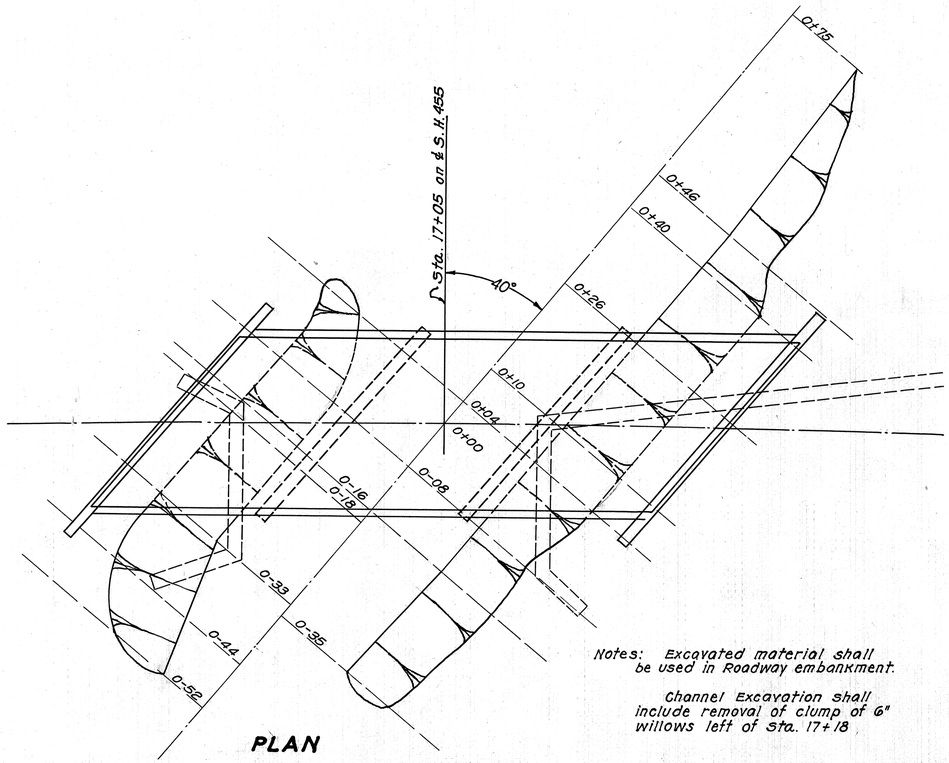
Sta. 17+30 to Sta. 23+00

40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40

10 OHIO
HURON COUNTY
S.H. 455 SEC. P-PT.
1938

7
14

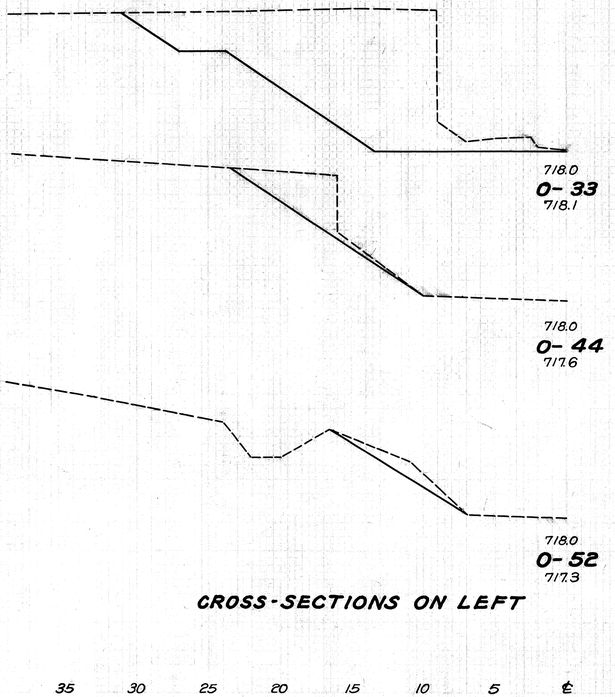
10	OHIO	1938	8 / 14
HURON		COUNTY	
S.H. 455		SEC. P-PT.	



PLAN

Notes: Excavated material shall be used in Roadway embankment.

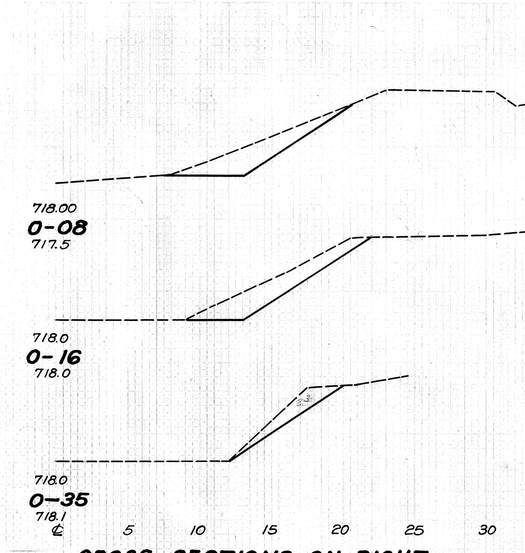
Channel Excavation shall include removal of clump of 6" willows left of Sta. 17+18



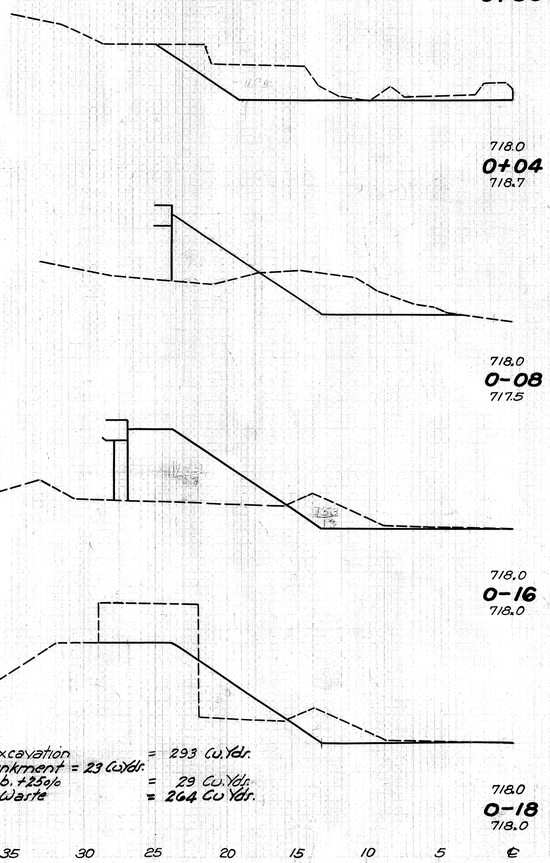
CROSS-SECTIONS ON LEFT

45 40 35 30 25 20 15 10 5 ℄

End Area Cut	End Area Fill	Cu. Yds. Cut	Cu. Yds. Fill
		46	3
134	0		
		31	0
18	0		
		4	0
6	0		



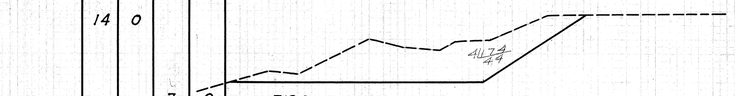
CROSS-SECTIONS ON RIGHT

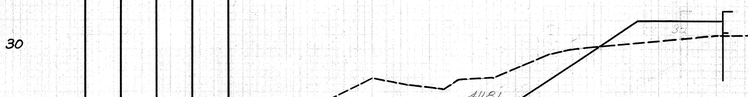


Excavation = 293 Cu.Yds.
Embankment = 23 Cu.Yds.
Emb. +25% = 29 Cu.Yds.
Net Waste = 264 Cu Yds.

