

AASHTOWare BrD/BrR 6.8

Report Tutorial

Fatigue and Service Stress LRFD/LRFR Reports

Topics Covered

- Fatigue and Service stress reports for LRFD/LRFR

Note: *Fatigue and Service Stress reports can be generated for Steel Girders LRFD/LRFR analysis only.*

BID	Bridge ID	Bridge Name	District	County	Facility	Location	Route	Feature Intersected	Mile/Km Post (mi)	Owner	Maintainer	Area	Length (ft)	Year Built
1	TrainingBridge1	Training Brid	District	01 Abb	SR 005	Pittsburg	0051	SR 6060	17.00	State Hi	State High	Not A	161.00	1999
2	TrainingBridge2	Training Brid	Unkno	Unkno	N/A	N/A	-1	N/A		Unkno			Unkn	1996
3	TrainingBridge3	Training Brid	District	01 Abb	I-79	Pittsburg	0079	Ohio River	125.00	State Hi	State High		455.00	1999
4	PCITrainingBridge1	PCI TrainingB					-1						Unkn	
5	PCITrainingBridge2	PCITrainingBr					-1						Unkn	
6	PCITrainingBridge3	PCI TrainingB					-1						Unkn	
7	PCITrainingBridge4	PCITrainingBr					-1						Unkn	
8	PCITrainingBridge5	PCI TrainingB					-1						Unkn	
9	PCITrainingBridge6	PCITrainingBr					-1						Unkn	
10	Example7	Example 7 P					-1						Unkn	
11	RCTrainingBridge1	RC Training					-1						Unkn	
12	TimberTrainingBridge1	Timber Tr. Bri					-1						Unkn	
13	FSys GFS TrainingBridge1	FloorSystem	District	15 Coll	NJ-Tur	NJCity	-1						Unkn	2002
14	FSys FS TrainingBridge2	FloorSystem	District	333 No	I-95	NYC	-1			State Hi	County H		Unkn	1998
15	FSys GF TrainingBridge3	FloorSystem	District	06 Bar	I-95	ATL	-1				County		Unkn	1998
16	FLine GFS TrainingBridge1	FloorLine GF	District	01 Abb	I-75	JAX	-1			State Hi	State High		Unkn	2001
17	FLine FS TrainingBridge2	FloorLine FS	District	02 Aike	I-75	GNV	-1			State Hi	State High		Unkn	2000
18	FLine GF TrainingBridge3	FloorLine GF	District	01 Abb	I-95	NY	15		2200.00	County	Unknown		Unkn	1999
19	TrussTrainingExample	Truss Trainin					5						Unkn	1930
20	LRFD Substructure Example 1	LRFD Substr											Unkn	
21	LRFD Substructure Example 2	LRFD Substr			SR 403	ERIE CO	4034	FOUR MILE	8.12				1095.8	2002
22	LRFD Substructure Example 3	LRFD Substr											Unkn	
23	LRFD Substructure Example 4	LRFD Substr					-1						240.00	2004
24	Visual Reference 1	Visual Refer	District	12 Che	I-76	WAITSF	I-76	MAD RIVER	1199.25	State Hi	State High		168.00	1938
25	Culvert Example 1	Culvert Exam					1	STH6					Unkn	
26	LFD Curved Guide Spec	LFD Curved					1						Unkn	
27	MultiCell Box Examples	Multi Cell Box					100						Unkn	2014
28	Gusset Plate Example	Gusset Plate	District			Some Hi				State Hi			67.900	2015
29	Splice Example	Splice Examp					-1						240.00	2004
30	Simple DL-Cont LL-Splice	Simple DL Sp	Unkno	Unkno	N/A	N/A	-1	N/A		Unkno			Unkn	1996
31	57 0524L	GILMAN DRI											Unkn	
32	PS Training Bridge	PS1 Training					-1						Unkn	
33	US-80-MAIN TRUSS-04042016	New Bridge											Unkn	

Fig 1. Bridge Explorer

From the Bridge Explorer (Fig 1) select TrainingBridge1 (BID 1) and double click (or right click and select open) to open it.

