



# Walkability Plan

## City of La Mesa, California

February 2006





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# Chapter 1: Introduction

Walking is the most basic and least expensive form of transportation. Every trip begins by walking — walking to the car, to the trolley or bus or to school or the grocery store. The quality of life and livability of a community can often be measured by how easy it is for residents to get around by walking.

Walking to and from destinations is not only a healthy mode of transportation but helps reduce pollutant emissions from motor vehicles. It helps support a sense of community by making it possible for residents to connect with their neighbors and their environment. Walking also helps improve community safety by placing more eyes on the street and on public spaces.

Ultimately, a “walkable community” is a place in which residents of all ages and abilities feel that it is safe, comfortable, convenient, efficient and welcoming to walk not only for recreation but also for utility and transportation.

In recent years many communities in the U.S. have begun to recognize that a livable community incorporates many features of traditional community design along with some modern technologies. Enthusiasm over a transportation system based on motor vehicles has been tempered by congestion on roadways and negative environmental impacts. The vision that has emerged in recent years is of walkable towns, villages and neighborhoods linked not only by freeways and motor vehicles but by transit systems,

and bicycle and pedestrian networks at the local level. This vision recognizes the importance of all modes of transportation. It also understands the importance of coordinating transportation and land use plans so as to improve access and, whenever possible, minimize travel distances.

The vision for this Plan is not new; it comes from previous planning documents developed by the City to improve quality of life and the health, safety and welfare of residents. This Plan, however, will help implement this vision by providing a wide range of recommendations to improve conditions for walking in the City of La Mesa. Some are focused on specific streets and intersections; others address design improvements that can be applied in hillside or non-hillside locations. Many of these changes will also benefit bicyclists and motorists by creating safer streets, intersections and sidewalks.

## Purpose

The purpose of developing a walkability plan for the City of La Mesa is to create a broad, community-based vision and action plan to make La Mesa a more walkable community. This plan sets the stage for achieving the General Plan vision of creating a community in which residents can get around the City without a motor vehicle.

As with any plan, implementation will not take place overnight. To assist in implementation, this Plan includes some recommendations for prioritizing projects. Based on this



# Chapter 1: Introduction

## Visions for a Walkable La Mesa

The following are views of the future expressed by some of the La Mesa residents that participated in the community workshop:

The future: The City should be vigorous, safe, self-sustaining, should have esthetics that reflect the true identity of the City. Also clean, safe, secure, with well-organized transit.

Accessibility, “The walking City.”

Safe place for visitors and residents to walk and enjoy.

Safe access for everyone = SAFE

Safe access to all neighborhoods.

More walking and riding of bikes, less cars zooming through neighborhoods (at least slowly) to schools, parks, shopping areas.

Wide sidewalks with landscape strips between the sidewalks and the street.

Trees and grass in the landscape strips.

Flower baskets hanging from trees and phone poles that always have flowers in them.

More and bigger planted areas downtown with benches for sitting.

Longer “Walk” signs so a pedestrian has time to cross the street.

Goals: A place/places to walk to. Things to see, to learn about.

Children walking together to school

process, and the availability of funds, the City will be able to decide which projects to focus on.

Development of the Plan was funded by a walkable communities grant from the San Diego Association of Governments (SANDAG).

## Process

In the first phase of development, consultants conducted an inventory of existing conditions in the City based on aerial photographs and field audits. Detailed maps were prepared that show the following information:

- Non-hillside streets with or without sidewalks
- Hillside streets with or without sidewalks
- Location of major pedestrian trip generators such as schools, transit stops, senior centers, parks, retail centers, etc.
- Location of traffic signals and crosswalks
- Intersections with/without curb ramps

These maps are included in Appendix E of this report.

Consultants followed up on the inventory analysis by conducting field visits of different parts of the City over a three-month period. Special emphasis was placed on some of the locations, such as schools and retail areas, that tend to generate the highest volumes of pedestrian trips.

Input from La Mesa residents was gathered through a variety of interviews and focus group meetings with school officials, parents of schoolchildren, and planning and transportation staff. Staff from Walk San Diego, a non-profit organization that promotes walking in the region, assisted by meeting with school and PTA officials and by contacting business groups and city commission members.

Additional information was gathered at a half-day public workshop attended by over 60 residents held on January 8, 2005. Participants were given an opportunity to describe their vision for making La Mesa more walkable. They also identified some of the problems and opportunities for walking in downtown La Mesa by participating in a “walking audit.” Working in small groups around maps and aerial photographs, participants described specific steps that could be taken to make parts of the City more walkable. (Please see Appendix for focus group meeting notes, workshop vision statements, meeting notes, etc.)



# Chapter 2: Vision, Goals and Strategies

Visions lead to goals, which lead to objectives, strategies and action steps. This plan provides essential details related to walking to make La Mesa a premier town for working, living, recreation and shopping. In this plan we anticipate major support for mixed-use, village-form development. Unlike many pedestrian plans, this plan provides a high level of detail on street-making, building placement, connectivity, compactness, land use policies and other issues that help define the way a community develops over time.

This Chapter bridges the broad vision statements and goals in the La Mesa General Plan and other planning documents, with specific activities the City should undertake to achieve those desired ends.

The vision and goals for walking in La Mesa are set in the City’s General Plan and other planning documents. The Circulation Element of the General Plan adopted in 1996 included the following vision of La Mesa in 2010:

**“A city where travel is safe and easily accommodated whether...by mass transit, in an automobile, on a bicycle or as a pedestrian.”**

## Support for Pedestrians

La Mesa has a long tradition of support for pedestrian-friendly design. As far back as 1963, the La Mesa General Plan emphasized the importance of supporting pedestrian activity by expanding the network of sidewalks

in the City. The plan spoke about the importance of sidewalks to “protect the lives of children enroute to schools and other centers of activity in the community.” It emphasized that sidewalks “provide a place for all age groups to walk without having to resort to the use of the gutter, darting between parked cars” and that they “provide a trim line for lots and aid in maintaining the appearance of the community and thus the value of all property.” The Plan recognized that while “sidewalks are essential in all areas,” in hill-side areas they “may be placed on one side of the street as topography dictates.”

## Downtown Village Specific Plan

This vision has been reiterated over the years in revisions to the General Plan and in a variety of Specific Plans. The Downtown Village Specific Plan adopted in 1990, for example, includes extensive language on the need to create a walkable environment. The second overall goal of the Plan states that “The focus for the Downtown Village should be on people — living, working, shopping and recreation. The entire area should be highly walkable from end to end. Pedestrian and bicycle movements should be given equal weight with the automobile. New development should emphasize interesting places enticing people to walk.”

The first major theme for the Downtown Village Specific Plan is “Compact Pedestrian-Oriented Commercial Area with Residential Emphasis.” The Plan goes on to state that



# Chapter 2: Vision, Goals and Strategies



“the emphasis is on the pedestrian rather than the automobile.” The Plan also proposes creating a new street category for La Mesa Boulevard and Allison Avenue — known as “Pedestrian/Transit/Parking Streets” — to “tie the Downtown Village together.” These streets would be heavily landscaped with trees and would include pedestrian-friendly features such as diagonal parking, medians, curb extensions, human-scale lighting, and more compact intersections.



In more recent years, the updated La Mesa General Plan includes extensive language on the need to support pedestrian activity, and on related social and urban form issues.

### Goal in the General Plan

The City of La Mesa General Plan includes several goals relevant to walking and bicycling. The broad vision cited above from the General Plan’s Circulation Element is supported by the following specific goals:

“Circulation Goal 5: To help maintain and enhance the quality of life in La Mesa by providing the necessary facilities within the circulation network of the City for safe, convenient and efficient transportation alternatives to the automobile.”

### Policies in the General Plan

The Circulation Element goes on to establish the following policies for Pedestrian Facilities:

“38. All new streets shall make provisions

for the adequate and safe movement of pedestrians, including improvements for the elderly and handicapped.

“39. Streets leading to schools and parks will receive a higher priority when allocating City funds for sidewalk improvements.

“40. The City will continue to retrofit existing street improvements, and require new developments to install public improvements which will provide for proper disabled access and mobility on public streets. The City recognizes that sidewalks are essential in all areas, including hillside areas where it may only be feasible to place sidewalks on one side of the street.

“41. The City may waive sidewalk improvement requirements for new developments when there is ample evidence that pedestrian access is not necessary. The City will adopt standards to assist in these determinations which include the following considerations:

- a) the percentage of existing continuous sidewalk along a block;
- b) the relationship between the estimated costs for the public improvements and the costs of the project; and
- c) whether the street is in a hillside area which presents physical constraints to the practical addition of sidewalks.

“42. Should the City defer construction of street improvements as part of any new de-



# Chapter 2: Vision, Goals and Strategies

velopment approval, the property owner may be required to sign an agreement to participate in the future installation of the improvements when a more complete street improvement project is feasible.

“43. The City will provide for the approval of certain commercial uses in the sidewalk areas of the public right-of-way in the Downtown Commercial District when those commercial uses can be found to be of benefit to the overall pedestrian environment.”

The Circulation Element also included the following objective for Pedestrian Facilities:

“The City will prepare and maintain an inventory of sidewalk facilities to determine where pedestrian improvements are most needed to insure disabled access and continuous safe routes for pedestrians throughout La Mesa. This resource will be used to select and prioritize projects in the Capital Improvement Program.”

This objective is being met through the development of this Walkability Plan.

### Mixed-Use Implementation Plan

Additional support for walkability is provided in the City’s “Mixed-Use Strategic Implementation Plan” adopted in 2003. The Plan addresses land use patterns that bring destinations closer together so walking becomes a viable or preferred alternative to automobile travel. The vision for the Plan states that:

“The City’s long held goals for the transit corridors include: revitalization and renewal of deteriorated properties, increased housing opportunity and provision of neighborhood level commercial activity that supports a pedestrian oriented environment. The envisioned image for the corridors is more urban and pedestrian-friendly and less suburban and auto-oriented, than is the case at the present time.”

### General Goals

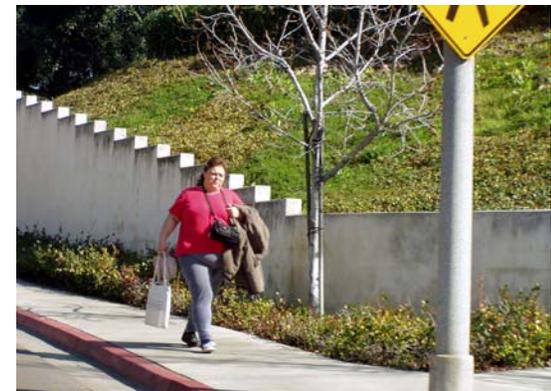
In addition to the language cited above that expresses the City’s direct intent to reduce automobile dependence and promote alternatives such as bicycling and walking, the following general goals regarding Transportation and Infrastructure should be reviewed for incorporation into the General Plan:

Reduce the number and length of vehicular trips and limit overall traffic congestion by promoting land use patterns and land uses allowing for multipurpose trips and trip deferral during peak travel times.

Design the City to enable and encourage walking and bicycling as a major and safe means of travel.

Protect existing and future residential areas from through-traffic that creates safety, noise, and pollution problems.

Link existing and future areas of the City with an integrated system of roads, transit, footpaths and bikeways that connects



## Chapter 2: Vision, Goals and Strategies



neighborhoods, commercial areas, schools, parks, and other major community-serving destinations.

Where necessary and feasible, accept some traffic congestion to achieve other community goals, such as encouraging the integrity of neighborhoods and the use of alternative means of travel.

Make all transportation decisions within a broad policy context that considers visual, environmental, economic and social objectives rather than being solely responsive to existing or projected traffic problems.

### Action Strategies

This section is the most detailed in this Chapter. The headings begin with general strategies, continue with the pedestrian facility network (sidewalks), and conclude with several more focused categories. The actions listed are very clear-cut. They can be monitored by providing the City Council, relevant appointed bodies, and other organizations with periodic reports on progress in achieving the General Plan goals cited in this Master Plan.

### General Strategies

Develop and maintain a comprehensive and coordinated walking and bicycling program.

Establish a Walking and Bicycling Advisory Committee to assist the City.

Plan for walking and bicycling facilities in all existing and new developments.

Coordinate and cooperate with surrounding jurisdictions and agencies, such as San Diego Trolley, Metropolitan Transportation Development Board, and Caltrans.

### Program and Planning Strategies

Planning Department and Public Works Department staff and the City's Planning Commission and Traffic Committee should be familiar with the guiding principles of a good walking and bicycling system, so as to ensure that these principles are followed in new development as well as the retrofit of already-built areas.

Develop standards that consider factors such as the need for low traffic speeds and dispersed volumes of motor vehicles, reduced numbers of driveways, improved sight distances, and access controls and curb cuts.

Develop criteria for direct and friendly walking and bicycle access to schools, parks shopping centers, community centers and other destinations inside and outside City limits.

Plan for walking and bicycling in existing and new neighborhoods by maximizing connectivity, providing shade, places to rest, short blocks, many eyes on the street and public spaces, and other key features.



# Chapter 2: Vision, Goals and Strategies

Ensure that walking and bicycling routes are integral parts of street design so that bikeways and pathways form an integrated, direct and convenient transportation network.

Design walking and bicycle routes as integral parts of new greenways and open space areas (where appropriate).

Plan bikeways and pathways providing attractive, shaded linkages between destinations.

Identify weak links and discontinuities in the existing network, and develop a plan to prioritize and fund solutions that improve or complete links.

Develop guidelines and standards for traffic operations, signal timing, geometric design, Universal Design (ADA) and roadway maintenance that facilitate walking and bicycling at intersections and other key crossing locations.

## Walking/Bicycling Network Strategies

Identify gaps in the desired City network and prioritize improvements.

Develop and adopt a map depicting the City's intended future walking and bicycling facility network.

Develop a map to identify and prioritize connections within and between neighborhoods, making walking and bicycling a first-choice for short and me-

dium distance trips.

Develop a program to gain neighborhood support for improving walking and bicycling connections.

Comment on plans from nearby cities and assist in identifying improvements needed in the regional network.

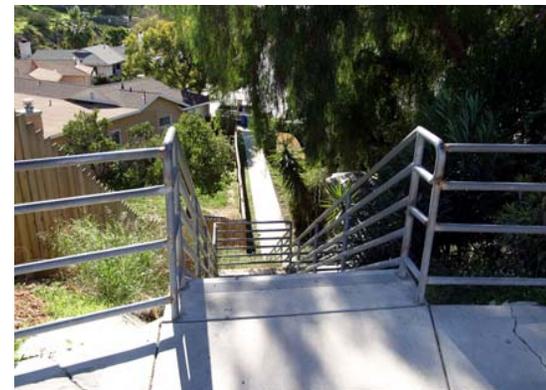
## Other Walking and Bicycling Features

Consider walkability and bicycle-operating characteristics in the design of bikeways, intersections and traffic control systems.

Establish a prioritized program to improve conditions for walking and bicycling. Strategies include: removing barriers; adding, curb ramps, automated pedestrian signals at key locations, pedestrian-activated signals in remote locations, bike racks, and bike rentals; greening of streets, placement and comfort of benches; installing pedestrian scale lighting, intersection lighting, shade and other ancillary pedestrian and bicycle features.

Provide adequate bicycle parking at all existing civic, employment, recreational, educational, industrial and commercial destinations.

Research the best bicycle parking facilities available, such as lockers and secure racks, and provide standards and guidance for appropriate installation in all new retail and commercial development,



# Chapter 2: Vision, Goals and Strategies



and business expansion.

Install lighting and other security measures as necessary.

Ensure that all new facilities in the City are free of architectural barriers that restrict access by individuals with disabilities.

Ensure that all existing facilities are surveyed for architectural barriers that restrict access by individuals with disabilities and schedule their removal.

Establish a process to ensure that work on utilities allows for barrier-free access by improving coordination between departments and utilities.

Ensure that all existing and future walking facilities are surveyed or planned to create proper furniture zones, shy zones, and that a travel zone is maintained for appropriate levels of quality and service for anticipated numbers of people.

Ensure that mailboxes, sign posts, benches, trash cans, signal control boxes, hydrants and other sidewalk furniture is placed and organized to minimize interruptions to the flow of people walking.

Maintain appropriate sight triangles, especially at intersections, so that people of all ages and abilities are able to see and be seen by people in cars.

In commercial areas, provide wide sidewalks (8-12 feet or wider) to create comfort for people wanting to avoid edges close to streets and buildings. In general, keep the travel zone to at least 8 feet wide.

Minimize disruptions by vehicular curb cuts (driveways). Use a minimum of a 40 inch 2% cross slope travel zone, or maintain the full width travel zone when practicable. Combine driveways and use frontage systems when feasible to reduce the number of driveways. Replace sidewalks where buildings and land uses no longer require driveways.

In commercial areas and along major pedestrian routes, benches should be placed at convenient locations, at least every 200 feet. Placement should not create barriers or discomfort to pedestrians.

Establish a standard for the design, placement, maintenance and screening of news racks on all commercial streets.

## Funding

Ensure adequate funding is available for the following walking and bicycling program activities: Network planning and coordination, facility construction, ancillary facilities, maintenance, publicity and safety programs, and enforcement.

Seek out and apply for grants to fund



# Chapter 2: Vision, Goals and Strategies

pedestrian and bicycle improvement projects.

## Maintenance

Design walking and bicycling facilities to minimize maintenance costs by specifying product standards and quality materials.

Establish routine inspection programs for all walking and bicycling facilities.

Develop lists of priorities for bikeway overlays and pathway maintenance and reconstruction to be considered during budget preparation.

Develop prioritized lists for sidewalk repair and replacement.

Develop procedures and practices for routine inspection and maintenance to insure that street gutter pans are flush with asphalt in travel lane.

## Promotion and Encouragement

Work with neighboring communities and SANDAG to:

Provide literature and current walking, transit and bicycling route maps for public use.

Update bicycle maps for public use on a regular basis, to be distributed at employment sites, bike shops, public buildings, and schools.

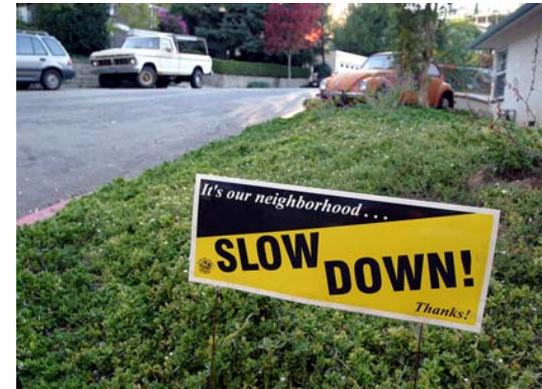
Acquire or develop literature promoting walking, compliance with bicycle, pedestrian and motor vehicle laws, safety tips, bike commuting, etc. for dissemination to the general public.

## Safety and Education

Develop educational programs for schools, worksites, and community groups with an emphasis on walking and bicycling safety and laws.

Investigate development of a monthly "riding tips" clinic aimed at new bicycle riders.

Strengthen educational programs used for traffic violators.



# Chapter 3: Existing Conditions

## Overall Network Issues

La Mesa is an older City, incorporated in 1912, that contains a variety of development patterns. The older commercial core around the Village is typical of a traditional walkable town center with a well-connected grid of streets and alleys, sidewalks, and street-facing retail.

The older commercial corridors along University Avenue, El Cajon Boulevard, La Mesa Blvd., Baltimore Parkway and Spring Street are more typical of post-World War II suburban street patterns and street designs with large intersections, auto-oriented uses, numerous curb cuts, attached sidewalks, parking lots next to the sidewalk and buildings set back from the street. The newer commercial corridors along Fletcher Parkway and the Grossmont Center areas have similar features but have improved landscaping and access control.

The varied topography of La Mesa contributes to the City's character and charm but also creates some challenges to improving walkability. Streets in many neighborhoods in hilly areas lack sidewalks and curbs and gutters. Curving streets result in reduced sight distance and intersections with irregular angles and shapes.

While freeways provide access to regional destinations, they also create some significant barriers within the City. Interstate 8 bisects La Mesa into two, Highway 125 cuts through the eastern section of the City and Highway

94 blocks off the City along its southern border. Freeway bridges and underpasses — primarily controlled by Caltrans — provide limited, and in some cases no access to pedestrians and bicyclists. The most serious problem occurs at the bridge over I-8 on Spring Street that connects an important pedestrian route from downtown La Mesa and the Trolley Station to the Industrial Center to the north.

On the plus side, the City of La Mesa has seven small neighborhood elementary schools that are close enough to many residences to allow children to walk and bicycle to school. Two larger middle schools and high schools are also accessible by walking, transit and school bus.

Similarly, La Mesa has numerous retail centers throughout the City that are in relatively close proximity to many residences and businesses. However, missing sidewalks and connectors, large intersections, freeways and high traffic speeds, pose significant barriers to accessing nearby schools and businesses in many neighborhoods.

The transit system — including trolley and bus service — provides additional access to schools, retail and other services within La Mesa and throughout the region. The elimination of the Dial-a-Ride on-demand transit system in recent years due to budget constraints was mentioned as a significant barrier to the mobility of senior and disabled residents.



*The varied topography in La Mesa creates many challenges for pedestrians.*



*Many hillside streets have no sidewalks.*



*Freeways create significant barriers to walking.*



# Chapter 3: Existing Conditions



*Hillside street without a sidewalk puts pedestrians in harms way.*



*Sight distance on hilly streets is limited.*



*Sidewalk missing on non-hillside street within a few hundred feet of Maryland Elementary School.*

## General Street Design

The existing streets in La Mesa include a wide range of examples. The hilly areas include narrow hillside streets as well as some collector-type streets. In non-hilly areas residential streets are wider and some collector and arterial streets are very wide. Wide streets provide good access for motor vehicles, and benefit emergency responders by providing plenty of clear width for maneuvering. But wide streets encourage high vehicle speeds, decrease the safety and comfort of non-motorized users and result in long exposure times for people trying to cross the street.

## Hillside Residential Streets

Hillside residential street widths in La Mesa generally tend to be narrow. Many hillside streets lack curb and gutter. Some streets have no sidewalks, and some have sidewalks on only one side of the street. In addition, there are many streets with discontinuous sidewalks. Topography changes also result in limited sight distances and intersections with irregular street alignments. Parking on hillside streets is scarce.

The City’s current street design standards call for a 40-50 foot right of way with street widths of 28-32 feet.

## Hillside Collector Streets

La Mesa also has some collector-type streets in its hillside areas. These roadways tend to be wider than the residential streets but are

also constrained by the difficult topography. Collectors tend to have less curves and as a result often exhibit high speed travel. Efforts have been made in some neighborhoods to deal with speeding through traffic calming, primarily using speed humps.

## Non-Hillside Residential Streets

Local residential streets in non-hillside parts of La Mesa vary widely. Older neighborhoods tend to have narrower, slower streets than some newer neighborhoods. Streets in non-hillside areas tend to have curb and gutter and sidewalks on both sides of the street. However, parts of the City that were annexed from the County often are missing sidewalks. On-street parking varies widely on non-hillside residential streets.

The City’s current street design standards call for a 56-foot right of way with a street width of 36 feet.

## Non-Hillside Collector Streets

Non-hillside collector streets in La Mesa also have many shapes and sizes. Some collector streets tend to be wider than necessary and result in higher speeds than desired. For example, streets like 70th Street and La Mesa Boulevard appear to be wider than necessary. On the plus side, this extra width may prove to be useful as La Mesa moves forward to retrofit its streets with walking and bicycling facilities, particularly bike lanes.

A few of the collector streets in La Mesa abut exclusively residential land uses, but are ex-



# Chapter 3: Existing Conditions

tremely wide. Possible uses of this width include moving the curb out to create a wider planter strip between the street and the sidewalk, building a raised, planted median down the center to break up the sea of asphalt and provide shade and beauty, or adding back-in diagonal parking.

## Arterial Streets

The arterial streets in La Mesa are wide and fairly hostile to pedestrians and cyclists. Fletcher Parkway, El Cajon Boulevard, University Avenue, Baltimore Parkway, Lake Murray Boulevard and Spring Street are all wide streets with pedestrian crossings that are over 60 feet long. The crossing at Fletcher Parkway and Jackson is over 100 feet long and is a major barrier to pedestrians. The wide roadway and rail corridor along Spring Street creates a barrier between the Village and the newer part of the downtown that include City Hall. Newer intersections near Grossmont Center are smaller and better designed to accommodate pedestrians.

Special attention should be given to intersections along these arterials that are close to pedestrian trip generators such as schools or shopping centers. For example, the intersections at University and Yale, Lowell and Parks are all used by children going to school at Helix High School, La Mesa Middle School and Dale Elementary School. Similarly, the intersection at Grossmont Center Drive and Center Drive is used by workers at the Hospital to cross to the commercial center.



*Non-hillside street without a sidewalk.*

Traffic volumes along these arterial roadways range from 15,000 to 20,000 average daily traffic (ADT).

## Hillside Walking Network

As noted above, many hillside streets are missing sidewalks. The accompanying maps indicate those streets on which sidewalks are missing or only present on one side of the street. In some cases, sidewalks along a block are not continuous.

The lack of sidewalks in hillside areas near schools is a major concern. Participants in the focus group meeting with school officials and in the Saturday workshop described the dangerous conditions that children face on hilly and narrow Glen Avenue as they make their way to Lemon Avenue Elementary School.

Even when sidewalks do exist they are often narrow and blocked by light poles, signs, hydrants, overgrown landscaping or other street furniture. Curb cuts that slope the sidewalk



*Stair connector off Dallas near SR-125.*



*Trail connector near Maryland Elementary School.*



*Typical arterial street in La Mesa.*



# Chapter 3: Existing Conditions



*Large arterial intersections make it difficult for pedestrians to cross the street. (top)*



*Sidewalk near Rolando Elementary is narrow and obstructed by light pole. (left)*



*Children near Dale Elementary are provided little support to walk to school.*

make these sidewalks especially difficult to traverse for seniors, wheelchair users or strollers.

The City currently has a policy that requires homeowners that embark on a home renovation project costing more than \$50,000 to either build the sidewalk in front of their home or pledge to allow the City to attach a lien on their property to secure payment for adding a sidewalk at a future date. This policy results in piecemeal construction of non-continuous sidewalks that provide little or no benefit to the neighborhood. Participants in the Saturday public workshop expressed support for changing this regulation to allow residents to contribute to a City fund for sidewalk construction in areas in the same neighborhood where they might be needed more.

Given space constraints in these areas, creative solutions will need to be developed to provide residents with good pedestrian access.

Trail and stair connectors exist in some hilly neighborhoods. For example, stair connectors in the Windsor Hills and Rolando neighborhoods allow able-bodied residents to get around on foot. A trail connector near Maryland Elementary School provides children greater access.

### Non-Hillside Walking Network

Walking conditions in non-hillside areas tend to be better. While connector and arterial

streets all include sidewalks, there are some residential streets that are missing sidewalks. Only some sidewalks have planter strips between the sidewalks and the curb that provide an important buffer between pedestrians and the roadway.

Although sidewalks exist on most streets, some of them are too narrow, or have obstructions that partially block the sidewalk. The sidewalk on Tower Street near Rolando Elementary School, for example is narrow and has several major obstructions for pedestrians.

### Major Intersections

Many of the major signalized intersections in La Mesa have features that negatively impact walking and bicycling. The problems include issues related to signal timing and signage, and deficiencies related to the Americans with Disabilities Act (ADA).

A detailed discussion of intersection deficiencies is included on the following pages, but here are a few of the common problems:

- Pedestrian clearance (flashing “don’t walk”) time too short for the crossing distance.
- Non-functioning pedestrian pushbuttons.

Pedestrians are required to push buttons even when crossing streets in the downtown. In areas with higher concentrations of pedestrians — like the downtown — walk intervals should come up every cycle concurrent with the through movement on the major street.



# Chapter 3: Existing Conditions

- Some pushbuttons are too small which makes them difficult for pedestrians to use. In addition, larger pushbuttons are required for compliance with ADA.
- Large corner radii on streets that carry very little truck traffic. Large radii increase the distance pedestrians have to cross at intersections and allow vehicles to make turns at high rates of speeds thus endangering pedestrians.
- Some corners only have one curb ramp – two ramps are generally required to be compliant with ADA.
- Improper curb ramp cross slope, running slope, angle of approach to curb, and landings.
- Marked crosswalks with kinks – this can be misleading to visually impaired pedestrians.

## Pedestrian Clearance Times

Pedestrian clearance times at large intersections may be too short to allow pedestrians to adequately get out of the street. The Manual on Uniform Traffic Control Devices (MUTCD) states that the pedestrian clearance time should allow a pedestrian traveling at 4 feet per second to reach at least the far side of the travel way or to a median of sufficient width for pedestrians to wait. In areas where pedestrians who travel slower than normal (e.g. children, seniors and wheelchair users) routinely use the crosswalk, longer pedestrian

clearance intervals should be considered.

Although the MUTCD allows pedestrian clearance times that only allow access to the median, this practice means that pedestrians may need to wait through multiple signal cycles just to cross the street. In addition, the medians in La Mesa do not have a median nose that sticks out beyond the crosswalk, so pedestrians are very exposed standing in the middle of the street with fast traffic surging by on both sides. For these reasons, the recommended pedestrian clearance times should be calculated using the full crosswalk length.

## Curb Ramps

ADA guidelines recommend two curb ramps per corner and require the following standards for curb ramps and landings.

- The base of the ramp must be flush with the pavement; no lip is allowed.
- The angle between the ramp and the street (or flat area at the base of the ramp) must be 90°.
- Curb ramp running slope must be no greater than 1:12 (8.33%).
- Curb ramp cross slope must be no greater than 1:48 (approximately 2%).
- The landing at the bottom or the top of the ramp (where wheelchair users need to turn to change direction) must be at least 4 feet wide.



*Some intersections in La Mesa include modern pedestrian crossing buttons that are easier to use.*



*Downtown sidewalks are relatively friendly to pedestrians.*



*Spring Street, which is hard to cross, divides the downtown.*



## Chapter 3: Existing Conditions



*Large intersections are difficult for all users to negotiate.*



*It can take up to 30 seconds for a pedestrian to cross a wide street like this one.*



*More compact intersections are easier to cross and result in less delay for vehicles as well.*

- The slope of the landing must be no more than 1:48 in any direction.
- A 2-foot wide tactile warning strip (usually consisting of truncated domes) must be provided where the ramp meets the street.

### Ten Steps to Walkability

1. Compact, lively town center, full of life, association, exchange and people.
2. Low speeds, distributed volumes, modest intersection widths.
3. Fine grained streets (many well connected short blocks), many streets, trails, links, paseos, transit links.
4. Neighborhood schools and parks/plazas, within one eighth to one mile. Pocket parks and plazas.
5. Public places with inviting features: benches, restrooms, shade, water and art.
6. Convenient, safe and efficient high visibility street crossings.
7. Many people of all ages and abilities walking many hours.
8. Celebrated public space and public life, parades, markets, festivals, awards.
9. Land use and transportation partnerships.
10. Affordable, inspiring, well maintained streets and homes.



# Chapter 4. Recommended Improvements

This chapter provides workable recommendations in two sections. The first segment takes specific geographic areas (Sections 1-8) detailing conceptual designs addressing future growth and retrofit opportunities. We have selected these specific areas and corridors since they tend to be in areas that are high priority for pedestrians or are slated for improvements. We also included them because they include certain areas (e.g., hillsides) that are especially unique and challenging.

Sections 9-12 provide more generic recommendations common to La Mesa topography and features. Most of these generic treatments can be applied in other parts of La Mesa. For example, for the nearly dozen schools, the solutions we pose for just several schools, Lemon Elementary, Murray Manor Elementary (Jackson and El Paso), and La Mesa Middle School, can be applied in principle to all schools. The correct way to design a school crossing on Jackson, for example, applies to similar streets throughout town.

These generic treatments cover the following topics: freeway bridges (Section 9), intersections (Section 10), midblock crossings (Section 11), school areas (Section 12) and transit stations (Section 13).

Our approach is to provide La Mesa staff with the necessary information to implement the best possible designs. Each set of two pages is a model project. The City is not likely to build every feature in any of the models — specific engineering studies are needed — but we know this will prove a helpful guide in all its endeavors to retain the “Jewel of the Hills” status La Mesa so richly deserves.

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# Chapter 4. Recommended Improvements

## Section 1.

### Hillside Neighborhoods



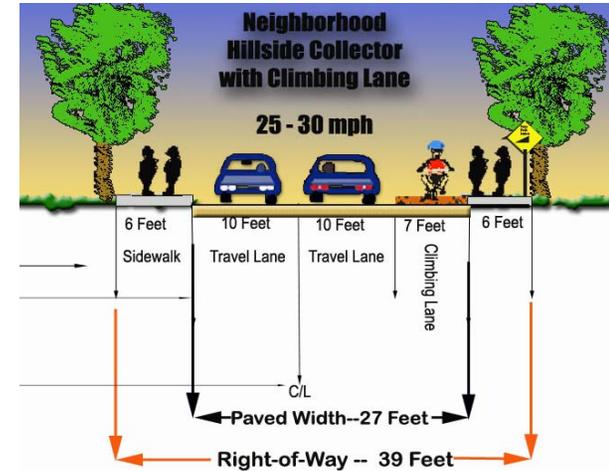
Hillside neighborhoods are a major portion of La Mesa. In general, roadways in these areas are narrow, sight distances are restricted and on-street parking is a precious resource. Many streets lack sidewalks on one or both sides. Recommendations and typical sections are provided here.

**Collector streets:** Every effort should be made to include a bicycle climbing lane (see illustration) on the uphill side of collector streets. A six foot wide sidewalk on at least one side of the street is important if people are to walk to nearby schools, parks and other locations. Planter strips are desirable, and should be included when right-of-way permits.

**Local streets:** Local streets have lighter traffic volumes. Sidewalks are desirable and should be included if called for in a neighborhood plan. There will be many cases where sidewalks are only needed on one side of a hillside local street.

Where on-street parking will tend to be saturated, paired driveways or curb extensions can be included to allow access by emergency responders or oncoming vehicles.

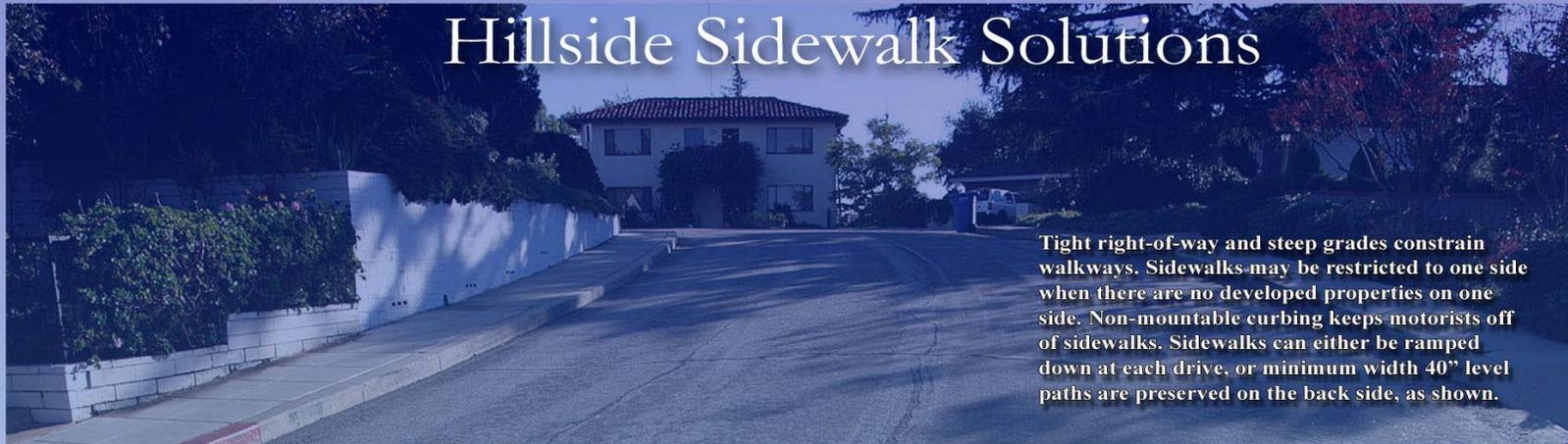
**Driveways:** Driveways should be designed to maintain a 4 foot flat (2% cross slope) sidewalk to traverse the space. This flat area is essential. It not only meets ADA requirements, but keeps people from falling during rainy weather, where footing can be tenuous. Colorized materials can be used to accentuate depressed flanges that intrude partially into the sidewalk (see illustration 3).



