PUBLIC REVIEW DRAFT

BERKELEY PEDESTRIAN MASTER PLAN
INITIAL STUDY/MITIGATED NEGATIVE DECLARATION

LSA

December 2009
Errata:

The attached Page 6-11, Section “6.10. PEDESTRIAN PLAZA AND OPEN SPACE PROJECTS” has been inserted in the Final Draft of the Pedestrian Master Plan. This new section replaces Section “6.10. PROJECT SHEETS” which has been moved to Page 6-12 and renumbered to be Section 6.11.
**RECOMMENDATION:** The City of Berkeley should implement the proposed bicycle/pedestrian path segments shown on the 2005 Bicycle Master Plan Update. Those projects are carried forward into this Pedestrian Master Plan. **Appendix A** shows the key proposed bicycle and pedestrian shared-use path projects segments and costs for construction.

### 6.10. PEDESTRIAN PLAZA AND OPEN SPACE PROJECTS

The City of Berkeley has a number of adopted plans and conceptual projects which would construct public plazas as a pedestrian amenity. The goals of such projects vary. They include providing improved pedestrian access to transit, increasing open and green space in “urbanized” areas, and increasing social and commercial opportunities such as window shopping or café type outdoor seating. Following are three examples of such projects, although there are many more citywide. It is critical to note that these example projects exist at the conceptual level and require further study, design, environmental analysis, and public outreach before they can be implemented.

#### 6.10.1. DOWNTOWN BERKELEY BART PLAZA

The City of Berkeley received an MTC Transportation for Livable Communities Planning Grant and, in partnership with BART and AC Transit, carried out a community-based urban design and transportation planning process to develop a concept plan for the larger downtown Berkeley BART plaza area, completed in late 2006. It defines both near-term and long-term improvements for the area with the near-term improvements allowing for a range of future long-term options. The near-term improvements defined in the plan include modifications to the BART entries to provide weather protection over stairs and escalators, as well as enhancements to the sidewalk along the plaza creating opportunities for café and restaurant seating to activate the area. A proposed custom bus canopy structure will provide shelter from the elements and create a centralized bus waiting area.

The City subsequently developed a Project Study Report Equivalent (PSRe) that contains a description of the proposed site design and near-term improvements, along with an analysis of alternatives, detailed project cost estimate, funding analysis, project schedule, and a Preliminary Environmental Analysis Report (PEAR). In 2010, the City will continue Design Development.

**RECOMMENDATION:** As the City of Berkeley continues Design Development of the Downtown Berkeley BART Plaza, the City should ensure that the project is consistent with the recommendations of this Plan as well as thoroughly coordinated with partner agencies such as transit providers BART and AC Transit.

#### 6.10.2. CENTER STREET PLAZA

The City of Berkeley Planning Department is developing a Downtown Streets and Open Space Improvement Plan (SOSIP), funded by a MTC/ABAG Station Area Planning Program Cycle Two Grant. The plan focuses on major street and open space opportunity “subareas” in the Downtown Area. One such subarea is Center Street between Shattuck and Oxford, where a pedestrian plaza with limited vehicle access may be developed. The SOSIP will also propose area-wide improvements at a conceptual level for all subareas (including Center Street), and will make recommendations relating to new street trees and furnishings, lighting, wayfinding signage, public art, and use of public right-of-way by vendors, festivals and special events. The SOSIP will be accompanied by a "financing plan" to estimate the capacity of appropriate funding sources and prioritize projects so that project and maintenance costs fit within that capacity. Because interest in the Center Street Plaza project has been
extremely high, public engagement and design development for the Center Street Plaza will likely go beyond the scope of the SOSIP.

**RECOMMENDATION:** As the City of Berkeley continues to develop the SOSIP and individual subarea projects, such as the Center Street Pedestrian Plaza, the City should ensure appropriate coordination among City departments and between partner agencies, as well as a thorough public outreach process when making critical decisions and before such projects are implemented.

### 6.10.3. NORTH SHATTUCK PEDESTRIAN PLAZA

The need for transit access and pedestrian improvements along North Shattuck was identified in the North Shattuck Urban Design and Circulation Report (2001)\(^3\).\(^4\). This report presents a conceptual plan for a North Shattuck Pedestrian Plaza which includes a transit hub that consolidates area bus stops, as well as new transit shelters, new public seating and bicycle parking.

**RECOMMENDATION:** As the City of Berkeley continues to develop improvements from the North Shattuck Report, the City should ensure appropriate coordination among City departments and outreach to partner agencies and the public before such projects are implemented. Because the project would involve a substantial redesign of the existing streetscape, a thorough public process is recommended.

### 6.11. PROJECT SHEETS

The remainder of this chapter provides specific project improvement sheets for stand-alone intersection, crosswalk or corridor projects throughout Berkeley. These projects involve unique improvements, or had more specific improvements than could fit into the overall citywide project categories described above. This subset of projects was selected from the overall citywide project ranking list based on a number of factors including: 1) the project’s rank in the overall citywide list; 2) a unique location with improvements that could not be accomplished through one of the citywide infrastructure project categories; 3) providing for a range of different project types (intersection, corridor, crosswalk, transit access, school access); and 4) providing for geographic balance of project locations throughout Berkeley.

The projects are listed here in relative order of their ranking in the overall citywide project ranking list. This is not to imply that project implementation will occur in this exact order, consecutively from 1 to 34. Rather, project implementation is likely to be a flexible process that will be based on factors such as funding opportunities, schedules for street overlays and other larger street improvements, and development or redevelopment activities. This list provides the city with a guide for implementation, to be used in conjunction with the citywide infrastructure project lists described above. City staff and the Pedestrian Subcommittee should review these project lists at least on an annual basis to update them based on projects that have been implemented, re-adjust priorities as needed and to consider any opportunities for incorporating these projects into upcoming development or street improvement activities, as well as any upcoming grant funding cycles that could be targeted.

The list of project locations below is in order of highest to lowest priority based on the citywide ranking.

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\(^3\) Approved by Berkeley City Council on January 16, 2001; Resolution No. 60,911-N.S.

\(^4\) **“Resolution Declaring the City Council’s Support for the North Shattuck Plaza Project”** approved on May 16, 2006; Resolution No. 63,297-N.S.
NOTICE OF INTENT TO ADOPT A MITIGATED NEGATIVE DECLARATION FOR THE BERKELEY PEDESTRIAN MASTER PLAN

Notice is hereby given that the City of Berkeley (City) has completed a Draft Initial Study/Mitigated Negative Declaration for the proposed Berkeley Pedestrian Master Plan (Plan) in accordance with the California Environmental Quality Act. The Plan Area includes the area within the City of Berkeley’s jurisdictional boundaries.

The Plan, which defines a pedestrian as “a person moving from place to place, on foot and/or with the use of an assistive mobility device (when that person has a disability and/or medical condition),” is intended to serve as a guide to the development and enhancement of the pedestrian environment and associated facilities within the City. While Berkeley is already considered to be a safe and accessible city for pedestrians – it ranked first in pedestrian safety for a city of its size in California according to one study, and it was designated as the “Most Accessible City in the Nation” by a panel of disability advocates and experts – the Plan builds upon past pedestrian planning efforts and provides tools for City staff to move forward with future development of pedestrian facilities.

The Plan identifies the following specific ways that it would provide guidance to City staff to enhance the pedestrian experience and infrastructure: identify opportunities and constraints with respect to the existing pedestrian system; evaluate trends in pedestrian usage, demand, and safety; identify a list of projects and programs to enhance the pedestrian environment; identify areas where further feasibility studies are necessary to evaluate proposed improvements; prioritize recommended projects and develop a long-term strategy for implementation; identify likely funding sources for identified projects and programs; and provide detailed guidelines, standards, and policies to ensure that all projects undertaken in the City incorporate best practices for pedestrian design.

The Initial Study prepared by the City was undertaken for the purpose of deciding whether the project may have a significant effect on the environment. On the basis of the Initial Study, City staff has concluded that the project will not have a significant effect on the environment and, therefore, has prepared a Draft Mitigated Negative Declaration. Furthermore, no sites within the City are located on the list of hazardous materials sites prepared pursuant to Government Code Section 65962.5.

Copies of the Draft Initial Study/Mitigated Negative Declaration are on file and available for review at the front desk at the Transportation Division of the Public Works Department (1947 Center Street, 3rd Floor, Berkeley, California, 94704).
Center Street, 3rd Floor) and at the Central Library (2090 Kittredge Street). Comments will be received until 5:00 p.m., February 11, 2010. Comments of all Responsible Agencies are requested. Any person wishing to comment on the Draft Initial Study/Mitigated Negative Declaration must submit such comments, in writing, to the City at the following address:

Eric Anderson, Associate Planner - Bicycle and Pedestrian
City of Berkeley Department of Public Works
1947 Center St., 3rd Floor
Berkeley, CA 94704

Verbal comments on the Draft Initial Study/Mitigated Negative Declaration may also be made at the following public meetings:

- Pedestrian Subcommittee of the Transportation Commission (January 27, 2010; 6:00 p.m. – 7:30 p.m.), North Berkeley Senior Center, 1901 Hearst Avenue, Workshop B, 1st Floor
- Berkeley Transportation Commission Meeting (February 4, 2010; 7:00 p.m.), North Berkeley Senior Center, 1901 Hearst Avenue

The City Council will consider the Mitigated Negative Declaration at its regularly scheduled meeting on March 23, 2010 at 6:30 p.m. in the City Council Chambers, 2134 Martin Luther King, Jr. Way. If the City finds that the project will not have a significant effect on the environment, it may adopt the Mitigated Negative Declaration. This means that the City may approve the project without the preparation of an Environmental Impact Report.

Before attending any of the meetings listed above, please confirm the date, time and location at the Community Calendar: http://www.ci.berkeley.ca.us/CalendarEventMain.aspx

Copies of the Final Draft Pedestrian Master Plan and the Mitigated Negative Declaration are available at: http://www.ci.berkeley.ca.us/ContentDisplay.aspx?id=16124
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DRAFT MITIGATED NEGATIVE DECLARATION

**Project Name.** Berkeley Pedestrian Master Plan

**Project Location.** The Master Plan Area includes the area within the City of Berkeley’s jurisdictional boundaries (see Figure 1).

**Summary Description of Project.** The proposed project consists of the adoption of the Berkeley Pedestrian Master Plan (Plan). The Plan, which defines a pedestrian as “a person moving from place to place, on foot and/or with the use of an assistive mobility device (when that person has a disability and/or medical condition),” is intended to serve as a guide to the development and enhancement of the pedestrian environment and associated facilities within the City of Berkeley.

**Findings.** It is hereby determined that, based on the information contained in the attached Initial Study, the project would not have a significant adverse effect on the environment. Mitigation measures necessary to avoid or reduce to a less-than-significant level the project’s potentially significant effects on the environment are detailed on the following pages. These mitigation measures are hereby incorporated and fully made part of this Draft Mitigated Negative Declaration. The City has hereby agreed to incorporate as part of the project and implement each of the identified mitigation measures, which would be adopted as part of the Mitigation Monitoring and Reporting Program.

Date: 1/6/10

[Signature]
1. **Project Title:**
Berkeley Pedestrian Master Plan

2. **Lead Agency Name and Address:**
City of Berkeley
Department of Public Works
1947 Center St., 3rd Floor
Berkeley, CA 94704

3. **Contact Person and Phone Number:**
Eric Anderson
Associate Planner - Bicycle and Pedestrian
City of Berkeley Department of Public Works
Phone: 510-981-7062

4. **Project Location:**
The Master Plan Area (Plan Area) includes the area within the City of Berkeley’s jurisdictional boundaries (see Figure 1).

5. **Project Sponsor's Name and Address:**
City of Berkeley
Department of Public Works
1947 Center St., 3rd Floor
Berkeley, CA 94704

6. **General Plan Designation:**
The Plan Area includes various General Plan designations.

7. **Zoning:**
The Plan Area includes various zones.
Berkeley Pedestrian Master Plan Initial Study
Regional Location and City Jurisdictional Boundary

I:/CBE0803 BerkPedestrian Plan/figures/Fig_1.ai (9/1/09)
8. **Description of Project:**

The proposed project consists of the adoption of the Berkeley Pedestrian Master Plan (Plan). The Plan, which defines a pedestrian as “a person moving from place to place, on foot and/or with the use of an assistive mobility device (when that person has a disability and/or medical condition),” is intended to serve as a guide to the development and enhancement of the pedestrian environment and associated facilities within the City of Berkeley (City).

While Berkeley is already considered to be a safe and accessible city for pedestrians – it ranked first in pedestrian safety for a city of its size in California according to one study, and it was designated as the “Most Accessible City in the Nation” by a panel of disability advocates and experts – the Plan builds upon past pedestrian planning efforts and provides tools for City staff to move forward with future development of pedestrian facilities. The Plan identifies the following specific ways that it would provide guidance to City staff to enhance the pedestrian experience and infrastructure:

- Identify opportunities and constraints with respect to the existing pedestrian system;
- Evaluate trends in pedestrian usage, demand, and safety;
- Identify a list of projects and programs to enhance the pedestrian environment;
- Identify areas where further feasibility studies are necessary to evaluate proposed improvements;
- Prioritize recommended projects and develop a long-term strategy for implementation;
- Identify likely funding sources for identified projects and programs; and
- Provide detailed guidelines, standards, and policies to ensure that all projects undertaken in the City incorporate best practices for pedestrian design.

The following section provides the planning context for the Plan, and describes the Plan’s components in more detail.

a. **Project Background.** Objective Six of the Berkeley General Plan Transportation Element articulates the City’s vision for its pedestrian environment: “Create a model bicycle- and pedestrian-friendly city where bicycling and walking are safe, attractive, easy, and convenient forms of transportation and recreation for people of all ages and abilities.”1 This text prompted the creation of the Plan, which is intended to support and implement the above objective, and build upon other goals, policies, actions, and implementation measures in the Transportation Element – namely, policies T-48 through T-55 – related to improving the pedestrian environment within the City. These policies, and all other policies in the General Plan, were evaluated in the City of Berkeley Draft General Plan Final EIR, which was certified in July 2001.

Several other planning and policy documents provide context for the recommendations contained in the Plan. These documents, which themselves contain policies related to the improvement of the pedestrian environment, include: the Berkeley Pedestrian Charter; City of Berkeley Area Plans (e.g., Downtown Area Plan); other City of Berkeley Plans (e.g., Aquatic Park Master Plan); other local plans (e.g., University of California Long Range Development Plan); regional plans (e.g., East Bay

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Regional Parks District Master Plan); and routine accommodation policies\(^2\) (e.g., Caltrans Deputy Directive 64).

b. **Plan Components.** The Plan is divided roughly into two main components. The first component (Chapters 1 through 5) provides background on a variety of issues related to the Plan’s origins and relationship to other planning documents (see discussion above), describes the existing pedestrian environment in Berkeley, and evaluates existing and forecasted pedestrian movements, volumes, and safety within the City. The second component (Chapters 6 through 10) contains recommendations for specific projects, programs, accessibility improvements, and zoning amendments related to improving the pedestrian environment. The following section describes these recommendations (in the second component of the Plan) in further detail.

1. **Recommended Projects.** In order to identify the most pressing improvement projects, City staff analyzed over 300 locations with a potential need for improvement. Then, with the help of public input, technical review, and development of a system to rank and prioritize projects according to criteria such as community access, transit connectivity, usage and demand, safety, and need, staff established a prioritized list of the top 100 intersections with the highest need for pedestrian improvements (see Figure 2 for a map of these locations).

The Plan uses the top 100 intersections to propose two categories of recommended projects: 1) City-wide pedestrian infrastructure improvement projects and 2) specific stand-alone intersection, crosswalk, or corridor projects related to the pedestrian environment. The City-wide projects, which include all 100 of the high-priority intersections, are organized by project type (as opposed to being location-specific), and apply to locations throughout Berkeley. The Plan identifies the following City-wide project types:

- Infill of sidewalk gaps;
- Installation of audible signals along corridors;
- Installation of truncated domes;\(^3\)
- High visibility crosswalk installation;
- Installation of perpendicular curb ramps;
- Standard crosswalk and advance warning signage;
- Priority intersections for signal timing adjustments;
- Parking restrictions (red curbs) adjacent to intersections;
- Installation of countdown signal heads;
- Speed feedback sign installation;
- Safe routes to schools;
- Pathway and stairway improvements;

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\(^2\) In this case, routine accommodation policies are policies intended to ensure that pedestrian needs are considered in the planning and development of transportation projects.

\(^3\) The tactile surfaces (generally yellow in the Bay Area) that are used at intersections to assist blind and vision-impaired pedestrians.
• Multi-use path projects; and
• Improvements to signalized intersections with high pedestrian collision rates.

Full descriptions of projects that fall within each of these categories are included in Appendix A of this Initial Study.

As previously noted, the second category of recommended projects includes specific improvements that may not fit into only one of the City-wide project types listed above, and sometimes encompass larger areas than a single intersection (e.g., a corridor that includes several blocks on the same street). While some of these stand-alone projects overlap with locations identified in the list of 100 high-priority intersections, they do not necessarily include locations from this list. City staff used the following criteria to pick these 34 high priority stand-alone projects: 1) the project location’s ranking on the top 100 list (if applicable); 2) the uniqueness of the project’s location, potentially requiring improvements to span across two or more of the project types identified for City-wide projects; 3) the range of project types (e.g., intersection, corridor, crosswalk, transit access, school access, etc) that it encompasses; and 4) the project location’s relationship to other high-priority projects.

Although the Plan ranks the 34 stand-alone projects, implementation of these projects would not necessarily proceed in this order; the variability of factors such as funding availability and schedules for other concurrent improvements would require that City staff review projects on an annual basis in order to update priorities and identify new opportunities for incorporating pedestrian improvements into other projects. The list of locations for the 34 stand-alone projects is included below, and is ordered according to their ranking at the time the City published the Draft Plan (see Figure 2 for a map of these projects):

1. University Avenue from San Pablo Avenue to 7th Street
2. University Avenue and Shattuck Avenue
3. Ashby Bay Area Rapid Transit (BART) Station improvements
4. Sacramento Street from University Avenue to Addison Street
5. Acton Street from Addison Street to University Avenue
6. Martin Luther King Jr. Way from Allston Way to University Avenue
7. University Avenue and Milvia Street
8. Ashby Avenue from California Street to San Pablo Avenue
9. Alcatraz Avenue and Adeline Street
10. Shattuck Avenue between Vine Street and Hearst Avenue
11. Shattuck Avenue from Russell Street to Ward Street
12. San Pablo Avenue from Addison Street to Bancroft Way
13. Bancroft Way and Oxford Street
14. Solano Avenue from Colusa Avenue to The Alameda
15. San Pablo Avenue and Delaware Street
Back of Figure 2
16. Shattuck Avenue and Berkeley Way  
17. University Avenue and Grant Street  
18. College Avenue from Ashby Avenue to Russell Street  
19. The Alameda/Martin Luther King Jr. Way and Hopkins Street  
20. Shattuck Avenue and Woolsey Street  
21. University Avenue and McGee Avenue  
22. Dwight Way at Alta Bates Hospital (between Fulton Street and Shattuck Avenue)  
23. Alcatraz Avenue and California Street  
24. North Berkeley BART Station  
25. San Pablo Avenue and Cedar Street  
26. Telegraph Avenue and Ashby Avenue  
27. Telegraph Avenue and Parker Street  
28. Rose Street and Sacramento Street  
29. Gilman Street and Santa Fe Avenue  
30. Addison Street and Jefferson Avenue  
31. Sacramento Street and Oregon Street  
32. Hearst Avenue UC Berkeley Campus Sidewalk  
33. Hearst Avenue and Gayley Street  
34. Gilman Street and Curtis Street and the Ohlone Greenway

Full descriptions of each of these high priority stand-alone projects are included in Appendix A of this Initial Study.

(2) **Recommended Programs.** The Plan provides recommendations for a variety of public awareness and education programs, which fall into four categories: “Pedestrian Awareness Programs,” “Pedestrian Education Programs,” the “Safe Routes to School Program,” and “Enforcement of Pedestrian Laws and Traffic Motor Vehicle Code.” Each of these categories is described in further detail below.

- **Pedestrian Awareness Programs.** The “Pedestrian Awareness Programs” consists of programs that are intended promote walking as a means of transportation and increase pedestrian safety. These programs include: 1) the “Everybody Walks in Berkeley” campaign; 2) the “Walk Bikes on Sidewalk, Ride Bikes on Street” campaign; 3) public service announcements on television; 4) providing walking maps and guides; and 5) other City-sponsored promotions such as “commuter of the month,” exhibits, and events.

- **Pedestrian Education Programs.** The “Pedestrian Education Programs” consist of programs that are intended to inform residents of hazardous pedestrian environments and teach skills to make walking a more safe and attractive means of transportation. These programs include: 1) safety
education campaigns; 2) enforcement education (in cooperation with the Berkeley Police Department); 3) senior citizen and disabled pedestrian education programs; 4) a teen and adult pedestrian education video; and 5) educating employers about the “Cash-Out” program.\footnote{The “Cash-Out” program is a State law that requires certain employers who provide vehicle parking for their employees to offer a cash allowance in lieu of a parking space. The law is intended to encourage alternative modes of transportation for commuting.}

- **Safe Routes to School Program.** The “Safe Routes to School” program consists of a variety of measures to promote walking or bicycling to school among students and improving traffic-related safety near schools. These programs, which include education, incentives, law enforcement, and engineering components, typically result from partnerships between the City, schools, volunteers, and law enforcement officials.

- **Enforcement of Pedestrian Laws and Traffic Motor Vehicle Code.** The “Enforcement of Pedestrian Laws and Traffic Motor Vehicle Code” programs are intended to target enforcement of pedestrian laws at scheduled times, and in areas where pedestrian volume is high and safety is of concern. These programs include: 1) targeted enforcement of pedestrian-related laws; 2) crosswalk enforcement; 3) use of a radar trailer; and 4) neighborhood speed watch,” where law enforcement officials loan out a radar to a citizen to record incidents of speeding.

(3) **Accessibility Recommendations.** Berkeley has long been considered one of the most accessible cities for persons with disabilities. Major commitments from the City to improve the pedestrian environment for disabled persons has included: establishing a Commission on Disability; establishing a Disability Compliance Program within the Public Works Department charged with ensuring that the City is in compliance with the Americans with Disabilities Act (ADA), as well as implementing other infrastructure improvements for the betterment of disabled persons; and becoming the first city to provide curb ramps for wheelchairs over 30 years ago. However, much of the City’s existing infrastructure that is intended to provide ease of mobility for disabled persons is in need of improvement or replacement, and accessibility in some neighborhoods lags behind the rest of the City. In this chapter, the Plan provides several recommendations for specific improvements to infrastructure (e.g., countdown pedestrian signals at signalized intersections), as well as new programs (e.g., providing ADA training to City staff).

(4) **Zoning and Design Review Recommendations.** The Plan includes recommendations to changes in the City’s Zoning Code and Design Review Guidelines that would require new development, redevelopment, and other capital improvement projects to improve the local pedestrian environment. Recommendations include new requirements related to zoning and site design (e.g., locating building entrances on major abutting streets rather than parking areas, ensuring unimpeded pedestrian sight lines, requiring pedestrian-scale lighting adjacent to new buildings, creating pedestrian activity zones throughout the City), as well as circulation and parking (e.g., ensuring pedestrian access through parking lots, requiring driveways to be located away from existing intersections to ensure pedestrian safety, providing adequate pedestrian drop-off zones in front of building entrances). These recommendations are also intended to inform updates and revisions to the Berkeley General Plan Land Use Element, Circulation Element, and City engineering standards.

The Plan is considered an implementation measure of the General Plan and does not require adoption by the Planning Commission or City Council.
9. **Surrounding Land Uses and Setting:** As previously described, the Plan Area spans the entire City of Berkeley. The City is bordered to the north by the City of Albany, to the east by Tilden Park Regional Park, to the south by the City of Oakland and the City of Emeryville, and to the west by the San Francisco Bay.