Once Bridge Workspace tree shows up, expand “Simple Span Structure” under “SUPERSTRUCTURE DEFINITIONS” in the tree by clicking on “+”. Then expand “MEMBERS” and select “G1”. Expand “G1” and select “Plate Girder (E)(C)” under “MEMBER ALTERNATIVES”. Expand “Plate Girder (E) (C)” by clicking on “+”. Now Bridge Workspace tree will be as shown in Fig 2.

Fatigue and Service reports

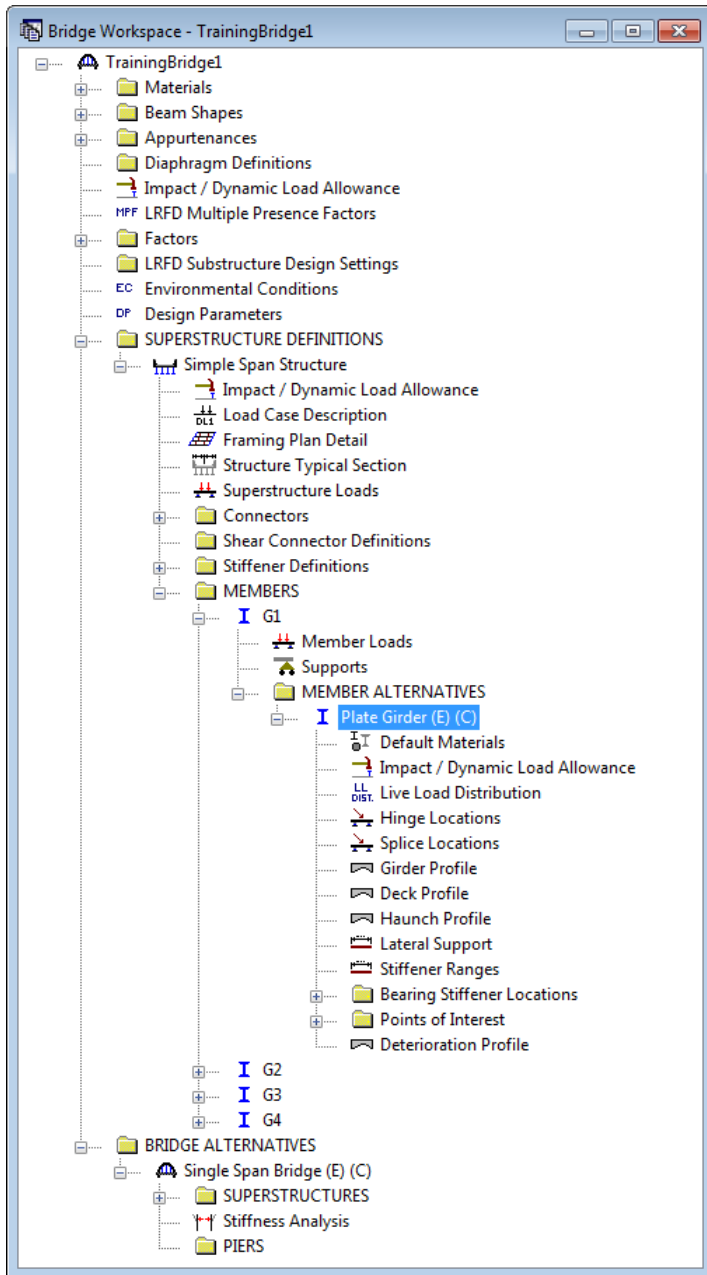


Fig 2. G1 - Bridge Workspace Tree - Girder Member Alternative

Select member alternative “Plate Girder (E) (C)”. Go to toolbar and click on View Analysis Setting button (Fig 3) to open Analysis Settings window (Fig 4).