*Curb cuts can be accommodated through a variety of techniques: (1) Driveway elevation change is accommodated in the planter strip (ideal), (2) Sidewalk and driveway merge with a sidewalk drop in elevation, (3) Sidewalks are brought back about 4 feet for a parallel flat crossing (use of contrasting materials helps prevent people from falling into depressed flange areas) and (4) use of shoreline to help guide visually impaired along edge.*



# Hillside Sidewalk Solutions



Tight right-of-way and steep grades constrain walkways. Sidewalks may be restricted to one side when there are no developed properties on one side. Non-mountable curbing keeps motorists off of sidewalks. Sidewalks can either be ramped down at each drive, or minimum width 40" level paths are preserved on the back side, as shown.

Severe right-of-way, grade, and sight constraints may require parking to be limited to one side of the street. In such cases streets should be kept to 18-20 feet (including parking) to prohibit speeding. In rare cases streets can be restricted to one way loops, although such systems work best when acreage is small (8-15 acres).

Above and below: A creative hillside layout clusters homes around a commons, creates trail access to all properties, then provides a compact one-way lane for access to each property (Aspen, Colorado)



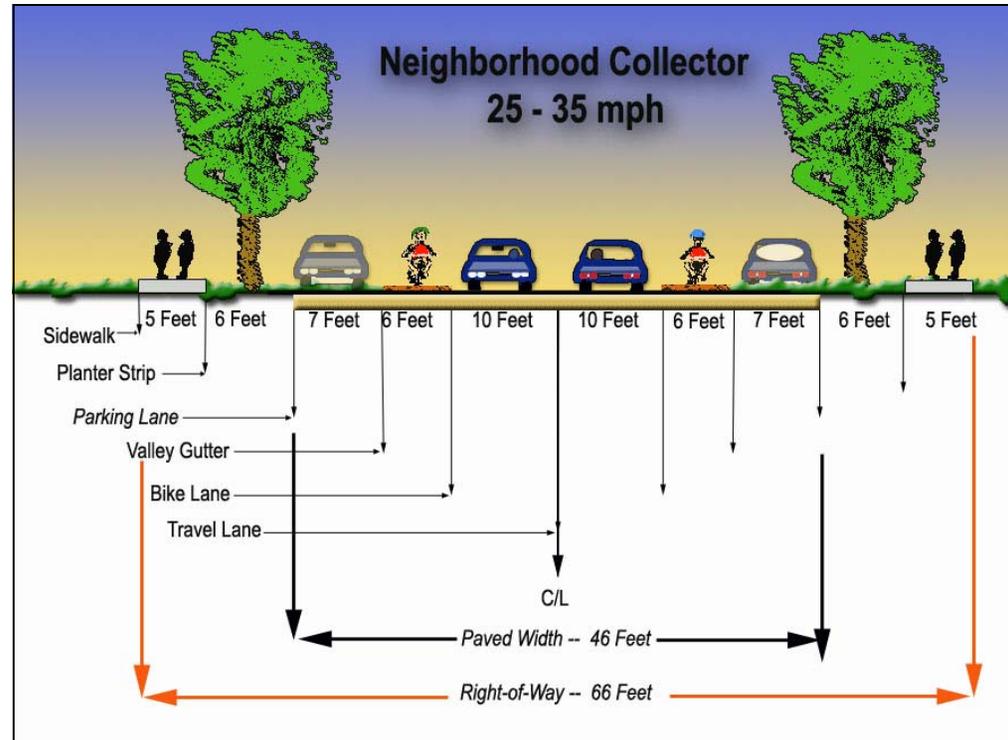
# Chapter 4. Recommended Improvements

## Section 2.

### Non-Hillside Neighborhoods



Non-Hillside neighborhood collector streets should have bike lanes, on-street parking on both sides and no more than 10 foot wide travel lanes. In most applications the typical section can be adapted to existing collector streets, such as Nagel Street (shown above).

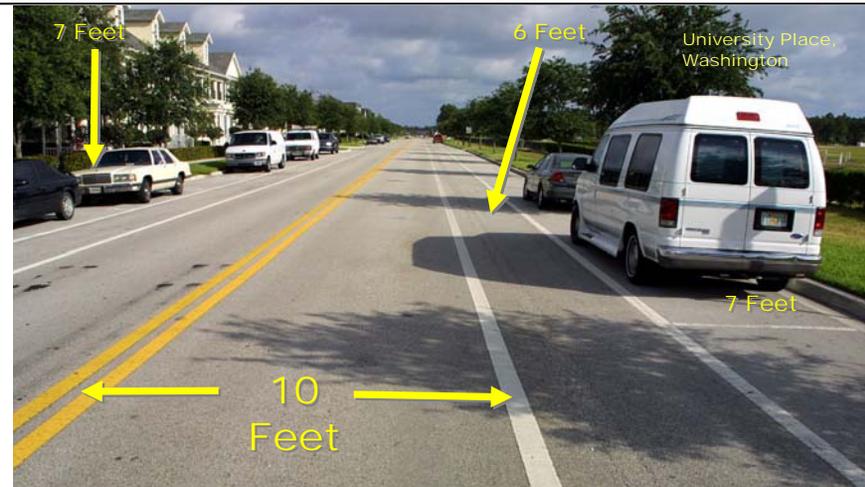


**Neighborhood Collectors:** This design permits comfortable travel within a range of 25-35 mph, which is the maximum speed desirable for neighborhood collectors.

**Bike Lanes:** These streets will benefit from bike lanes, which will visually narrow the traveled portion of the street, create buffers to parked cars, increase effective turning radii, improve sight lines, and provide quality space for bicycling.

**Sidewalks:** Preferred sidewalk locations are behind 6 foot planter strips. This is not always possible on retrofit streets. When sidewalks are attached to curb, they should be at least 6 feet wide.

*By keeping lanes down to 10 feet, bike lanes to 6 feet, and parking to 7 feet a minimum width is used, and speeds are kept under control (right). A 13-foot bike and parking lane combination is ideal. Note scrub line of old bike lane line. When travel lane was wider, speeds were too high. Many practical built examples demonstrate importance of travel lane widths for controlling speed.*



# Chapter 4. Recommended Improvements

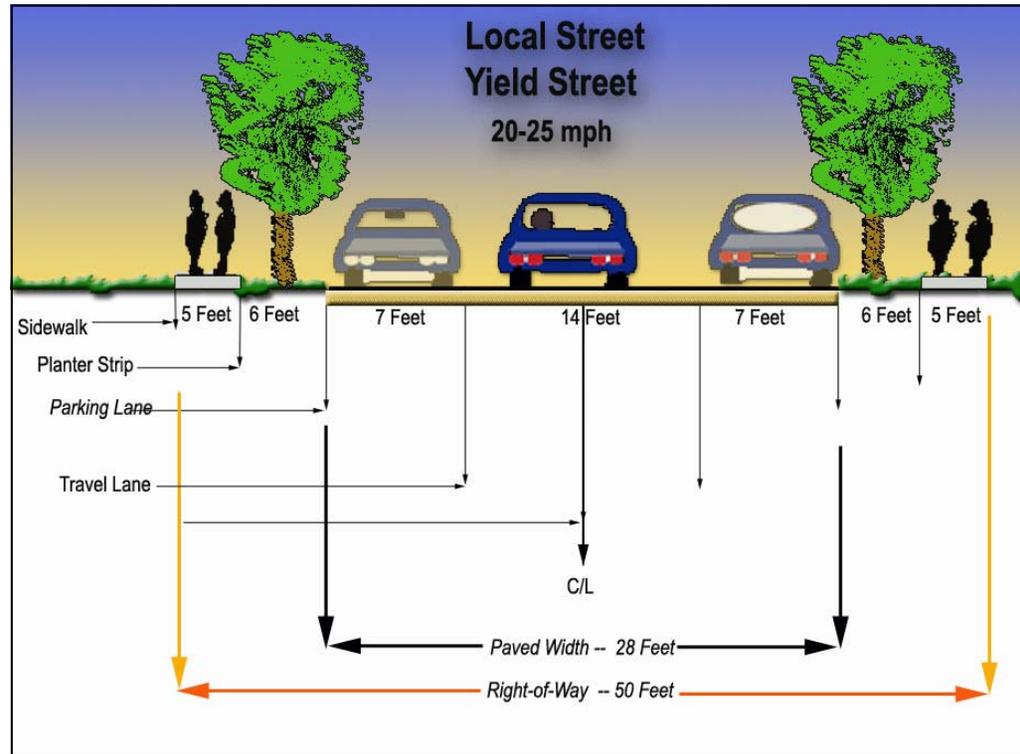
## Section 2.

### Non-Hillside Local Streets



Although most of La Mesa is built out, there will be times when new non-hillside local streets are needed. This typical section is the preferred design for safety and value. Street details include a double canopy of trees, 5 foot wide sidewalks, 6 foot planter strips, two 7 foot parking lanes and one 14 foot travel lane (yield lane). This design helps hold speeds to 20-25 mph, and is considered a very safe design. This design maximizes on-street parking. To provide access to fire equipment, curb extensions (with hydrants) or double driveways can be used. Streets this narrow need to be part of a well connected street system that allows multiple points of access.

**Yield Streets:** Yield streets are common in North America. With adequate driveways there is never a location where it is not convenient for one motorist to yield to another. It is the yielding behavior, and potential need to yield that keeps speeds low.



**Sidewalks and trees:** The combination of 5-foot sidewalks, trees and planters create comfortable walking space, add to property values,

and increases the green qualities and needs of neighborhood streets. Curb extensions on corners reduce entry speeds, while preserving access.



# Chapter 4. Recommended Improvements

## Section 3. Downtown Streets

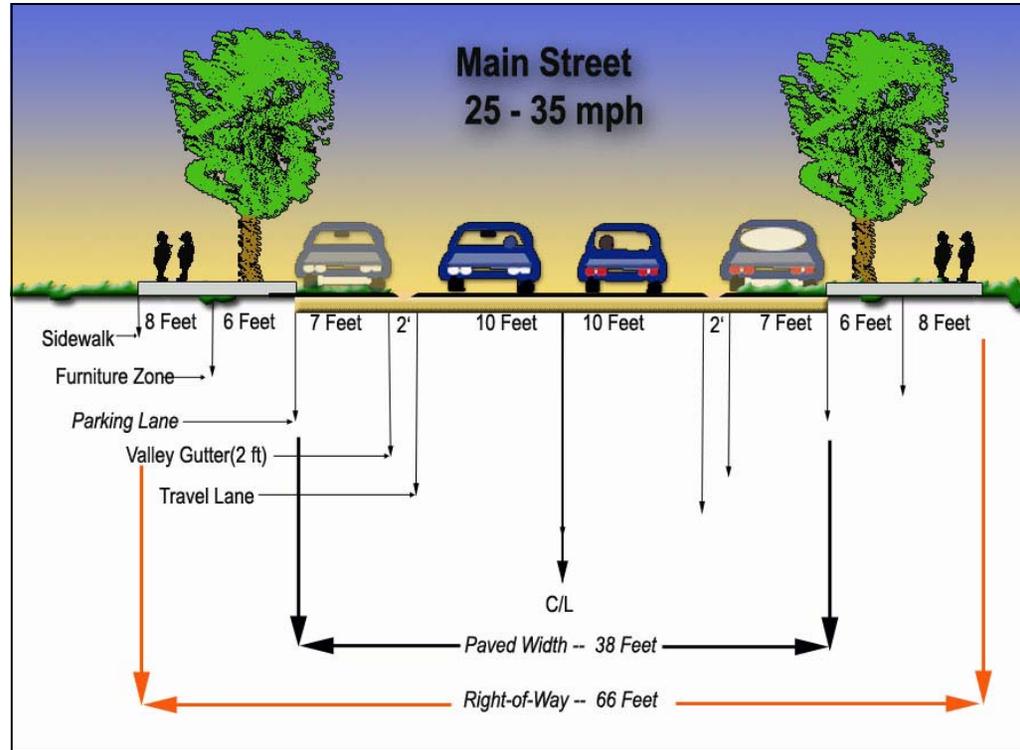


La Mesa's downtown streets work well in most cases. Future adjustments to many town center streets should include added parking, curb extensions, and use of pavers made of non-slip materials.

**Two-Way Street:** Designs such as the typical shown above will hold speeds in the 20-25 mph range. At this speed many motorists yield to pedestrians. Bike lanes are not needed at these lower speeds, since most bicyclists prefer to make use of the full lane and merge with traffic.

**Sidewalks and furniture:** Sidewalks and sidewalk furniture should be upgraded and maintained. Some restaurant street tables and furniture is well laid out. However, some outdoor seating areas are too wide and make passage challenging.

**Universal Design:** As a general rule two ramps are needed on each corner. Although some semi-circle designs in place are adequate, others will benefit from curb extensions and two ramps per corner.



# Chapter 4. Recommended Improvements

## Section 3.

### Downtown Sidewalks



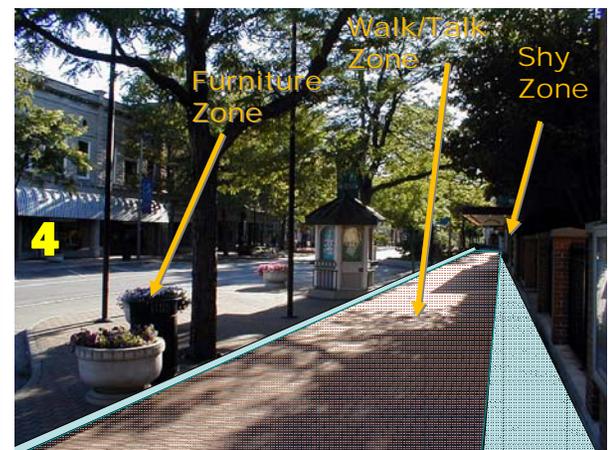
**1, 4 Sidewalk zones**, such as those shown on this Portland, Oregon street, help define walking space. Pedestrians benefit from adequate width in well defined “walk/talk zones” separate from “furniture zones” and “shy zones.”

**2. Angled Parking** On-street parking creates efficient and competitive motorized access to downtown shopping. Stores in downtowns need maximum convenience parking. Parking also provides an effective buffer to moving traffic and creates sufficient friction to keep traffic speeds low. Diagonal parking should be added to both sides of Allison Avenue. Other streets in the downtown should be studied to determine the feasibility of adding diagonal parking on one or both sides of the street. Reverse back-in angled parking (photo at right), in which vehicles pull forward and then back into an angled space, is being used by more and more jurisdictions and

should be considered. It is safer since it sends vehicle passengers away from the street. It also makes it easier for drivers to pull out from a spot by improving their view.

**3. Curb Extensions** With angled parking La Mesa now has the opportunity to add curb extensions and reduce street crossing distance by 50%. This benefits not only pedestrians, but makes the road accessible to motorists for longer periods of time. Curb extensions also prevent illegal parking, improve sight distances and keep open turning access onto important streets.

**Driveways:** Driveways should be designed maintaining a 4 foot flat (2% cross slope) sidewalk to traverse the space. Colorized material should be used to accentuate any depressed flanges that intrude partially into the sidewalk.



# Chapter 4. Recommended Improvements

## Section 4. University Avenue



University Avenue is slated to undergo significant improvements in the next year. The plan is to rebuild it into a dignified, attractive civic boulevard. Five sections are planned. All roadway sections will incorporate reduced speed, more convenience parking, greater access control, improved walking experiences and new streetscape features. Over time, capital investments in new mixed use buildings can be expected to occur.

**Street and streetscape:** Traffic volumes on some portions of University Avenue under 10,000 vehicles per day may permit conversion to two lane sections with angled parking, wider sidewalks and much shorter crossings. Mixed use village areas can become highly desirable places to live, shop, work and find entertainment. Bike lanes can be used to separate motorists from pedestrians, improve sight distances and provide wider turning radii into driveways and at intersections. Curb extensions will be common.

**Sidewalks and driveways:** Many portions of University Avenue will continue to have off-street parking and service driveways. Driveways can be

better managed, sidewalks can be widened, and important streetscape features can create comfortable and effective walking conditions.

**1 & 2: Driveways.** Typical off-street parking lot with double entry. This design is challenging for pedestrians. Many commercial driveways are not only overly wide, they have significant down slope creating trip and fall conditions — especially in wet weather — and making passage for wheelchairs and strollers very difficult.

**3: Intersections.** Most intersections are overly wide today. They should be transformed into more compact designs that make intersections safer, more efficient, more attractive and friendlier to pedestrians.



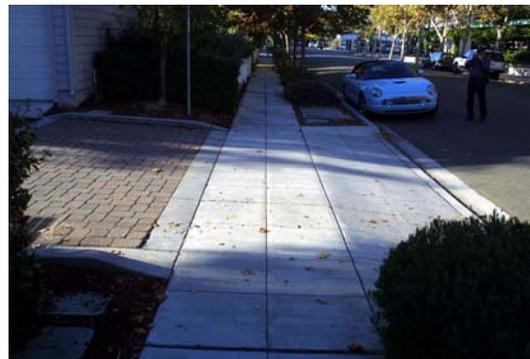
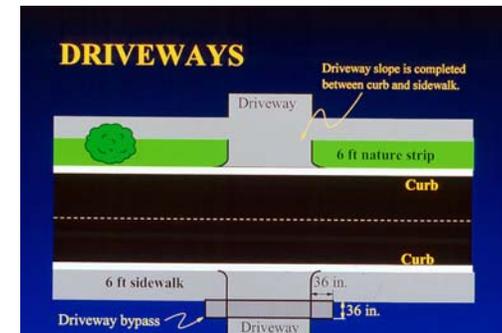
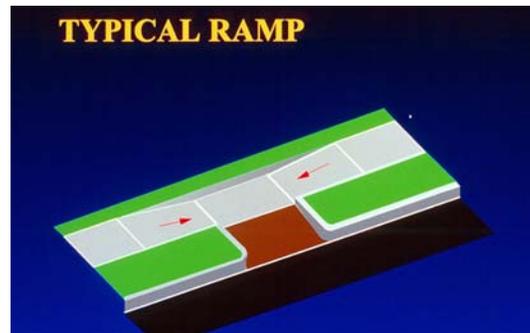
# Chapter 4. Recommended Improvements

## Section 4.

### Commercial Driveways

To improve accessibility and walkability, the number of commercial driveways should be kept to the minimum necessary. When built, they should: (1) be constructed with a nearly level surface for direct lines of travel (maintain 2% maximum cross slope), (2) provide color contrast to help guide pedestrians around flares, flanges and other potential tripping hazards, (3) take advantage of different materials or colors to emphasize to motorists that they are intruding into pedestrian space, (4) kept to a maximum width of no more than 14 to 20 feet. Width of driveways can be reduced by building separate in and out lanes.

Legally motorists should yield to pedestrians as they exit or enter a road. Not all motorists obey this law. In some cases poor designs lead them to believe that pedestrians are intruding into their space. The photos shown on this page provide a variety of methods to assist and guide pedestrians across driveways.

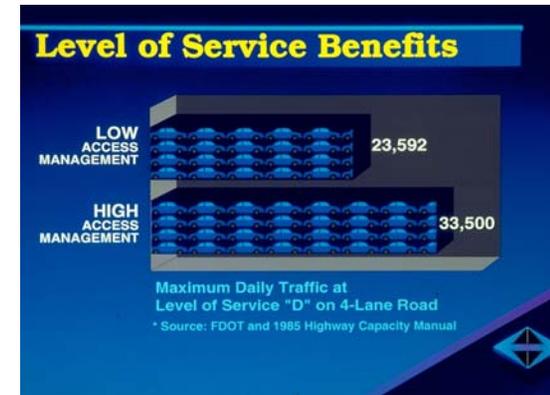


# Chapter 4. Recommended Improvements

## Section 4.

### Access Management

**Medians add efficiency.** Medians provide multiple benefits to communities. Through higher levels of access controls, medians can increase the carrying capacity on four lane roadways up to 30%. In many cases this means that a road does not have to have the added cost, width and barrier of expanding to six lanes. Fletcher Parkway, for example, could operate efficiently with only four lanes.



**Medians increase safety.** Studies now show that over half of all fatalities and injury producing crashes can be eliminated with well-designed medians. In some cases reductions are as high as 90%. Trees in medians may reduce crashes even more (Palo Alto study by Reid Ewing).



**Sight Lines.** To maintain sight triangles and sight lines, guidance is needed for the placement of landscaping and trees. Generally native, xeriscape plant materials and slow growth shrubs are preferred. They should be kept trimmed to 2 feet. Trees with more than a 6 inch caliper should be placed back from intersections 50 or more feet, and spaced to allow natural canopies to evolve. Trees should be under trimmed to 7 feet, thus helping assure adequate sight lines.



Pedestrians can often make use of well designed medians to make informal crossings when gaps are adequate. Otherwise median crossing islands shown in this report may be appropriate for the most desired crossing locations.



# Chapter 4. Recommended Improvements

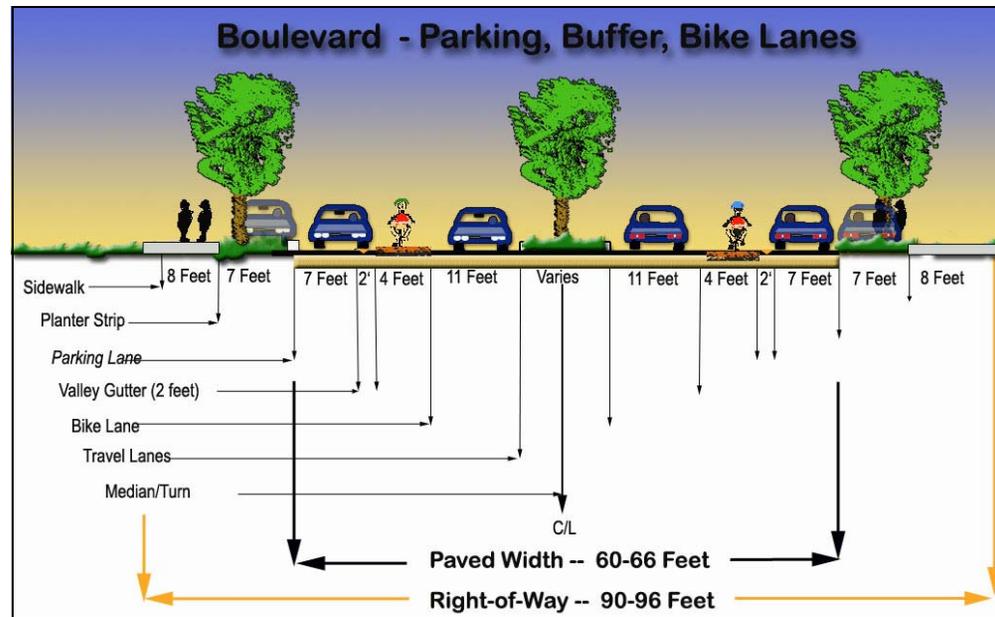
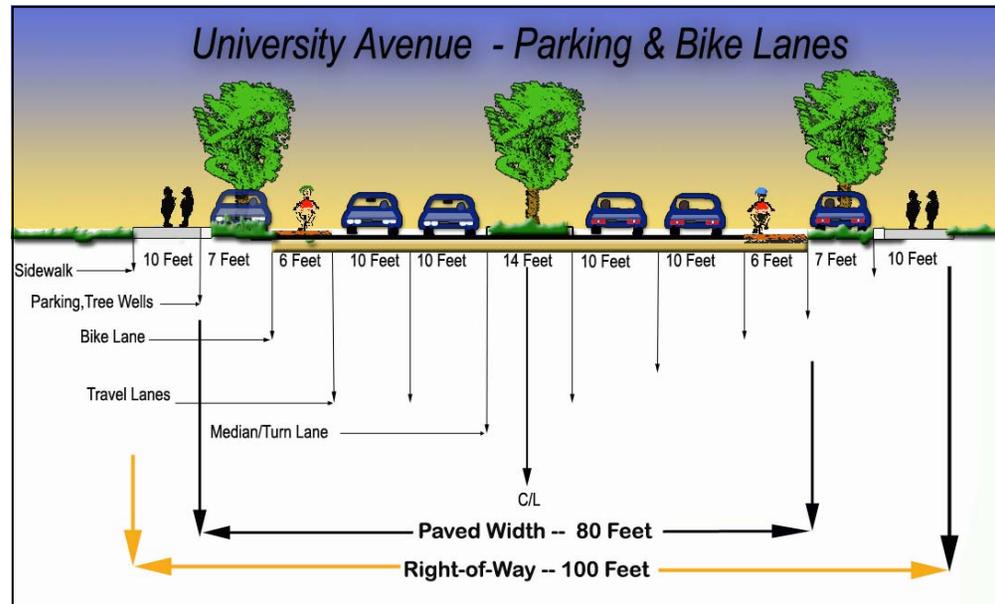
## Section 4.

### Alternative Designs for University Avenue

Over the years University Avenue is likely to be transformed into an urban corridor made up primarily of highly valued mixed use development. However, today there are two distinct settlement patterns. Both can be pedestrian, bicycle, transit and business friendly. University Avenue carries from 18,900 to 22,600 Average Daily Traffic (ADT). These numbers can be accommodated with either of the following two typical sections.

**Suburban Style:** This suburban design provides bike lanes, buffers to sidewalks, improved turning radii and increased turning sight distance. The section slightly modifies speed to safer levels. In the short term, significant portions of University Avenue should be designed with this typical section. This section will retain many driveways, but where possible, driveways should be narrowed, and designed to provide ADA access and safety. (See section on Commercial Driveways.)

**Urban Style:** A more urban street style has distinct advantages. This design deletes two travel lanes, converting them to other uses, such as on-street parking, buffers to parking, bike lanes and planter strips. Parking is inset through extensive use of curb extensions. The street will be much greener and leaner, setting a pleasant village atmosphere and moving all traffic that desires to move through the area. Travel speeds will be 10-12 mph lower than today, and businesses will benefit from lower speed, noise, pollution, and ample access to parking. This section will have few or no driveways, and limit turns to the safest locations. Pedestrians benefit in significant ways with the more compact street, and streetscaping is greatly enhanced.



# Chapter 4. Recommended Improvements

## Section 4.

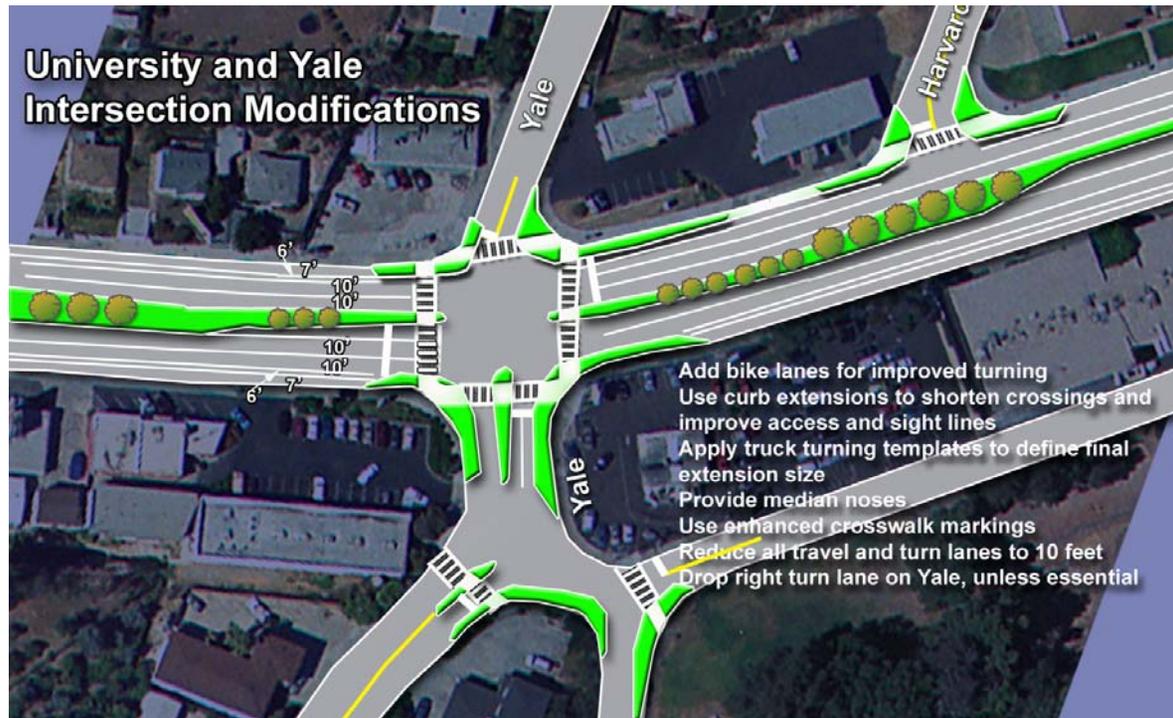
### University Avenue and Yale Avenue

The University and Yale intersection is one of the most active pedestrian locations in town. This junction not only serves as the way students and some faculty/staff access Helix High School, it is an after school gathering place.

A number of specific problems exist. Crossing distances are long, causing many students to run across the street, and avoid the intersection altogether.

A combination of bike lanes, curb extensions, median noses, and a new crossing island will make crossings more comfortable. Speeds can be modified through lane width reductions and corner treatments.

Traffic analysis should determine if the dedicated right turn lane from the high school side of Yale to University Avenue is needed. If not, it should be removed to increase safety and overall intersection efficiency.



# Chapter 4. Recommended Improvements

## Section 4.

### University Avenue and Lowell Street

University Avenue and Lowell Street serves as the second entryway to Helix High School. Students cross University to get to stores, and to enter their neighborhoods. The westernmost crossing is much too far from the intersection (see below). A combination of bike lanes, curb extensions, and median noses will make crossings more comfortable. Speeds can be modified through lane width reductions and corner treatments.



# Chapter 4. Recommended Improvements

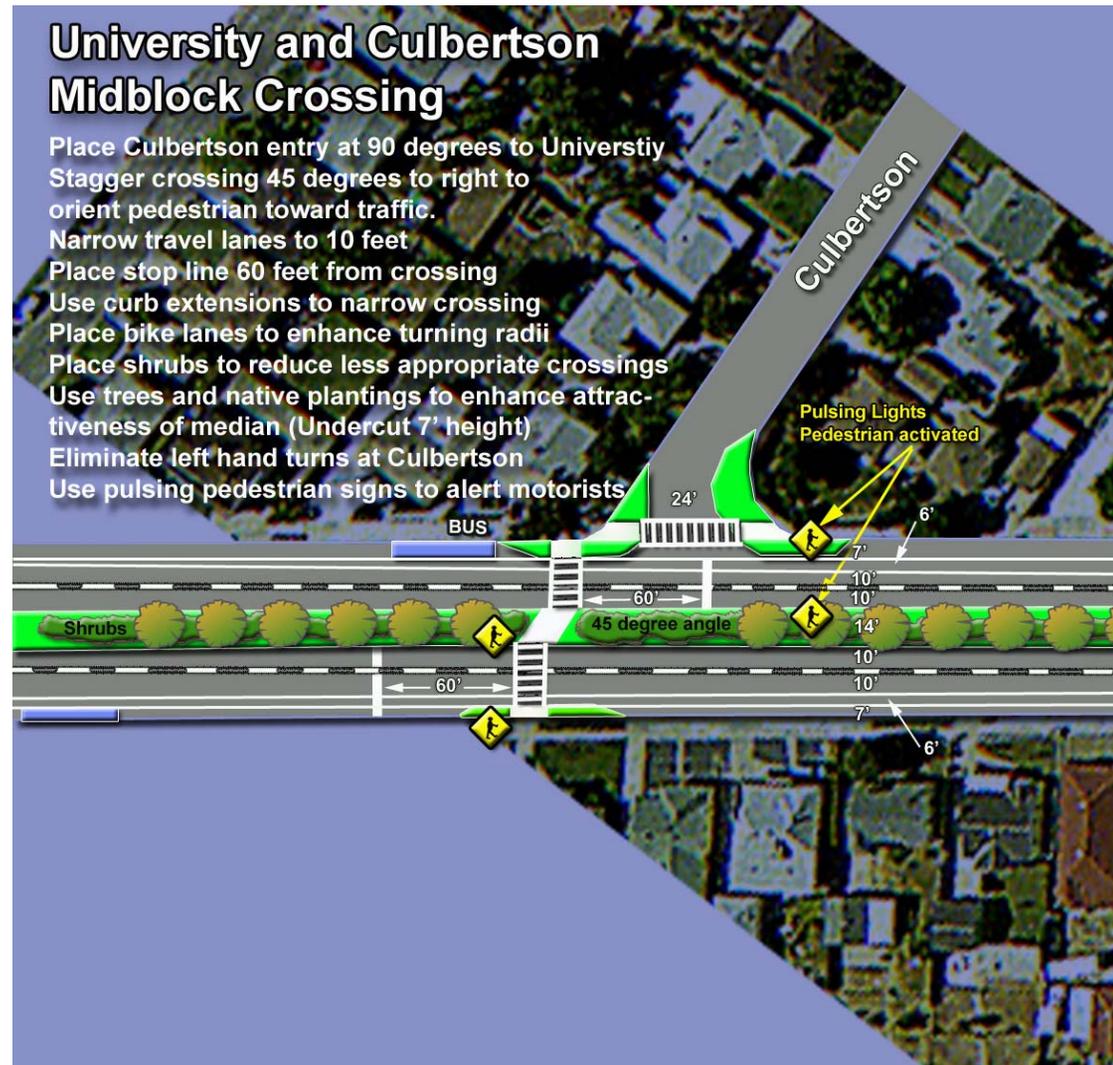
## Section 4.

### University Avenue and Culbertson Avenue

This model bus stop midblock crossing design can be used at various locations in La Mesa. The design works well, especially in conjunction with a median closure. Median closures reduce turning conflicts, improve corridor travel efficiency, and simplify pedestrian crossings.

This design incorporates many of the features shown in the University and Maple design (p.33), with some variations. Pedestrians are allowed to cross without a lengthy center island. Although ideally this crossing would be to the right side of Culbertson (to eliminate right-out turning conflicts), the possibility of right-in conflicts, where the motorist is slowing to turn, not to yield, might be even more confusing. The location of the crossing is also convenient to reach the bus stop since it eliminates conflicts that would otherwise be created by crossing Culbertson. This same treatment could be placed near Olive, where the south side bus stop is located. The crossing could also be placed in a true midblock location. Before final midblock placement of the bus stop the City should evaluate if the bus stops are in the best long term locations.

The pedestrian-activated pulsing lights appear on both sides of the street (near and median sides) in both directions. Stop bars placed back 60' from the crossing reduce multiple threat crashes where one motorist stopped at the crossing screens the other motorist (and pedestrian). This stop bar placement opens up the needed sight lines. Additional MUTCD and Caltrans pavement markings should also be used, as well as advance pedestrian crossing signs.



# Chapter 4. Recommended Improvements

## Section 4. Medians and Emergency Access

Medians can increase the carrying capacity of multi-lane roads about 30% and reduce serious crashes by 50-90%. La Mesa is also considering medians on University Avenue to increase the comfort, ease and safety of pedestrians crossing from one side of the street to the other, to increase esthetic qualities and to reduce the amount of asphalt in the corridor.

Meanwhile new tools are available to help emergency responders gain immediate access to neighborhood streets from the opposite side of medians. This is done through a variety of turn pockets designed only for use by emergency responders. In some cases motorists may not even be aware that the grassy portions of median sections can handle turns. Well-designed openings are known only to those who need to use them.

*U-turn pockets for motorists and fire trucks can be conveniently located. (1, 3) Sammamish, Washington uses special angled cuts for emergency responders, and signs to discourage motorists from making illegal turns at these locations. (2) Bellevue lowers curbs and uses reinforced "grasscrete" to allow appropriate EMS entries and exits (Code 3). (4) Bellevue lowers their medians about 150 yards back from troubled intersections allowing EMS teams to cross medians and drive contra-flow through blocked intersections.*



# Chapter 4. Recommended Improvements

## Section 4.

### University Avenue and Parks Avenue

University Avenue at Parks Avenue is a heavily skewed intersection. To make it easier to cross an intersection of this type, it is essential to keep crosswalks proximate to intersections. When overly wide turning radii are built this compounds the challenge of getting people across the street in short crossing times and distances. Today crossing distances at this intersection are too long. To reduce the distance and improve safety at this intersection the following tools should be used: curb extensions, median noses, bike lanes and lane width reductions, as shown.

