

APPENDIX D – Preparation Guidelines for Project Report (New Highway Planting or Roadside Rehabilitation)

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APPENDIX D – Preparation Guidelines for Project Report (New Highway Planting or Roadside Rehabilitation)

ARTICLE 1 Overview

Use of Project Report (New Highway Planting or Roadside Rehabilitation)

The project report (new highway planting) is the project approval document for minor roadside preservation State Highway Operation and Protection Program (SHOPP) projects in the 20.XX.201.220 – New Highway Planting Program.

The project report (new highway planting) is also the project approval document for State Transportation Improvement Program (STIP) projects in the 20.XX.025.700 – Interregional Improvement Program Highway Projects and 20.XX.075.600 – Regional Improvement Program Highway Projects.

The project report (roadside rehabilitation) is the project approval document for roadside preservation SHOPP projects in the 20.XX.201.210 – Roadside Rehabilitation Program.

Preparation of Project Report (New Highway Planting or Roadside Rehabilitation)

These guidelines provide information to be used with the requirements described in [Chapter 10](#) – Formal Project Studies, [Chapter 12](#) – Project Approvals and Changes to Approved Projects, and [Chapter 29](#) – Landscape Architecture.

The following guidance is tailored to highway planting projects. See [Appendix K](#) – Preparation Guidelines for Project Report for fundamental guidance on the preparation of project approval documents.

The project report (new highway planting or roadside rehabilitation) should be prepared using the report template associated with this appendix, see Article 3. The report should be similar in organization, but can vary based on features, complexity and issues specific to each project. Modify the report format to include information

that is pertinent to the scope, cost and schedule of project. If a section is not applicable to the project, fill in as “Not applicable.”

ARTICLE 2 Outline

General

The project report (PR) outline located in [Appendix K](#) – Preparation Guidelines for Project Report was adapted to meet the documentation needs of the New Highway Planting Program and Roadside Rehabilitation Program. Some sections of the standard PR were modified to facilitate the presentation of project information.

Consult with the district program advisor and the Headquarters SHOPP program manager to determine how project-specific issues should be presented.

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

Front Matter

Cover Sheet

Vicinity Map

Licensed Landscape Architect Stamp

The licensed landscape architect stamp or seal and number with signature shall be placed on a separate sheet, which shall be part of the report. Also included on this sheet shall be a statement indicating that the licensed landscape architect is attesting to the technical information contained therein and the data upon which recommendations, conclusions, and decisions are based. This seal does not constitute approval of the report. Approval of the report is a management decision and is separate from this technical signature of the person in responsible charge.

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Main Body of Report

1. INTRODUCTION

Include the types of proposed work, gross length and area of the work, and the net length and area for each type of work. The SHOPP performance measure associated with the New Highway Planting Program and Roadside Rehabilitation Program is “Acres.” As appropriate, in the table, enter the number of acres for the SHOPP project output.

2. RECOMMENDATION

3. BACKGROUND

Project History

Discuss how the project need was identified and any efforts already expended, including previous relevant work and discussion of deficiencies not corrected by previous projects, and etcetera.

Community Interaction

Existing Facility

Describe pertinent existing facilities within the proposed project limits and those in the adjacent sections of highway. Include the dates of highway construction and previous planting work.

Discuss vegetation, irrigation facilities, and other roadside features, including median and roadside widths, road edge treatments, slopes, drainage facilities, erosive conditions, available utilities—particularly potable water, recycled/nonpotable water, electrical utilities, water line crossovers, and conduits in structures or under the pavement along with their age and condition.

Project Study Report Data Sheet Consistency

Describe deviations from the project study report (PSR) data sheet.

Issues and Commitments

Describe stakeholder interaction, including support or opposition to the proposed project. Discuss any commitments this project makes or fulfills.

4. PURPOSE AND NEED

5. ALTERNATIVES

5A. VIABLE ALTERNATIVES

Identify the alternative recommended for programming purposes.