Fig 3. View Analysis Setting Button

Fatigue and Service reports

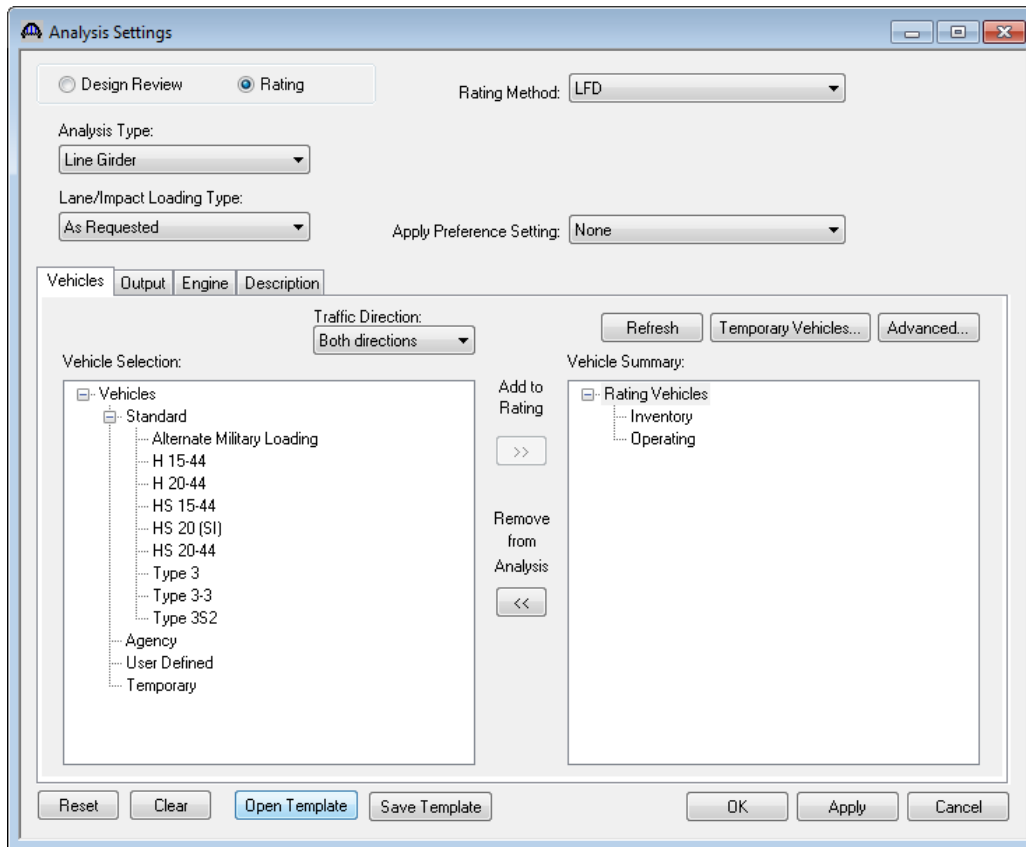


Fig 4. Analysis Settings Window

On analysis setting window click on “Open Template” button to open Template library (Fig 5). Select “HL93 Design Review” Template from Template Library. Click on “Open” button to apply template to Analysis Settings window (Fig 6).

