

ATTENTION! There are a number of items in this appendix that need to be updated—especially in the areas of funding/programming, risks, and FHWA coordination. Until this appendix is updated, please see Appendix K for the discussion of topics in the Microsoft Office Word template associated with this appendix and discuss any issues with the Headquarters SHOPP program manager or advisor.

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 Chapters [9](#), [10](#) and [12](#) of the [Project Development Procedures Manual](#), [Highway Design Manual](#) (HDM) and [Design Information Bulletin 81-01 – 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 phase.

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 81-01 – Capital Preventive Maintenance Guidelines](#). The CAPM-PR template shown in Article 3 of this appendix 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 PID and project approval documents.

For a detailed sequence of the actions to complete a CAPM-PR see the [Project Development Workflow Tasks Manual](#).

CAPM-PR Preparation

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 81-01](#) – Capital Preventive Maintenance Guidelines. See Article 5, [Chapter 9](#) of this manual and [Design Information Bulletin 81-01](#) – Capital Preventive Maintenance Guidelines for a discussion of the timing and requirements of scoping team field review.

The use of the Design Scoping Index found in [Appendix L](#) 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 & Documentation

All projects shall have informal project team field-reviews as necessary as discussed in Section 2 of [Appendix L](#) and the [Project Development Workflow Tasks Manual](#). 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 discussed above 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 81-01*](#) – Capital Preventive Maintenance Guidelines.

Recommended enhancements will be incorporated into the project if including the enhancement does not change the target construction season. The 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.

CAPM-PR Approval

The District Director (or Deputy District Director per Caltrans Delegation of Authority) is responsible for approval of the CAPM-PR.

CAPM-PR Distribution

One copy of the draft and final CAPM-PR and shall be sent to:

Chief, Office of Roadway Rehabilitation
Division of Maintenance
Mail Station #31

The draft CAPM-PR should be sent soon after the scoping team field review and reflect the decisions made on that review.

The final CAPM-PR shall be distributed to the following Headquarter units:

Two copies of the report shall be sent to:
Division of Design
Office of Project Development Procedures
Attention: Design Report Routing
Mail Station #28

Five copies of the report shall be sent to:
HQ Division of Engineering Services
Program/Project & Resource Management
MS 9-5/11g

ARTICLE 2 Guidelines for Completing Capital Preventive Maintenance Project Report Template

General

The standard PSR outline found in Appendix L 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 following 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 found in Article 3 of this appendix. 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.

Cover Sheet

All CAPM-PRs should have a standard cover sheet to provide project identification information and signatures. Information to be provided includes the following:

- Title

Indicate “Capital Preventive Maintenance Project Report”
- File Reference

District-County-Route-Post Mile (Dist-Co-Rte-PM)

The post mile should be given to the nearest 0.1 mile.

Responsible Unit (RU)

The unit source code of the registered civil engineer in charge of the technical features of the project.

Expenditure Authorization (EA)

Use the “K” phase for development of the CAPM-PR.

Month Year

Provide the preparation month and year of the report.

- Clearly state the reason for the CAPM-PR on the title sheet.
 - “Request Programming in the 20XX SHOPP”
 - “Provide Project Approval”
- On Route _____ From _____ To _____

Provide a brief description of the project limits that corresponds to the post mile given above and ties the limits to commonly known physical features on the ground that can be identified on available mapping.

- Right of Way Endorsement

The statement shown in the template must be used and signed by the District Division Chief for Right of Way. The signature indicates that the right of way information in the CAPM-PR and the right of way data sheet are complete, current, and accurate.

- Recommended Approval

A recommendation for approval must be signed by the project manager as an indication that all appropriate studies have been included and as an indication that the proposal is in accord with Caltrans policies.

- Approval

The CAPM-PR is approved once the report is signed and dated by the District Director (or Deputy District Director per Caltrans Delegation of Authority). The date of signing becomes the official project approval date.

