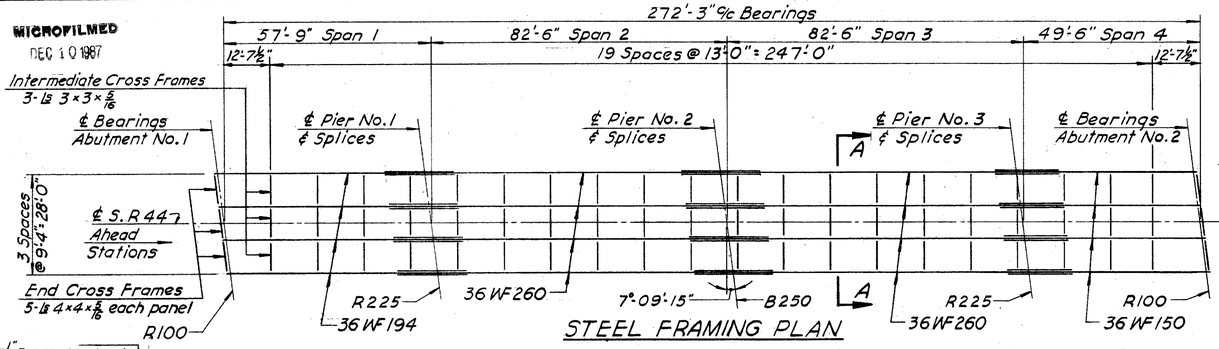
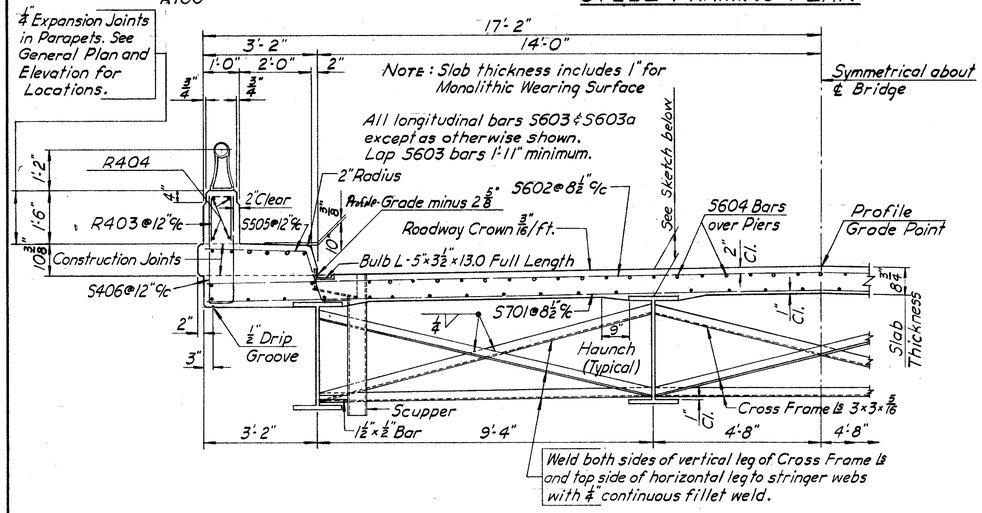
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	ACI-1103(21)	

444
488

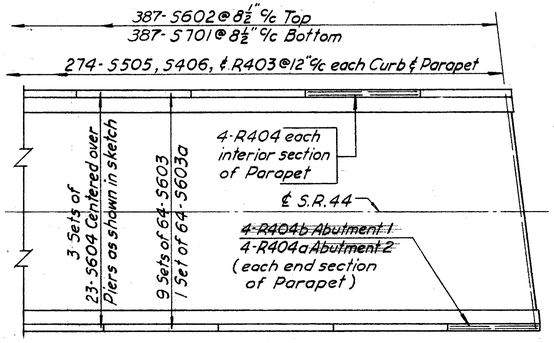
LAKE COUNTY
SEC LAK-1-12.89



STEEL FRAMING PLAN



HALF SECTION A-A



PART PLAN OF DECK
(Other End Similar)

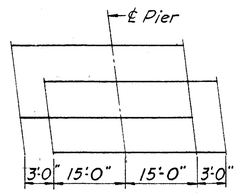
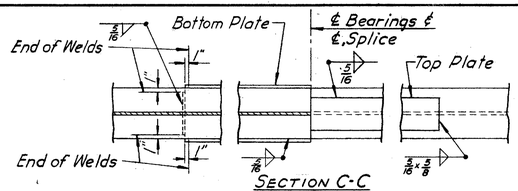
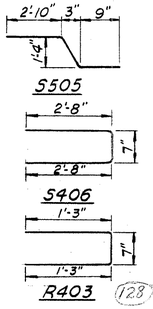