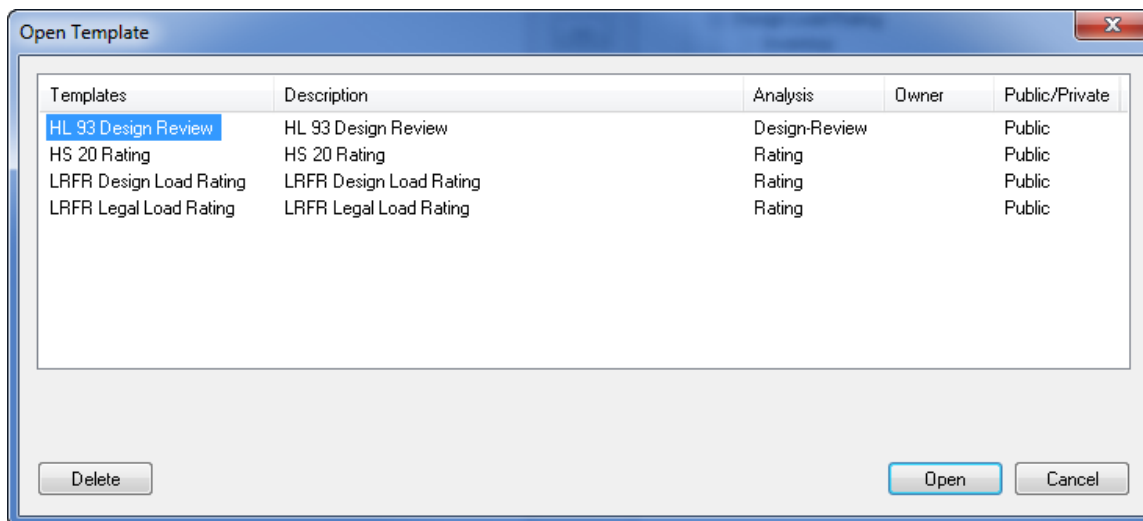


Fig 5. Open Template Window

Fatigue and Service reports

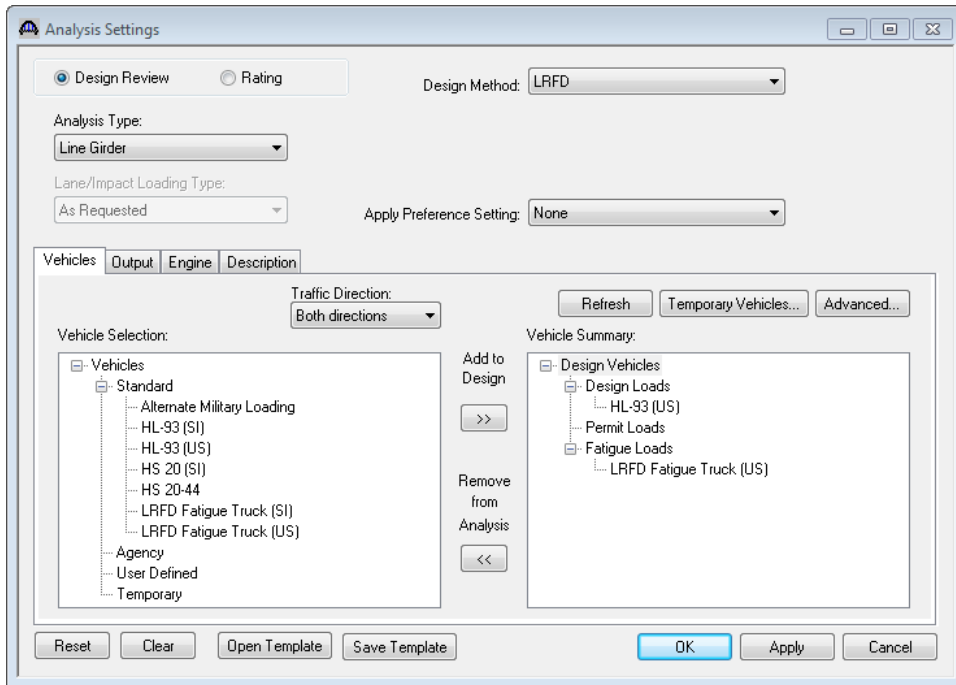


Fig 6. Analysis Settings Window – With Design Vehicles

Open Output tab on Analysis Settings window (Fig 7). Select Fatigue Stress Ranges report and Service II Stresses Ranges report by checking in check box under AASHTO Engines Reports. Click on “OK” button to save and close Analysis Settings window.

