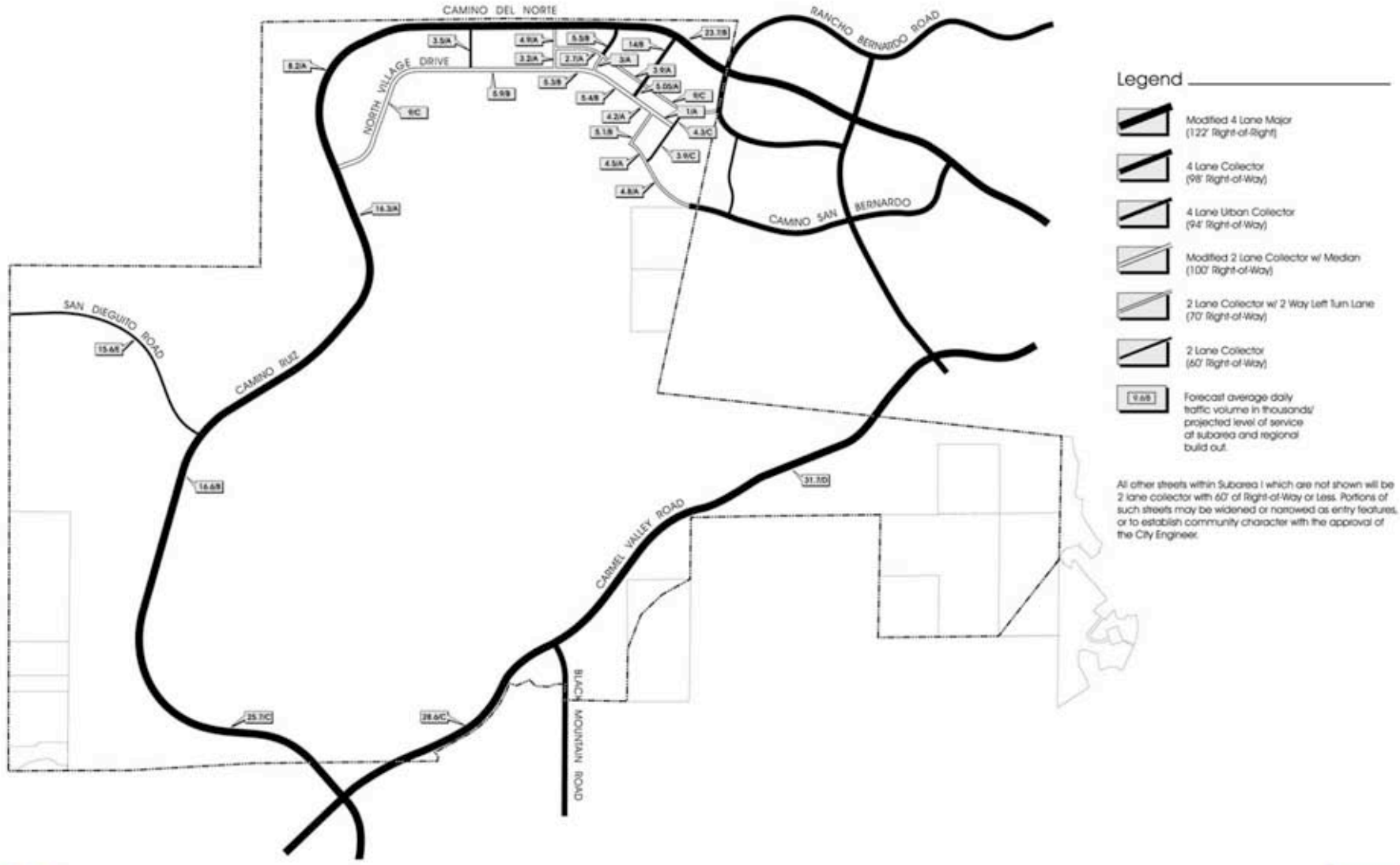


Street Classifications

Black Mountain Ranch Subarea Plan

6.1
FIGURE

CIRCULATION ELEMENT

GOAL

To ensure a safe and efficient transportation system that integrates with the existing regional system and minimizes impacts to residential neighborhoods, environmentally sensitive areas and adjacent communities.

IMPLEMENTING PRINCIPLES

- Establish a circulation system that results in an efficient movement of vehicles.
- Develop a multimodal circulation system to provide alternative means and routes to arrive at the same destination point and maximizes the opportunities for alternative transportation modes
- Coordinate development with adjacent communities to emphasize mixed-use designs with transit orientations to reduce impacts (i.e. congestion) to the regional circulation system in particular I-15.
- Work with City, state and federal agencies to identify and facilitate improvements along I-15.
- Establish a balanced, topographically sensitive and pedestrian-friendly local street system that connects different neighborhoods and districts to allow for efficient traffic dispersal and minimum road widths.

A. REGIONAL CONTEXT

Interstate 5 is located approximately seven miles from the western Subarea boundary and Interstate 15 is located approximately one-half mile from the eastern border of the site. The Del Dios Highway is located approximately 1.3 miles north of the site. At present, there is no east-west paved roadway between I-5 and I-15 from Mira Mesa Boulevard north to Del Dios Highway.