10. **Other agencies whose approval may be required:**

   - California Department of Transportation (Caltrans)
   - Bay Area Rapid Transit (BART)
   - Alameda-Contra Costa Transit (AC Transit)
Environmental Factors Potentially Affected:

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a “Potentially Significant Impact” as indicated by the checklist on the following pages.

☐ Aesthetics  ☐ Agricultural Resources  ☐ Air Quality
☐ Biological Resources  ☐ Cultural Resources  ☐ Geology/Soils
☐ Hazards & Hazardous Materials  ☐ Hydrology/Water Quality  ☐ Land Use/Planning
☐ Mineral Resources  ☐ Noise  ☐ Population/Housing
☐ Public Services  ☐ Recreation  ☐ Transportation/Traffic
☐ Utilities/Service Systems  ☐ Mandatory Findings of Significance

**Determination.** (To be completed by the Lead Agency.)

On the basis of this initial evaluation:

☐ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

☐ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

☐ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

☐ I find that the proposed project MAY have a “potentially significant impact” or “potentially significant unless mitigated” impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

☐ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

[Signature]

Date: 1/6/10

Printed Name
## ENVIRONMENTAL CHECKLIST

<table>
<thead>
<tr>
<th>Potential Impact</th>
<th>Potentially Significant Impact</th>
<th>Less Than Significant Impact</th>
<th>No Impact</th>
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### I. AESTHETICS. Would the project:

- **a) Have a substantial adverse effect on a scenic vista?** (Less-than-Significant Impact)

The proposed Plan would result in development of pedestrian improvements on existing rights-of-way within the City. These projects, such as infill of sidewalk gaps, perpendicular curb ramps, parking restrictions, and pathway improvements, would consist primarily of at-grade, surface-level improvements that would not change scenic vistas. New signage could be installed along roadways and pathways throughout the City as part of the Plan. However, this new signage would be of a scale that would not obstruct scenic views, or have other impacts on scenic vistas within Berkeley.

- **b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a State scenic highway?** (Less-than-Significant Impact)

The proposed Plan would result in development of pedestrian improvements on existing rights-of-way within the City. These improvements would generally result in at-grade, surface-level improvements (e.g., paving, painting red curbs, sign installation), and would not damage scenic resources. The closest State scenic highway to the Plan Area is a section of I-580 in Oakland, approximately 2 miles south of the City’s jurisdictional border. Pedestrian projects that would be constructed as a result of implementation of the Plan would not be visible from this highway. Therefore, the Plan would not affect scenic resources within a State scenic highway.

- **c) Substantially degrade the existing visual character or quality of the site and its surroundings?** (Less-than-Significant Impact)

As previously noted, the proposed Plan would result in development of pedestrian improvements on existing rights-of-way. These improvements would generally consist of at-grade, surface-level improvements to existing pedestrian infrastructure, and would not result in significant changes to the visual character of the City. Although projects such as pathway improvements, installation of
countdown signal heads, and removal of driveways close to intersections could alter the visual character of certain parts of the City, such effects would be minor, and would not adversely change the area’s visual character.

d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area? (Less-than-Significant Impact)

The proposed Plan includes recommendations for several projects that would result in the installation of new pedestrian-scale lighting or improvements to existing lighting along pedestrian pathways or streetscapes (e.g., certain projects that fall within the “Streetscape Enhancements” project type and several other stand-alone projects). Implementation of the City’s standard conditions of approval related to new lighting projects (i.e., demonstrating that new light sources would be shielded and directed downward and away from property lines to prevent excessive glare beyond the pedestrian corridor) would reduce potentially significant impacts related to light and glare to a less-than-significant level.

II. AGRICULTURAL RESOURCES. In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. Would the project:

a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to a non-agricultural use? (No Impact)

No agricultural resources of the type specified here are located within or near the City of Berkeley, and the City has not contained working farmland in recent history (although community gardens,
which would be unaffected by the Plan, are located throughout the City). The entire City is classified as “Urban and Built-Up Land” by the State Department of Conservation, Farmland Mapping and Monitoring Program and no land is zoned for agricultural use. Therefore, implementation of the Plan would not result in the conversion of agricultural land to non-agricultural uses.

b) Conflict with existing zoning for agricultural use, or a Williamson Act contract? (No Impact)

No land within the City is zoned for agricultural use, nor is any of the City under a Williamson Act contract.

c) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use? (No Impact)

Implementation of the proposed Plan would not result in the extension of infrastructure into an undeveloped area, the development of urban uses on a greenfield site, or other physical changes that would indirectly result in the conversion of farmland to non-agricultural uses.

III. AIR QUALITY. Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:

<table>
<thead>
<tr>
<th>Potentially Significant Impact</th>
<th>Potentially Significant Unless Mitigation Incorporated</th>
<th>Less Than Significant Impact</th>
<th>No Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) Conflict with or obstruct implementation of the applicable air quality plan?</td>
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<tr>
<td>b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?</td>
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<tr>
<td>c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or State ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?</td>
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<td></td>
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<tr>
<td>d) Expose sensitive receptors to substantial pollutant concentrations?</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>e) Create objectionable odors affecting a substantial number of people?</td>
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</table>

---

a) Conflict with or obstruct implementation of the applicable air quality plan? (Less-than-Significant Impact)

As previously noted, the proposed Plan would result in development of pedestrian improvements on existing rights-of-way within the City. While some projects would result in minor alterations to local pedestrian, bicycle, and vehicular circulation patterns (e.g., changes to vehicular turn lanes, removal of driveways near intersections to improve pedestrian safety), by their nature none of the recommend ed projects in the Plan would increase traffic congestion such that there would be a substantial increase in vehicular pollutants or greenhouse gas emissions, conflict with or obstruct implementation of an air quality plan, violate air quality standards, or expose sensitive receptors to pollutants or objectionable odors. Please refer to Section XV, Transportation/Traffic, for additional detail about the Plan’s potential effects on traffic volumes. Projects that would be implemented under the Plan are intended to enhance the pedestrian environment, with the larger objective of making walking a more attractive and convenient mode of transportation within the City. An increase in walking as an alternative to use of the automobile could thereby reduce overall vehicular emissions in the City and improve regional air quality.

Construction of pedestrian improvement projects could result in temporary air quality impacts as ground disturbance occurs to install new pedestrian features, such as sidewalks and street signs. However, implementation of the City’s standard construction-period emissions and dust control measures would ensure that these impacts would be less than significant. Therefore, the proposed Plan would not result in significant air quality impacts.

b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation? (Less-than-Significant Impact)

Please see III.a.

c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or State ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)? (Less-than-Significant Impact)

Please see III.a.

d) Expose sensitive receptors to substantial pollutant concentrations? (Less-than-Significant Impact)

Please see III.a.

e) Create objectionable odors affecting a substantial number of people? (Less-than-Significant Impact)

Please see III.a.
IV. BIOLOGICAL RESOURCES. Would the project:

a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service? (No Impact)

b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service? (No Impact)

c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) Through direct removal, filling, hydrological interruption, or other means? (No Impact)

d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites? (No Impact)

e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance? (No Impact)

f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan or other approved local, regional, or State habitat conservation plan? (No Impact)

The proposed Plan would result in development of pedestrian improvements on existing rights-of-way within the City and no specific projects recommended in the Plan would require the removal of a significant number of trees. If individual trees would be removed to allow for the implementation of pedestrian features, such removal would not have a significant impact on protected species due to the location of the project (in an urbanized area, where wildlife is adapted to urban conditions). Due to
the scale and nature of specific projects outlined in the Plan, it is not expected that large swaths of the City’s tree canopy would be removed to implement pedestrian improvements. Several proposed improvements (e.g., certain projects that fall within the “Streetscape Enhancements” project type, as well as other stand-alone projects) include the planting of street trees to enhance the pedestrian environment; new street trees would incrementally contribute to the quality of urban wildlife habitat. No projects under the Plan would result in significant impacts to biological resources, including: habitat for special status species; wetlands or any riparian habitat; movement of migratory species; or protected trees.

b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service? (No Impact)

Please see IV.a.

c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means? (No Impact)

Projects under the Plan would generally not require substantial excavation and fill, and none of them would be located within or adjacent to wetlands. Therefore, implementation of the Plan would not have an adverse effect on federally protected wetlands.

d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites? (No Impact)

Please see IV.a.

e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance? (No Impact)

Please see IV.a.

f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan or other approved local, regional, or State habitat conservation plan? (No Impact)

The Plan Area is not within any adopted or other approved local, regional, or State habitat conservation plan, and would thus not conflict with such plans.
V. CULTURAL RESOURCES. Would the project:

a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5? (Potentially Significant Unless Mitigation Incorporated)

The proposed Plan would result in development of pedestrian improvements on existing rights-of-way within the City, which are likely to have been subject to ground disturbance in the recent past. Locations for projects that would be implemented under the Plan are primarily paved, disturbed areas that are not known to contain (or are unlikely to contain) historical resources. Furthermore, these projects primarily consist of surface-level, at-grade paving improvements (e.g., curb cuts, infill of sidewalk gaps) or above-grade improvements (e.g., installation of audible signals along pedestrian corridors), implementation of which would require no or minimal excavation or earthworking activities, and which would have little potential to affect unidentified archaeological resources.

However, it is possible that historical resources, as defined by CEQA Guidelines section 15064.5, could be encountered during construction activities. Implementation of the following mitigation measure would ensure that potential impacts to historic resources that may be encountered during construction for all projects under the Plan would be reduced to a less-than-significant level.

Mitigation Measure CULT-1: Should an archaeological resource be encountered during project construction activities, the construction contractor shall halt construction in the vicinity of the find and immediately notify the City of Berkeley. Construction activities shall be redirected and a qualified archaeologist, in consultation with the City, shall: 1) evaluate the archaeological deposit to determine if it meets the CEQA definition of a historical or unique archaeological resource and 2) make recommendations about the treatment of the deposit, as warranted. If the deposit does meet the CEQA definition of a historical or unique archaeological resource, then it shall be avoided to the extent feasible by project construction activities. If avoidance is not feasible, then adverse effects to the deposit shall be mitigated as specified in CEQA Guidelines section 15126.4(b) (for historic resources) or CEQA section 21083.2 (for unique archaeological resources). This mitigation may include, but is not limited to, a thorough recording of the resource on Department of Parks and Recreation Form 523 records, or archaeological data.
recovery excavation. If data recovery excavation is warranted, *CEQA Guidelines* section 15126.4(b)(3)(C), which requires the preparation of a data recovery plan prior to data recovery excavation, shall be followed. If the significant identified resources are unique archaeological resources, mitigation of these resources shall be subject to the limitations on mitigation measures for archaeological resources identified in CEQA sections 21083.2(c) through 21083.2(f).

As part of the Plan, the City would work with the Berkeley Path Wanderers Association, a non-profit community group, to improve the network of over 130 historic pedestrian pathways and stairways in the Berkeley Hills (e.g., projects that fall within the “pathway and stairway improvements” project type). Some of these pathways are not ADA-compliant, impassible, steep, or currently unbuilt. Implementation of the following mitigation measure would ensure that improvements to these pathways and stairways would not compromise the historic integrity of the pathway network and would result in less-than-significant impacts to historical resources:

**Mitigation Measure CULT-2:** The City shall ensure that improvements to historic pathways and stairways in the Berkeley Hills are constructed and designed in accordance with their existing design, and that improvements maintain the historic integrity of these pathways and stairways.

b) *Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5? (Potentially Significant Unless Mitigation Incorporated)*

It is possible, but unlikely, that archaeological resources, as defined by CEQA section 21083.2(g) could be encountered during construction activities. Implementation of Mitigation Measure CULT-1 would ensure that impacts to any archaeological resources discovered during construction would be reduced to a less-than-significant level.

c) *Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature? (Potentially Significant Unless Mitigation Incorporated)*

The proposed Plan would result in development of pedestrian improvements on existing rights-of-way within the City. Locations for projects that would be implemented under the Plan are primarily paved, disturbed areas that are not known to contain (or are unlikely to contain) paleontological resources. In addition, implementation of recommended projects in the Plan would require no or minimal excavation or earthworking activities. However, there is a possibility that construction activities could uncover sub-surface paleontological resources. Implementation of the following mitigation measure for all projects under the Plan would ensure that potential impacts to paleontological resources would be reduced to a less-than-significant level.

**Mitigation Measure CULT-3:** If paleontological resources are encountered during site preparation or grading activities, all work within 25 feet of the discovery shall be redirected until a qualified paleontologist has assessed the discoveries and made recommendations. Paleontological resources include fossil plants and animals, and evidence of past life such as trace fossils and tracks.
If the paleontological resources are found to be significant, adverse effects to such resources shall be avoided by project activities to the extent feasible. If project activities cannot avoid the resources, the adverse effects shall be mitigated. In accordance with CEQA Guidelines Section 15126.4(b)(3), mitigation may include data recovery and analysis, preparation of a final report, and the formal transmission or delivery of any fossil material recovered to a paleontological repository, such as the University of California Museum of Paleontology (UCMP). Upon completion of project activities, the final report shall document methods and findings of the mitigation and be submitted to the City of Berkeley and a suitable paleontological repository.

d) Disturb any human remains, including those interred outside of formal cemeteries? *(Potentially Significant Unless Mitigation Incorporated)*

The potential to uncover Native American human remains exists in locations throughout California, even in urbanized areas. Although not anticipated to occur in the near-surface areas that could be subject to ground disturbance as part of Plan implementation, human remains could be identified during site-preparation and grading activities for recommended projects under the Plan, resulting in a significant impact to Native American cultural resources. Implementation of the following mitigation measure for all projects under the Plan would reduce potential adverse impacts to human remains to a less-than-significant level.

**Mitigation Measure CULT-4:** If human remains are encountered during construction activities, work within 25 feet of the discovery shall be redirected and the Alameda County Coroner notified immediately. At the same time, an archaeologist shall be contacted to assess the situation and consult with the appropriate agencies. If the human remains are of Native American origin, the Coroner must notify the Native American Heritage Commission within 24 hours of this identification. The Native American Heritage Commission will identify a Most Likely Descendant (MLD) to inspect the site and provide recommendations for the proper treatment of the remains and associated grave goods.

Upon completion of the assessment, the archaeologist shall prepare a report documenting the methods and results, and provide recommendations for the treatment of the human remains and any associated cultural materials, as appropriate and in coordination with the recommendations of the MLD. The report shall be submitted to the City of Berkeley and the Northwest Information Center.
VI. GEOLOGY AND SOILS. Would the project:

a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:

i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.

ii) Strong seismic ground shaking?

iii) Seismic-related ground failure, including liquefaction?

iv) Landslides?

b) Result in substantial soil erosion or the loss of topsoil?

c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?

d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?

e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?

a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:

i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? (No Impact)

Locations for projects that would be implemented under the Plan are paved or otherwise developed areas already subject to pedestrian use. These projects primarily consist of surface-level, at-grade
paving improvements (e.g., curb cuts, infill of sidewalk gaps) and other above-grade improvements (e.g., installation of audible signals along pedestrian corridors), and would not increase risks to human health or safety related to fault rupture, ground shaking, ground failure, or liquefaction compared to existing conditions. Proposed improvements would be constructed to City standards, which include compliance with standard geotechnical engineering standards.

ii) Strong seismic ground shaking? (No Impact)

Please refer to VI.a.

iii) Seismic-related ground failure, including liquefaction? (No Impact)

Please refer to VI.a.

iv) Landslides? (No Impact)

Please refer to VI.a.

b) Result in substantial soil erosion or the loss of topsoil? (Less-than-Significant Impact)

Exposed soils could be subject to erosion during construction and grading activities for projects that would be implemented under the Plan, particularly pathway and stairway improvements in steep areas in the Berkeley Hills. The potential for soil erosion exists during the period of earthwork activities and between the time when earthwork is completed and new vegetation is established or hardscape is installed. Construction of projects in areas susceptible to erosion would comply with City standards for mitigating potentially significant construction-period impacts related to loss of topsoil and erosion (e.g., using standard erosion-control features, such as hay bales, at sites where ground is disturbed) and adherence to National Pollutant Discharge Elimination System (NPDES) stormwater permit provisions (if required). Adherence to these standards would ensure that impacts related to erosion would be less than significant.

c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse? (No Impact)

Locations for projects that would be implemented under the Plan are paved or otherwise developed areas already subject to pedestrian use, and these projects would not introduce new uses or structures to these locations. Furthermore, recommended projects primarily consist of surface-level, at-grade paving improvements (e.g., curb cuts, infill of sidewalk gaps) and other above-grade improvements (e.g., installation of audible signals along pedestrian corridors), and would not result in increased risk of landslides, lateral spreading, subsidence, liquefaction, or collapse when compared to existing conditions. Proposed improvements would be constructed to City standards, which include compliance with standard geotechnical engineering standards.
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property? (No Impact)

As previously noted, the proposed Plan would result in development of pedestrian improvements on existing rights-of-way within the City that are already paved or otherwise developed areas subject to pedestrian use. Some of these locations could contain expansive soils that could damage new paved areas, if improvements are not properly constructed. However, all pedestrian improvements undertaken as part of the Plan would be constructed in compliance with standard geotechnical engineering standards, which would ensure that improvements would not be substantially damaged by expansive soils.

e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water? (No Impact)

Projects that would be implemented under the Plan would not require the treatment or disposal of wastewater; therefore, the proposed Plan would have no impacts associated with soils incapable of supporting alternative wastewater disposal systems.

<table>
<thead>
<tr>
<th>VII. HAZARDS AND HAZARDOUS MATERIALS.</th>
<th>Potentially Significant Impact</th>
<th>Potentially Significant Unless Mitigation Incorporated</th>
<th>Less Than Significant Impact</th>
<th>No Impact</th>
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<tbody>
<tr>
<td>a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?</td>
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<td>b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?</td>
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<tr>
<td>c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?</td>
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<tr>
<td>d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?</td>
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</table>
For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?

For a project located within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?

Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?

Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials? (Less-than-Significant Impact)

Although small quantities of commercially available hazardous materials could be used during project construction activities (e.g., oil, gasoline, paint) and for landscape maintenance within project areas, these materials would not be used in sufficient quantities to pose a threat to human or environmental health. Therefore, development of projects that would be implemented under the Plan would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.

Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment? (Less-than-Significant Impact)

None of the projects that would be implemented under the Plan would result in emissions of hazardous materials or the regular handling of hazardous waste. Hazardous materials, including commercially-available pesticides, fuels, and paint, could be used temporarily during construction of certain projects. However, the use of these materials would not pose a hazard to the public or the environment.

Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school? (Less-than-Significant Impact)
Please see VII.b. The use of hazardous materials such as commercially-available pesticides, fuels, and paint during construction of certain projects would not pose a hazard to students at schools in Berkeley or surrounding cities.

d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment? (No Impact)

No sites within the City are located on the list of hazardous materials sites prepared pursuant to Government Code Section 65962.5.6 Therefore, implementation of the Plan would not pose a significant health hazard to the public or environment related to contaminated brownfield sites.

e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area? (No Impact)

Oakland International Airport, which is the closest airport to the City, is located approximately 8 miles southeast of the site. No projects that would be implemented under the Plan would be located in an airport land use plan or within 2 miles of a public or public use airport. Therefore, implementation of the Plan would not expose people to airport-related hazards.

f) For a project located within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area? (No Impact)

The project site is not located within the vicinity of a private airstrip. Therefore, implementation of the Plan would not expose people to airport-related hazards.

g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan? (Less-than-Significant Impact)

Implementation of the proposed Plan would enhance pedestrian access and circulation within the City, and would improve the ability of pedestrians to travel in the event of an emergency or evacuation. Implementation of the Plan would not impair the implementation of or substantially interfere with an adopted emergency response plan or emergency evacuation plan. As discussed in Section XV, Transportation/Traffic, the Plan is not expected to substantially increase vehicle congestion such that emergency access or evacuation would be hindered. Implementation of General Plan Policy T-28, Emergency Access (see Section XV, Traffic/Transportation), would ensure that fire truck access is maintained on all roads.

h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands? (Less-than-Significant Impact)

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Recommended projects that would be developed under the Plan primarily consist of surface-level, at-grade paving improvements (e.g., curb cuts, infill of sidewalk gaps) and other above-grade improvements (e.g., installation of audible signals along pedestrian corridors) on existing rights-of-way. These projects would not introduce inappropriate uses or materials to these rights-of-way – for example, introducing housing or a large amount of fire-susceptible vegetation – that would increase the risk of wildland fires at these locations. Completing the pathway network in the Berkeley Hills, which is proposed in the Plan, would reduce the hazard posed by wildland fires by providing an alternate escape route for residents in the event of a fire. Therefore, the Plan would have a less-than-significant (and potentially beneficial) effect on wildfire risks.

VIII. HYDROLOGY AND WATER QUALITY. Would the project:

a) Violate any water quality standards or waste discharge requirements?  □  □  ■  □

b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?  □  □  ■  □

c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?  □  □  ■  □

d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?  □  □  ■  □

e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?  □  □  ■  □

f) Otherwise substantially degrade water quality?  □  □  ■  □
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?

h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?

i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding of as a result of the failure of a levee or dam?

j) Inundation by seiche, tsunami, or mudflow?

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<th>g)</th>
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<tbody>
<tr>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
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</table>

a) Violate any water quality standards or waste discharge requirements? *(Less-than-Significant Impact)*

Projects that would be developed under the proposed Plan would be within existing rights-of-way, most of which are already paved. However, some projects (e.g., filling of sidewalk gaps) would increase impervious surfaces at certain locations. Water quality runoff impacts would be less-than-significant with implementation of standard City storm water management measures (e.g., use of straw bales to reduce soil erosion, and installation of perforated curbs and permeable paved surfaces) and adherence to National Pollutant Discharge Elimination System (NPDES) stormwater permit provisions (if required). None of the projects would violate water quality standards or waste discharge requirements by generating large volumes of polluted storm water runoff.

b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)? *(Less-than-Significant Impact)*

None of the projects that would be developed under the Plan would require the use or extraction of groundwater. Although some projects could introduce new impervious surfaces, the locations of these projects are within existing rights-of-way, most of which are already paved. These projects would not substantially interfere with groundwater recharge, nor would they deplete groundwater supplies.

c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site? *(Less-than-Significant Impact)*

Projects that would be developed under the proposed Plan would be within existing rights-of-way, most of which are already paved. Although some projects would slightly change drainage patterns at
certain locations (e.g., through changes in curb cuts or the construction of new sidewalk segments), these alterations would be minor and would not change the course of a stream or river, or otherwise cause changes in the drainage pattern such that substantial on- or off-site erosion/siltation or flooding would occur.

d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site? (Less-than-Significant Impact)

Refer to Section VIII.c. None of the projects that would be developed under the proposed Plan would substantially alter existing drainage or flooding patterns.

e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff? (Less-than-Significant Impact)

Please see VIII.a and VIII.c.

f) Otherwise substantially degrade water quality? (Less-than-Significant Impact)

Please see VIII.a.

g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map? (No Impact)

None of the projects that would be developed under the Plan include housing. Therefore, the Plan would not result in the placement of housing in a floodplain.

h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows? (Less-than-Significant Impact)

Projects that would be developed under the Plan primarily consist of surface-level, at-grade paving improvements (e.g., curb cuts, infill of sidewalk gaps) and other above-grade improvements (e.g., installation of audible signals along pedestrian corridors) on existing rights-of-way. None of these projects would result in the placement of structures in an area prone to flooding that could impede or redirect flood flows.

i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding of as a result of the failure of a levee or dam? (Less-than-Significant Impact)

A portion of the City is located within the Dam Failure Inundation Area for Berryman Reservoir. Although development of the Plan’s recommended projects could result in a small increase in the amount of pedestrian use within the City, the increase in the number of people exposed to flooding risks as a result of a failure of a levee or dam would not be considered significant.

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j) Inundation by seiche, tsunami, or mudflow? (Less-than-Significant Impact)

Projects that would be developed under the proposed Plan would be located within existing rights-of-way, in locations that are already subject to pedestrian use. Furthermore, all of the projects and intersections shown on Figure 2 are located at sufficiently high elevations and sufficiently inland from the San Francisco Bay that seiche and tsunami are highly unlikely to be experienced. Therefore, implementation of the Plan would not increase potential risks related to inundation by seiche, tsunami, or mudflow.