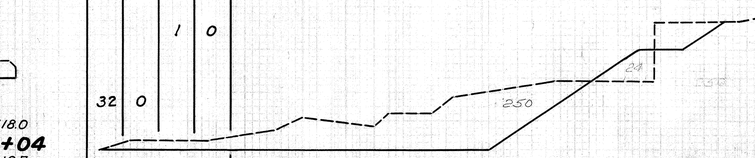
End Area Cut	End Area Fill	Cu. Yds. Cut	Cu. Yds. Fill
		14	0
		14	0
		6	0
		32	0
		25	15
		13	37
		30	12

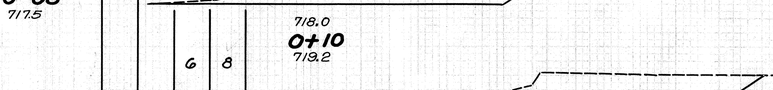
0+75 = 0.0

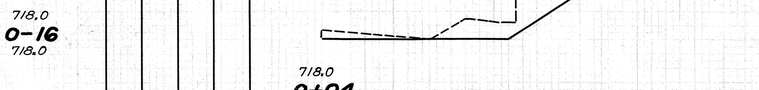


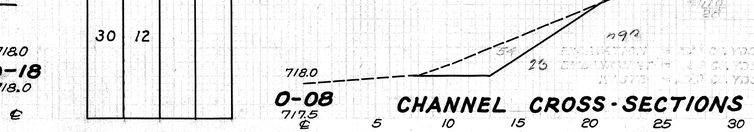


0+06 = 0.0









CHANNEL CROSS-SECTIONS

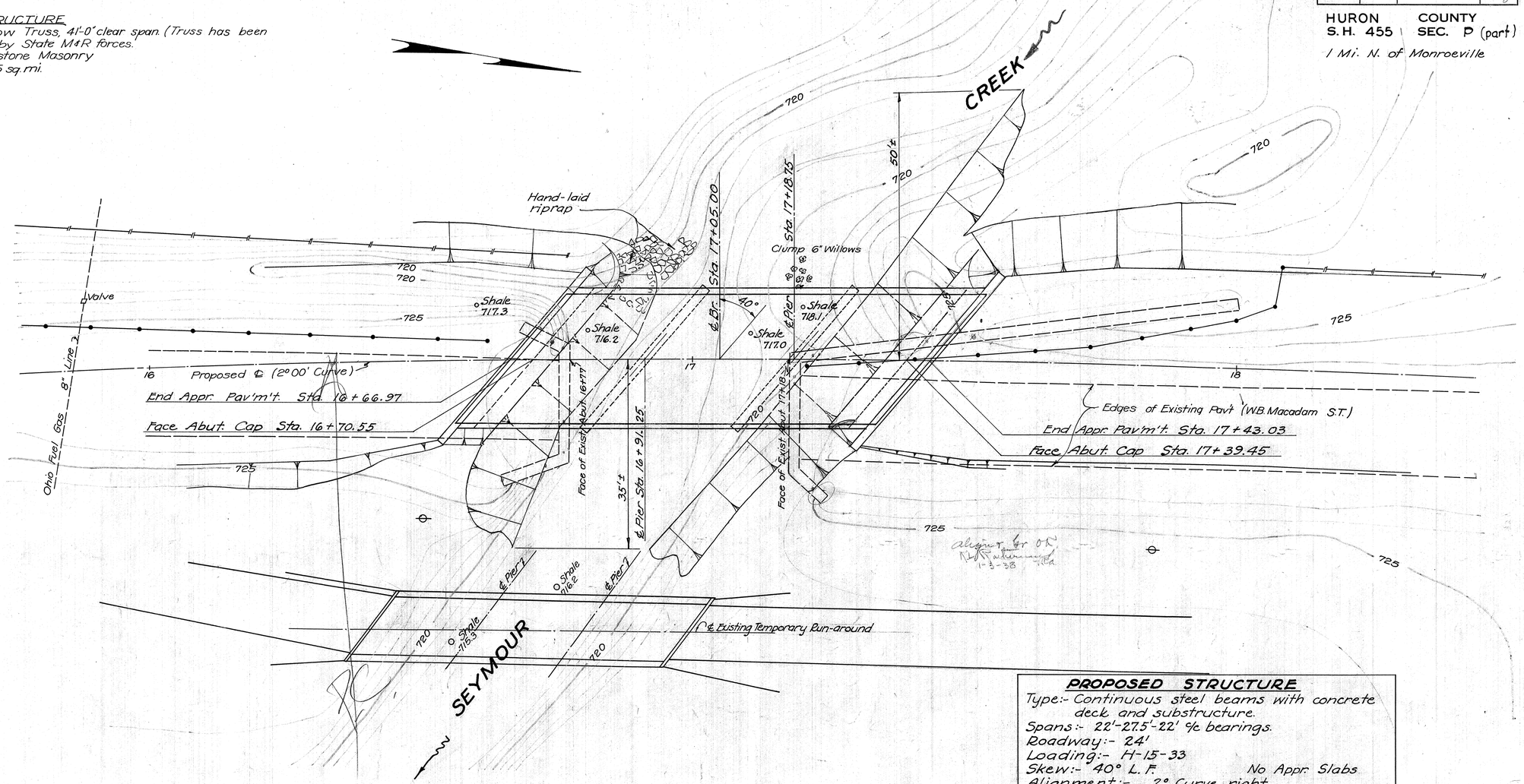
End Area Cut	End Area Fill	Cu. Yds. Cut	Cu. Yds. Fill
0	0		
		24	0
44	0		
		10	1
45	9		
		30	4
69	6		
		63	2
143	0		
		24	0
89	0		
		26	0
28	1		

FED. RD. DIST. NO.	STATE		FISCAL YEAR
10	OHIO		1938

9/14

HURON COUNTY
S.H. 455 SEC. P (part)
1 Mi. N. of Monroeville

DATA ON PRESENT STRUCTURE
SUPERSTRUCTURE - Low Truss, 41'-0" clear span. (Truss has been dismantled and removed by State M+R forces.
SUBSTRUCTURE - Sandstone Masonry
DRAINAGE AREA - 6.5 sq. mi.

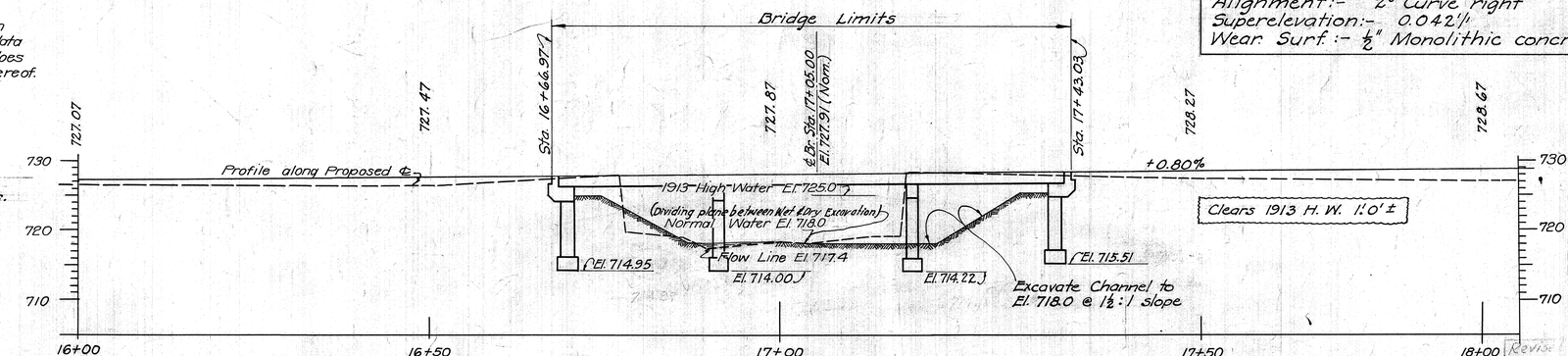


PROPOSED STRUCTURE

Type:- Continuous steel beams with concrete deck and substructure.
Spans:- 22'-27.5'-22' ℄ bearings.
Roadway:- 24'
Loading:- H-15-33
Skew:- 40° L.F. No Appr. Slabs
Alignment:- 2° Curve right
Superelevation:- 0.042'/'
Wear. Surf.:- ½" Monolithic concrete.

Note: The shale elevations shown hereon represent the foundation data obtained, but the State of Ohio does not guarantee the correctness thereof.

Temporary run-around bridge and approaches to be removed and temporary bridge to be delivered to the State Highway Division Garage at Ashland, when no longer needed to maintain traffic. State to maintain temporary runaround bridge & approaches.



