California Energy Commission
DOCKETED
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TN # 68644
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# Chapter 3
# Project Description

## 3.1 Environmental Setting

### 3.1.1 Site Location and Boundaries

The proposed Fanita Project (the Project) covers approximately 2,600 acres of undeveloped land in the northern portion of the city of Santee (Figures 3.1-1 and 3.1-2) in San Diego County. Santee is approximately 20 miles due east of the Pacific Ocean and about 15 miles northeast of downtown San Diego. The Project lies north of State Route 52 (SR-52) and west of State Route (SR-67). There is no direct public street access into most of the Project Site at present. Fanita Parkway extends from Mast Boulevard into the southwest corner of the property, and a number of streets in residential areas to the south and southwest terminate at the property boundary.

### 3.1.2 Existing Site Conditions

Topographically, the Project Site is typified by a series of northeast- to southwest-trending ridgelines that create finger canyons (see Chapter 4.1, Figures 4.1-1 and 4.1-2). The northwestern part of the Site is dominated by the large, flat valley of Sycamore Canyon. Elevations in the northeastern corner of the property are approximately 1,200 feet above mean sea level (MSL) and approximately 475 feet above MSL in the southwestern corner. Slope gradients vary widely, ranging from 0 to 10 percent in the northwest to 11 to 25 percent near ridgetops, with occasional instances of 26 to 40 percent throughout the Project Site and a concentration of 41 percent plus slopes in the southern and



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northeastern portions of the Project Site. Gentle and moderate slopes predominate in the valley floor in the northwestern and west-central portions of the Project Site, with more gently sloping or relatively level terrain in the remainder of the property.

### 3.1.3 Aesthetics

The visual resources located within the Project Site include hills and valleys, rock outcroppings, and (historically) riparian areas with native oaks and sycamores. The most dominating visual resource of the area is the ridgelines, which can be viewed from a variety of areas within the city of Santee, including the Santee Town Center. A single ridgeline extends from the northeastern corner of the Project Site to the southwestern corner, and is joined by smaller, intervening ridgelines in the southern portion of the Project Site. As seen from the existing developed areas of Santee, this ridgeline blocks views into much of the western and northern portions of the Project Site.

### 3.1.4 Agriculture

As mentioned above, the Project Site consists of a variety of terrain including hills and valleys, rock outcroppings, riparian areas, and ridgelines. There are no agricultural uses on the Project Site.

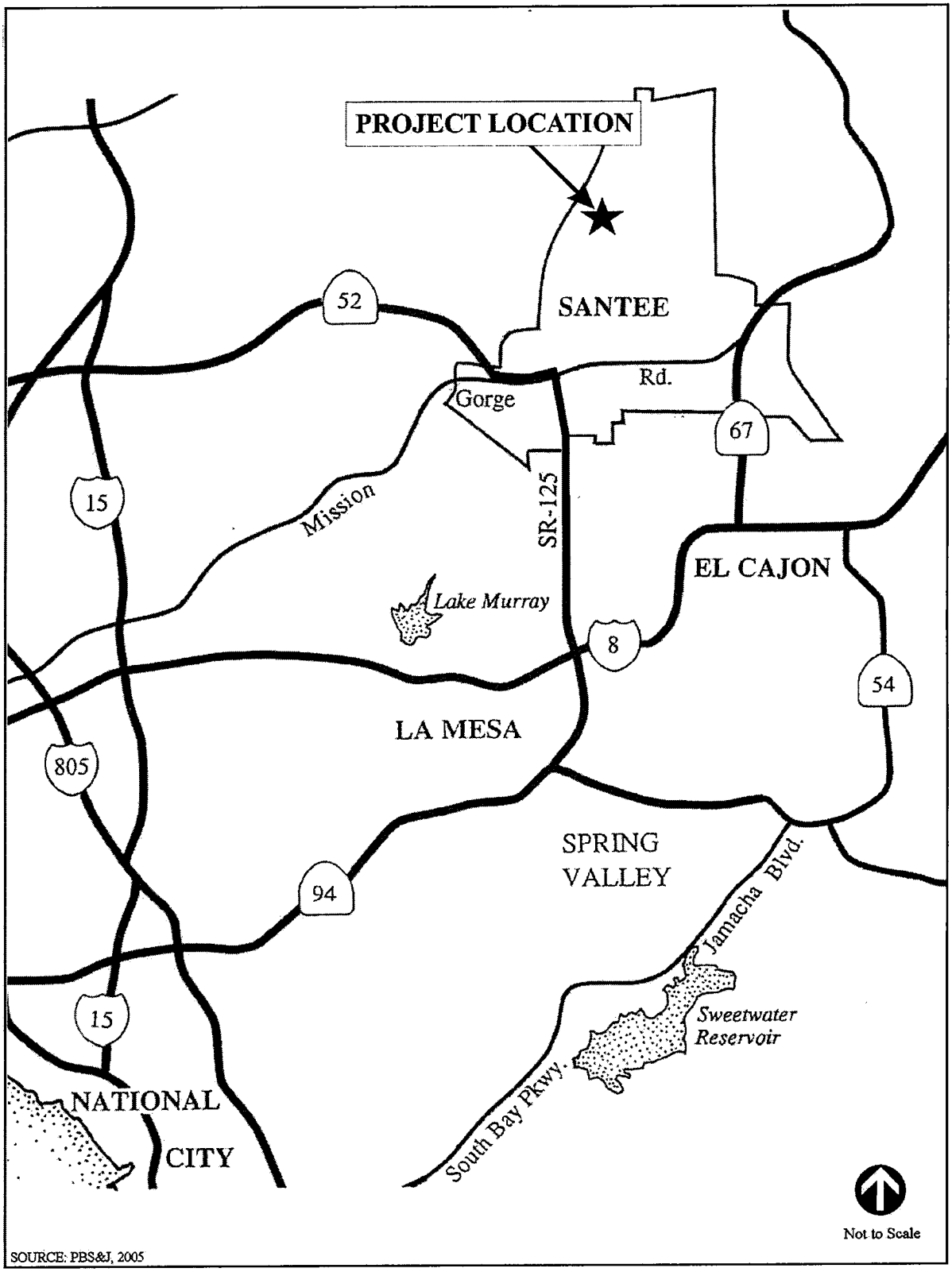
### 3.1.5 Air Quality

The Project Site is located within the San Diego Air Basin (SDAB). Air quality in the SDAB is improving. The SDAB currently meets the federal standards for all criteria pollutants except ozone ($O_3$) and meets the state standards for all criteria pollutants except $O_3$, respirable particulate matter ($PM_{10}$), and fine particulate matter ($PM_{2.5}$). The SDAB is classified as a "basic" nonattainment area for the federal 8-hour $O_3$ standard. Basic is the least severe of the six degrees of $O_3$ nonattainment. The SDAB is currently classified as a state "serious" $O_3$ nonattainment area and a state nonattainment area for $PM_{10}$ and $PM_{2.5}$. The SDAB currently falls under a federal "maintenance plan" for carbon monoxide (CO), following a 1998 redesignation as a CO attainment area. The SDAB is in attainment status for other criteria pollutants.

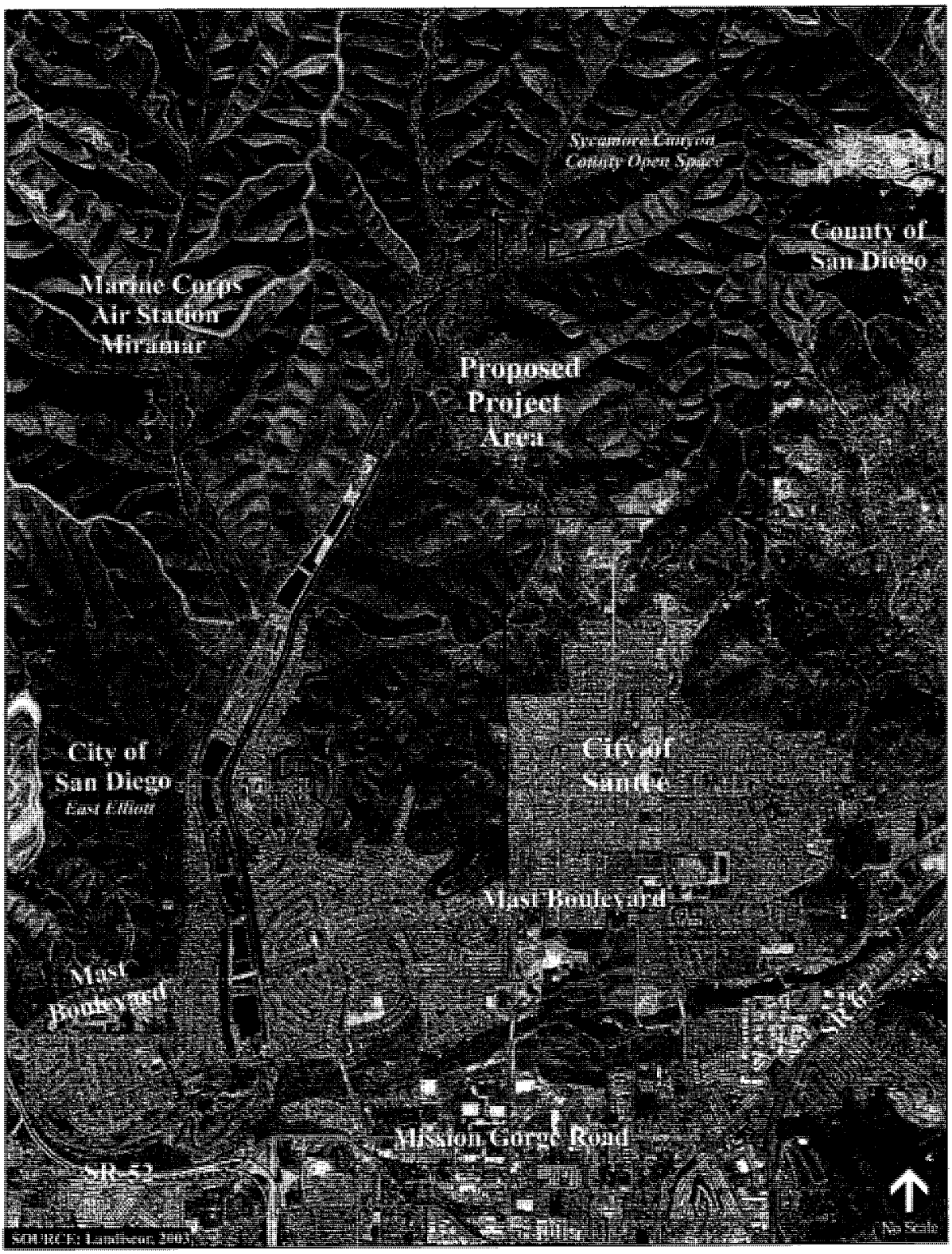
### 3.1.6 Biological Resources

Almost the entire Project Site burned in the 2003 Cedar Fire. Prior to the fire, biological surveys were conducted that provide a baseline analysis of what resources existed and what resources are expected to reestablish over time. The biological section (Chapter 4.3) describes the resources found on the Project Site prior to the 2003 Cedar Fire and as updated after the fire.

Several biological communities exist on the Project Site including wetland (e.g., seasonal basins and freshwater marsh), riparian (e.g., southern willow scrub, coast live oak riparian woodland, sycamore woodland, mule fat scrub), southern mixed chaparral, coastal sage scrub, disturbed coastal sage scrub, grasslands, disturbed or graded areas, and rock outcroppings. Coastal sage scrub, a sensitive vegetation community, occupies most of the southern portion of the Project Site and some of the




**REGIONAL LOCATION MAP** **FIGURE 3.1-1**




**PROJECT LOCATION AND VICINITY** **FIGURE 3.1-2**

west-facing slopes. Chaparral is the predominant plant community in the northeastern portion of the Project Site at higher elevations, and extends westerly along the north-facing slopes. Other on-site sensitive biological resources include oak and riparian woodlands, located in the Sycamore Creek drainage. Section 4.3, Biological Resources, describes the vegetation on the Project Site in more detail.

The Project Site is located within the City's Draft Subarea Plan area of the regional Multiple Species Conservation Program (MSCP) Fanita Ranch subunit.

## 3.1.7 Climate Change

Atmospheric greenhouse gases (GHGs) and clouds within the Earth's atmosphere influence the Earth's temperature by absorbing most of the infrared radiation rising from the Earth's Sun-warmed surface that would otherwise escape into space. This process is commonly known as the Greenhouse Effect." GHGs and clouds, in turn, radiate some heat back to the Earth's surface and some out to space. The resulting balance between incoming solar radiation and outgoing radiation from both the Earth's surface and atmosphere keeps the planet habitable.

However, anthropogenic (i.e., caused by humans) emissions of GHGs into the atmosphere enhance the Greenhouse Effect by absorbing the radiation from other atmospheric GHGs that would otherwise escape to space, thereby trapping more radiation in the atmosphere and causing temperature to increase. Increasing anthropogenic emissions of GHGs are primarily associated with the burning of fossil fuels (during transport, electricity generation, industry, manufacturing, etc.) and deforestation, as well as agricultural activity and solid waste and have led to a trend of unnatural warming of the Earth's temperature, which is causing changes in the Earth's climate. This increasing temperature phenomenon is known as "global warming" and the climatic effect is known as "climate change" or "global climate change."

## 3.1.8 Cultural Resources

Fourteen prehistoric sites have been identified within the Project Site. Finds include milling stations, isolated artifacts, and campsites. Impacts to eight of these cultural resource sites have either been mitigated or the sites were previously determined not to be significant. The remaining sites include three canyon-bottom, special-resource sites, one knoll-top special-resource site, and two large base campsites.

## 3.1.9 Energy Setting

The current condition of the Project Site is largely undeveloped; therefore, little or no energy is consumed in its maintenance. The Project Site receives energy services from San Diego Gas and Electric Company (SDG&E). SDG&E is a regulated public utility that provides electricity and natural gas services to 3 million consumers throughout San Diego County. In 2000, San Diego County consumed over 6 billion kilowatt hours (kWh) for residential uses and over 125 billion kWh

for nonresidential uses. SDG&E maintains a 150-foot-wide easement that crosses the central portion of the Project Site in an east-west direction.

## 3.1.10 Geology and Soils Setting

The Project Site area is underlain by three principal geologic units: Granitic Rocks, Friars Formation, and Stadium Conglomerate. In addition, surficial materials consisting of ancient stream terrace deposits, ancient landslide deposits, alluvium/colluvium, and topsoils are found on the Project Site.

Geologic conditions on the Project Site include compressive and expansive soils, shallow groundwater, and slope instability. Landslides or landslide-prone materials exist predominantly in the southern portion of the Project Site, generally below the 600-foot elevation. Some of this area has been previously altered to remedy the potential effects of slope instability. Compressible and expansive soils (primarily in Friars Formation slopes) and shallow groundwater are located in the Sycamore Creek drainage, and are typical throughout San Diego County and the City of Santee.

The known active faults nearest to the Project Site are the Rose Canyon fault zone, 15 miles to the west-southwest; the Coronado Bank fault zone, 29 miles to the southwest; and the Elsinore-Julian fault zone, 26 miles to the northeast. Because there are numerous areas where rock is at or close to the surface, blasting is anticipated as part of grading for the Project in the northern portion of the Project Site.

## 3.1.11 Hazards and Hazardous Materials Setting

In general, the Project Site has been vacant and undeveloped since at least as early as 1928. The Project Site has been used for cattle grazing, and an abandoned quarry is present in the area where the proposed Cuyamaca Street extension would enter the Project Site. The former Camp Elliott, located immediately west of the Project Site was used by the military until 1960 for weapons training. The remaining area is vacant. No evidence of hazardous waste, hazardous materials, or petroleum contamination has been identified. Furthermore, no underground storage tanks were found on the Project Site.

The Project is located within a high fire hazard zone and lies within the jurisdiction of the City of Santee's Fire Department. This part of Santee burns frequently, with many wildfires originating in the SR-67 corridor and burning southwesterly into the Sycamore Canyon Open Space Preserve and the Fanita Ranch property. Since records have been kept (beginning in 1910), a total of 23 wildfires have burned through or in the area immediately surrounding the Project Site. Two wildfires in 1987 and one wildfire in 1989 burned portions of the Fanita Ranch property for a total of 1,967 acres. The majority of the Fanita Ranch property burned over in the 1994 Rocoso Fire and completely burned over again in the October 25, 2003, Cedar Fire. Most of these wildfires occurred under Santa Ana wind conditions. The last two wildfires occurred during severe, prolonged periods of drought.

## 3.1.12 Hydrology and Water Quality

The Project Site lies within the San Diego River watershed, which encompasses approximately 366 square miles from its headwaters in the Cuyamaca Mountains to its confluence with Sycamore Canyon. El Capitan Reservoir, a major reservoir, is located approximately 12 miles upstream of The Project Site. In addition, San Vicente Reservoir is located approximately 5 miles upstream. Internally, the Project Site can be divided into two primary drainage basins – one west and one east of the primary ridgeline. The watershed on the west drains toward Sycamore Creek; the watershed on the east drains more directly toward the San Diego River.

Sycamore Creek is a watercourse on the western side of the Project Site that joins the San Diego River approximately 1 mile south of the Project Site. Due to the presence of hillsides on site, runoff can concentrate quickly at the canyon outlets. High intensity storms generate short duration runoff with relatively high peak flows.

## 3.1.13 Land Use and Planning

The Project generally adjoins development to the southeast and southwest. The area south of the Project Site is primarily single-family detached homes on 6,000- and 10,000-square-foot lots. The land use along the south and southwestern boundary includes an older subdivision, with some low density and hillside/limited residential areas to the southeast. South of the Project Site is Mast Boulevard, which is a four-lane major arterial that runs in an east-west direction and connects to State Route SR 52 (SR-52), just west of the Project Site.

Adjacent to the eastern boundary of the Project Site are the central part of the city of Santee and the rural community of Eucalyptus Hills, which is located in unincorporated San Diego County. This community is in the Lakeside Community Plan area and is currently designated for residential uses at one dwelling unit per 1, 2, and 4 acres. Most of the other lands farther to the east and northeast of the Project Site are either undeveloped or developed with low density residential uses.

The Santee Lakes Recreation Preserve, located west of the Project Site, consists of approximately 190 acres, including a wastewater treatment facility. This reclamation plant processes and treats up to 2 million gallons of sewage per day. The seven Santee Lakes are located within a streambed of Sycamore Canyon and are regarded as a major visual and recreational feature within the city of Santee. Recreational pursuits provided at this regional park include boating, fishing, camping, picnicking, and other forms of outdoor recreation. Santee Lakes is owned and operated by the Padre Dam Municipal Water District (PDMWD). The city of Santee has approved a Conditional Use Permit to PDMWD for activities associated with Santee Lakes.

Other surrounding land uses include mostly natural open space, recreational, and low density single-family residential. The 1,600-acre Sycamore Canyon County Open Space Preserve lies due north of the Project site, west of SR-67. Adjacent to the northwestern boundary of the property is the Marine Corps Air Station Miramar (MCAS Miramar), which includes thousands of acres of undeveloped land, much of which is in a near natural state. Approximately 2 miles to the southwest is the 6,200-acre natural resource–based Mission Trails Regional Park. Approximately one mile due west is the

3,500-acre East Elliott area, containing the Sycamore Landfill and privately owned undeveloped parcels within the City of San Diego.

SDG&E owns a 150-foot-wide easement for electrical lines which traverses the central portion of the Project site from east to west. Five overhead transmission lines occur within the easement: one 69 kV (kilovolt), one 138 kV, and three 230 kV lines (1 kV = 1,000 volts). A water reservoir tank, operated on land owned by the PDMWD, is located north of the current terminus of Carlton Hills Boulevard. A second water reservoir tank is located in the southeastern section of the Project area.

## 3.1.14 Mineral Resources

The Project Site is designated by the City of Santee General Plan Conservation Element as Mineral Resource Zone-3 (MRZ-3). MRZ-3 areas are those containing mineral deposits whose significance cannot be evaluated from available data. This classification also includes areas where both acceptable and unacceptable quality material are intermixed. The Project Site is not known to have any current economically extractable resources, although there is an abandoned rock quarry partly on the Project Site.

## 3.1.15 Noise

The Project Site is undeveloped and there are no noise-generating sources on site. The primary sources of noise to the Project Site are from vehicular traffic on local roads near the Project Site. Lands adjacent to the north and northwest are undeveloped and do not contain noise-generating sources. Low density residential areas exist to the west and surrounding the southern portion of the Project area. MCAS Miramar and Gillespie Field are located in the vicinity of the Project site, but the Project site is located outside of the 65 Community Noise Equivalent Level (CNEL) noise contour.

## 3.1.16 Population and Housing Setting

The Project Site is undeveloped. The City of Santee General Plan Land Use Element has designated this area as a residential planned development with a specified ratio of lot sizes.

## 3.1.17 Public Services Setting

### Schools

The Santee School District (SSD) serves the Fanita Project area for grades kindergarten through eighth grade (K-8) and the Grossmont Union High School District (GUHSD) serves the area for grades ninth through twelfth grade (9-12). According to the 2003 General Plan Update Master EIR, "adequate capacity exists within the K-8 schools serving the City." The GUHSD has two high schools in Santee: West Hills High School on Mast Boulevard near Medina Drive, southwest of the Project Site; and Santana High School on Magnolia Avenue between Mast Boulevard and Second Street, southeast of the Project Site. West Hills High School was originally built in expectation of an

influx of students from a previous development of the Project Site, but when development of Fanita Ranch did not occur, students from other areas were enrolled at the school.

### Fire

The Project Site is within the service area of the City of Santee Fire Department. The City is a member of the Heartland Fire Zone, which orchestrates a mutual aid agreement among cooperating jurisdictions to provide paramedic and fire services in the event additional units are required.

### Police

The San Diego County Sheriff's Department, under contract to the City, provides police protection in the Project Site.

## 3.1.18 Recreation and Parks Setting

The Project Site is privately owned and there is no public access allowed on site; however, it currently provides trespassing residents of Santee and Eucalyptus Hills with hiking, mountain biking, off-road vehicle use areas, and horseback riding trails. The Project Site is located in the Northwest Quadrant, as identified in the Recreation Element of the General Plan. This element recognizes that the Project residents will need recreational areas. The General Plan requires that both active and passive recreation be provided for in future development plans, and that a trails system be established which provides connections to nearby trail systems.

## 3.1.19 Traffic Circulation

Currently, there are no improved roads within the boundaries of the Project Site. There are, however, a number of streets that approach or reach the property boundary. There are four main north-south streets in the area: Fanita Parkway, Carlton Hills Boulevard, Magnolia Avenue, and Cuyamaca Street. North of Mission Gorge Road, Mast Boulevard is the closest major east-west roadway to the southern boundary of The Project Site. There are three freeways in the vicinity of the Project site: SR-52, SR-125, and SR-67.

## 3.1.20 Public Utilities and Services

The Project Site lies within the service area of the following utility purveyors. Because the Project Site is undeveloped, no services are currently provided to the Project Site and no facilities currently exist, except for electric transmission lines.

- **Electricity and Natural Gas.** San Diego Gas and Electric Company (SDG&E).
- **Telephone.** AT&T/Pacific Bell.
- **Water, Recycled Water, and Sewer Service.** PDWMD provides water, recycled water ~~wastewater~~, and sewer services to most of the area surrounding the Project Site.

- **Solid Waste.** Waste Management, Inc. provides refuse collection and disposal, curbside recycling, yard waste collection, along with other waste management needs for the City.

# 3.2 Proposed Planned Development

The approximately 2,600-acre Fanita Project (Figure 3.2-1) consists of single-family residential neighborhoods; parklands; a natural preserve; and supporting commercial, Homeowners Association (HOA), and mixed-use facilities in a town center. The primary street access would be the northerly extension of Cuyamaca Street into the north-central part of the Project Site. The secondary street access would be a northward extension of Fanita Parkway along the Project Site's western border. The development would consist of three principal components: the Villages, the Parklands, and the Preserve, with backbone roadways and parkways as a separate land use shared by the principal components (Table 3.2-1). Infrastructure and support elements would be integrated systems throughout the development. The acreages of the uses within the principal components are shown in Table 3.2-2. A description of the components of the Project follows.

## 3.2.1 The Villages

The residential portion of the Project would consist of approximately 1,380 single-family dwelling units. In addition, there would be 15 live/work units in the Village Center. The 1,380 residences would be in four separate "villages" on a total of approximately 969.1 acres (see Figure 3.2-1). One village (Sage Hill) would be in the south, adjacent to existing development, and would contain 357 dwelling units on approximately 190.5 acres, with 139.6 acres of roads, parks, and open space (Figure 3.2-2). In the south-central part of the Project Site, another village (Oak View) would contain 161 dwelling units on approximately 88.6 acres, with 44.7 acres of roads, parks, and open space (Figure 3.2-3). A third village (Sycamore Glen), in the north-central part of the Project Site, would contain 463 dwelling units on approximately 121.8 acres, with 45.0 acres of roads, parks, and open space (Figure 3.2-3). A fourth village (Rock Point), in the northeastern part of the Project Site, would contain 399 dwelling units on approximately 262.8 acres, with 76.1 acres of roads, parks, and open space (Figure 3.2-4).

**Table 3.2-1. Principal Development Components**

| Component | Acres | Percent of Area |
|---|---|---|
| The Villages | 969.1 | 37 |
| The Parklands | 229.3 | 9 |
| The Preserve | 1,277.4[(1)] | 49 |
| Backbone Roadways and Parkways | 114.4 | 4 |
| **Total** | **2,590.2[(2)]** | **100** |

[(1)] Total MSCP preserve on site is 1,412 acres, of which 134.6 acres are in The Parklands and 1,277.4 acres are in The Preserve.
[(2)] With 11 acres southwest of Santee Lakes, the total is approximately 2,600 acres.

# Section 4.13
# Public Safety

This section of the EIR is divided into five discussions of potential hazards to public safety: electromagnetic fields (EMF), hazardous materials, gas leak from a wastewater treatment plant (WTP), wildland fires, and nearby airports. The EMF section describes the impacts from exposure to EMFs and the potential for exposure within the Project Site. This section incorporates information from the *Fanita Ranch Specific Plan Final Recirculated Environmental Impact Report* (RECON1998). The hazardous materials section considers the potential for impacts related to hazardous materials sites and is based on the *Phase I Environmental Site Assessment, Fanita Ranch* prepared by Geocon Consultants, Inc. (2005). The wildland fires section discusses the potential for wildland fires to occur within the Project Site and the management program for the Project. This section is based on the *Fanita Fire Protection Plan* developed by Firewise 2000, Inc. (2007). The management program is part of the *Fanita Development Plan* document prepared by Forma Design (2007). The Phase I Environmental Site Assessment (ESA) is provided in Appendix I of this EIR and the *Fanita Fire Protection Plan* is provided in Appendix J of this EIR.

## 4.13.1 Environmental Setting

### 4.13.1.1 Electromagnetic Fields

#### Existing Condition

The Project Site is crossed by a 150-foot-wide San Diego Gas and Electric Company (SDG&E) transmission line easement. The easement runs in a straight line oriented east/west in the south-



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central part of the Project Site. The easement contains five high-voltage electrical lines: one 69 kilovolt (kV) line, one 138 kV line, and three 230 kV lines. One kilovolt is equal to one thousand volts.

**Background of Electromagnetic Fields.** Studies from the late 1970s have suggested a possible relationship between cancer, specifically childhood leukemia, and exposure to electrical and magnetic fields or proximity to overhead transmission lines. The available scientific data do not support a conclusion that electrical and/or magnetic fields cause health effects. However, due to public concern regarding EMF and health effects and the proximity of the power lines to potential development areas, this issue is addressed in this EIR.

High-power transmission lines (such as those described above on the Project Site) generate electromagnetic fields, which consist of invisible lines of force that surround anything conducting electricity. An electrical field is created when voltage is established on a wire (i.e., when an item is "plugged in"), while magnetic fields are created with the flow of current (i.e., if there is no current, there is no electrically induced magnetic field). These electrical and magnetic fields of human origin are ubiquitous in modern America and are generated by all electrical items, including many common household appliances. A small sample of common EMF sources includes refrigerators, televisions, stereos, coffee makers, broilers, electric blankets, fax machines, computers, and light bulbs.

Electrical fields are measured in volts per meter (V/m) and magnetic fields are measured in teslas or gauss, which equals one ten-thousandth of a tesla. Typical electrical field levels within the home or workplace are 1 to 10 V/m; fields within one foot of small appliances reach 20 to 200 V/m; and the field strength directly next to an electric blanket can reach 10,000 V/m. Ten thousand volts per meter is approximately the maximum level directly beneath a 765 kilovolt (kV) transmission line. Electrical fields weaken rapidly with increased distance from the source. An electrical field with a strength of 10,000 V/m at the source will decrease to less than 500 V/m at a distance of 60 meters (approximately 200 feet). Electrical fields are also easily blocked by vegetation and buildings.

The maximum magnetic field value beneath a power distribution line is approximately 50 milligauss (mG), and directly beneath a 765 kV transmission line is approximately 250 mG. The level directly below a 230 kV line is about 65 mG, which decreases to about 15 mG at a distance of 30 meters, or approximately 100 feet. Typical home levels are between 0.1 and 5 mG and the values within several inches of appliances can be 10 to 20 times higher. Unlike electric fields, magnetic fields are not substantially affected by vegetation and buildings.

### 4.13.1.2 Hazardous Materials

Project Site conditions were identified during the Phase I ESA performed by Geocon Consultants. The Phase I ESA consisted of a reconnaissance of Project Site conditions, observation of nearby properties from public streets, a search of environmental database listings, historical map and photograph reviews, and reviews of previous Phase I ESA reports from the surrounding area.

### Historical and Current Uses

In general, the Project Site has been vacant and undeveloped since at least as early as 1928. The Project Site has been used for cattle grazing and a quarry is present at the site where the planned extension of Cuyamaca Street would enter the Project Site. The former Camp Elliott, located immediately west of the Project Site, now Marine Corps Air Station (MCAS) Miramar, was used by the military until 1960 for weapons training. Currently, the Project Site contains a concrete oval-shaped structure (water reservoir), a concrete stairwell leading underground (believed to be associated with a lift station), and a paved driveway (an extension of Carlton Hills Boulevard) that are enclosed within a chain-link and barbed-wire fence in the southwestern portion of the Project Site. The remaining area is vacant.

### Site Reconnaissance

During the on-site reconnaissance, no chemical odors, pools of liquid, drums, significantly stained soil, distressed vegetation, or indicators of underground storage tanks (USTs), pits, or ponds were observed. Miscellaneous non-hazardous debris was observed in the northern and western portions of the Project Site. This debris consisted of concrete debris in the western portion of the Project Site and abandoned equipment associated with a former rock quarry in the northern portion. There is no physical evidence to suggest that the surrounding off-site properties would impact the Project Site. Further, no unexploded ordnance was observed during the on-site reconnaissance.

### Database Search and Records Review

A record search of databases of sites that generate, store, treat, or dispose of hazardous materials, or sites for which a hazardous materials release or incident has occurred, was carried out for the Project Site and surrounding area. The data search included federal, state, and local lists. No listing was found for any site within an eighth of a mile (660 feet) of the Project Site. A review of the California Department of Conservation Division of Oil and Gas (DOGGR) map determined that one gas and oil well is located east of the Project Site within 1 mile. Based on the "drilling-idle" status of this well, which is a well that has been drilled and closed but has not been properly abandoned pursuant to DOGGR regulations. As a result, there is a low likelihood that this well presents an environmental concern to the Project Site.

## 4.13.1.3 Gas Leak from Wastewater Treatment Plant

Wastewater service is provided to the City by the Padre Dam Municipal Water District (PDMWD). The PDMWD also provides wastewater services to parts of El Cajon and Lakeside for a total of approximately 14,500 accounts. Of the 5.2 million gallons of wastewater managed by PDMWD per day, 40 percent (approximately 2.1 million gallons) is diverted to the PDMWD wastewater treatment plant (WTP) for treatment. The effluent is treated with chlorine and sulfur dioxide gases, which are injected into the water under a vacuum. The maximum intended inventory of chlorine is 5 tons and the maximum intended inventory of sulfur dioxide is 4 tons.

### 4.13.1.4 Wildland Fire

The Project Site is located within a high fire hazard zone in the central part of San Diego County. Further, the proposed development lies within the City of Santee Fire Department's Fire jurisdiction.

The Project Site is located in a moderately steep inland, coastally influenced zone, approximately 17 and a half miles inland from the ocean. The east, south, and west sides of the Project Site are bordered for the most part by scattered residential development and pockets of annual grasslands, Diegan coastal sage scrub, and coastal sage scrub. Prior to the Cedar Fire in October 2003, the northern and eastern boundaries were bordered by large areas of southern mixed chaparral and coastal sage scrub, and scattered residential and agricultural developments located in the Eucalyptus Hills area. The State Route 67 (SR-67) corridor presents a serious threat during extreme fire weather conditions brought about by extended drought and drying seasonal Santa Ana winds. This area serves as a ready source of potential ignitions resulting from vehicle accidents, over-heated vehicles, and burning material thrown from vehicles. During the October 2003 wildfires, Incident Reports noted wind gusts up to 75 mph from the northeast.

Prior to the Cedar Fire, the undeveloped areas of dense native coastal sage scrub and chaparral vegetation on and off site consisted of a mix of species such as chamise (*Adenostoma fasciculatum*), California sagebrush (*Artemisia californica*), flat-topped buckwheat (*Eriogonum fasciculatum*), and laurel sumac (*Malosma laurina*), some of which were more than 6 feet in height. As is typical of scrub and chaparral species, a high percentage of these plants had an abundance of dead material. This was due to the effects of vegetation age and the region's Mediterranean climate. Long, wet winters promote significant new growth. Long, hot, and very dry summer seasons and occasional, multiyear droughts cause significant parts of these plants to die back. All of these plants are adapted to wildfires, which they need for species regeneration.

Following the large number of wildfires that burned through southern California in October 2003, including the Cedar Fire, fire planning policies are being revised at both the state and local levels. As of July 14, 2004, the County of San Diego approved new fire code ordinances that have changed the landscape standards, building standards, and road widths and grades for new construction in wildland/urban interface areas. The City has recently adopted local Urban Wildlife Interface Code requirements for the fire safe development within wildland/urban interface areas.

### 4.13.1.5 Nearby Airports

MCAS Miramar is adjacent to the Project Site and its runway is approximately 5.5 miles west of the Project Site. MCAS Miramar's Airport Influence Area encompasses the City, and therefore the entire Project Site. The Airport Influence Area for Gillespie Field encompasses the southern portion of the Project Site. Gillespie Field is located approximately 2.5 miles south of the Project Site. The runway and flight patterns are generally oriented east-west.

## 4.13.2 Regulatory Framework

### 4.13.2.1 Federal

#### Resource Conservation and Recovery Act of 1976, as amended by the Hazardous and Solid Waste Amendments of 1984

Federal hazardous waste laws are generally promulgated under the Resource Conservation and Recovery Act (RCRA). These laws provide for the "cradle to grave" regulation of hazardous wastes. Any business, institution, or other entity that generates hazardous waste is required to identify and track its hazardous waste from the point of generation until it is recycled, reused, or disposed.

The U.S. Environmental Protection Agency (EPA) has the primary responsibility for implementing RCRA; however, individual states are encouraged to seek authorization to implement some or all of RCRA provisions. California received authority to implement the RCRA program in August 1992. The California Department of Toxic Substance Control (DTSC) is responsible for implementing the RCRA program as well as California's own hazardous waste laws, which are collectively known as the Hazardous Waste Control Law. Under the Certified Unified Program Agency (CUPA) program, DTSC has in turn delegated enforcement authority to the County of San Diego.

### 4.13.2.2 State

#### Hazardous Materials Release Response Plans and Inventory Act

Section 25503.5 of Chapter 6.95 of the California Health and Safety Code requires facilities that use, produce, store, generate, or have a change in business inventory of hazardous substances in quantities above certain limits to establish and implement a Hazardous Materials Management Plan (HMMP) or Business Plan. The plan must disclose the type, quantity, and storage location of materials. The law also requires a site-specific emergency response plan, employee training, and designation of emergency contact personnel.

### 4.13.2.3 Local

A number of federal and state laws and regulations govern the generation, handling, transportation, and disposal of hazardous materials. Federal agencies that regulate hazardous materials include the EPA and the Occupational Safety and Health Administration (Fed/OSHA). At the state level, agencies such as DTSC, California Occupational Safety and Health Administration (Cal/OSHA), and the Office of Emergency Services govern the use of hazardous materials. In San Diego County, the County Department of Environmental Health is the regional agency generally entrusted with the monitoring and enforcement of various laws and regulations governing the handling, use, transportation, storage, and disposal of hazardous materials.

#### City of Santee Wildland Code Requirements

The City has adopted the 2001 California Fire Code with local amendments including renaming and amending Article 86, Fire Safe Development in Urban Wildland Interface Areas. This article

requires that a map be filed with the City Clerk's office indicating the urban wildland interface areas within the city. Additionally, the Article requires 100 feet of fuel modified defensible space around structures, and new structures to be built using noncombustible/fire resistive construction methods.

### San Diego County Airport Land Use Compatibility Plan

The San Diego County Airport Land Use Compatibility Plan (ACLUP), based on individual airport master plans, reflects the anticipated growth of airports during at least the next 20 years. The ACLUP differs from an airport master plan in that it focuses on land surrounding the airports, while the master plan focuses on land within each airport's purview. The ACLUP contains compatibility criteria and matrices and review procedures addressing noise, over flight, safety, and airspace protection. This document discusses all airports in San Diego County including MCAS Miramar and Gillespie Field.

## 4.13.3 Project Impacts and Mitigation

### 4.13.3.1 Issue 1 – Exposure to Electromagnetic Fields

**Public Safety Issue 1 Summary**

***Would implementation of the Project result in a significant hazard to the public or the environment through the exposure to electromagnetic fields?***

| | |
|---|---|
| **Impact:** The Project may expose people to harmful electromagnetic fields from the SDG&E easement. | **Mitigation:** No mitigation required. |
| **Significance Before Mitigation:** Less than significant. | **Significance After Mitigation:** Less than significant. |

### Thresholds of Significance

Implementation of the Project may have a significant adverse impact if it would expose the public to electromagnetic fields.

### Impact Analysis

The SDG&E transmission line easement containing the electrical lines crosses the Project Site entirely within the large, central Preserve open space area. The nearest residences would be the northernmost lots located in the Sage Hill Village Site. The nearest graded pad is about 280 feet south of the easement. North of the easement, the Oak View Village Site is a minimum of 1,450 feet from the easement. A proposed trail is aligned beneath the easement for approximately 280 feet.

Based on the information presented in Section 4.13.1.1, it is unlikely that the 230 kV transmission line would cause health impacts. Electrical fields weaken rapidly with increased distance from the source. For example, the 10,000 V/m electrical field from a 765 kV transmission line would decrease to less than 500 V/m at a distance of 200 feet. This is a 95 percent decrease in electrical field strength. The electrical field from the 230 kV transmission line on the Project Site is approximately 2,000 V/m. Applying the information from the example, the electrical field from the 230 kV

transmission line, at a distance of approximately 200 feet, would be approximately 100 V/m. This is a 95 percent decrease from the initial 2,000 V/m electrical field at the transmission line. Because the nearest residence would be approximately 280 feet from the transmission line, the strength of the electrical field at this residence would be less than 100 V/m. For comparison, small appliances have an EMF level of 20 to 200 V/m and electrical fields are easily blocked by obstacles such as walls. As a result, the Project would have a less than significant impact associated with electrical fields.

Further, it is unlikely that magnetic fields from the 230 kV transmission line would cause health impacts. Like electrical fields, magnetic fields weaken rapidly with increased distance from the source. For example, the level directly beneath a 230 kV transmission line is about 65 mG and decreases to approximately 15 mG at a distance of approximately 100 feet. Assuming a constant decrease in magnetic field strength, the level from the 230 kV transmission line source at approximately 200 feet would be approximately 4 mG.

Moreover, studies of the potential for adverse public health effects due to electromagnetic fields are inconclusive at this point. The most recent studies cast doubt on the existence of a link between EMF exposure and health effects. Because of this unresolved public controversy, a statement or conclusion of impacts would be speculative. CEQA Guidelines Section 15145 states, "If, after thorough investigation, a Lead Agency finds that a particular impact is too speculative for evaluation, the agency should note its conclusion and terminate discussion of the impact." In accordance with this direction and based on the evidence presented in Section 4.13.1.1, Existing Conditions, the possible effects of EMF on health are too speculative for evaluation. Therefore, no further analysis is warranted.

### Mitigation Measures

The Project would have a less than significant impact with regard to hazards from electromagnetic fields; therefore, no mitigation measures are required.

## 4.13.3.2 Issue 2 – Exposure to Hazardous Materials

**Public Safety Issue 2 Summary**

***Would implementation of the Project result in a significant hazard to the public or the environment through the routine transport, use, disposal, or release of hazardous materials, including unexploded ordnance?***

| | |
|---|---|
| **Impact:** The Project may expose people to hazardous materials including unexploded ordnance. | **Mitigation:** No mitigation required. |
| **Significance Before Mitigation:** Less than significant. | **Significance After Mitigation:** Less than significant. |

### Thresholds of Significance

Based on Appendix G of the CEQA Guidelines, implementation of the Project may have a significant adverse impact if it would:

- Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.
- Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.
- Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.
- Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would create a significant hazard to the public and the environment.

## Impact Analysis

The Phase I ESA conducted by Geocon Consultants concluded that no conditions existed to indicate that hazardous materials were present within the Project Site. Based on observations of off-site properties during the reconnaissance of the Project Site, Geocon Consultants did not observe any physical evident to suggest that the off-site properties have affected the Project Site in any way with hazardous waste or materials.

Ordnance and explosives have reportedly been found in several locations in the area called East Elliott, which borders the Project Site's west boundary. Based on a review of aerial photographs from the late 1960s, berms and a grid pattern were observed in the northwest portion of the Project Site, indicating that the area was used for bombing and target practice. Based on a visual survey conducted for a 1997 Phase I ESA of the Project Site, bombing activities appear to have been a one-time event based on the limited number of impact craters and the close precision of the noted impacts. Further, a reconnaissance is typically performed subsequent to the target practice event to evaluate the accuracy of the event and for identification of unexploded rounds. Based on this information, there is a low likelihood that unexploded rounds would remain in this area.

The U.S. Army Corps of Engineers (USACE) conducted an investigative study of three areas (Areas D, G, and H) of the former Camp Elliott in January 2006. One of these areas, Area H, borders the Project Site to the north. Area G is approximately 1.5 miles to the northwest of the Project Site and Area D is over 3 and one-half miles west of the Project Site. No ordnance, ordnance related scrap, or evidence of prior military use was found in Area H. Although ordnance and explosives scrap items have previously been found in Areas D and G, no unexploded ordnance was found during the USACE investigation.

Therefore, as a result of the information presented in the current Phase I ESA, previous Phase I ESAs for the Project Site, and the recently conducted investigation by USACE, the Project would not result in a significant hazard to the public or the environment as a result of hazardous materials, including unexploded ordnance.

### Mitigation Measures

The Project would have a less than significant impact with regard to hazards from hazardous waste and materials or unexploded ordnance; therefore, no mitigation measures are required.

### 4.13.3.3 Issue 3 – Gas Leak from Water Recycling Facility

**Public Safety Issue 3 Summary**

***Would implementation of the Project result in a significant hazard to the public or the environment through the exposure to a wastewater treatment plant gas leak?***

**Impact:** The Project may expose people to a gas leak from the wastewater treatment plant.

**Mitigation:** No mitigation required.

**Significance Before Mitigation:** Less than significant.

**Significance After Mitigation:** Less than significant.

### Thresholds of Significance

Implementation of the Project may have a significant adverse impact if it would expose the public to a wastewater treatment plant gas leak.

### Impact Analysis

The PDMWD operates a WTP on the west side of Fanita Parkway, west of the proposed Preserve and southwest of the Oak View Village Site. The PDMWD has a risk management plan which includes an accidental release prevention program, chemical-specific prevention steps, and an emergency response program. The accidental release prevention program and chemical-specific prevention steps (safety program) is an "aggressive and active safety program in place to manage the handling of chlorine and sulfur dioxide gas." (PDMWD 2004). The measures outlined in the safety program were based on the Chlorine Institute Manual for the Safe Handling of Chlorine. Because sulfur dioxide is nearly identical in physical properties to chlorine and is stored and fed in identical cylinders, the same safety measures are applied to sulfur dioxide.

Gas detectors are located in the chlorine storage room, the chlorine feed room, and both sulfur dioxide rooms. At a chlorine or sulfur dioxide concentration of 1 part per million (ppm) threshold (exposure to 100 ppm of sulfur dioxide is an immediate health threat and 35 ppm of chlorine is considered immediately dangerous to life and health), a visual and audible alarm will activate and either the scrubber system in the chlorine rooms or the water mist sprinkler knockdown system in the sulfur dioxide rooms will activate. The entire chemical feed system is monitored 24 hours a day by a computer system, which is tested daily. In the event of an accidental release, WTP personnel are notified by an auto-dial pager system. This system also notifies other PDMWD personnel to respond as backups to mitigate the leak. There were no reportable releases of chlorine or sulfur dioxide between April 1999 and April 2004.

The Emergency Response Program is a training program to prevent potential releases from the WTP. All WTP personnel actively participate with the safety training and planning for the facility. Further,

the WTP is equipped with a hazmat emergency response trailer which contains the tools and communication equipment necessary for an effective response to a chemical release. This program also includes annual emergency response drills.

As a result of the risk management plan, detection systems, clear accident history record, and consistent emergency response training, the impacts of a significant hazard through exposure to a WTP gas leak would be less than significant.

### Mitigation Measures

The Project would have a less than significant impact with regard to hazards from a gas leak at the WTP; therefore, no mitigation measures are required.

### 4.13.3.4 Issue 4 – Wildland Fires

**Public Safety Issue 4 Summary**

***Would implementation of the Project expose people or structures to a significant risk of loss, injury or death involving wildland fires?***

**Impact:** The Project may expose people and structures to potential substantial adverse effects from wildland fires.

**Mitigation:** No mitigation required.

**Significance Before Mitigation:** Less than significant.

**Significance After Mitigation:** Less than significant.

### Thresholds of Significance

Based on Appendix G of the CEQA Guidelines, implementation of the Project may have a significant adverse impact if it would expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands.

### Impact Analysis

The Project Site is located within a high fire hazard zone and lies within the City of Santee Fire Department's Fire Protection District. This part of Santee burns frequently, with many wildfires originating in the SR-67 corridor and burning southwesterly into the Sycamore Canyon Open Space Preserve and the Project Site. Since records have been kept (beginning in 1910), a total of 23 wildfires have burned through or in the area immediately surrounding the Project Site. Two wildfires in 1987 and one wildfire in 1989 burned portions of the Project Site for a total of 1,967 acres. The majority of the Project Site burned over in the 1994 Rocoso Fire and completely burned over again in the October 2003 Cedar Fire. Most of these wildfires occurred under Santa Ana wind conditions. The last two wildfires occurred during severe, prolonged periods of drought. The Project Site will burn again at some point, and quite possibly under the worst possible fire weather conditions like those that occurred in October 2003.

As a result of the high fire risk in the Project Site vicinity, a Fire Protection Plan has been developed for the Project Site by Firewise 2000, Inc. (2007). The Fire Protection Plan, available in Appendix J, was prepared so that the entire Project Site (and surrounding neighborhoods) could survive future wildfires without structure loss and without loss of life and would not require the intervention of the City of Santee Fire Department. Because engine companies may not be readily available due to incidents in other areas, it is important that the Project is constructed to withstand wildfires with no structures or lives lost and without intervention from fire fighting personnel.

The homes and buildings constructed for the Project would be constructed of fire-resistant materials. Further, all structures would be installed with overhead sprinklers, including all garages. Planting materials for landscaping throughout the Project Site would be restricted to noninvasive fire resistant ornamental plants and fire resistant native plants, depending on their location. A 100 to 130-foot fuel modification zone has been incorporated around all development. Strategically located access points to the fuel modification zones would provide vehicle access for brush thinning and firefighting. The Homeowners Association (HOA) would be responsible for maintaining fuel modified defensible space throughout the development as described in the Fire Protection Plan. Because of the Project design (use of the fire-resistant materials and fire sprinklers) and the requirements of the City and the Fire Protection Plan, which requires fuel modification zones and structures to be built with fire resistant materials, the Project would have a less than significant impact with respect to exposing people or structures to a significant risk of loss, injury, or death involving wildland fires.

### Mitigation Measures

No mitigation measures are required.

### 4.13.3.5 Issue 5 – Emergency Response and Evacuation Plans

**Public Safety Issue 5 Summary**

***Would implementation of the Project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?***

| | |
|---|---|
| **Impact:** The Project may affect emergency response and evacuation plans. | **Mitigation:** No mitigation required. |
| **Significance Before Mitigation:** Less than significant. | **Significance After Mitigation:** Less than significant. |

### Thresholds of Significance

Based on Appendix G of the CEQA Guidelines, implementation of the Project may have a significant adverse impact if it would impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.

### Impact Analysis

The Project Site does not contain any through streets that would be part of an emergency response or evacuation route. Currently, the proposed plans for Village Site located in the western portion of the

Project Site (Sage Hill Village Site, the western portion of the Oak View Village Site, and the northern portion of the Sycamore Glen Village Site) are accessible via Fanita Parkway. The proposed plans for the Village Sites located in the northern and eastern portions of the Project Site (the eastern portion of the Oak View Village Site, the southern portion of the Sycamore Glen Village Site, and the Rock Point Village Site) are accessible via Cuyamaca Street. There is no direct access to Eucalyptus Hills or SR-67. In addition, a new fire station would be built at the southern boundary of the Project Site on Cuyamaca Street. This station would service the northern sections of the Project Site.

The residents of Sage Hill Village would use Fanita Parkway as its normal ingress and egress route. This Village, however, has two emergency access routes for fire and medical emergencies. The first is via the extension of Carlton Hills Boulevard at the cul-de-sac located southwest of the Carlton Hills Reservoir. The second access route begins at a cul-de-sac located on the east side of Sage Hill Village. This gated emergency access road travels to the Cuyamaca Reservoir utilizing a Padre Dam utility road, then to Woodglen Vista Drive. The residents of Oak View and Sycamore Glen Villages would use both Fanita Parkway and Cuyamaca Street, which are connected by Main Street. Ingress and egress to Rock Point Village, located in the northeastern portion of the Project Site, is via Cuyamaca Street. In addition, there is an emergency access road located at the northwest corner of Rock Point Village which connects to the north end of Sycamore Glen Village. If Cuyamaca Street is inaccessible, then this emergency road as well as Main Street could be used to access Fanita Parkway.

The threat of a wildfire spreading from the SR-67 corridor in a southwesterly direction under Santa Ana winds poses a serious threat to the Project. For this reason, no secondary ingress/egress roads are planned from the proposed Rock Point Village out the east side into Eucalyptus Hills through the highly flammable southern mixed chaparral fuels. Because these native fuels are highly flammable, evacuee and firefighter ingress and egress routes should not be located on the east side of the Project Site.

All road widths and grades would be designed to accommodate emergency fire equipment from the City of Santee and mutual aid equipment. All streets, cul-de-sacs, and hammerhead "T" turnarounds, road widths and grades will be designed to fully comply with the City road standards. Dead-end streets which will be improved and reconstructed into hammerhead "T" turnabouts as part of this Project include Birchcrest Boulevard, Lasso Way, Halberns Boulevard, Cecilwood Drive, Dragoye Drive, and Roecrest Drive.

Further, there are numerous emergency or service access points, which would be gated to limit public access. These points would allow firefighting crews to gain access to the preserve and open space areas. The emergency access points are located at several locations throughout the Rock Point Village Site, at cul-de-sacs on the northern portions of the Sycamore Glen and Sage Hill Village Sites, and at the on-site dead end improvements on the southern portion of the Project. Therefore, the Project would provide ample emergency access routes and will have a less than significant impact.

### Mitigation Measures

The Project would have a less than significant impact to any adopted emergency response plan or emergency evacuation plan. Therefore, no mitigation measures are required.

### 4.13.3.6 Issue 6 – Surrounding Airports

**Public Safety Issue 6 Summary**

***Would implementation of the Project result in a safety hazard for people residing or working in the Project Site?***

| | |
|---|---|
| **Impact:** Portions of the Project are located within two airport land use plans and hazards may result from flight operations. | **Mitigation:** No mitigation required. |
| **Significance Before Mitigation:** Less than significant. | **Significance After Mitigation:** Less than significant. |

### Thresholds of Significance

Based on Appendix G of the CEQA Guidelines, implementation of the Project may have a significant adverse impact if it is would result in a safety hazard for people residing or working in the Project Site because it is located within an airport land use plan.

### Impact Analysis

Parts of the San Diego County ACLUP include portions of the Project Site. MCAS Miramar is adjacent to the Project Site and its runway is approximately 5.5 miles west of the Project Site. MCAS Miramar's Airport Influence Area encompasses the City, and therefore, the entire Project Site. MCAS Miramar's Air Installations Compatible Use Zones (AICUZ) Update, the installation's master plan, discusses Accident Potential Zones (APZ) and the installation's accident history since 1970. APZ I is located within 2 miles of the runway. APZ II extends from the runway northeast through Sorrento Valley to the coast. The area adjacent to the Project is a Clear Zone, which is off the end of a runway used to enhance the protection of people and property on the ground. Thirty-four accidents have occurred since 1970 from MCAS Miramar, none affecting the Project Site.

Of the 34 accidents within 15 miles of MCAS Miramar since 1970, a majority of these occurred on the runway or within the APZs. One accident occurred approximately ¼ mile south of Santee, approximately 3 miles south of the Project Site. Two other accidents occurred approximately 5 miles east of the Project Site. Therefore, based on previous accident locations and the fact that there are no primary flight paths over the Project Site, there is little hazard to the Project Site from MCAS Miramar flight operations.

Gillespie Field is located approximately 2.5 miles south of the Project Site. The Project Site is not within Gillespie Field's Airport Influence Area. Furthermore, the runway and flight patterns are generally oriented east-west. Therefore, there is little hazard to this area of the Project because of the low likelihood of regular flights over the area. Therefore, the Project would have a less than

significant impact with respect to hazards from surrounding airports and would be consistent with their associated land use plans

### Mitigation Measures

No mitigation measures are required.