Proposed Highway Planting Features

Provide a detailed description of proposed planting or planting rehabilitation work, including how it solves deficiencies identified in the purpose-and-need. Be site specific in the discussion of the proposal. Discuss overall design issues to be addressed, including:

- Plant types and the functional purpose of the planting; discuss how planting is used to improve the maintainability, safety, and aesthetics of the area, identify the length of plant establishment period
- Proposed methods of irrigation
- Refer to the preliminary plans that should delineate and describe the following:
 - Form and function of the plant material (such as: broad deciduous trees, mulch, groundcover, shrub screen, grasses, and etcetera)
 - Irrigation mainline routing, bridge supply lines, irrigation crossovers, points of connection, water meter, water and power source, remote control valve cluster locations, irrigation controller locations, and etcetera
 - Gates, access roads, staircases, and maintenance vehicle pullouts locations
 - Additional paving for narrow areas and areas beyond the gore, slope paving, and use of inert materials (such as: rock blanket, mulch, and etcetera)

Traveler and Worker Safety

Describe proposed traveler and worker safety considerations including, but not limited to, the following:

- Relocating roadside facilities to protected areas or adjacent to the right-of-way fence
- Removal or replacement of deteriorating trees or other plant material, and removal of plant material that encroaches upon required sight distances
- Planting of vines on noise barriers and retaining walls to deter graffiti
- Automation of manual irrigation systems, including controllers, valves and control and neutral conductors

- Providing maintenance access roads and access gates for workers on foot or in vehicles, staircases, and maintenance vehicle pullouts
- Placing mulch or installing inert materials to reduce weeds, water use and ongoing maintenance
- Providing vegetation control underneath guardrails and signs
- Providing paving for narrow areas
- Paving of slopes under bridge structures
- Providing additional paving beyond the gore
- Replacing spot locations of frequently damaged guardrail with concrete barrier
- Removing signs that are redundant
- Removing or relocating signs outside of gore areas

Water Conservation

Discuss current and future water consumption. Reference the updated calculations from the water budget calculator located on the California Department of Water Resources, [Water Efficient Landscape Ordinance website](#).

Include the calculations as an attachment.

Discuss any local or regional requirements for water conservation and how the proposed design will ensure compliance. Include water capacity fee.

Discuss how the proposed planting design and irrigation design will reduce or minimize water consumption. Discuss if a temporary irrigation system is feasible.

Provide a comprehensive analysis of the feasibility of using recycled/nonpotable water for irrigation including: water source, quality, cost justification (as an attachment), suitability for proposed planting, availability, reliability, quantity, unusual health or environmental considerations, future implications or operational problems, impact on adjacent or nearby planting projects, cooperation with other potential users, and any other appropriate considerations.

When smart irrigation technology is proposed, discuss the water management features to be utilized and how this work will be resourced by district maintenance. If district maintenance will require training to operate the new system, describe how this will be accomplished. Describe the communication protocol and indicate the communication carrier used by the district.

Maintenance

Discuss current and expected future maintenance costs, maintenance needs and potential savings, if any, to be derived from the proposed project.

Discuss how the proposed design concept conforms to Caltrans' chemical reduction goals.

Paybacks

For rehabilitation projects the payback must be 12 years or less. It is calculated by subtracting the following items from the total project cost: traveler and worker safety items, water assessment fees, recycled/non-potable water transmission/supply lines, smart irrigation technology/remote irrigation control systems (RICS), resident engineer's field office, hazardous materials, traffic control, and stormwater pollution prevention.

Nonstandard Design Features

Describe any features that do not comply with planting policies described in [Chapter 29](#) – Landscape Architecture.

Cost Estimate

Provide a project cost estimate as of January 1st of the current fiscal year, including a 15% contingency factor. Refer to the sample cost estimate in Article 4 for items to consider.

Use of Wildflowers

California native wildflowers must be included with all projects with federal funding that include planting work. Highway planting to provide traffic safety improvements, re vegetation, erosion control, and irrigation-only projects are exempt from this requirement.

The project report should discuss any proposed use of wildflowers and compliance with federal wildflower requirements. If wildflowers are not incorporated, the project report must describe the specific reasons why use of native wildflowers is not appropriate and an estimate of the dollar value of the required wildflower element.

5B. REJECTED ALTERNATIVES

6. CONSIDERATIONS REQUIRING DISCUSSION

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 as needed.

6A. HAZARDOUS WASTE

6B. VALUE ANALYSIS

Typically this section is not applicable. These projects usually do not reach the project cost threshold that requires a value analysis study, however; the principles of value engineering may be applied to ensure cost effectiveness of the project.

