



ASR/LFR BRIDGE LOAD RATING SUMMARY

Version 1.0

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SECTION 1 - GENERAL BRIDGE DATA							
(8) Asset ID 04366		Route Type Interstate		(27) Year Built 1964		(90) Date of Inspection 12/2/2019	
(9) Bridge Location 5MI NW OF COLA		(7) Facility Carried I-20		(6) Feature Intersected/Route Crossing RR CN&L			
(49) Length 176 ft.	(11) Milepost 63.010	(2) District 1	(3) County LEXINGTON	(22) Owner SCDOT	(418) Conditions During Rating (NBI Item 58, NBI Item 59, NBI Item 60) 7, 7, 7		
(43, 44, 45, & 46) Bridge Description Simple 3 Span PSG Bridge				(31) Design Load HS 20 + MOD	(108) Existing Wearing Surface Type & Depth MONOLITHIC CONCRETE		
Rating Program & Version BrR 6.8.4 - AASHTO Engine		Rating Program & Version N/A		Rating Method LFR		AASHTO Reference MBE 3rd Edition, 2018	
(58) Deck 7 Good	(59) Superstructure 7 Good	(60) Substructure 7 Good		(62) Culvert N N/A (NBI)		(113) Scour Critical N Not Over Waterway	

SECTION 2A - INVENTORY RATINGS - Design Vehicles and AASHTO Legal Trucks							
Rating Vehicle	Controlling Configuration	Weight (Tons)	Controlling Member	Controlling Location	Controlling Limit State	Rating Factor	Rating (Tons)
H-20	Truck	20	G2-G6	1.40	PS Tensile Stress - Concrete	1.292	25
H-20 Lane	Lane	20	G2-G6	1.50	PS Tensile Stress - Concrete	1.298	25
HS-20	Truck	36	G2-G6	1.40	PS Tensile Stress - Concrete	0.883	31
HS-20 Lane	Lane	36	G2-G6	1.50	PS Tensile Stress - Concrete	1.298	46
Alternate Military Loading	Truck	24	G2-G6	1.50	PS Tensile Stress - Concrete	1.047	25
Modified AASHTO SC - Type 3	Truck	25	G2-G6	1.40	PS Tensile Stress - Concrete	1.177	29
Modified AASHTO SC - Type 3S2	Truck	36.6	G2-G6	1.30	Design Shear - Concrete	1.160	42
AASHTO - Type 3-3	Truck	40	G2-G6	1.50	PS Tensile Stress - Concrete	1.315	52

SECTION 2B - INVENTORY RATINGS - Specialized Hauling Vehicles (SHV)							
Rating Vehicle	Controlling Configuration	Weight (Tons)	Controlling Member	Controlling Location	Controlling Limit State	Rating Factor	Rating (Tons)
SC-SHV1A	Truck	32.5	G2-G6	1.50	PS Tensile Stress - Concrete	0.840	27
SC-SHV1B	Truck	35	G2-G6	1.50	PS Tensile Stress - Concrete	0.796	27
SC-SHV2A	Truck	33	G2-G6	1.50	PS Tensile Stress - Concrete	0.846	27
SC-SHV2B	Truck	40	G2-G6	1.40	PS Tensile Stress - Concrete	0.721	28
SC-SHV3A	Truck	42.5	G2-G6	1.40	PS Tensile Stress - Concrete	0.977	41
SC-SHV3B	Truck	45	G2-G6	1.40	PS Tensile Stress - Concrete	0.925	41
SC Representative School Bus	Truck	17.525	G2-G6	1.40	PS Tensile Stress - Concrete	1.718	30
SC-SU2	Truck	20	G2-G6	1.40	PS Tensile Stress - Concrete	1.458	29
SU4	Truck	27	G2-G6	1.50	PS Tensile Stress - Concrete	1.050	28
SU5	Truck	31	G2-G6	1.40	PS Tensile Stress - Concrete	0.954	29
SU6	Truck	34.75	G2-G6	1.50	PS Tensile Stress - Concrete	0.864	30
SU7	Truck	38.75	G2-G6	1.50	PS Tensile Stress - Concrete	0.797	30

This ASR/LFR Load Rating is based on:			<input checked="" type="checkbox"/> Design Plans	<input type="checkbox"/> Design Plans & Approved Shop Drawings	<input type="checkbox"/> Other (Please explain in Remarks)
			<input checked="" type="checkbox"/> As-Built Plans		
SECTION 3 - BRIDGE LOAD RATING SUMMARY					
Controlling Legal Truck	Load Posting Required? If Yes, complete Signing/Posting Form.			Controlling Legal Load Rating Factor (at Operating level)	
EV3	No			1.259	

