

**APPLICATION FORM FOR****CYCLE 9 HIGHWAY SAFETY IMPROVEMENT PROGRAM (HSIP)**Application ID 05-Monterey-1

LAPG 9-A (REV 04/2018)

Page 1 of 9

Print Form

**APPLICATION SUMMARY**

This summary page is filled out automatically once the application is completed.

After the application is finalized, please save this PDF form using the exact "Application ID" (shown below) as the file name.

Application ID 

**Important:** Review and follow the [Application Form Instructions](#) step-by-step as you complete the application. Completing an application without referencing the instructions will likely result in an incomplete application or an application with fatal flaws that will be disqualified from the ranking and selection process.

**Submitted By (Agency)**

Monterey

**Application Category**

Common BCR Application

**Caltrans District**

05

**Application Number**

1

**Out of**

2

**Project Location**

The intersection of Del Monte Avenue and Casa Verde Way in City of Monterey and Casa Verde Recreational trail crossing just north of the intersection between Del Monte Avenue and Robertson Ave.

**Project Description**

Intersection Improvements including: relocate of the Casa Verde Trail Crossing to the Int., protected left turn phase, shorten/restripe crosswalks, ADA Improvements, bike crosswalks/signals, median improvements, and leading ped phase.

**Total Project Cost**

\$982,800

**HSIP Funds Requested**

\$923,832

**Countermeasure No. 1**

S6: Provide protected left turn phase (left turn lane already exists)

**Countermeasure No. 2**

S20: Install pedestrian crossing (S.I.)

**Countermeasure No. 3**

S22: Modify signal phasing to implement a Leading Pedestrian Interval (LPI)

**Project Benefit**

11,888,162

**Benefit Cost Ratio (BCR)**

12.1

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**APPLICATION FORM FOR****CYCLE 9 HIGHWAY SAFETY IMPROVEMENT PROGRAM (HSIP)**Application ID 05-Monterey-1

LAPG 9-A (REV 04/2018)

Page 2 of 9

**I. Basic Project Information**Date: Caltrans District: MPO: Agency: County: Total number of applications being submitted by your agency: Application Number (each application must have a unique number): **Contact Person Information**Name (Last, First): Position/Title of Contact Person: Email: Telephone: Extension: Address: City: Zip Code: 

(Enter only a 5-digit number)

**Application Category:** **Project Information**

Project Location:

-Be Brief (Limited to 250 Characters)

-See [Application Form Instructions](#)

Project Description:

-Be Brief (Limited to 250 Characters)

-See [Application Form Instructions](#)Functional Classification: (For Functional Classification and CRS Maps,  
Visit: [http://www.dot.ca.gov/hq/tsip/hseb/crs\\_maps/](http://www.dot.ca.gov/hq/tsip/hseb/crs_maps/))CRS Map ID (e.g. 08E14): Urban/Rural Area: High-Risk-Rural-Roads (HR3) Eligibility: If this project is not entirely HR3 eligible, what is the approximate total cost percentage that is HR3 eligible?  %**Work on the State Highway System**Does the project include improvements on the State Highway System? **ADA Notice**

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**APPLICATION FORM FOR****CYCLE 9 HIGHWAY SAFETY IMPROVEMENT PROGRAM (HSIP)**Application ID 05-Monterey-1

LAPG 9-A (REV 04/2018)

Page 3 of 9

**Warrant Studies**

- Check if the project includes new installation of certain traffic control devices (e.g., traffic signals, pedestrian signals, etc.). If yes, Traffic Signal Warrant 4, 5 and/or 7 must be met (CA MUTCD Chapter 4C). Please provide the warrants as Attachment #8 in Section V.

**Additional Information**

1. Is the project focused primarily on "spot location(s)" or "systemic" improvements?
2. Which of the California's Strategic Highway Safety Plan (SHSP) Challenge Areas does the project address primarily?  
(For more information on the SHSP and its Challenge Areas, see: <http://www.dot.ca.gov/SHSP/>)
- 
3. How were the safety needs and potential countermeasures for this project first identified?
- 
4. California established [Systemic Safety Analysis Report Program](#) (SSARP) in 2016. Was this project identified through the SSARP program?
- 
5. What is the primary mode of travel intended to be benefited by this project?
6. Approximate percentage of project cost going to improvements related to motorized travel:  %
7. Approximate percentage of project cost going to improvements related to non-motorized travel:  %
8. Provide the number of intersections and the length of roadways included in the project (enter 0 if not applicable):
- Number of Intersections:  Miles of Roadway:
9. Posted Speed Limit (mph):
10. Annual Average Daily Traffic (See [Application Form Instructions](#))
- | AADT (Major Road)                   | AADT (Minor Road)                  | Year Collected/Estimated          |
|-------------------------------------|------------------------------------|-----------------------------------|
| <input type="text" value="28,100"/> | <input type="text" value="4,000"/> | <input type="text" value="2016"/> |

