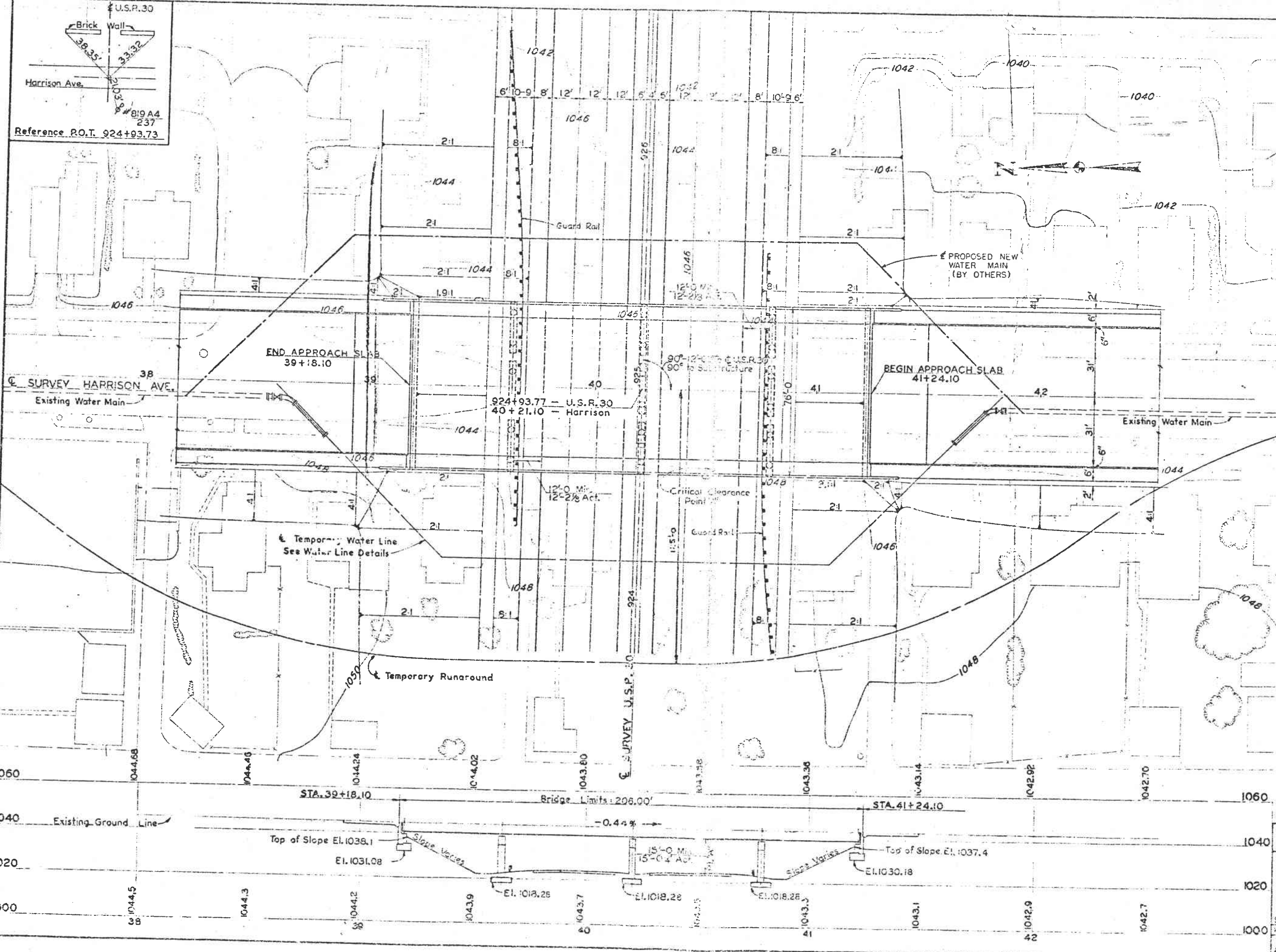


U.S.R. 30
 Brick Wall
 38.35' 33.32'
 Harrison Ave.
 8' 9" 44'
 237
 Reference P.O.T. 924+93.73

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

STARK COUNTY
 STA-30-12.47
 In Canton



Earthwork limits shown are schematic.
 Actual slopes shall conform to plan cross-sections.

B.M. Elev. 1048.04 - Mine Spike in power pole #81544 at S.E. corner of 15th Street S.W. and Bryan Avenue S.W.

PROPOSED STRUCTURE
 TYPE: Continuous steel beams with reinforced concrete deck and substructure.
 SPANS: 43.0' - 57.75' - 57.75' - 43.0'
 ROADWAY: 62' 1/2' 6'-0" Sidewalks
 LIVE LOAD: HS-20-44
 SKEW: 0°
 SURFACE COURSE: 1 1/2" Asphalt Concrete
 APPROACH SLABS: AS-1-72 (25' long) modified
 ALIGNMENT: Tangent

Harrison Ave. 1985 A.D.T. = 7,849
 U.S.R. 30 1985 A.D.T. = 43,037
CURVE DATA
 TEMPORARY RUNAROUND
 Δ = 37°39'30"
 T = 102.30'
 L = 197.18
 E = 16.05'
 R = 300.0'

W.E.G. BRIDGE 3
 SHEET 1 OF 11

W.E. QUICKSALL AND ASSOCIATES, INC.
 CONSULTING ENGINEERS - NEW PHILADELPHIA, OHIO

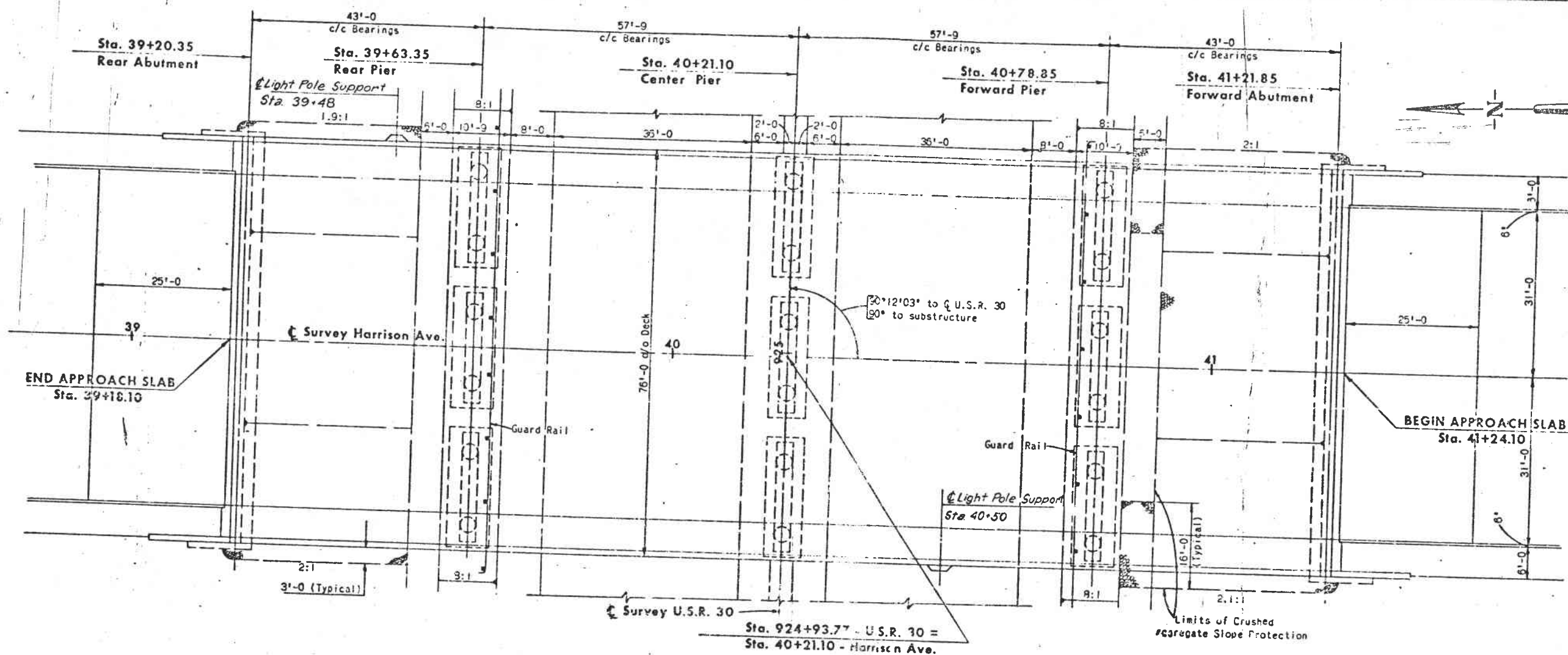
SITE PLAN
 BRIDGE NO. STA-30-1423
 U.S.R. 30 under Harrison Ave.

STARK COUNTY		STA. 924+93.77	
PRESENT TOPOGRAPHY	PROPOSED WORK	DESIGNED	DRAWN
Surveyed	Drawn	W.E.G.	W.E.G.
Checked	Checked	W.E.G.	W.E.G.

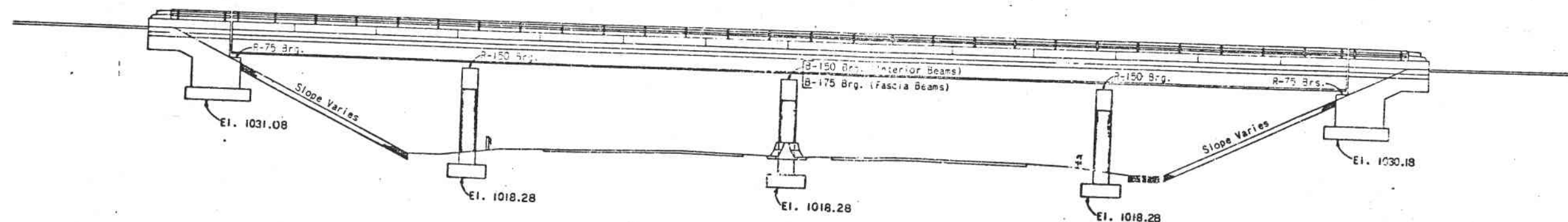
FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

STA-30-12.47

30-12.47



PLAN



ELEVATION

W.E.O. BRIDGE 5
SHEET 2 OF 11

W. E. QUICKSALL AND ASSOCIATES, INC.
CONSULTING ENGINEERS • NEW PHILADELPHIA, OHIO

GENERAL PLAN & ELEVATION

BRIDGE NO. STA-30-1423

U.S.R. 30 under HARRISON AVE.

