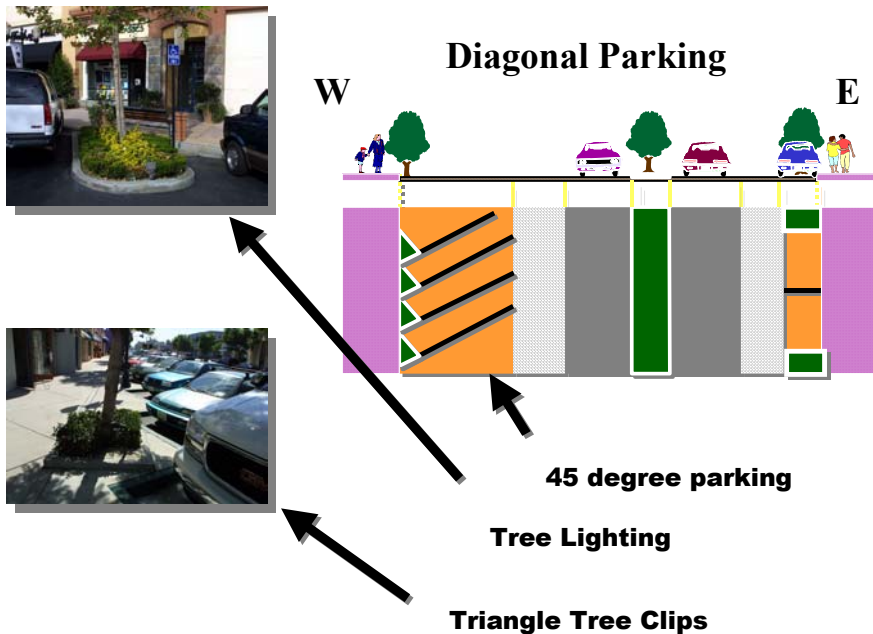


# Section III

## Village Detailed Plan



### BACKGROUND

Residents are concerned with the high rates of speed (38-42 mph), difficulty of crossing La Jolla Boulevard, lack of access, shortage of parking in the area and lack of comfortable public space. Sidewalk spaces are sparse, stark and uninviting. Although sidewalks are adequate in width, they are cluttered and plain, and they pose challenges for people with disabilities. Residents are concerned that if travel lanes are reduced to add diagonal parking and slow traffic speeds, that traffic will spill into adjacent neighborhoods.

The Walkable Communities proposed plan includes the concept of a series of roundabouts, medians, diagonal parking on the West side and parallel parking on the East Side. Buffer lanes next to parking lanes will aid motorists in entering and exiting these spaces without creating delays to through motorists.

This concept improves existing and proposed conditions, such as pedestrian safety. It should reduce speeding in the area, and improve both motorist and pedestrian access issues.

### Benefits to Bird Rock with this altered site plan and intersection enhancement approach includes:

1. Reduced speeds on La Jolla Boulevard (from 40 mph to 15-20 mph at roundabout intersections, and 30 mph elsewhere on La Jolla Boulevard).
2. Roundabouts make it easy to access parking on each side of the street by making U-turns at the nearest roundabout to access far side parking.
3. Improved safety and access to all properties through enhanced low-speed travel and circulation.

## La Jolla Boulevard






*Photo: Southbound on La Jolla Boulevard, approaching Camino de la Casta. This visual widening encourages motorists to increase their speed in Bird Rock. Refuge islands and curb extensions in this 3-lane portion of La Jolla boulevard would improve pedestrian safety.*



### CAN LA JOLLA BOULEVARD WORK WITH TWO LANES?

Traffic Capacity on La Jolla Boulevard is limited by the number of lanes on either approach (2-lanes, plus turn lane), and the peak hour handling capacity of intersections in nearby communities. Based on the analysis conducted by Michael Wallwork, our project engineer, the Bird Rock portion of La Jolla Boulevard is not capable nor anticipated by projections of getting more than 24,000 vehicles per day at build out. Two lanes can handle this traffic volume. A reasonable portion of the traffic on La Jolla Boulevard is locally generated by area residents. Thus, actions taken to make Bird Rock more pedestrian friendly, as well as steps taken to re-create neighborhood service shops, may slightly dampen traffic volumes, or help stabilize these volumes near current levels. This stabilization of volumes may result as Bird Rock and other areas further develop village nodes, where many people use their cars less frequently, and cover less distance to meet their needs.