Access to Subarea I is currently provided by I-5 via Del Mar Heights Road or Via de la Valle to El Camino Real, then to San Dieguito Road. The project area may also be reached from I-15, a portion of SR-56 or Carmel Mountain Road. Extensions of existing San Dieguito Road, Black Mountain Road, Carmel Valley Road and Camino del Norte, as well as new construction of Camino Ruiz and, ultimately SR-56 will provide future access.

San Dieguito Road originates at El Camino Real south of Via de la Valle and terminates at the Subarea. On the south, Black Mountain Road runs north from Miramar Road and connects Mira Mesa to the Rancho Peñasquitos community. The north-south segment of improved Black Mountain Road in Rancho Peñasquitos terminates at the southern Subarea I boundary.

An unimproved portion of Black Mountain Road extends across the site. Carmel Valley Road originates west of I-5 and extends in a northeast direction towards Subarea I. A segment of Carmel Valley Road has been constructed adjacent to the southern portion of Subarea I. Camino del Norte originates in Poway and extends in a northwest direction to where it terminates in the southern portion of 4S Ranch, just south of Rancho Bernardo Road. Rancho Bernardo Road connects portions of 4S Ranch east of Subarea I to I-15 further to the east. Rancho Bernardo Road currently terminates at the east boundary of Subarea I. No improved public roadways presently connect the north from Subarea I.

Both the west and the east ends of SR-56 are complete and in operation. The proposed middle segment will traverse the NCFUA generally in an east-west direction south of Subarea I. This middle segment will connect the west end of SR-56 in Carmel Valley with the east end of SR-56 in Rancho Peñasquitos. The City of San Diego and Caltrans have selected an alignment that is to the south of Subarea I. Subarea I will be directly connected to SR-56 by Camino Ruiz and Black Mountain Road (**Figure 1.3**).

B. THE STREET SYSTEM WITHIN SUBAREA I

The planned circulation network for Subarea I would consist of a hierarchy of streets. The hierarchical pattern of streets allows for the separation of local and through traffic and minimizes conflicts. In addition, a pattern of local and collector streets will encourage pedestrian and bicycle usage by allowing for roadways with lower traffic volumes and narrower widths, which would contribute to a safer environment for non-motorized traffic.

The street system within Subarea I serves, in concert with the open space system and pedestrian linkages, to frame the community and provide visual clarity and a sense of orientation. The design and implementation of the circulation system through the use of bridges and underpasses reflects the resource-based nature of the community reducing impacts to the MHPA. The transportation system is also designed to be multimodal to minimize impacts to the surrounding communities.

A backbone street system of Camino del Norte, Camino Ruiz and Carmel Valley Road all link with roads outside the Subarea and are designed to carry both through and local traffic (**Figures 6.1** and **7.20**). Collector streets occur exclusively in or proximate to the North Village's Community Mixed-Use Center or the South Village (**Figures 2.5**, **7.15** and **7.16**).

A series of computerized area-wide traffic models have been run to evaluate the adequacy of proposed street improvements for all FUA subareas, with manual estimates of average daily traffic calculated for the North Village.

Figure 6.1 identifies daily traffic in Subarea I at project buildout. These numbers include trips occurring on Subarea I roadways which have their origin within Subarea I as well as trips originating elsewhere in the region. The highest number of trips occur on Camino del Norte. This is an acknowledgment that the highest intensity of use is located in the area between the Community Mixed-Use Center and I-15. This area encompasses existing and proposed 4S Ranch development as well as the Rancho Bernardo Industrial Park.

The streets within Subarea I are classified according to the City's street standards and consist of the following types:

Four-Lane Major Streets such as

- Camino del Norte
- Camino Ruiz
- Carmel Valley Road

Modified Two-Lane Collector Streets such as

- North Village Drive

Two-Lane Collector Streets such as

- San Dieguito Road

Figure 6.1, Street Classifications, shows the street sizes required for the project. The street classifications, curb-to-curb width, and right-of-way widths are defined in the City's street standards. Based on the cumulative traffic volumes at project buildout, Camino del Norte—which will be built to six-lane prime standards east of the Subarea I boundary—will continue as a six-lane prime right-of-way within the North Village, but transition to four-lane major street improvements with extra wide medians (**Figure 7.20**). Camino Ruiz south of Camino del Norte is classified as a four lane major street with extra wide medians (**Figure 7.20**). North Village Drive is designated as a modified two-lane collector. San Dieguito Road is recommended to be improved as a two-lane collector street (**Figure 7.21**).

C. NORTH VILLAGE STREET SYSTEM

The planned circulation network for the North Village consists of a hierarchy of streets laid out in a grid pattern. The hierarchical pattern of streets allows for the separation of local and through traffic and minimizes conflicts. In addition, alternating patterns of local and collector streets will encourage pedestrian and bicycle usage by allowing for roadways with lower traffic volumes and narrower widths, which contributes to a safer environment for non-motorized traffic. **Figure 2.5** shows the planned circulation system for the internal street network in the North Village.

Camino del Norte

Camino del Norte serves as a primary roadway to provide an east-west connection to communities outside the Subarea and to I-15. Camino del Norte also defines the northern boundary of the North Village area. This portion of Camino del Norte will be designed to carry 30,000 Average Daily Trips (ADT) per the maximum desired Level of Service (LOS) C standard for the City of San Diego. Bike lanes are proposed on both sides of Camino del Norte in the vicinity of the North Village area.

