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FINAL RANCHO MURIETA GOLF CART/NEV CIRCULATION PLAN

September 7, 2006

*Prepared for:
Rancho Murieta Community
Service District
and
Rancho Murieta Association*

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1. EXECUTIVE SUMMARY

The Rancho Murieta Golf Cart/Neighborhood Electric Vehicle Circulation Plan is intended to meet the requirements of Assembly Bill 188 (amended June 20, 2005) that requires the Rancho Murieta Community Service District (CSD) to complete a Golf Cart Transportation plan pursuant to *Streets and Highway Code 1950*. Assembly Bill 188 has a sunset of January 1, 2007, at which time California Vehicle Code 21115.5 will also expire making it illegal for a golf cart or low-speed vehicle (i.e. Neighborhood Electric Vehicle) to cross State Route 16 (SR-16).

The Rancho Murieta Golf Cart/Neighborhood Electric Vehicle Circulation Plan identifies two golf cart/NEV crossings of SR 16 at Murieta Parkway and Murieta South Parkway and suggestions for golf cart/NEV travel on the private streets of Rancho Murieta North and Rancho Murieta South.

In order to provide the Rancho Murieta community with the same quality of life and conveniences afforded by golf cart travel across SR 16, the following actions are required by the Rancho Murieta CSD and/or Rancho Murieta Association (RMA) to permit travel across SR 16. *Note: the following requirements satisfy Assembly Bill 188, federal, and statutory requirements for operation of golf carts and neighborhood electric vehicles (NEV) on public roadway facilities (i.e. SR 16).*

- Implement a permitting process to ensure golf carts and NEVs meet the minimum safety criteria identified in Chapter 6.0, Sections 1950 - 1965 of the Streets and Highways Code and applicable California Vehicle Code (CVC) citations. Golf carts and/or NEVs are required to have the following minimum safety equipment to travel across SR 16:

Minimum Safety Criteria during daylight

- *Stoplamp*
- *One Rear Reflector*
- *Horn*

Minimum Safety Criteria during darkness

- *Stoplamp*
- *One Rear Reflector*
- *Horn*
- *Headlamp*
- *Taillamp*

Golf Carts and/or NEVs may be additionally equipped with the following safety features:

- *Rear View Mirror*
- *Parking Brake (standard equipment)*
- *Seatbelts*
- *Front and Rear Turn Signal Lights*
- *Windshield*

In addition to the above minimum safety criteria, operators must also possess a valid driver's license and comply with the financial responsibility requirements of the California Vehicle Code.

Note: The above standards do not apply to golf carts used exclusively for normal play on the golf course or within the residential area of Rancho Murieta North or Rancho Murieta South, and that are not intended for travel across

SR 16. Golf cart/NEV operators traveling on privately owned and maintained roadways are only subject to RMA and CSD requirements for golf cart/NEV use.

- Provide for appropriate golf cart/NEV signage and lane striping at entrances to public roadway facilities.
 - Placement of a “Neighborhood Electric Vehicle Community” sign (See Appendix B – Figure 1) prior to entering Rancho Murieta plan area
 - Designation of Murieta Drive as a golf cart/NEV lane. This designation requires a striped seven foot golf-cart lane within the existing paved roadway surface and signage (see Appendix B – Figure 2) indicating the lane should be shared by golf carts and bicycles.
 - Placement of a “Golf Cart” symbol and/or “Golf Cart Crossing” placard (See Appendix B – Figure 5) on approaches to the intersections of SR 16/Murieta Parkway and SR 16/Murieta South Parkway

2. INTRODUCTION

The Rancho Murieta Golf Cart/Neighborhood Electric Vehicle Circulation Plan evaluates the unique opportunities for using golf carts and neighborhood electric vehicles (NEV) as alternative modes of transportation within the Rancho Murieta Community located in Sacramento County, California. The primary focus of this plan is to comply with Assembly Bill 188 to permit the continued use of golf carts and future use of NEVs across State Route 16 (SR 16) to adjacent commercial uses and other planned developments. The *Golf Cart/NEV Circulation Plan* adheres to the legal and statutory requirements specific to golf cart and NEV travel across state roadway facilities.

A. BACKGROUND

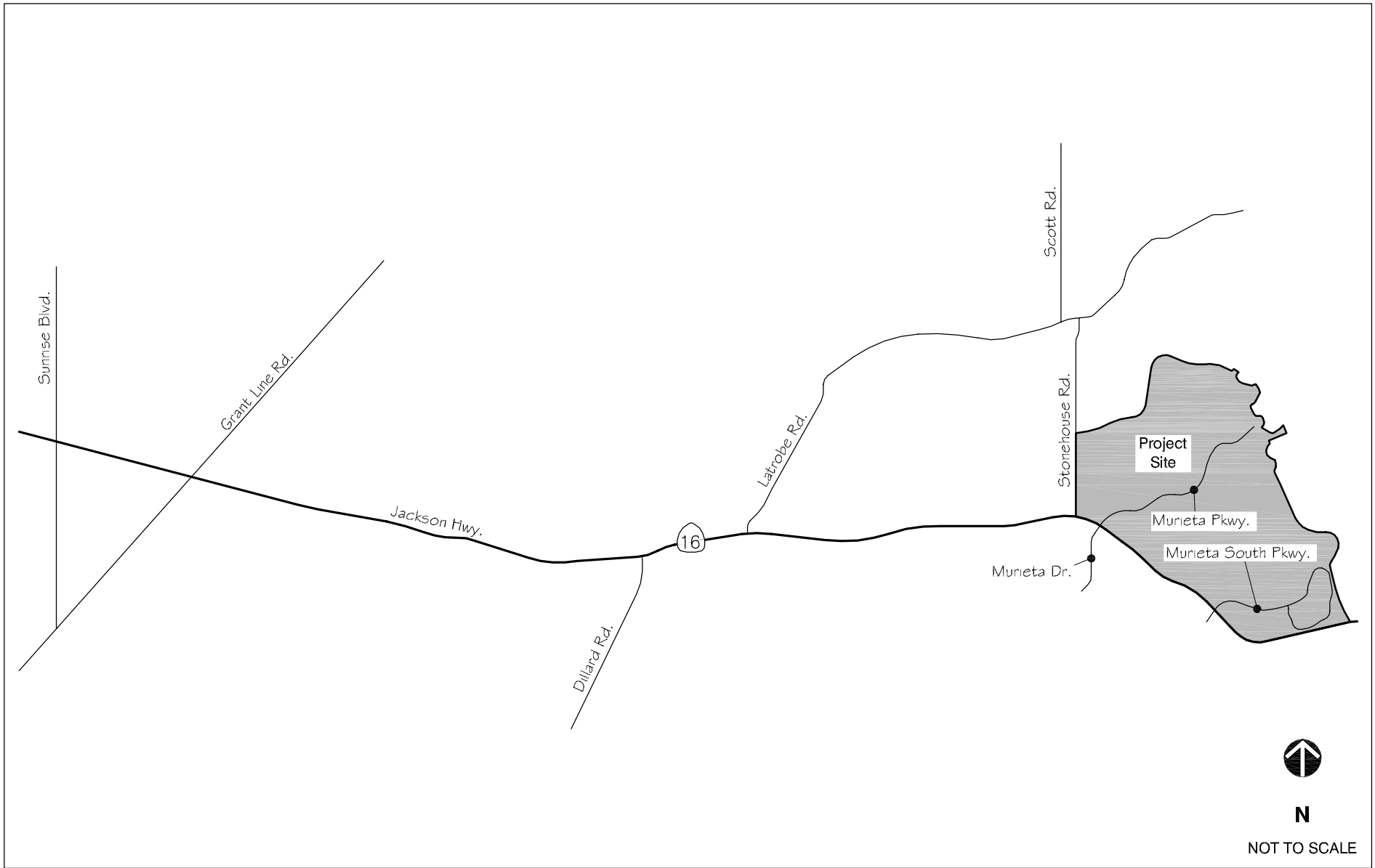
Rancho Murieta is a planned mixed-use, non-age restricted residential planned development located 28 miles southeast of downtown Sacramento (see Figure 1). The community has a population of approximately 6,000 persons and is comprised of approximately 2,500 homes located predominately on the north side of SR 16. The homes to the north of SR 16 surround two 18-hole golf courses and are split into two areas by the Cosumnes River creating Rancho Murieta North and Rancho Murieta South. South of SR 16, the community consists of a 189 unit mobile home community, commercial, business park, and municipal airport uses.

