U.S. Department of Transportation
Federal Highway Administration

South Carolina Department of Transportation

MEMORANDUM OF AGREEMENT
FOR
FEDERAL-AID PREVENTIVE MAINTENANCE PROJECTS

February 2024

Introduction

Preventive maintenance is a planned strategy of cost-effective treatments to extend the service life of pavements, bridges, and essential highway appurtenances without significantly increasing structural capacity. Preventive maintenance activities are eligible for federal assistance so long as the activities are shown to be a cost-effective means to extend the useful life of the highway and are located within a defined corridor with logical termini. The following guidance shall apply for preventive maintenance on all Federal-aid highway funded projects.

Eligible Preventive Maintenance Activities

Asphalt Pavement

1. Asphalt crack sealing and patching
2. Surface Treatments
    a. Chip Seals
    b. Cape Seals
    c. Micro-surfacing
    d. Slurry Seals
    e. Fog Seals
3. Thin and ultra-thin asphalt overlay
4. Mill and Fill
    a. No more than 2 inches of the existing pavement structure; exclusive of open graded friction course
5. Resurfacing
    a. No more than 2 inches of additional layers; exclusive of open graded friction course and/or any necessary build-up to achieve proper cross slope
6. Rejuvenators
7. Diamond Grinding

PCC Pavement

1. Concrete joint/crack sealing
2. Diamond grinding
3. Dowel bar retrofit
4. Isolated, partial, and/or full depth patch concrete repairs to restore the functionality of the slab
5. Slab replacement, not exceeding 50% of the total project
6. Thin concrete overlay
7. Slab stabilization and jacking

Eligible Preventive Maintenance Activities (continued)

Bridges

1. Deck overlays (thin polymer epoxy, asphalt with waterproof membrane, rigid overlays)
2. Full and partial depth patching excluding the use of asphalt patch without membrane
3. Spot/zone/full painting steel elements (substructure and superstructure)
4. Protective coat concrete elements (deck, superstructure, and substructure)
5. Joint replacement, repair, or elimination
6. Scour mitigation (including crutch bents)
7. Scour countermeasure (installation/repair)
8. Movable bridge machinery cleaning/lubrication/repair (includes electrical)
9. Superstructure strengthening
10. Seal, patch and repair superstructure and substructure concrete
11. Pile preservation (jackets, wraps)
12. Bearing restoration (cleaning, lubrication, resetting, replacement)
13. Precast concrete slab replacement (less than 50 % of spans replaced)
14. Mitigation of fatigue cracking
15. Cathodic protection systems for decks, substructure, and superstructure
16. Cleaning of decks, joints, drains, superstructure, and substructure elements
17. Channel cleaning and removal of debris from channels
18. Application of concrete sealants, coatings, and membranes for surface protection of the concrete on any bridge component including deck, superstructure, substructure, rails, and parapets
19. Installation or restoration/upgrade of bridge protection system
20. Repair/replace bridge drainage systems or components
21. Repair/replace approach slabs
22. Steel member repair (superstructure or substructure)

Roadside/Median

1. Shoulder restoration
2. New shoulder paving and widening
    a. No more than 4 feet of existing shoulder (measured exclusive of rumble strips) can be paved
3. Existing travel lane widening
    a. Maximum of 2 feet of pavement width per travel lane can be added to accommodate cycling
4. Mow strips (paving under guardrail)
5. Removal of vegetation within the clear zone
6. Upgrading guardrail and/or barrier components
7. Removal or shielding of obstacles
8. Installation of rumble strips/stripes

Eligible Preventive Maintenance Activities (continued)

Traffic Control Devices

1. Traffic sign installation and restoration
2. Pavement marking/markers installation and replacement
3. Signal rebuilds and upgrades, including technology and software components
4. ITS Components
    a. Traffic cameras/sensors installation, repair and replacement
    b. Variable message boards installation, repair and replacement

Drainage Facilities

1. Ditch restoration
2. Storm drainage restoration
3. Pipe culvert and box culvert restoration
4. Pipe culvert liners
5. Cleaning closed drainage systems
6. Removal of vegetation necessary to maintain hydraulic efficiency of drainage accommodations

Roadside Safety Enhancements

All preventive maintenance activities shall maintain or enhance the current level of safety within the project limits. While safety enhancements may be included in preventive maintenance projects, it is not a requirement; since safety enhancements can be deferred and included in an operative safety management system or in a future project identified in the current STIP. However, roadside safety should be evaluated for improvement within the scope of the preventive maintenance project.

Design Criteria

No formal design exceptions to the established 10 controlling criteria will be needed for the retention of existing substandard conditions (exclusions are noted below for projects on the Interstate System). In effect, SCDOT will be maintaining the project as built and as it was agreed upon in the original project agreement. However, any new substandard feature created, or existing ones made worse, must be covered by a design exception since such action in effect changes the project as built.

In addition, it is agreed that the following controlling criteria will be addressed as follows on the Interstate System:

- Vertical clearance: the substandard vertical clearance to an overpass, within the limits of preventive maintenance projects involving any listed pavement techniques on the Interstate System, shall be corrected as part of the project, or documented with a design exception.

- Cross Slope and/or Superelevation Rate: the existing cross slopes/superelevation may be retained without a documented design exception as part of a mill and fill project as defined within this agreement. Any resurfacing beyond mill and fill (excluding open graded friction course) shall require correction of the cross slopes/superelevation, or documentation with a design exception.

ADA Accessibility

All preventive maintenance activities shall comply with the SCDOT ADA Transition Plan.

Highway-Rail Grade Crossings

Signal and gates shall be in place or installed and functioning properly for highway-rail grade crossings within the project limits or near the terminus of the project before opening to unrestricted use by traffic unless other warning devices are evaluated and considered adequate by the SCDOT Traffic Safety Office.

Environmental Documentation

Projects shall have an appropriate environmental document to satisfy the National Environmental Policy Act (NEPA). This is generally accomplished with a Categorical Exclusion (CE).

Authorization of Federal-Aid Preventive Maintenance Projects

Authorization of projects shall comply with the FHWA/SCDOT Stewardship and Oversight Plan. The project description must indicate that the scope of work is preventive maintenance, identify the specific strategy, location, and termini, and indicate that the project will be completed in accordance with this agreement.

Conclusion

This agreement shall constitute a commitment by the South Carolina Department of Transportation (SCDOT) and the South Carolina Division of Federal Highway Administration (FHWA) to develop and administer a preventive maintenance program using sound engineering judgment and economic evaluation resulting in cost-effective strategies to extend the service life of pavements, bridges, and essential highway appurtenances on Federal-aid highways.

This agreement is intended to be a living document that can be modified when needed to incorporate additional legislation or changes to improve the program and/or project delivery. The FHWA South Carolina Division Administrator or the SCDOT Deputy Secretary for Engineering may initiate amendments to this Preventive Maintenance Agreement should essential modification become apparent to either party.

Emily O. Lawton, FHWA South Carolina Division Administrator — Date: 3-5-2024

Rob Perry, P.E., Interim Deputy Secretary for Engineering, SCDOT — Date: 2-7-2024