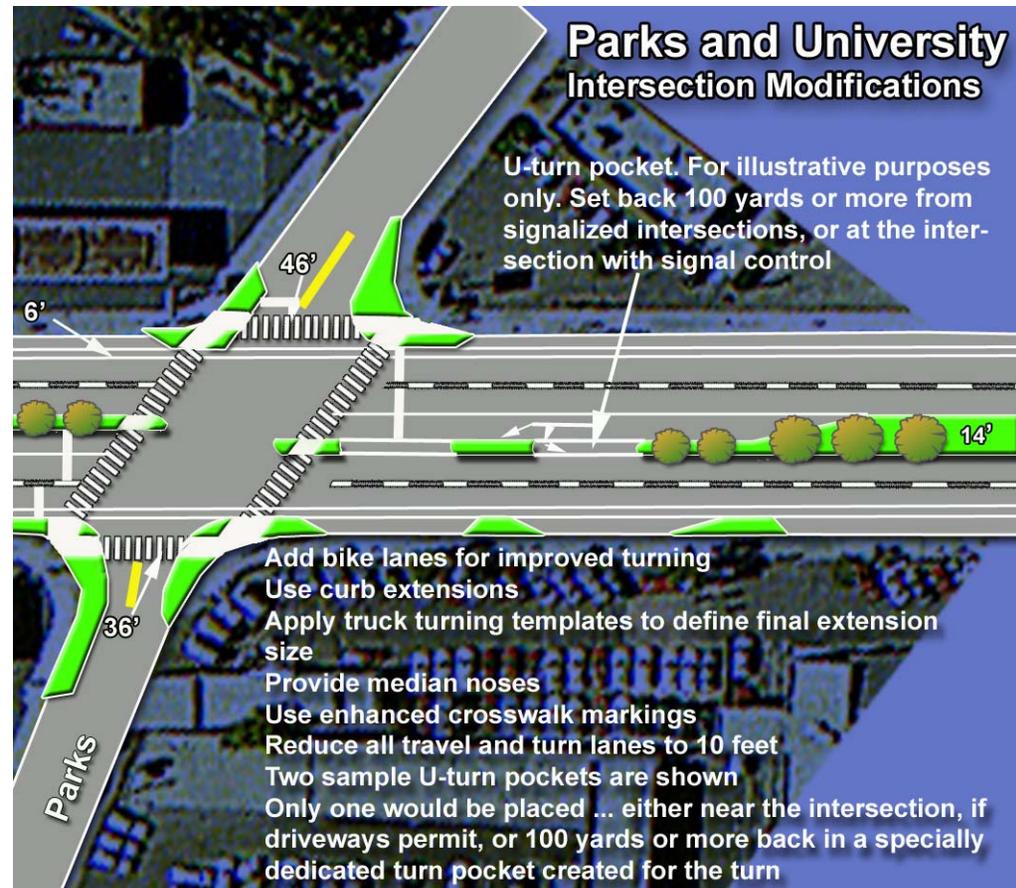
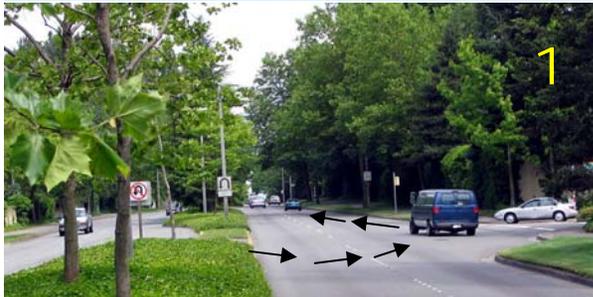


# Chapter 4. Recommended Improvements

## Section 4.

### University Avenue and Parks U-Turn Alternative

#### U-Turns and Access Control



As access management is enhanced on University Avenue through median closures, there will be a growing need for motorists to make U-turns. This can be done more safely by entering a storage pocket and proceeding with the dedicated left signal (at signals), or in non-signalized locations with suitable gaps. The above and left scenes illustrate this technique. (1) 148th Avenue in Bellevue, Washington. The roadway makes use of 10

foot travel lanes, and occasional turning pockets, moving 41,000 vehicles per day. (2-3) Bellevue has perfected left turns at intersections as well. The median is dropped 40-50 feet short of the intersection and a turning pocket is created to permit completion of turning vehicles with the dedicated left cycle. Sidewalks are set back and curb extensions keep street crossings narrow to maximize intersection efficiency and pedestrian safety.



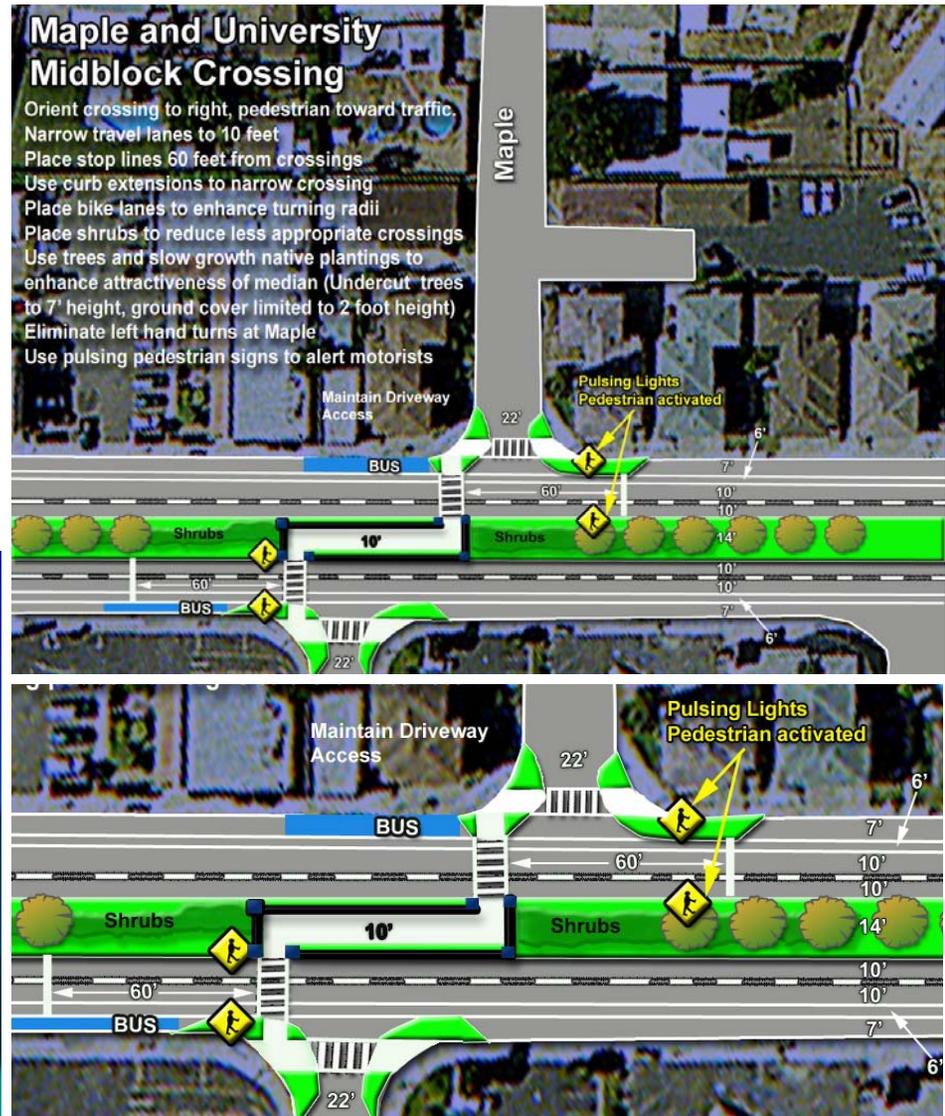
# Chapter 4. Recommended Improvements

## Section 4.

### University Avenue and Maple Avenue

University Avenue and Maple Avenue provide a model midblock crossing of a busy roadway. This location has transit stops on each side of the roadway. Today there is no marked crossing of University. Engineering and environmental support for walking is poor. The proposed treatment provides a convenient and efficient crossing. It also eliminates a fairly chaotic vehicular movement in and around this intersection.

Speeds and noise can be modified through lane width reductions, a significant greening of the corridor and other near term changes. Curb extensions reduce entry speeds to neighborhood streets, shorten crossing distances and add to the attractiveness of the block. A similar midblock treatment is proposed for Culbertson and University.





# Chapter 4. Recommended Improvements

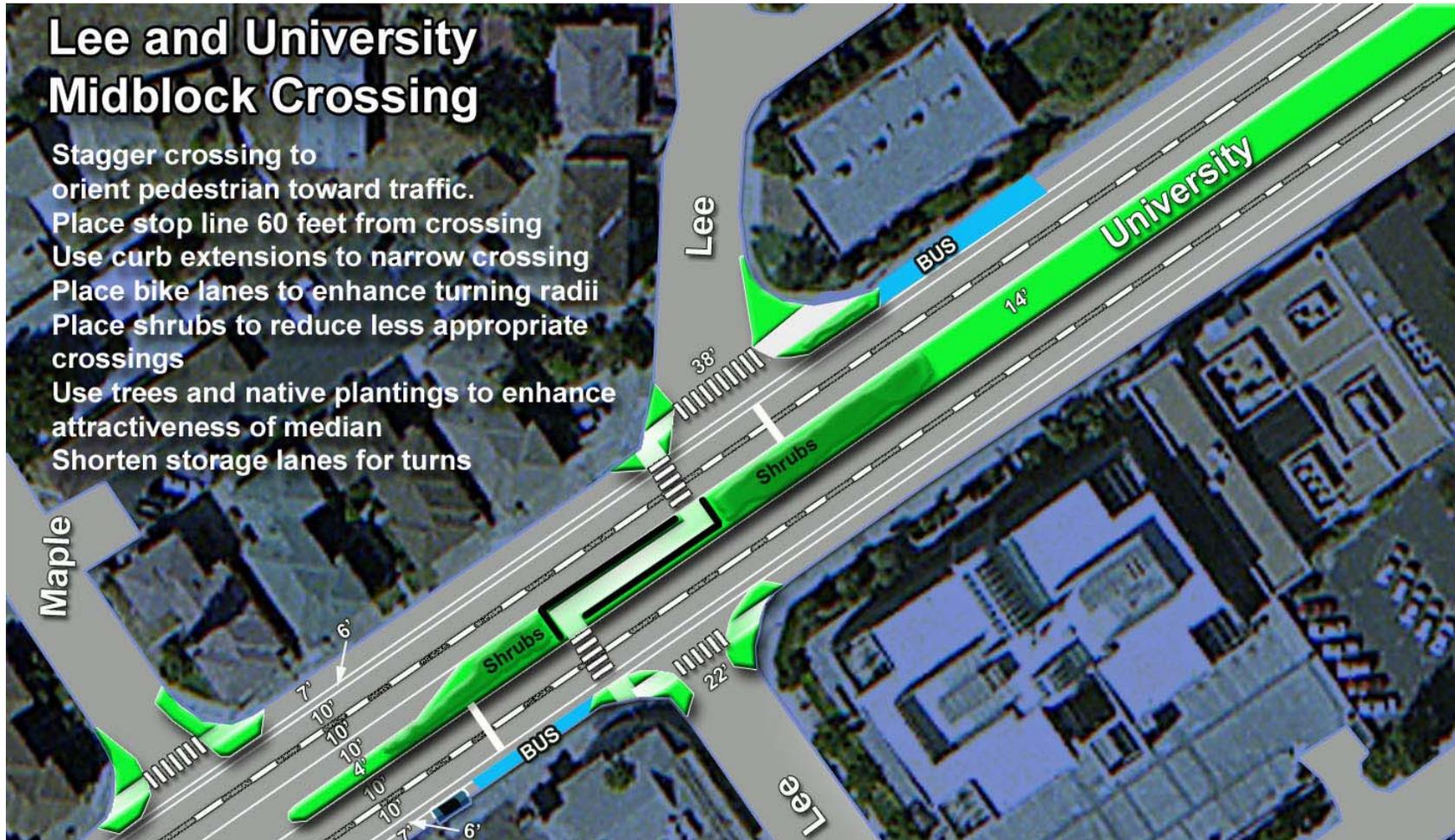
## Section 4.

### University Avenue and Lee Avenue

Although Lee Avenue is not currently being considered for a midblock crossing, this design was developed to demonstrate yet another reason for adding a crossing when intersections are stag-

gered. If bus stops were warranted for this location, based on a future land use scenario, then this style of crossing would work well when streets are staggered. Note that Lee is being con-

sidered for a median closure. In any event, this approach to curb extensions, median closure, traffic management and street narrowing is consistent with the La Mesa walkability vision.

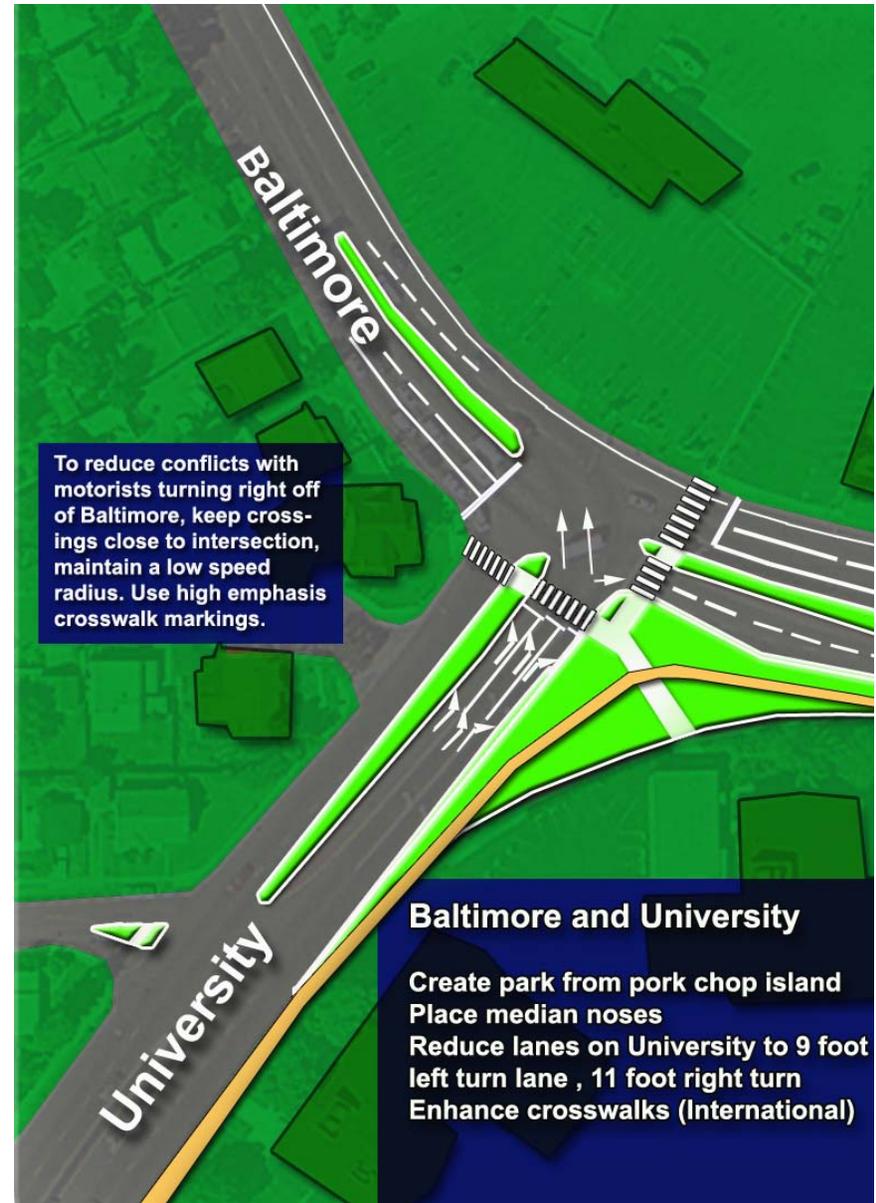


# Chapter 4. Recommended Improvements

## Section 4.

### University Ave. and Baltimore Drive

Baltimore Drive reflects poorly on La Mesa by overemphasizing worn asphalt, where green should set the tone. The intersection at University Avenue and Baltimore Drive has an untamed appearance, and limited walking appeal. Yet this intersection embraces and connects many to the post office, library and city hall. A new park should be created out of the overly wide and seldom used right turn lane. A new right turn pocket can be created. Due to the curvature of Baltimore, 11 foot wide lanes are recommended. Otherwise no lanes on University warrant more than 10 foot widths. All remaining unused space can be dedicated to the center median, which deserves gateway status. Median noses will help control turning speed, and give pedestrians a place to pause while shifting attention from one set of conflicts to the next.



# Chapter 4. Recommended Improvements

## Section 4.

### University Avenue and Spring Street

University Avenue and Spring Street is one of the highest priority intersections needing change. This intersection serves the San Diego Trolley, the library, city hall, post office and other key downtown destinations. Although there is much going on in and around this intersection, there is potential for improvement. Bike lanes can be added to Spring Street. This is an important addition, which will create a buffer from moving traffic to the sidewalk, improve turning radii into driveways, and generally help with operations. Eliminating a lane on the southeast corner of University (if vol-

umes permit) will greatly reduce crossing distances, and eliminate a confusing intersection scramble. There is no need for sidewalks along the western side of Spring (next to light rail line). Enhanced crossing islands, enhanced crosswalks and other aesthetic improvements will be of great help to walkability in this area. The ADA cuts through existing islands are too narrow, and should be widened to 6-8 feet minimum. A jug handle sidewalk entry to the right-hand-turn lane is proposed. This helps orient pedestrians to motorist conflicts before they occur.



# Chapter 4. Recommended Improvements

## Section 4. University Avenue and Memorial Drive

University Avenue and Memorial Drive is an important site, serving the La Mesa Senior Center and key neighborhood services, residential needs and active lifestyles. This treatment proposal provides a full lane reduction on University, the addition of bike lanes, curb extensions, larger medians, tree plantings, median noses, tighter turn radii for better control of speed and reduced crossing distances, and other techniques to keep speeds moderate. All lanes are to be narrowed to 10 feet, with the exception of right turn lanes, which should be 11-12 feet, based on curb radius.

All current and forecast traffic volumes can be handled with the new design.



# Chapter 4. Recommended Improvements

## Section 5.

### El Cajon Boulevard



**Model boulevard:** El Cajon Boulevard is one of La Mesa’s best evolved boulevards. Attractive medians, gateway treatments and convenient on-street parking have improved this road significantly. However, more can be done over time. Many improvements can be undertaken in the short term at little cost.

**Bike lanes:** Bike lanes and a slight narrowing of travel lane widths (to 11') can be undertaken during the next roadway remarking. Bike lanes can be added at any time for an estimated \$5.55 per linear foot using the most durable, thermoplastic, materials. This pricing includes a four inch stripe for parking, an 8 inch stripe for the bike lane line, plus pavement symbols and signing. Enhanced visual treatments can also be added. Bike lanes can be colorized (as shown) for an added \$35-40,000 per mile for both sides of the street.

**Curb extensions:** El Cajon can be greatly enhanced with curb extensions. These extensions

can be provided at gateways, and eventually, most or all intersections. Benefits of curb extensions are many, including reduced speeding in the corridor, space for landscaping, control of parking, reduced crossing distances and risk to pedestrians, visual tightening of the corridor, added attractiveness, ability to add two ramps per corner and better meet ADA.

**Improved access controls:** Over time many of the medians can be better controlled, reducing the potential for crashes, increasing the opportunity for shorter midblock pedestrian crossings, and improving traffic efficiency.

**Improved intersections:** A number of intersections can be modified for enhanced walking and ADA support. This includes not only curb extensions, as appropriate, but pork chop islands, median noses, countdown signals and other features. A more complete menu of intersection walkability changes is covered in detail

in Section 10.

**Midblock crossings:** Midblock crossings of multiple lane roadways can be important for access and safety. A more detailed engineering analysis of this corridor is likely to reveal 2-3 appropriate midblock crossing locations. When placed, enhanced crosswalk markings, median cuts, adequate sight distances, enhanced lighting, and other features should be considered.

**Driveway entries:** Numerous driveways are too wide. Depressed flanges and other areas are difficult to detect in low light conditions, and are tripping hazards at all times. This creates barriers for wheelchairs and other people, and makes walking in the corridor unpleasant. Over time a replacement of driveways is recommended. Each time a change in use permit is requested, alterations to driveways is recommended. General guidelines for commercial driveways are provided in this report.



# Chapter 4. Recommended Improvements

## Section 5.

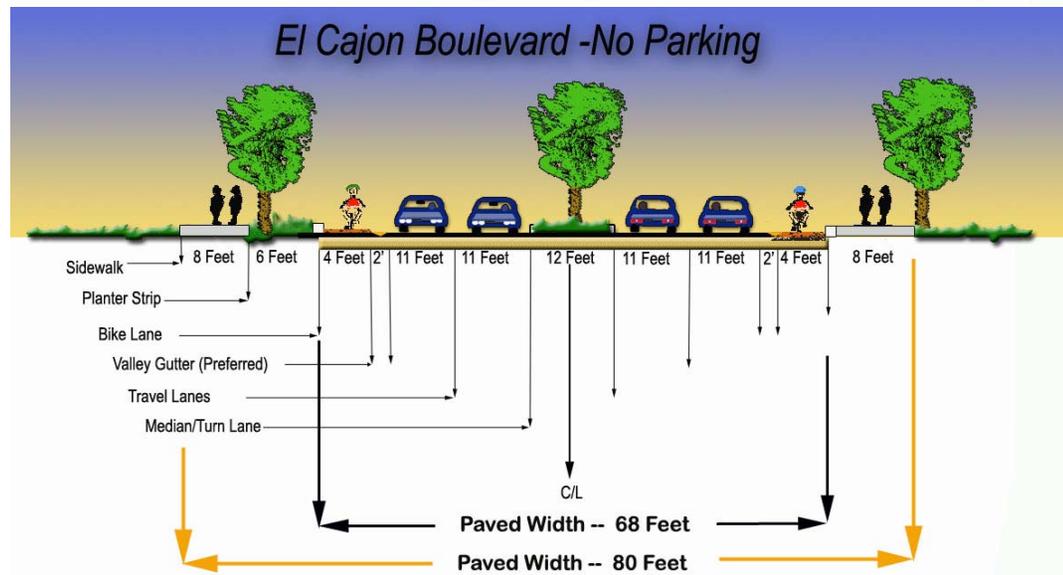
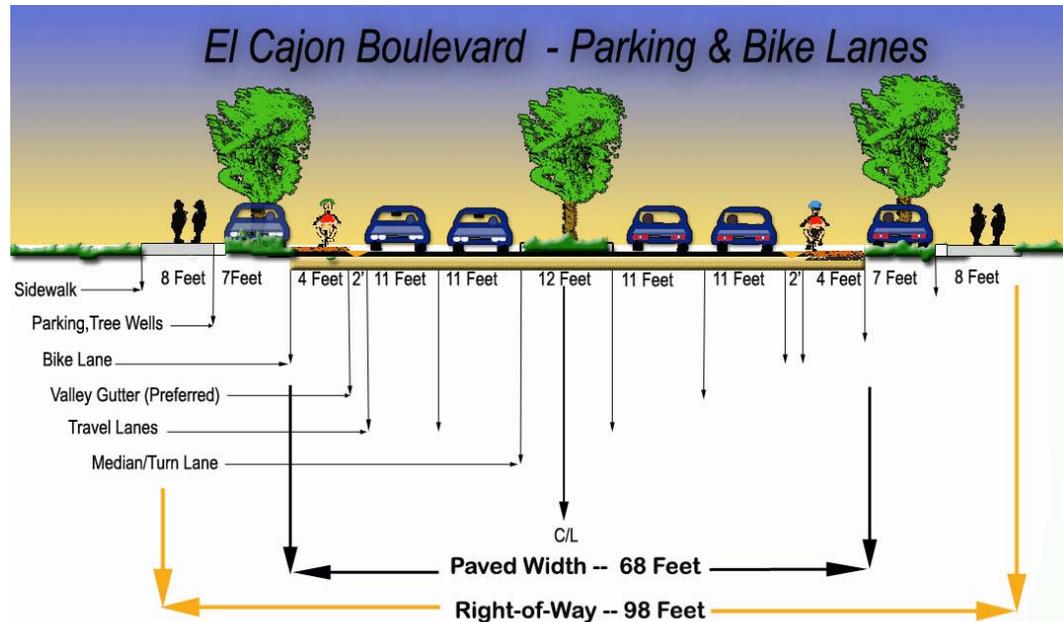
### El Cajon Boulevard

Typical sections: Over time, as funding opportunities, development of mixed use villages and other land use changes occur one of the two below typical sections can be applied to El Cajon.

**Parking and Bike Lanes:** This illustration details the preferred typical section for El Cajon. Featured are medians, slightly narrower lanes, valley gutter pans, bike lanes, parking, curb extensions, tree wells, triple canopy and sidewalks.

This section is ideal for mixed use development. The people to roadway space is better than 50/50, making this a boulevard of great attractiveness and overall holistic function. This typically maximizes land development and investment, giving La Mesa the greatest possible return on investment. Slightly narrower lanes, bike lanes and other features also allow improved efficiency at intersections, thus helping stabilize vehicular levels of service.

**Bike lanes and no parking:** This section is reserved for transitional (still suburban) areas of El Cajon. Over time, as further investments are made in the corridor, on a block by block basis, this design should be replaced with the above preferred typical section (includes on-street parking). This transitional section can be largely put in place at low cost in the near term, by adding bike lanes and narrowing travel lanes during the next roadway re-marking. This section depicts two possible sidewalk treatments, one with a planter strip, the other without. Land uses and right-of-way will dictate which can be applied.



# Chapter 4. Recommended Improvements

## Section 6. Fletcher Parkway



**High horsepower boulevard:** Fletcher Parkway is a six lane, high capacity roadway, with bike lanes, turn pockets and other advanced engineering elements. One section of this corridor runs parallel to the trolley. High speeds and width of this parkway creates a barrier to efficient pedestrian and transit travel. Speeds in this corridor are high (often over 50 mph), resulting in high noise levels, and significant challenges for pedestrian crossings. There are a number of missing sidewalk sections. In the long term, La Mesa should consider if all six lanes are needed in all sections. (Note, today's traffic volumes only warrant a 4-lane roadway.) If six lanes are not needed, some areas can be made much safer and friendlier by converting outer lanes to parking and adding tree wells/curb extensions. This will help support modern land use development.

**Bike lanes:** Bike lanes have been provided, and are generally well laid out and marked. Future lane markings should include increasing the line width to 8 inches. In several locations bike lane widths are minimal. There are ample opportunities during the next remarking of this road to shift travel lane lines slightly, dropping widths to 11 feet each. Some added space can be added to bike

lanes (up to 7 feet). This will improve the comfort of riding, allow for more turn radius into driveways and at some intersections, and otherwise improve corridor operations.

**Curb extensions:** Fletcher Parkway can be greatly enhanced with curb extensions, especially on many side streets. Some areas that have more lanes than needed, can be considered for on-street parking (reducing the six lanes to four). These extensions are best when provided at gateways, and key pedestrian crossing areas. Benefits of curb extensions are many, including reduced speeding in the corridor, space for added greenery, control of parking, reduced crossing distances and risk to pedestrians, visual tightening of the corridor, added attractiveness and ability to add two ramps per corner and better meet ADA requirements.

**Improved access controls:** Median controls are good to excellent in many locations. Other median sections can be better controlled, reducing potential for crashes, increasing opportunity for shorter midblock pedestrian crossings, and improving traffic efficiency. Left turning pockets can be introduced in advance of signals,

helping intersection safety and efficiency.

**Improved intersections:** A number of intersections can be modified to enhance walking and ADA support. This includes not only curb extensions, as appropriate, but pork chop islands, median noses, countdown signals and other features. A more complete menu of intersection walkability changes is covered in detail in Section 10.

**Midblock crossings:** Midblock crossings of multiple lane roadways can be important for access and safety. A more detailed engineering analysis of this corridor is likely to reveal 2-3 appropriate midblock crossing locations. When placed, enhanced crosswalk markings, median cuts, adequate sight distances, enhanced lighting, and other features should be considered.

**Driveway entries:** Numerous driveways are too wide. Depressed flanges and other areas are difficult to detect in low light conditions, and are tripping hazards at all times. This creates barriers for wheelchairs and pedestrians, and makes walking in the corridor unpleasant. Over time, replacement of driveways is recommended. Each time a change in use permit is requested, alteration to driveways is recommended. General guidelines for commercial driveways are provided in this report.



# Chapter 4. Recommended Improvements

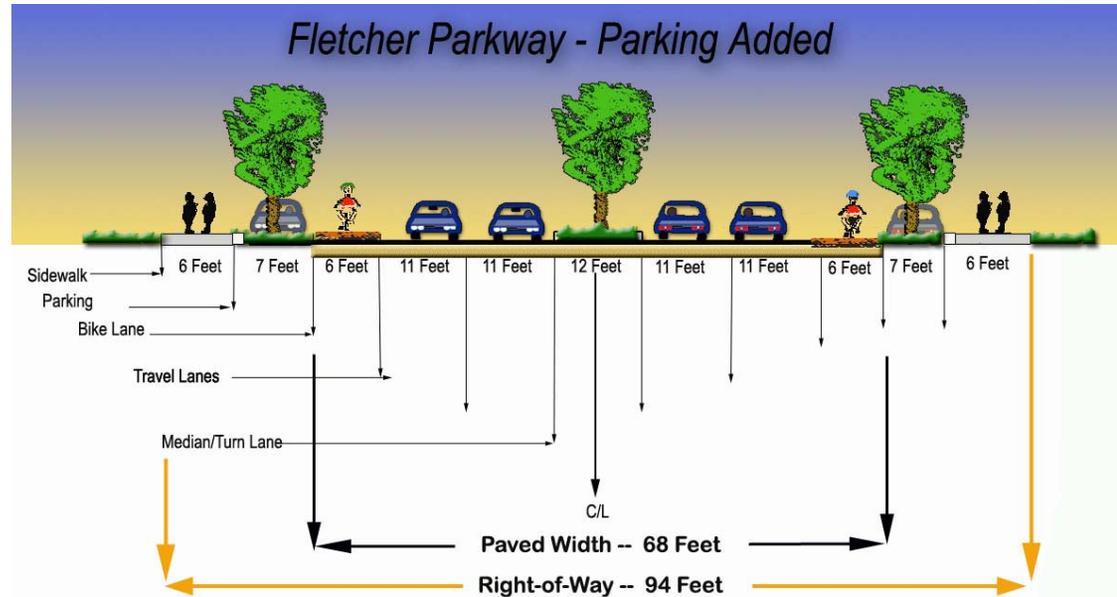
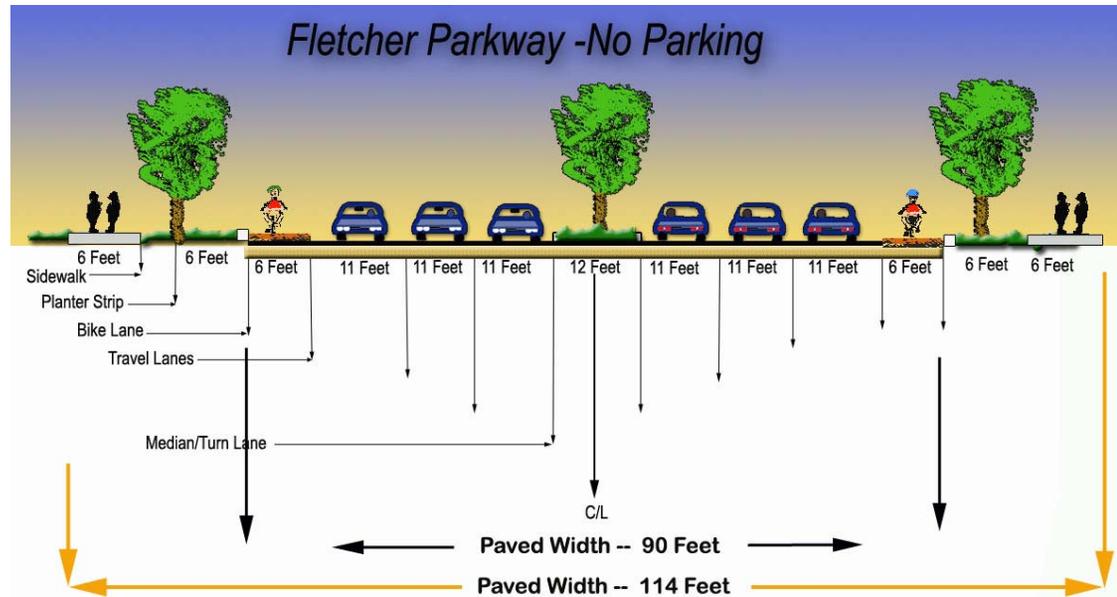
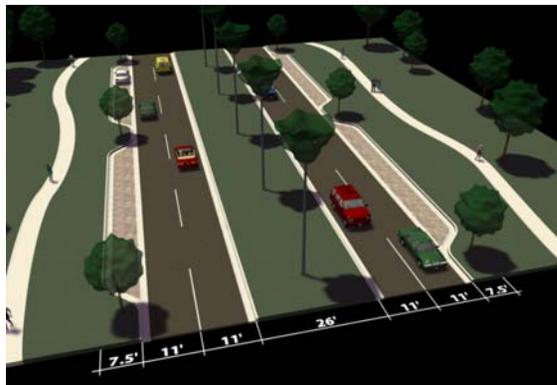
## Section 6.

### Fletcher Parkway

**Typical sections:** At present Fletcher Parkway serves a suburban setting, with six lanes of traffic and high speed movements. This section can go through several transitions to become more walkable, provide more choice in transportation, less noise, and less of a barrier to area residents.

**Enhanced Bike Lanes, Sidewalks:** Bike lanes can be slightly widened and travel lanes slightly narrowed, improving turning radii into driveways and increasing the comfort of bicycling.

**Added parking, fewer travel lanes:** This section is ideal for mixed use development. The people to roadway space is improved, making this a boulevard of greater attractiveness and overall holistic function. This layout maximizes land development and investment, giving La Mesa the greatest possible return on investment. Slightly narrower lanes, bike lanes and other features also allow improved efficiency at intersections, thus helping stabilize vehicular levels of service.



# Chapter 4. Recommended Improvements

## Section 7.

### Hospital/Grossmont Center



**Popular action packed boulevard:** Grossmont Center Drive is a relatively short, high capacity roadway that bisects the hospital to the east (and up the hill) from a large suburban-style shopping center to the west. It varies in width from six lanes at Murray Drive (2 turn lanes) to five lanes at Center Drive. Numerous pedestrians cross Grossmont Center Drive to get from the medical center to the shopping center.

**Bike lanes:** Bike lanes are missing along Grossmont Center Drive. Future studies should determine if bike lanes can be accommodated by reducing lane widths to 10 or 11 feet.

**Improved access controls:** Sections of the fifth lane that are not used for turning movements can be converted to landscaped medians over time. This will reduce the potential for crashes and improve the appearance of the street.

**Improved intersections:** A number of intersections can be modified for enhanced walking

and ADA support. This includes not only curb extensions, as appropriate, but pork chop islands, median noses, countdown signals, two ADA curb ramps at each intersection, improved crosswalk markings and other features. A more complete menu of intersection walkability changes is covered in detail in Section 10.

**Driveway entries:** Several driveways along Grossmont Center Drive are too wide. Depressed flanges and other areas are difficult to detect in low light conditions, and are tripping hazards at all times. This creates barriers for wheelchairs and other people, and makes

walking in the corridor unpleasant. Replacement of driveways over time is recommended. Each time a change in use permit is requested, alteration to driveways is recommended. General guidelines for commercial driveways are provided in this report.



