



# Bridge Preservation Program

(P500313)

|               |                |                      |                |
|---------------|----------------|----------------------|----------------|
| Category      | Transportation | Date Last Modified   | 01/07/20       |
| SubCategory   | Bridges        | Administering Agency | Transportation |
| Planning Area | Countywide     | Status               | Ongoing        |

## EXPENDITURE SCHEDULE (\$000s)

| Cost Elements                    | Total         | Thru FY19    | Est FY20     | Total<br>6 Years | FY 21      | FY 22      | FY 23      | FY 24      | FY 25      | FY 26      | Beyond<br>6 Years |
|----------------------------------|---------------|--------------|--------------|------------------|------------|------------|------------|------------|------------|------------|-------------------|
| Planning, Design and Supervision | 3,412         | 2,487        | 67           | 858              | 143        | 143        | 143        | 143        | 143        | 143        | -                 |
| Land                             | 33            | 15           | 6            | 12               | 2          | 2          | 2          | 2          | 2          | 2          | -                 |
| Site Improvements and Utilities  | 2             | 2            | -            | -                | -          | -          | -          | -          | -          | -          | -                 |
| Construction                     | 9,464         | 5,896        | 1,332        | 2,236            | 369        | 369        | 369        | 369        | 380        | 380        | -                 |
| Other                            | 2             | 2            | -            | -                | -          | -          | -          | -          | -          | -          | -                 |
| <b>TOTAL EXPENDITURES</b>        | <b>12,913</b> | <b>8,402</b> | <b>1,405</b> | <b>3,106</b>     | <b>514</b> | <b>514</b> | <b>514</b> | <b>514</b> | <b>525</b> | <b>525</b> | <b>-</b>          |

## FUNDING SCHEDULE (\$000s)

| Funding Source               | Total         | Thru FY19    | Est FY20     | Total<br>6 Years | FY 21      | FY 22      | FY 23      | FY 24      | FY 25      | FY 26      | Beyond<br>6 Years |
|------------------------------|---------------|--------------|--------------|------------------|------------|------------|------------|------------|------------|------------|-------------------|
| Federal Aid                  | 366           | 366          | -            | -                | -          | -          | -          | -          | -          | -          | -                 |
| G.O. Bonds                   | 12,507        | 8,036        | 1,365        | 3,106            | 514        | 514        | 514        | 514        | 525        | 525        | -                 |
| Intergovernmental            | 40            | -            | 40           | -                | -          | -          | -          | -          | -          | -          | -                 |
| <b>TOTAL FUNDING SOURCES</b> | <b>12,913</b> | <b>8,402</b> | <b>1,405</b> | <b>3,106</b>     | <b>514</b> | <b>514</b> | <b>514</b> | <b>514</b> | <b>525</b> | <b>525</b> | <b>-</b>          |

## APPROPRIATION AND EXPENDITURE DATA (\$000s)

|                             |       |                          |        |
|-----------------------------|-------|--------------------------|--------|
| Appropriation FY 21 Request | 1,028 | Year First Appropriation | FY03   |
| Appropriation FY 22 Request | -     | Last FY's Cost Estimate  | 11,863 |
| Cumulative Appropriation    | 9,807 |                          |        |
| Expenditure / Encumbrances  | 9,147 |                          |        |
| Unencumbered Balance        | 660   |                          |        |

## PROJECT DESCRIPTION

This project includes actions or strategies that prevent, delay, or reduce deterioration of bridge elements, restore the function of existing bridges, keep bridges in good condition, and extend their useful life. Preservation actions may be preventive or condition driven. This project provides for removal of corrosion and installation of protective coatings on existing County steel bridges that have been identified as needing surface recoating through the Biennial Bridge Inspection Program. In addition, this project provides for the repair or replacement of leaking deck joints to minimize the deterioration and corrosion of bridge superstructure and substructure elements beneath the joints as identified through the Biennial Bridge Inspection Program. Bridge preservation field operations include the removal of the existing coating system which may contain hazardous materials; containment of blast cleaning and waste paint particles; disposal of the hazardous materials at a pre-approved disposal site, as required by Maryland and Federal environmental regulations; installation

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of protective coating system; joint repair or replacement, and inspection to ensure compliance with environmental and contract requirements.

## **COST CHANGE**

Increase due to addition of FY25 and FY26 to this ongoing level-of-effort project.

## **PROJECT JUSTIFICATION**

The benefits of this program will include extending the useful service life of existing steel bridges, prevention of long-term structural deficiencies, decreases in vehicle load restrictions, and reduced potential road closures and public inconvenience. The long-term goal of this program will be to protect existing bridges and keep them in good condition to reduce bridge renovation/replacement costs. The expected life cycle of a coating system is 15 years. Candidate bridges for each year are identified based on the bridge coating evaluations under the Biennial Bridge Inspection Program and the available funds under the bridge preservation program. The County currently has 113 Highway and 29 Pedestrian steel girder, beam and truss structures in its bridge inventory. These numbers will change when steel highway or pedestrian bridges are added into or dropped from the County's bridge inventory. The degree of specialized work required to restore the protective coatings to in-service bridges is beyond the scope of routine operations. Proper protective coating systems are an essential component of bridge maintenance to prevent long-term structural steel deterioration. The County currently has 50 bridges with deck joints in its inventory. Damage both to the joint and to the portion of the bridge beneath the joint that is exposed to debris, water, and deicing salts must be addressed and prevented to prolong the life of the bridge. Many defects identified through the Biennial Bridge Inspection Program are the direct result of bridges not being properly protected to withstand chemical and environmental elements. These defects include frozen and deteriorated steel bearings, corroded structural steel, and steel beam section loss.

## **OTHER**

The "Intergovernmental" revenue shown in the funding schedule is from Howard County for its share of painting costs for two bridges that Montgomery County and Howard County share.

## **DISCLOSURES**

Expenditures will continue indefinitely.

## **COORDINATION**

Maryland Department of Natural Resources, Maryland State Highway Administration, Occupational Safety and Health Administration, Maryland-National Capital Park and Planning Commission, Utilities, CSX Transportation, Washington Metropolitan Area Transit Authority, Montgomery County Department of Permitting Services, and Bridge Renovation Program (500313).