DES. WRD.	DRAWN	TRACED	CHECKED	APPROVED	DATE	REMARKS
	PMZ		DO		2/1/71	3/68

STA-30-12.47

ESTIMATED QUANTITIES

Item	Total	Unit	Description	Abuts	Piers	Super	Gen'l.
404	39	Cu. Yds.	Asphalt concrete, AC20			39	
503	755	Cu. Yds.	Unclassified Excavation	427	328		
509	183,842	Lbs.	Reinforcing Steel	15023	42,240	126,579	
511	503	Cu. Yds.	Class C Concrete - Superstructure (See proposal note)			503	
511	150	Cu. Yds.	Class C Concrete - Piers above footings		150		
511	196	Cu. Yds.	Class C Concrete - Abutments above footings	196			
511	227	Cu. Yds.	Class C Concrete - Footings	83	144		
512	20	Lin. Ft.	Premolded sealing strip	20			
513	288370	Lbs.	Structural Steel			288370	
514	288370	Lbs.	Field Painting of Structural Steel			288370	
516	35	Sq. Ft.	1" Preformed Expansion Joint Filler	35			
517	455.66	Lin. Ft.	Bridge Railing - BR-2-67	58.65		407.00	
518	91	Cu. Yds.	Porous Backfill	91			
518	14	Each	Scupper, including supports			14	
518	72	Lin. Ft.	6" Non-Perforated Helical C.M.P. including specials, 707.01	72			
518	160	Lin. Ft.	6" Perforated Helical C.M.P., 707.01	160			
518	26	Each	Subdrainage for wearing surface (As per plan)			26	
601	644	Sq. Yds.	Crushed Aggregate Slope Protection	644			
S625			See Sheet 226-B for Lighting Summary				
808	503	Units	Chemical Admixture for concrete, Type A, B or D			503	
Special	19	Cu. Yds.	Asphaltic Protective Course (See proposal note)			19	
Special	1408	Sq. Yds.	Membrane Waterproofing sheet type (See proposal note)			1408	

* Includes 1,400 Lbs. to be paid by Ohio Bell Telephone Co. A/50,

* includes 60 * to be paid by East Ohio Gas Co.

ELEVATIONS-TOP OF DECK SLAB

STATION	PROFILE GRADE MINUS .12'	CURB LINES *
39+20.35	1044.03	1043.55
39+25.00	1044.01	1043.53
39+50.00	1043.90	1043.42
39+63.35	1043.84	1043.36
39+75.00	1043.79	1043.32
40+00.00	1043.68	1043.21
40+21.10	1043.59	1043.10
40+25.00	1043.57	1043.09
40+50.00	1043.46	1043.00
40+75.00	1043.35	1042.87
40+78.75	1043.33	1042.85
41+00.00	1043.24	1042.77
41+21.85	1043.14	1042.66

* Elevations shown are at the intersection of face of curb and bearing of abutments and piers and at even 25' stations.

Elevations are those required, before deck concrete is placed to allow for dead load deflection caused by the weight of the concrete.

GENERAL NOTES

REFERENCE shall be made to:

Standard Drawings:

BR-2-67, revised 10-15-71
RB-1-65, revised 2-2-59
SD-1-69, dated 6-12-69
HL 4,5,7 9-6-73

Supplemental Specifications:

808, dated 1-1-71
835, dated 3-12-75

DESIGN SPECIFICATIONS: This structure conforms to "Standard Specifications for Highway Bridges" adopted by the American Association of State Highway Officials, 1965, including the Ohio "Supplement" to these specifications.

DESIGN INFORMATION:

Design Loading - HS20-44
Concrete Class "C" - Unit stress, 1333 p.s.i. for substructure
Concrete Class "C" - Unit stress, 1200 p.s.i. for superstructure
Structural Steel - ASTM A36 - Unit stress, 20000 p.s.i.
Reinforcing Steel - ASTM A615, A616 or A617

Basic unit stress 20,000 p.s.i.

Spiral Reinforcement shall be plain bars ASTM A82 or A615

FOUNDATION BEARING PRESSURE: Pier footings are designed for a maximum bearing pressure of 2.5 tons per square foot. Abutment footings are designed for a maximum pressure of 2.0 tons per square foot.

STEEL ERECTION: During the erection of end dams and crossframes, care shall be taken to insure that stringers, bearing parts and bridge seats remain in bearing contact.

OHIO BELL TELEPHONE CO. will furnish brackets, straps, nuts, washers and studs for telephone line attachment.

THE EAST OHIO GAS COMPANY shall furnish all the materials including the brackets for attaching their gas line to the bridge and qualified personnel to perform the work. The address of the Gas Co. is:

The East Ohio Gas Co.
332 Second Street N.W.
Canton, Ohio 44702

W.E.Q. BRIDGE 5
SHEET 3 OF 11

W.E. QUICKSALL AND ASSOCIATES, INC.
CONSULTING ENGINEERS • NEW PHILADELPHIA, OHIO

GENERAL NOTES, ESTIMATED
QUANTITIES & SLAB ELEVATIONS

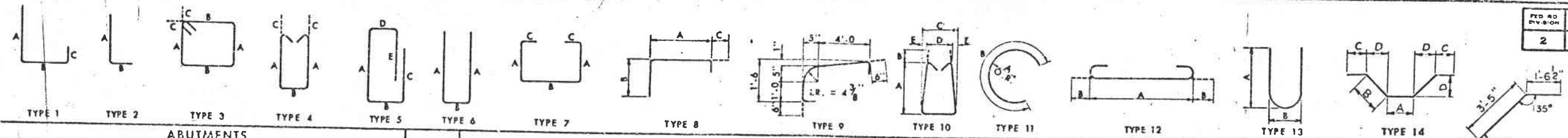
BRIDGE NO. STA-30-1423

USR 30 UNDER HARRISON AVE

STARK COUNTY

STA. 924+93.77

DRAWN	TRACED	CHECKED	DATE	BY
PMZ		DO	3/69	



ABUTMENTS									
MARK	TYPE	A	B	C	D	E	NO.	LENGTH	WEIGHT
A501	Str.						24	27'-0"	374
A502	5	6'-10"	1'-0"	5'-4"	11'-0"	2'-6"	124	16'-4"	3042
A503	6	7'-8"	1'-5"				24	10'-5"	592
A505	6	1'-9"	3'-5"				100	6'-7"	999
A506	2	7'-9"	5'-4"				100	12'-11"	1945
A507	2	7'-9"	10'-0"				100	8'-5"	1264
A508	6	9'-6"	1'-2"				12	19'-11"	359
D801	15						82	5'-6"	1204
A501	Str.						32	35'-0"	1397
A502	Str.						32	14'-4"	478
A503	Str.						32	6'-4"	278
A504	Str.						8	11'-4"	95
A505	Str.						28	4'-10"	141
A506	6	4'-3"	1'-2"				4	9'-5"	39
A507	6	3'-4"	1'-2"				4	7'-7"	32
A508	6	2'-7"	1'-2"				12	6'-1"	75
A509	Str.						4	5'-8"	24
A510	Str.						76	20'-7"	1632
A511	Str.						4	7'-6"	31
A512	4	2'-2"	8'-0"	7'-3"			28	5'-7"	67
A513	13	6'-0"	7'-0"				28	7'-2"	209
A514	Str.						6	9'-0"	75
RAILING									
R501	Str.						48	14'-6"	*
R502	Str.						16	11'-1"	*
R504	Str.						6	14'-4"	*
R505	4	3'-2"	8'-0"	6'-0"			16	7'-7"	*
R506	9	See Detail					9	6'-7"	*
R507	8	4'-8"	3'-2"	6'-0"			9	8'-1"	*
R508	13	1'-6"	5'-3"				16	3'-2"	*
R509	Str.						8	4'-6"	*
R510	Str.						28	7'-0"	*

PIERS									
MARK	TYPE	A	B	C	D	E	NO.	LENGTH	WEIGHT
P1001	Str.						48	22'-0	4364
P301	Str.						40	17'-10	2425
P302	Str.						60	17'-7	3587
P303	Str.						60	17'-2	4659
P307	2	5'-1	11'-3				180	6'-1	3723
P308	Str.						84	22'-0	6283
P801	Str.						126	20'-3	6728
P801	Str.						105	5'-6	1025
P802	Str.						210	7'-6	2366
P501	6	2'-7	2'-6				180	7'-5	1392
P502	Str.						36	20'-2	757
	</								

SUPERSTRUCTURE									
MARK	TYPE	A	B	C	D	E	NO.	LENGTH	WEIGHT
S701	Str.						356	43'-4"	30,775
S702	Str.						516	39'-11"	43,768
S703	Str.						255	34'-6"	18,052
S601	Str.						678	30'-0"	30,651
S602	Str.						108	33'-0"	3,731
S603	Str.						113	34'-0"	5,771
S501	6	7'-5"	1'-4"				255	2'-4"	628
S502	6	7'-5"	1'-2"				255	2'-2"	573
S503	6	7'-5"	6'-6"				255	7'-9"	2,069
S504	4	2'-2"	9'-0"	5'-0"			272	5'-7"	1,584
L501	1	7'-5"	2'-1"	7'-5"			8	3'-1"	26
L502	1	2'-9"	2'-1"	2'-9"			8	7'-4"	62
L503	14	1'-4"	2'-11"	6'-0"	2'-1"		12	8'-0"	100
L504	Str.						8	2'-9"	22

NOTES

All dimensions are out-to-cut.

