



# BrM 5.3 New Features

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Load Rating Module

September 12-13, 2017

Alexandria, Virginia

- How it was before

# How it was before:

- Merge:
  - Custom Vehicles
  - Summary Reports
  - Locations
  - LR Events

- The Solution
  - Vehicles
  - Events
  - Event History
  - Current Rating

- Processes

- Integration with Inspection

## Inspection > Appraisal

### Structural Appraisal

Open/Posted/Closed (041): A Open, no restriction ▼

Approach Alignment (072): 6 Equal Min Criteria ▼

Bridge Railings (036A): 0 Substandard ▼

Transitions (036B): 0 Substandard ▼

Approach Guardrail (036C): 0 Substandard ▼

Approach Guardrail Ends (036D): 0 Substandard ▼

Pier Protection (111): Not Applicable (P) ▼

Scour Critical (113): N Not Over Waterway ▼

Fracture Critical Details: NONE (FIX PARAM VALL ▼)

### Calculated Appraisal Ratings

Structural Evaluation (067): 6 Equal Min Criteria

Deck Geometry (068): 3 Intolerable - Correct

Underclearances (069): 4 Tolerable

SD/FO Status: Functionally Obsolete

Sufficiency Rating (SRB): 75.0

Sufficiency Rating Calculate Status: **SAVED / 0**

Health Index: 66.67%

Bridge Condition: Fair

### Clearances

#### Minimum Vertical Clearances

Over Structure (053): 99.990 ft

Under (Reference) (054A): R Railroad beneath struc ▼

Under Clearance (054B): 22.240 ft

#### Minimum Lateral Clearances

Reference Feature (055A): R Railroad beneath struc ▼

Right Side (055B): 10.490 ft

Left Side (056): 0.000 ft

#### Navigation Data

Navigation Control Exists (038): NA-no waterway ▼

Navigation Vertical Clearances (039): 0.000 ft

Navigation Horizontal Clearances (040): 0.000 ft

Minimum Vertical Lift Clearances (116): 0.000 ft

### NBI Load Ratings

Load Rating Review Recommended:

Design Load (031): 1 M 9 (H 10) ▼

Posting (070): 5 At/Above Legal Loads ▼

Operating Type (063): 6 Load Factor (MS18) ▼

OR Factor (064): 1.60 rf

Inventory type (065): 6 Load Factor (MS18) ▼

IR Factor (066): 2.67 rf

Alternate Operating Rating Type: Alt OR Method -1 ▼

Alternate Operating Rating: 0.0 ton

Alternate Inventory Rating Type: Alt IR Method -1 ▼

Alternate Inventory Rating: 0.0 ton

### Posting Loads

#### Inventory

Type 1: 0.0 ton

Type 2: 0.0 ton

Type 3: 0.0 ton

#### Operating

Type 1: 0.0 ton

Type 2: 0.0 ton

Type 3: 0.0 ton

#### SHVs

SU4: ton

SU5: ton

SU6: ton

SU7: ton

NRL: ton

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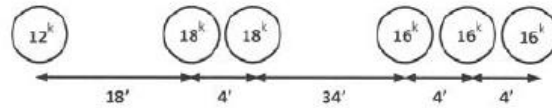
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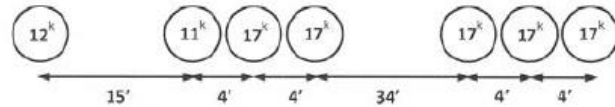
- Integration with Inspection

## UTAH COMMON PERMIT CONFIGURATIONS

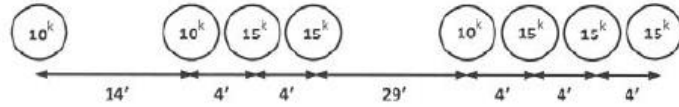
UT-P6 (GVW = 96<sup>k</sup>)



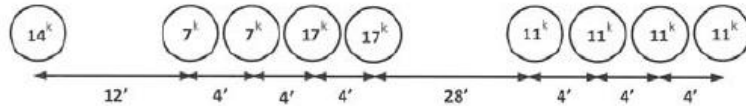
UT-P7 (GVW = 108<sup>k</sup>)



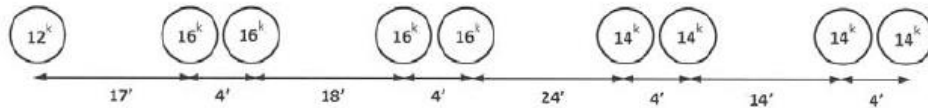
UT-P8 (GVW = 105<sup>k</sup>)



UT-P9a (GVW = 106<sup>k</sup>)



UT-P9b (GVW = 132<sup>k</sup>)



### Load Ratings

#### LRFR Rating

HL-93 Opr (064):	1.23	rf
HL-93 Inv (066):	0.95	rf
Type 3:	1.7240	
Type 3S2:	1.7730	
Type 33:	2.1390	
LL:		
NegMom:		
SU4:	1.4360	
SU5:	1.3470	
SU6:	1.2250	
SU7:	1.1740	
UTP6:	1.5760	
UTP7:	1.4840	
UTP8:	1.4860	
UTP9a:	1.6390	
UTP9b:	2.2500	

