

CHAPTER 9: HIGHWAY SAFETY IMPROVEMENT PROGRAM GUIDELINES**CYCLE 4 - 2010/2011 FEDERAL FISCAL YEAR****CONTENTS**

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CHAPTER 9 HIGHWAY SAFETY IMPROVEMENT PROGRAM

9.1 INTRODUCTION

The Highway Safety Improvement Program (HSIP), codified as Section 148 of Title 23, United States Code (23 U.S.C. §148) was elevated to a core program as a result of the passage of the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU). SAFETEA-LU was originally effective through September 30, 2009 and now has been extended by continuing resolution through December 2010.

These HSIP Guidelines are written for the 2010/11 Federal Fiscal Year (FFY) of funding. At the time these Guidelines were released, a new Federal Transportation Act to supersede SAFETEA-LU had not yet been enacted by Congress. These Guidelines were written with the expectation that the HSIP will remain a core program and be funded at or near the 2009/10 funding levels. The total amount of HSIP funds available for local agency safety projects is expected to be approximately \$50 million for the 2010/11 FFY.

9.2 ELIGIBLE APPLICANTS

The applicant for HSIP funds is an agency that assumes responsibility and accountability for the use and expenditure of federal-aid highway funds. The applicant must be a city or a county within the State of California. Exceptions to this requirement will be reviewed by the Department of Transportation (Caltrans), Headquarters - Division of Local Assistance (HQ-DLA) on a case-by-case basis.

9.3 ELIGIBLE PROJECTS

HSIP funds are eligible for work on any publicly-owned roadway or bicycle/pedestrian pathway or trail that corrects or improves the safety for its users.

It is the intent of the HSIP that federal funds be expended on safety projects that can be designed and constructed expeditiously. Projects should not require the acquisition of significant rights of way (not more than 10% of the construction cost), nor should they require extensive environmental review and mitigation.

For a project to be eligible for HSIP funding, a specific safety problem must be identified for correction and the proposed countermeasure must correct or substantially improve the condition. The project must be consistent with [California's Strategic Highway Safety Plan \(SHSP\)](#). Examples of eligible projects include, but are not limited to, the twenty-one project categories as listed under 23 U.S.C. §148(a)(3)(B) as shown below. There is no funding priority assigned to the list.

1. An intersection safety improvement.
2. Pavement and shoulder widening (including addition of a passing lane to remedy an unsafe condition).
3. Installation of rumble strips or other warning devices, if the rumble strips or other devices do not adversely affect the safety or mobility of bicyclists, pedestrians, and persons with disabilities.

4. Installation of a skid-resistant surface at an intersection or other location with a high frequency of crashes.
5. An improvement for pedestrian or bicyclist safety or for the safety of persons with disabilities.
6. Construction of any project for the elimination of hazards at a railway-highway crossing that is eligible for funding under Section 130, including the separation or protection of grades at railway-highway crossings.
7. Construction of railway-highway crossing safety feature, including installation of highway-rail grade crossing protective devices.
8. The conduct of an effective traffic enforcement activity at a railway-highway crossing.
9. Construction of a traffic calming feature.
10. Elimination of a roadside obstacle or roadside hazard.
11. Improvement of highway signage and pavement markings.
12. Installation of a priority control system for emergency vehicles at signalized intersections.
13. Installation of a traffic control or other warning device at a location with high crash potential.
14. Transportation safety planning.
15. Improvement in the collection and analysis of safety data.
16. Planning integrated interoperable emergency communications equipment, operational activities, or traffic enforcement activities (including police assistance) relating to work zone safety.
17. Installation of guardrails, barriers (including barriers between construction work zones and traffic lanes for the safety of road users and workers), and crash attenuators. (Note: Includes barrier rail and guardrail on a structure or its approaches.)
18. The addition or retrofitting of structures or other measures to eliminate or reduce accidents involving vehicles and wildlife.
19. Installation and maintenance of signs (including fluorescent yellow-green signs) at pedestrian-bicycle crossings and in school zones.
20. Construction and operational improvements on high risk rural roads.
21. Conducting road safety audits.