Str. in the "TYPE" column indicates straight bars.

Include with railing for payment.

Refer to CMS Sections 106.03, 700, 709.01 through 709.05 and 709.08. Sufficient additional reinforcing steel shall be provided for sampling. Random samples shall be replaced in the structures by the additional steel, spliced in accordance with 509.08.

W.E. QUICKSALL & ASSOCIATES, INC.
CONSULTING ENGINEERS • NEW PHILADELPHIA, OHIO

REINFORCING BAR SCHEDULE

BRIDGE NO. STA-30-1423

U.S.R. 30 under HARRISON AVE.

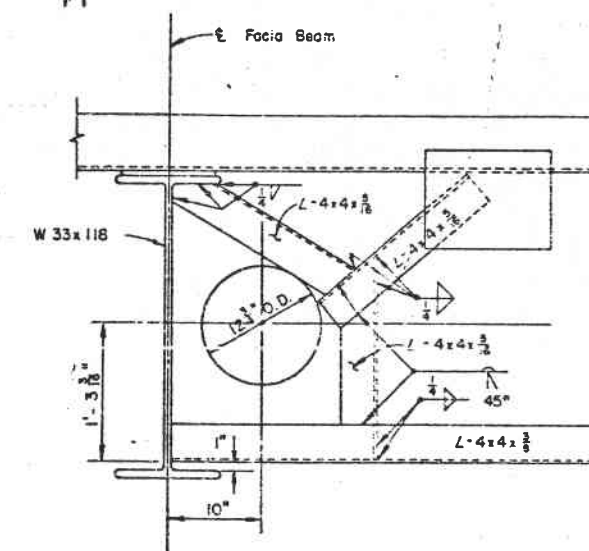
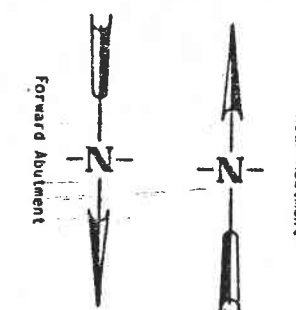
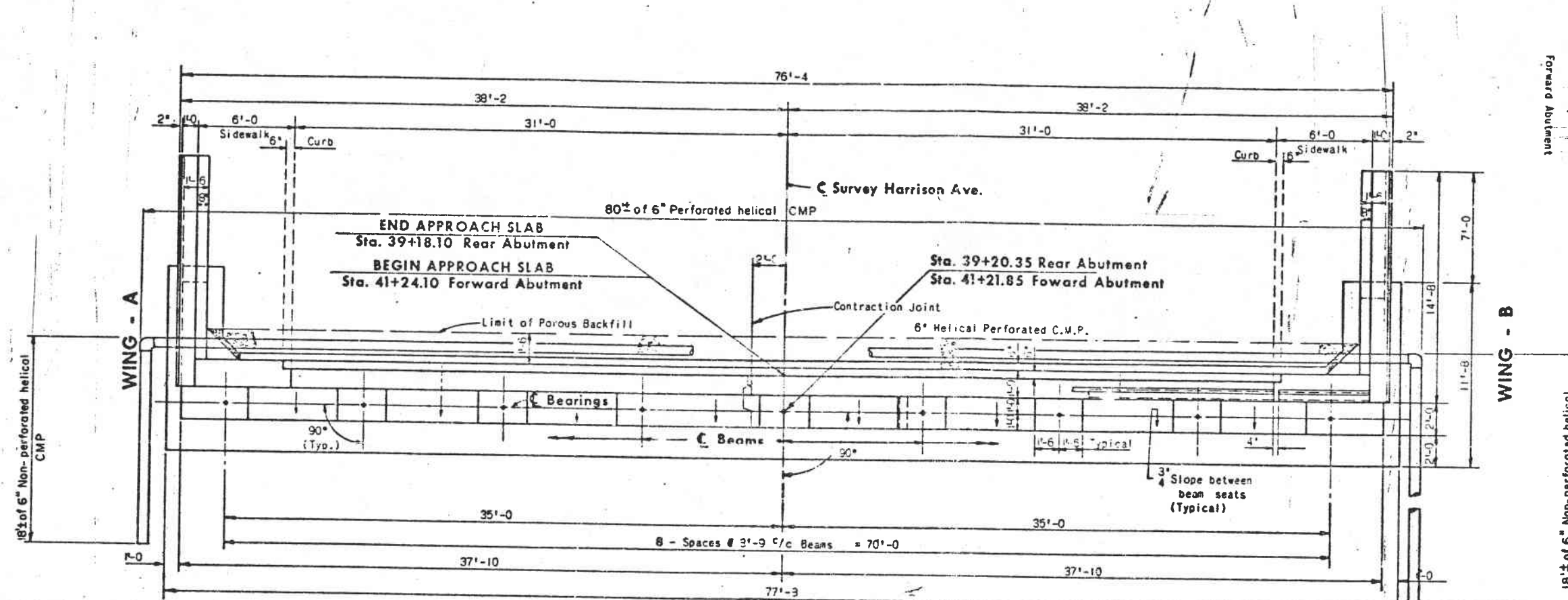
STARK COUNTY STA. 921-93.77

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE
	PMZ		ada	WLM	2/68

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

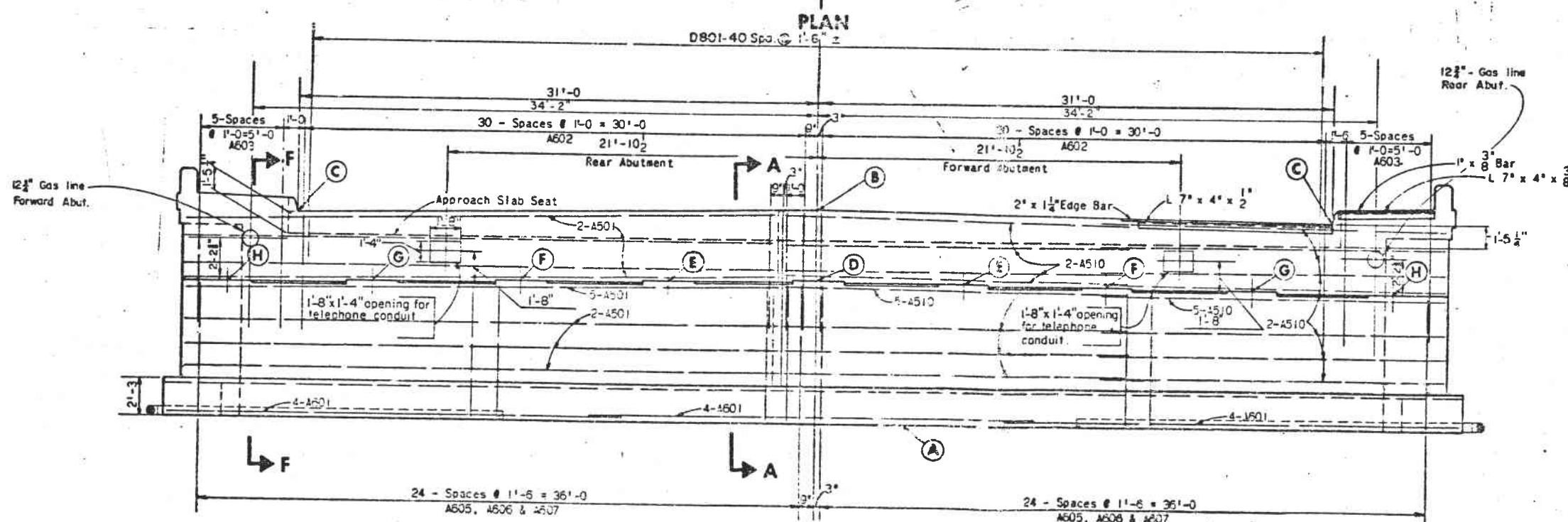
358
135

STA-30-12.47



End Crossframe details for 12 3/4" Gas line
(Additional steel to be furnished by East)
Ohio Gas Company

BACKWALL CONCRETE: In addition to the provisions of 511.08, backwall concrete shall not be placed until after the deck concrete in the span adjacent to the backwall has been placed.



ELEVATION

LOCATION	ELEVATIONS									
	A	B	C	D	E	F	G	H	J	K
Rear Abutment	1031.08	1044.14	1043.65	1039.80	1039.66	1039.53	1039.39	1039.25	1043.11	1043.55
Forward Abutment	1030.18	1043.24	1042.76	1038.91	1039.78	1038.64	1036.50	1037.37	1042.60	1042.66

NOTES:
See Sheet No. 7 for contraction joint details.
For additional details see Sheet No. 7
Forward Abutment identical to Rear Abutment except as noted in Elevation Tables.
Porous Backfill shall extend upward to the Approach Slab & Sidewalk.

W.E.Q. BRIDGE 5
SHEET 6 OF 11

W. E. QUICKSALL AND ASSOCIATES, INC.
CONSULTING ENGINEERS • NEW PHILADELPHIA, OHIO

ABUTMENT DETAILS

BRIDGE NO. STA-30-1423

U.S.R. 30 under HARRISON AVE.