As a planned development, the community is described as ultimately containing a total of 5,189 single family units. A recent proposal known as the *Murieta Gardens* would develop 53 acres south of SR 16 and would include a mix of single family homes, a church, and commercial uses.

For over 30 years, residents' of the community have long relied on golf carts and more recently NEVs for local trips, similar to many other golf course focused communities. As of 2002, the community was notified that it is illegal to cross a state highway in golf carts and NEVs. The State Legislature enacted Assembly Bill 188 which amended Section 21115.5 of the California Vehicle Code to temporarily provided exemptions for travel across SR 16 until a Golf Cart Plan plan was developed to appropriately address golf cart travel across SR 16.

B. STUDY PURPOSE

Chapter 6, Sections 1950 - 1965 of the Streets and Highway Code outlines the requirements for a city or county to establish and adopt a golf cart transportation plan. As described in Section 1950, the intent of the Legislature in enacting Chapter 6 is that the transportation plan be developed and designed to best serve the functional travel needs of the plan area, to have the physical safety of the golf cart/NEV driver's person and property as a major planning component, and to have the capacity to accommodate golf cart/NEV drivers of every legal age and range of skills. The results of this study comply with that intent.



C. APPROACH

Consistent with Chapter 6.0, Sections 1950 - 1965 of the Streets and Highways Code, the plan addresses the following key elements.

- *Route Planning* – defines the legal definitions and design considerations for NEV/golf cart circulation including whether the streets and other functional classifications of use will accommodate NEV/golf carts without an adverse impact on traffic safety.
- *Modal Integration* – provides opportunities for coordination with other modes of transportation so that a NEV/golf cart driver may employ multiple modes of transportation in reaching a destination in the plan area. Modal integration also considers integration with the existing NEV/golf cart facilities.
- *Citizens and Community Involvement in Planning* – Public participation in the development of this plan included two public presentations, a 30-day comment period open to residents of the Rancho Murieta Community, review by Caltrans, California Highway Patrol, and Sacramento County Department of Transportation.
- *Flexibility and coordination with long-range transportation planning* – does not limit or impede future planning efforts. Future developments within Rancho Murieta CSD boundary may incorporate elements of this plan into the development plan.
- *Minimum General Design Criteria for NEV/Golf Cart Operations* – identifies relevant design considerations and requirements for NEV/golf cart lanes, routes, signs, crossings, markers, and parking. It also addresses pedestrian and bicycle safety issues.
- *Minimum Design and Safety Criteria for NEV/Golf Carts* – reviews safety, permitting and equipment requirements applicable to NEV/golf carts on public streets.

D. DEFINITIONS

The following words and phrases are used in this report:

- **“Plan Area”** refers to the Rancho Murieta community.
- **“Golf Cart”** means a motor vehicle having not less than three wheels in contact with the ground and an unladen weight of less than 1,300 pounds which is designed to be and is operated at not more than 15 miles per hour and is designated to carry golf equipment and not more than two persons, including the driver (CVC Sec 345). A conventional golf cart is not a Low Speed Vehicle.
- **“Permitted Golf Cart”** is a motor vehicle defined as above but with minimum designated safety equipment (see Chapter 5, Section 5): stoplamp, one rear reflector, and horn for daylight operations. To operate a golf cart after dusk the minimum designated safety equipment includes: brake light, one rear reflector, horn, headlamp, and taillamp. A golf cart equipped as described above would be allowed to cross SR 16 with the appropriate permit (see Chapter 5 section C-2).
- **“NEV”** or **“Low Speed Vehicle”** is defined as a motor vehicle, other than a motor truck, having four wheels on the ground and an unladen weight of 1,800 pounds or less, that is capable of propelling itself at a minimum speed of 20 miles per hour and a maximum speed of 25 miles per hour, on a paved level surface. For the purposes of this plan, a ‘low speed vehicle’ (LSV) is not a golf cart, except when

operated pursuant to Section 21115 or 21115.1 of the CVC pertaining to operations within a golf course facility/community. (CVC Section 385.5)

Low-speed vehicle is a relatively new motor vehicle classification created by the National Highway Traffic Safety Administration (NHTSA) in 1998 to permit the manufacture and circulation of small, four-wheeled motor vehicles with top speeds of 20-25 miles per hour. This new classification is codified as Section 571.500 Title 49 code of Federal Regulations and California Vehicle Code Section 385.5. Table 1 below summarizes the differences between two Golf Cart/NEV manufacturers.

Note: LSVs that are designed to travel up to 25 miles per hour are classified as motor vehicles and are required to have automotive grade headlights, stop lamps, turn signal lamps, tail lamps, parking brakes, rearview mirrors, seatbelts, windshields, brakes, and vehicle identification numbers. For the purposes of this plan, NEVs or “speed-modified golf cart” are subject to federal safety requirements.

CATEGORY	GOLF CART (CLUB CAR)		NEV (GEMCO)	
	2 Passenger	4 Passenger	2 Passenger	4 Passenger
Curb Weight	495 lbs	500 lbs	1,100 lbs	1,280 lbs
GVW	NA	NA	1,600 lbs	2,100 lbs
Length	91.5”	91.5”	98.5”	126.5”
Height	68.5”	68.5”	68”	69.75”
Width	47.25”	47.25”	55”	55”
Wheelbase	65.5”	65.5”	71.1”	101”
Tires	8.5-inch	8.5-inch	10-inch	12-inch
Rating	Street/Turf	Street	Street/Turf	Street
Speed	15 mph	15 mph	15/30 mph	30 mph

Source: Manufacturer specifications for CLUB CAR and GEMCO

- **“Speed-modified Golf Cart”** that may have a higher top speed of 25 miles per hour and/or meets the safety requirements of Section 571.500 of Title 49 of the Code of Federal Regulations
- **Privately Owned and Maintained Roads** includes roads owned and maintained by a city, county, or private entity that is not dedicated for use by the public or are not generally held open for use of the public for purposes of vehicular travel (CVC Sec 21107.7 (c)). Streets within the Rancho Murieta are owned and maintained by the Rancho Murieta Association.
- **“Golf Cart Facilities”** means all publicly owned facilities that provide for golf cart travel including golf cart lanes, golf cart routes, and golf cart crossings.