Camino Ruiz

Camino Ruiz would serve as the main roadway providing north-south access to communities to the north and south of Subarea I. Camino Ruiz also defines the western boundary of the North Village. The northern portion of Camino Ruiz, along the western boundary of the North Village, will be constructed as a four-lane major collector and would be designed to carry approximately 30,000 ADT under LOS C standards. Bike lanes are proposed for both sides of Camino Ruiz.

North Village Drive

North Village Drive provides primary east-west circulation and access, and forms the spine of the North Village. North Village Drive will be constructed to a modified two-lane collector standard, with a carrying capacity of 9,000 ADT under LOS C standards. Bike lanes are proposed for both sides of North Village Drive.

Major internal circulation roadways form a grid pattern with alternating local and collector streets in both the east-west and north-south axes.

D. SUMMARY OF SIGNIFICANT FACILITIES AND PROPOSED IMPROVEMENTS

In April 1998, a Traffic Impact Analysis was completed for the Black Mountain Ranch Subarea I Plan. In the analysis, details for a range of critical circulation improvements were provided to mitigate impacts above and beyond those in the BMR VTM/PRD. Because this range of possible mitigation measures is based on forecasts and assumptions of future traffic from a variety of proposed projects, the final mitigation program, including the mitigation of noise impacts associated with traffic, necessarily will be further refined in connection with CEQA review of future tentative maps for specific development projects within the Subarea and for offsite facilities and projects. As a result, the improvements and phasing may be modified and different mitigation measures or phasing may be substituted to the satisfaction of the City Engineer, so long as the mitigation measures to be implemented are determined to meet or exceed the level of mitigation provided for in this traffic analysis.

The development of Black Mountain Ranch Subarea I, beyond the BMR VTM/PRD, is envisioned to occur in three phases. The first phase would be approximately 27 percent of the proposed development, approximately 64 percent would occur in the second phase, and the final phase would represent buildout or 100 percent of the project. This section presents the proposed circulation improvements for mitigation of traffic impacts that are associated with each phase.

1. Bernardo Center Drive

Improvements are recommended at the intersection at West Bernardo Drive as well as at the intersection with Camino del Norte. Improvements to the approach lanes will result in additional capacity, and minor widening will be required. The improvement may also include a pedestrian bridge. Impacts from these improvements will be temporary traffic delays and possible short-term noise impacts from construction of the improvements.

2. Black Mountain Road

The extension of Black Mountain Road from the northern limit of Black Mountain Road to Carmel Valley Road will be constructed to its ultimate cross section as part of the BMR/VTM PRD. The portion of Black Mountain Road south of SR-56 is expected to have traffic volumes that will require that the roadway be widened to six-lane primary arterial standards. This widening effort will extend between Twin Trails Road and Mercy Road. As the widening to six lanes is a planned improvement, impacts from the widening will be temporary traffic delays and possible short-term noise impacts from construction of the improvements.

3. Camino del Norte

This facility is necessary for access to the I-15 corridor from the project as a four-lane facility on the western portion increasing to a six-lane arterial to the east within the 4S Ranch project. On-site portions will be built by Subarea I. The adjacent portions will be constructed by the 4S Ranch project. The need for this facility is identified in the phased improvements for Subarea I. Additional improvements have also been defined at the I-15 interchange consistent with the project report by Caltrans that will enhance capacity at the interchange. These improvements are reflected in the planned geometry used for the calculations of delay and congestion. A significant archeological site, CA-SDI-5,103, is located within the future alignment of Camino del Norte. Mitigation in the form of data recovery is required for construction of Camino del Norte to Camino Ruiz in accordance with 1995 VTM/PRD. Beyond this, no further mitigation is appropriate in view of the acceptable levels of service forecast for buildout conditions.

4. Camino Ruiz

Camino Ruiz is planned to be constructed in its ultimate cross section of a four-lane major street between Carmel Valley Road and San Dieguito Road as part of the approved VTM/PRD for Black Mountain Ranch. For the portion of Camino Ruiz north of San Dieguito Road, the proposed project will construct Camino Ruiz to four-lane major standards. The developers of Torrey Highlands will construct portions of Camino Ruiz to the south of Carmel Valley Road. Impacts from these improvements were evaluated in the Black Mountain Ranch VTM/PRD EIR and the EIR for Fairbanks Highlands. A partial cloverleaf interchange will be provided at SR-56 at the time the six-lane SR-56 is required. The EIR for SR-56 (LDR No. 95-0099, SCH No. 96031039) evaluated impacts of the construction of SR-56, including the Camino Ruiz interchange.

Immediately north of proposed SR-56, a short portion of Camino Ruiz is projected to experience daily traffic volumes in excess of levels consistent with desirable levels of service for the planned six-lane facility. However, the improvements to the interchange with SR-56 to allow for loop ramps will achieve acceptable levels of service at the interchange during peak hours. Further, the ultimate provision of six lanes for the portion of Camino Ruiz between Carmel Valley Road and Carmel Mountain Road is appropriate for the level of project volumes.