## 4.13.4 Cumulative Impacts and Mitigation

**Public Safety Cumulative Issue Summary**

***Would implementation of the Project have a cumulatively considerable contribution to a cumulative public safety impact considering past, present, and probable future projects?***

| Cumulative Impact | Fanita Contribution |
|---|---|
| Exposure to electromagnetic fields | Not cumulatively considerable |
| Exposure to hazardous materials | Not cumulatively considerable |
| Exposure to gas leaks | Not cumulatively considerable |
| Exposure to wildfires | Not cumulatively considerable |
| Conflict with emergency access plans | Not cumulatively considerable |
| Exposure to hazards from surrounding airports | Not cumulatively considerable |

### Increased Exposure to Electromagnetic Fields

As mentioned in 4.13.3.1 above, the Project Site includes a SDG&E transmission line easement containing electrical lines that cross the central Preserve open space area of the Project Site. The 230 kV transmission line is a stationary source, and electric and magnetic fields emitted from the lines weaken rapidly with increased distance from the source. Furthermore, the transmission line does not cross or run in parallel with any other transmission lines creating a cumulative electric and/or magnetic fields. Therefore, the Project would not contribute to a cumulatively considerable impact to EMFs.

### Increased Exposure to Hazardous Materials

It is anticipated that future growth in the City would result in an incremental increase in the amount of hazardous materials used, treated, transported, and disposed of area-wide. Although each development site has potentially unique hazardous materials considerations, it is expected that future growth would comply with federal and state statutes and regulations applicable to hazardous materials, and would be subject to existing and future plans or programs of enforcement by the appropriate regulatory agencies. Furthermore, targeted investigation has not discovered any hazardous materials on the Project Site. For these reasons, cumulative impacts resulting from the use, transport and disposal of hazardous materials or risk of upset from a release of hazardous materials, would be less than significant, and implementation of the Project would not have a cumulatively considerable contribution.

Cumulative effects of hazardous waste disposal and the geographic area of impact vary based upon the type of waste in question. Non-radioactive hazardous waste materials are disposed of into permitted hazardous waste facilities, and radioactive waste is decayed on site or disposed of in facilities that are specifically approved for radioactive waste. Disposal facilities accepting radioactive hazardous waste are currently available, and it is likely that some would be available in the future or that alternative means of disposal would be required in order to comply with the law. Therefore, cumulative impacts for non-radioactive and radioactive hazardous waste would be less than significant, and implementation of the Project would not have a cumulatively considerable contribution.

It is possible that future development in the City would involve significant renovation and demolition activities, which would potentially subject construction workers to health and safety risks through exposure to hazardous materials, although the individual workers potentially affected would vary from project to project. It is anticipated that future development projects would adhere to the applicable requirements that regulate worker safety and exposure. As a result, cumulative impacts would be less than significant. As a result, the Project's contribution to cumulative impacts associated with potential exposure of construction workers to hazardous materials would not be cumulatively considerable.

### Increased Exposure to Gas Leaks

As mentioned in 4.13.3.3 above, the PDMWD operates a WTP on the west side of Fanita Parkway, west of the proposed Preserve and southwest of the Oak View Village Site. The Project would develop new residences within the vicinity of the WTP which has a potential to have a gas leak. However, the WTP is a stationary source, and any leak would be isolated to the immediate area of the WTP. In addition, the facility has an early warning system that would sound during any gas leak. The Project does not include any facilities that would have a potential for a gas leak. Furthermore, it is anticipated that future development projects would adhere to the applicable requirements that regulate storage and/or use of gases. Therefore, the Project would not contribute to a cumulatively considerable impact associated with exposure to gas leaks.

### Emergency Response and Evacuation Plans

Construction and operation associated with future development in the City could result in activities that could interfere with adopted emergency response or evacuation plans, such a temporary construction barricades or other obstructions that could impede emergency access. It is anticipated that future development projects would undergo CEQA review of potential impacts on adopted emergency response or evacuation plans, and would be required to implement measures necessary to mitigate potential impacts. Furthermore, the only proposed through routes in the Project Site would loop between Fanita Parkway and Cuyamaca Street on site and would not, in combination with other projects, affect emergency response and evacuation plans elsewhere in Santee. As a result, cumulative impacts related to interference with adopted emergency response or evacuation plans would be less than significant. Therefore, the Project's contribution to cumulative impacts associated with interference with adopted emergency response or evacuation plans would not be cumulatively considerable.

### Wildland Fires

A significant risk of wildland fires currently exists in the City, as evidenced by the October 2003 Cedar Fire. Although the City has developed policies to manage the fire risk, existing and future residents and structures would continue to be at risk. Furthermore, implementation of the Project could contribute to the risk of wildland fires because it would result in development in an area prone to wildfires and would create a new development edge near a wildfire-prone area. However, with the implementation of the Fanita Fire Protection Plan, which requires fuel modification zones and structures to be built with fire resistant materials, impacts from the Project would not be cumulatively considerable.

### Hazards from Nearby Airports

Future development in the areas surrounding the City would be located in the vicinity of MCAS Miramar. The risk posed to each future development project is based on location, and is therefore unique. It is also likely that such risk would be a factor in any decision to approve or deny future development proposals. All land uses that may be impacted by MCAS Miramar are reviewed and regulated through the Miramar Comprehensive Land Use Plan, the City, and the San Diego Regional Airport Authority. As a result, cumulative risks to future development associated with proximity to MCAS Miramar would not be cumulatively considerable. Therefore, the Project's contribution to cumulative impacts associated with development located in the vicinity of MCAS Miramar would not be cumulatively considerable.

## 4.13.5 CEQA Checklist Items Adequately Addressed in Initial Study

***For a project in the vicinity of a private airstrip, would the Project result in a safety hazard to people residing or working in the Project Site?***

No private airstrips are located in the vicinity of the Project Site. Therefore, the Project would not likely result in a safety hazard for people residing or working in the Project Site.

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# TRAFFIC IMPACT ANALYSIS

# FANITA

**Santee, California**
**November 14, 2007**

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**TRAFFIC IMPACT ANALYSIS**

# FANITA

**Santee, California**
**November 14, 2007**

## 1.0 INTRODUCTION

The Fanita is a property of approximately 2,600 acres in the northern portion of the City of Santee, northeast of State Route 52 (SR-52) and west of State Route 67 (SR-67). The proposed project consists of the development of four distinct residential neighborhoods with 1,380 single-family units, parkland, a natural preserve, and mixed-use facilities in the Village Center. The existing Fanita Parkway and Cuyamaca Street will be extended northwards to the site to provide access. This report will address potential impacts due to the traffic generated by the proposed project. This report includes the following sections:

- Project Description
- Existing Conditions
- Analysis Approach and Methodology
- Significance Criteria
- Analysis of Existing Conditions
- Trip Generation/Distribution/Assignment
- SANDAG Modeling and Future Traffic Volumes
- Analysis of Near-Term Scenarios (Years 2010 and 2012)
- Analysis of Long-Term Scenarios
- Congestion Management Program Compliance
- Significance of Impacts and Mitigation Measures

***Figure 1–1*** depicts the project vicinity, and ***Figure 1–2*** depicts the project location.

# 2.0 PROJECT DESCRIPTION

## 2.1 Project Location

The Fanita is a property of approximately 2,600 acres in the northern portion of the City of Santee, northeast of State Route 52 (SR-52) and west of State Route 67 (SR-67). The Project site is essentially undeveloped. Developed residential neighborhoods in the City of Santee adjoin it on the south, southeast, and southwest. The upper portion of the Santee Lakes Recreation Area and a wastewater treatment plant operated by Padre Dam Municipal Water District are adjacent on the middle of the western boundary. Marine Corps Air Station (MCAS) Miramar is on northwestern border of the project site, and East Elliott, an undeveloped area of the City of San Diego, is west of the Santee Lakes and south of MCAS Miramar. About a mile west, in the City of San Diego, is the Sycamore Landfill.

Adjacent to Fanita on the north and along the northern portion of the eastern boundary is unincorporated County of San Diego, with the Sycamore Canyon County Open Space Preserve to the north and the rural residential community of Eucalyptus Hills to the east. The interchange at the junction of the SR-52 and State Route 125 (SR-125) freeways is about 1.6 miles to the southwest, and the San Diego River is about a mile south of the site. SR-67 is about 1.3 miles to the southeast. About two miles to the southwest is the natural resource based, approximately 6,200-acre Mission Trails Regional Park.

***Figure 2–1*** depicts the project conceptual site plan.

## 2.2 Project Description

The proposed Fanita project consists of the development of single-family residential neighborhoods, parkland, a natural preserve, and supporting commercial, HOA, and mixed-use facilities in the Village Center. The residential portion would construct 1,380 single-family dwelling units in 4 separate "villages" on a total of approximately 960 acres. The Santee General Plan contains 16 Guiding Principles for the development of Fanita (the Project site), and in accordance with the Guiding Principles, residential units are configured proportionately on 6,000 (20 percent), 10,000 (20 percent), and 20,000 (60 percent) square-foot lots. One village (Sage Hill) would be in the south, adjacent to existing development, and would contain 357 dwelling units on approximately 330 acres. In the south-central part of the site, another village (Oak View) would contain 161 dwelling units on approximately 132 acres, and in the north-central part of the site, a third village (Sycamore Glen) would contain 463 dwelling units on approximately 160 acres. A fourth village (Rock Point), in the northeastern part of the site, would contain 399 dwelling units on approximately 334 acres.

"The Parklands" is proposed west of and between the central two villages on approximately 235 acres and is intended to serve as both a pedestrian-oriented Village Center and community-serving recreational resource. It would contain active and passive recreational areas, including a "Kid's Camp," ballfields, a nature center, a lake, and a nature park, all linked by hiking and biking trails. It would also be the site of a health and wellness center, a village green and bandstand, a botanical garden and demonstration/retail nursery, and a "Main Street" providing a general store and

convenience goods and services, an inn, offices, a community pavilion, a chapel and memorial garden, and potentially other HOA, civic, and cultural facilities.

## 2.3 Project Access

Two access routes are proposed to the project site. The first access will be via the northerly extension of Fanita Parkway to the site. The second access will be via the northerly extension of Cuyamaca Street to the site.

## 3.0 EXISTING CONDITIONS

Most of the roadways and intersections within the study area currently exist. The on-site roadway network will be developed along with the project. SR 52, a State facility, currently terminates at SR 125. It is planned to extend SR 52 between SR 125 and SR 67 in two phases. In the first phase, SR 52 will be extended between SR 125 and Cuyamaca Street. In the second phase SR 52 will be extended from Cuyamaca Street to SR 67. The planned eastward extension of SR 52 to SR 67 is explained further in Section 8.0, SANDAG Modeling. This study will analyze both conditions of partial and complete extension of SR 52.

### 3.1 STUDY AREA

Select Zone Analysis (SZA) plots were obtained from SANDAG for the project Traffic Analysis Zones (TAZ). Based on this SZA plot, the study area was determined to be between SR 125 to the west, Riverford Road to the east, Prospect Avenue to the south, and the project to the north. The study area includes the following intersections and freeway segments:

***Intersections***

1. Lake Canyon Road/Fanita Parkway
2. Lake Canyon Road/ Carlton Hills Boulevard
3. Cecilwood Drive/Halberns Boulevard
4. Princess Joann Road/Cuyamaca Street
5. Princess Joann Road/Magnolia Avenue
6. Woodglen Vista Drive/Cuyamaca Street
7. Woodglen Vista Drive/Magnolia Avenue
8. El Nopal/Cuyamaca Street
9. El Nopal/Magnolia Avenue
10. El Nopal/Los Ranchitos Road
11. Mast Boulevard/SR 52 EB Ramp
12. Mast Boulevard/SR 52 WB Ramp
13. Mast Boulevard/West Hills Parkway
14. Mast Boulevard/Medina Drive
15. Mast Boulevard/Pebble Beach Drive
16. Mast Boulevard/Fanita Parkway
17. Mast Boulevard/Carlton Hills Boulevard
18. Mast Boulevard/Halberns Boulevard
19. Mast Boulevard/Cuyamaca Street
20. Mast Boulevard/Magnolia Avenue
21. Riverside Drive/Riverford Road
22. Carlton Oaks Drive/Fanita Parkway
23. Carlton Oaks Drive/Carlton Hills Boulevard
24. River Park Drive/Cuyamaca Street
25. Town Center Parkway/Cuyamaca Street
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27. Mission Gorge Road/West Hills Parkway
28. Mission Gorge Road/ SR 52 Off Ramp

29. Mission Gorge Road/ SR 52 On Ramp
30. Mission Gorge Road/SR 125
31. Mission Gorge Road/Fanita Drive
32. Mission Gorge Road/Carlton Hills Boulevard
33. Mission Gorge Road/Town Center Parkway
34. Mission Gorge Road/Cuyamaca Street
35. Mission Gorge Road/Civic Center Drive
36. Mission Gorge Road/Cottonwood Avenue
37. Mission Gorge Road/Magnolia Avenue
38. Woodside Avenue/SR 67 SB Off-Ramp
39. Woodside Avenue/SR 67 NB On-Ramp
40. Buena Vista Avenue/Cuyamaca Street
41. SR 52 WB Ramps/ Cuyamaca Street [a]
42. SR 52 EB Ramps/ Cuyamaca Street [a]
43. SR 52 WB Ramps/ Magnolia Avenue/SR 67 SB Ramps [a]
44. SR 52 EB Ramps/ Magnolia Avenue [a]
45. Prospect Avenue/Fanita Drive
46. Prospect Avenue/Cuyamaca Street
47. Prospect Avenue/Cottonwood Avenue
48. Prospect Avenue/Magnolia Avenue
49. Prospect Avenue/SR 67 SB On-Ramp [b]
50. Prospect Avenue/SR 67 NB Off-Ramp
51. SR 52 WB Off-Ramp/Fanita Drive [a]
52. SR 52 EB On-Ramp/Fanita Drive [a]
53. Beck Drive/Cuyamaca Street
54. Ganley Road/Fanita Parkway/Santee Lakes Boulevard

Note:
[a] Future intersection.
[b] Will be eliminated in the future, with the extension of SR 52.

### *Freeway Segments*

- **State Route 52**
  - — Santo Road to Mast Boulevard
  - — Mast Boulevard to Mission Gorge Road
  - — Mission Gorge Road to Cuyamaca Street [a]
  - — Cuyamaca Street to SR 67 [a]

- **State Route 67**
  - — Winter Gardens Avenue to Riverford Road
  - — Riverford Road to Prospect Avenue
  - — Prospect Avenue to I-8

- **State Route 125**
  - — Mission Gorge Road to Grossmont College Drive

Note:
[a] Future Freeway segment

*Figure 3-1* depicts the study area including all intersections and freeway segments analyzed in this report.

## 3.2 Street Network

The following is a brief description of the existing roadway system in the study area.

**Princess Joann Road** is classified as a Residential Collector from Cuyamaca Street to its eastern terminus. It is currently constructed as a two-lane roadway constructed from Cuyamaca Street to east of Sima Court. This roadway provides access to residential neighborhoods. The prima facie speed limit is 25 mph.

**Woodglen Vista Drive** is classified as a Residential Collector from Cuyamaca Street to Magnolia Avenue. It is currently constructed as a two-lane roadway, and it primarily provides access to residential, and park/open space land uses. The prima facie speed limit is 25 mph.

**El Nopal** is classified as a Residential Collector from Cuyamaca Street to Magnolia Avenue on the City of Santee Circulation Element, and it is classified as a Light Collector on the County of San Diego Circulation Element east of Magnolia Avenue. It is currently constructed as a two-lane roadway, and it primarily provides access to residential neighborhoods. Some portions of El Nopal provide a dedicated bike route. Curbs, gutters, and sidewalks are provided within the City of Santee. The speed limit is prima facie 25 mph west of Magnolia Avenue and 35 mph east of Magnolia Avenue.

**Mast Boulevard** is classified as a Major Arterial. It is currently a four-lane roadway, which is constructed between State Route 52 and Los Ranchitos Road near the eastern Santee city limits. Mast Boulevard will not be connected eastward to Riverford Road until SR 52 is extended to SR 67 at the earliest. Curbs, gutters, and sidewalks are provided, and the posted speed limit is 35-40 mph.

**Carlton Oaks Drive** is classified as a Collector Street. This roadway extends from West Hills Parkway to Stoyer Drive. It is currently constructed as a two-lane divided roadway east of Carlton Hills Boulevard and a four-lane divided roadway west of Carlton Hills Boulevard up to Pebble Beach Drive. The posted speed limit is 35 mph.

**Mission Gorge Road** is classified as a Major Arterial from the western City limits to SR 125 and a Prime Arterial from SR 125 to Magnolia Avenue. This roadway extends from Magnolia Avenue in Santee to Interstate 8 in San Diego. It generally provides six travel lanes. The posted speed limit is 35 mph east of Mesa Road and 50-55 mph west of Mesa Road.

**Woodside Avenue** is classified as a Major Arterial from Magnolia Avenue to SR 67. It is currently constructed as a four-lane roadway with a painted median. This road provides access to SR-67. Woodside Avenue is classified as a Major Road on the County of San Diego Circulation Element. Dirt shoulders are provided and the posted speed limit is 40 mph from SR 67 to the eastern City limits.

**Prospect Avenue** is classified as a Major Arterial east of Cuyamaca Street and as a Collector west of Cuyamaca Street. It constructed as a two-lane road. The City of Santee has an improvement project to upgrade Prospect Avenue from Cuyamaca Street to Magnolia Avenue to a 4-Lane arterial. The timing and need for this project depends on the construction schedule of SR 52. The posted speed limit is 35 mph.

**West Hills Parkway** is classified as a Collector Street. This roadway extends from Mission Gorge Road to Mast Boulevard. It is currently constructed as a four-lane roadway. The posted speed limit is 45 mph. West Hills Parkway is generally located within the City of San Diego.

**Fanita Parkway** is classified as a Parkway. This roadway extends from Ganley Road to Carlton Oaks Drive. It is currently constructed as two-lane undivided roadway. The posted speed limit is 35 mph.

**Fanita Drive** is classified as a Collector Street. This roadway extends from Mission Gorge Road to Grossmont College Drive in El Cajon. It is currently constructed as four-lane undivided roadway. This roadway primarily provides access to residential and small commercial land uses. The posted speed limit is 40 mph.

**Carlton Hills Boulevard** is classified as a Major Arterial from Mission Gorge Road to Lake Canyon Road. It is currently constructed as a four-lane divided roadway. The roadway has either a raised or painted center median along most of its length. The posted speed limit is 35 mph.

**Halberns Boulevard** is classified as a Collector Street. This roadway extends from Stoyer Drive to north of Lake Canyon Road. It is currently constructed as a two-lane with center left turn lane roadway. The posted speed limit is 35 mph.

**Town Center Parkway** is classified as a Parkway between Mission Gorge Road and Magnolia Avenue. It is currently constructed as a six-lane roadway between Mission Gorge Road and Cuyamaca Street. The roadway provides access to retail development that has occurred within the Town Center area of Santee. The posted speed limit is 35 mph.

**Cuyamaca Street** is classified as a Major Arterial within the City of Santee. It extends from Fletcher Parkway in El Cajon to 0.5 mile north of El Nopal in Santee. Cuyamaca Street varies as a four or six-lane roadway between Prospect Street and Mast Boulevard. North of Mast Boulevard, Cuyamaca Street is built generally as a two-lane divided roadway with a wide landscaped/raised median up to its current terminus north of Chaparral Drive that can accommodate future widening to 4 lanes. The posted speed limit is 35-45 mph.

**Civic Center Drive** is classified as a Parkway between Town Center Parkway and Mission Gorge Road. It is currently constructed as a four-lane roadway. The roadway provides access to retail and office development that has occurred within the Santee Town Center. The posted speed limit is 35 mph. Civic Center Drive will eventually be extended from its current terminus at Town Center Parkway to Magnolia Avenue to form the fourth leg of the Magnolia Avenue/New Frontier intersection.

**Magnolia Avenue** is classified as a Prime Arterial from Mission Gorge Road to Prospect Avenue and a Major Arterial north of Mission Gorge Road and extends from El Cajon to Princess Joann Road in the northern section of Santee. Magnolia Avenue is classified as a Collector Street north of Princess Joann Road. Magnolia Avenue has six travel lanes along portions of the roadway between Prospect Avenue and Mission Gorge Road. The remainder of the roadway has four travel lanes. The posted speed limit is 40-45 mph.

**Riverford Road** was originally classified as a Prime Arterial from SR 67 to Riverside Drive on the County of San Diego Circulation Element. In August of 2000, a revision to the Upper San Diego River Improvement Plan (USDRIP) included a Circulation Element reclassification that downgraded Riverford Road to a Collector from Woodside Avenue N. to Woodside Avenue. Riverford Road is currently constructed as a three lane undivided roadway (two northbound thru lanes and one southbound travel lane) from Riverside Drive to Mast Boulevard to just north of the San Diego River. This portion also provides a Two Way Left Turn Lane (TWLTL) median for a few hundred feet just south of the Riverford Road/Riverside Drive-Mast Boulevard signalized intersection. South of the San Diego River, Riverford Road is currently constructed as a two lane undivided roadway until intersecting with Woodside Avenue at a signalized-controlled "Tee" intersection. The posted speed limit is 40 mph and curbside parking is generally prohibited. Bike lanes are provided intermittently.

**SR 52** is a four to six-lane freeway, which currently terminates at SR 125. It is planned to eventually extend SR 52 eastward to SR 67 around Year 2010.

**SR 125** is a four to six-lane freeway, which extends from I-8 to SR 52. The terminus of SR 125 is signalized at Mission Gorge Road.

It may be noted that although the future extension of SR 125 north of Mission Gorge Road is no longer included in the current Regional Plan (RTP) or in the City of Santee's General Plan Circulation Element, it is still a state statutorily adopted highway alignment.

**SR 67** is a four to six-lane freeway. SR 67 extends from I-8 northward to Ramona in the County of San Diego.

***Figure 3–2*** depicts the existing conditions at the study area intersections.

## 3.3 Existing Traffic Volumes

Peak hour intersection turning movement volumes at most study area intersections were obtained from existing City of Santee records or manual counts conducted by Linscott Law and Greenspan, Engineers (LLG) in March 2004. ***Appendix A*** contains the manual count sheets. ***Figure 3–3*** depicts the AM/PM peak hour intersection turning movement volumes. Three-day 24-hour tube counts were also recorded along some segments. ***Table 3-1*** lists the segment counts conducted by LLG Engineers during September 2004 and April 2005. The tube count sheets are also included in *Appendix A*.

## TABLE 3-1
## EXISTING SEGMENT VOLUMES

| Segment | Source | Date | Volume |
|---|---|---|---|
| **Princess Joann Road** | | | |
| Cuyamaca St. to Magnolia Ave. | LLG Engineers | 2005 [a] | 1,500 |
| **Woodglen Vista Dr.** | | | |
| Cuyamaca St. to Magnolia Ave. | LLG Engineers | 2005 [a] | 2,700 |
| **El Nopal** | | | |
| Cuyamaca St. to Magnolia Ave. | LLG Engineers | April-05 | 3,200 |
| Magnolia Ave. to Los Ranchitos | LLG Engineers | 2005 [a] | 9,100 |
| **Mast Boulevard** | | | |
| SR 52 to West Hills Pkwy | LLG Engineers | 2005 [a] | 27,200 |
| West Hills Pkwy. to Fanita Pkwy. | City of Santee | 2004 | 19,700 |
| Fanita Pkwy. to Carlton Hills Blvd. | City of Santee | 2004 | 19,200 |
| Carlton Hills Blvd. to Halberns Blvd. | City of Santee | 2004 | 19,400 |
| Halberns Blvd. to Cuyamaca St. | City of Santee | 2004 | 22,300 |
| Cuyamaca St. to Magnolia Ave. | City of Santee | 2004 | 23,500 |
| Magnolia Ave. to Los Ranchitos Rd. | City of Santee | 2005 [b] | 7,400 |
| **Carlton Oaks Drive** | | | |
| Fanita Pkwy. to Carlton Hills Blvd. | LLG Engineers | April-05 | 10,700 |
| **Mission Gorge Road** | | | |
| Western City Limits to West Hills Pkwy. | City of Santee | 2005 [c] | 16,600 |
| West Hills Pkwy. to SR 52 | City of Santee | 2005 [c] | 14,300 |
| SR 52 to Fanita Dr. | City of Santee | 2005 | 57,500 |
| Fanita Dr. to Carlton Hills Blvd. | City of Santee | 2005 | 50,500 |
| Carlton Hills Blvd. to Town Center Dr. | City of Santee | 2005 | 52,800 |
| Town Center Pkwy. to Cuyamaca St. | City of Santee | 2005 | 41,400 |
| Cuyamaca St. to Magnolia Ave. | LLG Engineers | April-05 | 39,000 |
| **Woodside Avenue** | | | |
| Magnolia Avenue to SR 67 | City of Santee | 2005 [b] | 35,000 |
| **Prospect Avenue** | | | |
| Fanita Dr. to Cuyamaca St. | LLG Engineers | December-04 | 11,800 |
| Cuyamaca St. to Magnolia Ave. | City of Santee | 2005 | 14,400 |
| **West Hills Parkway** | | | |
| Mast Blvd. to Mission Gorge Rd. | LLG Engineers | 2005 [a] | 13,700 |
| **Fanita Parkway** | | | |
| Fanita to Lake Canyon Rd. | LLG Engineers | 2005 [a] | 1,900 |
| Lake Canyon Rd. to Mast Blvd. | LLG Engineers | April-05 | 3,300 |
| Mast Blvd. to Carlton Oaks Dr. | City of Santee | 2005 | 1,800 |

## TABLE 3-1 (CONTINUED)
## EXISTING SEGMENT VOLUMES

| Segment | Source | Date | Volume |
|---|---|---|---|
| **Fanita Drive** | | | |
| Mission Gorge Rd. to SR 52 Ramps | LLG Engineers | 2005 [a] | 13,700 |
| SR 52 Ramps to Southern City Limits | City of Santee | 2005 | 6,900 |
| **Carlton Hills Boulevard** | | | |
| Lake Canyon Rd. to Mast Blvd. | LLG Engineers | 2005 [a] | 5,900 |
| Mast Blvd. to Carlton Oaks Dr. | LLG Engineers | 2005 [a] | 9,200 |
| Carlton Oaks Dr. to Mission Gorge Rd. | LLG Engineers | 2005 [a] | 21,100 |
| **Halberns Boulevard** | | | |
| Lake Canyon Rd. to Mast Blvd. | City of Santee | 2005 | 2,000 |
| **Town Center Parkway** | | | |
| Mission Gorge Rd. to Cuyamaca St. | City of Santee | 2005 | 18,600 |
| Cuyamaca St. to Civic Center Dr. | LLG Engineers | 2005 [a] | 4,700 |
| **Cuyamaca Street** | | | |
| Princess Joann Rd. to El Nopal | LLG Engineers | 2005 [a] | 3,700 |
| El Nopal to Mast Blvd. | City of Santee | 2005 | 10,100 |
| Mast Blvd. to Town Center Pkwy. | LLG Engineers | April-05 | 24,200 |
| Town Center Pkwy. to Mission Gorge Rd | LLG Engineers | April-05 | 23,300 |
| Mission Gorge Rd. to SR 52 Ramps | LLG Engineers | 2005 [a] | 24,300 |
| SR 52 Ramps to Prospect Ave. | LLG Engineers | December-04 | 23,500 |
| **Civic Center Drive** | | | |
| Mission Gorge Rd. to Town Center Pkwy. | LLG Engineers | 2005 [a] | 6,200 |
| Town Center Pkwy. to Magnolia Ave. | [d] | [d] | [d] |
| **Magnolia Avenue** | | | |
| Princess Joann Rd. to El Nopal | City of Santee | 2005 | 9,700 |
| El Nopal to Mast Blvd. | City of Santee | 2005 | 22,400 |
| Mast Blvd. to Mission Gorge Rd. | City of Santee | 2005 | 21,700 |
| Mission Gorge Rd. to SR 52 Ramps | LLG Engineers | 2005 [a] | 30,400 |
| SR 52 Ramps to Prospect Ave. | LLG Engineers | December-04 | 36,100 |
| Prospect Ave. to Bradley Ave. | LLG Engineers | 2005 [a] | 11,000 |
| **Riverford Road** | | | |
| Riverside Dr. to SR 67 Ramps | LLG Engineers | September-04 | 17,100 |

*Footnotes:*

a. Estimated based on Year 2005 peak hour intersection turning movement volumes assuming AM peak hour volumes are 8% of ADT.
b. AM peak hour volumes are 8% of ADT.
c. Year 2001 count updated with a growth factor of 2% per year for four years.
d. Segment does not currently exist.

# 4.0 ANALYSIS APPROACH AND METHODOLOGY

This traffic analysis assesses the key intersections, street segments, freeways, and Congestion Management Program (CMP) arterials in the project area. All of these facilities are analyzed under existing and several future analysis timeframes to determine the project impacts on the prevailing street network during each timeframe.

## 4.1 Analysis Approach

This report includes peak hour intersection analysis of the following scenarios. Only segment analysis is conducted for the Year 2030 scenarios:

- Existing
- Year 2010 Without Project and Without SR 52 Extended East of SR 125
- Year 2010 With 50% of the Project and Without SR 52 Extended East of SR 125
- Year 2010 Without Project and With SR 52 Extended to Cuyamaca Street
- Year 2010 With 50% of the Project and With SR 52 Extended to Cuyamaca Street
- Year 2012 Without Project and With SR 52 Extended to SR 67
- Year 2012 With Magnolia Avenue Extended to Cuyamaca Street and With Entire Project and With SR 52 Extended to SR 67
- Year 2012 Without Magnolia Avenue Extended to Cuyamaca Street and With Entire Project and With SR 52 Extended to SR 67
- Year 2030 With SR 52 Extended to SR 67

LLG is currently in the process of conducting a study to analyze the operations of extending SR 52 east of its current termination with SR 125 to connect with SR 67. One of the main issues to be addressed in this study is the interchange at Cuyamaca Street. Currently a trolley line runs in the median of Cuyamaca Street at its planned crossing of SR 52. The current policy is "any crossings of the trolley shall be signalized with the traffic signal connected directly to the Santee Traffic Signal System or the traffic signal shall be pre-empted by the trolley". Therefore various alternative configurations of the Cuyamaca Street interchange are currently being studied. However, no alternative has been finalized. For the purpose of this study, the configuration assumed is a diamond interchange with a northbound to westbound loop ramp at SR 52/Cuyamaca Street. This results in one track crossing at the Eastbound Off-Ramp at Cuyamaca Street.

West of Mast Boulevard, SR 52 has three westbound lanes between Mast Boulevard and Santo Road. The project proponent has contributed $1.0 million towards extending the third lane all the way to I-15. In the eastbound direction, three lanes from I-15 merge to two lanes west of Mast Boulevard. It is proposed to add a lane all the way to Mast Boulevard by restriping the existing pavement, resulting in non-standard shoulder width. The freeway analysis for all scenarios except the existing assumes SR 52 as a 6-lane facility with 3 lanes in each direction, west of Mast Boulevard.

### 4.1.1 *Existing*

The existing Year 2005 peak hour traffic volumes were recorded and the study area intersections were analyzed with the existing intersection geometry and traffic control.

### 4.1.2 *Year 2010 Without SR 52 Extended East of SR 125 (No Project)*

This scenario assumes that no network changes will occur in the Year 2010. The Year 2010 without project traffic volumes were generated from the ADT volumes obtained from a SANDAG Series 10.0 model run. No changes to the existing geometry were assumed at any of the project study area intersections.

### 4.1.3 *Year 2010 With 50% of the Project and Without SR 52 Extended East of SR 125*

For this scenario, it is assumed that 50% of the project will be developed. Therefore, 50% of the project traffic was assigned to the project study area and added to the peak hour volumes generated in the above scenario (Year 2010 without SR 52 extended east of SR 125). All the currently existing intersections and segments are assumed for this scenario. In addition, a new intersection was also assumed at Cuyamaca Street/Princess Joann Road for this scenario.

### 4.1.4 *Year 2010 With SR 52 Extended to Cuyamaca Street (No Project)*

This scenario assumes that SR 52 is extended eastwards from SR 125 to Cuyamaca Street. The Year 2010 with SR 52 extended to Cuyamaca Street traffic volumes were generated from the ADT volumes obtained from a SANDAG Series 10.0 model run. No changes to the existing geometry were assumed at any of the project study area intersections except new intersections at the Cuyamaca Street/SR 52 interchange.

### 4.1.5 *Year 2010 With SR 52 Extended to Cuyamaca Street (With 50% of the Project)*

For this scenario, it is assumed that 50% of the project will be developed. Therefore, 50% of the project traffic was assigned to the project study area and added to the peak hour volumes generated in the above scenario (Year 2010 with SR 52 extended to Cuyamaca Street). All the currently existing intersections and segments are assumed for this scenario. In addition, new intersections at the Cuyamaca Street/SR 52 interchange and at Cuyamaca Street/Princess Joann Road are assumed for this scenario.

### 4.1.6 *Year 2012 With SR 52 Extended to SR 67 (No Project)*

This scenario assumes that SR 52 is extended eastwards from SR 125 to SR 67. The Year 2010 with SR 52 extended to SR 67 traffic volumes were generated from the ADT volumes obtained from a SANDAG Series 10.0 model run. The Year 2010 peak hour volumes were increased by a factor to obtain Year 2012 with SR 52 extended to SR 67. No changes to the existing geometry were assumed at any of the project study area intersections except full interchanges at SR 52/Cuyamaca Street and SR 52/Magnolia Avenue.

### 4.1.7 *Year 2012 With SR 52 Extended to SR 67 (With Entire Project)*

For this scenario, it is assumed that the entire project is developed. Therefore, the entire project traffic was assigned to the project study area and added to the peak hour volumes generated in the above scenario (Year 2012 with SR 52 extended to SR 67). All currently existing intersections and segments are assumed for this scenario. In addition, a full interchanges at SR 52/Cuyamaca Street and SR

52/Magnolia Avenue is assumed for this scenario. A new intersection was also assumed at Cuyamaca Street/Princess Joann Road for this scenario.

### 4.1.8 *Year 2030 With Entire Project With SR 52 Extended to SR 67*

For this scenario, it is assumed that the entire project is developed. The Year 2030 without Fanita project traffic volumes, were obtained from the SANDAG Series 10 model. This scenario includes the extension of SR 52 to SR 67, Extension of Magnolia Avenue at its northern terminus to Cuyamaca Street and the extension of Mast Boulevard to Riverford Drive.

## 4.2 Methodology

There are different methodologies used to analyze signalized intersections, unsignalized intersections, street segments, freeways, and Congestion Management Program (CMP) arterials. The measure of effectiveness for intersection operations is Level of Service (LOS). In the 2000 Highway Capacity Manual (HCM), LOS for signalized intersections is defined in terms of delay. The level of service analysis results in seconds of delay expressed in terms of letters A through F. Delay is a measure of driver discomfort, frustration, fuel consumption, and lost travel time.

### 4.2.1 *Signalized Intersections*

For signalized intersections, levels of service criteria are stated in terms of the average control delay per vehicle for a 15-minute analysis period. Control delay includes initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay. ***Table 4–1*** summarizes the delay thresholds for signalized intersections.

TABLE 4–1
LEVEL OF SERVICE THRESHOLDS FOR SIGNALIZED INTERSECTIONS

| Average Control Delay Per Vehicle (Seconds/Vehicle) | | | Level Of Service |
|---|---|---|---|
| 0.0 | ≤ | 10.0 | A |
| 10.1 | to | 20.0 | B |
| 21.1 | to | 35.0 | C |
| 35.1 | to | 55.0 | D |
| 55.1 | to | 80.0 | E |
| | ≥ | 80.0 | F |

Source: Highway Capacity Manual, 2000.

Level of service A describes operations with very low delay, (i.e. less than 10.0 seconds per vehicle). This occurs when progression is extremely favorable, and most vehicles arrive during the green phase. Most vehicles do not stop at all. Short cycle lengths may also contribute to low delay.

Level of service B describes operations with delay in the range 10.1 seconds and 20.0 seconds per vehicle. This generally occurs with good progression and/or short cycle lengths. More vehicles stop than for LOS A, causing higher levels of average delay.

Level of service C describes operations with delay in the range 20.1 seconds and 35.0 seconds per vehicle. These higher delays may result from fair progression and/or longer cycle lengths. Individual cycle failures may begin to appear. The number of vehicles stopping is significant at this level, although many still pass through the intersection without stopping.

Level of service D describes operations with delay in the range 35.1 seconds and 55.0 seconds per vehicle. At level D, the influence of congestion becomes more noticeable. Longer delays may result from some combination of unfavorable progression, long cycle lengths, or higher v/c ratios. Many vehicles stop, and the proportion of vehicles not stopping declines. Individual cycle failures are more frequent.

Level of service E describes operations with delay in the range of 55.1 seconds to 80.0 seconds per vehicle. This is considered to be the limit of acceptable delay. These high delay values generally indicate poor progression, long cycle lengths, and high v/c ratios. Individual cycle failures are frequent occurrences.

Level of service F describes operations with delay in excess of over 80.0 seconds per vehicle. This is considered to be unacceptable to most drivers. This condition often occurs with over-saturation (i.e., when arrival flow rates exceed the capacity of the intersection). It may also occur at high v/c ratios below 1.00 with many individual cycle failures. Poor progression and long cycle lengths may also be major contributing causes to such delay levels.

### 4.2.2 *Unsignalized Intersections*

For unsignalized intersections, level of service is determined by the computed or measured control delay and is defined for each minor movement. Level of service is not defined for the intersection as a whole. ***Table 4-2*** depicts the criteria, which are based on the average control delay for any particular minor movement.

**TABLE 4-2**
**LEVEL OF SERVICE THRESHOLDS FOR UNSIGNALIZED INTERSECTIONS**

| Average Control Delay Per Vehicle (Seconds/Vehicle) | | | Level Of Service | Expected Delay To Minor Street Traffic |
|---|---|---|---|---|
| 0.0 | ≤ | 10.0 | A | Little or no delay |
| 10.1 | to | 15.0 | B | Short traffic delays |
| 15.1 | to | 25.0 | C | Average traffic delays |
| 25.1 | to | 35.0 | D | Long traffic delays |
| 35.1 | to | 50.0 | E | Very long traffic delays |
| | ≥ | 50.0 | F | Severe congestion |

Source: Highway Capacity Manual, 2000.

Level of Service F exists when there are insufficient gaps of suitable size to allow a side street demand to safely cross through a major street traffic stream. This level of service is generally evident from extremely long control delays experienced by side-street traffic and by queuing on the minor-street approaches. The method, however, is based on a constant critical gap size; that is, the critical gap remains constant no matter how long the side-street motorist waits. LOS F may also appear in the form of side-street vehicles selecting smaller-than-usual gaps. In such cases, safety may be a problem, and some disruption to the major traffic stream may result. It is important to note that LOS F may not always result in long queues but may result in adjustments to normal gap acceptance behavior, which are more difficult to observe in the field than queuing.

### 4.2.3 *Street Segments*

The street segments were analyzed on a daily basis for the Year 2030 without and with project conditions by comparing the Average Daily Traffic (ADT) volume to the City of Santee Capacity Standards. This table is included in ***Appendix B*** and provides Level of Service estimates based on traffic volumes and roadway characteristics.

### 4.2.4 *Arterial Analysis*

The speed of vehicles on urban streets is influenced by three main factors: street environment, interaction among vehicles, and traffic control. As a result, these factors affect quality of service. There is a distinct set of urban street LOS for each urban street class. Levels of service based on prevailing speeds and class of arterials determine the operations of arterials. The Arterial Class is calculated automatically by the Highway Capacity Software (HCS) based on the distances between intersections and the link speeds.

***Table 4-4*** is based on FHWA research that shows longer running times on networks with short segments. This will cause longer travel times and lower LOS than using the free flow speeds.

Travel Time = Running Time + Signal Delay (intersection delay)

Arterial Speed = Total Distance / Total Travel Time

Segment Distance = Total Distance / Number of Segments

Flow Speed = Free Flow Speed (FFS) / Link.

Exhibit 15-2, Urban Street LOS by Class, Highway Capacity Manual (HCM) 2000, summarizes the level of service thresholds for Arterial roadways in terms of speed and is included in *Appendix C*.

**TABLE 4-3**
**ARTERIAL ANALYSIS DEFINITIONS**

| Speed (mph) | Segment Distance | Class |
|---|---|---|
| 1 to 29 | any | IV |
| 30 to 35 | < 2000 ft | IV |
| 30 to 35 | >/= 2000 ft | III |
| 36 to 45 | any | II |
| above 45 | any | I |

The Arterial Class is calculated automatically based on the distances between intersections and the link speeds. The speed is the total distance divided by the total travel time. The segment distance is the total distance divided by the number of segments. The Flow Speed is the free flow speed or link speed input for each link.

### 4.2.5 *Freeway Mainline*

Freeway segments were analyzed during the AM and PM peak hours based on the methodologies developed by CALTRANS District 11. The assessment of key freeway segments is necessary to satisfy the requirement of the CMP, as outlined later in the report. Freeway segment LOS is based on the volume to capacity ratio (V/C) on the freeway.

The analysis of freeway segment LOS is based on the procedure developed by Caltrans District 11 based on methods described in the Highway Capacity Manual. The procedure involves comparing the peak hour volume of the mainline segment to the theoretical capacity of the roadway (V/C). The procedure for calculating freeway LOS involves the estimation of volume to capacity (V/C) ratio using the following equation:

*V/C = ((Daily Volume * Peak Hour Percent * Directional Factor * Truck Factor) / Capacity*

| | | |
|---|---|---|
| *Daily Volume* | = | Average Daily Traffic (ADT) |
| *Peak Hour Percent* | = | Percentage of ADT occurring during the peak hour. |
| *Directional Factor* | = | Percentage of peak hour traffic occurring in peak direction. |
| *Truck Factor* | = | Truck/terrain factor to represent influence of heavy vehicles & grades. |
| *Capacity* | = | 2,200 vehicles/lane/hour/lane for mainline, and1,800 for auxiliary lanes. |

The resulting V/C is then compared to accepted ranges of V/C values corresponding to the various Levels of Service for each facility classification, as shown in ***Table 4-4***. The corresponding Level of Service represents an approximation of existing or anticipated future freeway operating condition in the peak direction of travel during the peak hour.

## TABLE 4-4
## CALTRANS DISTRICT 11
## FREEWAY SEGMENT LEVEL OF SERVICE DEFINITIONS

| LOS | V/C | Congestion/Delay | Traffic Description |
|---|---|---|---|
| ***Used for freeways, expressways and conventional highways*** | | | |
| A | <0.41 | None | Free flow |
| **B** | 0.42-0.62 | None | Free to stable flow, light to moderate volumes. |
| **C** | 0.63-0.80 | None to minimal | Stable flow, moderate volumes, freedom to maneuver noticeably restricted |
| **D** | 0.81-0.92 | Minimal to substantial | Approaches unstable flow, heavy volumes, very limited freedom to maneuver. |
| **E** | 0.93-1.00 | Significant | Extremely unstable flow, maneuverability and psychological comfort extremely poor. |
| ***Used for freeways and expressways*** | | | |
| **F(0)** | 1.01-1.25 | Considerable 0-1 hour delay | Forced flow, heavy congestion, long queues form behind breakdown points, stop and go. |
| **F(l)** | 1.26-1.35 | Severe 1-2 hour delay | Very heavy congestion, very long queues. |
| **F(2)** | 1.36-1.45 | Very Severe 2-3 hour delay | Extremely heavy congestion, longer queues, more numerous breakdown points, longer STOP periods. |
| **F(3)** | >1.46 | Extremely Severe 3+ hours of delay | Gridlock |

Source: Caltrans District 11

*Footnotes:*

LOS = Level of Service

V/C =Volume/Capacity

## 5.0 SIGNIFICANCE CRITERIA

Based on City of Santee policies, intersections are considered to operate at acceptable Levels of Service if LOS D or better is calculated. If the project causes the thresholds in *Table 5-1* to be exceeded, and the facility operates at LOS E or LOS F, a significant impact is calculated.

If project traffic causes the location to degrade from an acceptable LOS D or better to LOS E or LOS F, the impact is considered direct. If project traffic causes a location to degrade from LOS E to LOS F, the impact is considered direct.

Impacts in the Year 2030 are considered to be cumulative, since the impact is not expected for over 20 years.

***Table 5-1*** below outlines the significance criteria, including the thresholds for freeways and segments:

**TABLE 5-1**
**TRAFFIC IMPACT SIGNIFICANT THRESHOLDS**

| Level of Service with Project | Allowable Increase Due to Project Impacts [a] | | | | |
|---|---|---|---|---|---|
| | Freeways V/C | Roadway Segments | | Intersections Delay (sec.) | Ramp Meters Delay (Min) |
| | | V/C | Speed (mph) | | |
| E & F [b] | 0.01 | 0.02 | 1 | 2 | 2 [c] |

*Footnotes:*

a. If a proposed project's traffic impacts exceed the values shown in the table, then the impacts are deemed "significant." The project applicant shall identify "feasible mitigations" to achieve LOS D or better.

b. The acceptable Level of Service (LOS) standard for roadways and intersections in San Diego is LOS D. However, for undeveloped locations, the goal is to achieve a LOS C.

c. The impact is only considered significant if the total delay exceeds 15 minutes.

Delay = Average stopped delay per vehicle measured in seconds
V/C = Volume to Capacity Ratio (capacity at LOS E should be used)
Speed = Arterial speed measured in miles per hour for Congestion Management Program (CMP) analyses

# 6.0 ANALYSIS OF EXISTING CONDITIONS

## 6.1 Peak Hour Intersection Levels of Service

***Table 6–1*** summarizes the existing AM and PM peak hour intersection analysis results at the key study area intersections. As seen in *Table 6–1*, all signalized intersections are calculated to currently operate at LOS D or better except the following intersections:

- Mast Boulevard / West Hills Parkway (LOS F during the AM peak hour)
- Woodside Ave / SR 67 SB Off Ramp (LOS E during the AM peak hour);

*Appendix **C*** contains the peak hour intersection analysis worksheets for the existing conditions.

## TABLE 6-1
## EXISTING INTERSECTION ANALYSIS

| Intersection | Control Type | Peak Hour | Delay [a] | LOS [b] |
|---|---|---|---|---|
| 1. Lake Canyon Rd/Fanita Parkway | TWSC [c] | AM<br>PM | 10.7<br>9.9 | B<br>A |
| 2. Lake Canyon Rd./Carlton Hills Blvd | AWSC [d] | AM<br>PM | 8.8<br>8.7 | A<br>A |
| 3. Cecilwood Dr/Halberns Blvd | TWSC [c] | AM<br>PM | 9.4<br>9.5 | A<br>A |
| 4. Princess Joann Rd/Cuyamaca St | [e]<br>[e] | AM<br>PM | [e]<br>[e] | [e]<br>[e] |
| 5. Princess Joann Rd/Magnolia Ave | AWSC [d] | AM<br>PM | 7.5<br>7.7 | A<br>A |
| 6. Woodglen Vista Dr/Cuyamaca St | AWSC [d] | AM<br>PM | 9.4<br>9.4 | A<br>A |
| 7. Woodglen Vista Dr/Magnolia Ave | Signal | AM<br>PM | 18.9<br>26.9 | B<br>C |
| 8. El Nopal/Cuyamaca St | AWSC [d] | AM<br>PM | 13.4<br>13.6 | B<br>B |
| 9. El Nopal/Magnolia Ave | Signal | AM<br>PM | 31.9<br>32.5 | C<br>C |
| 10. El Nopal/Los Ranchitos Rd | AWSC [d] | AM<br>PM | 16.5<br>15.8 | C<br>C |
| 11. Mast Blvd/SR 52 EB Ramp | Signal | AM<br>PM | 24.7<br>28.0 | C<br>C |
| 12. Mast Blvd/SR 52 WB Ramp | Signal | AM<br>PM | 37.3<br>18.2 | D<br>B |
| 13. Mast Blvd/West Hills Pkwy | Signal | AM<br>PM | **91.4**<br>38.7 | **F**<br>D |
| 14. Mast Blvd/Medina Dr | Signal | AM<br>PM | 19.7<br>14.9 | B<br>B |

*Footnotes:*

a. Average delay per vehicle
b. Level of Service
c. Two Way STOP Controlled intersection. Delay and LOS for minor street left-turn movement reported.
d. All Way STOP Controlled intersection.
e. Intersection does not exist

## TABLE 6-1 (CONTINUED)
## EXISTING INTERSECTION ANALYSIS

| Intersection | Control Type | Peak Hour | Delay [a] | LOS [b] |
|---|---|---|---|---|
| 15. Mast Blvd/Pebble Beach Dr | Signal | AM | 16.3 | B |
| | | PM | 15.3 | B |
| 16. Mast Blvd/Fanita Pkwy | Signal | AM | 22.3 | C |
| | | PM | 20.0 | C |
| 17. Mast Blvd/Carlton Hills Blvd | Signal | AM | 28.3 | C |
| | | PM | 33.0 | C |
| 18. Mast Blvd/Halberns Blvd | Signal | AM | 23.1 | C |
| | | PM | 25.5 | C |
| 19. Mast Blvd/Cuyamaca St | Signal | AM | 32.4 | C |
| | | PM | 37.7 | D |
| 20. Mast Blvd/Magnolia Ave | Signal | AM | 34.2 | C |
| | | PM | 40.3 | D |
| 21. Riverside Dr/Riverford Rd | Signal | AM | 31.8 | C |
| | | PM | 33.7 | C |
| 22. Carlton Oaks Dr/Fanita Pkwy | Signal | AM | 18.0 | B |
| | | PM | 13.8 | B |
| 23. Carlton Oaks Dr/Carlton Hills Blvd | Signal | AM | 34.9 | C |
| | | PM | 34.3 | C |
| 24. River Park Dr/Cuyamaca St | Signal | AM | 18.1 | B |
| | | PM | 23.7 | C |
| 25. Town Center Pkwy/Cuyamaca St | Signal | AM | 24.8 | C |
| | | PM | 36.2 | D |
| 26. Civic Center Drive/Magnolia Ave/New Frontier Mobile Home Park | Signal | AM | 5.3 | A |
| | | PM | 4.1 | A |
| 27. Mission Gorge Rd/West Hills Pkwy | Signal | AM | 34.0 | C |
| | | PM | 32.5 | C |
| 28. Mission Gorge Rd/ SR 52 Off Ramps | Signal | AM | 19.4 | B |
| | | PM | 27.1 | C |

*Footnotes:*

a. Average delay per vehicle
b. Level of Service
c. Two Way STOP Controlled intersection. Delay and LOS for minor street left-turn movement reported.
d. All Way STOP Controlled intersection.

## TABLE 6-1 (CONTINUED)
## EXISTING INTERSECTION ANALYSIS

| Intersection | Control Type | Peak Hour | Delay [a] | LOS [b] |
|---|---|---|---|---|
| 29. Mission Gorge Rd/ SR 52 On Ramps | Signal | AM<br>PM | 2.4<br>2.6 | A<br>A |
| 30. Mission Gorge Rd/SR 125 | Signal | AM<br>PM | 18.9<br>27.4 | B<br>C |
| 31. Mission Gorge Rd/Fanita Dr | Signal | AM<br>PM | 19.5<br>14.7 | B<br>B |
| 32. Mission Gorge Rd/Carlton Hills Blvd | Signal | AM<br>PM | 25.0<br>21.0 | C<br>C |
| 33. Mission Gorge Rd/Town Center Pkwy | Signal | AM<br>PM | 26.3<br>42.7 | C<br>D |
| 34. Mission Gorge Rd/Cuyamaca St | Signal | AM<br>PM | 36.0<br>51.1 | D<br>D |
| 35. Mission Gorge Rd/Civic Center Dr | Signal | AM<br>PM | 23.8<br>25.1 | C<br>C |
| 36. Mission Gorge Rd/Cottonwood Ave | Signal | AM<br>PM | 25.1<br>26.5 | C<br>C |
| 37. Mission Gorge Rd/Magnolia Ave | Signal | AM<br>PM | 36.6<br>40.1 | D<br>D |
| 38. Woodside Ave/SR 67 SB Off-ramp | AWSC [d] | AM<br>PM | **42.4**<br>20.6 | **E**<br>C |
| 39. Woodside Ave/SR 67 NB On-ramp | Signal | AM<br>PM | 24.1<br>14.2 | C<br>B |
| 40. Buena Vista Ave/Cuyamaca St | Signal | AM<br>PM | 14.4<br>16.9 | B<br>B |
| 41. SR 52 WB Ramps/Cuyamaca St | [e]<br>[e] | AM<br>PM | [e]<br>[e] | [e]<br>[e] |

*Footnotes:*

a. Average delay per vehicle
b. Level of Service
c. Two Way STOP Controlled intersection. Delay and LOS for minor street left-turn movement reported.
d. All Way STOP Controlled intersection.
e. Intersection does not exist

## TABLE 6-1 (CONTINUED)
## EXISTING INTERSECTION ANALYSIS

| Intersection | Control Type | Peak Hour | Delay [a] | LOS [b] |
|---|---|---|---|---|
| 42. SR 52 EB Ramps/Cuyamaca St | [e] | AM | [e] | [e] |
| | [e] | PM | [e] | [e] |
| 43. SR 52 WB Ramps/ Magnolia Ave/SR 67 SB Ramps | [e] | AM | [e] | [e] |
| | [e] | PM | [e] | [e] |
| 44. SR 52 EB Ramps/Magnolia Ave | [e] | AM | [e] | [e] |
| | [e] | PM | [e] | [e] |
| 45. Prospect Ave/Fanita Dr | Signal | AM | 33.9 | C |
| | | PM | 35.1 | D |
| 46. Prospect Ave/Cuyamaca St | Signal | AM | 27.5 | C |
| | | PM | 29.3 | C |
| 47. Prospect Ave/Cottonwood Ave | Signal | AM | 10.7 | B |
| | | PM | 12.8 | B |
| 48. Prospect Ave/Magnolia Ave | Signal | AM | 27.1 | C |
| | | PM | 35.9 | D |
| 49. Prospect Ave/SR 67 SB On-ramp | No Traffic | AM | [f] | [f] |
| | Control | PM | [f] | [f] |
| 50. Prospect Ave/SR 67 NB Off-ramp | Signal | AM | 21.4 | C |
| | | PM | 28.1 | C |
| 51. SR 52 WB Off-Ramp/Fanita Dr. | [e] | AM | [e] | [e] |
| | [e] | PM | [e] | [e] |
| 52. SR 52 EB On-Ramp/Fanita Dr. | [e] | AM | [e] | [e] |
| | [e] | PM | [e] | [e] |
| 53. Cuyamaca St./Beck Dr. | AWSC [d] | AM | 31.2 | D |
| | | PM | 24.8 | C |
| 54. Fanita Dr./Ganley Dr./Santee Lakes Blvd. | TWSC [c] | AM | 10.9 | B |
| | | PM | 9.8 | A |

*Footnotes:*

a. Average delay per vehicle
b. Level of Service
c. Two Way STOP Controlled intersection. Delay and LOS for minor street left-turn movement reported.
d. All Way STOP Controlled intersection.
e. Intersection does not exist
f. Intersection does not have traffic controls and hence not analyzed.