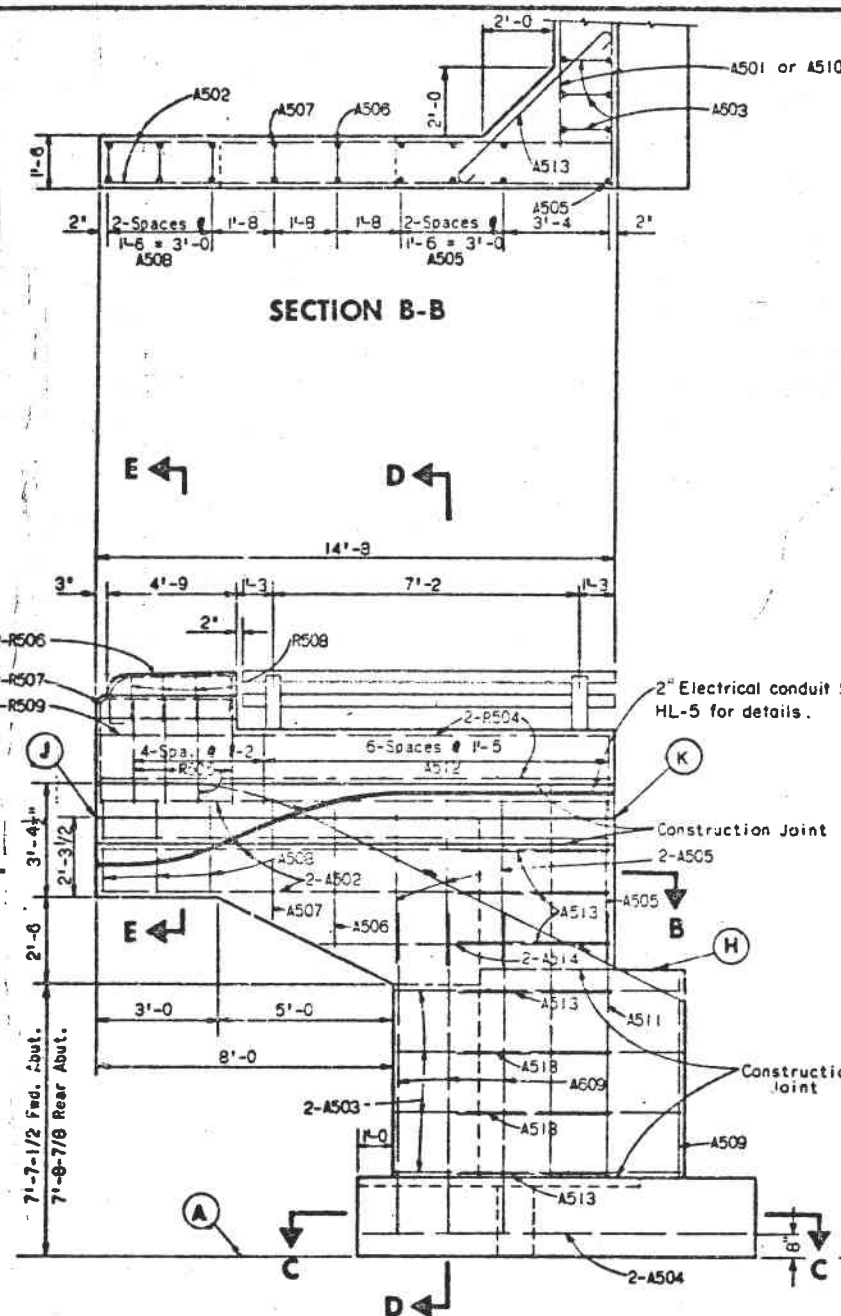
STARK COUNTY STA. 924+93.77

DESIGNED	DRAWN	CHECKED	REVIEWED	DATE	BY
PMZ		bo	2/14	3/18	

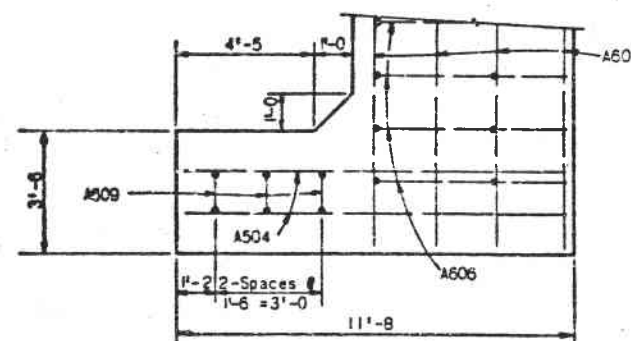
FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

35-9
435

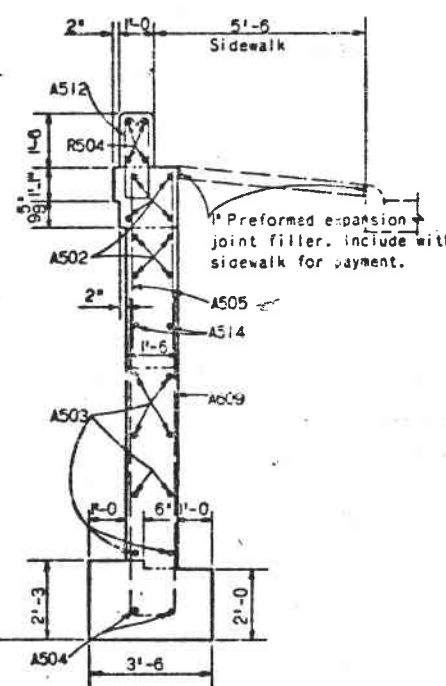
STA-30-12.47



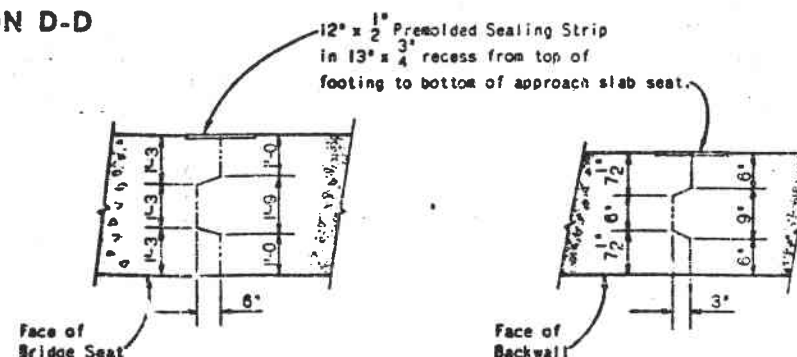
ELEVATION - WING A
WING B - OPPOSITE HAND



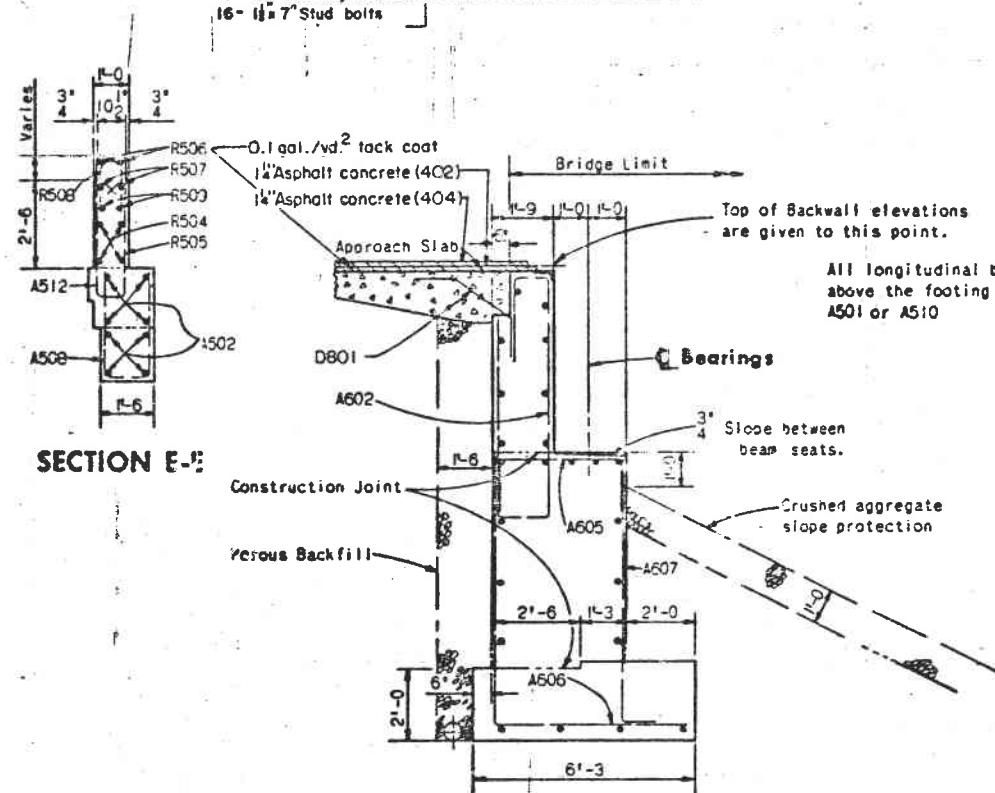
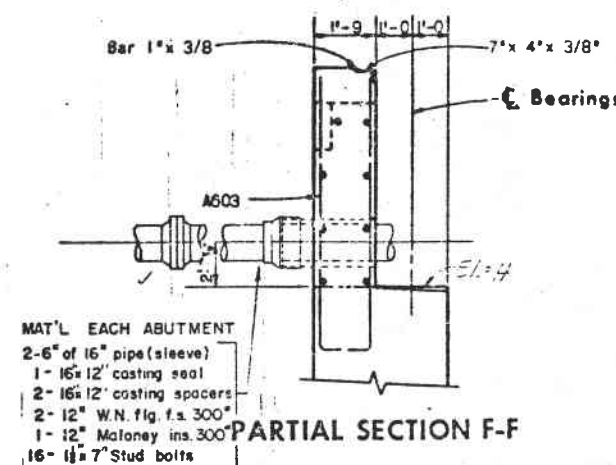
SECTION C-C



SECTION D-D



CONTRACTION JOINT DETAILS



SECTION E-E

SECTION A-A

See Sheet #5 for Abut. Plan, Elevation
and Table of Elevations.