Some of the work improvement categories are broad in nature. Consult the District Local Assistance Engineer (DLAE) for clarifications or questions on project categories and/or eligibility.

Work that is incidental to the safety improvements, such as new landscaping or context sensitive solution features, have restricted reimbursement limits. The amount of federal reimbursement for all combined incidental work shall not exceed 10% of the construction costs. The local agency is responsible for all incidental work costs that exceed 10% of the construction costs.

9.4 PROJECT CATEGORIES

CATEGORY 1 – STATEWIDE BENEFIT/COST RATIO PROJECTS

Projects may qualify for HSIP funding based on a calculated Benefit/Cost Ratio (B/C). The B/C for projects is automatically calculated by the [HSIP application tool](#). See the HSIP Benefit Cost Calculation Details file posted on the [HSIP web site](#).

Caltrans HQ-DLA staff will rank the projects on a statewide basis using the B/C calculated by the HSIP application tool and shown on the individual applications.

CATEGORY 2 – DISTRICT WORK TYPE PROJECTS

The Work Type category is used to ensure a minimum level of funding throughout the state. Work Type projects now require all of the same data elements as B/C projects and the scoring rubrics are heavily weighted on the projects' B/C score. The complete scoring rubrics are included in the [HSIP application tool](#).

9.5 FUNDING

The amount of federal safety funds available for the local HSIP program in the 2010/11 FFY is expected to be approximately \$50 million.

Sixty to seventy-five percent (\$30 to \$38 million) will be targeted for B/C projects. Twenty-five to forty percent (\$12 to \$20 million) will be targeted for Work Type projects.

The maximum federal reimbursement ratio for all HSIP projects is ninety percent (90%). The maximum federal reimbursement amount for any single HSIP project is \$900,000. All project expenses that exceed the \$900,000 maximum federal reimbursement amount will be the responsibility of the project sponsor and will not be eligible for reimbursement. The actual project reimbursement ratio will be determined when the "Authorization to Proceed" is approved by the Federal Highway Administration (FHWA). Requests for additional federal funds that exceed the original dollar amount shown in the agency's application will not be granted except in unusual cases.

Project costs eligible for federal reimbursement include:

- **Preliminary Engineering**
 - Environmental Studies (NEPA Clearance required)
 - Preparation of Plans, Specifications and Estimates (PS&E)
- **Right of Way**
 - Engineering
 - Appraisal and Acquisition
 - Utility relocation
- **Construction**

- Construction Engineering
- Construction

9.6 JOINT-FUNDED PROJECTS WITH CALTRANS

A Caltrans-initiated safety project on a state highway that requires financial participation by a local agency is eligible for funding. Typically, these types of projects involve new or upgraded traffic signals at an intersection. The number of intersection legs owned by each agency determines the cost-sharing ratio. For example, if a traffic signal is proposed at a 4-legged intersection, 2-legs being a State Highway and 2-legs being a local road, the project cost sharing ratio for each agency would be fifty percent (50%). For other special financial arrangements, see Section 4B.104 (CA), Financing, of the [California Manual on Uniform Traffic Control Devices](#).

A local agency-initiated safety project on a local roadway that involves a State Highway must include a letter of support from Caltrans. If the project is likely to require financial participation by Caltrans, the applicant should include reasonable estimates of all cost sharing ratios, amounts, and funding schedule in their application and letter of support.

The local agency should consult with the DLAE to identify any planned and/or programmed State Highway safety projects that may require financial participation by a local agency. If Caltrans is developing a safety project that may require financial participation by a local agency, the local agency should submit an HSIP application to compete for funding. Submittal of an application does not guarantee that the project will be approved for funding. The financial and project administration responsibilities of each agency will be outlined in the Cooperative Agreement.

