Chapter 6 **Highway Bridge Program**

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Exhibits applicable to this Chapter can be found at:

http://www.dot.ca.gov/hq/LocalPrograms/hbrr99/hbrr99a.htm#forms

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Chapter 6 Highway Bridge Program

6.1 INTRODUCTION

The Highway Bridge Program (HBP) is a safety program that provides federal-aid to local agencies to replace and rehabilitate deficient locally owned public highway bridges or complete preventive maintenance on bridges that are not deficient. This chapter explains eligibility requirements, the reimbursable scopes of work, how to apply for HBP or Bridge Preventive Maintenance Program (BPMP) funding, and the general programming process.

This program is funded by the Federal Highway Administration (FHWA) authorized by United State Code (USC) Title 23. This program is subject to Obligational Authority (OA) limits. See *Local Assistance Program Guidelines (LAPG)*, *Chapter 2: Financing the Federal-Aid Highway Program*, Section 2.2, for more information regarding OA.

The programming of HBP projects is managed through a 15-year plan. This multi-year plan provides the HBP funding to be programmed in the Federal Statewide Transportation Improvement Program (FSTIP). The FSTIP provides four years of HBP programming. See *LAPG Chapter 2: Financing the Federal-Aid Highway Program* , Section 2.3, for information regarding what type of HBP projects may use the HBP programmed in the FSTIP.

The HBP has many statutory, regulatory, and policy limitations on how funds can be utilized on bridge projects. The purpose of these rules is to ensure that federal funds are dedicated to solving bridge safety problems. Since local agencies are financially accountable for meeting these requirements, it is essential that local agency decision-makers understand these guidelines.

The intent of the HBP is to remove structural deficiencies from existing local highway bridges to keep the traveling public safe. The HBP goal is to keep local highway bridges in good condition through a preventive maintenance program and to fix bridges that are in fair condition. A bridge that is in poor condition must be considered for rehabilitation or replacement.

Local agencies assume full liability for the safety of their bridges and eligibility of participating costs of their projects.

Definition of Terms

AASHTO - American Association of State Highway and Transportation Officials

AC- Advance Construction. The local agencies provide local funds initially to be programmed with a conversion to federal funding at a later time.

ADT- Average Daily Traffic

BIC – Bridge Investment Credit

CEQA - California Environmental Quality Act (1970)

CCO – Construction Change Order

Authorization to Proceed - Federal project funding eligibility approval for a particular phase of work by the Federal Highway Administration.

CFR - Code of Federal Regulations. The CFR are not legislated statutes but do have the force of law.

BIR - Bridge Inspection Report

Bridge - 23 CFR 650.305 defines a bridge as a structure including supports erected over a depression or an obstruction, such as water, highway, or railway, and having a track or passageway for carrying traffic or other moving loads, and having an opening measured along the center of the roadway of more than 20 feet between under copings of abutments or spring lines of arches, or extreme ends of openings for multiple boxes; it may also include multiple pipes, where the clear distance between openings is less than half of the smaller contiguous opening.

BPMP - Bridge Preventive Maintenance Program. A program to provide federal funding for preventive maintenance for bridges that are in good condition.

DLAE - District Local Assistance Engineer.

E-76 - Electronic Authorization to Proceed

EPSP - Expedited Project Selection Procedures

Fair Condition - When the lowest rating of the 3 National Bridge Inventory (NBI) items for a bridge (Items 58-Deck, 59-Superstructure, 60-Substructure) is 5 or 6, the bridge will be classified as Fair. When the rating of NBI item for a culvert (Item 62-Culverts) is 5 or 6, the culvert will be classified as Fair.

FAST Act - Fixing America's Surface Transportation Act was signed into law by President Obama on December 4, 2015 providing funding for highways, highway safety and public transportation for the six year period 2016-2020.

FHWA - Federal Highway Administration

FSTIP - Federal Statewide Transportation Improvement Program, a four-year list of all state and local transportation projects proposed for federal surface transportation funding with the state. This is developed by Caltrans in cooperation with MPOs and in consultation with local non-urbanized government. The FSTIP, includes FTIPs, which are incorporated by reference and other rural federally funded projects. The FSTIP, including incorporated FTIPs, is only valid for use after FHWA/FTA approval.

Good Condition – When the lowest rating of the 3 NBI items for a bridge (Items 58-Deck, 59-Superstructure, 60-Substructure) is 7, 8, or 9 the bridge will be classified as Good. When the rating of NBI item for a culvert (Item 62-Culverts) is 7, 8, or 9, the culvert will be classified as Good.

High Cost Bridge Project - A bridge project with a Right of Way or Construction phase in excess of $20 million of federal funds.

LAPG - Local Assistance Program Guidelines manual provides local project sponsors with complete description of the federal and state programs available for financing local public transportation related projects.

LAPM - Local Assistance Procedures Manual describes the processes, procedures, documents, authorization, approvals and certifications, which are required in order to receive federal-aid and/or state funds for many types of local transportation projects.

Mandatory Seismic Retrofit Program - The 1989 Mandatory Seismic Safety Retrofit program is a finite list of projects established under the Proposition 1B (Prop 1B) funding program.

MPO - Metropolitan Planning Organization.

NRHP - National Register of Historic Places. A listing of historically or archaeologically significant sites maintained by each state. The NRHP does not contain all significant sites. It only lists those currently identified and that the owner has allowed to be listed. There are many eligible sites that have not been registered, either because they have not been found or they have not yet been nominated.

NBI - National Bridge Inventory. This is an FHWA database containing bridge information and inspection data for all highway bridges on public roads, on and off Federal-aid highways that are subject to the National Bridge Inspection Standards.

NBIS - National Bridge Inspection Standards. 23 CFR 650 Subpart C.

NCHRP - National Cooperative Highway Research Program. Administered by the Transportation Research Board (TRB) and sponsored by the member departments (i.e., individual state departments of transportation) of AASHTO and FHWA. The NCHRP was created in 1962 to conduct research in acute problem areas that affect highway planning, design, construction, operation, and maintenance nationwide.

NEPA - National Environmental Policy Act. Federal environmental law requiring federal agencies to consider the environmental impacts of their action, evaluate least damaging alternatives and ensure decisions are made in the public's best interest based on a balanced consideration of the need for safe and efficient transportation.

NHS - National Highway System. Legislative designation of highways that are of national importance.

Nearly Ready to Advertise - A project is considered "nearly ready to advertise" when NEPA is clear, ROW will be certified prior to within 6 months of a HBP financially constrained program list and completion of final design plans are at 95% or greater. The ROW certification must be verified with Caltrans ROW staff.

Non-Participating Cost: A cost that is included in the project, but is not eligible for Federal reimbursement.

OFP - Office of Federal Programs

OPI – Office of Project Implementation

Off System - Functional classification given to rural and urban local streets and roads, and rural minor collectors, these routes are off the federal-aid system.

On System - Functional classification given to all roadways that are on the federal-aid system.

Participating Costs - A participating cost is an actual project cost paid for by the sponsoring local agency that is eligible for federal reimbursement in compliance with laws, regulations and policies.

PCI - Paint Condition Index is a 0–100 ranking system that utilizes the current paint condition of the various painted steel elements on a bridge. The PCI weighs the quantity and condition states of the various painted elements as well as the importance of that element in the bridge.

PE - Preliminary Engineering phase includes all project initiation and development activities undertaken after its inclusion in the approved FSTIP through the completion of PS&E. It may include preliminary Right of Way engineering and investigations necessary to complete the environmental document.

Prop 1B – Proposition 1B Bond funds to be utilized as local match to HBP for mandatory seismic projects.

PS&E – Plans, Specifications and Estimate.

Poor Condition - When the lowest rating of the 3 NBI items for a bridge (Items 58-Deck, 59-Superstructure, 60-Substructure) is 4, 3, 2, 1, or 0, the bridge will be classified as Poor. When the rating of NBI item for a culvert (Item 62-Culverts) is 4, 3, 2, 1, or 0, the culvert will be classified as Poor.

PM – Preventive Maintenance. See BPMP Guidelines, December 2015 (12/23/2015) to determine eligibility for HBP participation.

Public Road - Any road or street under the jurisdiction of and maintained by a public authority and open to public travel.

Ready to Advertise - A project that has an approved NEPA document, approved Right of Way Certification and PS&E is complete.

RFA – Request for Authorization.

RTPA – Regional Transportation Planning Agency.

R/W - Right of Way. This phase includes the work necessary to appraise and acquire project right of way, relocate individuals or businesses, and revise or relocate utilities.

Scour Critical - A bridge with a foundation element that has been determined to be unstable for the observed or evaluated scour condition. (When the NBI item 113 is 3 or less.)

SHS - State Highway System. The network of public highway systems that is owned and maintained by the California Department of Transportation (Caltrans).

Structurally Deficient (SD) - A classification given to a bridge which has any component in poor or worse condition. (23 CFR 490.405)

SI&A – Structure Inventory and Appraisal

SLA - Caltrans Structures Local Assistance. See Section 6.2.

Sufficiency Rating (SR) - A method of evaluating highway bridge data by a complex formula defined in Appendix B of the National Bridge Inventory Coding Guide.

STIP - State Transportation Improvement Program. The STIP is a five year list of projects proposed in the Regional Transportation Improvement Program. The proposed STIP that are approved and adopted by the California Transportation Commission.

STBGP - Surface Transportation Block Grant Program. A category of federal-aid funding for general purpose transportation uses. See 23 USC 133.

USC - United State Code. The USC is the codification by subject matter of the general and permanent laws of the United States. Title 23 relates to Highways.

VA - Value Engineering Analysis – The systematic process of review and analysis of a project during the concept and design phases, by a multi-disciplined team of persons not involved in the project. For local HBP projects, a VA should be done when either the R/W or construction phase exceed $40 million of federal funds. See *LAPM Chapter 12: Plans, Specifications, & Estimate*, Section 12.5 for further procedures.

HBP Website

The HBP website provides information and references for local bridge owners. The website contains training opportunities, links to local agency bridge list, the HBP FTIP/FSTIP Program Lists, various reports, as well as the HBP and BPMP guidelines. The HBP website can be accessed from the following link:

www.dot.ca.gov/hq/LocalPrograms/hbrr99/hbrr99a.htm

Eligibility Requirements for HBP Funds

To be eligible to receive HBP funds, a bridge must be owned and maintained by a California local agency, in the National Bridge Inventory (NBI), be structurally deficient and have a Sufficiency Rating (SR) less than or equal to 80, be seismically vulnerable, scour critical or needs repainting. The information should be obtained from the most current Bridge Inspection Report (BIR) at the time of the application submittal. If a local agency needs to obtain a copy of a BIR, they should contact their DLAE.