W.E.O. BRIDGE 5
SHEET 7 OF 11

W. E. QUICKSALL AND ASSOCIATES, INC.
CONSULTING ENGINEERS • NEW PHILADELPHIA, OHIO

ABUTMENT DETAILS

BRIDGE NO. STA-30-1423

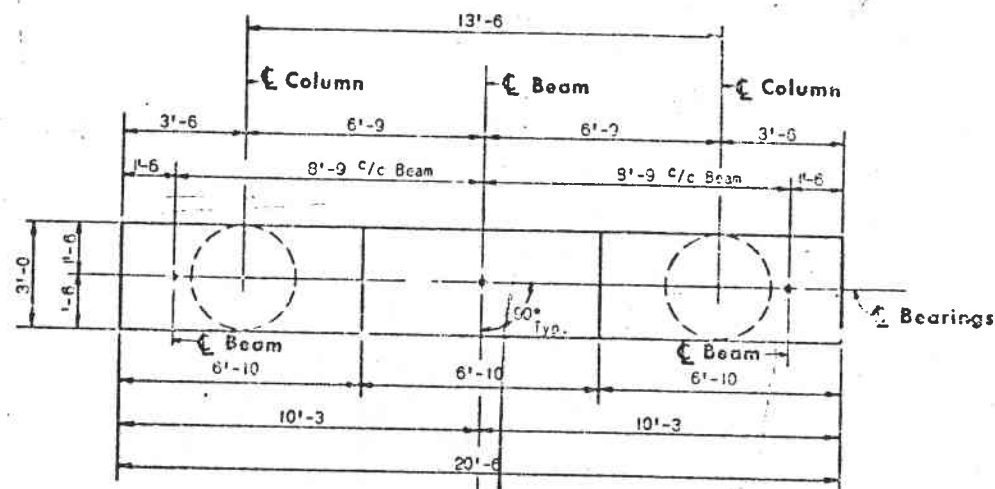
U.S.R. 30 under HARRISON AVE.

DESIGNED	DRAWN	TRACED	CHECKED	RE-DESIGNED	DATE	REVISION
PMZ			ba	DLN	3/88	

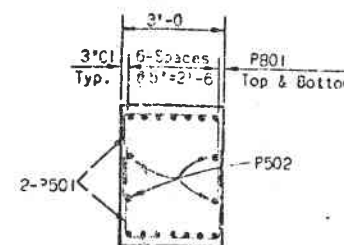
FED. DIST.	STATE	PROJECT
2	OHIO	

STA-30-12.47

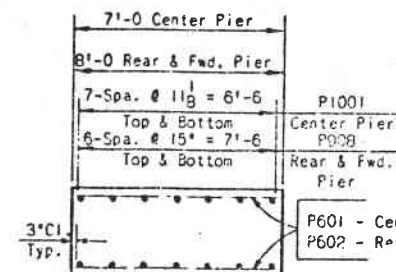
360
100



PLAN OF PIER CAP
TYPICAL FOR ALL BENTS

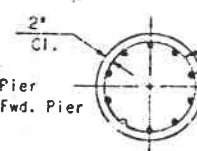


SECTION A-A



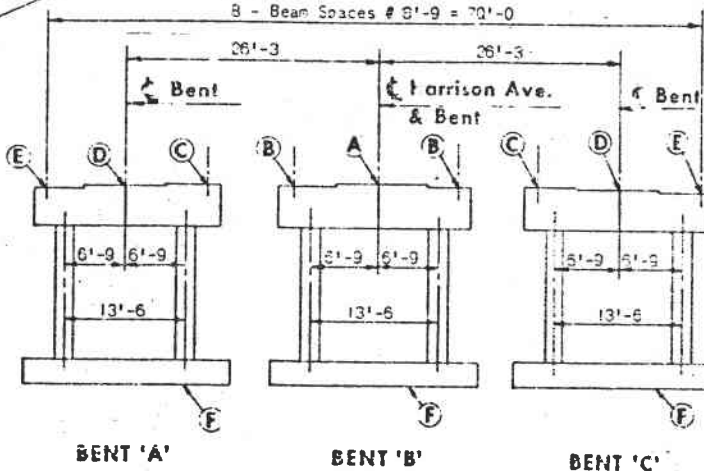
SECTION B-B

P901 & P902 Rear Piers
P901 & P903 Center Piers
P902 & P903 Forward Piers



SECTION C-C

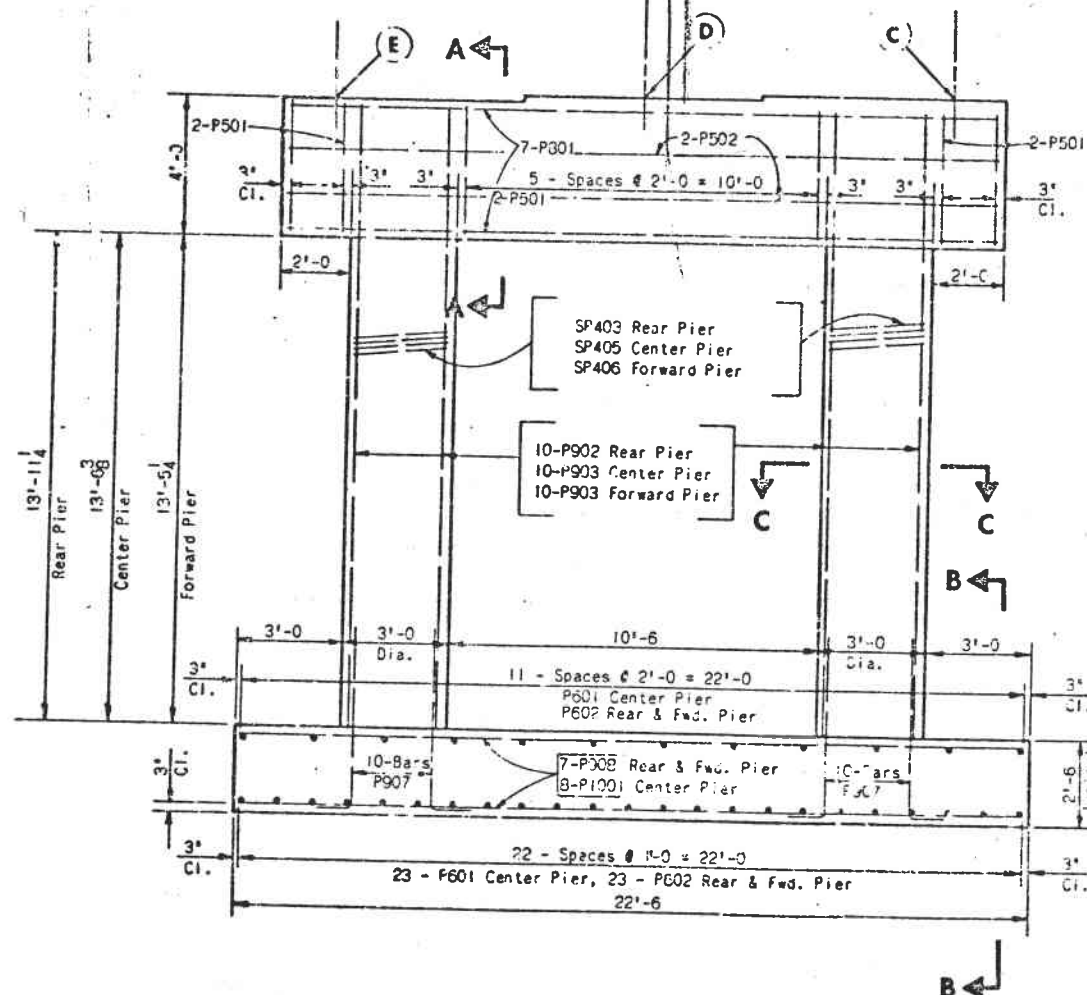
SP401 or SP403 Rear Pier
SP402 or SP405 Center Pier
SP404 or SP406 Forward Pier



TYPICAL PIER ELEVATION

LOCATION	ELEVATIONS					
	A	B	C	D	E	F
Rear Pier	1039.27	1039.13	1039.00	1038.86	1038.72	1038.59
Center Pier	1039.00	1038.87	1038.73	1038.59	1038.31	1038.28
Forward Pier	1039.71	1038.62	1038.49	1038.35	1038.21	1038.20

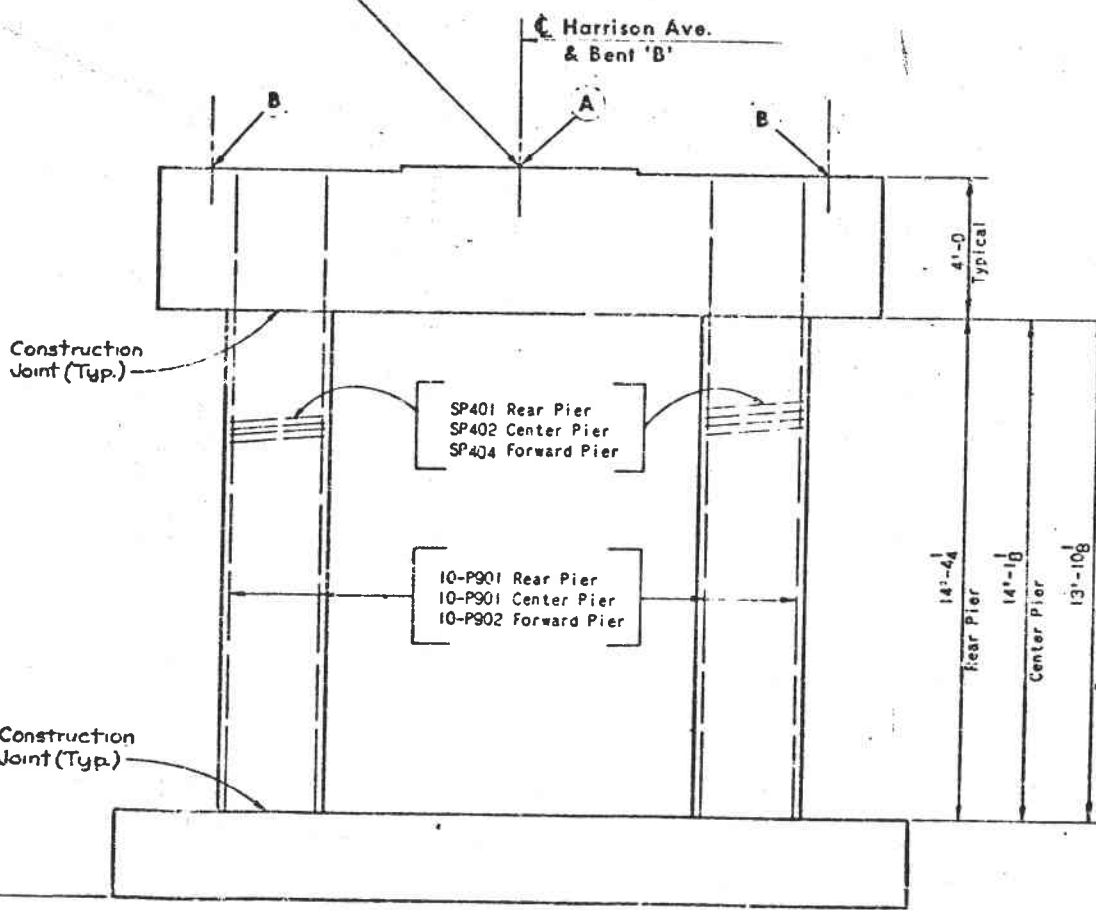
BEARING ANCHORS: At the option of the contractor, bearing anchors (or formed holes), located and supported by templates, may be cast in place.



