



# BRIDGE LOAD RATING SUMMARY REPORT

## OFFICE OF STRUCTURAL ENGINEERING

### OHIO DEPARTMENT OF TRANSPORTATION

SFN	Bridge Number		DISTRICT	GPS COORDINATES	
				LATITUDE:	LONGITUDE:
1631830	COS-TR 252-0.01		5	40.317575	81.648733
ORIGINAL YEAR BUILT	YEAR REBUILT	TOTAL BRIDGE LENGTH		FEATURE INTERSECTED (Below)	
1972	2024	46.50 ft		EVANS CREEK	
<b>SPECIAL ASSUMPTIONS &amp; COMMENTS</b>	MODELED BY MAN. REVIEWED BY MJR, MARCH 2024.				
	THIS RATING IS INTENDED FOR THE COS-TR252-0.00 (PID 117980) PROJECT WHICH INVOLVES FULL REPLACEMENT OF EXISTING COS-TR252-0.01 BRIDGE OVER EVANS CREEK.				
	SINGLE SPAN (46'-6" C/C BRG.) PRESTRESSED CONCRETE BOX BEAM (CB17X48) WITH 6" (MIN.) THICK COMPOSITE REINFORCED CONCRETE DECK SUPPORTED ON INTEGRAL ABUTMENTS.				
	24'-0" OUT-TO-OUT DECK (F/F RAILING) WITH FASCIA-MOUNTED DEEP BEAM RAILING WITH TUBULAR BACKUP AND RETROFIT.				
	TANGENT ALIGNMENT. 30° 00' 00" SKEW (L.F)				
	NO FWS MODELED (NOT REQUIRED BY BDM NOR REQUIRED BY CLIENT)				
	DBR LOADS DISTRIBUTED EQUALLY TO ALL BEAMS. USER CALCULATED TO BE 0.10 K/FT (EACH BEAM).				
	TOPPING LOADS VARY BY BEAMS. HOWEVER, FOR SIMPLICITY, THE CONTROLLING TOPPING LOAD FOR INTERIOR BEAMS IS CONSIDERED FOR INPUT (B4) FOR ALL INTERIOR BEAMS CONSERVATIVELY. SIMILARLY, THE CONTROLLING TOPPING LOAD FOR EXTERIOR BEAMS (B1) IS CONSIDERED FOR INPUT FOR BOTH EXTERIOR BEAMS CONSERVATIVELY.				
	SERVICE III TENSILE STRESS, AND RATING FACTORS FOR SHEAR INCLUDED IN RATING.				
	INCLUDES 2% ADDITIONAL SELF-WEIGHT CONTINGENCY.				
ELASTIC GAINS INCLUDED. HL93 INVENTORY AND OPERATING, 2F1, 3F1, 5C1, TYPE 3, TPE 3-3, TYPE 3S2, SU4/4F1, SU5, SU6, SU7 AND EV2 CONTROLLED BY INTERIOR BEAM. EV3, PL 60T AND PL 65T CONTROLLED BY EXTERIOR BEAM. SERVICE III TENSILE STRESS CONTROLS ALL LEGAL AND SU VEHICLES. HL93 OPERATING CONTROLLED BY STRENGTH I - FLEXURE. EV2 CONTROLLED BY STRENGTH II - FLEXURE. EV3, PL60T AND PL 65T CONTROLLED BY STRENGTH II - SHEAR.					

Please type or select on right using drop down arrow

LOAD RATING PURPOSE:	1 - Initial Load Rating
GENERAL APPRAISAL (0-9):	9
LOAD RATING SOFTWARE:	3 - AASHTO BrR
SOFTWARE VERSION:	7.4.1.3001
ROUTINE PERMIT LOAD (RPL):	A - No routine permit Loads are restricted
RATING SOURCE:	1 - Plan information available for load rating analysis
LOAD RATING METHOD:	LRFR - Load & Resistance Factor Rating (RF) - Code 8
DESIGN LOADING:	A - HL93



#### STRUCTURE RATING SUMMARY

OHIO & AASHTO LEGAL VEHICLES					Design Inventory and Operating Ratings				
Legal Load	GVW (Tons)	No of Axles	Rating Factor RF	Safe Weight (Tons)	Loading Type	Rating by RF			
						Inventory	Operating		
2F1	15	2	2.639	15.00	<b>HL93 Loading</b>  <b>Recommendation</b>  <b>Sign Posting Recommendation:</b>	1.147	1.192		
3F1	23	3	1.789	23.00		No Load Posting is Recommended			
5C1	40	5	1.839	40.00					
Type 3	25	3	1.845	25.00					
Type 3-3	40	6	2.217	40.00					
Type 3S2	36	5	2.018	36.00					
SPECIALIZED HAULING VEHICLES (SHV)									
SU4/4F1	27	4	1.597	27.00					
SU5	31	5	1.485	31.00					
SU6	34.75	6	1.335	34.75					
SU7	38.75	7	1.241	38.75					
EMERGENCY VEHICLES (EV)					Permit Load (PL) Analysis (optional)				
Check box if rating for EV3 <input checked="" type="checkbox"/>					Loading Type	GVW (Tons)	No of	Rating Factor	Safe Load (Tons)
EV2	28.75	2	1.614	28.75	PL 60T	60	6	2.765	165.90
EV3	43	3	2.225	43.00	PL 65T	65	7	2.248	146.12
<b>Controlling Legal Load RF</b>			125%	1.25	<b>PL Analysis Method</b>		Load & Resistance Factor Rating (LRFR)		

<b>AGENCY/FIRM/OFFICE</b>		<b>JACOBS ENGINEERING GROUP</b>				
	<b>Name</b>	<b>PE Number</b>	<b>Phone Number</b>	<b>Email</b>	<b>Report Date:</b>	2024-03-07
<b>Rated By</b>	Muhammad Asad Nawaz	N/A	614-825-6704	asad.nawaz@jacobs.com		
<b>Reviewed By</b>	Matthew J. Rotar	83975	440-477-7596	matt.rotar@jacobs.com		