PROFILE ON PROPOSED ℄

SITE PLAN
BR. Nº HU-99-164
OVER
SEYMOUR CREEK
S.H. 455 SEC. P (PT.)
HURON COUNTY
STATE OF OHIO
SCALE 1" = 10' OCTOBER, 19

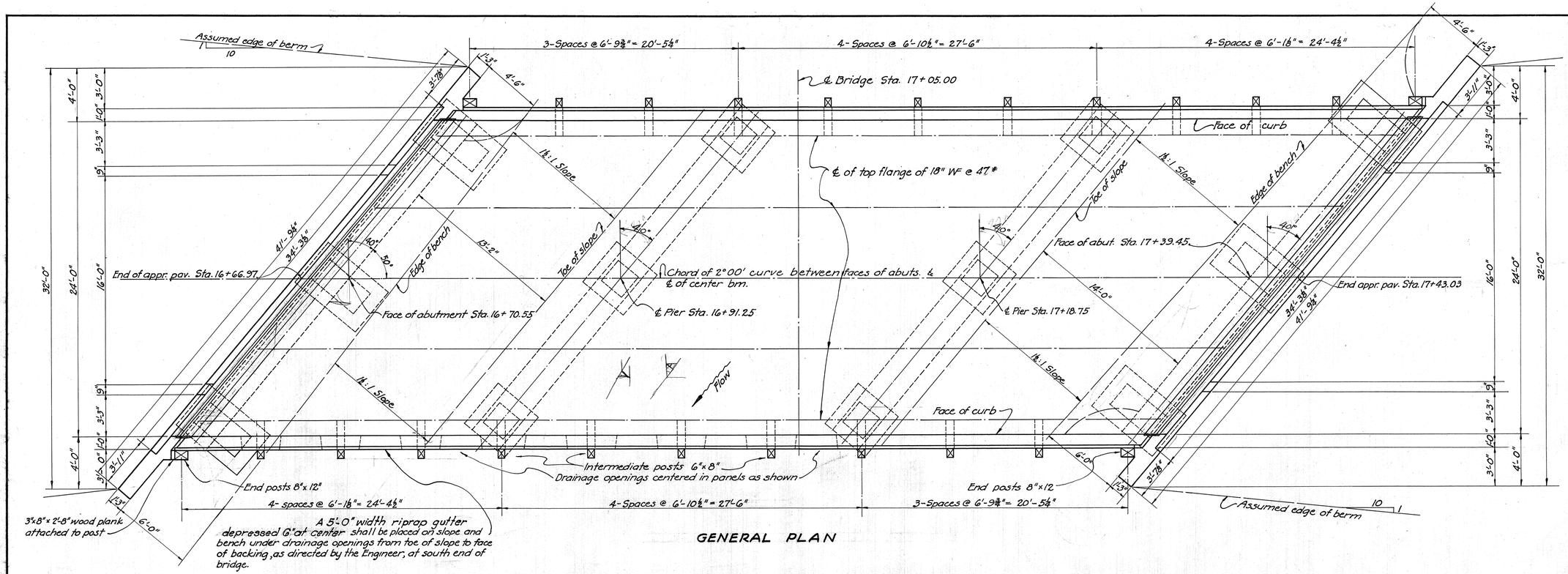
PRESENT TOPOG.		PROPOSED WORK			
SURVEY	DRAWN	DESIGNED	DRAWN	CHECK	REVIS
T.S.&L. 1-3-38	R.L.W. G.T.B.	C.N.A.	C.N.A.	J.L.M.	

Revised 3-3-38
Stations

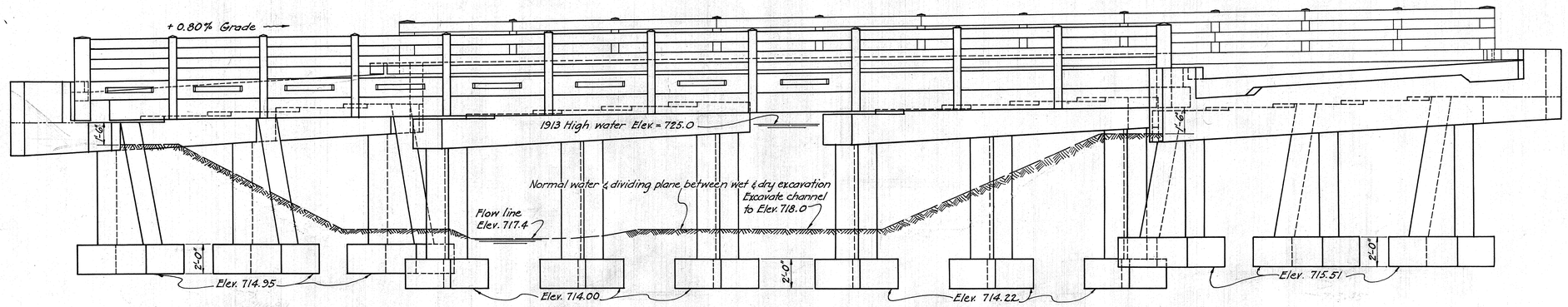
FED. RD. DIST. NO.	STATE	FED. AID PROJECT	FISCAL YEAR
10	OHIO		1938

10/14

HURON COUNTY
S. H. 455 SEC. P (part)



GENERAL PLAN



GENERAL ELEVATION

GENERAL NOTES

FOR DETAILS NOT SHOWN on these drawings, reference shall be made to Std. Drwgs. MBD-36, A5-35, & WSB-35

EXISTING ABUTMENTS That portion of existing stone abutments outside the limits of "Channel Excavation" and "Excavation for Structures, Dry" shall be removed to 2'-0" below proposed ground line and shall be included with "Removal of Portions of Existing Structure" for payment. Suitable material to be used as hand laid riprap at the location shown on the Site Plan. Remaining stone masonry to be piled on adjacent right-of-way by the Contractor as directed by the Engineer.

WELDING shall be done by the electric arc process. No prequalification of welders shall be required but all welding shall be done by experienced welders in a manner satisfactory to the Engineer.

CHAMFER all corners ¾" unless otherwise noted.

CAMBER :- No camber is required but fabricator shall inspect beams for curve and shall so fabricate that any curved beams will be placed convex side up.

RAILING POSTS AND RAILS shall be untreated.

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

GENERAL PLAN & ELEVATION
GENERAL NOTES

BRIDGE NO. HU-99-164
OVER SEYMOUR CREEK

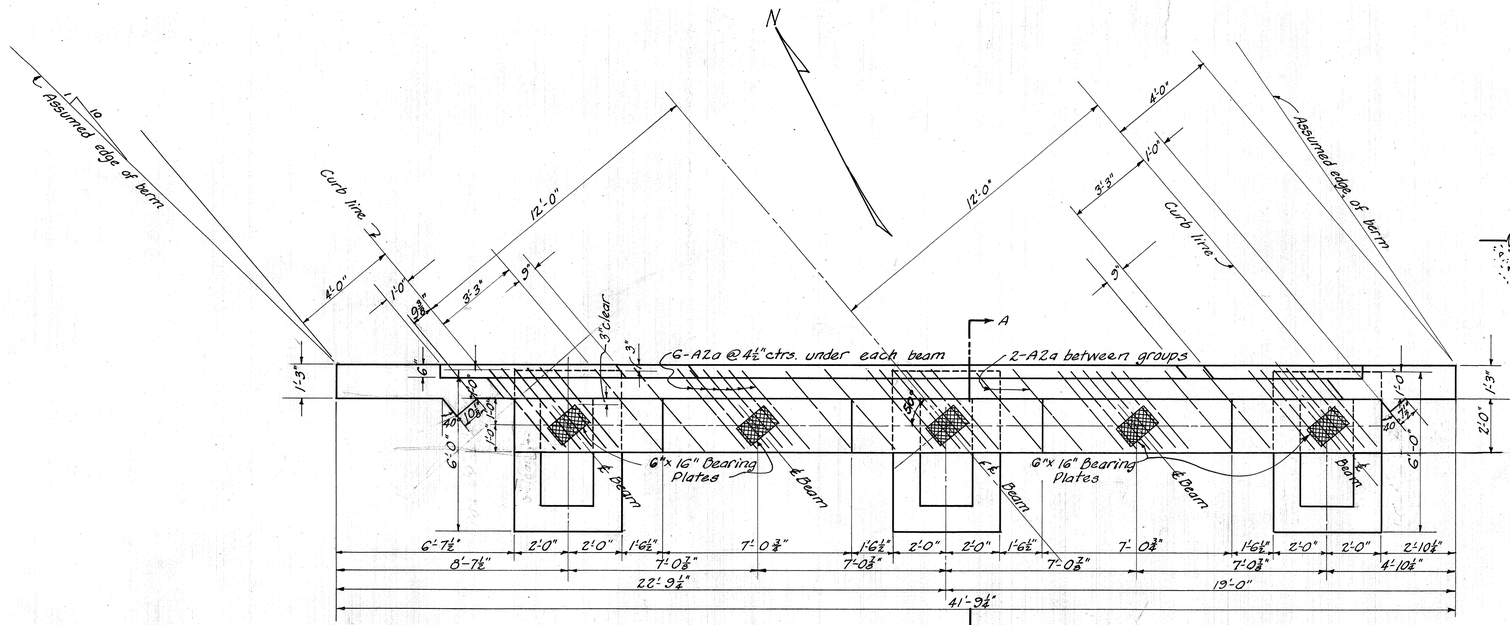
HURON COUNTY S. H. 455
SECTION P (pt.) STA. 17+05.00