5. Carmel Valley Road

Carmel Valley Road will be built to its ultimate configuration (four-lane major standards) for its entire length. This roadway will be built consistent with City standards and the projected traffic volumes. The eastern portion of Carmel Valley Road, which links Black Mountain Road to Rancho Bernardo, is phased to be available at the appropriate stage. The portions of Carmel Valley Road to the west and beyond the Black Mountain Ranch project boundaries are partially the responsibility of the Black Mountain Ranch VTM/PRD during its initial stages. Impacts from construction of Carmel Valley Road were covered in the 1992 EIR for Black Mountain Ranch North and South Tentative Maps (DEP Nos. 90-0332 and 91-0313, SCH No. 91081026) and the 1995 Black Mountain Ranch VTM/PRD EIR.

6. El Apajo

A minor widening to achieve two travel lanes plus a two-way left-turn lane and either parking or bike lanes is proposed for El Apajo between San Dieguito Road and Via de Santa Fe. These improvements would reduce but not fully mitigate the traffic impacts from buildout of the Subarea I on El Apajo. While a four-lane cross section would fully mitigate the projected traffic volumes, the proposed three-lane cross section is in better conformance with the existing abutting development. Full four-lane widening would impact street access for an existing school and shopping center, would require grading into sensitive slopes, and removal of mature trees.

7. El Camino Real

The portion of El Camino Real between Via de la Valle and San Dieguito Road is currently constructed with two travel lanes. El Camino Real needs to be widened to a four-lane facility from Via de la Valle south to Half Mile Drive. The City has undertaken design of the bridge over the San Dieguito River. The bridge improvement would result in impacts to wetlands, and agricultural lands.

8. Interstates 5 and 15

The project's volumes are not significant in the planned buildout of I-5 or I-15 based the City's guidelines except for one segment on I-15 south of Camino del Norte. Improvements are being examined by Caltrans as part of the current Major Investment Study (MIS). These improvements include HOV lanes on I-5 north of I-805 and HOV lanes in the median area of I-15 north of SR-56 as well as a myriad of other operational capacity improvements. These improvements on I-15 could result in as much as three additional lanes of peak hour capacity. As part of Caltrans' ongoing work, it is expected that HOV slip ramps will become available at every on-ramp in both directions as ramp improvements occur with other surface street improvements. Caltrans would be the responsible agency for review of the potential environmental impacts of improvements to these two freeway facilities.

9. Rancho Bernardo Road

Studies have identified the need for six-lane widening improvements on Rancho Bernardo Road from West Bernardo Drive through to the I-15 interchanges, continuing to Bernardo Center Drive. These improvements include both intersection improvements to enhance capacity and roadway widening to achieve the adopted six-lane major cross section as identified in the Community Plan for Rancho Bernardo. Both the Black Mountain Ranch project and the county's 4S Ranch project are identified with joint responsibility for implementing these improvements, as well as several other improvements in the Rancho Bernardo area. A reclassification to primary arterial would be necessary to fully mitigate this segment. This necessitates purchasing access rights and driveway closures west of the freeway. This would impact community access and existing commercial uses along this reach.

10. North Village Drive

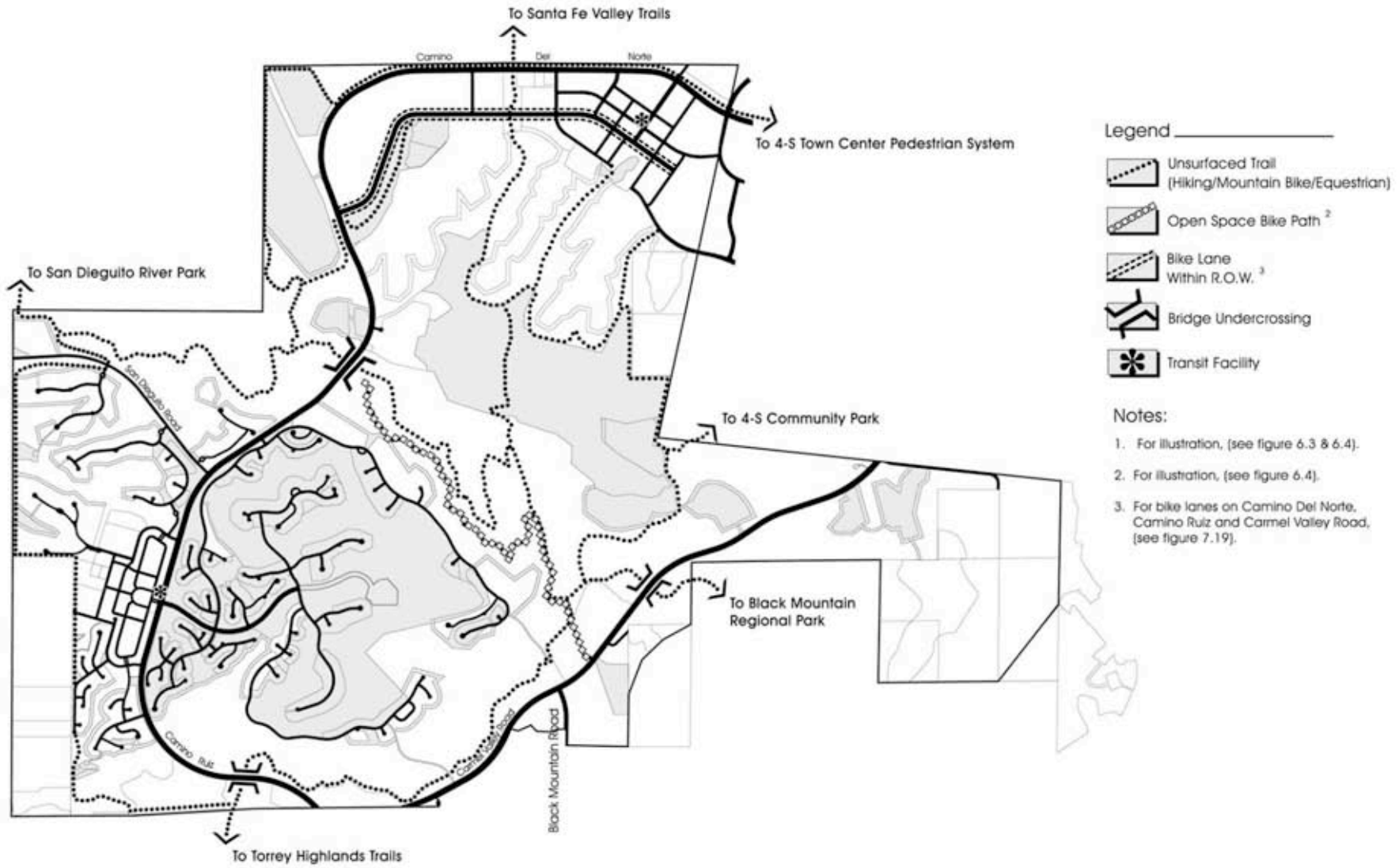
North Village Drive will be built as development of the proposed project proceeds. Since this facility is wholly within the northern project area, it is wholly the responsibility of the developers of Black Mountain Ranch. Traffic signals will also be provided at key intersections along its length.