Applying for HBP Funds

The steps to initiate and develop a HBP project are discussed throughout this chapter. A local agency should be knowledgeable about their bridge inventory and utilize an asset management system to prioritize their bridges for inclusion into the HBP for rehabilitation or replacement, or into a BPMP Plan list for preventive maintenance.

Agencies that have executed or that have the authority to execute State/Local Federal-Aid Master Agreements with Caltrans may apply for HBP funds. Federal funds provided under these guidelines may only be spent on bridges carrying public highways (including local streets and roads) not included in the State Highway System and not owned by Caltrans.

The following is an overview of the process:

1. The local agency should contact the DLAE to review the program requirements. The DLAE may schedule an optional pre-field review meeting and coordinate with SLA as needed.

2. The local agency sends an application, *Exhibit 6-A: HBP Application/Scope Definition Form* for HBP funds or a BPMP plan list and certification letter for preventive maintenance funds to the DLAE.
3. The DLAE reviews the application package for minimum requirements, makes recommendations, and forwards copies of the application to HBP Managers and if requested by the local agency to SLA.
4. HBP Managers will review the candidate project, if it is eligible, the candidate project will be added to the next project prioritization list. HQ HBP Managers will notify the DLAE the project will be prioritized.
5. Once all new eligible candidate projects are prioritized, the funding cutoff line is determined for on system and off system projects. The projects above the cutoff line will be entered and accepted into the HBP database. The projects below the cutoff line will be returned to the DLAE.
6. After the project is adopted into the FTIP by the MPO, the PE funds can be authorized. See *Section 6.7: Project Implementation*.
7. The DLAE coordinates a field review with the local agency, if required. It may be scheduled after consultants have been retained by the local agency. The scheduling of optional cursory PS&E reviews should be discussed.
8. Work begins on the preliminary design and environmental process.
9. Once the environmental documents are approved, the local agency may commence with final design and proceed with R/W if needed.
10. When the PS&E is 65% complete, the local agency may request that Caltrans perform an optional cursory review of the PS&E. If this service is requested, the PS&E should be sent to the DLAE. The local agency must be clear regarding review deadlines to ensure the project meets the schedule of the local agency.
11. Once R/W is certified and the PS&E package is complete, the local agency may submit the request for construction authorization.
12. The DLAE processes the request for authorization and notifies the local agency of the FHWA approval. The local agency may now advertise the construction project.

6.2 Roles And Responsibilities

Local Agency

The local agency is the project manager and is responsible for all aspects of the project. They assume full liability for the safety of their bridges and eligibility of participating costs of their projects. The local agency is accountable for how it spends federal funds on eligible projects and is responsible for following these program guidelines, the BPMP Guidelines and the procedures in the LAPM.

The local agency is responsible for requesting Caltrans funding approval for certain participating costs identified in *Exhibit 6-B: HBP Special Cost Approval Checklist*.

Those local agencies that are performing their own seismic analysis and design are responsible for developing seismic retrofit projects from start to finish. This includes, but is not limited to, initiating the projects, performing (or overseeing consultant performance of) seismic analyses, presenting the retrofit strategy to Caltrans at mandatory strategy meetings, ensuring environmental compliance, preparing PS&E, advertising and administering the construction contracts.

Caltrans, District Local Assistance Engineer

The DLAE is the point of contact for all local assistance projects. Written communication, includes email, from Caltrans to the local agency that provides official policy direction (including eligibility, scope, or funding decisions) to the local agency will be from the DLAE. Copies of all written correspondence and appropriate email will be kept in the DLAE project files.

The DLAE is responsible for providing expertise in understanding these program guidelines and the federal process as documented in the LAPM and the LAPG. The DLAE is also responsible for ensuring that all "official" written (including e-mail) controversial correspondence to local agencies is copied to the HBP Managers and the Office of Project Implementation. Controversial correspondence includes any denial of funds to a local agency or an action on the part of Caltrans that delays the construction authorization of a local HBP project.

The DLAE is to coordinate all Caltrans internal activities for local assistance projects. The DLAE is pro-active in ensuring that local agencies are aware of HBP scoping issues and offering help to local agency to resolve those issues. The DLAE is to utilize the HBP Managers, Office of Project Implementation, SLA, District geometricians, District R/W and Environmental experts, and be familiar with the standards and AASHTO references identified in *LAPM Chapter 11: Design Guidance*.

The DLAE is also responsible for ensuring that local agencies are aware of all Caltrans services available to local agencies that can improve the quality and timely delivery of HBP projects.

For current names, addresses, and email addresses, see the DLAE website: http://www.dot.ca.gov/hq/LocalPrograms/dlae.htm.

Caltrans, Structures Local Assistance

SLA provides and coordinates technical services related to bridge projects in the areas of field reviews, feasibility studies, cost estimation, inspection, design, analysis, construction, consultant selection and contracting, including expertise in explaining these program guidelines. SLA works directly with local agency staff and management after coordination with the DLAE. However, all Caltrans official correspondence to local agencies is transmitted through the DLAE and HBP Managers.

SLA, at the request of the DLAEs, is responsible for working with local agencies in promoting the HBP and helping local agencies identify deficient bridges. SLA, in this function, should also promote the above mentioned services to improve the quality and timely delivery of local HBP projects.

Note: When SLA receives questions regarding bridge inspections, SLA may forward the questions to the appropriate bridge inspection engineering staff (either Caltrans staff or local agency staff authorized to inspect bridges).

Caltrans, Office of Federal Programs

HBP Managers work in this office and this office is responsible for:

- Prioritizing new HBP applications according to policy.
- Programming funds for local agency projects.
- Approving special costs identified in *Exhibit 6-B: HBP Special Cost Approval Checklist*.
- Managing the statewide Local HBP apportionment fund balance.
- Establishing program policy and procedures to maximize the use of federal funds and comply with federal requirements.
- Working with the DLAE and SLA to resolve difficult project related policy issues.
- Conducting program reviews to determine local agency compliance with federal and State laws, regulations, and policy.
- High Cost Bridge Projects.

Caltrans, Office of Project Implementation

This office is responsible for the actual authorization of federal funds and the development of program supplemental agreements on projects processed by the DLAE.

It is the responsibility of this office to ensure that federal funds are authorized on projects in compliance with the LAPM. The OPI relies on information provided by the HBP Managers and the DLAE regarding the amount of participating HBP funds on a project. Funds authorized on a project shall not exceed amounts programmed in the HBP program lists.

6.3 Reimbursable Project Scopes

Local agencies that develop HBP projects are required to ensure their projects are cost-effective and that the project scope address the bridge deficiencies. The three general project scopes participating under the HBP are bridge rehabilitation, replacement and seismic safety retrofit. However, the HBP does allow some limited stand-alone project scopes for painting, scour countermeasure and local seismic safety retrofit.

Bridge Inspection Program

The Bridge Inspection Program is a federally mandated program established under 23 USC 144(b), 23 USC 144(d), and 23 USC 151.

The intent of the program is to:

- Establish an inventory of bridges carrying public highways.
- Help local agencies manage their bridges.
- Identify safety problems related to bridges.

Generally, each bridge in the State carrying a public highway that has a minimum span greater than 20 feet is inspected every two years. Caltrans maintains the master bridge inventory for the State. The statewide inventory of bridges is available from the HBP website. Whenever a bridge is inspected, the owner of the bridge is sent a bridge inspection report that discusses the health of the bridge including recommended maintenance work. The report also includes a SI&A sheet. The SI&A sheet provides all the detailed ratings required by federal law.

Local agencies may request copies of the bridge inspection reports from the DLAE or SLA. Agencies that inspect their own bridges should work with their own inspection departments to acquire the reports.

A "deficient" bridge is defined as being in poor condition or structurally deficient.

When developing a rehabilitation or replacement strategy for a bridge it is necessary to understand the current deficiencies with the bridge to develop an appropriate scope of work that resolves the deficiencies of the bridge.

Local Seismic Safety Retrofit

The purpose of this scope of work is to address local bridge seismic safety concerns of publicly owned bridges that may be in danger of collapse under a maximum credible earthquake. There are two types of seismic safety retrofit projects, Mandatory and Voluntary.

The 1989 Mandatory Seismic Safety Retrofit program is a finite list of projects established under the Proposition 1B (Prop 1B) funding program. The funds for these projects are a combination of HBP and Prop 1B as the local match. New projects cannot be added to this list and are Voluntary.

For Voluntary Seismic Safety Retrofit projects when a local agency has new information about a bridge such as a new fault or vulnerability, and if they perform self-funded seismic analysis calculations that shows a potential for collapse of the bridge under a maximum credible earthquake, they should submit the analysis to Caltrans for review. If Caltrans concurs with the submitted document, a voluntary seismic retrofit project may be programmed under HBP for further analysis and possible retrofit. Once the voluntary seismic retrofit project is programmed, the process is identical to the Mandatory Seismic Safety Retrofit projects. See the Seismic Safety Retrofit flowchart below for an overview of the necessary processes.