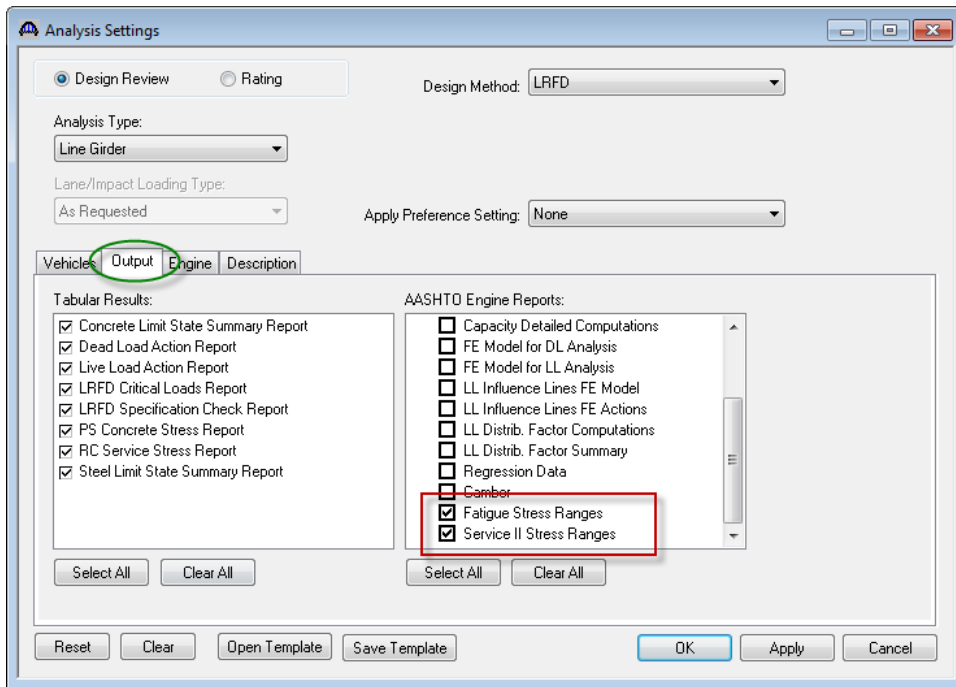


Fig 7. Analysis Settings Window – Output Tab

Fatigue and Service reports



Fig 8. Analyze Button

Select member alternative “Plate Girder (E)(C)” on G1. Click on Analyze Button on toolbar (Fig 8) to run analysis. Once Analyze button is clicked Analysis Progress window pops up (Fig 9). After analysis is completed click on “OK” button to close Analysis Progress window.