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**APPLICATION FORM FOR****CYCLE 9 HIGHWAY SAFETY IMPROVEMENT PROGRAM (HSIP)**Application ID 05-Monterey-1

LAPG 9-A (REV 04/2018)

Page 4 of 9

**II. Narrative Questions** (See [Application Form Instructions](#))

These narrative questions are intended to provide additional project details for the application reviewers and project files. The reviewers will use the information in their "fatal flaw" assessment of the applications. Please make sure that:

- 1) The project scope is eligible for HSIP funding;
- 2) The countermeasures used in the Benefit Cost Ratio (BCR) calculation are appropriately applied based on the scope of the project;
- 3) The crash data used in the BCR calculation is appropriately applied based on the scope of the project and countermeasures used; and
- 4) The application data and attachments are reasonable and meet generally accepted traffic engineering and transportation safety principles.

***If significant inconsistencies or errors are found in the application information, the reviewers may conclude that the application includes "fatal flaws" and the application will be dropped from further funding considerations. The applicant will not be notified of findings until after the selection process is complete.***

**1. Overall Identification of Need**

Describe how the agency identified the project as one of its top safety priorities. Was a data-driven safety evaluation of their entire roadway network completed? Do the proposed project locations represent some of the agency's highest crash concentrations?

(Limited to 5,000 characters)

The project was first identified as a part of the community planning process, the Del Monte Beach Neighborhood, a neighborhood group had several concerns with this crossing and the intersection. The intersection of Del Monte and Casa Verde is the only entering point into the Del Monte Beach Neighborhood and the Del Monte Beach (a public beach). Based on this initial start, further review was done and found this intersection to be in an corridor with a higher number of collisions. Due to the unique characteristics, the trail crossing, the area surrounding Casa Verde shows a concentration of injury collisions. This is in part due to the nature of bicycle/pedestrian collisions which frequently result in injury accidents. [See Attachments for a Heat map developed by TIMS for injury collisions between 2013 and 2017.] This is an area of high incidence because this intersection is the convergence point of a major neighborhood entrance, a heavily use trail crossing and a major commute route into the city for all modes of transportation, especially bicycles which utilize the Monterey Peninsula Recreational Trail.

Not only is this corridor a major commute route, it is also the major visitor route for cars, bicycles and pedestrians. Monterey is a tourism economy with a limited transportation infrastructure due to the topography and an active military base which divides the City. As a result, arterials carry very high levels of vehicle traffic; Del Monte Avenue carries 40-50% of the adjacent Highway 1 average traffic daily. As a result of the Monterey Arterials carrying significant traffic volumes there are high numbers of collisions along these heavily used corridors.

**2. Potential for Proposed Improvements to Address the Safety Issues**

Describe the primary causes of the collisions that have occurred within the project limits. Are there patterns in the crash types? Clearly demonstrate the connection between the problem and the proposed countermeasures utilized in the BCR calculations. Depending on the nature of the project, explain why the agency chooses to pursue "Spot location(s)" or "Systemic" improvements.

(Limited to 5,000 characters)

**Note:** *Safety improvements that do not have countermeasures and crash reduction factors identified in the HSIP Analyzer can be included in the project scope and cost estimate as "Other Safety-Related" improvement; they just won't be added to the project's BCR shown in the application.*

Most accidents that occur at the intersection, are rear-end collisions, these make up 44% of all collisions on the corridor. The proposed protected left turn is for the side street where some of the rear-end collisions have occurred, due to confusion on who is turning left or proceeding straight.

Another major type of collisions are Bicycle/Pedestrian Related which account for 20% of collisions, all of these collisions are injury accidents. One of the most common occurrences are bicyclists failing to yield to oncoming vehicle traffic and broadside passing vehicles at the trail crossing.

The relocation of the trail crossing to the signalized intersection clears up the confusion between automobile ROW and Bicycle/Pedestrian Right Of Way. The provision of a "CrossBike" or bicycle crosswalk allows bicycles to proceed through without dismounting from their bicycle as they would have on the trail crossing. Bicycle Signals Curvature has been added to the trail crossing as it approaches the intersection to slow bicycles down as they approach the intersection allowing them more reaction time.

With the relocation of the trail crossing to the crosswalk, a leading pedestrians phase will be incorporated with the crosswalk and

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**APPLICATION FORM FOR****CYCLE 9 HIGHWAY SAFETY IMPROVEMENT PROGRAM (HSIP)**Application ID 05-Monterey-1

LAPG 9-A (REV 04/2018)

Page 5 of 9

"CrossBike" that will run east-west on the north side of the intersection. This provides further emphasis and visibility to the priority for pedestrians. Giving the bicycles and pedestrians clear direction, priority and allocated space will help alleviate the issues of compliance and confusion on who has the right of way. The curb radius will be tightened on the northeast and northwest corner to slow right turning vehicles, enhancing safety for bikes and peds. Other options such as "No Right Turn on Red" or flashing yellow warnings are being considered to provide additional visibility and warning to remind vehicle to yield to pedestrians.