9.7 AGENCY APPLICATION

Prior to beginning the preparation of a HSIP Application, agencies should ensure that they are in good standing with respect to the new Safety Program Delivery Requirements and are eligible to receive new HSIP funding. For more details, see Section 9.10, Project Delivery, in these guidelines.

Agencies seeking HSIP funds to construct infrastructure improvements are required to use the new [HSIP application tool](#) located on the web site. This application tool is a Microsoft Excel, macro-driven tool which guides applicants through the process of entering the required data. Once the data has been entered, the tool automatically calculates the B/C for the project and prepares the application for the applicants. The instructions are incorporated into the tool and the applicant can access them electronically or print a hard copy from the tool. Applicants must utilize this tool in preparing their electronic and hard-copy applications. Failure to follow this process will result in their application being rejected.

A local agency must submit applications to its respective [Caltrans District Office](#), directed to the attention of the DLAE, by the designated deadline. A signed application, plus one copy is required. An electronic copy of the application output file (created by the application tool) must also be included in the applicant's submittal. All maps, schematics, drawings, figures, or photographs that are attached to the application

should be made on 8-1/2 x 11-inch paper and included as .pdf formatted files in the electronic copy.

Candidate projects must include cost estimates for all phases of the project. A detailed engineer's estimate must be included for of the construction costs.

Candidate projects must include estimated dates when various project milestones will be completed.

Projects must contain collision summary reports and collision diagrams. Do not submit copies of the traffic collision report prepared by the law enforcement officer.

Schematic drawings or plans showing the general nature and location of the proposed improvements must be submitted for all projects.

Photographs to better illustrate the problem are encouraged.

9.8 APPLICATION REVIEW AND PROJECT SELECTION PROCESS

Projects competing for funding will be prioritized in descending order, statewide, by the calculated B/C. The HSIP Benefit Cost Calculation Details are posted on the DLA HSIP web site.

Projects that do not receive funding under the B/C category will re-compete for funding under the Work Type category.

The DLAE will prioritize and rank all Work Type projects. The scoring rubrics that will be used are included in the [HSIP application tool](#). The DLAE may establish a District Review Committee to assist in the evaluation of Work Type projects. The composition of this committee will be determined by the DLAE and may be comprised of representatives from Caltrans, FHWA, local or regional governmental agencies, state or local law enforcement agencies, health services agencies, community based organizations, etc. After ranking all Work Type projects, the DLAE will submit a prioritized list of Work Type projects to HQ-DLA.

HQ-DLA staff will review each District's prioritized Work Type project list in conjunction with the statewide list of prioritized B/C projects. HQ-DLA will consider the Work Type projects on a statewide basis to achieve an equitable funding distribution across the state. HQ-DLA will post the list of approved projects on the HSIP web site.

Approximately 3 to 4 months after the application due date, the DLAE will inform all applicants of the results.

9.9 PROJECT PROGRAMMING AND IMPLEMENTATION

Caltrans HQ-Division of Transportation Programming will send the list of approved projects to the Metropolitan Planning Organizations (MPOs). The MPOs will amend the Federal Transportation Improvement Program (FTIP) to include their projects. Caltrans, acting as the MPO for the rural Regional Transportation Planning Agencies, will amend the Federal Statewide Transportation Improvement Program (FSTIP) accordingly. Once the FTIP/FSTIP is amended, the DLAE will inform the local agencies that they may submit their request for authorization (E76).

Once programmed into the FTIP/FSTIP, projects must be processed and implemented in accordance with the federal-aid procedures contained in the [Local Assistance Procedures Manual \(LAPM\)](#) and the [DLA Safety Program Delivery Requirements](#). Agencies are strongly encouraged to review the LAPM and Delivery Requirements before submitting new applications and/or proceeding with new projects, even if they have completed federally funded projects in the past.

Federal funds are considered obligated to each project phase when the FHWA approves the 'Request for Authorization' (see Chapter 3, [Project Authorization](#), of the LAPM).