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
R.S.M.	R.S.M.	J.E.P.	J.H.B.	W.E.B. W.S.A. W.W.E.	7/25/38 8/5/38	

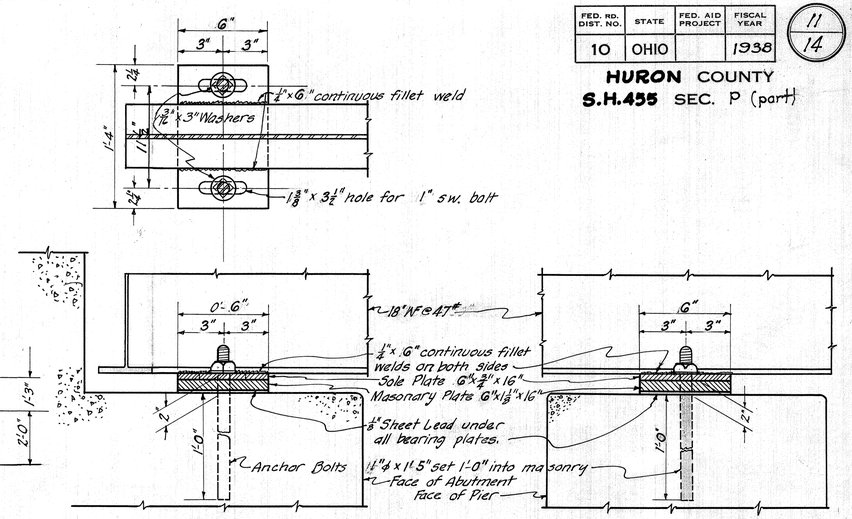
FED. RD. DIST. NO.	STATE	FED. AID PROJECT	FISCAL YEAR
10	OHIO		1938

11/14

HURON COUNTY
S.H.455 SEC. P (part)



PLAN OF NORTH ABUTMENT
(SOUTH ABUTMENT OPPOSITE HAND)

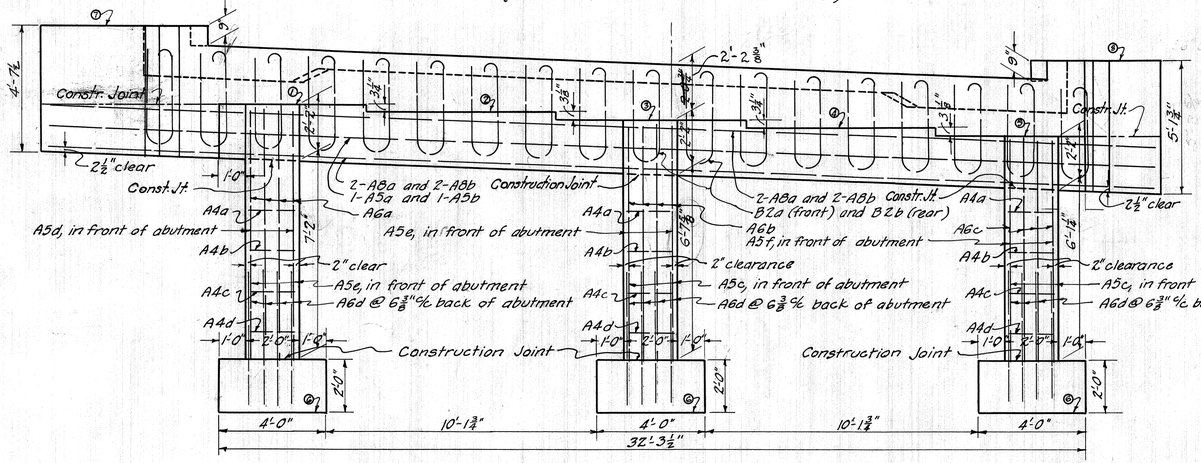


EXPANSION BEARING END AT ABUTMENTS

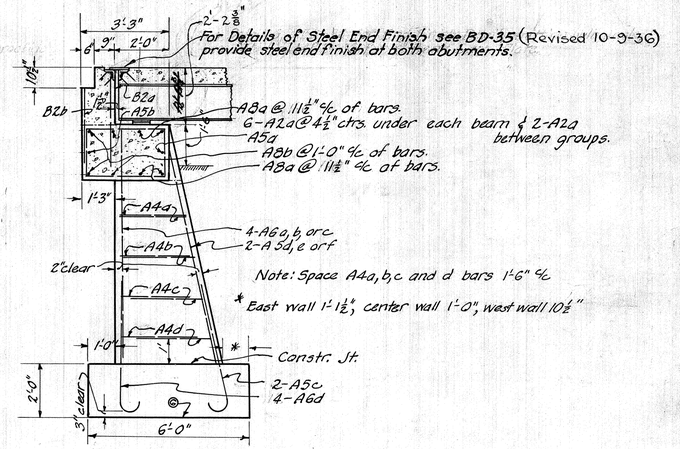
FIXED BEARING OVER PIERS

BEARING PLATE DETAILS

Note: Concrete above bridge seat construction joint shall not be placed until after concrete deck is placed and steel end finish shall be used as template.



ELEVATION OF NORTH ABUTMENT
(SOUTH ABUTMENT OPPOSITE HAND)



SECTION THRU ABUTMENT

ABUTMENT ELEVATIONS

North Abutment		South Abutment	
①	726.84	①	726.28
②	726.57	②	726.01
③	726.31	③	725.75
④	726.04	④	725.48
⑤	725.78	⑤	725.22
⑥	715.51	⑥	714.95
⑦	729.84	⑦	729.28
⑧	728.67	⑧	728.12

Revised 10-11-38

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

ABUTMENT AND BEARING PLATE DETAILS

BRIDGE NO. HU.-99-164
OVER SEYMOUR CREEK
HURON COUNTY — S.H.455
SEC. P (pt.) — STA. 17+05.00

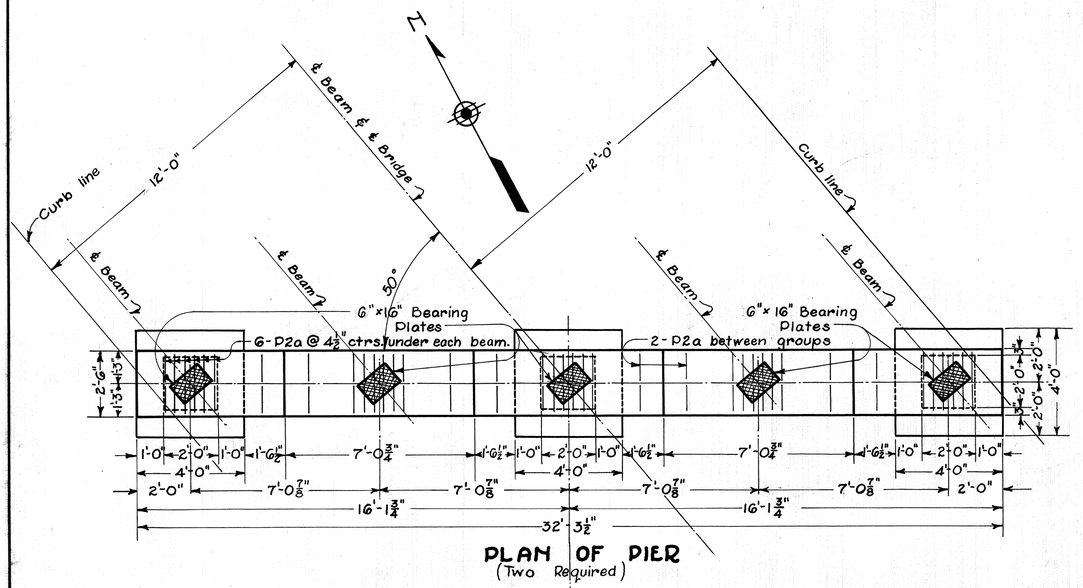
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
R.E.M.	R.E.M.	R.H.L.	J.A.B.	W.E.S. W.S.H. M.A.B.	7/25/38 8/5/38	