**Bird Rock  
Phase One**  
**Treatment  
Locations  
(Site Specific)**

-  Roundabouts
-  Other Treatments
-  Visual Treatments






**Phase One**

Some of these elements can be built by Autumn, 2002

- Restripe Forward, Midway, Colima, Linda Rosa, La Jolla Hermosa, Calumet, Chelsea
- Add Stop Sign at Crystal and Chelsea and Crystal and Wrelton
- Add "B" Bars at Wrelton/Chelsea
- Add "B" Bars at Linda Rosa and Forward
- Add diagonal parking on La Jolla Hermosa Between School and Southern end of street
- Add speed table at school crossing on Colima
- Add Mini Roundabout on Chelsea at Sea Ridge
- Add Mini Roundabout at Forward and La Jolla Hermosa
- Add Mini Roundabout at Colima and La Jolla Hermosa

**Bird Rock  
Phase Two**  
**Treatment  
Locations  
(Site Specific)**

-  Roundabouts
-  Other Treatments
-  Visual Treatments






**Phase Two**

Some of these elements can be built as early as Spring, 2003

- Reconstruct La Jolla Boulevard between Forward and Turquoise with Roundabouts at two or more of the following locations: (1) Turquoise and Cam de la Costa, (2) Bird Rock and Forward (3) Midway and Colima.
- Implement the reconfiguration of La Jolla Boulevard, similar to the plan shown on page 13: One traffic lane in each direction with diagonal parking on the west side and parallel parking on the east side etc.
- Reconstruct La Jolla Mesa/Linda Rosa/Colima
- Add short medians to La Jolla Hermosa
- Add bulbouts at Chelsea and Bird Rock
- Add median at Sea Ridge at Beach Access
- Widen park at northern end of Chelsea with one lane pass through

**Bird Rock  
Phase Three**  
**Treatment  
Locations  
(Site Specific)**

-  Roundabouts
-  Other Treatments
-  Visual Treatments



**Phase Three**

Most of these elements will not be built until their need is assessed from evaluations of other tool placements

- Angled slow point on Colima, Midway and Forward
- Add speed table to top of hill on Bellevue between Bird Rock and Cam de la Costa
- Add medians to Bellevue and Cam de la Costa
- Add mini-roundabout at Cam de La Costa and Waverly

**Fire Department Approval:**

The City Transportation Planning staff is currently discussing the plan details with the San Diego Fire Department. Staff intends to obtain fire department's approval of all the traffic calming measures that involve street design change before their implementation.



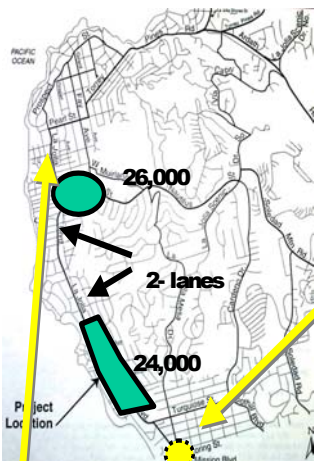
4. Improved pedestrian access and safety for residents, shoppers and others wishing to access their beach, parks, shops, services, other public space and schools.
5. Increased safety of motorists and pedestrians. National figures for similar treatments demonstrate 50 percent reduction of all crashes and up to 90 percent reduction of injury producing crashes from this lower speed environment.
6. Improved and enhanced public space, stability of area retail businesses, ability to establish sense of identity and sense of place through improved streetscaping.
7. Gateway entry to Bird Rock, reduced speed through the shopping district.



## DESIGN

The roundabouts will be single lane devices creating attractive gateway features. One community suggestion is to have a giant bird bath at one of the entry roundabouts. Upward of 25,000 autos can be handled daily with this design. Pedestrians will cross distances of 12-14 feet to median islands, versus today's 68 feet. Speeds through roundabouts are controlled at 15-20 mph. All size vehicles will be able to make all through movements at these roundabouts. Some restrictions will apply to oversize vehicles making some turns.

Median islands will be eight to ten feet wide and will be landscaped to add color and attraction to the area. Delivery trucks will be given appropriate drop-off locations. This portion of La Jolla Boulevard will have on-street parking on each side. The West side will have diagonal parking, while the East side will have parallel parking. There will be two travel lanes through this area. These two lanes are capable of carrying existing traffic of 20,000 vehicles per day, as well as growth in traffic up to 25,000 vehicles per day, 2000 vehicles higher than current projections.