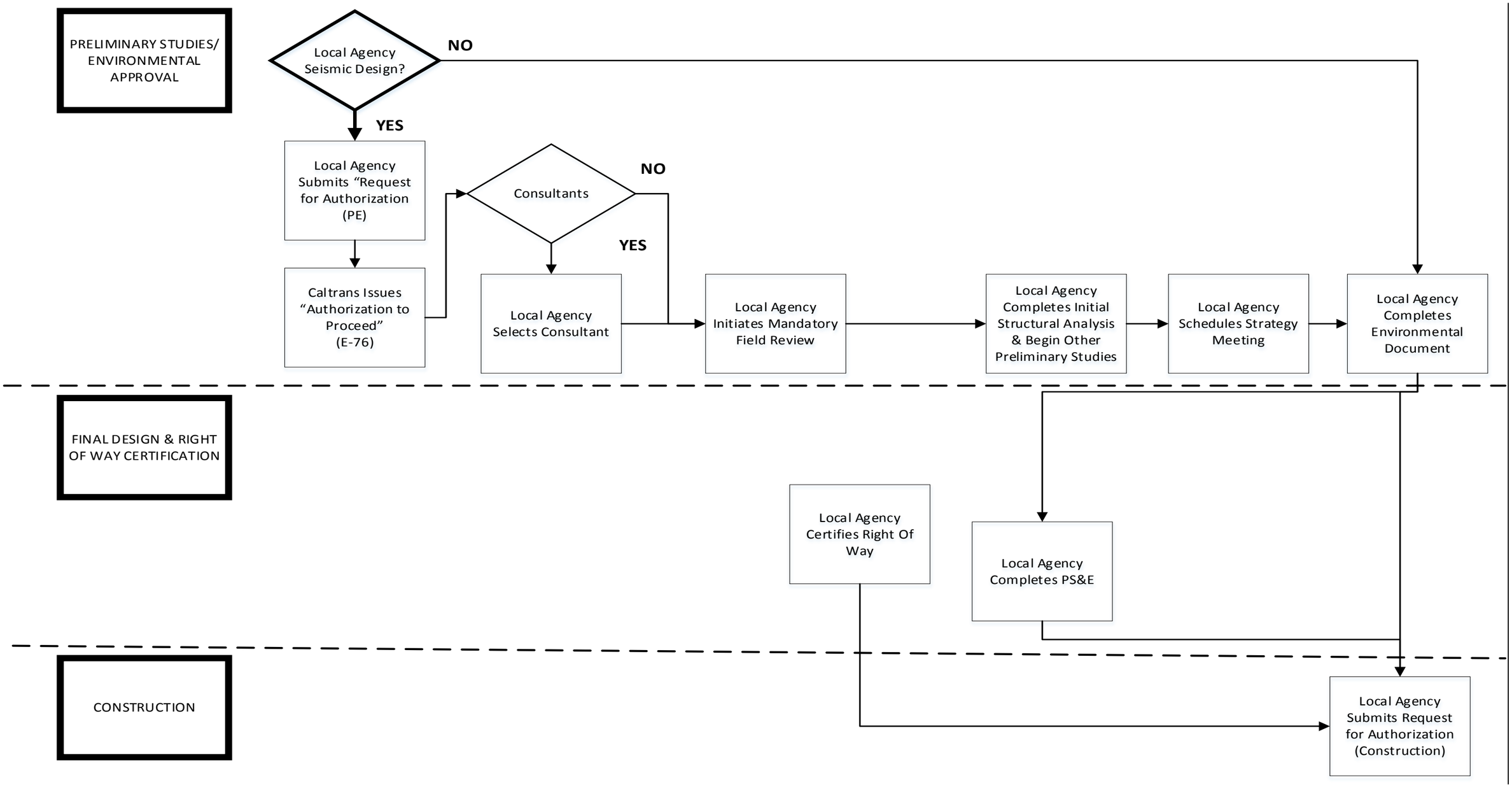

Figure 6-1: Seismic Safety Retrofit Flowchart

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Bridge Rehabilitation

Bridges must be rated SD with a SR ≤ 80 to be eligible candidates for rehabilitation. See the HBP website for instructions on determining SD and SR. All deficiencies of the bridge shall be reviewed to determine the project scope. See Section 6.9 regarding how the ratings are derived from the bridge inspection report data.

1. Rehabilitation funding is for major reconstruction of a bridge to meet current standards anticipating the transportation needs for a minimum of 10 years into the future. The development of a rehabilitation project shall correct major deficiencies including structural problems, load capacity improvement, bridge deck replacement, deficient deck geometry, seismic deficiencies, scour problems, and painting. Major reconstruction not triggered by the above deficiencies is not participating. (23 CFR 650.405(b)(2))
2. Constructing additional lanes (including turn lanes) on an existing bridge requires approval by the HBP Managers. Local agencies shall raise this issue for Caltrans review through the DLAE by providing supporting documentation demonstrating the need for widening. Supporting documentation may include discussion of specific AASHTO standards, planning studies, and master plans developed by MPOs or RTPAs. Discussion of proposed widening (including construction schedule) of the transportation corridor shall also be included if the corridor has not yet been widened to current standards.

   Local agencies must have prior RTPA approval to program the capacity increasing project into the HBP.
3. Bridge replacement may be an appropriate "rehabilitation" option if a detailed cost analysis shows that replacement is the most cost-effective solution. HBP Managers' prior approval is required to ensure the cost analysis is HBP eligible. Cost-effectiveness studies may include life cycle cost analysis. SLA written concurrence is required for bridge replacement projects where the SR>50. Concurrence must be obtained prior to approving the environmental documents and proceeding with final design and R/W. The local agency shall discuss the level of detail in the cost analysis with SLA prior to its development. The level of detail will vary on a case-by-case basis. In cases where rehabilitation is not constructible or where the cost-effectiveness is self-evident, the detailed cost analysis may not be required, but SLA concurrence will still be required. HBP Managers concurrence is required prior to SLA written concurrence to the DLAE.
4. The cost comparison between rehabilitation and replacement shall not be the sole factor in deciding the best alternative. In special cases where the best alternative is not the most cost-effective, HBP eligibility approval shall be elevated to the HBP Managers through the DLAE.

Bridge Replacement

1. Bridges must be rated SD with the SR < 50 to be eligible candidate for replacement.
2. Even though a bridge may be eligible for replacement, rehabilitation shall still be considered to ensure the most cost-effective solution is selected. When appropriate, a

cost analysis should be included in the local agency's project file. The SR, by itself, shall not be the sole justification for bridge replacement. HBP Managers' prior approval is required to ensure the cost analysis is HBP eligible.

Bridge Painting

The purpose of this scope of work is to help local agencies fund eligible bridge painting projects as a stand-alone scope of work when the local agency does not wish to rehabilitate or replace a subject bridge.

1. The PCI for a bridge must be 65 or less, or SLA must provide concurrence for a bridge painting project to participate in the HBP. The PCI is available from the bridge inventory listing from the HBP website:

   http://www.dot.ca.gov/hq/structur/strmaint/local/localbrlist.pdf

2. Minor rehabilitation of corroded structural members is an eligible participating cost under stand-alone paint projects. The cost of the rehabilitation effort shall not exceed 10 percent of the cost of the painting project (paint contract items only).
3. The costs of resolving major deficiencies causing the bridge to be SD are not participating in a painting project. If the bridge is SD with SR<80, rehabilitation should be considered prior to the development of a painting project. Background information supporting this consideration should be documented in the local agency's project file.
4. HBP funded bridge painting is for major scopes of work. Minor spot painting is considered preventive maintenance and is not participating work under the HBP. Minor spot painting can be programmed under the BPMP.

Scour Countermeasure

The purpose of this scope of work is to help local agencies implement scour countermeasures as a stand-alone scope of work when the local agency does not wish to rehabilitate or replace a subject bridge.

1. To receive funds the bridge must have a rating of NBI Item 113 $\leq$ 3 or SMI Hydraulics must provide a recommendation that scour countermeasure is necessary.
2. The participating cost of a scour countermeasure project is limited to installation of monitoring devices and/or modifying the bridge foundation or bank protection to resist scour damage. The repair of damage caused by scour without mitigating the scour problem is considered maintenance work and is not participating.
3. Correcting major deficiencies on a bridge is not a requirement of a scour countermeasure project. If the bridge is eligible for rehabilitation or replacement it should be considered prior to the development of a scour countermeasure project.
4. Scour countermeasure projects utilizing HBP funds must be designed to HEC-23 and SM&I has to be able to change the NBI 113 code to not be scour critical.

Bridge Preventive Maintenance Program

The purpose of program is to help local agencies fund bridge preventive maintenance work to keep their bridges in good condition. There are specific requirements for a local agency to request funding for BPMP projects, but the total cost of the proposed work needs to exceed $100,000 for programming purposes. The BPMP has separate guidance that can be found on the HBP website that layout the requirements and timelines for submittal. Once programmed, BPMP projects follow the policy found in this chapter. See BPMP Guidelines for preventive maintenance requirements.

6.4 Eligible Costs

Participating Cost Limits

To ensure the purpose of the HBP is being fulfilled by local agency projects, certain costs and types of work have participation limits. These limits apply to all projects funded under this chapter. See *Exhibit 6-B: HBP Special Cost Approval Checklist* for a summary of participating costs that require specific HBP Managers approval.

Approach Roadway Work

Federal participation for approach roadway shall be limited to the minimum necessary to make the facility operable consistent with current design standards. The approach roadway length is measured from the bridge abutment to the touchdown on the existing roadway alignment. The approach length from each abutment in excess of 200ft for on federal-aid system projects and 400ft for off federal-aid system projects requires advance approval by the HBP Managers. The HBP eligible approach roadway width will match the HBP eligible bridge width.

The following quote from the CFR identifies work that is not eligible for participation under the HBP:

"23 CFR 650.405(2)(c) Ineligible work. Except as otherwise prescribed by the Administrator, the costs of long approach fills, causeways, connecting roadways, interchanges, ramps, and other extensive earth structures, when constructed beyond the attainable touchdown point, are not eligible under the bridge program."

Preliminary Engineering Costs

HBP funds may not be used for general feasibility or general transportation corridor planning studies even if federally deficient bridges are on a corridor being studied for improvement. HBP participation in PE is for the development of specific HBP projects where the local agency is required to deliver a construction project.

Typical PE costs run 15-18% of bridge construction costs and Federal participation of total PE costs is limited to actual costs up to 25% of the estimated participating construction cost (excluding construction engineering and contingency). Participation beyond 25% must be approved by the HBP Managers.

HBP participation in consultant contract management and quality assurance costs shall not exceed 15% of a consultant's total charges.

For exceptions, local agencies must submit a justification in writing to the DLAE. The DLAE will review the request, provide recommendations and forward to the HBP Managers for approval.

For additional information, see *LAPM Chapter 3: Project Authorization*, Section 3.1, for eligible participating work.

Contingency Including Supplementary Work Costs

HBP participation in Contingency and Supplementary Work in the planning phase of a project should not exceed 25% of the participating construction contract item costs. Contingency and Supplementary Work in the final engineer's estimate must not exceed 10% of the participating construction contract item costs, unless approved by the HBP Managers.

Construction Engineering Costs

HBP participation in total Construction Engineering must not exceed 15% of the participating construction contract item costs, unless approved by the HBP Managers. Local agencies must contact the DLAE for assistance.

Architectural Treatments

Architectural treatments (decorative fascia, tile work, architectural lighting, exotic bridge railing, belvederes etc.) generally are not participating. Location, public input, availability of funds, and cost-effectiveness play a role in the determination of HBP participation. Architectural treatments should not exceed 2% of the total construction contract item cost. Local agencies are required to justify architectural treatments in their project files for future audits.

Local agencies shall notify the DLAE to request HBP participation of architectural treatments.

Environmental Mitigation

HBP projects and funds are to be used for the purpose of bridge safety. The environmental mitigation funding on a HBP project must relate to the purpose and need for taking care of the original bridge deficiencies and environmental mitigation beyond this may not be eligible. HBP funds can be used to reimburse local agencies for environmental mitigations for which the mitigation proposed actually results from the bridge project. Mitigations beyond the bridge project limits will require approval of the HBP Managers prior to sign off of the environmental document. The Caltrans District local assistance Senior Environmental Planner (SEP) is responsible for advising local agencies, the DLAE and the HBP Managers when proposed mitigation is excessive and/or if any of their mitigation may not be reimbursed with HBP funds.