# Chapter 4. Recommended Improvements

## Section 8. Industrial Center

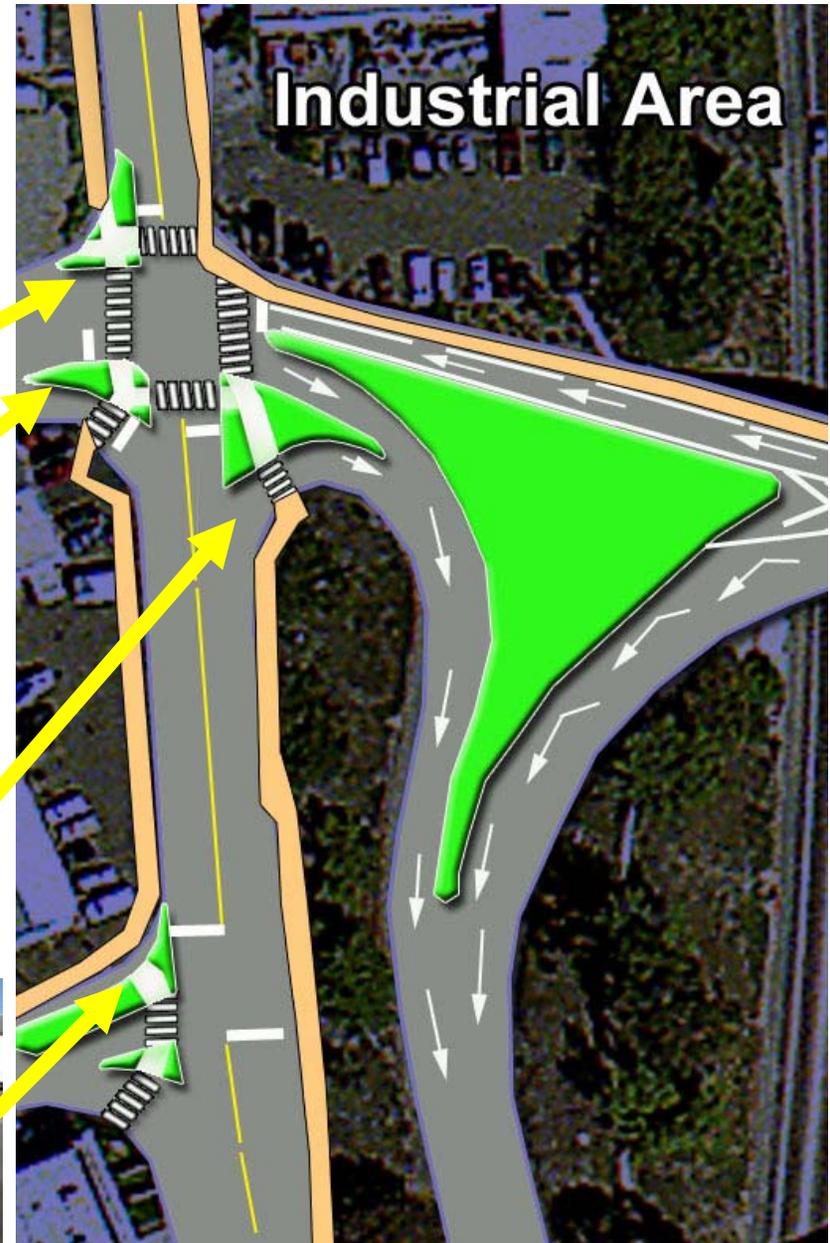
Many people walk to work centers in the La Mesa Industrial Center. Others walk or pass through the area on their way to other destinations. Some crossings are more than 15- feet across for two lane roads.

In the future, the center should include formal 6' wide or wider walkways, built to the back of the curb. Pork chop islands, curb extensions and other treatments should be provided to make crossing simple and direct. Improved lighting and other amenities should also be provided.

In some locations the addition of bike lanes will help buffer and separate motorists from pedestrians, and increase the effective turning radius of large trucks servicing the area. When bike lanes are used, travel lanes can be kept to 11 feet or less.

Several intersections are excellent candidates for roundabouts. Use of roundabouts would keep speeds under control and improve the efficiency and operations of all size vehicles, especially trucks.

Medians can be applied on some curves to keep speeds under control.



# Chapter 4. Recommended Improvements

## Section 9. Freeway Bridges

The numerous freeway bridges in La Mesa pose a special challenge to pedestrians. Some bridges are uncomfortable but tolerable, while others pose a major barrier. Meanwhile, well worn pathways are testimony that many are crossing on or under bridges as best they can.

**Bike lanes and buffers to traffic:** Bike lanes, or alternative 3-5 foot spaced edge lines can be placed as retrofits on most bridges, buffering existing walkways from moving traffic. If bike lanes are warranted, then these should be 5-6 feet wide and well maintained.

**Wide Walkways:** Other bridges will need to have new walkways constructed. Walkways are often two-way operations, and should be provided as 8-foot minimum width, whenever feasible. In some cases ample width is already provided on bridge decks allowing raised walkways to be constructed. Lightweight concrete can be specified.

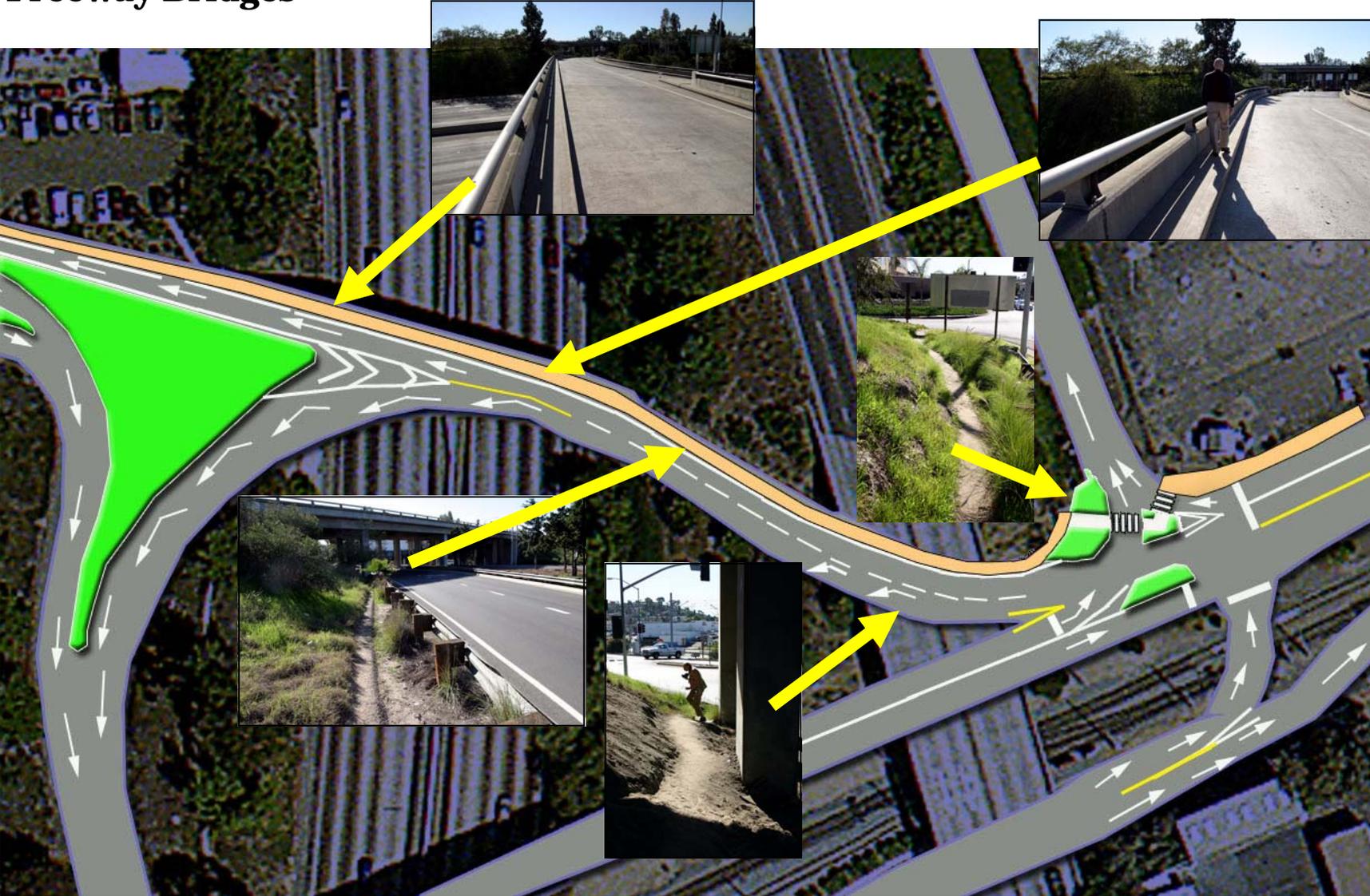
**Rail and fencing:** Rail and attractive fencing material should be placed for both positive restraint and to create psychological relief from heights.

**Photos to right:** (1) The new Dallas bridge over I-125 has adequate pedestrian ways on each side. (2-3) Bike lanes can be added to each side without taking away from motor vehicle space. They would still allow the bike lane to be used as a temporary breakdown area. Costs for an 8-inch wide lane line: \$5.55 (two sides). Costs for colorization \$35,000 per mile for (two sides).



# Chapter 4. Recommended Improvements

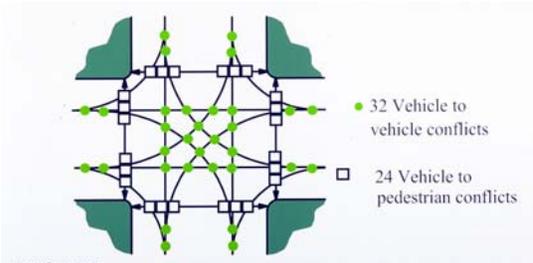
## Section 9. Freeway Bridges



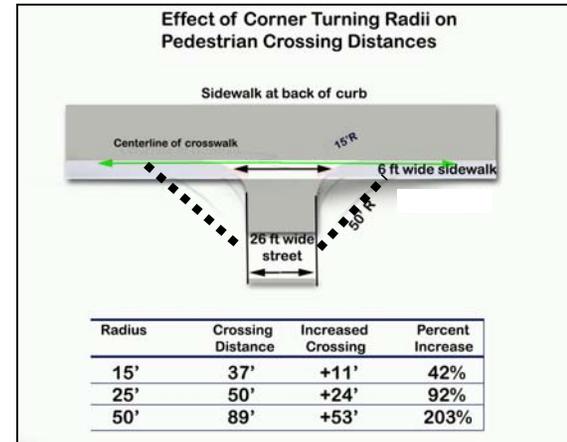
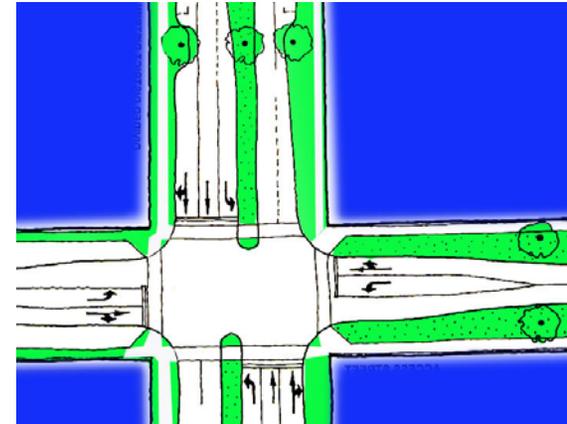
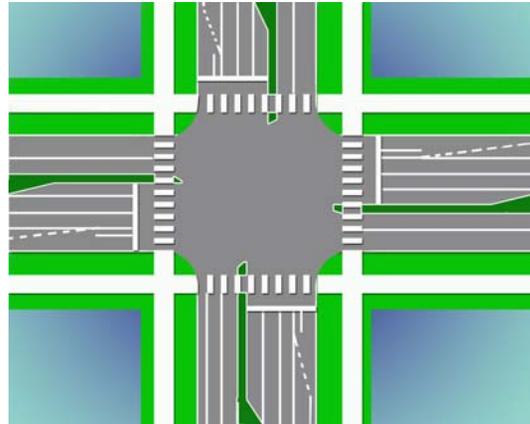
# Chapter 4. Recommended Improvements

## Section 10. Major Intersections

Most of La Mesa's intersections were built at a time when little attention was paid to pedestrian street crossings. Many intersections have too many conflicts taking place and from too many directions for most people to deal with. The re-



sult is that many pedestrians find intersections among the most complex, challenging places to cross streets, and often try to cross in other locations. Note in the chart above, pedestrians face six separate conflicts on each leg they cross. Increased walkability depends on finding the best solutions for every intersection. Compact, efficient intersections are needed. This section provides principles and example solutions for small to large La Mesa intersections.



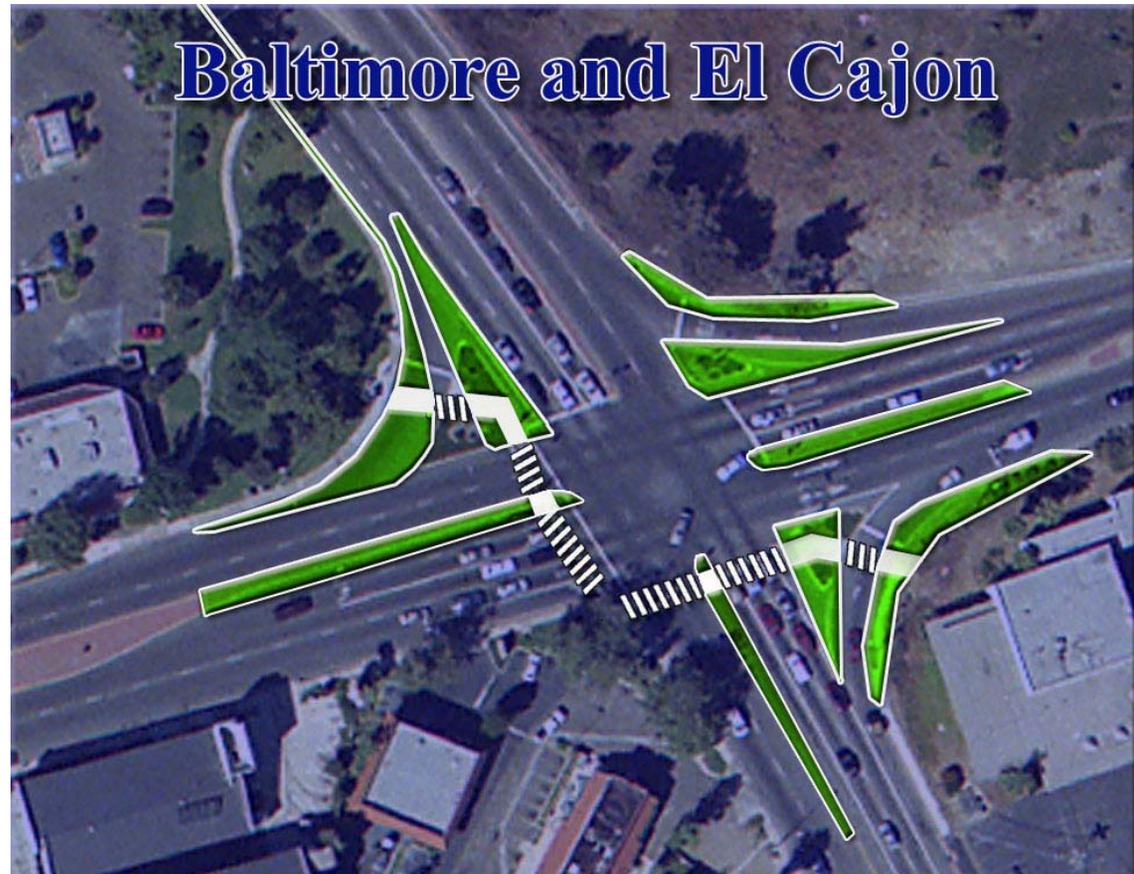
# Chapter 4. Recommended Improvements

## Section 10. Major Intersections

Baltimore Drive and El Cajon is a moderate complexity crossing. As shown in these photos it is possible to separate conflicts in time and place through crossing islands, pork chop islands, curb extensions and median noses.

**Compact intersection form:** The first step of modifying intersections to be more efficient, safe and friendly is to remove all physical space not needed by motorists. In the past, many intersections were oversized. Now that more people walk, pedestrian clearance intervals are set for these extreme street widths. More time must be added to signal cycles, delaying motorists longer than necessary. By taking away excess street width through appropriate lane widths (often 10-11 feet), and excess turn radii, pedestrians have shorter crossings, and motorists have shorter signal cycles.

**Corner radii.** The appropriate corner radius for streets wide enough to have on street parking on each street (El Paso and Dalhart school crossing) is 5 feet. Note on the previous page for operational needs the combined lane widths need to be 20-26 feet wide. Dalhart is 40 feet wide, and El Paso is 56 feet wide. A 50 foot radius is added to each corner. The final crossing distance is 103 feet. Walking at 3.5 feet per second a pedestrian needs 27 seconds to cross the street rather than just 12 seconds, if it were properly designed. Sadly, such intersections are common in parts of La Mesa and other western cities.



**Baltimore and El Cajon:** This intersection has gone through a number of transformations. Most recently several of the pork chop islands have been removed. Meanwhile the pork chop island in the upper photo, which remains, is poorly designed. Motorists are allowed in at too high a speed. Once they are on final approach to the intersection they have been forced to turn too far, and they can no longer see if there's a gap to merge into. Not only does this lead to lost capacity and efficiency, but the number of

crashes is high. Correctly designed pork chop islands are friendly to pedestrians, increase capacity and reduce crashes. Images on the next two pages illustrate the principles and design details of properly designed intersections and pork chop islands. The above illustration provides a view of a corrected intersection for Baltimore and El Cajon. Crossings have been left out of two legs primarily due to land use limitations (lack of attractors).



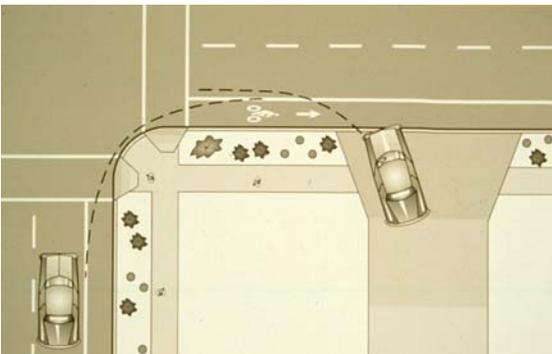
# Chapter 4. Recommended Improvements

## Section 10.

### Compact Intersections

Urban intersections of the future can be made safer, more comfortable, pedestrian friendly and efficient through careful selection of tools that do the following:

1. Signals are kept at the best possible viewing heights through use of post mountings and masts. Motorists can see signal heads, gaps in traffic and pedestrians in the same view.
2. When right turning volumes are high, well designed, low speed, pork chop islands can be placed to minimize crossing times and distances of pedestrians.
3. Corner radii can be kept to 25 feet in most large intersections, especially when bike lanes or on-street parking are used. In such cases the effective turning radius is increased.
4. Median noses create locations where pedestrians can pause and focus on the next threat pattern. Motorist turning speeds are also better controlled with median noses.



# Chapter 4. Recommended Improvements

## Section 10.

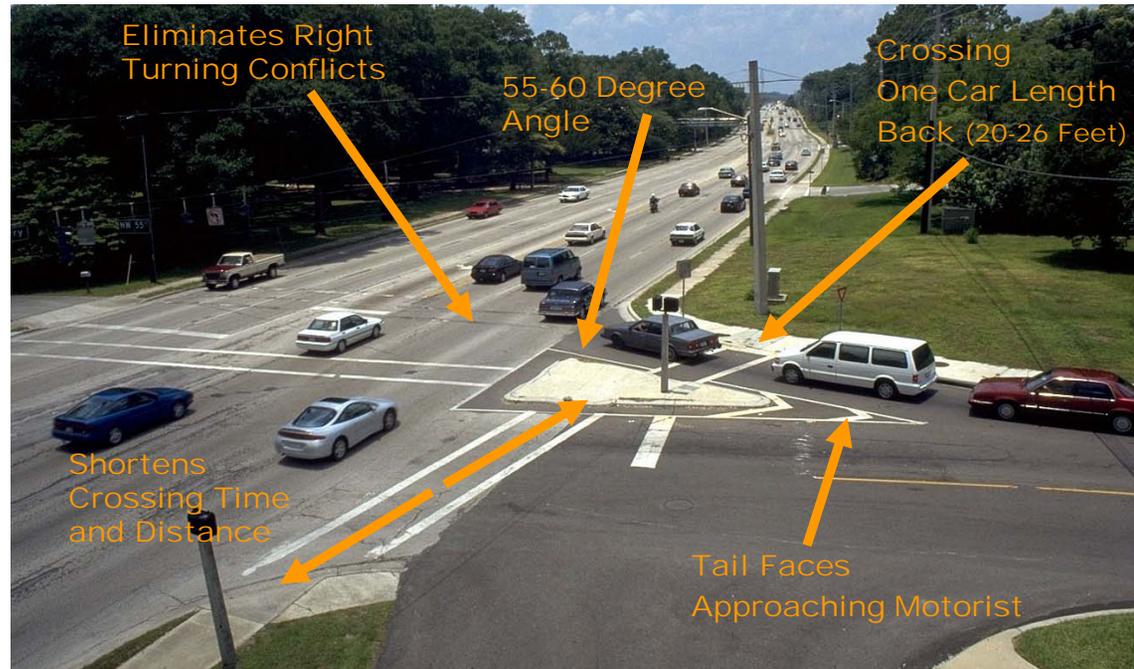
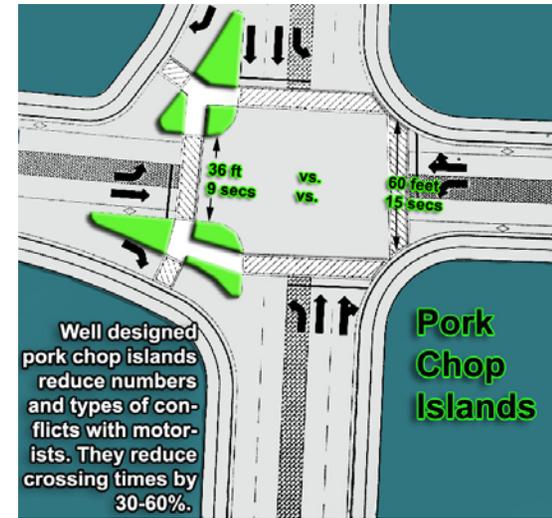
### Pork Chop Islands

Pork chop islands allow pedestrians to get across wide, multiple lane intersections in stages, sometimes cutting crossing times and distances by a third or half. This page illustrates correctly designed pork chop islands. Entry and exit speeds are never higher than 10-15 mph. At these speeds motorists have a high desire to yield to pedestrians.

**Low speed entry and exit:** Most engineering standards are for rural, high speed pork chop islands. These are often difficult for pedestrians. Fast, rural designs also lead to higher crashes than urban, pedestrian-friendly pork chop islands.

**Pedestrian crossing location:** Pedestrians are crossed about 22 feet back from the yield line. This allows a motor vehicle to stop, check for a gap and not block the crosswalk. It also keeps the crossing close enough to the intersection to allow the pedestrian to take the desired travel line, and where vehicle speeds are low.

**Signals, controls and ADA ramps:** Well designed pork chops keep pedestrians at grade, not having to step up to the raised median or island. On very large islands, however, it may be necessary to use standard ramps and sidewalks in order to establish adequate drainage of the crossing space. Signal crossings are set to allow pedestrians to cross from island to island.



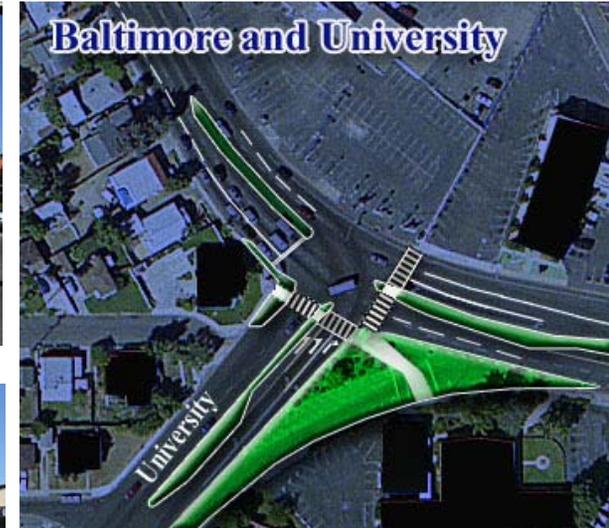
# Chapter 4. Recommended Improvements

## Section 10.

### Major Intersections

By applying the principles of intersection geometric and operational design outlined on the previous pages it is possible to make complex intersections simpler, more comfortable and safer to cross. All steps taken to make intersections clearer, compact and low speed will increase the desire of pedestrians to cross at intersections rather than midblock. The City of La Mesa should define the performance of any intersection by the desire and number of pedestrians going to key intersections to cross. Currently many La Mesa intersections demonstrate poor pedestrian and motorist performance. Pedestrians are avoiding intersections to save time and reduce conflicts.

Locations where pedestrians often cross away from the intersection are typically too complex and have too many disincentives, and should receive further attention.



# Chapter 4. Recommended Improvements

## Section 11.

### Midblock Crossings

In recent years as streets have been widened and traffic volumes have increased it has gotten more difficult for pedestrians to cross the street. To keep traffic moving, the signal timing is often insufficient to allow a moderately healthy person cross the street. Pedestrians now find street crossings challenging. Midblock crossings are becoming popular, functional, useful tools that can enhance safety, convenience and efficiency when properly designed and placed. The proposed examples on these pages address real world needs that help pedestrians get to the most convenient and safe crossing location.

There are a lot of myths about whether midblock crossings give pedestrians a false sense of security or not. These myths have been dispelled by new Federal Highway Administration studies (see Appendix C). In this section we address the most modern and effective methods of helping people get across streets where they most need to cross.

**Two lane crossings:** In some cases simple high emphasis markings, signing and good lighting are adequate. As motorist and pedestrian volumes and crossing complexities increase added tools of curb extensions, crossing islands, landscaping, and even speed tables may be needed. Costs are between \$5-15,000.

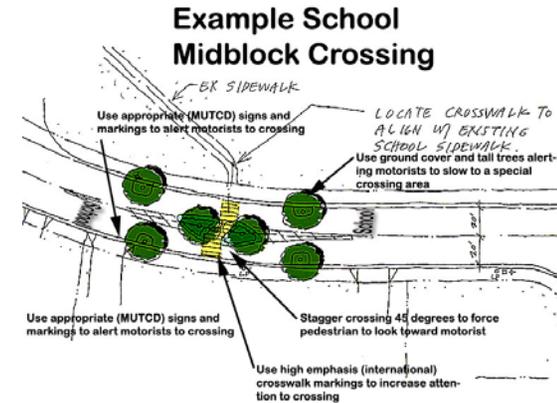
**Multiple lane crossings:** Due to their added volumes and complexity all multiple lane roads call for added treatments. At a minimum, high emphasis crosswalk markings, signing, lighting

and curb extensions are recommended. Roadways should be designed to induce running speeds of no more than 30-35 mph.

**Crossing Islands:** Median crossing islands are one of the most important tools. Islands or refuges separate crossings into two distinct manageable steps. A gap in traffic is needed to travel about 20-24 feet (6-7 seconds). These islands often use staggered crosswalk placements (see illustration) forcing pedestrians to pause then look directly toward the traffic conflicts they must deal with.

**Flashing Signs:** Signs activated by the presence of pedestrians, or pedestrian button actuated, are becoming popular. These tools are a significant step up from lesser alert systems, and can increase yielding behavior by drivers. Costs on a multiple lane road are often below \$20,000 for both medians and controls.

**Signals:** Signals may be used when volumes are high, or in other conditions where insufficient gaps occur and motorists are less likely to yield. As a general rule, on most roads where speeds are below 35 mph, and less than 20,000 ADT yielding behavior will be sufficient to use measures short of signal stop controls. Costs can be kept to \$30-60,000, depending on complexity.



Above: A sample 2-lane roadway midblock crossing. The street shown here (First Avenue, Grand Junction, Colorado) was to be a five-lane road. The engineering team kept the road to three lanes, holding down speeds, and getting very good results from midblock crossings. A five-lane road is likely to have called for signals at this crossing. Signals would delay motorists and pedestrians many times daily.



# Chapter 4. Recommended Improvements

## Section 11. Midblock Crossings

Simple and comfortable two-lane midblock or other non-signalized crossings have the following elements:

1. Appropriate signs and pavement markings called for in the Manual of Uniform Traffic Control Devices (MUTCD).
2. Islands should be kept to 8 feet or wider, when space allows.
3. Crossings can be angled to the right. This reduces the potential to run across the entire road, forces the pedestrian to pause and look directly at the next conflict and creates more storage space
4. Travel lanes can often be kept to a 10-foot width, which reduces potential for higher speed.
5. Ground cover is used in many cases to make islands more noticeable from farther distances, increasing speed reductions and eliminating surprised conditions.
6. Speed tables are used when appropriate for added speed reductions. Use of contrasting materials helps motorists detect these changes in conditions, and further reduces the tendency to speed.



# Chapter 4. Recommended Improvements

## Section 12. School Areas

La Mesa's school zones require many aids to establish safer and more orderly pickup and drop off locations. Changes are also needed to provide simpler and easier crossings of children and other methods of reducing risk.

**Collector intersections:** Conflicts should be separated in time and place. Curb extensions, pork chop islands, crossing islands, reduced turning radii on corners are all effective measures to create improved crossings.

**Example intersection:** Jackson and El Paso, shown to the right, is proposed for early design geometric and operations changes. The lower left corner pork chop island is kept. A new curb extension moderates turning speeds, still allowing all size vehicles to move. Crossing exposure is reduced from 26 feet to 15 feet. Crossing islands and curb extensions on each leg reduce the distance of exposure from as much as 50 feet to no more than 25 feet at a time. Median noses slow left turners to acceptable speeds.

**Intersection principles:** Intersections should be designed to maintain low speeds 24 hours per day. Children are often focused on things other than traffic and are full of energy around schools. All possible measures need to be taken to keep parents and other drivers under control, with keen attention to each intersection and driveway or other conflict location.



**Crosswalk Markings:** Crosswalk markings within 1/4 mile of schools should be international, enhanced designs, such as those shown in this example intersection. Enhanced markings have numerous benefits. They are easier for motorists to detect and respond to under low light, foggy and even in normal lighting conditions. Enhanced markings help guide pedestrians to the best places to cross. While Caltrans standards call for yellow paint, white paint is easier to detect from a distance.



# Chapter 4. Recommended Improvements

## Section 12. School Areas

The resurfacing project slated for Jackson provides an excellent opportunity to further visually narrow the street near Murray Manor School, insert appropriate medians, median noses and curb extensions.

For the length of the project boundaries it is appropriate to use wider bike lane stripes (8" width versus 6" standard) and pigmented bike lanes with markings (roughly \$30,000 per mile for tennis court paint). Visually narrowing or tightening the roadway can have some moderating effect on speed, and help call attention to the unique crossing area. Once tested these materials and concepts can be applied on other collector and arterial streets, as appropriate.

Medians or shorter crossing islands, as well as curb extensions, are important to reduce crossing times and distances, enhance the visibility of school crossing guards, and reduce the ability of motorists to make fast turns around corners.

The driveway entry to the school should be reduced with curb extensions to move the merge back further from the intersection crossing, and only allow one parent at a time to enter the intersection queue. Activities in this area today are chaotic, and are inappropriate around school arrival and departure activities.

Since funds for the resurfacing project are limited, crossing islands can be kept to as little as 100 feet in either direction from the El Paso



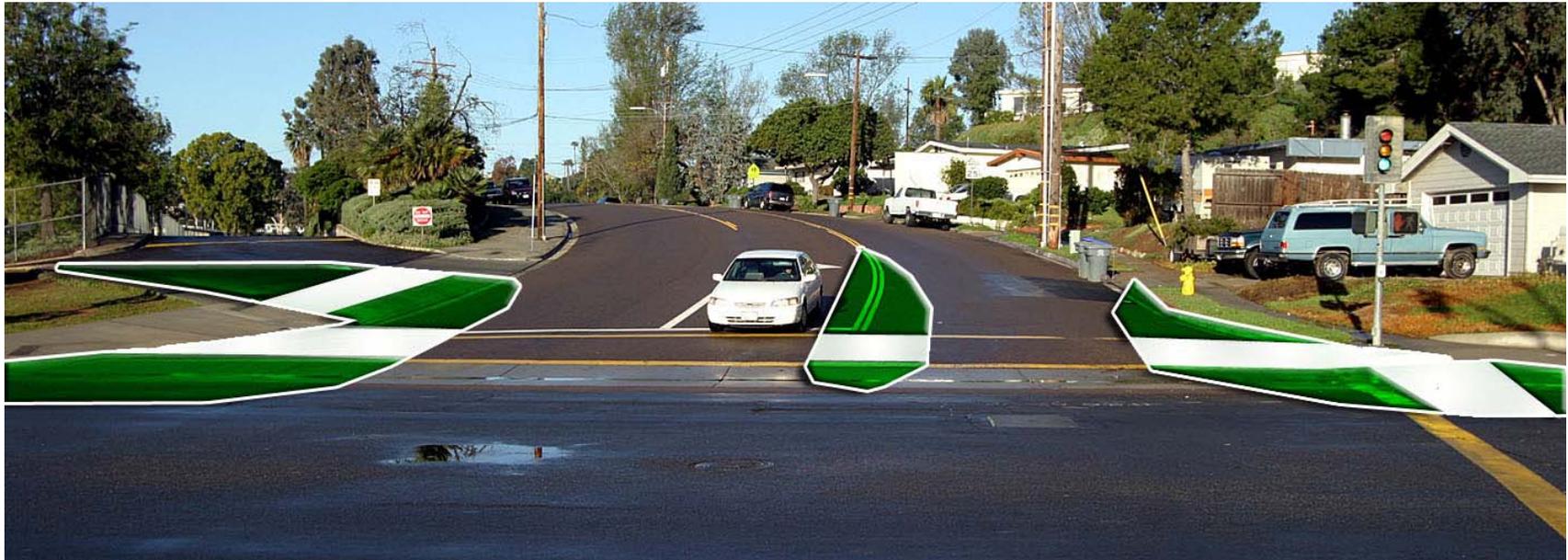
intersection. Ground cover (kept trimmed to 2 feet, trees (under-trimmed to 7 feet) and other materials to make crossing islands and curb extensions more visible will also add to the effectiveness of these combined treatments.

Several Jackson residential driveways, close to El Paso will be right in and right out only (see foreground photo). The need to eliminate left turns at these critical locations should be discussed in advance with property owners.



# Chapter 4. Recommended Improvements

## Section 12. School Areas



The intersection of Dalhart at El Paso is exceptionally wide on all quadrants. The crossing of Dalhart, for example is 103 feet, when only 24-26 feet are needed for all size vehicular access. El Paso is over 70 feet at the crossing location, when only 24-28 are needed.

Although this road is not currently slated for changes, it is an excellent example of the type of challenge faced at many La Mesa Schools based on oversizing of collector category roadways. Overly wide roadways not only create added risk to students. They also delay motorists while students cross these extra distances.



# Chapter 4. Recommended Improvements

## Section 12. School Areas

Lemon Avenue Elementary School exemplifies problems associated with a number of La Mesa schools. Intersections are overly wide. The intersection of Glen, Lemon and Madison is overly complex with multiple conflict points. Routes children take from hillside neighborhoods lack sidewalks and safe walking conditions.

Solutions here, as elsewhere, include adding missing sidewalks, reducing the size of intersections, narrowing lanes and controlling turning movements.

Madison provides an opportunity to eliminate significant intersection problems. A new park serves as a street closure, simplifying the remaining intersection. Residents continue to gain access through a driveway link.

Medians and curb extensions narrow crossing distances of Glen and Lemon from 96 feet to about 26-28 feet. Other crossing widths are also reduced through use of curb extensions. A study should be conducted to determine if residents will accept converting a short section of Glen (from Lemon to Alpine) to one-way in order to add a sidewalk on one side of the street and make it safer for children walking to the school.



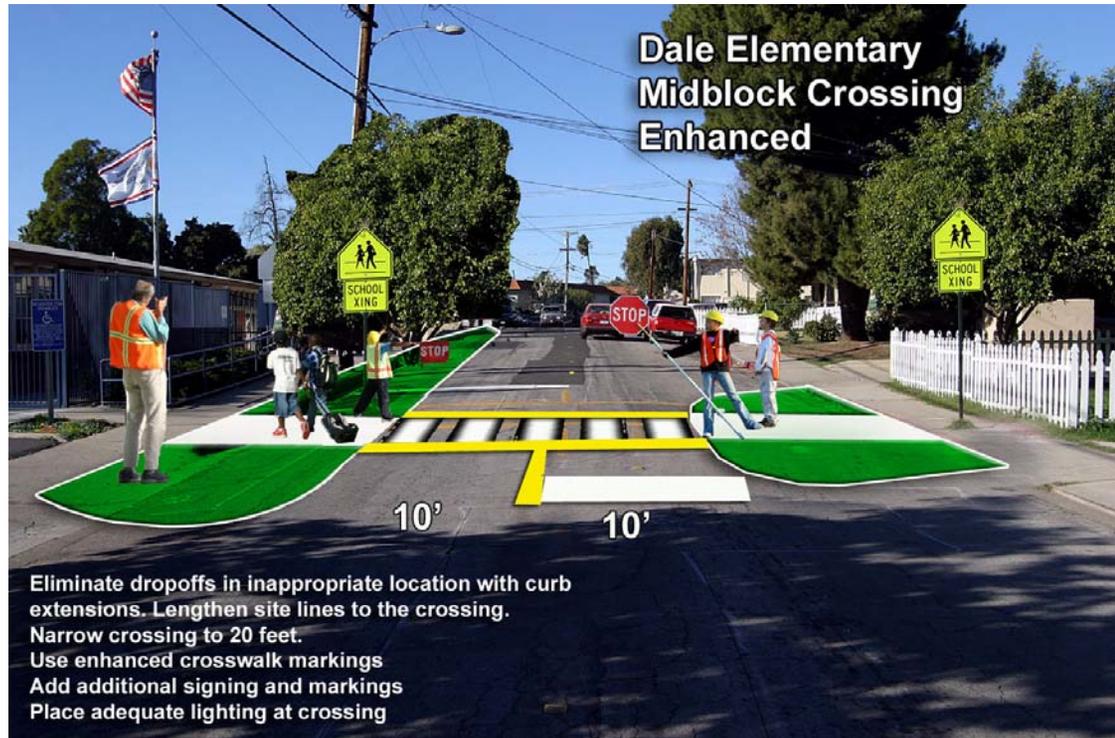
# Chapter 4. Recommended Improvements

## Section 12. School Areas

Dale Elementary School is another example of how school crossings can be made more benign, and comfortable for walking. This adapted design on Parks Avenue is integral to both the safety of children at Dale Elementary and nearby La Mesa Middle School. A similar treatment should be placed at an appropriate crossing to La Mesa Middle School.

