

Multnomah County Willamette River Bridges Capital Improvement Plan



Project Summary Information: Span Lock and Live Load Shoe Rehabilitation

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| Bridge Names(s): | Hawthorne | | Project ID#: | BUN-HA-02 | Project Status: | In Progress | |
| Project Rank: | 17 | Primary Category of Work | Mechanical | Performance Attribute Total Score | 18 | Importance Score | TI-2 22.93 |
| Logical Grouping Project ID #'s: | HA-MECH-04 and HA-MECH-05 | | | | | | |
| Bridge Num and Names(s): | 02757 Willamette River, Hawthorne Ave [Hawthorne] | | | | | | |

Definition of Problem

The span supports for the movable bridge require re-alignment to allow for even loading at each corner of the bridge. The span guide roller assemblies are worn and can cause binding of the span during operation of the bridge. All four span locks have clearance that prevents holding the bridge down when closed.

Description of Proposed Solution

The proposed solution is to analyze the current state of the span supports for the movable bridge and re-align the shoes to ensure even loading on each corner. The span guide assemblies should be removed from the bridge, disassembled, cleaned, and have wearable components replaced. The bronze span lock guide and receiver shoes will also be replaced to reduce the clearance to a closer fit.

Project Justification

The benefits of completing this work are even load across all span supports on the movable bridge, which prevents a "pumping" effect created by traffic when the supports are not in hard contact. Improved bearing also ensures that the traffic load of the bridge is evenly distributed across all four corners. Improvement of the span guide and seating guide operation will allow for more reliable overall bridge operation. The benefits of replacing the shoes are increased service life of the span lock due to reduced shock loading and improved safety during a seismic event.



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| Right-of-Way: | \$0 |
| Utility Reimbursement: | \$0 |
| Construction: | \$667,711 |
| Preliminary Engineering: | \$166,928 |
| Construction Engineering: | \$166,928 |
| Total Cost at Target Construction Time: | \$1,001,567 |
| Target Construction Time: | 2020-2024 |

Notes:

None entered.