3. EXISTING CONDITIONS

The following information summarizes the current policy and existing golf cart and NEV facilities within the plan area. This information provides a basis for determining the best locations for future connections and for key crossing points to allow access between the residential areas north of SR 16 to the commercial and retail south of SR 16.

A. POLICY

The Rancho Murieta CSD and RMA have established provisions that permit residents to operate golf carts and NEVs on the privately owned and maintained roadways. These provisions are included in the Rancho Murieta Association *Non-Architectural Rules*, CC&Rs, Rancho Murieta CSD ordinances, and other governing documents.

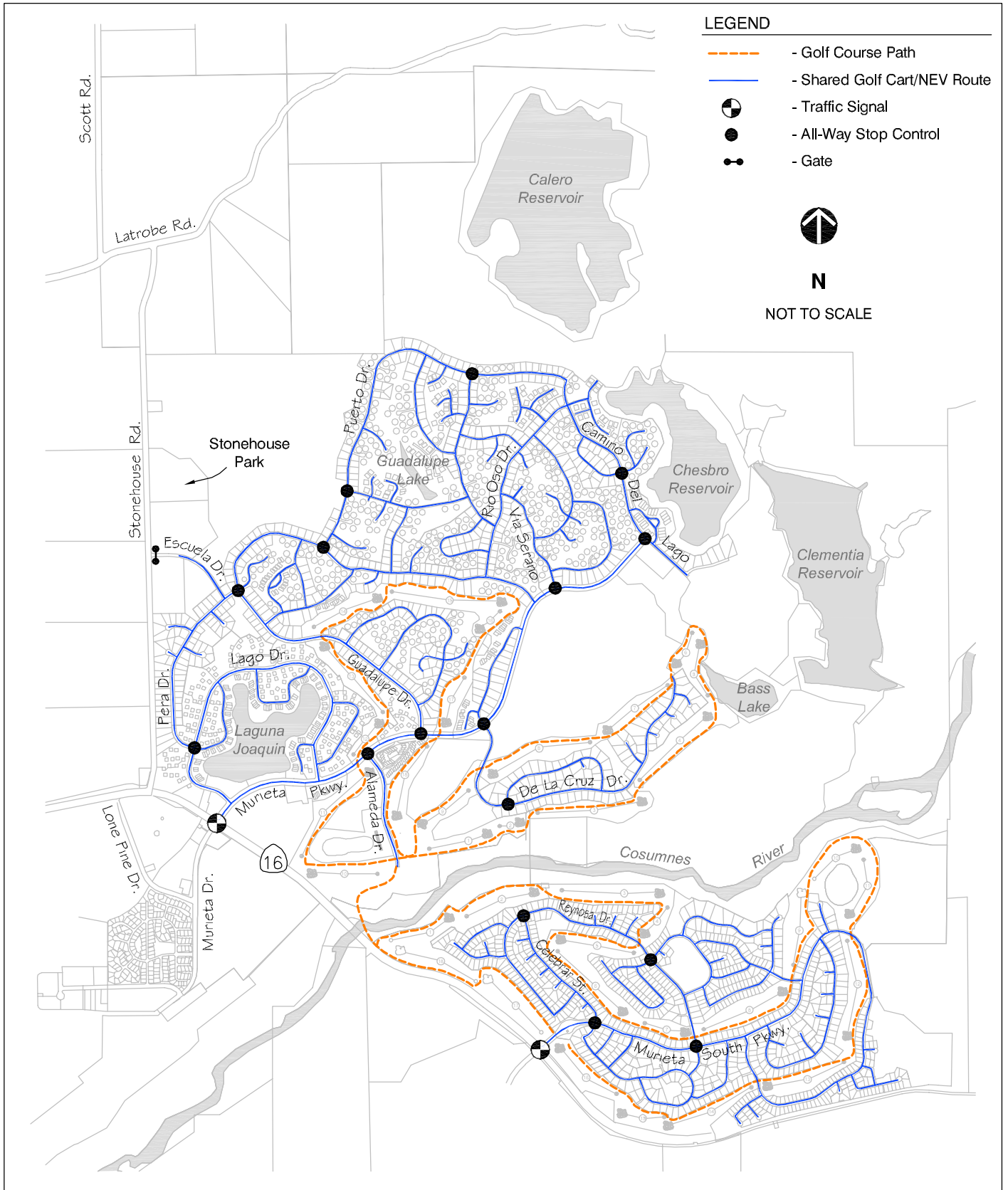
B. ROADWAY NETWORK

1. Characteristics

As indicated in the RMA's *Non-Architectural Rules* and CC&Rs, golf carts and NEV use is allowed on all privately owned and maintained streets. The existing policy allows golf carts to share the travel lane with vehicles, pedestrians and bicyclists on all residential streets within Rancho Murieta North and Rancho Murieta South; however, travel across public roadways such as SR 16 are not covered by Rancho Murieta CSD or RMA policies.

The following is a description of the major roadways in the plan area (see figure 2).

- State Route 16 – is an east/west major highway that connects downtown Sacramento to SR 49 in Amador County. From Folsom Boulevard to the Amador county line, SR 16 is a two-lane undivided roadway providing primary access to the Rancho Murieta community. Two signalized intersections provide access to the community, SR 16/Murieta Parkway and SR 16/Rancho Murieta South Parkway.
- Murieta Parkway – is a privately owned and maintained two-lane divided collector roadway providing access to Rancho Murieta North from SR 16. Murieta Parkway north of SR 16 is approximately 78 feet curb-to-curb (100-foot right-of-way), has on-street bicycle lanes, a posted speed limit of 25 mph, and stop-sign control at intersections with other residential streets.
- Murieta Drive – is a privately owned and maintained two-lane undivided collector roadway south of SR 16. Murieta Drive forms the south leg of the SR 16/ Murieta Parkway intersection and provides access to Murieta Village and other retail and airport uses. This segment of Murieta Parkway is approximately 40 feet curb-to-curb, has a posted speed limit of 25 mph, and stop-sign control at intersections with other streets.
- Murieta South Parkway – is a privately owned and maintained two-lane undivided collector roadway providing access to Rancho Murieta South from SR 16. Murieta South Parkway north of SR 16 is approximately 46 feet curb-to-curb, a posted speed limit of 25 mph, and stop-sign control at intersections within other residential streets. South of SR 16, Murieta South Parkway serves as an access road to Rancho Murieta Community Service District office and Public Safety center.



