

Design Memorandum

TO: All Design Section Staff

FROM: Bijan Khaleghi
DATE: May 20, 2010
SUBJECT: Bridge Load Rating Policy

This memorandum supersedes memorandum issued on April 14, 2010.

Load ratings are required for all new, widened, or rehabilitated bridges where the rehabilitation alters the load carrying capacity of the structure. Bridge Load Rating shall be done as part of the design, and rating files shall be forwarded to WSDOT's Load Rating Engineer:

Mohamad Al-Salman, PE
Washington State Department of Transportation
Bridge Preservation Office
(360) 570-2567

This new load rating policy is effective May 1, 2010, and applicable to all new and ongoing designs. This policy applies to all WSDOT in-house or consultant designed bridges.

Load rating calculations shall be checked as specified in WSDOT Bridge Design Manual Article 1.3.2.

This memorandum applies to all WSDOT bridges regardless of the contracting method.

BACKGROUND

Bridge load ratings are now required to be accomplished as part of the design for all new designs. PGSuper program is updated to perform load rating of precast prestressed girder bridges. Configuring WSDOT load rating options in an existing PGSuper project file is described below for clarity.

If you have any questions regarding this issue, please contact Mohamad Al-Salman at 570-2567, Rick Brice at 705-7174 or Bijan Khaleghi at 705-7181.

cc: Mohammad Shekhizadeh, Bridge Construction - 47354

F. Posner, Bridge and Structures – 47340

Configuring WSDOT Load Rating Options in an existing PGSuper Project File

Beginning May 1, 2010, load ratings are required for all new and ongoing WSDOT designs (See [Design Memo 03-2010](#)). PGSuper Version 2.3 has LRFR load rating capabilities. The purpose of this document is to detail the steps necessary to configure a PGSuper Project Files created with PGSuper Version 2.2 or earlier to perform load rating calculations in accordance with the WSDOT Bridge Design Manual.

New PGSuper Projects

The WSDOT PGSuper Project Templates have been pre-configured for the WSDOT load rating requirements. If you are creating a new project using PGSuper version 2.3 and the most recent libraries and templates, no additional steps are required. Follow the steps described in the next section to ensure you are using the most recent PGSuper Library and Templates.

Updating PGSuper Library and Templates

Ensure that PGSuper is configured with the latest libraries and templates before configuring your project file for load rating.

1. Start PGSuper
2. Select Configure PGSuper from the File menu
3. Select the WSDOT library and templates package from the WSDOT server

Configure PGSuper

Set the User, Library, and Template Configuration information.

Libraries and Templates

PGSuper doesn't have any default girders, design criteria, or other settings. All of the "default" information is stored in the Master Library and User and Workgroup Templates.

Use generic libraries and templates installed with PGSuper

Use libraries and templates published on the local file system, network, or the Internet

Select a server that contains PGSuper libraries and templates, or use the Add/Edit button to manage the servers:

WSDOT

Select a PGSuper library and templates package:

WSDOT
AASHTO Standard Girders from PCI BDM

[More about this library and templates package...](#)

Check for library and template updates:

Once a day

User Information

Enter your user information. This information will be used in report titles and other output.

Engineer

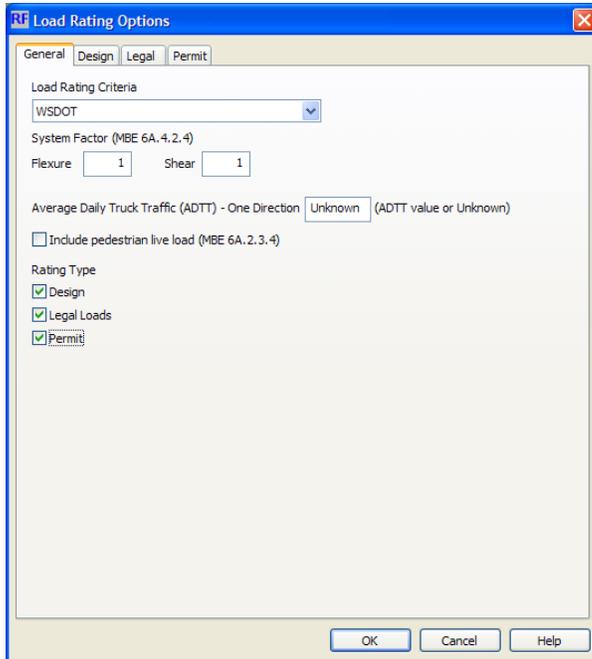
Company

4. Press the Update Library and Templates Now button

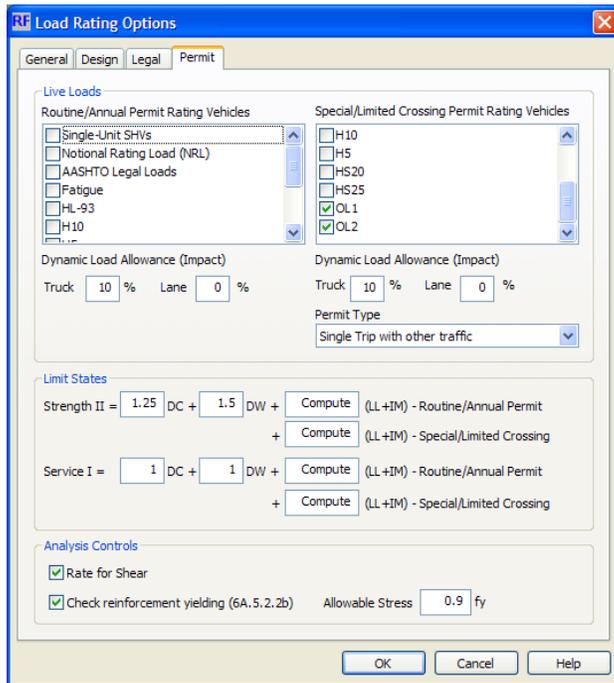
Configure Load Rating Options

To configure the load rating options:

1. Select Load Rating Options from the Project menu (or press the **RF** button on the toolbar)
2. On the General Tab, select WSDOT as the Load Rating Criteria and check all three Rating Type boxes



- On the Permit tab, check the OL1 and OL2 vehicles in the Special/Limited Crossing Permit Rating Vehicles list and change the Permit Type to “Single Trip with other traffic”



- Save your PGSuper project file.

Your project file is ready to have PGSuper perform a load rating analysis.

Load Rating Analysis

To perform the load rating analysis, simply create a Load Rating Report. The default configuration for this report contains minimum information that needs to be reported to the WSDOT Load Rating unit. Other chapters can be added to this report to get a more detailed record of the load rating analysis.

The WSDOT Load Rating Summary Report provides all of the information required for the Bridge Rating Summary Sheet, shown in Appendix 13.4-A1 of the BDM.

PGSuper performs load rating calculations for the superstructure only. Load rating of the cross beam is required and must be done by other means.