# 7.0 TRIP GENERATION/DISTRIBUTION/ASSIGNMENT

***Table 7–1*** summarizes the project trip generation. A trip generation rate of 10 ADT per unit was used for residential units with lot sizes 10,000 SF or less and 12 ADT per unit per unit was used for residential units with lot sizes greater than 10,000 SF. The rates used for the non-residential land uses are based on corresponding land uses listed in the "*Brief Guide of Vehicular Traffic Generation Rates for the San Diego Region*", April 2002, by SANDAG.

## 7.1 Trip Generation

***Table 7-1*** summarizes the total trip generation for the proposed project. As seen in *Table 7-1*, the project is estimated to generate a total of 18,770 ADT with 1,463 trips in the AM peak hour (493 inbound and 970 outbound) and 1,853 trips in the PM peak hour (1,245 inbound and 608 outbound).

However, this is a master plan project with residential, office, retail and recreational facilities providing education, shopping and job opportunities within the project site. Therefore, it is important to account for the fact that the majority of the non-residential generated traffic will serve the local residences and therefore remain internal to the site. For example, 80% of the retail generated traffic were assumed to serve the project residences. It is believed that the non-residential internal percentages utilized in this report are conservative. They result in the assumption that about 10% of the residential trip generation is internal to the project site.

### 7.1.1 *Internal Trips*

***Table 7-2*** summarizes the internal trips for the proposed project based on the assumed internal trip percentages. As seen in *Table 7-2*, the project is estimated to generate a total of 3,072 internal daily trips with 210 trips in the AM peak hour (85 inbound and 125 outbound) and 298 trips in the PM peak hour (183 inbound and 115 outbound).

### 7.1.2 *External Trips*

The external trips were determined by subtracting the internal trips estimated in *Table 7-2* from the total trips summarized in *Table 7-1*. ***Table 7-3*** summarizes the external trips for the proposed project. As seen in *Table 7-3*, the project is estimated to generate a total of 15,698 external daily trips with 1,253 trips in the AM peak hour (411 inbound and 842 outbound) and 1,555 trips in the PM peak hour (1,060 inbound and 494 outbound).

## TABLE 7-1
## PROJECT TRIP GENERATION - TOTAL TRIPS

| Land Use | Lot Size | Quantity | Daily Trip Ends (ADT) [a] | | AM Peak Hour | | | | | PM Peak Hour | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Rate [b] | Vol | % of ADT | In:Out Split | Volume In | Volume Out | Volume Total | % of ADT | In:Out Split | Volume In | Volume Out | Volume Total |
| **RESIDENTIAL** | | | | | | | | | | | | | | |
| Rock Point | 20,000 SF | 399 DU | 12 /DU | 4,790 | 8% | 3 : 7 | 115 | 268 | 383 | 10% | 7 : 3 | 335 | 144 | 479 |
| Oak View | 20,000 SF | 65 DU | 12 /DU | 780 | 8% | 3 : 7 | 19 | 43 | 62 | 10% | 7 : 3 | 55 | 23 | 78 |
| Oak View | 20,000 SF | 96 DU | 12 /DU | 1,150 | 8% | 3 : 7 | 28 | 64 | 92 | 10% | 7 : 3 | 81 | 34 | 115 |
| Sycamore | 6,000 SF | 268 DU | 10 /DU | 2,680 | 8% | 3 : 7 | 64 | 150 | 214 | 10% | 7 : 3 | 188 | 80 | 268 |
| Sycamore | 10,000 SF | 195 DU | 10 /DU | 1,950 | 8% | 3 : 7 | 47 | 109 | 156 | 10% | 7 : 3 | 137 | 58 | 195 |
| Sage Hill | 10,000 SF | 85 DU | 10 /DU | 850 | 8% | 3 : 7 | 20 | 48 | 68 | 10% | 7 : 3 | 60 | 25 | 85 |
| Sage Hill | 20,000 SF | 272 DU | 12 /DU | 3,260 | 8% | 3 : 7 | 78 | 183 | 261 | 10% | 7 : 3 | 228 | 98 | 326 |
| **Subtotal Residential** | | **1,380 DU** | | **15,460** | | | **371** | **865** | **1,236** | | | **1,084** | **462** | **1,546** |
| **NON-RESIDENTIAL** | | | | | | | | | | | | | | |
| **Recreation Areas** | | | | | | | | | | | | | | |
| Active | - | 17.5 Acres | 50 /Acre | 880 | 13% | 5 : 5 | 57 | 57 | 114 | 9% | 5 : 5 | 40 | 40 | 79 |
| Passive Parks | - | 44.1 Acres | 5 /Acre | 220 | 4% | 6 : 4 | 5 | 4 | 9 | 8% | 6 : 4 | 11 | 7 | 18 |
| **Village Center** | | | | | | | | | | | | | | |
| Offices | - | 6,408 SF | 20 /KSF | 130 | 14% | 9 : 1 | 16 | 2 | 18 | 13% | 2 : 8 | 3 | 14 | 17 |
| Com Center | - | 22,686 SF | 30 /KSF | 680 | 4% | 6 : 4 | 16 | 11 | 27 | 9% | 6 : 4 | 37 | 24 | 61 |
| The Inn | - | 22 Rooms | 7 /Room | 150 | 8% | 4 : 6 | 5 | 7 | 12 | 9% | 6 : 4 | 8 | 6 | 14 |
| Art Cottages | - | 15 Cottages | 12 /Cottage | 180 | 8% | 2 : 8 | 3 | 11 | 14 | 9% | 7 : 3 | 11 | 5 | 16 |
| Nursery | - | 12,618 SF | 40 /KSF | 500 | 3% | 6 : 4 | 9 | 6 | 15 | 10% | 5 : 5 | 25 | 25 | 50 |
| Retail | - | 13,310 SF | 40 /KSF | 530 | 3% | 6 : 4 | 10 | 6 | 16 | 9% | 5 : 5 | 24 | 24 | 48 |
| Chapel | - | 4,508 SF | 9 /KSF | 40 | 5% | 6 : 4 | 1 | 1 | 2 | 8% | 5 : 5 | 2 | 1 | 3 |
| **Subtotal Non-Residential** | | | | **3,310** | | | **122** | **105** | **227** | | | **161** | **146** | **307** |
| **Total Fanita Ranch** | | | | **18,770** | | | **493** | **970** | **1,463** | | | **1,245** | **608** | **1,853** |

*Footnotes:*

a. Trip Ends are one-way traffic movement, either entering or leaving.

b. Brief Guide of Vehicular Traffic Generation Rates for the San Diego Region, April 2002, SANDAG

## TABLE 7-2
## PROJECT TRIP GENERATION - INTERNAL TRIPS

| Land Use | Internal Trip Percent | Daily Volume | | AM Peak Hour | | | | PM Peak Hour | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Total | Internal | Total | Internal Trips | | | Total | Internal Trips | | |
| | | | | | Total | In | Out | | Total | In | Out |
| **RESIDENTIAL** | | | | | | | | | | | |
| Rock Point | 10% | 4,788 | 479 | 383 | 38 | 11 | 27 | 479 | 48 | 34 | 14 |
| Oak View | 10% | 780 | 78 | 62 | 6 | 2 | 4 | 78 | 8 | 6 | 2 |
| Oak View | 10% | 1,152 | 115 | 92 | 9 | 3 | 6 | 115 | 12 | 8 | 4 |
| Sycamore | 10% | 2,680 | 268 | 214 | 21 | 6 | 15 | 268 | 27 | 19 | 8 |
| Sycamore | 10% | 1,950 | 195 | 156 | 16 | 5 | 11 | 195 | 20 | 14 | 6 |
| Sage Hill | 10% | 850 | 85 | 68 | 7 | 2 | 5 | 85 | 9 | 6 | 3 |
| Sage Hill | 10% | 3,264 | 326 | 261 | 26 | 8 | 18 | 326 | 33 | 23 | 10 |
| **Subtotal Residential** | | **15,464** | **1,546** | **1,236** | **123** | **37** | **86** | **1,546** | **157** | **110** | **47** |
| **NON-RESIDENTIAL** | | | | | | | | | | | |
| **Recreation Areas** | | | | | | | | | | | |
| Active | 30% | 264 | 114 | 34 | 17 | 17 | 79 | 24 | 12 | 12 | 264 |
| Passive Parks | 30% | 66 | 9 | 3 | 2 | 1 | 18 | 5 | 3 | 2 | 66 |
| **Village Center** | | | | | | | | | | | |
| Offices | 30% | 39 | 18 | 5 | 5 | - | 16 | 5 | 1 | 4 | 39 |
| Community Center | 40% | 272 | 27 | 11 | 7 | 4 | 61 | 24 | 15 | 9 | 272 |
| The Inn | 50% | 75 | 12 | 6 | 2 | 4 | 14 | 7 | 4 | 3 | 75 |
| Artisan Cottages (39,000 SF) | 30% | 54 | 14 | 4 | 1 | 3 | 16 | 5 | 3 | 2 | 54 |
| Nursery | 60% | 300 | 15 | 9 | 5 | 4 | 50 | 30 | 15 | 15 | 300 |
| Retail | 80% | 424 | 16 | 13 | 8 | 5 | 48 | 38 | 19 | 19 | 424 |
| Chapel | 80% | 32 | 2 | 2 | 1 | 1 | 3 | 2 | 1 | 1 | 32 |
| **Subtotal Non-Residential** | | **3,310** | **1,526** | **227** | **87** | **48** | **39** | **305** | **141** | **73** | **68** |
| **Total Fanita Project** | | **18,770** | **3,072** | **1,463** | **210** | **85** | **125** | **1,851** | **298** | **183** | **115** |

## TABLE 7-3
## PROJECT TRIP GENERATION - EXTERNAL TRIPS

| Land Use | External Trip Percent | Daily Volume | | AM Peak Hour | | | | PM Peak Hour | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Total | External ADT | Total | External Trips | | | Total | External Trips | | |
| | | | | | Total | In | Out | | Total | In | Out |
| **RESIDENTIAL** | | | | | | | | | | | |
| **Estate Homes** | | | | | | | | | | | |
| Rock Point | 90% | 4,788 | 4,311 | 383 | 345 | 104 | 241 | 479 | 431 | 302 | 129 |
| Oak View | 90% | 780 | 702 | 62 | 56 | 17 | 39 | 78 | 70 | 49 | 21 |
| Oak View | 90% | 1,152 | 1,035 | 92 | 83 | 25 | 58 | 115 | 103 | 72 | 31 |
| Sycamore | 90% | 2,680 | 2,412 | 214 | 193 | 58 | 135 | 268 | 241 | 169 | 72 |
| Sycamore | 90% | 1,950 | 1,755 | 156 | 140 | 42 | 98 | 195 | 175 | 123 | 52 |
| Sage Hill | 90% | 850 | 765 | 68 | 61 | 18 | 43 | 85 | 76 | 53 | 23 |
| Sage Hill | 90% | 3,264 | 2,934 | 261 | 235 | 71 | 164 | 326 | 293 | 205 | 88 |
| **Subtotal Residential** | | **15,464** | **13,914** | **1,236** | **1,113** | **335** | **778** | **1,546** | **1,389** | **973** | **416** |
| **NON-RESIDENTIAL** | | | | | | | | | | | |
| **Recreation Areas** | | | | | | | | | | | |
| Active | 70% | 875 | 616 | 114 | 80 | 40 | 40 | 79 | 55 | 28 | 27 |
| Passive Parks | 70% | 221 | 154 | 9 | 6 | 4 | 2 | 18 | 13 | 8 | 5 |
| **Village Center** | | | | | | | | | | | |
| Offices | 70% | 128 | 91 | 18 | 13 | 12 | 1 | 17 | 12 | 2 | 10 |
| Community Center | 60% | 681 | 408 | 27 | 16 | 10 | 6 | 61 | 37 | 22 | 15 |
| The Inn | 50% | 154 | 75 | 12 | 6 | 2 | 4 | 14 | 7 | 4 | 3 |
| Artisan Cottages (39,000 SF) | 70% | 180 | 126 | 14 | 10 | 2 | 8 | 16 | 11 | 8 | 3 |
| Nursery | 40% | 505 | 200 | 15 | 6 | 4 | 2 | 50 | 20 | 10 | 10 |
| Retail | 20% | 532 | 106 | 16 | 3 | 2 | 1 | 48 | 10 | 5 | 5 |
| Chapel | 20% | 41 | 8 | 2 | - | - | - | 3 | 1 | - | 1 |
| **Subtotal Non-Residential** | | **3,310** | **1,784** | **227** | **140** | **76** | **64** | **306** | **166** | **87** | **78** |
| **Total Fanita Ranch** | | **18,770** | **15,698** | **1,463** | **1,253** | **411** | **842** | **1,852** | **1,555** | **1,060** | **494** |

## 7.2 Trip Distribution/Assignment

The entire San Diego County is divided into Traffic Analysis Zones (TAZ). One of the model outputs is the Select Zone Assignment (SZA) plot that distributes traffic generated by one or more TAZs. The following Select Zone Assignment (SZA) plots were obtained from SANDAG for three distinct network scenarios:

- Without SR 52 Extension east of SR 125
- With SR 52 extended to Cuyamaca Street
- Year 2010 with SR 52 extended to SR 67

***Local Capture:***

The Select Zone Assignment plots indicate the percent of local capture along the study area segments. Based on the Select Zone Assignment (SZA) plots, the following local capture within the City was assumed:

- 2% of the project traffic would utilize the retail facilities at the northwest corner of the Mast Boulevard/Magnolia Avenue intersection and the Santana High school,
- 1% of the project traffic would be destined to retail to the west of Cuyamaca Street between Town Center Parkway and Mission Gorge Road.
- 4% of the project traffic would be destined to the retail and the Santee Office Park developments in the Town Center Area at Cuyamaca Street/Town Center Parkway.
- 2% of the project traffic would utilize the retail facilities along Town Center Parkway between Cuyamaca Street and Mission Gorge Road.
- 2% of the project traffic would utilize the retail facilities along Mission Gorge Road between Cuyamaca Street and Town Center Parkway.
- 2% of the project traffic would utilize the existing and planned retail facilities along Mission Gorge Road east of Carlton Hills Boulevard.
- 1% of the project traffic would be destined to the existing West Hills High school on Mast Boulevard.

Applying the local capture, three trip distribution scenarios were developed. ***Figure 7-1*** depicts the distribution of project traffic for current network conditions with SR 52 not extended east of SR 125. ***Figure 7-2*** depicts the distribution of traffic with SR 52 extended east to Cuyamaca Street. ***Figure 7-3*** depicts the distribution of traffic with SR 52 extended east to SR 67 and with Magnolia Avenue extended to Cuyamaca Street.

For the condition with Magnolia Avenue not extended to Cuyamaca Street for the Year 2012 timeframe, the distribution shown in *Figure 7-3* was used. Minor modifications were made to account for Magnolia Avenue not being extended to Cuyamaca Street.

## 8.0 SANDAG MODELING AND FUTURE TRAFFIC VOLUMES

The SANDAG Series 10.0 model was used as the basis for all future scenario traffic modeling for this project. The model inputs such as land use and network data were reviewed for each model run. These were verified to ensure that the City of Santee General Plan land uses and Circulation Element were correctly assumed in the Model. In addition, the Santee Office Park project land uses which have been approved by the City, were included in the Model. Other available land use and network data were also reviewed and included in the model inputs for all analysis scenarios. The City and SANDAG were consulted to finalize the model inputs.

Future traffic volumes need to be projected in order to determine whether the planned circulation system could accommodate project volumes. The SANDAG City/County Forecast Traffic Model Series 10.0 was used to estimate these volumes. The traffic model outputs freeway and street segment ADT volumes. These ADT volumes were utilized directly as output by the model.

Models were obtained for the following network scenarios:

- Year 2010 - SR 52 not extended east of SR 125
- Year 2010 - SR 52 extended from SR 125 to Cuyamaca Street
- Year 2010 - SR 52 extended from SR 125 to SR 67
- Year 2030 - SR 52 extended from SR 125 to SR 67

The SANDAG model outputs peak hour volumes. However, the SANDAG model output is not as accurate in determining peak hour intersection turn movements. Therefore, peak hour turning movement volumes were estimated using a template in EXCEL developed by LLG to determine peak hour traffic at an intersection from future ADT volumes using the relationship between existing peak hour turn movements and the existing ADT volumes. This same relationship can be assumed to generally continue in the future. However, it was taken into account that this relationship will likely change in some locations, once SR 52 is extended in phases, first to Cuyamaca Street and then to SR 67. For example, if the segment ADT on the roadway is forecast to double in the near-term (Year 2010), it is reasonable to assume that the peak hour intersection turn movement volumes will generally double. The extension of SR 52 was taken into account in determining the peak hour intersection volumes, with modifications to peak hour volumes in certain movements affected by the extension of SR 52.

SANDAG Series 10 Model Run did not include the Sycamore Landfill project and the Castle Rock residential project as currently proposed. Hence, the traffic generated by these proposed projects was added manually to all SANDAG Series 10 traffic volumes for all base [without project] conditions. A brief description of each of the two projects is included below:

### *Sycamore Landfill*

The proposed expansion of the existing Sycamore Landfill project is located in the City of San Diego, north of Mast Boulevard at West Hills Parkway. through the Year 2025, until landfill closure. The landfill currently is permitted at a maximum of 620 trucks/day, or 3,300 tons/day, whichever comes first. The landfill has conducted analyses using projected regional growth and other economic indicators to estimate the amount of waste that will require processing in future years. Most of the traffic to the project will be truck traffic. Factoring the passenger Car Equivalence (PCE), the project is calculated to generate a total 13,360 ADT with 1,710 trips (820 inbound and 890 outbound) during the AM peak hour and 740 trips (350 inbound and 390 outbound) during the PM peak hour.

### *Castlerock*

The Castlerock project is located in the northwest quadrant of the Pebble Beach Road / Mast Boulevard intersection, within the City of San Diego. This project will include 120 multi-family units, 272 single family units and 87 "green court" single family residential units. This project is calculated to generate a total of 4,550 ADT with 364 trips (73 inbound and 291 outbound) during the AM peak hour and 455 trips (318 inbound and 137 outbound) during the PM peak hour.

***Figure 8-1*** depicts the total cumulative project volumes

## 8.1 Near-Term

### 8.1.1 *Year 2010 Without SR 52 Extension East of SR 125*

Peak hour intersection turning movement volumes were determined based on the method described above for the near-term without project, using the Year 2010 Without SR 52 Extension east of SR 125 Model ADT output. 50% of the project traffic was distributed and assigned using the distribution in *Figure 7-1*. **No intersection improvements were assumed** for any existing intersections. The existing lane configurations were used. For the with project scenario, a new intersection at Princess Joann was assumed.

### 8.1.2 *Year 2010 With SR 52 Extension to Cuyamaca Street*

Peak hour intersection turning movement volumes were determined based on the method described above for the near-term without project, using the Year 2010 With SR 52 extension to Cuyamaca Street Model ADT output. 50% of the project traffic was distributed and assigned using the distribution in *Figure 7-2*. The configuration of a one half diamond on the west side of Cuyamaca Street with a northbound to westbound loop ramp at SR 52/Cuyamaca Street was assumed for this scenario. **No intersection improvements were assumed** for any existing intersections. The existing lane configurations were used. New intersections due to the changes in the street network (extension of SR 52) were assumed. A track crossing at the eastbound off-ramp for eastbound SR 52 to northbound Cuyamaca Street is assumed.

### 8.1.3 *Year 2012 With SR 52 Extension to SR 67*

The peak hour intersection turning movement volumes which were determined for the Year 2010 With SR 52 Extension to SR 67 were increased by a factor to obtain the Year 2012 With SR 52 Extension to SR 67 volumes. The entire project traffic was distributed and assigned using the distribution in *Figure 7-3*. **No intersection improvements were assumed** for any existing intersections. The existing lane configurations were used. New intersections due to the changes in the street network (extension of SR 52) were assumed. A track crossing at the eastbound off-ramp for eastbound SR 52 to northbound Cuyamaca Street is assumed. A new intersection at Princess Joann Road/Cuyamaca Street was also assumed.

## 8.2 Long-Term – Year 2030

The long-term ADT volumes were obtained from the Year 2030 With SR 52 Extension to SR 67. The entire project ADT was distributed and assigned using the distribution percentages in *Figure 7-3*. It was assumed that Mission Gorge Road would be widened to 8-Lane Prime Arterial standards consistent with the General Plan. New network roadways due to the changes in the street network (extension of SR 52) were assumed.

# 9.0 ANALYSIS OF NEAR-TERM SCENARIOS

## 9.1 Year 2010 Without SR 52 Extended East of SR 125 and Without Project

### 9.1.1 *Traffic Volumes/Intersection Geometry*

As described in Section 8, SANDAG Modeling and Future Traffic Volumes, the segment volumes were obtained from a SANDAG model run for this scenario. The peak hour intersection volumes were derived from these segment volumes as described Section 8.0. This scenario assumes that in the Year 2010 no network changes will occur and SR 52 will continue to terminate at SR 125. **No intersection improvements were assumed** for any existing intersections.

***Figure 9–1*** depicts the Year 2010 peak hour intersection traffic volumes without the extension of SR 52 and without project.

### 9.1.2 *Intersection Analysis*

***Table 9–1*** summarizes the peak hour intersection operations at the key study area intersections for the Year 2010 without SR 52 extension east of SR 125 Scenario. As seen in *Table 9–1*, all key study area intersections are calculated to operate at LOS D or better except the following:

- Mast Boulevard / SR 52 Westbound Ramps (LOS F during the AM & PM peak hours)
- Mast Boulevard / West Hills Parkway (LOS F during the AM & PM peak hours)
- Mast Boulevard / Cuyamaca Street (LOS E during the PM peak hour)
- Town Center Parkway / Cuyamaca Street (LOS E during the PM peak hour)
- Mission Gorge Road / Town Center Parkway (LOS F during the PM peak hour)
- Mission Gorge Road / Cottonwood Avenue (LOS E during the PM peak hour)
- Mission Gorge Road / Magnolia Avenue (LOS E during the AM & PM peak hours)
- Woodside Avenue / SR 67 Southbound Off-Ramp (LOS F during the AM & PM peak hours)
- Beck Drive / Cuyamaca Street (LOS F during the AM peak hour)

***Appendix D*** contains the peak hour intersection analysis worksheets for the Year 2010 without SR 52 extension east of SR 125 without project traffic scenario.

## TABLE 9-1
## INTERSECTION ANALYSIS
## YEAR 2010 WITHOUT SR 52 EXTENDED EAST OF SR 125

| Intersection | Control Type | Peak Period | Without Project | | With 50% of the Project | | Delay Δ [c] | Impact Type |
|---|---|---|---|---|---|---|---|---|
| | | | Delay [a] | LOS [b] | Delay [a] | LOS [b] | | |
| 1. Lake Canyon Rd/Fanita Parkway | TWSC [d] | AM | 11.2 | B | 16.1 | C | 4.9 | None |
| | | PM | 10.4 | B | 16.4 | C | 6.0 | None |
| 2. Lake Canyon Rd./Carlton Hills Blvd | AWSC [e] | AM | 9.3 | A | 9.5 | A | 0.2 | None |
| | | PM | 9.2 | A | 9.5 | A | 0.3 | None |
| 3. Cecilwood Dr/Halberns Blvd | TWSC [d] | AM | 9.9 | A | 9.9 | A | 0.0 | None |
| | | PM | 9.9 | A | 9.9 | A | 0.0 | None |
| 4. Princess Joann Rd/Cuyamaca St | TWSC [d] | AM | [e] | [e] | 9.9 | A | [e] | [e] |
| | | PM | [e] | [e] | 10.7 | B | [e] | [e] |
| 5. Princess Joann Rd/Magnolia Ave | AWSC [f] | AM | 7.8 | A | 7.8 | A | 0.0 | None |
| | | PM | 7.9 | A | 7.9 | A | 0.0 | None |
| 6. Woodglen Vista Dr/Cuyamaca St | AWSC [f] | AM | 11.1 | B | 15.5 | C | 4.4 | None |
| | | PM | 12.4 | B | 16.6 | C | 4.2 | None |
| 7. Woodglen Vista Dr/Magnolia Ave | Signal | AM | 22.2 | C | 22.2 | C | 0.0 | None |
| | | PM | 30.1 | C | 30.1 | C | 0.0 | None |
| 8. El Nopal/Cuyamaca St | AWSC [f] | AM | 21.6 | C | **66.0** | **F** | **44.4** | **Direct** |
| | | PM | 24.2 | C | **109.9** | **F** | **85.7** | **Direct** |
| 9. El Nopal/Magnolia Ave | Signal | AM | 37.8 | D | 39.4 | D | 1.6 | None |
| | | PM | 37.5 | D | 38.3 | D | 0.8 | None |
| 10. El Nopal/Los Ranchitos Rd | AWSC [f] | AM | 23.2 | C | 27.9 | D | 4.7 | None |
| | | PM | 10.4 | B | 16.4 | C | 6.0 | None |

## TABLE 9-1 (CONTINUED)
## INTERSECTION ANALYSIS
## YEAR 2010 WITHOUT SR 52 EXTENDED EAST OF SR 125

| Intersection | Control Type | Peak Period | Without Project | | With 50% of the Project | | Delay Δ [c] | Impact Type |
|---|---|---|---|---|---|---|---|---|
| | | | Delay [a] | LOS [b] | Delay [a] | LOS [b] | | |
| 11. Mast Blvd/SR 52 EB Ramp | Signal | AM | 21.8 | C | 23.2 | C | 1.4 | None |
| | | PM | 33.3 | C | **82.3** | **F** | **49.0** | **Direct** |
| 12. Mast Blvd/SR 52 WB Ramp | Signal | AM | **>100.0** | **F** | **135.0** | **F** | **>10.0** | **Direct** |
| | | PM | **86.9** | **F** | **115.5** | **F** | **28.6** | **Direct** |
| 13. Mast Blvd/West Hills Pkwy | Signal | AM | **>100.0** | **F** | **327.6** | **F** | **>10.0** | **Direct** |
| | | PM | **81.0** | **F** | **101.6** | **F** | **20.6** | **Direct** |
| 14. Mast Blvd/Medina Dr | Signal | AM | 25.0 | C | 28.6 | C | 3.6 | None |
| | | PM | 17.1 | B | 19.2 | B | 2.1 | None |
| 15. Mast Blvd/Pebble Beach Dr | Signal | AM | 21.2 | C | 22.0 | C | 0.8 | None |
| | | PM | 23.5 | C | 24.6 | C | 1.1 | None |
| 16. Mast Blvd/Fanita Pkwy | Signal | AM | 24.1 | C | 28.6 | C | 4.5 | None |
| | | PM | 22.1 | C | 25.7 | C | 3.6 | None |
| 17. Mast Blvd/Carlton Hills Blvd | Signal | AM | 36.1 | D | 37.5 | D | 1.4 | None |
| | | PM | 38.3 | D | 39.8 | D | 1.5 | None |
| 18. Mast Blvd/Halberns Blvd | Signal | AM | 50.6 | D | 54.8 | D | 4.2 | None |
| | | PM | 35.0 | D | 37.9 | D | 2.9 | None |
| 19. Mast Blvd/Cuyamaca St | Signal | AM | 52.9 | D | **64.8** | **E** | **11.9** | **Direct** |
| | | PM | **56.0** | **E** | **63.4** | **E** | **7.4** | **Direct** |
| 20. Mast Blvd/Magnolia Ave | Signal | AM | 35.2 | C | 37.3 | D | 2.1 | None |
| | | PM | 41.4 | D | 42.5 | D | 1.1 | None |

## TABLE 9-1 (CONTINUED)
## INTERSECTION ANALYSIS
## YEAR 2010 WITHOUT SR 52 EXTENDED EAST OF SR 125

| Intersection | Control Type | Peak Period | Without Project | | With 50% of the Project | | Delay Δ [c] | Impact Type |
|---|---|---|---|---|---|---|---|---|
| | | | Delay [a] | LOS [b] | Delay [a] | LOS [b] | | |
| 21. Riverside Dr./Riverford Rd | Signal | AM | 34.2 | C | 34.5 | C | 0.3 | None |
| | | PM | 36.6 | D | 38.6 | D | 2.0 | None |
| 22. Carlton Oaks Dr/Fanita Pkwy | Signal | AM | 18.9 | B | 19.3 | B | 0.4 | None |
| | | PM | 15.4 | B | 17.1 | B | 1.7 | None |
| 23. Carlton Oaks Dr/Carlton Hills Blvd | Signal | AM | 41.0 | D | 43.5 | D | 2.5 | None |
| | | PM | 36.4 | D | 37.6 | D | 1.2 | None |
| 24. River Park Dr/Cuyamaca St | Signal | AM | 21.4 | C | 21.6 | C | 0.2 | None |
| | | PM | 26.6 | C | 26.7 | C | 0.1 | None |
| 25. Town Center Pkwy/Cuyamaca St | Signal | AM | 28.1 | C | 28.4 | C | 0.3 | None |
| | | PM | **70.1** | **E** | **75.2** | **E** | **5.1** | **Direct** |
| 26. Civic Center Drive/Magnolia Ave/New Frontier Mobile Home Park | Signal | AM | 7.1 | A | 7.1 | A | 0.0 | None |
| | | PM | 7.3 | A | 7.4 | A | 0.1 | None |
| 27. Mission Gorge Rd/West Hills Pkwy | Signal | AM | 37.3 | D | 38.4 | D | 1.1 | None |
| | | PM | 32.5 | C | 32.8 | C | 0.3 | None |
| 28. Mission Gorge Rd/ SR 52 Off Ramps | Signal | AM | 22.8 | C | 22.8 | C | 0.0 | None |
| | | PM | 30.1 | C | 30.1 | C | 0.0 | None |
| 29. Mission Gorge Rd/ SR 52 On Ramps | Signal | AM | 4.8 | A | 4.8 | A | 0.0 | None |
| | | PM | 3.2 | A | 3.2 | A | 0.0 | None |
| 30. Mission Gorge Rd/SR 125 | Signal | AM | 20.7 | C | 21.3 | C | 0.6 | None |
| | | PM | 41.3 | D | 45.0 | D | 3.7 | None |

## TABLE 9-1 (CONTINUED)
## INTERSECTION ANALYSIS
## YEAR 2010 WITHOUT SR 52 EXTENDED EAST OF SR 125

| Intersection | Control Type | Peak Period | Without Project | | With 50% of the Project | | Delay Δ [c] | Impact Type |
|---|---|---|---|---|---|---|---|---|
| | | | Delay [a] | LOS [b] | Delay [a] | LOS [b] | | |
| 31. Mission Gorge Rd/Fanita Dr | Signal | AM | 13.7 | B | 15.8 | B | 2.1 | None |
| | | PM | 28.2 | C | 30.6 | C | 2.4 | None |
| 32. Mission Gorge Rd/Carlton Hills Blvd | Signal | AM | 39.2 | D | 48.6 | D | 9.4 | None |
| | | PM | 27.4 | C | 29.2 | C | 1.8 | None |
| 33. Mission Gorge Rd/Town Center Pkwy | Signal | AM | 37.9 | D | 38.0 | D | 0.1 | None |
| | | PM | **82.1** | **F** | **83.8** | **F** | 1.7 | None |
| 34. Mission Gorge Rd/Cuyamaca St | Signal | AM | 35.9 | D | 37.7 | D | 1.8 | None |
| | | PM | 52.8 | D | 53.4 | D | 0.6 | None |
| 35. Mission Gorge Rd/Civic Center Dr | Signal | AM | 55.0 | D | **55.5** | **E** | 0.5 | None |
| | | PM | 44.9 | D | 45.3 | D | 0.4 | None |
| 36. Mission Gorge Rd/Cottonwood Ave | Signal | AM | 39.1 | D | 39.3 | D | 0.2 | None |
| | | PM | **69.5** | **E** | **71.3** | **E** | 1.8 | None |
| 37. Mission Gorge Rd/Magnolia Ave | Signal | AM | **69.2** | **E** | **72.1** | **E** | **2.9** | **Direct** |
| | | PM | **58.1** | **E** | **60.4** | **E** | **2.3** | **Direct** |
| 38. Woodside Ave/SR 67 SB Off-ramp | AWSC [d] | AM | **128.5** | **F** | **129.8** | **F** | 1.3 | None |
| | | PM | **88.6** | **F** | **90.0** | **F** | 1.4 | None |
| 39. Woodside Ave/SR 67 NB On-ramp | Signal | AM | 26.8 | C | 26.8 | C | 0.0 | None |
| | | PM | 18.9 | B | 18.9 | B | 0.0 | None |
| 40. Buena Vista Ave/Cuyamaca St | Signal | AM | 14.8 | B | 14.8 | B | 0.0 | None |
| | | PM | 17.5 | B | 17.6 | B | 0.1 | None |

## TABLE 9-1 (CONTINUED)
## INTERSECTION ANALYSIS
## YEAR 2010 WITHOUT SR 52 EXTENDED EAST OF SR 125

| Intersection | Control Type | Peak Period | Without Project | | With 50% of the Project | | Delay Δ [c] | Impact Type |
|---|---|---|---|---|---|---|---|---|
| | | | Delay [a] | LOS [b] | Delay [a] | LOS [b] | | |
| 41. SR 52 WB Ramps/Cuyamaca St | e | AM | e | e | e | e | e | e |
| | | PM | e | e | e | e | e | e |
| 42. SR 52 EB Ramps/Cuyamaca St | e | AM | e | e | e | e | e | e |
| | | PM | e | e | e | e | e | e |
| 43. SR 52 WB Ramps/ Magnolia Ave/ SR 67 SB Ramps | e | AM | e | e | e | e | e | e |
| | | PM | e | e | e | e | e | e |
| 44. SR 52 EB Ramps/ Magnolia Ave | e | AM | e | e | e | e | e | e |
| | | PM | e | e | e | e | e | e |
| 45. Prospect Ave/Fanita Dr | Signal | AM | 34.2 | C | 34.2 | C | 0.0 | None |
| | | PM | 38.2 | D | 38.3 | D | 0.1 | None |
| 46. Prospect Ave/Cuyamaca St | Signal | AM | 34.4 | C | 34.8 | C | 0.4 | None |
| | | PM | 40.9 | D | 41.3 | D | 0.4 | None |
| 47. Prospect Ave/Cottonwood Ave | Signal | AM | 26.8 | C | 26.8 | C | 0.0 | None |
| | | PM | 39.3 | D | 39.3 | D | 0.0 | None |
| 48. Prospect Ave/Magnolia Ave | Signal | AM | 31.6 | C | 31.9 | C | 0.3 | None |
| | | PM | 52.4 | D | 54.2 | D | 1.8 | None |
| 49. Prospect Ave/SR 67 SB On-ramp | Yield [h] | AM | h | h | h | h | h | h |
| | | PM | h | h | h | h | h | h |
| 50. Prospect Ave/SR 67 NB Off-ramp | Signal | AM | 26.5 | C | 26.8 | C | 0.3 | None |
| | | PM | 50.2 | D | 53.9 | D | 3.7 | None |

## TABLE 9-1 (CONTINUED)
## INTERSECTION ANALYSIS
## YEAR 2010 WITHOUT SR 52 EXTENDED EAST OF SR 125

| Intersection | Control Type | Peak Period | Without Project | | With 50% of the Project | | Delay Δ [c] | Impact Type |
|---|---|---|---|---|---|---|---|---|
| | | | Delay [a] | LOS [b] | Delay [a] | LOS [b] | | |
| 51. SR 52 WB Off-Ramp/Fanita Dr. | e | AM | e | e | e | e | e | e |
| | | PM | e | e | e | e | e | e |
| 52. SR 52 EB On-Ramp/Fanita Dr. | e | AM | e | e | e | e | e | e |
| | | PM | e | e | e | e | e | e |
| 53. Beck Dr./Cuyamaca St. | AWSC[f] | AM | **69.9** | **F** | **152.7** | **F** | **82.8** | **Direct** |
| | | PM | 34.3 | D | **115.6** | **F** | **81.3** | **Direct** |
| 54. Ganley Rd./ Fanita Pkwy./Santee Lakes Rd. | TWSC[d] | AM | 9.4 | A | 12.3 | B | 2.9 | None |
| | | PM | 9.4 | A | 12.8 | B | 3.4 | None |

*Footnotes:*

a. Average delay per vehicle
b. Level of Service
c. Increase in delay due to project traffic in seconds per vehicle.
d. Two Way STOP Controlled intersection. Delay and LOS for minor street left-turn movement reported.
e. Intersection does not exist/Does not apply.
f. All Way STOP Controlled intersection.
g. Even though this is a cumulative impacts based on the significance criteria (Section 5.0), since the project adds more than 100 trip to this intersection, this is considered a direct impact.
h. Intersection does not have traffic controls and hence not analyzed.

*General Notes:*

Bold indicates LOS E or F operations.
Highlight indicates potential impact

## 9.2 Year 2010 – Without SR 52 Extended East of SR 125 and With 50% of the Project

### 9.2.1 *Traffic Volumes*

As described in Section 8, SANDAG Modeling and Future Traffic Volumes, 50% of the project traffic was distributed based on the distribution percentages in *Figure 7-1* and assigned to the study area intersections. These volumes were added to the volumes in *Figure 9-1* to obtain the Year 2010 Without SR 52 Extended east of SR 125 with 50% of the project traffic. **No intersection improvements were assumed** for any existing intersections.

***Figure 9–2*** depicts the Year 2010 peak hour project (50%) traffic volumes without the extension of SR 52. ***Figure 9-3*** depicts the Year 2010 Without SR 52 extended east of SR 125 with 50% of the project peak hour intersection traffic volumes.

### 9.2.2 *Intersection Analysis*

***Table 9–1*** summarizes the peak hour intersection operations at the key study area intersections for the Year 2010 without SR 52 extension east of SR 125 and with 50% of the project traffic. As seen in *Table 9–1*, with the addition of 50% of the project traffic, all key study area intersections are calculated to operate at LOS D or better, except the following:

- El Nopal / Cuyamaca Street (LOS F during the AM & PM peak hours)
- Mast Boulevard / SR 52 Eastbound Ramps (LOS F during the PM peak hour)
- Mast Boulevard / SR 52 Westbound Ramps (LOS F during the AM & PM peak hours)
- Mast Boulevard / West Hills Parkway (LOS F during the AM & PM peak hours)
- Mast Boulevard / Cuyamaca Street (LOS E during the AM & PM peak hours)
- Town Center Parkway / Cuyamaca Street (LOS E during the PM peak hour)
- Mission Gorge Road / Town Center Parkway (LOS F during the PM peak hour)
- Mission Gorge Road / Civic Center Drive (LOS E during the PM peak hour)
- Mission Gorge Road / Cottonwood Avenue (LOS E during the PM peak hour)
- Mission Gorge Road / Magnolia Avenue (LOS E during the AM & PM peak hours)
- Woodside Avenue / SR 67 Southbound Off-Ramp (LOS F during the AM & PM peak hours)
- Beck Drive / Cuyamaca Street (LOS F during the AM & PM peak hours)

***Appendix E*** contains the peak hour intersection analysis worksheets for the Year 2010 without SR 52 extension east of SR 125 with 50% of the project traffic scenario.

## 9.3 Year 2010 – SR 52 Extended to Cuyamaca Street Without Project

### 9.3.1 *Traffic Volumes/Intersection Geometry*

As described in Section 8, SANDAG Modeling and Future Traffic Volumes, the segment volumes were obtained from a SANDAG model run for this scenario. The peak hour intersection volumes were derived from these segment volumes as described Section 8.0, SANDAG modeling. This scenario assumes that in the Year 2010 SR 52 is extended to Cuyamaca Street. The following intersection improvements were assumed:

- A half diamond interchange at Cuyamaca Street / SR 52, with a westbound on-ramp, an eastbound off-ramp and a northbound Cuyamaca Street to westbound loop ramp.
- A half diamond interchange at Fanita Drive / SR 52, with a westbound off-ramp and an eastbound on-ramp.

**No intersection improvements were assumed** for any existing intersections.

***Figure 9–4*** depicts the Year 2010 peak hour intersection traffic volumes with the extension of SR 52 to Cuyamaca Street and without project.

### 9.3.2 *Intersection Analysis*

***Table 9–2*** summarizes the peak hour operations at the key study area intersections for the Year 2010 with the Extension of SR 52 to Cuyamaca Street and without project traffic. As seen in *Table 9–2*, all key study area intersections are calculated to operate at LOS D or better except the following:

- Mast Boulevard / SR 52 Westbound Ramps (LOS F during the AM & PM peak hours)
- Mast Boulevard / West Hills Parkway (LOS F during the AM & PM peak hours)
- Mast Boulevard / Cuyamaca Street (LOS E during the AM peak hour)
- Mission Gorge Road / Cuyamaca Street (LOS E during the PM peak hour)
- Mission Gorge Road / Civic Center Drive (LOS E during the AM peak hour)
- Mission Gorge Road / Magnolia Avenue (LOS E during the AM & PM peak hours)
- Woodside Avenue / SR 67 Southbound Off-Ramp (LOS F during the AM & PM peak hours)
- Beck Drive / Cuyamaca Street (LOS F during the AM peak hour)

***Appendix F*** contains the peak hour intersection analysis worksheets for the Year 2010 with SR 52 extended to Cuyamaca Street without project traffic scenario.

## TABLE 9-2
## INTERSECTION ANALYSIS
## YEAR 2010 WITH SR 52 EXTENDED TO CUYAMACA STREET

| Intersection | Control Type | Peak Period | Without Project | | With 50% of the Project | | Delay Δ [c] | Impact Type |
|---|---|---|---|---|---|---|---|---|
| | | | Delay [a] | LOS [b] | Delay [a] | LOS [b] | | |
| 1. Lake Canyon Rd/Fanita Parkway | TWSC [d] | AM | 11.2 | B | 16.0 | C | 4.8 | None |
| | | PM | 10.5 | B | 14.3 | B | 3.8 | None |
| 2. Lake Canyon Rd./Carlton Hills Blvd | AWSC [e] | AM | 9.5 | A | 9.7 | A | 0.2 | None |
| | | PM | 9.3 | A | 9.7 | A | 0.4 | None |
| 3. Cecilwood Dr/Halberns Blvd | TWSC [d] | AM | 9.7 | A | 9.7 | A | 0.0 | None |
| | | PM | 9.6 | A | 9.6 | A | 0.0 | None |
| 4. Princess Joann Rd/Cuyamaca St | TWSC [d] | AM | [e] | [e] | 10.7 | B | [e] | None |
| | | PM | [e] | [e] | 11.8 | B | [e] | None |
| 5. Princess Joann Rd/Magnolia Ave | AWSC [e] | AM | 7.7 | A | 7.7 | A | 0.0 | None |
| | | PM | 7.9 | A | 7.9 | A | 0.0 | None |
| 6. Woodglen Vista Dr/Cuyamaca St | AWSC [e] | AM | 11.1 | B | 15.5 | C | 4.4 | None |
| | | PM | 12.4 | B | **57.1** | **F** | **44.7** | **Direct** |
| 7. Woodglen Vista Dr/Magnolia Ave | Signal | AM | 22.3 | C | 22.3 | C | 0.0 | None |
| | | PM | 30.1 | C | 30.1 | C | 0.0 | None |
| 8. El Nopal/Cuyamaca St | AWSC [e] | AM | 21.6 | C | **66.0** | **F** | **44.4** | **Direct** |
| | | PM | 24.2 | C | **109.9** | **F** | **85.7** | **Direct** |
| 9. El Nopal/Magnolia Ave | Signal | AM | 37.8 | D | 39.4 | D | 1.6 | None |
| | | PM | 37.5 | D | 38.3 | D | 0.8 | None |
| 10. El Nopal/Los Ranchitos Rd | AWSC [e] | AM | 22.8 | C | 27.3 | D | 4.5 | None |
| | | PM | 20.6 | C | 27.7 | D | 7.1 | None |

## TABLE 9-2 (CONTINUED)
## INTERSECTION ANALYSIS
## YEAR 2010 WITH SR 52 EXTENDED TO CUYAMACA STREET

| Intersection | Control Type | Peak Period | Without Project | | With 50% of the Project | | Delay Δ [c] | Impact Type |
|---|---|---|---|---|---|---|---|---|
| | | | Delay [a] | LOS [b] | Delay [a] | LOS [b] | | |
| 11. Mast Blvd/SR 52 EB Ramp | Signal | AM | 21.8 | C | 22.2 | C | 0.4 | None |
| | | PM | 22.3 | C | 22.8 | C | 0.5 | None |
| 12. Mast Blvd/SR 52 WB Ramp | Signal | AM | **132.3** | **F** | **143.8** | **F** | **>10.0** | **Direct** |
| | | PM | **90.1** | **F** | **109.3** | **F** | **19.2** | **Direct** |
| 13. Mast Blvd/West Hills Pkwy | Signal | AM | **309.9** | **F** | **319.5** | **F** | **>10.0** | **Direct** |
| | | PM | **86.2** | **F** | **103.1** | **F** | **16.9** | **Direct** |
| 14. Mast Blvd/Medina Dr | Signal | AM | 26.4 | C | 31.1 | C | 4.7 | None |
| | | PM | 18.7 | B | 21.7 | C | 3.0 | None |
| 15. Mast Blvd/Pebble Beach Dr | Signal | AM | 22.0 | C | 23.2 | C | 1.2 | None |
| | | PM | 24.3 | C | 25.9 | C | 1.6 | None |
| 16. Mast Blvd/Fanita Pkwy | Signal | AM | 24.3 | C | 28.0 | C | 3.7 | None |
| | | PM | 22.0 | C | 25.5 | C | 3.5 | None |
| 17. Mast Blvd/Carlton Hills Blvd | Signal | AM | 34.2 | C | 34.8 | C | 0.6 | None |
| | | PM | 40.7 | D | 42.1 | D | 1.4 | None |
| 18. Mast Blvd/Halberns Blvd | Signal | AM | 40.7 | D | 42.0 | D | 1.3 | None |
| | | PM | 28.1 | C | 28.3 | C | 0.2 | None |
| 19. Mast Blvd/Cuyamaca St | Signal | AM | **62.2** | **E** | **74.7** | **E** | **12.5** | **Direct** |
| | | PM | 51.8 | D | **57.6** | **E** | **5.8** | **Direct** |
| 20. Mast Blvd/Magnolia Ave | Signal | AM | 37.7 | D | 42.4 | D | 4.7 | None |
| | | PM | 43.4 | D | 44.9 | D | 1.5 | None |

## TABLE 9-2 (CONTINUED)
## INTERSECTION ANALYSIS
## YEAR 2010 WITH SR 52 EXTENDED TO CUYAMACA STREET

| Intersection | Control Type | Peak Period | Without Project | | With 50% of the Project | | Delay Δ [c] | Impact Type |
|---|---|---|---|---|---|---|---|---|
| | | | Delay [a] | LOS [b] | Delay [a] | LOS [b] | | |
| 21. Riverford Rd/Riverside Dr | Signal | AM | 34.0 | C | 34.3 | C | 0.3 | None |
| | | PM | 35.8 | D | 37.5 | D | 1.7 | None |
| 22. Carlton Oaks Dr/Fanita Pkwy | Signal | AM | 18.0 | B | 18.6 | B | 0.6 | None |
| | | PM | 14.7 | B | 15.0 | B | 0.3 | None |
| 23. Carlton Oaks Dr/Carlton Hills Blvd | Signal | AM | 40.3 | D | 42.6 | D | 2.3 | None |
| | | PM | 35.6 | D | 36.7 | D | 1.1 | None |
| 24. River Park Dr/Cuyamaca St | Signal | AM | 18.6 | B | 19.1 | B | 0.5 | None |
| | | PM | 24.8 | C | 26.3 | C | 1.5 | None |
| 25. Town Center Pkwy/Cuyamaca St | Signal | AM | 31.8 | C | 32.1 | C | 0.3 | None |
| | | PM | 41.9 | D | 42.8 | D | 0.9 | None |
| 26. Civic Center Drive/Magnolia Ave/New Frontier Mobile Home Park | Signal | AM | 7.1 | A | 7.4 | A | 0.3 | None |
| | | PM | 7.8 | A | 8.3 | A | 0.5 | None |
| 27. Mission Gorge Rd/West Hills Pkwy | Signal | AM | 41.5 | D | 43.2 | D | 1.7 | None |
| | | PM | 32.9 | C | 33.1 | C | 0.2 | None |
| 28. Mission Gorge Rd/ SR 52 Off Ramps | Signal | AM | 13.7 | B | 13.7 | B | 0.0 | None |
| | | PM | 23.0 | C | 23.0 | C | 0.0 | None |
| 29. Mission Gorge Rd/ SR 52 On Ramps | Signal | AM | 3.3 | A | 3.3 | A | 0.0 | None |
| | | PM | 3.0 | A | 3.0 | A | 0.0 | None |
| 30. Mission Gorge Rd/SR 125 | Signal | AM | 20.9 | C | 21.2 | C | 0.3 | None |
| | | PM | 25.7 | C | 26.6 | C | 0.9 | None |

## TABLE 9-2 (CONTINUED)
## INTERSECTION ANALYSIS
## YEAR 2010 WITH SR 52 EXTENDED TO CUYAMACA STREET

| Intersection | Control Type | Peak Period | Without Project | | With 50% of the Project | | Delay Δ [c] | Impact Type |
|---|---|---|---|---|---|---|---|---|
| | | | Delay [a] | LOS [b] | Delay [a] | LOS [b] | | |
| 31. Mission Gorge Rd/Fanita Dr | Signal | AM | 20.3 | C | 20.6 | C | 0.3 | None |
| | | PM | 19.6 | B | 19.7 | B | 0.1 | None |
| 32. Mission Gorge Rd/Carlton Hills Blvd | Signal | AM | 32.9 | C | 39.2 | D | 6.3 | None |
| | | PM | 27.6 | C | 29.5 | C | 1.9 | None |
| 33. Mission Gorge Rd/Town Center Pkwy | Signal | AM | 30.7 | C | 30.7 | C | 0.0 | None |
| | | PM | 48.0 | D | 48.7 | D | 0.7 | None |
| 34. Mission Gorge Rd/Cuyamaca St | Signal | AM | 44.6 | D | 44.9 | D | 0.3 | None |
| | | PM | **60.3** | **E** | **61.6** | **E** | 1.3 | None |
| 35. Mission Gorge Rd/Civic Center Dr | Signal | AM | **55.4** | **E** | **55.9** | **E** | 0.5 | None |
| | | PM | 45.9 | D | 46.3 | D | 0.4 | None |
| 36. Mission Gorge Rd/Cottonwood Ave | Signal | AM | 32.8 | C | 33.0 | C | 0.2 | None |
| | | PM | 49.8 | D | 50.2 | D | 0.4 | None |
| 37. Mission Gorge Rd/Magnolia Ave | Signal | AM | **68.0** | **E** | **70.8** | **E** | **2.8** | **Direct** |
| | | PM | **56.1** | **E** | **58.5** | **E** | **2.4** | **Direct** |
| 38. Woodside Ave/SR 67 SB Off-ramp | AWSC [d] | AM | **151.7** | **F** | **152.7** | **F** | 1.0 | None |
| | | PM | **153.1** | **F** | **153.7** | **F** | 0.6 | None |
| 39. Woodside Ave/SR 67 NB On-ramp | Signal | AM | 26.8 | C | 26.8 | C | 0.0 | None |
| | | PM | 18.9 | B | 18.9 | B | 0.0 | None |
| 40. Buena Vista Ave/Cuyamaca St | Signal | AM | 15.8 | B | 16.0 | B | 0.2 | None |
| | | PM | 19.6 | B | 19.6 | B | 0.0 | None |

## TABLE 9-2 (CONTINUED)
## INTERSECTION ANALYSIS
## YEAR 2010 WITH SR 52 EXTENDED TO CUYAMACA STREET

| Intersection | Control Type | Peak Period | Without Project | | With 50% of the Project | | Delay Δ [c] | Impact Type |
|---|---|---|---|---|---|---|---|---|
| | | | Delay [a] | LOS [b] | Delay [a] | LOS [b] | | |
| 41. SR 52 WB Ramps/Cuyamaca St | AWSC | AM | 10.8 | B | 10.9 | B | 0.1 | None |
| | | PM | 32.1 | C | 32.7 | C | 0.6 | None |
| 42. SR 52 EB Ramps/Cuyamaca St | Signal | AM | 23.8 | C | 23.9 | C | 0.1 | None |
| | | PM | 19.1 | B | 19.2 | B | 0.1 | None |
| 43. SR 52 WB Ramps/ Magnolia Ave/ SR 67 SB Ramps | [g] | AM | [g] | [g] | [g] | [g] | [g] | [g] |
| | | PM | [g] | [g] | [g] | [g] | [g] | [g] |
| 44. SR 52 EB Ramps/Magnolia Ave | [g] | AM | [g] | [g] | [g] | [g] | [g] | [g] |
| | | PM | [g] | [g] | [g] | [g] | [g] | [g] |
| 45. Prospect Ave/Fanita Dr | Signal | AM | 35.2 | D | 35.2 | D | 0.0 | None |
| | | PM | 37.3 | D | 37.3 | D | 0.0 | None |
| 46. Prospect Ave/Cuyamaca St | Signal | AM | 37.4 | D | 37.7 | D | 0.3 | None |
| | | PM | 50.4 | D | 51.2 | D | 0.8 | None |
| 47. Prospect Ave/Cottonwood Ave | Signal | AM | 40.2 | D | 40.2 | D | 0.0 | None |
| | | PM | 44.8 | D | 44.8 | D | 0.0 | None |
| 48. Prospect Ave/Magnolia Ave | Signal | AM | 32.1 | C | 32.5 | C | 0.4 | None |
| | | PM | 46.3 | D | 47.9 | D | 1.6 | None |
| 49. Prospect Ave/SR 67 SB On-ramp | Yield [h] | AM | [h] | [h] | [h] | [h] | [h] | [h] |
| | | PM | [h] | [h] | [h] | [h] | [h] | [h] |
| 50. Prospect Ave/SR 67 NB Off-ramp | Signal | AM | 26.5 | C | 26.8 | C | 0.3 | None |
| | | PM | 50.1 | D | 53.4 | D | 3.3 | None |

## TABLE 9-2 (CONTINUED)
## INTERSECTION ANALYSIS
## YEAR 2010 WITH SR 52 EXTENDED TO CUYAMACA STREET

| Intersection | Control Type | Peak Period | Without Project | | With 50% of the Project | | Delay Δ [c] | Impact Type |
|---|---|---|---|---|---|---|---|---|
| | | | Delay [a] | LOS [b] | Delay [a] | LOS [b] | | |
| 51. SR 52 WB Off-Ramp/Fanita Dr | TWSC [d] | AM | 13.6 | B | 13.7 | B | 0.1 | None |
| | | PM | 14.3 | B | 14.3 | B | 0.0 | None |
| 52. SR 52 EB On-Ramp/Fanita Dr | Yield [h] | AM | h | h | h | h | h | h |
| | | PM | h | h | h | h | h | h |
| 53. Beck Dr/ Cuyamaca St | ASWC[e] | AM | **69.9** | **F** | **152.7** | **F** | **82.8** | **Direct** |
| | | PM | 34.3 | D | **115.6** | **F** | **81.3** | **Direct** |
| 54. Fanita Pkwy./Ganley Rd./Santee Lakes Rd | TWSC[d] | AM | 9.4 | A | 12.3 | B | 2.9 | None |
| | | PM | 9.4 | A | 12.8 | B | 3.4 | None |

*Footnotes:*

a. Average delay per vehicle
b. Level of Service
c. Increase in delay due to project traffic in seconds per vehicle.
d. Two Way STOP Controlled intersection. Delay and LOS for minor street left-turn movement reported.
e. All Way STOP Controlled intersection.
f. Even though this is a cumulative impacts based on the significance criteria (Section 5.0), since the project adds more than 100 trip to this intersection, this is considered a direct impact.
g. Intersection does not exist/Does not apply.
h. Intersection does not have traffic controls and hence not analyzed.