FED. RD. DIST. NO.	STATE	FED. AID PROJECT	FISCAL YEAR
10	OHIO		1938

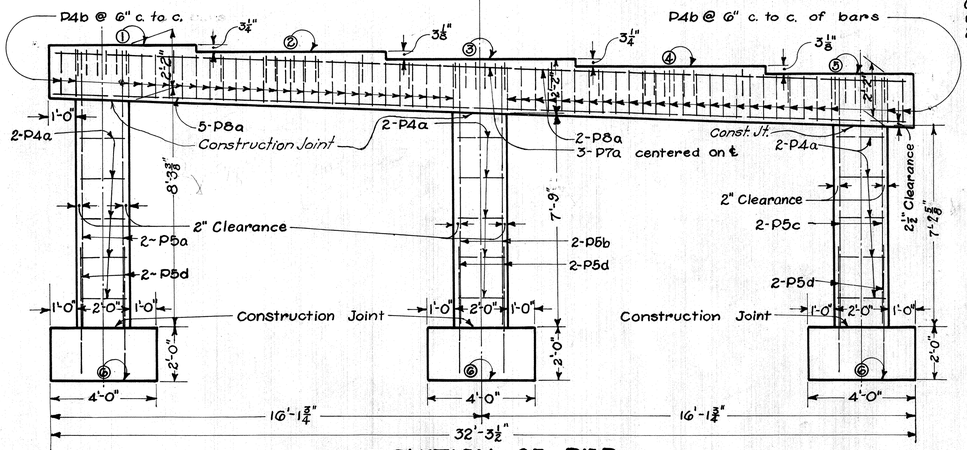
12/14

HURON COUNTY

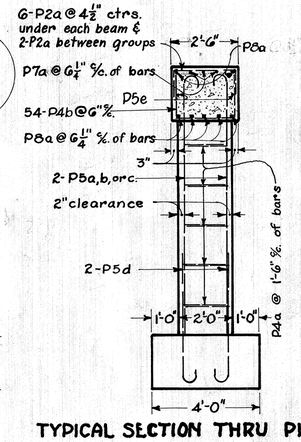
S.H. 455 SEC. P(part)



PLAN OF PIER
(Two Required)



ELEVATION OF PIER

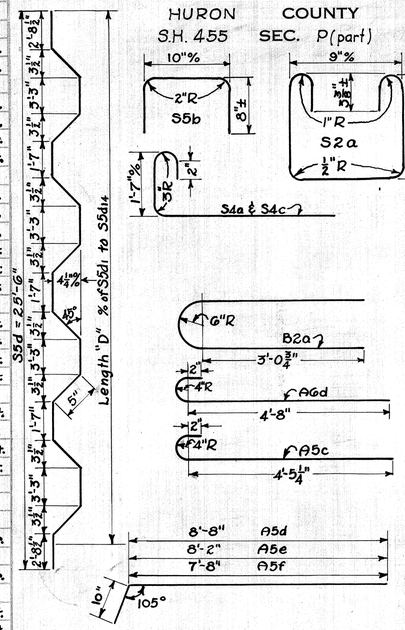


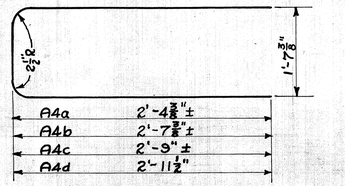
TYPICAL SECTION THRU PIER

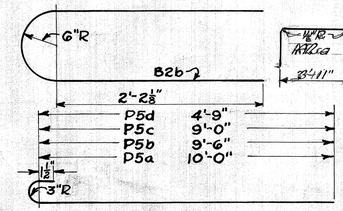
STEEL LIST

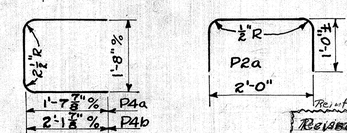
Mark	Size	No.	Length	Weight	Shape	Length D"
Superstructure						
S5a	3" ϕ	24	38'-0"	1,370	Str.	—
S5b	3" ϕ	20	2'-0"	60	Bt.	—
S5c	3" ϕ	52	38'-0"	2980	Str.	—
S5d	3" ϕ	35	26'-6"	1390	Bt.	—
S5d1	3" ϕ	2	2'-6"	10	Str.	2'-6"
S5d2	3" ϕ	2	4'-3"	10	Bt.	4'-3"
S5d3	3" ϕ	2	6'-0"	20	Bt.	6'-0"
S5d4	3" ϕ	2	7'-9"	20	Bt.	7'-6"
S5d5	3" ϕ	2	9'-6"	30	Bt.	9'-3"
S5d6	3" ϕ	2	11'-3"	30	Bt.	11'-0"
S5d7	3" ϕ	2	13'-3"	40	Bt.	12'-9"
S5d8	3" ϕ	2	14'-9"	40	Bt.	14'-3"
S5d9	3" ϕ	2	16'-6"	50	Bt.	16'-0"
S5d10	3" ϕ	2	18'-6"	60	Bt.	17'-9"
S5d11	3" ϕ	2	20'-3"	60	Bt.	19'-6"
S5d12	3" ϕ	2	21'-9"	70	Bt.	21'-0"
S5d13	3" ϕ	2	23'-6"	70	Bt.	22'-9"
S5d14	3" ϕ	2	25'-6"	80	Bt.	24'-6"
S5e	3" ϕ	36	25'-9"	1,400	Str.	
S5e1	3" ϕ	2	1'-3"	10	Str.	
S5e2	3" ϕ	2	3'-0"	10	Str.	
S5e3	3" ϕ	2	4'-9"	10	Str.	
S5e4	3" ϕ	2	6'-3"	20	Str.	
S5e5	3" ϕ	2	8'-0"	20	Str.	
S5e6	3" ϕ	2	9'-6"	30	Str.	
S5e7	3" ϕ	2	11'-6"	30	Str.	
S5e8	3" ϕ	2	13'-3"	40	Str.	
S5e9	3" ϕ	2	14'-9"	50	Str.	
S5e10	3" ϕ	2	16'-6"	50	Str.	
S5e11	3" ϕ	2	18'-3"	60	Str.	
S5e12	3" ϕ	2	19'-9"	60	Str.	
S5e13	3" ϕ	2	21'-6"	70	Str.	
S5e14	3" ϕ	2	23'-3"	70	Str.	
S4a	3" ϕ	40	4'-6"	190	Bt.	
S4b	3" ϕ	36	25'-9"	970	Str.	
S4b1	3" ϕ	2	1'-3"	10	Str.	
S4b2	3" ϕ	2	3'-0"	10	Str.	
S4b3	3" ϕ	2	4'-9"	10	Str.	
S4b4	3" ϕ	2	6'-3"	10	Str.	
S4b5	3" ϕ	2	8'-0"	20	Str.	
S4b6	3" ϕ	2	9'-6"	20	Str.	
S4b7	3" ϕ	2	11'-6"	20	Str.	
S4b8	3" ϕ	2	13'-3"	30	Str.	
S4b9	3" ϕ	44	14'-9"	680	Str.	
S4b10	3" ϕ	2	16'-6"	30	Str.	
S4b11	3" ϕ	2	18'-3"	40	Str.	
S4b12	3" ϕ	2	19'-9"	40	Str.	
S4b13	3" ϕ	2	21'-6"	40	Str.	
S4b14	3" ϕ	2	23'-3"	50	Str.	
S4c	3" ϕ	40	5'-6"	230	Bt.	
S2a	½" ϕ	126	3'-9"	320	Bt.	
Total Superst. steel				11,040		

