Bureau of Structures Cost Estimate Calculations - May 16, 2023				
TYPE OF ACTIVITY	**UNIT**	**UNIT COST***	**FORMULA**	**NOTES**
REPLACE STRUCTURE	DECK AREA (SF)	$220 PER SF	(deck area)*220*1.05	5% multiplier to assume that new bridge is larger than old. 2022 structure costs for a flat slab bridge. January 2022 - September 2022 costs available.
REPLACE DECK	DECK AREA (SF)	$105 PER SF	(deck area)*105*1.05	5% multiplier to assume the new deck is larger than old. 2019 cost increased by 15%.
REPLACE DECK AND BEARINGS	DECK AREA (SF) BEARINGS (EA)	$105 PER SF DECK $3200 PER BEARING	(deck area)*105*1.05+(# of bearings *3200)	See notes for "replace deck" and "repair or replace bearings".
CONCRETE OVERLAY	DECK AREA (SF)	$46 PER SF	(deck area)*46	Cost is from 2019 data with 15% increase.
CONCRETE OVERLAY AND JOINT REPAIR	DECK AREA (SF) JOINT (LF)	$46 PER SF DECK $500 PER LF JOINT	(deck area)*46 + total_length_joint*500	See notes for "concrete overlay" and "joint repair".
CONCRETE OVERLAY, JOINT REPAIR, AND BEARING REHABILITATION	DECK AREA (SF) BEARINGS (EA) JOINT (LF)	$46 PER SF DECK $500 PER LF JOINT $3200 PER BEARING	(deck area)*46 + total_length_joint*500 + (# of bearings*3200)	See notes for "concrete overlay", "joint repair", and "repair or replace bearings".
CULVERT REPLACEMENT	BARREL LENGTH (LF)	$3600 PER LF	(culvert barrel length) * 3600	Assumes a two-cell concrete box culvert as the replacement structure.
REPAIR OR REPLACE BEARINGS	BEARINGS (EA)	$3200 PER BEARING	(# of bearings)*3200	Assumes bearings are replaced with laminated elastomeric bearings.
REPAIR OR REPLACE JOINTS	JOINTS (LF)	$500 PER LF JOINT	total_length_joint*500	Assumes joints to be replaced are strip seals. Cost is from 2023 data and includes strip seal and joint repair.
REPAIR OR REPLACE JOINTS AND BEARINGS	BEARINGS (EA) JOINTS (LF)	$500 PER LF JOINT $3200 PER BEARING	total_length_joint*500 + (# of bearings*3200)	See notes for "joint repair" and "repair or replace bearings".
REPAINT SUPERSTRUCTURE	PAINT (SF)	$38 PER SF	superstructure_paint_area*38	2019 cost + $15/sf.

*The square foot costs include all items shown on the structure plan except removing old structure. Costs also include a proportionate share of the project's mobilization, as well as structural approach slab costs, if applicable. However, square footage does not include the structural approach slabs, and is based on the length of the bridge from abutment to abutment. (It is realized that this yields a slightly higher square footage bridge cost for those bridges with structural approach slabs.)