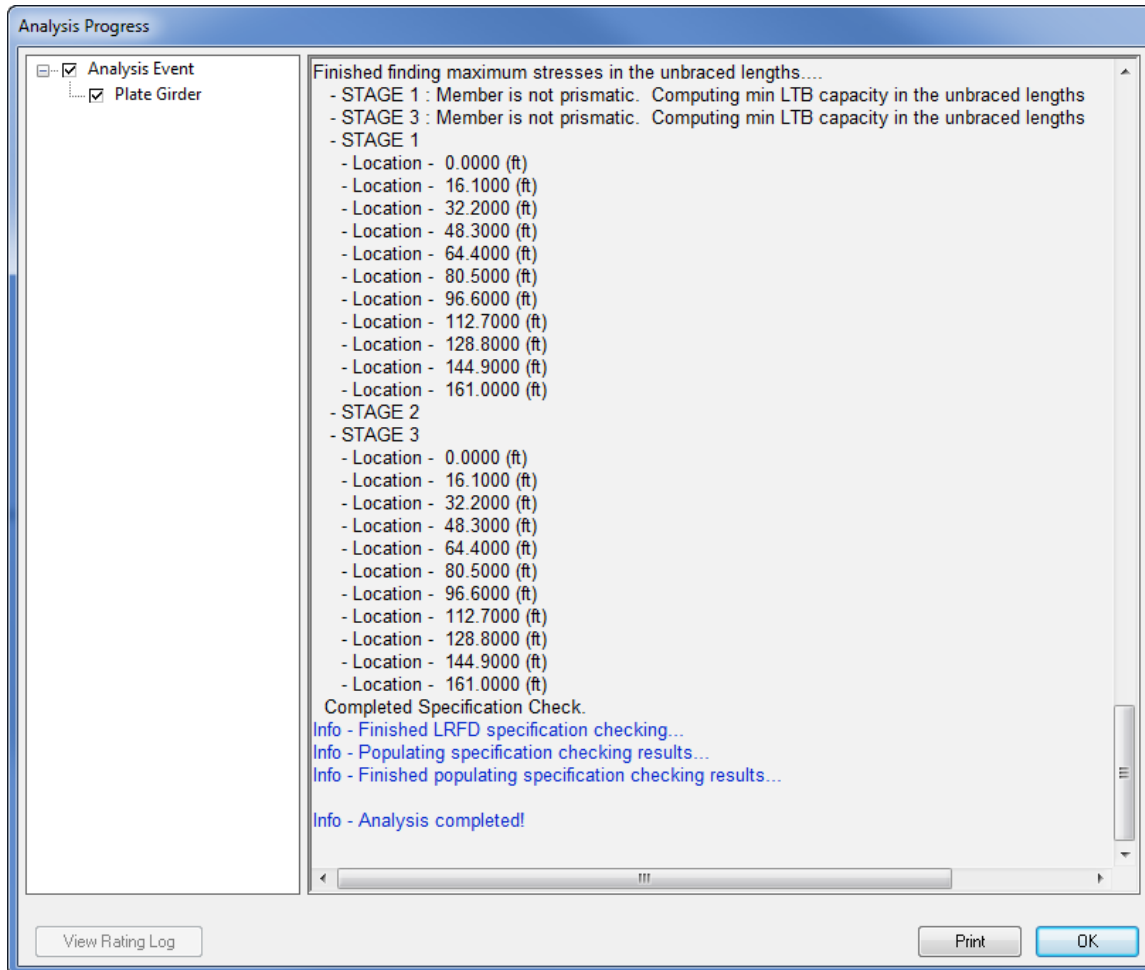


Fig 9. Analysis Progress Window

Click View Analysis Output button (Fig. 10) on toolbar to open Analysis Output List window (Fig 11).



Fig 10. View Analysis Output Button

Fatigue and Service reports

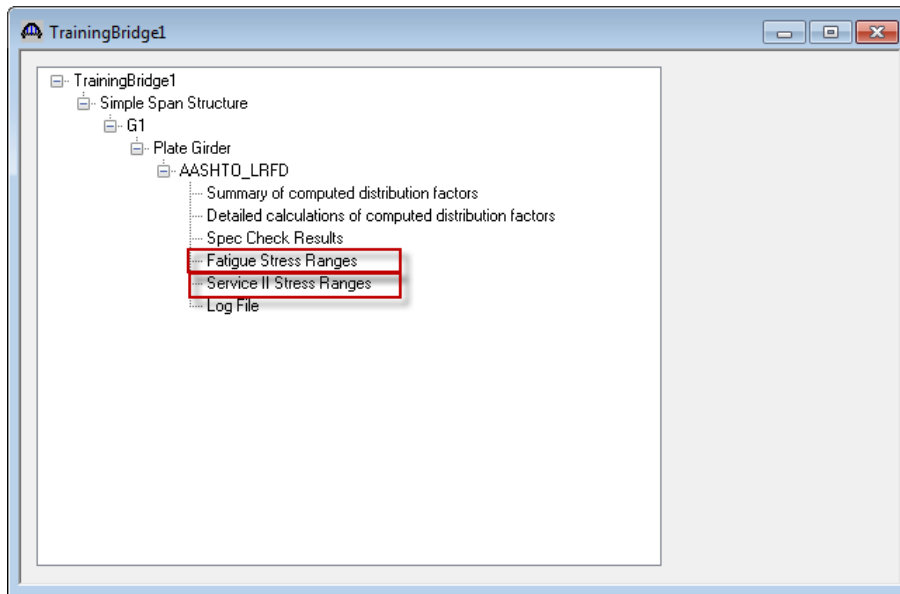


Fig 11. Analysis Output List Window

Double click on “Fatigue Stress Ranges” link to open LRFD Fatigue Stress Report (Fig 12)