ELEVATION OF BENT 'A'
BENT 'C' - OPPOSITE HAND

Sta. 39+63.35
Sta. 40+21.10
Sta. 40+78.85

Rear Pier
Center Pier
Forward Pier



ELEVATION OF BENT 'B'

All Reinforcing Bars and dimensions in Bent 'B' are the same as Bent 'A' & 'C' except where otherwise shown.

W.E.O. BRIDGE
SHEET 8 OF 11

W. E. QUICKSALL AND ASSOCIATES, INC. CONSULTING ENGINEERS • NEW PHILADELPHIA, OHIO					
PIER DETAILS					
BRIDGE NO. STA-30-1423					
U.S.R. 30 under HARRISON AVE.					
STARK COUNTY STA. 924+93.77					
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE
PMZ			ba	DM	3/2

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

361
145

STA-30-12.47

SUPERSTRUCTURE NOTES

ADDITIONAL DETAILS: Refer to Standard Drawings SD-1-69, sheets 1, 2, 3 & 4 RB-1-55 and BR-2-67 for details not shown.

FIELD SPLICES: Shall be for 33 # 118 or 33 # 130 as detailed on Standard Drawing SD-1-69, sheet 4.

DECK SLAB HAUNCH: A typical haunch width of 9" shall be used for computing quantities of concrete. However, the haunch width may vary between 6" and 12" provided that the slope shall not be greater than 1:4 for a haunch less than 9" wide.

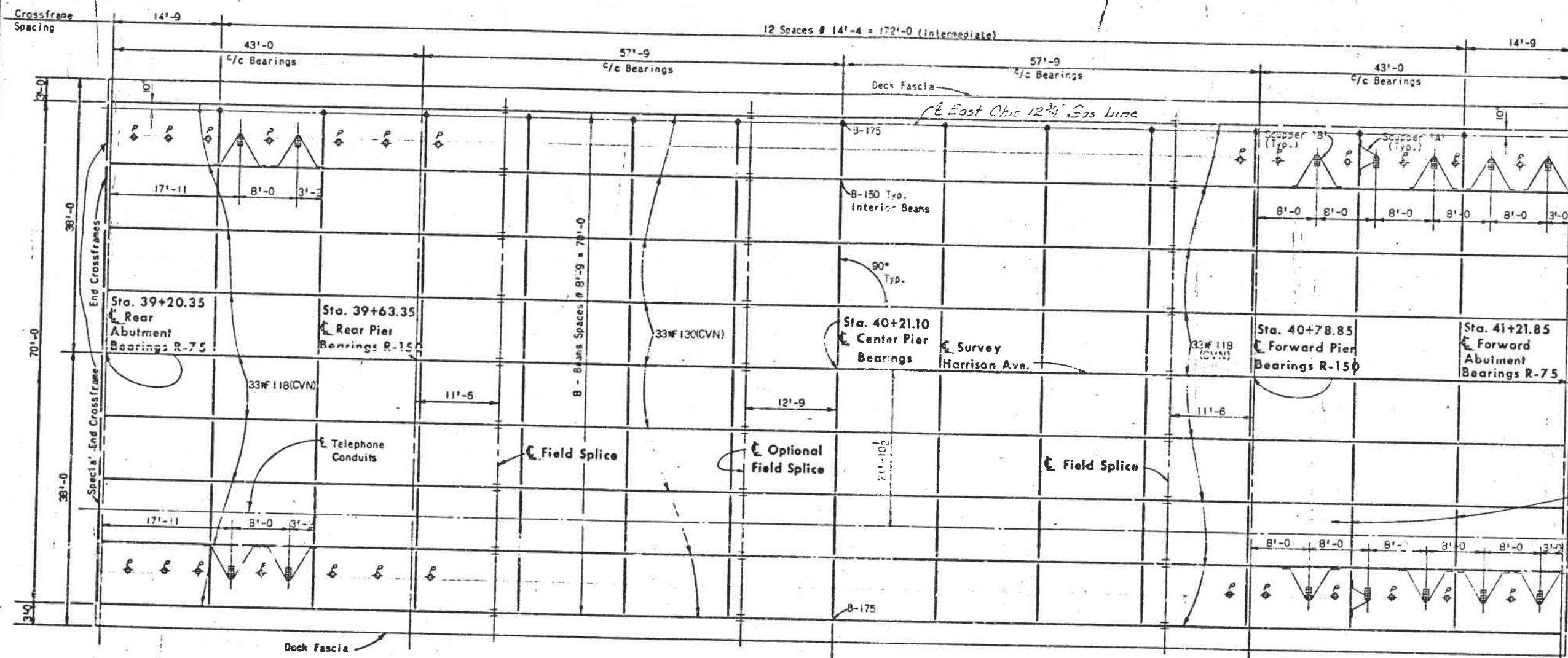
This Dimension is nominal dimension. The quantity of deck concrete to be paid for shall be based on this dimension, even though deviation from it may be necessary because the top flange of the beam may not have the exact camber or conformation required to place it parallel to the finished grade. Deduction shall be made for volume of encased steel plates as per Sec. 511.19 of the Construction and Material Specifications.

Denotes position of Gas pipe support

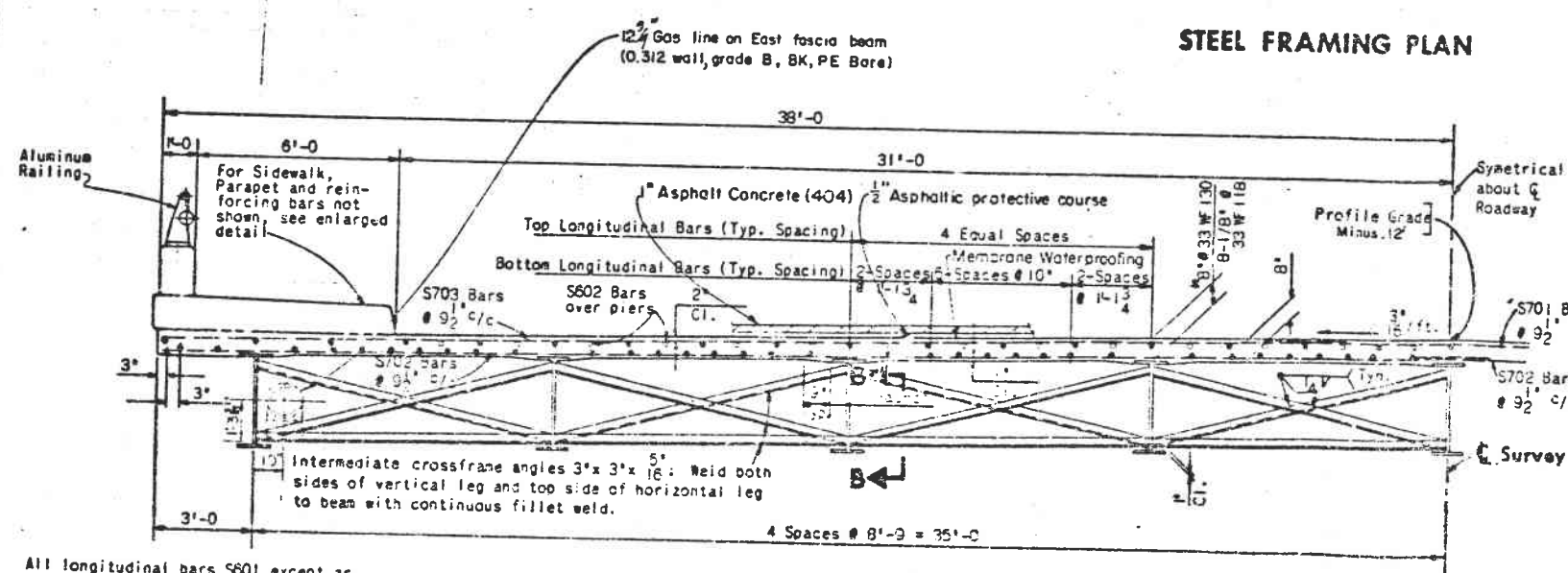
See sheet 374A for additional Subdrainage details.

Special Intermediate Crossframes
Where "CVN" follows a shape or plate size designation, the material shall meet specified minimum notch toughness requirements. The Fabricators shall submit to the Director a procedure designed for positive identification of material through all phases of fabrication. No material shall be fabricated until the Director has approved the procedure.