The primary collision factor for two-thirds of the collisions are improper, unsafe or hazardous maneuvers. The suggested improvements improve the operations for all modes traffic thereby reducing circumstances where drivers feel the need make improper, unsafe or hazardous maneuvers.

This is a spot improvement rather than an systemic improvement as it this location is rather unique in comparison to the rest of Del Monte Ave in the City of Monterey. It is one the few four-leg that has a trail crossing immediately adjacent to the intersection and frequent and consistent traffic along the minor street.

Other safety feature include Mountable Curb, Traffic Control and construction signs. Mountable curb is for the intersection of Casa Verde and Roberts Ave/Surf Way less than 150 feet north of the intersection. The mountable curb is to ensure proper circulation at the intersection. Casa Verde Way dead ends at Surf Way/Roberts which provides one-way circulation to the Del Monte Beach neighborhood. The access to Casa Verde is Right In, Right Out with a striped splitter island, the project will make this mountable curb to provide physical barrier, but ensure vehicles such as fire trucks that need to make wider turns will have access. Traffic Control and Construction Area Signs are important to ensure the safety of all during construction activities.

**3. Crash Data Evaluation**

What is the source of the crash data? For each countermeasure, describe how the influence areas and the limits of the crash data were established to ensure only appropriate crashes were included in the Collision Diagrams, Collision Lists and used in the BCR calculation. (Limited to 5,000 characters)

**Note:** *If the project includes multiple locations and multiple countermeasures, group the locations so that within each group, the same countermeasures apply to all locations and their crash data. Describe the location groups. These location groups must be consistent with the grouping in using the HSIP Analyzer.*

The source of the Crash Data is Crossroads Software Traffic Collision Database which is integrated with the City of Monterey Police Department reporting system. SWITRS, the Statewide Integrated Traffic Records System was used to supplement data. The influence area was limited to 250 feet surrounding the intersection. Crashes from the Midblock collision report related to the trail crossing on Casa Verde were within the influence area were included especially as the improvement is related to the relocation of this crossing to the intersection and improvement of the crossing.

**4. Prior Attempts to Address the Safety Issue**

List all other projects/countermeasures that have been (or are being) deployed at this location. Applicants must identify all federal funds that have been used or approved within or directly adjacent to the proposed project limits within the last 5 years. (HSIP funding cannot be used to construct the same general type of countermeasures within the same limits within 5 years to ensure agencies do not apply the same Crash Reduction Factors to the same crashes)

For projects proposing high cost improvements/countermeasures such as shoulder widening and horizontal/vertical realignments, applicants must document that they have installed and monitored low-cost improvements which have not adequately addressed the safety issue ("**incremental approach**"). (Limited to 5,000 characters)

The City of Monterey has taken several approaches to contend with the frequency of bicycle crashes and near misses at the recreational trail crossing.

Prior to the existing configuration the trail crossing was at the intersection. During that time period there was no formal space for bicycles and bicycles had to dismount and utilize the crosswalk as pedestrians per state law. Bicyclists at high speeds are not prone to dismount and slow, priority at the time was given to the intersection operations.

In 1980, the crossing was then moved away from the intersection and as a trail crossing, however cars keep the right of way and bicyclist must yield to cars. With the growth that Monterey has experienced in population, tourism, and trail users, collisions at the trail crossing are way to common. Since the reconfiguration the City has tried signage, striping treatments, and a slight jogging of the trail to slow bicyclists down. This has had little to no affected and most bicyclists still fail to yield right of way to vehicles and many of bicyclists

**APPLICATION FORM FOR****CYCLE 9 HIGHWAY SAFETY IMPROVEMENT PROGRAM (HSIP)**Application ID 05-Monterey-1

LAPG 9-A (REV 04/2018)

Page 6 of 9

believe that they have the right of way.

No Highway Safety Improvement Program Funding has been used on this location within the last 5 years or type of countermeasure.

**5. Other Comments**

Explain here if this project requests any exceptions to the rules (such as "PE no more than 25%", "ROW no more than 10%" and "CE no more than 15%" rules), or if you have any other comments. (Limited to 5,000 characters)

In regards to the leading pedestrian phase and protected left turn phase, the relocation of the crosswalk gave the opportunity to combine projects and maximize efficiency in implementing projects.

**APPLICATION FORM FOR****CYCLE 9 HIGHWAY SAFETY IMPROVEMENT PROGRAM (HSIP)**Application ID 05-Monterey-1

LAPG 9-A (REV 04/2018)

Page 7 of 9

**III. Project Cost, Safety Countermeasures and Benefit Cost Ratio (BCR)**

Please transfer the below from the HSIP Analyzer. Please make sure you have reviewed the HSIP Analyzer instructions and completed the HSIP Analyzer correctly.