Features of school crossings, as shown on the previous sections for intersections and mid-block crossings include:

1. Narrowing lanes to widths of 10 feet to minimize time and distance of exposure, and to reduce motorist tendency to speed.
2. Use of curb extensions, especially if low (2.0 foot) ground cover and tall undercut trees are used, increases motorists' awareness of the choker effect, and further reduces their tendency to speed. Excess driveway widths are also reduced, preferably with an in-only and out-only pattern between two appropriate driveways.
3. High visibility markings are essential around schools.
4. Stop or Yield lines are placed for added emphasis.
5. All signs and markings called for in the Manual on Uniform Traffic Control Devices (MUTCD) are placed. Note here we have



doubled the number of school crossing signs from the existing conditions. Redundancy in appropriate signs around schools can add to recognition, detection and appropriate response. California calls for yellow markings around schools. White is a more detectable color. A combination of the two, one meeting California standards (yellow), and those meeting the MUTCD can be considered for local adoption.



# Chapter 4. Recommended Improvements

## Section 13.

### Transit Stop Areas



La Mesa’s existing downtown Allison bus station, and other stops, include industrial advertising benches. The designs are unattractive, uncomfortable and often create barriers to people trying to walk by. Shown elsewhere on this page are examples of concepts, designs and elements needed to make transit and the presence of transit a source of pride to the La Mesa community.

Key features to emphasize in design include use of vertical height, color, materials, shapes, tones and textures to make walking, transit and even driving through areas pleasant and welcoming.

Shade is a high priority when considering design details. In a few locations, such as on the proposed relocation of the downtown bus station to La Mesa Boulevard (see p. 60), an attractive bus bay is recommended. The bay can benefit from use of pavers, a valley gutter and sufficient depth (11-13 feet to allow the bus to pull in fully from the adjacent travel lane. Modern transit information technology and quality sitting places in shaded environments with many “eyes on shelters” provide added important elements.

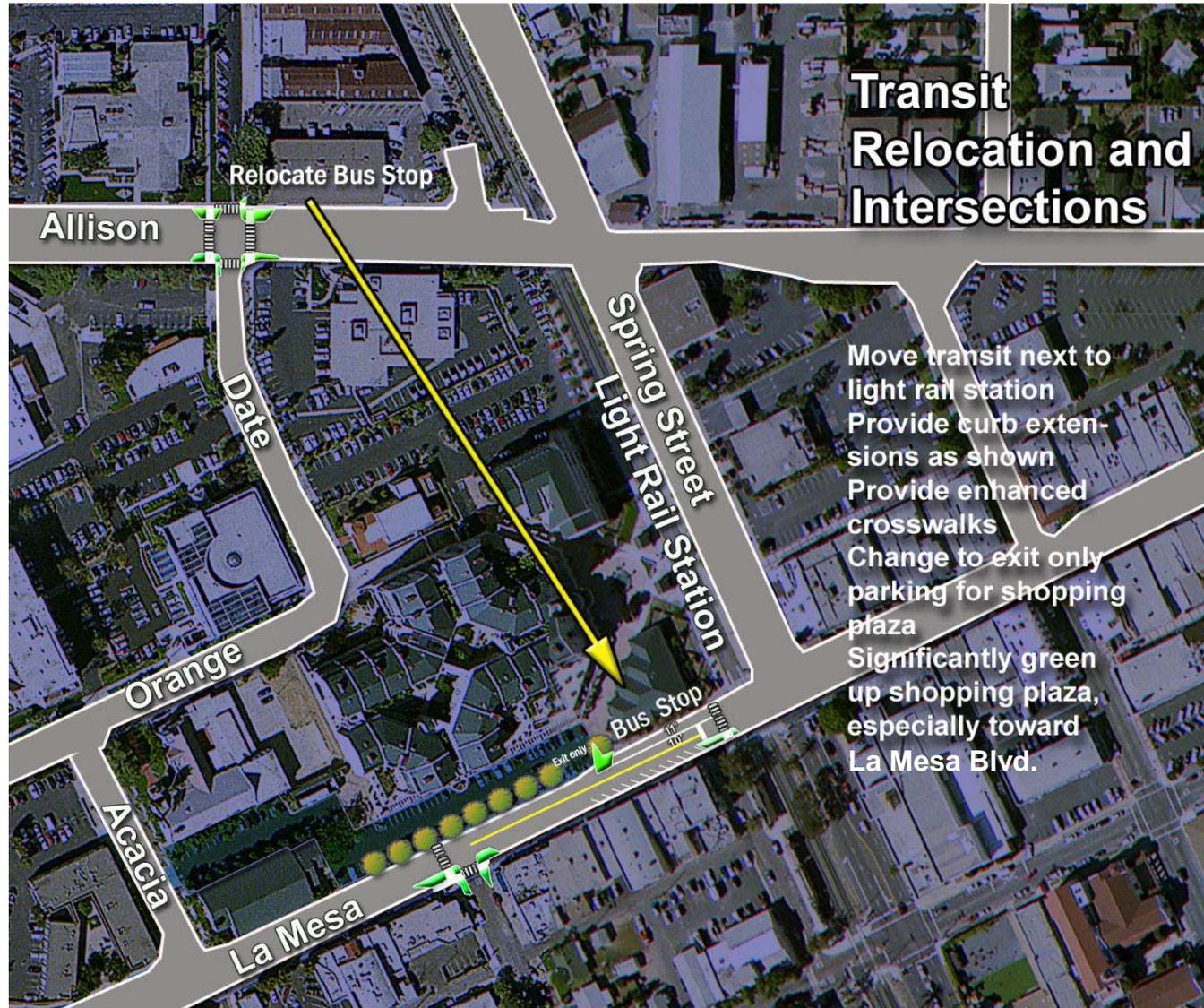


# Chapter 4. Recommended Improvements

## Section 13. Transit Stops

The existing bus stop at Allison and Date is poorly located. This location is over 300 feet from the trolley station. Transferring passengers often cross midblock, and on the run, knowing their connections may be tight.

A much improved location can be provided on the north side of La Mesa Boulevard. There is sufficient width to provide a bus pullout location here. The existing off-street parking should be altered to drop the in access. A narrowing of the existing easternmost driveway is appropriate, and if needed internal space can be provided to create more of a turn. An alternative would place angled parking on La Mesa Boulevard.



# Chapter 5. Recommended Prioritization Process

As in any jurisdiction, resources to make improvements to the walking environment in La Mesa are limited. As a result, it is critical that a process be established by the City to identify priority projects in a logical and equitable way. During the focus group meetings and design workshops, residents identified some streets or areas that need attention. Some participants also recommended that the City identify priority projects on a neighborhood by neighborhood basis. As the City moves forward with this Plan it is important that it work with residents in different neighborhoods to make sure that problems are addressed over time.

This Plan recommends several specific projects that should be given high priority. They include the following:

- Lemon Avenue Elementary
- University Avenue corridor from Yale Avenue to Parks Avenue near Helix High School, La Mesa Middle School and Dale Elementary School
- El Paso and Jackson

To identify future priorities, the City should establish a prioritization process that assesses both the potential for walking as well as the deficiencies that pose an obstacle to walking. A simple point system for each criteria can be used.

## Potential for Walking

Potential for walking can be established by looking at the following factors:

- Policy factors
- Proximity factors
- Hillside vs. non-hillside location factors

## Policy Factors

The first refers to policies that the City has adopted through its planning process that identify certain areas as having greater importance for pedestrians. Street segments within these areas or along these corridors should be assigned a higher number of points. For example, streets in the Downtown Village Specific Plan or the Mixed-Use Overlay Zone Plan that are identified as primary pedestrian routes would receive higher points than secondary pedestrian routes or other locations.

The point value for Policy Factors is as follows:

- Streets or corridors within a primary pedestrian route: **2 points**

## Proximity Factors

As the name implies, proximity factors refers to whether a street segment or corridor is in walking distance of destinations such as schools, transit, retail or parks. Each destination can be given a different point system depending on the importance that the community places on each destination. Walking distance may vary depending on the destination. For example, the walking distance to an elementary school might be 1/4 of a mile, while the walking distance to a high school or regional transit might be as much as one mile.

The point value for Proximity Factors is as follows:

- Streets or corridors within one quarter mile of an elementary school: **5 points**
- Streets or corridors within one third mile of a middle school: **3 points**
- Streets or corridors within one half mile of a high school : **2 points**
- Streets or corridors within one quarter mile of pedestrian-oriented retail: **4 points**
- Streets or corridors within half a mile of a trolley station or bus route: **3 points**
- Streets or corridors within 1/4 mile of a developed park or recreational center (e.g. Kroc Center): **3 points**
- Streets or corridors within 1/4 mile of a senior center or residential complex for seniors: **4 points**

## Hillside vs. Non-Hillside Location Factors

A third factor to consider is whether the street segment or corridor is in a hillside or non-hillside location. In general, streets and corridors in non-hillside locations tend to be more accessible and more likely to be used by pedestrians than those in hillside areas unless they are close to a school.

The point value for Hillside and Non-hillside locations is as follows:



# Chapter 5. Recommended Prioritization Process

- Non-Hillside locations: **3 points**
- Hillside locations: **0 points**

## Deficiencies

Deficiencies refer to the lack of basic support for pedestrians and assigns a point value based on the following two factors:

- Missing sidewalks
- Difficult and/or dangerous street crossings

As part of this Plan, a detailed inventory of sidewalks was prepared that can help guide the City in establishing priorities. Locations with missing sidewalks would be assigned a higher point value than those with sidewalks. A different criteria would apply in hillside locations where placing sidewalks on both sides of the street is often not possible.

The point value for sidewalks in non-hillside areas is as follows:

- Blocks with no sidewalks on either side of the street: **4 points**
- Blocks with sidewalk on only one side of the street: **3 points**
- Blocks with discontinuous sidewalk on either side of the street: **2 points**

The point value for sidewalks in hillside areas is as follows:

- Blocks with no sidewalks on either side of the street: **2 points**

- Blocks with discontinuous sidewalk on one side of the street: **1 point**

A second map included with this plan shows the location of automobile-pedestrian crashes since 1999. Although the data is limited, attention should be given to improving locations with a higher number of crashes. A list of additional intersections — especially higher speed, multiple lane, high volume roads, including all arterials — that are difficult to cross is also included and should be updated over time as improvements are made. Improvements might include: adding curb extensions, pedestrian refuges or medians, shortening crossing distance by reducing lanes or curb radius.

The point value for dangerous intersections is as follows:

- Intersection with more than two automobile-pedestrian crashes in the past 5 years and all arterials with more than 14,000 ADT: **3 points**
- Other intersections that were determined to be difficult to cross: **2 points**

Using these criteria, priorities can be established by simply adding the points for different streets and corridors in La Mesa. The locations that receive the highest point value should be classified as the highest priority.

The City should establish a process to review the list of priorities every year. Locations that have been improved can be deleted from the list while new locations might be added.

Intersections that are Difficult for Pedestrians to Cross

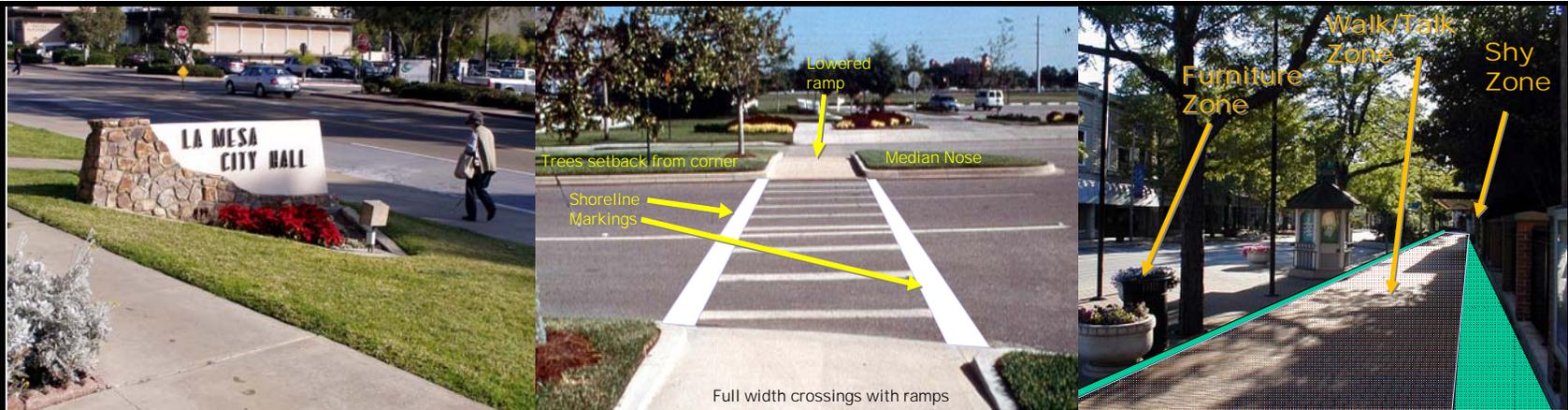
Intersections with at least one automobile-pedestrian crash during the last five years:

- Fletcher Parkway and Jackson Drive: 1
- Grossmont Center Dr. and Center Drive: 1
- Parkway Drive and Baltimore Drive: 2
- Parks Avenue and University Avenue: 1
- University Ave. and Massachusetts Avenue: 2
- Crossing of Baltimore Drive at Bertro

Other intersections that are difficult to cross:

- University Avenue and 70<sup>th</sup> Street
- University Avenue and Harbinson Avenue
- University Avenue and Yale Avenue
- University Avenue and La Mesa Boulevard
- University Avenue and Alison Avenue
- University Avenue and Spring Street
- Baltimore Drive and El Cajon Boulevard
- Alison Avenue and Spring Street
- La Mesa Boulevard and Spring Street
- Lemon Avenue and Spring Street
- Fletcher Parkway and Baltimore Drive
- Most intersections on Fletcher Parkway





# Walkability Plan City of La Mesa, California

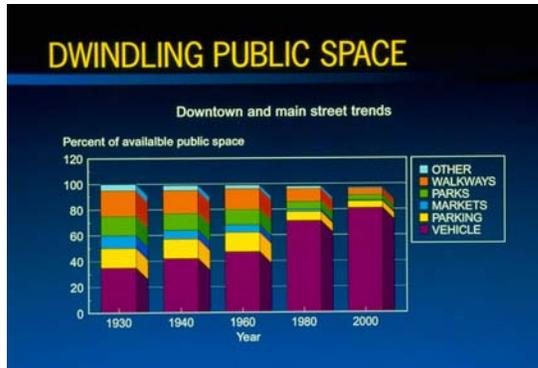
## Appendix A: General Walkability Concepts

February 2006





# Appendix A: Walkability Concepts — Principles and Practices



*As cars came to dominate urban spaces something had to give. Sidewalks became narrower, plazas disappeared. As walking returns, people seek out pleasant, welcoming public places where they can choose to associate with others or simply enjoy watching the activity. Good places are essential features of walkable communities.*

La Mesa is working to make the City a place that is friendly to pedestrians, bicyclists, and businesses. If walking and bicycling are to work, La Mesa must pay close attention to other issues beyond basic walking and bicycling systems. City policies must support the concept of mixed use village clusters that can make it possible for more people to walk and shop where they feel comfortable. People seek out places where there are other people. Vehicular traffic must be accommodated but should not be allowed to dominate land use and transportation decisions.



## Placemaking

Pedestrian systems must connect people to places where they want to be, easily and efficiently. To feel safe there need to be businesses and other people present that ensure there are “eyes watching over walkways and other public spaces.” Pleasant and secure places have many houses, stores and other uses watching over the best streets,



## Good Public Places

- Provide opportunities for chance meetings and social interaction.
- Provide a sense of safety and security.
- Are designed and managed to reduce stress for everyone.
- Provide a feeling of identity and self-worth.

trails, parks and plazas. In this section and others to follow, details of how we can reclaim public space are emphasized.

For these reasons, this plan envisions substantive changes to La Mesa streets, sidewalks and land uses. Over time, streets in La Mesa that are dominated by automobiles can evolve into slower, safer and quieter places.



## Appendix A: Walkability Concepts — Principles and Practices

Over time, roadway and parking lot asphalt and concrete can shrink in area and make way for more landscaping, more dense, mixed-income housing, more retail and service businesses, and more enjoyable places to see and be seen in.

Future community area plans should reflect this vision. Auto traffic will be accommodated and provided access, but will not be permitted to dominate.

Thus the long term vision for La Mesa is to become a healthy, vital, economically prosperous city, with distinct centers and attractions, unique architectural styles, destination places and strong, compelling gateways.

### ***What is placemaking?***

Placemaking is the practice of carefully designing good places for people. Human beings have a natural instinct to interact with their environment. Examples of this include gardening, or decorating your home or dorm room. Given an opportunity in public places, people often rearrange furniture to meet needs. Through these acts, places are created that reflect distinctive character and meet the needs of those gathering in that place. Good places are designed to make people feel relaxed and comfortable.

Designing good places throughout the com-

munity means paying attention to details that impact people. From designing and locating transit stops to location of sidewalk café tables and benches, careful placemaking is crucial.

### **Village Centers**

Village Centers are compact neighborhoods or community commercial areas where walking and interaction of people and businesses is encouraged. These spaces generally have a radius of one-quarter mile, with the most dense elements toward the center.

Mixed-use buildings in villages combine a number of uses including retail, office, residential and entertainment. Facilities are provided to encourage walking and bicycling between nearby residential areas and the village center. The average walking trip for transportation is less than a mile, so village centers are most likely to maximize walking when they are provided in a variety of places.

At the center of a village is a public space, which may be a plaza, a square, a green, or an important street intersection. These centers are focal points in a community, often taking on unique, distinguishing neighborhood character or personality.

Neighborhood streets are designed to provide

### **Great Good Places**

In his book, *The Great Good Place*, sociologist Ray Oldenburg identifies third places, or "great good places," as public places on neutral ground where people can gather and interact. In contrast to first places (home) and second places (work), third places allow people to put aside their concerns and simply enjoy the company and conversation around them. Third places "host the regular, voluntary, informal, and happily anticipated gatherings of individuals beyond the realms of home and work." Oldenburg suggests that beer gardens, main streets, pubs, cafés, coffeehouses, post offices, and other third places are the heart of a community's social vitality and the foundation of a functioning democracy. They promote social equality by leveling the status of guests, provide a setting for grassroots politics, create habits of public association, and offer psychological support to individuals and communities.



# Appendix A: Walkability Concepts — Principles and Practices

## Walking Needs — Basics

**People walk where it is easy and fun.**  
 Shown to the right are two different ways a space might evolve. In scene one any walking is a hardship, and is often avoided at any cost. Most people drive from store to store. In scene two walking is a treat. Driving is efficient, but now most people prefer to walk from destination to destination. These people may end up spending a lot more time in the space, and a lot less time in their cars.



*Pedestrians feel most comfortable when adequate widths, buffers, shade, sun and other elements are provided. In recent years many neighborhoods, and even primary streets, were built without sidewalks. Today, as we retrofit streets, the forgotten America sidewalks must be designed to meet the basic and advanced needs of all neighborhoods. Widths will vary according to location, but in all situations certain basic needs must be adhered to. Not all pedestrians are the same, so school areas, waterfronts, transit stops, shopping districts and recreational areas will need their own guidelines for widths, buffers and other dimensions.*

**Pedestrian Space Requirements**

1.5' 1' .5' 0' .5' 1' 1.5'

People in Motion Require Strolling Width

Includes: Planning Baggage Swaying Speed Obstacles Direction Change

1.5 - 2.5 Feet Actual

3.0 - 4.0 Feet Needed for Movement

**Pedestrian Space Requirements**

3' 2' 1' 0' 1' 2' 3'

Seven people Equivalent of Two SUV's

Just as with driving, social walking requires two adults to be alongside one another

6.0 Feet Needed



**Walking is a social activity.** Just as when driving, people walking prefer to be side by side. Thus minimum width sidewalks of 5.0 foot should be the narrowest walkways. In commercial areas 6-20 feet of open walking space is often sought. All walking and outdoor eating spaces should be designed for the climate, with special attention to places in the sun, cooling places in the shade, shelter from wind and other climatic conditions.



*People afoot need various widths for special needs. On the way home from school, children should not be directly next to travel ways. Planter strips are important buffers. When crossing the street 12 foot minimum widths are preferred in all locations, with added space based on volumes*



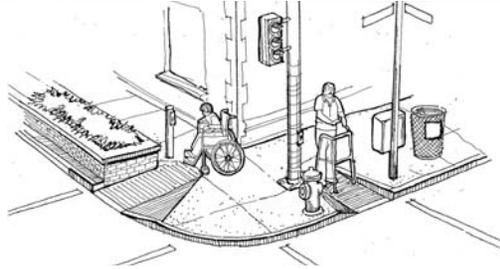
# Appendix A: Walkability Concepts – Principles and Practices

equity between pedestrian comfort and steady, low speed automobile movement. Increasing pedestrian activity encourages casual meetings that form community bonds. A village setting with a variety of businesses providing goods and services in close proximity is most easily accessed by foot, thus attracting walkers.



## Healthy Streets

A healthy street is one that works for everyone using the street. It is of a size and scale that vehicular traffic can move efficiently and steadily, typically under 35 mph. It is attractive, a place where people enjoy traveling by car, by foot, transit and by bicycle. How can streets be designed for everyone?



Healthy streets are designed to provide mobility and access for all people, whether inside a vehicle or using other modes of transportation. Street designs should meet the needs of all pedestrians, including those with visual impairments or mobility restrictions.

### *How fast is too fast?*

Speeds over 30-35 m.p.h. do not serve the goals of creating more walkable and bicycle-

friendly communities, nor do they increase capacity on urban streets. Many factors influence a driver's selection of travel speed. For example, the width and length of streets affect drivers' sense of what is an appropriate speed for the environment. The number of people visible, amount of landscaping, weather conditions, number of

parked cars, and many other factors are quickly processed by drivers' minds to select travel speed. Drivers' temperament, trip purpose, and time schedule are other considerations. The result is that many drivers do not adhere to posted speed limits, but drive according to comfort levels set for them by designers. Barren, scary streets generally produce higher speeds. La Mesa, unfortunately has some stark streets, void of trees, with far too much concrete and asphalt, and other features that encourage speeding.

### *How much space do vehicles need?*

The American Association of State Highway Transportation Officials (AASHTO) publishes the Policy on the Geometric Design of Streets and Highways (Green Book). This book provides guidelines for designing streets



and highways of all sizes. Unfortunately, these guidelines are often weak on issues associated with village centers and main streets.

Our recommendation is for vehicle travel lanes throughout La Mesa to be ten feet wide unless extra width is needed to accommodate buses or trucks. Where 6-foot bike lanes are provided, the effective operational width of a 10 foot wide travel lane is 16 feet; which facilitates turning movements for large vehicles.

Right and left turn lanes have been provided at many intersections. These lanes add con-



## Appendix A: Walkability Concepts — Principles and Practices

siderable distance to pedestrian crossings. An assessment should be conducted to determine if these lanes can be removed at some locations to facilitate pedestrian movements.

### *How can bicyclists share streets?*

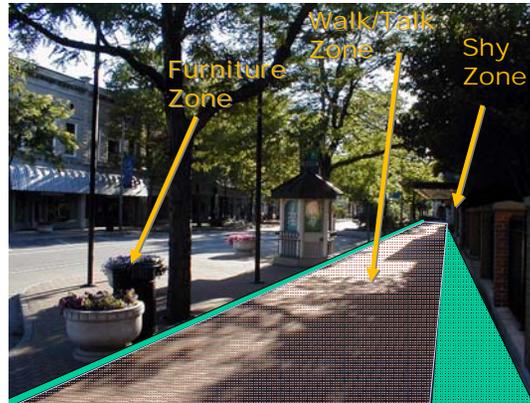
By reducing vehicle lane width, space within the street can be designated for bicyclists. Designated on-street bike lanes are recommended on every collector and arterial street where there is adequate space, and where running speeds are 25 mph or higher. Bike



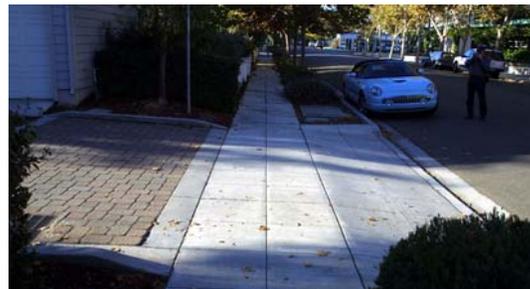
lanes have benefits in addition to providing space for bicyclists. They provide buffers between traffic and sidewalks, increase driver sight-distance, provide forgiveness for errant drivers, allow easier entry and exit from parking spaces, create temporary storage areas for cars while emergency responders go by and provide many other benefits.

### *How can walking routes be improved?*

All streets in non-hillside urban neighborhoods in La Mesa should have sidewalks on both sides and be designed using the sidewalk zoning method illustrated in the accompany-



ing photo. In addition to providing a basic transportation route, sidewalks offer the opportunity to create safe, appealing public spaces that reflect community pride and invite people to walk. A furniture zone provides space for landscaping, hydrants, transit stops, bike racks, and benches so that

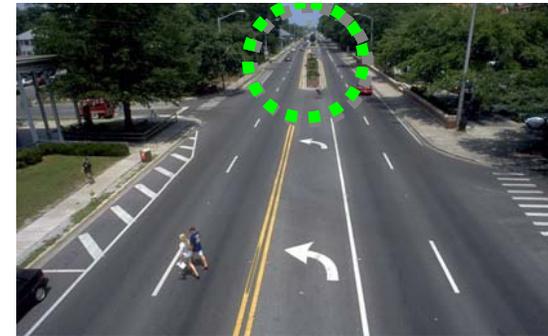


walkways remain unobstructed.

Walkways, including trails, links, and passageways, are also key pedestrian facilities. Sidewalks and walkways should create a continuous, connected network similar to the street system provided for motorized traffic.

### *How do driveways impact pedestrians?*

Driveways, like side streets, expose pedestrians to turning vehicles. Although drivers need access to properties, consolidating driveways and keeping them as small as possible makes the walkway more practical. Sloped driveways are problematic for people using wheelchairs or walkers.



*Pedestrians crossing without islands are exposed for 15 seconds. Crossing islands shorten crossing exposures to 5-7 seconds. Autos traveling 40 mph cover a distance of 880 feet in 15 seconds. In many urban contexts this is a distance far too long for pedestrians to see a danger.*



# Appendix A: Walkability Concepts — Principles and Practices

## Medians and Turning Pockets

One method for reducing the frequency of turning movements that cross pedestrian travel routes is to provide raised medians. Medians provide essential buffers between opposing lanes of traffic and can increase carrying capacity of individual lanes by 30%. They do this by restricting crossover traffic and lane stoppages at turning points. Left turn pockets are provided in the median at major turning points. Medians also provide pedestrians with a place to wait for a crossing opportunity between travel lanes. They allow space for street beautification and gateway treatments and help eliminate aggressive behaviors such as inappropriate passing.



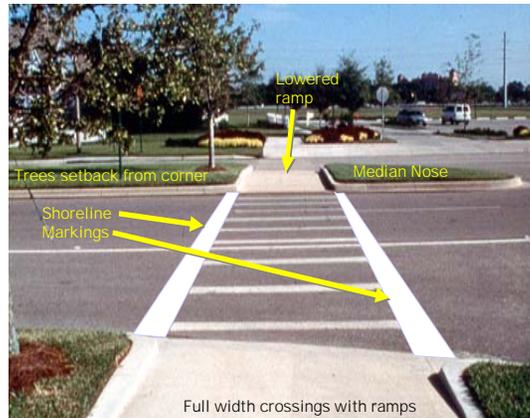
## How important are trees?

Trees beautify areas, provide shade, and help cool spaces. Trees can be planted so as to create a sense of enclosure that contributes to

slower traffic speeds. In a survey of a community, 74% of the public preferred to shop in establishments whose structures and parking lots are beautified with trees and other landscaping. (Center for Urban Horticulture)

## How can parking needs be met?

On-street parking provides convenient auto access to streetside businesses. It also provides a buffer between pedestrians and moving traffic. On-street parking takes up only one-third of the space of off-street



parking, adding to essential village density. The provision of bulbouts ensures visibility between drivers and people waiting to cross streets who might otherwise be screened by parked cars. Bike lanes need to be wide enough that opening car doors do not endanger passing bicyclists (generally 6 feet next to 7 foot parking bays).

## Healthy Crossings

### What works best at intersections?

At all intersections, pedestrians need the shortest possible crossing distances, curb ramps to facilitate use of wheelchairs or canes, detectable warning strips for people with visual impairments, and adequate time to cross the street without conflicting with traffic. Medians, mentioned above, can be used in large intersections to limit the amount of time pedestrians are exposed to traffic and allow them a refuge before completing their crossing.

This section recommends designs and modifications that can be used at many intersections in La Mesa. Some suggestions apply only to signalized intersections while others apply to any intersection.

## Pedestrian Signals

All intersections in La Mesa should be evalu-



# Appendix A: Walkability Concepts — Principles and Practices

ated to ensure that a minimum of 7 seconds is allowed for a pedestrian to step into the crosswalk. This segment of the signal phase, referred to as the walk interval, is the only time a pedestrian can begin the journey across the street. In town and neighborhood centers a pedestrian walk interval should be provided whether or not a pedestrian pushes a button. In some remote locations, and on some mid-block signalized crossings, pedestrians are required to push the button for activation, but it must respond to their call quickly. When push buttons do not respond quickly pedestrians often seek other places to cross the street.

In locations where push buttons are provided, the button should give tactile and



audible information for people who have physical disabilities.

### Crosswalk Markings

Ladder style markings are recommended for all collectors and arterial roadways. The higher the speed and volume the more visible markings need to be. Marked crosswalks on major roadways should be 12 feet wide or wider. Proper widths allow pedestrians from opposing directions to enter, pass one another and get out of the street in the most efficient manner.

### Curb extensions

Curb extensions, also referred to as bulbouts or bump-outs, narrow the street by extending



*Crosswalks are for everyone. Ladder style crossings help older adults and others with visual acuity issues establish a shoreline, aiding them in direct curb-to-curb travel.*

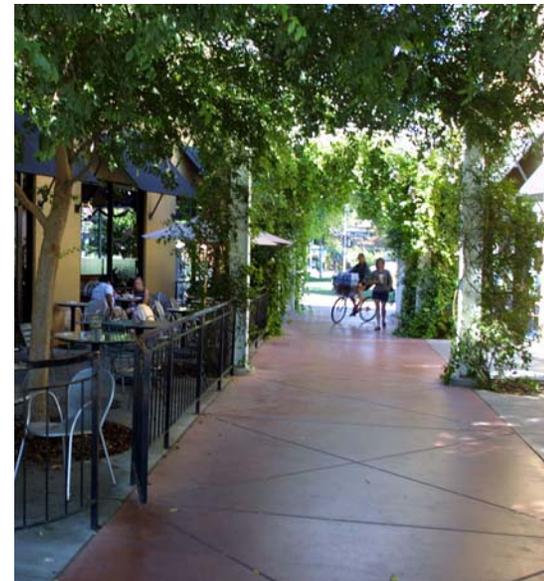
the curb into the parking lane, shoulder area, or curb lane. They can be used at intersections or along streets where there is on-street parking. They help to slow down vehicles making right turns.

### *Should pedestrians always cross at intersections?*

No. Pedestrians need crossing opportunities that are convenient to their destinations. Intersections may serve this purpose, but there are also times when a crossing between intersections works better. These are called mid-block crossings.

### Mid-block Crossing Islands

Placing a raised island between travel lanes



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where mid-block crossings are used allows pedestrians to cross one-half of the street, then wait for an opportunity to complete their journey. The crossing area in the island can be angled to encourage pedestrians to look at oncoming traffic before proceeding.

### Pedestrian Linkages

Linkages are alleys, walkways, corridors and shared-use paths that connect pedestrian facilities.

#### *Why are linkages important?*

Linkages increase pedestrian convenience by providing “short cuts” to destinations. Linkages often provide travel routes that are more appealing than walking next to traffic.

### Bicycle Facilities

Providing good facilities for bicyclists helps all users of the street system, not only bicyclists. (For a list of 22 benefits of bicycle lanes go to [www.walkable.org/download/shoulder.doc](http://www.walkable.org/download/shoulder.doc).)



### Bike Lane Markings

Bike lane markings should be highly visible. An 8" wide stripe is recommended. Details for markings through intersections and other locations are identified in Part Nine of the Manual on Uniform Traffic Control Devices.

### Bike Parking

Bike parking should be provided on all destination blocks, all parking garages, and by employers of ten or more employees. High security bike parking should be provided at all new parking garages, and retrofitted into existing garages.



### Efficient Transit

The efficiency of transit is enhanced by high levels of ridership. This allows buses to run more often and serve more areas. This, in turn, attracts more riders. The benefits of high levels of transit use include reduced parking needs, less traffic congestion, cleaner air, and greater transportation choices for students and year-round residents.



#### *How do pedestrian facilities impact riders?*

Every transit rider is a pedestrian at some point in their journey. Safe, convenient travel routes to their transit stop is essential. Walkways and convenient, safe crossings are basic transportation elements that are needed throughout all urban areas.



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## Bulbouts/Curb Extensions



*Bulbouts at one-way street locations can often be narrowed to as little as 14 feet. Speeds and directional movements are controlled, pedestrian crossings are reduced, and all movements become more efficient.*

*This treatment is directly across from a wide, less attractive one-way street where the treatment has not been applied.*



*Bulbouts reduce nonessential street space. By using a variety of colors, textures, materials, lighting and street furniture, streets can be made both more functional and attractive.*

## Variety of Designs

Curb extensions or bulbouts help channel and focus pedestrians and motorists. Downtown and school areas especially benefit from well designed, well placed bulbouts. Bulbouts are now accepted on major arterial roadways, as well as much smaller collector roadways.



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## Crosswalks and Markings



*Markings:* Ladder style crossings help older adults and others with visual acuity issues establish a shoreline, aiding them in direct curb-to-curb travel. Ladder style markings should be emphasized for crossings of all collectors and arterials. When not placed at signalized intersections these markings also require standard (MUTCD) pedestrian crossing signs (not shown). Good lighting is essential.



**High Emphasis Markings.** Properly marked and signed crossings, matched with appropriate speed geometric designs lead to higher levels of motorist courtesy toward pedestrians. Large cities like Seattle have learned that one-half of all pedestrian fatalities occur while people are at or near transit stops and stations. The above crossing in Fargo, North Dakota was built after putting the 4-lane street on a road diet, reducing the number of lanes from four to three. Many cities choose to have lights flash only when pedestrians are present. In this way motorist yielding behavior can be very high, even on busy roadways.



*Above:* Horizontal lines wear quickly, while well placed perpendicular lines can last many years.



**Multi-lane roadways require more than just crosswalks.**

Research conducted by the Federal Highway Administration found no increase in pedestrian crashes, nor severity of crashes, in marked crosswalks versus unmarked crossings on two-lane roads.

On multiple lane roadways, however, crossings with just markings and signs have increased crash levels. For this reason, the study recommends that crossings on multi-lane roadways, at midblock and un-signalized intersection locations, have added features, such as yield lines placed back 40-60 feet (see photo below), crossing islands, and in some cases half-signals. (FHWA-RD-01-142, *Safety Effects of Marked vs. Unmarked Crosswalks*, May 2001, Charles Zegeer, et al)



*Multi-lane crossings work best with center median islands. This allows pedestrians to clear the street in under 8 seconds. If islands are thin and gaps are few signals may be needed. The median at left includes a fence that requires pedestrians to walk toward oncoming traffic before crossing the road.*



# Appendix A: Walkability Concepts — Principles and Practices

## Trees and Street Furniture



Birmingham, MI uses quality materials to screen parking lots and create attractive street furniture.



