

### Bureau of Structures Cost Estimate Calculations

TYPE OF ACTIVITY	UNIT	UNIT COST	FORMULA	NOTES
REPLACE STRUCTURE	DECK AREA (SF)	\$110 PER SF	$(\text{deck area}) * (110 + 12 + 10) * 1.05$	5% multiplier to assume that new bridge is larger than old. \$12 per sf for removal of old, and \$10 per sf for excavation for new structure
REPLACE SUPERSTRUCTURE	DECK AREA (SF)	\$80 PER SF	$(\text{deck area}) * 80 * 1.05$	5% multiplier to assume the super is larger than old.
REPLACE SUPERSTRUCTURE AND BEARINGS	DECK AREA (SF) BEARINGS (EA)	\$80 PER SF DECK \$1250 PER BEARING	$(\text{deck area}) * 80 * 1.05 + (\# \text{ of bearings } * 1250)$	5% multiplier to assume the super is larger than old. Assumed replacement of all bearings, and not just CS3/CS4 ones. Also assumes all bearings replaced with laminated elastomeric bearings.
REPLACE DECK	DECK AREA (SF)	\$71 PER SF	$(\text{deck area}) * 25 * 1.05$	5% multiplier to assume the deck is larger than old.
REPLACE DECK AND BEARINGS	DECK AREA (SF) BEARINGS (EA)	\$71 PER SF DECK \$1250 PER BEARING	$(\text{deck area}) * 25 * 1.05 + (\# \text{ of bearings } * 1250)$	5% multiplier to assume the deck is larger than old. Assumed replacement of all bearings, and not just CS3/CS4 ones. Also assumes all bearings replaced with laminated elastomeric bearings.
CONCRETE OVERLAY	DECK AREA (SF)	\$25 PER SF	$(\text{deck area}) * 25$	
CONCRETE OVERLAY AND JOINT REPAIR	DECK AREA (SF) JOINT (LF)	\$25 PER SF DECK \$167 PER LF JOINT	$(\text{deck area}) * 25 + \text{total\_length\_joint} * 167$	Assumes all joints to be replaced (and assumes none are modular).
CONCRETE OVERLAY, JOINT REPAIR, AND BEARING REHABILITATION	DECK AREA (SF) BEARINGS (EA) JOINT (LF)	\$25 PER SF DECK \$167 PER LF JOINT \$1250 PER BEARING	$(\text{deck area}) * 7.65 + \text{total\_length\_joint} * 167 + (\# \text{ of bearings } * 1250)$	Assumes all joints to be replaced (and assumes none are modular). Also conservatively assumes all bearings are being replaced.
THIN POLYMER OVERLAY	DECK AREA (SF)	\$12.00 PER SF DECK	$(\text{deck area}) * 4$	
THIN POLYMER OVERLAY AND JOINT REPLACEMENT	DECK AREA (SF) JOINT (LF)	\$12.00 PER SF DECK \$167 PER LF JOINT	$(\text{deck area}) * 4 + \text{total\_length\_joint} * 167$	Assumes all joints to be replaced (and assumes none are modular).
THIN POLYMER OVERLAY, JOINT REPLACEMENT, AND BEARING REHABILITATION	DECK AREA (SF) BEARINGS (EA) JOINT (LF)	\$12.00 PER SF DECK \$167 PER LF JOINT \$1250 PER BEARING	$(\text{deck area}) * 4 + \text{total\_length\_joint} * 167 + (\# \text{ of bearings } * 1250)$	Assumes all joints to be replaced (and assumes none are modular). Also conservatively assumes all bearings are being replaced.
CULVERT REPLACEMENT	BARREL LENGTH (LF)	\$2300 PER LF	$(\text{culvert barrel length}) * 2300$	Assumes a two-cell culvert as a replacement. Same barrel length assumed.
REPAIR OR REPLACE BEARINGS	BEARINGS (EA)	\$1250 PER BEARING	$(\# \text{ of bearings}) * 1250$	Assumes all bearings to be replaced.
REPAIR OR REPLACE JOINTS	JOINTS (LF)	\$167 PER LF JOINT	$\text{total\_length\_joint} * 167$	Assumes all joints to be replaced (and assumes none are modular).
REPAIR OR REPLACE JOINTS AND BEARINGS	BEARINGS (EA) JOINTS (LF)	\$167 PER LF JOINT \$1250 PER BEARING	$\text{total\_length\_joint} * 167 + (\# \text{ of bearings } * 1250)$	Assumes all joints to be replaced (and assumes none are modular). Also conservatively assumes all bearings are being replaced.
REPAINT STRUCTURE	PAINT (SF)	\$12 PER SF	$\text{paint\_area} * 12$	Assumes superstructure to be painted.
REPLACE RAILING	RAILING (LF)	\$180 PER LF	$\text{railing\_length} * 180$	Assumes entire rail to be replaced.