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## CIRCULATION ELEMENT

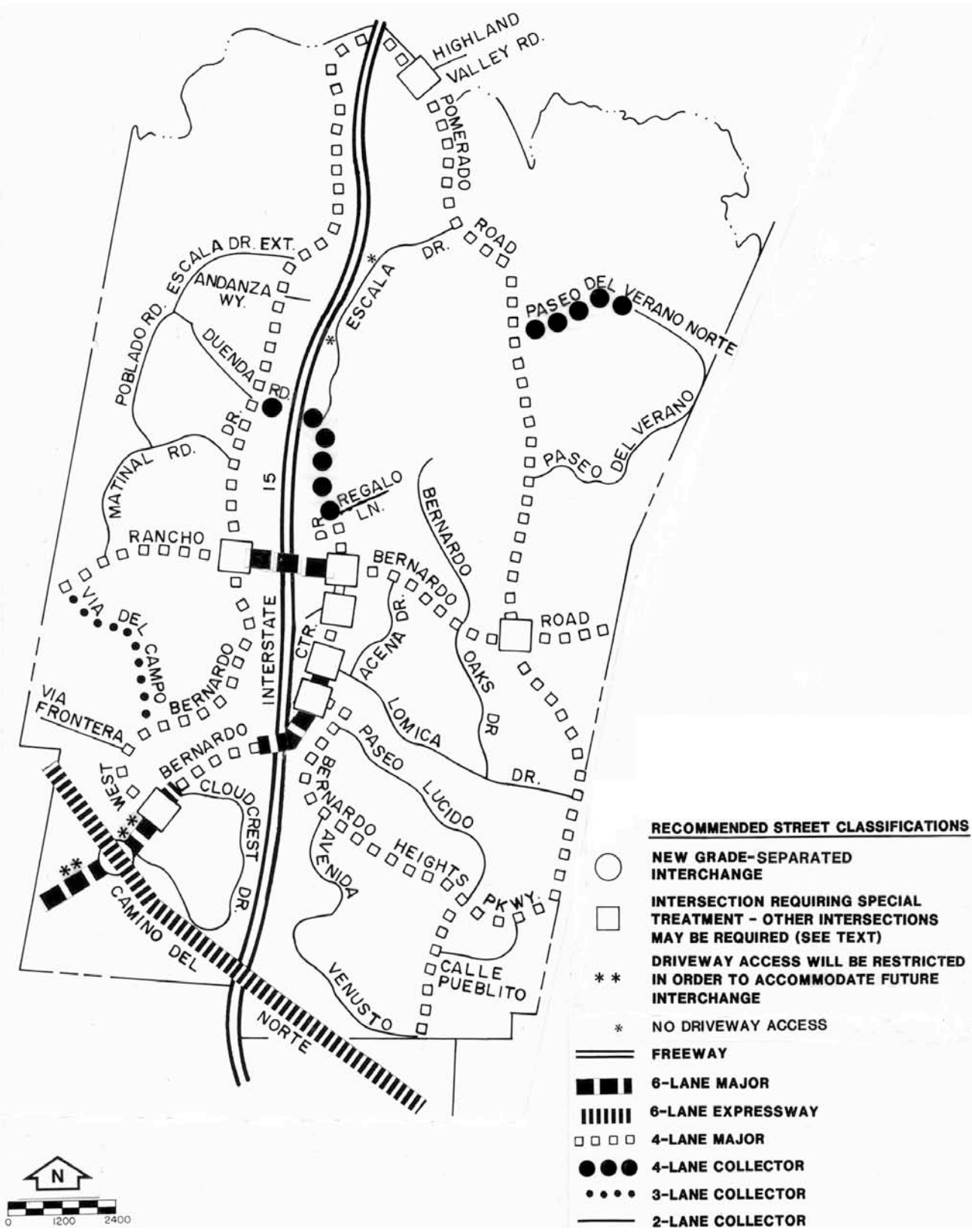
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### INTRODUCTION

The basic purpose of a circulation system is to provide for safe and convenient movement within a community and access to points beyond its boundaries, all without undue congestion. This requires a fully integrated transportation system incorporating automotive, transit, bicycle, pedestrian and parking facilities that allow the individual a choice of modes of travel.

The existing circulation system in the Rancho Bernardo community is a complex interconnection of local, collector and major streets and an expressway joined at four points to the regional transit corridor known as I-15. Council Policies 200-1 and 600-4 identify six classifications of streets, including: freeway, expressway, primary arterial, major street, collector street and local street. These categories are defined as follows:

1. Freeway: Freeways, which are under the jurisdiction of the State Department of Transportation, have full access control with full grade separation, ramp connections and are usually four lanes or more divided roadways. Their primary purpose is the longer distance movement of traffic. Interstate 15 serves this purpose for the Rancho Bernardo Community. Access to and from I-15 is provided at four freeway interchanges within the community. The most southerly, at Camino Del Norte, provides access to both industrial sites and to the High Country West residential area. The Bernardo Center Drive interchange provides access to the Town Center area. The most central and heavily used interchange is located at Rancho Bernardo Road in the heart of the community. The fourth and most northerly interchange is located at Pomerado Road. This point serves north and southbound traffic.
2. Expressway: A divided highway whose only purpose is to carry through traffic and to provide a network connecting to the State Highway System. An expressway has full control of access and may have grade separations at selected intersections. Expressways are located so as to serve travel demand corridors that exceed the vehicle-carrying capacity of an arterial street. Camino Del Norte functions as an expressway in Rancho Bernardo.
3. Primary Arterial: A six-lane divided highway with some access control and possibly grade separations. Its main function is to carry through traffic and to provide a network connecting to the State Highway System. At the present time there are no streets in the planning area that are performing as, and are classified as a primary arterial.
4. Major Street: A four- or six-lane divided highway designed to interconnect major activity areas in the city and to provide a network connecting to the State Highway System. Providing direct access to abutting property is a secondary function. Several streets within the community are presently functioning, and are classified as majors. An example is Bernardo Center Drive.