*General Notes:*

Bold indicates LOS E or F operations.
Highlight indicates potential impact

## 9.4 Year 2010 – SR 52 Extended to Cuyamaca Street With 50% of the Project

### 9.4.1 *Traffic Volumes/Intersection Geometry*

As described in Section 8, SANDAG Modeling and Future Traffic Volumes, 50% of the project traffic was distributed based on the distribution percentages in *Figure 7-2* and assigned to the study area intersections. These volumes were added to the volumes in *Figure 9-4* to obtain the Year 2010 Without SR 52 Extended east of SR 125 with 50% of the project traffic. **Intersection improvements as described in Section 9.3.1 above were assumed**.

***Figure 9–5*** depicts the Year 2010 peak hour project (50%) traffic volumes with SR 52 extended to Cuyamaca Street. ***Figure 9-6*** depicts the Year 2010 With SR 52 Extended to Cuyamaca Street with 50% of the project peak hour intersection traffic volumes. ***Figure 9-7*** depicts the intersection Geometry for new intersections and intersections with modified geometry.

### 9.4.2 *Intersection Analysis*

*Table 9–2* summarizes the peak hour intersection operations at the key study area intersections for the Year 2010 With SR 52 Extended to Cuyamaca Street and with 50% of the project traffic. As seen in *Table 9–2*, with the addition of 50% of the project traffic, all key study area intersections are calculated to operate at LOS D or better, except the following:

- Woodglen Vista Drive / Cuyamaca Street (LOS F during the PM peak hour)
- El Nopal / Cuyamaca Street (LOS F during the AM & PM peak hours)
- Mast Boulevard / SR 52 Westbound Ramps (LOS F during the AM & PM peak hours)
- Mast Boulevard / West Hills Parkway (LOS F during the AM & PM peak hours)
- Mast Boulevard / Cuyamaca Street (LOS E during the AM & PM peak hours)
- Mission Gorge Road / Civic Center Drive (LOS E during the AM & PM peak hours)
- Mission Gorge Road / Magnolia Avenue (LOS E during the AM & PM peak hours)
- Woodside Avenue / SR 67 Southbound Off-Ramp (LOS F during the AM and PM peak hours)
- Beck Drive / Cuyamaca Street (LOS F during the AM & PM peak hours)

***Appendix G*** contains the peak hour intersection analysis worksheets for the Year 2010 with SR 52 extended to Cuyamaca Street with 50% of the project traffic scenario.

## 9.5 Year 2012 – SR 52 Extended to SR 67, With Magnolia Avenue Extension to Cuyamaca Street and Without Project

### 9.5.1 *Traffic Volumes/Intersection Geometry*

As described in Section 8, SANDAG Modeling and Future Traffic Volumes, the segment volumes were obtained from a SANDAG model run for this scenario. The peak hour intersection volumes were derived from these segment volumes as described Section 8.0. This scenario assumes that SR 52 is extended to SR 67. The following improvements were assumed:

- A half diamond interchange at Fanita Drive / SR 52, with a westbound off-ramp and an eastbound on-ramp.
- A full diamond interchange at Cuyamaca Street / SR 52, with an eastbound and westbound on- and off-ramps, and a northbound Cuyamaca Street to westbound SR 52 loop ramp.
- A half diamond interchange at Magnolia Avenue / SR 52, with a westbound off-ramp and an eastbound on-ramp and a southbound on-ramp to SR 67.

**No intersection improvements were assumed** for any existing intersections. ***Figure 9–8*** depicts the Year 2012 peak hour intersection traffic volumes with the extension of SR 52 to SR 67 and without project.

### 9.5.2 *Intersection Analysis*

***Table 9–3*** summarizes the peak hour operations at the key study area intersections for the Year 2012 with the Extension of SR 52 to SR 67 and without project traffic. As seen in *Table 9–3*, all key study area intersections are calculated to operate at LOS D or better except the following:

- Cuyamaca Street / El Nopal (LOS E during the PM peak hour)
- Mast Boulevard / SR 52 Westbound Ramps (LOS F during the AM & PM peak hours)
- Mast Boulevard / West Hills Parkway (LOS F during the AM & PM peak hours)
- Mission Gorge Road / Cuyamaca Street (LOS E during the PM peak hour)
- Woodside Avenue / SR 67 Southbound Off-Ramp (LOS F during the AM peak hour)
- Woodside Avenue / SR 67 Northbound On-Ramp (LOS F during the PM peak hour)
- Beck Drive / Cuyamaca Street (LOS F during the AM peak hour and LOS E during the PM peak hour)

***Appendix H*** contains the peak hour intersection analysis worksheets for the Year 2012 with SR 52 extended to SR 67, With Magnolia Avenue Extension to Cuyamaca Street without project traffic scenario.

## TABLE 9-3
## INTERSECTION ANALYSIS
## YEAR 2012 WITH SR 52 EXTENDED TO SR 67

| Intersection | Control Type | Peak Period | Without Project | | With Entire Project | | Delay Δ [c] | Impact Type |
|---|---|---|---|---|---|---|---|---|
| | | | Delay [a] | LOS [b] | Delay [a] | LOS [b] | | |
| 1. Lake Canyon Rd/Fanita Parkway | TWSC [d] | AM | 10.8 | B | 27.5 | D | 16.7 | None |
| | | PM | 10.1 | B | 20.1 | C | 10.0 | None |
| 2. Lake Canyon Rd./Carlton Hills Blvd | AWSC [e] | AM | 8.3 | A | 8.4 | A | 0.1 | None |
| | | PM | 8.2 | A | 8.5 | A | 0.3 | None |
| 3. Cecilwood Dr/Halberns Blvd | TWSC [d] | AM | 9.7 | A | 9.7 | A | 0.0 | None |
| | | PM | 9.7 | A | 9.7 | A | 0.0 | None |
| 4. Princess Joann Rd/Cuyamaca St | TWSC [d] | AM | [e] | [e] | 9.9 | A | [e] | None |
| | | PM | [e] | [e] | 10.0 | B | [e] | None |
| 5. Princess Joann Rd/Magnolia Ave | AWSC [e] | AM | 7.4 | A | 8.8 | A | 1.4 | None |
| | | PM | 7.5 | A | 9.0 | A | 1.5 | None |
| 6. Woodglen Vista Dr/Cuyamaca St | AWSC [e] | AM | 12.2 | B | 19.2 | C | 7.0 | None |
| | | PM | 17.4 | C | **137.3** | **F** | **119.9** | **Direct** |
| 7. Woodglen Vista Dr/Magnolia Ave | Signal | AM | 22.8 | C | 24.3 | C | 1.5 | None |
| | | PM | 30.4 | C | 33.3 | C | 2.9 | None |
| 8. El Nopal/Cuyamaca St | AWSC [e] | AM | 30.3 | D | **92.0** | **F** | **61.7** | **Direct** |
| | | PM | **37.0** | **E** | **125.6** | **F** | **88.6** | **Direct** |
| 9. El Nopal/Magnolia Ave | Signal | AM | 31.1 | C | 31.5 | C | 0.4 | None |
| | | PM | 32.4 | C | 39.1 | D | 6.7 | None |
| 10. El Nopal/Los Ranchitos Rd | AWSC [e] | AM | 10.1 | B | 10.5 | B | 0.4 | None |
| | | PM | 9.3 | A | 9.7 | A | 0.4 | None |

TABLE 9-3 (CONTINUED)
INTERSECTION ANALYSIS
YEAR 2012 WITH SR 52 EXTENDED TO SR 67

| Intersection | Control Type | Peak Period | Without Project | | With Entire Project | | Delay Δ [c] | Impact Type |
|---|---|---|---|---|---|---|---|---|
| | | | Delay [a] | LOS [b] | Delay [a] | LOS [b] | | |
| 11. Mast Blvd/SR 52 EB Ramp | Signal | AM | 22.0 | C | 22.0 | C | 0.0 | None |
| | | PM | 32.8 | C | 45.9 | D | 13.1 | None |
| 12. Mast Blvd/SR 52 WB Ramp | Signal | AM | **105.7** | **F** | **128.3** | **F** | **22.6** | **Direct** |
| | | PM | **101.9** | **F** | **146.1** | **F** | **44.2** | **Direct** |
| 13. Mast Blvd/West Hills Pkwy | Signal | AM | **301.0** | **F** | **323.1** | **F** | **22.1** | **Direct** |
| | | PM | **88.7** | **F** | **129.4** | **F** | **40.7** | **Direct** |
| 14. Mast Blvd/Medina Dr | Signal | AM | 12.6 | B | 13.8 | B | 1.2 | None |
| | | PM | 14.2 | B | 15.1 | B | 0.9 | None |
| 15. Mast Blvd/Pebble Beach Dr | Signal | AM | 20.3 | C | 20.6 | C | 0.3 | None |
| | | PM | 22.9 | C | 24.0 | C | 1.1 | None |
| 16. Mast Blvd/Fanita Pkwy | Signal | AM | 26.0 | C | **60.5** | **E** | **34.5** | **Direct** |
| | | PM | 23.3 | C | 33.4 | C | 10.1 | None |
| 17. Mast Blvd/Carlton Hills Blvd | Signal | AM | 33.6 | C | 34.8 | C | 1.2 | None |
| | | PM | 40.2 | D | 43.3 | D | 3.1 | None |
| 18. Mast Blvd/Halberns Blvd | Signal | AM | 50.4 | D | 52.9 | D | 2.5 | None |
| | | PM | 29.9 | C | 30.4 | C | 0.5 | None |
| 19. Mast Blvd/Cuyamaca St | Signal | AM | 49.0 | D | **66.6** | **E** | **17.6** | **Direct** |
| | | PM | 45.7 | D | 52.3 | D | 6.6 | None |
| 20. Mast Blvd/Magnolia Ave | Signal | AM | 32.7 | C | 32.9 | C | 0.2 | None |
| | | PM | 38.8 | D | 39.3 | D | 0.5 | None |

## TABLE 9-3 (CONTINUED)
## INTERSECTION ANALYSIS
## YEAR 2012 WITH SR 52 EXTENDED TO SR 67

| Intersection | Control Type | Peak Period | Without Project | | With Entire Project | | Delay Δ [c] | Impact Type |
|---|---|---|---|---|---|---|---|---|
| | | | Delay [a] | LOS [b] | Delay [a] | LOS [b] | | |
| 21. Riverford Rd/Riverside Dr | Signal | AM | 34.0 | C | 34.8 | C | 0.8 | None |
| | | PM | 30.5 | C | 32.4 | C | 1.9 | None |
| 22. Carlton Oaks Dr/Fanita Pkwy | Signal | AM | 19.8 | B | 20.4 | C | 0.6 | None |
| | | PM | 15.0 | B | 17.4 | B | 2.4 | None |
| 23. Carlton Oaks Dr/Carlton Hills Blvd | Signal | AM | 40.2 | D | 45.0 | D | 4.8 | None |
| | | PM | 36.7 | D | 36.8 | D | 0.1 | None |
| 24. River Park Dr/Cuyamaca St | Signal | AM | 12.2 | B | 12.7 | B | 0.5 | None |
| | | PM | 17.0 | B | 18.1 | B | 1.1 | None |
| 25. Town Center Pkwy/Cuyamaca St | Signal | AM | 31.4 | C | 31.8 | C | 0.4 | None |
| | | PM | 41.4 | D | 43.4 | D | 2.0 | None |
| 26. Civic Center Dr/Magnolia Ave/ New Frontier Mobile Home Park | Signal | AM | 30.0 | C | 31.8 | C | 1.8 | None |
| | | PM | 33.4 | C | 33.8 | C | 0.4 | None |
| 27. Mission Gorge Rd/West Hills Pkwy | Signal | AM | 50.9 | D | 54.5 | D | 3.6 | None |
| | | PM | 35.2 | D | 35.8 | D | 0.6 | None |
| 28. Mission Gorge Rd/ SR 52 Off Ramps | Signal | AM | 2.7 | A | 2.7 | A | 0.0 | None |
| | | PM | 4.9 | A | 4.9 | A | 0.0 | None |
| 29. Mission Gorge Rd/ SR 52 On Ramps | Signal | AM | 3.0 | A | 3.0 | A | 0.0 | None |
| | | PM | 2.5 | A | 2.5 | A | 0.0 | None |
| 30. Mission Gorge Rd/SR 125 | Signal | AM | 22.6 | C | 23.5 | C | 0.9 | None |
| | | PM | 30.1 | C | 53.8 | D | 23.7 | None |

## TABLE 9-3 (CONTINUED)
## INTERSECTION ANALYSIS
## YEAR 2012 WITH SR 52 EXTENDED TO SR 67

| Intersection | Control Type | Peak Period | Without Project | | With Entire Project | | Delay Δ [c] | Impact Type |
|---|---|---|---|---|---|---|---|---|
| | | | Delay [a] | LOS [b] | Delay [a] | LOS [b] | | |
| 31. Mission Gorge Rd/Fanita Dr | Signal | AM | 18.0 | B | 18.5 | B | 0.5 | None |
| | | PM | 20.1 | C | 22.4 | C | 2.3 | None |
| 32. Mission Gorge Rd/Carlton Hills Blvd | Signal | AM | 29.7 | C | 38.6 | D | 8.9 | None |
| | | PM | 24.6 | C | 26.7 | C | 2.1 | None |
| 33. Mission Gorge Rd/Town Center Pkwy | Signal | AM | 29.0 | C | 29.3 | C | 0.3 | None |
| | | PM | 45.9 | D | 46.1 | D | 0.2 | None |
| 34. Mission Gorge Rd/Cuyamaca St | Signal | AM | 43.9 | D | 44.3 | D | 0.4 | None |
| | | PM | 66.0 | E | **69.4** | **E** | **3.4** | **Direct** |
| 35. Mission Gorge Rd/Civic Center Dr | Signal | AM | 36.3 | D | 36.3 | D | 0.0 | None |
| | | PM | 38.3 | D | 38.3 | D | 0.0 | None |
| 36. Mission Gorge Rd/Cottonwood Ave | Signal | AM | 29.0 | C | 29.3 | C | 0.3 | None |
| | | PM | 36.0 | D | 36.0 | D | 0.0 | None |
| 37. Mission Gorge Rd/Magnolia Ave | Signal | AM | 53.5 | D | **56.3** | **E** | **2.8** | **Direct** |
| | | PM | 46.8 | D | 47.7 | D | 0.9 | None |
| 38. Woodside Ave/SR 67 SB Off-ramp | AWSC [d] | AM | **59.9** | **F** | **60.2** | **F** | 0.3 | None |
| | | PM | 28.2 | D | 28.8 | D | 0.6 | None |
| 39. Woodside Ave/SR 67 NB On-ramp | Signal | AM | 32.4 | C | 32.4 | C | 0.0 | None |
| | | PM | **112.6** | **F** | **113.7** | **F** | 1.1 | None |
| 40. Buena Vista Ave/Cuyamaca St | Signal | AM | 16.2 | B | 16.2 | B | 0.0 | None |
| | | PM | 20.8 | C | 20.9 | C | 0.1 | None |

## TABLE 9-3 (CONTINUED)
## INTERSECTION ANALYSIS
## YEAR 2012 WITH SR 52 EXTENDED TO SR 67

| Intersection | Control Type | Peak Period | Without Project | | With Entire Project | | Delay Δ [c] | Impact Type |
|---|---|---|---|---|---|---|---|---|
| | | | Delay [a] | LOS [b] | Delay [a] | LOS [b] | | |
| 41. SR 52 WB Ramps/Cuyamaca St | [f] | AM | 25.4 | C | 27.2 | C | 1.8 | None |
| | [f] | PM | 21.6 | C | 22.5 | C | 0.9 | None |
| 42. SR 52 EB Ramps/Cuyamaca St | Signal | AM | 25.2 | C | 25.6 | C | 0.4 | None |
| | | PM | 25.0 | C | 25.8 | C | 0.8 | None |
| 43. SR 52 WB Ramps/ Magnolia Ave/ SR 67 SB Ramps | Signal | AM | 17.1 | B | 17.6 | B | 0.5 | None |
| | | PM | 33.2 | C | 36.9 | D | 3.7 | None |
| | | | | | | | | None |
| 44. SR 52 EB Ramps/Magnolia Ave | Signal | AM | 20.4 | C | 20.4 | C | 0.0 | None |
| | | PM | 20.7 | C | 20.7 | C | 0.0 | None |
| 45. Prospect Ave/Fanita Dr | Signal | AM | 30.6 | C | 30.7 | C | 0.1 | None |
| | | PM | 31.9 | C | 32.1 | C | 0.2 | None |
| 46. Prospect Ave/Cuyamaca St | Signal | AM | 30.4 | C | 30.6 | C | 0.2 | None |
| | | PM | 32.8 | C | 33.1 | C | 0.3 | None |
| 47. Prospect Ave/Cottonwood Ave | Signal | AM | 20.6 | C | 20.6 | C | 0.0 | None |
| | | PM | 22.8 | C | 22.8 | C | 0.0 | None |
| 48. Prospect Ave/Magnolia Ave | Signal | AM | 29.0 | C | 29.1 | C | 0.1 | None |
| | | PM | 33.6 | C | 33.8 | C | 0.2 | None |
| 49. Prospect Ave/SR 67 SB On-ramp | [h] | AM | [h] | [h] | [h] | [h] | [h] | [h] |
| | [h] | PM | [h] | [h] | [h] | [h] | [h] | [h] |
| 50. Prospect Ave/SR 67 NB Off-ramp | Signal | AM | 19.6 | B | 19.7 | B | 0.1 | None |
| | | PM | 29.1 | C | 30.1 | C | 1.0 | None |

## TABLE 9-3 (CONTINUED)
## INTERSECTION ANALYSIS
## YEAR 2012 WITH SR 52 EXTENDED TO SR 67

| Intersection | Control Type | Peak Period | Without Project | | With Entire Project | | Delay Δ [c] | Impact Type |
|---|---|---|---|---|---|---|---|---|
| | | | Delay [a] | LOS [b] | Delay [a] | LOS [b] | | |
| 51. SR 52 WB Off-Ramp/Fanita Dr | TWSC [d] | AM | 16.4 | C | 16.6 | C | 0.2 | No |
| | | PM | 18.7 | C | 19.1 | C | 0.4 | No |
| 52. SR 52 EB On-Ramp/Fanita Dr | g | AM | g | g | g | g | g | g |
| | g | PM | g | g | g | g | g | g |
| 53. Beck Dr/Cuyamaca St | AWSC [e] | AM | **80.0** | **F** | **223.6** | **F** | **143.6** | **Direct** |
| | | PM | **40.4** | **E** | **192.4** | **F** | **152.0** | **Direct** |
| 54. Ganley Rd/Fanita Pkwy/Santee Lakes Rd | TWSC [d] | AM | 9.4 | A | 18.3 | C | 8.9 | None |
| | | PM | 9.5 | B | 19.8 | C | 10.3 | None |

*Footnotes:*

a. Average delay per vehicle
b. Level of Service
c. Increase in delay due to project traffic in seconds per vehicle.
d. Two Way STOP Controlled intersection. Delay and LOS for minor street left-turn movement reported.
e. All Way STOP Controlled intersection.
f. Even though this is a cumulative impacts based on the significance criteria (Section 5.0), since the project adds more than 100 trip to this intersection, this is considered a direct impact.
g. Intersection does not have traffic controls and hence not analyzed.
h. Intersection does not exist.

*General Notes:*

Bold indicates LOS E or F operations.
Highlight indicates potential impact

## 9.6 Year 2012 – SR 52 Extended to SR 67, With Magnolia Avenue Extension to Cuyamaca Street and With Entire Project

### 9.6.1 *Traffic Volumes/Intersection Geometry*

As described in Section 8, SANDAG Modeling and Future Traffic Volumes, the entire project traffic was distributed based on the distribution percentages in *Figure 7-3* and assigned to the study area intersections. These volumes were added to the volumes in *Figure 9-8* to obtain the Year 2012 With SR 52 Extended to SR 67 with the entire project traffic. **Intersection improvements as described in Section 9.5.1 above were assumed.**

***Figure 9–9*** depicts the Year 2012 peak hour project (100%) traffic volumes with SR 52 extended to SR 67. ***Figure 9-10*** depicts the Year 2012 With SR 52 Extended to SR 67 with 100% of the project peak hour intersection traffic volumes. ***Figure 9-11*** depicts the intersection geometry for new intersections and intersections with modified geometry for the Year 2012 with SR 52 Extended to SR 67.

### 9.6.2 *Intersection Analysis*

***Table 9–3*** summarizes the peak hour operations at the key study area intersections for the Year 2012 with the Extension of SR 52 to SR 67 and with 100% of the project traffic. As seen in *Table 9–3*, all key study area intersections are calculated to operate at LOS D or better except the following:

- Woodglen Vista Drive / Cuyamaca Street (LOS F during the PM peak hour)
- El Nopal / Cuyamaca Street (LOS F during the AM & PM peak hours)
- Mast Boulevard / SR 52 Westbound Ramps (LOS F during the AM & PM peak hours)
- Mast Boulevard / West Hills Parkway (LOS F during the AM & PM peak hours)
- Mast Boulevard / Fanita Parkway (LOS E during the AM peak hour)
- Mast Boulevard / Cuyamaca Street (LOS E during the AM peak hour)
- Mission Gorge Road / Cuyamaca Street (LOS E during the PM peak hour)
- Mission Gorge Road / Magnolia Avenue (LOS E during the AM peak hour)
- Woodside Avenue / SR 67 SB Off-Ramp (LOS F during the AM peak hour)
- Beck Drive / Cuyamaca Street (LOS F during the AM & PM peak hours)

***Appendix I*** contains the peak hour intersection analysis worksheets for the Year 2012 with SR 52 extended to SR 67, With Magnolia Avenue Extension to Cuyamaca Street with the entire project traffic scenario.

## 9.7 Year 2012 – SR 52 Extended to SR 67, Without Magnolia Avenue Extension to Cuyamaca Street and Without Project

### 9.7.1 *Traffic Volumes/Intersection Geometry*

As described in Section 8, SANDAG Modeling and Future Traffic Volumes, the segment volumes were obtained from a SANDAG model run for this scenario. The peak hour intersection volumes were derived from these segment volumes as described Section 8.0. This scenario assumes that SR 52 is extended to SR 67. In this scenario, it is assumed that Magnolia Avenue is not extended north /

west to Cuyamaca Street. Therefore, the "with Magnolia Avenue extension to Cuyamaca Street and without project" traffic volumes were reassigned to reflect the change in the network.

The network improvements assumed for the Year 2012 with SR 52 extended to SR 67 with Magnolia Avenue extension to Cuyamaca Street are assumed for this scenario also. **No intersection improvements were assumed** for any existing intersections.

***Figure 9–12*** depicts the Year 2012 peak hour intersection traffic volumes Without Magnolia Avenue Extension to Cuyamaca Street, with the extension of SR 52 to SR 67 and without project.

### 9.7.2 *Intersection Analysis*

***Table 9–4*** summarizes the peak hour operations at the key study area intersections for the Year 2012 Without Magnolia Avenue Extension to Cuyamaca Street, with the Extension of SR 52 to SR 67 and without project traffic. As seen in *Table 9–4*, all key study area intersections are calculated to operate at LOS D or better except the following:

- Cuyamaca Street / El Nopal (LOS E during the PM peak hour)
- Mast Boulevard / SR 52 Westbound Ramps (LOS F during the AM & PM peak hours)
- Mast Boulevard / West Hills Parkway (LOS F during the AM & PM peak hours)
- Mission Gorge Road / Cuyamaca Street (LOS E during the PM peak hour)
- Woodside Avenue / SR 67 Southbound Off-Ramp (LOS F during the AM peak hour)
- Woodside Avenue / SR 67 Northbound On-Ramp (LOS F during the PM peak hour)
- Beck Drive / Cuyamaca Street (LOS F during the AM peak hour and LOS E during the PM peak hour)

***Appendix J*** contains the peak hour intersection analysis worksheets for the Year 2012 Without Magnolia Avenue Extension to Cuyamaca Street, with SR 52 extended to SR 67 without project traffic scenario.

## 9.8 Year 2012 – SR 52 Extended to SR 67, Without Magnolia Avenue Extension to Cuyamaca Street and With Entire Project

### 9.8.1 *Traffic Volumes/Intersection Geometry*

As described in Section 8, SANDAG Modeling and Future Traffic Volumes, the entire project traffic was distributed based on the distribution percentages in *Figure 7-3* and assigned to the study area intersections. These volumes were added to the volumes in *Figure 9-12* to obtain the Year 2012 With SR 52 Extended to SR 67 with the entire project traffic. **Intersection improvements as described in Section 9.5.1 above were assumed**.

***Figure 9–13*** depicts the Year 2012 peak hour project (100%) traffic volumes Without Magnolia Avenue Extension to Cuyamaca Street and with SR 52 extended to SR 67. ***Figure 9-14*** depicts the Year 2012 With SR 52 Extended to SR 67 with 100% of the project peak hour intersection traffic volumes.

## TABLE 9-4
## INTERSECTION ANALYSIS
## YEAR 2012 WITH SR 52 EXTENDED TO SR 67

| Intersection | Control Type | Peak Period | Without Project | | With Entire Project | | Delay Δ [c] | Impact Type |
|---|---|---|---|---|---|---|---|---|
| | | | Delay [a] | LOS [b] | Delay [a] | LOS [b] | | |
| 1. Lake Canyon Rd/Fanita Parkway | TWSC [d] | AM | 10.8 | B | 27.5 | D | 16.7 | None |
| | | PM | 10.1 | B | 20.1 | C | 10.0 | None |
| 2. Lake Canyon Rd./Carlton Hills Blvd | AWSC [e] | AM | 8.3 | A | 8.4 | A | 0.1 | None |
| | | PM | 8.2 | A | 8.5 | A | 0.3 | None |
| 3. Cecilwood Dr/Halberns Blvd | TWSC [d] | AM | 9.7 | A | 9.7 | A | 0.0 | None |
| | | PM | 9.7 | A | 9.7 | A | 0.0 | None |
| 4. Princess Joann Rd/Cuyamaca St | TWSC [d] | AM | [e] | [e] | 22.8 | C | [e] | None |
| | | PM | [e] | [e] | 23.5 | C | [e] | None |
| 5. Princess Joann Rd/Magnolia Ave | AWSC [e] | AM | 7.2 | A | 7.6 | A | 0.4 | None |
| | | PM | 7.3 | A | 8.1 | A | 0.8 | None |
| 6. Woodglen Vista Dr/Cuyamaca St | AWSC [e] | AM | 13.8 | B | **47.5** | **E** | **33.7** | **Direct** |
| | | PM | 19.6 | C | **210.5** | **F** | **190.9** | **Direct** |
| 7. Woodglen Vista Dr/Magnolia Ave | Signal | AM | 23.0 | C | 25.7 | C | 2.7 | None |
| | | PM | 30.4 | C | 34.7 | C | 4.3 | None |
| 8. El Nopal/Cuyamaca St | AWSC [e] | AM | 37.5 | E | **161.5** | **F** | **124.0** | **Direct** |
| | | PM | **44.3** | **E** | **232.3** | **F** | **188.0** | **Direct** |
| 9. El Nopal/Magnolia Ave | Signal | AM | 31.1 | C | 32.5 | C | 1.4 | None |
| | | PM | 36.6 | D | 40.5 | D | 3.9 | None |
| 10. El Nopal/Los Ranchitos Rd | AWSC [e] | AM | 10.1 | B | 10.5 | B | 0.4 | None |
| | | PM | 9.3 | A | 9.7 | A | 0.4 | None |

TABLE 9-4 (CONTINUED)
INTERSECTION ANALYSIS
YEAR 2012 WITH SR 52 EXTENDED TO SR 67

| Intersection | Control Type | Peak Period | Without Project | | With Entire Project | | Delay Δ [c] | Impact Type |
|---|---|---|---|---|---|---|---|---|
| | | | Delay [a] | LOS [b] | Delay [a] | LOS [b] | | |
| 11. Mast Blvd/SR 52 EB Ramp | Signal | AM | 22.0 | C | 22.0 | C | 0.0 | None |
| | | PM | 32.8 | C | 45.9 | D | 13.1 | None |
| 12. Mast Blvd/SR 52 WB Ramp | Signal | AM | **105.7** | **F** | **128.3** | **F** | **22.6** | **Direct** |
| | | PM | **101.9** | **F** | **146.1** | **F** | **44.2** | **Direct** |
| 13. Mast Blvd/West Hills Pkwy | Signal | AM | **301.0** | **F** | **323.1** | **F** | **22.1** | **Direct** |
| | | PM | **88.7** | **F** | **129.4** | **F** | **40.7** | **Direct** |
| 14. Mast Blvd/Medina Dr | Signal | AM | 12.6 | B | 13.8 | B | 1.2 | None |
| | | PM | 14.2 | B | 15.1 | B | 0.9 | None |
| 15. Mast Blvd/Pebble Beach Dr | Signal | AM | 20.3 | C | 20.6 | C | 0.3 | None |
| | | PM | 22.9 | C | 24.0 | C | 1.1 | None |
| 16. Mast Blvd/Fanita Pkwy | Signal | AM | 26.0 | C | **60.5** | **E** | **34.5** | **Direct** |
| | | PM | 23.3 | C | 33.4 | C | 10.1 | None |
| 17. Mast Blvd/Carlton Hills Blvd | Signal | AM | 33.6 | C | 34.8 | C | 1.2 | None |
| | | PM | 40.2 | D | 43.3 | D | 3.1 | None |
| 18. Mast Blvd/Halberns Blvd | Signal | AM | 50.4 | D | 52.9 | D | 2.5 | None |
| | | PM | 29.9 | C | 30.4 | C | 0.5 | None |
| 19. Mast Blvd/Cuyamaca St | Signal | AM | 50.0 | D | **68.1** | **E** | **18.1** | **Direct** |
| | | PM | 46.1 | D | 52.9 | D | 6.8 | None |
| 20. Mast Blvd/Magnolia Ave | Signal | AM | 33.6 | C | 33.8 | C | 0.2 | None |
| | | PM | 39.2 | D | 39.7 | D | 0.5 | None |

## TABLE 9-4 (CONTINUED)
## INTERSECTION ANALYSIS
## YEAR 2012 WITH SR 52 EXTENDED TO SR 67

| Intersection | Control Type | Peak Period | Without Project | | With Entire Project | | Delay Δ [c] | Impact Type |
|---|---|---|---|---|---|---|---|---|
| | | | Delay [a] | LOS [b] | Delay [a] | LOS [b] | | |
| 21. Riverford Rd/Riverside Dr | Signal | AM | 34.0 | C | 34.8 | C | 0.8 | None |
| | | PM | 30.5 | C | 32.4 | C | 1.9 | None |
| 22. Carlton Oaks Dr/Fanita Pkwy | Signal | AM | 19.8 | B | 20.4 | C | 0.6 | None |
| | | PM | 15.0 | B | 17.4 | B | 2.4 | None |
| 23. Carlton Oaks Dr/Carlton Hills Blvd | Signal | AM | 40.2 | D | 45.0 | D | 4.8 | None |
| | | PM | 36.7 | D | 36.8 | D | 0.1 | None |
| 24. River Park Dr/Cuyamaca St | Signal | AM | 12.2 | B | 12.7 | B | 0.5 | None |
| | | PM | 17.0 | B | 18.1 | B | 1.1 | None |
| 25. Town Center Pkwy/Cuyamaca St | Signal | AM | 31.4 | C | 31.8 | C | 0.4 | None |
| | | PM | 41.4 | D | 43.4 | D | 2.0 | None |
| 26. Civic Center Dr/Magnolia Ave/ New Frontier Mobile Home Park | Signal | AM | 30.0 | C | 31.8 | C | 1.8 | None |
| | | PM | 33.4 | C | 33.8 | C | 0.4 | None |
| 27. Mission Gorge Rd/West Hills Pkwy | Signal | AM | 50.9 | D | 54.5 | D | 3.6 | None |
| | | PM | 35.2 | D | 35.8 | D | 0.6 | None |
| 28. Mission Gorge Rd/ SR 52 Off Ramps | Signal | AM | 2.7 | A | 2.7 | A | 0.0 | None |
| | | PM | 4.9 | A | 4.9 | A | 0.0 | None |
| 29. Mission Gorge Rd/ SR 52 On Ramps | Signal | AM | 3.0 | A | 3.0 | A | 0.0 | None |
| | | PM | 2.5 | A | 2.5 | A | 0.0 | None |
| 30. Mission Gorge Rd/SR 125 | Signal | AM | 22.6 | C | 23.5 | C | 0.9 | None |
| | | PM | 30.1 | C | 53.8 | D | 23.7 | None |

## TABLE 9-4 (CONTINUED)
## INTERSECTION ANALYSIS
## YEAR 2012 WITH SR 52 EXTENDED TO SR 67

| Intersection | Control Type | Peak Period | Without Project | | With Entire Project | | Delay Δ [c] | Impact Type |
|---|---|---|---|---|---|---|---|---|
| | | | Delay [a] | LOS [b] | Delay [a] | LOS [b] | | |
| 31. Mission Gorge Rd/Fanita Dr | Signal | AM | 18.0 | B | 18.5 | B | 0.5 | None |
| | | PM | 20.1 | C | 22.4 | C | 2.3 | None |
| 32. Mission Gorge Rd/Carlton Hills Blvd | Signal | AM | 29.7 | C | 38.6 | D | 8.9 | None |
| | | PM | 24.6 | C | 26.7 | C | 2.1 | None |
| 33. Mission Gorge Rd/Town Center Pkwy | Signal | AM | 29.0 | C | 29.3 | C | 0.3 | None |
| | | PM | 45.9 | D | 46.1 | D | 0.2 | None |
| 34. Mission Gorge Rd/Cuyamaca St | Signal | AM | 43.9 | D | 44.3 | D | 0.4 | None |
| | | PM | **66.0** | **E** | **69.4** | **E** | **3.4** | **Direct** |
| 35. Mission Gorge Rd/Civic Center Dr | Signal | AM | 36.3 | D | 36.3 | D | 0.0 | None |
| | | PM | 38.3 | D | 38.3 | D | 0.0 | None |
| 36. Mission Gorge Rd/Cottonwood Ave | Signal | AM | 29.0 | C | 29.3 | C | 0.3 | None |
| | | PM | 36.0 | D | 36.0 | D | 0.0 | None |
| 37. Mission Gorge Rd/Magnolia Ave | Signal | AM | 53.5 | D | **56.3** | **E** | **2.8** | **Direct** |
| | | PM | 46.8 | D | 47.7 | D | 0.9 | None |
| 38. Woodside Ave/SR 67 SB Off-ramp | AWSC [d] | AM | **59.9** | **F** | **60.2** | **F** | 0.3 | None |
| | | PM | 28.2 | D | 28.8 | D | 0.6 | None |
| 39. Woodside Ave/SR 67 NB On-ramp | Signal | AM | 32.4 | C | 32.4 | C | 0.0 | None |
| | | PM | **112.6** | **F** | **113.7** | **F** | 1.1 | None |
| 40. Buena Vista Ave/Cuyamaca St | Signal | AM | 16.2 | B | 16.2 | B | 0.0 | None |
| | | PM | 20.8 | C | 20.9 | C | 0.1 | None |

## TABLE 9-4 (CONTINUED)
## INTERSECTION ANALYSIS
## YEAR 2012 WITH SR 52 EXTENDED TO SR 67

| Intersection | Control Type | Peak Period | Without Project | | With Entire Project | | Delay Δ [c] | Impact Type |
|---|---|---|---|---|---|---|---|---|
| | | | Delay [a] | LOS [b] | Delay [a] | LOS [b] | | |
| 41. SR 52 WB Ramps/Cuyamaca St | [f] | AM | 25.4 | C | 27.2 | C | 1.8 | None |
| | [f] | PM | 21.6 | C | 22.5 | C | 0.9 | None |
| 42. SR 52 EB Ramps/Cuyamaca St | Signal | AM | 25.2 | C | 25.6 | C | 0.4 | None |
| | | PM | 25.0 | C | 25.8 | C | 0.8 | None |
| 43. SR 52 WB Ramps/ Magnolia Ave/ SR 67 SB Ramps | Signal | AM | 17.1 | B | 17.6 | B | 0.5 | None |
| | | PM | 33.2 | C | 36.9 | D | 3.7 | None |
| 44. SR 52 EB Ramps/Magnolia Ave | Signal | AM | 20.4 | C | 20.4 | C | 0.0 | None |
| | | PM | 20.7 | C | 20.7 | C | 0.0 | None |
| 45. Prospect Ave/Fanita Dr | Signal | AM | 30.6 | C | 30.7 | C | 0.1 | None |
| | | PM | 31.9 | C | 32.1 | C | 0.2 | None |
| 46. Prospect Ave/Cuyamaca St | Signal | AM | 30.4 | C | 30.6 | C | 0.2 | None |
| | | PM | 32.8 | C | 33.1 | C | 0.3 | None |
| 47. Prospect Ave/Cottonwood Ave | Signal | AM | 20.6 | C | 20.6 | C | 0.0 | None |
| | | PM | 22.8 | C | 22.8 | C | 0.0 | None |
| 48. Prospect Ave/Magnolia Ave | Signal | AM | 29.0 | C | 29.1 | C | 0.1 | None |
| | | PM | 33.6 | C | 33.8 | C | 0.2 | None |
| 49. Prospect Ave/SR 67 SB On-ramp | [h] | AM | [h] | [h] | [h] | [h] | [h] | [h] |
| | [h] | PM | [h] | [h] | [h] | [h] | [h] | [h] |
| 50. Prospect Ave/SR 67 NB Off-ramp | Signal | AM | 19.6 | B | 19.7 | B | 0.1 | None |
| | | PM | 29.1 | C | 30.1 | C | 1.0 | None |

## TABLE 9-4 (CONTINUED)
## INTERSECTION ANALYSIS
## YEAR 2012 WITH SR 52 EXTENDED TO SR 67

| Intersection | Control Type | Peak Period | Without Project | | With Entire Project | | Delay Δ [c] | Impact Type |
|---|---|---|---|---|---|---|---|---|
| | | | Delay [a] | LOS [b] | Delay [a] | LOS [b] | | |
| 51. SR 52 WB Off-Ramp/Fanita Dr | TWSC [d] | AM | 16.4 | C | 16.6 | C | 0.2 | No |
| | | PM | 18.7 | C | 19.1 | C | 0.4 | No |
| 52. SR 52 EB On-Ramp/Fanita Dr | g | AM | g | g | g | g | g | g |
| | g | PM | g | g | g | g | g | g |
| 53. Beck Dr/Cuyamaca St | AWSC [e] | AM | **92.7** | **F** | **240.0** | **F** | **147.3** | **Direct** |
| | | PM | **48.4** | **E** | **206.8** | **F** | **158.4** | **Direct** |
| 54. Ganley Rd/Fanita Pkwy/Santee Lakes Rd | TWSC [d] | AM | 9.4 | A | 18.3 | C | 8.9 | None |
| | | PM | 9.5 | B | 19.8 | C | 10.3 | None |

*Footnotes:*

a. Average delay per vehicle
b. Level of Service
c. Increase in delay due to project traffic in seconds per vehicle.
d. Two Way STOP Controlled intersection. Delay and LOS for minor street left-turn movement reported.
e. All Way STOP Controlled intersection.
f. Even though this is a cumulative impacts based on the significance criteria (Section 5.0), since the project adds more than 100 trip to this intersection, this is considered a direct impact.
g. Intersection does not have traffic controls and hence not analyzed.
h. Intersection does not exist.

*General Notes:*

Bold indicates LOS E or F operations.
Highlight indicates potential impact

### 9.8.2 *Intersection Analysis*

***Table 9–3*** summarizes the peak hour operations at the key study area intersections for the Year 2012 with the Extension of SR 52 to SR 67 and with 100% of the project traffic. As seen in *Table 9–3*, all key study area intersections are calculated to operate at LOS D or better except the following:

- Woodglen Vista Drive / Cuyamaca Street (LOS E during the AM peak hour and LOS F during the PM peak hour)
- El Nopal / Cuyamaca Street (LOS F during the AM & PM peak hours)
- Mast Boulevard / SR 52 Westbound Ramps (LOS F during the AM & PM peak hours)
- Mast Boulevard / West Hills Parkway (LOS F during the AM & PM peak hours)
- Mast Boulevard / Fanita Parkway (LOS E during the AM peak hour)
- Mast Boulevard / Cuyamaca Street (LOS E during the AM peak hour)
- Mission Gorge Road / Cuyamaca Street (LOS E during the PM peak hour)
- Mission Gorge Road / Magnolia Avenue (LOS E during the AM peak hour)
- Woodside Avenue / SR 67 Southbound Off-Ramp (LOS F during the AM peak hour)
- Woodside Avenue / SR 67 Northbound Off-Ramp (LOS F during the PM peak hour)
- Beck Drive / Cuyamaca Street (LOS F during the AM & PM peak hours)

***Appendix K*** contains the peak hour intersection analysis worksheets for the Year 2012 with SR 52 extended to SR 67 with the entire project traffic scenario.

# 10.0 LONG-TERM YEAR 2030 ANALYSIS

## 10.1 Year 2030 With Magnolia Avenue Extension to Cuyamaca Street Without Project

### 10.1.1 *Segment Volumes*

The Year 2030 ADT volumes were obtained from the SANDAG Series 10.0 Volume plot. As explained in Section 8.0 SANDAG Modeling and Future Traffic Volumes, traffic generated by the two planned projects, Sycamore Landfill and the Castlerock project were added to the Year 2030 without project traffic volumes. The Fanita project traffic volumes were then added to the Year 2030 without Fanita project volumes to obtain the Year 2030 with Fanita project volumes.

***Figure 10-1*** depicts the Year 2030 ADT volumes without Fanita project traffic. ***Figure 10-2*** depicts the Entire Fanita project ADT volumes, while ***Figure 10-3*** depicts the Year 2030 ADT volumes with Fanita project traffic.

### 10.1.2 *Segment Operations*

***Table 10-1*** summarizes the Year 2030 segment operations with Magnolia Avenue Extension to Cuyamaca Street and without Fanita project traffic. As seen in *Table 10-1*, all segments in the study area are calculated to operate at acceptable LOS D conditions, except the following:

- Mast Boulevard from SR 52 to West Hills Parkway (LOS F)
- Mission Gorge Road from SR 125 to Fanita Drive (LOS E)
- Mission Gorge Road from Carlton Hills Boulevard to Town Center Drive (LOS E)
- Woodside Avenue from Magnolia Avenue to SR 67 (LOS E)
- Magnolia Avenue from Civic Center Drive to Mission Gorge Road (LOS F)
- Magnolia Avenue from Mission Gorge Road to SR 52 Ramps (LOS E)

## 10.2 Year 2030 With Magnolia Avenue Extension to Cuyamaca Street With Entire Project

*Table 10-1* summarizes the Year 2030 segment operations with Magnolia Avenue Extension to Cuyamaca Street and with Fanita project traffic. As seen in *Table 10-1*, with the addition of project traffic, the following segments are calculated to operate at LOS E or worse conditions:

- Mast Boulevard from SR 52 to West Hills Parkway (LOS F)
- Mission Gorge Road from SR 125 to Fanita Drive (LOS E)
- Mission Gorge Road from Carlton Hills Boulevard to Town Center Drive (LOS E)
- Woodside Avenue from Magnolia Avenue to SR 67 (LOS E)
- Fanita Parkway from Lake Canyon Road to Mast Boulevard (LOS E)
- Carlton Hills Boulevard from Carlton Oaks Drive to Mission Gorge Road (LOS E)
- Cuyamaca Street from River Park Drive to Town Center Parkway (LOS E)
- Magnolia Avenue from Civic Center Drive to Mission Gorge Road (LOS F)
- Magnolia Avenue from Mission Gorge Road to SR 52 Ramps (LOS E)

## TABLE 10-1
## LONG-TERM (YEAR 2030) SEGMENT ANALYSIS
## WITH MAGNOLIA AVENUE EXTENSION TO CUYAMACA STREET

| Segment | Roadway Classification [a] | LOS E Capacity [b] | Year 2030 Without Project [c] | | | Year 2030 With Entire Project [d] | | | V/C Δ [g] | Significance |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | Volume | LOS [e] | V/C [f] | Volume | LOS | V/C | | |
| **Princess Joann Road** | | | | | | | | | | |
| Cuyamaca St. to Magnolia Ave. | Resi Col | 16,200 | 1,600 | A | 0.099 | 1,600 | A | 0.099 | 0.000 | None |
| **Woodglen Vista Dr.** | | | | | | | | | | |
| Cuyamaca St. to Magnolia Ave. | Resi Col | 16,200 | 5,300 | C | 0.327 | 5,300 | C | 0.327 | 0.000 | None |
| **El Nopal** | | | | | | | | | | |
| Cuyamaca St. to Magnolia Ave. | Resi Col | 16,200 | 5,600 | C | 0.346 | 5,600 | C | 0.346 | 0.000 | None |
| Magnolia Ave. to Los Ranchitos | 4-Ln Col | 34,200 | 9,000 | A | 0.263 | 9,470 | A | 0.277 | 0.014 | None |
| Los Ranchitos Rd. to Riverford Rd. | 4-Ln Col | 34,200 | 12,100 | A | 0.354 | 12,570 | A | 0.368 | 0.014 | None |
| **Mast Boulevard** | | | | | | | | | | |
| SR 52 to West Hills Pkwy [h] | 4-Ln Maj | 40,000 | **42,110** | **F** | **1.053** | **45,720** | **F** | **1.143** | **0.090** | **Cumulative** |
| West Hills Pkwy. to Fanita Pkwy. | 4-Ln Maj | 40,000 | 27,450 | C | 0.686 | 32,000 | C | 0.800 | 0.114 | None |
| Fanita Pkwy. to Carlton Hills Blvd. | 4-Ln Maj | 40,000 | 22,150 | B | 0.554 | 23,410 | B | 0.585 | 0.032 | None |
| Carlton Hills Blvd. to Halberns Blvd. | 4-Ln Maj | 40,000 | 23,160 | B | 0.579 | 23,630 | B | 0.591 | 0.012 | None |
| Halberns Blvd. to Cuyamaca St. | 4-Ln Maj | 40,000 | 25,770 | B | 0.644 | 26,240 | B | 0.656 | 0.012 | None |
| Cuyamaca St. to Magnolia Ave. | 4-Ln Maj | 40,000 | 28,520 | C | 0.713 | 28,680 | C | 0.717 | 0.004 | None |
| Magnolia Ave. to Los Ranchitos Rd. | 4-Ln Maj | 40,000 | 13,780 | A | 0.345 | 14,880 | A | 0.372 | 0.028 | None |
| Los Ranchitos Rd. to Riverford Rd. | 4-Ln Maj | 40,000 | 10,380 | A | 0.260 | 11,480 | A | 0.287 | 0.028 | None |
| **Carlton Oaks Drive** | | | | | | | | | | |
| Fanita Pkwy. to Carlton Hills Blvd. | 4-Ln Col | 34,200 | 13,200 | A | 0.386 | 15,240 | B | 0.446 | 0.060 | None |
| **Mission Gorge Road** | | | | | | | | | | |
| Western City Limits to West Hills Pkwy. | 4-Ln Maj | 40,000 | 18,150 | B | 0.454 | 18,940 | B | 0.474 | 0.020 | None |
| West Hills Pkwy. to SR 52 | 4-Ln Maj | 40,000 | 28,460 | C | 0.712 | 28,460 | C | 0.712 | 0.000 | None |
| SR 52 to SR 125 | 4-Ln Maj | 40,000 | 28,260 | C | 0.707 | 28,260 | C | 0.707 | 0.000 | None |
| SR 125 to Fanita Dr. | 8-Ln Prime | 76,000 | **70,090** | **E** | **0.940** | **72,450** | **E** | 0.953 | 0.013 | None |
| Fanita Dr. to Carlton Hills Blvd. | 8-Ln Prime | 76,000 | 62,320 | D | 0.926 | 65,150 | D | 0.993 | 0.067 | None |
| Carlton Hills Blvd. to Town Center Dr. | 6-Ln Prime | 57,000 | **50,560** | **E** | **0.887** | **51,190** | **E** | 0.898 | 0.011 | None |
| Town Center Pkwy. to Cuyamaca St. | 6-Ln Prime | 57,000 | 40,160 | C | 0.705 | 41,100 | C | 0.721 | 0.016 | None |
| Cuyamaca St. to Magnolia Ave. | 6-Ln Prime | 57,000 | 38,570 | C | 0.677 | 38,570 | C | 0.677 | 0.000 | None |
| **Woodside Avenue** | | | | | | | | | | |
| Magnolia Avenue to SR 67 | 4-Ln Maj | 40,000 | **36,130** | **E** | **0.903** | **36,290** | **E** | 0.907 | 0.004 | None |

## TABLE 10-1 (CONTINUED)
## LONG-TERM (YEAR 2030) SEGMENT ANALYSIS
## WITH MAGNOLIA AVENUE EXTENSION TO CUYAMACA STREET

| Segment | Roadway Classification [a] | LOS E Capacity [b] | Year 2030 Without Project [c] | | | Year 2030 With Entire Project [d] | | | V/C Δ [g] | Impact Type |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | Volume | LOS [e] | V/C [f] | Volume | LOS | V/C | | |
| **Prospect Avenue** | | | | | | | | | | |
| Fanita Dr. to Cuyamaca St. | 4-Ln Col | 34,200 | 12,070 | A | 0.353 | 12,070 | A | 0.353 | 0.000 | None |
| Cuyamaca St. to Magnolia Ave. | 4-Ln Maj | 40,000 | 17,580 | B | 0.440 | 17,740 | B | 0.444 | 0.004 | None |
| **West Hills Parkway** | | | | | | | | | | |
| Mast Blvd. to Mission Gorge Rd. | 4-Ln Col | 34,200 | 14,500 | B | 0.424 | 15,290 | B | 0.447 | 0.023 | None |
| **Fanita Parkway** | | | | | | | | | | |
| Project Site to Ganley Dr./ Santee Lakes Blvd. | Resi Col | 16,200 | 700 | A | 0.043 | 8,240 | D | 0.509 | 0.465 | None |
| Ganley Dr to Lake Canyon Rd. | Resi Col | 16,200 | 2,500 | B | 0.154 | 10,040 | D | 0.620 | 0.465 | None |
| Lake Canyon Rd. to Mast Blvd. [h] | Resi Col | 16,200 | 4,190 | C | 0.259 | **11,100** | **E** | **0.685** | **0.427** | **Cumulative** |
| Mast Blvd. to Carlton Oaks Dr. | 4-Ln Col | 34,200 | 3,000 | A | 0.088 | 5,040 | A | 0.147 | 0.060 | None |
| **Fanita Drive** | | | | | | | | | | |
| Mission Gorge Rd. to SR 52 Ramps | 4-Ln Col | 34,200 | 9,770 | A | 0.286 | 10,240 | A | 0.299 | 0.014 | None |
| SR 52 Ramps to Prospect Ave. | 4-Ln Col | 34,200 | 8,570 | A | 0.251 | 8,730 | A | 0.255 | 0.005 | None |
| **Carlton Hills Boulevard** | | | | | | | | | | |
| Lake Canyon Rd. to Mast Blvd. | 4-Ln Maj | 40,000 | 6,000 | A | 0.150 | 6,630 | A | 0.166 | 0.016 | None |
| Mast Blvd. to Carlton Oaks Dr. | 4-Ln Maj | 40,000 | 9,820 | A | 0.246 | 11,230 | A | 0.281 | 0.035 | None |
| Carlton Oaks Dr. to Mission Gorge Rd. [h] | 4-Ln Maj | 40,000 | 33,660 | D | 0.842 | **37,110** | **E** | **0.928** | **0.086** | **Cumulative** |
| **Halberns Boulevard** | | | | | | | | | | |
| Lake Canyon Rd. to Mast Blvd. | 4-Ln Col | 34,200 | 2,900 | A | 0.085 | 2,900 | A | 0.085 | 0.000 | None |
| **Town Center Parkway** | | | | | | | | | | |
| Mission Gorge Rd. to Cuyamaca St. | 4-Ln Pkwy | 40,000 | 31,600 | C | 0.790 | 31,910 | C | 0.798 | 0.008 | None |
| Cuyamaca St. to Civic Center Dr. | 4-Ln Pkwy | 40,000 | 15,300 | A | 0.383 | 16,090 | B | 0.402 | 0.020 | None |
| **Cuyamaca Street** | | | | | | | | | | |
| Fanita Project to Princess Joann Rd | 4-Ln Maj | 40,000 | - | A | - | 8,170 | A | 0.204 | 0.204 | None |
| Princess Joann Rd. to Woodglen Vista Dr | 4-Ln Maj | 40,000 | 5,930 | A | 0.148 | 10,950 | A | 0.274 | 0.126 | None |
| Woodglen Vista Dr to El Nopal | 4-Ln Maj | 40,000 | 9,830 | A | 0.246 | 14,850 | A | 0.371 | 0.126 | None |
| El Nopal to Mast Blvd. | 4-Ln Maj | 40,000 | 17,130 | B | 0.428 | 22,150 | B | 0.554 | 0.126 | None |
| Mast Blvd. to River Park Dr. | 4-Ln Maj | 40,000 | 27,820 | C | 0.696 | 32,220 | D | 0.806 | 0.110 | None |
| River Park Dr. to Town Center Pkwy. [h] | 4-Ln Maj | 40,000 | 33,220 | D | 0.831 | **37,300** | **E** | **0.933** | **0.102** | **Cumulative** |

## TABLE 10-1 (CONTINUED)
## LONG-TERM (YEAR 2030) SEGMENT ANALYSIS
## WITH MAGNOLIA AVENUE EXTENSION TO CUYAMACA STREET

| Segment | Roadway Classification [a] | LOS E Capacity [b] | Year 2030 Without Project [c] | | | Year 2030 With Entire Project [d] | | | V/C Δ [g] | Impact Type |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | Volume | LOS [e] | V/C [f] | Volume | LOS | V/C | | |
| **Cuyamaca Street (Continued)** | | | | | | | | | | |
| Town Center Pkwy. to Mission Gorge Rd | 4-Ln Maj | 40,000 | 28,230 | C | 0.706 | 31,210 | C | 0.780 | 0.075 | None |
| Mission Gorge Rd. to SR 52 Ramps | 4-Ln Maj | 40,000 | 30,640 | C | 0.766 | 32,840 | D | 0.821 | 0.055 | None |
| SR 52 Ramps to Prospect Ave. | 4-Ln Maj | 40,000 | 29,440 | C | 0.736 | 30,070 | C | 0.752 | 0.016 | None |
| **Civic Center Drive** | | | | | | | | | | |
| Mission Gorge Rd. to Town Center Pkwy. | 4-Ln Pkwy | 40,000 | 13,400 | A | 0.335 | 13,400 | A | 0.335 | 0.000 | None |
| Town Center Pkwy. to Magnolia Ave. | 4-Ln Pkwy | 40,000 | 16,200 | B | 0.405 | 16,510 | B | 0.413 | 0.008 | None |
| **Magnolia Avenue** | | | | | | | | | | |
| Cuyamaca St to Princess Joann Rd. | 4-Ln Maj | 40,000 | 500 | A | 0.013 | 3,640 | A | 0.091 | 0.079 | None |
| Princess Joann Rd. to Woodglen Vista Rd | 4-Ln Maj | 40,000 | 5,700 | A | 0.143 | 8,840 | A | 0.221 | 0.079 | None |
| Woodglen Vista Rd. to El Nopal | 4-Ln Maj | 40,000 | 10,500 | A | 0.263 | 13,640 | A | 0.341 | 0.079 | None |
| El Nopal to Mast Blvd. | 4-Ln Maj | 40,000 | 18,200 | B | 0.455 | 20,870 | B | 0.522 | 0.067 | None |
| Mast Blvd. to Civic Center Dr. | 4-Ln Maj | 40,000 | 33,800 | D | 0.845 | 35,210 | D | 0.880 | 0.035 | None |
| Civic Center Dr. to Mission Gorge Rd. [h] | 4-Ln Maj | 40,000 | **46,900** | **F** | **1.173** | **48,000** | **F** | **1.200** | **0.027** | **Cumulative** |
| Mission Gorge Rd. to SR 52 Ramps | 6-Ln Prime | 57,000 | **52,600** | **E** | **0.923** | **53,540** | **E** | 0.939 | 0.016 | None |
| SR 52 Ramps to Prospect Ave. | 6-Ln Prime | 57,000 | 33,900 | B | 0.595 | 34,530 | B | 0.606 | 0.011 | None |
| Prospect Ave. to Bradley Ave. | 4-Ln Col | 34,200 | 20,200 | B | 0.591 | 20,510 | B | 0.600 | 0.009 | None |
| **Riverford Road** | | | | | | | | | | |
| Riverside Dr. to SR 67 Ramps | 6-Ln Prime | 57,000 | 26,000 | B | 0.456 | 27,260 | B | 0.478 | 0.022 | None |

*Footnotes:*

a. Year 2030 City of Santee Circulation Element
b. LOS E capacity based on City of Santee Roadway Classification
c. Segment volumes obtained from the SANDAG Series 10.0 Plot.
d. The entire project traffic was assigned and added to the without project traffic.
e. Level of Service
f. Volume / Capacity ratio
g. Increase in V / C due to the project
h. The project has a potential cumulative impact on this segment. However, more detailed analysis determined that this impact is not significant.