#### LFR Rating

HS-20 Opr:	1.63
HS-20 Inv:	0.98
Type 3:	2.0090
Type 3S2:	2.0640
Type 33:	2.4920
LL:	
NegMom:	
SU4:	1.6720
SU5:	1.5680
SU6:	1.4260
SU7:	1.3670
UTP6:	1.5570
UTP7:	1.4650
UTP8:	1.4680
UTP9a:	1.6190
UTP9b:	2.2220

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# Merge together:

UTAH DEPARTMENT OF TRANSPORTATION BRIDGE LOAD RATING SUMMARY											
<b>EXISTING BRIDGE DATA</b>											rev. 5/22/2014
Bridge ID	OC 300		Year Built	1958							
Bridge Location (NBI)	42 Miles East of Kanab		Plans Available	Yes							
Superstructure Type (NBI)	Steel Stringer/Multi-Beam		Design Loading	HS20-44							
Length of Bridge (ft.)	354.00		Inspection Date	4/23/2013							
Number of Spans	5		FCM	No							
<b>RESISTANCE DATA</b>											
Condition Factor	1										
System Factor	1										
<b>BRIDGE DEAD LOAD DATA</b>						<b>CRITERIA</b>					
Overlay Type	Bituminous		AASHTO Manual for Bridge Evaluation, Second Edition, 2011 with 2012, 2013 and 2014 Interim Revisions								
Overlay Depth (in)	4		Bridge Management Manual, by UDOT, Chapter 4, February 2014								
Overlay Depth Measured	No		Rating Program Used: BrR, version 6.5.0								
<b>LIVE LOAD DATA</b>											
Dynamic Load Allowance (Legal/Permit)	33.00%										
ADTT (one-way)	418										
<b>LRFR RESULTS</b>											
Level	Vehicle	Tons	Rating Factor	Limit State	Mode	Member	Span	Rating Factor	Mode	Member	Span
Design	HL-93 (INV)	36	1.11	Service_II	SteelYield	G1,G5	3	NA	NA	NA	NA
	HL-93 (OPR)	36	1.45	Service_II	SteelYield	G1,G5	3	NA	NA	NA	NA
	HS-20 (INV)	36	NA	NA	NA	NA	NA	1.60	Serviceability-Steel	G2-G4	3
	HS-20 (OPR)	36	NA	NA	NA	NA	NA	2.67	Serviceability-Steel	G2-G4	3
Legal	Type 3	25	1.97	Service_II	SteelYield	G1,G5	3	2.61	Serviceability-Steel	G2-G4	3
	Type 3S2	36	1.82	Service_II	SteelYield	G1,G5	3	2.38	Serviceability-Steel	G2-G4	1.5
	Type 3-3	40	1.92	Service_II	SteelYield	G1,G5	3	2.55	Serviceability-Steel	G2-G4	3
	Span	40	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Neg Mom	40	4.50	Service_II	SteelYield	G1,G5	3	NA	NA	NA	NA
	SU4	27	1.75	Service_II	SteelYield	G1,G5	3	2.32	Serviceability-Steel	G2-G4	3
	SU5	31	1.59	Service_II	SteelYield	G1,G5	3	2.11	Serviceability-Steel	G2-G4	3
	SU6	35	1.42	Service_II	SteelYield	G1,G5	3	1.89	Serviceability-Steel	G2-G4	3
Permit	UT-P6	48	2.43	Service_II	SteelYield	G1,G5	1.5	2.43	Serviceability-Steel	G2-G4	1.5
	UT-P7	54	2.31	Service_II	SteelYield	G1,G5	1.5	2.31	Serviceability-Steel	G2-G4	1.5
	UT-P8	52.5	2.12	Service_II	SteelYield	G1,G5	1.5	2.13	Serviceability-Steel	G2-G4	1.5
	UT-P9a	53	2.11	Service_II	SteelYield	G1,G5	1.5	2.11	Serviceability-Steel	G2-G4	1.5
	UT-P9b	66	2.28	Service_II	SteelYield	G1,G5	1.5	2.29	Serviceability-Steel	G2-G4	1.5
	Legend: G = Girder or Stringer Span = Lane load combination for spans > 200 ft Neg Mom = Lane load combination for negative moments and reactions at interior supports NA = Not Applicable * = Rated for unlimited crossings for LRFR † = Rated at operating level for LFR FCM = Fracture Critical Member						Remarks: None. Assumptions: None. Recommendations: None.				
Load Rating Performed By / Firm:						Melanie Helm, PE / Jacobs Engineering Group			Engineer Seal		
Initials/Date:						MH 11/12/2014					
Load Ratings Checked By / Firm:						Susan K. Wynn, SE / Jacobs Engineering Group					
Quality Assurance By / Firm:						Peter J. McGovern, PE / Jacobs Engineering Group					