<table>
<thead>
<tr>
<th>IX. LAND USE AND PLANNING. Would the project:</th>
<th>Potentially Significant Impact</th>
<th>Potentially Significant Unless Mitigation Incorporated</th>
<th>Less Than Significant Impact</th>
<th>No Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) Physically divide an established community?</td>
<td>☐</td>
<td>☐</td>
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<tr>
<td>b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?</td>
<td>☐</td>
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<tr>
<td>c) Conflict with any applicable habitat conservation plan or natural community conservation plan?</td>
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</table>

a) Physically divide an established community? (No Impact)

The physical division of an established community typically refers to the construction of a physical feature (such as an interstate highway or railroad tracks) or removal of a means of access (such as a local road or bridge) that would impair mobility within an existing community, or between a community and outlying area.

Projects that would be implemented under the proposed Plan would occur on existing rights-of-way within the City. Although some projects could result in minor alterations to local pedestrian, bicycle, and vehicular circulation patterns (e.g., changes to vehicular turn lanes, removal of driveways near intersections to improve pedestrian safety), they would not result in the division of an established community. Furthermore, the Plan is intended to improve the pedestrian environment, including increasing overall pedestrian connectivity, as well as access for disabled persons. Therefore, the Plan would not physically divide an established community, and would benefit community integrity and connectivity.
b) **Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?** *(No Impact)*

As noted in the description of the proposed Plan, the Plan is intended to “support and implement” Objective Six of the Berkeley General Plan Transportation Element, as well as build upon other goals, policies, actions, and implementation measures – namely, policies T-48 through T-55 – related to improving the pedestrian environment within the City. In addition, the Plan is intended to be consistent with policies and recommendations contained in other planning and policy documents that contain policies related to the improvement of the pedestrian environment, including: the Berkeley Pedestrian Charter; City of Berkeley Area Plans (e.g., Downtown Area Plan); other City of Berkeley Plans (e.g., Aquatic Park Master Plan); other local plans (e.g., University of California Long Range Development Plan); regional plans (e.g., East Bay Regional Parks District Master Plan); and routine accommodation policies (e.g., Caltrans Deputy Directive 64). The Plan would promote plans and policies adopted for the purpose of avoiding or mitigating an environmental effect, particularly those that support reduced reliance on motor vehicle transportation.

c) **Conflict with any applicable habitat conservation plan or natural community conservation plan?** *(No Impact)*

The Plan would not conflict with habitat conservation plans or natural community conservation plans because no such plans are located in the Plan Area.

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X. **MINERAL RESOURCES.** Would the project:

<table>
<thead>
<tr>
<th>Potentially Significant Impact</th>
<th>Potentially Significant Unless Mitigation Incorporated</th>
<th>Less Than Significant Impact</th>
<th>No Impact</th>
</tr>
</thead>
</table>

a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the State?

[ ] [ ] [ ] [ ]

b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?

[ ] [ ] [ ] [ ]

a) **Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the State?** *(No Impact)*

The Berkeley General Plan\(^8\) does not identify mineral resources within the City. Implementation of the Plan would not result in impacts to mineral resources.

b) **Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?** *(No Impact)*

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\(^8\) Berkeley, City of, 2001.
No locally important mineral resource recovery sites are identified in the Berkeley General Plan. Implementation of the Plan would not result in impacts to mineral resources.

<table>
<thead>
<tr>
<th>XI. NOISE. Would the project result in:</th>
<th>Potentially Significant Impact</th>
<th>Potentially Significant Unless Mitigation Incorporated</th>
<th>Less Than Significant Impact</th>
<th>No Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?</td>
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<tr>
<td>b) Exposure of persons to or generation of excessive ground borne vibration or ground borne noise levels?</td>
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<tr>
<td>c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?</td>
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<tr>
<td>d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?</td>
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<tr>
<td>e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?</td>
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<tr>
<td>f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?</td>
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</table>

a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies? (Less-than-Significant Impact)

Recommended improvements are located within existing rights-of-way already subject to motor vehicle use and associated noise. Although some projects would result in new sources of noise (e.g., audible signals to help persons with visual impairments to cross streets safely), the noise generated would be minor, and would not exceed local standards. The installation of certain improvements could result in short-term noise increases during the construction phase. However, such increases would not permanently increase area noise levels and would not be considered significant. Project construction would comply with the City’s noise standards for construction and demolition activities (Section 13.40.070 of the City’s Municipal Code, which regulates the hours of construction activities). Construction activities would be restricted to the hours of 7:00 a.m. to 7:00 p.m. Mondays.
through Fridays and 9:00 a.m. to 8:00 p.m. on weekends and holidays. The Plan would not increase vehicle trips or introduce other generators of high noise levels to the site. Therefore, the Plan would not expose persons to or generate high noise levels in excess of established standards.

b) Exposure of persons to or generation of excessive ground borne vibration or ground borne noise levels? *(Less-than-Significant Impact)*

Construction of some recommended projects contained in the proposed Plan would require some excavation and earthwork activities. In addition, some project locations are adjacent to residential areas. Although construction activities could result in temporary high noise levels, this noise would not be sustained and would occur only during construction. No pile driving or other construction activity that would generate very high noise levels or ground borne vibration would be required to construct the pedestrian improvements outlined in the plan. Project construction would comply with the City’s noise standards for construction and demolition activities (Section 13.40.070 of the City’s Municipal Code, which regulates the hours of construction activities). Construction activities would be restricted to the hours of 7:00 a.m. to 7:00 p.m. Mondays through Fridays and 9:00 a.m. to 8:00 p.m. on weekends and holidays. Therefore, the proposed project would not expose people to or generate excessive ground-borne vibration or noise and the temporary increase in noise levels during the construction period would be less than significant.

c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project? *(Less-than-Significant Impact)*

Although some projects would result in new sources of noise (e.g., installation of audible signals), the noise generated would be minor, and would not result in a substantial permanent increase in ambient noise levels. Implementation of the Plan would not result in long-term increases in ambient noise levels.

d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project? *(Less-than-Significant Impact)*

Construction activities associated with recommended projects under the Plan would increase ambient noise levels during the construction period. However, this increased noise level would be temporary, and would occur in association with minor excavation, earthwork, and paving activities, and would be considered less than significant.

e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels? *(No Impact)*

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10 Berkeley, City of, 2009.
Oakland International Airport, which is the closest airport to the City, is located approximately 8 miles southeast of the site. The proposed Plan would not be located in an airport land use plan or within 2 miles of a public or public use airport. Furthermore, none of the recommended projects would generate new residents or workers. Implementation of the proposed Plan would not expose persons within the Plan Area to high levels of airport-related noise.

f) *For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels? (No Impact)*

The City is not located within the vicinity of a private airstrip. Implementation of the proposed Plan would not expose persons within the project site to high levels of airport-related noise.

### XII. POPULATION AND HOUSING.

Would the project:

a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?

c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?

---

**Potential Impact:**

- Potentially Significant
- Potentially Significant Unless Mitigation Incorporated
- Less Than Significant
- No Impact

---

a) *Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)? (No Impact)*

Implementation of the proposed Plan would result in improvements to pedestrian facilities within existing rights-of-way and would not directly or indirectly induce population growth.

b) *Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere? (No Impact)*

Implementation of the proposed Plan would not remove any existing housing.

c) *Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere? (No Impact)*
Implementation of the proposed Plan would not displace any people, and therefore no construction of replacement housing would be necessary.

<table>
<thead>
<tr>
<th>Potentially Significant Impact</th>
<th>Potentially Significant Impact Mitigated</th>
<th>Less Than Significant Impact</th>
<th>No Impact</th>
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</table>

XIII. PUBLIC SERVICES.

a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:

i) Fire protection? (Less-than-Significant Impact)

Recommended projects would be constructed or installed within existing rights-of-way and would not result in new fire hazards or increase demand for fire services. While some projects would result in minor alterations to local pedestrian, bicycle, and vehicular circulation patterns (e.g., changes to vehicular turn lanes, removal of driveways near intersections to improve pedestrian safety), these projects would not substantially impair emergency access. Implementation of General Plan Policy T-28, Emergency Access (see Section XV, Traffic/Transportation), would ensure that fire truck access is maintained on all roads. Overall, the City would continue to be served by the Berkeley Fire Department, and the Plan would thus result in less-than-significant impacts to fire protection services.
ii) Police protection? *(Less-than-Significant Impact)*

The proposed Plan would result in pedestrian improvement projects within existing rights-of-way and would not result in new demand for police services. While the Plan includes recommendations for programs to increase enforcement of traffic violations that reduce pedestrian safety, these programs would not result in the need for additional police facilities. Overall, the City would continue to be served by the Berkeley Police Department, and the Plan would thus result in less-than-significant impacts to police services.

iii) Schools? *(No Impact)*

The proposed Plan does not involve the construction of housing or employment-generating facilities. Therefore, it would not increase demand for school services.

iv) Parks? *(Less-than-Significant Impact)*

The proposed Plan includes development of new pedestrian facilities in the City. Development of the Plan’s recommended improvements would increase connections between existing recreational facilities and parks within the City, and could result in an incremental increase in park use. However, the increase in use of these facilities as a result of implementation of the Plan would be small, and would not likely result in the physical deterioration of parks.

v) Other public facilities? *(No Impact)*

The proposed Plan would not increase demand for other public facilities, such as libraries, because it would not result in population or employment growth in the City, or cause other demographic changes that would increase the demand for such facilities.

### XIV. RECREATION.

<table>
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<tr>
<th>Potential Impact</th>
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<th>Potentially Significant Unless Mitigation Incorporated</th>
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</table>

a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?  

b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?

a) *Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated? *(Less-than-Significant Impact)*"
As noted in XIII.a.iv, the proposed Plan would not result in a substantial increase in park usage. Development of the Plan’s recommended improvements would increase connections between existing recreational facilities and parks within the City, and could incrementally increase use of these facilities. However, the increase in use of these facilities as a result of implementation of the Plan would be small, and would not likely result in physical deterioration. Therefore, the proposed project would not result in deterioration of parks or recreational facilities.

b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment? (Less-than-Significant Impact)

As noted in XIV.a, the proposed Plan would not substantially increase use of local recreational facilities, and would not require the construction or expansion of recreational facilities. Therefore, the Plan would not have a significant impact on recreational facilities.

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<th>Potentially Significant Unless Mitigation Incorporated</th>
<th>Less Than Significant Impact</th>
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<tbody>
<tr>
<td>a) Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)?</td>
<td>❑</td>
<td>❑</td>
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<tr>
<td>b) Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency or designated roads or highways?</td>
<td>❑</td>
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<td>❑</td>
<td>❑</td>
</tr>
<tr>
<td>c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?</td>
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<td>❑</td>
<td>❑</td>
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<tr>
<td>d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?</td>
<td>❑</td>
<td>❑</td>
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<tr>
<td>e) Result in inadequate emergency access?</td>
<td>❑</td>
<td>❑</td>
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<td>❑</td>
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<tr>
<td>f) Result in inadequate parking capacity?</td>
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<tr>
<td>g) Conflict with adopted polices, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?</td>
<td>❑</td>
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<td>❑</td>
<td>❑</td>
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</table>

a) Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections).
trips, the volume to capacity ratio on roads, or congestion at intersections)? (Potentially Significant Unless Mitigation Incorporated)

The Plan does not include components that would generate new vehicle trips or increase the existing traffic load. Rather, implementation of the projects and programs identified in the Plan would improve the City’s pedestrian infrastructure, enhance pedestrian safety, and encourage walking as a viable form of transportation throughout the City.

However, there are components of the Plan that could reduce the vehicle capacity of intersections and/or increase congestion through physical changes at intersections that favor pedestrian movements (e.g., signal timing adjustment). Implementation of the following mitigation measure would ensure that changes to intersection traffic control or geometry would not substantially increase congestion.

**Mitigation Measure TRAF-1:** Prior to implementation of the pedestrian projects listed in this mitigation measure, the City shall prepare a level of service (LOS) and queuing analysis of the affected intersection to determine whether the project would cause a significant impact per the City’s adopted LOS thresholds, as set forth in the *City of Berkeley Guidelines for Development of Traffic Impact Reports*,11 or would result in queuing that could affect traffic operations at adjacent intersections. The analysis shall be prepared for existing and existing plus project conditions using current traffic counts (no more than 1 year old). The LOS analysis shall be prepared for the following projects:

3. Ashby BART Station Area Improvements (Ashby Avenue/Adeline Street)
13. Bancroft Way at Oxford/Fulton Streets
28. Sacramento Street/Rose Street
33. Hearst Avenue at Gayley Road/La Loma Avenue12

If the proposed improvements shown in the Plan would result in a significant impact to LOS or operation of the intersection, the City shall pursue one of the two following outcomes for each affected intersection: 1) the project shall be modified to lessen the impact of the pedestrian improvements to below the City’s adopted LOS threshold, as set forth in the *City of Berkeley Guidelines for Development of Traffic Impact Reports*, or the prevailing LOS13 for the existing condition OR 2) the City shall make findings, pursuant to Policy T-18 in the General Plan, that significant beneficial pedestrian impacts and/or other beneficial impacts would reduce the adverse LOS/intersection operation impact to a less-than-significant level.14

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11 Berkeley, City of, Office of Transportation, No Date. *Guidelines for Development of Traffic Impact Reports*.

12 As of October 2009, the City is conducting an analysis of the proposed improvements to the intersection of Hearst Avenue at Gayley Road/La Loma Avenue. If this analysis concludes that implementation of the pedestrian improvements would not cause a significant impact to LOS or queuing, the intersection may be excluded from the additional requirements outlined in Mitigation Measure TRAF-1.

13 The “prevailing LOS” would be the “no project” LOS, consistent with the City’s *Guidelines for Development of Traffic Impact Reports*.

14 City of Berkeley General Plan, Policy T-18, Level of Service states: “When considering transportation impacts under the California Environmental Quality Act, the City shall consider how a plan or project affects all modes of transportation, including transit riders, bicyclists, pedestrians, and motorists, to determine the transportation impacts of a plan or project. Significant beneficial pedestrian, bicycle, or transit impacts, or significant beneficial impacts on air quality, noise, visual quality, or safety in residential areas, may offset or mitigate a significant adverse impact on vehicle Level of...
Several of the recommended pedestrian projects shown in Chapter 6 include modification or construction of bulbouts. The bulbout projects are intended to reduce pedestrian crossing distance and increase visibility of and for pedestrians. Bulbouts can also serve to reduce the turn radius for turning vehicles, thereby resulting in increased pedestrian safety by reducing the speed of vehicular traffic. Section 6.4.3 of the Plan includes items that should be considered when designing bulbouts. Implementation of the following mitigation measure would ensure that projects involving new bulbouts or modifications to existing bulbouts would not substantially increase traffic congestion.

**Mitigation Measure TRAF-2:** In addition to the considerations outlined in Section 6.4.3 of the Plan, the City shall ensure that bulbouts would not extend beyond the parking lane into the through lanes of the roadway to the degree that they would eliminate through travel lanes or narrow travel lanes below minimum widths as described in State and Federal guidelines as adopted by the City of Berkeley. If the City determines that removing or narrowing through travel lanes is necessary to accommodate pedestrian movements or improve safety, then a level of service and queuing analysis shall be prepared to determine whether the project would cause a significant impact per the City’s adopted LOS thresholds, as set forth in the *City of Berkeley Guidelines for Development of Traffic Impact Reports*, or would result in queuing that could affect traffic operations at adjacent intersections. If the proposed bulbout improvements would result in a significant impact to LOS or result in queuing that could affect traffic operations at adjacent intersections, the City shall pursue one of the two following outcomes for each affected bulbout: 1) the design of the bulbout shall be modified to reduce the impact below the City’s adopted LOS threshold, as set forth in the *City of Berkeley Guidelines for Development of Traffic Impact Reports*, or the prevailing LOS for the existing condition OR 2) the City shall make findings, pursuant to Policy T-18 in the General Plan, that significant beneficial pedestrian impacts and/or other beneficial impacts would reduce the adverse LOS/intersection operation impact to a less-than-significant level.

b) *Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways? (Potentially Significant Unless Mitigation Incorporated)*

Among other roadways in the City of Berkeley, Ashby Avenue and Adeline Street are both designated Congestion Management Program (CMP) Routes in the Alameda County Congestion Management Program. Pedestrian project #3 includes conversion of the eastbound free-right turn lane

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at the intersection of Ashby Avenue/Adeline Street to a stop-controlled right-turn lane. The modification of the right turn lane could increase congestion at this intersection of two CMP roadways. However, with implementation of Mitigation Measure TRAF-1, the impact would be reduced to a less-than-significant level.

No other Plan projects on other CMP routes (e.g., San Pablo Avenue) would create traffic congestion such that impacts to CMP facilities would occur.

c) **Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks? (No Impact)**

The Plan does not include any changes to infrastructure or policies that would affect air traffic patterns or levels of air traffic.

d) **Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)? (Less-than-Significant Impact)**

The improvements proposed in the Plan are intended to reduce hazards to pedestrians. Physical modifications to intersections, such as the construction/modification of bulbouts and reduction of turn radii would reduce vehicle speed, provide more visibility for pedestrians, and enhance the safety of intersections. No increase in hazards due to a design feature are anticipated from implementation of the Plan.

e) **Result in inadequate emergency access? (Less-than-Significant Impact)**

To increase pedestrian safety and visibility, several of the recommended pedestrian projects include the construction or widening of pedestrian refuge islands in the median of roadways and the addition of bulbouts at intersections. The construction of these features could result in narrowing of traffic lanes and/or reduction of turn radii at intersections such that access for emergency vehicles is impeded.

Implementation of General Plan Policy T-28, Emergency Access, would ensure that adequate emergency access is maintained throughout the City. Policy T-28 states:

> Provide for emergency access to all parts of the city and safe evacuation routes. (Also see Disaster Preparedness and Safety Policy S-22.)

**Actions:**

A. Do not install new full diverters or speed humps on streets identified on the Emergency Access and Evacuation Network map unless it is determined by the Fire and Police Departments that the installation will not significantly reduce emergency access or evacuation speeds. The Fire Department should be able to access all Berkeley locations within four minutes (see Disaster Preparedness and Safety Element). All other proposed traffic calming devices or obstructions to the free flow of traffic on these streets should be reviewed by the Fire and Police Departments to ensure that the proposed change will not significantly increase emergency response times or hinder effective evacuation of adjacent neighborhoods.
B. Maintain and improve pedestrian pathways throughout the city that are dedicated for public use and provide an alternative to the streets in case of an emergency evacuation.

C. Maintain and make available to the public up-to-date maps of all emergency access and evacuation routes.

D. Where necessary, consider parking restrictions to ensure adequate access for emergency vehicle access and evacuation in hill area neighborhoods with narrow streets.

E. Prioritize evacuation routes for undergrounding of overhead utilities.

With implementation of the actions listed under Policy T-28 (particularly the review by the City Fire and Police Departments of potential obstructions to traffic) pedestrian projects recommended in the Plan would not result in a significant adverse effect to emergency access.

f) Result in inadequate parking capacity? (Less-than-Significant Impact)

Implementation of the recommended projects in the Plan (e.g., parking restrictions adjacent to intersections) could result in the removal of a small number of parking spaces at the following locations:

- Sacramento Street/Addison Street
- Sacramento Street/University Avenue
- Northeast side of Addison Street near Acton Street
- Shattuck Avenue within 20 feet of Russell Street
- South leg of Colusa Avenue/Solano Avenue
- Fresno Avenue/Solano Avenue
- University Avenue/Grant Street
- University Avenue/McGee Avenue
- Dwight Way at Alta Bates Hospital
- Gilman Street/Santa Fe Avenue
- Hearst Avenue between Le Conte and Euclid

Although the Plan may reduce the overall parking supply in the City, in most cases the removal of parking would support Policy T-53 of the General Plan, which requires the designation of a 50-foot red-marked no parking zone at intersections with “severe or high collision rates” in order to increase the visibility of pedestrians. This General Plan policy has been incorporated as Policy 2.3 of the Plan. Furthermore, at many of the locations where parking will be removed, additional off-street public parking is provided in parking garages and the reduction in on-street spaces would be nominal when compared to the overall parking supply. This is especially true in the downtown area, near Alta Bates Hospital, and along Hearst Avenue near UC Berkeley.
It should also be noted that in the court case known as *San Franciscans Upholding the Downtown Plan v. City and County of San Francisco*, 102 Cal.App.4th 656 (2002) the court ruled that the loss of parking is not in and of itself a physical environmental impact: “. . . there is no statutory or case authority requiring an EIR to identify specific measures to provide additional parking spaces in order to meet an anticipated shortfall in parking availability. The social inconvenience of having to hunt for scarce parking spaces is not an environmental impact; the secondary effect of scarce parking on traffic and air quality is.” Reduction in parking at identified intersections is consistent with the adopted policies of the General Plan, is justified by the expected increase in pedestrian safety, and would not result in secondary environmental effects, such as increased traffic or air pollution (the overall reduction in parking spaces at any specific location would be minor, and demand for these spaces could be absorbed elsewhere). At locations where on-street parking would be removed, the Plan directs that the City partner with adjacent businesses to implement trip reduction and parking management strategies. As a result, the implementation of the Pedestrian Master Plan would not result in significant primary of secondary impacts related to inadequate parking capacity.

**g) Conflict with adopted polices, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)? (Less-than-Significant Impact)**

Chapter 2 of the Plan sets forth the goals and policies that were used to develop the Plan. As noted in Chapter 2, the “objectives, policies and actions of the [City of Berkeley] General Plan serve as the foundation upon which specific projects, programs, and implementation measures are identified in this Plan.” The policies in the Master Plan are taken directly from the Berkeley General Plan. Master Plan implementation measures were thus developed to implement the General Plan policies.

One of the factors used in project selection and prioritization in the Master Plan is whether there is an identified need for a project. One indication of the need for a project is whether the project is identified in an existing plan. During the preparation of the Plan, other pertinent planning and policy documents were reviewed with a specific focus on the goals, policies, and projects listed within each document. Chapter 3 of the Plan provides a summary of these documents, including the following:

- Berkeley Pedestrian Charter
- Applicable Berkeley General Plan Policies
- Berkeley Area Plans
- Aquatic Park Master Plan
- Berkeley Bicycle Plan
- San Pablo Avenue Public Improvement Plan
- University of California Long Range Development Plan
- Ed Roberts Campus Plan – Ashby BART Station
- Metropolitan Transportation Commission (MTC) Regional Bicycle Plan
- San Francisco Bay Area Ozone Attainment Plan for the 1-Hour National Ozone Standard
- East Bay Regional Parks District Master Plan
- Eastshore State Park General Plan
• BART Station Planning for the Ashby and Downtown Berkeley BART Stations
• AC Transit Evaluation of Rapid Bus Service in the San Pablo Avenue Corridor
• The Bay Trail Plan
• Alameda Countywide Strategic Pedestrian Plan
• Alameda Countywide Bicycle Plan
• Federal, State and Local Routine Accommodation Policies

The Master Plan incorporates key elements of these plans, including: 1) enhancing the pedestrian environment; 2) connecting pedestrian facilities to transit, open space, and employment centers (including UC Berkeley); 3) increasing accessibility for the disabled; and 4) reducing dependence on private motor vehicles to reduce traffic congestion and improve regional air quality. Therefore, the goals, policies and implementation measures in the Plan do not conflict with but would be consistent with or complementary to adopted policies, plans and programs.

XVI. UTILITIES AND SERVICE SYSTEMS. Would the project:

a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?

b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?
e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?

g) Comply with federal, State, and local statutes and regulations related to solid waste?