**Functional Street System at Buildout**  
**Rancho Bernardo Community Plan**

**FIGURE 7**



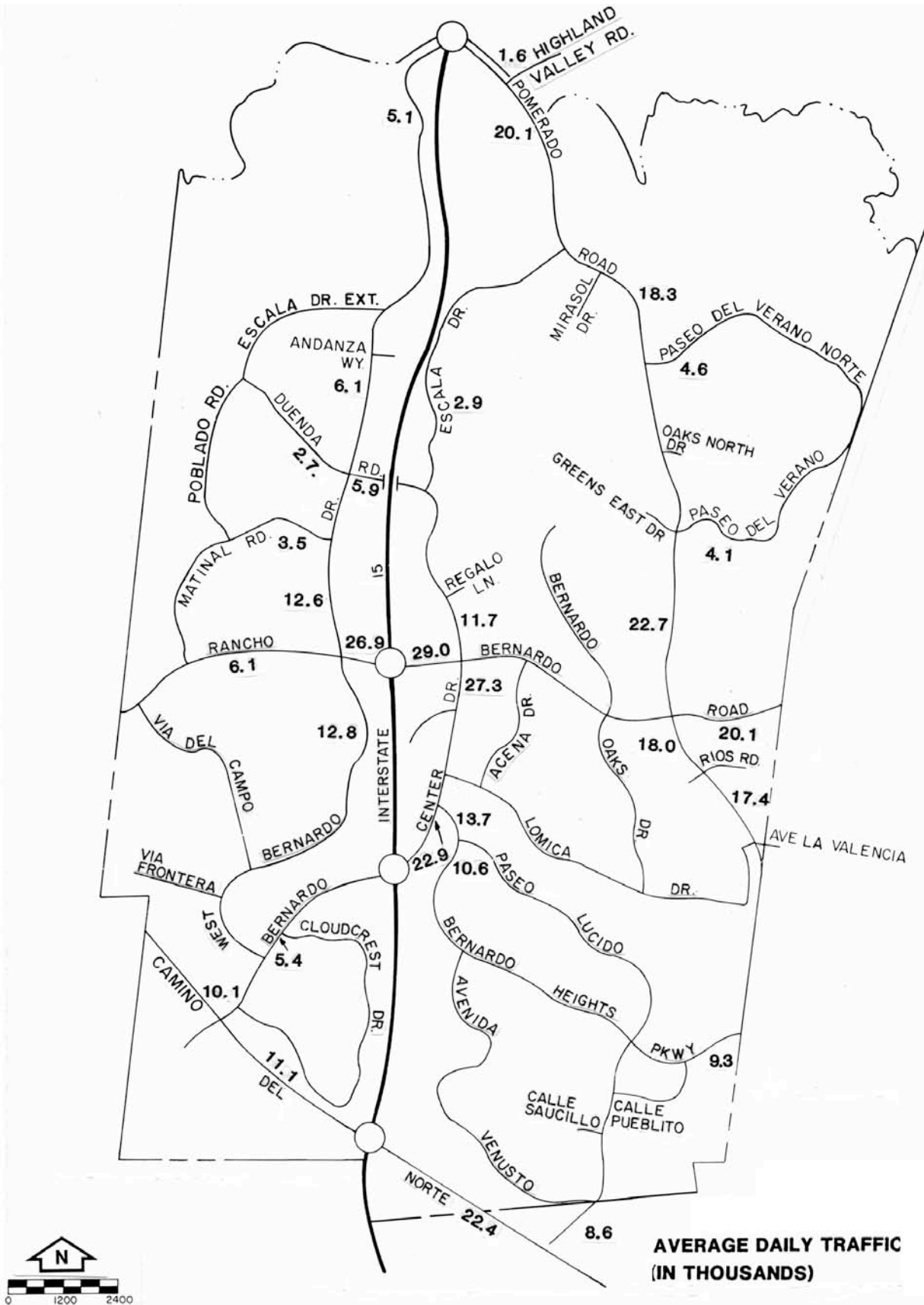
5. Collector Street: A two- or four-lane street which serves to move traffic in local areas and carry it to major streets. Collector streets are also designed to provide direct access to abutting properties. Bernardo Oaks Drive is an example of this type of street.
6. Local Street: A local street is designed primarily to provide access to adjoining property with the movement of traffic given secondary importance. Most residential streets within the community are designated as local streets. These streets are not shown on the **Circulation Element Map, Figure 7.**

Camino Del Norte provides access from Rancho Bernardo to the I-15 corridor and portions of the City of Poway. Within the community, Camino Del Norte provides access to both industrial areas, the High Country West and Camino Bernardo residential areas and the Bernardo Heights Residential Area.

