

APPENDIX H – Preparation Guidelines for Capital Preventive Maintenance Project Report

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APPENDIX H – Capital Preventive Maintenance Project Report

ARTICLE 1 Overview

Reference Information

Some of the references found in this appendix have hyperlinks that connect to Caltrans intranet pages which are not displayable to the general public. Until such time that the specific reference becomes available on the internet, the user will have to contact their district liaison, Caltrans project manager, or the appropriate Headquarters division to inquire about the availability of the reference.

Use of Capital Preventive Maintenance Project Report

These guidelines provide information to be used with the policies and procedures described in [Chapter 9](#) – Project Initiation, [Chapter 10](#) – Formal Project Studies, [Chapter 12](#) – Project Approvals and Changes to Approved Projects, [Highway Design Manual \(HDM\)](#), and [Design Information Bulletin 81](#) – Capital Preventive Maintenance Guidelines. Capital preventive maintenance (CAPM) projects are funded from the 20.XX.201.121, Pavement Rehabilitation Program (121 Program).

The capital preventive maintenance project report (CAPM-PR) outline for a 121 Program project satisfies the requirements for both the project initiation document (PID) and the project report (PR) for projects in the 121 Program. 121 Program projects have a well-defined scope and follow a process that combines the project initiation and project approval phases.

Because the CAPM-PR is the primary project reference document by both Headquarters and the districts; the need for accurate and complete project information is essential.

The following guidance is tailored to projects with a scope that is consistent with the criteria described in [Design Information Bulletin 81](#) – Capital Preventive Maintenance Guidelines. The report template in Article 3 “Template” should be modified to include or exclude any applicable deficiencies or issues. See [Appendix L](#)

– Preparation Guidelines for Project Study Report and [Appendix K](#) – Preparation Guidelines for Project Report for fundamental guidance and tools on the preparation of project initiation and project approval documents.

Preparation of Capital Preventive Maintenance Project Report

Project Scoping

The primary purpose of the CAPM program is to repair pavement exhibiting minor surface distress or triggered ride. Repair strategies selected should be readily constructible in order to minimize traffic disruption and should provide relief from intensive maintenance activity. The intent of the CAPM program is to extend the service life of pavement with minor distress by a minimum of five years.

A scoping team field review is required for all CAPM projects and provides a forum to identify and make decisions on significant issues. The composition of the scoping team should be consistent with the guidance in [Design Information Bulletin 81](#) – Capital Preventive Maintenance Guidelines. See [Chapter 9](#) – Project Initiation and [Design Information Bulletin 81](#) – Capital Preventive Maintenance Guidelines for a discussion of the timing and requirements of scoping team field review.

The use of the [Design Scoping Index](#) located in [Appendix L](#) – Preparation Guidelines for Project Study Report can assist the project team in properly scoping a project. The Design Scoping Index can be used to identify facility deficiencies and the concerns of stakeholders. The Design Scoping Index should be modified to address only CAPM program issues.

Field Reviews and Documentation

All projects shall have informal project team field reviews as necessary as discussed in of [Appendix L](#) – Preparation Guidelines for Project Study Report. The purpose of these field reviews is to gather information to develop a quality project. By contrast, the purpose of the scoping team field review is to establish consensus on the project scope.

Deflection Studies

Deflection studies are neither required nor resourced for CAPM projects.

Enhancements

The district traffic operations unit will perform a traffic operational review for all CAPM projects. A traffic operational review is an evaluation of specific easily implemented enhancements that should be included in CAPM projects as discussed in the [Design Information Bulletin 81](#) – Capital Preventive Maintenance Guidelines.

Recommended enhancements will be incorporated into the project if including the enhancement does not change the target construction season. The project development team (PDT) guides the project development on this issue. The enhancements must not significantly increase the project cost.

When recommended enhancements are not incorporated into the project, document the decision to exclude recommended enhancements. Include the explanation and documentation of the district’s traffic operation unit concurrence in the project files.

District Planning, Environmental and Right-of-Way Involvement

Functional units should become involved as early as possible in the project development process to determine the appropriate level of involvement. Developing a plan for their involvement should help to avoid potential delays in project delivery and minimize potential changes in project scope that may result in project cost increases.