DIAGRAM SHOWING STAGGER OF S604 BARS

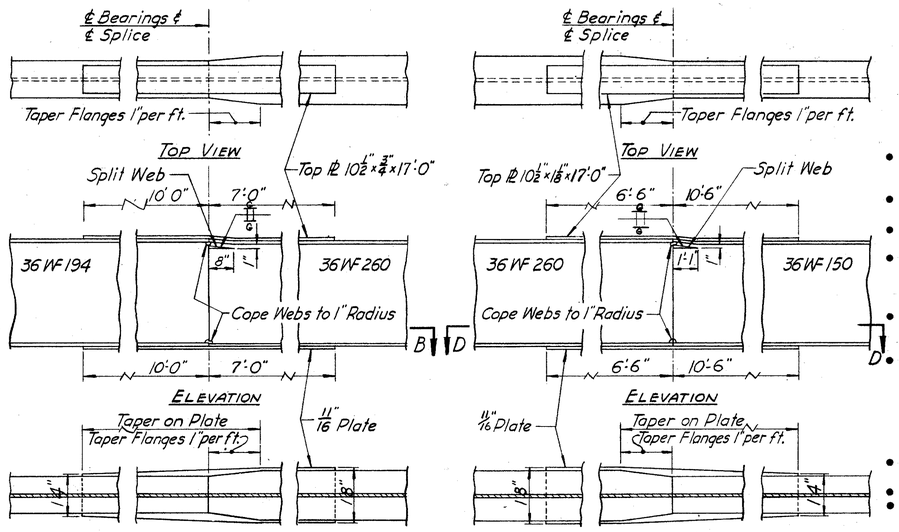


SPLICE DETAILS AT PIER 2



SUPERSTRUCTURE BAR LIST

MARK	No.	SIZE	LENGTH	TYPE	WEIGHT	
S701	387	7	34'-3"	Str.	27,093	
S602	387	6	34'-3"	Str.	19,909	
S603	576	6	30'-0"	Str.	25,955	
S603a	64	6	22'-0"	Str.	2,115	
S604	69	6	33'-0"	Str.	3,420	
S505	548	5	4'-9"	Bent	2,715	
S406	548	4	5'-9"	Bent	2,105	
R403	548	4	2'-11"	Bent		
R404	~~120~~	4	~~15'-8"~~ 11'-3"	Str.		Include with railing for payment
R404a	~~8~~ 16	4	~~20'-7"~~ 12'-7"	Str.		
R404b	8	4	12'-7"	Str.		
				TOTAL WEIGHT	83,312#	



SPLICE DETAILS AT PIER 1

All welds are similar to those for Splice Detail @ Pier 2.

Note for all Splices:
The butt welds on both faces of the top flange and web, and the upper face of the bottom flange shall be ground smooth.

SPLICE DETAILS AT PIER 3

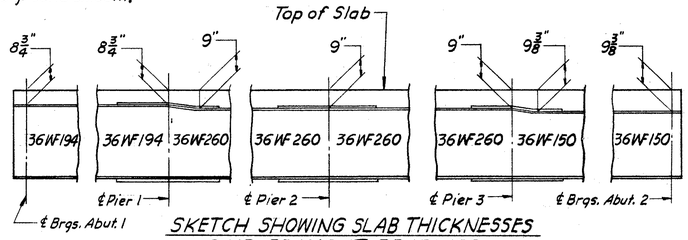
All welds are similar to those shown for Splice Detail @ Pier 2, except as shown.

NOTES

- REFERENCE shall be made to Standard Drawing CSB-2-56, sheets 1-3 of 6, revised 3-1-58, for details of end dams, gutters, scuppers, pipe drains and curb plates and deck placing procedure.
- REFERENCE shall be made to Standard Drawing RB-1-55, dated 3-1-55, for details of rockers and bolsters.
- REFERENCE shall be made to Standard Drawing AR-1-57, revised 3-1-58, for aluminum railing type "A" and concrete parapet details.
- WELDED STEEL: The steel for the 36WF194 and the 36WF260 beams shall conform to ASTM Designation A-373. All other structural steel shall conform to either ASTM A-7 (as per Sec. M-7.4(a) of the Construction and Material Specifications) or to A-373.
- WELDING of structural steel shall be Class "A" except as otherwise shown. Welds shown as field welds may, at the option of the Contractor, be made in the shop.
- Concrete and reinforcing steel above parapet construction joint included with railing for payment.
- All concrete shall be class "C".
- BEAM SPLICE WELDING PROCEDURE:
  1. Raise end of beam at Pier 2-2¼"
  2. Butt weld Beam Flanges and Webs at Pier 1 using the following procedure: make one pass on each flange, then one on the web, and repeat until welds are completed.
  3. Weld top and bottom moment plates at Pier 1.
  4. Lower end of beam at Pier 2.
  5. Make splices at Piers 2 and 3 in the same manner, raising the ends of the beams 2½" at Pier 3 and ¾" at Abutment 2.

DEFLECTION AND CAMBER

LOCATION	INSIDE BEAMS			OUTSIDE BEAMS		
	Span 1	Spans 2 & 3	Span 4	Span 1	Spans 2 & 3	Span 4
Deflection due to weight of steel	1/16"	1/8"	0	1/16"	1/8"	0
Deflection due to remaining Dead Load	1/4"	1/2"	1/8"	1/4"	1/2"	1/8"
Convexity required for Vertical Curve	7/16"	7/8"	5/16"	7/16"	7/8"	5/16"
Sum of Deflection and Convexity	3/4"	1 1/2"	7/16"	3/4"	1 1/2"	7/16"
Required Camber	1"	1 1/2"	0	1"	1 1/2"	0



SKETCH SHOWING SLAB THICKNESSES OVER BEAMS AT BEARINGS

SEC. C-32 FED. AID PROJ. NO. ACI-1103 (21)

PREPARED BY
CAPITOL ENGINEERING ASSOCIATES, DILLSBURG, PA.
FOR
STATE OF OHIO
DEPARTMENT OF HIGHWAYS

DECK DETAILS
BRIDGE NO. LAK-1-1493
S.R. 1 UNDER EXIST. S.R. 44
LAKE COUNTY
STA. 434+55.38

DESIGNED	DRAWN	TRACED	CHECKED	REVISED	DATE	REVISED
JJM	C		S			2-13-59

Rev. 2-13-59