Public transit, or bus service, available to the Rancho Bernardo community, is being provided by the Metropolitan Transit Development Board (MTDB) and the County Transit System (CTS). MTDB Route 20 provides express service between downtown San Diego and Rancho Bernardo with stops at Fashion Valley, Clairemont, Kearny Mesa, Miramar Naval Air Station, Mira Mesa and Rancho Peñasquitos.

The MTDB has extended its services to the North County Fair Shopping Center in Escondido where transfers may be obtained for trips to downtown Escondido. The CTS provides service between Poway and Rancho Bernardo at the intersection of Rancho Bernardo Road and Pomerado Road.

Bicycles and electric golf carts have become an important form of transportation for many residents of the area, especially for short trips to stores or neighborhood activity centers. Therefore, a need exists to develop a bikeway system to minimize the conflicts that presently exist between bicycles, electric carts, pedestrians and cars.



**1987 Average Daily Traffic**  
**Rancho Bernardo Community Plan**

FIGURE  
**8**

## **TRANSPORTATION OBJECTIVES**

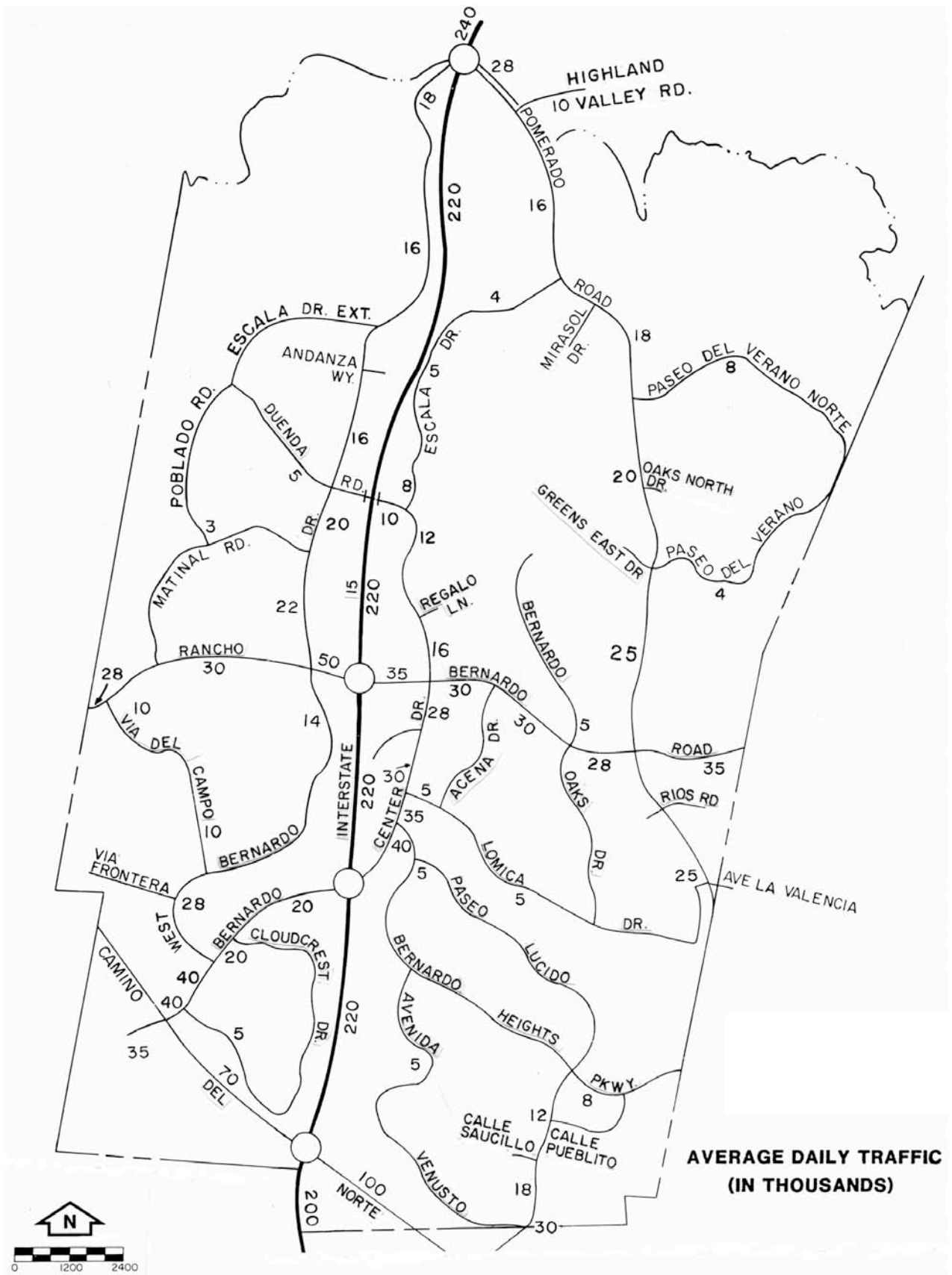
The primary goal for the Rancho Bernardo transportation system is THE SAFE, ORDERLY, EFFECTIVE, EFFICIENT AND CONVENIENT MOVEMENT OF PEOPLE AND GOODS WITHIN THE COMMUNITY AND TO PROVIDE ACCESS TO THE REGIONAL TRANSPORTATION SYSTEM. In the past, developing communities have relied almost totally on the automobile. However, a transportation system designed primarily for the automobile cannot meet the total transportation needs of Rancho Bernardo or the San Diego region. While other transportation modes are needed, autos and buses are expected to remain the dominant mode of urban mobility. The auto circulation system will be determined primarily by travel demands generated by the intensities and allocations of the land uses within the community and the surrounding fringe areas. The following objectives are added for further definition of the primary **Circulation Element** goal.