11. San Dieguito Road

This roadway is projected to have buildout traffic volumes that exceed its standard functional capacity in locations both in the county and the City of San Diego. However, the predominant character of San Dieguito Road is a high-speed facility with excellent sight distance, limited grades, left-turn pockets at intersections and only occasional side street access with no driveways. The project proposes improvement at the El Apajo intersection that would provide a traffic signal at this intersection. The issue of capacity on San Dieguito Road was evaluated by the county of San Diego during the studies associated with the deletion of SA 680. (SA 680 was a facility to the north that would have lessened the effect to San Dieguito Road.) In these studies, county staff concluded that San Dieguito Road could handle up to 16,000 ADT. Past and recent forecasts confirm that had SA 680 remained in the county's circulation system, lower volumes on San Dieguito Road would occur.

The connection of Santa Fe Valley to the Del Dios Highway is now approved as a private, gated connection for the use of Santa Fe Valley residents. While offering these residents access choices, the general public would not have this option. In fact, preliminary testing of a network with no gate would reduce certain volumes within the Future Urbanizing area while increasing others near Rancho Santa Fe.

The necessary portion of San Dieguito Road from the west City limits and Camino Ruiz will be constructed as part of the approved BMR VTM/PRD. This segment and the adjacent portion within the county's Fairbanks Ranch development is proposed for limited intersection improvements to allow a protected left-turn lane in locations where it otherwise is not available. These improvements would reduce but not fully mitigate the impacts of Subarea I traffic on this roadway, which would require full



Alternative Transportation Modes

Black Mountain Ranch Subarea Plan

6.2 FIGURE

four-lane improvements. The improvement to four lanes would not be consistent with the County Circulation Element, which designates it a two-lane collector. Other impacts would result to access for existing residential development, landform alteration, and removal of eucalyptus trees resulting in impacts to community character. Similarly, San Dieguito Road east of El Camino Real experiences volumes that could be mitigated by a four-lane widening project. Instead, limited intersection improvements are proposed to enhance capacity while respecting the character of the area and the existing roadway design.