HBP funds may be used for mitigation measures necessary to mitigate adverse impacts when the DLAE, HBP Manager and SEP mutually determines that:

- The impacts for which the mitigation is proposed actually result from the Administration action; and

- The proposed mitigation represents a reasonable public expenditure after considering the impacts of the action and the benefits of the proposed mitigation measures.

The following items may be considered eligible for HBP funding:

- Mitigation that is accomplished within the scope of the project.
- Plant establishment and monitoring up to five years to allow for the permanent establishment of plants. The funding of plant establishment may be accomplished using an escrow account. Plant establishment and monitoring longer than three years must be approved by the SEP, DLAE and HBP Manager.
- Other participating mitigation, such as land bank mitigation purchases, may be required and must be documented in the NEPA documents and be approved by FHWA.

Federal funds (including HBP funds) may not be used for:

- Endowment funds for biological monitoring or maintenance activities in perpetuity;
- Maintenance work. Maintenance is the fiscal obligation of the local agency.

Local agencies should contact the DLAE and SEP for detailed discussion and field review to scope appropriate mitigation strategies. The DLAE will work with the District environmental reviewer and the HBP Managers to resolve difficult issues.

Replaced Bridges to Remain In Place

Sometimes when a bridge is replaced with a new bridge on a new alignment but on the same corridor, the old bridge does not need to be demolished. The old bridge can remain in place to carry pedestrian and bicycle traffic. The old bridge may not be rehabilitated with HBP funds unless it is of historical significance and is limited to the estimated cost of removal.

The CFR provides the legal background and an additional example:

23 CFR 650.411(c)(2) Whenever a deficient bridge is replaced or its deficiency alleviated by a new bridge under the bridge program, the deficient bridge shall either be dismantled or demolished or its use limited to the type and volume of traffic the structure can safely service over its remaining life. For example, if the only deficiency of the existing structure is inadequate roadway width and the combination of the new and existing structure can be made to meet current standards for the volume of traffic the facility will carry over its design life, the existing bridge may remain in place and be incorporated into the system.

Proposed work outside these examples requires HBP Managers approval. The local agency is responsible for requesting Caltrans approval.

Railroad Car Bridges

Permanent installation of railroad car bridges is not HBP eligible. Temporary railroad car bridges required for construction will be eligible.

The basis for not allowing HBP participation in the permanent installation of railroad car bridges is the following:

- It is very difficult for an engineer to certify that the structural members can meet Caltrans/AASHTO structural design standards.

- It is difficult to establish material properties.
- There are potential problems associated with meeting AASHTO minimum geometrics.
- It is expensive to inspect railroad car bridges due to the number of structural elements and welds.

Local agencies are encouraged to consider slab deck bridges as an appropriate cost-effective alternative.

Seismic Safety Retrofit Projects with Different Scope

A local agency may decide to develop a construction project that is more extensive than that approved at the strategy meeting. For example, a local agency may choose to replace a bridge when the strategy meeting recommended retrofit. Agencies may also expand the retrofit project to design to a higher performance standard than no-collapse, or to include bridge rehabilitation to address general bridge deficiencies. When these situations occur, the local agency is responsible for the extra cost beyond the program's committed funding towards the no-collapse retrofit project as recommended by the strategy. The program's funding commitment is the cost estimate included in the final strategy approval document. This funding commitment may be increased if additional cost items needed to complete the recommended project are identified by the local agency. Caltrans DLAEs and HBP Managers will review these additional costs. Appropriate costs will be allowed and added to the total project cost.

If a bridge qualifies as an HBP project and the extra work qualifies for HBP program funding, the extra cost may be participating. On combined Mandatory Seismic Safety Retrofit projects, the local agency should take the project to the strategy meeting to establish estimated capital costs for the seismic project. For capital cost of the combined project (R/W and construction), the state will provide the matching funds up to the estimated seismic retrofit cost established at the strategy meeting and the local agency will provide the matching funds to the cost in excess of the seismic cost.

Bicycle and/ or Pedestrian Access

HBP funds are eligible to accommodate bicycle and pedestrian access on replacement and/ or rehabilitation bridge projects, however the funds will be reimbursed at the minimum AASHTO Standard Specification for Highway Bridges, or Caltrans Highway Design Manual design standards for bicycle and pedestrian facilities which is typically 6 feet. When a bridge is being replaced or going under major reconstruction with HBP funds, replacing bicycle and pedestrian facilities in-kind, or providing new bike and pedestrian facilities as needed for consistency with the existing corridor is eligible for HBP funds. In addition, HBP funds can be used to provide bicycle and pedestrian access on bridges that are within corridors that have adopted bicycle and pedestrian corridor plans. The adopted bicycle and/or pedestrian plan must be included with the HBP application.

If a local agency disagrees with an eligibility determination and is unable to reach agreement with the HBP Program Managers. The local agency may appeal HBP eligibility determinations by following the dispute resolution process as outlined in Section 20.4 of Chapter 20 of the LAPM.

For rehabilitation projects, HBP may participate in the widening when other major deck reconstruction or lane/shoulder widening is needed. (Costs for bridge widening for bicycle facilities only are not participating.)

New bicycle facilities must be identified as "betterments" in the HBP application (*Exhibit 6-A: HBP Application/Scope Definition Form*) and must be justified. The justification must show that the betterments are needed by the community and are appropriate for the location.

Temporary Bridges

If a project is programmed and a bridge collapses, the HBP may participate in the installation and rental of a temporary bridge for up to three years. Rental costs exceeding three years will not be HBP reimbursable. Special covenants shall be included in the E76 and program supplemental agreement to this effect.

All NEPA documents must be approved according to the standard process (*LAPM Chapter 6: Environmental Procedures*). Additionally, the installation of the temporary bridge shall not preclude other more cost-effective bridge replacement options. In essence, the scope of the final project shall be determined prior to the installation of the temporary bridge.

The basis of this eligibility determination is that the work to install the temporary bridge is simply an advance of the detour work needed for the final bridge replacement construction. These participating costs would have occurred anyway; therefore, the costs are participating.

Limited HBP Participation in Replacement Projects

When an agency intends to design a bridge project beyond the recommended standards or intends a betterment in a design element (i.e. sidewalks exceeding the 6-foot minimum) or when a bridge is eligible for replacement and a cost analysis shows that a rehabilitation alternative is more cost-effective, the HBP may participate in the project up to the costs of a minimum standard project as in the rehabilitation project (support and capital costs) with the local agency using other funds for the remainder. Other funds could be but not limited to STBGP, STIP, or local funds. Note that federal funds may not be used to match federal funds.

Special Historic Bridge Work

It is the intent of the HBP to place value on maintaining the historic integrity of qualifying historic bridges. The requirements associated with bridge rehabilitation and replacement apply to this section, except where discussed below.

1. A "historic bridge" is a bridge that is listed on or eligible for listing on the National Register of Historic Places. This data may be downloaded from the Structure Maintenance website at http://www.dot.ca.gov/hq/structur/strmaint/historic.htm. For qualifying bridges, NBI data item 37, Historical Significance, is rated 1 or 2.
2. *23 USC 144(g)(4)(A)* authorizes the use of HBP funds for the reasonable costs associated with actions to preserve, or reduce the impact of a HBP project on the historical integrity of a designated bridge.
3. When a rehabilitation project is proposed the local agency shall notify the DLAE to ensure that the proposed work is participating under the HBP. The DLAE will consult

with SLA to ensure all reasonable rehabilitation strategies have been considered. Local agencies will be required to process the appropriate design decisions per *LAPM Chapter 11: Design Guidance*, as necessary.

4. For a historic bridge replacement project, where a new bridge will be on a new alignment, the historic bridge may be rehabilitated using HBP funds. The participating costs of the rehabilitation shall not exceed the estimated cost of demolition of the historic bridge.

5. A local agency that proposes to demolish a historic bridge for a replacement project with HBP funds shall first make the bridge available for donation to the State, another local agency, or to a private entity. This can be accomplished by notifying the State Historic Preservation Officer, Caltrans, or other cities or counties in the State.

   The costs incurred by the local agency to preserve the historic bridge, including funds made available to the receiving entity to enable it to accept the bridge, shall be HBP participating up to an amount not to exceed the cost of demolition. The bridge will no longer be eligible for any federal-aid under Title 23. Local agencies should consider using other federal programs before using HBP for this purpose.

If HBP funds are involved in the preservation of the historic bridge, the donation may only take place if the receiving entity enters into an agreement with the local agency to:

A. Maintain the bridge and the features that give it its historic significance; and;

B. Assume all future legal and financial responsibility for the bridge, which may include an agreement to hold the local agency harmless in any liability action.

6.5 DESIGN STANDARDS

Standards for local assistance projects are available in *LAPM Chapter 11: Design Guidance*. Note that the bridge inspection ratings must never be used as design criteria for meeting AASHTO standards. The minimum ratings triggering HBP eligibility do not necessarily reflect good design practice established by AASHTO in the "A Policy on Geometric Design of Highways and Streets."

The goal of the HBP is to remove deficiencies from bridges through rehabilitation or replacement. On rare occasions, local standards or design decisions appear to compromise the intent of the HBP. For this reason, local agencies, as a condition for HBP funding on all rehabilitation and replacement projects, shall ensure the scope of work will result in a bridge that will not be rated SD. Local standards or design decisions processed under *LAPM Chapter 11: Design Guidance*, do not provide exemption to this requirement. Decisions based on cost-effectiveness or in the public interest of historic structures must be approved by the HBP Managers.

Basic No-Collapse Standards

The primary philosophy for the Local Seismic Safety Retrofit scope of work is to prevent bridge collapse. The result of a retrofit project should be a bridge that is safe from collapse in the event of a maximum credible earthquake. It is possible that the designer may demonstrate by

analysis that a bridge will not collapse without any retrofit. In this case a "do nothing" strategy is an acceptable assessment. The designer must be cautioned to follow all load path demands and assure that no one portion of the resisting structural frame is deficient. Bridge replacement may also be an acceptable strategy when the existing bridge is in poor structural condition and the cost of retrofitting the bridge exceeds the cost of a new bridge with a similar configuration.

Some agencies may desire to retrofit their bridges to a service level performance standard. They would like to retrofit their bridges not only to withstand earthquakes but to suffer only minor damage that could be quickly repaired to allow resumption of service. This would typically require extra or different retrofit measures that cost more than the standard no-collapse retrofit. Requests like this will be treated the same way as those with expanded scope. The local agency will be responsible for any cost above and beyond that of the standard no-collapse retrofit.

Exceeding Minimum AASHTO Standards

HBP project eligibility begins at the minimum AASHTO standards, exceeding these must be justified and approved by HBP Managers. Where proposed design solutions exceed AASHTO's "A Policy on Geometric Design of Highways and Streets" guidelines, the associated extra costs are not HBP participating. Minimum standards may be exceeded based on intermodal transportation considerations, serviceability issues, and good geometric design practice, and may not be HBP eligible.