- Potentially Significant Impact
- Potentially Significant Unless Mitigation Incorporated
- Less Than Significant Impact
- No Impact

a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board? (No Impact)

The proposed Plan would not increase the demand for wastewater treatment and would therefore not compromise the treatment standards of the Water Board.

b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects? (Less-than-Significant Impact)

Implementation of the proposed Plan would not generate wastewater or require the use of substantial quantities of water. A small increase in water use would occur with landscape irrigation for projects that include landscaping or tree planting (e.g., certain projects that fall within the “Streetscape Enhancements” project type, as well as other stand-alone projects). However, such improvements would all need to comply with City policies regarding irrigation, planting of native species, and water-efficient landscape design. The Plan would not require the construction of new wastewater or water facilities, or the expansion of existing facilities.

c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects? (Less-than-Significant Impact)

Refer to VIII.a. and VIII.c. Projects that would be implemented under the proposed Plan would not generate a substantial quantity of runoff that would exceed the capacity of stormwater drainage systems that serve the City.

d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed? (Less-than-Significant Impact)

Development of some recommended projects in the Plan that include landscaping or street tree planting could require small amounts of water for irrigation. Once established, and operating under
City policies for public landscaping, these plants would require little if any supplemental watering. Existing water entitlements would be sufficient to supply water to the projects.

e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project’s projected demand in addition to the provider’s existing commitments? (No Impact)

Projects that would be implemented under the proposed Plan would not generate wastewater and would not result in an increase in demand for wastewater treatment.

f) Be served by a landfill with sufficient permitted capacity to accommodate the project’s solid waste disposal needs? (Less-than-Significant Impact)

Implementation of the proposed Plan would not generate solid waste (beyond whatever small quantities of construction waste could not be recycled and reused). Existing landfills would have sufficient capacity to accommodate this potential minor increase in construction waste.

g) Comply with federal, State, and local statutes and regulations related to solid waste? (Less-than-Significant Impact)

Recycling receptacles would continue to be provided along sidewalks and other project locations, as required, in accordance with all statutes and regulations related to solid waste. Therefore, the Plan would be consistent with such statutes and regulations.

XVII. MANDATORY FINDINGS OF SIGNIFICANCE.

a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?  

b) Does the project have impacts that are individually limited, but cumulatively considerable? (“Cumulatively considerable” means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?

a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?  *(Potentially Significant Unless Mitigation Incorporated)*

Development of projects under the proposed Plan could adversely cultural resources; however, implementation of Mitigation Measures CULT-1, CULT-2, CULT-3, and CULT-4 would ensure that potential impacts to cultural resources would be reduced to less-than-significant levels. With mitigation, implementation of the Plan would not: 1) degrade the quality of the environment; 2) substantially reduce the habitat of a fish or wildlife species; 3) cause a fish or wildlife species population to drop below self-sustaining levels; 4) threaten to eliminate a plant or animal community; 5) reduce the number or restrict the range of a rare or endangered plant or animal; or 6) eliminate important examples of the major periods of California history.

b) Does the project have impacts that are individually limited, but cumulatively considerable? *(“Cumulatively considerable” means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)* *(Less than Significant Impact)*

The proposed Plan’s impacts would be individually limited and not cumulatively considerable. In addition, most of the Plan’s impacts would result from construction-period activities for individual projects, and would be temporary. All environmental impacts that could occur as a result of implementation of the proposed Plan would be reduced to less-than-significant levels through implementation of the mitigation measures recommended in this document.

c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly? *(No Impact)*

The proposed Plan would not result in any environmental effects that would cause substantial direct or indirect adverse effects to human beings.
REPORT PREPARATION

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B. REFERENCES


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CHAPTER 6
RECOMMENDED PEDESTRIAN PROJECTS

This chapter discusses capital project recommendations for Berkeley’s pedestrian network. These infrastructure improvements are intended to enhance pedestrian access and circulation as well as help pedestrians feel more comfortable when walking in Berkeley. This chapter focuses on engineering and infrastructure. Chapter 7 discusses programs and other non-infrastructure improvements to enhance the walking environment in Berkeley.

6.1. PROJECT SELECTION AND PRIORITIZATION

Identification and development of the recommended infrastructure projects in this chapter was a multi-part process that involved extensive public input, technical review of numerous intersections and crosswalk locations by the project team, and development of a detailed analysis tool to prioritize and rank project locations. Beginning in March 2006 with the Pedestrian Master Plan Public Workshop, the project team began collecting information from Berkeley residents on locations they would like to see improved. The team continued collecting information over the course of the project through the project website and email links. At the same time public input was being received, the project team was conducting a citywide inventory of pedestrian facilities, including sidewalks, crosswalks, and curb ramps, adding to the existing database of pedestrian signal locations, signage, and other pedestrian features. With this extensive data, both from the public input process and from the inventory, the team could then begin to look at the most likely locations for improvements. Over 300 individual locations were studied for potential improvements as part of the initial planning process.

In order to compare the relative importance of these locations for improvements, a ranking system was developed that used a variety of readily available data factors.

**Community Access:** Is the project located near key pedestrian generators or attractors?  
Measurements: Civic buildings, neighborhood commercial centers, parks, senior centers, schools, density of surrounding land uses

**Transit Connectivity:** Is the project located near key transit access points?  
Measurements: BART and Amtrak connections, AC Transit trunk lines, AC Transit local lines

**Usage and Demand:** How many people are walking in the project area?  
Measurements: Census journey to work data, Space Syntax forecasted volumes

**Safety:** Will the project improve safety?  
Measurements: Collisions, pedestrian exposure, traffic volumes and speeds

**Support and Need:** Is there an identified need for the project?  
Measurement: Project is identified in an existing plan, public comment received

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1 The term “pedestrian” refers to a person moving from place to place, on foot and/or with the use of an assistive mobility device (when that person has a disability and/or medical condition). “Walking” or “to walk” are the terms used to describe this movement of a pedestrian.
A list of the top 100 ranked intersections is provided in Appendix A. This list provides the City with an overall guide of the relative priority of various project locations, based on the technical factors above. This approach to ranking was intended to eliminate the case-by-case approach that has often been taken with pedestrian projects in the past.

Because pedestrian improvements are so localized, it can be challenging to develop a cohesive citywide master plan that is more than simply a list of dozens of location-specific improvements. As such, a number of project categories were identified that grouped projects of similar type together to be implemented on a corridor or citywide scale. These project categories are:

- Infill of Sidewalk Gaps
- Installation of Truncated Domes
- Installation of Perpendicular Curb Ramps
- Priority Intersections for Signal Timing Adjustments
- Locations for Installing Countdown Signal Heads
- Safe Routes to Schools Priorities
- Multi-Use Path Projects
- Installation of Audible Signals Along Corridors
- High Visibility Crosswalk Installation
- Standard Crosswalk and Advance Warning Signage
- Parking Restrictions (Red Curbs) Adjacent to Intersections
- Speed Feedback Sign Installation
- Pathway and Stairway Improvements
- Improvements to Signalized Intersections with High Pedestrian Collision Rates

As part of the project description, specific recommendations are made for prioritizing these improvements, so that the City can implement them in a logical manner based on the areas of greatest need first.

In addition to the broader citywide projects, a number of stand-alone intersection, corridor, and crossing projects were identified over the course of the project. These were projects that involved more specific improvements than could fit into the overall citywide project categories. These 34 projects are presented in detail at the end of this chapter.

All of these projects will have impacts in terms of funding and drainage and may impact street pavement. Specific projects may also affect specific street rehabilitation projects. Implementation of these projects will necessitate coordination with the various capital improvement programs.

Cost estimates and detailed project lists are shown in Appendix A.

6.2. CITYWIDE INFRASTRUCTURE PROJECTS

6.2.1. INFILL OF SIDEWALK GAPS

Sidewalk gaps are areas in Berkeley where there are no sidewalks, or the sidewalk ends abruptly, resulting in a discontinuous network. Areas without sidewalks may force pedestrians to walk along the edge of
the roadway, or may cause pedestrians to cross at undesignated crossing locations. Providing a continuous pedestrian sidewalk along all of Berkeley’s roadways is recommended. As discussed in Chapter 4, a complete citywide inventory of sidewalk segments and gaps was conducted as part of this plan. The location of these major sidewalk gaps is shown in Figures 4-1 through 4-4.

With the exception of some parts of the Berkeley Hills, the sidewalk network of Berkeley is mostly complete. The largest area of missing sidewalks is located between Cedar and Gilman, west of San Pablo Avenue. Parts of this area have historically been more industrial in nature and as such some of the street network was not built with sidewalks. The major sidewalk gaps are listed in Appendix A.

The Berkeley Hills contain the largest area of missing sidewalks in the City. While sidewalks are present along the major streets such as Spruce, Euclid and Marin, much of the network of narrow and curving residential streets lacks sidewalks. Retrofitting all of these roadways with sidewalks is not likely to be feasible, given the topography and narrow streets constrained in many cases by private properties built up to the edge of or in some cases encroaching on the public right-of-way. Furthermore, the pathway/stairs network provides pedestrian access to many of the hills areas, and improving these pathways is considered a higher priority than extensive new sidewalk development in the hills.

**RECOMMENDATION:** As a first priority, Berkeley should fill sidewalk gaps located in the flat central and western part of the City, particularly those between Cedar and Gilman west of San Pablo Avenue. Note that infilling gaps will increase impervious area which is subject to National Pollutant Discharge Elimination System (NPDES) stormwater permit requirements. Drainage issues must be considered with new construction. As a second priority, Berkeley should continue to work with residents of the hills where new sidewalk segments are requested. Due to topographical constraints, it is likely that sidewalks may not be feasible in many areas of the hills. Appendix A shows a list of the key sidewalk gap segments outside of the hills areas, and the estimated costs for installing these sidewalk segments.

**6.2.2. ADA IMPROVEMENTS**

**6.2.2.1. PERPENDICULAR CURB RAMP RETROFIT**

Perpendicular curb ramps are designed so two ramps are included at intersection corners. Perpendicular ramps allow pedestrians and people in wheelchairs to enter into the crosswalk directly in their line of travel. Perpendicular ramps have been the preferred design for the City of Berkeley in the past and are required on all newly constructed streets. However, on many major streets diagonal ramps are present. Perpendicular ramps do require more space to install than a single diagonal ramp, are more costly, and sometimes cannot be accommodated due to utilities or other obstructions at the corner. Further, because of Berkeley’s southwest drainage pattern, all southwest corner curb ramps must be reviewed for drainage. Accounting for these special considerations, it is recommended that perpendicular curb ramps be installed where feasible, especially at major intersections in high pedestrian activity zones.

**RECOMMENDATION:** As a first priority, Berkeley should identify opportunities to install perpendicular curb ramps at all arterial/arterial intersections and then establish a schedule for constructing them where feasible. See Appendix A for a list of these locations. Curb ramps at arterial/collector intersections should be evaluated on a case-by-case basis when the City is undertaking construction, maintenance or repair projects that affect the public right of way.
6. Recommended Pedestrian Projects

6.2.2.2. TRUNCATED DOMES

Truncated domes provide a cue to visually-impaired pedestrians that they are entering a street or intersection. Since 2002, Americans with Disabilities Act (ADA) Guidelines have called for truncated domes on curb ramps. Most of Berkeley’s curb ramps lack truncated domes, because they were constructed prior to 2002. Should adequate funding be available, truncated domes should be installed on streets that have been constructed or re-paved since 2002. Otherwise, all future installations or reconstruction of curb ramps should include truncated domes as required by law.

Although it is not required for Berkeley to install truncated domes at existing curb ramps that were built prior to 2002, the City may wish to install these devices at high priority pedestrian locations. Truncated domes are a very visible improvement, and they are relatively inexpensive to install. The preferred option for retrofitting truncated domes requires saw-cutting out a 3x4 space in the ramp in order to embed the truncated dome panel flush with the surface. While more expensive than simply epoxying the retrofit panel to an existing ramp, the saw-cutting ensures that the domes will not become detached and pose a tripping hazard.

RECOMMENDATION: Berkeley should consider retrofitting truncated domes at all arterial/arterial intersections where they are currently lacking. In some cases, these would be considered temporary installations until the time that the roadway is resurfaced and the curb ramps are reconstructed to new ADA standards. See Appendix A for a list of these locations. As required by law, Berkeley will also continue to install truncated domes when re-paving streets and improving existing curb ramps.

6.3. SIGNALIZED INTERSECTION ENHANCEMENTS

6.3.1. SIGNAGE AND STRIPING

A controlled intersection provides the greatest level of traffic control for both motor vehicles and pedestrians. However, even with traffic controls, there may be conflicts between vehicles and pedestrians due to vehicles stopping partially in the crosswalk, failing to yield to pedestrians when turning, or making a right turn on red movement while pedestrians are crossing. Although these conflicts are primarily due to motorist behavior (generally failing to yield), making signage and striping improvements can help to increase motorist awareness of their vehicle placement at intersections and need to yield.

RECOMMENDATION: At intersections with a history of high vehicle-pedestrian conflicts (based on SWITRS data or the pedestrian exposure analysis), the City should consider: 1) installing Stop Lines five feet in advance of the crosswalks, to help position motorists back of the crosswalk when stopped; 2) install “Turning Traffic Must Yield to Pedestrians” (MUTCD R10-15) signage; and 3) if pedestrian conflicts appear to be related to right turn on red, consider prohibiting right turn on red at that location. The City’s default advance stop bar setback is four feet unless conditions for a five foot setback have been met. A five foot stop bar setback should be used only where it does not exacerbate existing sightline issues caused by vegetation or buildings located close to the intersection. A list of the signalized intersections with the highest rate of pedestrian collisions is provided in Appendix A.

6.3.2. SIGNAL TIMING ADJUSTMENT

Signal timing controls the amount of time each phase of a signal is allotted for vehicles and bicycles to pass through or pedestrians to cross the street. Per the MUTCD, standard traffic engineering design assumes that pedestrians travel at 4.0 feet per second, which together with the width of the street, is used to determine the amount of time to assign to the pedestrian clearance interval. For slower pedestrians,
such as the elderly and children, this assumed walking speed may result in them not being able to fully cross the street before the light changes. By adjusting the signal timing to reflect a slower walking rate, slower pedestrians will have more time to cross the street.

**RECOMMENDATION:** As a first priority, Berkeley should consider adjusting signal timing at the 15 arterial/arterial signals adjacent to senior centers and 10 locations adjacent to elementary schools to allow for a pedestrian walking speed of 2.8 to 3.5 feet per second. This slower walking speed is consistent with MUTCD recommendations for walking rates for slower pedestrians. Consideration of signal operation and signal coordination by the Department of Public Works traffic engineers and signal technicians is necessary for this recommendation. As a next priority, consider implementing this signal timing walking speed for all high pedestrian demand locations in the City. Appendix A identifies the top priority signal locations.

### 6.3.3. COUNTDOWN SIGNALS

Countdown pedestrian signals provide information on the amount of time remaining in the pedestrian clearance interval, which can assist pedestrians in making safe crossing judgments. Guidance on the use of these devices is now included in the California MUTCD. The City of Berkeley has a program in place to install countdowns on all new signal installations, or when signals are upgraded.

**RECOMMENDATION:** Berkeley should continue to install countdowns on all new signal installations and when signals are upgraded. In addition, the City should plan to upgrade all signals to pedestrian countdown signals. A list of locations that need countdown signals is provided in Appendix A.

### 6.3.4. AUDIBLE SIGNALS

Audible signals emit sounds to guide visually-impaired pedestrians indicating when it is safe to cross. Different audible signals are usually used to also indicate crossing direction. Sounds are activated by the pedestrian push-button. The MUTCD states that installation of audible signals should be based on an engineering study that considers:

- Potential demand for accessible pedestrian signals
- A request for accessible pedestrian signals
- Traffic volumes during times when pedestrians might be present; including periods of low traffic volumes or high turn-on-red volumes
- The complexity of traffic signal phasing
- The complexity of intersection geometry

The City of Berkeley currently has audible pedestrian signals installed at 25 intersections, primarily concentrated along the Shattuck corridor downtown, along University, along Telegraph, and along 6th/7th streets in West Berkeley.

**RECOMMENDATION:** Berkeley should consider installing audible signals at all signalized intersections. Signalized intersections near the homes of people who are visually impaired, focusing on arterial/arterial installations should be a first priority. Locations near senior centers should also be high priorities. The City has developed a list of prioritized intersection locations for audible pedestrian signal
installation. This list is based on residences of people with visual impairments and land uses. Appendix A lists locations recommended for audible signal installation.

6.4. UNCONTROLLED CROSSWALK IMPROVEMENTS

Infrastructure improvements at uncontrolled crosswalk locations can help increase the visibility of pedestrians to motorists and improve the pedestrians’ walking experience. These improvements are for both unmarked and marked crosswalks at intersections. Improvements to uncontrolled crosswalks are discussed in Appendix B – Pedestrian Design Guidelines.

6.4.1. HIGH-VISIBILITY CROSSWALK MARKINGS

There are a variety of different striping styles for crosswalks. The City of Berkeley utilizes two different marking styles for pedestrian crosswalks: the standard “transverse” style, consisting of two parallel lines; and the “ladder” style consisting of the two parallel lines with perpendicular ladder bars striped across the width of the crosswalk. Ladder style crosswalks are used in locations where heightened pedestrian visibility is important.

RECOMMENDATION: The following roadways have been determined by the City to be high priority corridors that warrant the installation of ladder crosswalk markings at all uncontrolled marked crosswalk locations. Appendix A shows a detailed breakdown of the number of uncontrolled marked crosswalks along each of these corridors with a cost breakdown.

- San Pablo Ave
- University Ave
- Sacramento St
- Ashby Ave
- Adeline St
- Martin Luther King Jr. Way
- Telegraph Ave
- Gilman St
- Shattuck Ave
- Milvia St between Blake St & University Ave

- Bancroft Way from Oxford St to Piedmont Ave
- Durant Ave from Oxford St to Piedmont Ave (completed)
- Channing Way from Oxford St to Piedmont Ave
- Claremont Ave, south of Ashby Ave (completed)
- College Ave
- Cedar St from Walnut St to Martin Luther King, Jr. Way
- Hopkins St from San Pablo Ave to Peralta Ave
- Solano Ave

6.4.2. FLASHING BEACONS

Where the visibility of pedestrians in a crosswalk may be poor, or where warranted by other safety considerations, yellow flashing beacons can be installed to alert motorists to expect pedestrians in a crosswalk. The City has installed several pedestrian actuated flashing beacons. The installation of flashing beacons is preferred by Public Works over the actuated in-pavement crosswalk flashing lights due to maintenance issues. The City should continue to monitor existing in-pavement crosswalk lights, and replace with flashing beacons if necessary. Flashing beacons should be installed on a case-by-case basis in accordance with the City’s crosswalk hierarchy, discussed in the Design Guidelines. All push-
button activated flashing beacon locations should have “Cross with Caution” signs (R62-E) at every push button location.

6.4.3. BULBOUTS

Bulbouts are engineering improvements intended to reduce pedestrian crossing distance and increase visibility. In addition to shortening the crosswalk distance, bulbouts serve to increase pedestrian visibility by allowing pedestrians to safely step out to the edge of the parking lane where they can see into the street, making them more visible to oncoming drivers. Despite their advantages, bulbouts can require major re-engineering of the street, can be very costly, and are not appropriate for all situations.

Several items should be considered when planning bulbouts. Bulbouts should be designed so that they allow transit buses to complete turning movements and load and unload passengers safely. Bulbou geometry should allow mechanical street sweepers to clean the transitions from parking lane curb to extended curb. Bulbouts may impact drainage and require re-engineering that could entail expensive and extensive pavement re-grading and/or storm drain modifications. The cost of bulbouts should be compared to the safety benefit when determining where bulbouts should be installed.

RECOMMENDATION: Berkeley should consider the feasibility of installing bulbouts at uncontrolled crosswalk locations on a case-by-case basis where appropriate.

6.5. SIGNAGE IMPROVEMENTS

The City of Berkeley’s current pedestrian-related signage consists of a mix of current (California MUTCD) and older (California Traffic Manual) signs, in both standard yellow and high-visibility fluorescent yellow green. In accordance with MUTCD sign update schedule, the City of Berkeley has developed a program to bring signs up to current MUTCD standards. As policy, when the City replaces signs near schools and senior centers, they upgrade to fluorescent yellow-green signs. The City is also converting to new MUTCD signage for pedestrian warning signs. Pedestrian warning signs are being replaced as part of regular on-going sign maintenance.

RECOMMENDATION: Continue to upgrade pedestrian warning signs and signs near schools and senior centers to fluorescent yellow-green signage. A summary of the total signs that need to be upgraded by corridor is presented in Appendix A.

6.6. PARKING RESTRICTIONS

Implementing parking restrictions adjacent to crosswalks is a low-cost method of maintaining pedestrian visibility. The California MUTCD recommends that at signalized intersections, parking be restricted for a minimum of two car stall lengths on the near side and one car length on the far side. At all other intersections, the California MUTCD recommends that parking be restricted on all corners at least one stall length from the crosswalk or curb return. Minimum parking stall length is 20 feet, with 24 feet the preferred length. (Section 3B.18 Parking Space Markings) Design guidance regarding parking restrictions is provided in Appendix B.

RECOMMENDATION: Parking restrictions (red curb) should be installed one parking stall length (20 to 24 feet) adjacent to both sides of all marked crosswalks. Disabled parking (blue curb) may also be suitable for such areas and should be considered where appropriate. Appendix A provides a list by corridor of the number of crosswalks and a cost for installing red paint at these locations.
6. Recommended Pedestrian Projects

6.7. CORRIDOR IMPROVEMENTS

6.7.1. SPEED FEEDBACK SIGNS

Speed feedback signs are permanent speed radar signs that display approaching vehicle speeds and speed limits on roadways. The unit is a fixed speed limit sign with a built-in radar display unit. The City already has speed feedback signs installed along several major roads and is working on criteria to select other locations for speed feedback signs.

**RECOMMENDATION:** The City should expand its program to install speed feedback signs on high priority corridors. Appendix A provides a list of locations and priorities for speed feedback sign installation.

6.7.2. BULBOUTS

Bulbouts are described in section 6.4.3.

**RECOMMENDATION:** As part of any major streetscape enhancement or overlay project, the City should conduct a feasibility study of installing bulbouts at selected locations along the corridor. The City should also look at enhancing existing bulbouts, such as those along Sacramento Avenue, to reduce the turn radius and provide parallel curb ramps that lead directly out into crosswalks. Installing bulbouts on a corridor basis would be similar to the project the City undertook along Dwight Way, in which a number of new bulbouts were installed. Bulbout designs should be standardized with input from the Fire Department and locations should be reviewed with the Fire Department to ensure bulbouts will not impact emergency vehicle access.

6.7.3. STREETSCAPE ENHANCEMENTS

The City of Berkeley has a number of existing detailed area plans that contain streetscape improvement recommendations. These plans are discussed in detail in Chapter 3. Table 6-1 identifies these improvements. This Pedestrian Master Plan defers to the specific streetscape and pedestrian improvement recommendations contained in those detailed area plans. Note that costs for these improvements are not included in the Pedestrian Master Plan.

<table>
<thead>
<tr>
<th>Street</th>
<th>From</th>
<th>To</th>
<th>Specific Improvement</th>
<th>Streetscape Plan</th>
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<td>Bowditch</td>
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<td>Draft Southside Area Plan</td>
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<td>Rose</td>
<td>Bike racks</td>
<td>Draft North Shattuck Urban Design and Circulation</td>
</tr>
<tr>
<td>Shattuck</td>
<td>Hearst</td>
<td>Rose</td>
<td>Bus shelters at: Hearst (2), Cedar (3), Vine (2), and Rose (2)</td>
<td>Draft North Shattuck Urban Design and Circulation</td>
</tr>
<tr>
<td>Shattuck</td>
<td>Hearst</td>
<td>Rose</td>
<td>Ped-mounted newsracks</td>
<td>Draft North Shattuck Urban Design and Circulation</td>
</tr>
<tr>
<td>Telegraph</td>
<td>Hearst</td>
<td>Rose</td>
<td>Improve sidewalks</td>
<td>Draft Southside Area Plan</td>
</tr>
<tr>
<td>Telegraph</td>
<td>Durant</td>
<td></td>
<td>Redesign Intersections for better safety</td>
<td>Draft Southside Area Plan</td>
</tr>
<tr>
<td>Telegraph</td>
<td>Bancroft</td>
<td></td>
<td>Redesign Intersections for better safety</td>
<td>Draft Southside Area Plan</td>
</tr>
<tr>
<td>Telegraph</td>
<td>Dwight</td>
<td></td>
<td>Redesign Intersections for better safety</td>
<td>Draft Southside Area Plan</td>
</tr>
<tr>
<td>University</td>
<td>I 80</td>
<td>Oxford</td>
<td>Festival Lighting along median</td>
<td>University Ave Strategic Plan</td>
</tr>
<tr>
<td>University</td>
<td>I 80</td>
<td>Oxford</td>
<td>Plant trees in parking lanes</td>
<td>University Ave Strategic Plan</td>
</tr>
<tr>
<td>University</td>
<td>I 80</td>
<td>Oxford</td>
<td>Install street furniture and safety telephones</td>
<td>University Ave Strategic Plan</td>
</tr>
<tr>
<td>University</td>
<td>I 80</td>
<td>Oxford</td>
<td>Install median irrigation system</td>
<td>University Ave Strategic Plan</td>
</tr>
</tbody>
</table>
6. Recommended Pedestrian Projects

RECOMMENDATION: Where feasible, Berkeley should implement the specific streetscape enhancements developed as part of specific area plans. Consideration should be given to placement of structures such as news racks or bike racks that may obstruct fire hydrants or access to buildings from the street.