12. State Route 56

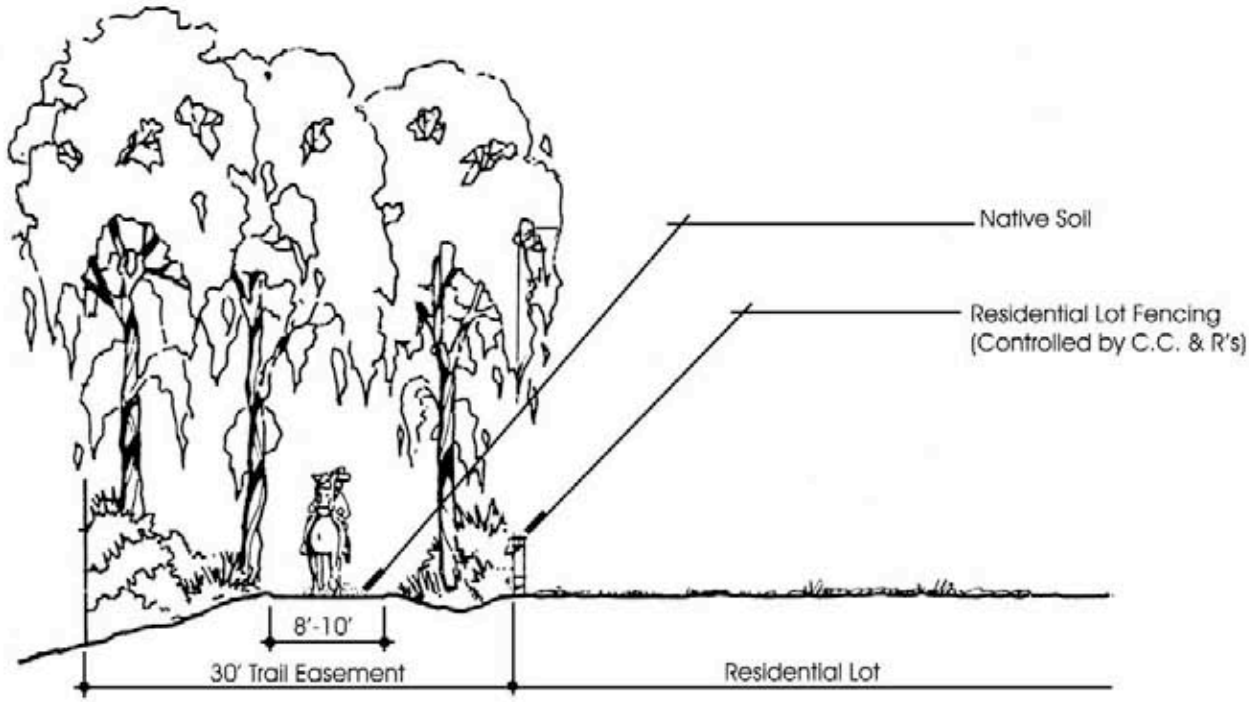
The east and west portions of SR-56 exist and the middle section is in the final design and construction stage. Initially planned as a four-lane expressway between the terminal points in Rancho Peñasquitos and Carmel Valley, SR-56 is eventually planned as a six-lane freeway. The Subarea I Plan assumes the availability of the initial expressway and the eventual ultimate freeway as reflected in the phased development thresholds for the Subarea. A further dependence is also identified for the missing loop ramp between eastbound SR-56 to northbound I-15 as well as the direct connectors for SR-56 to north I-5.