Establishing Bridge Geometrics

Many areas of California are experiencing population growth and are demanding more diverse modes of transportation than in recent years. Major capital projects such as bridge rehabilitation and replacement projects can involve difficult environmental problems and expensive construction. For this reason it is important that local agencies properly plan their bridge projects from a transportation facility point of view rather than just a "replace in kind" approach or simply rehabilitate a bridge using current ADTs.

Local agencies need to work closely with their RTPA and consult AASHTO's "A Policy on Geometric Design of Highways and Streets" or "Geometric Design of Very Low Volume Roads" to ensure that their bridge rehabilitation and replacement projects will meet their needs.

Bridge geometrics should be established based on future ADTs, but may also be based on other appropriate transportation planning studies involving Design Hourly Volume analysis or other rational analysis. In many cases RTPAs have adopted transportation models that should be inputted to the geometric design of new or rehabilitation bridge projects.

HBP One Lane Bridge Policy

The cost of rehabilitating one lane bridges or the new construction of one lane bridges may not be HBP participating. The problem with these kinds of projects is the project scope fails to meet the requirements of Section 6.5 of the HBP Guidelines. Specifically, the project should raise the bridge's sufficiency rating to greater than 80 and the bridge must not be structurally deficient.

Section 6.5 also says that "Exceptions based on cost-effectiveness or in the public interest of historic structures must be approved by the Office of Federal Programs". Even when this

flexibility is exercised, design decisions must be approved by the local agency in accordance with Chapter 11 of the LAPM.

Special Circumstances: Historic Bridge

A bridge that is registered or eligible to be registered in the National Register of Historic Places is exempt from the requirement that all geometric deficiencies be corrected by a local agency. Local agencies may consider "replacing" the historic bridge with a new bridge on the same corridor with minor roadway realignments. See Section 6.4 of the HBP Guidelines for more information.

It is strongly encouraged that historic bridges be brought up to current load capacity design standards. Where increasing the load carrying capacity of a historic bridge impacts the historic characteristics of the bridge, then the scope of the rehabilitation project need only bring the bridge to as-built design standards, provided that public safety is not compromised.

Special Circumstances: Cost-effectiveness

The HBP also allows flexibility in the design of new or the rehabilitation of one lane bridges even if an existing bridge is not historic. Where widening a bridge to meet AASHTO standards is not cost effective because a local road is only one lane, the curb to curb geometrics should be established using AASHTO's Guidelines for Geometric Design of Very Low Volume Local Roads (ADT≤400). Holding queues will be eligible for HBP funds. As noted above, any design decision must be approved by the local agency in accordance with Chapter 11 of the LAPM.

For non-historic bridge, the rehabilitation or replacement projects are required to meet current load carrying design standards. Design exceptions will not be permitted.

Local agencies must provide written concurrence that local law enforcement and local firefighting officials concur with the proposed geometrics of the one lane bridge rehabilitation or replacement projects.

As explanation must also be provided by the local agency showing how the public's safety is being improved by the project. It there is no significant improvement to the public's safety, then the primary intent of the HBP is not being met and HBP funds cannot be used on the project. See Section 6.1 of the HBP Guidelines for information on the intent of the program.

6.6 APPLICATION PROCESS

Agencies that have executed or that have the authority to execute State/Local Federal-Aid Master Agreements with Caltrans may apply for HBP funds. Federal funds provided under these guidelines may only be spent on bridges carrying public highways (including local streets and roads) not included in the State Highway System and owned by the local agency applying.

When Caltrans receives the application, the DLAE and HBP Managers will review the proposed work to ensure HBP eligibility. Compliance with eligibility requirements is the responsibility of the local agency. This is especially the case where the project evolves during

PE phase. Local agencies needing further assistance in eligibility review should ask the DLAE for a field review. All new applications must be submitted to the DLAE no later than November 30 of odd years.

When Caltrans determines that the project is eligible for HBP funds, it will need to be prioritized against all the other new applications that have been received. The HBP Managers will take the prioritized list to the HBP Advisory Committee for a funding cutoff determination. Projects that are above the funding cutoff line will be accepted into the HBP and programmed. Projects below the funding cutoff line will be sent back to the DLAE.

Note: Federal authorization for any phase of work must be in place BEFORE reimbursable work is performed. Do not confuse the programming process with the federal authorization process as reimbursement work done prior to authorization is not eligible.

Application Period

For all projects other than those considered High Cost Bridge Projects, applications will be accepted on a continuing basis. High Cost Bridge Project requirements are discussed in Section 6.7: Project Programming Policy and Procedure.

Application Requirements

The following information must be included in a HBP application package:

1. A cover letter from the local agency requesting that Caltrans program the project.
2. The HBP Application form, *Exhibit 6-A: HBP Application/Scope Definition Form,* and attachments must be complete. Local agencies needing help with the application should contact the DLAE.
3. *Exhibit 7-B: Field Review Form* and *Exhibit 7-C: Roadway Data* from *LAPM Chapter 7: Field Review*). The local agency should fill out only known data.
4. Applications for High Cost Bridge Projects will only be accepted by the DLAE after a solicitation for candidates has been transmitted from the DLAE's to local agencies. See *Section 6.7: Project Programming Policy and Procedures* for information on High Cost Bridges.

The DLAE is responsible for ensuring the application package meets the above requirements prior to forwarding copies of the package to the HBP Managers. The DLAE should identify any potential difficulties and provide recommendations.

Optional SLA Review of Application

The HBP Managers or DLAE may request SLA review of a project. This level of oversight is consistent with *LAPM Chapter 7*, which places the responsibility of project scoping on the local agency. Local agencies requesting optional technical support for project scoping may request an optional field review in the application. The level of service provided by Caltrans will be dependent on available staffing.

When HBP Managers request SLA to review an application or scope change, a request for construction authorization shall not be processed by the DLAE until SLA's review is complete.

At the discretion of the HBP Managers, PE authorization may be withheld pending the results of the SLA review.

SLA shall notify the DLAE and the HBP Managers of any findings as a result of the application review. The HBP Managers will also notify the DLAE and SLA of the status of the application package. Any issues raised need to be resolved by the local agency, SLA, the DLAE, District R/W or the District Environmental Reviewer. The DLAE is responsible for the coordination of the resolution of issues raised.

After the project is programmed, the DLAE will initiate the field review if required by *LAPM Chapter 7: Field Review*, if the field review has not yet taken place. Field reviews should be scheduled appropriately to include the local agency's consultants.

Project Prioritization Policy

The National Bridge Inventory (NBI) coding from the Bridge Inspection Reports will be used in the prioritization process. The prioritization below will be used to determine programming priorities for developing financially constrained HBP lists. The priority established will determine when the Preliminary Engineering (PE) phase will be programmed. New projects will only be available for programming into the two additional years of a new FTIP/FSTIP cycle.

The lowest priority number is the highest priority.

PRIORITY 1:

Seismic retrofit projects and Scour countermeasure projects or rehabilitation and/or replacement of scour critical bridges (NBI Item 113≤2).

PRIORITY 2:

Bridges that have major structural deficiencies causing the bridge to be posted or closed. The NBI Item 41 Structure Open, Posted, or Closed to Traffic will be utilized to determine the sort order. The sort will be:

1. K = bridge closed to traffic
2. D = bridge open, would be posted or closed except for temporary shoring
3. P = bridge posted for load
4. R = bridge posted with restrictions not load.

PRIORITY 3:

Scour countermeasure projects or rehabilitation of scour critical bridges (NBI Item 113=3).

PRIORITY 4:

Projects that are eligible for replacement. Structurally Deficient with a sufficiency rating less than 50.

PRIORITY 5:

Projects that are eligible for rehabilitation. Structurally Deficient with a sufficiency rating 80 or less.

PRIORITY 6:

Bridge Preventive Maintenance Plan Projects.

PRIORITY 7:

Projects that are Functionally Obsolete with application dated prior to October 1, 2016.

PRIORITY 8:

Low water crossing projects with application dated prior to October 1, 2016.

Each of these 8 priorities, may have two additional levels of prioritization within each priority depending upon the number of projects in each priority.

The second level of prioritization will be based upon the length of bypass or detour, in miles. This is documented in NBI Item 19. The detour length will be ordered longest to shortest.

The third level of prioritization will be based upon the future ADT on the route. This is documented in the NBI Item 114. The Future ADT will be ordered highest to lowest.

6.7 PROJECT PROGRAMMING POLICY AND PROCEDURE

Policy

This policy and procedure provide details for compliance with the FTIP regulations and CTC Policy. The CTC policy is to maximize the use of federal HBP funds. CTC Resolution LBS1B-G-0708 established the Proposition 1B Seismic Program as the top priority for programming HBP funds.

It is CTC's intent that the Department also program funds for the bridge inspection program and critical safety non-seismic projects. Bridges with serious structural deficiencies as a top priority for funding.

The statewide financially constrained program list will be ranked based on the Ranking Policy in compliance with federal regulations and developed in cooperation with the Local Assistance Highway Bridge Program Advisory Committee.

The HBP will be programmed consistent with the delivery schedule for Proposition 1B seismic projects provided by local agencies constrained by available federal funds.

These procedures will provide a basis for fully utilizing HBP funds and obtaining the policy goals of the HBP through the federal transportation programming process.

Procedure

1. At the beginning of every FTIP Cycle, the FTIP (all years) will be programmed to reflect the most current cost and schedule data for the Proposition 1B Seismic projects. Safety non-seismic bridge projects may also be programmed based upon the Department's project ranking policy.

2. The DLAEs shall date stamp every seismic and non-seismic Request for Authorization (all phases) when the DLAE determines the package is complete and ready to obligate. The DLAE shall update the FileMaker HBP programming database with the revised funds and schedule in the current year of the FTIP. The date stamp shall be keyed into the FileMaker HBP programming database when funds cannot be obligated due to problems including but not limited to scope issues, delays in modifying the FTIP, or if the project phase is programmed in a future year. The DLAE shall not transmit the RFA for obligations until scope and FTIP issues are resolved.
3. Post programming changes for construction phase for HBP or seismic projects must be elevated to HBP Managers for funding approval as soon as the DLAE has reviewed the RFA package for completeness. Complete *Exhibit 6D: HBP Scope/Cost/Schedule Change Request* to provide justification for cost increase. The DLAE must sign the *Exhibit 6D* recommending approval.
4. Beginning in January of every year and completed on February 15th of every year:

a. The HBP Managers will review the quarterly status updates that local agencies are required to maintain through the LA-ODIS database. This review will flag which seismic projects in the current year cannot be delivered and which seismic projects can be advanced.

b. The DLAEs will review projects programmed in the current year to evaluate if the project phases programmed can potentially be delivered. DLAEs, depending on staff resources, may need to coordinate with Local Agencies to ensure request for authorization packages are being developed.

c. The DLAEs will maintain the "ready to advertise" or "nearly ready to advertise" flags in the HBP FileMaker database. These flags impact a project's ranking and must be maintained by the DLAE.

d. The HBP Managers will select the projects ready to obligate for inclusion into the FTIP, if needed, or for funding projects advanced under EPSP or post programming changes.