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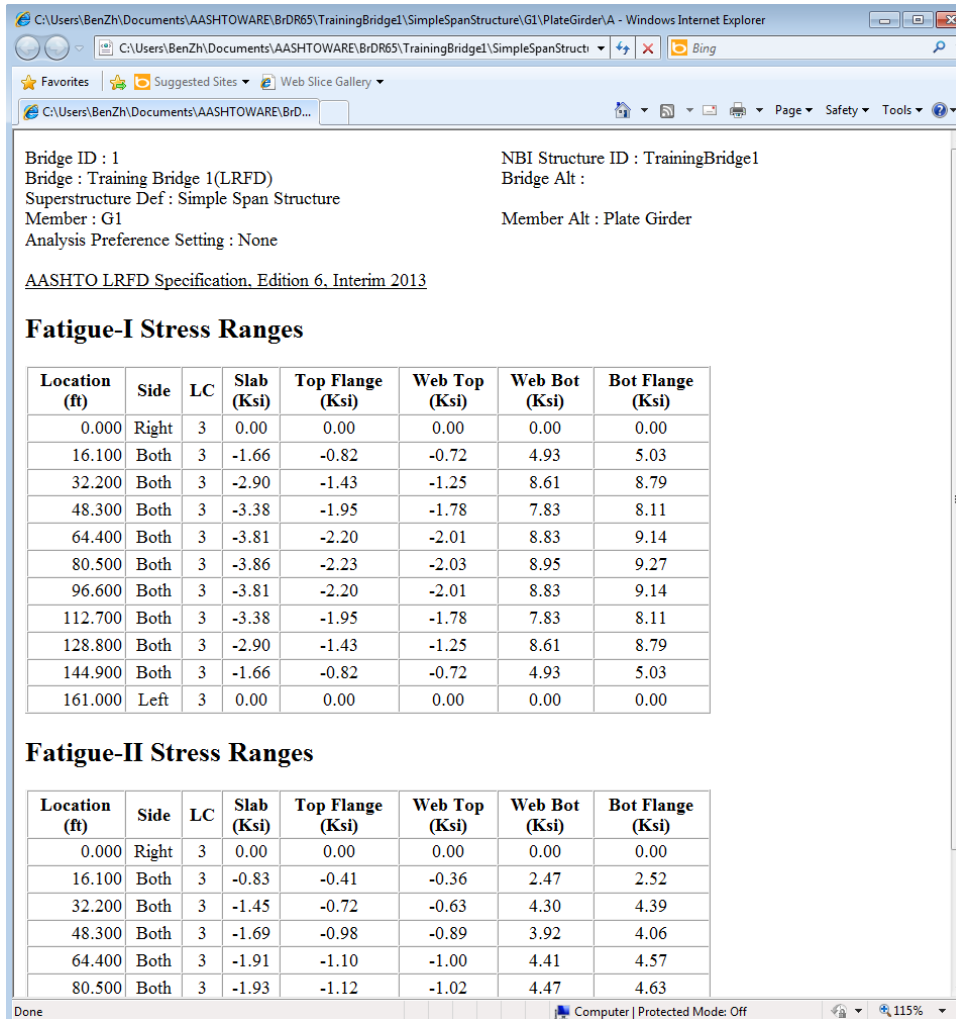


Fig 12. LRFD Fatigue Stress Report

Double click on “Service II Stress Ranges” link to open LRFD Service II Stress Report (Fig 13).

