



SARAH MILDRED LONG Bridge Replacement
The Regional River Crossing

**APRIL 26, 2013 DESIGN WORKSHOP
SARAH MILDRED LONG BRIDGE REPLACEMENT
THE REGIONAL RIVER CROSSING**

**SUMMARY OF BRIDGE RAILING SELECTION RESULTS
MAY 7, 2013**

Introduction

The new Sarah Mildred Long Bridge will require a TL-4 rated bridge railing. This is a rating given by national codes to meet impact loads for this type of bridge. There are several railing types that meet this design criteria to pick from. The design standards for this type of bridge rail for vehicle traffic and bicycles require a railing height of 42" (3'-6"). This is 14" lower than the railing on the existing bridge. During the Design Workshop on April 26, 2013, the participants were presented with three options for bridge railing type that satisfy the requirements: Fully Open Bridge Rail, Partially Open Bridge Rail, and Solid Concrete Bridge Rail. The participants were shown examples of bridge railings from other bridges, as well as animations showing the driver's perspective along the new bridge with each bridge railing type.

After the presentation, there was time for open discussion and more one on one discussion during the lunch break. A large banner, as shown in Figure 1, was displayed in the room to further assist the participants in their selection of preferred railing type.

Summary of Preferences Selected

Scoring of the three (3) railing types was done on a scale of 1 to 10, with 10 being the highest possible score. The participants were given voting forms with extra space to provide their written comments. The results of the preferences were: Fully Open Bridge Rail, with an average score of 8.8, Partially Open Bridge Rail with an average score of 6.4, and Solid Concrete Bridge Rail with an average score of 2.2. The results of the voting preferences are shown in Figure 2.

The winning bridge railing type is the **Fully Open Bridge Rail**.



SARAH MILDRED LONG Bridge Replacement

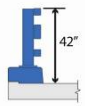
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Figure 1. Bridge Railing Banner


BRIDGE RAILING Optional Types

Fully Open Bridge Rail


Rail Cross section



42"



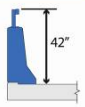
Bridge Cross section




Driver's perspective travelling southbound towards Portsmouth, New Hampshire (looking Northwest with I-95 Bridge in the view)

Partially Open Bridge Rail


Rail Cross section



42"



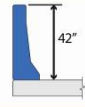
Bridge Cross section




Driver's perspective travelling southbound towards Portsmouth, New Hampshire (looking Northwest with I-95 Bridge in the view)

Solid Concrete Bridge Rail


Rail Cross section




42"






Bridge Cross section



Driver's perspective travelling southbound towards Portsmouth, New Hampshire (looking Northwest with I-95 Bridge in the view)



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Figure 2. Bridge Railing Preference Results