## 10.3 Year 2030 With Magnolia Avenue Extension to Cuyamaca Street - Potential Segment Impacts

*Table 10-1* indicates that with the addition of project traffic, the project has potential significant impacts on the following segments:

- Mast Boulevard between SR-52 Westbound Ramps and West Hills Parkway
- Fanita Parkway between Lake Canyon Road and Mast Boulevard
- Carlton Hills Boulevard between Carlton Oaks Road to Mission Gorge Road
- Cuyamaca Street between River Park Drive and Town Center Parkway
- Magnolia Avenue between Civic Center Drive and Mission Gorge Road

The following three paragraphs contain analyses that indicate that the project has no significant impact on these segments.

### 10.3.1 *Arterial Analysis*

An arterial analysis of Mast Boulevard indicates LOS D or better operations in both eastbound and westbound directions during both AM and PM peak hours. (***Appendix L*** contains the arterial analysis worksheets)

### 10.3.2 *Two-Lane Highway Analysis*

A two-lane highway analysis of this segment indicates LOS D or better operations during the AM and PM peak hours. Therefore, the project has no impact on the segment of Fanita Parkway between Lake Canyon Road and Mast Boulevard. *Appendix L* includes the HCM two-lane analysis worksheets.

### 10.3.3 *Peak hour Intersection Analysis*

The intersections at either end of the following segments are calculated to operate at an acceptable LOS D or better during the AM and PM peak hours, as seen in ***Table 10-2***. Therefore, the project has no significant impact on the segments.

- Carlton Hills Boulevard between River Park Drive and Town Center Parkway
- Cuyamaca Street between River Park Drive and Town Center Parkway
- Magnolia Avenue between Civic Center Drive and Mission Gorge Road

*Appendix L* includes the peak hour intersection analysis worksheets.

TABLE 10-2
YEAR 2030 INTERSECTION ANALYSIS

| Intersection | Control Type | Peak Hour | Delay [a] | LOS [b] |
|---|---|---|---|---|
| 23. Carlton Oaks Dr / Carlton Hills Blvd | Signal | AM<br>PM | 51.0<br>40.1 | D<br>D |
| 24. Cuyamaca St / River Park Dr | Signal | AM<br>PM | 13.8<br>18.2 | B<br>B |
| 25. Cuyamaca St / Town Center Pkwy | Signal | AM<br>PM | 31.6<br>44.9 | C<br>D |
| 26. Civic Center Dr / Magnolia Ave | Signal [e] | AM<br>PM | 34.0<br>36.5 | C<br>D |
| 32. Mission Gorge Rd / Carlton Hills Blvd | Signal | AM<br>PM | 39.9<br>28.8 | D<br>C |
| 37. Mission Gorge Rd / Magnolia Ave | Signal | AM<br>PM | 50.5<br>54.0 | D<br>D |

## 10.4 Year 2030 Without Magnolia Avenue Extension to Cuyamaca Street Without Project

### 10.4.1 *Segment Volumes*

The Year 2030 ADT volumes were obtained from the SANDAG Series 10.0 Volume plot. As explained in Section 8.0 SANDAG Modeling and Future Traffic Volumes, traffic generated by the two planned projects, Sycamore Landfill and the Castlerock project were added to the year 2030 without project traffic volumes. The Fanita project traffic volumes were then added to the Year 2030 without Fanita project volumes to obtain the Year 2030 with Fanita project volumes.

***Figure 10-4*** depicts the Year 2030 ADT volumes without Fanita project traffic. ***Figure 10-5*** depicts the Entire Fanita project ADT volumes, while ***Figure 10-6*** depicts the Year 2030 ADT volumes with Fanita project traffic.

### 10.4.2 *Segment Operations*

***Table 10-3*** summarizes the Year 2030 segment operations without Magnolia Avenue Extension to Cuyamaca Street and without Fanita project traffic. As seen in *Table 10-3*, all segments in the study area are calculated to operate at acceptable LOS D conditions, except the following:

- Mast Boulevard from SR 52 to West Hills Parkway (LOS F)
- Mission Gorge Road from SR 125 to Fanita Drive (LOS E)
- Mission Gorge Road from Carlton Hills Boulevard to Town Center Drive (LOS E)

## TABLE 10-3
## LONG-TERM (YEAR 2030) SEGMENT ANALYSIS
## WITHOUT MAGNOLIA AVENUE EXTENSION TO CUYAMACA STREET

| Segment | Roadway Classification [a] | LOS E Capacity [b] | Year 2030 Without Project [c] | | | Year 2030 With Entire Project [d] | | | V/C Δ [g] | Impact Type |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | Volume | LOS [e] | V/C [f] | Volume | LOS | V/C | | |
| **Princess Joann Road** | | | | | | | | | | |
| Cuyamaca St. to Magnolia Ave. | Resi Col | 16,200 | 1,600 | A | 0.099 | 2,860 | B | 0.177 | 0.078 | None |
| **Woodglen Vista Dr.** | | | | | | | | | | |
| Cuyamaca St. to Magnolia Ave. | Resi Col | 16,200 | 5,300 | C | 0.327 | 5,930 | C | 0.366 | 0.039 | None |
| **El Nopal** | | | | | | | | | | |
| Cuyamaca St. to Magnolia Ave. | Resi Col | 16,200 | 5,600 | C | 0.346 | 6,860 | C | 0.423 | 0.078 | None |
| Magnolia Ave. to Los Ranchitos | 4-Ln Col | 34,200 | 9,000 | A | 0.263 | 9,470 | A | 0.277 | 0.014 | None |
| Los Ranchitos Rd. to Riverford Rd. | 4-Ln Col | 34,200 | 12,100 | A | 0.354 | 12,570 | A | 0.368 | 0.014 | None |
| **Mast Boulevard** | | | | | | | | | | |
| SR 52 to West Hills Pkwy [h] | 4-Ln Maj | 40,000 | **42,110** | **F** | **1.053** | **45,720** | **F** | 1.143 | 0.090 | **Cumulative** |
| West Hills Pkwy. to Fanita Pkwy. | 4-Ln Maj | 40,000 | 27,450 | C | 0.686 | 32,000 | C | 0.800 | 0.114 | None |
| Fanita Pkwy. to Carlton Hills Blvd. | 4-Ln Maj | 40,000 | 22,150 | B | 0.554 | 23,410 | B | 0.585 | 0.032 | None |
| Carlton Hills Blvd. to Halberns Blvd. | 4-Ln Maj | 40,000 | 23,160 | B | 0.579 | 23,630 | B | 0.591 | 0.012 | None |
| Halberns Blvd. to Cuyamaca St. | 4-Ln Maj | 40,000 | 25,770 | B | 0.644 | 26,240 | B | 0.656 | 0.012 | None |
| Cuyamaca St. to Magnolia Ave. | 4-Ln Maj | 40,000 | 29,020 | C | 0.726 | 29,180 | C | 0.730 | 0.004 | None |
| Magnolia Ave. to Los Ranchitos Rd. | 4-Ln Maj | 40,000 | 13,780 | A | 0.345 | 14,880 | A | 0.372 | 0.028 | None |
| Los Ranchitos Rd. to Riverford Rd. | 4-Ln Maj | 40,000 | 10,380 | A | 0.260 | 11,480 | A | 0.287 | 0.028 | None |
| **Carlton Oaks Drive** | | | | | | | | | | |
| Fanita Pkwy. to Carlton Hills Blvd. | 4-Ln Col | 34,200 | 13,200 | A | 0.386 | 15,240 | B | 0.446 | 0.060 | None |
| **Mission Gorge Road** | | | | | | | | | | |
| Western City Limits to West Hills Pkwy. | 4-Ln Maj | 40,000 | 18,150 | B | 0.454 | 18,940 | B | 0.474 | 0.020 | None |
| West Hills Pkwy. to SR 52 | 4-Ln Maj | 40,000 | 28,460 | C | 0.712 | 28,460 | C | 0.712 | - | None |
| SR 52 to SR 125 | 4-Ln Maj | 40,000 | 28,260 | C | 0.707 | 28,260 | C | 0.707 | - | None |
| SR 125 to Fanita Dr. | 8-Ln Prime | 76,000 | **70,090** | **E** | **0.940** | **72,450** | **E** | 0.953 | 0.013 | None |
| Fanita Dr. to Carlton Hills Blvd. | 8-Ln Prime | 76,000 | 62,320 | D | 0.926 | 65,150 | D | 0.993 | 0.067 | None |
| Carlton Hills Blvd. to Town Center Dr. | 6-Ln Prime | 57,000 | **50,560** | **E** | **0.887** | **51,190** | **E** | 0.898 | 0.011 | None |
| Town Center Pkwy. to Cuyamaca St. | 6-Ln Prime | 57,000 | 40,160 | C | 0.705 | 41,100 | C | 0.721 | 0.016 | None |
| Cuyamaca St. to Magnolia Ave. | 6-Ln Prime | 57,000 | 38,570 | C | 0.677 | 38,570 | C | 0.677 | - | None |
| **Woodside Avenue** | | | | | | | | | | |
| Magnolia Avenue to SR 67 | 4-Ln Maj | 40,000 | **36,130** | **E** | **0.903** | **36,290** | **E** | 0.907 | 0.004 | None |

## TABLE 10-3 (CONTINUED)
## LONG-TERM (YEAR 2030) SEGMENT ANALYSIS
## WITHOUT MAGNOLIA AVENUE EXTENSION TO CUYAMACA STREET

| Segment | Roadway Classification [a] | LOS E Capacity [b] | Year 2030 Without Project [c] | | | Year 2030 With Entire Project [d] | | | V/C Δ [g] | Impact Type |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | Volume | LOS [e] | V/C [f] | Volume | LOS | V/C | | |
| **Prospect Avenue** | | | | | | | | | | |
| Fanita Dr. to Cuyamaca St. | 4-Ln Col | 34,200 | 12,070 | A | 0.353 | 12,070 | A | 0.353 | - | None |
| Cuyamaca St. to Magnolia Ave. | 4-Ln Maj | 40,000 | 17,580 | B | 0.440 | 17,740 | B | 0.444 | 0.004 | None |
| **West Hills Parkway** | | | | | | | | | | |
| Mast Blvd. to Mission Gorge Rd. | 4-Ln Col | 34,200 | 14,500 | B | 0.424 | 15,290 | B | 0.447 | 0.023 | None |
| **Fanita Parkway** | | | | | | | | | | |
| Project Site to Ganley Dr./ Santee Lakes Blvd. | Resi Col | 16,200 | 700 | A | 0.043 | 8,240 | D | 0.509 | 0.465 | None |
| Ganley Dr to Lake Canyon Rd. | Resi Col | 16,200 | 2,500 | B | 0.154 | 10,040 | D | 0.620 | 0.465 | None |
| Lake Canyon Rd. to Mast Blvd. [h] | Resi Col | 16,200 | 4,190 | C | 0.259 | **11,100** | **E** | 0.685 | 0.427 | **Cumulative** |
| Mast Blvd. to Carlton Oaks Dr. | 4-Ln Col | 34,200 | 3,000 | A | 0.088 | 5,040 | A | 0.147 | 0.060 | None |
| **Fanita Drive** | | | | | | | | | | |
| Mission Gorge Rd. to SR 52 Ramps | 4-Ln Col | 34,200 | 9,770 | A | 0.286 | 10,240 | A | 0.299 | 0.014 | None |
| SR 52 Ramps to Prospect Ave. | 4-Ln Col | 34,200 | 8,570 | A | 0.251 | 8,730 | A | 0.255 | 0.005 | None |
| **Carlton Hills Boulevard** | | | | | | | | | | |
| Lake Canyon Rd. to Mast Blvd. | 4-Ln Maj | 40,000 | 6,000 | A | 0.150 | 6,630 | A | 0.166 | 0.016 | None |
| Mast Blvd. to Carlton Oaks Dr. | 4-Ln Maj | 40,000 | 9,820 | A | 0.246 | 11,230 | A | 0.281 | 0.035 | None |
| Carlton Oaks Dr. to Mission Gorge Rd. [h] | 4-Ln Maj | 40,000 | 33,660 | D | 0.842 | **37,110** | **E** | 0.928 | 0.086 | **Cumulative** |
| **Halberns Boulevard** | | | | | | | | | | |
| Lake Canyon Rd. to Mast Blvd. | 4-Ln Col | 34,200 | 2,900 | A | 0.085 | 2,900 | A | 0.085 | - | None |
| **Town Center Parkway** | | | | | | | | | | |
| Mission Gorge Rd. to Cuyamaca St. | 4-Ln Pkwy | 40,000 | 31,600 | C | 0.790 | 31,910 | C | 0.798 | 0.008 | None |
| Cuyamaca St. to Civic Center Dr. | 4-Ln Pkwy | 40,000 | 15,300 | A | 0.383 | 16,090 | B | 0.402 | 0.020 | None |
| **Cuyamaca Street** | | | | | | | | | | |
| Fanita Project to Princess Joann Rd | 4-Ln Maj | 40,000 | - | A | - | 8,170 | A | 0.204 | 0.204 | None |
| Princess Joann Rd. to Woodglen Vista Dr | 4-Ln Maj | 40,000 | 6,230 | A | 0.156 | 13,140 | A | 0.329 | 0.173 | None |
| Woodglen Vista Dr to El Nopal | 4-Ln Maj | 40,000 | 10,330 | A | 0.258 | 16,610 | B | 0.415 | 0.157 | None |
| El Nopal to Mast Blvd. | 4-Ln Maj | 40,000 | 17,630 | B | 0.441 | 22,650 | B | 0.566 | 0.126 | None |
| Mast Blvd. to River Park Dr. | 4-Ln Maj | 40,000 | 27,820 | C | 0.696 | 32,220 | D | 0.806 | 0.110 | None |

## TABLE 10-3 (CONTINUED)
## LONG-TERM (YEAR 2030) SEGMENT ANALYSIS
## WITHOUT MAGNOLIA AVENUE EXTENSION TO CUYAMACA STREET

| Segment | Roadway Classification [a] | LOS E Capacity [b] | Year 2030 Without Project [c] | | | Year 2030 With Entire Project [d] | | | V/C Δ [g] | Impact Type |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | Volume | LOS [e] | V/C [f] | Volume | LOS [e] | V/C [f] | | |
| **Cuyamaca Street (Continued)** | | | | | | | | | | |
| River Park Dr. to Town Center Pkwy. [h] | 4-Ln Maj | 40,000 | 33,220 | D | 0.831 | **37,300** | **E** | **0.933** | **0.102** | **Cumulative** |
| Town Center Pkwy. to Mission Gorge Rd | 4-Ln Maj | 40,000 | 28,230 | C | 0.706 | 31,210 | C | 0.780 | 0.075 | None |
| Mission Gorge Rd. to SR 52 Ramps | 4-Ln Maj | 40,000 | 30,640 | C | 0.766 | 32,840 | D | 0.821 | 0.055 | None |
| SR 52 Ramps to Prospect Ave. | 4-Ln Maj | 40,000 | 29,440 | C | 0.736 | 30,070 | C | 0.752 | 0.016 | None |
| **Civic Center Drive** | | | | | | | | | | |
| Mission Gorge Rd. to Town Center Pkwy. | 4-Ln Pkwy | 40,000 | 13,400 | A | 0.335 | 13,400 | A | 0.335 | - | None |
| Town Center Pkwy. to Magnolia Ave. | 4-Ln Pkwy | 40,000 | 16,200 | B | 0.405 | 16,510 | B | 0.413 | 0.008 | None |
| **Magnolia Avenue** | | | | | | | | | | |
| Cuyamaca St to Princess Joann Rd. | 4-Ln Maj | 40,000 | - | A | - | - | A | - | - | None |
| Princess Joann Rd. to Woodglen Vista Rd | 4-Ln Maj | 40,000 | 5,200 | A | 0.130 | 6,460 | A | 0.162 | 0.032 | None |
| Woodglen Vista Rd. to El Nopal | 4-Ln Maj | 40,000 | 10,000 | A | 0.250 | 11,880 | A | 0.297 | 0.047 | None |
| El Nopal to Mast Blvd. | 4-Ln Maj | 40,000 | 17,700 | B | 0.443 | 20,370 | B | 0.509 | 0.067 | None |
| Mast Blvd. to Civic Center Dr. | 4-Ln Maj | 40,000 | 33,800 | D | 0.845 | 35,210 | D | 0.880 | 0.035 | None |
| Civic Center Dr. to Mission Gorge Rd. [h] | 4-Ln Maj | 40,000 | **46,900** | **F** | **1.173** | **48,000** | **F** | 1.200 | 0.027 | **Cumulative** |
| Mission Gorge Rd. to SR 52 Ramps | 6-Ln Prime | 57,000 | **52,600** | **E** | **0.923** | **53,540** | **E** | 0.939 | 0.016 | None |
| SR 52 Ramps to Prospect Ave. | 6-Ln Prime | 57,000 | 33,900 | B | 0.595 | 34,530 | B | 0.606 | 0.011 | None |
| Prospect Ave. to Bradley Ave. | 4-Ln Col | 34,200 | 20,200 | B | 0.591 | 20,510 | B | 0.600 | 0.009 | None |
| **Riverford Road** | | | | | | | | | | |
| Riverside Dr. to SR 67 Ramps | 6-Ln Prime | 57,000 | 26,000 | B | 0.456 | 27,260 | B | 0.478 | 0.022 | None |

*Footnotes:*

a. Year 2030 City of Santee Circulation Element
b. LOS E capacity based on City of Santee Roadway Classification
c. Segment volumes obtained from the SANDAG Series 10.0 Plot. ADT volumes on Cuyamaca Street and Magnolia Avenue were manually adjusted for the without Magnolia Avenue extension to Cuyamaca Street
d. The entire project traffic was assigned and added to the without project traffic.
e. Level of Service
f. Volume / Capacity ratio
g. Increase in V / C due to the project
h. The project has a potential cumulative impact on this segment. However, more detailed analysis determined that this impact is not significant.

- Woodside Avenue from Magnolia Avenue to SR 67 (LOS E)
- Magnolia Avenue from Civic Center Drive to Mission Gorge Road (LOS F)
- Magnolia Avenue from Mission Gorge Road to SR 52 Ramps (LOS E)

## 10.5 Year 2030 Without Magnolia Avenue Extension to Cuyamaca Street With Entire Project

*Table 10-3* summarizes the Year 2030 segment operations without Magnolia Avenue Extension to Cuyamaca Street and with Fanita project traffic. As seen in *Table 10-3*, with the addition of project traffic, the following segments are calculated to operate at LOS E or worse conditions:

- Mast Boulevard from SR 52 to West Hills Parkway (LOS F)
- Mission Gorge Road from SR 125 to Fanita Drive (LOS E)
- Mission Gorge Road from Carlton Hills Boulevard to Town Center Drive (LOS E)
- Woodside Avenue from Magnolia Avenue to SR 67 (LOS E)
- Fanita Parkway from Lake Canyon Road to Mast Boulevard (LOS E)
- Carlton Hills Boulevard from Carlton Oaks Drive to Mission Gorge Road (LOS E)
- Cuyamaca Street from River Park Drive to Town Center Parkway (LOS E)
- Magnolia Avenue from Civic Center Drive to Mission Gorge Road (LOS F)
- Magnolia Avenue from Mission Gorge Road to SR 52 Ramps (LOS E)

## 10.6 Year 2030 Without Magnolia Avenue Extension to Cuyamaca Street - Potential Segment Impacts

Without Magnolia Avenue extension to Cuyamaca Street, the traffic volumes do not change on any of the potentially impacted segments listed in Section 10-3. Therefore, the Arterial, Two-Lane Highway and Peak Hour Intersection analyses in Section 10.3 which indicate that none of the potentially segment impacts (*Table 10-2*) are significant applies for the network condition without Magnolia Avenue extension to Cuyamaca Street also.

## 10.7 Year 2030 Without Magnolia Avenue Extension to Cuyamaca Street With Entire Project and Cuyamaca Street as a Two-Lane Collector Street

### 10.7.1 *Segment Analysis*

*Table 10-4* summarizes the Year 2030 segment operations without Magnolia Avenue Extension to Cuyamaca Street with Fanita project traffic and Cuyamaca Street as a Two-Lane Collector Street. As seen in *Table 10-4*, with the addition of project traffic, the following segments are calculated to operate at LOS E or worse conditions:

- Cuyamaca Street from Princess Joann Road to Woodglen Vista Drive (LOS E)
- Cuyamaca Street from Woodglen Vista Drive to El Nopal (LOS F)
- Cuyamaca Street from El Nopal to Beck Drive (LOS F)

### 10.7.2 *Arterial Analysis*

Based on the comparison of the roadway capacity table, the 2-Lane Collector segments of Cuyamaca Street between Princess Joann Road and Beck Drive are calculated to operate at LOS E or worse. An arterial analysis determined that these segments are calculated to operate at LOS D or better conditions in the AM and PM peak hours. The intersections on either end on each of these segments are calculated to operate at LOS D or better.

- Cuyamaca Street from Princess Joann Road to Woodglen Vista Drive
- Cuyamaca Street from Woodglen Vista Drive to El Nopal
- Cuyamaca Street from El Nopal to Beck Drive

Since the arterial analysis reveals LOS D operations or better during the peak hours, the project is considered to have no significant impact on the segment. ***Table 10–5*** summarizes the results of the arterial analysis. As seen in *Table 10-5*, the arterial analysis of Cuyamaca Street shows an adequate LOS D or better operations during the AM and PM peak hours.

## TABLE 10-4
## YEAR 2030 SEGMENT OPERATIONS
## NO MAGNOLIA AVENUE EXTENSION TO CUYAMACA STREET & CUYAMACA STREET AS A TWO-LANE COLLECTOR

| Segment | Roadway Classification | LOS E Capacity | Year 2030 Without Project | | | Year 2030 With Entire Project | | | V/C Δ | Impact Type |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | Volume | LOS | V/C | Volume | LOS | V/C | | |
| **Cuyamaca Street** | | | | | | | | | | |
| Fanita Project to Princess Joann Rd | 2-Ln Collector | 16,200 | - | A | - | 8,170 | D | 0.504 | 0.504 | None |
| Princess Joann Rd. to Woodglen Vista Dr | 2-Ln Collector | 16,200 | 6,230 | C | 0.385 | **13,140** | **E** | **0.811** | **0.427** | **Cumulative** |
| Woodglen Vista Dr to El Nopal | 2-Ln Collector | 16,200 | 10,330 | D | 0.638 | **16,610** | **F** | **1.025** | **0.388** | **Cumulative** |
| El Nopal to Beck Dr | 2-Ln Collector | 16,200 | **15,930** | **E** | 0.983 | **20,950** | **F** | **1.293** | **0.310** | **Cumulative** |
| Beck Dr to Mast Blvd. | 4-Ln Collector | 34,200 | 17,630 | B | 0.515 | 22,650 | B | 0.662 | 0.147 | None |

## TABLE 10–5
## LONG-TERM ARTERIAL OPERATIONS
## CUYAMACA STREET BETWEEN PRINCESS JOANN ROAD AND BECK DRIVE

| Scenario | AM Peak Hour | | | | PM Peak Hour | | | |
|---|---|---|---|---|---|---|---|---|
| | Northbound | | Southbound | | Northbound | | Southbound | |
| | Arterial Speed[a] | LOS[b] | Arterial Speed | LOS | Arterial Speed | LOS | Arterial Speed | LOS |
| Mitigated Year 2030 With Project | 21.8 | C | 15.7 | D | 18.3 | C | 20.0 | C |

***Footnotes:***

a. Speed is in miles per hour

b. LOS = Level of service

*General Notes:*

Arterial Analysis worksheets are included in ***Appendix F***.

## 10.8 Ramp Meter Analysis

### 10.8.1 *Background*

Traffic engineers rely on established methodology from the national Transportation Research Board (TRB), to conduct analysis as set forth in the HCM mentioned in Section 8.1. The TRB consists of professional engineers who spend years researching and developing methods for analyzing complex traffic features such as signalized and unsignalized intersections, freeways and arterials, etc. To date, the TRB has not developed a methodology for analyzing freeway ramp meters.

In the absence of a nationally-recognized and tested method, jurisdictions have developed simple methods of ramp-meter analysis that rely on characteristics of existing metered locations (flow rates, etc.) to produce delay and queue results. The measure of effectiveness (MOE) for this analysis is delay in minutes, as shown on *Table 5–1*. These methods have been proven often to yield unreliable results when calibrated against observed, existing conditions, due to the simple "demand vs. rate" comparison that is the crux of the methodology. LLG has measured queues and delays in the field, and compared these with calculated volumes for the identical conditions and identified significant discrepancies that leave the methodology suspect.

Ramp meter flow rates characteristically vary throughout the peak hour based on the performance of the freeway mainline. As the mainline becomes more congested, the ramp meter rates decline, metering fewer vehicles onto the freeway. The current methods outlined in the *City of San Diego Traffic Impact Study Manual* and the *SANTEC/ITE Guidelines for Traffic Impact Studies (TIS) in the San Diego Region* do not account for this correlation of meter rates to mainline performance.

Also, as ramp meter delays approach "unacceptable", or 15-minutes as defined by the SANTEC guidelines, it is expected that drivers will avoid the meter location and instead "shop" ramp locations along the freeway in either direction. Exactly when in the peak hour this "meter-shopping" phenomenon occurs, and how many vehicles actually are displaced is a matter of speculation.

It should be noted that page 16 of the *SANTEC/ITE Guidelines* describes in detail the faults with the current method. It should also be noted that the local chapter of ITE has determined that the existing methodology outlined in the City's handbook is so poor that is has assembled a team of engineers from several agencies and consulting firms to collaborate on a completely new method.

There are several project and site-specific problems with producing accurate future ramp meter results at the SR 52 / Mast Boulevard interchange, in addition to the issues with the methodology described above. To begin with, the interchange does not currently have ramp meters installed, so no actual flow rates can be ascertained. A standard of practice is to assume that the peak hour demand at the time of the installation (assumed in this analysis at existing conditions) is an acceptable method of estimating the flow rate. However, as described above, the flow rate is not a function of the peak hour demand at the intersection, but of the peak hour performance of the freeway mainline. Thus, any flow rate (the basis of the analysis) that LLG determines is purely speculative.

It should also be noted that a PCE factor of 2.0 is applied to heavy vehicles analyzed at meter locations. In low speed situations such as the slow queue at a ramp meter, the effects of heavy vehicles in the traffic stream is arguably diminished, leaving any impacts of significance that could be determined even more overstated than they might already be.

Finally, based on this method, the only improvements that could be implemented to improve meter operations and therefore mitigate a project impact would be to accelerate the meter's flow rate to process more vehicles. As mentioned above, these rates are reactive to the mainline operations. Neither the project nor the City would have assurance that the State (Caltrans) would or could adjust flow-rates to mitigate project impacts. No realistic physical mitigation measures could be possible in this or any other case.

### 10.8.2 *Analysis*

Per the City's request, LLG has conducted this ramp meter analyses despite the limitations described above. Ramp metering was assumed to be in place by 2030. The "Existing" traffic volumes shown on *Figure 3–2* were used for determining the meter rates, based on Caltrans' practice of using opening day volumes to determine initial meter rates. These meter rates form the basis for the Year 2030 analysis. The methodology and calculation sheets are contained in ***Appendix M***.

Per Caltrans standards, a three-lane on-ramp should consist of one (High Occupancy Vehicle) HOV and two Single Occupancy Vehicle (SOV) lanes. The impact at the SR 52 WB Ramps / Mast Boulevard intersection can only be mitigated with three westbound right-turn lanes on Mast Boulevard. This would result in the need for three SOV lanes on the SR 52 Westbound On-Ramp. Therefore the following two alternative SR 52 Westbound On-Ramp lane configurations were analyzed and are described below:

- **On-Ramp Alternative I** - Two Westbound Right-Turn Lanes on Mast Boulevard, with One HOV and 2 SOV lanes on the On-Ramp
- **On-Ramp Alternative II** - Three Westbound Right-Turn Lanes on Mast Boulevard, with 3 SOV lanes on the On-Ramp

The project is estimated to add traffic only to the westbound ramps and none to the eastbound ramps. Hence Ramp Meter analysis was conducted only for the Mast Boulevard Westbound SR 52 On-Ramp. The Ramp Meter analysis was conducted using the "Fixed Rate" and "Maximum Delay" methods.

## On-Ramp Alternative I (I HOV and 2 SOV Lanes)

### Fixed Rate Method

***Table 10-6*** summarizes the ramp meter analysis for Alternative I. As seen in *Table 10-6*, in the Year 2030, with the "Fixed Rate" method, queues of 24,725 feet are calculated during the AM peak hour with delays of 34 minutes and no queues or delays are calculated during the PM peak hour without project traffic. With the addition of project traffic, the queues are calculated to increase to 29,325 feet during the AM peak hour (an increase of 4,600 feet) with the delay increasing to 41 minutes (an increase of 7 minutes) and no queues or delays are calculated during the PM peak hour.

If 1 HOV and 2 SOV lanes are provided, the queues are calculated to reduce to 22,080 feet during the AM peak hour with delays of 31 minutes and no queues or delays are calculated during the PM peak hour.

It may be noted that a storage length of 475 feet per lane can be provided on the On-Ramp between the STOP bar (Ramp Meter) and Mast Boulevard. Hence, a storage length of 950 feet (2 SOV lanes x 475 feet) is available on the On-Ramp. Therefore, the total spillback on Mast Boulevard is 21,130 feet (22,080 feet – 950 feet). There are two right-turn lanes on westbound Mast Boulevard at the Westbound On-Ramp. Therefore, the actual spillback per lane on Mast Boulevard is calculated to be about 10,565 feet (21,130 feet / 2 Lanes) or, approximately 423 cars.

### Maximum Delay Method

With the "Maximum Delay" or the 15-minute delay method, queues of 13,570 feet are calculated during the AM peak hour and no queues or delays are calculated during the PM peak hour without project traffic. With the addition of project traffic, the queues are calculated to increase to 14,490 feet during the AM peak hour (an increase of 920 feet) and no queues or delays are calculated during the PM peak hour.

If 1 HOV and 2 SOV lanes are provided, the queues are calculated to reduce to 13,041 feet during the AM peak hour. The total spillback on Mast Boulevard is 12,091 feet (13,041 feet – 950 feet). The spillback per lane on Mast Boulevard is calculated to be about 6,046 feet (12,091 feet / 2 Lanes) or, approximately 242 cars per lane.

## On-Ramp Alternative II (3 SOV Lanes)

### Fixed Rate Method

***Table 10-7*** summarizes the results of the On-Alternative II ramp meter analysis. As seen in *Table 10-7*, in the Year 2030, queues of 24,725 feet are calculated during the AM peak hour with delays of 34 minutes and no queues or delays are calculated during the PM peak hour without project traffic. With the addition of project traffic, the queues are calculated to increase to 29,325 feet during the AM peak hour (an increase of 4,600 feet) with the delay increasing to 41 minutes (an increase of 7 minutes) and no queues or delays are calculated during the PM peak hour.

## TABLE 10-6
## YEAR 2030 RAMP METER ANALYSIS
## (1 HOV AND 2 SOV LANES ALTERNATIVE)

**Fixed Rate Method**

| Location / Condition | Peak Hour | Peak Hour Demand D | Flow F | Excess Demand E | Delay (min) | Total Queue (ft) |
|---|---|---|---|---|---|---|
| **WB Mast Boulevard to WB SR 52** | | | **2** | **SOV** | | |
| Year 2030 Without Project | AM | 2,714 | 1,725 | 989 | 34 | 24,725 |
| | PM | 797 | 1,725 | 0 | 0 | 0 |
| Year 2030 With Project | AM | 2,898 | 1,725 | 1173 | 41 | 29,325 |
| | PM | 911 | 1,725 | 0 | 0 | 0 |
| Project Increase | AM | 184 | NA | 184 | 6 | 4,600 |
| | PM | 114 | NA | 0 | 0 | 0 |
| **With Recommended On-Ramp Mitigation** | | | **3** | **SOV** | | |
| Year 2030 With Project | AM | 2,608 | 1,725 | 883 | 31 | 22,080 |
| | PM | 820 | 1,725 | 0 | 0 | 0 |
| **Actual Calculated Queue** | | | | | | |
| Existing Ramp Storage Per Lane | | 475 feet per lane * 2 Lanes | | | 950 | Feet |
| Queue Per Lane | | 22,080 feet – 950 feet | | = | 21,130 | Feet |
| Surface Street Spill Back per lane | | 21,130 feet / 2 lanes | | = | **10,565** | Feet |
| or | | 1,527 / 25 feet per vehicle | | = | 423 | Vehicles |

**Maximum Delay Method**

| Location / Condition | Peak Hour | Peak Hour Demand D | Flow F | Excess Demand E | Delay (min) | Total Queue (ft) |
|---|---|---|---|---|---|---|
| **WB Mast Boulevard to WB SR 52** | | | **2** | **SOV** | | |
| Year 2030 Without Project | AM | 2,714 | 2,171 | 543 | 15 | 13,570 |
| | PM | 797 | 1,725 | 0 | 0 | 0 |
| Year 2030 With Project | AM | 2,898 | 2,318 | 580 | 15 | 14,490 |
| | PM | 911 | 1,725 | 0 | 0 | 0 |
| Project Increase | AM | 184 | NA | 37 | 0 | 920 |
| | PM | 114 | NA | 0 | 0 | 0 |
| **With Recommended On-Ramp Mitigation** | | | **3** | **SOV** | | |
| Year 2030 With Project | AM | 2,608 | 1,725 | 522 | 15 | 13,041 |
| | PM | 820 | 1,725 | 0 | 0 | 0 |
| **Actual Calculated Queue** | | | | | | |
| Total Ramp Storage | | 475 feet per lane * 2 Lanes | | | 950 | Feet |
| Queue Per Lane | | 13,041 feet – 950 feet | | = | 12,091 | Feet |
| Surface Street Spill Back per lane | | 12,091 feet / 2 lanes | | = | **6,046** | Feet |
| or | | 1,527 / 25 feet per vehicle | | = | 242 | Vehicles |

## TABLE 10-7
## YEAR 2030 RAMP METER ANALYSIS
## (3 SOV LANES ALTERNATIVE)

**Fixed Rate Method**

| Location / Condition | Peak Hour | Peak Hour Demand D | Flow F | Excess Demand E | Delay (min) | Total Queue (ft) |
|---|---|---|---|---|---|---|
| **WB Mast Boulevard to WB SR 52** | | | **2** | **SOV** | | |
| Year 2030 Without Project | AM | 2,714 | 1,725 | 989 | 34 | 24,725 |
| | PM | 797 | 1,725 | 0 | 0 | 0 |
| Year 2030 With Project | AM | 2,898 | 1,725 | 1173 | 41 | 29,325 |
| | PM | 911 | 1,725 | 0 | 0 | 0 |
| Project Increase | AM | 184 | NA | 184 | 6 | 4,600 |
| | PM | 114 | NA | 0 | 0 | 0 |
| **With Recommended On-Ramp Mitigation** | | | **3** | **SOV** | | |
| Year 2030 With Project | AM | 2,898 | 2,588 | 310 | 7 | 7,750 |
| | PM | 911 | 2,588 | 0 | 0 | 0 |
| **Actual Calculated Queue** | | | | | | |
| Existing Ramp Storage Per Lane | | 475 feet per lane * 3 Lanes | = | | 1,425 | Feet |
| Total Spill Back | | 7,750 feet – 1,425 feet | = | | 6,325 | Feet |
| Spill Back per lane | | 6,325 feet / 3 lanes | = | | **2,108** | Feet |
| | or | 1,527 / 25 feet per vehicle | = | | 84 | Vehicles |

**Maximum Delay Method**

| Location / Condition | Peak Hour | Peak Hour Demand D | Flow F | Excess Demand E | Delay (min) | Total Queue (ft) |
|---|---|---|---|---|---|---|
| **WB Mast Boulevard to WB SR 52** | | | **2** | **SOV** | | |
| Year 2030 Without Project | AM | 2,714 | 2,171 | 543 | 15 | 13,570 |
| | PM | 797 | 1,725 | 0 | 0 | 0 |
| Year 2030 With Project | AM | 2,898 | 2,318 | 580 | 15 | 14,490 |
| | PM | 911 | 1,725 | 0 | 0 | 0 |
| Project Increase | AM | 184 | NA | 37 | 0 | 920 |
| | PM | 114 | NA | 0 | 0 | 0 |
| **With Recommended On-Ramp Mitigation** | | | **3** | **SOV** | | |
| Year 2030 With Project | AM | 2,898 | 2,588 | 310 | 7 | 7,763 |
| | PM | 911 | 2,588 | 0 | 0 | 0 |
| **Actual Calculated Queue** | | | | | | |
| Existing Ramp Storage Per Lane | | 475 feet per lane * 3 Lanes | = | | 1,425 | Feet |
| Total Spill Back | | 7,763 feet – 1,425 feet | = | | 6,338 | Feet |
| Spill Back per lane | | 6,338 feet / 3 lanes | = | | **2,113** | Feet |
| | or | 1,527 / 25 feet per vehicle | = | | 85 | Vehicles |

If the recommended mitigation of widening the on-ramp to 3 SOV lanes is implemented, the queues are calculated to reduce to 7,750 feet during the AM peak hour with delays of 7 minutes and no queues or delays are calculated during the PM peak hour.

As described previously, a storage length of 475 feet per lane can be provided on the On-Ramp between the STOP bar (Ramp Meter) and Mast Boulevard and therefore, a storage length of 1,425 feet is available on the On-Ramp (475 feet *3 SOV Lanes). The total spillback on Mast Boulevard is 6,325 feet (7,750 feet – 1,425 feet). There are two right-turn lanes on westbound Mast Boulevard at the Westbound On-Ramp. Therefore, the actual spillback per lane on Mast Boulevard is calculated to be about 2,108 feet (6,325 feet / 3 Lanes) or, approximately 84 cars.

**Maximum Delay Method**

With the "Maximum Delay" or the 15-minute delay method, queues of 13,570 feet are calculated during the AM peak hour and no queues or delays are calculated during the PM peak hour without project traffic. With the addition of project traffic, the queues are calculated to increase to 14,490 feet during the AM peak hour (an increase of 920 feet) and no queues or delays are calculated during the PM peak hour.

If the recommended mitigation of widening the on-ramp to 3 SOV lanes is implemented, the queues are calculated to reduce to 7,763 feet during the AM peak hour with delays of 7 minutes and no queues or delays are calculated during the PM peak hour.

As described previously, a storage length of 475 feet per lane can be provided on the On-Ramp between the STOP bar (Ramp Meter) and Mast Boulevard and therefore, a storage length of 1,425 feet is available on the On-Ramp (475 feet *3 SOV Lanes). The total spillback on Mast Boulevard is 6,338 feet (7,763 feet – 1,425 feet). There are two right-turn lanes on westbound Mast Boulevard at the Westbound On-Ramp. Therefore, the actual spillback per lane on Mast Boulevard is calculated to be about 2,113 feet (6,338 feet / 3 Lanes) or, approximately 85 cars.

It may be noted that in the Year 2012 with SR 52 extended to SR 67, the SR 52 Westbound On-Ramp / Mast Boulevard intersection is calculated to operate at **LOS F** with a delay of **108.8** seconds during the AM peak hour with On-Ramp Alternative I (I HOV and 2 SOV Lanes). With On-Ramp Alternative II (3 SOV Lanes), the SR 52 Westbound On-Ramp / Mast Boulevard intersection is calculated to operate at **LOS B** with a delay of **16.7** seconds during the AM peak hour.

## 11.0 CONGESTION MANAGEMENT PROGRAM COMPLIANCE

The Congestion Management Program (CMP) was first adopted on November 22, 1991, and is intended to directly link land use, transportation and air quality through Level of Service performance. Local agencies are required by statute to conform to the CMP.

The CMP requires an Enhanced CEQA Review for all large projects that are expected to generate more than 2,400 ADT or more than 200 peak hour trips. Since the project is calculated to generate over 200 peak hour trips, this level of review is required of the proposed project.

In 1993, the Institute of Transportation Engineers California Border Section and the San Diego Region Traffic Engineer's Council established a set of guidelines to be used in the preparation of traffic impact studies that are subject to the Enhanced CEQA review process. These guidelines were updated in January 2003. This published document is titled 2002 Congestion Management Program update. The guidelines require that a project study area be established as follows:

- All streets and intersections on CMP roadways where the project will add 50 or more peak hour trips in either direction.
- Mainline freeway locations where the project will add 150 or more peak hour trips in either direction.

Per these guidelines, the following facilities were analyzed to satisfy the CMP since the project is calculated to add 50 or more peak hour trips to these facilities:

- The arterial section of Mission Gorge Road between SR 125 and Magnolia Avenue
- The freeway segment of SR 52 between Santo Road and SR 67
- The freeway segment of SR 125 Mission Gorge Road to Grossmont College Drive
- The freeway segment of SR 67 Winter Garden Avenue to I-8

Per the CMP guidelines, intersection peak hour, freeway mainline, freeway ramp meter, arterial roadway segment analyses are required. The significance criteria to determine the significant impacts based on all the above analyses are summarized in Section 5.0, Significance Criteria are repeated below for easy reference. The required analyses are included in this report as follows:

1. Section 6.0 contains the existing peak hour intersection analysis
2. Section 9.0 contains the near-term (Year 2010 scenarios and Year 2012 scenario) peak hour intersection analysis
3. Section 10.0 contains the Long-Term (Year 2030) segment analysis
4. There are no ramp meters in operation within the project study area. Hence, no ramp meter analysis is included in this report.
5. Mission Gorge Road is a CMP arterial and has been analyzed in this section.
6. Freeway mainline analysis for each analysis scenario is included in this section.

Existing freeway segment volumes were obtained from Caltrans. Project traffic volumes were distributed and assigned for each scenario to obtain the existing project volumes along freeway segments. The Year 2010 and Buildout freeway segment volumes were obtained from the *SR 52 Extension – Units 4 & 5* study dated March 21, 2006 prepared by LLG Engineers for CALTRANS.

## 11.1 Existing Conditions

### 11.1.1 *Arterial Analysis*

***Table 11–1*** summarizes the arterial operations for existing conditions. As seen in *Table 11-1*, the arterial segment of Mission Gorge Road between SR 125 and Magnolia Avenue is calculated to currently operate at LOS D in both directions during the AM and PM peak hours.

The existing arterial analysis worksheets are contained in ***Appendix M1***.

### 11.1.2 *Freeway Analysis*

***Table 11–2*** summarizes the freeway operations for the existing condition. As seen in *Table 11-2,* all freeway segments within the study area are calculated to currently operate at LOS C or better except the following:

- **SR 52 West of Mast Boulevard**
  LOS F (1) in the westbound direction during the AM peak hour and in the eastbound direction during the PM peak hour

- **SR 52 between Mast Boulevard and Mission Gorge Road**
  LOS F (3) in the westbound direction during the AM peak hour and in the eastbound direction during the PM peak hour

- **SR 67 between Winter Gardens Avenue and Riverford Road**
  LOS F (0) in the southbound direction during the AM peak hour and at LOS F (1) in the northbound direction during the PM peak hour

## TABLE 11–1
## ARTERIAL OPERATIONS ON MISSION GORGE ROAD BETWEEN MAGNOLIA AVENUE AND SR 125

| Scenario | AM Peak Hour | | | | PM Peak Hour | | | |
|---|---|---|---|---|---|---|---|---|
| | Westbound | | Eastbound | | Westbound | | Eastbound | |
| | Arterial Speed[a] | LOS[b] | Arterial Speed | LOS | Arterial Speed | LOS | Arterial Speed | LOS |
| Existing | 25.5 | D | 24.4 | D | 22.2 | D | 23.3 | D |
| Year 2010 Without SR 52 Extended East of SR 125 – No Project | 23.6 | D | 21.3 | D | 17.5 | E | 20.0 | E |
| Year 2010 Without SR 52 Extended East of SR 125 – With 50% of the Project | 23.4 | D | 20.6 | E | 17.2 | E | 19.6 | E |
| **Decrease** | **-0.2** | | **-0.7** | | **-0.5** | | **-0.4** | |
| Year 2010 With SR 52 Extended to Cuyamaca Street – Without Project | 22.7 | D | 21.9 | D | 19.9 | E | 21.0 | D |
| Year 2010 With SR 52 Extended to Cuyamaca Street – With 50% of the Project | 22.6 | D | 21.4 | D | 19.6 | E | 20.8 | E |
| **Decrease** | **-0.1** | | **-0.5** | | **-0.3** | | **-0.2** | |
| Year 2012 With SR 52 Extended to SR 67, With Magnolia Avenue Extension – Without Project | 23.5 | D | 23.4 | D | 22.4 | D | 21.0 | D |
| Year 2012 With SR 52 Extended to SR 67, With Magnolia Avenue Extension – With Entire Project | 22.8 | D | 23.1 | D | 22.2 | D | 19.8 | E |
| **Decrease** | **-0.7** | | **-0.3** | | **-0.2** | | **-1.2** | |
| Year 2012 With SR 52 Extended to SR 67, Without Magnolia Avenue Extension – Without Project | 23.5 | D | 23.4 | D | 22.4 | D | 21.0 | D |
| Year 2012 With SR 52 Extended to SR 67, Without Magnolia Avenue Extension – With Entire Project | 22.8 | D | 23.1 | D | 22.2 | D | 19.8 | E |
| **Decrease** | **-0.7** | | **-0.3** | | **-0.2** | | **-1.2** | |
| Mitigated Operations for Year 2012 With and Without Magnolia Avenue Extension[d] | 23.0 | D | 23.6 | D | 22.4 | D | 20.2 | |
| **Difference With Mitigation**[e] | **-0.5** | | **+0.2** | | **0.0** | | **-0.8** | |

***Footnotes:***

a. Speed is in miles per hour
b. LOS = Level of service
c. Not improved to LOS D or better but mitigated to a below a level of significance since it is better than before the addition of project traffic.
d. Arterial Operations with the implementation of all intersection improvements along Mission Gorge Road.
e. Calculated speed with the implementation of recommended mitigation measures are either less than 1.0 mile per hour worse or better than prior to the addition of project traffic.