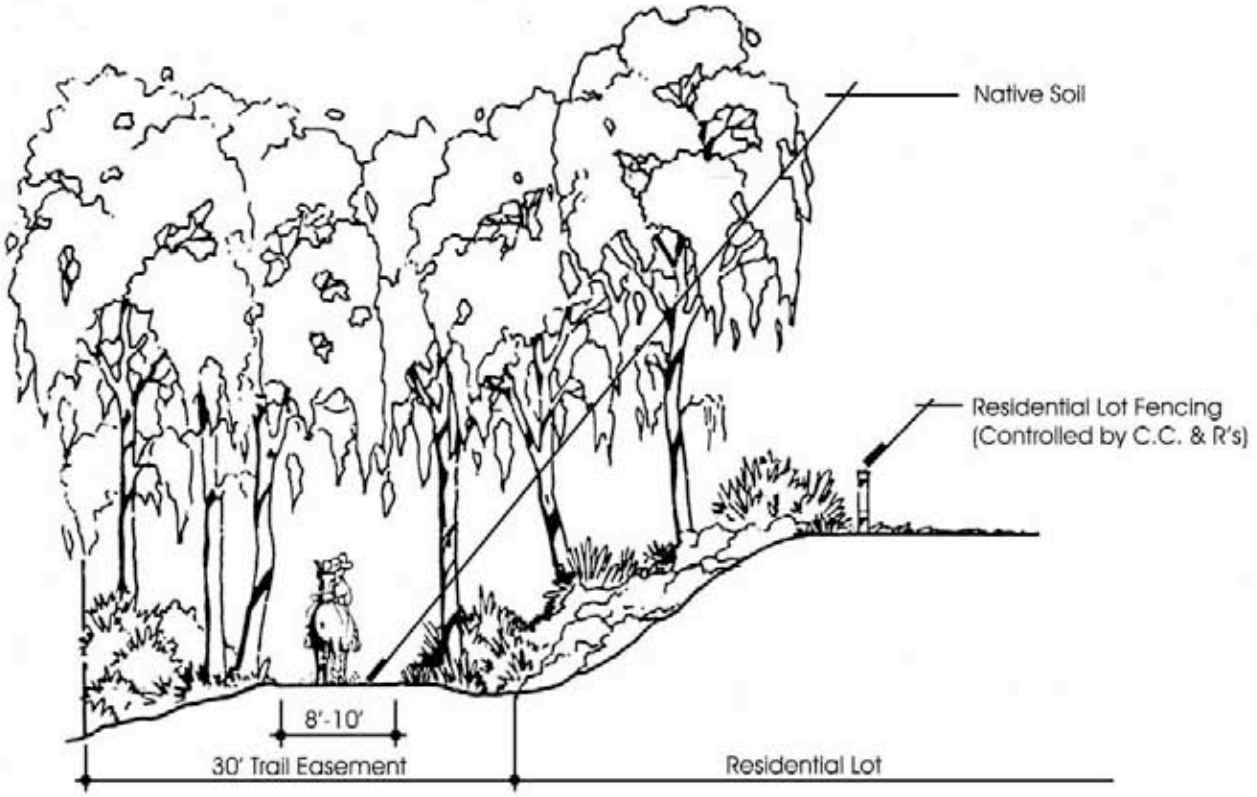
13. Via de la Valle

Via de la Valle, between I-5 and San Andres Drive, is striped as a four-lane cross section. This portion of Via de la Valle is constructed with a median and full improvements that are sufficient to restripe to six lanes. East of San Andres Drive, Via de la Valle is limited to a two-lane cross section. The two-lane portion of Via de la Valle eastward from San Andres Drive to El Camino Real (East) must be widened and improved to a four-lane cross section to accommodate existing traffic volumes. This widening would require grading into sensitive hillsides, impacts to sensitive vegetation, and potential construction-related access and circulation impacts and long-term water quality impacts to the San Dieguito lagoon. Widening of Via de la Valle and improvements to its intersection with El Camino Real were identified in the Black Mountain Ranch VTM/PRD. Past efforts by the City to accomplish this improvement have been unsuccessful.

14. West Bernardo Drive

The most northern portion of West Bernardo Drive is proposed for improvement from the I-15 southbound ramps adjacent to Lake Hodges southward to just north of Aguamiel Road. In addition, a traffic signal is proposed for the intersection of West Bernardo Drive at the southbound I-15 ramps. The proposed cross section would continue the one established closer to an existing retirement center, which includes one vehicle travel lane in each direction plus a bike lane and widening to allow protected turns at intersections. An improvement in this area to the full four-lane major cross section in the community circulation plan, while possible, is likely to generate additional concerns due to non-traffic issues along the alignment in this area.





Hiking/Mountain Bike/Equestrian Trail **6.3**

Black Mountain Ranch Subarea Plan FIGURE

15. Interstate 15 Freeway Ramps

Improvements contained in several of the projects outlined above are interchange improvements on I-15. The interchanges in Rancho Bernardo including West Bernardo Road, Rancho Bernardo Road, Bernardo Center Drive and Camino del Norte will all be improved consistent with existing studies. Another interchange at SR-56 and I-15 will also have improvements to provide the missing loop ramp to the north and southbound ramp improvements.

E. TRANSIT

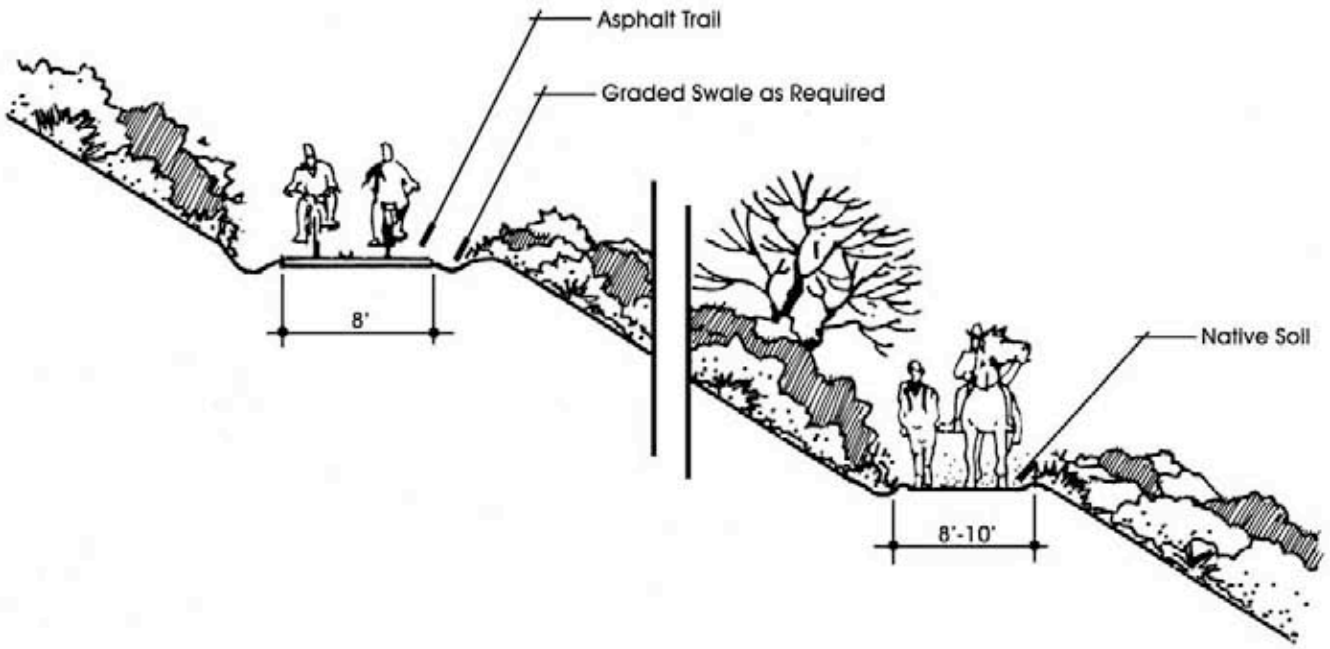
The design of a multimodal transportation system was one of the primary goals of the Framework Plan process. The plan strives to create a land use and circulation pattern that supports multimodal travel habits for residents and employees of the Future Urbanizing Area. The vision for the transit system in the Framework Plan includes the opportunity to create "transit emphasis" roadways and intersections, transit exclusive right-of-ways and provisions for regional transit service. The planned transit network is intended to be fully integrated into the local and regional transportation system, and it will provide maximum connectivity to major activity centers.