Within Rancho Murieta North and Rancho Murieta South, there are a number of other privately owned and maintained roadways. These roadways serve as connections between residents' homes and collector roadways and have a posted speed limit of 25 mph. These streets have varying curb-to-curb widths, but generally conform to one of the following widths:

- Primary Residential – 42 feet curb-to-curb
- Minor Residential – 35 feet curb-to-curb

C. EXISTING TRAFFIC CONDITIONS ON SR 16

Traffic volumes on SR 16 within the study area were obtained from available sources¹. Existing daily traffic counts, morning (7:00-9:00 AM), and evening (4:00 – 6:00 PM) peak period traffic counts were conducted in January 2006. Table 2 below shows that SR 16 within the study area operates within acceptable levels of service based on Sacramento County's LOS policy. Existing peak period intersection counts were not readily available for the intersection of SR 16/Murieta South Parkway.

Roadway Segment	# of Lanes	Capacity¹	Average Daily Traffic	LOS
SR 16: Dillard Road to Murieta Parkway/Murieta Drive	2	20,000	15,610	C
Intersection				
	AM Peak Hour		PM Peak Hour	
	V/C²	Delay	V/C²	Delay
SR 16/Murieta Parkway/Murieta Drive	0.73	C	0.54	A
SR 16/Murieta South Parkway	N/A	N/A	N/A	N/A
Note: ¹ County of Sacramento's <i>Traffic Impact Guidelines</i> , July 2004. ² LOS based on Circular 212 Planning methodology. Source: The Residences West of Murieta Hills, The Residences East of Murieta Hills, and the Retreat RDEIR, Sacramento County DERA (June 2006)				

¹ *The Residences West of Murieta Hills, The Residences East of Murieta Hills, and the Retreat RDEIR*, Sacramento County Department of Environmental Review & Assessment (June 2006)

4. NEV/GOLF CART CIRCULATION

A. ROUTE PLANNING

The following section discusses the various facilities within which golf cart/NEV travel is permissible. The golf cart/NEV facilities within the plan area will accommodate the internal and external travel needs of the Rancho Murieta residents.

1. Functional Classifications

- **Golf Cart/NEV Lanes** are portions of public or privately owned and maintained roadways designated by signs and pavement markings for golf cart/NEV travel. Golf cart/NEV lanes are 7 feet wide and allow golf carts to travel adjacent to automobile traffic but within a striped separated space. Bicyclists may share golf cart lanes if there is not a separate bicycle lane on the roadway. Golf cart lanes are appropriate on residential collector streets that meet the following design criteria:
 - Road Design Speed – between 25 and 45 miles per hour
 - Automobile Traffic Volume – Streets should be capable of providing a high level of service to insure that adequate capacity exists for automobiles, bicyclists and golf carts. The County of Sacramento's *Traffic Impact Guidelines*, July 2004 requires rural streets and intersections to operate at no worse than level of service "D." Based on the traffic volume thresholds shown in Table 3, a target vehicular threshold to maintain LOS D on a two lane collector street with front-on homes should be no more than 6,400 vehicles per day and 9,000 vehicles per day for a two lane collector street without front-on homes.
- **Golf Cart/NEV Routes** are designated residential streets and alleys, which are in compliance with Section 515 of the California Vehicle Code, have speed limits of 25 miles per hour or less, and are shared with other motor vehicles and bicyclists. Roadways designated as golf cart/NEV routes can be identified through the use of signs. Golf Cart/NEV Routes are feasible on residential streets and private alleys meeting the following design criteria:
 - Road Design Speed: 25 mph or less. CVC Sec 345 and Sec 515.
 - Automobile Traffic Volume: In order to facilitate the safe co-existence between golf carts, autos, bicycles and pedestrians, candidate golf route streets should have relatively low volumes of traffic. Based on experience, the speed restriction and safety concerns suggest that residential streets should carry no more than 3,000 to 4,000 vehicles per day.
- **Golf Cart/NEV Crossing Zones**, as defined in Section 21115.1 of the CVC, are locations on public streets for use by golf carts to cross, at any time other than during darkness, on any street, other than a state highway, which has a posted speed limit of 45 miles per hour or less and which is immediately adjacent to a golf course. For purposes of this plan, a golf cart/NEV crossing zone is not a golf cart crossing connecting adjacent golf course holes. A golf cart/NEV crossing zone refers to crossing locations of SR 16 that are identified on the proposed circulation plan (Figure 3). These crossing locations will use through travel lanes at the signalized intersections.

**TABLE 3
AVERAGE DAILY TRAFFIC VOLUME LEVEL OF SERVICE THRESHOLDS**

Facility Type	# of Lanes	Maximum Volume for Given Service Level				
		A	B	C	D	E
Residential	2	600	1,200	2,000	3,000	4,500
Residential collector with frontage	2	1,600	3,200	4,800	6,400	8,000
Residential collector without frontage	2	6,000	7,000	8,000	9,000	10,000
Arterial, low access control	2	9,000	10,500	12,000	13,500	15,000
	4	18,000	21,000	24,000	27,000	30,000
	6	27,000	31,500	36,000	40,500	45,000
Arterial, moderate access control	2	10,800	12,600	14,400	16,200	18,000
	4	21,600	25,200	28,800	32,400	36,000
	6	32,400	37,800	43,200	48,600	54,000
Arterial, high access control	2	12,000	14,000	16,000	18,000	20,000
	4	24,000	28,000	32,000	36,000	40,000
	6	36,000	42,000	48,000	54,000	60,000
Rural, 2-lane highway	2	2,400	4,800	7,900	13,500	22,900
Rural, 2-lane road, 24'-36' of pavement, paved shoulders	4	2,200	4,300	7,100	12,200	20,000
Rural, 2-lane road, 24'-36' of pavement, no shoulders	6	1,800	3,600	5,900	10,100	17,000