- To regard transportation facilities as an integral part of the landscape in which they are sited.
- To provide a system that minimizes areas of conflict between pedestrians, bicycles and motor vehicle traffic while adequately serving all three transportation modes.
- To provide aesthetically pleasing transportation facilities with landscaped medians as a design element on major streets. Landscaped medians should conform to Engineering Department policies and practices.
- To provide a coordinated system of transportation that will safely and efficiently accommodate traffic generated within Rancho Bernardo and minimize negative impacts from adjoining communities.
- To avoid single-family housing fronting and deriving access from major streets.
- To ensure that project approvals are conditioned upon provision of noise mitigation measures to achieve compatibility with existing and projected land uses.
- To minimize the environmental impact of street construction.
- To provide for effective utilization of public transit facilities and services coordinated with regional transit services to provide convenient travel within Rancho Bernardo and throughout the region.

## **STREET AND TRANSIT PROPOSALS**

The existing transportation network provides Rancho Bernardo with an acceptable level of service. The proposed improvements to the system will maintain an acceptable level of service as the community continues to develop.





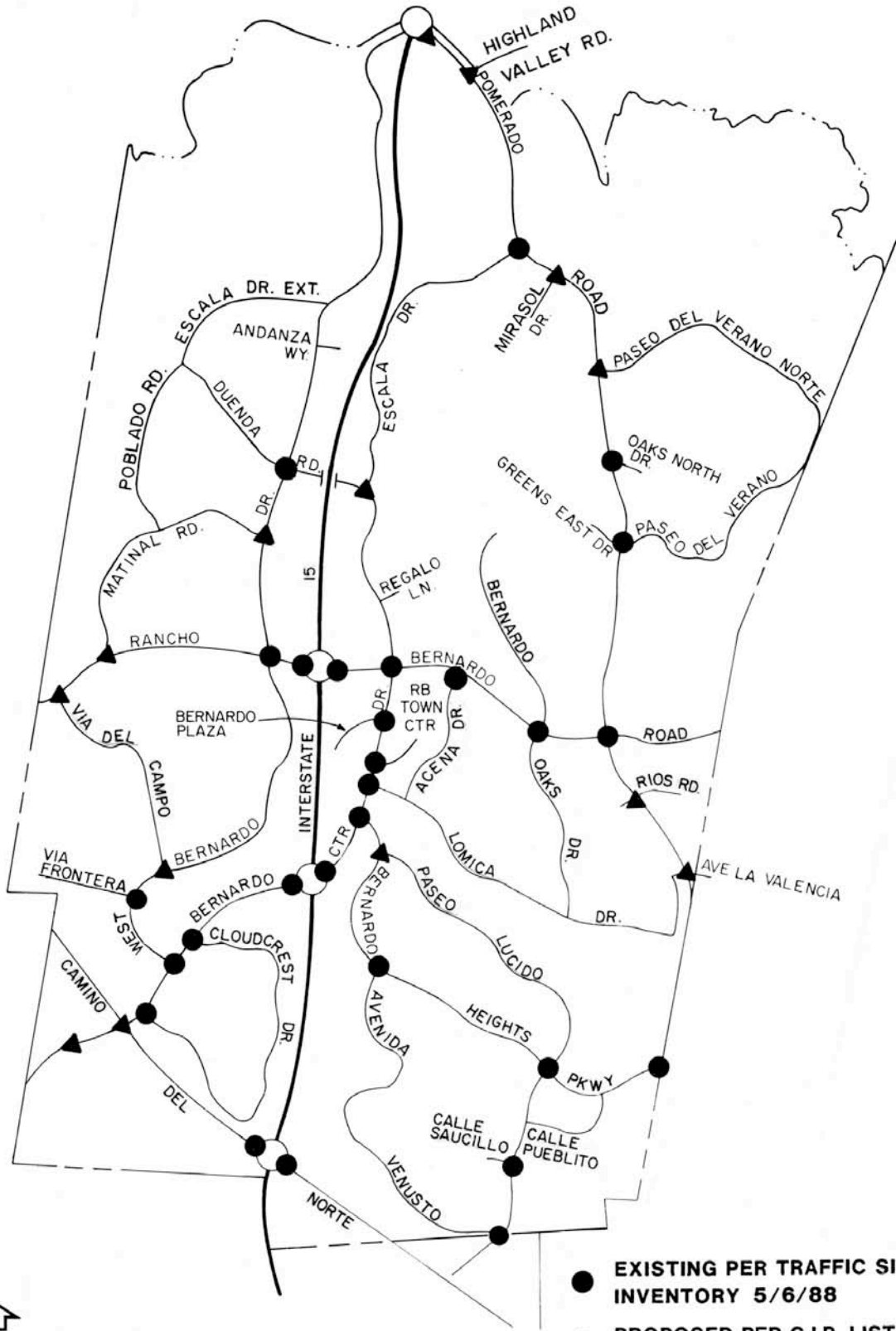
**Traffic Forecast at Buildout**  
**Rancho Bernardo Community Plan**

**FIGURE**  
**9**

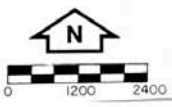
Development of the system has been based on vehicular traffic assignment for the community which reflect the land use designations of this Plan. Basic factors considered were population, employment, development characteristics, topographic considerations and a trip generation and distribution analysis of both the community and the region. The circulation system is based on roadway development concepts which will achieve desirable levels of service for the community.