5. Revised program lists may be released to the MPOs on March 30th of every year to ensure all current year federal funds are obligated. These lists would advance projects outside the 4 year element of the FTIP so the projects could be obligated by September 30th of the current year, provided OA and apportionment are available at that time.
6. After March 30th of every year, EPSP and Post Programming procedures will be implemented for all projects funded in the 4 year element of the FTIP until federal apportionment or OA is exhausted. Some reserves may be held if there were delays in processing FTIP amendments based on the previous October program lists. The HBP Managers will review this situation on a case by case basis.
7. Starting in July of each year, the DLAEs will survey their local agencies for next year's needs. The surveys will be provided by the HBP Managers to the DLAEs. The HBP FileMaker database must be updated by DLAEs by the end of September. The HBP Managers will release new statewide program lists to the MPOs for inclusion into the FTIP by the end of October of each year.

The HBP Managers update program lists every October and March to incorporate project cost and schedule updates and new funding requests from local agencies. Once developed, the HBP Managers release program lists to the MPOs for inclusion in to the FTIP and the program lists are posted on the Division of Local Assistance website at http://dot.ca.gov/hq/LocalPrograms/hbrr99/HBP_FSTIP.html.

Note that these program lists do not fulfill the federal programming requirements. Inclusion into the FTIP by MPOs must precede fund authorization for any activity for which HBP funds are being sought.

The HBP programming process is summarized in the following table:

Table: 6-1: HBP Programming Process Summary

Start	End	Responsible Party	Action
Oct. 1	Mar. 30	HBP Manager	EPSP, Post Programming changes suspended, unless approved by HBP Managers.
Jan. 1	Feb. 15	HBP Manager	Review LA-ODIS for project slippage/advancement.
Jan. 1	Feb. 15	DLAE	DLAEs review current year programmed projects, reprogram funds in FileMaker database as needed.
Feb. 15	Mar. 30	HBP Manager	Determine if new statewide program lists need to be developed and released to regions.
Mar. 30	Sept. 30	HBP Manager	EPSP, Post Programming changes enabled. Fund obligated until balances are zero. Statewide programming lists should be sent to MPOs if needed.
Jul. 1	Sept. 30	DLAE	DLAEs survey local agencies for next year's needs and update HBP database. HBP managers provides DLAE with survey forms.
Oct. 1	Oct. 30	HBP Manager	New program lists developed and released to MPOs to amend their FTIPs.

Programming Tools to Advance Projects

Expedited Project Selection Procedures allow most project programming in the 4 year element of the FTIP to be advanced for authorization and obligation, provided OA and apportionment are available to fund the project and programming capacity is available in the year of obligation of funds. For local assistance federal HBP, EPSP is managed by the HBP Managers. New project that have been prioritized, the PE phase can not utilize EPSP.

Post programming changes are changes to phases of work that have already been authorized and obligated and require additional funds. No pre-approved FTIP amendment is required to obligate additional funds for a post programming change provided there is not scope change to the project. Post programming changes must be reflected in future FTIP amendments to ensure that the FTIP always reflect total project costs and is financially constrained. Post programming changes are subject to approval of the HBP Managers.

1. EPSP and post programming Policy

a. Due to limited federal funds, funds programmed in the current year of the FTIP will be reserved specifically for the project in the current year of the FTIP. These funds will be held in reserve until March 30th of any given year.

b. Effective October 1st of every year, EPSP and Post programming changes will be suspended for all projects, unless otherwise approved by the HBP Managers. Exceptions will be granted provided there will be no impact to the delivery of current year programmed projects. The HBP Managers will try to hold back a reserve of un-programmed capacity each year to fund construction change orders, cost overruns, and other mid-phase cost increases to help ensure smooth project development activities.

2. Advancing non Proposition 1B Seismic Project (other HBP projects)

a. "Advancing" means obligating funds on a project where the funds are not programming in the current year of the FTIP.

b. If there is a schedule slippage or savings in current year programmed projects, and no Proposition 1B Seismic projects can be advanced to use current year funds, the Department will make HBP funds available to other HBP funded bridge projects programmed in future years within the 4 year element of the FTIP.

c. The priority for programming federal HBP funds will be based on having a complete request for authorization package in the possession of the DLAE, the type of work, the deficiencies with the bridge, and having approved scopes of work.

Project Ranking Policy

Subject to budgetary constraints, the PE phase for eligible projects is programmed only in one of the two new years of a new FSTIP cycle to facilitate the development of new projects.

Also subject to budgetary constraints, the R/W phase for eligible projects is programmed in the last year of the FTIP. Funding for the R/W phase may be advanced to the year requested once full compliance with the provisions of NEPA has been documented and approved by Caltrans.

The ranks below will be used to determine funding priorities of the construction phase for developing the financially constrained HBP program lists. After projects are prioritized and funds reserved, Caltrans submits the financially constrained program lists to the MPOs for inclusion into the FTIP.

The lowest number rank is the highest priority for construction. Within each rank, projects are sorted by the AASHTO Sufficiency Rating to reflect the general condition of the bridge. The lowest SR is the highest priority. This means that lower priority projects will have PE and R/W funded even though construction may be pushed out of the 4 year element of the FTIP. When these projects are ready for construction authorization, the ranking system will allow these projects to receive a high priority for construction programming within updated statewide program lists.

These project ranks will be applied to programmed projects to financially constrain any program list needed to update the FTIP. The DLAEs are responsible for maintaining fields in

the HBP FileMaker database that indicate a project's readiness to advertise. Local agencies are responsible for closely coordinating with the DLAEs on project status, schedule, and estimates as documented in these guidelines.

Rank 0

This is not technically a project rank. All projects with HBP funds obligated for construction fall in this rank for listing purposes only. These projects cannot be pushed out of the 4 year element of the FTIP because funds have been obligated for construction. Local funded Advance Construction projects not subject to cash management commitments. Local funded AC conversion can be converted to HBP funds when programming capacity is available.

Rank 1A

Projects for the general support of the federally mandated Bridge Inspection Program.

Rank 1B

Projects that are ready to advertise AND;

Are critical HBP funded rehabilitation or replacement projects. These bridges must have major structural deficiencies causing the bridge to be posted or closed. The NBI data item 41 must be coded B, D, E, K, P, or R.

Rank 1C

Cash management projects with future AC conversion commitments by the Department. Projects may or may not be ready to advertise for construction. Federal HBP funding commitments are case by case, approved by the Department.

Rank 1D:

Projects are ready to advertise AND;

Are Proposition 1B funded projects or;

Are scour countermeasure projects, rehabilitation or replacement of scour critical bridges (NBI item 113≤3).

Rank 1E:

All other projects ready to advertise.

Rank 2A:

BPMPs are grouped listings of bridges that need PM work. This means construction funds are distributed over multiple years based on how projects in the BPMP are actually authorized. Stand-alone PM projects not part of a BPMP are excluded from this rank and will be treated like rehabilitation projects.

Rank 2B: Individually listed projects with Construction in the 4 year element of the FTIP.

High priority regionally significant or non-air quality exempt (line item) projects that are not subject to cash management. Construction funding year is determined based on readiness to deliver and subject to Department case by case review. This rank highlights the sensitivities in rescheduling projects impacting regional air quality conformity determinations.

In the event of construction schedule slippage, the Department may push the project funding in the FTIP a minimum of two years out, after consultation with the MPO. If no programming capacity can be found, the project will need to be pushed out until the next FTIP cycle. Local agencies will be required to program local funded AC if the project is only slipping one year or the HBP cannot afford to fund the project according to the new project schedule. Local agencies will need to work with their MPOs/RTPAs to ensure the AC is programmed correctly in the FTIP.

If NEPA or R/W is not clear and R/W includes lengthy property acquisition, the construction funding should be pushed outside the 4 year element of the FTIP.

Rank 3A:

All projects nearly ready to advertise within six months of a new financially constrained program list being generated AND;

Are critical HBP funded rehabilitation or replacement projects. These bridges must have major structural deficiencies causing the bridge to be posted or closed. The NBI data item 41 must be coded B, D, E, K, P, or R.

Rank 3B:

All projects nearly ready to advertise within six months of a new financially constrained program list being generated AND;

Are Proposition 1B funded projects or;

Are scour countermeasure projects or rehabilitation or replacement of scour critical bridges (NBI item 113≤3).

Rank 3C:

All projects nearly ready to advertise within six months of a new financially constrained program list being generated.

Rank 4:

Projects that are not ready to advertise. NEPA documents and R/W are not clear. Bridge must have major structural deficiencies causing the bridge to be posted or closed. NBI data item 41 coded B, D, E, K, P, or R.

Rank 5:

Includes Proposition 1B seismic projects that are not ready to advertise. NEPA and R/W are not clear. Includes scour countermeasure projects and rehabilitation or replacement of scour critical bridges (NBI data item 113 ≤3). NEPA and R/W are not clear.

Rank 6:

All types of projects with STIP matching funds or other federal STBGP funds for enhanced project scopes. Projects are not ready to advertise. NEPA and R/W are not clear.

Voluntary seismic retrofit projects (no Proposition 1B seismic involvement). Projects are not ready to advertise. NEPA and R/W are not clear.

Rank 7:

General bridge rehabilitation or replacement and other stand-alone scopes of work, including stand-alone PM. Projects are not ready to advertise. NEPA and R/W are not clear.

Annual Project Survey

Prior to the development of program lists in October, the DLAE will request that status of currently programmed projects from local agencies. Cost and schedule information provided from the survey will be incorporated into the program lists. Failure to provide status may result in project cancellation. The programming as provided in the financially constrained lists provided to the MPOs may have different funding in a different federal fiscal year than requested by the local agency in the survey. The financially constrained program lists are based upon the Rank Policy.

High Cost Projects Programming Policy

To ensure that HBP funds are made available throughout the state on a fair and equitable basis, in compliance with federal regulations, high cost projects have additional programming policy. It has been demonstrated that high cost project commits large sums of federal funds but cannot spend the funds in one year due to local agency contract processes, time to mobilize the contractors and the time it takes to actually construct large project. These idle federal funds could be used to advance other projects. Cash management of high cost projects is critical to effective stewardship of the local HBP. The HBP Managers will identify the high cost projects and through the DLAE, make contact with the project sponsors to explain the policy.