A study of transit potential for Subarea I is included in **Appendix D** of this Subarea Plan. This Subarea Plan and the corresponding Public Facilities Financing Plan support two specific transit opportunities: a vanpool system and a shuttle linkage to the county transit system.

The designation of the North Village for high-intensity uses and the presence of high-occupancy vehicle lanes on I-15 make vanpools an attractive option for Subarea I residents and employees. Vanpool funding is available through employer and MTDB programs as well as developer contributions.

The future transit routes will be designated by the Metropolitan Transit Development Board (MTDB). Transit routing could provide an extension of existing service to the North Village Transit Center or the creation of a shuttle system that connects Subarea I to the proposed I-15 Bus Rapid Transit system. A localized shuttle system would connect North Village residents to an I-15 express transit stop with a return trip taking workers to employment centers west of I-15. Initial funding for shuttle buses is available through the Subarea I Public Facilities Financing Plan. The Subarea Plan applicant will work with the Metropolitan Transit Development Board to develop a mutually agreeable transit service and financing plan.

The North and South Villages include several provisions to encourage transit usage. The villages will each contain a transit center which will serve this portion of the NCFUA. Each transit center will provide shelter, bike storage and vehicle parking. Both centers are located in readily accessible areas where mixed uses and development have been concentrated. Both sites provide convenient, central locations for service by either vans, shuttles or buses. Funding for the construction of these transit centers is provided for in



Open Space Bike Trail and Equestrian/Hiking Trail **6.4**

Black Mountain Ranch Subarea Plan FIGURE

the Subarea I Public Facilities Financing Plan. Transit routes will flow to and from these centers along Camino del Norte and Camino Ruiz. They will connect with I-15 express routes and potential future transit along SR-56.

Additional transit stops may be located along the bus routes if future demand warrants bus access. Whenever possible, they will be located adjacent to parks and public facilities. The streets adjacent to the transit stops will be designated to facilitate safe pedestrian crossings.

The transit centers are located such that buses and other mass transportation vehicles can quickly and efficiently move through the community. They will be designed in conformance with MTDB guidelines and will accommodate both local and regional buses.

The transit center location in the center of the North Village places it in close proximity to high-density residential, commercial development, office development and the employment center—an intense mix of uses to attract transit service and users. A key element in the transit system is the strategic location of park-and-ride facilities. Park-and-ride lots are designated within the North Village and near the interchange of SR-56 at Camino Ruiz. Also, the eventual conversion of the extra-wide medians on Camino Ruiz, Camino del Norte or Carmel Valley Road to exclusive transit-use lanes is an alternative, should MTDB determine the necessity.

F. NON-MOTORIZED TRANSPORTATION

All primary and major roadways within the Black Mountain Ranch area, including the North Village, will be constructed with bicycle lanes on each side of the street.

Appropriate bicycle facilities (e.g., bicycle racks, lockers) will be required at major activity centers. In addition, unsurfaced trails that could be used for bicycles have been planned in the North Village.

Bicycle access among activity centers within the North and South Villages is enhanced by the traditional grid system of village streets which provides multiple alternative routes and slows vehicular traffic. Cyclists traveling greater distances will have access to bike lanes on Camino del Norte, Camino Ruiz, Carmel Valley Road and the La Jolla Valley Bike Path. These bike lanes connect to a comprehensive bike lane system in the NCFUA, as provided for in the Framework Plan, and within adjacent 4S Ranch.

All primary and major roadways within the Black Mountain Ranch area will have pedestrian pushbuttons at all signalized intersections. In addition, all roadways in the North Village and South Village will be constructed with sidewalks. Clear pedestrian access from residential areas to the commercial core and each of the schools will be provided via sidewalks, pathways, and interconnecting courtyards and arcades, thus increasing the opportunity for alternatives to automotive travel.

The approved Black Mountain Ranch VTM/PRD project includes more than 18 miles of interconnected multipurpose trails linking all parts of the Subarea internally and externally to the trail systems of adjacent communities, allowing for increased opportunities for non-motorized travel external to the Subarea (**Figure 6.2**). The Northeast and Southwest Perimeter Properties shall extend this trail system to serve development on their respective properties.

Trails within the MHPA will be multipurpose regional trails and paths for hiking, biking and, in some cases, for horseback riding (**Figures 6.3** and **6.4**). They will be designed and constructed by project developers and dedicated to the City of San Diego. They will be located in public open space areas and will consist of loose decomposed granite or similar native material. The trails and paths will generally follow the contours of the natural terrain and will avoid unnecessary grading. The design of the trail system will be sensitive to native species and will include interpretive signs to inform users of the purpose of the area and to identify native flora and fauna. As prescribed in the MSCP Subarea Plan, trails and paths within the MHPA will use existing utility easements and improvements where feasible. The City of San Diego will be responsible for trail maintenance.