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<b>Wearing Surface/Dead Load</b> Asphalt: <input type="text"/> in      Granular: <input type="text" value="20.00"/> in Concrete: <input type="text"/> in      Timber: <input type="text"/> in Max Wearing Surface for Load Capacity: <input type="text" value="44.45"/> in		<b>Load Rating</b> Load Rating Status: <input type="text" value="Re-Analysis Req"/> <input type="button" value="v"/> Rating Program: <input type="text"/>						
<b>ASR/LFR</b> <table border="1"> <tr> <td> <b>Controlling Member</b>            H Trk: <input type="text" value="S03 @ 1.50"/>            HS Trk: <input type="text" value="S03 @ 1.50"/>            Type 3 Trk: <input type="text" value="S03 @ 1.50"/>            Type 3S2 Trk: <input type="text" value="S01 @ 1.40"/>            Type 3-3 Trk: <input type="text" value="S01 @ 1.40"/>            Spec 121: <input type="text"/>            NRL: <input type="text"/> </td> <td> <b>Inv Rating</b>            H Trk: <input type="text" value="18"/> ton            HS Trk: <input type="text" value="32"/> ton            Type 3 Trk: <input type="text" value="42"/> ton            Type 3S2 Trk: <input type="text" value="50"/> ton            Type 3-3 Trk: <input type="text" value="50"/> ton            Spec 121: <input type="text"/> ton            NRL: <input type="text"/> ton         </td> <td> <b>Oper Rating</b>            H Trk: <input type="text" value="36"/> ton            HS Trk: <input type="text" value="66"/> ton            Type 3 Trk: <input type="text" value="67"/> ton            Type 3S2 Trk: <input type="text" value="84"/> ton            Type 3-3 Trk: <input type="text" value="84"/> ton            Spec 121: <input type="text"/> ton            NRL: <input type="text"/> ton         </td> </tr> </table>		<b>Controlling Member</b> H Trk: <input type="text" value="S03 @ 1.50"/> HS Trk: <input type="text" value="S03 @ 1.50"/> Type 3 Trk: <input type="text" value="S03 @ 1.50"/> Type 3S2 Trk: <input type="text" value="S01 @ 1.40"/> Type 3-3 Trk: <input type="text" value="S01 @ 1.40"/> Spec 121: <input type="text"/> NRL: <input type="text"/>	<b>Inv Rating</b> H Trk: <input type="text" value="18"/> ton HS Trk: <input type="text" value="32"/> ton Type 3 Trk: <input type="text" value="42"/> ton Type 3S2 Trk: <input type="text" value="50"/> ton Type 3-3 Trk: <input type="text" value="50"/> ton Spec 121: <input type="text"/> ton NRL: <input type="text"/> ton	<b>Oper Rating</b> H Trk: <input type="text" value="36"/> ton HS Trk: <input type="text" value="66"/> ton Type 3 Trk: <input type="text" value="67"/> ton Type 3S2 Trk: <input type="text" value="84"/> ton Type 3-3 Trk: <input type="text" value="84"/> ton Spec 121: <input type="text"/> ton NRL: <input type="text"/> ton	<b>Posting</b> <table border="1"> <tr> <td> <b>Recommended Posting</b>            Type 3 Trk: <input type="text"/> ton            Type 3S2 Trk: <input type="text"/> ton            Type 3-3 Trk: <input type="text"/> ton            Max Axle: <input type="text"/> ton            Height Posting: <input type="text"/> ft         </td> <td> <b>Actual Posting</b>            Type 3 Trk: <input type="text"/> ton            Type 3S2 Trk: <input type="text"/> ton            Type 3-3 Trk: <input type="text"/> ton            Max Axle: <input type="text"/> ton            Single Lane All Vehicles: <input type="checkbox"/>            Single Lane Trucks/Buses: <input type="checkbox"/>            Height Posting: <input type="text"/> ft         </td> </tr> </table>		<b>Recommended Posting</b> Type 3 Trk: <input type="text"/> ton Type 3S2 Trk: <input type="text"/> ton Type 3-3 Trk: <input type="text"/> ton Max Axle: <input type="text"/> ton Height Posting: <input type="text"/> ft	<b>Actual Posting</b> Type 3 Trk: <input type="text"/> ton Type 3S2 Trk: <input type="text"/> ton Type 3-3 Trk: <input type="text"/> ton Max Axle: <input type="text"/> ton Single Lane All Vehicles: <input type="checkbox"/> Single Lane Trucks/Buses: <input type="checkbox"/> Height Posting: <input type="text"/> ft
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<b>LRFR</b> <table border="1"> <tr> <td> <b>Controlling Member</b>            HL-93: <input type="text"/>            Type 3 Trk: <input type="text"/>            Type 3S2 Trk: <input type="text"/>            Type 3-3 Trk: <input type="text"/>            Spec 121: <input type="text"/>            NRL: <input type="text"/> </td> <td> <b>Rating Factor</b>            Inv HL-93: <input type="text"/>            Oper HL-93: <input type="text"/> </td> <td> <b>Legal Rating</b>            Type 3 Trk: <input type="text"/>            Type 3S2 Trk: <input type="text"/>            Type 3-3 Trk: <input type="text"/>            Spec 121: <input type="text"/>            NRL: <input type="text"/> </td> <td> <b>Permit Rating</b>            Type 3 Trk: <input type="text"/>            Type 3S2 Trk: <input type="text"/>            Type 3-3 Trk: <input type="text"/>            Spec 121: <input type="text"/>            NRL: <input type="text"/> </td> </tr> </table>				<b>Controlling Member</b> HL-93: <input type="text"/> Type 3 Trk: <input type="text"/> Type 3S2 Trk: <input type="text"/> Type 3-3 Trk: <input type="text"/> Spec 121: <input type="text"/> NRL: <input type="text"/>	<b>Rating Factor</b> Inv HL-93: <input type="text"/> Oper HL-93: <input type="text"/>	<b>Legal Rating</b> Type 3 Trk: <input type="text"/> Type 3S2 Trk: <input type="text"/> Type 3-3 Trk: <input type="text"/> Spec 121: <input type="text"/> NRL: <input type="text"/>	<b>Permit Rating</b> Type 3 Trk: <input type="text"/> Type 3S2 Trk: <input type="text"/> Type 3-3 Trk: <input type="text"/> Spec 121: <input type="text"/> NRL: <input type="text"/>	
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<b>Notes:</b> <input type="text"/>								

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HISTORY OF RATING EVENTS					
New Event					
	Event To Publish	(01)	(02)	(03)	(04)
Rating Date (252)	04 ▾	6/30/2005 12:00	1/1/1900 12:00	11/21/2013 12	12/8/2014 12:0
Rater Initials		DDJ	JFB	DDJ	DDJ
HS (OPER. RATING) (64)	04 ▾	35.5	48	38.5	43.6
HS (INV. RATING) (66)	04 ▾	21.3	36	23.6	26.1
H-TRUCK (254A)	04 ▾	26.8		25.7	31.3
TANDEM AXLE (254B)	04 ▾	33.3		36.8	40.9
TRIAxLE DUMP (254C)	04 ▾	31.3		33.5	38.4
CONCRETE (254D)	04 ▾	31.6		33	38.8
18-WHEELER (254E)	04 ▾	57.8		57.7	70.1
6-AXLE (254F)	04 ▾	54.1		53.8	64.8
SCHOOL BUS (254G)	04 ▾	32.5		31.6	38.4
RATING METHOD (OPER.) (63)	04 ▾	1 LF Load Factor ▾	5 No rating ▾	1 LF Load Factor ▾	1 LF Load Factor ▾
RATING METHOD (INV.) (65)	04 ▾	1 LF Load Factor ▾	5 No rating ▾	1 LF Load Factor ▾	1 LF Load Factor ▾
RATING SPEC (249)	04 ▾	LFD ▾	Not Rated ▾	LFD ▾	LFD ▾
RATING ANALYSIS MAJOR (250A)	04 ▾	AASHTO BrR (Virtis) ▾	Not Rated / Analyzed ▾	AASHTO BrR (Virtis) ▾	AASHTO BrR (Virtis) ▾
RATING ANALYSIS MINOR (250B)	04 ▾	Not Rated / Analyzed ▾	Not Rated / Analyzed ▾	BRUFEM ▾	BRUFEM ▾
RATING AGENCY (251)	04 ▾	ALDOT (Maint. Bureau) ▾	Not Rated / Analyzed ▾	ALDOT (Maint. Bureau) ▾	ALDOT (Maint. Bureau) ▾
POSTING LEVEL (70)				5 At/Above Legal Load ▾	
RATING STATUS (253A)				Rating Published ▾	
RATING STATUS PRIMARY (253B)				No Action ▾	
RATING STATUS SECONDARY (253C)				No Action ▾	
POSTING MEMBER (257A)				Superstructure ▾	
REASON POSTED (257B)				None / Condition Noted ▾	
POSTING CHART INDICATOR (259)				Leave Off Posting Char ▾	
STANDARD DRAWINGS - MAIN (265)				SPECIAL	
STANDARD DRAWINGS - APPROACH (266)				NNNNNNNNNNNNNNNN	

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# Step 1: Define the Vehicles

- Merge:
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Admin > General Config > Vehicle Definitions

Vehicle Definitions							
Vehicle	Default Rating Method	Default Analysis Type	Standard	Is Active	Description	Order	
<input type="text"/>	5 No rating or eval	Design	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="text"/>		<a href="#">Add New Vehicle</a>
▶ HS-20 Operating	6 Load Factor (MS18)	Design	Yes	Yes		1	↓ ↓ ×
▶ HS-20 Inventory	6 Load Factor (MS18)	Design	Yes	Yes		2	↑ ↑ ↓ ↓ ×
▶ HL-93 Operating	8 LRFR (HL93)	Design	Yes	Yes		3	↑ ↑ ↓ ↓ ×
▶ HL-93 Inventory	8 LRFR (HL93)	Design	Yes	Yes		4	↑ ↑ ↓ ↓ ×
▶ Type 3	8 LRFR (HL93)	Legal	Yes	Yes		5	↑ ↑ ↓ ↓ ×
▶ Type 3S2	8 LRFR (HL93)	Legal	Yes	Yes		6	↑ ↑ ↓ ↓ ×
▶ Type 3-3	8 LRFR (HL93)	Legal	Yes	Yes		7	↑ ↑ ↓ ↓ ×
▶ Notational SHV	8 LRFR (HL93)	Permit	Yes	Yes		8	↑ ↑ ↓ ↓ ×
▶ SHV 4	8 LRFR (HL93)	Permit	Yes	Yes		9	↑ ↑ ↓ ↓ ×
▶ SHV 5	8 LRFR (HL93)	Permit	Yes	Yes		10	↑ ↑ ↓ ↓ ×
▶ SHV 6	8 LRFR (HL93)	Permit	Yes	Yes		11	↑ ↑ ↓ ↓ ×
▶ SHV 7	8 LRFR (HL93)	Permit	Yes	Yes		12	↑ ↑ ↓ ↓ ×
▶ EV2	8 LRFR (HL93)	Permit	Yes	Yes		13	↑ ↑ ↓ ↓ ×
▶ EV3	8 LRFR (HL93)	Permit	Yes	Yes		14	↑ ↑ ↓ ↓ ×
▶ UT-P6	8 LRFR (HL93)	Permit	Yes	Yes	GVW = 96k	15	↑ ↑ ↓ ↓ ×
▶ UT-P7	8 LRFR (HL93)	Permit	Yes	Yes	GVW = 108k	16	↑ ↑ ↓ ↓ ×
▶ UT-P8	8 LRFR (HL93)	Permit	Yes	Yes	GVW = 105k	17	↑ ↑ ↓ ↓ ×
▶ UT-P9a	8 LRFR (HL93)	Permit	Yes	Yes	GVW = 106k	18	↑ ↑ ↓ ↓ ×
▶ UT-P9b	8 LRFR (HL93)	Permit	Yes	Yes	GVW = 132k	19	↑ ↑ ↓ ↓ ×
▶ Other Permit Vehicle	8 LRFR (HL93)	Permit	No	Yes	See notes for vehicle descript...	20	↑ ↑ ×

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# Step 2: Create a Load Rating Event

Inspection > Load Ratings

Rating Event: 9/5/2017 [Create New Load Rating Event](#)

**Current & Reported Ratings**

Load Rating Review Recommended

**Reported Rating**

Open / Posted / Closed (041): A Open, no restriction

Design Load (031): A HL 93

Posting (070): 5 At/Above Legal Loads

**Vehicle** Item 64 Item 66 Rating Tons Event Method G3/65

No Current Ratings have been selected for this bridge.

**Load Rating Reports**

Event Name: 9/5/2017 Load Rating Date: 9/5/2017

Load Rater: Melanie Helm, PE Reviewer: Susan K Wynn, SE

Software used: AASHTOWare BrR Secondary Software: NA

Asphalt Overlay, Dynamic Load Allowance 33%

AAADT (one-way) 418

System Factor and Condition Factor: 1 & 1

Wearing Surface / Fill Depth: 4.00 inches Category: Routine

[Add New Vehicle/Rating](#)

Vehicle	Current	Rating	Tons	Method	Analysis Type	Limit State	Location	Notes
HS-20 Operating	<input type="checkbox"/>	1.6	0	6 Load Factor (MS18)	Design	Serviceability Steel	S3 G2 to G4	
HS-20 Inventory	<input type="checkbox"/>	2.67	0	6 Load Factor (MS18)	Design	Serviceability Steel	S3 G2 to G4	
HL-93 Operating	<input type="checkbox"/>	1.11	0	8 LRFR (HL93)	Design	Service II - Steel Yield	S3 G1 & G5	
HL-93 Inventory	<input type="checkbox"/>	1.45	0	8 LRFR (HL93)	Design	Service II - Steel Yield	S3 G1 & G5	
Type 3	<input type="checkbox"/>	1.97	0	8 LRFR (HL93)	Legal	Service II - Steel Yield	S3 G1 & G5	
Type 3S2	<input type="checkbox"/>	1.82	0	8 LRFR (HL93)	Legal	Service II - Steel Yield	S3 G1 & G5	
Type 3-3	<input type="checkbox"/>	1.92	0	8 LRFR (HL93)	Legal	Service II - Steel Yield	S3 G1 & G5	
Notational SHV	<input type="checkbox"/>	4.5	0	8 LRFR (HL93)	Permit	Service II - Steel Yield	S3 G1 & G5	Lane Load Combination fc
SHV 4	<input type="checkbox"/>	1.75	0	8 LRFR (HL93)	Permit	Service II - Steel Yield	S3 G1 & G5	
SHV 5	<input type="checkbox"/>	1.59	0	8 LRFR (HL93)	Permit	Service II - Steel Yield	S3 G1 & G5	
SHV 6	<input type="checkbox"/>	1.42	0	8 LRFR (HL93)	Permit	Service II - Steel Yield	S3 G1 & G5	
SHV 7	<input type="checkbox"/>	1.3	0	8 LRFR (HL93)	Permit	Service II - Steel Yield	S3 G1 & G5	
EV2	<input type="checkbox"/>	0	0	8 LRFR (HL93)	Permit	Service II - Steel Yield	S3 G1 & G5	
EV3	<input type="checkbox"/>	0	0	8 LRFR (HL93)	Permit	Service II - Steel Yield	S3 G1 & G5	
UT-P6	<input type="checkbox"/>	2.43	0	8 LRFR (HL93)	Permit	Service II - Steel Yield	S1 & S5 G1 & G5	
UT-P7	<input checked="" type="checkbox"/>	2.31	0	8 LRFR (HL93)	Permit	Service II - Steel Yield	S1 & S5 G1 & G5	
UT-P8	<input type="checkbox"/>	2.12	0	8 LRFR (HL93)	Permit	Service II - Steel Yield	S1 & S5 G1 & G5	
UT-P9a	<input type="checkbox"/>	2.11	0	8 LRFR (HL93)	Permit	Service II - Steel Yield	S1 & S5 G1 & G5	
UT-P9b	<input type="checkbox"/>	2.28	0	8 LRFR (HL93)	Permit	Service II - Steel Yield	S1 & S5 G1 & G5	



- How it was before

- Merge:
  - Custom Vehicles
  - Summary Reports
  - Locations
  - LR Events

- The Solution
  - Vehicles
  - Events
  - Event History
  - Current Rating

- Processes

- Integration with Inspection

# Peek at History of a Rating:

**Load Rating Reports**

Event Name: 9/5/2017 Routine      Load Rating Date: 9/5/2017  
 Load Rater: Melanie Helm, PE      Reviewer: Susan K Wynn, SE  
 Software used: AASHTOWare BrR      Secondary Software: NA

Asphalt Overlay, Dynamic Load Allowance 33%  
 AADT (one-way) 418  
 System Factor and Condition Factor: 1 & 1

Wearing Surface / Fill Depth: 4.00 inches      Category: Routine

[Add New Vehicle/Rating](#)

Vehicle	Current	Rating	Tons	Method	Analysis Type	Limit State	Location
HS-20 Operating	<input checked="" type="checkbox"/>	1.6	0	6 Load Factor (MS18)	Design	Serviceability Steel	S3 G2 to G4
Jan 1, 1972 - 1972 Pencil Calc		1.75	0	6 Load Factor (MS18)	Design	NA	
HS-20 Inventory	<input checked="" type="checkbox"/>	2.67	0	6 Load Factor (MS18)	Design	Serviceability Steel	S3 G2 to G4
HL-93 Operating	<input checked="" type="checkbox"/>	1.11	0	8 LRFR (HL93)	Design	Service II - Steel Yield	S3 G1 & G5
HL-93 Inventory	<input checked="" type="checkbox"/>	1.45	0	8 LRFR (HL93)	Design	Service II - Steel Yield	S3 G1 & G5
Type 3	<input checked="" type="checkbox"/>	1.97	0	8 LRFR (HL93)	Legal	Service II - Steel Yield	S3 G1 & G5

- How it was before

# Step 3: Which Rating is Current

- Merge:
  - Custom Vehicles
  - Summary Reports
  - Locations
  - LR Events

- The Solution
  - Vehicles
  - Events
  - Event History
  - Current Rating

- Processes

- Integration with Inspection

Inspection > Load Ratings

Rating Event: 9/5/2017 [Create New Load Rating Event](#)

**Current & Reported Ratings**

Load Rating Review Recommended

**Reported Rating**

Open / Posted / Closed (041): A Open, no restriction

Design Load (031): A HL 93

Posting (070): 5 AI/Above Legal Loads

Vehicle	Item 64	Item 66	Rating	Tons	Event	Method 63/65	
HS-20 Operating	<input type="checkbox"/>	<input type="checkbox"/>	1.6	0	9/5/2017	6 Load Factor (MS18)	<a href="#">Remove</a>
HS-20 Inventory	<input type="checkbox"/>	<input type="checkbox"/>	2.67	0	9/5/2017	6 Load Factor (MS18)	<a href="#">Remove</a>
HL-93 Operating	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1.11	0	9/5/2017	8 LRFR (HL93)	<a href="#">Remove</a>
HL-93 Inventory	<input type="checkbox"/>	<input checked="" type="checkbox"/>	1.45	0	9/5/2017	8 LRFR (HL93)	<a href="#">Remove</a>
Type 3	<input type="checkbox"/>	<input type="checkbox"/>	1.97	0	9/5/2017	8 LRFR (HL93)	<a href="#">Remove</a>
Type 3S2	<input type="checkbox"/>	<input type="checkbox"/>	1.82	0	9/5/2017	8 LRFR (HL93)	<a href="#">Remove</a>
Type 3-3	<input type="checkbox"/>	<input type="checkbox"/>	1.92	0	9/5/2017	8 LRFR (HL93)	<a href="#">Remove</a>
Notational SHV	<input type="checkbox"/>	<input type="checkbox"/>	4.5	0	9/5/2017	8 LRFR (HL93)	<a href="#">Remove</a>
SHV 4	<input type="checkbox"/>	<input type="checkbox"/>	1.75	0	9/5/2017	8 LRFR (HL93)	<a href="#">Remove</a>
SHV 5	<input type="checkbox"/>	<input type="checkbox"/>	1.59	0	9/5/2017	8 LRFR (HL93)	<a href="#">Remove</a>
SHV 6	<input type="checkbox"/>	<input type="checkbox"/>	1.42	0	9/5/2017	8 LRFR (HL93)	<a href="#">Remove</a>
SHV 7	<input type="checkbox"/>	<input type="checkbox"/>	1.3	0	9/5/2017	8 LRFR (HL93)	<a href="#">Remove</a>
EV2	<input type="checkbox"/>	<input type="checkbox"/>	0	0	9/5/2017	8 LRFR (HL93)	<a href="#">Remove</a>
EV3	<input type="checkbox"/>	<input type="checkbox"/>	0	0	9/5/2017	8 LRFR (HL93)	<a href="#">Remove</a>
UT-P6	<input type="checkbox"/>	<input type="checkbox"/>	2.43	0	9/5/2017	8 LRFR (HL93)	<a href="#">Remove</a>
UT-P7	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	2.31	0	9/5/2017	8 LRFR (HL93)	<a href="#">Remove</a>
UT-P8	<input type="checkbox"/>	<input type="checkbox"/>	2.12	0	9/5/2017	8 LRFR (HL93)	<a href="#">Remove</a>
UT-P9a	<input type="checkbox"/>	<input type="checkbox"/>	2.11	0	9/5/2017	8 LRFR (HL93)	<a href="#">Remove</a>
UT-P9b	<input type="checkbox"/>	<input type="checkbox"/>	2.28	0	9/5/2017	8 LRFR (HL93)	<a href="#">Remove</a>

**Load Rating Reports**

Event Name: 9/5/2017 Load Rating Date: 9/5/2017

Load Rater: Melanie Helm, PE Reviewer: Susan K Wynn, SE

Software used: AASHTOWare BrR Secondary Software: NA

Asphalt Overlay, Dynamic Load Allowance 33%

AADT (one-way) 418

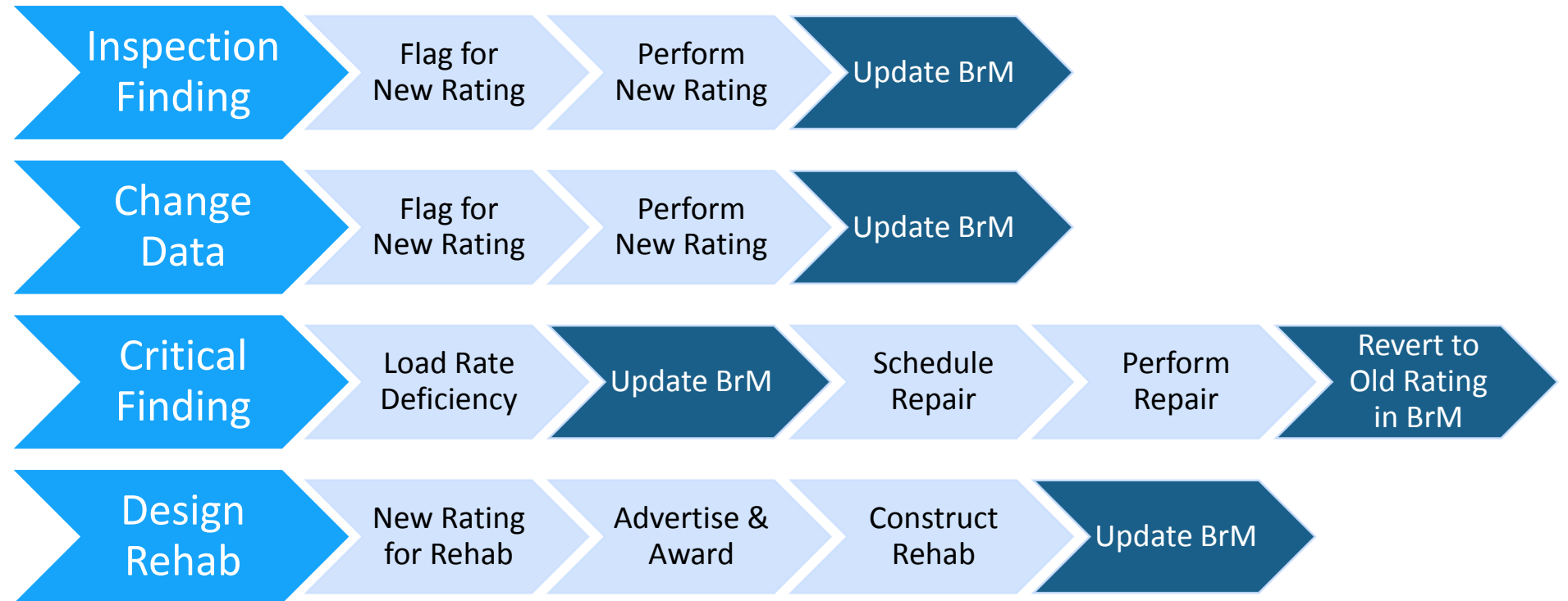
System Factor and Condition Factor: 1 & 1

Wearing Surface / Fill Depth: 4.00 inches Category: Routine [Add New Vehicle/Rating](#)