Source: County of Sacramento's *Traffic Impact Guidelines*, July 2004

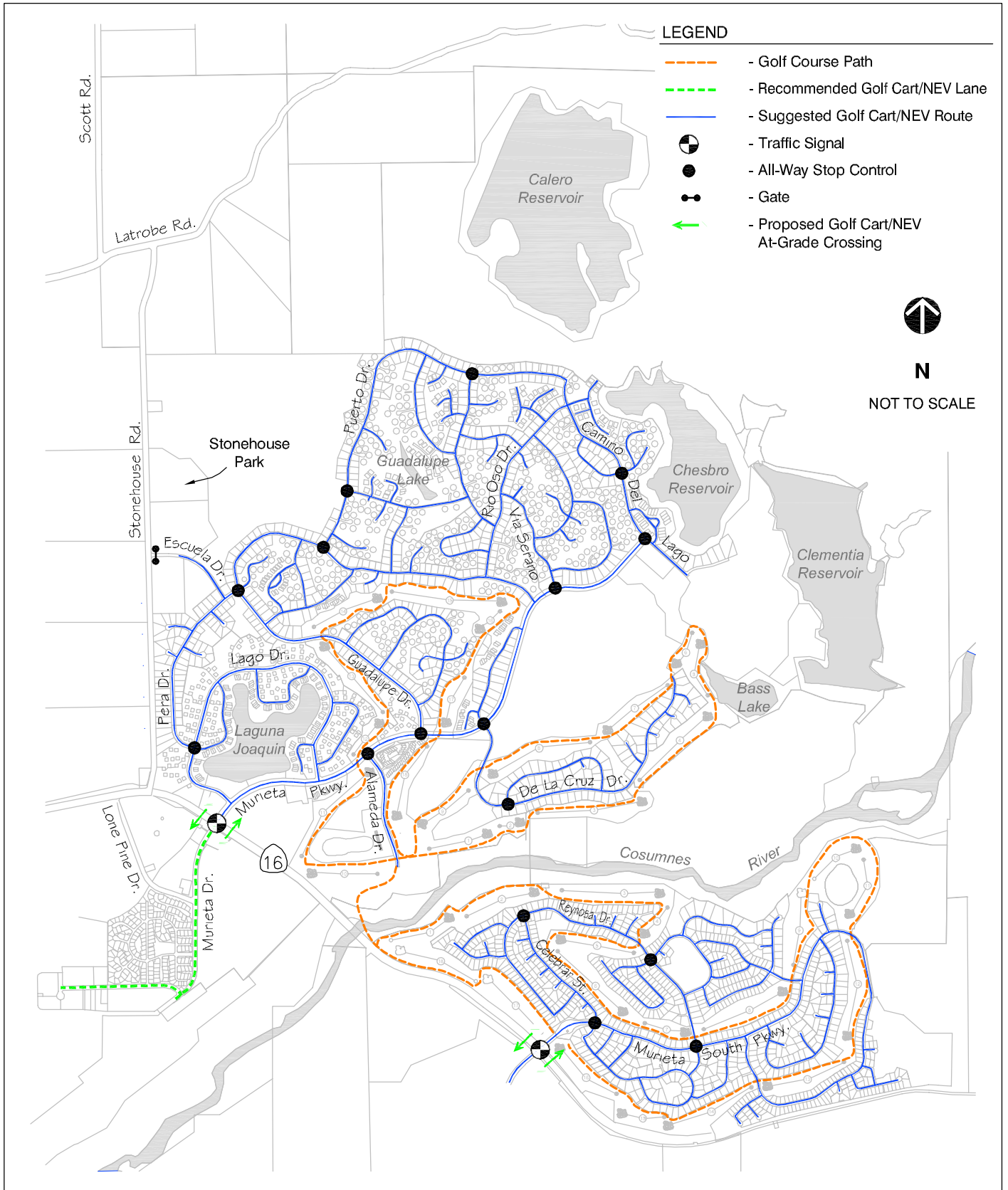
Future golf cart/NEV lanes and golf cart/NEV route designations on future roadways are suggested to follow the above guidelines.

2. Proposed Golf Cart/NEV Circulation System

The proposed Golf Cart/NEV circulation system for Rancho Murieta is illustrated in Figure 3. The golf cart/NEV circulation system is recommended to include the following components.

- **Golf Cart/NEV Lanes:** Striped 7-foot golf cart/NEV lanes are recommended on Murieta Drive as described below:
 - Murieta Drive south of SR 16 is a privately owned and maintained roadway; however, public access to this roadway is not restricted as are most privately owned streets. Murieta Drive is recommended to include striped on-street golf cart/NEV lane in both directions of travel. The on-street pavement width does not allow for separate golf cart/NEV and bicycle lanes; therefore, bicyclists will be required to share the golf cart/NEV lane.
- **Golf Cart/NEV Routes:** Shared use golf cart/NEV route designations are suggested for the following privately owned and maintained roadways:
 - Murieta Parkway (collector) – beginning at Lago Drive and continuing Camino Del Lago.

Note: The designation of these facilities as shared use golf cart routes is consistent with their functional classification (residential streets) and/or design speed of 25 miles per hour or less.



- Murieta South Parkway (collector) – beginning just east of the guard station looping around as Murieta South Parkway transitions to Colbert Drive.
- Murieta South Parkway south of SR 16, serves as a access road to Rancho Murieta Community Service District and Public Safety offices and therefore, does not require special golf cart/NEV facilities.
- Golf cart/NEV route designation is also suggested for minor residential and primary residential classified streets within Rancho Murieta North and Rancho Murieta South.



- **Golf Cart/NEV Crossings:** Two at-grade crossings are proposed at the signalized intersections of SR 16 with Murieta Parkway/Murieta Drive and Murieta South Parkway. Right-of-way through the intersection is allocated to golf carts and NEVs by specified traffic signal phases. Field observations indicate that the existing signal timing is adequate to allow golf carts and NEVs to cross SR 16.
 - SR 16 / Murieta Parkway/Murieta Drive – the recommended crossing design should provide for through travel within the existing travel lanes between the guard station and intersection. South of SR 16, golf carts and NEVs should use the golf cart lane to access retail, airport uses, and other planned uses. Golf carts and NEVs are prohibited from traveling along SR 16 between Murieta Parkway and Murieta South Parkway.



- SR 16 / Murieta South Parkway – the recommended crossing design should provide for through travel within the existing travel lane from the guard station through the intersection to the Rancho Murieta CSD and Public Safety offices. NEVs and golf carts are prohibited from traveling along SR 16 between Murieta Parkway and Murieta South Parkway.



5. NEV/GOLF CART OPERATIONS AND DESIGN CRITERIA

A. MODAL INTEGRATION

Golf carts/NEVs, bicycle, and pedestrian facilities will interface on the minor residential, primary residential, and collector streets within the plan area. These streets should be designated with appropriate signage alerting residents to the shared use function of the street and/or separated golf cart/NEV lanes where necessary (see Appendix B).

B. GOLF CART/NEV PARKING FACILITIES

Golf carts and NEVs within the plan area have historically been accommodated in automobile parking stalls at common area facilities, retail centers, commercial centers, and parks. Golf carts and NEVs will continue to be permitted to utilize automobile parking stalls at local facilities.

C. GOLF CART/NEV OPERATIONS

The following are required of golf cart/NEV operators within the plan area.

1. Golf Cart/NEV Operator Requirements on Privately Owned and Maintained Roadways

Golf cart/NEV operators whose sole intent is for vehicle use on the privately owned and maintained roadways within the plan area are subject to RMA and Rancho Murieta CSD provisions for golf/NEV cart use. The provisions are contained in the Rancho Murieta Association *Non-Architectural Rules*, CC&Rs, Rancho Murieta CSD ordinances, and other governing documents.

2. Golf Cart/NEV Operator Requirements to Cross SR 16

Golf cart/NEV operators intending to use the privately owned and maintained roadways and travel across SR 16 are required to meet the following:

- a. A golf cart/NEV operator must have a valid driver's license issued by the State of California or an acceptable foreign jurisdiction, in accordance with CVC Sections 12502-12505 CVC.
- b. A golf cart/NEV operator must comply with the financial responsibility requirements established pursuant to Chapter 1 (commencing with Section 16000) of Division 7 of the CVC.
- c. All golf cart/NEV travel across SR 16 must have a permit.