More specific proposals are as follows:

- Bernardo Center Drive: Widen to a six-lane major street from north of West Bernardo Drive to Camino del Norte.
- Bernardo Center Drive: Construct a median from the intersection with West Bernardo Drive to I-15.
- Bernardo Center Drive: Improve to six-lane major street from I-15 to north of Lomica Drive within existing right-of-way by narrowing median and prohibiting parking. Dual left-turn lanes may require additional right-of-way at intersections.
- Bernardo Center Drive: Install a traffic signal interconnect from Rancho Bernardo Road to Bernardo Heights Parkway to coordinate the stoplights along Bernardo Center Drive.
- Bernardo Center Drive: Construct a six-lane major street between the westerly community boundary and Camino del Norte.
- Rancho Bernardo Road: Install a traffic signal interconnect from West Bernardo Drive to Bernardo Center Drive to coordinate the stoplights along Rancho Bernardo Road.
- Rancho Bernardo Road: Widen a portion of Rancho Bernardo Road to a six-lane major street from an area approximately 150 feet easterly of Bernardo Center Drive to an area approximately 150 feet westerly of West Bernardo Drive. Any replacement costs or damage repairs, whether landscaping or otherwise, incurred during the construction of the improvements, particularly in the medians, will be a cost of the improvements and not at the cost or expense of the Maintenance District. In addition, any improvements would be subject to prior approval of the precise improvement plans by the Rancho Bernardo Planning Board or its successor entity.
- West Bernardo Drive: Widen to a four-lane major street between Andanza Way and I-15.
- Camino del Norte: Widen and otherwise improve to a six-lane expressway. Provide an interchange at Bernardo Center Drive.
- Duenda Road: Construct as a two-lane collector from its westerly terminus at Matinal Circle to the future Poblado Road.



