ITEM 983.522 **WILDLIFE PASSAGE BENCH** **LUMP SUM**

REV. 2026.08.03 (REV. DATE TO BE REMOVED BY MASSDOT CONTRACTS)

DESIGNER INSTRUCTIONS:

Coordinate with MassDOT Environmental Services Section to ensure Wildlife Passage Bench is designed adequately and shown on Plans, meeting any other conditions imposed by permits.

NOTE:

- *xxx.*
- *xxx.*

The Wildlife Passage Bench is a dirt or gravel bench incorporated into bridge or culvert projects typically over scour protection. Its primary function is to allow wildlife to pass uninterrupted underneath crossing structures as they travel along river corridors, eliminating the need to cross roads, thereby reducing animal mortality and increasing public safety.

The wildlife passage bench is required to comply with environmental permits issued for the project. MassDOT's Wildlife & Endangered Species Unit (the Wildlife Unit) will provide a pre-construction meeting (virtual or on-site). During this meeting project environmental impacts will be discussed to determine if on-site guidance is needed during the wildlife passage bench construction. This ensures the Contractor constructs the wildlife passage bench as shown on the Plans, as required by these Special Provisions, and in accordance with permit requirements.

WORK PROCEDURE

At least 30 days prior to the commencement of construction, the Contractor shall coordinate with David Paulson (MassDOT Wildlife Unit Supervisor, (857) 262-3378 / david.j.paulson@state.ma.us) to set up an initial pre-construction meeting (virtual or in-person) with the Wildlife Unit, Contractor, and Resident Engineer. At this meeting, the Wildlife Unit will provide an overview of the Wildlife Passage Bench. The Contractor should be prepared to discuss the anticipated means, methods, and schedule.

Following the initial meeting, the Contractor shall schedule a meeting to review the anticipated impacts associated with the Wildlife Passage Bench and to discuss the work with the Wildlife Unit and respective parties from MassDOT within two weeks of initiating work. The Wildlife Unit will review the initial construction of the wildlife passage and may request photographs from the Contractor as needed. The Contractor shall provide the Wildlife Unit with adequate access to observe, direct, and inspect the channel restoration work throughout the duration of the removal, stockpile, and reinstallation of the existing streambed material.

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MATERIAL

If Streambed Restoration Item 983.521 is proposed in the project, the Wildlife Passage Bench typically uses the same material gradation proposed within the Streambed Restoration Item. However, if the streambed consists of boulder and cobble material, the Wildlife Passage Bench material shall be adjusted to include a surface layer of finer material (e.g., sand/gravel) to fill the voids and provide a walkable surface for wildlife.

If the Streambed Restoration Item is not proposed, the Wildlife Passage Bench will use natural material that is traversable for small or large wildlife. At a minimum, the material shall consist of finer aggregates (potentially, material resembling nearby banks, if practicable) to fill the voids in the underlying rip rap and form a relatively smooth travel path.

If material is being brought to the site for the Wildlife Passage Bench, the Contractor shall provide the Wildlife Unit with photographs to see the material prior to the site visit and installation.

CONSTRUCTION OF THE WILDLIFE PASSAGE BENCH

The Wildlife Passage Bench shall be constructed according to the bridge design plans. Field conditions may warrant changes to the design, and such changes must be approved by the Wildlife Unit and Resident Engineer.

Wildlife Passage Benches typically exist on both sides of a stream channel above or below the Ordinary High-Water Level to provide a dry path through the structure for wildlife when flooding is not taking place. The elevation of the Passage Bench may vary based on stream morphology, flood depths and velocities, bridge design, and site topography. The distance between the Wildlife Passage Bench and bridge beam should be maximized to the greatest extent possible. The minimum vertical clearance between the bench surface and the bottom of the bridge beam is 2 feet.

The Wildlife Passage Bench shall be level, or nearly so, and a minimum of 3 feet wide. Larger widths should be used for larger bridges and the width of the Wildlife Passage Bench should be maximized to the greatest extent possible.

The ends of the wildlife passage bench shall be tied to traversable natural ground or bank lines outside of the bridge to ensure wildlife can readily pass in and out of the structure. The approaches to the wildlife passage bench should be passable by wildlife as shown on the plans. No abrupt changes in topography or terrain should be present between the Wildlife Passage Bench and the connection to the ground outside the project limit. Steep side slopes should be avoided approaching Wildlife Passage Benches.

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The initial placement of the Wildlife Passage Bench material shall fill the voids in the underlying riprap, if present. The purpose of filling the voids is to provide a level, stable, and smooth surface for wildlife to walk on.

The ends of the Wildlife Passage Bench shall be graded and tied to natural ground or bank lines outside of the bridge to ensure wildlife passage. This may require the Wildlife Passage bench to traverse across slope stabilization located around each abutment. No abrupt changes in topography should be present between the natural bank / ground and the Wildlife Passage Bench. The final Wildlife Passage Bench shape and appearance shall be completed in the field as directed by the Wildlife Unit.

BASIS OF PAYMENT

Item 983.522 will be paid for at the Contract Lump Sum price, which price shall include all labor, materials, equipment, excavating, stockpiling, furnishing, transporting, importing any additional material, and placing the material specified and for furnishing, and all incidental costs required to complete the work.

WILDLIFE PASSAGE BENCH REFERENCE PHOTOS ON NEXT PAGES

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Figure 1 (above). Example of Wildlife Passage Bench traversing scour protection.



Figure 2 (left). The Wildlife Passage Bench material can consist of similar material to the streambed; however, if the streambed consists of boulder and cobble material, then the wildlife passage bench material shall be adjusted to include a surface layer of finer material to fill the voids and provide a walkable surface for wildlife.

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Figure 3 (above). Example of wildlife passage bench showing uniform bank lines running through the structure for good wildlife passage in Charlton, MA.



Figure 4 (above). The wildlife passage bench must extend around the abutments and can be tied to traversable natural ground or bank lines outside of the bridge to ensure wildlife can readily pass in and out of the structure.

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