3. Permit Process

Golf carts/NEVs intending to cross SR 16 are subject to a permit process by the RMA, Rancho Murieta CSD, or designee. In accordance with Streets and highways Code section 1961 (b), the RMA or Rancho Murieta CSD shall implement a permit process for golf carts/NEVs. The permit process ensures that all golf carts/NEVs operated across SR 16 meet the applicable Federal and State policies.

D. MINIMUM GOLF CART/NEV DESIGN CRITERIA

1. Authority to Install

The RMA and/or Rancho Murieta CSD as appropriate is authorized to place and maintain, or cause to be placed and maintained, the signs, striping and pavement markings described in this plan.

Note: any modification of golf cart/NEV circulation routes and/or crossings will be at the discretion of the RMA and/or Rancho Murieta CSD.

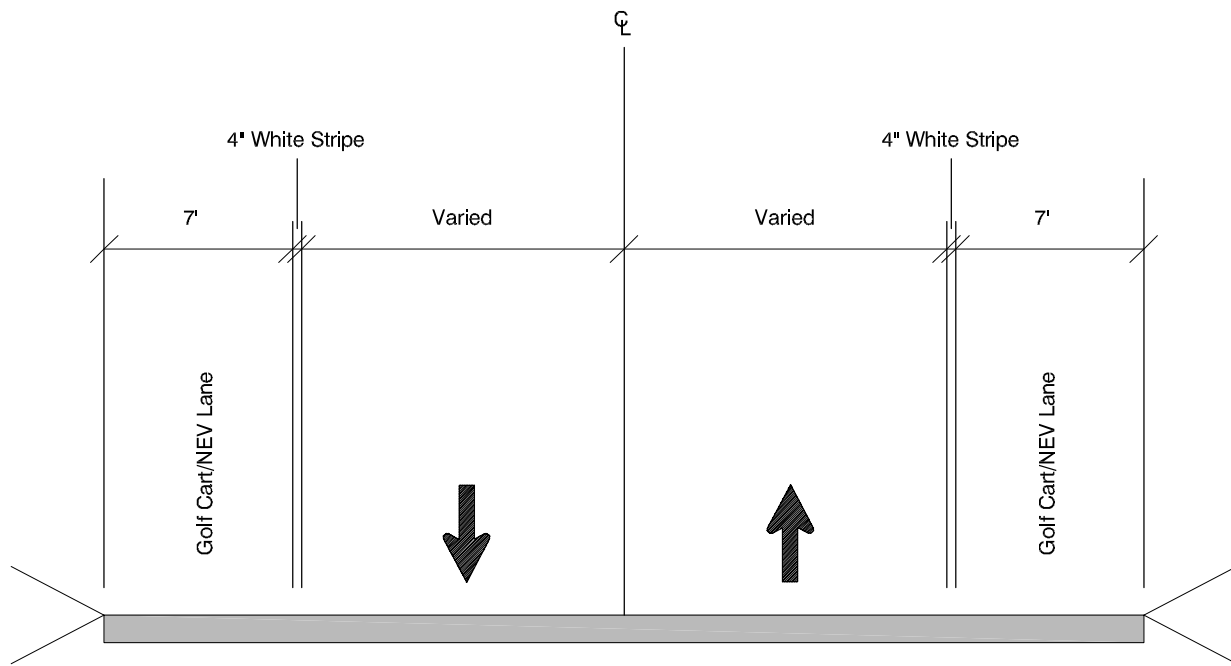
2. Golf Cart/NEV Facility Design Standards

- a. **Golf Cart/NEV Lanes:** lanes should be at least seven feet (7') wide measured from the adjacent lip of gutter, have a minimum vertical clearance of eight (8) feet from obstructions, have a smooth paved or concrete surface, and be separated from vehicle travel lanes by two solid four inch (4") wide white lines. On approaches to intersections, golf cart lanes should end, with "dashed" cart lane lines beginning 200 feet from the intersection. Cart lanes should be designated by appropriate pavement legends and signs posted along the way (see Figure 4).
- b. **Golf Cart/NEV Routes:** Cart routes may be designated on privately owned and operated streets with a maximum posted speed limit of 25 miles per hour. It is suggested that golf cart/NEV route transitions be clearly marked. It is the intent of golf cart/NEV routes to be facilities shared with bicycles and automobiles.
- c. **Golf Cart/NEV Crossings:** For the purpose of this plan, golf cart/NEV crossings outside of Rancho Murieta North and Rancho Murieta South will occur at signal or stop controlled intersections. Golf carts and NEVs will cross the intersection within the right-hand travel lane. Golf carts and NEVs should not travel in marked crosswalks. Crossings should meet Caltrans' minimum sight distance requirements (Highway Design Manual).

3. Specifications for Signs and Pavement Markings

The following standards and policies for golf cart/NEV signing and pavement markings are at a minimum recommended outside of Rancho Murieta North and Rancho Murieta South. Sign designations are subject to change when adopted by Caltrans.

- a. **SG-bb, Golf Cart Community.** The Community sign (SG-bb) may be placed along streets entering the plan area. (Appendix B Figure 1)
- b. **SR-x, Golf Cart/NEV Lane.** Placement of the golf cart/NEV lane symbol sign (SR-x) is recommended at the beginning of each designated golf cart/NEV lane, at all major changes in direction, at the far side of collector street intersections and at a maximum of one-half mile intervals (Appendix B Figure 2). The sign should utilize the golf cart symbol.
- c. **SR-xx Combination Golf Cart/NEV/Bike Lane.** Placement of the combination golf cart/NEV/bike lane sign (SR-xx) is recommended on golf cart/NEV lanes where a Class II Bike Lane is also provided. (Appendix B Figure 3). The sign should utilize the golf cart symbol.



Note: Bicycles Share Golf Cart/NEV Lane. On Street Parking Not Shown.

- d. **SG-aa, Golf Cart/NEV Route.** Placement of the golf cart/NEV route symbol sign (SG-aa) is suggested on streets, which have been designated as golf cart/NEV routes. The sign should be located at the far side of street intersections and at a maximum of one-half mile intervals on all continuous residential streets (Appendix B Figure 4). The sign should utilize the golf cart symbol.
- e. **SW-aa, Advanced Golf Cart/NEV Crossing.** Placement of the advanced golf cart/NEV crossing sign (SW-aa) is suggested 50 feet in advance of any unsignalized crossing (Appendix B Figure 5).
- f. **SW-bb, Golf Cart/NEV Crossing.** Placement of the golf cart/NEV crossing sign (SW-bb) is suggested where golf carts or NEVs cross the road at locations other than a signalized intersection (Appendix B Figure 5).

4. Safety Criteria for Golf Carts/NEVs on Privately Owned and Maintained Roadways

Golf carts and NEVs intended for use solely on the privately owned and maintained roadways within the plan area are subject to RMA and Rancho Murieta CSD requirements for golf/NEV cart use. The provisions are contained in the Rancho Murieta Association *Non-Architectural Rules*, CC&Rs, Rancho Murieta CSD ordinances, and other governing documents.

