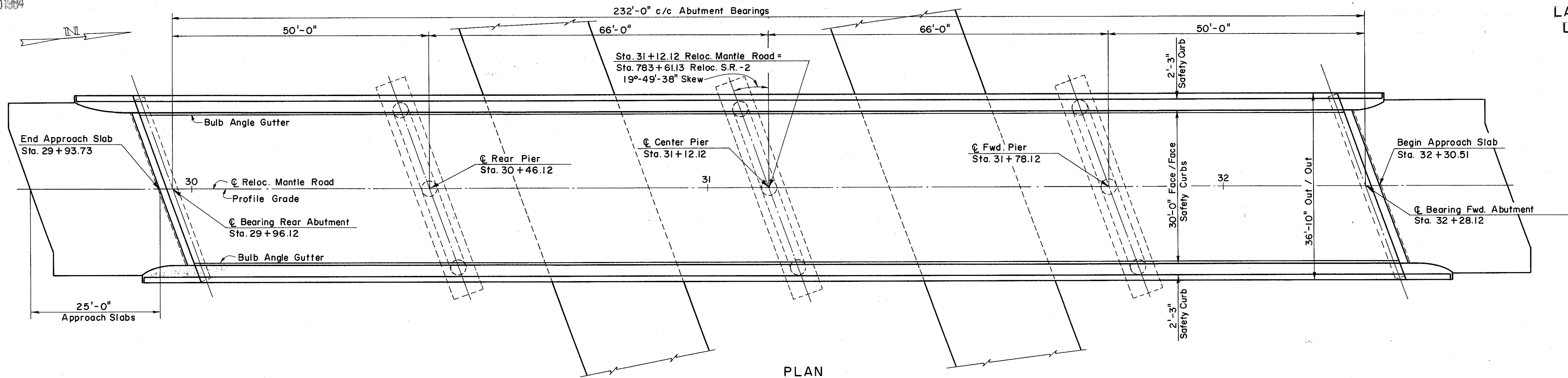


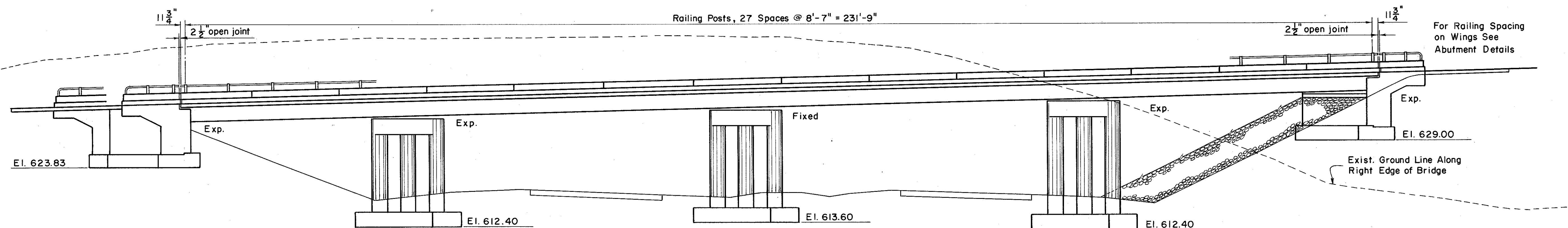
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FED. RD. DIVISION	STATE	PROJECT	235 313
2	OHIO		

LAKE COUNTY
LAK-2-16.49



PLAN



ELEVATION

ESTIMATED QUANTITIES							
ITEM	TOTAL	UNIT	DESCRIPTION	SUPER	ABUTS.	PIERS	GEN'L
E-2	444	Cu. Yds.	Unclassified Excavation		248	196	
S-1	271	Cu. Yds.	Class C Concrete Superstructure	271			
S-1	80	Cu. Yds.	Class C Concrete, Pier caps & columns			80	
S-1	107	Cu. Yds.	Class E Concrete, Abut. above Footings		107		
S-1	120	Cu. Yds.	Class E Concrete, Footings		46	74	
S-4	111,988	Lbs.	Reinforcing Steel	69,920	70,078	11,435	30,475
S-7	202,400	Lbs.	Structural Steel	202,400			
S-8	202,400	Lbs.	Field Painting of Structural Steel	202,400			
S-14	516.00	Lin. Ft.	Railing (Aluminum Railing & Type A Posts w/Conc. Parapets)	516.00			
S-29	22	Cu. Yds.	Porous Backfill		22		
S-29	12	Each	Scuppers, Including Supports		12		
S-10I	271	Each	Water-reducing, Set-retarding Admixtures	271			
I-10	439	Sq. Yds.	Crushed Aggregate Slope Protection				439

GENERAL NOTES

REFERENCE shall be made to Standard Drawings CSB-2-56, sheets No. 2 and No. 3 of 6 revised 2-2-59, FSB-1-62 revised 1-15-63, AR-1-57 revised 4-2-62, and to Supplemental Specifications S-10I dated 7-12-62 and S-307 dated 8-23-60.

DESIGN SPECIFICATIONS: This structure conforms to the requirements of "Design Specifications for Highway Structures" of the State of Ohio Department of Highways, dated 9-1-57, together with current revisions thereof.

EXCAVATION QUANTITY includes the removal of fill material required for construction of the forward abutment.

FOUNDATION BEARING PRESSURE: Abutment footings are designed for a maximum bearing pressure of 1.8 tons per square foot. Piers are designed for a maximum bearing pressure of 2.4 tons per square foot.

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 DECK PLACING: In order to facilitate water curing of the deck slab, the placing of concrete shall progress upgrade. The slab may be placed in sections, between transverse construction joints which are parallel to transverse reinforcing steel and are located near the center of any span.

SURFACE FINISH OF CONCRETE: The requirements of Section S-1.22, Rubbed Finish, shall apply to:

- (a) The entire superstructure except the top and bottom surfaces of safety curbs and roadways.
- (b) The entire surface of piers and abutments except bridge seats, back walls and face of abutments between outside beams.

MACHINE FINISH: The concrete bridge deck shall be finished by the use of a finishing machine.

CONTINUOUS BEAM SHOP ASSEMBLY: Reference paragraph 4, Sec. S-7.12 of the Construction and Material Specifications for the purpose of checking the fit-up of weld joint preparation, only two adjacent beams need be shop assembled at a time in their correct, unloaded positions. All beams shall be assembled and match marked.

ALL STRUCTURAL STEEL: ASTM A 36
DESIGN LOADING: CF 400 (57)

BASIC UNIT WORKING STRESSES:
Concrete, Class C: 1,333 p.s.i.
Concrete, Class E: 1,133 p.s.i.
Structural Steel, ASTM A 36: 20,000 p.s.i.
Reinforcing Steel, ASTM A 15, A 16 & A 160 Deformed, Intermediate or Hard Grade: 20,000 p.s.i.
Spiral Reinforcement, Plain, Structural Grade: 18,000 p.s.i.

PREPARED BY CAPITOL ENGINEERING ASSOCIATES, DILLSBURG, PA. FOR				
STATE OF OHIO DEPARTMENT OF HIGHWAYS DIVISION OF DESIGN AND CONSTRUCTION BUREAU OF BRIDGES				
GENERAL PLAN BRIDGE NO. LAK-2-1673 RELOC. S.R. 2 UNDER RELOC. MANTLE ROAD LAKE COUNTY STA. 783 + 61.13				
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE
	M.J.F.	F.W.B.	L.L.D.	G.S.W.
			M.J.F.	M.C.P.
				4-20-64