## TABLE 11-2
## FREEWAY MAINLINE OPERATIONS
## EXISTING CONDITIONS

| Freeway Segment | Dir. | # of Lanes[a] | Hourly Capacity[b] | ADT[c] | % K[d] | | % D[e] | | Truck Factor[f] | Peak Hour Volume[g] | | V/C[h] | | LOS | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | AM | PM | AM | PM | | AM | PM | AM | PM | AM | PM |
| **SR 52** | | | | | | | | | | | | | | | |
| West of Mast Blvd. | EB | 2M+1A | 5,200 | 80,000 | 0.110 | 0.109 | 0.230 | 0.750 | 0.974 | 2078 | 6,715 | 0.400 | 1.291 | A | **F(1)** |
| | WB | 2M+1A | 5,200 | | 0.110 | 0.109 | 0.770 | 0.250 | | 6957 | 2,238 | 1.338 | 0.430 | **F(1)** | B |
| Mast Blvd. to Mission Gorge Rd. | EB | 2M | 4,000 | 57,000 | 0.110 | 0.109 | 0.230 | 0.750 | 0.974 | 1,481 | 4,784 | 0.370 | 1.196 | A | **F(0)** |
| | WB | 2M | 4,000 | | 0.110 | 0.109 | 0.770 | 0.250 | | 4,957 | 1,595 | 1.239 | 0.399 | **F(0)** | A |
| **SR 67** | | | | | | | | | | | | | | | |
| Winter Gardens Ave. to Riverford Rd. | NB | 2M | 4,000 | 82,000 | 0.084 | 0.091 | 0.355 | 0.660 | 0.933 | 2,621 | 5,279 | 0.655 | 1.320 | C | **F(1)** |
| | SB | 2M | 4,000 | | 0.084 | 0.091 | 0.645 | 0.340 | | 4,762 | 2,719 | 1.190 | 0.680 | **F(0)** | C |
| Riverford Rd. to Prospect Ave. | NB | 2M | 4,000 | 48,000 | 0.084 | 0.091 | 0.355 | 0.660 | 0.933 | 1,534 | 3,090 | 0.384 | 0.772 | A | C |
| | SB | 2M | 4,000 | | 0.084 | 0.091 | 0.645 | 0.340 | | 2,787 | 1,592 | 0.697 | 0.398 | C | A |
| Prospect Ave. to I-8 | NB | 3M | 6,000 | 64,000 | 0.084 | 0.091 | 0.355 | 0.660 | 0.933 | 2,046 | 4,120 | 0.341 | 0.687 | A | C |
| | SB | 3M | 6,000 | | 0.084 | 0.091 | 0.645 | 0.340 | | 3,717 | 2,122 | 0.619 | 0.354 | B | A |
| **SR 125** | | | | | | | | | | | | | | | |
| Mission Gorge Rd. to Grossmont College Dr. | NB | 3M | 6,000 | 48,500 | 0.076 | 0.087 | 0.447 | 0.556 | 0.956 | 1,723 | 2,454 | 0.287 | 0.409 | A | A |
| | SB | 3M | 6,000 | | 0.076 | 0.087 | 0.553 | 0.444 | | 2,132 | 1,960 | 0.355 | 0.327 | A | A |

*Footnotes:*

a. M – Mainline lanes; A – Auxiliary lanes
b. Capacity calculated at 2000 vph per lane and 1200 vph per HOV lane
c. Existing ADT Volumes from CALTRANS
d. Peak Hour Percentage (K) and Direction Split (D) from CALTRANS "1999 Traffic Volumes", June 2000
e. Truck Factor from "2000 Annual Average Daily Truck Traffic on the California State Highway System", Jan 2002
f. Peak Hour Volume = ((ADT)(K)(D)/Truck Factor)
g. V/C = ((ADT)(K)(D)/Truck Factor/Capacity)

| LOS | V/C |
|---|---|
| A | <0.41 |
| B | 0.62 |
| C | 0.8 |
| D | 0.92 |
| E | 1 |
| F(0) | 1.25 |
| F(1) | 1.35 |
| F(2) | 1.45 |
| F(3) | >1.46 |

## 11.2 Year 2010 Without SR 52 Extended East of SR 125 and Without Project

### 11.2.1 *Arterial Analysis*

*Table 11–1* summarizes the arterial operations for Year 2010 Without SR 52 extended east of SR 125 and without project traffic condition. As seen in *Table 11-1*, during the AM peak hour, the arterial segment of Mission Gorge Road between SR 125 and Magnolia Avenue is calculated to operate at LOS D in both directions during the AM peak hour and LOS E in both directions during the PM peak hour.

The Year 2010 Without SR 52 extended east of SR 125 and without project traffic arterial analysis worksheets are contained in ***Appendix M2***.

### 11.2.2 *Freeway Analysis*

Since the project has contributed towards the widening of SR 52 to a six-lane freeway and the widening was designated as part of the *Transnet* Early Action Program approved by SANDAG Board of Directors in January 2005, SR 52 is assumed to be six-lanes west of Mast Boulevard for the freeway analysis.

***Table 11–3*** summarizes the freeway operations for the Year 2010 Without SR 52 extended east of SR 125 and without project traffic scenario. As seen in *Table 11-3,* in the Year 2010 Without SR 52 extended east of SR 125 and without project traffic, all freeway segments within the study area are calculated to operate at LOS D or better except the following:

- **SR 67 between Riverford Road and Prospect Avenue**
  LOS F (0) in the southbound direction during the AM peak hour and in the northbound direction during the PM peak hour

- **SR 67 between Prospect Ave and I-8**
  LOS F (0) in the southbound direction during the AM peak hour and in the northbound direction during the PM peak hour

## 11.3 Year 2010 Without SR 52 Extended East of SR 125 With 50% of the Project

### 11.3.1 *Arterial Analysis*

*Table 11–1* summarizes the arterial operations for Year 2010 Without SR 52 extended east of SR 125 and with 50% of the project traffic condition. As seen in *Table 11-1*, with the addition of 50% of the project traffic, during the AM peak hour, the arterial segment of Mission Gorge Road between SR 125 and Magnolia Avenue is calculated to deteriorate to LOS E in the eastbound direction during the AM peak hour and continue to operate at the same levels of service as without the project traffic in the remaining direction.

The Year 2010 Without SR 52 extended east of SR 125 with 50% project traffic arterial analysis worksheets are included in ***Appendix M3***.

## TABLE 11-3
## FREEWAY MAINLINE OPERATIONS
## YEAR 2010 WITHOUT SR 52 EXTENDED EAST OF SR 125

| Freeway Segment | Dir. | # of Lanes [a] | Hourly Capacity [b] | 100% Project PH Volume [c] | | Without Project PH Volume [d] | | V/C [e] | | LOS | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | AM | PM | AM | PM | AM | PM | AM | PM |
| **SR 52** | | | | | | | | | | | |
| West of Mast Blvd. | EB | 3M | 6,000 | 53 | 133 | 3,212 | 3,360 | 0.535 | 0.560 | B | B |
| | WB | 3M | 6,000 | 106 | 62 | 2,697 | 3,459 | 0.450 | 0.576 | B | B |
| Mast Blvd. to Mission Gorge Rd. | EB | 3M | 6,000 | 0 | 0 | 2,783 | 2,978 | 0.464 | 0.496 | B | B |
| | WB | 3M | 6,000 | 0 | 0 | 2,390 | 3,002 | 0.398 | 0.500 | A | B |
| **SR 67** | | | | | | | | | | | |
| Winter Gardens Ave. to Riverford Rd. | NB | 2M | 4,000 | 26 | 15 | 1,917 | 3,899 | 0.479 | 0.975 | B | **E** |
| | SB | 2M | 4,000 | 12 | 31 | 3,519 | 1,985 | 0.880 | 0.496 | D | B |
| Riverford Rd. to Prospect Ave. | NB | 2M | 4,000 | 4 | 2 | 2,249 | 4,536 | 0.562 | 1.134 | B | **F(0)** |
| | SB | 2M | 4,000 | 2 | 5 | 4,092 | 2,333 | 1.023 | 0.583 | **F(0)** | B |
| Prospect Ave. to I-8 | NB | 3M | 6,000 | 14 | 37 | 3,310 | 6,658 | 0.552 | 1.110 | B | **F(0)** |
| | SB | 3M | 6,000 | 31 | 18 | 6,008 | 3,431 | 1.001 | 0.572 | **F(0)** | B |
| **SR 125** | | | | | | | | | | | |
| Mission Gorge Rd. to Grossmont College Dr. | NB | 3M | 6,000 | 41 | 105 | 2,674 | 3,761 | 0.446 | 0.627 | B | C |
| | SB | 3M | 6,000 | 85 | 51 | 3,274 | 3,036 | 0.546 | 0.506 | B | B |

## TABLE 11-3 (CONTINUED)
## FREEWAY MAINLINE OPERATIONS
## YEAR 2010 WITHOUT SR 52 EXTENDED EAST OF SR 125

| Freeway Segment | Dir. | # of Lanes [a] | Hourly Capacity [b] | ADT [f] | % K [g] | | % D [g] | | Truck Factor [h] | Peak Hour Volume [i] | | V/C [j] | | LOS | | Δ V/C | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | AM | PM | AM | PM | | AM | PM | AM | PM | AM | PM | AM | PM |
| **SR 52** | | | | | | | | | | | | | | | | | |
| West of Mast Blvd. | EB | 3M | 6,000 | 78,700 | 0.075 | 0.087 | 0.538 | 0.498 | 0.974 | 3,265 | 3,493 | 0.544 | 0.582 | B | B | 0.009 | 0.022 |
| | WB | 3M | 6,000 | | 0.075 | 0.087 | 0.462 | 0.502 | | 2,803 | 3,521 | 0.467 | 0.587 | B | B | 0.018 | 0.010 |
| Mast Blvd. to Mission Gorge Rd. | EB | 3M | 6,000 | 67,100 | 0.075 | 0.087 | 0.538 | 0.498 | 0.974 | 2,783 | 2,978 | 0.464 | 0.496 | B | B | - | - |
| | WB | 3M | 6,000 | | 0.075 | 0.087 | 0.462 | 0.502 | | 2,390 | 3,002 | 0.398 | 0.500 | A | B | - | - |
| **SR 67** | | | | | | | | | | | | | | | | | |
| Winter Gardens Ave. to Riverford Rd. | NB | 2M | 4,000 | 60,800 | 0.084 | 0.091 | 0.355 | 0.660 | 0.933 | 1,943 | 3,914 | 0.486 | 0.978 | B | **E** | 0.007 | 0.004 |
| | SB | 2M | 4,000 | | 0.084 | 0.091 | 0.645 | 0.340 | | 3,531 | 2,016 | 0.883 | 0.504 | D | B | 0.003 | 0.008 |
| Riverford Rd. to Prospect Ave. | NB | 2M | 4,000 | 70,500 | 0.084 | 0.091 | 0.355 | 0.660 | 0.933 | 2,253 | 4,538 | 0.563 | 1.135 | B | **F(0)** | 0.001 | 0.000 |
| | SB | 2M | 4,000 | | 0.084 | 0.091 | 0.645 | 0.340 | | 4,094 | 2,338 | 1.023 | 0.584 | **F(0)** | B | 0.000 | 0.001 |
| Prospect Ave. to I-8 | NB | 3M | 6,000 | 104,000 | 0.084 | 0.091 | 0.355 | 0.660 | 0.933 | 3,324 | 6,695 | 0.554 | 1.116 | B | **F(0)** | 0.002 | 0.006 |
| | SB | 3M | 6,000 | | 0.084 | 0.091 | 0.645 | 0.340 | | 6,039 | 3,449 | 1.007 | 0.575 | **F(0)** | B | 0.005 | 0.003 |
| **SR 125** | | | | | | | | | | | | | | | | | |
| Mission Gorge Rd. to Grossmont College Dr. | NB | 3M | 6,000 | 76,400 | 0.076 | 0.087 | 0.447 | 0.556 | 0.956 | 2,715 | 3,866 | 0.452 | 0.644 | B | C | 0.007 | 0.018 |
| | SB | 3M | 6,000 | | 0.076 | 0.087 | 0.553 | 0.444 | | 3,359 | 3,087 | 0.560 | 0.515 | B | B | 0.014 | 0.008 |

*Footnotes:*

a. M – Mainline lanes; A – Auxiliary lanes
b. Capacity calculated at 2000 vph per lane and 1200 vph per HOV lane
c. Entire Project Traffic assigned
d. 50% project traffic deducted from the Year 2010 with project traffic volumes
e. V/C = Volume / Capacity factor
f. ADT – Average Daily Traffic volumes form the corresponding SANDAG plot for Year 2010 increased by 2% a year for 2 years.
g. Peak Hour Percentage (K) and Direction Split (D) from CALTRANS "1999 Traffic Volumes", June 2000
h. Truck Factor from "2000 Annual Average Daily Truck Traffic on the California State Highway System", Jan 2002
i. Peak Hour Volume = ((ADT)(K)(D)/Truck Factor)
j. V/C = ((ADT)(K)(D)/Truck Factor/Capacity)

| LOS | V/C |
|---|---|
| A | <0.41 |
| B | 0.62 |
| C | 0.8 |
| D | 0.92 |
| E | 1.00 |
| F(0) | 1.25 |
| F(1) | 1.35 |
| F(2) | 1.45 |
| F(3) | >1.46 |

### 11.3.2 *Freeway Analysis*

*Table 11–3* summarizes the freeway operations for the Year 2010 Without SR 52 extended east of SR 125 with 50% of the project traffic scenario. As seen in *Table 11-3,* with the addition of project traffic, all freeway segments within the study area are calculated to continue to operate at LOS D or better except the following:

- **SR 67 between Riverford Road and Prospect Avenue**
  LOS F (0) in the southbound direction during the AM peak hour and in the northbound direction during the PM peak hour

- **SR 67 between Prospect Ave and I-8**
  LOS F (0) in the southbound direction during the AM peak hour and in the northbound direction during the PM peak hour

## 11.4 Year 2010 With SR 52 Extended to Cuyamaca Street and Without Project

### 11.4.1 *Arterial Analysis*

*Table 11–1* summarizes the arterial operations for Year 2010 With SR 52 extended to Cuyamaca Street and without project traffic condition. As seen in *Table 11-1*, during the AM peak hour, the arterial segment of Mission Gorge Road between SR 125 and Magnolia Avenue is calculated to operate at LOS D in both directions. During the PM peak hour, the subject arterial is calculated to operate at LOS E in the eastbound direction.

The Year 2010 with SR 52 extended to Cuyamaca Street and without project arterial analysis worksheets are contained in ***Appendix M4***.

### 11.4.2 *Freeway Analysis*

***Table 11–4*** summarizes the freeway operations for the Year 2010 with SR 52 extended to Cuyamaca Street and without project traffic condition. As seen in *Table 11-4,* in the Year 2010 with SR 52 extended to Cuyamaca Street and without project traffic, all freeway segments within the study area are calculated to operate at LOS C or better.

## 11.5 Year 2010 With SR 52 Extended to Cuyamaca Street With 50% of the Project

### 11.5.1 *Arterial Analysis*

*Table 11–1* summarizes the arterial operations for Year 2010 With SR 52 extended to Cuyamaca Street and with 50% of the project traffic condition. As seen in *Table 11-1*, with the addition of 50% of the project traffic, during the AM peak hour, the arterial segment of Mission Gorge Road between SR 125 and Magnolia Avenue is calculated to operate at LOS D in both directions. During the PM peak hour, the subject arterial is calculated to operate at LOS E in the both directions.

The Year 2010 without SR 52 extension to Cuyamaca Street and with 50% of the project traffic arterial analysis worksheets are contained in ***Appendix M4***.

## TABLE 11-4
## FREEWAY MAINLINE OPERATIONS
## YEAR 2010 WITH SR 52 EXTENDED TO CUYAMACA STREET - NO PROJECT

| Freeway Segment | Dir. | # of Lanes [a] | Hourly Capacity [b] | 100% Project PH Volume [c] | | Without Project PH Volume [d] | | V/C [e] | | LOS | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | AM | PM | AM | PM | AM | PM | AM | PM |
| **SR 52** | | | | | | | | | | | |
| West of Mast Blvd. | EB | 3M | 6,000 | 53 | 133 | 3,379 | 3,695 | 0.563 | 0.616 | B | B |
| | WB | 3M | 6,000 | 106 | 62 | 2,590 | 3,616 | 0.432 | 0.603 | B | B |
| Mast Blvd. to Mission Gorge Rd. | EB | 3M | 6,000 | 10 | 26 | 3,023 | 3,357 | 0.504 | 0.559 | B | B |
| | WB | 3M | 6,000 | 21 | 12 | 2,362 | 3,238 | 0.394 | 0.540 | A | B |
| Mission Gorge Rd. to Cuyamaca Street | EB | 2M + 1A | 5,200 | 10 | 26 | 1,871 | 1,429 | 0.360 | 0.275 | A | A |
| | WB | 3M | 6,000 | 21 | 12 | 1,084 | 2,189 | 0.181 | 0.365 | A | A |
| **SR 67** | | | | | | | | | | | |
| Winter Gardens Ave. to Riverford Rd. | NB | 2M | 4,000 | 26 | 15 | 1,665 | 3,164 | 0.416 | 0.791 | B | C |
| | SB | 2M | 4,000 | 12 | 31 | 2,194 | 2,328 | 0.548 | 0.582 | B | B |
| Riverford Rd. to Prospect Ave. | NB | 2M | 4,000 | 4 | 2 | 1,485 | 2,796 | 0.371 | 0.699 | A | C |
| | SB | 2M | 4,000 | 2 | 5 | 1,940 | 2,072 | 0.485 | 0.518 | B | B |
| Prospect Ave. to I-8 | NB | 3M | 6,000 | 14 | 37 | 2,720 | 4,338 | 0.453 | 0.723 | B | C |
| | SB | 3M | 6,000 | 31 | 18 | 3,077 | 3,815 | 0.513 | 0.636 | B | C |
| **SR 125** | | | | | | | | | | | |
| Mission Gorge Rd. to Grossmont College Dr. | NB | 3M | 6,000 | 43 | 109 | 2,836 | 2,352 | 0.473 | 0.392 | B | A |
| | SB | 3M | 6,000 | 89 | 55 | 1,783 | 3,344 | 0.297 | 0.557 | A | B |

## TABLE 11-4 (CONTINUED)
## FREEWAY MAINLINE OPERATIONS
## YEAR 2010 WITH SR 52 EXTENDED TO CUYAMACA STREET – WITH PROJECT

| Freeway Segment | Dir. | # of Lanes [a] | Hourly Capacity [b] | ADT [f] | % K [g] | | % D [g] | | Truck Factor [h] | Peak Hour Volume [i] | | V/C [j] | | LOS | | Δ V/C | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | AM | PM | AM | PM | | AM | PM | AM | PM | AM | PM | AM | PM |
| **SR 52** | | | | | | | | | | | | | | | | | |
| West of Mast Blvd. | EB | 3M | 6,000 | 86,000 | 0.069 | 0.085 | 0.560 | 0.510 | 0.974 | 3,432 | 3,828 | 0.572 | 0.638 | B | C | 0.009 | 0.022 |
| | WB | 3M | 6,000 | | 0.069 | 0.085 | 0.440 | 0.490 | | 2,696 | 3,678 | 0.449 | 0.613 | B | B | 0.018 | 0.010 |
| Mast Blvd. to Mission Gorge Rd. | EB | 3M | 6,000 | 76,000 | 0.069 | 0.085 | 0.560 | 0.510 | 0.974 | 3,033 | 3,383 | 0.505 | 0.564 | B | B | 0.002 | 0.004 |
| | WB | 3M | 6,000 | | 0.069 | 0.085 | 0.440 | 0.490 | | 2,383 | 3,250 | 0.397 | 0.542 | A | B | 0.004 | 0.002 |
| Mission Gorge Rd. to Cuyamaca Street | EB | 2M + 1A | 5,200 | 41,900 | 0.069 | 0.085 | 0.630 | 0.398 | 0.974 | 1,881 | 1,455 | 0.362 | 0.280 | A | A | 0.002 | 0.005 |
| | WB | 3M | 6,000 | | 0.069 | 0.085 | 0.370 | 0.602 | | 1,105 | 2,201 | 0.184 | 0.367 | A | A | 0.004 | 0.002 |
| **SR 67** | | | | | | | | | | | | | | | | | |
| Winter Gardens Ave. to Riverford Rd. | NB | 2M | 4,000 | 61,000 | 0.060 | 0.085 | 0.434 | 0.574 | 0.933 | 1,691 | 3,179 | 0.423 | 0.795 | B | C | 0.006 | 0.004 |
| | SB | 2M | 4,000 | | 0.060 | 0.085 | 0.566 | 0.426 | | 2,206 | 2,359 | 0.551 | 0.590 | B | B | 0.003 | 0.008 |
| Riverford Rd. to Prospect Ave. | NB | 2M | 4,000 | 53,700 | 0.060 | 0.085 | 0.434 | 0.574 | 0.933 | 1,489 | 2,798 | 0.372 | 0.700 | A | C | 0.001 | 0.001 |
| | SB | 2M | 4,000 | | 0.060 | 0.085 | 0.566 | 0.426 | | 1,942 | 2,077 | 0.485 | 0.519 | B | B | 0.001 | 0.001 |
| Prospect Ave. to I-8 | NB | 3M | 6,000 | 90,100 | 0.061 | 0.085 | 0.468 | 0.533 | 0.933 | 2,734 | 4,375 | 0.456 | 0.729 | B | C | 0.002 | 0.006 |
| | SB | 3M | 6,000 | | 0.061 | 0.085 | 0.532 | 0.467 | | 3,108 | 3,833 | 0.518 | 0.639 | B | C | 0.005 | 0.003 |
| **SR 125** | | | | | | | | | | | | | | | | | |
| Mission Gorge Rd. to Grossmont College Dr. | NB | 3M | 6,000 | 67,900 | 0.067 | 0.083 | 0.606 | 0.420 | 0.956 | 2,879 | 2,461 | 0.480 | 0.410 | B | B | 0.007 | 0.018 |
| | SB | 3M | 6,000 | | 0.067 | 0.083 | 0.394 | 0.580 | | 1,872 | 3,399 | 0.312 | 0.566 | A | B | 0.015 | 0.009 |

*Footnotes:*

a. M – Mainline lanes; A – Auxiliary lanes
b. Capacity calculated at 2000 vph per lane and 1200 vph per HOV lane
c. Entire Project Traffic assigned
d. 50% project traffic deducted from the Year 2010 with project traffic volumes
e. V/C = Volume / Capacity factor
f. ADT – Average Daily Traffic volumes form the corresponding SANDAG plot for Year 2010 increased by 2% a year for 2 years.
g. Peak Hour Percentage (K) and Direction Split (D) from CALTRANS "1999 Traffic Volumes", June 2000
h. Truck Factor from "2000 Annual Average Daily Truck Traffic on the California State Highway System", Jan 2002
i. Peak Hour Volume = ((ADT)(K)(D)/Truck Factor)
j. V/C = ((ADT)(K)(D)/Truck Factor/Capacity)

| LOS | V/C |
|---|---|
| A | <0.41 |
| B | 0.62 |
| C | 0.8 |
| D | 0.92 |
| E | 1.00 |
| F(0) | 1.25 |
| F(1) | 1.35 |
| F(2) | 1.45 |
| F(3) | >1.46 |

### 11.5.2 *Freeway Analysis*

*Table 11–4* summarizes the freeway operations for the Year 2010 with SR 52 extended to Cuyamaca Street with 50% of the project traffic scenario. As seen in *Table 11-4,* with the addition of 50% of the project traffic, all freeway segments within the study area are calculated to continue to operate at LOS C or better.

## 11.6 Year 2012 With Magnolia Avenue Extension to Cuyamaca Street, with SR 52 Extended to SR 67 and Without Project

### 11.6.1 *Arterial Analysis*

*Table 11–1* summarizes the arterial operations for Year 2012 With SR 52 extended to SR 67 without the entire project traffic condition. As seen in *Table 11-1*, during the AM and PM peak hours, the arterial segment of Mission Gorge Road between SR 125 and Magnolia Avenue is calculated to continue to operate at LOS D in both directions.

The Year 2012 with SR 52 extension to SR 67 and without project traffic arterial analysis worksheets are included in ***Appendix M5***.

### 11.6.2 *Freeway Analysis*

*Table 11–5* summarizes the freeway operations for the Year 2012 with SR 52 extended to SR 67 without project traffic condition. As seen in *Table 11-5,* the Year 2012 with SR 52 extended to SR 67 without project traffic, the following operations were calculated:

- **SR 67 between Winter Gardens Avenue and Prospect Avenue**
  LOS F (0) in the northbound direction during the PM peak hour.

- **SR 67 between Prospect Avenue and I-8**
  LOS E in the northbound direction during the PM peak hour.

## 11.7 Year 2012 With Magnolia Avenue Extension to Cuyamaca Street, with SR 52 Extended to SR 67 and With Entire Project

### 11.7.1 *Arterial Analysis*

*Table 11–1* summarizes the arterial operations for Year 2012 With SR 52 extended to SR 67 and with the entire project traffic condition. As seen in *Table 11-1*, with the addition of the entire project traffic, during the AM peak hour, the arterial segment of Mission Gorge Road between SR 125 and Magnolia Avenue is calculated to continue to operate at LOS D in both directions. During the PM peak hour, the arterial segment of Mission Gorge Road between SR 125 and Magnolia Avenue is calculated to continue to operate at LOS E in the eastbound direction and LOS D in the westbound direction.

## TABLE 11-5
## FREEWAY MAINLINE OPERATIONS
## YEAR 2012 WITH SR 52 EXTENDED TO SR 67

| Freeway Segment | Dir. | # of Lanes [a] | Hourly Capacity [b] | 100% Project PH Volume [c] | | Without Project PH Volume [d] | | V/C [e] | | LOS | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | AM | PM | AM | PM | AM | PM | AM | PM |
| **SR 52** | | | | | | | | | | | |
| West of Mast Blvd. | EB | 3M | 6,000 | 102 | 263 | 1,684 | 3,861 | 0.281 | 0.644 | A | C |
| | WB | 3M | 6,000 | 211 | 124 | 3,584 | 1,652 | 0.597 | 0.275 | B | A |
| Mast Blvd. to Mission Gorge Rd. | EB | 3M | 6,000 | 8 | 21 | 1,577 | 3,640 | 0.263 | 0.607 | A | B |
| | WB | 3M | 6,000 | 17 | 10 | 3,352 | 1,567 | 0.559 | 0.261 | B | A |
| Mission Gorge Rd. to Cuyamaca Street | EB | 2M + 1A | 5,200 | 46 | 83 | 1,400 | 3,149 | 0.269 | 0.606 | A | B |
| | WB | 3M | 6,000 | 67 | 56 | 3,005 | 2,010 | 0.501 | 0.335 | B | A |
| Cuyamaca Street to SR 67 | EB | 3M | 6,000 | 42 | 25 | 1,252 | 3,782 | 0.209 | 0.630 | A | C |
| | WB | 2M + 1A | 5,200 | 20 | 53 | 3,861 | 2,331 | 0.742 | 0.448 | C | B |
| **SR 67** | | | | | | | | | | | |
| Winter Gardens Ave. to Riverford Rd. | NB | 2M | 4,000 | 44 | 24 | 2,008 | 4,286 | 0.502 | 1.072 | B | **F(0)** |
| | SB | 2M | 4,000 | 25 | 63 | 3,338 | 2,158 | 0.834 | 0.539 | D | B |
| Riverford Rd. to Prospect Ave. | NB | 2M | 4,000 | 8 | 5 | 2,025 | 4,264 | 0.506 | 1.066 | B | **F(0)** |
| | SB | 2M | 4,000 | 4 | 11 | 3,326 | 2,188 | 0.832 | 0.547 | D | B |
| Prospect Ave. to I-8 | NB | 3M | 6,000 | 8 | 21 | 4,911 | 5,722 | 0.819 | 0.954 | D | **E** |
| | SB | 3M | 6,000 | 17 | 10 | 3,724 | 4,843 | 0.621 | 0.807 | C | D |
| **SR 125** | | | | | | | | | | | |
| Mission Gorge Rd. to Grossmont College Dr. | NB | 3M | 6,000 | 82 | 211 | 2,327 | 2,227 | 0.388 | 0.371 | A | A |
| | SB | 3M | 6,000 | 169 | 99 | 1,693 | 2,941 | 0.282 | 0.490 | A | B |

## TABLE 11-5 (CONTINUED)
## FREEWAY MAINLINE OPERATIONS
## YEAR 2012 WITH SR 52 EXTENDED TO SR 67

| Freeway Segment | Dir. | # of Lanes [a] | Hourly Capacity [b] | ADT [f] | % K [g] | | % D [g] | | Truck Factor [h] | Peak Hour Volume [i] | | V/C [j] | | LOS | | Δ V/C | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | AM | PM | AM | PM | | AM | PM | AM | PM | AM | PM | AM | PM |
| **SR 52** | | | | | | | | | | | | | | | | | |
| West of Mast Blvd. | EB | 3M | 6,000 | 89,100 | 0.061 | 0.065 | 0.320 | 0.699 | 0.974 | 1,786 | 4,124 | 0.298 | 0.687 | A | C | 0.017 | 0.044 |
| | WB | 3M | 6,000 | | 0.061 | 0.065 | 0.680 | 0.301 | | 3,795 | 1,776 | 0.632 | 0.296 | C | A | 0.035 | 0.021 |
| Mast Blvd. to Mission Gorge Rd. | EB | 3M | 6,000 | 79,100 | 0.061 | 0.065 | 0.320 | 0.699 | 0.974 | 1,585 | 3,661 | 0.264 | 0.610 | A | B | 0.001 | 0.003 |
| | WB | 3M | 6,000 | | 0.061 | 0.065 | 0.680 | 0.301 | | 3,369 | 1,577 | 0.561 | 0.263 | B | A | 0.003 | 0.002 |
| Mission Gorge Rd. to Cuyamaca Street | EB | 2M + 1A | 5,200 | 80,000 | 0.055 | 0.065 | 0.320 | 0.610 | 0.974 | 1,446 | 3,232 | 0.278 | 0.621 | A | C | 0.009 | 0.016 |
| | WB | 3M | 6,000 | | 0.055 | 0.065 | 0.680 | 0.390 | | 3,072 | 2,066 | 0.512 | 0.344 | B | A | 0.011 | 0.009 |
| Cuyamaca Street to SR 67 | EB | 3M | 6,000 | 90,000 | 0.056 | 0.067 | 0.250 | 0.615 | 0.974 | 1,294 | 3,807 | 0.216 | 0.635 | A | C | 0.007 | 0.004 |
| | WB | 2M + 1A | 5,200 | | 0.056 | 0.067 | 0.750 | 0.385 | | 3,881 | 2,384 | 0.746 | 0.458 | C | B | 0.004 | 0.010 |
| **SR 67** | | | | | | | | | | | | | | | | | |
| Winter Gardens Ave. to Riverford Rd. | NB | 2M | 4,000 | 72,800 | 0.069 | 0.084 | 0.379 | 0.660 | 0.933 | 2,052 | 4,310 | 0.513 | 1.078 | B | **F(0)** | 0.011 | 0.006 |
| | SB | 2M | 4,000 | | 0.069 | 0.084 | 0.621 | 0.340 | | 3,363 | 2,221 | 0.841 | 0.555 | D | B | 0.006 | 0.016 |
| Riverford Rd. to Prospect Ave. | NB | 2M | 4,000 | 72,100 | 0.069 | 0.084 | 0.379 | 0.660 | 0.933 | 2,033 | 4,269 | 0.508 | 1.067 | B | **F(0)** | 0.002 | 0.001 |
| | SB | 2M | 4,000 | | 0.069 | 0.084 | 0.621 | 0.340 | | 3,330 | 2,199 | 0.833 | 0.550 | D | B | 0.001 | 0.003 |
| Prospect Ave. to I-8 | NB | 3M | 6,000 | 124,500 | 0.065 | 0.079 | 0.568 | 0.542 | 0.933 | 4,919 | 5,743 | 0.820 | 0.957 | D | **E** | 0.001 | 0.004 |
| | SB | 3M | 6,000 | | 0.065 | 0.079 | 0.432 | 0.458 | | 3,741 | 4,853 | 0.624 | 0.809 | C | D | 0.003 | 0.002 |
| **SR 125** | | | | | | | | | | | | | | | | | |
| Mission Gorge Rd. to Grossmont College Dr. | NB | 3M | 6,000 | 64,100 | 0.064 | 0.082 | 0.564 | 0.445 | 0.956 | 2,409 | 2,438 | 0.401 | 0.406 | A | A | 0.014 | 0.035 |
| | SB | 3M | 6,000 | | 0.064 | 0.082 | 0.436 | 0.555 | | 1,862 | 3,040 | 0.310 | 0.507 | A | B | 0.028 | 0.017 |

*Footnotes:*

a. M – Mainline lanes; A – Auxiliary lanes
b. Capacity calculated at 2000 vph per lane and 1200 vph per HOV lane
c. Entire Project Traffic assigned
d. Entire project traffic deducted from the Year 2012 with project traffic volumes
e. V/C = Volume / Capacity factor
f. ADT – Average Daily Traffic volumes form the corresponding SANDAG plot for Year 2010 increased by 2% a year for 2 years.
g. Peak Hour Percentage (K) and Direction Split (D) from CALTRANS "1999 Traffic Volumes", June 2000
h. Truck Factor from "2000 Annual Average Daily Truck Traffic on the California State Highway System", Jan 2002
i. Peak Hour Volume = ((ADT)(K)(D)/Truck Factor)
j. V/C = ((ADT)(K)(D)/Truck Factor/Capacity)

| LOS | V/C |
|---|---|
| A | <0.41 |
| B | 0.62 |
| C | 0.8 |
| D | 0.92 |
| E | 1.00 |
| F(0) | 1.25 |
| F(1) | 1.35 |
| F(2) | 1.45 |
| F(3) | >1.46 |

### 11.7.2 *Freeway Analysis*

*Table 11–5* summarizes the freeway operations for the Year 2012 with SR 52 extended to SR 67 with project traffic condition. As seen in *Table 11-5,* with the addition of 100% of the project traffic, the following operations were calculated:

- **SR 67 between Winter Gardens Avenue and Prospect Avenue**
  LOS F (0) in the northbound direction during the PM peak hour.

- **SR 67 between Prospect Avenue and I-8**
  LOS E in the northbound direction during the PM peak hour.

## 11.8 Year 2012 Without Magnolia Avenue Extension to Cuyamaca Street, with SR 52 Extended to SR 67 and Without Project

Not extending Magnolia Avenue to Cuyamaca Street has no impact on the arterial operations along Mission Gorge Road or the freeway mainline operations along SR 52, SR 67 and SR 125. Hence the results are not repeated.

# 12.0 ACCESS AND OTHER ISSUES

## 12.1 Roundabout Analysis

Two intersections along Fanita Parkway (Ganley Rd /Fanita Pkwy/Santee Lakes Boulevard and Fanita Parkway/Lake Canyon Road) were assessed to determine if the installation of roundabouts is a viable option to improve traffic flow on Fanita Parkway and reduce speed along this section of Fanita Parkway.

The design standards adopted for the roundabout analysis are from "*Roundabouts – An informational Guide",* a publication of the *US Department of Transportation*. There are six basic roundabout categories according to size and environment. Mini-Roundabouts allow a maximum number of one lane entering per approach with a maximum entry speed of 15 mph. The circle diameter of a mini-roundabout can be between 45 ft to 80 ft. Both study area intersections allow these minimum design standards; therefore, mini-roundabout design standards were used for the analysis.

The two potential roundabout intersections were analyzed under AM and PM peak hour conditions for the worst-case scenario (Year 2012 with Total Project). Average vehicle delay and Levels of Service (LOS) were determined based upon the procedures of the *2000 Highway Capacity Manual (HCM),* with the assistance of the *aaSidra* (version 2.1) computer software. As shown in ***Table 12-1***, both the intersections were calculated to operate to LOS A during the AM and PM peak hour conditions with the installation of roundabouts. This analysis indicates that the installation of roundabouts is a viable alternative to installing traffic signals. ***Appendix N*** includes the two intersection analysis sheets for the roundabout analysis.

TABLE 12–1
ROUNDABOUT OPERATIONS

| Intersection | Control Type | Peak Hour | Existing | |
|---|---|---|---|---|
| | | | Delay[a] | LOS[b] |
| Ganley Rd. /Fanita Pkwy. / Santee Lakes Rd. | Roundabout | AM<br>PM | 3.8<br>7.5 | A<br>A |
| Lake Canyon Rd./Fanita Pkwy. | Roundabout | AM<br>PM | 3.4<br>6.4 | A<br>A |

***Footnotes:***

a. Average delay expressed in seconds per vehicle. Overall delay reported for signalized intersections as per procedures of HCM 2000.

b. Level of Service.

ROUNDABOUT

DELAY/LOS THRESHOLDS

| Delay | LOS |
|---|---|
| 0.0 < 10.0 | A |
| 10.1 to 20.0 | B |
| 20.1 to 35.0 | C |
| 35.1 to 55.0 | D |
| 55.1 to 80.0 | E |
| > 80.1 | F |

## 12.2 Project Phasing

As described previously, the project will be accessed by two roadways: Fanita Parkway and the future northward extension of Cuyamaca Street. Fanita Parkway is a Two-Lane Collector in the City of Santee Circulation Element. Cuyamaca Street is classified as a Two Lane Collector north of Mast Boulevard. North of its current terminus, Cuyamaca Street is classified as a Parkway in the City of Santee Circulation Element. A study was conducted to determine the number of units that could be built with:

- The existing Fanita Parkway only and no access to Cuyamaca Street
- Access via Fanita Parkway and Cuyamaca Street but with Cuyamaca Street only built as a Two-Lane Collector

***Table 12-2*** summarizes the calculations to determine the number of units that could be built with each of the above two conditions.

### 12.2.1 *Scenario 1 - Fanita Parkway Only*

This scenario assumes access via Fanita Parkway only. Currently Fanita Parkway is built as a Two-Lane Collector. The total LOS D capacity of Fanita Parkway is 10,900 ADT. The existing daily traffic volume on Fanita Parkway is 1,900 ADT. At LOS D, the remaining available capacity on Fanita Parkway is 9,000 ADT (10,900-1,900). Until Cuyamaca Street is built, all project traffic would need to utilize Fanita Parkway to access the site. Therefore, about 803 EDU (9,000 ADT ÷ 11.2058 ADT / EDU) can be accommodated with Fanita Parkway as the only access.

### 12.2.2 *Scenario 2 - Fanita Parkway + 2-Lane Cuyamaca Street*

This scenario assumes access via Fanita Parkway and Cuyamaca Street as a 2-Lane Collector. The total LOS D capacity of a two-lane Cuyamaca Street is 10,900 ADT. As in the above scenario, the available capacity on Fanita Parkway is 9,000 ADT. The existing daily traffic volume on Cuyamaca Street north of Mast Boulevard is 8,500 ADT. At LOS D, the remaining available capacity on Cuyamaca Street is 2,400 (10,900-8,500). This scenario will accommodate a total of 1,034 units, an additional 231 units over the 803 units in Scenario 1.

The above analyzes were based on the City of Santee table look-up method. An arterial analysis determined that this segment is calculated to operate at LOS D or better. Therefore widening of Cuyamaca Street may not be necessary at this time. However, widening of Cuyamaca Street will still be required in the final phase of the development if further analysis at that time indicates that it is necessary.

TABLE 12-2
PROJECT PHASING

| Roadway | Roadway Classification | LOS D Capacity | Existing ADT | Available Capacity | # of EDU [a] | Utilized Capacity |
|---|---|---|---|---|---|---|
| **Scenario 1 - Fanita Parkway Only** | | | | | | |
| Fanita Parkway | 2 Lane Col | 10,900 | 1,900 | 9,000 | 803 | 9,000 |
| **Scenario 2 - Fanita Parkway + Cuyamaca Street** | | | | | | |
| Fanita Parkway | 2 Lane Col | 10,900 | 1,900 | 9,000 | 816 | 9,000 |
| Cuyamaca Street | 2 Lane Col | 10,900 | 8,500 | 2,400 | 218 | 2,400 |
| **Total Available Capacity** | | | | **11,400** | **1,034** | **11,400** |

*Footnotes:*

a. EDU – Equivalent Dwelling Units. See Section 13.3 for explanation.

## 12.3 Eastward Project Access to SR 67

The alternate of providing a direct access road to SR 67 on the eastern boundary of the site was reviewed. Based on the anticipated trip distribution, about 7% of the project traffic is oriented to the east. Thus, if a direct project access to SR 67 were provided, only about 1,360 ADT would be expected to utilize it. This is not a significant amount of traffic and therefore, from a cost/benefit standpoint, the eastward access to SR 67 is not recommended. In addition, the provision of such a connection would invite "cut-through" traffic through the Fanita community.

## 12.4 Travel Time Study

The proposed project will potentially impact the average travel time along Mast Boulevard and SR 52 during the AM peak hour westbound commute and the PM peak hour eastbound commute. ***Table 12–3*** summarizes the existing amount of time it takes to travel on Mast Boulevard between Magnolia Avenue and SR 52 and on SR 52 between Mast Boulevard and Santo Road. The distance on Mast Boulevard between Magnolia Avenue and SR 52 is approximately 3.11 miles and that on SR 52 between Mast Boulevard and Santo Road is approximately 2.77 miles.

The current travel time was observed by driving twice in the westbound direction during the AM peak hour (6:30 AM and 8:30 AM) from Magnolia Avenue to Santo Road and twice in the eastbound direction during the PM peak hour (4:00 PM and 5:30 PM) from Santo Road to Magnolia Avenue on both November 29th 2005 and November 30th 2005. *Table 12-3* summarizes the recorded travel times on each day for the westbound (during the AM peak hour) and eastbound (during the PM peak hour) directions. ***Appendix O*** contains the individual travel time observations for both the westbound and eastbound directions.

### 12.4.1 *Travel Time – Existing Conditions*

As seen in *Table 12-3*, the average travel time on westbound Mast Boulevard between Magnolia Avenue and SR 52 and on SR 52 between Mast Boulevard and Santo Road under today's conditions is 23 minutes and 39 seconds during the AM peak hour (the peak direction). The average travel time on eastbound SR 52 between Santo Road and Mast Boulevard, and Mast Boulevard between SR 52 and Magnolia Avenue under current conditions is 18 minutes and 0 seconds during the PM peak hour (the peak direction).

This compares with an average travel time of 6 minutes and 42 seconds, driving at the posted speed limit(s) over this entire distance, assuming green at all Mast Boulevard signals and no congestion on SR 52.

**TABLE 12-3**
**TRAVEL TIME OBSERVATIONS**

| Segment | 11/29/2005 | | 11/30/2006 | | Average Travel Time (Minutes) |
|---|---|---|---|---|---|
| | Run #1 | Run #2 | Run #1 | Run #2 | |
| **AM Peak Hour (Westbound)** | | | | | |
| Mast Boulevard from Magnolia Avenue to SR 52 | 8.71 | 11.29 | 9.40 | 17.01 | 11.60 |
| SR 52 from Mast Boulevard to Santo Road | 11.22 | 13.45 | 11.05 | 11.42 | 11.79 |
| **Overall from Magnolia Avenue/Mast Boulevard to Santo Road/SR 52** | **19.93** | **24.74** | **20.45** | **28.43** | **23.39** |
| **PM Peak Hour (Eastbound)** | | | | | |
| SR 52 from Santo Road to Mast Boulevard | 10.26 | 12.30 | 8.48 | 10.92 | 10.49 |
| Mast Boulevard from SR 52 to Magnolia Avenue | 6.56 | 7.75 | 7.47 | 6.64 | 7.11 |
| **Overall from Santo Road/SR 52 to Magnolia Avenue/Mast Boulevard** | **16.82** | **20.05** | **15.95** | **17.56** | **18.00** |

### 12.4.2 *Travel Time – Future Conditions*

For Year 2012, it is assumed that a third westbound lane will be extended from Mast Boulevard to Santo Road. The following methodology was used to estimate the future travel time projections with the entire project and with all proposed mitigation measures implemented (see ***Tables 12-4 & 12-5)***.

*Table 12-4*

1. The distance traveled is listed in column B.
2. The existing *observed* travel time is indicated in column C.
3. The distance traveled was divided by the *observed* travel time to obtain the existing average speed and is indicated in column D.
4. The *calculated* existing travel time (column E) and speed (column F) were obtained from an arterial analysis of Mast Boulevard between SR 52 and Magnolia Avenue (see *Appendix O*).
5. The existing *calculated* speed on SR 52 (column E) was obtained from the Freeway Mainline analysis (see *Appendix O*).
6. The existing travel time on SR 52 based on the *calculated* speed is listed in column F.

7. The existing observed speed and travel time as a percent of the calculated speed and travel time is expressed in terms of percentage in column G.

*Table 12-5*

8. The distance traveled is listed in column B.
9. The existing observed speed and travel time as a percent of the calculated speed and travel time is expressed in terms of percentage in column C.
10. The *calculated* Year 2012 travel time (column D) and speed (column E) were obtained from an arterial analysis of Mast Boulevard between SR 52 and Magnolia Avenue (with entire project and all recommended mitigation measures implemented - see *Appendix O*).
11. The Year 2012 *calculated* speed on SR 52 (column D) was obtained from the Freeway Mainline analysis (with entire project and all recommended mitigation measures implemented - see *Appendix O*).
12. The Year 2012 travel time on SR 52 based on the *calculated* speed is listed in column E.
13. The percent of observed travel time to calculated travel time (column B) was then applied to the calculated travel time (Year 2012) and speed to obtain the estimated Year 2012 travel time and speed (columns F and G).

As seen in *Tables 12-4* and *12-5*, in the Year 2012, the travel time between Magnolia Avenue and Santo Road is estimated to improve from the currently observed about 23 minutes to about 11 minutes in the AM peak hour and from about 18 minutes to about 13 minutes. The overall speed is estimated to **improve** from the currently observed about 20 miles per hour to about 42 miles per hour during the AM peak hour in the westbound direction and from about 26 miles per hour to about 38 miles per hour during the PM peak hour in the eastbound direction. This is largely due to the planned improvements to SR 52.

The Year 2012 condition assumes the following:

- The addition of the entire project traffic
- The extension of the third westbound lane on SR 52 between Mast Boulevard and Santo Road
- Implementation of the recommended project mitigation measures at the Mast Boulevard / SR 52 Eastbound Ramps, Mast Boulevard / SR 52 Westbound Ramps, Mast Boulevard / West Hills Parkway and Mast Boulevard / Cuyamaca Street intersections.

## TABLE 12-4
## EXISTING TRAVEL TIME CALCULATIONS

| Segment | Distance in Miles | Observed | | Calculated | | Observed Speed as a % of calculated Speed |
|---|---|---|---|---|---|---|
| | | Average Travel Time (Minutes) | Speed (mph) | Travel Time (Minutes) | Speed (mph) | |
| A | B | C | D | E | F | G |
| **AM Peak Hour (Westbound)** | | | | | | |
| Mast Boulevard from Magnolia Avenue to SR 52 | 3.32 | 11.60 | 17.2 | 9.67 | 20.60 | 83% |
| SR 52 from Mast Boulevard to Santo Road | 4.56 | 11.79 | 23.2 | 17.1 | 16.00 | 145% |
| **Overall Mast Boulevard/SR 52 from Magnolia Ave to Santo Rd** | **7.88** | **23.39** | **20.2** | **26.77** | **17.66** | **114%** |
| **PM Peak Hour (Eastbound)** | | | | | | |
| SR 52 from Santo Road to Mast Boulevard | 4.56 | 10.49 | 6.1 | 11.26 | 24.30 | 107% |
| Mast Boulevard from SR 52 to Magnolia Avenue | 3.32 | 7.11 | 28.0 | 6.87 | 29.00 | 97% |
| **Overall SR 52/Mast Boulevard from Santo Rd to Magnolia Ave** | **7.88** | **17.60** | **26.9** | **18.13** | **26.08** | **103%** |

## TABLE 12-5
## YEAR 2012 TRAVEL TIME CALCULATIONS

| Segment | Distance in Miles | Observed as a % of calculated Speed | Calculated | | Estimated | |
|---|---|---|---|---|---|---|
| | | | Travel Time (Minutes) | Speed (mph) | Travel Time (Minutes) | Speed (mph) |
| A | B | C | D | E | F | G |
| **AM Peak Hour (Westbound)** | | | | | | |
| Mast Boulevard from Magnolia Avenue to SR 52 | 3.32 | | 8.44 | 23.60 | | |
| SR 52 from Mast Boulevard to Santo Road | 4.56 | | 4.41 | 62.00 | | |
| **Overall Mast Boulevard/SR 52 from Magnolia Ave to Santo Rd** | **7.88** | **114%** | **12.85** | **36.78** | **11.23** | **42.10** |
| **PM Peak Hour (Eastbound)** | | | | | | |
| SR 52 from Santo Road to Mast Boulevard | 4.56 | | 4.41 | 62.00 | | |
| Mast Boulevard from SR 52 to Magnolia Avenue | 3.32 | | 8.27 | 24.10 | | |
| **Overall SR 52/Mast Boulevard from Santo Rd to Magnolia Ave** | **7.88** | **103%** | **11.35** | **37.29** | **12.831** | **38.40** |

# 13.0 SIGNIFICANCE OF IMPACTS AND MITIGATION MEASURES

## 13.1 Significance of Impacts

### 13.1.1 *Year 2010 SR 52 Not Extended East of SR 125 and 50% of the Project*

The following significant impacts were calculated in the Year 2010 without the extension of SR 52 east of SR 125 and with the addition of 50% of the project traffic:

**A. Direct Impacts**

***Intersections***

- El Nopal / Cuyamaca Street
- Mast Boulevard / SR 52 Eastbound Ramps
- Mast Boulevard / SR 52 Westbound Ramps
- Mast Boulevard / West Hills Parkway
- Mast Boulevard / Cuyamaca Street
- Town Center Parkway / Cuyamaca Street
- Mission Gorge Road / Magnolia Avenue
- Beck Drive / Cuyamaca Street

***Arterial Segments***

- There were no arterial segment impacts calculated for this scenario.

***Freeway Segments***

- There were no freeway segment impacts calculated for this scenario.

### 13.1.2 *Year 2010 With SR 52 Extended to Cuyamaca Street and 50% of the Project*

The following significant impacts were calculated in the Year 2010 with SR 52 extended to Cuyamaca Street and with the addition of 50% of the project traffic:

**A. Direct Impacts**

***Intersections***

- Woodglen Vista Drive / Cuyamaca Street
- El Nopal / Cuyamaca Street
- Mast Boulevard / SR 52 Westbound Ramps
- Mast Boulevard / West Hills Parkway
- Mast Boulevard / Cuyamaca Street
- Mission Gorge Road / Magnolia Avenue
- Beck Drive / Cuyamaca Street

***Arterial Segments***

- There were no arterial segment impacts calculated for this scenario.

*Freeway Segments*

- There were no freeway segment impacts calculated for this scenario.

### 13.1.3 *Year 2012 With Magnolia Avenue Extension to Cuyamaca Street, With SR 52 Extended to SR 67 and the Entire Project*

The following significant impacts were calculated in the Year 2012 With Magnolia Avenue Extension to Cuyamaca Street, with SR 52 extended to SR 67 and with the addition of the entire project traffic:

## A. Direct Impacts

*Intersections*

- Woodglen Vista Drive / Cuyamaca Street
- El Nopal / Cuyamaca Street
- Mast Boulevard / SR 52 Westbound Ramps
- Mast Boulevard / West Hills Parkway
- Mast Boulevard / Fanita Parkway
- Mast Boulevard / Cuyamaca Street
- Mission Gorge Road / Cuyamaca Street
- Mission Gorge Road / Magnolia Avenue
- Beck Drive / Cuyamaca Street

*Arterial Segments*

- There were no arterial segment impacts calculated for this scenario.

*Freeway Segments*

- There were no freeway segment impacts calculated for this scenario.

### 13.1.4 *Year 2012 Without Magnolia Avenue Extension to Cuyamaca Street, With SR 52 Extended to SR 67 and the Entire Project*

The following significant impacts were calculated in the Year 2012 Without Magnolia Avenue Extension to Cuyamaca Street, with SR 52 extended to SR 67 and with the addition of the entire project traffic:

## A. Direct Impacts

*Intersections*

- Woodglen Vista Drive / Cuyamaca Street
- El Nopal / Cuyamaca Street
- Mast Boulevard / SR 52 Westbound Ramps
- Mast Boulevard / West Hills Parkway
- Mast Boulevard / Fanita Parkway
- Mast Boulevard / Cuyamaca Street

- Mission Gorge Road / Cuyamaca Street
- Mission Gorge Road / Magnolia Avenue
- Beck Drive / Cuyamaca Street

*Arterial Segments*

- There were no arterial segment impacts calculated for this scenario.

*Freeway Segments*

- There were no freeway segment impacts calculated for this scenario.

### 13.1.5 *Year 2030 With and Without Magnolia Avenue Extension to Cuyamaca Street, With SR 52 Extended to SR 67 and the Entire Project*

No cumulative impacts were calculated for this scenario.

### 13.1.6 *Project Access and Other Issues*

For all scenarios, project related impacts may occur if appropriate mitigation measures are not implemented at the following facilities:

- Princess Joann Road / Cuyamaca Street intersection
- Cuyamaca Street between Mast Boulevard and the Project Entrance
- Fanita Parkway between current north terminus and project entrance
- Project internal streets
- An increase in traffic may result on Princess Joann Road, Woodglen Vista Drive and El Nopal during the AM and PM peak hours if project traffic utilize these roadways.

## 13.2 Mitigation Measures

For easy comprehension, the recommended mitigation measures at the study area intersections only, are summarized in tabular form separately, for each scenario. ***Figure 13-1*** depicts the recommended mitigations in graphical format. ***Appendix P*** contains the mitigated intersection analysis worksheets for all scenarios.

### 13.2.1 *Year 2010 Without the Extension of SR 52 East of SR 125 and 50% of the Project*

***Intersections***

***Table 13-1*** summarizes the recommended mitigation measures for the Year 2010 without SR 52 extension east of SR 125 and 50% of the project traffic. The mitigated delay and LOS are also tabulated.

***Arterial Segments***

There are no significant impacts to the Mission Gorge Road arterial segments and hence no mitigation is required.

***Freeway Segments***

There were no freeway impacts calculated for this scenario; therefore, no mitigation is required.

### 13.2.2 *Year 2010 With SR 52 Extended to Cuyamaca Street and 50% of the Project*

***Intersections***

***Table 13-2*** summarizes the recommended mitigation measures for the Year 2010 with SR 52 extended to Cuyamaca Street and 50% of the project traffic. The mitigated delay and LOS are also tabulated.

***Arterial Segments***

There are no significant impacts to the Mission Gorge Road arterial segments and hence no mitigation is required.

***Freeway Segments***

There were no freeway impacts calculated for this scenario; therefore, no mitigation is required.