6.8. SAFE ROUTES TO SCHOOL

Proximity to schools was one of the primary factors in ranking and prioritizing the projects. Many of the corridor-wide improvements identified above would involve pedestrian enhancements near school areas. Improvements at these locations could benefit school-aged children walking to and from school, in addition to improving conditions for all pedestrians improving the neighborhood. In addition, a Safe Routes to School project near Jefferson Elementary is identified in the stand-alone projects list below. Finally, a variety of Safe Routes to School related non-infrastructure programs are discussed in Chapter 7.

RECOMMENDATION: Berkeley should continue to implement Safe Routes to School projects as part of their effort to improve pedestrian safety in school areas. The City should actively pursue SR2S grants for any needed pedestrian improvements location near school zones. Appendix A shows a list of prioritized locations for Safe Routes to School improvements; these are located at intersections with at least three schools within 0.25 miles of the intersections and are in the top 100 ranked intersections.

6.9. PATHS AND STAIRS PROJECTS

6.9.1. HISTORIC BERKELEY HILLS PATHWAYS AND STAIRS

A unique network of over 130 historic pedestrian pathways and stairways exists in the Berkeley Hills. The pathways offer quiet resting places, panoramic viewpoints and critical pedestrian routes down from the hills neighborhoods, linking narrow and winding streets. The Department of Public Works has a detailed database of public pathways and publicly dedicated rights-of-way that was developed during the City of Berkeley’s General Plan process. The Berkeley Path Wanderers Association, a non-profit community group, has created a map of these pathways and works to improve them by installing simple wooden steps with volunteer labor. Some of the dedicated path alignments are currently unbuilt, impassable, steep, and not ADA-compliant. The City of Berkeley should seek to improve the remaining unbuilt pathways, and continue to cooperate with the Path Wanderers Association on this effort. Note that pathway improvements may impact existing drainage patterns and may require additional construction. The City should ensure that existing pathways are well maintained, kept clear of vegetation, and well-signed so that residents can access them. In the event of an emergency, these pathways could serve as critical evacuation routes for large numbers of pedestrians in the hill area.

RECOMMENDATION: The City of Berkeley should work with the Berkeley Path Wanderers Association to improve the historic network of pathways and stairs in the hills. Priorities and cost estimates for pathway improvements are listed in Appendix A.

6.9.2. SHARED-USE BICYCLE/PEDESTRIAN PATH PROJECTS

A number of shared-use bicycle/pedestrian path projects are planned in Berkeley. These projects serve pedestrians as well as other non-motorized users such as bicyclists and roller bladers, and may be used by both recreational users and commuters. Most of these projects are shown on the 2005 Bicycle Master Plan Update map.

2 City of Berkeley General Plan, Transportation Element
RECOMMENDATION: The City of Berkeley should implement the proposed bicycle/pedestrian path segments shown on the 2005 Bicycle Master Plan Update. Those projects are carried forward into this Pedestrian Master Plan. Appendix A shows the key proposed bicycle and pedestrian shared-use path projects segments, and costs for construction.

6.10. PROJECT SHEETS

The remainder of this chapter provides specific project improvement sheets for stand-alone intersection, crosswalk or corridor projects throughout Berkeley. These projects involve unique improvements, or had more specific improvements than could fit into the overall citywide project categories described above. This subset of projects was selected from the overall citywide project ranking list based on a number of factors including: 1) the project’s rank in the overall citywide list; 2) a unique location with improvements that could not be accomplished through one of the citywide infrastructure project categories; 3) providing for a range of different project types (intersection, corridor, crosswalk, transit access, school access); and 4) providing for geographic balance of project locations throughout Berkeley.

The projects are listed here in relative order of their ranking in the overall citywide project ranking list. This is not to imply that project implementation will occur in this exact order, consecutively from 1 to 30. Rather, project implementation is likely to be a flexible process that will be based on factors such as funding opportunities, schedules for street overlays and other larger street improvements, and development or redevelopment activities. This list provides the city with a guide for implementation, to be used in conjunction with the citywide infrastructure project lists described above. City staff and the Pedestrian Subcommittee should review these project lists at least on an annual basis to update them based on projects that have been implemented, re-adjust priorities as needed, and to consider any opportunities for incorporating these projects into upcoming development or street improvement activities, as well as any upcoming grant funding cycles that could be targeted.

The list of project locations is listed below, is in order of highest to lowest priority based on the citywide ranking.

Table 6-2
Pedestrian Project List

<table>
<thead>
<tr>
<th>Project Number</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>University from San Pablo to 7th Street</td>
</tr>
<tr>
<td>2</td>
<td>University and Shattuck</td>
</tr>
<tr>
<td>3</td>
<td>Ashby BART Station Improvements</td>
</tr>
<tr>
<td>4</td>
<td>Sacramento from University to Addison</td>
</tr>
<tr>
<td>5</td>
<td>Acton from Addison to University</td>
</tr>
<tr>
<td>6</td>
<td>Martin Luther King Jr. Way from Allston to University</td>
</tr>
<tr>
<td>7</td>
<td>University and Milvia</td>
</tr>
<tr>
<td>8</td>
<td>Ashby from California to San Pablo</td>
</tr>
<tr>
<td>9</td>
<td>Alcatraz and Adeline</td>
</tr>
<tr>
<td>10</td>
<td>Shattuck between Vine and Hearst</td>
</tr>
<tr>
<td>11</td>
<td>Shattuck from Russell to Ward</td>
</tr>
<tr>
<td>12</td>
<td>San Pablo from Addison to Bancroft</td>
</tr>
</tbody>
</table>
## 6. Recommended Pedestrian Projects

<table>
<thead>
<tr>
<th>Project Number</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>13</td>
<td>Bancroft at Oxford</td>
</tr>
<tr>
<td>14</td>
<td>Solano from Colusa to The Alameda</td>
</tr>
<tr>
<td>15</td>
<td>San Pablo and Delaware</td>
</tr>
<tr>
<td>16</td>
<td>Shattuck at Berkeley Way</td>
</tr>
<tr>
<td>17</td>
<td>University and Grant</td>
</tr>
<tr>
<td>18</td>
<td>College from Ashby to Russell</td>
</tr>
<tr>
<td>19</td>
<td>The Alameda/MLK and Hopkins</td>
</tr>
<tr>
<td>20</td>
<td>Shattuck and Woolsey</td>
</tr>
<tr>
<td>21</td>
<td>University and McGee</td>
</tr>
<tr>
<td>22</td>
<td>Dwight at Alta Bates</td>
</tr>
<tr>
<td>23</td>
<td>Alcatraz and California</td>
</tr>
<tr>
<td>24</td>
<td>North Berkeley BART Station</td>
</tr>
<tr>
<td>25</td>
<td>San Pablo and Cedar</td>
</tr>
<tr>
<td>26</td>
<td>Telegraph and Ashby</td>
</tr>
<tr>
<td>27</td>
<td>Telegraph and Parker</td>
</tr>
<tr>
<td>28</td>
<td>Rose and Sacramento</td>
</tr>
<tr>
<td>29</td>
<td>Gilman and Santa Fe</td>
</tr>
<tr>
<td>30</td>
<td>Addison and Jefferson</td>
</tr>
<tr>
<td>31</td>
<td>Sacramento and Oregon</td>
</tr>
<tr>
<td>32</td>
<td>Hearst Campus Sidewalk</td>
</tr>
<tr>
<td>33</td>
<td>Hearst and Gayley</td>
</tr>
<tr>
<td>34</td>
<td>Gilman Street and Curtis Street and the Ohlone Greenway</td>
</tr>
</tbody>
</table>
6. Recommended Pedestrian Projects

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6. Recommended Pedestrian Projects

CORRIDOR IMPROVEMENT:
1. UNIVERSITY AVENUE FROM SAN PABLO AVENUE TO 7TH STREET

Study Area Description

University Avenue serves as the major route between downtown Berkeley, the University of California campus, and Interstate 80 through West Berkeley. The section between San Pablo Avenue and 10th Street is a “choke point” for vehicles traveling along University Avenue and an important node of pedestrian activities in West Berkeley. University Avenue is a major street that provides east-west connections between the Marina, the I-80 freeway, West Berkeley, Downtown, and the University of California campus. San Pablo Avenue and University Avenue have raised, landscaped medians, two travel lanes in each direction and exclusive single left turn lanes at most intersections.

7th, 8th, 9th and 10th Streets are local roadways providing north-south connections to the local neighborhoods in West Berkeley. University Avenue has a raised, landscaped median, two travel lanes in each direction and exclusive single left turn lanes at 8th eastbound and westbound, and 9th eastbound. The intersection of 7th, 8th, and 10th Street with University Avenue are stop-controlled on minor approaches. The intersection of University and 9th Street is signalized. All of these minor streets are residential in character away from the University Avenue corridor and have one travel lane in each direction. A variety of commercial and retail establishments front University Avenue, and there is metered parallel parking generally along the first half block of the side streets in each direction. Pedestrian crosswalks are provided at all legs of all intersections. The crosswalks of University at 7th, 8th, and 10th are uncontrolled; the crosswalks at 9th are signalized.

Issues

- Vehicle queues on University Ave frequently extend along the San Pablo to 7th Street corridor; queues are particularly heavy between 9th and 10th eastbound (vehicles waiting at the San Pablo intersection); and between 7th and 8th westbound (vehicles waiting at the 6th Street intersection). “KEEP CLEAR” pavement markings are present across the side street intersections in both directions, but vehicles were frequently observed blocking the crosswalks at these intersections.
- Long pedestrian crossing distances across all legs of San Pablo/University, and across the University legs of the other intersections.
- Large volume of pedestrians crossing at San Pablo/University due to retail activities and bus route transfers.
- Pedestrian crossings along corridor include children traveling to James Kenney Park north of University.
- Vehicles on all legs often stop in the crosswalk on red.
- No audible pedestrian signal actuation at University/San Pablo and University/9th.
- Observed southbound truck turning right onto University Avenue having trouble making the turn without going into eastbound left turn lane.
- Parked vehicles on University Avenue are too close to crosswalks and obscure presence of pedestrians.
- No truncated domes on curb ramps.
- This portion of University Avenue is scheduled for rehabilitation in Summer 2008 as a Federal STP project. The grant funding is insufficient for the paving itself requiring that the street program make up the deficit.
### Proposed Improvements

- San Pablo Avenue is a State of California right-of-way, therefore any work along the roadway requires State approval.
- At San Pablo/University install advance stop bars on all approaches and retain ladder style crosswalks on all legs. $3,600
- San Pablo Avenue Intersection:
  - Perpendicular curb ramps with truncated domes should be installed. $20,000
  - Drainage grates exist at the northeast and southeast corners.
  - Create pedestrian refuges on San Pablo Avenue at the medians by constructing median nose. $30,000
  - Install pedestrian-actuated audible signal on all legs. $4,000
- 7th, 8th, 9th, and 10th Street Intersections:
  - Directional curb ramps with truncated domes should be installed. $80,000
  - Drainage grates exist at several corners.
  - Create ADA compliant pedestrian median refuges on University Avenue. Median refuges may impact drainage and require re-engineering that could entail expensive and extensive re-grading and/or storm drain modifications. $240,000
  - Install ladder style crosswalks and warning signage at uncontrolled locations across University Avenue (all except 9th). $8,400
  - Increase lighting for pedestrians across University Avenue or install overhead pedestrian-activated flashing lights. Installation of increased lighting may require trenching for conduit that would impact street paving. $200,000 (2 locations only)
  - Increase enforcement of vehicles blocking intersections. (No capital cost)
- 6th and, 9th Street Intersections:
  - Explore signal timing options at San Pablo Avenue, 6th Street, and 9th Street to decrease vehicle queuing. (No capital cost)

### Cost

- $552,000 ($116,000 is accounted for in Citywide projects)
INTERSECTION IMPROVEMENT PROJECT:
2. UNIVERSITY AVENUE AND SHATTUCK AVENUE

**Study Area Description**

| The signalized intersection where northbound Shattuck splits from southbound Shattuck at University Avenue lies at the north end of the downtown district of Berkeley. University Avenue is the major east/west street and Shattuck Avenue is the major north/south street in Berkeley and their intersection is very complex, a result of the historic layout of the city as developed around the earlier streetcar system. Shattuck Avenue is split into a north/south couplet that is three lanes in either direction for several blocks between University Avenue and Center Street to the south. This intersection lies at the north end of the couplet, where it is resolved by the northbound Shattuck alignment being incorporated into University Avenue for a short block westward until it turns northward and reunites with southbound Shattuck to become bi-directional. This short block of University Avenue is three lanes wide with the far right lane being a right turn only lane, the middle lane allowing right turns and through movement, and the left lane allowing left turns and through movement. Shattuck Avenue southbound is three lanes in width. Eastbound University Avenue has two lanes for through movement, and both left and right hand pocket lanes, while southbound Shattuck, north of University Avenue, has two through lanes and a right-hand pocket lane. |

**Issues**

- The Shattuck and University corridors are two of the most heavily congested corridors in Berkeley.
- This intersection is the site of the most auto/pedestrian collisions during a recent eight-year period.
- There are two right turn lanes proceeding northward from westbound University onto northbound Shattuck.
- Left turns are allowed from University onto Shattuck, although there is no dedicated lane from westbound University onto southbound University.
Proposed Improvements

- If sufficient right-of-way exists, install perpendicular curb ramps with truncated domes at all corners so that ramps face directly into crosswalk. $20,000
- Install advance stop bars on University to discourage encroachment of stopped vehicles into crosswalk and in right-turn-on-red situations. $1,800
- Consider utilization of a “leading pedestrian signal phase” to give pedestrians a “head start” to cross the street before motor vehicles start. (No capital cost)
- Repaint crosswalk striping at each crossing. $2,000
- Consider restricting right turn on red from westbound University traffic to northbound Shattuck in conjunction with improving intersection operations through signal timing modifications and/or signage. $200
- Install “No U-Turn” sign on west leg of intersection. $200

Cost

- $24,200 ($21,000 is accounted for in Citywide projects)
SAFE ROUTES TO TRANSIT PROJECT:
3. ASHBY BART STATION AREA IMPROVEMENTS

Study Area Description

The Ashby BART station is situated on a triangular site, bordered by three major streets with heavy traffic volumes: Ashby Avenue on the north, Martin Luther King Jr. Drive on the west, and Adeline Street on the east. Uncontrolled crosswalks exist on both Adeline and Martin Luther King Jr streets in front of the BART station. These crosswalks experience high pedestrian volumes from people walking to the station from the surrounding residential areas. Pedestrians also cross Ashby at the unmarked crosswalk at Otis Street. In addition to the BART station, the parking lot of the station hosts a flea market on weekends that draws many local residents. In-pavement flashing lights have been installed across Martin Luther King Jr. Drive at Prince Street.

This area is undergoing changes as part of the Ed Roberts Campus Plan.

Issues

- High pedestrian volumes, combined with heavy traffic on surrounding streets, and many vehicles entering/exiting BART station parking lot.
- BART station driveways on MLK Jr. Drive.
- Free right turn lane at southwest corner of Ashby/Adeline promotes higher speed vehicle turns near a major entrance to the station.
- Pedestrian/Auto conflicts have been noted by local residents, specifically related to vehicles not stopping at the STOP sign on the northbound right turn movement out of the BART driveway on the west side of the station.
- Length of crossings on Adeline, particularly Adeline/Ashby.
Proposed Improvements

- Install in-pavement yield to pedestrian signs in medians at uncontrolled marked crosswalks along BART frontage as noted. $1,200
- Install advance stop line at intersections of Ashby/MLK and Ashby/Adeline to ensure vehicles stop far enough back from crosswalk, and refresh crosswalk paint. $6,400
- Consider tightening up “free” right turn radii at northwest corner of Ashby/Adeline using paint or vertical treatments. Take into account turning radii of trucks, buses, and other large vehicles. $100,000
- Work with BART to narrow widths of driveways from BART station onto MLK. In the long-term, these driveways should be realigned to 90-degrees to MLK. These driveways are on BART property and changes would need to be coordinated with BART. $51,200
- Consider constructing a bulbout on south side of Ashby between Harper and MLK, to provide a shorter crossing at the Ashby/MLK intersection. Ashby Avenue is State of California right-of-way and any work would need to be approved by the State. $80,000
- Change free right turn slip lane at southwest corner of Ashby and Adeline to stop controlled. $200
- Improve the crossing at Otis and Ashby by striping a high visibility crosswalk across the west leg of the intersection, constructing a median refuge, installing in-pavement flashers and constructing a bulbout on the south side of Ashby. Install “Cross with Caution” sign. $206,600
- Consider a study of pedestrian safety improvements along the Adeline Corridor. (No capital cost)
- Additional improvements include those planned as part of the Ed Roberts Campus Project. Improvements included in the project moving the existing middle of block crosswalk south and adding signage and in-pavement flashers. (No cost)

Cost

- $445,600 ($2,400 is accounted for in Citywide projects)
6. Recommended Pedestrian Projects

CORRIDOR IMPROVEMENT:
4. SACRAMENTO STREET BETWEEN ADDISON STREET AND UNIVERSITY AVENUE

Project Description
This improvement corridor extends along Sacramento between Addison Street and University Avenue. The intersection of Sacramento Street with University Avenue is signalized. Sacramento Street is a north-south major road with two travel lanes each direction, a raised landscaped median, and on-street parallel parking. University Avenue is an east-west major road with two travel lanes in each direction, a raised median, and on-street parallel parking. Addison Street is a local roadway providing east-west connections to the Andronico’s Market parking lot and neighborhoods in West and Central Berkeley. Addison Street has one travel lane in each direction, with on-street parallel parking. This segment of Addison Street carries a large volume of vehicles and trucks for a neighborhood street due to Andronico’s Market. The intersection skews to the west slightly on Sacramento Street, south of Addison Street. Vehicles on Addison Street are able to cross Sacramento Street in two stages, since the median is wide enough to store one car in each direction. Both intersections have marked crosswalks on all legs. Due to the width of the median on Sacramento, pedestrians are effectively crossing the roadway in two stages; when in the median area, pedestrians walk in a paved area along the edge of the median that is delineated with high-visibility ladder striping. (The remaining portions of the crosswalks are transverse striped).

Issues
Sacramento/University
- Long pedestrian crossing distances across all intersection legs.
- Large turning radii at corners and wide outer lane widths (about 20 feet) encourage right turning vehicles to speed through turning movement, especially at the northwest corner.
- A number of right-turning vehicles are not stopping on red if there is no opposing traffic, neglecting to look for pedestrians in crosswalk.
- Utility boxes and poles block or obscure pedestrians on sidewalk waiting to cross.
- Vehicles often stop in the crosswalk on red signal phase.
- No audible pedestrian signal actuation.
- No truncated domes on curb ramps.

Sacramento/Addison
- Long pedestrian crossing distances across Sacramento Street.
- Southbound vehicles tend to speed through this intersection.
- Parked vehicles on southwest side of Sacramento Street are too close to crosswalk and obscure presence of pedestrians.
- Raised median on southern leg of Sacramento Street sticks into crosswalk creating an obstacle for the disabled.
- No truncated domes on curb ramps.
- Numerous eastbound vehicles on Addison do not stop at crosswalk due to site distance problem created by intersection skewing and parked vehicles on Sacramento Street.
- Lowered curb instead of curb ramp on southwest corner.

Proposed Improvements
Sacramento/Addison
- Construct bulbouts at all corners to increase pedestrian visibility, restrict parking close to the intersection, reduce vehicle speeds, and decrease pedestrian crossing distances across Sacramento Street. Directional curb ramps with truncated domes should be installed. Bulbouts would require relocation of four catch basins and pipes (1 at northwest corner, 1 at southeast corner, 2 at northeast corner. $250,000
- Install ladder style crosswalks across Sacramento Street increase pedestrian visibility. Re-stripe crosswalk across southern leg of Sacramento so that the raised median does not intrude into the crosswalk. $3,000

Sacramento/University
- Construct bulbouts at all corners of the intersection to reduce the width of the outermost lane to a maximum of 12 feet, increase pedestrian visibility, decrease the pedestrian crossing distances and tighten the turning radius for right turning vehicles. Directional curb ramps with truncated domes should be installed. Adequate lane
width should be retained to serve as a bus pullout for the existing bus stops. Drainage grates exist at the
northeast and southeast corners. Bulbouts would require relocation of four catch basins and pipes (1 at
northwest corner, 1 at southeast corner, 2 at northeast corner.) $250,000

- Create ADA compliant pedestrian refuges at all medians. $120,000
- Install pedestrian-actuated audible signal on all legs. $4,000
- Improve visibility of crosswalks and pedestrians by installing advance stop bars on all approaches and ladder
style crosswalks on all legs. $8,400

Cost

- $634,800 (14,800 is accounted for in Citywide projects)
6. Recommended Pedestrian Projects

CORRIDOR IMPROVEMENT PROJECT:
5. ACTON STREET BETWEEN ADDISION AND UNIVERSITY

<table>
<thead>
<tr>
<th>Project Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>This corridor includes Acton Street between Addison and University. Acton Street is a north-south local roadway with one lane in each direction, and with metered, parallel parking to the north, loading zone parking on the east side, and no parking on the west side. University Avenue is a major street with two travel lanes in each direction, a raised center median and on-street parallel parking. Addison Street is a local east-west roadway. The intersection of Acton/University is signalized and adjacent to residential and neighborhood retail establishments, including Andronico’s Market on the southeast corner. Pedestrian signal actuation is on all corners and on the University Avenue medians. The intersection of Acton Street with Addison Street is four-way, stop-controlled. The northwest corner contains a 28-foot long bulbout that sticks about 6 feet into the Acton Street roadway and contains a tree. The intersection is adjacent Andronico’s Market loading area on the northeast corner and residences on the other corners. Trucks generally approach Andronico’s Market loading area on the northeast corner and residences on the other corners. The Strawberry Creek Lodge Senior Housing is located on Addison Street west of this intersection. Addison Street between Acton and Sacramento carries a large volume of vehicles for a neighborhood street due to Andronico’s Market.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Issues</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Acton/University</strong></td>
</tr>
<tr>
<td>Long pedestrian crossing distances across University Avenue.</td>
</tr>
<tr>
<td>Metered parking space on northwestern side of University Avenue is too close to crosswalk.</td>
</tr>
<tr>
<td>University Avenue vehicles often stop in the crosswalk.</td>
</tr>
<tr>
<td>Raised median on eastern leg sticks 2.5 feet into crosswalk, creating an obstacle for the disabled.</td>
</tr>
<tr>
<td>Raised medians do not serve as pedestrian refuges because they do not extend into the crosswalks or have curb ramps.</td>
</tr>
<tr>
<td>No audible pedestrian signal or audible actuation.</td>
</tr>
<tr>
<td>Truncated domes on southwest curb ramp only.</td>
</tr>
<tr>
<td>Curb ramp on northeast corner facing western direction only.</td>
</tr>
<tr>
<td>Curb ramp on the southeast side of Acton Street not facing crosswalk.</td>
</tr>
</tbody>
</table>

| **Acton/Addison** |
| Loading zone activity close to the intersection creates a vehicle bottleneck at the northern leg of Addison Street causes driver frustration and reckless turning movements. |
| Trucks must sometimes double park on Addison Street to wait for space in loading dock or on Acton Street. |
| Andronico’s employees park in loading dock after morning deliveries, occasionally blocking the sidewalk and forcing delivery trucks to park on street. |
| New senior living facility one block away. Many seniors walk through this intersection to access Andronico’s and other retail and community services. |
Proposed Improvements

**Acton/University**
- Construct bulbouts at northeast, northwest and southeast corners to reduce the width of the outermost lane to a maximum of 12 feet, increase pedestrian visibility, and decrease the pedestrian crossing distances across University Avenue. Directional curb ramps with truncated domes should be installed. Adequate lane width should be retained to serve as a bus pullout for the existing bus stops. Drainage grates exist at the northeast and southeast corners. $200,000
- Create pedestrian refuges at the medians on University Avenue that are ADA compliant. This may require drainage inlets. $60,000
- Install audible pedestrian actuation and audible signal on all legs. $4,000
- Remove curb ramp on southeast side of Acton Street that does not lead into crosswalk. (see image) $1,000

**Acton/Addison**
- Work with Andronico’s to explore the options of relocating on-street loading zones. One option may be:
  - Removed loading zone on the southeast side of Acton Street closest to the intersection. (No capital cost)
  - Replace existing parallel parking with a loading zone on the northeast side of Addison Street closest to the intersection. (No capital cost)
- Partner with Andronico’s to develop a traffic management plan, which would include employee trip reduction, employee parking provisions and expectations, and keeping the loading dock clear of parked vehicles until the cessation of all delivery activities. (No capital cost)
- Enforce parking violations. (No capital cost)

**Cost**
- $265,000 ($4,000 is accounted for in Citywide projects)
## Study Area Description

This project encompasses a corridor along Martin Luther King Jr. Way including Allston Way, Center Street, Addison Street and University Avenue. This area is at the heart of the city’s civic area, and is fronted by the Berkeley Unified School District Offices, the Berkeley Public Safety Building, the Berkley/Albany Municipal Court, and Martin Luther King Jr. Park and Plaza. Berkeley High School is located on the southeast corner of MLK/Allston Way. A farmer’s market is held on Center Street on Saturdays. The MLK corridor marks the western edge of downtown Berkeley; to the east are civic, office and commercial uses of downtown, to the west are residential neighborhoods. Martin Luther King Jr. Way is a major north-south roadway, and carries two lanes of traffic in each direction plus on-street parking. Allston, Center, and Addison are effectively local roads with one travel lane in each direction plus parking, but carry very heavy volumes to the east of MLK due to the downtown land uses. University Avenue is a major east-west street with two travel lanes each direction plus on-street parking. Allston Way at MLK is signalized, Center Street is a signalized T-intersection that extends east off MLK, Addison Street is stop-controlled on the minor approaches, and University Avenue is signalized. Pedestrian volumes are primarily east-west across this corridor; marked crosswalks are present at all legs of all intersections, with those at Addison being uncontrolled and the remaining signal controlled. Audible pedestrian signals are installed at Center street and University Avenue intersections.