Agencies should not proceed with any phase of reimbursable work (Preliminary Engineering, Right of Way, or Construction) until the DLAE provides the local agency with the written "Authorization to Proceed" for each project phase.

All costs associated with any phase of work performed prior to receiving written "Authorization to Proceed" from the DLAE will not be eligible for reimbursement.

9.10 PROJECT DELIVERY

To meet FHWA's intent for HSIP federal funds being expended on safety projects that can be designed and constructed expeditiously and to ensure that all programmed projects are delivered in a timely manner, DLA has created [Safety Program Delivery Requirements](#) for all ongoing and future federally funded safety projects.

The key delivery requirements for new safety projects include three milestones and corresponding delivery deadlines:

1. Request for Authorization to Proceed with PE within 6 months after the project is amended into the Federal Statewide Transportation Improvement Program (FSTIP).
2. Request Authorization to Proceed with Construction within 30 months (2 ½ years) after the project is amended into the FSTIP.
3. Complete construction and close-out the project within 54 months (4 ½ years) after the project is amended into the FSTIP.

If an agency has an active HSIP project that is flagged for not meeting one or more of these milestones, Caltrans will not accept applications from that agency until the flags have been resolved or the project is complete. See the [Safety Program Delivery Requirements](#) document posted on the Safety Program Delivery Status web site for further details. Agencies can check current project milestone status under the "Project and Program Summaries" section on this web page.

Due to FHWA's financial constraint requirement for the FSTIP and the past poor delivery of HSIP projects, DLA anticipates that most local agencies will be required to utilize Expedited Project Selection Procedures (EPSP) in order to meet the above delivery requirements. To better explain these procedures and provide additional guidance, DLA has created a document titled [Using EPSP to Meet Delivery Requirements](#). The document is available on the HSIP web site.

PROJECT INACTIVITY

Inactive projects tie up limited program funds from being used by other local agencies for their safety needs. Federal-aid projects become ‘inactive’ when there has been no financial activity (invoice submittals or payments) on the project within certain time periods. The duration of the time period that triggers inactivity is based upon the unexpended balance of the project as shown below:

| | |
|--|----------------------------------|
| Unexpended Balance < \$50,000 | 3 years of no financial activity |
| $\$50,000 \leq \text{Unexpended Balance} \leq \$500,000$ | 2 years of no financial activity |
| Unexpended Balance > \$500,000 | 1 year of no financial activity |

HSIP projects that become ‘inactive’ can lose all federal funds that have been programmed, obligated, and expended on a project. Go to the [Inactive Projects](#) web site for additional information.

9.11 DESIGN STANDARDS

Chapter 11, “[Design Standards](#)”, of the LAPM describes statewide design standards, specifications, procedures, guides, and references that are acceptable in the geometric, drainage, and structural design of local assistance projects. The chapter also describes design exception approval procedures. These standards and procedures shall be used for all HSIP projects on the local road system.

If a project contains a bikeway component, it shall be designed in accordance with the [Caltrans Highway Design Manual](#) and the [California Manual on Uniform Traffic Control Devices \(MUTCD\)](#). Exceptions to using these standards will be handled in accordance with the exception approval process described in the appropriate manual.

All projects must meet the requirements of the Americans with Disabilities Act of 1990 (ADA) and Section 504 of the Rehabilitation Act of 1973. For more information on [ADA compliance](#), please refer to Chapter 11, “Design Standards,” of the LAPM, or go to the DLA web site.

All projects must upgrade nonstandard safety features to the appropriate standard when those features are within the scope and work area of the project. Requests for exceptions to this requirement must follow all federal exception approval processes.

A local agency that proposes to install an experimental traffic control device on a public roadway shall follow the process prescribed in Section 1A.10 of the California MUTCD and coordinate with the [California Traffic Control Devices Committee \(CTCDC\)](#). Given that this can be a time-consuming process, DLA does not recommend pursuing experimental traffic control devices unless the local agency is close to obtaining the approval to use the experimental device or unless the local agency is willing to accept the risk that the project might fail to meet the above delivery requirements and the agency would be prevented from applying for future HSIP funding until the project is complete.