Mark	Size	No.	Length	Weight	Shape
Abutments					
A8a	1" ϕ	8	31'-9"	870	Str.
A8b	1" ϕ	8	41'-6"	1120	Str.
A6a	⅝" ϕ	8	9'-0"	150	Str.
A6b	⅝" ϕ	8	8'-6"	140	Str.
A6c	⅝" ϕ	8	8'-0"	140	Str.
A6d	⅝" ϕ	24	6'-0"	300	Bt.
A5a	¾" ϕ	2	31'-9"	100	Str.
A5b	¾" ϕ	2	41'-6"	130	Str.
A5c	¾" ϕ	12	5'-9"	110	Bt.
A5d	¾" ϕ	4	9'-6"	60	Bt.
A5e	¾" ϕ	4	9'-0"	50	Bt.
A5f	¾" ϕ	4	8'-6"	50	Bt.
A4a	⅝" ϕ	12	6'-3"	80	Bt.
A4b	⅝" ϕ	12	6'-9"	80	Bt.
A4c	⅝" ϕ	12	7'-0"	90	Bt.
A4d	⅝" ϕ	12	7'-6"	90	Bt.
A2a	½" ϕ	76	7'-0"	360	Bt.
B2a	½" ϕ	36	7'-9"	190	Bt.
B2b	½" ϕ	36	6'-0"	150	Bt.
Total Abut. steel				4,760	
Piers					
P8a	1" ϕ	14	32'-0"	1520	Str.
P7a	1" ϕ	6	15'-0"	240	Str.
P5a	¾" ϕ	8	11'-0"	130	Bt.
P5b	¾" ϕ	8	10'-6"	130	Bt.
P5c	¾" ϕ	8	10'-0"	120	Bt.
P5d	¾" ϕ	24	5'-9"	210	Bt.
P5e	¾" ϕ	4	32'-0"	190	Str.
P4a	⅝" ϕ	60	4'-9"	300	Bt.
P4b	⅝" ϕ	216	5'-9"	1,300	Bt.
P2a	½" ϕ	76	4'-0"	200	Bt.
Total Pier steel				4340	
Replacement Bars					
RE8	1" ϕ	1	8'-0"	30	Str.
RE7	1" ϕ	1	8'-0"	20	Str.
RE6	⅞" ϕ	1	7'-6"	20	Str.
RE5	¾" ϕ	1	7'-0"	10	Str.
RE4	⅝" ϕ	1	6'-6"	10	Str.
RE2	½" ϕ	1	4'-0"	—	Str.
Total Replacement steel				90	
Grand Total				19,730#	









Revised 10-23-38

ESTIMATED QUANITITIES

		South Abut.	North Abut.	South Pier	North Pier	Super-struct.	General	Total
E-2	Excavation for structures, wet	10	0	9	0			19 c.y.
E-2	Excavation for structures, dry	32	40	0	0			72 c.y.
E-2	Excavation for structures, rock	3	7	4	7			21 c.y.
E-3	Channel excavation						293	293 c.y.
S-1	1:5½ Concrete, superstructure					44		44 c.y.
S-1	1:5½ Concrete, walls	19	19	10	10			58 c.y.
S-1	1:6½ Concrete, footings	5	5	4	4			18 c.y.
S-3	Type "B" waterproofing	14	14					28 sq.yd.
S-4	Reinforcing steel	2130	2130	2170	2170	11,040	90	19,730 lbs.
S-7	Structural steel (except field painting)					23,800		23,800 lbs.
S-8	Field painting of structural steel					23,800		23,800 lbs.
S-14	Bridge railing, timber					146		146 lin.ft.
S-15	Removal of existing temporary run-around & approaches						Lump Sum	Lump Sum
I-10	Hand-laid riprap, 8" minimum Thickness						43	43 sq. yds.
S-22	Removal of Portions of Existing Structure						Lump Sum	Lump Sum
E-2	Cofferdams and pumping						Lump Sum	Lump Sum

Pier Elevations

North Pier		South Pier	
①	726.67	①	726.45
②	726.40	②	726.18
③	726.14	③	725.92
④	725.88	④	725.66
⑤	725.61	⑤	725.39
⑥	714.22	⑥	714.00

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

PIER DETAILS, REINF. STEEL LIST & ESTIMATED QUANTITIES

BRIDGE No. HU-99-16.4
OVER SEYMOUR CREEK

HURON COUNTY
SECTION P(pt)

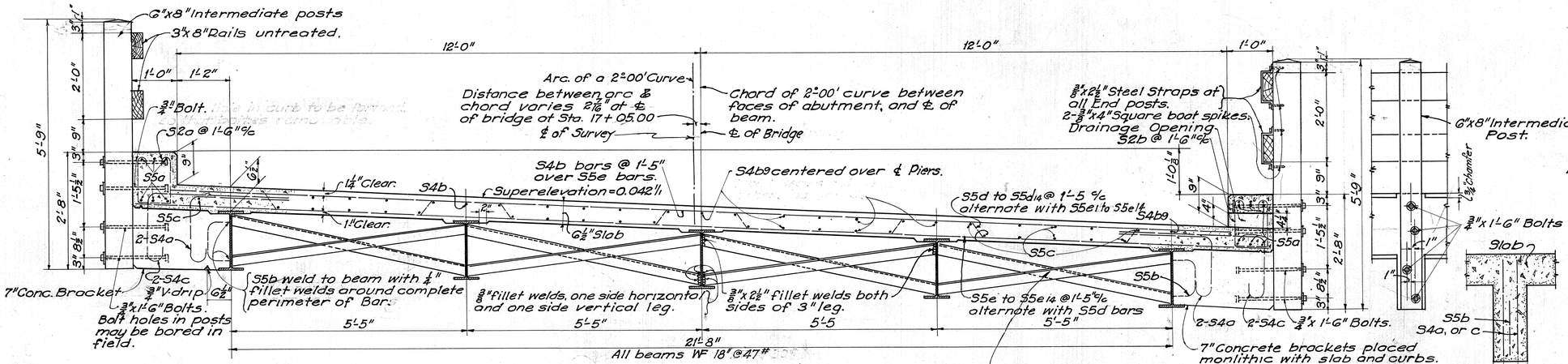
S.H. 455
STA. 17+05.00

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
R.C.M.	R.C.M.	W.D.G.	J.H.C.	H.L.B. W.S.H. M.H.R.	7/28/38 8/5/38	

FED. RD. DIST. NO.	STATE	FED. AID PROJECT	FISCAL YEAR
10	OHIO		1938

13
14

HURON COUNTY
S.H. 455 SEC. P(part)

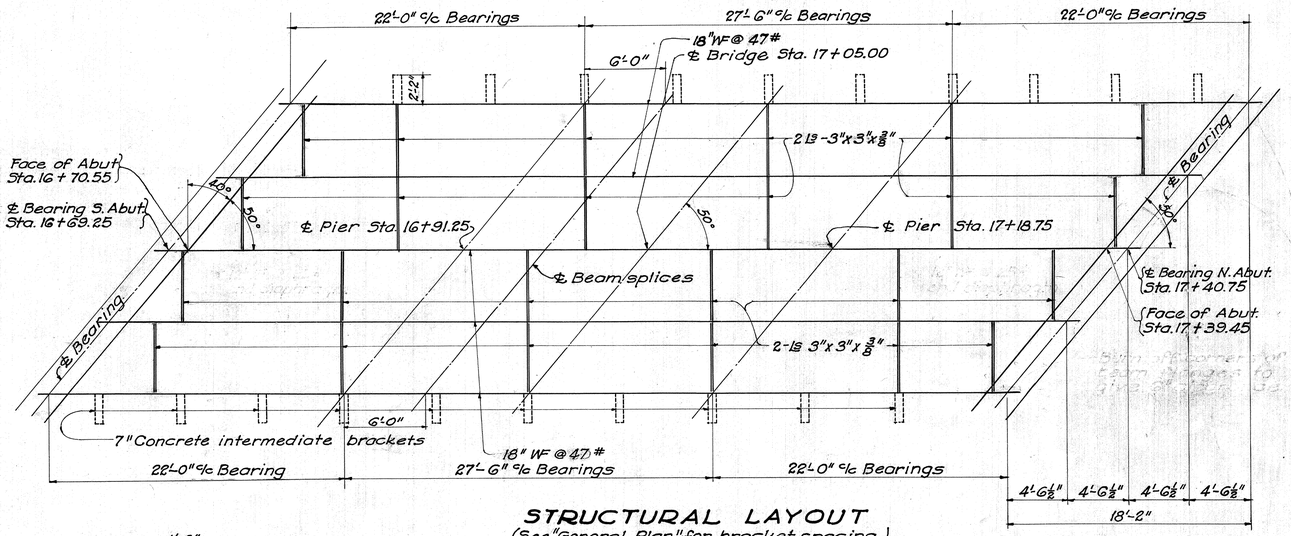


NOTE:- G 1/2" Slab thickness includes 1/2" for wearing surface. Bridge centered on ℄ of center beam.