SECTION 4 - REMARKS & SIGN/SEAL			
Load Rating Engineer		Quality Control Engineer	
Name: Sathvika M		Name: William Johnson	
Company/Title: HDR Inc. / Bridge Engineer		Company/Title: HDR Inc. / Bridge Engineer	
Date: 12/18/2019		Date: 2/12/2020	
Refer to "Remarks" on LRFR Summary pages.		<input type="checkbox"/> Structure is part of QA sample set. Quality Assurance Engineer	
		2/14/2020	



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SECTION 5 - OPERATING RATINGS - Design Vehicles & AASHTO Legal Trucks							
Rating Vehicle	Controlling Configuration	Weight (Tons)	Controlling Member	Controlling Location	Controlling Limit State	Rating Factor	Rating (Tons)
H-20	Truck	20	G2-G6	1.70	Design Shear - Concrete	2.677	53
H-20 Lane	Lane	20	G2-G6	1.70	Design Shear - Concrete	2.352	47
HS-20	Truck	36	G2-G6	1.70	Design Shear - Concrete	1.843	66
HS-20 Lane	Lane	36	G2-G6	1.70	Design Shear - Concrete	2.352	84
Alternate Military Loading	Truck	24	G2-G6	1.70	Design Shear - Concrete	2.203	52
Modified AASHTO SC - Type 3	Truck	25	G8 & G9	1.60	Design Shear - Concrete	2.193	54
Modified AASHTO SC - Type 3S2	Truck	36.6	G2-G6	1.70	Design Shear - Concrete	1.940	71
AASHTO - Type 3-3	Truck	40	G2-G6	1.70	Design Shear - Concrete	2.324	92

SECTION 6A - OPERATING RATINGS - SC Specialized Hauling Vehicles (SHV) - Legal on Non-Interstate and Permit on Interstate							
Rating Vehicle	Controlling Configuration	Weight (Tons)	Controlling Member	Controlling Location	Controlling Limit State	Rating Factor	Rating (Tons)
SC-SHV1A	Truck	32.5	G8 & G9	1.60	Design Shear - Concrete	1.555	50
SC-SHV1B	Truck	35	G2-G6	1.60	Design Shear - Concrete	1.514	52
SC-SHV2A	Truck	33	G2-G6	1.60	Design Shear - Concrete	1.633	53
SC-SHV2B	Truck	40	G2-G6	1.30	Design Shear - Concrete	1.340	53
SC-SHV3A	Truck	42.5	G8 & G9	1.60	Design Shear - Concrete	2.010	85
SC-SHV3B	Truck	45	G8 & G9	1.60	Design Shear - Concrete	1.906	85

SECTION 6B - OPERATING RATINGS - Two Miscellaneous SHV & AASHTO SHV - Legal on all roads							
Rating Vehicle	Controlling Configuration	Weight (Tons)	Controlling Member	Controlling Location	Controlling Limit State	Rating Factor	Rating (Tons)
SC Representative School Bus	Truck	17.525	G2-G6	1.70	Design Shear - Concrete	3.423	59
SC-SU2	Truck	20	G2-G6	1.70	Design Shear - Concrete	2.946	58
SU4	Truck	27	G2-G6	1.60	Design Shear - Concrete	2.016	54
SU5	Truck	31	G2-G6	1.30	Design Shear - Concrete	1.713	53
SU6	Truck	34.75	G8 & G9	1.60	Design Shear - Concrete	1.833	63
SU7	Truck	38.75	G2-G6	1.30	Design Shear - Concrete	1.741	67

SECTION 6C - OPERATING RATINGS - Standard Permit Vehicles & Typical Cranes							
Rating Vehicle	Controlling Configuration	Weight (Tons)	Controlling Member	Controlling Location	Controlling Limit State	Rating Factor	Rating (Tons)
SC - 100k	Truck	50	G2-G6	1.60	Design Shear - Concrete	1.827	91
SC - 120k	Truck	60	G2-G6	1.30	Design Shear - Concrete	1.385	83
SC - 130k	Truck	65	G2-G6	1.30	Design Shear - Concrete	1.385	90
SC Crane #544726	Truck	80	G2-G6	1.30	Design Shear - Concrete	1.160	92
SC Crane #527568	Truck	88.85	G2-G6	1.30	Design Shear - Concrete	1.294	114

SECTION 6D - OPERATING RATINGS - Emergency Vehicles (EV)							
Rating Vehicle	Controlling Configuration	Weight (Tons)	Controlling Member	Controlling Location	Controlling Limit State	Rating Factor	Rating (Tons)
EV2	Truck	28.75	G2-G6	1.70	Design Shear - Concrete	2.082	59
EV3	Truck	43	G8 & G9	1.60	Design Shear - Concrete	1.259	54

Remarks: