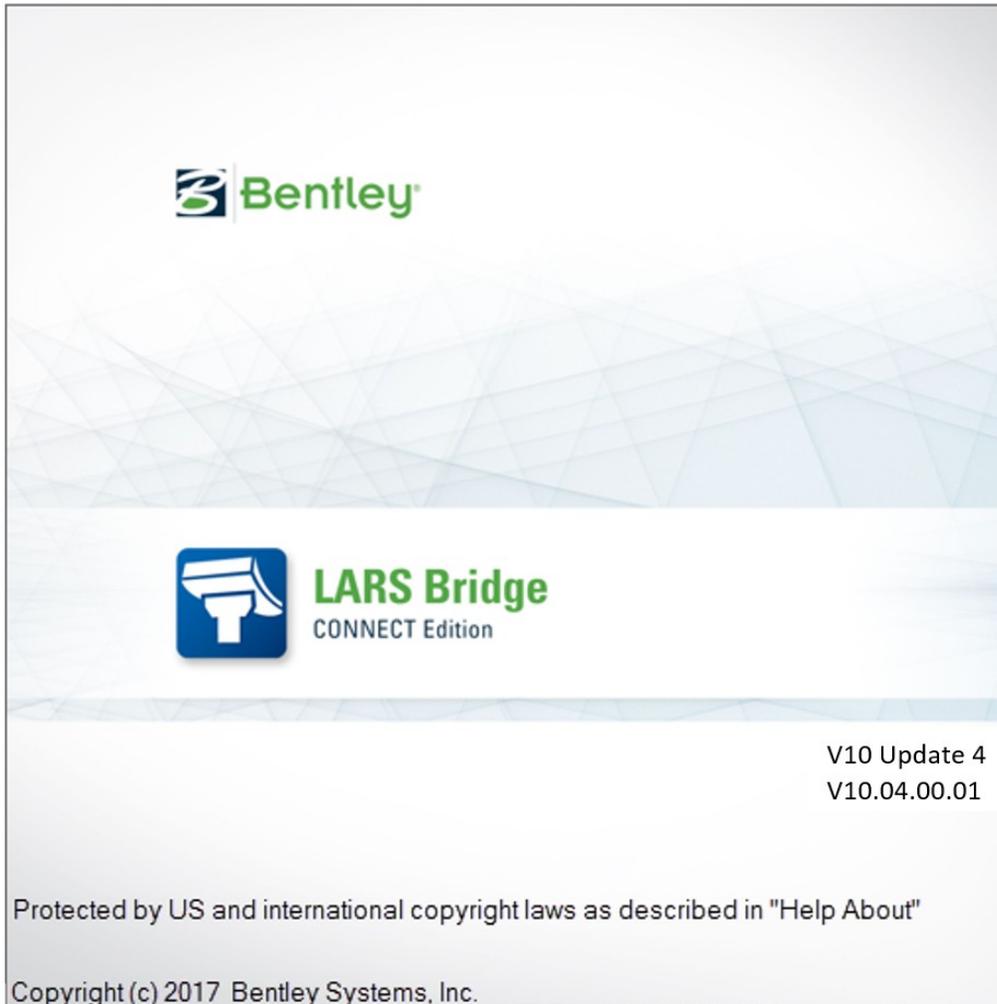


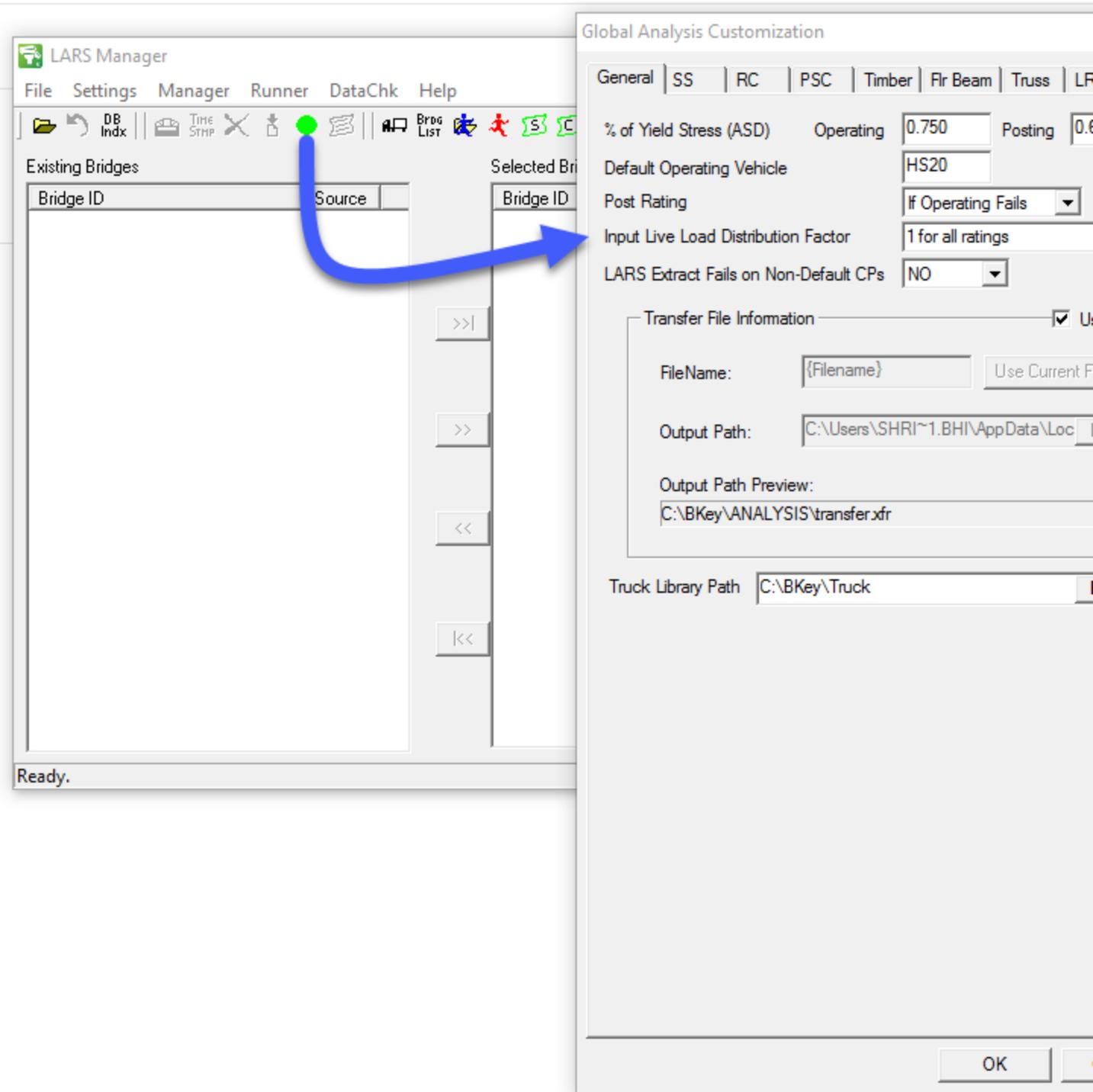
# LARS Bridge CONNECT Edition V10 Update 4 Release Notes



LARS Bridge CONNECT Edition V10 Update 4 is a maintenance release with two enhancements and several bug fixes as indicated below:

## **Enhancements:**

1. LARS customization icon been added to LARS Manager.



2. LARS documentation is now accessible from the following "Help" menus:

- i) LARS Bridge CONNECT Edition
- ii) LARS Manager

iii) LARS Complex Truss, &

iv) LARS Bridge Connector

## Bug Fixes:

- LARS V10.02.00.01 Crashes when generating reports that contain truss and flexure members

The reported crash was patched and is no longer an issue in the Updated LARS.

- LARS V10.02.00.03 Complex Truss crashes when clicking on the “Rate Members” button

The reported Crash was patched and is no longer an issue in the Updated LARS.

- LARS V6.00.01.09 Critical Summary Report One Lane ratings use the 2 Lane ratings

When closing out of the Lars and rerunning the bridge the Critical Summary the output looks OK, but when closing out and rerunning the program a second time there seems to be a problem with the “1-lane” ratings in the “Bridge Summary Report.” The reported issue was patched and is no longer an issue in the Updated LARS.

- LARS V10.02.00.01 Ratings disagree between LARS and BrR for two AL files

This reporting problem is no longer an issue in the Updated LARS which now correctly reports the moment capacity near the supports (within a tenth of the span length).

- LARS V6.08 Floorbeam one-lane versus multi-lane shear ratings seem to be inconsistent.

Summary of results from the Updated LARS now indicate that expected differences from shear ratings of one-lane vs two-lane .

- LARS V6.00.01.08 CPS Fails Too Many Elements

This reporting problem is no longer an issue in the Updated LARS.

- LARS V6.09 Bridge that ran in V6.08 failed in V6.09

This was a problem with a missing analysis summary and now the Updated LARS is reporting properly.

- LARS V5.00.06.09 Program does not appear to be correctly using material data based on year of construction for RC bridges; also it didn't consider grade 75 rebar.

Please note this is not an issue in LARS. The correct workflow for resolving the above issue is as follows:

The values for the “Material Specific Values” shown in Figure 2 are not to be completed if the material data is to be based on year of construction (as shown in the “General Bridge Information” in Figure 3), which uses the material strengths based on the global customization settings (see Figure 4 for a sample). Also note that if grade 75 reinforcement is used that must be entered as part of the customizations used for the “bmd” file or that value can be entered under the applicable yield strength for the “Material Specific Values.”

### Material of Construction

SS Structural Steel  
 HS Hybrid Steel  
 CSC Composite Steel + Concrete  
 HSC Hybrid Steel + Concrete  
 RC Reinforced Concrete  LW conc  
 CRC Composite RC  
 PSC Prestressed Concrete  LW conc  
 CPS Composite Prestressed  LW conc  
 TMB Timber

\* - for default, see Analysis Customization RC tab

#### Material Specific Values

Yield (Fy) (psi) \*

f'c (psi) \*

Cover (in)

Shear fys (psi) \*

Figure 2

### General Bridge Information

Bridge ID:  State Bridge ID:   
 Structure Type:  Analyst Name:   
 Structure Length:  Year of Construction:   
 Structure Cross Section:  General Road Width:   
 Edge Dist. "A" (in.)   
 Detail   
 Construction Route:   
 Section:   
 Location:  Station:   
 LRFR Factors:  
 Phi System:   
 Average Daily Truck Traffic:   
 Permit Type:   
 Spc. Permit Type:

Number of Spans:   
 Marked Route:   
 Key Route:   
 County:   
 District Number:   
 NBI Structure ID:   
 Facility Carried:   
 Feature Intersected:   
 Structure Status:   
 Structure Flag:

#### Figure 3

Comments:  
 REINFORCED CONCRETE BRIDGE OVER THE BOISE RIVER ON BROADWAY AVE. COMPFOR D L L L AND FSW. S01 AND S02 15 EXT. AND INT FOR SPAN 1 AND 7 WITH 49FT. SPAN S03 AND S04 ARE EXT AND INT FOR SPANS 2 AND 6 W/ 56.5 FT. SPS05 AND S06 ARE EXT AND INT FOR

### Local Analysis Customization

General | **SS** | RC | PSC | Timber | Fr Beam | Truss | LRFR - General

#### Yield Bending Stress - Reinforcing Steel

Up to Yr	Fy	Inventory	Operating	Posting	
1905	26000.0	14300.0	19500.0	19500.0	<input type="button" value="Add"/>
1920	32000.0	17600.0	24000.0	24000.0	<input type="button" value="Modify"/>
1944	33000.0	18150.0	24750.0	24750.0	<input type="button" value="Delete"/>
1979	40000.0	20000.0	28000.0	28000.0	
2050	60000.0	24000.0	36000.0	36000.0	

#### Allowable Bending Stress - Reinforced Concrete

Up to Yr	f'c	Inventory	Operating	Posting	
1930	3000.0	1200.0	1650.0	1650.0	<input type="button" value="Add"/>
2050	3500.0	1400.0	1925.0	1925.0	<input type="button" value="Modify"/>
					<input type="button" value="Delete"/>

#### Yield Shear Stress - Shear Reinforcing Steel

Up to Yr	Fy	Inventory	Operating	Posting	
1905	26000.0	14300.0	19500.0	19500.0	<input type="button" value="Add"/>
1920	32000.0	17600.0	24000.0	24000.0	<input type="button" value="Modify"/>
1944	33000.0	18150.0	24750.0	24750.0	<input type="button" value="Delete"/>
1979	40000.0	20000.0	28000.0	28000.0	
2050	60000.0	24000.0	36000.0	36000.0	

#### Allowable Shear Stress - Reinforced Concrete

Up to Yr	f'c	Inventory	Operating	Posting	
1930	3000.0	1200.0	1650.0	1650.0	<input type="button" value="Add"/>
2050	3500.0	1400.0	1925.0	1925.0	<input type="button" value="Modify"/>
					<input type="button" value="Delete"/>

Ignore shear rating when no stirrups are present:   
 Always ignore shear rating:   
 Check shear directly at supports:   
 Move critical shear locations to match concentrated loads within d regions:

#### Figure 4