SECTION THRU ROADWAY

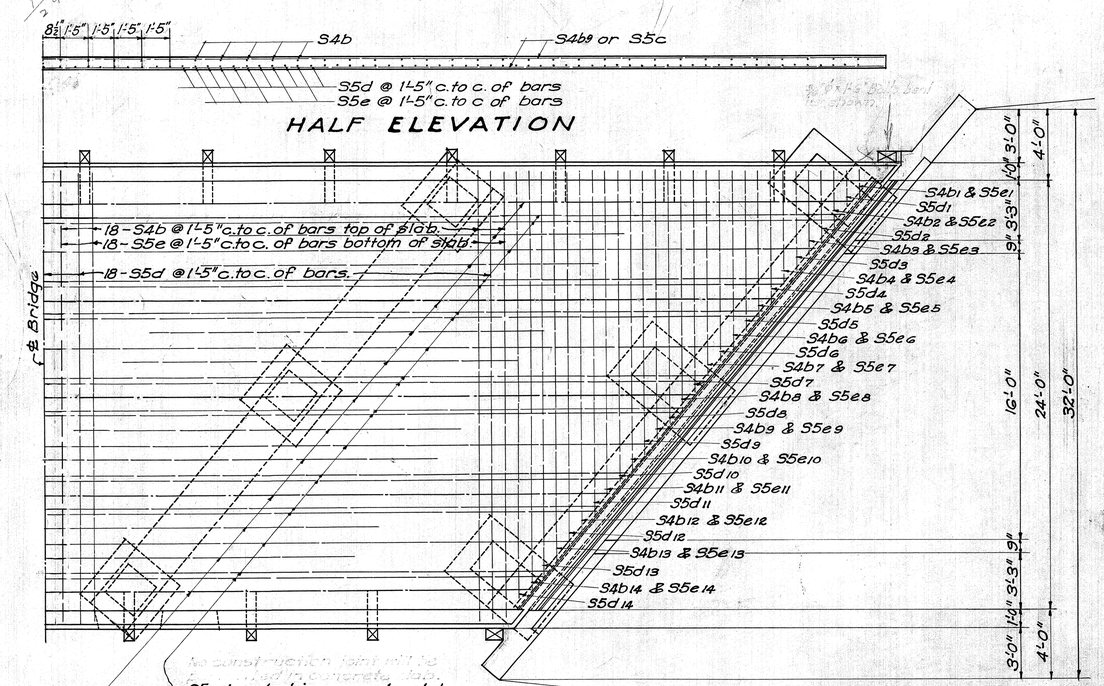
END POSTS

SECTION THRU INTERMEDIATE BRACKET



STRUCTURAL LAYOUT

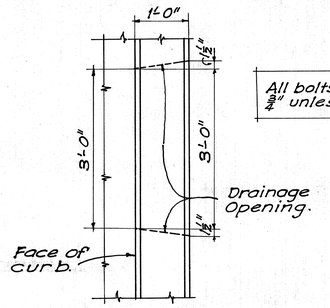
(See "General Plan" for bracket spacing.)



S5c located in concrete slab as shown in Section Thru Rdwy.

1:S4b9 centered over ℄ of I-Beams, and 1:S4b9 above and 1:S4b9 below between I-Beams as shown in Section Thru Rdwy.

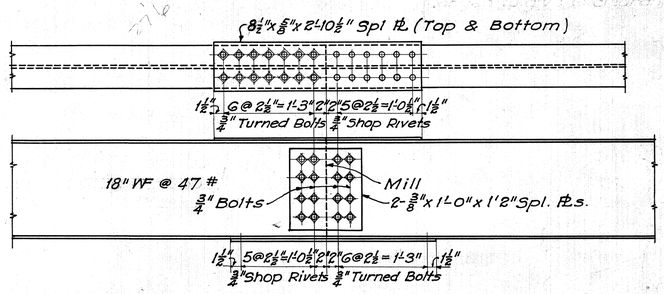
HALF PLAN 24 FT. ROADWAY



PLAN OF DRAINAGE OPENING

(See sheet No. 10 for location of openings)

All bolts and rivets shall be 3/4" unless otherwise noted.



DETAILS OF STRINGER SPLICE

Field splice to be made either with rivets or turned bolts.

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

SUPERSTRUCTURE DETAILS

BRIDGE No HU 99-164
OVER SEYMOUR CREEK.

HURON COUNTY SEC. P (Pt.) S. H. 455 STA. 17+05.00

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
R.E.M.	R.E.M.	E.W.	J.H.B.	W.S.H. W.H.E.	7/25/38 8/5/38	

FED. RD. DIST. NO.	STATE		FISCAL YEAR
10	OHIO		1938

14/14

HURON COUNTY
S. H. 455 SEC. P-PT.

SUMMARY TABLES

TABLE NO. 1

ROADWAY DRAINAGE				
TOTALS FROM SHEET NO.	8" PIPE LIN. FT.	8" PIPE UNDER DRIVES LIN. FT.	8" PIPE OUTLETS LIN. FT.	
4	84	20	10	
TOTALS	84	20	10	

TABLE NO. 2

EXCAVATION & EMBANKMENT					
STATIONS		EXCAVATION	EMBANKMENT	EMB. + 25%	
FROM	TO	CU. YDS.	CU. YDS.	CU. YDS.	
12 + 70	16 + 86	249	793	991	
17 + 30	23 + 00	140	928	1160	
TOTALS		389	1721	2151	

Net Borrow = 2151 - 389 - 264(Channel waste) = 1498 Cu.Yd.

TABLE NO. 3

DRIVEWAYS			
TOTALS FROM SHEET NO.	15" CORR. M.P. RELAID FOR DRIVEWAYS LIN. FT.	AGGREGATE FOR TR. BD. SIDE APPR'S CU. YDS.	15" CORR. M.P. REMOVED & STORED LIN. FT.
4	20	14	34
TOTALS	20	14	34

TABLE NO. 4

RIPRAP	
TOTALS FROM SHEET NO.	HAND LAID RIPRAP SQ. YDS.
4	10
TOTAL	10

TABLE NO. 5

CATCH BASINS		
TOTALS FROM SHEET NO.	STD. NO. 7 CATCH BASIN UNITS	
4	1	
TOTAL	1	

CALCULATIONS

LINE	CALCULATIONS				TOTALS	UNITS
1	NET LENGTH OF PROJECT					
2	Sta. 14 + 00 to sta. 22 + 25	=	825.00	Lin. Ft. =	0.156	Mile
3						
4	FINISHING SHOULDERS, SLOPES AND DITCHES					
5	Sta. 12 + 70 to sta. 16 + 67	=	397	Lin. Ft.		
6	Sta. 17 + 43 to sta. 23 + 00	=	557	Lin. Ft.		
7	Total	=	954	Lin. Ft.	954	Lin. Ft.
8						
9	5" WATERBOUND MACADAM BASE COURSE					
10	Sta. 14 + 00 to sta. 16 + 66.97 = 266.97 Lin. Ft.					
11	Sta. 17 + 43.03 to sta. 22 + 25 = 481.97 Lin. Ft.					
12	Total = 748.94 Lin. Ft.					
13	Length = 748.94 Ft. Width = 20 Ft. Area = 748.94 x 20 ÷ 9	=	1664.3	Sq. Yds.		
14	Area for Merger at Beginning of Project (See Sh. No. 4)	=	57.5	Sq. Yds.		
15	Area for Merger at End of Project (See Sh. No. 4)	=	14.2	Sq. Yds.		
16	Total	=	1736.0	Sq. Yds.	1736.0	Sq. Yds.
17						
18	BITUMINOUS MATERIAL (C.T.) FOR SURFACE TREATMENT (0.50 GAL. PER SQ. YD.)					
19	Area (See Line 16) = 1736.0 Sq. Yds. Vol. = 1736.0 x 0.50	=	868.0	Gals.	868.	Gals.
20						
21	BITUMINOUS MATERIAL (A.C.B. #2) FOR SURFACE TREATMENT (0.30 GAL. PER SQ. YD.)					
22	Area (See Line 16) = 1736.0 Sq. Yds. Vol. = 1736.0 x 0.30	=	520.8	Gals. Use	521	Gals.
23						
24	NO. 6 AGGREGATE FOR SURFACE TREATMENT (30 LBS. PER SQ. YD.)					
25	Area (See Line 16) = 1736.0 Sq. Yds. Vol. = 1736.0 x 30 ÷ 2400	=	21.7	Cu. Yds.	21.7	Cu. Yds.
26						
27	NO. 46 AGGREGATE FOR SURFACE TREATMENT (25 LBS. PER SQ. YD.)					
28	Area (See Line 16) = 1736.0 Sq. Yds. Vol. = 1736.0 x 25 ÷ 2400	=	18.1	Cu. Yds.	18.1	Cu. Yds.
29						
	AGGREGATE FOR TRAFFIC BOUND SIDE APPROACHES					
	Volume from Table No. 3	=	14	Cu. Yds.		
	Volume for One Mail Box Approach (See Sh. No. 2 for detail)	=	3.5	Cu. Yds.		
	Total	=	17.5	Cu. Yds.	17.5	Cu. Yds.