6C. RESOURCE CONSERVATION

6D. RIGHT-OF-WAY ISSUES

6E. ENVIRONMENTAL COMPLIANCE

6F. AIR QUALITY CONFORMITY

6G. TITLE VI CONSIDERATIONS

Typically this section is not applicable. These projects usually do not require public presentations, meetings, participation or other involvement where Title VI of the *Civil Rights Act of 1964* could be an issue.

6H. NOISE ABATEMENT DECISION REPORT

Typically this section is not applicable. These projects usually do not require a draft project report to authorize public release of a draft environmental document.

6I. TRANSPORTATION MANAGEMENT PLAN

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

6J. STORMWATER COMPLIANCE

An approved storm water data report (SWDR) as described in [Storm Water Quality Handbooks: Project Planning and Design Guide](#) must be completed during the project approval phase. Discuss any issues that affect the project.

7. OTHER CONSIDERATIONS AS APPROPRIATE

Only include appropriate topics.

8. FUNDING, PROGRAMMING AND ESTIMATE

Support Estimate:

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.

9. DELIVERY SCHEDULE

10. RISKS

11. EXTERNAL AGENCY COORDINATION

12. PROJECT REVIEWS

The scoping team field review is only required if the project report purpose is to request programming and for project approval.

13. PROJECT PERSONNEL

14. ATTACHMENTS

In addition to the attachments discussed in [Appendix K](#)– Preparation Guidelines for Project Report, include the following:

- Design concept
- Water use calculations
- Cost justification for recycled/nonpotable water use
- Project study report data sheet

ARTICLE 3 Template

This article is a template for the project report (roadside safety improvements). 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 located at:

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

ARTICLE 4 Sample Cost Estimate

Item Description	Unit	Quantity	Unit Price	Estimated Construction Cost
<u>Planting, Irrigation and Year(s) Plant Establishment Costs by Functional Planting Categories Identified in the Proposal</u>				
Roadside Clearing	ACRE			
Linear Screen Planting	MILE			
Tree and Shrub Planting	ACRE			
Groundcover Planting	ACRE			
Vines on Wall or Fence	MILE			
Plant Establishment	LS	Lump Sum		
Irrigation System (for example: supply line, sprinklers, low-voltage conductors, and remote control valves)	LS	Lump Sum		
Irrigation Crossover	LF			
Hang Ductile Iron Pipe on Bridge	LF			
Extend Water Supply Line to Caltrans Right-of-way	LS	Lump Sum		
Jacked or Directional Bored Crossovers	LF			
Water Meter	EA			
Water Assessment Fee	LS	Lump Sum		
Water Cost	LS	Lump Sum		
Convert Potable Water to Recycled/Nonpotable Water	LS	Lump Sum		
Backflow Preventer	EA			
Irrigation Controller Enclosure	EA			
Booster Pump	EA			
Electrical Service (Irrigation)	LS	Lump Sum		
Upgrade Existing Irrigation System	ACRE			
Water Supply	LS	Lump Sum		
<u>Worker Safety</u>				
Relocate Irrigation Controllers	EA			

Appendices
 Project Development Initiation and Approval Reports

Relocate Backflow Preventer Assemblies	EA			
Relocate Mainlines	LS			
Relocate Valves	EA			
Relocate Laterals and Sprinklers	LS	Lump Sum		
Remove Hazardous Trees or Vegetation	LS	Lump Sum		
Plant Vines for Graffiti Control	EA			
Maintenance Access Roads	SQYD			
Maintenance Access Gates (Walk)	EA			
Maintenance Access Gates (Drive)	EA			
Maintenance Vehicle Pullouts	EA			
Mulch	SQYD			
Rock Cover/Rock Blanket	SQYD			
Vegetation Control Under Guardrails and Signs	SQYD			
Slope Paving	SQYD			
Contrasting Surface Treatment Beyond the Gore Pavement	SQYD			
Pave Narrow Areas	SQYD			
Remove or Replace Signs	LS	Lump Sum		
Remove or Relocate Pull Boxes	LS	Lump Sum		
<u>Other Items</u>				
Supplemental Work	LS	Lump Sum		
Resident Engineer's Office	LS	Lump Sum		
Storm Water Pollution Prevention	LS	Lump Sum		
Hazardous Materials	LS	Lump Sum		
		SUBTOTAL _____		
		15% CONTINGENCY _____		
		GRAND TOTAL _____		
		CALL (Round to nearest \$1000)		