## TABLE 13-1
## RECOMMENDED MITIGATION MEASURES
## YEAR 2010 WITHOUT SR 52 EXTENSION EAST OF SR 125

| Intersection | Peak Hour | Without Project | | With 50% Project | | Mitigated [c] | | Recommended Mitigation Measures | Impact Mitigated to Below a Level of Significance? |
|---|---|---|---|---|---|---|---|---|---|
| | | Delay [a] | LOS [b] | Delay [a] | LOS [b] | Delay [a] | LOS [b] | | |
| 8. El Nopal/Cuyamaca St | AM<br>PM | 21.6<br>24.2 | C<br>C | **66.0**<br>**>80.0** | **F**<br>**F** | 32.5<br>24.1 | C<br>C | Install a traffic signal and provide 20 foot-wide curb lanes on Cuyamaca Street. | **Yes** |
| 11. Mast Blvd/SR 52 EB Ramps | PM | **82.3** | **F** | **>100.0** | **F** | 35.5 | D | Provide the following improvements:<br>**SR 52 EB Off-Ramp**: Dedicated dual Left-turn lanes. | **Yes** |
| 12. Mast Blvd/SR 52 WB Ramps | AM<br>PM | **>100.0**<br>**86.9** | **F**<br>**F** | **>100.0**<br>**>100.0** | **F**<br>**F** | 15.3<br>14.5 | B<br>B | Provide the following improvements :<br>**WB Mast Blvd**: a third dedicated right-turn lane<br>**SR 52 WB On-Ramp**: Provide two additional lanes on the ramp up to the future ramp meter location | **Yes** |
| 13. Mast Blvd/West Hills Pkwy | AM<br>PM | **>100.0**<br>**81.0** | **F**<br>**F** | **>100.0**<br>**>100.0** | **F**<br>**F** | 85.2<br>24.1 | F<br>C | Provide the following improvements:<br>**SB Landfill Dwy**: A dedicated left-turn lane, and a second right-turn lane with right-turn overlap phasing<br>**WB Mast Blvd**: One additional through lane with a storage length of 200 feet and required tapers.<br>**NB West Hills Pkwy**: A second Left-turn lane<br>**EB Mast Blvd**: A second Left-turn lane and a third through lane | **Yes** |
| 19. Mast Blvd/ Cuyamaca St | AM<br>PM | 52.9<br>**56.0** | D<br>**E** | **64.8**<br>**63.4** | **E**<br>**E** | 36.8<br>53.4 | D<br>D | Provide a dedicated southbound right-turn lane and a second eastbound left-turn lane | **Yes** |

## TABLE 13-1 (CONTINUED)
## RECOMMENDED MITIGATION MEASURES
## YEAR 2010 WITHOUT SR 52 EXTENSION EAST OF SR 125

| Intersection | Peak Hour | Without Project | | With 50% Project | | Mitigated [c] | | Recommended Mitigation Measures | Impact Mitigated to Below a Level of Significance ? |
|---|---|---|---|---|---|---|---|---|---|
| | | Delay [a] | LOS [b] | Delay [a] | LOS [b] | Delay [a] | LOS [b] | | |
| 25. Town Center Pkwy / Cuyamaca St | PM | **70.1** | **E** | **74.8** | **E** | 44.6 | D | Provide right-turn overlap phasing on Westbound Town Center Parkway. It should be noted that this impact does not occur with the extension of SR 52 to SR 67. | **Yes** |
| 33. Mission Gorge Rd/Town Center Pkwy | PM | **82.1** | **F** | **83.8** | **F** | 49.9 | D | Provide a second Northbound left-turn lane. It should be noted that this impact does not occur with the extension of SR 52 to SR 67. | **Yes** |
| 37. Mission Gorge Rd/Magnolia Ave | AM<br>PM | **69.2**<br>**58.1** | **E**<br>**E** | **72.1**<br>**60.4** | **E**<br>**E** | 51.4<br>50.7 | D<br>D | Contribute a fair share towards providing a third through lane on southbound Magnolia Avenue. It may be noted that this impact is not fully mitigated since the project only contributes a fair share towards the mitigation measure. See *Table 13-6* for mitigation thresholds | **Yes** |
| 53. Beck Drive / Cuyamaca Street | AM<br>PM | **78.0**<br>**50.7** | **F**<br>**F** | **>100.0**<br>**>100.0** | **F**<br>**F** | 24.6<br>23.5 | C<br>C | Install a traffic signal and provide second northbound and southbound through lanes with 20 foot wide curb lanes through this intersection. | **Yes** |

*Footnotes:*

a. Average intersection delay in seconds
b. Level of service
c. Delay and LOS with the implementation of recommended mitigation measures shown for information.

## TABLE 13-2
## RECOMMENDED MITIGATION MEASURES
## YEAR 2010 WITH SR 52 EXTENDED TO CUYAMACA STREET

| Intersection | Peak Hour | Without Project | | With 50% Project | | Mitigated [c] | | Recommended Mitigation Measures | Impact Mitigated to Below a Level of Significance? |
|---|---|---|---|---|---|---|---|---|---|
| | | Delay [a] | LOS [b] | Delay [a] | LOS [b] | Delay [a] | LOS [b] | | |
| 6. Woodglen Vista Dr/Cuyamaca St | PM | 12.4 | B | **57.1** | **F** | 13.0 | C | Install a traffic signal and provide 20 foot-wide curb lanes on Cuyamaca Street. | **Yes** |
| 8. El Nopal/ Cuyamaca St | AM<br>PM | 21.6<br>24.2 | C<br>C | **66.0**<br>**>80.0** | **F**<br>**F** | 18.1<br>17.5 | C<br>C | Install a traffic signal and provide 20 foot-wide curb lanes on Cuyamaca Street. | **Yes** |
| 12. Mast Blvd/SR 52 WB Ramp | AM<br>PM | **>100.0**<br>**90.1** | **F**<br>**F** | **>100.0**<br>**>100.0** | **F**<br>**F** | 19.5<br>14.5 | B<br>B | Provide the following improvements :<br>**WB Mast Blvd**: a third dedicated right-turn lane<br>**SR 52 WB On-Ramp**: Provide two additional lanes on the ramp up to the future ramp meter location | **Yes** |
| 13. Mast Blvd/West Hills Pkwy | AM<br>PM | **>100.0**<br>**86.2** | **F**<br>**F** | **>100.0**<br>**>100.0** | **F**<br>**F** | 72.7<br>24.5 | E<br>C | Provide the following improvements:<br>**SB Landfill Dwy**: A dedicated left -turn lane, and a second right-turn lane with right-turn overlap phasing<br>**WB Mast Blvd**: One additional through lane with a storage length of 200 feet and required tapers.<br>**NB West Hills Pkwy**: A second Left-turn lane<br>**EB Mast Blvd**: A second Left-turn lane and a third through lane | **Yes** |

## TABLE 13-2 (CONTINUED)
## RECOMMENDED MITIGATION MEASURES
## YEAR 2010 WITH SR 52 EXTENDED TO CUYAMACA STREET

| Intersection | Peak Hour | Without Project | | With 50% Project | | Mitigated [c] | | Recommended Mitigation Measures | Impact Mitigated to Below a Level of Significance? |
|---|---|---|---|---|---|---|---|---|---|
| | | Delay [a] | LOS [b] | Delay [a] | LOS [b] | Delay [a] | LOS [b] | | |
| 19. Mast Blvd/ Cuyamaca St | AM | **>100.0** | **F** | **>100.0** | **F** | 52.1 | D | Provide a dedicated southbound right-turn lane and a second eastbound left-turn lane | **Yes** |
| | PM | 51.8 | D | **68.2** | **E** | 44.6 | D | | |
| 37. Mission Gorge Rd/Magnolia Ave | AM | **68.0** | **E** | **71.0** | **E** | 51.7 | D | Contribute a fair share towards providing a third through lane on southbound Magnolia Avenue. It may be noted that this impact is not fully mitigated since the project only contributes a fair share towards the mitigation measure. See *Table 13-6* for mitigation thresholds | **Yes** |
| | PM | **56.1** | **E** | **58.5** | **E** | 50.3 | D | | |
| 53. Beck Drive / Cuyamaca Street | AM | **69.9** | **F** | **>80.0** | **F** | 19.6 | C | Install a traffic signal and provide second northbound and southbound through lanes with 20 foot wide curb lanes through this intersection. | **Yes** |
| | PM | 34.3 | D | **>80.0** | **F** | 17.4 | B | | |

*Footnotes:*

a. Average intersection delay in seconds
b. Level of service
c. Delay and LOS with the implementation of recommended mitigation measures shown for information.

### 13.2.3 *Year 2012 With Magnolia Avenue Extension to Cuyamaca Street, SR 52 Extended to SR 67 and the Entire Project Traffic*

***Intersections***

***Table 13-3*** summarizes the recommended mitigation measures for the Year 2012 with SR 52 extended to SR 67 and the entire project traffic. The mitigated delay and LOS are also tabulated.

***Arterial Segments***

There are no significant impacts to the Mission Gorge Road arterial segments and hence no mitigation is required.

***Freeway Segments***

There were no freeway impacts calculated for this scenario; therefore, no mitigation is required.

### 13.2.4 *Year 2012 Without Magnolia Avenue Extension to Cuyamaca Street, with SR 52 Extended to SR 67 and the Entire Project Traffic*

***Intersections***

***Table 13-4*** summarizes the recommended mitigation measures for the Year 2012 with SR 52 extended to SR 67 and the entire project traffic. The mitigated delay and LOS are also tabulated.

***Arterial Segments***

Although there are no significant impacts to the Mission Gorge Road arterial segments, the recommended intersection mitigations will improve operations along these arterial segments.

***Freeway Segments***

There were no freeway impacts calculated for this scenario; therefore, no mitigation is required.

## TABLE 13-3
## RECOMMENDED MITIGATION MEASURES
## YEAR 2012 WITH SR 52 EXTENDED TO SR 67 WITH MAGNOLIA AVENUE

| Intersection | Peak Hour | Without Project | | With 100% Project | | Mitigated [c] | | Recommended Mitigation Measures | Impact Mitigated to Below a Level of Significance? |
|---|---|---|---|---|---|---|---|---|---|
| | | Delay [a] | LOS [b] | Delay [a] | LOS [b] | Delay [a] | LOS [b] | | |
| 6. Woodglen Vista Dr/Cuyamaca St | PM | 17.4 | B | **>80.0** | **F** | 18.1 | C | Install a traffic signal and provide 20 foot-wide curb lanes on Cuyamaca Street. | **Yes** |
| 8. El Nopal/ Cuyamaca St | AM<br>PM | 30.3<br>37.0 | C<br>E | **>80.0**<br>**>80.0** | **F**<br>**F** | 17.2<br>16.8 | C<br>C | Install a traffic signal and provide 20 foot-wide curb lanes on Cuyamaca Street. | **Yes** |
| 12. Mast Blvd/SR 52 WB Ramp | AM<br>PM | **>100.0**<br>**>100.0** | **F**<br>**F** | **>100.0**<br>**>100.0** | **F**<br>**F** | 16.7<br>15.8 | B<br>B | Provide the following improvements :<br>**WB Mast Blvd**: a third dedicated right-turn lane<br>**SR 52 WB On-Ramp**: Provide two additional lanes on the ramp up to the future ramp meter location | **Yes** |
| 13. Mast Blvd/West Hills Pkwy | AM<br>PM | **>100.0**<br>**88.7** | **F**<br>**F** | **>100.0**<br>**>100.0** | **F**<br>**F** | 78.5<br>25.7 | E<br>C | Provide the following improvements:<br>**SB Landfill Dwy**: A dedicated left -turn lane, and a second right-turn lane with right-turn overlap phasing<br>**WB Mast Blvd**: One additional through lane with a storage length of 200 feet and required tapers.<br>**NB West Hills Pkwy**: A second Left-turn lane<br>**EB Mast Blvd**: A second Left-turn lane and a third through lane | **Yes** |
| 16. Mast Blvd/Fanita Pkwy | AM | 26.0 | C | **60.5** | **E** | 39.9 | D | Provide the following intersection geometry:<br>**SB Fanita Pkwy:** A second right-turn lane | **Yes** |

## TABLE 13-3 (CONTINUED)
## RECOMMENDED MITIGATION MEASURES
## YEAR 2012 WITH SR 52 EXTENDED TO SR 67 WITH MAGNOLIA AVENUE

| Intersection | Peak Hour | Without Project | | With 100% Project | | Mitigated [c] | | Recommended Mitigation Measures | Impact Mitigated to Below a Level of Significance? |
|---|---|---|---|---|---|---|---|---|---|
| | | Delay [a] | LOS [b] | Delay [a] | LOS [b] | Delay [a] | LOS [b] | | |
| 19. Mast Blvd/ Cuyamaca St | AM | 49.0 | D | **66.6** | **E** | 44.9 | D | Provide a dedicated southbound right-turn lane and a second eastbound left-turn lane | **Yes** |
| 34. Mission Gorge Rd/Cuyamaca St | PM | **66.0** | **E** | **69.4** | **E** | 62.0 | E | Contribute a fair share towards providing a dedicated right-turn lane on northbound Cuyamaca Street and restriping the third southbound through lane as a dedicated right-turn lane. It may be noted that this impact is not fully mitigated since the project only contributes a fair share towards the mitigation measure. See *Table 13-6* for mitigation thresholds | **Yes** |
| 37. Mission Gorge Rd/Magnolia Ave | AM | 53.5 | D | **56.4** | **E** | 42.4 | D | Contribute a fair share towards providing a third Through lane on southbound Magnolia Avenue. It may be noted that this impact is not fully mitigated since the project only contributes a fair share towards the mitigation measure. See *Table 13-6* for mitigation thresholds | **Yes** |
| 53. Beck Dr./ Cuyamaca St. | AM<br>PM | **>80.0**<br>**40.4** | **F**<br>**E** | **>80.0**<br>**>80.0** | **F**<br>**F** | 31.9<br>25.6 | C<br>C | Install a traffic signal and provide second northbound and southbound through lanes with 20 foot wide curb lanes through this intersection. | **Yes** |

*Footnotes:*

a. Average intersection delay in seconds
b. Level of service
c. Delay and LOS with the implementation of recommended mitigation measures shown for information.

## TABLE 13-4
## RECOMMENDED MITIGATION MEASURES
## YEAR 2012 WITH SR 52 EXTENDED TO SR 67 WITHOUT MAGNOLIA AVENUE

| Intersection | Peak Hour | Without Project | | With 100% Project | | Mitigated [c] | | Recommended Mitigation Measures | Impact Mitigated to Below a Level of Significance? |
|---|---|---|---|---|---|---|---|---|---|
| | | Delay [a] | LOS [b] | Delay [a] | LOS [b] | Delay [a] | LOS [b] | | |
| 6. Woodglen Vista Dr/Cuyamaca St | AM<br>PM | 13.8<br>17.4 | B<br>B | **47.5**<br>**>80.0** | **E**<br>**F** | 19.5<br>27.2 | C<br>C | Install a traffic signal and provide 20 foot-wide curb lanes on Cuyamaca Street. | **Yes** |
| 8. El Nopal/ Cuyamaca St | AM<br>PM | 30.3<br>**37.0** | C<br>E | **>80.0**<br>**>80.0** | **F**<br>**F** | 23.9<br>31.3 | C<br>C | Install a traffic signal and provide 20 foot-wide curb lanes on Cuyamaca Street. | **Yes** |
| 12. Mast Blvd/SR 52 WB Ramp | AM<br>PM | **>100.0**<br>**>100.0** | **F**<br>**F** | **>100.0**<br>**>100.0** | **F**<br>**F** | 16.7<br>15.8 | B<br>B | Provide the following improvements :<br>**WB Mast Blvd**: a third dedicated right-turn lane<br>**SR 52 WB On-Ramp**: Provide two additional lanes on the ramp up to the future ramp meter location | **Yes** |
| 13. Mast Blvd/West Hills Pkwy | AM<br>PM | **>100.0**<br>**88.7** | **F**<br>**F** | **>100.0**<br>**>100.0** | **F**<br>**F** | 78.5<br>25.7 | E<br>C | Provide the following improvements:<br>**SB Landfill Dwy**: A dedicated left -turn lane, and a second right-turn lane with right-turn overlap phasing<br>**WB Mast Blvd**: One additional through lane with a storage length of 200 feet and required tapers.<br>**NB West Hills Pkwy**: A second Left-turn lane<br>**EB Mast Blvd**: A second Left-turn lane and a third through lane | **Yes** |
| 16. Mast Blvd/Fanita Pkwy | AM | 26.0 | C | **60.5** | **E** | 39.9 | D | Provide the following intersection geometry:<br>**SB Fanita Pkwy:** A second right-turn lane | **Yes** |

## TABLE 13-4 (CONTINUED)
## RECOMMENDED MITIGATION MEASURES
## YEAR 2012 WITH SR 52 EXTENDED TO SR 67 WITHOUT MAGNOLIA AVENUE

| Intersection | Peak Hour | Without Project | | With 100% Project | | Mitigated [c] | | Recommended Mitigation Measures | Impact Mitigated to Below a Level of Significance? |
|---|---|---|---|---|---|---|---|---|---|
| | | Delay [a] | LOS [b] | Delay [a] | LOS [b] | Delay [a] | LOS [b] | | |
| 19. Mast Blvd/ Cuyamaca St | AM | 49.0 | D | **66.6** | **E** | 44.9 | D | Provide a dedicated southbound right-turn lane and a second eastbound left-turn lane | **Yes** |
| 34. Mission Gorge Rd/Cuyamaca St | PM | **66.0** | **E** | **69.4** | **E** | 62.0 | E | Contribute a fair share towards providing a dedicated right-turn lane on northbound Cuyamaca Street and restriping the third southbound through lane as a dedicated right-turn lane. It may be noted that this impact is not fully mitigated since the project only contributes a fair share towards the mitigation measure. See *Table 13-6* for mitigation thresholds | **Yes** |
| 37. Mission Gorge Rd/Magnolia Ave | AM | 53.5 | D | **56.4** | **E** | 42.4 | D | Contribute a fair share towards providing a third Through lane on southbound Magnolia Avenue. It may be noted that this impact is not fully mitigated since the project only contributes a fair share towards the mitigation measure. See *Table 13-6* for mitigation thresholds | **Yes** |
| 53. Beck Dr. / Cuyamaca St. | AM<br>PM | **>80.0**<br>**40.4** | **F**<br>**E** | **>80.0**<br>**>80.0** | **F**<br>**F** | 31.9<br>25.6 | C<br>C | Install a traffic signal and provide second northbound and southbound through lanes with 20 foot wide curb lanes through this intersection. | **Yes** |

*Footnotes:*

a. Average intersection delay in seconds
b. Level of service
c. Delay and LOS with the implementation of recommended mitigation measures shown for information.

### 13.2.5 *Year 2030 (With and Without Magnolia Avenue Extension to Cuyamaca Street)*

No impacts are calculated and hence no mitigation measures are required.

### 13.2.6 *Project Access*

- **Princess Joann Road / Cuyamaca Street Intersection** - Provide the following geometry:

  *Southbound on Cuyamaca Street* - One Left-turn lane, one Through lane and one shared Through/Right lane,
  *Westbound on Princess Joann Road* - Shared left/through/right lane,
  *Northbound on Cuyamaca Street* - One Left-turn lane, one Through lane and one shared Through/Right lane,
  *Eastbound on Princess Joann Road* - Shared left/through/right lane.

- **Cuyamaca Street between Mast Boulevard and the Project Entrance** – Construct / Widen Cuyamaca Street as follows:

  *Mast Boulevard to North of Beck Drive* - Widen the current two-lane section of Cuyamaca Street between Beck Drive and Mast Boulevard to City of Santee Four-Lane Major Road Standards.

  *North of Beck Drive to current north Terminus of Cuyamaca Street* – No widening is required in the near-term. However, widening the current two-lane section of Cuyamaca Street to City of Santee Four-Lane Major Road Standards may be required in the final phase of the project if further analysis at that time indicates that it is necessary.

  *Current north Terminus of Cuyamaca Street to Project Site* – Construct Cuyamaca Street to a City of Santee Two-Lane Parkway standards.

- **Fanita Parkway between Current North Terminus to Project Entrance -** Construct new sections of Fanita Parkway between Ganley Road and Project Entrance to City of Santee Parkway standards.

- **Project Internal Streets -** Construct internal streets to the satisfaction of the City Engineer.

- **Princess Joann Road, Woodglen Vista Drive and El Nopal -** "Cut-through" traffic on Princess Joann Road, Woodglen Vista Drive and El Nopal may result from project traffic. If a documented "cut-through" problem occurs on these roads, then implementation of peak period turn prohibitions may be required.

## 13.3 Year 2030 Potential Segment Impacts

The Year 2030 segment analysis indicates that with the addition of project traffic, the project has potential impacts on the following segments:

- Mast Boulevard between SR-52 Westbound Ramps and West Hills Parkway

- Fanita Parkway between Lake Canyon Road and Mast Boulevard
- Carlton Hills Boulevard between River Park Drive and Town Center Parkway
- Cuyamaca Street between River Park Drive and Town Center Parkway
- Magnolia Avenue between Civic Center Drive and Mission Gorge Road

However, an arterial analysis on Mast Boulevard, a Two-Lane Highway analysis on Fanita Parkway and peak hour intersection analysis at the intersections on either end of the last three segments listed indicate that the project has no significant impact on any of these segments in the Year 2030.

## 13.4 Travel Time Analysis

A travel time analysis on Mast Boulevard between Magnolia Avenue and SR-52 and on SR 52 from Mast Boulevard to Santo Road indicates that with the implementation of all planned and recommended network improvements, and with the addition of all Fanita Project traffic, the travel time is estimated to improve over the currently observed travel time for the corresponding distance.

## 13.5 Year 2030 Without Magnolia Avenue Extension to Cuyamaca Street With Entire Project and Cuyamaca Street as a Two-Lane Collector Street

Year 2030 analyses indicates that with Cuyamaca Street as a 2-Lane Collector street, all intersections on Cuyamaca Street north of Mast Boulevard are calculated to operate at acceptable levels of service, if signalized. Segment analysis indicates potential impacts on the segments of Cuyamaca Street north of Beck Drive. However, an arterial analysis of Cuyamaca Street indicates acceptable arterial operations of LOS C.

## 13.6 Ramp Meter Analysis

If the standard requirement of 1 HOV and 2 SOV lanes are provided on the Westbound SR 52 on-Ramp at Mast Boulevard, Queues of 423 vehicles during the AM peak hour with delays of 31 minutes are calculated on Mast Boulevard. In addition, the Westbound SR 52 on-Ramp / Mast Boulevard intersection is calculated to operate at LOS F during the AM peak hour.

However, if the recommended mitigation of widening the on-ramp to 3 SOV lanes is implemented, the queues are calculated to reduce to 84 vehicles on Mast Boulevard during the AM peak hour with delays of 7 minutes. With this mitigation, the Westbound SR 52 on-Ramp / Mast Boulevard intersection is calculated to operate at LOS B during the AM peak hour

## 13.7 Mitigation Threshold Analysis

### 13.7.1 *Equivalent Dwelling Units*

The project includes residential and non-residential developments. In order to determine the time frame for when each mitigation measure is needed, the development was converted to "Equivalent Dwelling Units (EDU)". The average trip rate (Total Residential ADT / Total Residential Units equals weighted average trip rate; 15,464 / 1,380 equals 11.2058) was calculated. Using this rate, the EDUs for each phase was calculated as shown in ***Table 13-5*** below. As seen in *Table 13-5*, the

total residential EDUs are 1,380 and the total non-residential EDUs are 296 EDUs (98 EDUs for Parks and Recreation and 198 EDUs for the Village Center).

**TABLE 13-5**
**EQUIVALENT DWELLING UNIT CALCULATION**

| Land Use | Quantity | | Daily Trip Ends (ADT) [a] | | EDUs |
|---|---|---|---|---|---|
| | | | Rate [b] | Volume | |
| **RESIDENTIAL** | | | | | |
| **Estate Homes** | | | | | |
| Rock Point | 399 | DU | 12 /DU | 4,788 | 427 |
| Oak View | 65 | DU | 12 /DU | 780 | 70 |
| Oak View | 96 | DU | 12 /DU | 1,152 | 103 |
| Sycamore | 268 | DU | 10 /DU | 2,680 | 239 |
| Sycamore | 195 | DU | 10 /DU | 1,950 | 174 |
| Sage Hill | 85 | DU | 10 /DU | 850 | 76 |
| Sage Hill | 272 | DU | 12 /DU | 3,264 | 291 |
| **Subtotal Residential** | **1,380** | **DU** | | **15,460** | **1,380** |
| **NON-RESIDENTIAL** | | | | | |
| **Recreation Areas** | | | | | |
| Active | 17.5 | Acres | 50 /Acre | 875 | 78 |
| Passive Parks | 44.1 | Acres | 5 /Acre | 221 | 20 |
| **Total Recreation Areas** | | | | **1,096** | **98** |
| **Village Center** | | | | | |
| Offices | 6,408 | SF | 20 /KSF | 128 | 11 |
| Community Center | 22,686 | SF | 30 /KSF | 681 | 61 |
| The Inn | 22 | Rooms | 7 /Room | 154 | 14 |
| Artisan Cottages (39,000 SF) | 15 | Cottages | 12 /Cottage | 180 | 16 |
| Nursery | 12,618 | SF | 40 /KSF | 505 | 45 |
| Retail | 13,310 | SF | 40 /KSF | 532 | 48 |
| Chapel | 4,508 | SF | 9 /KSF | 41 | 4 |
| **Subtotal Village Center** | | | | **2,220** | **198** |
| **Subtotal Non-Residential** | | | | **3,310** | **296** |
| **Total Fanita Ranch** | | | | **18,770** | **1,676** |

### 13.7.2 *Mitigation Thresholds*

***Table 13-6*** summarizes the number of units that can be built before a significant impact would occur. It may be noted that the mitigation measures at the Cuyamaca Street / Princess Joann Road and Cuyamaca Street / Beck Drive intersections should be implemented prior to the construction of the first unit upon completing the extension of Cuyamaca Street from its current terminus to the project site.

**TABLE 13-6**
**MITIGATION THRESHOLDS**
**YEAR 2012 WITH SR 52 EXTENDED TO SR 67 WITH THE ENTIRE PROJECT TRAFFIC**

| Intersection | Unit Threshold (EDU [a]) |
|---|---|
| 4. Princess Joann Rd/Cuyamaca St | 0 EDU [b] |
| 6. Woodglen Vista Dr/Cuyamaca St | 1,240 EDU |
| 8. El Nopal/ Cuyamaca St | 410 EDU |
| 12. Mast Blvd/SR 52 WB Ramp | 170 EDU |
| 13. Mast Blvd/West Hills Pkwy | 170 EDU |
| 16. Mast Blvd/Fanita Pkwy | 1,570 EDU |
| 19. Mast Blvd/ Cuyamaca St | 1,570 EDU |
| 34. Mission Gorge Rd/Cuyamaca St | 830 EDU |
| 37. Mission Gorge Rd/Magnolia Ave | 830 EDU |
| 53. Beck Dr./ Cuyamaca St. | 0 EDU [b] |

*Footnotes:*

a. EDU – Equivalent Dwelling Unit. See *Table 13-4* for explanation.

b. Prior to the addition of the first unit when Cuyamaca Street is extended to the project.

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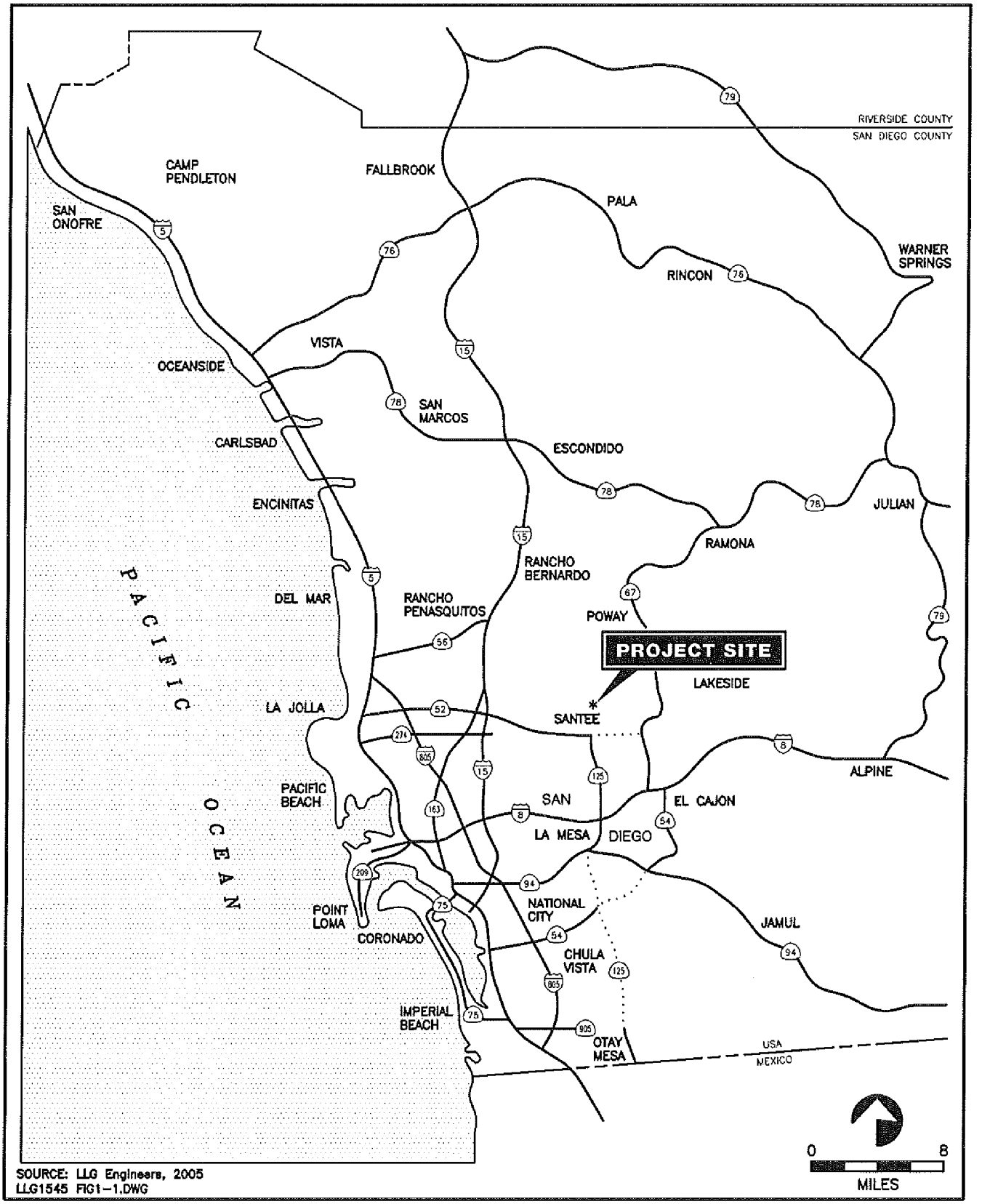
# FIGURES




SOURCE: LLG Engineers, 2005
LLG1545 FIG1-1.DWG

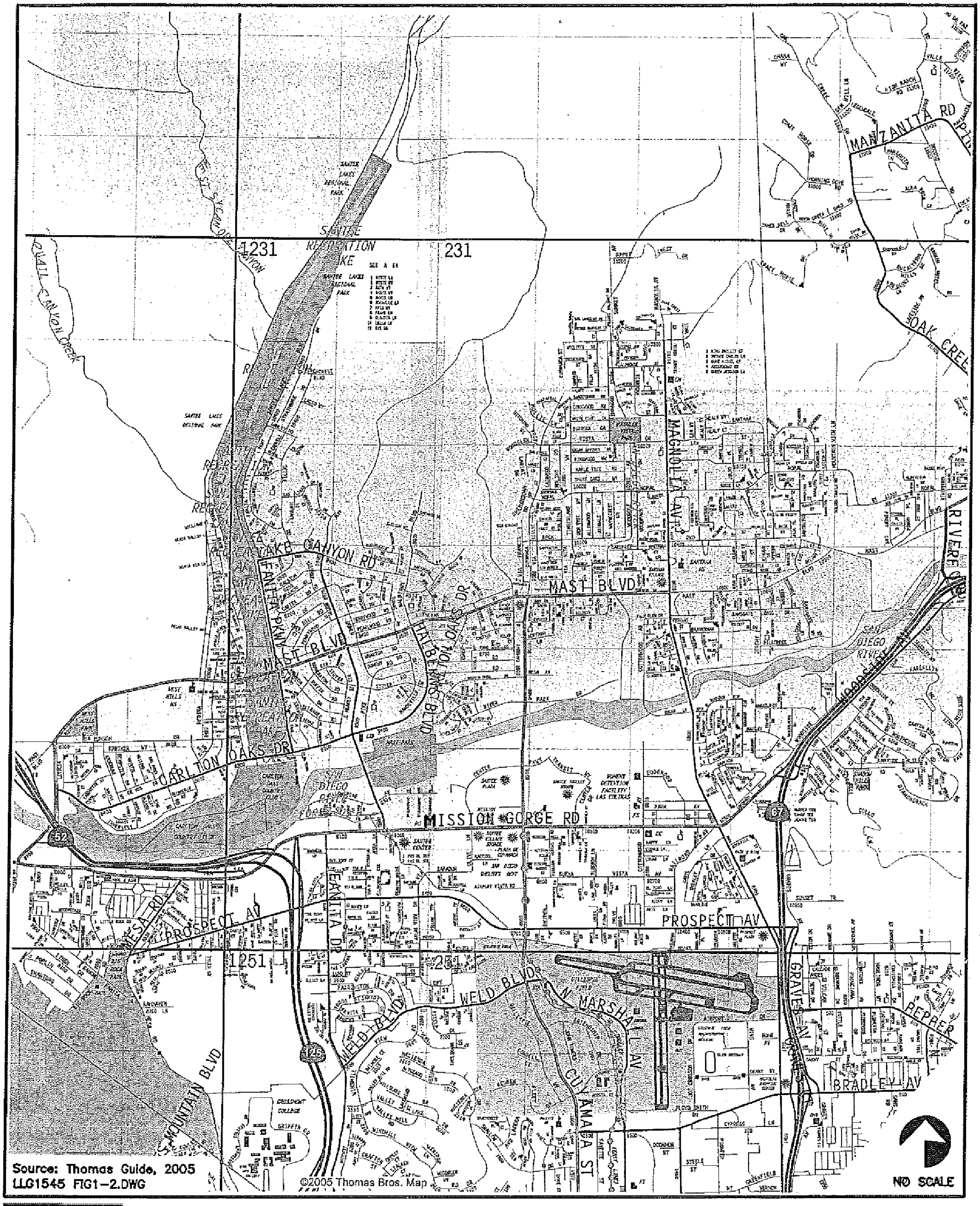
LINSCOTT LAW & GREENSPAN engineers

# Figure 1-1

## VICINITY MAP

Fanita

018660




LINSCOTT LAW & GREENSPAN engineers

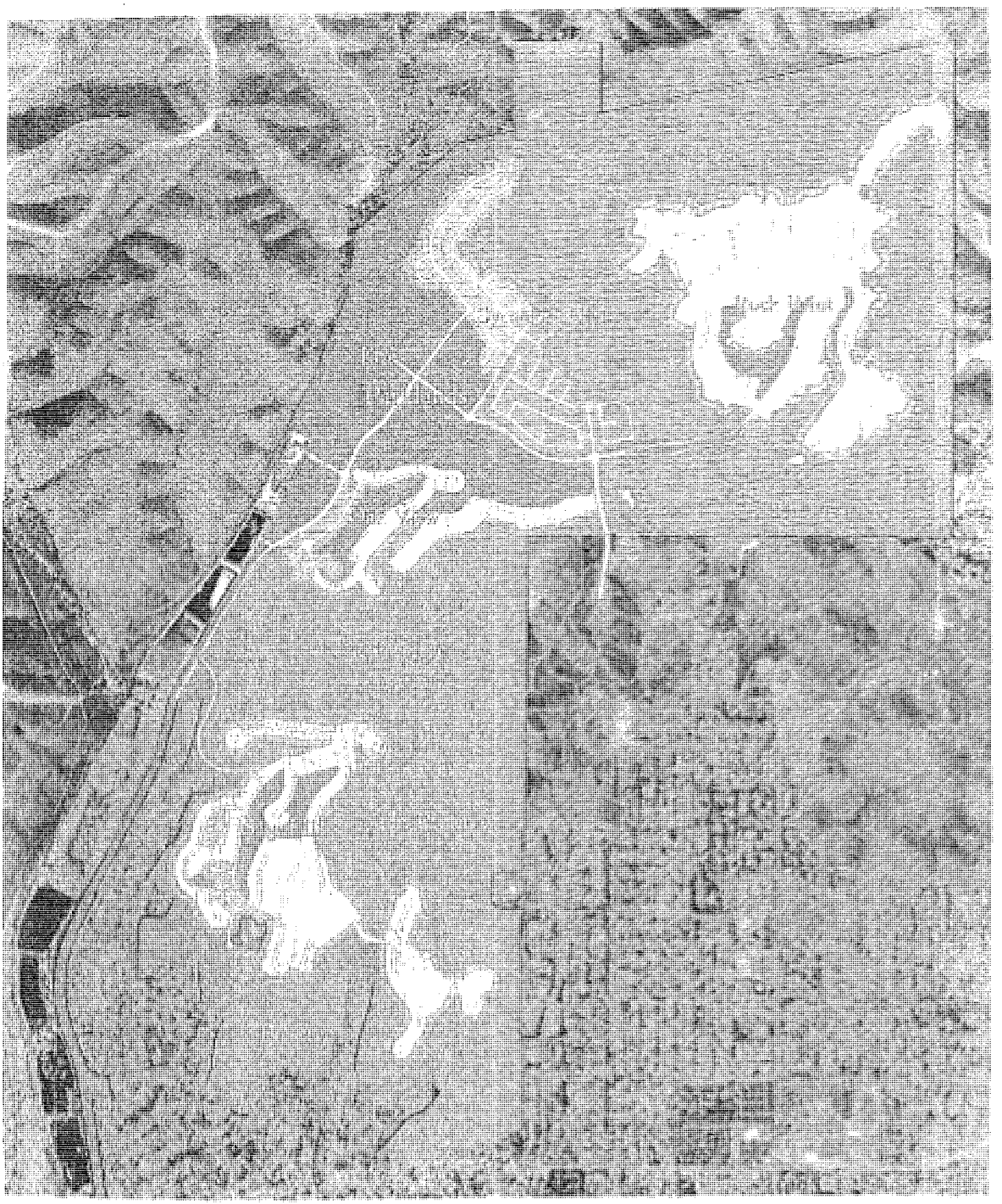
# Figure 1-2

**PROJECT AREA MAP**



Fanita

018661



LLG1545 FIG2-1.DWG

NO SCALE

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# Figure 2-1

## CONCEPTUAL SITE PLAN



Fenita

018662

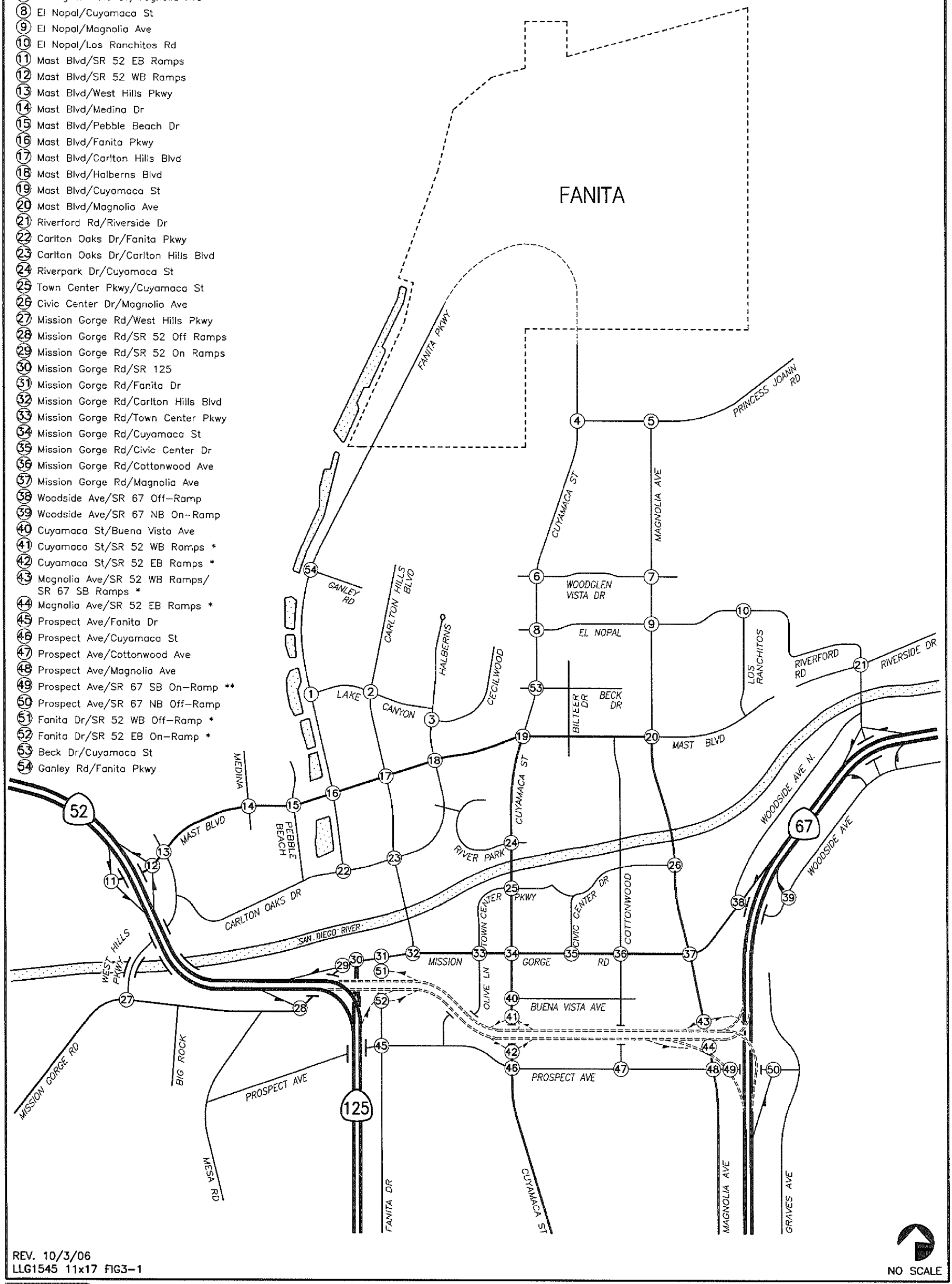
**Study Area Intersections**

1. Lake Canyon Rd/Fanita Pkwy
2. Carlton Hills Blvd/Lake Canyon Rd
3. Cecilwood Dr/Halberns Blvd
4. Princess Joann Rd/Cuyamaca St *
5. Princess Joann Rd/Magnolia Ave
6. Woodglen Vista Dr/Cuyamaca St
7. Woodglen Vista Dr/Magnolia Ave
8. El Nopal/Cuyamaca St
9. El Nopal/Magnolia Ave
10. El Nopal/Los Ranchitos Rd
11. Mast Blvd/SR 52 EB Ramps
12. Mast Blvd/SR 52 WB Ramps
13. Mast Blvd/West Hills Pkwy
14. Mast Blvd/Medina Dr
15. Mast Blvd/Pebble Beach Dr
16. Mast Blvd/Fanita Pkwy
17. Mast Blvd/Carlton Hills Blvd
18. Mast Blvd/Halberns Blvd
19. Mast Blvd/Cuyamaca St
20. Mast Blvd/Magnolia Ave
21. Riverford Rd/Riverside Dr
22. Carlton Oaks Dr/Fanita Pkwy
23. Carlton Oaks Dr/Carlton Hills Blvd
24. Riverpark Dr/Cuyamaca St
25. Town Center Pkwy/Cuyamaca St
26. Civic Center Dr/Magnolia Ave
27. Mission Gorge Rd/West Hills Pkwy
28. Mission Gorge Rd/SR 52 Off Ramps
29. Mission Gorge Rd/SR 52 On Ramps
30. Mission Gorge Rd/SR 125
31. Mission Gorge Rd/Fanita Dr
32. Mission Gorge Rd/Carlton Hills Blvd
33. Mission Gorge Rd/Town Center Pkwy
34. Mission Gorge Rd/Cuyamaca St
35. Mission Gorge Rd/Civic Center Dr
36. Mission Gorge Rd/Cottonwood Ave
37. Mission Gorge Rd/Magnolia Ave
38. Woodside Ave/SR 67 Off-Ramp
39. Woodside Ave/SR 67 NB On-Ramp
40. Cuyamaca St/Buena Vista Ave
41. Cuyamaca St/SR 52 WB Ramps *
42. Cuyamaca St/SR 52 EB Ramps *
43. Magnolia Ave/SR 52 WB Ramps/ SR 67 SB Ramps *
44. Magnolia Ave/SR 52 EB Ramps *
45. Prospect Ave/Fanita Dr
46. Prospect Ave/Cuyamaca St
47. Prospect Ave/Cottonwood Ave
48. Prospect Ave/Magnolia Ave
49. Prospect Ave/SR 67 SB On-Ramp **
50. Prospect Ave/SR 67 NB Off-Ramp
51. Fanita Dr/SR 52 WB Off-Ramp *
52. Fanita Dr/SR 52 EB On-Ramp *
53. Beck Dr/Cuyamaca St
54. Ganley Rd/Fanita Pkwy

NOTE:

* – Future Intersections

** – Will be removed in the future with the extension of SR 52




REV. 10/3/06
LLG1545 11x17 FIG3-1

NO SCALE

LINSCOTT LAW & GREENSPAN engineers

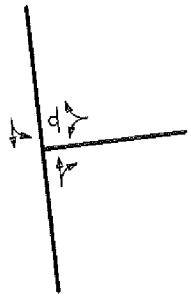
# Figure 3-1

## STUDY AREA MAP

Fanita

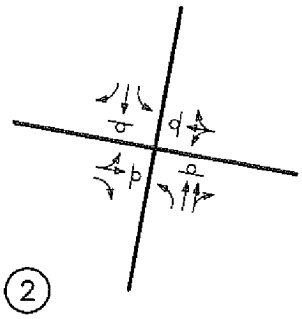
018663

LAKE CANYON RD/
FANITA PARKWAY



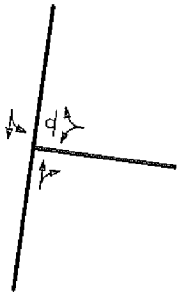
1

LAKE CANYON RD/
CARLTON HILLS BLVD



2

CECILWOOD DR/
HALBERNS BLVD



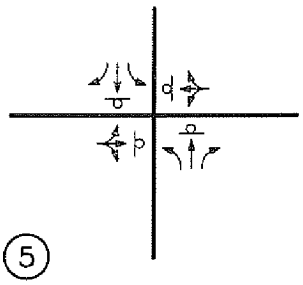
3

PRINCESS JOANN RD/
CUYAMACA ST

DOES NOT EXIST

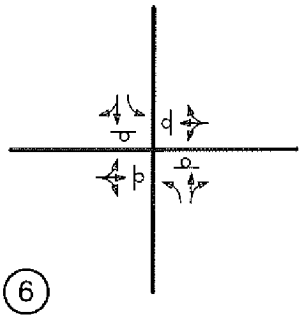
4

PRINCESS JOANN RD/
MAGNOLIA AVE



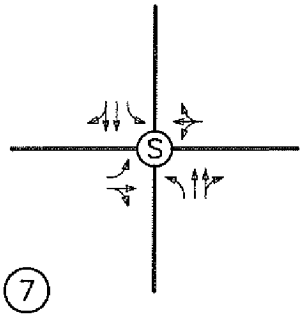
5

WOODGLEN VISTA DR/
CUYAMACA ST



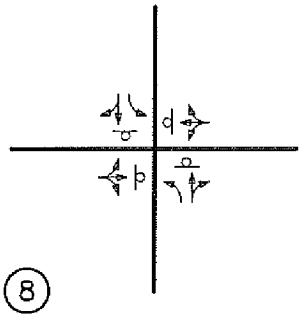
6

WOODGLEN VISTA DR/
MAGNOLIA AVE



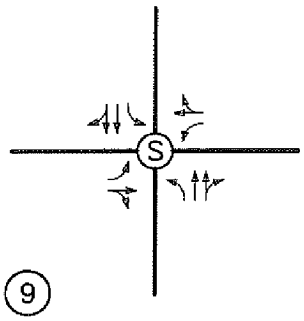
7

EL NOPAL/
CUYAMACA ST



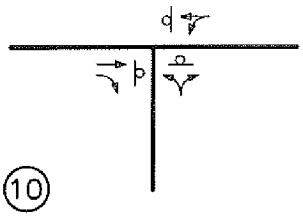
8

EL NOPAL/
MAGNOLIA AVE



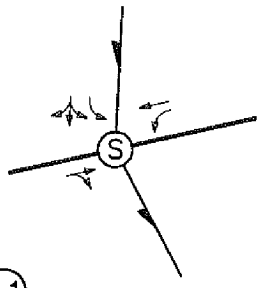
9

EL NOPAL/
LOS RANCHITOS RD



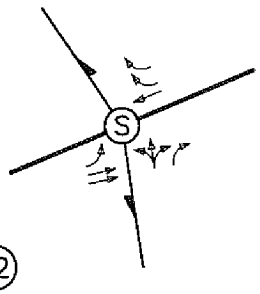
10

MAST BLVD/
SR 52 EB RAMP



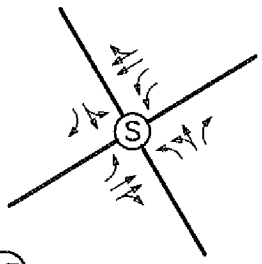
11

MAST BLVD/
SR 52 WB RAMP



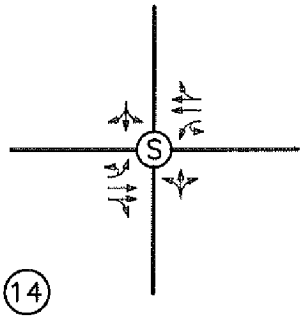
12

MAST BLVD/
WEST HILLS BLVD



13

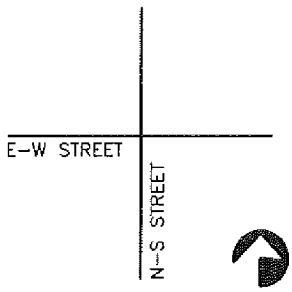
MAST BLVD/
MEDINA BLVD



14

NOTES:

- AM/PM Peak hour volumes are shown at the intersections
- EAST–WEST STREET/ NORTH–SOUTH STREET




LEGEND

(S) – Traffic Signal

NO SCALE

LINSCOTT LAW & GREENSPAN engineers

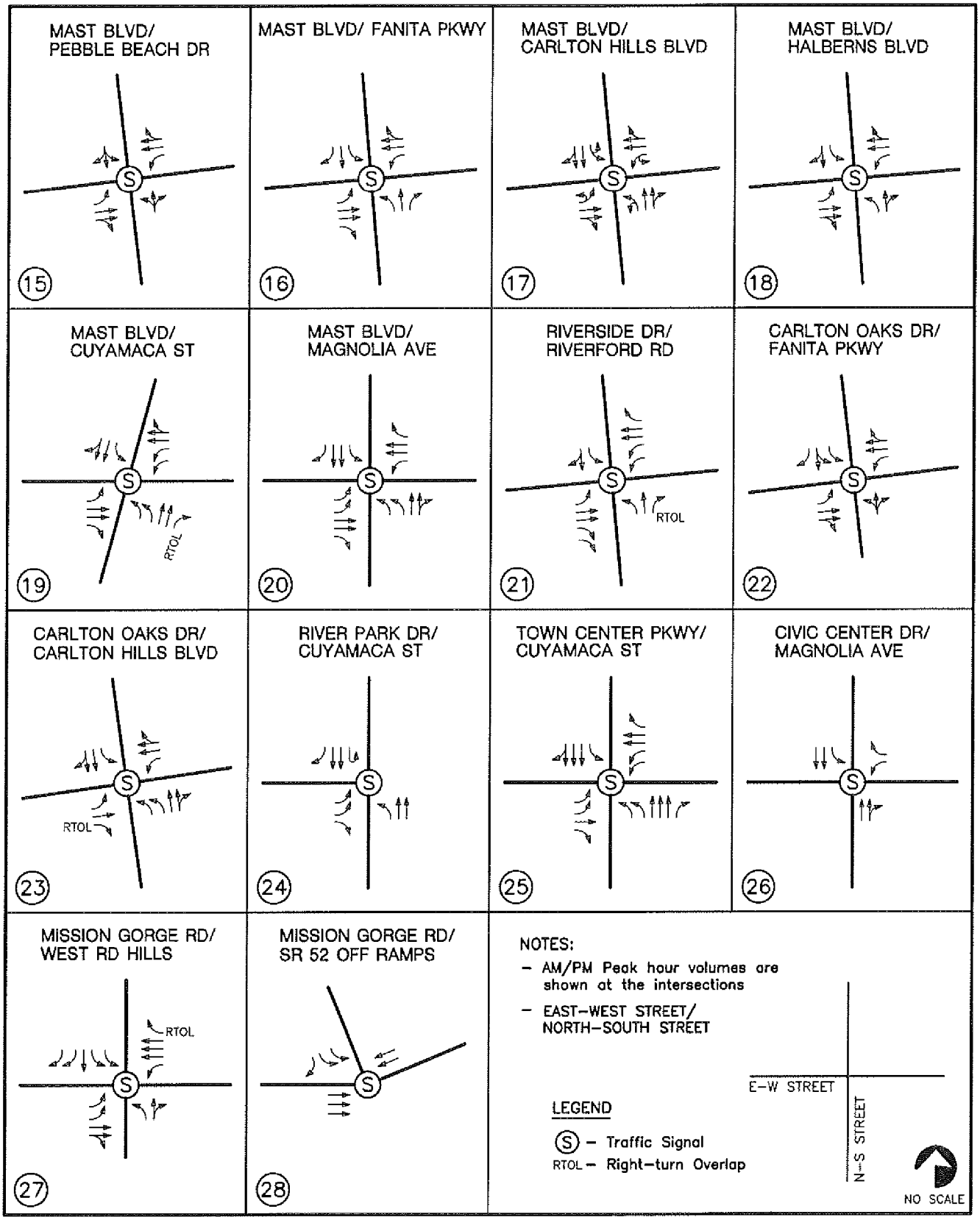
REV. 10/24/06
LLG1545 FIG3–2.DWG

# Figure 3-2

(1 OF 4)

## EXISTING INTERSECTION GEOMETRY

**Fanita**




LINSCOTT LAW & GREENSPAN engineers

REV. 10/24/08
LLG1545 FIG3-2.DWG

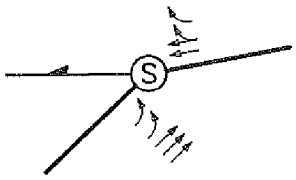
# Figure 3-2

(2 OF 4)