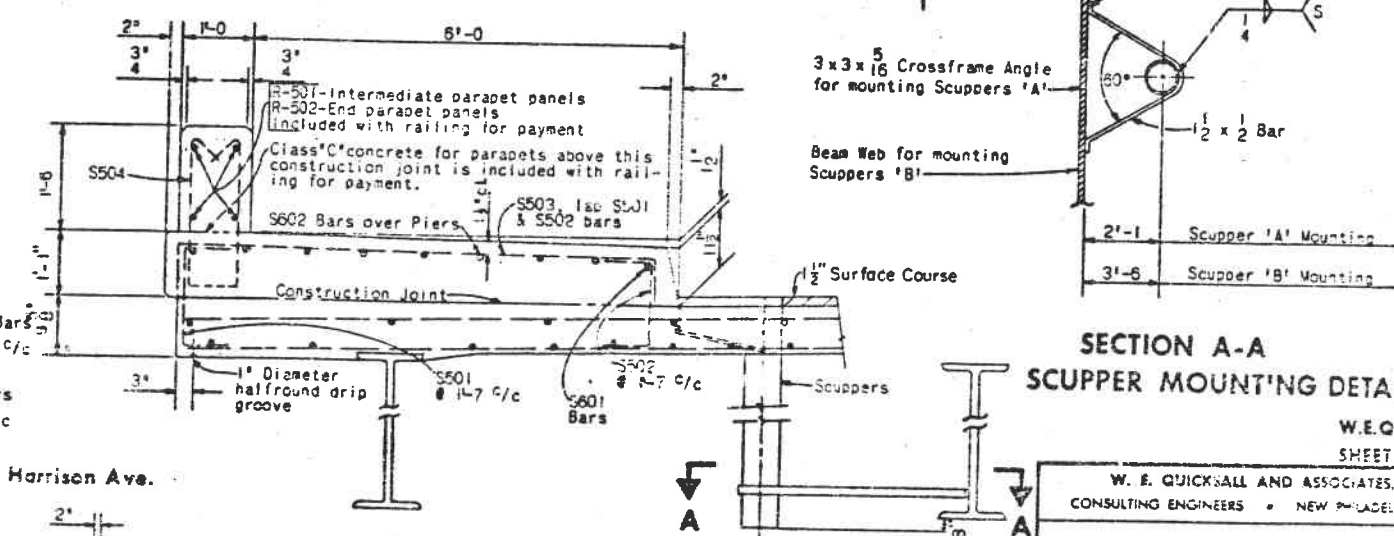
Special End Crossframes
All splice material shall be (CVN)



STEEL FRAMING PLAN



HALF TRANSVERSE SECTION



SECTION A-A SCUPPER MOUNTING DETAILS

W.E.G. BRIDGE 5
SHEET 9 OF 11

W. E. QUICKSALL AND ASSOCIATES, INC.
CONSULTING ENGINEERS • NEW PHILADELPHIA, OHIO

SUPERSTRUCTURE DETAILS

BRIDGE NO. STA-30-1423

U.S.R. 30 under HARRISON AVE.

STARK COUNTY STA. 924+93.77

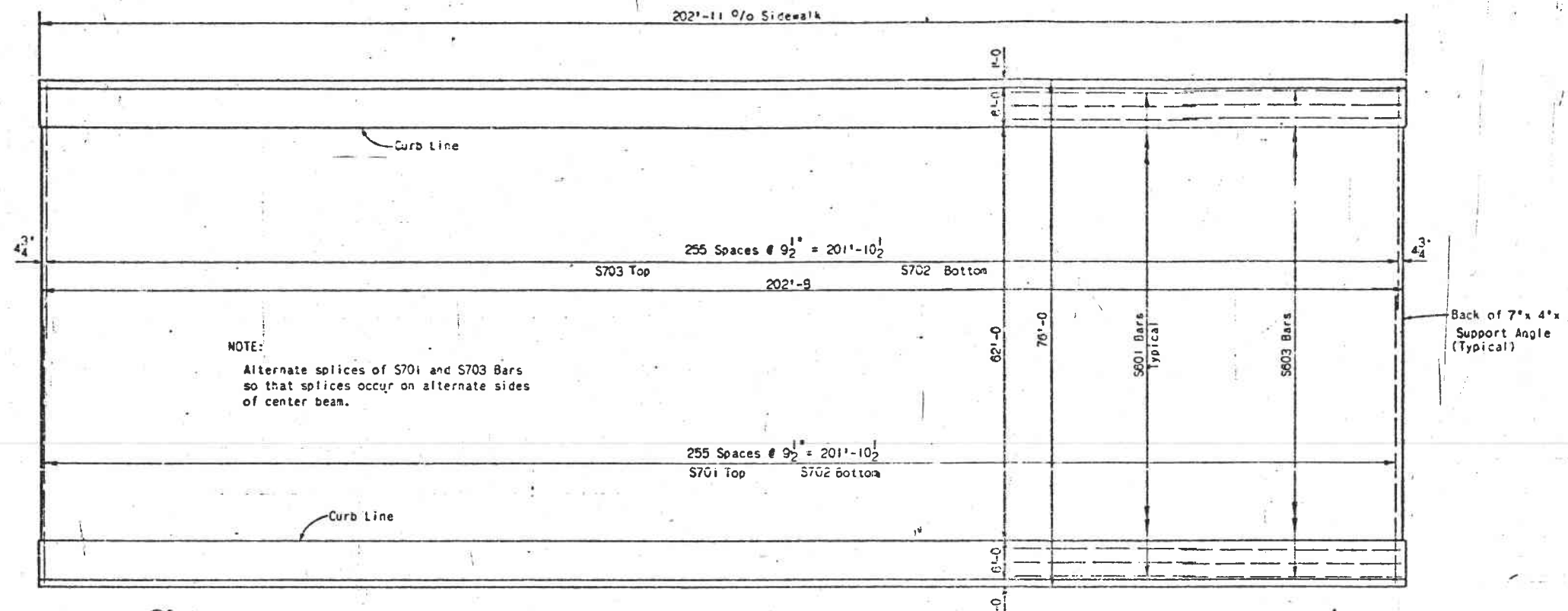
DESIGNED	DRAWN	CHECKED	REVIEWED	DATE
PMZ		60	DLM	3/68

SIDEWALK AND PARAPET DETAILS

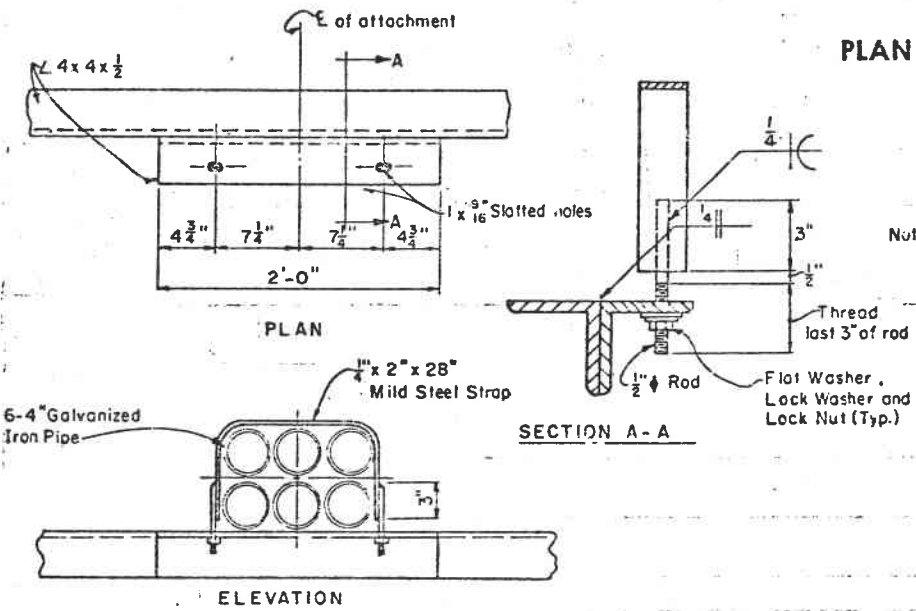
For additional details see Sheet #10. & #11.

SECTION B-B

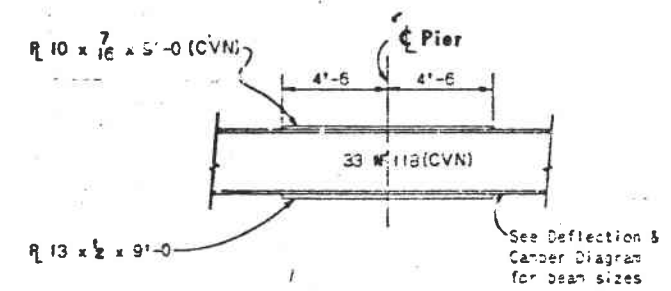
All longitudinal bars S601 except as otherwise shown. Lap S601 bars 1'-11" minimum.



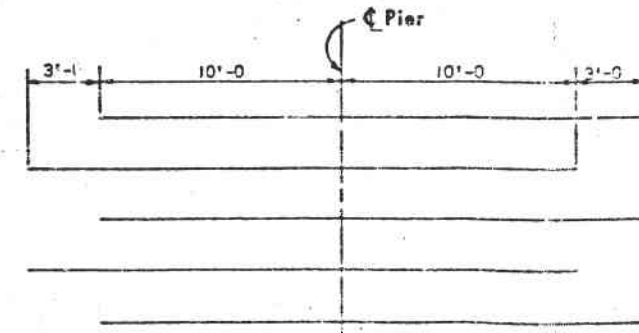
PLAN OF DECK REINFORCING STEEL



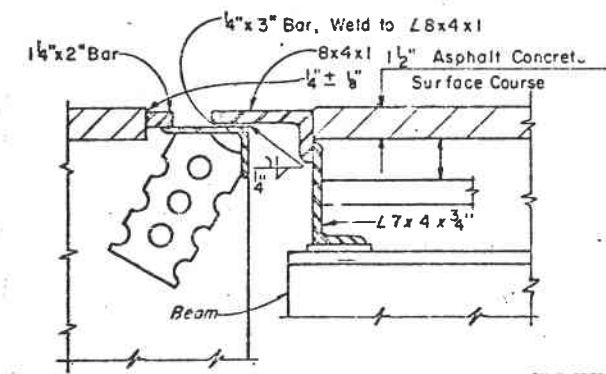
MOMENT PLATE DETAILS



ALTERNATE STAGGER SYSTEM OF S602 BARS OVER PIERS

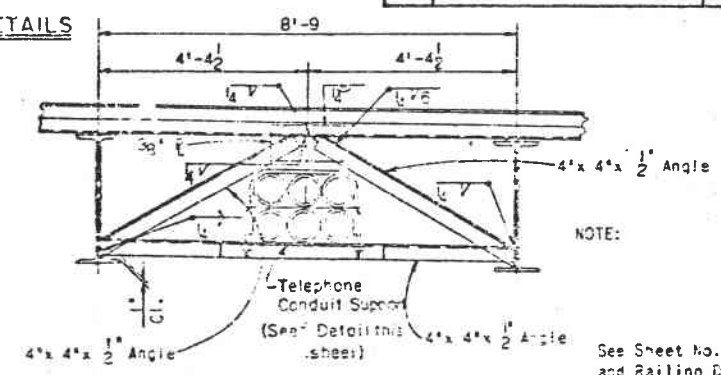


For Lighting details See Standard Drawing HL-4 Rev. 9-6-73.