Project approval requires that the approved categorically exempt and/or categorically excluded (CE/CE) be attached to the report.

Vicinity Map Sheet (Separate Sheet)

- Vicinity Map

Refer to the discussion on Strip Map under the discussion of Attachments.

- On Route _____ From _____ To _____

Provides brief description of the project limits that corresponds to the post miles given above and ties the limits to commonly known physical features on the ground that can be identified on available mapping.

Registered Civil Engineer's Stamp and Statement (Separate Sheet)

The second page of the CAPM-PR contains the required stamp or seal and signature of a registered civil engineer who is the person in responsible charge. The sheet must include a statement indicating that the registered civil engineer attests to the technical information contained herein and the data upon which recommendations, conclusions, and decisions are based. Approval of the CAPM-PR is a management decision and is separate from this technical signature of the person in responsible charge.

Table of Contents (Separate Sheet)

1. INTRODUCTION AND BACKGROUND

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

2. RECOMMENDATION

3. PURPOSE AND NEED

Purpose:

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."

Need:

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. In the rare occurrence that design exceptions are required, include discussion here. See [Chapter 21](#) and [Appendix BB](#) for information on design exceptions.

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 (PMS) - 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 must evaluate the recommendations of the District Safety Review Committee to ensure the Department's safety goal is upheld. See [Chapter 8, Section 7](#) of the PDPM and [HDM Index 110.8 – Safety Reviews](#) 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 Planning Scoping Checklist in [Appendix L](#). This section should discuss:

- Pavement preservation strategies within the corridor.
- Discussion of other planned projects in the corridor. Project management branches can provide information about other ongoing or anticipated projects in the vicinity of this project. District planning branches 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 81-01 – 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 81-01 – Capital Preventive Maintenance Guidelines](#).

Use the remaining subsections to summarize all major issues, reviews, and coordination efforts within Caltrans and with other interested agencies. 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 PLANS

A Transportation Management Plan (TMP) will be required if significant construction delays are anticipated. TMPs develop construction traffic handling practices such as lane closures, detours, mass transit service enhancements, and work-hour restrictions to minimize delays. TMPs also discuss how bicycle and pedestrian traffic will be accommodated through the job site. Summarize the key elements of the TMP. Costs associated with TMPs should be included in the cost estimate.

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. FUNDING/SCHEDULING

8A. COST 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 (i.e., digouts, grinding, crack sealing, asphalt overlay, shoulder backing, etc.) 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](#) and [Appendix AA](#) for 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.

8B. PROJECT SUPPORT

Include estimated PY effort and other support costs of project development and construction from the time the project is initially programmed through the final stages of construction. The proposed schedule should be based upon an evaluation of the worst case and the optimal scenario. This information is not required for Minor projects.

The cost of any specialty contracts or other atypical direct project costs that may be required for the project should also be estimated by the proposed fiscal year.

8C. PROJECT SCHEDULE

Provide the project milestone dates in the table in the template.

9. SCOPING TEAM FIELD REVIEW ATTENDANCE ROSTER

10. REVIEWS

The template includes a list of suggested reviews. Each district should modify the template to reflect reviews established by district procedures.

Include reviewer's signature and review completion date, or N/A if not applicable. Indicate type of federal involvement.

11. ATTACHMENTS

Include the items listed on the boilerplate.

- Strip map (may be eliminated if the Vicinity Map contains the information discussed below).
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 GIS 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 Output Table
Contact the [Headquarters CAPM SHOPP Manager](#) for the SHOPP Project Output form and guidance on how to complete the form.
- Typical Section(s)
- PMS Inventory Data
- Environmental Determination/Document
- Right of Way Data Sheet
- Scoping Team Field-Review Attendance Roster
- Note: Add additional attachments as necessary

ARTICLE 3 Template for Capital Preventive Maintenance Project Report (CAPM-PR)

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.

The template is available at:

<http://www.dot.ca.gov/hq/oppd/pdpm/templates/apdx-h-template.docx>