5. Safety Criteria for Golf Carts/NEVs Crossing SR 16

Golf carts and NEVs intended for travel across SR 16 are required to meet applicable federal and state requirements to operate on a state or public roadway. The Streets and Highway Code (Chapter 6.0, Sections 1950 - 1965) provides guidance on what equipment may be adopted through the development of a Golf Cart Transportation Plan while the CVC specifies the equipment required.

Golf carts operated pursuant to CVC 345 shall conform to the applicable minimum safety equipment specified in CVC 24001.5. The minimum safety equipment required differs depending whether golf carts are used during daylight or after dusk. The minimum safety equipment and corresponding CVC citations is provided on the following page:

Minimum Safety Criteria during daylight

- *Stoplamp (CVC 24603)*
- *One Rear Reflector (CVC 24607)*
- *Horn (CVC 27000)*

Minimum Safety Criteria during darkness

- *Stoplamp (CVC 24603)*
- *One Rear Reflector (CVC 24607)*
- *Horn (CVC 27000)*
- *Headlamp (CVC 24400)*
- *Taillamp (CVC 24600)*

Golf Carts and may be additionally equipped with the following safety features:

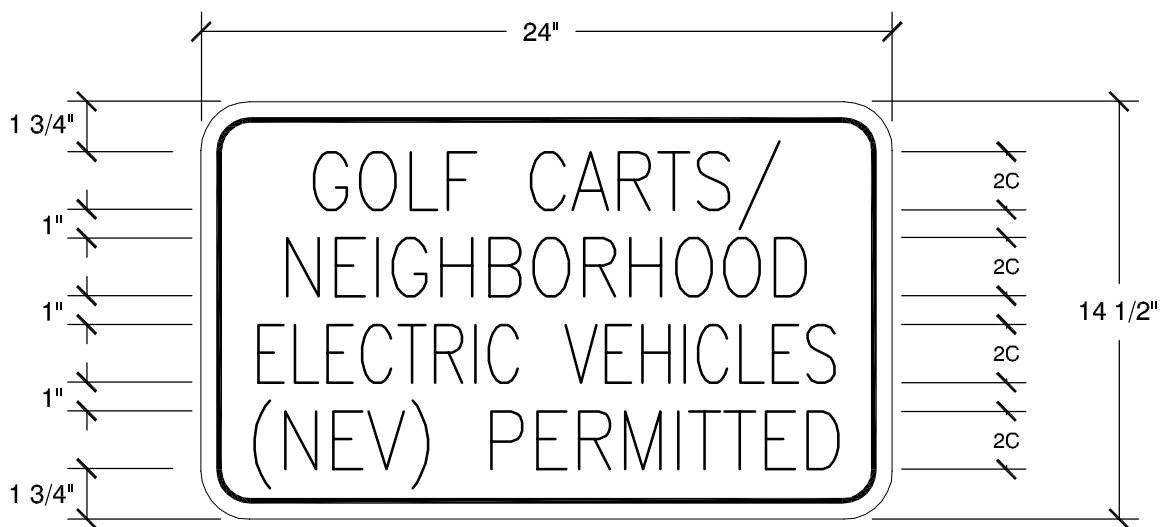
- Rear View Mirror (CVC26709)
- Parking Brake (CVC 26450)
- Seatbelts (49-CFR-571.209 and 571.210)
- Front and Rear Turn Signal Lights (CVC 24952 and 24953)
- Windshield (CVC 26701, 26703, and 26705)

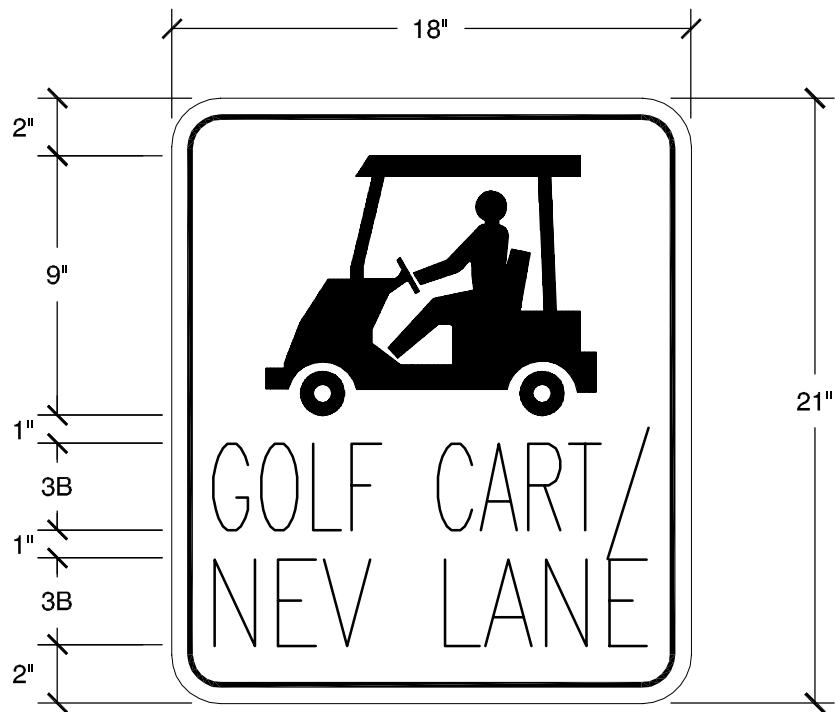
NEVs operated pursuant to CVC 385.5 shall conform to the equipment requirements specified in Section 571.500 of Title 49 of the Code of Federal Regulations for Motor Vehicle Standards. NEVs sold in California are equipped according to Section 571.500 of Title 49 and therefore satisfy the minimum safety equipment requirements to travel across SR 16.

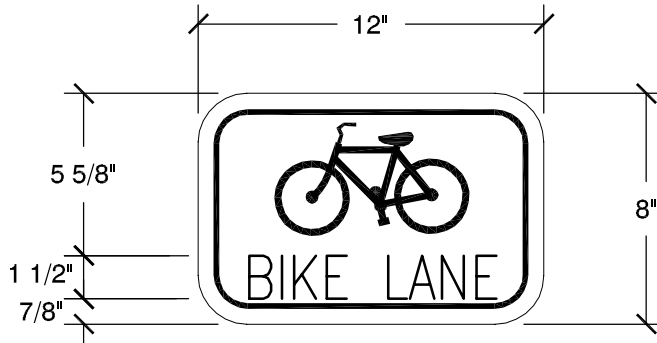
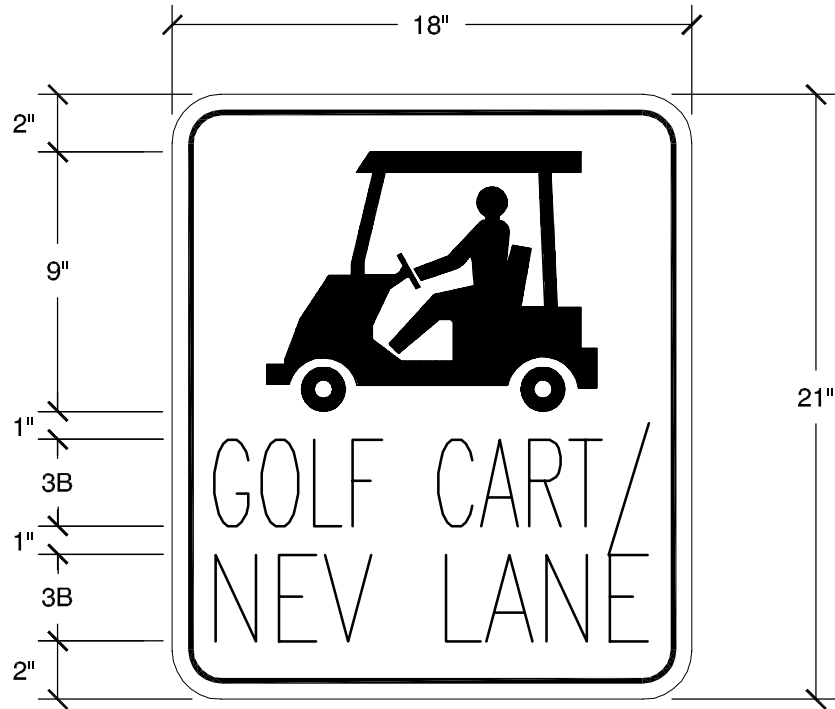
In addition to the above equipment requirements, golf carts and NEVs may not be operated *in an unsafe condition, which is not equipped as required by the Vehicle Code, or which is not safely loaded* (CVC 24002).