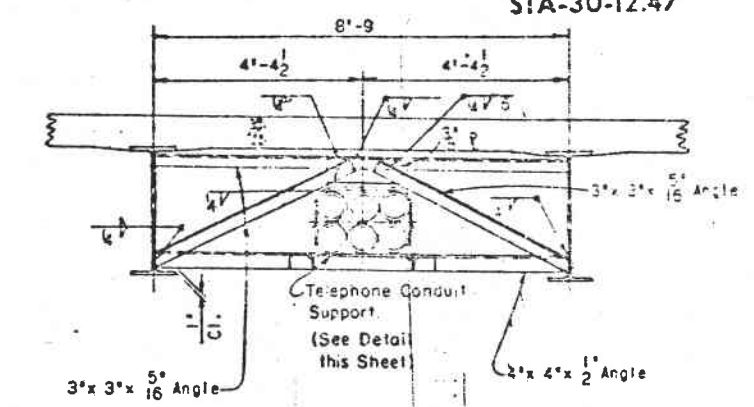


For additional end dam details see Standard Drawing SD-1-69, Sheet 1 of 4.

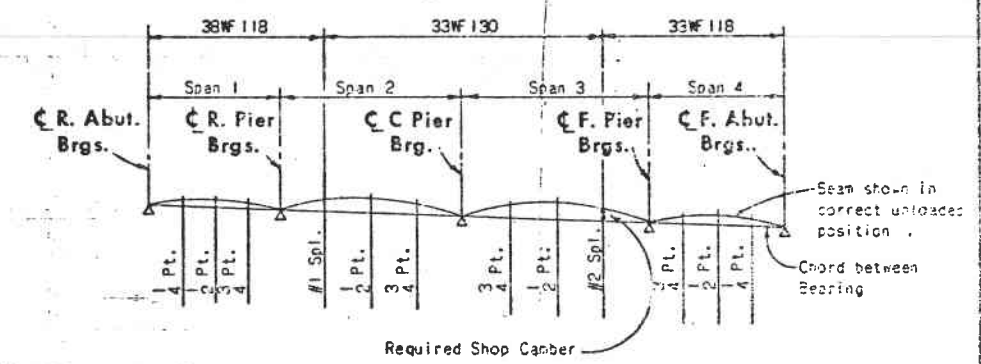
END DAM DETAILS



SPECIAL END CROSSFRAME DETAIL



SPECIAL INTERMEDIATE CROSSFRAME DETAIL



DEFLECTION & CAMBER DIAGRAM

LOCATION		SPAN 1			SPAN 2			SPAN 3			SPAN 4		
		1/4 Pt.	1/2 Pt.	3/4 Pt.	1/4 Pt.	1/2 Pt.	3/4 Pt.	1/4 Pt.	1/2 Pt.	3/4 Pt.	1/4 Pt.	1/2 Pt.	3/4 Pt.
Interior Beams	Deflection due to weight of steel	0	0	0	0	1/16	0	0	1/16	0	0	0	0
	Deflection due to remaining dead load	1/8	3/16	1/16	1/8	1/4	1/8	1/4	1/8	1/16	3/16	1/8	1/8
	Required shop camber	1/8	3/16	1/16	1/8	5/16	1/8	5/16	1/8	1/16	3/16	1/8	1/8
Fascia Beams	Deflection due to weight of steel	0	0	0	0	1/16	0	0	1/16	0	0	0	0
	Deflection due to remaining dead load	1/4	5/16	1/8	3/16	1/2	3/16	1/4	2/16	3/16	1/8	5/16	1/4
	Required shop camber	1/4	5/16	1/8	3/16	9/16	3/16	1/2	9/16	3/16	1/8	5/16	1/4

W.E.O. BRIDGE 5
SHEET 10 OF 11

W. E. QUICKSALL AND ASSOCIATES, INC.
CONSULTING ENGINEERS • NEW PHILADELPHIA, OHIO

SUPERSTRUCTURE DETAILS

BRIDGE NO. STA-30-1423

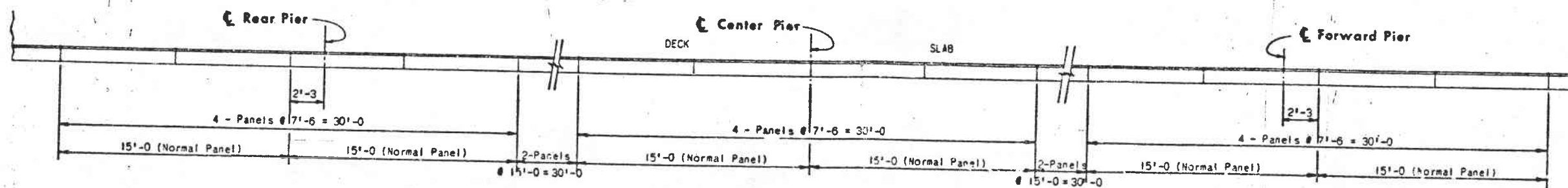
U.S.R. 30 under HARRISON AVE.

STARK COUNTY		STA. 274+93	
DESIGNED	PMZ	CHECKED	DO
DATE	2/27/77	DATE	3/1/78

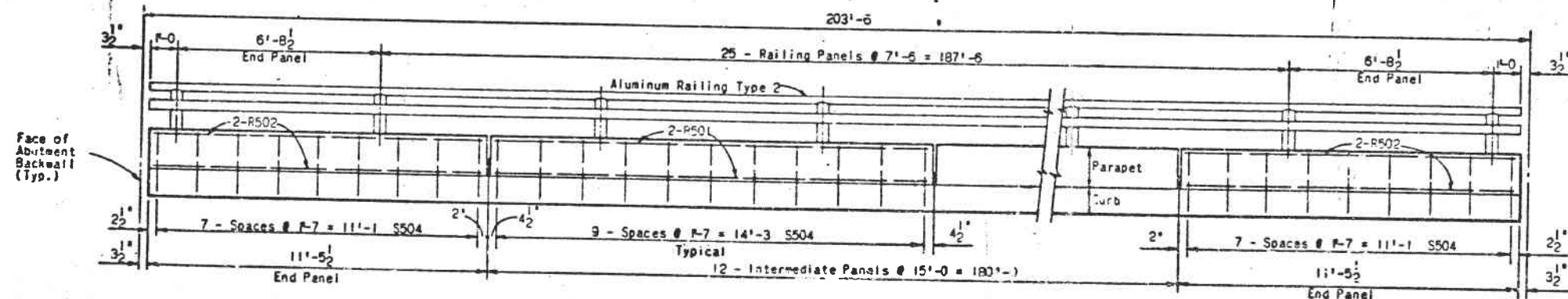
FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

362
155

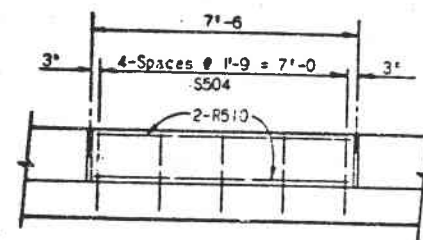
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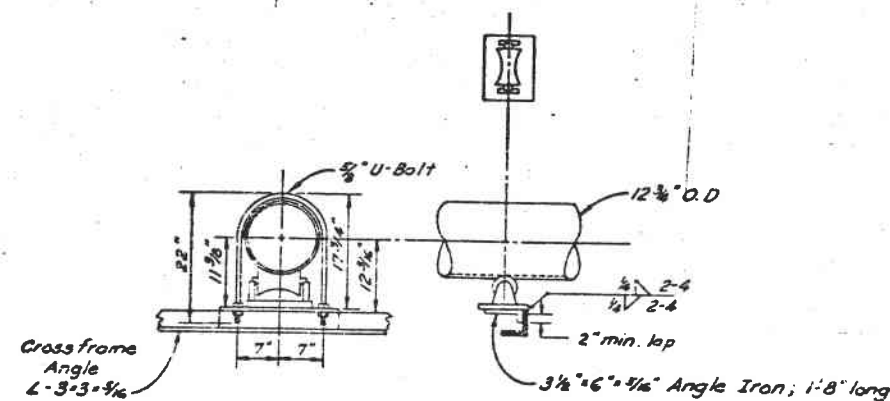
PLAN OF PARAPET DEFLECTION JOINTS OVER PIERS



PARAPET AND RAILING DETAILS



TYPICAL 7'-6 PARAPET PANEL



GRINNELL PIPE ROLL AND STAND

Lock nuts to be inst. on U-bolt
so pipe can move freely on roll.

TYPICAL SUPPORT OF GAS LINE TO
INTERMEDIATE CROSSFRAME

For additional details see
sheets no. 9 and 40.

W.E.O. BRIDGE 5
SHEET 11 OF 11

W. E. QUICKSALL AND ASSOCIATES, INC.
CONSULTING ENGINEERS • NEW PHILADELPHIA, OHIO

SUPERSTRUCTURE DETAILS

BRIDGE NO. STA-30-1423

U.S.R. 30 under HARRISON AVE

STARK COUNTY

STA. 924+93.77

DESIGNED	DRAWN	CHECKED	REVIEWED	DATE	BY
				3/68	DLN