

# PENNDOT e-Notification

Bureau of Information Systems  
Application Development Division



**BXLRFD**  
**No. 007**  
March 22, 2007

## Serviceability Spacing Summary Output Issue

An issue has been found with version 1.4.0.0 of the BXLRFD program. For analysis runs, the program may indicate a false failure for the Crack Control Spacing check on the "Serviceability Spacing Summary" table in the output if the spacing of any reinforcement at the location being considered is less than the allowable crack control spacing. The program calculates the allowable crack control spacing for the bar in tension and incorrectly compares it with both the top and bottom slab (or left and right wall) reinforcement spacing instead of the spacing for the bar in tension only.

LRFD Box Culvert Design and Rating, Version 1.4.0.0 PAGE 12  
Input File: xxx.dat xx/xx/xxxx xx:xx:xx

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DUBOIS-JEFFERSON COUNTY AIRPORT CONNECTOR  
SERVICEABILITY SPACING SUMMARY  
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Location	Minimum Primary Spacing	Maximum Primary Spacing	Temp/ Shrink Spacing	Crack Control Spacing
Top Slab No. 1	OK	OK	OK	NG
Bottom Slab No. 1	OK	OK	OK	NG
Wall No. 1	OK	OK	OK	NG
Wall No. 2	OK	OK	OK	NG

WARNING! : Serviceability criteria has not been met. For further details  
activate the Serviceability Check Table in the OUR command.  
Then verify entered bar size and spacing values.

If this type of criteria failure is observed in the "Serviceability Spacing Summary" table, refer to the workaround section of this document to determine if there is an actual failure or a false failure.

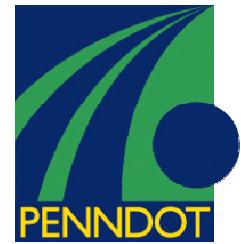
### Work Around

This issue only affects the Crack Control Spacing portion of the table. If an "NG" appears for Crack Control Spacing at any location, enable the "Serviceability Spacing Check" output table on the OUR command of the input file and reprocess the file.

The results found in the "Serviceability Spacing Check" table are accurate and should be used in lieu of the indications for Crack Control Spacing on the "Serviceability Spacing Summary" table. Review the "Serviceability Spacing Check" table to determine if there is an actual crack control spacing problem.

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## Serviceability Spacing Summary Output Issue

LRFD Box Culvert Design and Rating, Version 1.4.0.0 PAGE 9  
Input File: xxx.dat xx/xx/xxxx xx:xx:xx

DUBOIS-JEFFERSON COUNTY AIRPORT CONNECTOR  
SERVICEABILITY SPACING CHECK

Top Slab No. 1

Dist (ft)	Loc	Bar Size	Input Spacing (in)	Minimum Primary Spacing (in)	Maximum Primary Spacing (in)	Temp/Shrink Spacing (in)	Crack Control Spacing (in)	Tens Reinf Stress (ksi)	Codes
0.50	T	8	5.00	1.50	18.00	18.00	9.93	26.24	1
	B	9	5.00	1.50	18.00	18.00			
1.38	T	8	5.00	1.50	18.00	18.00	21.66	14.70	1
	B	9	5.00	1.50	18.00	18.00			
2.00	T	8	5.00	1.50	18.00	18.00	49.24	7.22	1
	B	9	5.00	1.50	18.00	18.00			
4.00	T	8	5.00	1.50	12.00	12.00			
	B	9	5.00	1.50	18.00	18.00	38.91	9.61	1
6.00	T	4	10.00	1.50	12.00	12.00			

If the bar spacing exceeds the crack control spacing, an asterisk will be shown in this area.

If no asterisk is found in the table, then the crack control spacing criteria has been met.

Direct any questions concerning the above program to:

**Shyh-hann Ji, P.E.**

*PENNDOT Bureau of Information Systems*

*Application Development Division*

Phone: (717)783-8822 | Fax: (717)705-5529

e-mail: [sji@state.pa.us](mailto:sji@state.pa.us)

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