- EXISTING PER TRAFFIC SIGNAL INVENTORY 5/6/88
- ▲ PROPOSED PER C.I.P. LIST 6/15/87



**Traffic Signals** FIGURE  
**10**

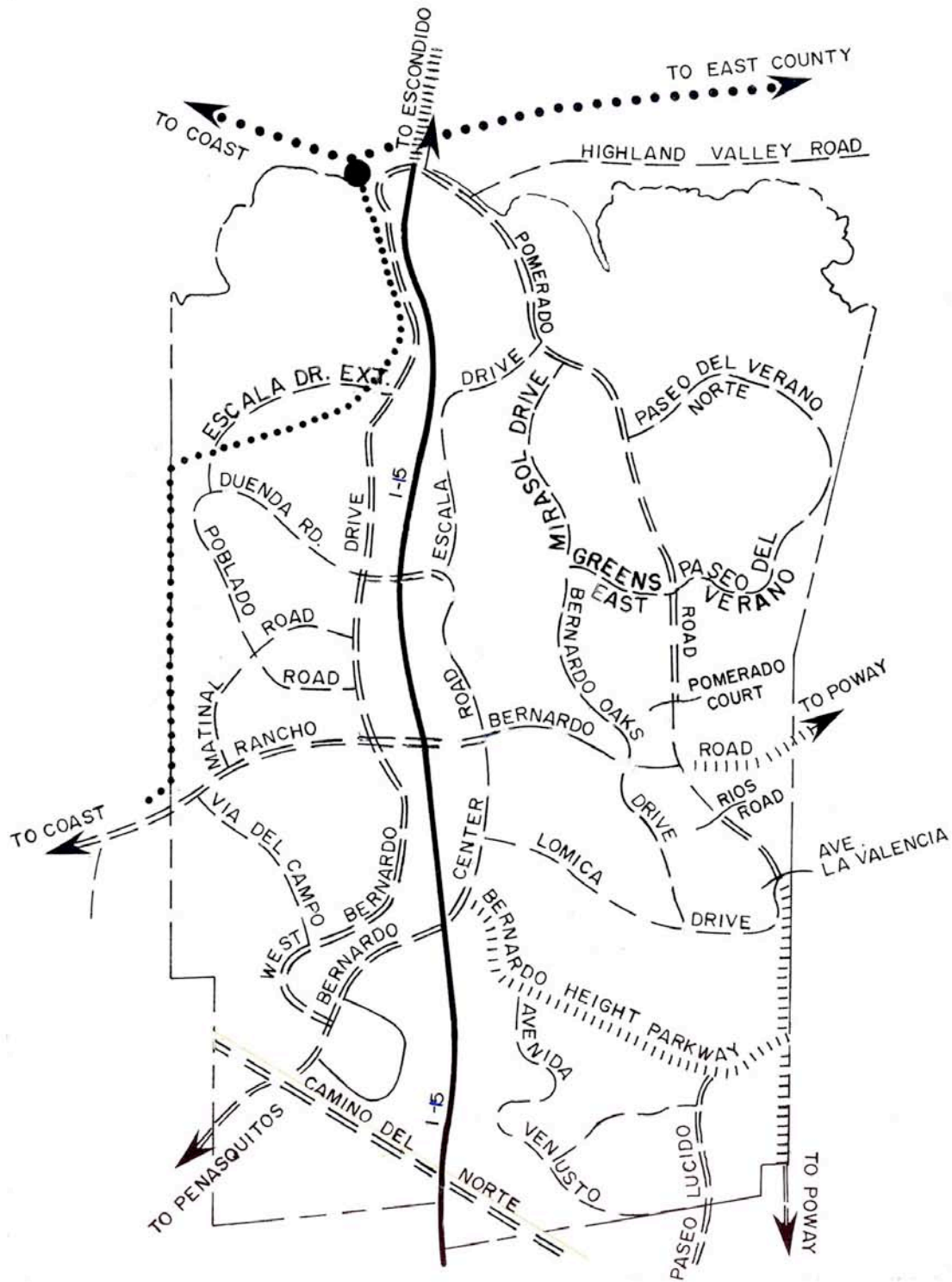
**Rancho Bernardo Community Plan**



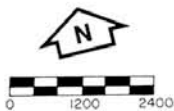
- Poblado Road: Complete improvements to two-lane collector from Matinal Road to northerly terminus at Carranza Drive. Construct as a two-lane collector from Carranza Drive to the future Duenda Road.
- Rancho Bernardo Road: Widen to a four-lane major street west of Matinal Road to the westerly community boundary.
- Via del Campo: Restripe to three-lane collector.
- West Bernardo Drive: Restripe to four-lane major street between Rancho Bernardo Road and Andanza Way. Street or intersection widenings should proceed only after traffic studies indicate a need for such improvements and should be constructed in such a manner as to minimize the loss of olive trees and on-street parking.

## STUDIES AND GENERAL RECOMMENDATIONS

- Interstate 15: Caltrans should study possible improvements to the interchange at I-15 and Camino Del Norte.
- Interstate 15: Caltrans should study the addition of a half-diamond interchange at Duenda Road for entrance to I-15 in the northbound direction and exit from I-15 in the southbound direction.
- Interstate 15: Caltrans should study and program the improvements needed at the I-15/Pomerado/ Highland Valley Road interchange.
- Development in the Future Urbanizing Area (La Jolla Valley and 4-S Ranch) should be carefully monitored in order to minimize its potential impacts on Rancho Bernardo Road and the need for a grade separated interchange at the Camino Del Norte/Bernardo Center Drive intersection.
- Caltrans should continue to monitor future growth within the I-15 corridor and provide high occupancy vehicle (HOV) lanes on I-15 when they are appropriate for the Rancho Bernardo area.
- The City should continue to monitor the necessity for street widening at major intersections for dual left-turn lanes, right-turn lanes and/or through lanes to provide and maintain an acceptable level of service. See the **Functional Street System** map for locations, **Figure 7**.
- Proposals for street widening at intersections and the Average Daily Trip count should be reviewed periodically by the City and the Rancho Bernardo Planning Board to promote improvements in traffic circulation commensurate with development in the community and the adjoining areas.



- == PROPOSED BIKE LANES-CLASS II
- ||||| EXISTING BIKE LANES-CLASS II
- PROPOSED BIKE ROUTES-CLASS III
- PROPOSED EQUESTRIAN TRAILS
- PROPOSED EQUESTRIAN CENTER



## Bicycle and Equestrian Trails

### Rancho Bernardo Community Plan

FIGURE

11

## **PUBLIC TRANSIT FACILITIES**

- Expansion of public transit service to the community should be encouraged. Frequent express bus service on the I-15 corridor should be maintained.

The San Diego Association of Governments (SANDAG), the designated regional Planning agency for San Diego County, is engaged in the planning of a regional public transit system for the San Diego Region. SANDAG has adopted a Regional Transit Plan which includes a transit corridor along I-15 through the Rancho Bernardo community. The MTDB, however, will be refining and conducting additional studies related to the development of a fixed-rail system and expanded bus services. The fixed-rail system in conjunction with extended local and express bus service would eventually provide good public transit throughout the region.

- Consideration should be given to development of park-and-ride facilities within the Rancho Bernardo community. This concept allows the commuter to drive, be driven, or ride a bicycle to a low-cost or no-cost suburban parking site and board an express transit vehicle to major urban activity centers. Park-and-ride facilities should be considered for sites shown in the MTDB's Short Range Transit Plan. The Planning Department and the Rancho Bernardo Planning Board should work with MTDB on an ongoing basis to determine locations for park-and-ride facilities.
- The Metropolitan Transit Development Board and the CTS should continue to reexamine and modify existing bus routes on an annual basis. The concern for energy conservation, higher fuel cost and clean air provide strong stimuli for more transit usage. The MTDB has responded to these needs by increasing bus service and realigning routes to serve more people at a greater level of efficiency.