Vehicle	Current	Rating	Tons	Method	Analysis Type	Limit State	Location	Notes
HS-20 Operating	<input checked="" type="checkbox"/>	1.6	0	6 Load Factor (MS18)	Design	Serviceability Steel	S3 G2 to G4	<a href="#">Remove</a>
HS-20 Inventory	<input checked="" type="checkbox"/>	2.67	0	6 Load Factor (MS18)	Design	Serviceability Steel	S3 G2 to G4	<a href="#">Remove</a>
HL-93 Operating	<input checked="" type="checkbox"/>	1.11	0	8 LRFR (HL93)	Design	Service II - Steel Yield	S3 G1 & G5	<a href="#">Remove</a>
HL-93 Inventory	<input checked="" type="checkbox"/>	1.45	0	8 LRFR (HL93)	Design	Service II - Steel Yield	S3 G1 & G5	<a href="#">Remove</a>
Type 3	<input checked="" type="checkbox"/>	1.97	0	8 LRFR (HL93)	Legal	Service II - Steel Yield	S3 G1 & G5	<a href="#">Remove</a>
Type 3S2	<input checked="" type="checkbox"/>	1.82	0	8 LRFR (HL93)	Legal	Service II - Steel Yield	S3 G1 & G5	<a href="#">Remove</a>
Type 3-3	<input checked="" type="checkbox"/>	1.92	0	8 LRFR (HL93)	Legal	Service II - Steel Yield	S3 G1 & G5	<a href="#">Remove</a>
Notational SHV	<input checked="" type="checkbox"/>	4.5	0	8 LRFR (HL93)	Permit	Service II - Steel Yield	S3 G1 & G5	Lane Load Combination fc <a href="#">Remove</a>
SHV 4	<input checked="" type="checkbox"/>	1.75	0	8 LRFR (HL93)	Permit	Service II - Steel Yield	S3 G1 & G5	<a href="#">Remove</a>
SHV 5	<input checked="" type="checkbox"/>	1.59	0	8 LRFR (HL93)	Permit	Service II - Steel Yield	S3 G1 & G5	<a href="#">Remove</a>
SHV 6	<input checked="" type="checkbox"/>	1.42	0	8 LRFR (HL93)	Permit	Service II - Steel Yield	S3 G1 & G5	<a href="#">Remove</a>
SHV 7	<input checked="" type="checkbox"/>	1.3	0	8 LRFR (HL93)	Permit	Service II - Steel Yield	S3 G1 & G5	<a href="#">Remove</a>
EV2	<input checked="" type="checkbox"/>	0	0	8 LRFR (HL93)	Permit	Service II - Steel Yield	S3 G1 & G5	<a href="#">Remove</a>
EV3	<input checked="" type="checkbox"/>	0	0	8 LRFR (HL93)	Permit	Service II - Steel Yield	S3 G1 & G5	<a href="#">Remove</a>
UT-P6	<input checked="" type="checkbox"/>	2.43	0	8 LRFR (HL93)	Permit	Service II - Steel Yield	S1 & S5 G1 & G5	<a href="#">Remove</a>
UT-P7	<input checked="" type="checkbox"/>	2.31	0	8 LRFR (HL93)	Permit	Service II - Steel Yield	S1 & S5 G1 & G5	<a href="#">Remove</a>
UT-P8	<input checked="" type="checkbox"/>	2.12	0	8 LRFR (HL93)	Permit	Service II - Steel Yield	S1 & S5 G1 & G5	<a href="#">Remove</a>
UT-P9a	<input checked="" type="checkbox"/>	2.11	0	8 LRFR (HL93)	Permit	Service II - Steel Yield	S1 & S5 G1 & G5	<a href="#">Remove</a>
UT-P9b	<input checked="" type="checkbox"/>	2.28	0	8 LRFR (HL93)	Permit	Service II - Steel Yield	S1 & S5 G1 & G5	<a href="#">Remove</a>

- How it was before
- Merge:
  - Custom Vehicles
  - Summary Reports
  - Locations
  - LR Events
- The Solution
  - Vehicles
  - Events
  - Event History
  - Current Rating
- Processes
- Integration with Inspection

## Part of these Processes:



- How it was before

- Merge:
  - Custom Vehicles
  - Summary Reports
  - Locations
  - LR Events

- The Solution
  - Vehicles
  - Events
  - Event History
  - Current Rating

- Processes

- Integration with Inspection

# The Links:

**NBI Load Ratings**

Load Rating Review Recommended:

Rating Date:

Initials:

Design Load (031):

Posting (070):

Operating Type (063):

OR Factor (064):  rf

Inventory type (065):

IR Factor (066):  rf

Alternate Operating Rating Type:

Alternate Operating Rating:  ton

Alternate Inventory Rating Type:

Alternate Inventory Rating:  ton

**Posting Loads**

**Inventory**

Type 1:  ton

Type 2:  ton

Type 3:  ton

**Operating**

Type 1:  ton

Type 2:  ton

Type 3:  ton

**SHVs**

SU4:  ton

SU5:  ton

SU6:  ton

SU7:  ton

NRL:  ton

**Current & Reported Ratings**

Load Rating Review Recommended

**Reported Rating**

Open / Posted / Closed (041):

Design Load (031):

Posting (070):

Vehicle	Item 64	Item 66	Rating	Tons	Event	Method 63/65	
HS-20 Operating	<input type="checkbox"/>	<input type="checkbox"/>	1.6	0	9/5/2017 Routine	6 Load Factor (MS18)	Remove
HS-20 Inventory	<input type="checkbox"/>	<input type="checkbox"/>	2.67	0	9/5/2017 Routine	6 Load Factor (MS18)	Remove
HL-93 Operating	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1.11	0	9/5/2017 Routine	8 LRFR (HL93)	Remove
HL-93 Inventory	<input type="checkbox"/>	<input checked="" type="checkbox"/>	1.45	0	9/5/2017 Routine	8 LRFR (HL93)	Remove
Type 3	<input type="checkbox"/>	<input type="checkbox"/>	1.97	0	9/5/2017 Routine	8 LRFR (HL93)	Remove
Type 3S2	<input type="checkbox"/>	<input type="checkbox"/>	1.82	0	9/5/2017 Routine	8 LRFR (HL93)	Remove
Type 3-3	<input type="checkbox"/>	<input type="checkbox"/>	1.92	0	9/5/2017 Routine	8 LRFR (HL93)	Remove
Notational SHV	<input type="checkbox"/>	<input type="checkbox"/>	4.5	0	9/5/2017 Routine	8 LRFR (HL93)	Remove
SHV 4	<input type="checkbox"/>	<input type="checkbox"/>	1.75	0	9/5/2017 Routine	8 LRFR (HL93)	Remove
SHV 5	<input type="checkbox"/>	<input type="checkbox"/>	1.59	0	9/5/2017 Routine	8 LRFR (HL93)	Remove