**Traffic Volume Potential**

Traffic in Bird Rock is expected to grow to as high as 23,000 vehicles per day by build out.

Traffic is constrained at these two locations, and in the 2-lane sections.



# Village Details

## BIKE LANES

Bike Lanes are planned for La Jolla Boulevard, from the south to Colima Street and for La Jolla Hermosa, from Colima Street to Cam dela Costa. North of Cam dela Costa the bike lane will become a bike path.

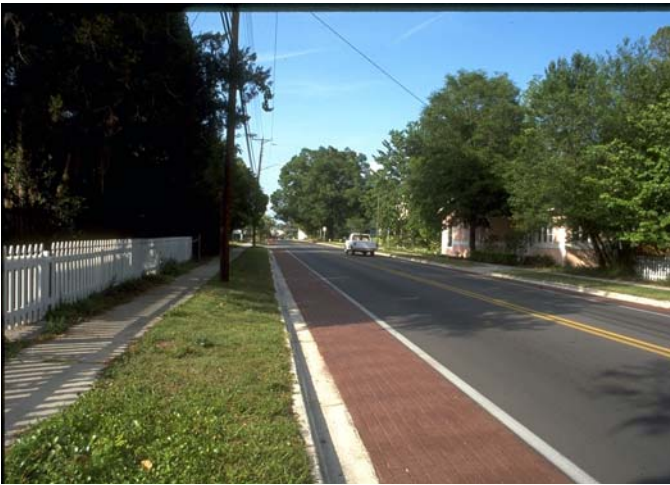
**Width:** Bike lanes are 6.0 feet wide from the curb face to the center of the 6-8" wide lane stripe. Bike lanes should be 6.0-7.0 feet wide when placed next to parallel parking. Lesser dimensions are permitted in some circumstances. If curb lanes are less than 4.0 feet, they should not be labeled bike lanes.

**Materials:** Bike lanes are made either of the same material, depth and base as travel lanes, or may be of a different material to create color contrast as shown in the photo on the left. In some cases, paved shoulders have lesser depth of base material, then reinforced to full depth and base at intersections. Contrasting materials create visual tightening of roadways, which has been shown to reduce speed in some settings.

## TRAVEL LANE(S) AND CAPACITY

Roadway travel lanes must move traffic at uniform speeds, provide flexibility in movement, and provide good, non-slip surfaces. A single urban travel lane can manage 15,000 vehicles daily (1500 in peak hour) to 20,000 vehicles (1800 in peak hour). Interruptions caused by driveways, crossover and stop controls, signals and other intersection traffic greatly reduce carrying capacity of roadway lanes, but can be mitigated by medians, roundabouts and other traffic management techniques. La Jolla Boulevard can be expected to handle all of today's 22,000 vehicles in two lanes, and more, once the stop controls and signals are removed. Thus, an estimate of 25,000 vehicles per day can be handled without a loss of service.

**Width:** Communities seeking to reduce speeding and risk to drivers, pedestrians and bicyclists are learning to reduce urban roadway lane widths and numbers of lanes in appropriate locations. Reductions from the typical 12.0 feet to 11-foot lane width, where appropriate, may provide space for bike lanes, wider sidewalks or wider planter strips. But one-foot lane width reductions from 12.0 feet to 11.0 feet have no effect on vehicle speeds. Lane reductions to 10.0 feet create some reductions in speeding, which may enhance stopping sight-distance. Lane reductions are often made when bike lanes are added. This extra edge space gives large trucks added room for turning into driveways and intersections. In some cases, on lesser classification streets than collector streets, 9.0-foot lanes are appropriate, or necessary, especially in low speed environments.



*Bike lanes offer visual tightening of roadways. They offer up to 22 benefits to roadway designs. Only two of these benefits are for bicyclists. One of the most important uses for a bike lane is to aid in traffic calming. When roadways have more lanes than needed, bike lanes are effective tools making use of existing curb to curb space. Too many lanes in roadway sections (four or more) allow imprudent drivers to set the speed. When just the right number of lanes are applied to roadway sections prudent drivers always set the pace. For more information on bike lanes and paved shoulders see: [www.walkable.org](http://www.walkable.org)*



Recommended lane width for village portions of La Jolla Boulevard under the proposed design is 10.5 feet. This width allows for operations and safety, and permits slightly wider bike lanes or safety lanes to increase turning radii and sight distances needed for large trucks and turning movements.