When a high cost project phase is ready to be programmed in the 4 year element of the FTIP, the local agency will notify the DLAE and discussions on programming the phase will begin.

- A funding commitment letter will be issued when a high cost phase of work needs to be programmed in the FTIP or as needed for a FHWA required Projects of Division Interest Project Financial Plan. NEPA and/or R/W clearance along with status of the PS&E package will play a role in determining the need for the funding commitment letter.
- The HBP Managers will issue a funding commitment letter, *Exhibit 6-E: Sample Funding Commitment Letter*, and associated funding sheet, *Exhibit 6-F: Sample Funding Sheet for*

Commitment Letter, to the local agency for a high cost project that commits the Department, subject to state and federal budget legislation and other limitation, to specify HBP in the FTIP over a multiple year period.

Local agencies will need to secure the availability of local funds (budget authority) to back the AC commitment.

- Local agencies that cannot obtain a source of local funds for AC will not have R/W or construction programmed within the 4 year element of the FTIP using HBP funds. These agencies may appeal this policy and request a meeting with the Department for review the specific situation. Members of the Local Assistance Highway Bridge Program Advisory Committee (Committee) representing the League of California Cities and the California State Association of Counties may be invited to the meeting to offer advice to the Department on implementing the policy as applied to the project in question.
- The sum of cash managed high cost projects in any federal fiscal year should not exceed 50% of the annual revenue for that federal sub-apportionment for which the project is eligible without concurrence from the Committee.
- Funds allocated to a project for AC conversion should not exceed $20 million per year without concurrence from the Committee.
- High Cost projects will not be accepted into the local assistance HBP if all (including high cost projects) projects cannot be funded over a 15 year period. If the project is not accepted into the local assistance HBP, local agencies have the option of proceeding with their own funds using AC, but the Department will not budget the project(s) for AC conversion using HBP funds.
- AC conversion in the year programmed will not be obligated unless at least 50% of the prior years' federal funds have been invoiced. This keeps the federal funds available to advance other projects that could be delivered.
- In reference to non-high cost project FTIP programming procedures, the advancement of future year AC conversion using EPSP for high cost projects will be after April 15th of each year instead of after March 30th. This will provide smaller projects programmed in future years the opportunity to advance before the high cost project use up available HBP funds.
- After April 15th of any year, conversion of AC for high cost projects will be prioritized and prorated as follows:
    - High cost projects with eligible costs that could be immediately reimbursed with AC conversion will be first priority for conversion and proration will be based on outstanding reimbursable expenditures.
    - Second priority will be advancing AC conversion amongst the high cost projects with remaining AC even if there are no project expenditures that could be immediately reimbursed.

- Depending on current year delivery of the HBP and other local assistance programs, the Department may delay AC conversion of eligible projects in the above two bullets to a later date.

Bridge Investment Credit

Federal-aid highway funds provides valuable financial resources to local agencies in making improvements to transportation facilities on local roads. Federal funding also comes with many requirements that need to be met in carrying out a project. Ideally, the most efficient use of federal funds is to maximize federal funds on fewer, larger projects, funding smaller projects with non-federal funding sources such as local funds.

The BIC is a new element in the HBP aimed at encouraging local agencies to invest in making improvements to bridges on local roads using local or non-federal funds and receive credit to use as match funds for future HBP projects. The BIC allows local agencies to replace, rehabilitate and do PM work on HBP eligible bridges using local funds, then receive credit for up to 100 percent of the eligible work. The credit, in turn, serves as the required non-federal match for a future local federal-aid bridge project.

To be eligible for BIC, a bridge must meet the current eligibility criteria for HBP as outlined in the current Bridge Preventive Maintenance Program Guidelines and this Chapter of the LAPG. Eligible HBP projects determined to be noncontroversial and PM projects are the best candidates to be funded by local agencies under this policy.

Eligible HBP projects that local agencies choose to design and build with local funds do not need to comply with Federal requirements, however the project must meet current minimum AASHTO design standards with the California amendments to received credit.

1. Project Programming for Banking BIC:

Local agencies using local funds on an eligible HBP project to earn credits under the BIC must submit an *Exhibit 6-A: HBP Application/Scope Definition Form,* which clearly defines scope and cost of the project. For BPMP's they must submit a certification letter and a BPMP plan list. Cost on the submittals should be 100% local funds. HBP Managers approval of the scope and cost for the BIC program is required prior to commencing work. If scope and cost is approved, the project will be programmed in the HBP database with 100% local funds.

2. Project Administration for Banking BIC:

The project sponsor is responsible for following all the applicable state and local laws and requirements in designing and constructing the project. Upon completion of the project, the sponsor must submit documentation including final project cost and as-built plans to Caltrans.

Caltrans will review the documentation and may field review the completed project to confirm it was constructed in accordance with all applicable standards and to the approved scope. Caltrans will approve the credit as it was originally requested or as shown in the final project cost, whichever is lower. Upward cost adjustment is not allowed. Credit will be banked at the completion of the project and the sponsor notified.

3. Project Programming for using BIC:

Local agencies may apply to use their banked BIC to cover their local match for any phase of a HBP eligible project as long as their banked credit is 200% of required local match for PE and R/W and 125% of required local match for Construction at the time of obligation. The higher percentages are required to ensure that there are sufficient credits to cover cost increases and scope changes.

As for any other HBP project, the project sponsor must submit an *Exhibit 6-A*:which clearly defines scope and cost of the project. Cost on the submitted exhibit should be 100% federal funds. In addition to the *Exhibit 6-A*, the project sponsor must provide a letter requesting their banked credit be applied to the phase or phases of the project that they want funded at 100% federal funds. The letter should include a table showing available credit and deduction based upon the percentages mentioned above. Caltrans approval of scope and cost for the BIC program is required prior to programming the project. When scope and cost is approved, and if the available credit is sufficient, the project will be programmed in the HBP database with 100% federal funds for the appropriate phase(s).

4. Project Administration for using BIC:

Project administration for bridges using banked BIC to cover the required local match is the same as any other HBP project, except the reimbursement ration will be at 100% federal. Since federal funds are involved, all the applicable federal, state and local laws and requirements in designing and constructing the project must be followed.

When the project completion paperwork is submitted to Caltrans, a reconciliation of the credit balance will be done based on the final invoice and the project sponsor notified.

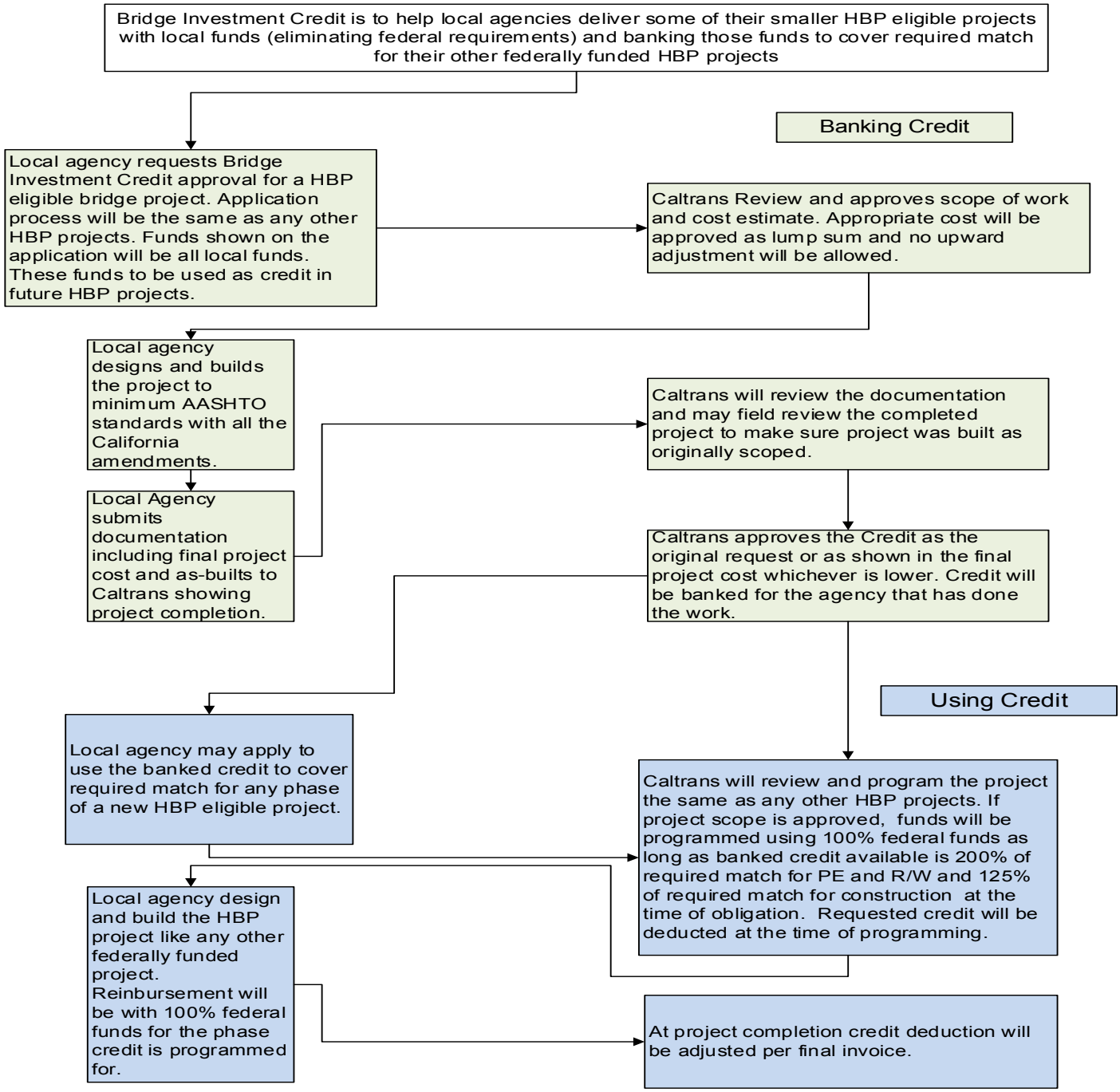

Figure 6-2: Bridge Investment Credit Concept Flowchart

6.8 PROJECT IMPLEMENTATION

Once the project is programmed in an approved FTIP, local agencies may request PE authorization for preparation of environmental documentation for NEPA clearance. The DLAE shall ensure that funds authorized do not exceed what is programmed as shown in the HBP program lists.

Mandatory Field Reviews for Local Seismic Safety Retrofit Projects

Field reviews for seismic retrofit projects are mandatory. The objectives of field review for seismic retrofit projects are also different in several ways from typical local agency projects. The objectives of a seismic project field review are to:

- Begin to scope the project. The project will not be fully scoped until after the strategy meeting.
- Verify that the as-built plans accurately represent the existing conditions.
- Check for modifications that would affect the seismic response of the structure.
- Dimension any members that are not accurately shown on the as-built plans.
- If no as-built plans are available, measure and dimension all pertinent structural members.
- Check for new conditions that would be affected by construction work.
- Discuss environmental considerations.