Fatigue and Service reports

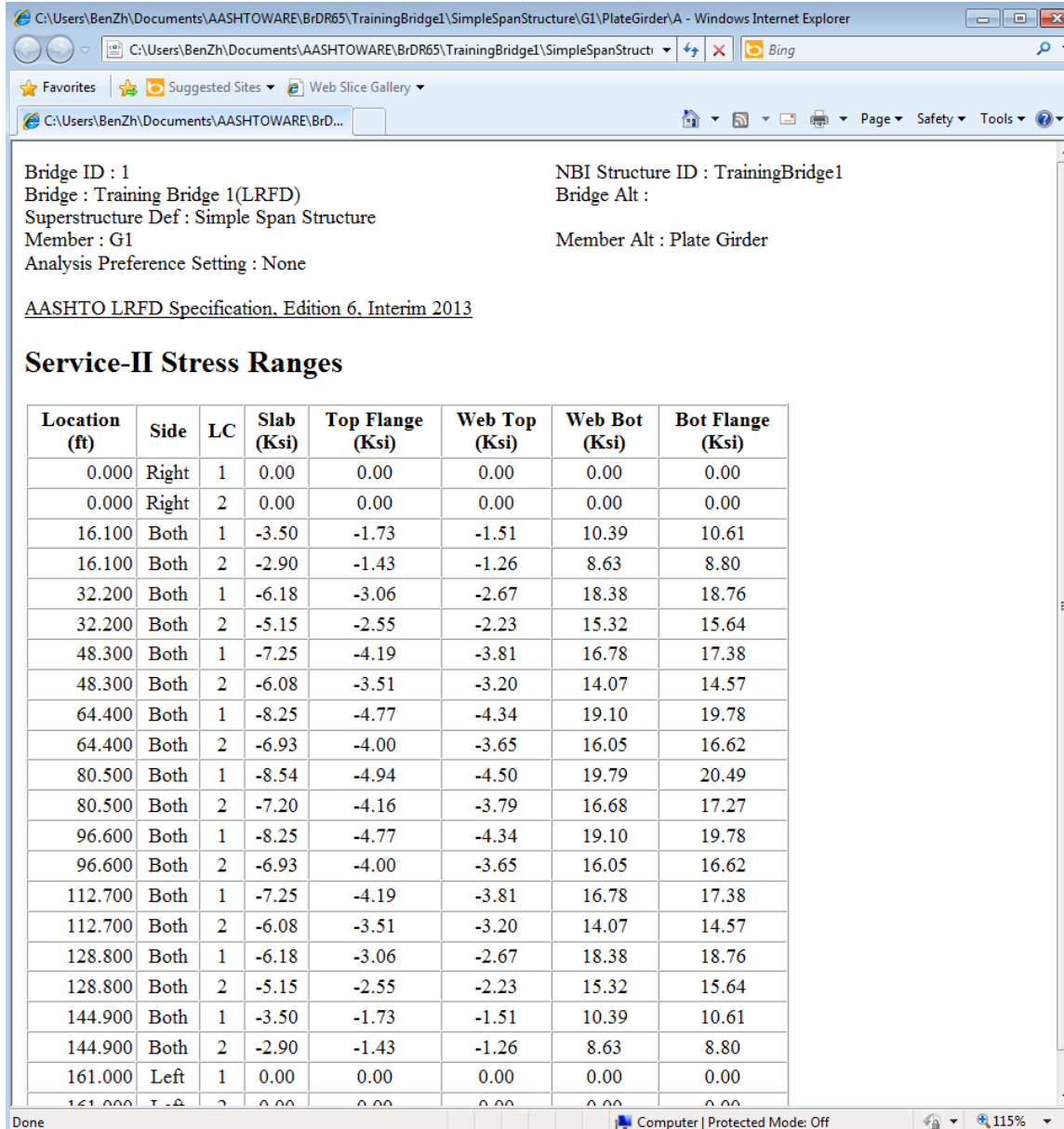


Fig 13. LRFD Service II Stress Report

Fatigue and Service stress reports can also be generated for LRFR analysis using similar procedure.