For some funding set-asides, only the project cost information is required. Please review the [Application Form Instructions](#) for details.

**Total Project Cost**

\$982,800

**HSIP Funds Requested**

\$923,832

**Project's Maximum Federal Reimbursement Ratio  
(e.g. enter 90 for 90%)**

93%

**Countermeasures**Number of Countermeasures Utilized (Max 3): **Countermeasure No. 1** S6: Provide protected left turn phase (left turn lane already exists)**Countermeasure No. 2** S20: Install pedestrian crossing (S.I.)**Countermeasure No. 3** S22: Modify signal phasing to implement a Leading Pedestrian Interval (LPI)**Project Benefit**

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**Benefit Cost Ratio (BCR)**

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**APPLICATION FORM FOR****CYCLE 9 HIGHWAY SAFETY IMPROVEMENT PROGRAM (HSIP)**Application ID 05-Monterey-1

LAPG 9-A (REV 04/2018)

Page 8 of 9

**IV. Implementation Schedule (See [Application Form Instructions](#))**

The local agency is expected to deliver the project per Caltrans Local Assistance [Safety Program Delivery requirements](#). In order for the milestones to be calculated correctly, all fields need to be filled in. For steps that are not applicable, enter "0".

**Target Date for the Project's Amendment into the FTIP:**

01/01/2019

Time for agency to internally staff project and request PE authorization:

1 Month(s)

Typical time for Caltrans and FHWA to process and approve PE authorization:

2 Month(s)

**Proposed PE Authorization Date:**

04/01/2019

(PE Authorization Delivery Milestone)

Will external consultants be required to complete the PE phase of this project?

Yes

Additional time needed to the Delivery Process for hiring PE consultant(s):

6 Month(s) (0 - 6)

Time to prepare environmental studies request:

2 Month(s)

Time to complete CEQA/NEPA studies/approvals:

1 Month(s)

*See PES Form in the LAPM for Typical studies and permits*

Time to complete the Right of Way Acquisition (federal process):

0 Month(s)

*Plan on 18 months minimum for federal process including a condemnation*

Time to complete final PS&amp;E documentation:

12 Month(s)

Other:

0 Month(s)

**Expected Completion Date for the PE Phase:**

01/01/2021

Time for agency to request CON authorization:

1 Month(s)

Typical time for Caltrans and FHWA to process and approve CON authorization:

3 Month(s)

**Proposed CON Authorization Date:**

05/01/2021

(CON Authorization Delivery Milestone)

Time included for the agency's workload-leveling or construction-window needs:

1 Month(s)

Time to award contract with CON contractor (following the federal process, including Board/Council approval, advertise, award, execute and mobilize):

3 Month(s)

Time to complete construction:

12 Month(s)

Time included for closing the CON contract:

2 Month(s)

Other:

0 Month(s)

**Expected Completion Date for the CON Phase:**

11/01/2022

Time to complete the project close-out process:

3 Month(s)

Typical time for Caltrans and FHWA to process and approve project close-out:

3 Month(s)

**Expected Completion Date for the project Close-Out:**

05/01/2023

(Close-Out Delivery Milestone)

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**APPLICATION FORM FOR****CYCLE 9 HIGHWAY SAFETY IMPROVEMENT PROGRAM (HSIP)**Application ID 05-Monterey-1

LAPG 9-A (REV 04/2018)

Page 9 of 9

**V. Application Attachments (See [Application Form Instructions](#))**Please attach all files as needed. **Note: files may not be attachable if file is open. Close before attach.**

1. Engineer's Checklist (Required for all projects) Attachment_1.pdf	View Attachment Remove Attachment
2. Vicinity map/Location map (Required for all projects) Attachment_2.pdf	View Attachment Remove Attachment
3. Project maps/plans showing existing and proposed conditions (Required for all projects) Attachment_3.pdf	View Attachment Remove Attachment
4. Pictures of Existing Condition (Required for all projects) Attachment_4.pdf	View Attachment Remove Attachment
5. HSIP Analyzer (Required for all projects) 05-Monterey-01Calc.pdf	View Attachment Remove Attachment
6. Collision diagram(s) (Not required for this project) Attachment_6.pdf	View Attachment Remove Attachment
7. Collision List(s) (Not required for this project) Attachment_7.pdf	View Attachment Remove Attachment
8. Warrant Studies (Not required for this project)	Attach
9. Letter/email of Support from Caltrans (No SHS involved - not required for this project)	Attach
10. Additional narration, documentation, letters of support, etc. (Optional) Attachment_10.pdf	View Attachment Remove Attachment

Save and Submit

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