## Issues

- Heavy pedestrian volumes related to proximity of civic uses, MLK Jr Park, and Berkeley High School.
- Heavy traffic volumes through corridor.
- On-street parking along MLK not consistent; dropped at intersections to accommodate left turn lanes.
- Uncontrolled crossing at Addison Street.
Proposed Improvements

- Consider installing bulbouts at west side of Center Street intersection, at south side of Addison Street intersection and at all corners of University Avenue intersection. Bulb-outs at Center Street may require drainage considerations to Strawberry Creek Culvert. Other bulbouts may require drainage improvements. $500,000 (with University Avenue bulbouts) $250,000 (without University Avenue bulbouts)
- Install pedestrian actuated beacon for crossing at Addison Street. $100,000
- Install audible pedestrian signals at Allston Way intersection. $4,000
- If sufficient right-of-way exists, install perpendicular curb ramps with truncated domes at all corners of University/MLK. $20,000
- Install advance warning signage and truncated domes for uncontrolled crosswalk across Addison at McKinley. $2000

Cost

- $376,000 (without University Avenue bulbouts)
- 626,000 (with University Avenue bulbouts)
($26,000 is accounted for in Citywide projects)
INTERSECTION IMPROVEMENT:
7. UNIVERSITY AVENUE AND MILVIA STREET

<table>
<thead>
<tr>
<th>Study Area Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>The signalized intersection of Milvia and University is within the city’s busy downtown area. Milvia is offset as it crosses University, so the intersection jogs to the east when heading northbound. The crosswalks however, are perpendicular; they are just set away from the corners on the southeast and northwest sides to provide a right angled crossing. Milvia is a north-south local road with one travel lane in each direction, plus on-street parallel parking; there is a left turn lane in the northbound direction on Milvia at University. University Avenue is an east-west major road with two lanes in each direction, with a raised center median and on-street parking. Commercial/retail uses front both sides of University in this area, and on the southwest corner is an auto service establishment with a parking lot that comprises much of the corner, including driveways on both University and Milvia.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Issues</th>
</tr>
</thead>
<tbody>
<tr>
<td>▶ Crossing distances across University.</td>
</tr>
<tr>
<td>▶ Left turning vehicles may be focused on approaching traffic and fail to yield to pedestrians.</td>
</tr>
</tbody>
</table>
Proposed Improvements

- Consider bulbout on the southeast corner to provide additional visibility for pedestrians and shorten crossing distance. Bulbou may require regrading of the southeast quadrant of the intersection. $100,000
- Consider a separate northbound and southbound phases for Milvia St., to eliminate left turn conflicts at the offset intersection. (No capital cost)

Cost

- $100,000 ($0 is accounted for in City-wide projects)
6. Recommended Pedestrian Projects

CORRIDOR IMPROVEMENT:
8. ASHBY AVENUE BETWEEN CALIFORNIA AVENUE AND SAN PABLO AVENUE

Study Area Description
This segment of Ashby Avenue is bordered by homes, with retail at Sacramento and San Pablo Corridors. It provides a major access route for motor vehicles to the I-80 freeway, and is heavily traveled. The road is four lanes, with the outside lanes used for parking during off-peak hours. The intersection of Ashby and San Pablo is a transfer point for AC Transit. The posted speed limit is 25 mph. Along the corridor, Sacramento Street, Mabel Street and San Pablo Avenue are signalized, while the remaining intersections are two-way stop-controlled. California Street is a bicycle boulevard. Between 2000 and 2007, pedestrian-vehicle collisions have occurred at California Street (3 collisions), Sacramento Avenue (1 collision), Mabel Street (1 collision), midway between Mabel and San Pablo Avenue (1 collision), and at San Pablo Avenue (6 collisions). Ashby Avenue and San Pablo Avenue are both California State Highways, and are under Caltrans jurisdiction. Improvements at San Pablo Avenue and Ashby Avenue are considered in the San Pablo Avenue Public Improvements Plan (SPPIP) and are included here.

Issues
- Heavy motor vehicle volumes.
- Speeding along corridor.
- Narrow sidewalks, lack of street trees and elimination of parking buffer during peak hours create an unpleasant walking environment.
- Limited easy crossing opportunities between Sacramento and Mabel.
- High rate of pedestrian-motor vehicle collisions at San Pablo/Ashby intersection.
- Bicycle Boulevard crossing at California Street does not have special treatments.
- Uncontrolled crossing at Acton does not have special treatments.
- Crosswalks are not striped on minor intersecting streets.
6. Recommended Pedestrian Projects

Proposed Improvements

California and Ashby
- Stripe high-visibility crosswalk across Ashby. $2,400
- Consider pedestrian-activated flashing beacon. $100,000

Sacramento and Ashby
- Stripe stop bars four feet back from crosswalk at all legs. $2,400
- Install right-turn must yield to pedestrians signage. $800

Stanton and Ashby and Dohr and Ashby Intersection
- Stripe transverse crosswalk across north and south legs of Stanton. $1,000
- Stripe transverse crosswalk across north and south legs of Dohr. $1,000

Acton and Ashby
- Stripe high-visibility crosswalk across Ashby. $1,200
- Install pedestrian warning signs. $400
- Consider pedestrian-activated flashing beacon. $100,000
- Consider bulbouts on northeast and southwest corners of Acton. Accommodate existing drainage. $150,000

Mabel and Ashby
- Stripe stop bars four feet back from crosswalk at all legs. $1,200

San Pablo and Ashby
- Install bus shelter on southwest corner on Ashby Avenue. $40,000
- Install right turn must yield to pedestrians sign and consider restricting right turns on red. $400
- Construct median nose with in-pavement luminaires to provide pedestrian refuge. (Per SPPIP) $13,800
- Pave crosswalks with textured pavers that will withstand heavy vehicle volumes. (Per SPPIP)(Cost not included)
- Install pedestrian-scale lighting on existing cobra head street lights. (Per SPPIP) $6,100

Cost
- $420,700 ($7,600 is accounted for in Citywide projects)
INTERSECTION IMPROVEMENT PROJECT:
9. ALCATRAZ AVENUE AND ADELINE STREET

Study Area Description
The intersection of Adeline Street with Alcatraz Avenue is in the Lorin District in South Berkeley near the border with Oakland. Adeline Street is a major street that runs diagonally from southwest to northeast connecting other major streets such as Shattuck Avenue, Martin Luther King Jr. Way and Stanford Avenue. Alcatraz Avenue is an important collector street that provides east-west connections between Claremont Avenue and the Elmwood district in the east to Adeline Street, Sacramento Avenue and San Pablo Avenue in the west. Alcatraz Avenue has one travel lane in each direction and has width to accommodate two vehicles side-by-side at the intersection approaches. Adeline Street has six travel lanes (three in each direction) plus a single exclusive left turn lane in each direction at intersections. The intersection is adjacent to neighborhood retail establishments on two corners, while the southeastern corner is the transition point for BART's underground tunnel section as it travels north through Berkeley on the Richmond line. On-street parking is prohibited on all approaches immediately adjacent to the intersection, leaving adequate lines-of-sight for drivers and pedestrians alike. Angled parking on Adeline Street is provided in parking bays located roughly 100 feet from the intersection on the east and west sides of Adeline Street north of the intersection and on the west side of Adeline Street south of the intersection.

This intersection will be addressed when planning for the Ed Roberts Campus.

Issues:
- Long crossing distances across Adeline Street.
- Pedestrian islands on Adeline Street too narrow to serve as refuge.
- Very wide southbound lane on far side of intersection (35' 9") increases speeds of eastbound right turning vehicles from Alcatraz Avenue to Adeline Street.
- Due in part to the very wide southbound lane described above, there is a large turning radius for eastbound right turning vehicles from Alcatraz Avenue to Adeline Street.
### Proposed Improvements

<table>
<thead>
<tr>
<th>Proposed Improvement</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Widen pedestrian refuge islands on Adeline Street to a minimum of 6 feet to shorten the pedestrian crossing distances across this major street. $62,000</td>
<td>$142,000 ($0 is accounted for in City-wide projects)</td>
</tr>
<tr>
<td>Construct a bulbout from the southwestern corner of the intersection to reduce the width of the outermost lane to a maximum of 12 feet and to decrease the pedestrian crossing distance across Adeline Avenue and “tighten” the turning radius for eastbound right turning vehicles from Alcatraz Avenue onto Adeline Street. Align crosswalk with bulbout. Design bulb-out to serve as a bus pullout for the existing bus stop at this location. The bulb-out should be designed with a turning radius that allows large vehicles to negotiate the corner. $80,000</td>
<td></td>
</tr>
<tr>
<td>Widening of refuge islands, and installation of raised medians will affect drainage, requiring re-engineering that could entail expensive and extensive pavement re-grading and/or storm drain modifications. The proposed bulb-out at the southwest corner may not require drainage improvements. A detailed survey is required to make this determination.</td>
<td></td>
</tr>
</tbody>
</table>
CORRIDOR IMPROVEMENT:
10. SHATTUCK AVENUE BETWEEN VINE STREET AND HEARST AVENUE

**Study Area Description**

This segment of Shattuck Avenue is located in the “Gourmet Ghetto,” a commercial area with high pedestrian and motor vehicle volumes. Signalized intersections along the corridor include Vine and Cedar. All other intersections are stop-controlled on the streets perpendicular to Shattuck Avenue. Shattuck Avenue is four lanes with on-street parking, a median and turn lanes at most intersections. The posted speed limit is 25 mph. A school is located on Virginia Street, and crosswalks at Virginia and Lincoln are yellow. Virginia Avenue is also a bicycle boulevard. Between 2000 and 2007, there have been 18 pedestrian-motor-vehicle collisions along the corridor (4 at Vine, 5 at Cedar, 4 at Virginia, 2 at Delaware, and 3 at Hearst). In all cases except for one, the driver or bicyclist was at fault.

**Issues**

- History of pedestrian collisions.
- Heavy motor vehicle volumes.
- Bicycle Boulevard on Virginia Street crosses at unsignalized intersection.
- School adjacent to corridor.
- School area signage on Shattuck is not up-to-date.
Proposed Improvements

<table>
<thead>
<tr>
<th>Location</th>
<th>Proposed Improvements</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vine and Shattuck</td>
<td>Paint stop bars four feet back from crosswalks on all four legs. $1,800</td>
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</tr>
<tr>
<td></td>
<td>Install “turning cars must yield to pedestrians” signs. $800</td>
<td></td>
</tr>
<tr>
<td>Cedar and Shattuck</td>
<td>Install “turning cars must yield to pedestrians” signs. $800</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Restrict right turns on red for motor vehicles on Cedar Street. $400</td>
<td></td>
</tr>
<tr>
<td>Lincoln and Shattuck</td>
<td>Consider bulbouts on north leg of Shattuck. $150,000</td>
<td>$1,150,000</td>
</tr>
<tr>
<td></td>
<td>Install MUTCD Assembly B School Pedestrian warning signage. $400</td>
<td></td>
</tr>
<tr>
<td>Virginia and Shattuck</td>
<td>Consider bulbouts on north and south legs of Shattuck. Accommodate bus stops on south leg. $250,000</td>
<td></td>
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<tr>
<td></td>
<td>Install MUTCD Assembly B School Pedestrian warning signage. $400</td>
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<tr>
<td></td>
<td>Install pedestrian activated flasher that can be activated from all four corners. $100,000</td>
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<tr>
<td></td>
<td>Consider intersection for signalization. (Per Berkeley Bicycle Plan)</td>
<td></td>
</tr>
<tr>
<td>Francisco and Shattuck</td>
<td>Consider bulbout on west leg of crosswalk. $100,000</td>
<td>$100,000</td>
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<tr>
<td></td>
<td>Restripe existing transverse crosswalk across Shattuck as high-visibility crosswalk. $1,200</td>
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<tr>
<td></td>
<td>Construct median nose on south leg of intersection. $3,000</td>
<td></td>
</tr>
<tr>
<td>Delaware and Shattuck</td>
<td>Restripe existing transverse crosswalks across Shattuck as high-visibility crosswalks. $2,400</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Construct median nose on north leg of intersection. $3,000</td>
<td></td>
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<tr>
<td></td>
<td>Install pedestrian warning signage. $400</td>
<td></td>
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<tr>
<td>Cost</td>
<td>$640,400 ($32,400 is accounted for in Citywide projects)</td>
<td></td>
</tr>
</tbody>
</table>
CORRIDOR IMPROVEMENT:

11. SHATTUCK AVENUE BETWEEN RUSSELL STREET AND WARD STREET

Study Area Description

This corridor extends along Shattuck Avenue between Russell Street and Ward Street. This corridor marks the area where Shattuck merges into Adeline, transitioning from one travel lane in each direction south of Ward to a wide major road with raised median north of Ward. This corridor is characterized by heavy volumes of vehicles, pedestrians, and bicyclists, and typically has heavy traffic congestion associated with the Berkeley Bowl market and other retail uses along the corridor. Russell Street is an east-west bicycle boulevard that intersects Shattuck and is stop-controlled on the minor approach. Shattuck/Ward/Adeline is a signalized intersection. Traffic along this corridor is also affected by nearby traffic signals at Ashby to the south. Heavy pedestrian crossings of Shattuck occur at this intersection and high-visibility ladder crosswalks are striped across Shattuck. The crosswalks at Oregon/Shattuck have actuated pole-mounted beacon for pedestrian crossings, as well as painted bulbouts at the corners.

Issues

- Heavy volumes of pedestrians, bicyclists, and motor vehicles along entire Shattuck corridor.
- Heavy pedestrian crossing volumes across Shattuck, particularly at Russell and Oregon.
- Berkeley Bowl marketplace vehicle traffic, with limited parking in parking lot many vehicles circle around Shattuck, Russell, and Adeline to find on-street parking.
- High on-street parallel parking turnover, resulting in many vehicles pulling in and out of spaces along a congested corridor.
- Left turning vehicles on Shattuck northbound at Oregon (to enter Berkeley Bowl driveway) have no dedicated left turn lane, and cause through traffic to veer to right hand side of road over painted bulb-out at the crosswalk.
- Traffic queues on Shattuck southbound at Ashby back up toward the Russell Street intersection, creating visibility issues for pedestrians crossing.
- Southbound traffic on Shattuck merges from two lanes to one lane at Ward.
6. Recommended Pedestrian Projects

Proposed Improvements

- Consider installing bulbouts at Shattuck Avenue and Ward Street and Shattuck Avenue and Stuart Street. Bulbouts would impact drainage requiring re-engineering that could entail expensive and extensive pavement re-grading and/or storm drain modifications. Design must not inhibit access to bus stops at Stuart Street. Ward $150,000  Stuart $250,000
- Install pedestrian warning signage at Stuart Street. $400
- Install in-pavement yield to pedestrian signs at Russell Street and Shattuck Avenue. $400
- Consider bulbouts on south leg of Russell Street. $150,000
- Restrict parking 20 feet to either side of Russell Street on Shattuck Avenue. $80

Cost

- $550,880 ($480 is accounted for in Citywide projects)
6. Recommended Pedestrian Projects

CORRIDOR IMPROVEMENT:
12. SAN PABLO AVENUE FROM ADDISON STREET TO BANCROFT WAY

**Study Area Description**

This section of San Pablo Avenue is bordered by many amenities, including a Post Office, several restaurants, convenience stores and other small stores. Businesses toward the south end of the corridor are more car-oriented than businesses to the north end. Addison Street and Allston Street are signalized, while Bancroft Way and Cowper Street are unsignalized. All intersections are striped with white transverse crosswalks. There is an uncontrolled mid-block crossing north of Addison Street. Addison Street crosses San Pablo Avenue in two segments, and has seen 7 pedestrian-motor vehicle collisions between 2000 and 2007. The driver was at fault in all collisions. During the same time frame, Allston saw 1 collision and Bancroft saw 2 collisions. San Pablo Avenue Public Improvements Plan recommends several improvements to this intersection, which have been included here. San Pablo Avenue is a California State Highway, and is under Caltrans jurisdiction.

**Issues**

- Uncontrolled mid-block crossing north of Addison Street with standard transverse crosswalks.
- High collision rate at Addison Street.
- Potential for pedestrian-motor vehicle collisions at T-intersection at Addison Street.
- Left turn lanes at most intersections reduce the size of available pedestrian refuges.
Proposed Improvements

Addison and San Pablo
- Install “Turning Traffic Must Yield to Pedestrians” signage for eastbound traffic on south leg of Addison Street. $200
- Retime signal at Addison to give pedestrians leading pedestrian interval. (No capital costs)
- Construct median nose to provide pedestrian refuge. (Per SPPIP) $3,000

Uncontrolled Crossing North of Addison
- Stripe high visibility crosswalk. (Per SPPIP) $1,200
- Construct bulbout on west leg of crosswalk. (Per SPPIP) $50,000

Allston and Cowper
- Stripe high-visibility crosswalks. (Per SPPIP) $2,400

Allston and Bancroft
- Construct median nose on both sides to provide pedestrian refuge. (Per SPPIP) $5,600
- Install pedestrian warning signage at south and north legs. $400
- Consider bulbouts into San Pablo at southwest and southeast corners. $150,000

Corridor-wide recommendations:
- Install pedestrian-scale lighting on existing cobra head street lights. (Per SPPIP) (Not included in cost)

Cost
- $214,200 ($4,000 is accounted for in Citywide projects)
INTERSECTION IMPROVEMENT:
13. BANCROFT WAY AT OXFORD/FULTON STREETS

<table>
<thead>
<tr>
<th>Study Area Description</th>
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</thead>
<tbody>
<tr>
<td>The signalized intersection of Bancroft and Fulton is located at the southwest corner of the University of California campus. Bancroft is an east-west roadway that is situated along the southern boundary of the campus. Bancroft is one-way in the westbound direction, with three westbound travel lanes and parallel parking on both sides of the street. Fulton is a north-south roadway that is situated along the western boundary of campus. Fulton has two travel lanes in each direction, with on-street parallel parking and a bicycle lane on each side, and a raised center median. The Bancroft/Fulton intersection is configured with a free right turn lane in the westbound direction; approaching Fulton the rightmost lane becomes a dedicated right turn lane, which becomes a channelized slip lane at the intersection. This slip lane becomes the second travel lane on northbound Fulton. Heavy pedestrian volumes exist at this intersection as pedestrians walk between campus and downtown Berkeley. Crosswalks are striped at all legs of the intersection; the slip lane and the northern leg across Fulton are striped with high-visibility ladder markings.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Issues</th>
</tr>
</thead>
<tbody>
<tr>
<td>▪ Heavy pedestrian volumes through intersection at campus boundary.</td>
</tr>
<tr>
<td>▪ Relatively high vehicle speeds coming westbound on one-way Bancroft.</td>
</tr>
<tr>
<td>▪ Free right turn slip lane on Bancroft becomes its own travel lane on Fulton; no slowing for merge necessary.</td>
</tr>
</tbody>
</table>
6. Recommended Pedestrian Projects

**Proposed Improvements**

- Install warning signage indicating that motorists and bicyclists should yield to pedestrians. $400
- Consider converting the existing free right turn lane to a stop or signal controlled lane, with a phase requiring all vehicles to stop for pedestrians. $200,000 (signal) $200 (stop sign)
- Install countdown signals for all crossing legs. $6,400

**BANCROFT WAY AT OXFORD/FULTON STREETS**

- Install countdown signals

**Design Details**

- $206,800 (signal option)
- $7,000 (stop sign option)

($6,400 is accounted for in Citywide projects)
# 6. Recommended Pedestrian Projects

## 14. SOLANO AVENUE FROM COLUSA TO THE ALAMEDA

### Study Area Description

<table>
<thead>
<tr>
<th>Study Area Description</th>
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<tbody>
<tr>
<td>The Solano Avenue shopping district, which straddles the Berkeley-Albany border, is an important neighborhood and citywide shopping attraction. A large share of the district's pedestrian traffic is concentrated at the eastern end of Solano Avenue, within the boundaries of this project between Colusa Avenue and The Alameda. The Thousand Oaks Elementary School is on Colusa Avenue, one block north of Solano Avenue. The intersection of The Alameda &amp; Solano Avenue serves as the eastern gateway to the Solano Avenue shopping district with each street serving as a conduit bringing traffic into and out of the area. Colusa Avenue provides access to Solano Avenue from the north to Kensington, Albany and El Cerrito, and from the south to central Berkeley. Colusa Avenue meets Solano Avenue at an &quot;offset&quot;: its southern leg meets Solano Avenue roughly 125 feet to the east of its northern leg's intersection. The southern leg's intersection is stop controlled for vehicles northbound on Colusa Avenue and uncontrolled for the Solano Avenue approaches. The northern leg's intersection is signalized. This section of Solano Avenue also has several marked crosswalks that are uncontrolled for vehicles on Solano Avenue. While the visibility of these crosswalks has recently been increased with the installation of “ladder” crosswalk paint markers and pedestrian right-of-way signs installed on the centerline of Solano Avenue and a bulb-out on the north side of the Colusa/Solano intersection, there are additional improvements that could further enhance safety.</td>
</tr>
</tbody>
</table>

### Issues

- Colusa Avenue offset intersection serves a traffic calming purpose by discouraging drivers from using this path to reach points north, but at a cost to pedestrians and bicyclists since drivers are frequently distracted as they negotiate traffic.
- Pedestrian conflicts with northbound left-turning vehicles from Colusa Avenue onto Solano Avenue.
- Pedestrian visibility and crossing distances across Solano Avenue at Fresno Avenue and Colusa Avenue (both legs) intersections.
- Large turning radius for turn from westbound Solano Avenue onto northbound Colusa Avenue.
- Northbound vehicles encroaching on east-west crosswalk when turning onto Solano Avenue from Colusa Avenue.
- Poor visibility of oncoming traffic along east-west crosswalk when turning onto Solano Avenue for vehicles turning onto Solano Avenue from Fresno Avenue and Colusa Avenue (S. leg).
- Large turning radius for eastbound right and westbound right turning vehicles at The Alameda & Solano Avenue.
- Long pedestrian crossing distances at The Alameda & Solano Avenue for north, south and east legs.
- Stopped vehicles encroach into crosswalks at intersections.
6. Recommended Pedestrian Projects

Proposed Improvements

- **Bulbouts for the following crosswalk locations:**
  - Colusa Avenue (N.) & Solano Avenue: north and south sides of west leg. North side has no apparent drainage issues, south side will require regrading to ensure flow around bulbout. $150,000
  - Colusa Avenue (S.) & Solano Avenue: north side of southeast corner; east side of southwest corner. May require regrading intersection or relocating or installing new catch basins. $150,000
  - Fresno Avenue & Solano Avenue: North and south sides of east leg. $150,000
  - The Alameda & Solano Avenue: northeast and southwest corners. $150,000

- **Install advanced stop bar at the following intersection approaches:** $1,500
  - Westbound approach to Colusa Avenue (N.) from Solano Avenue.
  - All approaches to the intersection of The Alameda & Solano Avenue.