*Street furniture lights our way and provides navigational aid and information. It can also help create a sense of place. Street lamps need to be placed where light diffuses well onto walkways, between and often under trees.*



*La Mesa should add urban street trees on all significant corridors. Trees should be set back 4.0 feet from travel lanes. Use of bike lanes creates more border width, allowing closer spacing. Minimum setback of all street furniture should be 18-24 inches. Trees are normally spaced 30-50 feet apart. In urban walkways trees often require specially prepared tree wells.*

### Variety of Designs

Street furniture can be unique to each site. La Mesa should take unattractive features (trash bins, dumpsters, newspaper racks) and convert them into visual sources of pride. Contests should be held to award prizes to businesses or residents that contribute the best new bench, light, sign or other street feature.



*Properly located street trees are not frills, fluff nor safety hazards. Instead they are aids in traffic calming, a means of purifying air and a cooling mechanism.*



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## Paseos, Connectivity, Links

*Mobility and access in a community are not only about streets and roads. Many cities across the U.S. are learning to use paseos, trails and other connectors to improve access to schools, services and businesses for their residents.*



**Alleys into Passageways.** *Parking to the rear of buildings needs to be easily accessed. If stores do not face into these spaces a careful dedication of landscape materials, lighting and other features will make these corridors comfortable for travel.*



**Eyes on connectors.** *Buildings should be constructed to provide supervision over converted alleys or new travel corridors. The scenes above (historic retrofit) and below (new shopping center) show two ways of achieving high levels of comfort and safety when using these connectors.*



## New Pedestrian Links Are Needed

Like many communities, La Mesa has many long blocks and other land areas where new links will need to be provided. Ideally, pedestrians are provided links between parallel blocks every 300-500 feet. This page features ways to arrange these buildings and physical spaces.

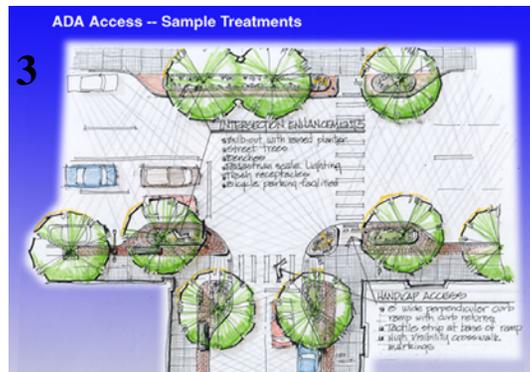
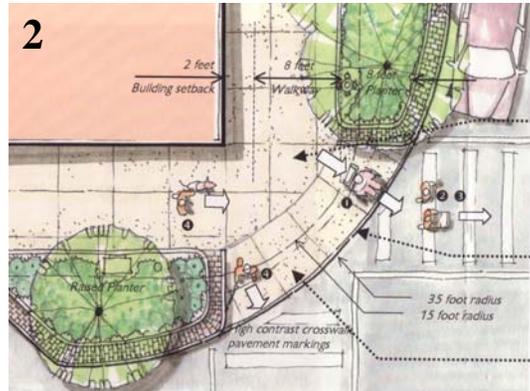
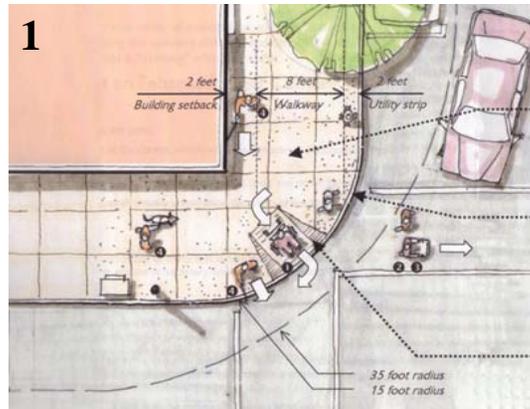
These spaces need to have ample (but not too much) width, many eyes facing into the spaces, effective use of landscaping to increase safety, and other features that draw people to them many hours of the day and night.



# Appendix A: Walkability Concepts — Principles and Practices

## ADA — Universal Design

Illustrations in center show (1) use of a 15 foot radius, shoreline orientation of ramps, (2) alternative extended curb allowing two ramps per corner, effective use of landscaping, and easier orientation, (3) an example set of ramps at a tee intersection. (4) Effective use of contrasting materials and flat walkway at top of drive. Below, when push buttons are used they should have large buttons, an arrow helping orient people to the direction of travel and an indicator button acknowledging the call has been received.



## Barrier Free and Easy Guidance

People with visual and motor skill disabilities need well-constructed sidewalk and crossing systems with no barriers. Although easy to address in well thought out new construction, it is harder to do in older urban areas. The image below illustrates proper width, orientation and a reasonable crossing even though the crosswalk marking was overlooked.



New national rules for public rights-of-way, currently under consideration by the Access Board offer guidance on minimum design standards. These can be accessed at [www.access-board.gov/indexes/accessindex.htm](http://www.access-board.gov/indexes/accessindex.htm). In the interim, an excellent guide for accessible design is the Federal Highway Administration publication *Designing Sidewalks and Trails for Access*.



# Appendix A: Walkability Concepts — Principles and Practices

## Security Through Design

**Well Behaved Buildings.** In each of the four sets of images below note which are friendlier to pedestrians. People learn to avoid those places that have poor building environments. Well behaved buildings provide (1) Many distinctive visual qualities, (2) Many windows and doors facing the street, (3) Proximity to the street, (4) Landscaping as well as other features that add color, pride, custodianship and ownership to spaces.



buildings, and (9) appropriate design of side and rear entry parking.

*Left, top: Division Avenue and Fulton Street, Grand Rapids, Michigan (Photos: Ramon Trias). Left: Photos courtesy of Dover Kohl and Associates. Photo simulation by Steve Price, Urban Advantage.*



## Town Codes and Walking.

La Mesa will need to continue to work toward amending its town code, as needed, to fully support all elements of secure placemaking. Updates to codes must address: (1) physical location of buildings (generally within 20 feet of curbs), (2) percent of required street-scape-relevant landscaping, (3) percent of windows/doors to total surface facing streets, (4) appropriate streetscaping materials, (5) transparent walls and fences that are not too tall to see over, with appropriate selection of attractive features and materials, (6) lack of hiding places, (7) appropriate level of lighting, (8) elimination of parking to the front of



# Appendix A: Walkability Concepts – Principles and Practices

## Fences, Fencing, Walls

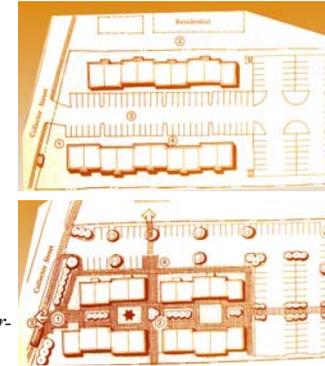


*Top to bottom: Walls or fences screening buildings from the street create security problems for people walking along a street and property owners. Transparent, low fencing is attractive and allows people passing by to detect anything going wrong, as well as those inside to watch over the street. Photo to right: An example of a limited, acceptable property fence. Eyes are still on the street. This pattern would not work if two adjacent alley properties both had visual barriers.*

## Eyes on Space, Not Walls

Law enforcement officers are quick to point out that tall fences do not make good neighbors. Despite lingering myths that walls and buffers add to security, they do not. Instead they simply make possible more illegal and hidden activity. La Mesa’s public and private lands should be built to allow maximum viewing of outdoor spaces.

*The two plan views to the right show how design can improve safety. Both have the same amount of housing and parking but the lower plan clearly defines private and public spaces and creates a central gathering place.*



*Multi-family housing units to the right have similar densities. The one on top invites people to take part in activities in the central court. The one below discourages residents from interacting.*



# Appendix A: Walkability Concepts — Principles and Practices

## Night Security, Lighting



*Denver's popular, well lit transit mall works all hours of the day and well into the night. The corridor is used as a major pedestrian promenade.*



*Paseos and other passageways should be well lit with both street lamps and shop windows. It is best to leave shop lights on all night in these important passageways.*

*Parking lots are especially vulnerable places during evening hours. Small, well located, well lit parking areas greatly reduce the potential for crime. These areas work best when large numbers of pedestrians are walking past.*



## Variety of Light Sources

One of the best ways to bring back night life to a town center is to provide adequate pedestrian scale lighting. Quality town center lighting includes three light sources: (1) pedestrian scale lamps (preferably down lighting to preserve the night sky), (2) Theme or ambient lighting on buildings, in trees or other featured lighting, and (3) interior lights on timer systems that create a warm glow from inside the buildings.



# Appendix A: Walkability Concepts — Principles and Practices

## Parks, Pocket Parks, Plazas



*Parks, plazas and public spaces in general should have many houses or other 24-hour uses watching over their edges and into their centers. When parks need to be larger an effort should be made to include activity centers or concession stands that can help watch over them. The world's most livable cities provide and maintain parks within an eighth mile of all homes. It is at this distance that people claim the park as their own, and show a willingness and desire to watch over the space. Small pocket parks — the size of a single house lot — can work very well.*



# Appendix A: Walkability Concepts — Principles and Practices



*Security comes through a number of open landscape designs. As a general rule, the more intense, mixed and diverse the land uses are, the more well-used and secure spaces become. Our nation has gone through many decades of separating and isolating land uses and people. Through carefully planned new parks, open spaces and neighborhoods, we can overcome the fear and prejudice that isolation tends to breed. Healthy lifestyles require all people to get out and take ownership of public spaces many hours of the day. Buildings, eateries, museums, activity centers...all these diverse uses help.*



# Appendix A: Walkability Concepts – Principles and Practices

## Public Restrooms

Walkable communities need to provide for the comfort and convenience of residents and should include attractive, well located public restrooms. Several participants in the Saturday workshop highlighted the need for a public restroom in La Mesa Village. One approach to public restrooms is to incorporate them into friendly transit station, plaza or visitor’s center.

New public restrooms are also often associated with staffed community police substations or other public service facilities. In some cases public restrooms are partners to commercial activities, such as a nearby gas station.



# Appendix A: Walkability Concepts – Principles and Practices



## Alleys

### Basic Alley Principles

A master plan needs to be developed to provide guidance on how to improve all alleys and alleyways. All alleys should be attractive and inviting, with significant movement and uses up and down them.

Alleys need to be clean, attractive and tidy. There should be no offensive odors or leakage from dumpsters.

Common dumpster storage areas should be created, minimizing the number and location of dumpsters.

Openings from alleys to streets should be clean and attractive. Pedestrians should have dominant movement along streets, with minimal intrusion by entering and exiting vehicles.



# Appendix A: Walkability Concepts — Principles and Practices



## Outdoor Cafes

### Basic Design Principles

Outdoor cafes offer many opportunities to extend and expand eating experiences. New outdoor cafes require space on sidewalks and especially at curb extensions.

Suitable minimum width passageways need to be maintained. In some locations a walking zone 6 feet wide is adequate. In others spaces, 12 feet or more may be needed. Pedestrian volumes, the length of the eating area and other elements dictate the minimum allowable width.

Chairs and tables need to be well organized and kept out of walkway areas. In general, seating should be next to the building; although under some circumstances seating can be placed closer to the street. In some states and/or cities alcohol cannot be served unless the seating is next to the restaurant.



*Examples of outdoor cafes that enliven an entire street or entertainment district.*

*Curb extensions at mid-block and corner locations — as in the La Mesa Villlage — allow for these types of new outdoor cafes.*



# Appendix A: Walkability Concepts — Principles and Practices

## Parking — Issues/Opportunities



**Off-Street Parking.** Over time, well-planned cities are able to coordinate parking in central locations. Instead of requiring each business to have its own parking, the town or city works with businesses to make available more on-street parking and establish municipal lots. If activity levels are high enough, parking garages are built and located where they do the least harm to downtown traffic patterns. Off-street parking must be attractive, safe and friendly to pedestrian environments. Many new large buildings fully incorporate parking needs in their structure and are encouraged to lease and market parking to the public and others. Below, attractive, low intensity, two-level parking in Beverly Hills California.



**Angled Parking:** Angled parking can add from 30-100% more parking to a street. There are many benefits of angled parking, including its effect on traffic calming. Seattle, Washington, Arlington, Virginia, Washington, D.C. and other cities are now adding back-in angled parking to their streets to make it easier to park and especially to exit. Other benefits include greater safety for motorists and bicyclists, easier loading of trunks and passengers (especially children), and less room taken up in the street.



### Parking should be a planned resource

Availability and location of parking is a central element of a walkable community. Many communities are re-pricing their parking to reward those coming to town centers for events, shopping, business and short visits.

Meanwhile, longer term parking for commute needs is priced at higher rates, making up the difference in garage income. This pricing concept is incorporated into efforts to provide improved, high performance transit service, downtown residential living and other strategies to improve the livability and performance of town centers.

Parking policies can help reduce auto dependence and increase incentives for those choosing to walk, ride bicycles or use transit.



**Above:** Parking garages should be attractive, adding to a sense of place. They should include a mix of uses, such as ground level retail or “liner” residential loft units. Garages can also include services such as dry cleaners, daycare, fitness centers, etc. that meet commuter and urban dweller needs and should address multiple event parking needs.



# Appendix A: Walkability Concepts — Principles and Practices

## Transit Enhancements

Cities that are trying to revitalize commercial areas and town centers recognize that transit service can play a major role. Key to that is designing a system that meets the needs of residents. In addition to regional transit systems, some cities are developing smaller circulator bus or van systems that can help residents travel within the community.



**High efficiency slide-on buses.** The above transit devices mimic Disney-style operations, with fast slide on and off entry/exit, quiet electric engines and low-speed, bike trail compatible operations. Many students can be easily shuttled through and to campus, from remote garages, and especially in low-lying river areas up the steep hillside to main parts of campus in these sleek, energy-efficient futuristic cars.

## Transit Shelters Add Comfort, Beauty

Well-designed transit shelters provide residents with a comfortable, safe and convenient place to wait for a bus or train while protected from the elements. Shelters can also be designed to help create a sense of place by complementing the “look” of a community or by incorporating art pieces.





# **Walkability Plan      City of La Mesa, California**

## **Appendix B: Public Participation Process**

**February 2006**





## Appendix B: Public Participation – Saturday Workshop

Following are summaries of the input provided by the residents of La Mesa during the public workshops and focus group meetings.

### Community Visions for a Walkable La Mesa

*Participants at the workshop held on Saturday, January 8, 2005 were asked to write down their vision for a more walkable La Mesa.*

#### Most Important Things to Make La Mesa a Walkable Community

Change. The civic center will be an asset to the community. New large library, police and fire stations. Post office, a new city hall and auditorium for cultural events and accessible for walking and biking to all. Continue to change storefronts to look like a European village.

A few improvements in sidewalks needed in the downtown area. Extend crosswalks at intersections. Planning required in new housing areas.

Widen sidewalks to 5 feet everywhere walks are now. Improve areas next to sidewalks, grass or asphalt. Reduce step-down/up at traffic crossing driveways. Who wants to walk where you have to look down for every step you take, to avoid falling in broken asphalt or mud holes?

Better maintenance of sidewalks. Better tree planning. Curb installation in areas outside of downtown. Better maintenance of areas by merchants. Replace “cobblestone” bricks (in downtown) with wider ones (difficult to walk on).

Better repair of sidewalks where needed. Concern about tree roots lifting and cracking sidewalks. Better selection of street trees that have less aggressive roots and trees that don’t drop seed pods such as magnolias, liquid ambers, ficus species.

Positive changes: 1) City center that welcomes pedestrians. 2) Increased housing density so needed shopping and entertainment can be concentrated in a central place rather than in several suburban malls. 3) More mass transit to bring people into the City center. 4) More public restrooms.

Safe access for everyone = SAFE. Safe access to all neighborhoods. More walking and riding of bikes, less cars zooming through neighborhoods (at least slowly) to schools, parks, shopping areas. I’d like to meet someone that says “I walked to Grossmont Plaza to the Movies” via paratransit.

Improve landscaping and sprinklers with colored concrete.

Growth of mixed use buildings, residential and business. Parking structures to hide cars. More one way streets. Less street parking. More pla-



## Appendix B: Public Participation – Saturday Workshop



zas (enclosed shopping). More drive through services in outlying areas.

On our trip the rises weren't too bad; not too tiring. La Mesa is noted for its hills. Cross streets adapted for the blind.

No at-grade trolley crossings. Trolley line will either be above or below street level.

La Mesa will stay the same. That is why people live here. A small town. Put more diverse stores in downtown area. Public restrooms in downtown.



New civic center. Relocated police department. Relocated post office. Sidewalks in Village smooth (no brick insets), big trees in the Village, dynamic shops, more parking, slower/less commuter traffic, better lighting, public restrooms in the Village.

1) Numerous small "golf cart" type autos in dedicated traffic areas. 2) Shuttle bus "electric or natural gas or hydrogen" propelled every 20 minutes through business district. 3) Sidewalks under shade trees. 4) No autos in downtown village area. 5) Mall like streets in business areas. 6) Available restroom facilities at trolley areas.

To retain its identity as a small town, friendly community that values the accomplishments of the individual. Areas of development that match the existing environment. No special interests given special treatments (relaxing of



code restrictions).

Walking in 20 years: 1) More rest stops (benches, water, etc.). 2) Create parking areas near downtown. 3) More trees in downtown. 4) Downtown park/plaza

Dream La Mesa: Safe sidewalks to Lemon Avenue School for kids and adults on east side of Glen Street (one side only) please before someone gets hurt.

A La Mesa that is safe for families and concerns of its citizens addressed. A City government that is consistent. Safety for elderly and children.

A sidewalk on Glen Street between Alpine Avenue going down the hill to Lemon Avenue Elementary School. We have lots of children who enjoy walking to school (good exercise) but need to be safe.

Nice restaurants, an awesome library and good shopping. Lots of trees, plants and greenery. Wide sidewalks with landscape strips between the sidewalks and the street. Trees and grass in the landscape strips. Flower baskets hanging from trees and phone poles that always have flowers in them.

I believe La Mesa will have these beautiful walking paths throughout La Mesa Village and outlying areas. In some areas sidewalks are not needed but safety is a major factor.



## Appendix B: Public Participation – Saturday Workshop

Hopefully this issue can be dealt with as soon as possible.

I'd like sidewalks built on the side of every road and the sidewalks even underfoot. More and bigger planted areas downtown with benches for sitting. Longer Walk signs so a pedestrian has time to cross the street. A bigger post office and modern new library, larger and with community meeting rooms.

The City will need to focus on urban mixed use development to increase density which will get more people living in the urban core. Higher densities and new mixed development will help fund the urban improvements. Improvements should focus on wide sidewalks with street tree plantings for shade and interesting pavings that add to the City's character. The future: The City should be vigorous, safe, self-sustaining, should have esthetics that reflect the true identity of the City. Also clean, safe, secure, with well-organized transit.

Continuous sidewalks. Sidewalks with parkways and tree-lined streets. Class 1 bike trails that connect mass transit hubs and commercial development with neighborhoods. Pedestrian only pathways that snake through the City to create interesting walks and connect neighborhoods and parks. A vibrant downtown with more shops than just antiques.

Urban feeling. Safe walking. Convenient

proximity (business/homes). Esthetically pleasing. Accessibility, "The walking City." Sanitary/clean walking zones (litter free). Less driveways/drive throughs or kept on perimeter areas to downtown.

Safe place for visitors and residents to walk and enjoy. Maintain and increase the number of trees and plants on side streets.

Even sidewalks or designated turf paths. Striped crosswalks. Fenced in dogs.

Undeveloped lots redeveloped with newer, higher density projects, including mixed use and multifamily development (and a new civic center). Older single-family neighborhoods revitalized through repair and additions. Smaller, less polluting cars!

Goals: A place/places to walk to. Things to see, to learn about. Variety. Labels on historic houses/unusual landscape elements. A comfortable, esthetically challenging place. Green.

1) "Freedom Trail" concept (walking route(s) of historic houses, landmarks). 2) Walking clubs. 3) Voluntary "litter pick-up" routes via walking — "neighborhood walk" — a branch of "neighborhood watch."

Still a desirable community. Attention paid to details that foster civic life. Diverse housing stock in stable neighborhoods. More pedestrian friendly



## Appendix B: Public Participation – Saturday Workshop



1) More and wider sidewalks. 2) Sidewalks given more priority in dense traffic areas. 3) Extended pathways to/from residential areas just outside of downtown core.

In 20 years: A vibrant downtown village with boutique commercial surrounded by highly integrated/connected variety of housing types.

La Mesa + 20: 1) More people, more people walking. 2) Older population. 3) Narrower streets. 4) More sidewalks. 5) More restaurants. 6) Fewer cars. 7) Slower cars. 8) Dense, mixed development along the major avenues. 9) A hotel at Grossmont Center. 10) Chargers are Superbowl champs!

Safe and comfortable and beautiful walking network to businesses, schools and services

Changes: 1) Want more “walking paths” not sidewalks. Paths not crossed by frequent intersections. 2) Want less concrete. Surface concrete too hard for comfortable walking.

Probably more traffic, harder to walk around. I would like: Planned access for bikes and pedestrians. Separation of slow-moving (bikes and pedestrians) from fast moving traffic.

Safe and clean (as it is now). No more condos, etc. Another park in the area of Murray Hill. More walking areas. For younger children — walking school bus.

Safe, smooth sidewalks. Well-marked intersec-

tions. Rest stops for walkers with emergency buzzer/bell connected to Police Department. These buzzers could be connected at stop light.

Sidewalks in all neighborhoods. Shady walkways. Children walking together to school. Well kept homes and yards.

### Community Values

*Participants at the workshop held on Saturday morning were asked to identify the values that they hold dear. Below are some of the values that received the highest priority:*

- ◆ Great Schools
- ◆ Quiet, Peaceful Neighborhoods
- ◆ Safety
- ◆ Beauty
- ◆ Parks, Recreation
- ◆ Neighbors, Friendship, Community
- ◆ Affordable Housing
- ◆ Good Services, Leadership
- ◆ Convenience, Accessibility
- ◆ Village, Downtown
- ◆ History



# Appendix B: Public Participation – Saturday Workshop

## Walking Audits

*Participants at the workshop held on the morning of Saturday, January 8, 2005 explored La Mesa’s downtown through facilitated “walking audits.” The audits gave everyone a chance to experience some of the problems that pedestrians confront when walking in the City. After the walking audits, participants reported their findings back to the larger group.*



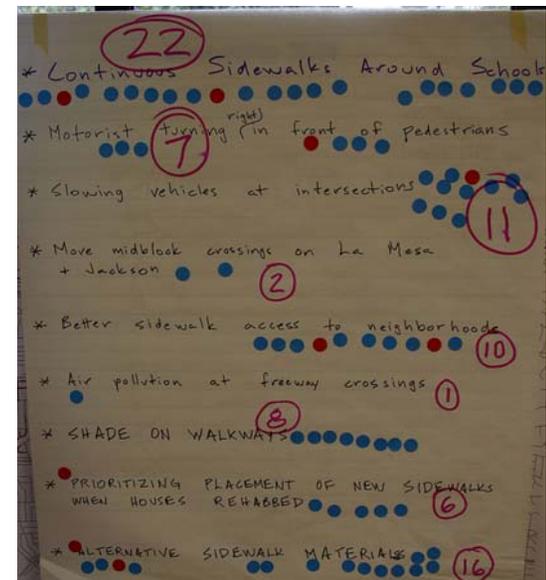
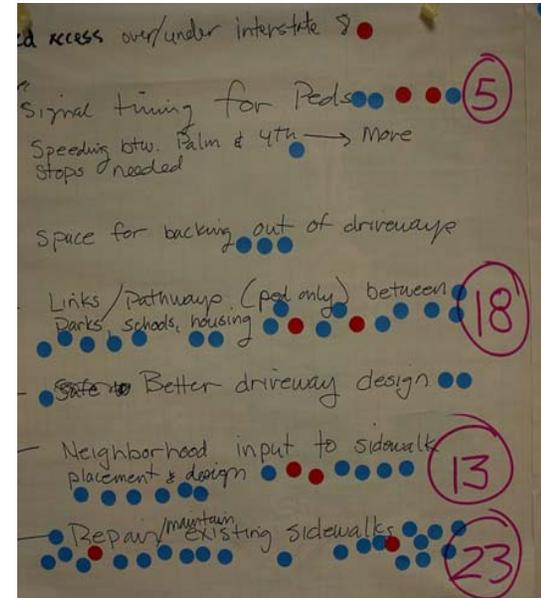
## Appendix B: Public Participation – Saturday Workshop



### Community Priorities

Participants at the workshop held on the Saturday, January 8, 2005 were asked to identify their priorities to make the City of La Mesa more walkable and then voted on the top seven using sticky "dots." Following are the priorities that received the largest number of votes:

- ◆ Well-Linked System of Walkways (26)
- ◆ Repair/Maintain Existing Sidewalks (23)
- ◆ Continuous Sidewalks Around Schools (22)
- ◆ Publicize Walkable Areas to Walk to — History, Parks, etc. (22)
- ◆ Better Pedestrian Access to Transit (18)
- ◆ Links, Pathways (ped only) Between Parks, Schools, Housing (18)
- ◆ Alternative Sidewalk Materials (16)
- ◆ Slowing Vehicles at Intersections (11)



## Appendix B: Public Participation – Saturday Workshop

### Design Tables

*Participants at the workshop held on Saturday, January 8, 2005 worked in small groups to sketch out ideas for making La Mesa more walkable. One person from each group reported back to the larger group. Following are some notes from those presentations, along with images of what each team sketched on the map of the City.*

#### Group 1

Not good walkways near Helix HS and under freeway

Nose problem Spring and freeway

Closeup

Traffic problems at El Cajon and Baltimore, confusion with University bending one way and where come together. Also at Allison and La Mesa.



Problem near Helix High School.

East Ridge, problems with 3 schools. How will that affect area. Beginning focus, Orien and Murray Hill Intersections.



#### Group 2

Danger spots for linkages to Orange, destinations where you'd want to walk to.

Red are danger spots. Action for ped safety

Fletcher Parkway, distance is so great, doesn't feel safe. Need ped refuges or pork chops. Can walk but don't feel safe.

Near Helix at Murray Hill and High (Waite)

#### Group 3

Looked at area near University Ave. Children attending schools across from University need safer crossings at University. Many driveways on University. University and Parks several businesses that have too many driveways.

#### Group 4

Picked on Lemon Avenue Elementary, and how to improve walkability. Chose ½ mile radius from school. Also misaligned intersections, exemplary of all schools. Bad intersection, missing sidewalks.

Linking throughout city. Should survey City residents to see what facilities would be most important to link. Ask residents what most important links would be.

Funding. Direct government funding and grant funding. Get stakeholders like insurance companies to provide funding support.

Alternative sidewalk materials. Use other colors. Good surface that is safe and is esthetically pleasing. Uniform standard.

#### Group 5

Analyzed where people travel within city. Civic center, hospitals, shopping, schools and parks. Identified primary routes for bicyclists and pedestrians in regional context.



## Appendix B: Public Participation – Saturday Workshop



Where to improve sidewalks, near schools and parks.

Potential additional crossing where freeway bisects commercial.

Alternative paving, working with existing trees. Use decomposed granite that is pliable and easier to walk on. Get clearances and work with existing trees.

Advocate bike lanes for regional access. University, La Mesa Blvd. would it compromise on-street parking to get wider lanes for bicyclists. Might be nice to have bike lane next to curb so there's more safety and separation.

### Group 6

Links to get out to main roads. Links to school. Street designs in neighborhoods. Identified different districts. Rated. Two neighborhoods up near Severin, one section that doesn't have sidewalks. Different scores from 0 to 10.

Near Lemon, very hilly, different designs, rated 3 across board. Mt. Nebo, including East Ridge. Resident on Yale concerned with development on East Ridge.

Important for each neighborhood/district to address their issues and concerns

### Group 7

Looked at where people at table live. Sidewalks on Glen Street near Lemon Avenue school, dangerous for children walking to school.

Problem at East Ridge going up Yale with new housing and getting more populated. Sidewalks on Mariposa missing sidewalks.

Speeding on Palm Avenue near First United Methodist church. There may be problem with speeding.



Important to have neighborhood input on sidewalk placement and design. Figure out what your neighbors want. Take neighborhood approach.



### Group 8

Talked about areas where folks walk. Fresno and Palm, problem with kids skateboarding near that intersection.

Some streets near 4<sup>th</sup> and Fresno have very bad sidewalks, older neighborhood. Poor maintenance of homes. Old cars left out on street which makes it unpleasant for people to walk by. Call code enforcement where residents have to mow their lawns. Not very pleasant to walk along these streets. Some streets where folks don't remove trash cans.

Need more publicity about folks having more pride in ownership.

Lots of wonderful places to walk, some far apart and up hills but is a very beautiful city. Ways we can improve.



## Appendix B: Public Participation – Saturday Workshop

### Additional Comments

Have 14 parks in the City. One idea, make parks more visible to community. Program and to make project more visible would be to do a “Walk around parks” or “walkathon” or “parkathon,” get corporate sponsors to raise funds, bring community together and also publicize walkability of community.

Reflection tape on trash containers.

Adopt a walk project. This could relate to that. Walk around your own block and pick up trash and improve look of community.

Requirement in City that have to pay for your curb and gutter as you build new house and get a lot of sidewalk links that are missing. Look at other communities to see what they have done.

Does California allow designated tax districts



to assess themselves to build sidewalks, bike paths, etc.?

Program now requires either building sidewalk or placing lien on house but instead allow people to pay into a fund.

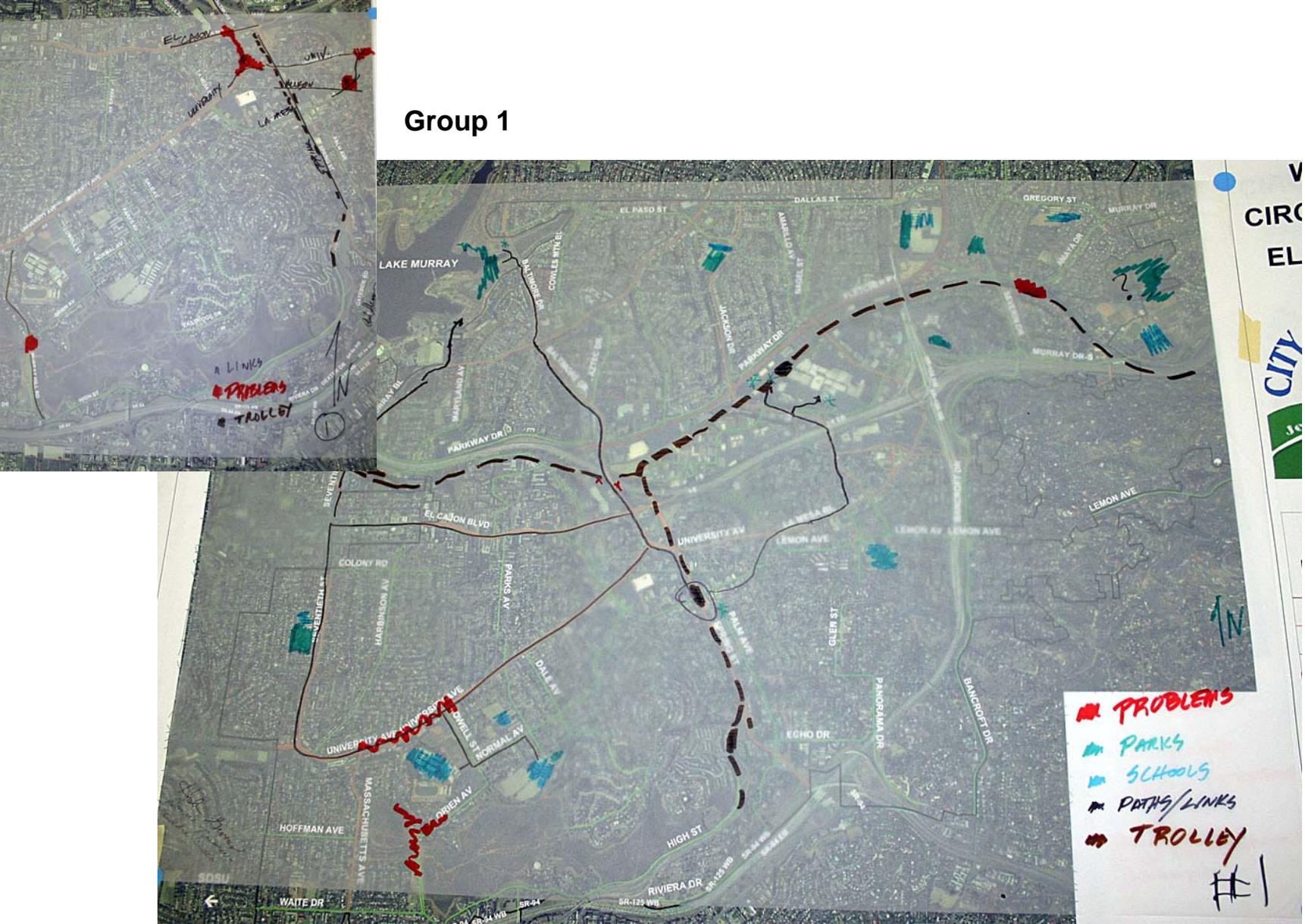
How are formal neighborhoods designated?

Work with residents to define what neighborhoods want.