SUMMARY OF QUANTITIES

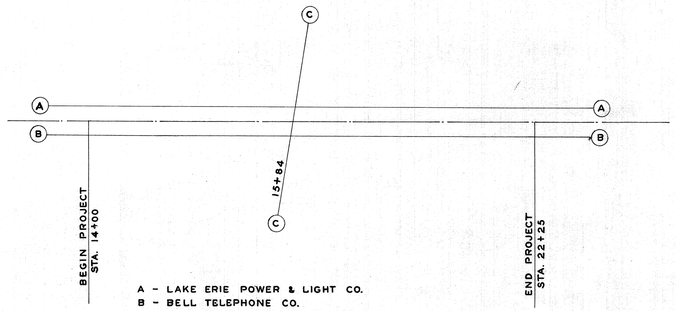
ITEM	TOTALS	UNITS	DESCRIPTION	REFERENCES TABLE	REFERENCES LINE
			ROADWAY		
E-1	389	Cu. Yds.	Roadway Excavation (Unclassified)	2	
E-4	1498	Cu. Yds.	Borrow (Contractor to furnish)	2	
E-5	954	Lin. Ft.	Finishing Shoulders, Slopes and Ditches		7
E-11	8.6	M. Gals.	Watering Embankments		
I-3	84	Lin. Ft.	8" Pipe for Roadway Drainage	1	
I-3	20	Lin. Ft.	8" Pipe for Roadway Drainage, under Drives	1	
I-3	10	Lin. Ft.	8" Pipe for Roadway Drainage Outlets	1	
I-6	20	Lin. Ft.	15" Corr. M. P. Relaid for Driveways	3	
I-6	34	Lin. Ft.	15" Corr. M. P. Removed and Stored	3	
I-8	1	Unit	Std. No. 7 Catch Basin	5	
I-10	10	Sq. Yds.	Hand Laid Riprap (8" Thickness)	4	
I-17	17.5	Cu. Yds.	Aggregate for Traffic Bound Side Approaches		33
			PAVEMENT		
B-20	1736.0	Sq. Yds.	5" Waterbound Macadam Base Course		16
T-31	868	Gals.	Bituminous Material (C.T.) for Surface Treatment		19
T-31	521	Gals.	Bituminous Material (A.C.B. No. 2) for Surface Treatment		22
T-31	21.7	Cu. Yds.	No. 6 Aggregate for Surface Treatment		25
T-31	18.1	Cu. Yds.	No. 46 Aggregate for Surface Treatment		28
			STRUCTURE OVER 20 FT. SPAN		
			For Estimated Quantities see sheet No. 12		

HURON COUNTY
S.H. 455 SEC. P
R/W PLANS

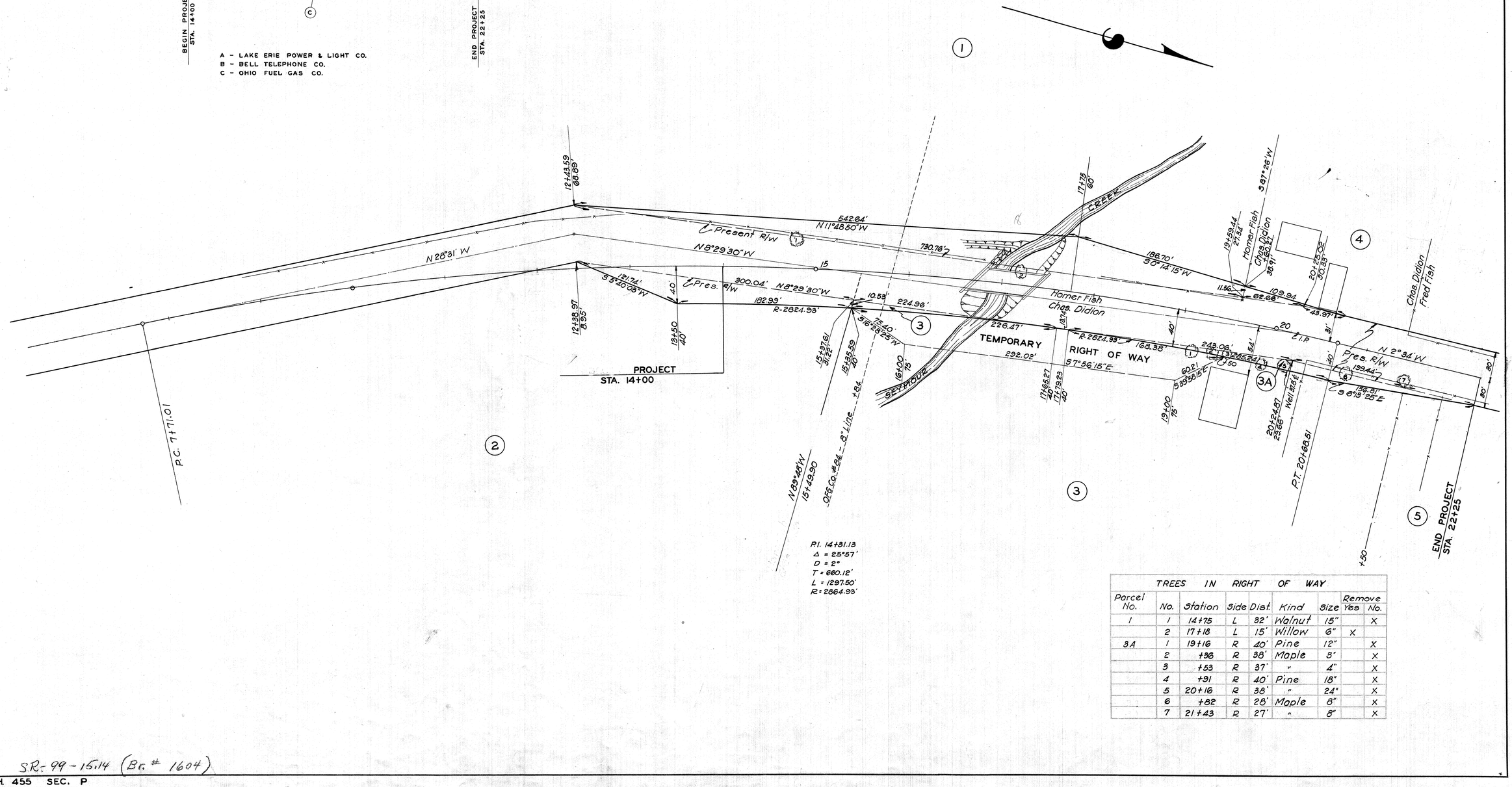
DATE 5-15- DRAWN BY A.F.V.
REVISED
LENGTH OF PROJECT MILES

R/W SHOWN ON THIS PLAN SECURED BY EASEMENTS OR APPROPRIATION.

LOCATION OF UTILITIES



A - LAKE ERIE POWER & LIGHT CO.
B - BELL TELEPHONE CO.
C - OHIO FUEL GAS CO.



TREES IN RIGHT OF WAY

Parcel No.	No.	Station	Side	Dist.	Kind	Size	Remove Yes	Remove No.
1	1	14+75	L	32'	Walnut	15"		X
	2	17+18	L	15'	Willow	6"	X	
3A	1	19+16	R	40'	Pine	12"		X
	2	+36	R	38'	Maple	3"		X
	3	+53	R	37'	"	4"		X
	4	+91	R	40'	Pine	18"		X
	5	20+16	R	38'	"	24"		X
	6	+82	R	28'	Maple	8"		X
	7	21+43	R	27'	"	8"		X

SR-99-15.14 (Br. # 1604)

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HURON COUNTY