- **Prohibit or restrict on-street parking to improve pedestrian visibility at the following locations:** $400
  - S. leg of Colusa Avenue & Solano Avenue: increase pedestrian visibility for northbound vehicles turning on to Solano Avenue by removing one or two parallel parking spaces on the south side of the west leg of the intersection. This would also improve the visibility of pedestrians for eastbound right turning vehicles from Solano Avenue onto the S. leg of Colusa Avenue.
  - Fresno Avenue & Solano Avenue: increase pedestrian visibility for eastbound vehicles on Solano Avenue by removing one or two angled parking spaces on the south side of Solano Avenue just to the west of the crosswalk.

- **Note:** Any underground work at Solano and Colusa may be complicated by the presence of EBMUD’s Wildcat Aqueduct (a 48-inch diameter potable water transmission line.) Additionally, bulb-outs may impact existing drainage and could require additional construction and costs.

- **Note:** These improvements may be eligible for Safe Routes to School funding as they are located near Thousand Oaks Elementary School.

**Cost**

- $601,900 ($1,900 is accounted for in Citywide projects)
INTERSECTION IMPROVEMENT:
15. SAN PABLO AVENUE AND DELAWARE STREET

Study Area Description
The intersection of San Pablo Avenue and Delaware Street is signalized. Delaware Street is a two-lane roadway with bicycle lanes, San Pablo Avenue is a four-lane roadway with a median and left turn lanes. Left turns from San Pablo are protected. White transverse crosswalks are striped on all four legs of the intersection. Bus stops are located on both sides of San Pablo Avenue north of the intersection. Between 2000 and 2007, five pedestrian-motor vehicle collisions occurred here, injuring 4 pedestrians. The driver of the vehicle was at fault in 3 of the collisions, and all collisions occurred within a crosswalk. San Pablo Avenue Public Improvements Plan recommends several improvements to this intersection, which have been included here. San Pablo Avenue is a California State Highway, and is under Caltrans jurisdiction.

Issues
- High collision rate.
- Bus stops located on north leg of intersection.
- Left turn lanes prevent pedestrians from using the median as a refuge if they cannot cross San Pablo in one light cycle.
- Pedestrians may improperly cross during protected left turn phase.
- Drainage at northeast corner.
6. Recommended Pedestrian Projects

Proposed Improvements

- Consider bulbouts into San Pablo Avenue at northeast and southwest corners. Existing drainage grate will need to be accommodated. Consider painting bulbouts at this location if constructing bulbouts is not feasible. $150,000
- Install R10-2a "Cross on (Ped Symbol) Signal" for pedestrians crossing Delaware Street. $200
- Consider shifting protected left turn phase to after through phase to allow pedestrians to complete crossing before left turn phase starts. (No capital cost)
- Construct the following items per the San Pablo Public Improvements Plan
  - Construct median noses to provide pedestrian refuge. $2,800
  - Install pedestrian-scale luminaries at both median noses. $4,100
  - Install pedestrian-scale lighting on existing cobra head street lights. $6,100
  - Plant street trees on west and east legs of Delaware Street. $3,200

Cost

- $168,000 ($0 is accounted for in City-wide projects)
UNCONTROLLED CROSSING IMPROVEMENT:
16. SHATTUCK AVENUE AT BERKELEY WAY

<table>
<thead>
<tr>
<th>Study Area Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>The intersection of Shattuck Avenue and Berkeley Way is stop-controlled on the minor approaches. Shattuck is a major north-south roadway that has two travel lanes in each direction with on-street parallel parking on both sides. South of Berkeley Way Shattuck has three lanes in the southbound direction. Berkeley Way is a local east-west street with one travel lane each direction, and on-street parallel parking on both sides. The Shattuck corridor is fronted by a variety of retail and commercial uses, and there is very heavy pedestrian activity in this area, including the uncontrolled crossings of Shattuck. Standard transverse crosswalks are striped on all legs. Berkeley Way is slightly offset on the east and west sides of Shattuck, and so the crosswalks are skewed across Shattuck, resulting in a longer crossing distance.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Issues</th>
</tr>
</thead>
<tbody>
<tr>
<td>☑ Offset intersection creates long crossing distance for pedestrians at uncontrolled locations and challenges for persons who are visually impaired.</td>
</tr>
<tr>
<td>☑ Heavy pedestrian volumes at uncontrolled location across major roadway.</td>
</tr>
</tbody>
</table>
6. Recommended Pedestrian Projects

Proposed Improvements

- Stripe high-visibility crosswalks
- Construct bulbouts
- Install MUTCD pedestrian warning signage

SHATTUCK AVENUE AT BERKELEY WAY

- Stripe high-visibility ladder markings at both legs across Shattuck. $2,400
- Consider installing bulbouts at all corners to increase pedestrian visibility and shorten crossing distance. Bulb-outs will require four inlets to be relocated, which may require additional costs. Bulbouts should not encroach on Berkeley Way, as this is a major response intersection for Fire Department Number 2. Design of project should be approved by Fire Department. $250,000
- Install current MUTCD pedestrian warning signage at crosswalk locations. $800

Cost

- $253,200 ($3,200 is accounted for in Citywide projects)
INTERSECTION IMPROVEMENT PROJECT:  
17. UNIVERSITY AVENUE AND GRANT STREET

Study Area Description

University Avenue is an important east-west major road that runs from the western edge of the University of California campus to I-80 and the Berkeley Marina. As such, it carries large vehicular traffic volumes and bus riders during the peak periods for commuters and students accessing the University and downtown Berkeley. Grant Street is a local street that runs north-south through largely residential neighborhoods in central Berkeley. Located one block west of Martin Luther King (MLK) Jr. Way, an important north-south Berkeley major road, Grant Street carries some of the pedestrian and bicycle traffic from MLK. University Avenue also has specialty retail and restaurant uses along most of its length – uses that generate significant pedestrian activities at the Grant Street intersection as well. Grant Street has one lane in each direction. University Avenue has four travel lanes (two in each direction), plus a raised median island. The intersection of Grant Street with University Avenue is unsignalized, with stop controls on the Grant Street approaches and uncontrolled approaches on University Avenue. At Grant Street, University Avenue has a left-turn pocket for westbound vehicles but does not have one for eastbound vehicles.

Issues

- Heavy traffic volumes, high speeds and no stop controls for vehicles along University Avenue combine to produce unsafe crossing conditions for pedestrians.
- On-street parking at the southwestern corner on University Avenue and at the southeastern corner on Grant Street prevents motorists from seeing pedestrians as they start to cross the intersection.
Proposed Improvements

- Increase pedestrian visibility and decrease crossing distances by building bulbouts on the northwest, southeast and southwest corners. The Fire Department should approve bulbout designs at this location. Bulbouts may affect existing drainage and could require additional construction and costs. $200,000
- Prohibit or restrict on-street parking in spaces immediately adjacent to southwestern corner on University Avenue and the southeastern corner on Grant Street.
- Install in-pavement flashers or overhead beacons for crosswalks across University Avenue. $75,000 in-pavement or $100,000 overhead beacon.
- Install “Turning Traffic Must Yield to Pedestrians” for East bound traffic on University Avenue. $200

Cost

- $300,200 (with overhead beacon option)
- $275,200 (with in-pavement flasher option)
($0 is accounted for in Citywide projects)
6. Recommended Pedestrian Projects

CORRIDOR IMPROVEMENT PROJECT:
18. COLLEGE AVENUE BETWEEN RUSSELL STREET AND ASHBY AVENUE

Study Area Description

The intersection of College Avenue & Ashby Avenue is at the heart of the Elmwood shopping district and each of these streets serve as important major street connectors within Berkeley and to points beyond. College Avenue provides north-south access from Oakland to the University of California campus, and carries several heavily patronized AC Transit bus lines. Ashby Avenue (State Route 13) provides east-west regional connections for vehicles to I-80 to the west and S.R. 24 in the east. Both of these streets, College Avenue and Ashby Avenue, are frequently overburdened with vehicular traffic.

Russell Street crosses College Avenue one block north of Ashby Avenue. In this block, vehicles are restricted to one lane of travel in each direction and they are often slowed by vehicles engaging in parallel parking maneuvers and by pedestrians at the mid-block crossing half-way between Russell Street and Ashby Avenue. The intersection of College Avenue & Russell Street is stop-controlled on all four approaches. Russell Street is blocked by a traffic barrier approximately 100 feet west of the intersection and serves mainly as an access point to parking and service entries behind the shops that line College Avenue.

Issues

▲ Stopped vehicle encroachment into pedestrian crosswalks at College Avenue & Ashby Avenue.
▲ Protected left turn phase for southbound traffic at the Ashby and College signal only is confusing for pedestrians crossing Ashby Avenue on the east leg crosswalk. Pedestrians often start to cross when the protected phase begins (despite the “Don’t Walk” signal), anticipating a “walk” signal.
▲ No streetlights on northwest corner of College Avenue & Ashby Avenue and both west corners of College Avenue & Russell Street factors into 3 reported nighttime-conditions collisions.
▲ Of the six reported pedestrian collisions at College Avenue & Ashby Avenue (between 2000 and 2004), five involved a vehicle making a turning movement. This suggests that despite the left turn restrictions on Ashby Avenue during the peak hours, there are significant unresolved conflicts between vehicles and pedestrians.
▲ Due to the large traffic volumes and congested conditions on Ashby and College Avenues, there are few opportunities to increase pedestrian visibility or decrease pedestrian crossing times at this intersection without restricting right-turn-on-red movements and seriously degrading auto LOS.
▲ Presence of Berkeley Fire Department station just east of College Avenue on Russell Street means that the effects of any alterations to area intersections on emergency response times must be considered, particularly with any changes to east side of College Avenue at Russell Street.
Proposed Improvements

Install additional pedestrian-scale street lights to improve pedestrian visibility at the following locations. $90,000
- The northwestern corner of College Avenue & Ashby Avenue.
- The northwestern and southwestern corners of College Avenue & Russell Street.

Install advanced stop bars all approaches at College Avenue & Ashby Avenue to reduce vehicle intrusion into crosswalks. $1,200

Provided sufficient right-of-way exists, install new perpendicular pedestrian ramps on all four corners at College and Ashby Avenues. Any work on Ashby Avenue requires State approval as it is a State of California right-of-way. $20,000

Ashby/College
- Consider moving the protected left-turn phase for the south bound Ashby traffic after the through traffic phase. (No capital cost)

Cost
- $111,200 ($21,200 is accounted for in Citywide projects)
INTERSECTION IMPROVEMENT PROJECT:
19. THE ALAMEDA / MARTIN LUTHER KING JR. WAY AND HOPKINS STREET

Study Area Description

The signalized intersection of The Alameda/Martin Luther King (MLK) Jr. Way and Hopkins Street in North Berkeley is a large intersection with four lanes on The Alameda/MLK (two in each direction) and two very wide lanes on Hopkins Street (plus bicycle lanes). Hopkins Street is roughly 60 feet wide on both of its approaches to the intersection, leaving more than sixteen feet for each travel lane once parking and bicycle lanes are accounted for. Due to the lack of median “refuge” islands pedestrians must brave a very long crossing distance to traverse this intersection. Just south of this intersection, MLK Way narrows from a four-lane to a two-lane facility. The North Berkeley Branch of the Berkeley Public Library sits on the northwestern corner of this intersection. Since this facility sits on a relatively small triangle-shaped block without any designated parking area dedicated for its visitors, library visitors will occasionally park on nearby streets and cross the intersection. Other complications for pedestrians arise from the Chevron Station located on the southeastern corner, which has four driveway curb cuts. These numerous driveways at a close distance to the intersection bring many opportunities for auto/pedestrian conflicts.

Issues

- Long pedestrian crossing distances across all intersection legs.
- Large turning radii for all right turn movements.
- Pedestrian/Auto conflicts for left-turning vehicles from The Alameda/MLK to Hopkins Street.
6. Recommended Pedestrian Projects

Proposed Improvements

- Build pedestrian refuge (i.e., raised) median islands on both Hopkins Street intersection approach legs to shorten pedestrian crossing distances. Islands should be a minimum of six feet in width. $60,000
- Construct bulbouts on The Alameda/MLK-facing sides of all corners to shorten pedestrian crossing distances, increase pedestrian visibility, and tighten turning radii for right-turning vehicles. The size of these bulbouts should be determined by further study of the intersection’s operations to find out if removing the unmarked right turn pockets on these approaches will affect levels of service for autos or turning capability of large vehicles. Additionally, bulbouts and pedestrian refuge may require modifications to existing drainage and utilities. The EBMUD Wildcat Aqueduct, a 49-inch diameter potable transmission line runs under the intersection and may limit options for relocating underground drainage systems. $250,000
- Study the opportunities to install protected left turn lanes and signal phases for The Alameda/MLK left-turning traffic to reduce auto/pedestrian conflicts.
- Install pedestrian push-buttons with new actuated signal controller system. $20,000
- Work with Chevron station owners and managers to either consolidate driveways or clearly mark entry and exit points for refueling area. Entry driveways should be those closest to the intersection, while exit points should be those furthest from the intersection.

Cost

- $330,000 ($0 is accounted for in City-wide projects)
### INTERSECTION IMPROVEMENT:
#### 20. SHATTUCK AVENUE AND WOOLSEY STREET

<table>
<thead>
<tr>
<th>Study Area Description</th>
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<tr>
<td>Woolsey Street is stop-controlled at Shattuck Avenue. High-visibility ladder crosswalks are striped across Shattuck, and transverse crosswalks are striped across Woolsey. Bus stops are located at the southeast and northwest corners, and Woolsey provides access to the Ashby BART station from residential neighborhoods to the east of Shattuck. At this intersection, Shattuck Avenue is two lanes and has posted speed limit of 25 mph. Between 2000 and 2007, there were three pedestrian-motor vehicle collisions at this intersection in which five pedestrians were severely injured. In two of the collisions, the driver of the motor vehicle was at fault. The pedestrian was at fault in the remaining collision.</td>
</tr>
</tbody>
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<table>
<thead>
<tr>
<th>Issues</th>
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<tbody>
<tr>
<td>✧ High collision rate.</td>
</tr>
<tr>
<td>✧ Bus stops located on southeast and northwest corners.</td>
</tr>
<tr>
<td>✧ Drainage grates located on all corners except for northwest corner.</td>
</tr>
</tbody>
</table>
**Proposed Improvements**

- Consider installing bulbouts at the northeast and northwest corners into Shattuck Avenue. Drainage grate and hydrant will need to be accommodated at northeast corner. $150,000
- Install pedestrian-actuated flashing beacon that can be actuated for north and south legs of intersection. Flashing beacon should include signage indicating to pedestrians that motor vehicles may not stop. $100,000
- Install pedestrian warning signage at crosswalk. $400
- Consider moving bus stop on southwest corner either r back from intersection to provide better sight lines or to the far side of the intersection. (Cost not provided)

**Cost**

- $250,400 ($400 is accounted for in Citywide projects)
UNCONTROLLED CROSSWALK IMPROVEMENT:
21. UNIVERSITY AVENUE AND MCGEE AVENUE

Study Area Description
The intersection of University Avenue and McGee Avenue in North Berkeley is stop-controlled on the McGee approaches. University Avenue is a major east-west road that has two travel lanes in each direction, a raised center median, and on-street parallel parking. A single left turn lane is present in the eastbound direction on University at this location. McGee Avenue is a local street, with one travel lane in each direction and on-street parallel parking. Land uses are commercial and retail along University Avenue, becoming residential along McGee away from the major street corridor. The Ohlone Greenway linear park is located two blocks north of University, and residents on the south side of University utilize the various crossings along this corridor including the uncontrolled crossing at McGee. Crosswalks are marked on all legs of the intersection, with the legs across University striped with a high-visibility ladder pattern.

Issues
- Uncontrolled crosswalks across University.
- Heavy traffic volumes along University Avenue.
- No truncated domes at corners.
Proposed Improvements

UNIVERSITY AVENUE AND MCGEE AVENUE

- Consider installing bulbouts at all four corners of intersection, to improve pedestrian visibility and shorten crossing distance. This would potentially require removing one parking space on both the northeastern and northwestern corners. Would also require consideration for bus stop location near southwestern corner. No storm drain currently exists at this intersection. Recommend extending the storm drain system from Addison and McGee north to serve University and McGee. (storm drain extension not included in cost) $250,000
- Install new curb ramps with truncated domes at all corners. (cost included in above estimate)
- Install in-pavement yield to pedestrian signs in median on both legs across University Avenue. $400

Cost

- $250,400 ($20,000 is accounted for in Citywide projects)
MID-BLOCK CROSSWALK IMPROVEMENT PROJECT:
22. DWIGHT WAY AT ALTA BATES HOSPITAL

<table>
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<tr>
<th>Study Area Description</th>
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<tr>
<td>A mid-block crosswalk is located on Dwight Way between Milvia and Shattuck, in front of the Alta Bates hospital. This crosswalk feeds directly into the hospital entrance and provides a crossing for those who are parked on-street or in parking lots on the south side of Dwight Way. The crosswalk is striped with a high-visibility ladder pattern. This segment of Dwight is one-way in the eastbound direction, with two lanes of traffic and parallel parking on both sides. At the south crosswalk landing, a driveway is present to the west side of the crosswalk, and two metered parking spaces are present to the east side of the crosswalk. On the north landing, an area of red curb is striped to the west of the crosswalk, and metered parking is present to the east of the crosswalk.</td>
</tr>
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<table>
<thead>
<tr>
<th>Issues</th>
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<tbody>
<tr>
<td>▲ Relatively high traffic volumes on Dwight, and one-way configuration may lead to higher vehicle speeds.</td>
</tr>
<tr>
<td>▲ Visibility for crossing may be an issue if vehicles are encroaching into red curb zone on north side of roadway.</td>
</tr>
<tr>
<td>▲ Crosswalk warning signage is not located at crosswalk.</td>
</tr>
</tbody>
</table>
## Proposed Improvements

- Construct bulbouts
- Relocate crosswalk warning signage to crosswalk
- Consider eliminating one metered parking space on south side of Dwight

### DWIGHT WAY AT ALTA BATES HOSPITAL

- Install bulbouts on both side of crosswalk to provide greater visibility for pedestrians and reduce crossing distance. Bulbouts may require additional drainage improvements. $150,000
- Relocate crosswalk warning signage to be at crosswalk. $400
- Consider eliminating one of the two metered parking spaces on the south side of the street, to provide a larger area for bulbouts to reduce potential for parked vehicles to encroach into crosswalk. $20

### Cost

- $150,420 ($400 is accounted for ni Citywide projects)
6. Recommended Pedestrian Projects

INTERSECTION IMPROVEMENT PROJECT:
23. ALCATRAZ AVENUE AND CALIFORNIA STREET

Study Area Description
The intersection of Alcatraz Avenue and California Street is stop-controlled on the California approaches. Alcatraz Avenue is a major east-west road with one travel lane in each direction and on-street parallel parking. Although it is a major road and carries heavy traffic volumes, Alcatraz is fronted by residential land uses. California Street is a local north-south road and a bicycle boulevard. A half-street traffic diverter is in place on the north side of California at Alcatraz -- northbound traffic cannot enter here, but southbound traffic can exit onto Alcatraz from California. A convenience store is located at the northeast corner, making this a heavily used crossing location for residents on the south side of Alcatraz. Standard transverse crosswalks are present on all legs of the intersection.

Issues
- Heavy traffic volumes on Alcatraz.
- High number of pedestrian crossings associated with convenience store on NE corner.
- Uncontrolled crosswalks across Alcatraz.
**Proposed Improvements**

- Stripe high-visibility ladder crosswalks on both legs across Alcatraz. $2,400
- Consider installing bulbouts on all corners. Bulbouts on northeast and southeast corners will require relocating inlets. Bulbouts on southwest corner will likely require regrading the southwest quadrant of the intersection to maintain drainage. The northwest corner does not appear to require work for storm drainage. Installation of curb ramps on east corners will need to account for bus stops in this location. $250,000
- Study installation of pedestrian actuated flashing beacons, particularly for the eastern leg which has the bus stop and convenience store. $100,000

**Cost**

- $354,400 ($2,400 is accounted for in Citywide projects)
### Study Area Description

The North Berkeley BART station and its surrounding park-and-ride lots are bounded by Sacramento Street on the east, Delaware Street on the south, Acton Street on the west and Virginia Street on the north. Due to its location in a largely residential neighborhood, the station attracts large numbers of pedestrians from all directions. Its location next to a major Berkeley north-south roadway, Sacramento Street, and its large park-and-ride lots ensures that it attracts large numbers of vehicle trips as well. Autos and AC Transit buses accessing the station generally approach along Sacramento Street, turning onto Virginia or Delaware Streets and then turning into the station lot driveways. As a result, the Virginia Street and Delaware Street intersections with Sacramento Street are critical points of conflict between autos and pedestrians.

The T-intersection of Sacramento Street with Delaware Street is at the southeastern corner of the station’s parking lot. Delaware Street is a collector that provides east-west connections to the North Berkeley BART station parking lots, Ohlone Park, and residential neighborhoods. Sacramento Street has two travel lanes in each direction, an exclusive single left turn lane on the southern leg and an exclusive right turn lane on the northern leg at the intersection. Delaware Street terminates at Sacramento Street and has one exclusive left turn lane and one exclusive right turn lane. The intersection is signalized. Bicyclists traveling eastbound can continue straight to the Ohlone Greenway. On-street parking is prohibited on all approaches immediately adjacent to the intersection, leaving adequate lines-of-sight for drivers and pedestrians. Pedestrian signals are automatic.

The intersection of Sacramento Street and Virginia Street is stop-controlled on Virginia Street. Virginia Street is a local roadway that is also a Bicycle Boulevard. At this intersection, Sacramento Street has a raised median on both legs, two travel lanes in each direction and an exclusive single left turn lane for northbound vehicles. Virginia Street has one travel lane in each direction and an exclusive right turn lane on the western leg of the intersection that doubles as a drop-off zone for the AM peak-hour. On-street parking is prohibited on all approaches immediately adjacent to the intersection but parallel parking on both roadways is allowed. The southwestern corner has a bulb-out that protrudes out into Sacramento Street. Pedestrian crossing signs are located on Sacramento Street in the median approaching the intersection.