Approval of Capital Preventive Maintenance Project Report

The District Director (or Deputy District Director per Caltrans’ delegation of authority) is responsible for approval of the CAPM-PR.

ARTICLE 2 Outline

General

The standard PSR outline located in [Appendix L](#) – Preparation Guidelines for Project Study Report was adapted to meet the documentation needs of CAPM projects. Sections of the standard PSR were combined and fill-in-the-blank features were included to facilitate the presentation of project information. The template is a guideline. The actual report should be similar in organization and may contain similar headings and subheadings, but may vary based on features, complexity, and issues. A template for the CAPM-PR is located in Article 3. The space for filling in

various sections of the template has been condensed for practical viewing of the template. As appropriate, each section can be expanded to accommodate necessary information. The template should be modified to include or exclude any pertinent project information. “Not applicable” should be placed in the blanks for topics that do not apply to a specific CAPM project.

Not every outline topic is discussed; information is presented when it differs from or is in addition to that found in [Appendix L](#) – Preparation Guidelines for Project Study Report and [Appendix K](#) – Preparation Guidelines for Project Report.

Front Matter

Cover Sheet

All CAPM-PRs should have a standard cover sheet to provide project identification information and signatures.

When the purpose of the report includes project approval, the approved environmental determination/document must be attached to the report.

Vicinity Map

Registered Professional Stamp

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Main Body of Report

1. INTRODUCTION

Provide a one or two sentence description of the project. Fill in the table.

2. RECOMMENDATION

3. PURPOSE AND NEED

The project purpose is the objective(s) that will be met to address the project need. An example of a CAPM purpose statement is: “The purpose of this project is to improve the ride and extend the life of the existing pavement.”

The project need is an identified underlying transportation deficiency or problem that needs correction. An example of a CAPM need statement is: “The pavement within

the project limits is exhibiting minor distress and unacceptable ride quality, which if left uncorrected, will deteriorate to a major roadway rehabilitation need.”

4. EXISTING FACILITY, DEFICIENCIES AND TRAFFIC DATA

4A. ROADWAY GEOMETRIC INFORMATION

Provide the information requested in the table. If lane widths are not uniform, note the width of each lane.

Bike paths that are separated from the roadway should be evaluated to determine if their surface is in need of treatment. Also, such facilities may be useful in addressing bicyclist and pedestrian needs during construction.

Provide information regarding discussion with the Headquarters Project Delivery Coordinator about project design features.

4B. CONDITION OF EXISTING FACILITY

Provide the latest information available for each homogeneous segment. Information about the traveled way is obtained from the most recent pavement management system pavement condition survey data.

4C. STRUCTURES INFORMATION

The intent is to evaluate vertical clearance at underpasses, separations and overcrossings where an overlay may reduce the existing vertical clearance. Provide the requested information as necessary.

4D. TRAFFIC DATA

Traffic Volumes and Characteristics

Provide the information requested.

Safety Reviews

A safety review is required for all major projects as well as any project with a traffic control plan. The PDT should evaluate the recommendations of the district safety review committee to ensure Caltrans’ safety goal is upheld. See [Chapter 8](#) – Overview of Project Development and [HDM](#) Index 110.8 for further discussion of the safety review.

5. CORRIDOR AND SYSTEM COORDINATION

It is important to provide a broad view of what is happening in the corridor so that the proposed project will be compatible with other projects in the area as well as long term corridor planning. Information from district planning can be obtained by requesting a Transportation Planning Scoping Information Sheet. This section should discuss:

- Pavement preservation strategies within the corridor.
- Discussion of other planned projects in the corridor. Project management can provide information about other ongoing or anticipated projects in the vicinity of this project. District planning can provide information about ongoing local projects in the area.

6. ALTERNATIVES

Discuss the proposed CAPM strategies. Clearly identify the recommended alternative. Based on project complexities, the writer has discretion on how individual alternatives are presented. Provide the flexible pavement overlay thickness. The proposed overlay thickness should be consistent with [Design Information Bulletin 81](#) – Capital Preventive Maintenance Guidelines.

Discuss a comparison of different pavement products or strategies.

Under “Enhancements”, summarize the discussion of the traffic operation review report on proposed enhancements. If a recommended enhancement is excluded from the project, state the reason for the exclusion. Enhancements shall be consistent with guidance in [Design Information Bulletin 81](#) – Capital Preventive Maintenance Guidelines.