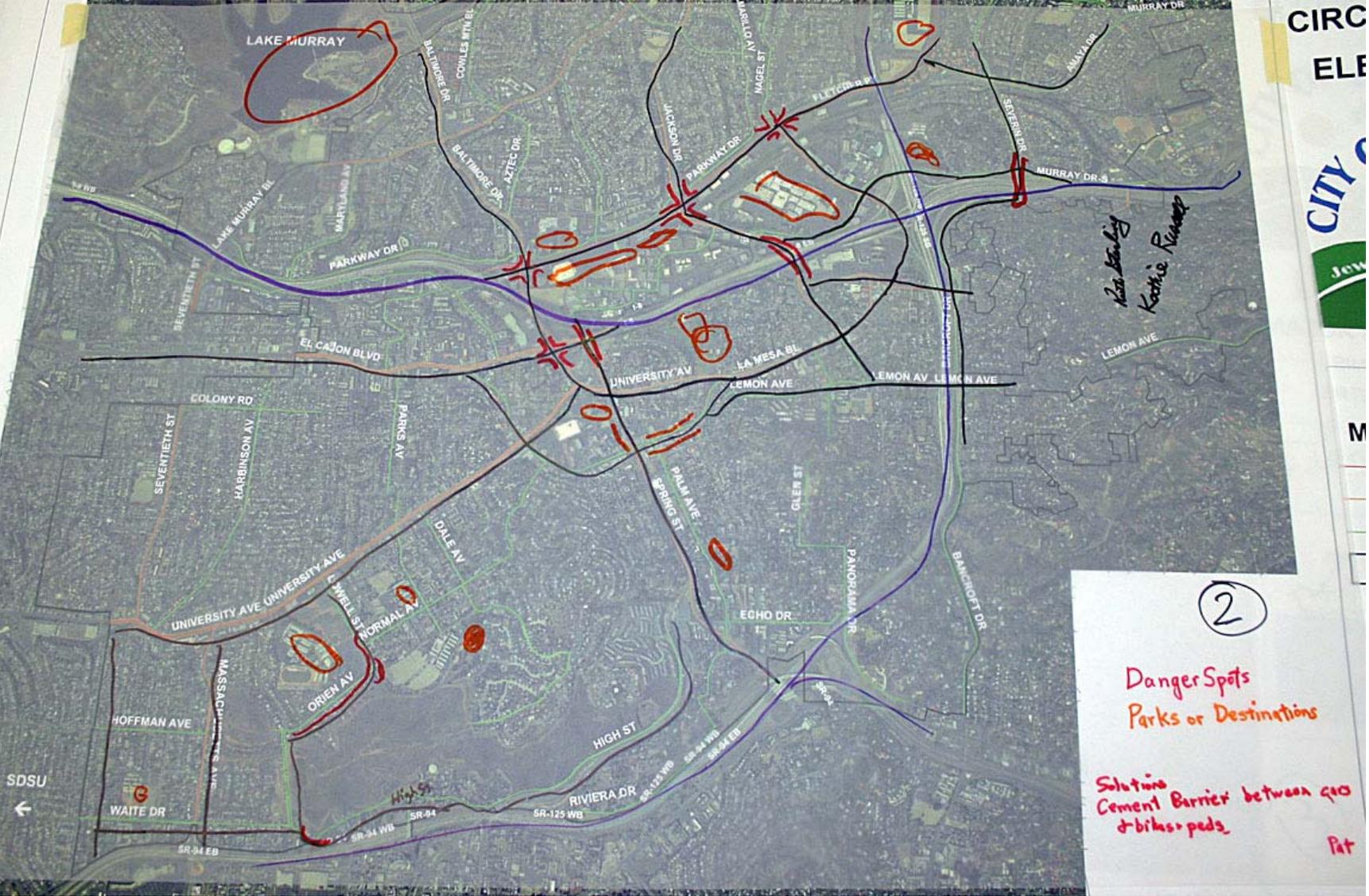


# Appendix B: Public Participation – Saturday Workshop

Group 1

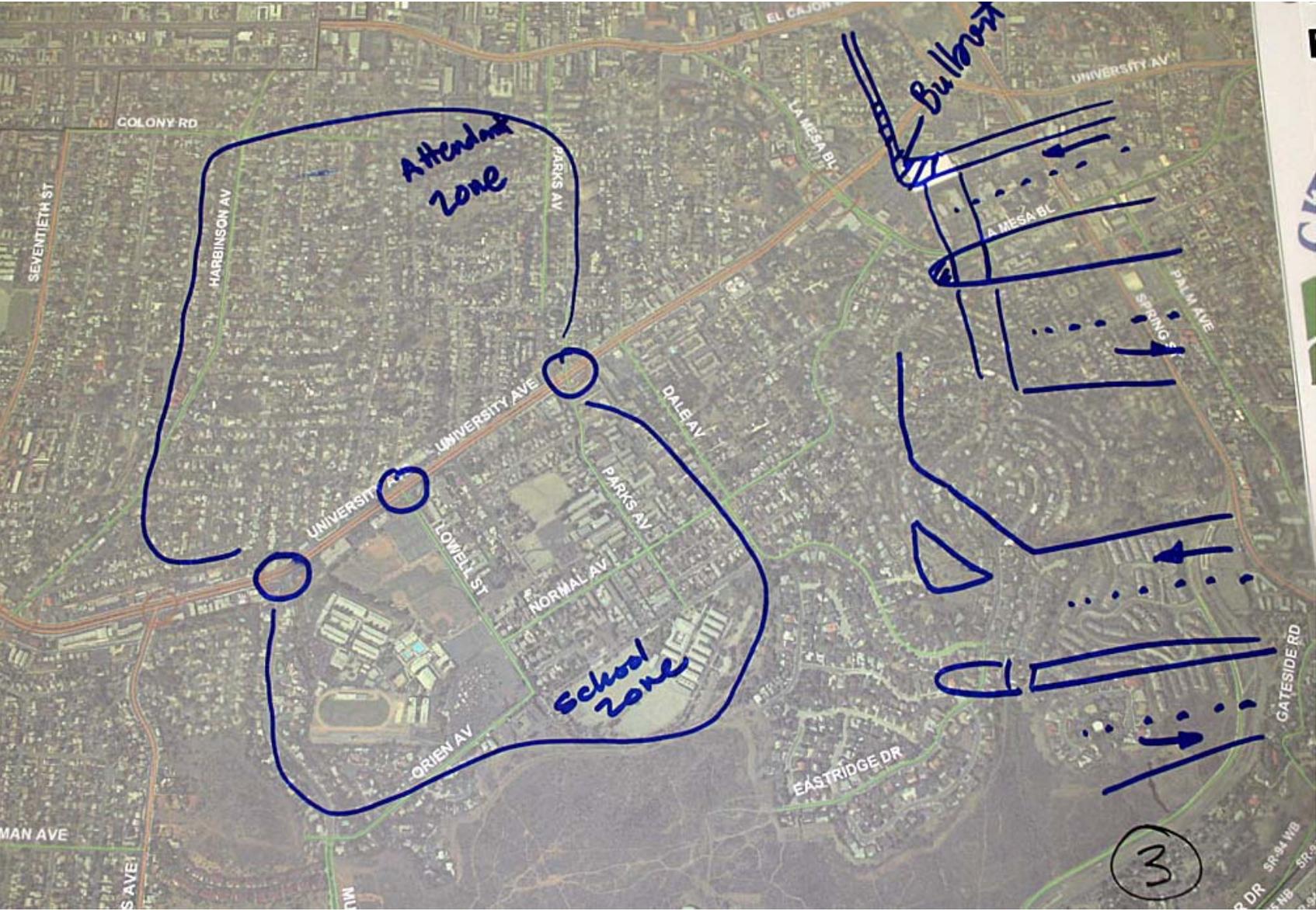


# Appendix B: Public Participation – Focus Groups



Group 2

# Appendix B: Public Participation – Saturday Workshop



Group 3

B-12



# Appendix B: Public Participation – Focus Groups









# Appendix B: Public Participation – Focus Groups



## Appendix B: Public Participation – Focus Groups

### Focus Group 1

#### La Mesa Commissions

December 16, 2004

##### Participants:

Bob Duff, Commission on Aging  
Sharon Godell, Historic Preservation  
Commission  
Mike Caprio, Traffic Commission

##### Staff/Consultants:

Patricia Rutledge, Planning Department  
Hamed Hajemian, Public Works Department  
Dan Burden, Walkable Communities  
Paul Zykofsky, Local Government  
Commission

Facilitated by Dan Burden.

Dan Burden introduced process by describing effort to develop a master plan for walking. Having a Plan in place will help get funding in future. Process will involve meetings, design, walk audits, etc. in order to get best information from the community.

Bob Duff:

Elected Board member of Spring Hill School District. Is bicyclist and is concerned with safety around schools. Walkability around parks – more around here – not as important with other parks. Jackson not good park to walk to and from. Most people drive to park. City is blessed with parks. Bancroft Park not easy to get to, on a hill. Briar Crest

park probably gets walking to it and has a lot of walking within it. Grisson park (?) with El Cajon, haven't seen people walking to it. MacArthur is walk park and people walk their dogs.

Areas that might need a park?  
Pretty well covered.  
Schools, how big an issue is it?

Walking to school has declined significantly. Lemon Avenue, they do walk to it. Parkway middle school. Bad traffic pattern at 2:30pm is very bad. Kids walk chaotically across. Not safe. YMCA park is near there as well. Get a lot of walking traffic from Lubbock Avenue and folks outside city.

Lemon Avenue, not safest street to walk on with high traffic. Avoid at 8 am and 2:30pm. Back up on all the streets. Have traffic patrol. Lots of parents still talking on cell phone when picking kids up. Traffic speed is ok. Christian Hill there is church school. Kids do walk from area nearby.

Around Helix High School always a traffic problem. High School kids drive. Also near La Mesa Middle School very difficult to get through. La Mesa Dale is all pedestrian, bedroom community. Traffic speed is high because is downhill.

Mike Caprio:

Wedded to car. My primary concern is when you live on a hill and since Dial-a-ride no longer in existence there are people who are

housebound, electric scooters don't have power to go up hills.

One gentleman who is 80 and can't get around without someone giving them a ride.

Patricia Rutledge:

For 30 years state gave grant for Dial-a-Ride. Well loved, well used but extremely expensive program – approximately \$20/ride. Funding sources changed and it became too expensive so went through traumatic time and had to end it.

Transit service is required to provide complementary program like Dial-a-Ride. But have to be certified that you can't get around on transit. People less willing to try.

One option would be to extend transit up the hills. They can walk but can't get up hills. None of transit vehicles come up the hill.

Patricia Rutledge:

In current funding climate very difficult to do. Might need more funding for transit.

Dan Burden:

How to make intersections easier to cross.

Mike Caprio:

A lot of problems with that. Four-way stop has helped a lot at Normal and Helix High. Traffic calming, have a major project going. Residents have been notified and have priori-



## Appendix B: Public Participation – Focus Groups

tized so can only do 3 or 4 a year. If you really want it and are willing to pay for it we will prioritize but no one has agreed to do it thus far. Ask residents what they want and then tell them what will cost. And if it's too much for budget the City will put at top of list to do it.

Bob Duff:

Signs that tell you how fast you're driving. Have police enforce at first and then keeps speed lower. Adamantly against red light cameras. City council has opposed it as well. Program lights so that you have a longer duration to switch so folks can jump yellow.

Sharon Godell:

Like to walk around a lot in downtown. Would like to see continuous sidewalks throughout downtown and other parts of the City.

Hate walking along Spring Street and crossing it. Traffic and noise is bad. Sidewalk on La Mesa dips.

Walk up to industrial area is very difficult. Don't feel safe riding bicycle because pavement uneven and some of streets uneven.

Bob Duff:

Ever consider shuttle bus from Grossmont Center up to hospital and downtown La Mesa and then down to 70<sup>th</sup> street to all hospitals zones? Circulator bus that we could depend a lot on.

Patricia Rutledge:

Hospital does run private shuttle from Grossmont Center transit station.

Sharon Godell:

I'd like to see it be easier to get across intersections.

Bob Duff:

University and La Mesa Blvd.

Sharon Godell:

Also the way the ped signals work. If don't hit signal at the right time won't be able to cross.

Bicycle loops are located on bike routes. So can tune.

Dan Burden:

Can also put in call button. Street that goes by Trader Joes, Murray Drive and Grossmont Center.

Patricia Rutledge:

Walk intervals not long enough to get across. Spring Street and Allison is a problem. Walk interval not long enough. "Don't walk" signal comes up very quickly.

Mike Caprio:

Police department has been timing the intervals to see if they work.

Hamed Hashemian:

Caltrans hasn't approved countdown signals as standard device yet. Because of liabilities.

New intersections have the facility but are not turned on yet. Yale and University has them. Several new signals have them.

Dan Burden:

Is release interval long enough? Should be 7 seconds for the green.

Hamed Hashemian:

Based on 4 ft./sec.

Patricia Rutledge:

Right turners that don't look at pedestrians.

Dan Burden:

One option, prohibit right turns on reds near schools and in downtowns. Can be very complex.

Other tool. Early release of pedestrian.



## Appendix B: Public Participation – Focus Groups

### Focus Group 2

#### School Officials

January 7, 2005

##### Participants:

Jerry Lecko, La Mesa Middle Schools PTA  
John Bley, La Mesa Spring Valley School District

Hugh Montgomery, Rolando Elementary PTA

##### Staff/Consultants

Hamed Hashemian, City of La Mesa  
Patricia Rutledge, City of La Mesa  
Dan Burden, Walkable Communities  
Paul Zykofsky, Local Government Commission

Dan introduced focus group by discussing the importance of schools to improving walkability in a community and to learning key problems and issues.

John Bley:

La Mesa very spread out so people walk around their schools. Lower income residents near La Mesa Dale and Rolando Elementary do walk in area around the schools. Don't come to community center. Do go to Kroc Center. School District is doing a lot with Kroc center, summer program to do a lot of activities. Includes La Mesa Dale (1-1/4 mile).

Problems around Lemon Avenue. Glen and Madison is one of the most difficult. City just put sidewalks down Lemon toward Bancroft. Cars speeding down curve on Lemon. Many kids walking down hill but no sidewalk. St. Andrews across street must have problem as well. A lot has been done in past few years to improve things around some of the schools.

Release hours: Middle schools, 9-3:30, Elementary Schools from 7:55 to 8:55 with release around 2:35pm. Based on bus transportation. All schools have bus transportation. Buses take elementary schools first and then middle school. Helix is charter school, not part of Spring Valley School District. Starts 7:30am ends 3:00 pm but have extracurricular activities before and after.

Grossmont HS same.

Jerry Lecko:

Parent and has son at La Mesa Middle School. Both went to Lemon Valley. Daughter at Helix H.S. Dr. Bley has spoken about one of pet peeves: the traffic problem at Lemon has been a big problem. As parent who has lived here over 15 years recognize that it's a built out city but some of schools built in 40s. Those neighborhoods that are built out have infrastructure and design of schools from a different era — not vehicle oriented. Now everyone has SUVs and because of lack of infrastructure — sidewalks — parents are driving kids to school. Lemon Ave and La Mesa Middle school are good cases, two periods

when traffic is very intense around that area. Sidewalks and streets can't carry volume of cars and pedestrians. Would take a lot of infrastructure to deal with these problems. City has been aware of Lemon Hill problem. No curbs and gutters let alone sidewalks. Streets narrow so there are a lot of issues to deal with.

Wanted to bring up today something that might be more cost effective. When have so much traffic conflicting with commuters — Lemon Avenue at 8am — is same time when residents commuting to work. At Lemon when the Police is near the intersection — La Mesa Middle School and Lemon Avenue — the courtesy is much higher. Just the presence of law enforcement makes big difference. Principals at both schools will request police presence because there's problem with speeding, U-turns (La Mesa Middle School), illegal parking, taking up disabled parking.

Dr. Smith from Helix was going to mention this. Some concern at Middle school that gets out at 3:30pm, High School get out at 3pm and walk right by middle school. Many HS kids cut through bus access lane and are already hanging out so there is a problem of middle school kids getting harassed or intimidated. Undermines feeling of security around school. Have HS kids around in groups that might be intimidating to younger kids. There are sidewalks, crosswalks, etc. but neighborhood doesn't feel safe. Have



## Appendix B: Public Participation – Focus Groups

been a few instances of gang fight at park next to middle school so parents and students don't feel safe. When incident happened the police was there immediately but it did create a bad image. Presence of law enforcement does make a difference. La Mesa doesn't have police assigned to each school, only to HS.

John Bley:

That area is going to change because City is creating a teen center in Highwood Park near MS that will attract HS kids. Teen center should bring adult supervision. Will provide activities for children in west side of school. Boys & Girls club.

Hugh Montgomery:

PTA president at Rolando just took over last year. Earlier in year a parent complained about a trash truck coming through at same time as school start. People concerned about people hanging out in front of their home. Check on where sexual predators. Lay out good walking routes.

Have safety patrol on 70<sup>th</sup> street that is a big intersection. Safety patrol is there too late. Get Retired Senior Volunteer Program (RSVP). Get them involved.

Jerry Lecko:

At most schools also have strong safety patrol. Starts out well at beginning of year with supervisor (teacher or principal). But there are times when there is no staff out there to

supervise. There should always be an adult to supervise. Is there some way to ticket people who run stop sign.

Hugh Montgomery:

RSVP could help the school patrols especially when school progresses and staff aren't able to be there.

Dan Burden:

Florida program where have very good school training program. Trained and administered by police. Adult paid crossing guards.

Some schools in SF Bay area have paid school crossing guards.

John Bley:

Here only have junior patrols with staff supervisor. Do schools have traffic safety team to address problems?

Jerry Lecko:

Lemon Avenue based on principal's leadership, traffic committee convened only a few times over the years. Committee met because of problems with construction.

John Bley:

School site council that looks at safety but are typically concerned with safety within school.

Hugh Montgomery:

Drop offs across street. Parents do crazy things. At end of street there was space for turnaround but that is not available. Walking

is nice. But no way to drop them off near school.

Jerry Lecko:

At Lemon Avenue there was discussion about changing start time to get away from traffic crunch at 8am. But difficult to do because of school times.

Hamed Hashemian:

Observed that people don't stop when school bus stops. Other places that's not the case.

Jerry Lecko:

People still do U-turns after dropping kids in street.

Dan Burden:

Is there information sent out at beginning of year?

John Bley:

Yes. Also newsletters.

Hugh Montgomery:

Looked at providing additional dropoff points. Limiting parking until 9am.

Jerry Lecko:

At La Mesa middle school there are about 10 buses that are ready to go. Usually principal goes out into middle of intersection. Problem is that once buses get out on Parks Avenue they then get stopped. Get bottleneck. Appropriate location for RSVP or different



## Appendix B: Public Participation – Focus Groups

treatment. Parks and Normal. Between 8:45 and 9 or at 3:10 pm.

Dan Burden:

Questions. Is there a school where you could do a special program? Where you get police out there for a week?

John Bley:

Could do at any of the schools. Principals would be happy to do.

Hugh Montgomery:

Could do at Rolando.

Jerry Lecko:

Could do at Lemon Avenue at weird intersection.

Dan Burden:

Which other schools would you mention as problematic?

Jerry Lecko:

Helix HS. Main entrance right off University. There was a problem at intersection of Lowell.

They recently put in stop sign. Has improved things a lot.

John Bley:

La Mesa Dale. Problem with Parks Ave which is narrow. Have changed so that buses and parents can do drop off inside lot.

Patricia Rutledge:

Maryland Avenue is walk only? How determine?

John Bley:

Depends on boundaries. Some improvements made around Maryland Avenue. Quieter neighborhood and small school, 300 kids. Middle school has 1200, Rolando 450, Helix 2500.

Dan Burden:

Have each teacher do a survey of how kids got to school on a given day. Establish benchmark.

Walking school bus?

Jerry Lecko:

Informally some of the neighborhood mothers are doing that. Usually two or more mothers that are walking children.

Dan Burden:

Safety vs. security. In Florida found that 50% safety, 50% security problem.

Hugh Montgomery:

Numbers of kids riding bike has declined. Have bike rodeo that kids have to go through to get permission to ride. But number is much smaller.

Bus service costs \$130/month. Expanded radius to qualify for bus service last year because of budget crisis.

### Focus Group 3

Caltrans, Transit Agency,  
Police and Fire Departments

January 7, 2005

#### Participants:

Dan Gallagher, Caltrans, Bike/Ped  
Coordinator

Susan Hafner, Metropolitan Transportation  
Development Board

Malcolm Chambers, La Mesa Police  
Department

Greg McAlpine, La Mesa Fire Department

#### Staff/Consultants:

Hamed Hashemian, Public Works Department

Patricia Rutledge, Planning Department

Dan Burden, Walkable Communities

Paul Zykofsky, Local Government Commission

Dan Burden introduced focus group by discussing what we are doing, its importance and learning issues that are key to improving walking.

Dan Gallagher:

Caltrans has a Deputy Directive 64 to consider biking and walking on all facilities. Are really trying to promote that. In Highway Design Manual have also looked at how to bring bicycles through freeway interchanges. Most perilous places usually are on and off-



## Appendix B: Public Participation – Focus Groups

ramps. I-15 and 40<sup>th</sup> Street made very bike and ped friendly and worked closely with community. Includes bus transit. For bicycles re-did Gilman I-5 where Rose canyon bike path ends. Large student population going up to UCSD and that was a very difficult interchange for bicyclists. Signage and re-stripping. Moving to make freeways less of an impediment to non-motorized travel.

Dan Burden:  
Examples of new pedestrian overpasses that have been built in this area?

Dan Gallagher:  
I-15 at 40<sup>th</sup>. Out here Grape Street where it doesn't work will.

Susan Hafner:  
Challenge is that station has a lot of other things going on around it. Safety, passenger's ability to get on and off and get to where need to go. Also challenge with bus stops. Lot of things that are characteristic to area. More wayfinding and indications to show where people can get across street.

Dan Burden:  
Learned in Seattle that half of all pedestrian crashes were transit users. Good model of good crossings?

Susan Hafner:  
Elements that are important, good signage, good markings, signalized intersections with good ped signals. From transit perspective

want to serve active centers and urban areas and recognize that need to communicate to passengers how to get there.

Hamed Hashemian:  
Spring Street is an area with a lot of crossings with trolley line. Opportunities to improve railroad crossings for pedestrians.

Susan Hafner:  
Big challenge. But don't necessarily have models.

Malcolm Chambers:  
From police department standpoint our concern is safe flow of traffic through city. Get collisions when people running to catch transit. If redesign try to make city more ped friendly. For example very difficult to get from trolley to bus. Have had people hit. Design so that it would be easier to get across Allison. Have had crashes, not fatality. Especially difficult for disabled person.

Traffic flow and safety for pedestrians. Good example is the way the fence and landscaping keeps people from crossing Spring Street.

Bus stops. Crashes when buses pull out from stop. Cars not aware what bus is going to do. Problem on Allison when bus pulls out. Examples, El Cajon or San Diego.

Hamed Hashemian:  
In Toronto bus stops are at intersections and typically there's a bus pocket which was also

the right turn lane and it's illegal to go around bus so cars line up behind bus. Issue with laws.

Greg McAlpine  
Echo what Malcolm was saying. Have seen crashes caused by aggressive bus drivers who get concerned. What are issues that tend to come up with fire departments.

Dan Burden  
Try to provide access on major collectors, arterials, etc. And make sure that they have good access. We'll also address some of the treatments that can work well that don't impact emergency responders. Keep good level of connectivity.

Greg McAlpine  
5 minute maximum response time. Respond also with paramedic assessment team. And then bring in private ambulances.

Dan Burden  
Train police to also do defibrillation.

Malcolm Chambers:  
3 motorcycle police. Only use cops on bikes during special events.

Traffic fatalities. Baltimore. Massachusetts, could be a car and a pole, not a pedestrian. Areas around La Mesa Middle school, Helix high school and Yale and University are areas with most problems. There is an officer at Helix but traffic is not one of major duties.



## Appendix B: Public Participation – Focus Groups

Dallas and Park Plaza near school, Fletcher Pkwy and Dallas. Fletcher is 45mph street and when children cross there it's a problem. Fletcher and I-125 where there's a walkway from school to cross at Amaya.

Dan Burden

Heard from schools about advantages when have officers at schools

Malcolm Chambers:

Motor officers are assigned to go to schools but can't make that a priority. But problem with some parents that feel that it makes problem worse. 3 officers try to be at the schools in the morning. Bicycles throughout areas. Problems with bike-car collisions; some areas have bike lanes and other areas don't. Markings fade or aren't always there.

Patricia Rutledge:

Goes back to wayfinding and pathfinding issues.

Dan Burden

One tool I really like is what they do in Victoria where every traffic control box they have a map that shows area you're in.

Patricia Rutledge:

Have a bike plan but it's about 20 years old.

Dan Gallagher:

Caltrans has funding for bike programs. Might want to look at that

Hamed Hashemian:

Have Caltrans bridges that are obstacles. How do we deal with that issue, e.g., Spring St.

Dan Gallagher:

If re-doing ramps or dealing with interchange now are looking at ways to fix. But do have other safety fund problems for minor A or B funds.

Patricia Rutledge:

Big draw for jobs in La Mesa industrial area.

Susan Hafner:

Transit station with west side shuttle at new location.

Dan Gallagher:

Holds a lot of clout if in your master plan you identify areas where connectivity is needed so that if Caltrans is doing project then you can tell us what needs to be done.

Susan Hafner:

Bus rapid transit is under discussion but not in this area. One to SDSU on El Cajon.

Dan Gallagher:

Look at 40<sup>th</sup> and I-15, crosswalks marked.

Hamed Hashemian:

Signal timing with Caltrans facilities. Are now working with operations folks to see.





# **Walkability Plan**

## **City of La Mesa, California**

### **Appendix C:**

### **Crosswalk Guidelines**

**February 2006**

### **Pedestrian Facilities Users Guide — Providing Safety and Mobility**

Publication No. FHWA-RD-01-102



U.S. Department of Transportation  
**Federal Highway Administration**  
Research and Development  
11700 Fairbank Highway Research Center  
6300 Georgetown Pike  
McLean, VA 22101-2296

March 2002





## Appendix C: Crosswalk Guidelines

### Recommended Guidelines for Crosswalk Installation

From FHWA– Publication No. FHWA-RD-01-102  
Pedestrian Facilities Users Guide

Marked crosswalks serve two purposes: (1) they tell the pedestrian the best place to cross, and (2) they clarify that a legal crosswalk exists at a particular location.

Marked crosswalks are one tool to get pedestrians safely across the street. When considering marked crosswalks at uncontrolled locations, the question should not simply be: "Should I provide a marked crosswalk or not?" Instead, the question should be: "Is this an appropriate tool for getting pedestrians across the street?" Regardless of whether marked crosswalks are used, there remains the fundamental objective of getting pedestrians safely across the street.

In most cases, marked crosswalks are best used in combination with other treatments (e.g., curb extensions raised crossing islands, traffic signals, roadway narrowing, enhanced overhead lighting, traffic-calming measures, etc.). Think of marked crosswalks as one of a progression of design treatments. If one treatment does not ade-

quately accomplish the task, then move on to the next one. The failure of one particular treatment is not a license to give up and do nothing. In all cases, the final design must address the goal of getting pedestrians across the road safely.

Marked pedestrian crosswalks may be used to delineate preferred pedestrian paths across roadways under the following conditions:

1. At locations with stop signs or traffic signals. Vehicular traffic might block pedestrian traffic when stopping for a stop sign or red light; marking crosswalks may help to reduce this occurrence.
2. At non-signalized street crossing locations in designated school zones. Use of adult crossing guards, school signs and markings, and/or traffic signals with pedestrian signals (when warranted) should be used in conjunction with the marked crosswalk, as needed.
3. At non-signalized locations where engineering judgment dictates that the number of motor vehicle lanes, pedestrian exposure, average daily traffic (ADT), posted speed limit, and geometry of the location would make the use of specially

designated crosswalks desirable for traffic/pedestrian safety and mobility. This must consider the conditions listed below.

Marked crosswalks alone are insufficient (i.e., without traffic-calming treatments, traffic signals, and pedestrian signals when warranted, or other substantial crossing improvement) and should not be used under the following conditions:

1. Where the speed limit exceeds 64.4 km/hour (40 mi/h).
2. On a roadway with four or more lanes without a raised median or crossing island that has (or will soon have) an ADT of 12,000 or greater.
3. On a roadway with four or more lanes with a raised median or crossing island that has (or will soon have) an ADT of 15,000 or greater.

Street crossing locations should be routinely reviewed to consider the following available options:

- Option 1 — No special provisions needed.
- Option 2 — Provide a marked crosswalk alone.



## Appendix C: Crosswalk Guidelines

- Option 3 — Install other crossing improvements (with or without a marked crosswalk) to reduce vehicle speeds, shorten crossing distances, increase the likelihood of motorists stopping and yielding, and/or other outcome.

The spacing of marked crosswalks should also be considered so that they are not placed too close together.

A more conservative use of crosswalks is generally preferred. Thus, it is recommended that in situations where marked crosswalks alone are acceptable that a higher priority be placed on their use at locations having a minimum of 20 pedestrian crossings per peak hour (or 15 or more elderly and/or child pedestrians per peak hour). In all cases, good engineering judgment must be applied.

### Other Factors

#### Distance of Marked Crosswalks From Signalized Intersections

Marked crosswalks should not be installed in close proximity to traffic signals, since pedestrians should be encouraged to cross at the signal in most situations. The minimum distance from a signal for installing a marked crosswalk should be determined by

local traffic engineers based on pedestrian crossing demand, type of roadway, traffic volume, and other factors. The objective of adding a marked crosswalk is to channel pedestrians to safer crossing points. It should be understood, however, that pedestrian crossing behavior may be difficult to control merely by the addition of marked crosswalks. The new marked crosswalk should not unduly restrict platooned traffic, and should also be consistent with marked crosswalks at other unsignalized locations in the area.

### Other Treatments

In addition to installing marked crosswalks (or, in some cases, instead of installing marked crosswalks), there are other treatments that should be considered to provide safer and easier crossings for pedestrians at problem locations. Examples of these pedestrian improvements include:

- Providing raised medians (or raised crossing islands) on multi-lane roads.
- Installing traffic signals and pedestrian signals where warranted, and where serious pedestrian crossing problems exist.
- Reducing the exposure distance for pedestrians by:

- Providing curb extensions.
- Providing pedestrian islands.
- Reducing four-lane undivided road sections to two through lanes with a left-turn bay (or a two-way left-turn lane), sidewalks, and bicycle lanes.
- When marked crosswalks are used on uncontrolled multi-lane roads, consideration should be given to installing advance stop lines as much as 9.1 m (30 ft) prior to the crosswalk (with a STOP HERE FOR CROSSWALK sign) in each direction to reduce the likelihood of a multiple-threat pedestrian collision.
- Bus stops should be located on the far side of uncontrolled marked crosswalks.
- Installing traffic-calming measures to slow vehicle speeds and/or reduce cut-through traffic.

Such measures may include:

- Raised crossings (raised crosswalks, raised intersections).
- Street-narrowing measures (chicanes, slow points, "skinny street" designs).

Intersection designs (traffic mini-circles,



## Appendix C: Crosswalk Guidelines

diagonal diverters).

- Others (see *ITE Traffic-Calming Guide* for further details) Some of these traffic-calming measures are better suited to local or neighborhood streets than to arterial streets:
- Providing adequate nighttime street lighting for pedestrians in areas with nighttime pedestrian activity where illumination is inadequate.
- Designing safer intersections and driveways for pedestrians (e.g., crossing islands, tighter turn radii), which take into consideration the needs of pedestrians.

These guidelines were developed in an FHWA report entitled *Safety Effects of Marked vs. Unmarked*

*Crosswalks at Uncontrolled Locations*<sup>(1)</sup>

This report may be found at:

[www.walkinginfo.org/rd/devices.htm](http://www.walkinginfo.org/rd/devices.htm).

In developing these proposed U.S. guidelines for marked crosswalks and other pedestrian measures, consideration was given not only to the research results in this study, but also to crosswalk guidelines and related pedestrian safety research in Australia, Canada, Germany, Great Britain, Hungary, The

Netherlands, Norway, and Sweden (see references 2-8).

### References

1. Zegeer, C., J. Stewart, and H. Huang, *Safety Effects of Marked vs. Unmarked Crosswalks at Uncontrolled Locations*, Report No. FHWA-RD-01-142, FHWA, Washington, DC, May 2001.
2. *Safety of Vulnerable Road Users*, Organisation for Economic Co-operation and Development (OECD), August 1998.
3. Ekman, L., *Pedestrian Safety in Sweden*, Report No. FHWA-RD-99-091, FHWA, Washington, DC, December 1999.
4. Hummel, T., *Dutch Pedestrian Safety Research Review*, Report No. FHWA-RD-99-092, FHWA, Washington, DC, December 1999.
5. *Pedestrian Safety: Analyses and Safety Measures*, Danish Road Directorate, Division of Traffic Safety and Environment, Copenhagen, June 1998.
6. Van Houten, R., *Canadian Research on Pedestrian Safety*, Report No. FHWA-RD-99-090, FHWA, Washington, DC, December 1999.

7. Cairney, P., *Pedestrian Safety in Australia*, Report No. FHWA-RD-99-093, FHWA, Washington, DC, December 1999.

8. Davies, D., *Research, Development, and Implementation of Pedestrian Safety Facilities in the United Kingdom*, Report No. FHWA-RD-99-089, FHWA, Washington, DC, December 1999.



# **Walkability Plan**

## **City of La Mesa**

### **Appendix D: Annotated Bibliography**



## Appendix D: Annotated Bibliography

### General Information and Design Resources

**Accommodating Bicycle and Pedestrian Travel: A Recommended Approach**, A US DOT Policy Statement on Integrating Bicycling and Walking into Transportation Infrastructure (2000), Federal Highway Administration.

*This document is a policy statement adopted by the United States Department of Transportation that incorporates three key principles: a policy statement that bicycling and walking facilities will be incorporated into all transportation projects unless exceptional circumstances exist; an approach to achieving this policy that has already worked in State and local agencies; and a series of action items that a public agency, professional association, or advocacy group can take to achieve the overriding goal of improving conditions for bicycling and walking.*

**Exemplary Bicycle and Pedestrian Plans** (2002), Pedestrian and Bicycle Information Center. [www.bicyclinginfo.org/pp/exemplary\\_print.htm](http://www.bicyclinginfo.org/pp/exemplary_print.htm)

*This list of exemplary bicycle and pedestrian plans was compiled to provide easy access to a number of good examples of comprehensive bicycle and pedestrian planning.*

**Flexibility in Highway Design** (1997), Federal Highway Administration. HEP 30. [www.fhwa.dot.gov/environment/flex/](http://www.fhwa.dot.gov/environment/flex/)

*This guide provides guidance about designing highways that incorporate community needs. It is written for highway engineers and project managers who want to learn more about the flexibility available to them when designing roads and illustrates successful approaches used in other highway projects. It can also be used by citizens who want to gain a better understanding of the highway design process.*

**Highway Capacity Manual** (2000), Transportation Research Board.

*The Highway Capacity Manual is a collection of procedures and methodologies for calculating highway capacity and level of service. The Manual neither constitutes nor attempts to establish legal standards for highway construction. Rather, it provides methods for analyzing in advance the quantity of service a highway can provide as well as the quality of that service. Chapter 19 focuses on bicycles.*

**Improving Conditions for Bicycling and Walking: A Best Practices Report** (1998), Federal Highway Administration.

*This document provides one-page anecdotal articles on successful bicycle and pedestrian programs and case studies around the United States, plus broad topics such as streetscape design and bicycle boulevards.*

**Manual on Uniform Traffic Control Devices [MUTCD]** (2001), American Traffic Safety Services Association, American Association of State Highway Transportation Officials, Federal Highway Administration, and the Institute of Transportation Engineers. <http://mutcd.fhwa.dot.gov/>

*The Manual on Uniform Traffic Control Devices, or MUTCD defines the standards used by road managers nationwide to install and maintain traffic control devices on all streets and highways. The MUTCD is published by the Federal Highway Administration (FHWA) under 23 Code of Federal Regulations (CFR), Part 655, Subpart F. Part 4, Section 4E.06 provides guidance, standards and support for the use of Accessible Pedestrian Signals. Section 4E.07 provides guidance, standards and support for the use of Pedestrian Detectors. Section 4E.08 provides guidance, standards and support for the use of Accessible Pedestrian Signals Detectors. Part 9 provides Traffic Controls for Bicycle Facilities. Other reports address bicycle and pedestrian issues indirectly, e.g., Part 8: Traffic Control Devices for Highway-Rail Grade Crossings.*

*This guide compiled the most relevant existing information related to the planning, design, and operation of pedestrian facilities, including the accommodation of pedestrians with disabilities. It also developed guidelines for the planning, design, and operation of pedestrian facilities. As of summer 2003, this guide had not been published.*



## Appendix D: Annotated Bibliography

### **Pedestrian and Bicycling Information Center (PBIC)**

<http://www.bicyclinginfo.org> (bicycling)

<http://www.walkinginfo.org> (walking)

*The PBIC is a web-based clearing-house for information about health and safety, engineering, design, advocacy, education, enforcement and access, and mobility with regard to bicycling and walking. The PBIC serves anyone interested in pedestrian and bicycle issues, including planners, engineers, private citizens, advocates, educators, police enforcement and the health community.*

### **Policy on Geometric Design of Highways and Streets [The Green Book] (2001), American Association of State Highway and Transportation Officials.**

*The Green Book provides guidance for the design of roadways including the provision of bicycle and pedestrian-related elements.*

### **Quality/Level of Service Handbook (2002), State of Florida, Department of Transportation.**

*This comprehensive report addresses multi-modal quality and level of service measurement techniques, including a Bicycle Level of Service and a Pedestrian Level of Service methodology.*

### **Recommendations for Traffic Provisions in Built-up Areas (1998), Centre for Research and Contract Standardization in Civil and Traffic Engineering – The Netherlands (CROW).**

*This publication discusses knowledge relating to the design, implementation and management of traffic provisions in built-up areas.*

### **Roadside Design Guide (1988), American Association of State Highway and Transportation Officials.**

*This publication contains information on roadside safety and economics, topography and drainage features, sign and luminaire supports, roadside barriers, median barriers, bridge railings, and crash cushions.*

### **Transportation and Traffic Engineering Handbook (1999), Institute of Transportation Engineers, James L. Pline (Editor).**

*This publication is a technical handbook that provides professionals with a day-to-day reference on principles and proven techniques of transportation and traffic engineering. The Handbook may be useful for non-technical readers, such as policy and neighborhood activists, who want to learn about transportation engineering basics.*

## Pedestrian Facility Design Resources

### **AASHTO Guide for the Planning, Design, and Operations of Pedestrian Facilities (2000), American Association of State Highway and Transportation Officials.**

*This guide compiled the most relevant existing information related to the planning, design, and operation of pedestrian facilities, including the accommodation of pedestrians with disabilities. It also developed guidelines for the planning, design, and operation of pedestrian facilities. As of summer 2003, this guide has not been published.*

### **Alternative Treatments for At-Grade Pedestrian Crossings (2001), Nazir Lalani and the Institute of Traffic Engineers Pedestrian and Bicycle Task Force.**

*This informational report documents studies on crosswalks and warrants used by various entities. The report summarizes studies on pedestrian crossings and assembles in a single document the various treatments currently in use by local agencies in the U.S., Canada, Europe, New Zealand and Australia to improve crossing safety for pedestrians at locations where marked crosswalks are provided. The report also summarizes the results of various studies conducted by public agencies on pedestrian-related collisions, including those documenting the results of removing crosswalk markings at uncontrolled locations.*



## Appendix D: Annotated Bibliography

***Design and Safety of Pedestrian Facilities: A Recommended Practice*** (1998), Institute of Transportation Engineers.

*This recommended practice discusses guidelines for the design and safety of pedestrian facilities to provide safe and efficient opportunities for people to walk near streets and highways.*

***Handbook on Planning, Design and Maintenance of Pedestrian Facilities*** (1989), Report No. FHWA-IP-88-019, Federal Highway Administration, B.L. Bowman, J.J. Fruin, and C.V. Zegeer.