**Speed:** Increasing numbers of neighborhoods and communities are insisting that roadway lanes not reward speeders. The combination of lane widths and other geometrics and operations that create comfort for 30 mph speed also maximize roadway capacity. The tendency to build in an “extra margin of safety” by creating roadways with design speed 10 mph higher than posted speeds result in motorists feeling comfortable and therefore driving 10 mph faster than is safe. This misunderstanding of cause and effect increases noise, risk to drivers, pedestrians and bicyclists.

#### MEDIANS AND TURNING POCKETS

Medians provide essential buffers between opposing lanes of traffic and can increase carrying capacity of individual lanes by 30%. They do this by restricting the friction of crossover traffic and lane stoppages at turning points. Intersection left turn pockets are provided in the median. This treatment enables management of access points along the road so that full access is provided at major generators and partial to no left turn access is provided at lesser driveways. Medians provide pedestrians with safe refuge as they cross streets. They allow space for street beautification and gateway treatments, and they help eliminate aggressive behaviors such as inappropriate passing.

**Width:** Median widths vary and are often determined by “leftover” space in the right-of-way when all other needs have been met. Medians of 4-8 feet are satisfactory for most pedestrian needs. An 8-foot median is considered sufficient for planting many species of trees and provides requisite setback to meet engineering clearance standards. Trees in medians and planter strips



*Bulbouts are recommended in the village area of La Jolla Boulevard as part of the Roundabout design, and at all other intersections. Curb extensions are also recommended for other portions of the neighborhood. Where indicated in Phase Two or Three construction (see each area for details).*

should be under trimmed 8.0 feet if there is significant volume of trucks. Medians on La Jolla Boulevard are to be 8.0 feet wide. This is the minimum distance for ease of maintenance.

**Height:** Medians are typically designed with curb heights of 6 inches. In some cases low walls or low hedging is used to channel pedestrian crossings to the most appropriate locations. In some cases, such as near Dupont Circle in Washington, D.C., curbs are dropped to permit informal pedestrian crossings. Another height variation is used on 148th Street in Bellevue, Washington, to aid emergency responders. Curbs are flattened, stable surfaces are developed, and grass is grown through the material to permit large fire engines to cross. Visually, motorists see these medians as blockages, adding to access control.

Medians are recommended for all portions of La Jolla Boulevard, from an area preceding Turquoise, to La Canada Street.

#### BULB-OUTS

Bulb-outs are extensions of curbing that reduce lane widths and overall street dimensions. Bulb-outs shorten crossing distances for pedestrians. Bulb-outs at intersections also slow turning traffic, provide added space for street amenities, protect parked vehicles, and improve sight lines. The most important element of a well constructed bulb-out is the introduction of people. It is hard for a motorist to see a pocket of people having fun in their village without wanting to stop and enjoy the ambiance and association. This Los Altos scene is one of four curb extensions on this corner. All four corners are packed with life and activity.



**La Jolla Boulevard today is a large mass of asphalt and resulting induced speed. Medians, curb extensions and landscaping have long been the missing piece to the place making puzzle.**



Medians, bike lanes and roundabouts are exceptionally powerful tools that, when used in combination, allow roadway dimensions to remain at human scale, slowing speeds and curtailing most crashes. Ugly roads are a result of using too few roadway design tools

## ROUNDBABOUTS

Roundabouts are designed to allow traffic to travel between 15 and 22 mph through intersections. Drivers circulating in roundabouts have right of way, so entering traffic yields. Drivers enter just as they would turn right from driveways – wait for gaps and enter. At traffic signals vehicles are sometimes delayed even when there is no traffic on cross streets. This inefficiency is eliminated at roundabouts, which generally improves capacity. Pedestrian crossings are placed one car length away from circulating traffic to ensure drivers' attention is focused on pedestrians, not turning movements. This placement also encourages pedestrians to cross behind vehicles entering roundabouts. Splitter islands, triangular islands at entries to roundabouts, often create refuges for pedestrians waiting for crossing gaps.

Roundabouts offer opportunities to provide attractive entries and focal points. Center islands and splitter islands are often landscaped.