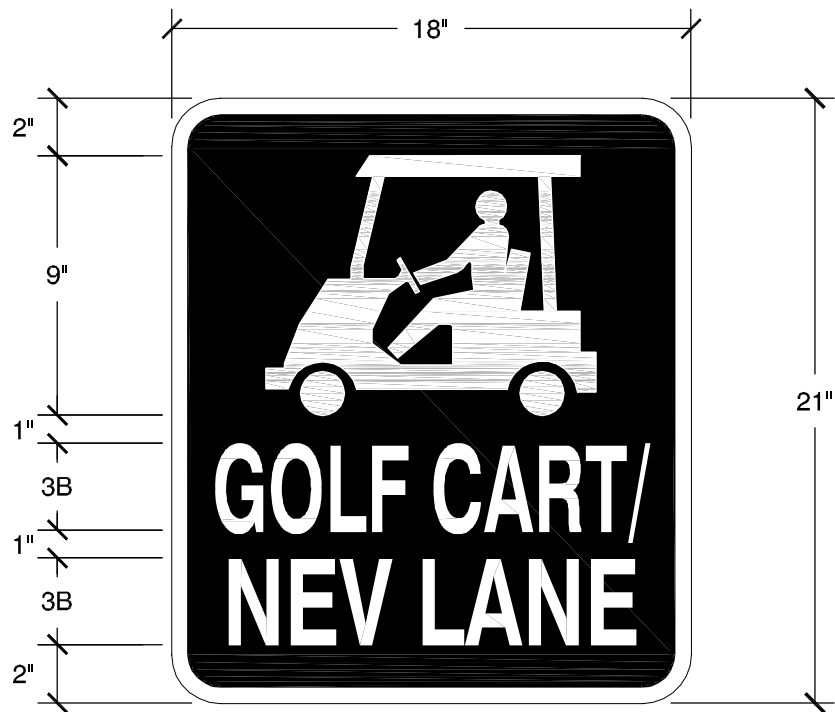
Note: The above standards do not apply to golf carts used exclusively for normal play on the golf course or within the residential area of Rancho Murieta North or Rancho Murieta South, and that are not intended for travel across SR 16.

APPENDIX A – SIGNS AND MARKINGS

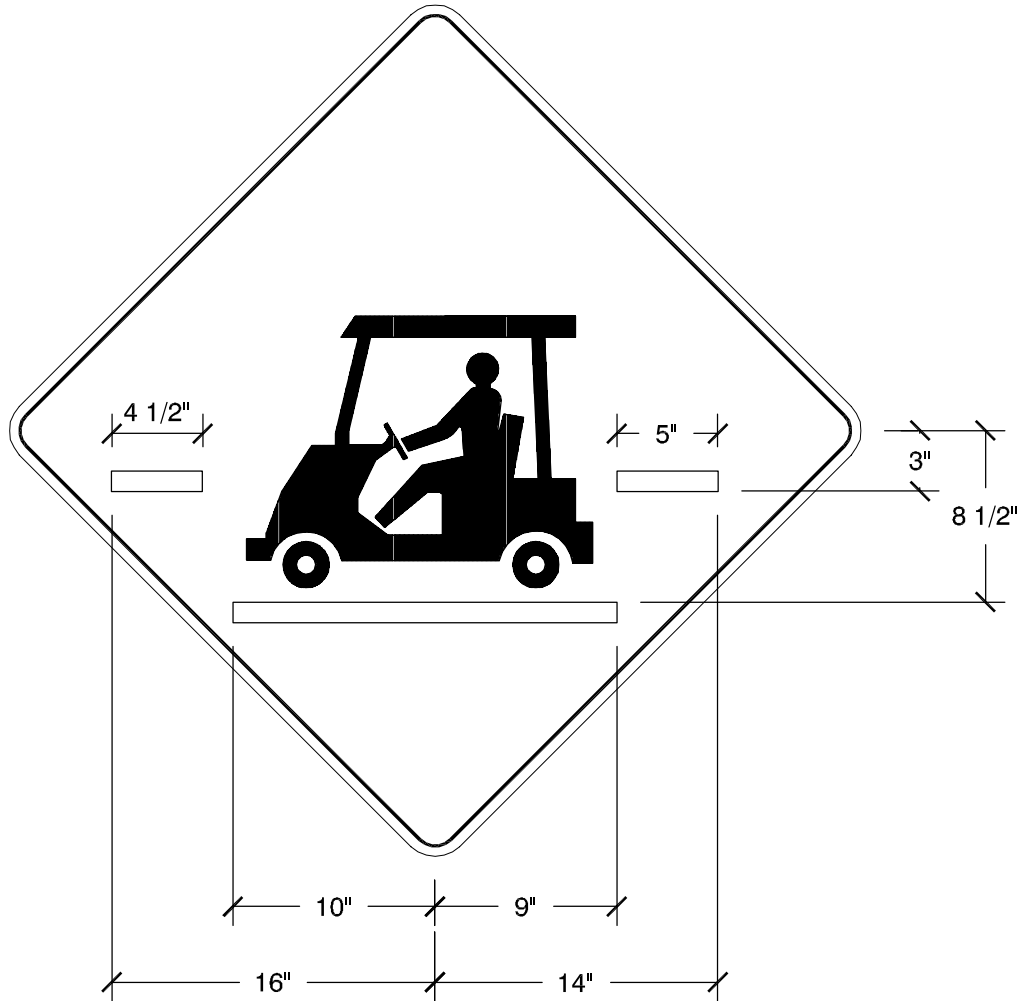








SW-aa GOLF CART/NEV CROSSING



SW-bb GOLF CART/NEV CROSSING