***Implementing Pedestrian Improvements at the Local Level*** (1999), Federal Highway Administration, HSR 20. <http://safety.fhwa.dot.gov/fourthlevel/pdf/LocalPedGuide.pdf>

*This publication reviews pedestrian-friendly policy and design recommendations that strive to improve the pedestrian environment in U.S. communities. It discusses the opportunities and challenges of implementing pedestrian improvements, and the necessary engineering, education, encouragement, and enforcement needed to make communities more pedestrian-friendly.*

***Improving Pedestrian Access to Transit: An Advocacy Handbook*** (1998), Federal Transit Administration / WalkBoston, National Technical Information Service. [http://ntl.bts.gov/ruraltransport/card\\_view.cfm?docid=8764](http://ntl.bts.gov/ruraltransport/card_view.cfm?docid=8764)

*This report was written as a teaching tool for ordinary citizens, and for transportation and urban planners working with citizen groups who advocate for public transit and walkable neighborhoods. It illustrates key steps that activists can take to ensure that public transit supports community needs and creates livable communities through improved pedestrian access. The authors present their personal experience in case studies that detail advocacy techniques and strategies, as well as identify some failures and setbacks. The report also discusses several public transit modes (e.g. bus, light rail, and subway) used in different kinds of communities (low income urban neighborhoods, upper and middle income inner suburb).*

***Main Streets: Flexibility in Design and Operation*** (2002), California Department of Transportation (Caltrans).

*This guidebook identifies the elements of context-sensitive design ranging from community involvement to design elements, safety, pedestrian crossings, visibility, and beautification.*

***Pedestrians and Traffic Control Measures*** (1988), National Cooperative Highway Research Program, Synthesis of Highway Practice Report 139, Transportation Research Board, C.V. Zegeer and S. Zegeer.

***Pedestrian Compatible Roadways: Planning and Design Guidelines*** (1995), Bicycle / Pedestrian Transportation Master Plan, Bicycle and Pedestrian Advocate, New Jersey Department of Transportation. [http://www.state.nj.us/transportation/publicat/pedest\\_guide.htm](http://www.state.nj.us/transportation/publicat/pedest_guide.htm)

*This publication outlines pedestrian planning and design guidelines for the state of New Jersey. The document covers an introduction to pedestrian facilities, guidelines for accommodating pedestrians on roadways, guidelines for encouraging pedestrian travel and operations and maintenance.*



## Appendix D: Annotated Bibliography

***Pedestrian Facilities Guidebook: Incorporating Pedestrians Into Washington's Transportation System*** (1997), Washington State Department of Transportation, Bicycle and Pedestrian Program.

*This guidebook provides the basic principles behind planning for pedestrians and encourages good design practices for traffic and transportation engineers, planners and designers, cities, counties, private developers, design professionals, and others in designing, constructing, and maintaining pedestrian facilities in a variety of settings throughout Washington. The guidebook is also useful for school districts, neighborhood councils, metropolitan planning organizations and citizen advocates.. The documents discuss typical concerns, possible solutions, implementation strategies, and evaluation processes for each topic.*

***Planning and Implementing Pedestrian Facilities in Suburban and Developing Rural Areas***, Report No. 294A, Transportation Research Board.

***Portland Pedestrian Design Guide*** (1998), Portland Pedestrian Program. [www.trans.ci.portland.or.us/designreferences/Pedestrian/DesignGuide.PDF](http://www.trans.ci.portland.or.us/designreferences/Pedestrian/DesignGuide.PDF)

*The purpose of this comprehensive design document is to integrate the wide range of design criteria and practices of pedestrian planning and design into a coherent set of new standards and guidelines that, over time, will promote an environment conducive to walking.*

***Pedestrian Facilities Reference Guide*** (2003), National Center for Bicycling and Walking. [http://www.bikewalk.org/walking/design\\_guide/pedestrian\\_design\\_guide\\_index.htm](http://www.bikewalk.org/walking/design_guide/pedestrian_design_guide_index.htm)

*This web-based reference guide provides links (html and pdf) to a variety of pedestrian facility related topics, including (but not limited to) walkways, intersections, crosswalks, curb ramps, signal timing, signing and marking, amenities, traffic calming, bridges, and the economic benefits of bicycle and pedestrian-based tourism. The documents discuss typical concerns, possible solutions, implementation strategies, and evaluation processes for each topic.*

***Pedestrian Safety Guidelines*** (2003), City of Sacramento, Public Works Department

*This report provides research and recommendations for pedestrian safety focused on the process of how crossing treatments are selected, and the design crossings and intersections. It also includes sections on traffic calming and neighborhood traffic management programs.*

### **Bicycle Facility Design Resources**

***Bicycle Facility Design Standards*** (1998), City of Philadelphia Streets Department

***Bicycle Facility Planning*** (1995), American Planning Association, Planning Advisory Service Report # 459, Pinsof & Musser.

***Bicycle Facilities Planning and Design Handbook*** (2000), State of Florida, Department of Transportation.

*This is one of the oldest and most comprehensive State bicycle facility design manuals available in the United States. The document covers everything from bicycle system planning to location criteria, selection criteria, and design criteria.*



## Appendix D: Annotated Bibliography

### ***Bicycle Facilities Reference Guide***

(2003), National Center for Bicycling and Walking. [www.bikewalk.org/bicycling/design\\_guide/bike\\_design\\_guide\\_index.htm](http://www.bikewalk.org/bicycling/design_guide/bike_design_guide_index.htm)

*This web-based reference guide provides links (html and pdf) to a variety of bicycle facility related topics, including (but not limited to) major urban streets, trail networks, transit connections, railroad crossings, traffic signals, drainage grates, bicycle parking, and the economic benefits of bicycle and pedestrian-based tourism. The documents discuss an overview of the problem, typical concerns, possible solutions, implementation strategies, and evaluation processes for each topic.*

***Bicycle Parking Guidelines*** (2002), Association of Pedestrian and Bicycle Professionals

*This document provides a summary of bicycle parking guidelines focusing on bike racks .*

***Bicycle Technical Guidelines: A Guide for Local Agencies in Santa Clara County*** (1999), Valley Transportation Authority

*This document provides an extensive array of bicycle design guidelines not covered in Chapter 1000. It also covers maintenance guidelines and bicycle parking.*

***Bikeway Planning and Design (Highway Design Manual, Chapter 1000)*** (2001), California Department of Transportation

*This manual provides mandatory and advisory planning and design standards for bikeways in California. The manual includes sections on Class I (bike paths), Class II (bike lanes), and Class III (bike routes). It also covers signage and pavement markings.*

***Collection of Cycle Concepts*** (2000), Danish Road Directorate. [www.cities-for-cyclists.org/dokumenter/cycon.pdf](http://www.cities-for-cyclists.org/dokumenter/cycon.pdf)

*This publication is a Dutch-based collection of bicycle facility treatments that aim to improve safety and increase the number of people who choose bicycling for transportation.*

***Evaluation of Shared-use Facilities for Bicycles and Motor Vehicles*** (1996), Florida Department of Transportation, Pedestrian and Bicycle Safety Office, David L. Harkey, J. Richard Stewart, and Eric A. Rodgman. <http://safety.fhwa.dot.gov/fourthlevel/pdf/UnivNCMar96.PDF>

*This study was completed to evaluate the safety and utility of shared-use facilities in order to provide engineers and planners comprehensive results that could be used in planning and designing roadways to be shared with motorists and bicyclists. The study concludes that the type of facility does not have an effect on the separation of motor vehicles and bicyclists.*

***Florida Bicycle Facilities Planning and Design Handbook*** (2000), Florida Department of Transportation, Pedestrian and Bicycle Safety Office. [www11.myflorida.com/Safety/ped\\_bike/ped\\_bike\\_standards.htm#Florida%20Bike%20Handbook](http://www11.myflorida.com/Safety/ped_bike/ped_bike_standards.htm#Florida%20Bike%20Handbook)

*This comprehensive handbook is intended to aid to engineers, planners, architects, landscape architects, and citizens concerned with the planning and design of bicycle facilities. The handbook also serves as a reference text for FDOT's Bicycle Facilities Planning and Design Course. The chapters include Planning, Safety, On-road Facilities, Shared-use Trails, and Supplemental Facilities.*

***Guide for the Development of Bicycle Facilities*** (1999), American Association of State Highway and Transportation Officials.

*This manual serves as the source of bicycle facility design standards and guidelines for many states in the United States. In California, this manual may serve as a secondary source to Chapter 1000 of the Highway Design Manual on topics not addressed in that document. This document originally was based on Caltrans Chapter 1000, and has been updated and expanded over the past thirty years and now offers a broader array of topics than Chapter 1000. While it is generally consistent with Caltrans Chapter 1000, there are differences in some of the standards and guidelines as well.*



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**Implementing Bicycle Improvements at the Local Level** (1998), Federal Highway Administration, HSR 20. <http://safety.fhwa.dot.gov/fourthlevel/pdf/LocalBike.pdf>

*This publication reviews policy and design recommendations to foster bicycle-friendly communities in the United States. It discusses the opportunities and challenges of implementing bicycle improvements, and the necessary engineering, education, encouragement, and enforcement needed to make communities more bicycle-friendly.*

**North Carolina Bicycle Facilities Planning and Design Guidelines** (1994), North Carolina Department of Transportation.

**Selecting Roadway Design Treatments to Accommodate Bicycles** (1993), Publication No. FHWA-RD-92-073, Federal Highway Administration. <http://safety.fhwa.dot.gov/fourthlevel/pdf/Select.pdf>

*This report presents a set of tables that can be used to determine the recommended type of bicycle facility to be provided in particular roadway situations. In addition, the report presents a brief discussion of the "design user" for bicycle facilities, and presents a planning process for bicycle facilities.*

**Sign Up for the Bike: Design Manual for a Cycle-Friendly Infrastructure** (1993), Centre for Research and Contract Standardization in Civil and Traffic Engineering – The Netherlands (CROW).

*This Dutch technical design manual discusses the evolution and implementation of a comprehensive bicycle network. The manual covers design process, network development, designs for road sections, intersections, and road surfaces, traffic calming (speed inhibitors), unlawful parking, bicycle parking, dealing with construction and other temporary situations, bicycle amenities, and assessment and evaluation of the network.*

## Bicycle and Pedestrian Planning and Design Resources

**Bicycling and Walking in North Carolina: A Long-Range Transportation Plan** (1996), North Carolina Department of Transportation.

[http://www.hsrc.unc.edu/pubinfo/ped\\_officeped.htm](http://www.hsrc.unc.edu/pubinfo/ped_officeped.htm)

*This plan builds upon planning and programming which the NCDOT has been doing for the last 22 years. It sets the direction for future development of bicycling and walking provisions across the State through the use of major goals and specific focus areas. These goals and focus areas will give decision makers a vision as they provide North Carolina with a transportation system that meets the needs of bicyclists and walkers.*



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**Capacity Analysis of Pedestrian and Bicycle Facilities: Recommended Procedures for the "Pedestrians" Chapter of the Highway Capacity Manual** (1998), Publication No. FHWA-RD-98-107, Federal Highway Administration, N. Rouphail, J. Hummer, J. Milazzo II, and P. Allen.  
[www.fhrc.gov/safety/pedbike/pubs/98-107/contents.htm](http://www.fhrc.gov/safety/pedbike/pubs/98-107/contents.htm)

*This report's objective was to develop revised operational analysis procedures for transportation facilities with pedestrian and bicyclist users. This document contains both new and revised procedures for analyzing various types of exclusive and mixed-use pedestrian facilities. These procedures are recommended to determine the level of service for pedestrian facilities on the basis of a summary of available U.S. and international literature.*

**Handbook for Pedestrian Action** (1977), Columbia University/Housing and Urban Development, R. Brambilla and G. Longo.

**Improving Conditions for Bicycling and Walking: A Best Practices Report** (1998), Rails to Trails Conservancy and Association of Pedestrian and Bicycle Professionals.  
<http://safety.fhwa.dot.gov/fourthlevel/pdf/intro.pdf>

*This "best practices" report provides information on some outstanding pedestrian and bicycle projects that have been recognized for increasing walking and bicycling and improving user safety in communities across the U.S.*

**Massachusetts Statewide Bicycle Transportation Plan** (1998), Massachusetts Highway Department and Executive Office of Transportation and Construction.

**National Bicycling and Walking Study: Transportation Choices for a Changing America** (1994), Federal Highway Administration.

*This report synthesizes 24 case-study research reports carried out for the National Bicycling and Walking Study. Current bicycling and walking levels, ways to increase them, and benefits of walking and bicycling are described. Actions to be carried out by various agencies of the U.S. Department of Transportation are listed. Action plans and programs at the State and local level similarly appear; additionally, specific city examples provide concrete data. Appendices include a list of the 24 case studies and a brief look at other nations' policies.*

**Oregon Bicycle and Pedestrian Plan** (1995), Oregon Department of Transportation, Bicycle and Pedestrian Program.

<http://www.odot.state.or.us/techserv/bikewalk/obpplanold.htm>

*This comprehensive plan discusses bicycle and pedestrian planning and policy in the context of Oregon. It also provides design guidelines and best practices for nearly everything related to bicycling and walking and is considered a model plan for the United States. Part One contains the policies and actions that drive ODOT; Part Two, Sections I and II contain planning and design guidelines; Part Two, Section III has maintenance and construction guidelines; Part Two, Section IV contains information for bicycle and pedestrian safety. The appendices contain other information, such as the Oregon statutes that pertain to bicycling and walking.*

**Rails-with-Trails: Lessons Learned** (2003), U.S. Department of Transportation, Federal Highway Administration, Federal Railroad Administration.

*This research document provides a comprehensive overview of trails and bikeways proposed next to active railroads. The report includes an extensive existing conditions analysis, a review of case studies, and a 'Best Practices' section for planning, design, and operation of these types of facilities.*



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***Accommodating the Pedestrian — Adapting Towns and Neighborhoods for Walking and Bicycling***, by **Richard Unter-mann**, March, (1999) By Henry F. Arnold, 1984 (Van Nostrand Reinhold. ISBN 0-442-28823-9

*One of the first books to identify the vast amount of urban and walkability decay occurring in communities paying too much allegiance to space needs of autos. The book identifies factors affecting the behavior and attitudes of people traveling on foot. It suggests varieties of remedies for communities, including downtown and urban environments.*

*The book points out that it is only through improved walkability that safe pedestrian access and use will become again common. It further states that when this occurs we will have true public access, and relief from the air, noise, safety, high transport costs, high energy consumption (and fitness/health) problems currently plaguing us.*

### Trail Design Resources

***Greenways: A Guide to Planning, Design, and Development*** (1993), The Conservation Fund.

*This guide provides professionals and citizen activists with the tools for dealing with all aspects of developing a greenway plan. The volume offers guidance in approaching the overall process of greenway creation while providing as much detail as possible about each step along the way. Topics covered include: the physical development of a greenway, organizing community resources, forging partnerships among public agencies, private groups, citizens, and businesses, principles of ecological design, including wetland restoration, water quality, and wildlife issues.*

***Trail Intersection Design Guidelines*** (1996), Florida Department of Transportation. [www11.myflorida.com/Safety/ped\\_bike/handbooks\\_and\\_research/TRAILINT.PDF](http://www11.myflorida.com/Safety/ped_bike/handbooks_and_research/TRAILINT.PDF)

*This handbook discusses design processes and principles of designing trail/roadway intersections. It includes information on various crossing types, regulating traffic and site design. This handbook also reviews some European trail crossing guidelines. Guidelines from the Netherlands and development of a bicycle crossing time equation are included in the appendices.*

***Trails for the 21st Century: Planning, Design, and Management Manual for Multi-Use Trails*** (1993), Rails to Trails Conservancy, Charles A. Flink, Kristine Olka, and Robert M. Searns.

*This book gives step-by-step guidance in all aspects of the planning, design, and management of multi-use trails. Topics discussed include: how to make physical and cultural assessments of the site and surrounding communities, planning the trail, public involvement, meeting the needs of adjacent landowners, compliance with legislation, designing the trail, meeting the needs of different users, working with special features, managing the trail, and maximizing the trail's potential.*



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### ADA-related Design Resources

**Accessible Pedestrian Signals** (1998), U.S. Access Board. [www.access-board.gov/research&training/pedsignals/peDESTRIAN.htm](http://www.access-board.gov/research&training/pedsignals/peDESTRIAN.htm)

*This document discusses audible pedestrian signals and the accommodation of blind pedestrians at signalized intersections. The document provides design guidelines and implementation strategies for determining appropriate intersections, performing installations, and using advanced detection technology.*

**Accessible Rights of Way: A Design Manual** (1999), U.S. Access Board.

<http://www.access-board.gov/publications/PROW%20Guide/PROWGuide.htm>

*This design manual is divided into two sections. The first section provides background information on the regulatory requirements for accessible public rights-of-way, including an overview of the Americans with Disabilities Act (ADA) and title II requirements. The second section discusses the Best Practices in accessible rights-of-way design and construction and provides detailed information about accessible pedestrian facilities.*

**ADA Accessibility Guidelines for Buildings and Facilities** (1998), U.S. Access Board.

<http://www.access-board.gov/adaag/html/adaag.htm>

*This document contains scoping and technical requirements for accessibility to buildings and facilities by individuals with disabilities under the Americans with Disabilities Act (ADA) of 1990. These scoping and technical requirements are intended to be applied during the design, construction, and alteration of buildings and facilities covered by titles II and III of the ADA.*

**Designing Sidewalks and Trails for Access, Part I of II** (1999), Federal Highway Administration, HEPH-30.

<http://www.fhwa.dot.gov/environment/bikeped/access-1.htm>

*The report is a compilation of data and designs gathered during a comprehensive literature search and site visits conducted throughout the United States. It presents a number of factors that affect the accessibility of sidewalks and trails in the United States. The history of accessibility legislation and an overview of current accessibility laws are provided. The travel characteristics of people with disabilities, children, and older adults are analyzed in relation to their use of sidewalks*

*and trails. Current design practices used in the design of sidewalks and trails are described and analyzed in terms of accessibility, engineering, and construction.*

**Designing Sidewalks and Trails for Access: Part II of II, Best Practices Design Guide** (2001), Federal Highway Administration, Barbara McMillen and others.

*This guidebook is a companion piece to Designing Sidewalks and Trails for Access, Part I of II and is focused on the best practices for designing sidewalks and trails for access. This document provides planners, designers, and transportation engineers with a better understanding of how sidewalks and trails should be developed to promote pedestrian access for all users, including people with disabilities.*



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**Recommended Street Design Guidelines for People Who Are Blind or Visually Impaired.** American Council of the Blind.

**Uniform Federal Accessibility Standards** (1984), available from the U.S. Access Board. [www.access-board.gov/ufas/ufas-html/ufas.htm](http://www.access-board.gov/ufas/ufas-html/ufas.htm)

*This document presents uniform standards for the design, construction and alteration of buildings so that physically handicapped persons will have ready access to and use of them in accordance with the Architectural Barriers Act, 42 U.S.C. 4151-4157. This document strived to minimize the differences in standards and develop standards for facility accessibility by physically handicapped persons for Federal and federally-funded facilities.*

**Universal Access to Outdoor Recreation: A Design Guide** (1993), PLAE, Inc, MIG Communications.

*This book provides the latest in universal design concepts and guidelines for outdoor environments, establishing a framework for determining the appropriate level of access in outdoor sites. It presents detailed design guidelines for the systems and elements necessary for ensuring accessibility to recreational trails, campsites, picnic areas, group meeting areas, and more. Examples demonstrate how the guidelines can be applied in typical outdoor settings to achieve a range of recreational opportunities for individuals of varying abilities.*

### Traffic Calming Design Resources

**Florida Department of Transportation's Roundabout Guide** (1999), Florida Department of Transportation, Institute of Transportation Engineers.

*This guide developed guidelines to assist operating agencies with decisions regarding roundabout design and implementation. The purpose of the guide is to provide guidance for the planning, design and operation of roundabouts in Florida. It deals with the identification of appropriate sites for roundabouts, the geometric design of roundabouts to meet FDOT requirements and operational considerations such as signing, marking, lighting and landscaping.*

**Making Streets that Work** (1996), City of Seattle.

*This document is a two-part educational tool for the creation of strong, sustainable communities based on street design. The guidebook is divided into four chapters preceded by a brief introduction discussing general project information and followed by an extensive section on additional resources. The guidebook is intended to help communities better understand neighborhood issues, identify opportunities, and recommend changes to streets as part of their neighborhood's planning process.*

**National Bicycling and Walking Study: Case Study # 19, Traffic Calming and Auto-Restricted Zones and other Traffic Management Techniques - Their Effects on Bicycling and Pedestrians** (1992), Federal Highway Administration. [www.fhwa.dot.gov/safety/fourthlevel/pdf/Case19.pdf](http://www.fhwa.dot.gov/safety/fourthlevel/pdf/Case19.pdf)

*This report discusses traffic calming and other traffic management methods. The report is divided into three parts. The first two major sections examine the history and traffic-calming techniques installed in Europe, Japan, and the United States. The final section of the report examines the practical and policy implication of traffic calming.*

**Traffic Calming** (1995), American Planning Association.

**Traditional Neighborhood Development Street Design Guidelines** (1997), Proposed Recommended Practice, Institute of Transportation Engineers. [http://safety.fhwa.dot.gov/fourthlevel/pdf/TND\\_Manual.pdf](http://safety.fhwa.dot.gov/fourthlevel/pdf/TND_Manual.pdf)

*This report includes a discussion of the concepts of traditional neighborhood development (TND), which are also referred to as "the new urbanism," as they relate to the role of streets in TND communities; a discussion of the community design parameters under which the guidelines would apply; presentation of the design principles underlying the guidelines; specific guidance on geo-*



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*metric street design; and an appendix that summarizes some recent findings on the relationship between urban design and travel demand.*

**Traffic Calming: State of the Practice** (1999), Institute of Transportation Engineers. <http://safety.fhwa.dot.gov/fourthlevel/pdf/ite/intro.pdf> (document in full)

<http://www.ite.org/traffic/tcstate.htm#tcsop> (by chapter)

*This report contains a synthesis of traffic calming experiences to date in the United States and Canada. It includes information on traffic calming in residential areas and in areas where high speed rural highways transition into rural communities. The report draws from detailed information collected on traffic calming programs in twenty featured communities, another 30 communities surveyed less extensively, and a parallel Canadian effort by the Canadian ITE (CITE) and the Transportation Association of Canada (TAC). The intended audience is transportation professionals.*

**Traffic Control Manual for In-Street Work** (1994), Seattle Engineering Department, City of Seattle. [www.cityofseattle.net/transportation/trafficcontrolmanual.htm](http://www.cityofseattle.net/transportation/trafficcontrolmanual.htm)

*This report provides information about establishing safe construction and work zones that consistently and clearly convey to motorists that work is being performed in the roadway.*

**Roundabouts: An informational guide, FHWA, Publication No. FHWA-RD-00-067** (1999).

*This guide provides assistance in explaining the purpose of roundabouts, planning, capacity, geometrics, critical dimensions, operations, uses, safety and related issues. Although this version is a bit dated, and does not provide sufficient guidance on either ADA or pedestrian/bicycle issues, it is one of the most popular and well used guides.*

**Local Area Traffic Management, Part 10**

**Guide to Traffic Engineering Practice** (Austroads, 1988), National Office Austroads, Level 10, Roden Cutler House 24-28 Campbell Street, Haymarket, NSW Australia, (02) 218-6218

*This Australian guide is one of the oldest and most respected publications working toward uniformity of practice in design, construction and user aspects of roads. This part of the Engineering Practice series is focused on local streets. It incorporates the needs, public process, study, implementation and monitoring.*

**Canadian Guide to Neighborhood Traffic Calming, ITE**, (December, 1998), .

*This guide provides assistance in providing a degree of traffic calming standards, while explaining that it is a guide to be used in conjunction with local conditions and professional judgment.*

*There is a chapter on community involvement, traffic calming process, and attainment of community support. The chapter stresses that neighborhood understanding and support is the most important factor in successful integration of traffic calming.*

**Traffic Calming in Practice**, County Surveyors Society, Department of Transport, Association of London Borough Engineers and Surveyors (November, 1994) .

*This book was produced to provide information to practitioners for practical advice on how to go about traffic calming; and for information on what techniques have proved successful, or indeed unsuccessful, elsewhere. Eighty case studies are provided. Commentary on the case studies provides a quick reference summarizing their effectiveness, cost and main features.*



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**Traffic Calming — The solution to urban traffic and a new vision for neighborhood livability (CART — Citizens Advocating Responsible Transportation),** (1989), Australia. Reprinted in the United States in 1993, with permission, by Sensible Transportation Options for People (STOP), Tigard, Oregon, (503) 624-6083.

*This guide is one of the first of its kind in the world. It has served to introduce many citizens and practitioners on tools proven effective in reducing inappropriate motorist actions in neighborhood settings.*

**Take BACK Your Streets — How to protect communities from Asphalt and Traffic,** (May, 1995), Conservation Law Foundation, Boston Massachusetts (617)-350-0990.

*This document was produced primarily for New England communities. It places streets in context to the purposes and functions of a community and explains road planning, laws governing road planning, reasons why in populated areas it is best to slow traffic, traffic calming measures, and steps readers would consider when highway agencies propose projects that would impact quality of life.*

**Livable Streets, by Donald Appleyard, with M. Sue Gerson and Mark Lintell** (1981), University of California Press, Berkeley and Los Angeles, California, London, England. ISBN 0-520-03689-1

*This book grew out of ten years of research into the quality of life in residential environments and the impacts of traffic on them. Appleyard's seminal work on this topic is still one of the most valuable in understanding the role and importance of well designed, constructed, operated and maintained neighborhood streets.*

*Appleyard measures the impacts of street noise, traffic volume and traffic speed on important qualitative measures, such as levels of human association and friendship, child safety, pride, crime, property values and other social impacts.*

*Appleyard went on to become one of the first practical traffic calming implementers in America (Berkeley, Oakland and San Francisco). Sadly, he was later killed in traffic by a speeding, out-of-control driver.*

**Reclaiming Our Streets** (February, 1993), City of Portland, Oregon, Bureau of Traffic Management, prepared by the Reclaiming Our Streets Task Force.

*Traffic solutions, safer streets, more livable neighborhoods. From media*

*campaigns, education and encouragement to enforcement, engineering and legislation.*

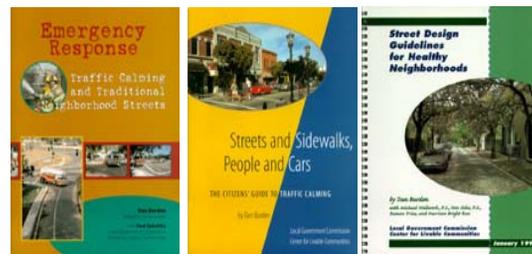
**Streets and Sidewalks, People and Cars — The Citizens' Guide to Traffic Calming, by Dan Burden** (April, 2000), California Local Government Commission, Center for Livable Communities. (916) 448-1198, [www.lgc.org](http://www.lgc.org)

Now the most widely read and distributed publication on traffic calming. This workbook helps practitioners and citizens better understand the dynamics of vehicle and pedestrian movement, identifies traffic calming opportunities, and recommends improvements to streets through new strategies, highly effective public process and modern tools.

Sections include: (1) Street Wise, including a discussion of street design and speeding, (2) Traffic Calming Process, (3) The Toolbox of 20 traffic calming tools, and (4) Resources, including inventory forms and tools needed to survey and evaluate neighborhood streets. (This book can be purchased in bulk quantities for wide distribution.)

**Emergency Response: Traffic Calming and Traditional Neighborhood Streets, by Dan Burden, with Paul Zykofsky** (December, 2000), California Local Government Commission, Center for Livable Communities. (916) 448-1198, [www.lgc.org](http://www.lgc.org)

This book is written to further the understanding, dialogue and common needs of public works staff, neighborhood



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leaders and emergency response teams, concerned with maintaining access and quality response times to and inside neighborhoods.

The book details both traditional street forms and modern traffic calming tools, providing alternatives to stop signs and speed humps.

**Street Design Guidelines for Healthy Neighborhoods**, by **Dan Burden**, with **Michael Wallwork, P.E.**, **Ken Sides, P.E.**, **Ramon Trias** and **Harrison Bright Rue** (January, 2002), California Local Government Commission, Center for Livable Communities. (916) 448-1198, [www.lgc.org](http://www.lgc.org)

This book is a response to the growing needs of public works staff and neighborhoods seeking improved ways to design multi-functional streets that work for everyone.

The guide provides applications specific to traditional (old historic and now modern) street forms. The authors are careful to point out that recommended street dimensions used in this guide not be applied to conventional (sprawl/cul-de-sac patterned) neighborhoods.

A number of communities have now adopted these guidelines to provide a base line for new traditional development.

### Safety

*Bicycle Crash Types: A 1990's Informational Guide* (1997), Publication No. FHWA-RD-96-104, Federal Highway Administration, W.H. Hunter, W.E. Pein, and J.C. Stutts. [www.tfhrc.gov/safety/pedbike/ctanbike/ctanbike.htm](http://www.tfhrc.gov/safety/pedbike/ctanbike/ctanbike.htm)

*This pedestrian crash type informational guide is a supplement to a research report entitled, "Pedestrian and Bicycle Crash Types of the Early 1990's" (FHWA-RD-95-163). The purpose of the research was to apply the basic National Highway Traffic Safety Administration (NHTSA) pedestrian and bicyclist typologies to a sample of recent crashes and to refine and update the crash type distributions with particular attention to roadway and locational factors. This particular informational guide provides detail on specific pedestrian-motor vehicle crash types (e.g., intersection dash) through two-page layouts that contain a sketch, description, and summary of the crash type, various graphs, and "bullet" information boxes.*

**Bicycle Safety Research Guide**, U.S. Department of Transportation, Federal Highway Administration, National Highway Traffic Safety Administration.

*This guide, available on CD, provides an excellent summary of current bicycle safety research along with specific recommendations.*

**Bicycle Safety-related Research Synthesis** (1995), University of North Carolina Highway Safety Research Center for Federal Highway Administration.

*This synthesis reviews research into current and potential levels of bicycle use, identifies the scale and nature of crashes related to bicycle use; discusses engineering countermeasures to prevent crashes; and describes current practices related to bicycle facility selection and design. The report also introduces readers to traffic-calming techniques; discusses helmet use; and reviews education and enforcement programs. Conclusions on the current state of knowledge in this field are offered, and where possible, reference to current practices are included.*

**Design of Major Urban Junctions: Review of Guidelines and Research Studies with Focus on Road Safety** (1998), Note no. 52, Danish Road Directorate.

**Developing Urban Management and Safety** (DUMAS), *Safety of Pedestrians and Two-Wheelers* (1998), Note no. 51, Danish Road Directorate.



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***Injuries to Pedestrians and Bicyclists: An Analysis Based on Hospital Emergency Department Data*** (1999), Publication No. FHWA-RD-99-078, Federal Highway Administration, J.C. Stutts and W.W. Hunter. [www.tfhrc.gov/safety/pedbike/research/99078/contents.htm](http://www.tfhrc.gov/safety/pedbike/research/99078/contents.htm)

*The purpose of this study was to broaden understanding about the safety of pedestrians and bicyclists. Traditionally, the U.S. Department of Transportation has relied on State motor vehicle crash data, based on reports completed by police and other law enforcement officers, as their primary source of information on events causing injury to pedestrians and bicyclists. This study was conducted to provide a more accurate description of the entire spectrum of events causing injury to pedestrians and bicyclists, as an aid to more effective countermeasure and program development.*

***Model Pedestrian Safety Program, User's Guide Supplement*** (1987), Publication No. FHWA/RD-87/040, Federal Highway Administration.

***Pedestrian and Bicycle Crash Analysis Tool (PBCAT), Software and User's Manual*** (1999), Publication No. FHWA-RD-99-192, Federal Highway Administration, D.L. Harkey, J. Mekemson, M.C. Chen, and K.A. Krull. [www.fhwa.dot.gov/safety/fourthlevel/pdf/pbcat.pdf](http://www.fhwa.dot.gov/safety/fourthlevel/pdf/pbcat.pdf)

*PBCAT is a software product intended to assist state and local pedestrian and bicycle coordinators, planners, and engineers with the problem of bicycle and pedestrian accidents and fatalities. PBCAT uses a data base to analyze details associated with crashes between motor vehicles and pedestrians or bicyclists. Once the data base is developed, the software can then be used to produce reports and select countermeasures to address the problems identified.*

***Pedestrian and Bicycle Crash Types of the Early 1990's*** (1996), Publication No. FHWA-RD-95-163, Federal Highway Administration, W.H. Hunter, J.C. Stutts, W.E. Pein, and C.L. Cox.

Out of print.

*The purpose of this research was to apply the basic National Highway Traffic Safety Administration (NHTSA) pedestrian and bicyclist typologies to a sample of recent crashes, and to refine and update the crash-type distributions, paying particular attention to roadway and locational factors.*

***Pedestrian Crash Types: A 1990's Informational Guide*** (1997), Publication No. FHWA-RD-96-163, Federal Highway Administration, W.H. Hunter, J.C. Stutts, and W.E. Pein.

*The purpose of the research was to apply the basic National Highway Traffic Safety Administration (NHTSA) pedestrian and bicyclist typologies to a sample of recent crashes and to refine and update the crash type distributions with particular attention to roadway and locational factors. This particular informational guide provides detail on specific pedestrian-motor vehicle crash types (e.g., intersection dash) through two-page layouts that contain a sketch, description, and summary of the crash type, various graphs, and "bullet" information boxes.*

***Pedestrian Safety: The Identification of Precipitating Factors and Possible Countermeasures*** (1971), Publication No. FH-11-7312, National Highway Traffic Safety Administration, M.B. Snyder and R.L. Knoblauch.

***Synthesis of Safety Research Related to Traffic Control and Roadway Elements***, Volume 2, (1982) Publication No. FHWA-TS-82-233, Federal Highway Administration, R.C. Pfefer, A. Sorton, J. Fegan, and M.J. Rosenbaum.



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## Trees

### Trees in Medians

*The purpose of the research was to learn if there is a higher incidence of crashes and crash severity when placing trees in urban medians. Comparisons were made for linear miles of medians with trees and medians without trees. Crashes and crash severity did not increase with trees in medians.*

*The study was conducted for Caltrans by Professor Sullivan, and was reviewed and commented upon by Reid Ewing for the City of Palo Alto, California in 2002. Based on the results of this review the City of Palo Alto and Caltrans have agreed to permit trees in urban medians.*

**Tree Guidelines for San Joaquin Valley Communities**, March, (1999) By E. Gregory McPherson, James R.I. Simpson, Paula J. Peper, Qingfu Xiao, Western Center for Urban Forest Research and Education, Produced by the Local Government Commission, Inc.

*The purpose of this compilation was to provide benefits of street trees to air quality, drainage, cooling and evaporation, walkability, property values, attractiveness of streets, livability and other factors leading to quality urban spaces. The document also provides an excellent bibliography on urban street trees and forestry.*

**Trees in Urban Design, Second Edition**, March, (1999) By Henry F. Arnold, 1992 (Van Nostrand Reinhold.

*The purpose of this publication is to provide aesthetic and technical detail on the placement, planting and nurturing of urban street trees.*

*Many urban foresters reference this as “the book to have to understand the urban tree and urban forest.”*

*In the introduction paragraph to the book the importance of trees is emphasized: “The remarkable aesthetic power of trees distracts artists so much that their potential for building dense organic compositions has been replaced by an over-refined, precious reverence for individual trees. Trees are the most exquisite and most sparingly apportioned raw material of urban design. Our cities display a mere dollop of their sensual color and form. There are exceptions both in North America and Europe to this general rule. Yet the paradox remains—we fail to design with our most humane raw material.”*

## Placemaking and Streetscapes

**The Experience of Place, by Tony Hiss**, March, (1990), Alfred A. Knopf, New York.

*This book offers insight into improving cities and countryside by paying close attention to placemaking. This includes our relationship, bond and connection with place. The author describes loss of place, the importance of place in everyday life, and in meeting and healing social problems. The author visits the importance of William H. Whyte’s studies of plazas and traffic choked streets.*

*The book addresses basic needs of people and society including connect- edness, public value of place, working landscapes, thinking regionally,*



## Appendix D: Annotated Bibliography

***Public Streets for Public Use* by Anne Vernez Moudon** (1991), Columbia University Press, Morningside Edition, New York, Oxford.

*The future of public streets and their reclamation as places for human heart and habitat are linked to this writing.*

*The book points out that contemporary American cities continue to ignore the necessity of pedestrian movement and transit.*

*The book provides substantial documentation of the growing problems associated with failure to provide for walking and placemaking, and identifies essential and appropriate uses of public streets as places to live, associate and share.*