### Issues

Significant pedestrian volumes crossing Sacramento Street at both key intersections as well as at the intersection of Francisco Street & Sacramento Street, half-way between Delaware Street and Virginia Street

- Raised medians on Sacramento Street do not serve as refuges for pedestrians because they do not extend into the crosswalks or have curb ramps.
- No truncated domes on curb ramps.
- Delaware Street Intersection:
  - Curb-delineated median on northern leg sticks 2 feet into crosswalk, creating an obstacle for the disabled crossing the intersection.
  - Large turning radius at northwest corner and exclusive right turn lane encourage southbound right turning vehicles to speed through movement.
  - Eastbound right-turning vehicles often stop in the crosswalk on red light phase.
  - No audible pedestrian signal.
- Virginia Street Intersection:
  - Lack of visibility of pedestrians waiting to cross Sacramento Street.
  - Left turning eastbound vehicles sometimes ignore pedestrians crossing the northern leg.
  - Long pedestrian crossing distance across Sacramento, especially southern leg.
Proposed Improvements

- Construct bulbouts to increase pedestrian visibility, decrease the pedestrian crossing distances and tighten the turning radius for right turning vehicles at corners of the following intersection locations:
  - Sacramento Street/Delaware Street Intersection:
    - Northwest and southwest corners. Directional curb ramps with truncated domes and actuation on all legs should be installed. $150,000
  - Sacramento Street/Virginia Street Intersection:
    - Construct bulbouts on northwest, northeast (drain grate on Virginia Street), and southeast corners of the intersection. Directional curb ramps with truncated domes should be installed and lane width should be retained to serve as a bus pullout for the existing bus stop. $200,000
    - Extend bulbout at southwest corner to increase pedestrian visibility at this skewed intersection and decrease pedestrian crossing distance to Sacramento Street median to 36 feet. Drainage modifications may be necessary and could contribute to construction costs. $100,000
  - Create pedestrian refuges at the medians on Sacramento Street that are ADA compliant. Drainage modifications may be necessary and could contribute to construction costs. $90,000
  - Install ladder style crosswalks at Virginia across Sacramento Street to improve pedestrian visibility. $2,400
  - At the Virginia Street intersection, increase lighting for pedestrians across Sacramento Street or install flashing, pedestrian-activated lights. $75,000
  - Install advance stop bars on all approaches to Delaware Street intersection. $900
  - Conduct a study to evaluate the possibility to reduce the speed limit on Sacramento to 25 mph.

Cost

- $550,800 ($3,300 is accounted for in Citywide projects)
INTERSECTION IMPROVEMENT PROJECT:
25. SAN PABLO AVENUE AND CEDAR STREET

Study Area Description

The signalized intersection of San Pablo Avenue (State Route 123) and Cedar Street in northwest Berkeley has a number of popular attractions such as Café Fanny and Acme Bread Company that bring large numbers of pedestrians to cross both streets. The SP Gas Station and the parking lots for the Golden Bear Motel and Café Fanny and Acme Bread on the southwest and southeast corners ensure a steady flow of vehicles as well. San Pablo Avenue has four travel lanes (two in each direction) plus a raised median island that accommodates a left-turn pocket for cross-streets. Cedar Street has two travel lanes (one in each direction). Just east of the intersection, Hopkins Street and Cedar Street converge (at a “fork” in the road), with Hopkins Street approaching from the northeast. The San Pablo Plan recommends special paving at Cedar Street and constructing bulb-outs along San Pablo side streets, but not within San Pablo right-of-way.

Issues

- Raised island on east leg of Cedar Street does not meet crosswalk. Painted median covers the last ~25 feet between raised median and the crosswalk, encouraging westbound vehicles to make u-turns prior to the intersection within the crosswalk zone.
- Large turning radius for westbound right turning vehicles onto San Pablo Avenue from Cedar Street.
- Stopped vehicles eastbound and westbound on Cedar Street intrude into crosswalks.
- Pedestrian-vehicle conflicts in crosswalks during permitted signal phases on San Pablo Avenue as southbound left and northbound left-turning vehicles traverse the east and west leg crosswalks.
Proposed Improvements

- Increase pedestrian visibility and decrease crossing distances by building bulb-outs on the following corners:
  - Northwestern corner: south side.
  - Southeastern corner: north side.
- Bulbou design should take into consideration turning movements by buses, trucks, and other large vehicles.
- Study the feasibility of protected turn phasing for left-turning vehicles from San Pablo Avenue on to Cedar Street to reduce pedestrian/auto conflicts.
- As State of California right-of-way, any work on San Pablo would require the Caltrans approval.

Cost

- $150,000 ($0 is accounted for in City-wide projects)
INTERSECTION IMPROVEMENT PROJECT:
26. TELEGRAPH AVENUE AND ASHBY AVENUE

Study Area Description

The signalized intersection of Telegraph Avenue and Ashby Avenue (State Route 13) in south Berkeley has heavy vehicular traffic volumes. At this location Telegraph Avenue is a four-lane north-south major road with two lanes of travel in each direction with a center-left turn lane. Ashby Avenue has four lanes, with parking allowed in the outside lane except during peak hours. Signal phasing for this intersection allows permitted movements for each direction of travel and a protected phase for southbound movements. High vehicular traffic volumes at this intersection are matched by high levels of pedestrian activity caused by nearby trip generating land uses such as Whole Foods Market on the southwestern corner and the main campus of Alta Bates Hospital located one block east of the intersection on Ashby Avenue. Pedestrian-auto conflicts are increased by the Chevron gas station located on the northwestern corner, which has driveway curb cuts located directly adjacent to where the crosswalks meet the curb. While now vacant, the driveways for the Union 76 station on the southeastern corner have a similar design that would exacerbate pedestrian/auto conflicts should this lot be developed in the future and the current driveways retained.

Issues

- Long pedestrian crossing distances across Telegraph Avenue and Ashby Avenue.
- Driveway curb cuts close to intersection crosswalks on northwestern and southeastern corners create pedestrian/auto conflicts.
Proposed Improvements

- Study the possibility of installing protected left turn phases for vehicles turning from Telegraph Avenue to Ashby Avenue and removing permitted left turns from the signal phasing for these movements. This would reduce the number of pedestrian/auto conflicts in crosswalks across Ashby Avenue.
- Work with Caltrans and Chevron station owners and managers to either consolidate driveways or clearly mark entry and exit points for refueling area. Entry driveways should be those closest to the intersection, while exit points should be those furthest from the intersection. Driveways on Ashby Avenue are within State of California right-of-way.
- Install count-down signal heads. $6,400

Cost

- $6,400 ($0 is accounted for in Citywide projects)
INTERSECTION IMPROVEMENT PROJECT:
27. TELEGRAPH AVENUE AND PARKER STREET

Study Area Description

Telegraph Avenue and Parker Street is an unsignalized intersection in South Berkeley. Telegraph Avenue is a five-lane north-south major roadway with two lanes of travel in each direction and a center-left turn lane. Parker Street is an east-west local street serving as access primarily to residential neighborhoods on the south side of the University of California Campus. Pedestrian volumes on Parker Street and at this intersection are generally high due to its proximity to the UC campus and the Telegraph Avenue shopping district. University students and faculty as well as Telegraph Avenue shopping patrons will often park in the surrounding residential neighborhoods and will use Parker Street to walk to Telegraph Avenue and points beyond. At the Telegraph Avenue intersection, both Parker Street approaches are stop-controlled. Telegraph Avenue is a major street that stretches from downtown Oakland to the south side of the University of California campus. Telegraph Avenue has two travel lanes in each direction at Parker Street and bicycle lanes in each direction as well. At the Parker Street intersection, the Telegraph Avenue approaches do not have stop controls. While the north and south legs of Telegraph Avenue at Parker Street have painted median islands, their widths (roughly 3 feet) and the fact that they do not have raised curbs make them inadequate to serve as pedestrian refuges. The recent installation of in-pavement, pedestrian-activated crosswalk flashers on the north leg of the intersection has improved pedestrian visibility and safety. Land uses adjacent to the intersection include restaurants, a convenience store with a small parking lot on the southeastern corner, an automobile repair business on the southwestern corner and specialty retail store fronts along Telegraph Avenue.

Issues

▲ Long pedestrian crossing distances across Telegraph Avenue.
▲ Driveway curb cuts close to intersection crosswalks on southwestern and southeastern corners create pedestrian/auto conflicts.
▲ Collision records over 5-year period show 3 out of 5 pedestrian collisions occurred in or near the south leg crosswalk during dusk or dark lighting conditions.
▲ Inadequate street lighting on northwestern and southeastern corners.
6. Recommended Pedestrian Projects

**Proposed Improvements**

- Remove driveway closest to south leg crosswalk on the southwestern corner of the intersection to reduce automobile/pedestrian conflicts. Pending negotiation with owner - $5,000
- Install in-pavement pedestrian actuated flashing lights on north side of intersection. $20,000 (Note: completed)

**Cost**

- $25,000 ($0 is accounted for in Citywide projects)
SAFE ROUTES TO SCHOOL PROJECT:
28. SACRAMENTO STREET AND ROSE STREET

<table>
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<tr>
<th>Study Area Description</th>
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<tr>
<td>The signalized intersection of Rose and Sacramento in north Berkeley is the point at which the Sacramento Street right-of-way narrows significantly. North of Rose Street, Sacramento has two lanes northbound and one lane southbound. South of Rose, Sacramento widens to two lanes in each direction with a wide landscaped center median. At the northbound leg of Sacramento at Rose, this additional width is used for a separate right turn lane, separated from the two northbound through-lanes by a triangular island. The northbound traffic lanes are controlled by the traffic signal. The separated right turn lane is controlled by a STOP sign. In order to cross the southern leg of Sacramento, pedestrians must cross the STOP controlled right turn lane, then wait on the island for the traffic signal to cross the remaining through traffic lanes. A number of potential pedestrian conflicts and motorists failing to stop at the northbound right turn lane have been noted by local residents. This may be due in part to the unique design of the intersection, which may appear to motorists to be a “free right” turn lane (even though it is STOP controlled).</td>
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<thead>
<tr>
<th>Issues</th>
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<tbody>
<tr>
<td>▲ Separate right turn lane on northbound Sacramento is STOP controlled, while other northbound traffic lanes are Signal-controlled.</td>
</tr>
<tr>
<td>▲ Right turn lane on northbound Sacramento is configured similar to many “free right” turn lanes, separated from through traffic by a small island.</td>
</tr>
<tr>
<td>▲ Pedestrian/Auto conflicts have been noted by local residents, specifically related to vehicles not stopping at the STOP sign on the northbound right turn movement.</td>
</tr>
</tbody>
</table>
Proposed Improvements

- Eliminate existing separated right turn lane by extending the existing southeast corner out to connect with the island. In order to facilitate right turns from the reconfigured corner, the corner radius of the existing island would need to be widened, and the traffic signal moved to the east. No underground storm drainage system exists at this intersection; all drainage is provided by surface flow. The bulb-out would require regrading the intersection. Access to two residential driveways that are currently within this separated right turn lane would need to be maintained. $190,000

- If sufficient right-of-way exists, install perpendicular curb ramps with truncated domes at all corners so that ramps face directly into crosswalk. $20,000

- Install countdown signals for all crossing legs. 1,000

- Install stop bars at all legs of the intersection to discourage encroachment of stopped vehicles into crosswalk and in right-turn-on-red situations. $1,200

Cost

- $212,200 ($22,200 is accounted for in Citywide projects)
INTERSECTION IMPROVEMENT PROJECT:  
29. GILMAN STREET AND SANTA FE AVENUE

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<thead>
<tr>
<th>Study Area Description</th>
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<tbody>
<tr>
<td>The intersection of Santa Fe Avenue/Masonic Avenue with Gilman Street is a focal point for vehicular and non-vehicular access to the Westbrae neighborhood shopping area in northwest Berkeley. The intersection is adjacent to well-known retail attractions such as Berkeley Bagels, Toot Sweets, and other specialty retail establishments along a two-block section of Gilman Street. Gilman Street is an important east-west link for vehicular traffic in Berkeley, and both Santa Fe and Masonic Avenues provide convenient access to Albany and El Cerrito for local traffic. The Ohlone Greenway trail passes through this neighborhood as well, one block east of the intersection in question, carrying substantial bicycle and pedestrian traffic through the neighborhood.</td>
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<tr>
<th>Issues</th>
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<tbody>
<tr>
<td>♦ Pedestrian conflicts with westbound right turning vehicles from Gilman Street onto Santa Fe Avenue.</td>
</tr>
<tr>
<td>♦ “Porkchop” island at Santa Fe Avenue &amp; Gilman Street has confusing design for drivers and pedestrians.</td>
</tr>
<tr>
<td>♦ Long crossing distance across Masonic Avenue at Santa Fe Avenue.</td>
</tr>
<tr>
<td>♦ Pedestrian visibility for drivers eastbound on Masonic Avenue turning right onto Santa Fe Avenue and for left-turning vehicles from Santa Fe Avenue onto Masonic Avenue.</td>
</tr>
<tr>
<td>♦ Oblique turning radius at southwestern corner of Santa Fe Avenue &amp; Masonic Avenue.</td>
</tr>
<tr>
<td>♦ Inadequate curb ramp at southeastern corner of Santa Fe Avenue &amp; Gilman Street.</td>
</tr>
</tbody>
</table>
6. Recommended Pedestrian Projects

Proposed Improvements

- Construct “porkchop” island and stop-controlled right-turn slip lane at Gilman Street and Santa Fe Avenue. Drainage and utility issues must be considered. Existing Berkeley Survey monument is in existing island and must be preserved as per State law. $100,000
- Using striping or vertical improvements, “straighten” and “neck-down” intersection of Masonic Avenue with Santa Fe Avenue so that Masonic Avenue meets Santa Fe Avenue at a 90-degree angle. This will shorten crossing distance for pedestrians across Masonic Avenue and will increase visibility of pedestrians crossing the intersection for motorists. $5,000
- Install crosswalk for pedestrians crossing northern leg (across Santa Fe Avenue) of Santa Fe Avenue & Masonic Avenue. Prohibit parking on north side of new crosswalk on west side of Santa Fe to improve pedestrian visibility to motorists. Consider installation of overhead pedestrian flashing lights for this new crosswalk. $1,200 (lights not included)
- Install bulbout on the northwest corner of Santa Fe Avenue & Gilman Street. Bulb-outs would require regrading intersection and installation of valley gutter from northeast to northwest corners. $100,000

Cost

- $206,200 ($0 is accounted for in City-wide projects)
INTERSECTION IMPROVEMENT:
30. ADDISON STREET AND JEFFERSON AVENUE

<table>
<thead>
<tr>
<th>Study Area Description</th>
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<tbody>
<tr>
<td>The intersection of Addison and Jefferson in central Berkeley is an intersection of two local streets one block south of University Avenue. Addison is an east-west local street with one lane in each direction and on-street parallel parking. Jefferson has a narrow right-of-way with a sidewalk and on-street parking only on the west side of the roadway. Jefferson is discontinuous at Addison; although the roadway continues to the south, it is completely blocked from motor vehicle through traffic with a sidewalk/landscaping, making the intersection of Addison/Jefferson at T-intersection in the southbound direction, and a cul-de-sac in the northbound direction. The intersection is also offset at this point, with the southern segment shifted slightly west of the northern segment. Surrounding land uses are primarily residential, with St. Josephs Church and Elementary School the most dominant use, located on the southeast side of the intersection. The heaviest pedestrian and vehicle volumes at this intersection are related to church and school activities. A yellow transverse school crosswalk is striped from the northeast corner to the south side of the T-intersection; due to the offset nature of this intersection, the crosswalk is skewed to align with the sidewalk continuing to the south.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Issues and Proposed Improvements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lack of sidewalks along Jefferson north of Addison.</td>
</tr>
<tr>
<td>Skewed pedestrian crosswalk across Addison.</td>
</tr>
<tr>
<td>Crosswalk lands on NE corner of Jefferson; no sidewalk on this block to the north.</td>
</tr>
<tr>
<td>Church/school loading area affects potential landing area for crosswalk.</td>
</tr>
</tbody>
</table>
6. Recommended Pedestrian Projects

**Proposed Improvements**

- Restripe crosswalk to west leg of intersection across Addison so that crosswalk is on same side as sidewalk. Align crosswalk perpendicular to roadway. Stripe high-visibility school ladder style. $1,200 for crosswalk and $2,000 for new ramp.
- Upgrade signage to install advance pedestrian warning signs and MUTCD Assembly B pedestrian signage at crosswalk. $800

**ADDISON STREET AND JEFFERSON AVENUE**

- Construct new curb ramp.
- Realign crosswalk perpendicular to Addison Street and restripe as ladder crosswalk.

**Cost**

- $4,000 ($4,000 is accounted for in Citywide projects)
6. Recommended Pedestrian Projects

INTERSECTION IMPROVEMENT:
31. SACRAMENTO STREET AND OREGON STREET

Study Area Description

The intersection of Sacramento Street and Oregon Street is stop-controlled on the Oregon approaches. Sacramento is a major north-south street with two travel lanes in each direction, a wide center landscaped median, and on-street parallel parking. Oregon is an east west local roadway that provides access to residential neighborhoods and has one travel lane in each direction with on-street parking. A community garden is located on the southwest corner of the intersection, and a convenience store is on the northwest corner. The convenience store and garden attract pedestrians from the neighborhood to the east of Sacramento, and the crossing experiences relatively high volumes. There are marked crosswalks on all legs of the intersection, and both legs across Sacramento are striped with a high-visibility ladder crosswalk. In addition, the northern leg has in-pavement flashing lights installed in the crosswalk, which are actuated via pole-mounted push-buttons on either side. Although Sacramento has a wide landscaped median that functions as a pedestrian refuge in many locations, at this intersection there is no median on the south leg due to a left turn lane, and the median on the north leg is tapered to a narrow point and does not function as a true refuge.

Issues

- Long crossing distances across Sacramento, without a full refuge at either crosswalk across Sacramento.
- Existing bulbouts on north side of intersection are rounded and provide a wide turning radius, and do not orient pedestrians 90-degrees to crosswalks.
- Pedestrian volumes related to convenience store.
- Senior and children pedestrians who are utilizing the community garden.
- In-pavement crosswalk lights may be difficult to see during daytime.
Recommended Pedestrian Projects

Proposed Improvements

- Widen the median at the north leg of the intersection to a full ADA-compliant refuge island. Because there is no left turn area in this location, the refuge area should be the full median width, and contain a median nose if feasible. Median widening could impact drainage requiring re-engineering that could entail expensive and extensive pavement re-grading and/or storm drain modifications. $30,000

Cost
- $30,000 ($0 is accounted for in Citywide projects)
SIDEWALK IMPROVEMENT PROJECT
32. HEARST AVENUE BETWEEN LE CONTE AVENUE AND EUCLID AVENUE

Study Area Description
Hearst Avenue serves as the northern boundary of the UC Berkeley campus. A sidewalk is present along the entire north (non-campus) side of Hearst between Oxford and Euclid. On the south side, a sidewalk is present from Oxford to LeConte. At LeConte, pedestrians must utilize an uncontrolled crosswalk to the north side of the street, to continue east toward Euclid. The intersection of Hearst/Euclid is the North Gate to campus, the major campus pedestrian entryway on the north side. East of Oxford, Hearst has two lanes of traffic in each direction, and on-street parallel parking. Between LeConte and Euclid, the roadway is divided with a grade change between the eastbound and westbound traffic. The eastbound side of the road contains on-street metered parallel parking that is primarily used by students.

Issues
▲ Lack of sidewalk on south side of Hearst forces pedestrians to cross at uncontrolled crossing at LeConte, and then cross back to campus at Euclid.
▲ High vehicle speeds, especially in westbound direction coming downhill.
▲ Parking demand along campus boundary.
▲ Topography/grade issues of installing a sidewalk through the area between LeConte and Euclid; no additional right of way along south side of roadway.
6. Recommended Pedestrian Projects

Proposed Improvements

- Study installation of sidewalk on south side of Hearst between Le Conte and Euclid. This may require parking removals along this segment, given the constrained right of way. Work with University regarding parking demand along this segment. Provide smooth flowline transitions at both ends of sidewalk for drainage. New sidewalk. $54,000
- Install curb and gutter along proposed sidewalk. $36,225
- Install pedestrian-scale lighting along proposed sidewalk. $258,750
- Plant street trees along proposed sidewalk. $25,600
- Work with the City to evaluate impact of parking lane on eastbound travel flows, and ability to accommodate additional travel flows during peak hours.

Cost

- $374,575 ($0 is accounted for in Citywide projects)
6. Recommended Pedestrian Projects

**INTERSECTION IMPROVEMENT:**

**33. HEARST AVENUE AND GAYLEY ROAD / LA LOMA AVENUE**

<table>
<thead>
<tr>
<th>Study Area Description</th>
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<tbody>
<tr>
<td>The signalized intersection of Hearst Avenue and Gayley Road / La Loma Avenue forms the northeast corner of the main campus area. Hearst Avenue is an east-west major collector with one lane in each direction that forms the northern boundary of campus. Gayley Road is a north south local campus road that provides access to the eastern campus area, the athletic fields, the Greek Theater, and the Memorial Stadium. North of Hearst, Gayley becomes La Loma, a local residential street that extends up into the Berkeley hills. Land uses surrounding the intersection include campus housing on the northeast and southeast corners, a parking garage on the northwest corner, and campus buildings on the southwest corner. Three of the four corners (northwest, southwest, and southeast) have free right turn slip lanes. The NE corner is configured with a relatively wide curb return. Heavy pedestrian crossings exist at this location. Marked crosswalks are present across all legs; all crosswalks are striped with a high-visibility ladder pattern.</td>
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</table>

<table>
<thead>
<tr>
<th>Issues</th>
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<tbody>
<tr>
<td>▲ Heavy pedestrian volumes utilize intersection traveling between residential areas to north of Hearst and campus.</td>
</tr>
<tr>
<td>▲ Free right turn slip lanes at NW, SW, and SE corners, allow vehicles to make turns at relatively high speeds.</td>
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<tr>
<td>▲ Parking garage exit on La Loma near NW corner.</td>
</tr>
<tr>
<td>▲ Intersection is identified as having significant impacts in the Environmental Impact Report for the Lawrence Berkeley National Laboratory’s proposed expansion. Additional lanes on several approaches will likely be required to accommodate additional motor vehicle traffic.</td>
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</tbody>
</table>
Proposed Improvements

- Consider modifying east, west and south right slip turns to be yield or stop controlled. $600
- As intersection is modified to accommodate the Lawrence Berkeley National Laboratory’s expansion and other UC Berkeley development plans, modify pedestrian crossing at right turn lanes to be signal-controlled. $300,000
- South side of Hearst Avenue and Gayley Avenue are UC Berkeley property and changes must be coordinated with University

Cost
- $300,600 ($0 is accounted for in Citywide projects)
INTERSECTION IMPROVEMENT:
34. GILMAN STREET AND CURTIS STREET AND THE OHLONE GREENWAY

Study Area Description
This all-way STOP controlled intersection is located in a small retail district in northern Berkeley that is otherwise surrounded by primarily single family homes. Gilman Street, 40 feet curb-to-curb, is a north-south major collector street with one lane in each direction and Curtis Street, 30 feet curb-to-curb, is a minor, quiet east-west residential street. The BART system’s aerial structure goes directly over the center of this intersection in a southwesterly to northeasterly direction. The Ohlone Greenway, a well used multi-use pathway established on the BART property under the aerial structure, enters the intersection in the same southwesterly to northeastern corners. The streets are relatively narrow already with parking permitted on both sides. There are four marked crosswalks, one on each approach, and all are the high visibility “ladder” style.

Issues
- Relatively heavy neighborhood and Ohlone Greenway pedestrian and bicycle traffic may create potential conflicts with motor vehicles.
- Three of the pedestrian ramps are not ADA compliant.
- The sidewalk on the southwest corner of Curtis and Gilman Streets is narrow.
6. Recommended Pedestrian Projects

Proposed Improvements

- Consider installing four bulb-outs on Gilman Street – at all four corners to further shorten the crossing distance and encourage a more pedestrian-friendly environment. These improvements should be designed to maintain right turn movements. $250,000
- Consider realigning Greenway to connect to Curtis south and north of intersection with Gilman.
- Work with BART to improve the lighting under the elevated rail tracks. $12,500
- Install signs directing bicyclists to cross Gilman on Curtis St. via potential realigned pathway. $400

Cost

- $262,900 ($0 is accounted for in Citywide projects)