Important items to keep in mind for retrofit project field reviews include access, clearance, coordination, detours, environmental, falsework, obstructions, utilities, modifications, hydraulics and permits.

The field reviews should be attended by:

- Consultants, if any.
- Local agency staff knowledgeable of utilities, R/W, environmental, traffic, etc.
- Caltrans SLA, DLAE staff and District Environmental.

The field review results:

- The scope of the project is discussed.
- The existing conditions are verified and any modifications documented.
- Construction controls are discussed.
- Responsibilities are reviewed.

Mandatory Strategy Meetings for Local Seismic Safety Retrofit Projects

The objectives of the strategy meetings are to:

- Offer seismic designers support or alternative approaches.
- Determine that standard seismic retrofit details are being fully utilized.

- Establish alternative acceptable procedures to satisfy retrofits when unusual problems are encountered.
- Recommend alternative analysis when appropriate.
- Inform the project engineer of solutions to similar problems encountered by Caltrans, consultants, or other local agencies.
- Provide local agency personnel with information regarding potential traffic control, right-of-way, utility, and environmental problems.
- Achieve consensus agreement on economical and practical retrofit strategies.

The strategy meeting should be attended by:

- Design Consultants (Structural, Geotechnical, and Traffic if necessary)
- Local agency staff
- Caltrans Division of Engineering services staff from Earthquake Engineering, Design, Construction, Maintenance and/or Geotechnical.
- Structures Local Assistance Representative
- District Local Assistance Engineer

The designer or project engineer is expected to have performed the diagnostic analysis using the appropriate static and dynamic analysis, summarized the condition of columns, restrainers/hinges and abutments, and a proposed solution prior to scheduling a strategy meeting. The designers should be prepared to discuss solutions considered and reasons for rejection of alternatives. At a minimum, a General Plan employing a legend of retrofit work and location of work, along with a table outlining the controlling design ductility ratios, should be presented. Additional tables and proposed details may also be necessary.

The following materials are required for the Mandatory Strategy Meeting:

- Draft Strategy Report, including the General Plan, Sufficiency Rating, as-built plans, photographs, and an estimate of costs (capital and engineering). These materials (a minimum of 10 copies) should be submitted to the DLAE. The DLAE should forward the package to Structures Local Assistance Office in Sacramento two weeks prior to the scheduled strategy meeting.
- Any plans or reports pertinent to the proposed work (utility layout, right-of-way maps, etc.)

The Strategy meeting should result in a general consensus regarding the acceptable analysis and retrofit approach should be reached by the strategy meeting attendees. Additional strategy meetings should not be necessary if all the information noted above is provided prior to and during the meeting. The conclusions reached should be outlined and summarized by the agency responsible for seismic design in "strategy meeting minutes" and documented in the Final Strategy Report. A copy of the minutes should be sent to all attendees. A copy of the Final Strategy Report will be kept on file in the Structures Local Assistance Office

Cost/Scope/Schedule Changes

If a cost/scope/schedule change occurs, the local agency shall notify the DLAE immediately of the changes. A cover transmittal letter shall be sent to the DLAE with the following attachments:

- An updated application with attachments, if there is a major scope change. Local agencies should contact the DLAE for advice on whether an updated application is needed.
- A cost/scope/schedule change form (*Exhibit 6-D: HBP Scope/Cost/Schedule Change Request*).

The DLAE will forward copies of the scope change request package to the HBP Managers and SLA. The HBP Managers and SLA will process the package the same way a new project application is handled. Major changes in scope will require a new federal project number be established.

Optional Cursory PS&E Review

Optional PS&E reviews are cursory in nature involving the scope (plans), specifications, and engineer's estimate. These reviews can help identify issues regarding roadway safety, constructability, obsolete or expensive standard specifications, and HBP eligibility that might have been overlooked

Cursory PS&E reviews are not design checks and findings are usually advisory in nature. Findings that are significant to the cost-effectiveness or safety of the project must be addressed by the local agency or federal authorization or reimbursement will be withheld. Tort liabilities resulting from design decisions, mistakes and omissions in the design are solely the responsibility of the local agency.

Local agencies may request an optional cursory PS&E review by contacting the DLAE.

1. The DLAE is responsible for coordinating the cursory PS&E review with the local agency, SLA, and other units within Caltrans. SLA is the point of contact for technical services provided by the Caltrans Division of Engineering Services.
2. See *LAPM Chapter 12: Plans, Specifications & Estimates*, Sections 12.2 and 12.14, for procedures relating to cursory PS&E review. These reviews should occur when the PS&E is about 65% complete for HBP projects. At this stage of completion, all the design calculations and plans have been completed but are unchecked. PS&E reviews at 100% completion are required for Mandatory Seismic Projects that have Prop 1B as local match.
3. Local agencies requesting optional cursory PS&E reviews are strongly encouraged to have field reviews with Caltrans involvement.
4. Because these reviews are optional, incomplete PS&E packages may be submitted. Only what is submitted by the local agency will be reviewed.
5. Local agencies may withdraw the request for PS&E review, at any time if Caltrans staff is not available to meet local agency deadlines. If it appears that a PS&E review cannot

be completed within the timeframe required by the local agency, the local agency shall be the decision maker as to whether the PS&E review should be completed with the possible delay in advertising their project.

6. Prior to processing any work authorizations, the DLAE shall coordinate with SLA and the local agency to ensure that the needs of the local agency are appropriately met. Under no circumstances is a DLAE to withhold prompt action on a request for authorization due to optional PS&E review.
7. Change orders or cost increases due to amending the PS&E after the project has been advertised may not necessarily be HBP participating. If there are significant changes to an advertised project, Caltrans may require the local agency to re-advertise the project. To avoid project delays, it is important that local agencies requesting help with their projects do so early in the project development cycle.
8. The PS&E packages submitted for review should include an electronic copy of all documents. The local agency should contact SLA prior to submittal, to verify the submittal requirements.

Proceeding to Final Design

Proceeding to final design and preparation of the PS&E may not commence until the DLAE has notified the local agency that the environmental documents have been approved and eligibility issues have been resolved. See *LAPM Chapter 12: Plans, Specifications & Estimate*, for detailed discussion of procedures.

Scope Changes during Final Design

Minor scope changes may be resolved with a letter from the local agency to the DLAE. The local agency must contact the DLAE for a decision on whether the scope change is minor.

Major scope changes may invalidate the environmental documents and cause the project to be ineligible for federal funding. HQ HBP Managers decides how to proceed in major scope changes during final design. The DLAE should consult with SLA, Caltrans District Environmental and the HBP Managers.

Where a major scope change is required, HQ HBP Managers require the project application be revised and resubmitted to the DLAE. If needed, the environmental documents may need to be reevaluated. If there are changes to the environmental documents, the DLAE must provide direction to the local agency if PS&E work may continue. The DLAE will need to work with District Environmental and HQ HBP Managers to resolve complex environmental issues.

Construction Change Orders

Local agencies assume full liability for the safety of their bridges and eligibility of participating costs of their projects.

Where the change orders exceed contingency, the local agency must contact the DLAE explaining the need for additional funds and submit an (*Exhibit 6-D: HBP Scope/Cost/Schedule Change Request* to document the reason and amount of additional HBP funding. The following instructions must be followed:

- If the project is programmed with the lump sum item in the FSTIP, only the HBP Managers need to be consulted to ensure sufficient funds are available for the CCO.
- If the project is identified as a line item in the FSTIP, the local agency must obtain concurrence from the RTPA/MPO and the HBP Managers.

Local agencies will work through the DLAE to obtain approval from the HBP Managers. If the FTIP needs to be amended for a project line item, the local agency must work with their appropriate RTPA/MPO for proper processing.

Project Closure during PE

If, during project development, it is determined that no work is needed (choosing the "no build" option), the local agency may close out the project in the PE phase. Sometimes during the project development phase, environmental, R/W, or legal issues arise that make the project not feasible or cost-effective. In these situations, the local agency will be reimbursed for the work performed under the E76 authorizing PE. When the local agency submits the final invoice, a final report must be included documenting the conclusion with supporting information. See *LAPM Chapter 17: Project Completion*, for detailed instructions.

If a local agency develops a final PS&E and the project is never advertised due to local match funding constraints, the HBP participation will be limited to the costs of scoping the project and developing the federal environmental documents. The engineering work to develop the final PS&E will be non-participating. Federal law does not authorize federal funds to be used to develop shelf projects.

Any other reasons for canceling a project may not be grounds for reimbursement of PE costs. If a local agency cancels (as opposed to choosing the "no build" option) a project, all PE funds must be returned to the State. The State will then return the funds to FHWA.

6.9 MAJOR DEFICIENCIES (FROM SI&A SHEET)

Scour Potential

National Bridge Inventory (NBI) item 113 is the scour criticality rating. This is a calculated rating based on a potential major hydraulic event. Scour potential should always be reviewed when developing a rehabilitation project. For detailed information regarding the NBI data "items" see the National Bridge Inventory Coding Guide. This guide can be downloaded from the HBP website.

Structural Deficiency-SD, and Sufficiency Rating-SR Defined

For a bridge to be considered structurally deficient a highway bridge must have the ratings described below.

For Structural Deficiency (SD) a condition rating of 4 or less for:

- Item 58 - Deck or
- Item 59 - Superstructures or
- Item 60 - Substructures or

- Item 62 - Culvert and Retaining Walls.
- [Item 62 applies only if the last digits of Item 43 are coded 19.]

The **Sufficiency Rating (SR)** is an overall "health" indicator for the bridge and is calculated by a complex formula defined in Appendix B in the National Bridge Inventory Coding Guide.

6.10 REFERENCES

Local Assistance Program Guidelines
http://www.dot.ca.gov/hq/LocalPrograms/lam/lapg.htm

Local Assistance Procedures Manual
http://www.dot.ca.gov/hq/LocalPrograms/lam/lapm.htm

California Transportation Commission Resolution G97-05
http://www.dot.ca.gov/hq/transprog/ctcliaison/resolutions/GRes-1978-1997.pdf

California Streets and Highways Code Sections 2411 and 2413
https://leginfo.legislature.ca.gov/faces/codesTOCSelected.xhtml?tocCode=SHC

United States Code Title 23, Section 144
http://uscode.house.gov/view.xhtml?req=(title:23%20section:144%20edition:prelim)

Code of Federal Regulations
https://www.archives.gov/federal-register/cfr

National Bridge Inventory Recording and Coding Guide
https://www.fhwa.dot.gov/bridge/nbi.cfm