## **TRAFFIC SIGNALS**

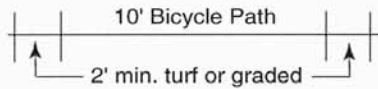
Traffic signals should be provided and installed as development progresses to ensure the highest degree of traffic safety and reasonable traffic flow.

Currently, a total of 42 traffic signals have been identified as needed in Rancho Bernardo and 28 have been installed. Signal lights are financed by 1) developers through the subdivision process; 2) a traffic signal charge as a condition of a subsequent tentative map approval and; 3) the City Capital Improvements Program in the developed areas. The proposed and existing traffic signals are shown on **Figure 10**.

All traffic signals in Rancho Bernardo should have bicycle-sensitive detectors installed so as to be able to detect bicyclists, especially in left-turn pockets.

Consideration should be given to adding traffic signals along West Bernardo Drive at the entrance to the Casa de Las Campanas retirement facility and either Aquamiel Road or Escala Drive Extension when it is completed.

Traffic Engineering requirements for installation must be met before traffic signals are installed at these or any other locations in the Rancho Bernardo area.



**CLASS I**

(Typical location - open space)

**Bicycle Path**

A completely separate right-of-way for the exclusive use of non-motorized vehicles.

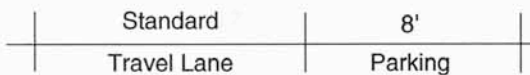
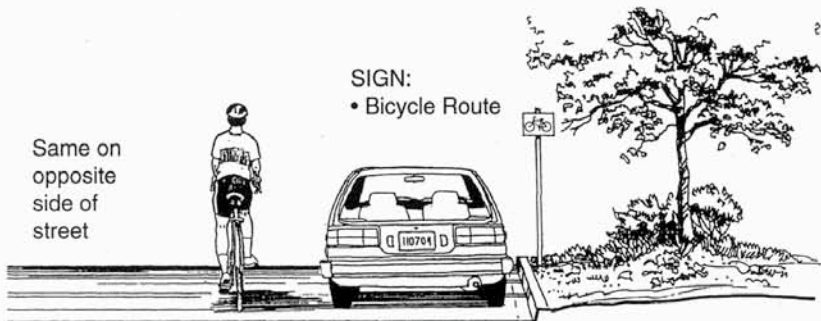


**CLASS II**

(Typical location - major street)

**Bicycle Lane**

A restricted right-of-way located on the paved road surface alongside the traffic lane nearest the curb, and identified by special signs, land striping, and other pavement markings.



**CLASS III**

(Typical location - neighborhood street)

**Bicycle Route**

A shared right-of-way designated by signs only, with bicycle traffic sharing the roadway with motor vehicles.

NOTE: The dimensions illustrated on this page are subject to change.



## **BIKEWAYS**

The increased usage of bicycles throughout San Diego County has created the demand for a coordinated bikeway system. This system will include bike lanes striped within the roadway and separate facilities constructed outside the roadway-bike paths. In response to this demand the City Council adopted a citywide bikeway system for inter-city travel on March 15, 1973. Local communities were requested to expand the system by developing local bikeway plans for their respective communities. On August 18, 1983, the Rancho Bernardo Community Planning Board in liaison with the City adopted a revised Bikeway Element for Rancho Bernardo. The bike plan discussed below and exhibited on **Figure 11** is a revision to the 1983 plan.

The Master Bikeway Plan for the City of San Diego is in the process of being revised. The revised Bikeway Plan proposes improved bikeways to business districts, improved bikeway signing and a combination of bike racks and lockers at major activity centers. The Rancho Bernardo bikeway system should be reviewed for conformance with the revised Master Bikeway Plan when adopted.

## **BIKEWAY CLASSIFICATIONS**

Generally speaking, local bikeways refer to all facilities that explicitly provide bicycle travel and can range from fully separated facilities to a simple signed street. These bikeways can utilize existing streets that connect parks, open space and schools to the residential areas and to the citywide system. The City recognizes three categories of bikeways which are defined and applied to Rancho Bernardo as follows:

1. **Class I Bike Path** - A completely separated right-of-way designated for the exclusive use of bicycles. There are no facilities of this type planned for Rancho Bernardo.
2. **Class II Bike Lane** - A restricted right-of-way designated for the exclusive or semi-exclusive use of bicycles. Crossflows by motorists and pedestrians may be allowed. The following Class II bike lanes are proposed for Rancho Bernardo in the Master Bikeway Plan.

Pomerado Road: From the I-15 interchange south to the intersection with Pomerado Court, then from Rios Road south to the City limits.

Bernardo Center Drive: Southwesterly from the intersection with Bernardo Heights Parkway, under I-15, to intersection with West Bernardo Drive and beyond (eventual link to Peñasquitos as shown on **Figure 11**).

West Bernardo Drive: Entire length from I-15 interchange on the north to interchange with Bernardo Center Drive to the south. This will require interaction with the San Diego Police Department to permit parking adjacent to the Westwood Community Center on those occasions when special events suggest the advisability of maximizing parking availability.

Rancho Bernardo Road: Westerly from the eastern city limits to the intersection with Pomerado Road and westerly from Bernardo Center Drive to the western city limits.

Bernardo Heights Parkway: Westerly from the intersection with Pomerado Road to the intersection with Bernardo Center Drive.