Roundabouts reduce speeding at an intersection, and, when effectively spaced, through a major corridor. Reduced speeding, added reaction time and other factors lead to a reduction in all types of crashes of 50-70% and reduction of injury crashes of up to 90%. The efficiency of vehicle movement allows a roundabout to increase vehicular movement of an intersection by 30%. Removal of traffic signals at roundabout sites saves maintenance costs of between \$3,000 and \$4,000 per year.

Roundabouts are to be considered for up to six intersections to aid in the circulation safety and movement of traffic: Turquoise, Colima, Midway, Forward, Bird Rock and Cam de la Costa. Smaller roundabouts are recommended for neighborhood areas as shown in the phasing maps. It is recommended that roundabouts be phased in sets of two. Sets include: Cam de al Costa and Turquoise, Colima and Midway, and Bird Rock and Forward. Phasing in sets maximizes circulation and speed control in key areas.



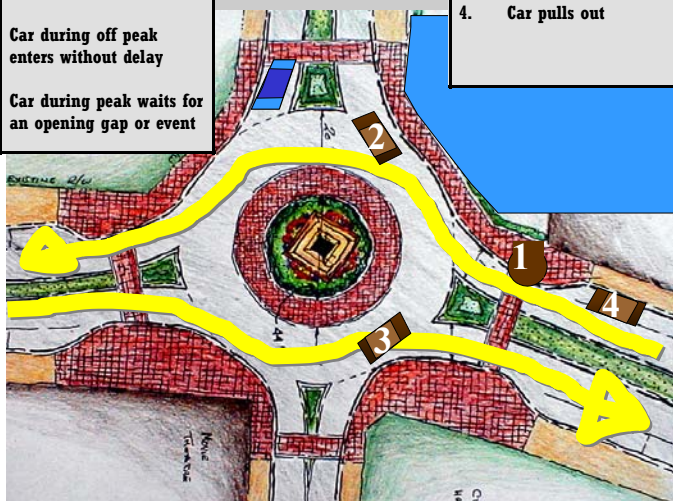
FORWARD & LA JOLLA

Car entering from signal typically waits 10-60 seconds

Car during off peak enters without delay

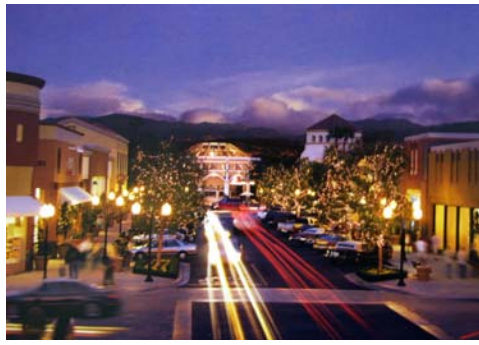
Car during peak waits for an opening gap or event

1. Pedestrian crosses street
2. Cars exits
3. Car make turn
4. Car pulls out



*The La Jolla Boulevard roundabouts can handle all of the projected 23,000 vehicles at build out. One issue raised by citizens is if the high flow of La Jolla Boulevard will permit side street traffic to enter during peak flow. This chart helps set aside the myth that main stream traffic fails to*





### **ON-STREET PARKING AND TREE WELLS**

Both on-street parking and tree wells are recommended for La Jolla Boulevard. These scenes in Abacoa, Florida, illustrate the attractiveness of tree wells and curb extensions to enhance the green of a street. Use of tree wells frees up sidewalk space, create a heightened green and color effect, and provides more sitting areas and space for other street furniture. Careful placement of tree wells preserves most, if not all of the parking bays, creates an orderly parking pattern, and shelters parked cars from moving vehicles.



At least 50% of the speed reduction needed on La Jolla Boulevard will come from aesthetic enhancements. Use of medians, curb extensions and tree wells will act together as a place maker, offering a reinvigorated sense of Bird Rock as a village.



Treatments on La Jolla Boulevard will include a buffer or safety lane. Tree wells could also be used on the side with diagonal parking. Treatments on side streets can also include tree wells, more effective sidewalk space and creation of restful green lines and clusters the trees.



### **MIXED USE BUILDINGS**

An important way to further curtail speed while evolving La Jolla Boulevard into a place is to adopt and work toward mixed use buildings. The "enclosure" of multi-story buildings provides needed people, with their eyes on the street, and help define place making.