Discuss any nonstandard design features. Proposed deviations from design standards must be approved following the procedures in [Chapter 21](#) – Design Standard Decisions.

Use the remaining subsections to summarize all major issues; the template has a list of common issues. Address each item as appropriate or put “Not applicable.” The template should be altered to include project-specific issues.

7. TRANSPORTATION MANAGEMENT

7A. TRANSPORTATION MANAGEMENT PLAN

See [Appendix K](#) – Preparation Guidelines for Project Report topic “Transportation Management Plan” in outline item “7. Other Considerations As Appropriate.”

7B. VEHICLE DETECTION SYSTEMS

If appropriate, discuss the recommendations of the district traffic unit as they apply to maintaining the operation of the existing vehicle detection system. The vehicle detection system is critical to traffic management and traveler information applications. Costs associated with staging or installation of any temporary detection system should be included in the cost estimate.

8. ENVIRONMENTAL COMPLIANCE

9. PROJECT ESTIMATE

Include a cost breakdown for each of the major elements of the project by providing the information requested. CAPM projects may include such items as placement of additional surface material, grinding pavement surfaces and/or other work necessary to preserve the existing pavement structural section.

To minimize future cost increases, a thorough scope and a reliable cost estimate needs to be prepared. Unreliable cost estimates result in severe problems in Caltrans’ programming and budgeting, and in local and regional planning. Realistic evaluations as to the final concept, scope, and cost of each project are to be established as early as possible and should be based on the best information available. All anticipated work (such as: digouts, grinding, crack sealing, asphalt overlay, shoulder backing, and etcetera) should be included. The project cost estimate should be prepared using the methodology presented in the outline.

Districts should base their cost estimates on experience with similar projects and available historical data. See [Chapter 20](#) – Project Development Cost Estimates further details on estimating project costs.

Unless the particulars of a specific case justify use of a different factor, a 20 percent contingency factor should be used.

10. FUNDING/PROGRAMMING

11. DELIVERY SCHEDULE

12. RISKS

13. EXTERNAL AGENCY COORDINATION

14. PROJECT REVIEWS

15. PROJECT PERSONNEL

16. ATTACHMENTS

- Strip map (may be eliminated if the vicinity map contains the following information).

A small map showing the project limits consistent with the brief description, post miles, and a north arrow. The map should be sufficient to locate the project at a glance for a person unfamiliar with the project. It should show the features used to identify the project limits such as roads, streams, junctions or railroads, and the nearest community that can be reasonably shown on the map, and a note indicating the direction to and name of the next community in each direction. It is necessary to understand the proposed work, as such pertinent project features are shown on the strip map. The vicinity map is not to be cluttered with project features.

- A geographic information system map of the project vicinity and counties containing the project limits. Color-coding via a color key or legend for the map should indicate:
 - a) The total number of distressed lane miles in the district from the last pavement condition survey (including the date);
 - b) The location of distressed lane miles which the project will retire; and
 - c) The number of distressed lane miles that are being retired in the current SHOPP (or midcycle SHOPP) document for the district.

The statistic for item b should be presented beside the largest colorized portion of the project. The key or legend for the color-coding should be superimposed in the corner of the map so as to not obscure the project limits, north arrow, or other markers.

- SHOPP project output
Contact the Headquarters SHOPP roadway preservation program manager for the SHOPP Project Output form and guidance on how to complete the form.

Descriptions of the SHOPP programs and the corresponding Headquarters SHOPP program managers and advisors is located at the Headquarters [*Division of Maintenance-State Highway Operation and Protection Program \(SHOPP\)*](#) website.

- Typical section(s)
- Pavement management system inventory data

- Environmental determination/document (required for project approval)
- Right-of-way data sheet
- Scoping team field review attendance roster
- Storm water data report-signed cover sheet
- Life-cycle cost analysis
- Risk register
- Note: Add additional attachments as necessary

ARTICLE 3 Template

This article is a template for the capital preventive maintenance project report. When using the template, delete any italicized text within the body of the document. The italicized text provides instructions for template users and does not provide any value to the final document.

[Appendix H Template](#)