Duenda Road: Westerly from Bernardo Center Drive to the intersection with West Bernardo Drive.

Paseo Lucido: Northerly from the Rancho Bernardo community limits to the intersection with Bernardo Heights Parkway.

Camino del Norte: Westerly from the southern Rancho Bernardo community limits to the western city limits.

Interstate 15: Northerly from Pomerado Road beyond the northern city limits to Via Rancho Parkway in Escondido. Bicyclists are allowed to use the freeway shoulders to cross Lake Hodges because no parallel alternative route to I-15 exists. Interstate 15 is under Caltrans jurisdiction.

3. **Class III Bike Route** - A shared right-of-way designated as such by signs placed on vertical posts or stenciled on the pavement. The following Class III bike lanes are proposed for Rancho Bernardo in the Master Bikeway Plan.

Lomica Drive: Westerly from Pomerado Road on Higa Place, south on Gabarda Road to the intersection with Lomica Drive, westerly on Lomica Drive to the intersection with Bernardo Center Drive.

Avenida Venusto: From the intersection with Bernardo Heights Parkway southerly and easterly to the intersection with Paseo Lucido; north on Paseo Lucido to the intersection with Bernardo Heights Parkway.

Via del Campo: Northerly from the intersection with West Bernardo Drive to the intersection with Rancho Bernardo Road.

Matinal Road: Northerly from the intersection with Rancho Bernardo Road to the intersection with Poblado Road.

Poblado Road: Westerly from West Bernardo Drive to eventual intersection with Duenda Road.

Duenda Road: Westerly from West Bernardo Drive to the intersection with Poblado Road.

Aguamiel Road: Northerly from the intersection with Duenda Road to the intersection with West Bernardo Drive.

Paseo del Verano Norte: Easterly from the intersection with Pomerado Road to the intersection with Paseo Del Verano.



Paseo del Verano: Easterly from the intersection with Pomerado Road to the intersection with Paseo Del Verano Norte.

Bernardo Center Drive: Northerly from the intersection with Bernardo Heights Parkway to the intersection with Duenda Road.

Rancho Bernardo Road: Westerly from Pomerado Road to the intersection with Bernardo Center Drive.

Greens East Road: Westerly from the intersection with Pomerado Road to its terminus at the Rancho Bernardo Inn.

Escala Drive: Northerly from the intersection with Duenda Road to the intersection with Pomerado Road.

Mirasol Drive: Southerly from Pomerado Road to its terminus at Sintonte Drive.

Sintonte Drive: Southerly from Mirasol Drive to its terminus at the Rancho Bernardo Inn.

Bernardo Oaks Drive: Northerly from Lomica Drive to its terminus at the Rancho Bernardo Inn.

Pomerado Road: From the intersection with Pomerado Court south to the intersection with Rios Road.

## **PROPOSALS**

- The bikeway plan, as shown on the map and described in the foregoing section should be developed.
- Priority should be given to the completion of a Class II bike lane on Pomerado Road, linking the Rancho Bernardo community with Escondido to the north and Poway to the south.

## **BICYCLE PARKING FACILITIES**

Bicycle Parking Facilities consist of bicycle racks and bicycle lockers. Bicycle racks should not require the use of chains or cables to secure them as chains and cables are easily cut by thieves using bolt cutters. It is recommended that bicyclists use U-shaped high security locks (e.g., Kryptonite, Citadel, Gorilla brands) to lock bicycles. Bicycle lockers should be provided for employees arriving by bicycle at major activity centers. A combination of bike racks and lockers should be provided at transit centers.

Bicycle parking facilities should be identified by bicycle parking signs. Bicycle parking signs with directional arrows should be used to guide bicyclists to locations where bicycle parking facilities are provided, such as shopping centers, schools, golf courses, transit centers, park-and-ride lots and recreation centers.

## **EQUESTRIAN TRAILS**

The existing rural character of the Rancho Bernardo area lends itself to equestrian recreation. “A Plan for Equestrian Trails and Facilities,” adopted by the San Diego City Council in 1975, includes several trails in the Rancho Bernardo area, including the Los Peñasquitos Trail, the Lake Hodges Trail and the Black Mountain Trail. The Los Peñasquitos Trail connects the San Vicente and El Camino Real major trails. It is designed to serve the large horse population in Los Peñasquitos Canyon and Sorrento Valley and provide access to Torrey Pines State Park. The Lake Hodges Trail would be part of a regional trail extending from the county fairgrounds in Del Mar to the Pacific Crest Trail near Julian. The Black Mountain Trail would connect the Lake Hodges and Los Peñasquitos Trails by use of the Open Space System in the area.

## **PROPOSALS**

- Implement the plan for Equestrian Trails and Facilities Report. The report proposes that within Rancho Bernardo, the Black Mountain Trail should connect with the Los Peñasquitos Trail and the Lake Hodges Trail should be constructed.
- The trails should retain a natural appearance. Wherever feasible, the trails should be located along open space corridors or along other public and semipublic corridors (e.g., gas and electric right-of-ways, aqueducts, etc.). This will also reduce the expense of acquiring rights-of-way.
- The City should cooperate with the county or other municipalities when the opportunity arises to construct equestrian trails that cross jurisdictional boundaries.
- Construction of equestrian trails should be a shared responsibility of the City, county and developers of equestrian-oriented subdivisions.