All projects containing Intelligent Transportation System (ITS) components shall comply with federal ITS regulations. See Chapter 12.6, [Intelligent Transportation Systems](#), of the Local Assistance Program Guidelines (LAPG).

9.12 PROGRAM EVALUATION

Title 23, Code of Federal Regulation Part 924.13 requires that the Highway Safety Improvement Program be evaluated for its effectiveness in reducing the number of crashes, fatalities, and serious injuries on the nation's roadways. Applicants that receive funding for a project may be asked to collect and submit data to Caltrans upon completion of the project. Positive safety benefits documented on constructed projects can help justify continued funding at or above current funding levels.

9.13 FEDERAL PROGRAM CODES AND PROJECT PREFIXES

The project prefix to be used with HSIP projects is **HSIPL**.

For additional information on program codes and project prefixes, see [Exhibit 3-M](#) of the LAPM.

9.14 REFERENCES

Title 23, United States Code, Section 148

❖ <http://uscode.house.gov/>

California Streets and Highways Code, Sections 2330-2334

❖ <http://www.leginfo.ca.gov/cgi-bin/displaycode?section=shc&group=02001-03000&file=2330-2334>

California Manual on Uniform Traffic Control Devices (California MUTCD)

❖ <http://www.dot.ca.gov/hq/traffops/signtech/mutcdsupp/>

California Traffic Control Devices Committee (CTCDC)

❖ <http://www.dot.ca.gov/hq/traffops/signtech/newtech/others/guidelines-exp.pdf>

Strategic Highway Safety Plan (SHSP)

❖ <http://www.dot.ca.gov/SHSP/>

Caltrans District Office

❖ <http://www.dot.ca.gov/hq/LocalPrograms/dlae.htm>

Caltrans Highway Design Manual

❖ <http://www.dot.ca.gov/hq/oppd/hdm/hdmtoc.htm>

Caltrans Local Assistance Program Guidelines (LAPG)

❖ <http://www.dot.ca.gov/hq/LocalPrograms/lam/lapg.htm>

Caltrans Local Assistance Procedures Manual (LAPM)

❖ <http://www.dot.ca.gov/hq/LocalPrograms/lam/lapm.htm>

HSIP Web Site

❖ <http://www.dot.ca.gov/hq/LocalPrograms/hsip.htm>

HSIP - List of approved projects

❖ http://www.dot.ca.gov/hq/LocalPrograms/HSIP/prev_cycle_results.htm

HSIP - Application Tool

❖ http://www.dot.ca.gov/hq/LocalPrograms/HSIP/apply_now.htm

HSIP – Sample documents for Application Tool

- ❖ http://www.dot.ca.gov/hq/LocalPrograms/HSIP/apply_now.htm

Safety Program Delivery Requirements

- ❖ http://www.dot.ca.gov/hq/LocalPrograms/HSIP/delivery_status.htm

LAPM – Project Authorization – Chapter 3

- ❖ <http://www.dot.ca.gov/hq/LocalPrograms/lam/lapm.htm>

LAPM – Design Standards – Chapter 11

- ❖ http://www.dot.ca.gov/hq/LocalPrograms/lam/prog_p/p11stand.pdf

Local Programs – ADA compliance

- ❖ http://www.dot.ca.gov/hq/LocalPrograms/DBE_CRLC/DBE_CRLC.html#ADA

Local Programs – Inactive Projects

- ❖ <http://www.dot.ca.gov/hq/LocalPrograms/Inactiveprojects.htm>

LAPG – Intelligent Transportation Systems – Chapter 12

- ❖ http://www.dot.ca.gov/hq/LocalPrograms/lam/prog_g/g12othr.pdf