## EXISTING INTERSECTION GEOMETRY

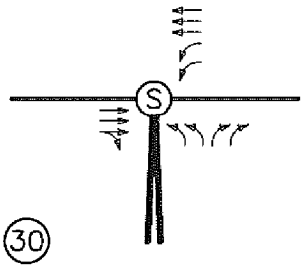
Fanita

MISSION GORGE RD/
SR 52 ON RAMPS



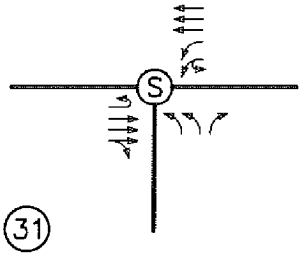

29

MISSION GORGE RD/
SR 125



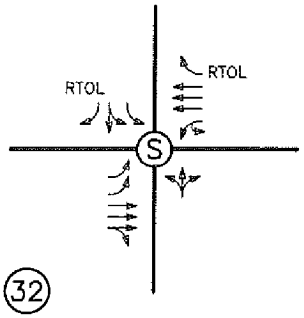

30

MISSION GORGE RD/
FANITA DR



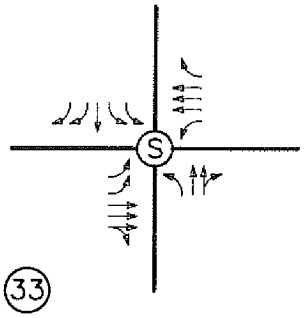

31

MISSION GORGE RD/
CARLTON HILLS BLVD



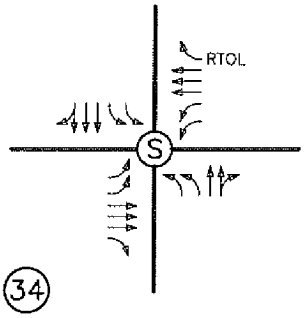

32

MISSION GORGE RD/
TOWN CENTER PKWY



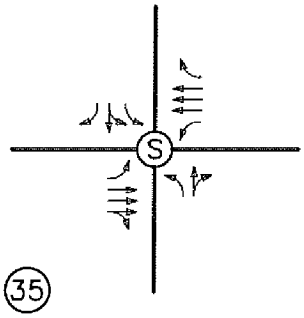

33

MISSION GORGE RD/
CUYAMACA ST



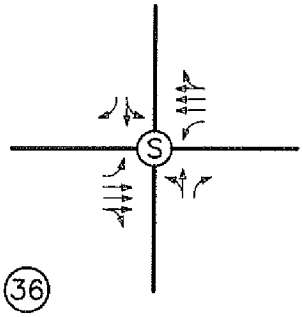

34

MISSION GORGE RD/
CIVIC CENTER DR



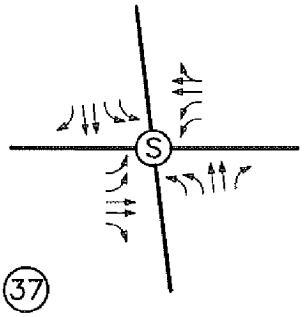

35

MISSION GORGE RD/
COTTONWOOD AVE



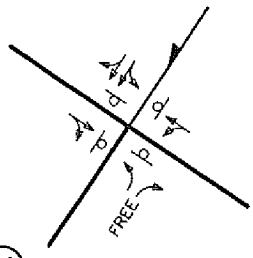

36

MISSION GORGE RD/
MAGNOLIA AVE



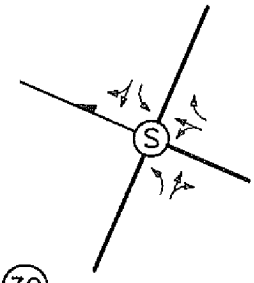

37

WOODSIDE AVE/
SR 67 OFF-RAMP



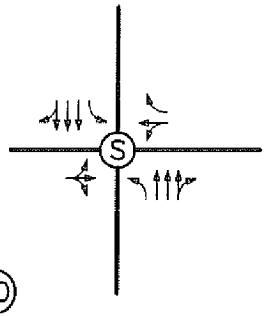

38

WOODSIDE AVE/
SR 67 NB ON-RAMP




39

BUENA VISTA AVE/
CUYAMACA ST




40

SR 52 WB RAMPS/
CUYAMACA ST

DOES NOT EXIST

41

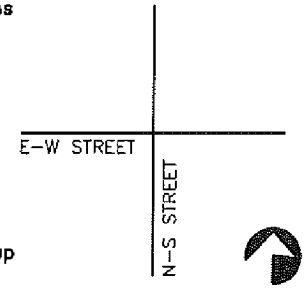
SR 52 EB RAMPS/
CUYAMACA ST

DOES NOT EXIST

42

NOTES:

- AM/PM Peak hour volumes are shown at the intersections
- EAST–WEST STREET/ NORTH–SOUTH STREET




LEGEND

(S) – Traffic Signal
RTOL – Right–turn Overlap

NO SCALE

LINSCOTT LAW & GREENSPAN engineers

REV. 4/19/06
LLG1545 FIG3-2.DWG

# Figure 3-2

(3 OF 4)

## EXISTING INTERSECTION GEOMETRY

Fanita

SR 52 WB RAMPS/
MAGNOLIA AVE/
SR 67 SB RAMPS

DOES NOT EXIST

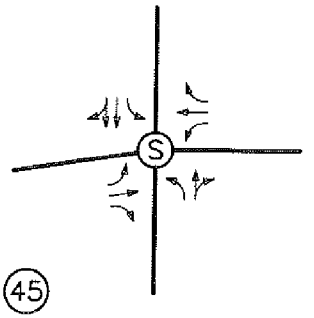
(43)

SR 52 EB RAMPS/
MAGNOLIA AVE

DOES NOT EXIST

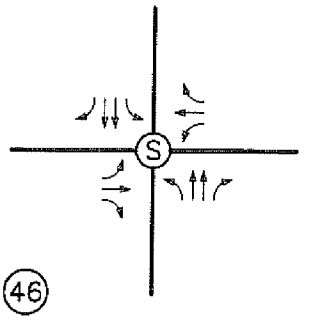
(44)

PROSPECT AVE/
FANITA DR



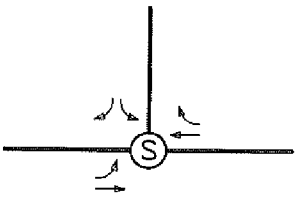

(45)

PROSPECT AVE/
CUYAMACA ST



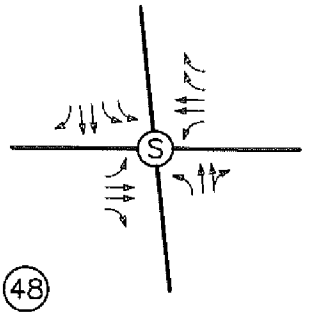

(46)

PROSPECT AVE/
COTTONWOOD ST



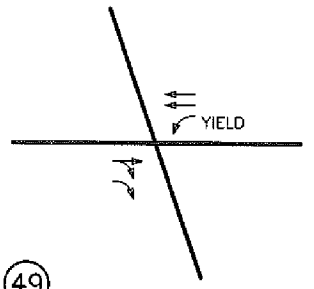

(47)

PROSPECT AVE/
MAGNOLIA AVE



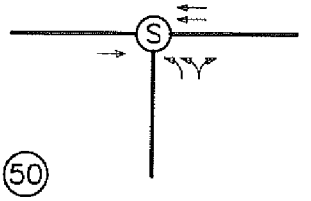

(48)

PROSPECT AVE/
SR 67 SB ON-RAMP




(49)

PROSPECT AVE/
SR 67 NB OFF-RAMP




(50)

WB OFF-RAMP/
SR 52/ FANITA DR

DOES NOT EXIST

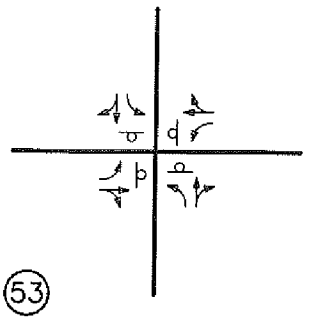
(51)

EB ON-RAMP/
SR 52/ FANITA DR

DOES NOT EXIST

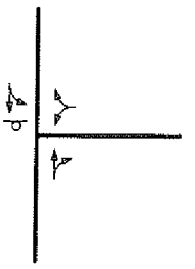
(52)

BECK DR/
CUYAMACA ST



(53)

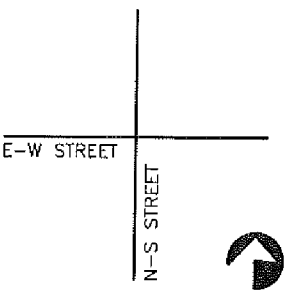
GANLEY RD/
FANITA PKWY/
SANTEE LAKES RD



(54)

NOTES:

- AM/PM Peak hour volumes are shown at the intersections
- EAST–WEST STREET/ NORTH–SOUTH STREET




LEGEND

(S) – Traffic Signal

NO SCALE

LINSCOTT LAW & GREENSPAN engineers

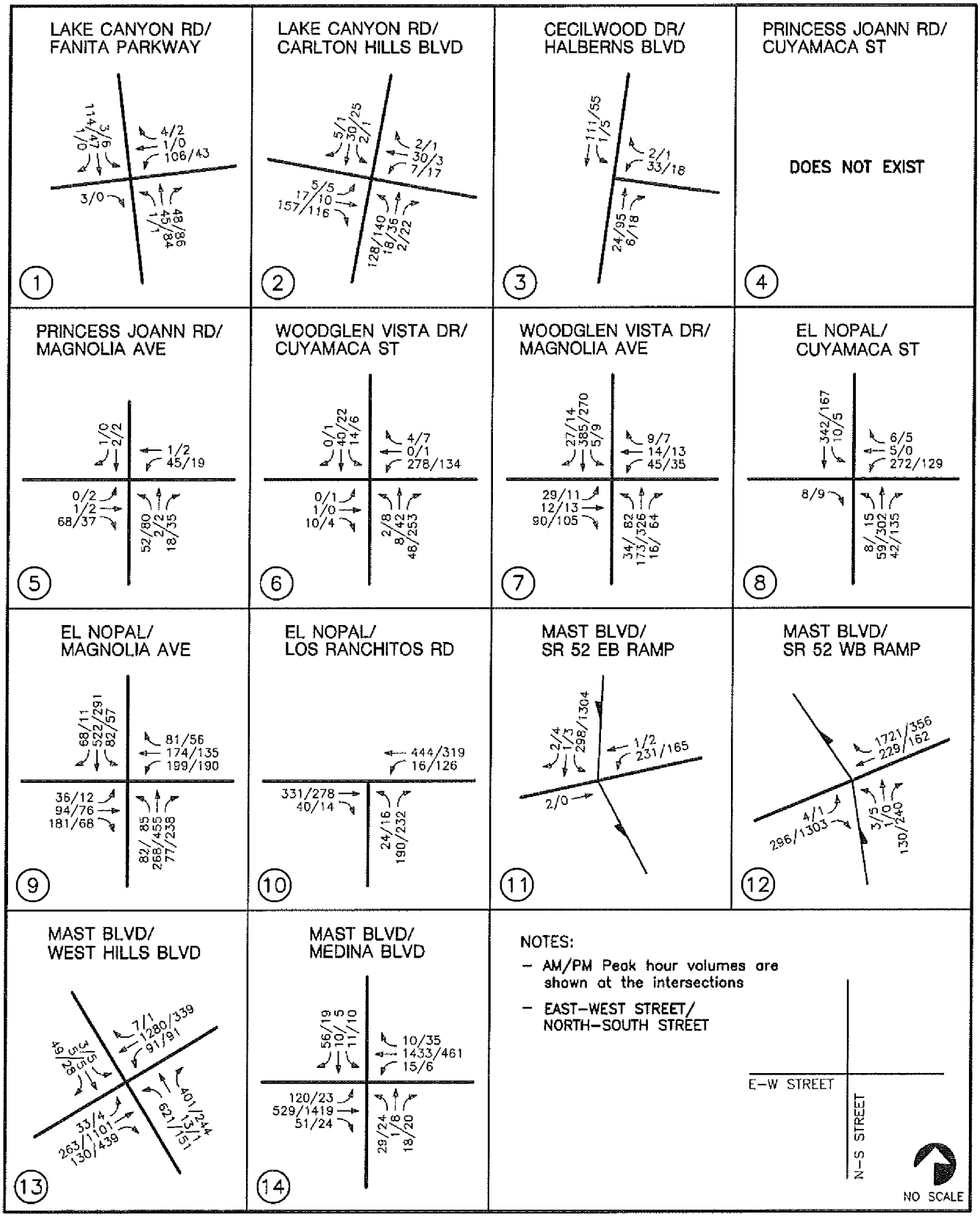
REV. 12/8/05
LLG1545 FIG3–2.DWG

# Figure 3-2

(4 OF 4)

## EXISTING INTERSECTION GEOMETRY

Fanita




LINSCOTT LAW & GREENSPAN engineers

REV. 2/8/07
LLG1545 FIG3-3.DWG

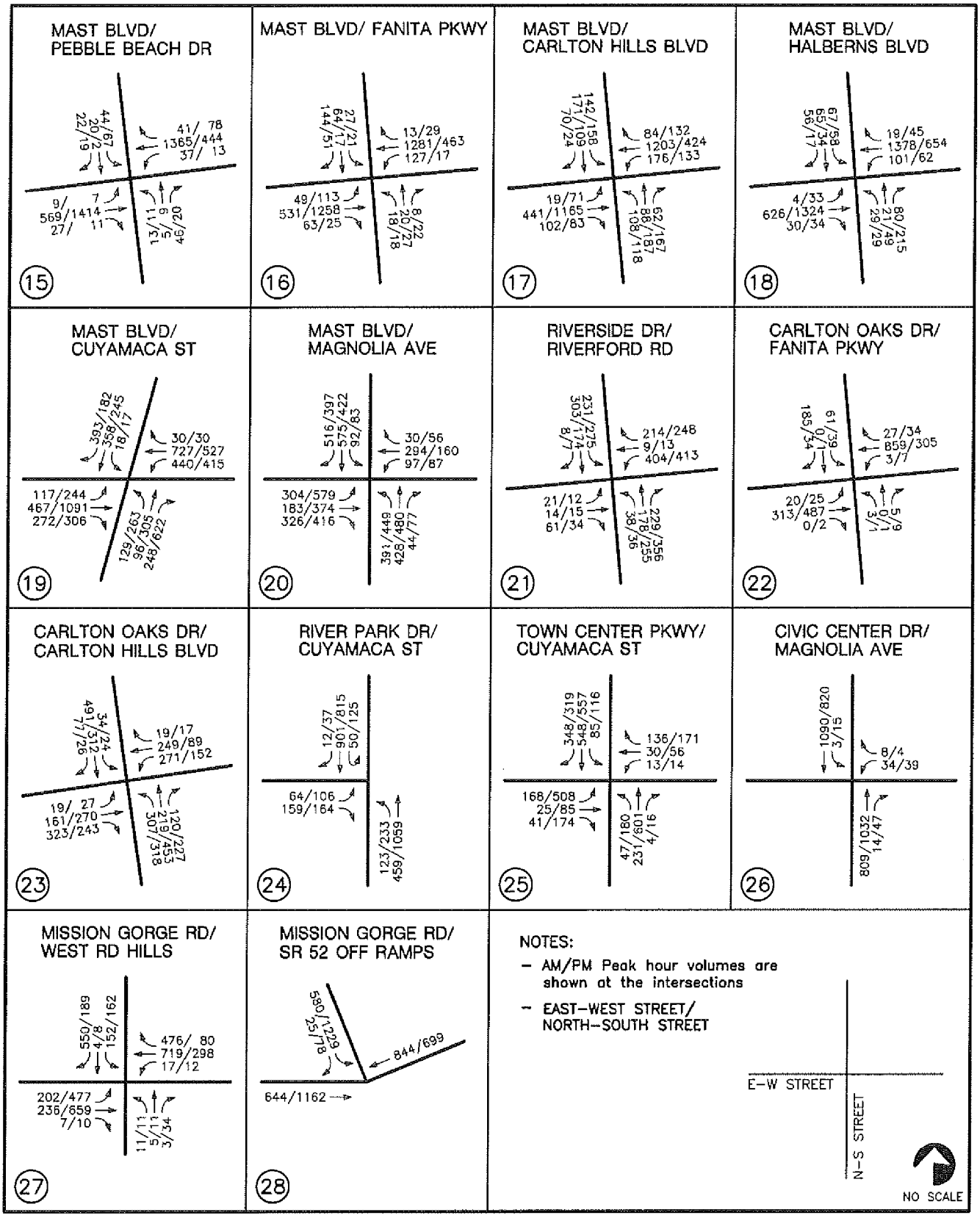
# Figure 3-3

(1 OF 4)

## EXISTING TRAFFIC VOLUMES AM/PM PEAK HOURS

**Fanita**

018668




LINSCOTT LAW & GREENSPAN engineers

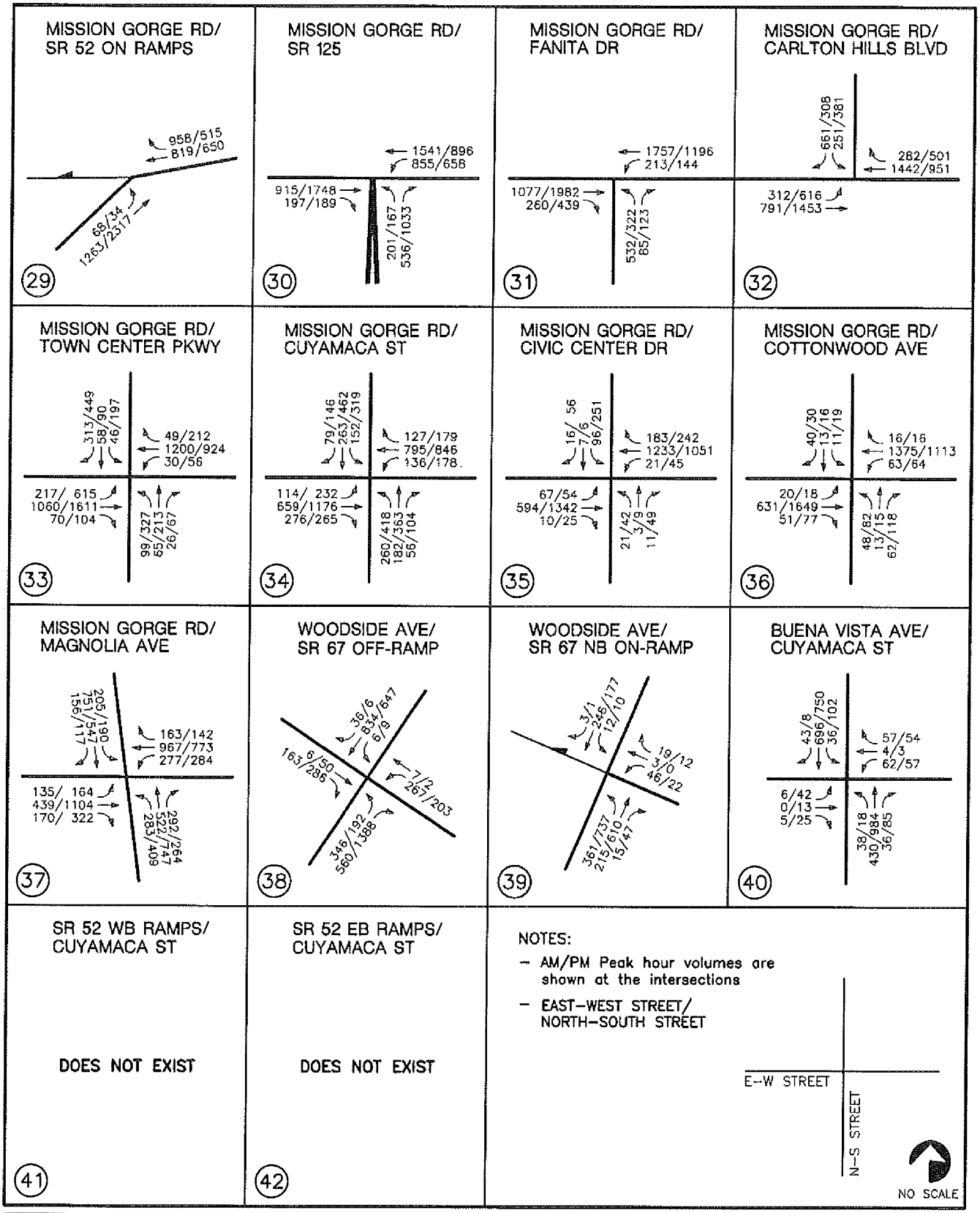
REV. 2/8/07
LLG1545 FIG3-3.DWG

# Figure 3-3

(2 OF 4)

## EXISTING TRAFFIC VOLUMES AM/PM PEAK HOURS

Fanita




LINSCOTT LAW & GREENSPAN engineers

REV. 2/8/07
LLG1545 FIG3-3.DWG

# Figure 3-3

(3 OF 4)

## EXISTING TRAFFIC VOLUMES AM/PM PEAK HOURS

**Fanita**

018670

SR 52 WB RAMPS/
MAGNOLIA AVE/
SR 67 SB RAMPS

DOES NOT EXIST

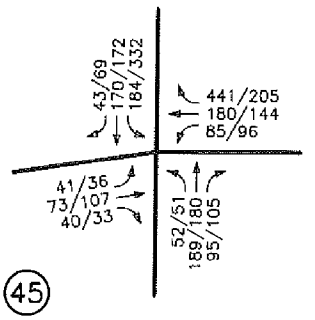
(43)

SR 52 EB RAMPS/
MAGNOLIA AVE

DOES NOT EXIST

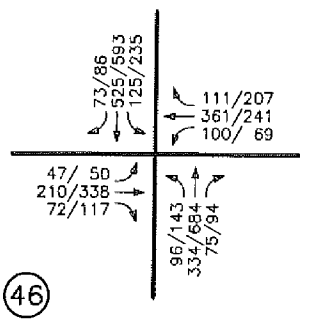
(44)

PROSPECT AVE/
FANITA DR



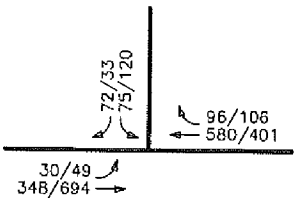

(45)

PROSPECT AVE/
CUYAMACA ST



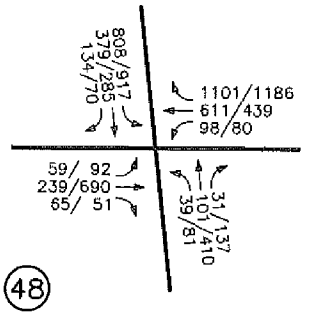

(46)

PROSPECT AVE/
COTTONWOOD ST



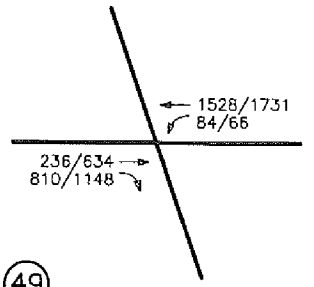

(47)

PROSPECT AVE/
MAGNOLIA AVE



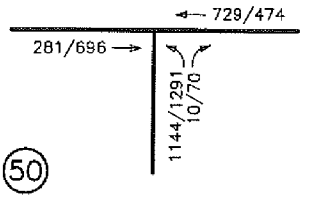

(48)

PROSPECT AVE/
SR 67 SB ON-RAMP




(49)

PROSPECT AVE/
SR 67 NB OFF-RAMP




(50)

WB OFF-RAMP/
SR 52/ FANITA DR

DOES NOT EXIST

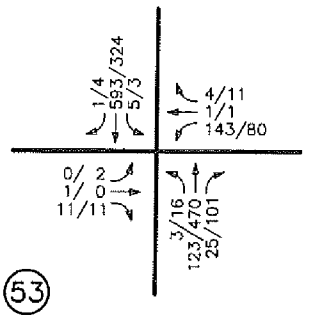
(51)

EB ON-RAMP/
SR 52/ FANITA DR

DOES NOT EXIST

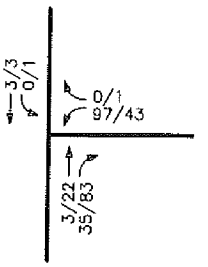
(52)

BECK DR/
CUYAMACA ST




(53)

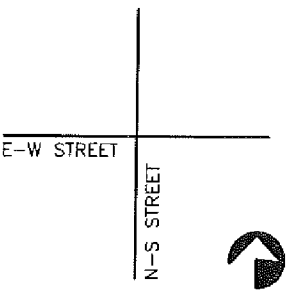
GANLEY RD/
FANITA PKWY/
SANTEE LAKES RD




(54)

NOTES:

- AM/PM Peak hour volumes are shown at the intersections
- EAST–WEST STREET/ NORTH–SOUTH STREET




NO SCALE

LINSCOTT LAW & GREENSPAN engineers

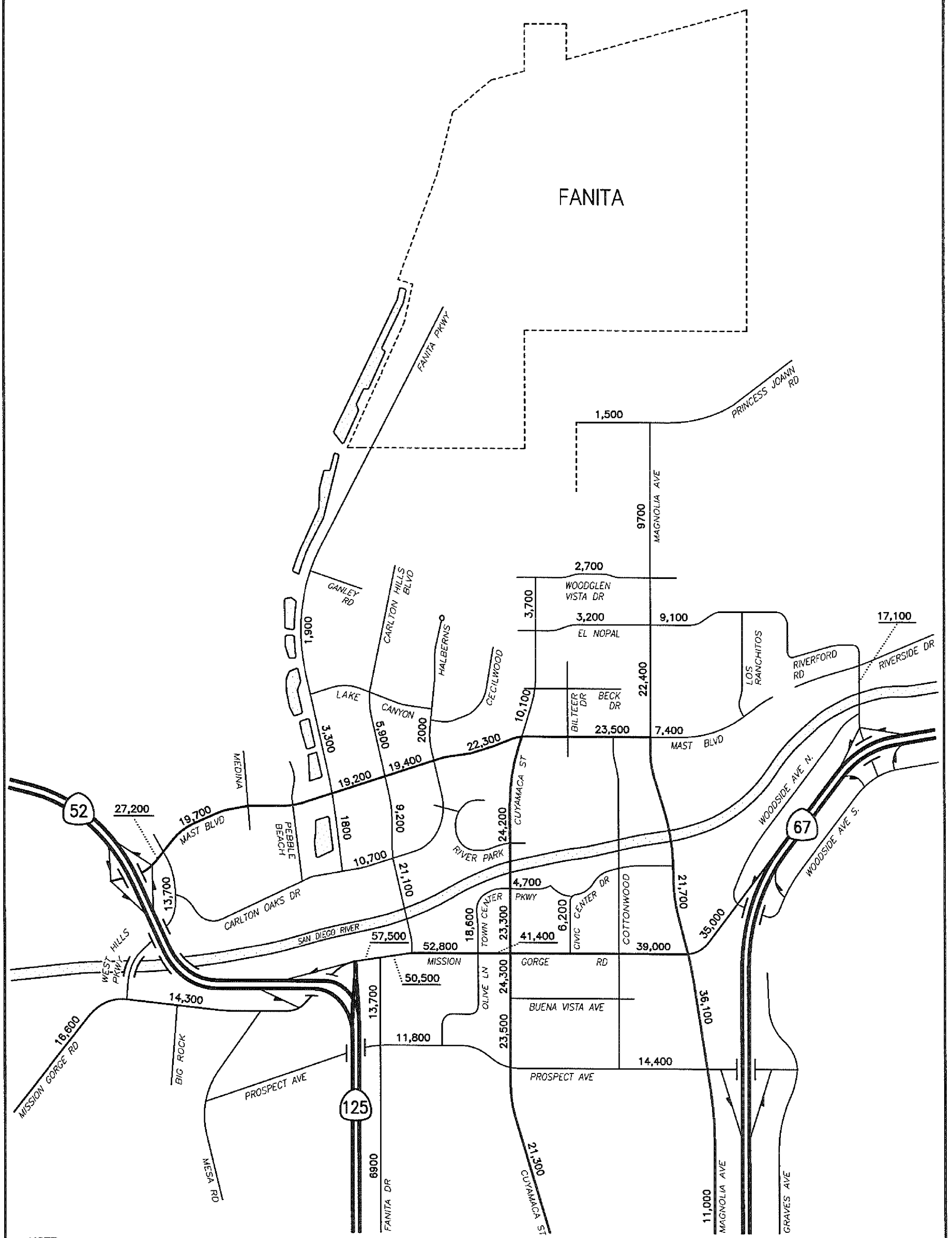
REV. 2/8/07
LLG1545 FIG3-3.DWG

# Figure 3-3

(4 OF 4)

## EXISTING TRAFFIC VOLUMES AM/PM PEAK HOURS

**Fanita**




NOTE:
– ADTs are shown midblock

REV. 4/25/06
LLG1545 11x17 FIG3–4

NO SCALE

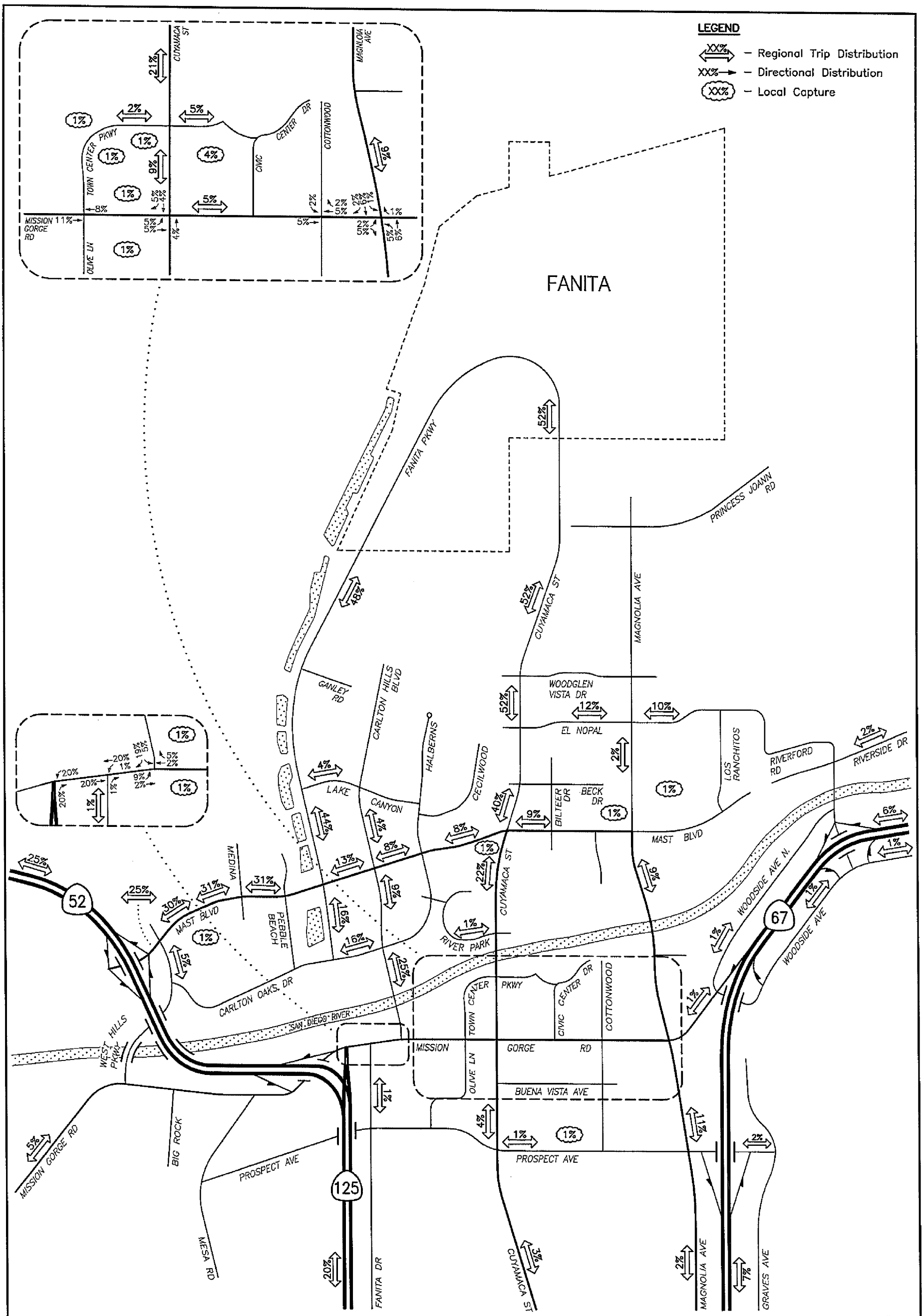
LINSCOTT LAW & GREENSPAN engineers

# Figure 3-4

## EXISTING TRAFFIC VOLUMES ADT

Fanita

018672




REV. 1/26/07
LLG1545 11x17 FIG7-1

NO SCALE

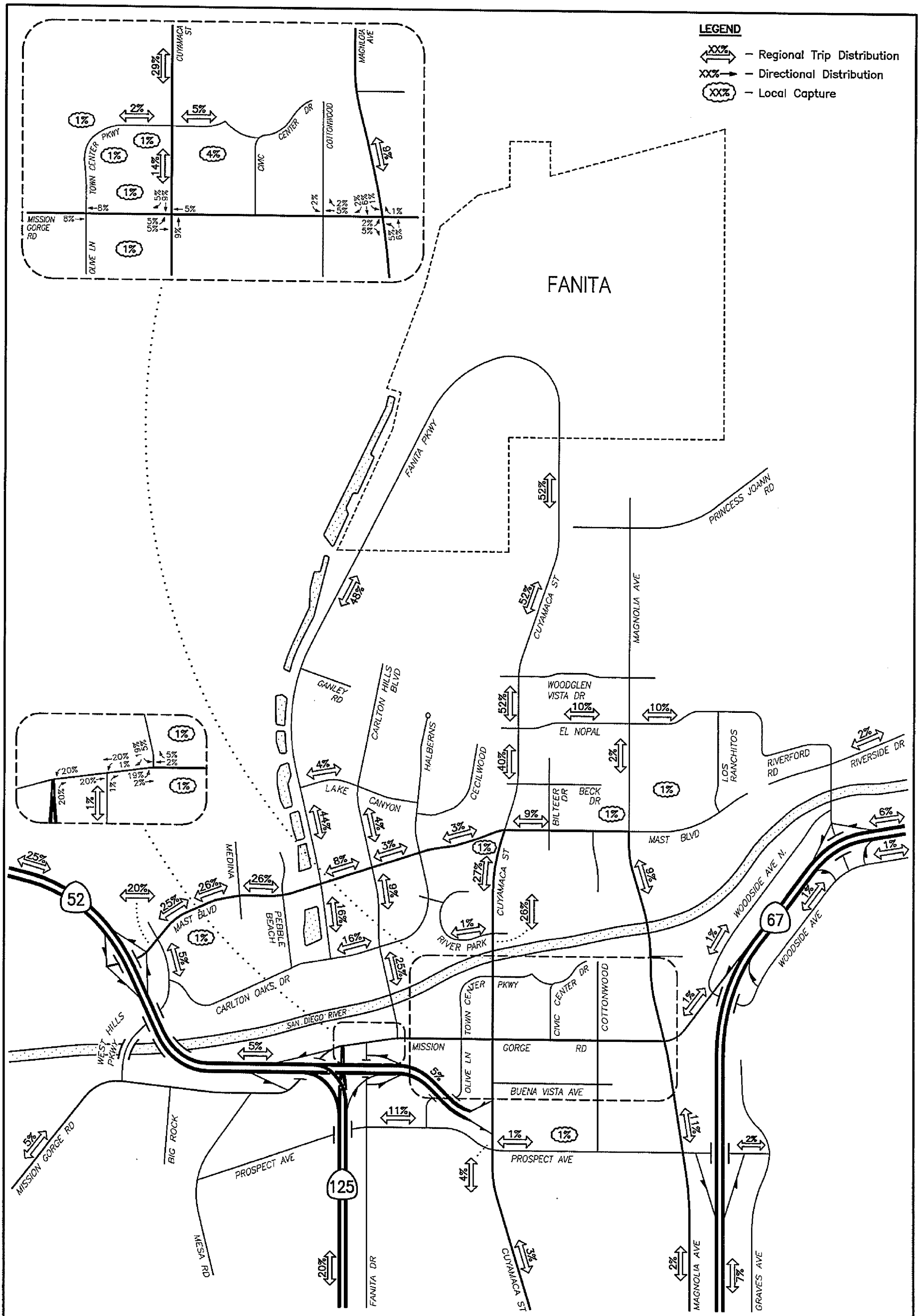
LINSCOTT LAW & GREENSPAN engineers

# Figure 7-1

## PROJECT TRIP DISTRIBUTION
## SR 52 NOT EXTENDED EAST OF SR 125

**Fanita**

018673



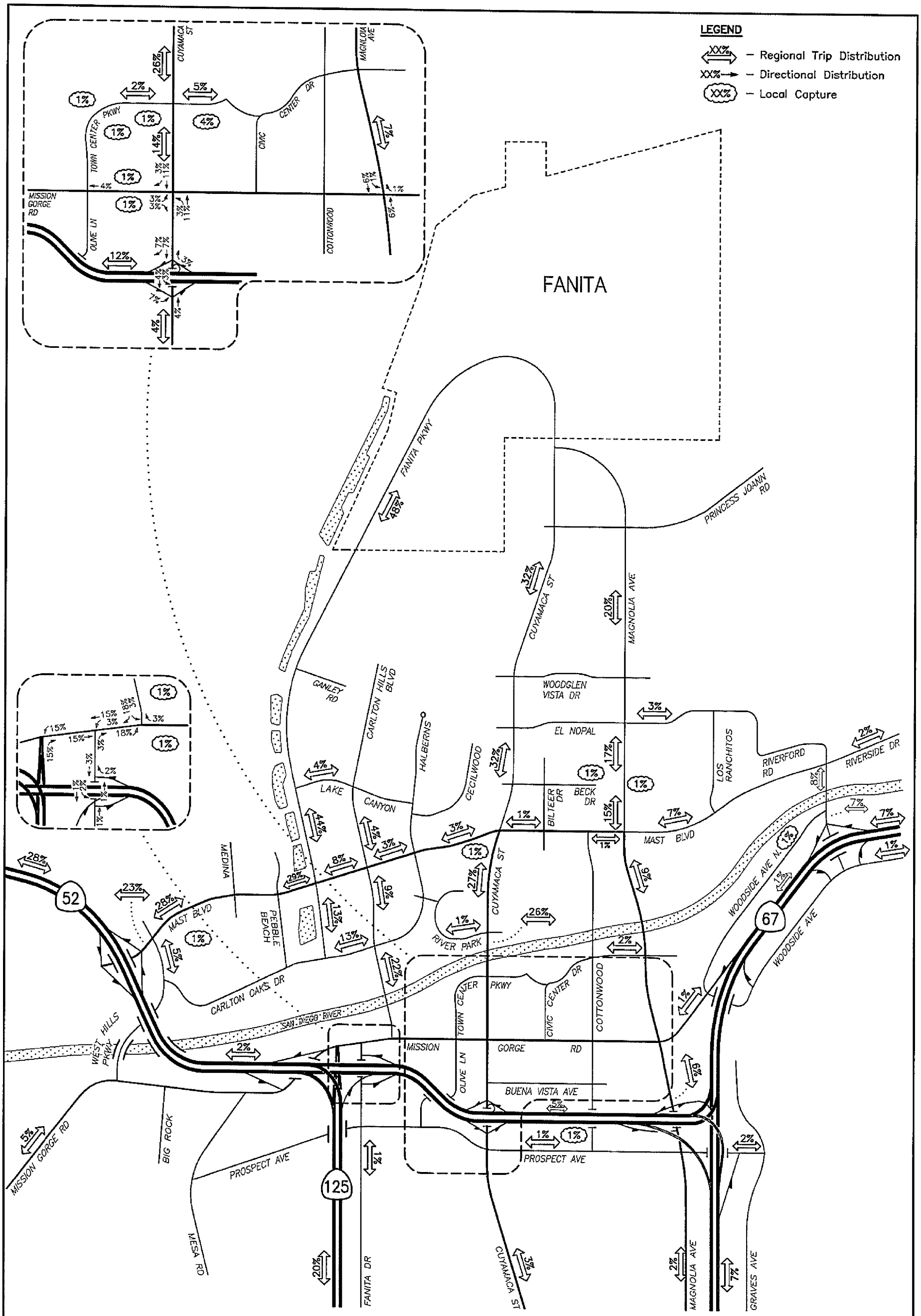

LINSCOTT LAW & GREENSPAN engineers

# Figure 7-2

**PROJECT TRIP DISTRIBUTION**
**SR 52 EXTENDED TO CUYAMACA STREET**

**Fanita**

018674



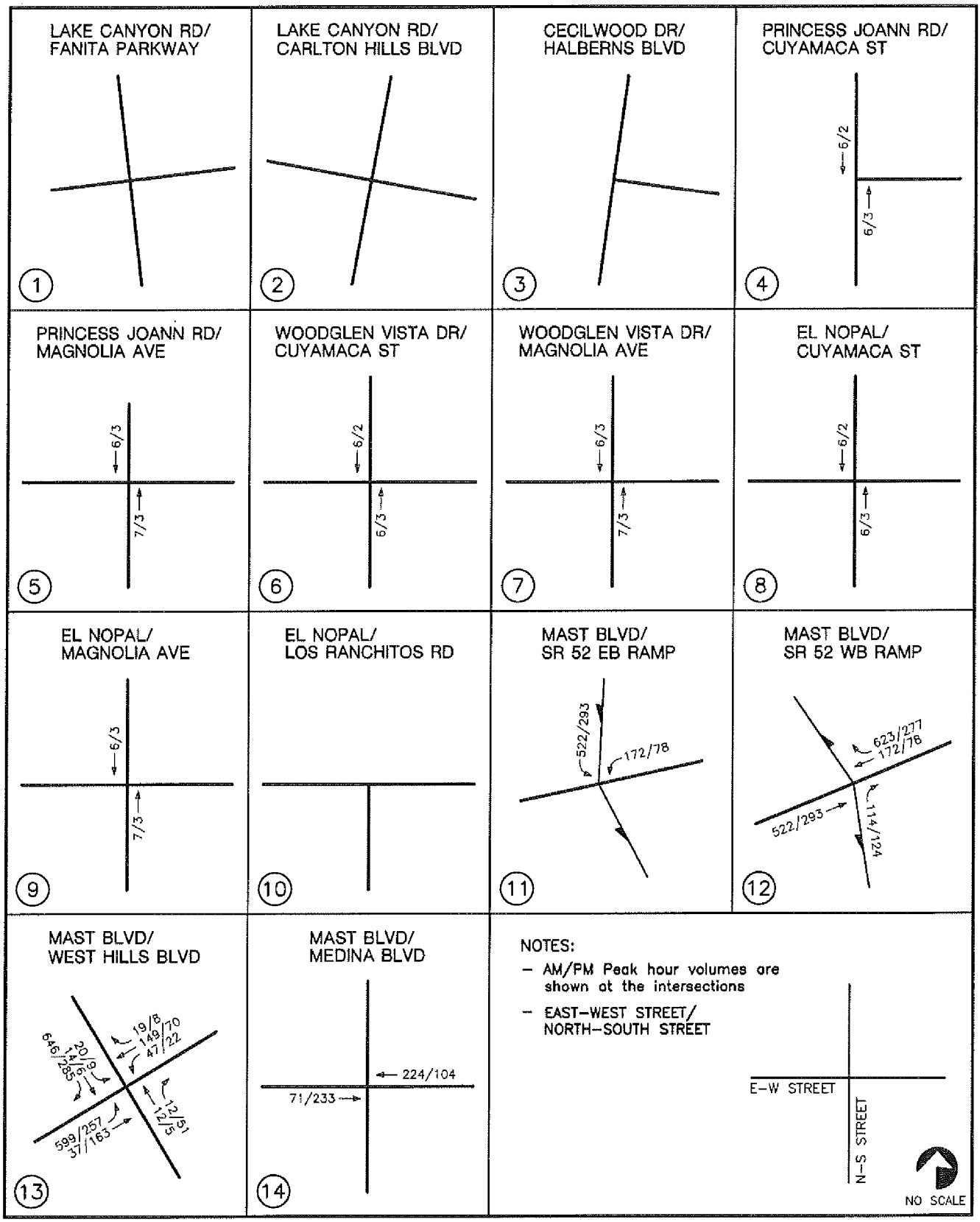

LINSCOTT LAW & GREENSPAN engineers

# Figure 7-3

## PROJECT TRIP DISTRIBUTION WITH SR 52 EXTENDED TO SR 67

Fanita

018675



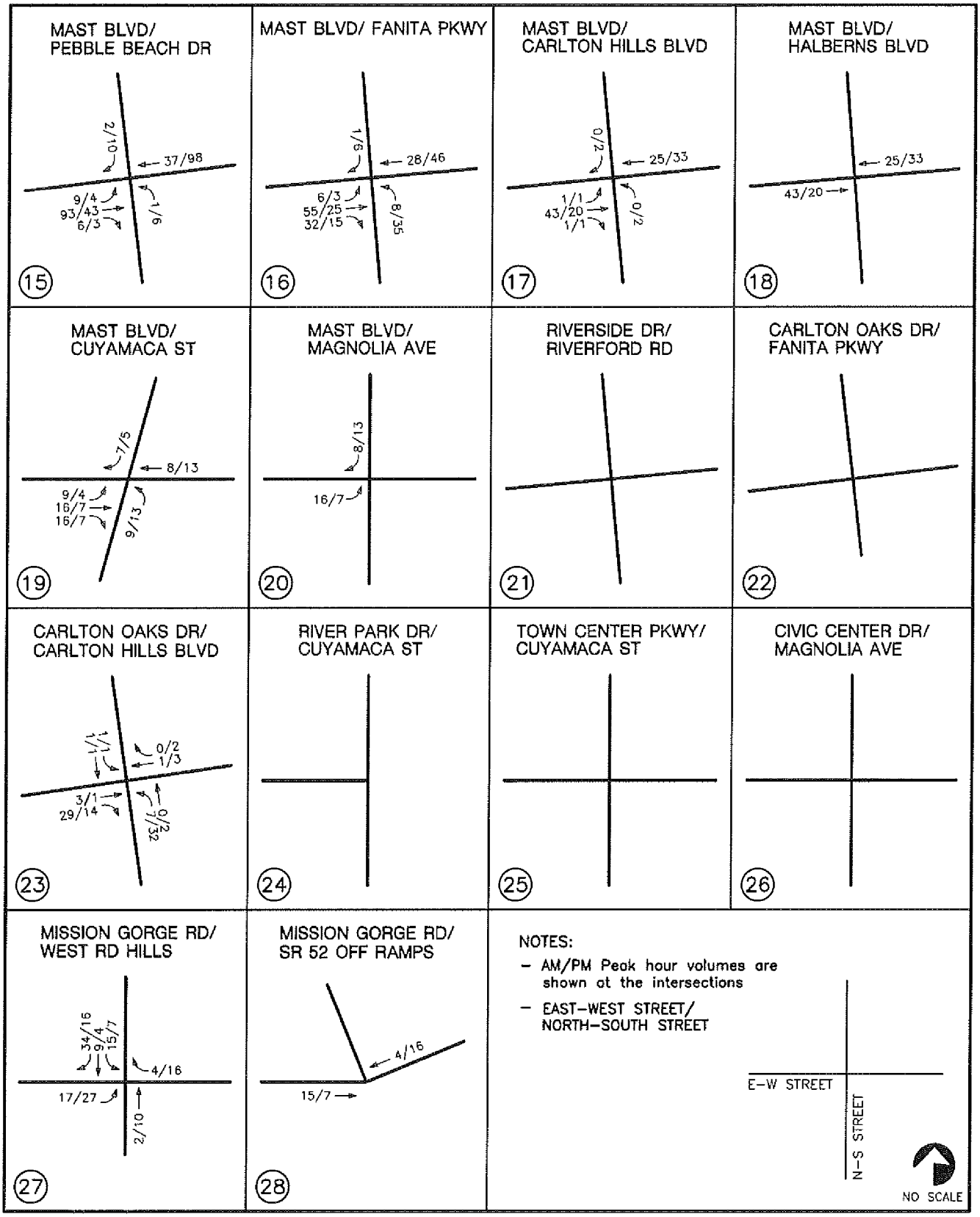

REV. 2/8/07
LLG1545 FIG8-1.DWG

# Figure 8-1

(1 OF 4)

## TOTAL CUMULATIVE TRAFFIC VOLUMES AM/PM PEAK HOURS

**Fanita**




LINSCOTT LAW & GREENSPAN engineers

REV. 2/8/07
LLG1545 FIG8-1.DWG

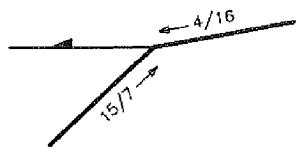
# Figure 8-1

(2 OF 4)

## TOTAL CUMULATIVE TRAFFIC VOLUMES AM/PM PEAK HOURS

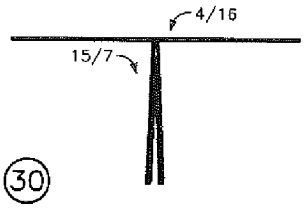
**Fanita**

MISSION GORGE RD/
SR 52 ON RAMPS



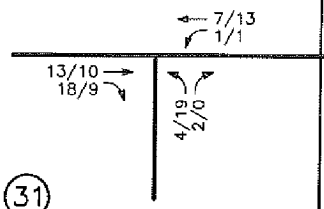

29

MISSION GORGE RD/
SR 125



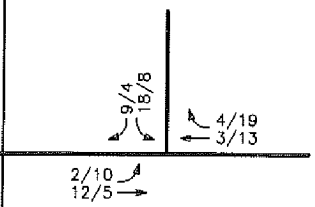

30

MISSION GORGE RD/
FANITA DR



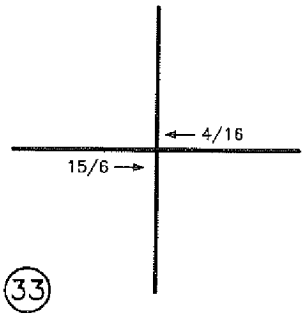

31

MISSION GORGE RD/
CARLTON HILLS BLVD



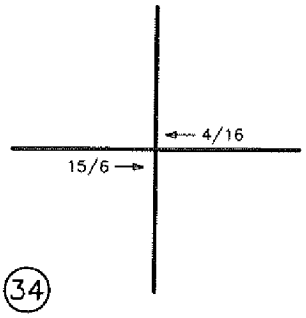

32

MISSION GORGE RD/
TOWN CENTER PKWY



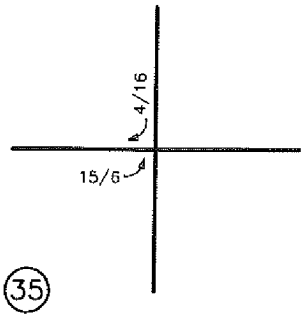

33

MISSION GORGE RD/
CUYAMACA ST



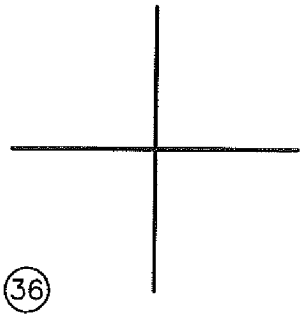

34

MISSION GORGE RD/
CIVIC CENTER DR



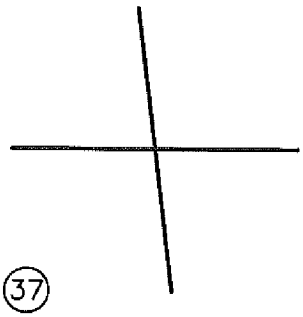

35

MISSION GORGE RD/
COTTONWOOD AVE



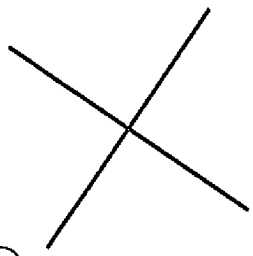
36

MISSION GORGE RD/
MAGNOLIA AVE



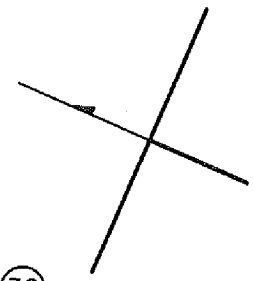
37

WOODSIDE AVE/
SR 67 OFF-RAMP



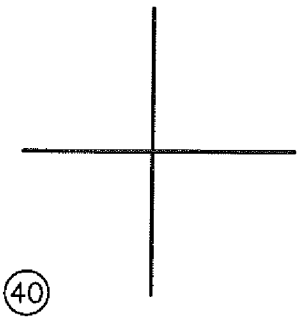
38

WOODSIDE AVE/
SR 67 NB ON-RAMP



39

BUENA VISTA AVE/
CUYAMACA ST



40

SR 52 WB RAMPS/
CUYAMACA ST

DOES NOT EXIST

41

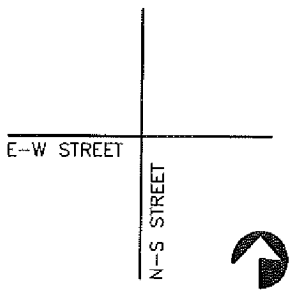
SR 52 EB RAMPS/
CUYAMACA ST

DOES NOT EXIST

42

NOTES:

- AM/PM Peak hour volumes are shown at the intersections
- EAST-WEST STREET/ NORTH-SOUTH STREET




NO SCALE

LINSCOTT LAW & GREENSPAN engineers

REV. 2/8/07
LLG1545 FIG8-1.DWG

# Figure 8-1

(3 OF 4)

## TOTAL CUMULATIVE TRAFFIC VOLUMES AM/PM PEAK HOURS

**Fanita**

SR 52 WB RAMPS/
MAGNOLIA AVE/
SR 67 SB RAMPS

DOES NOT EXIST

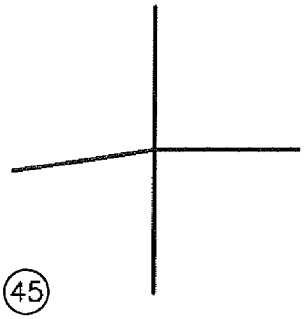
(43)

SR 52 EB RAMPS/
MAGNOLIA AVE

DOES NOT EXIST

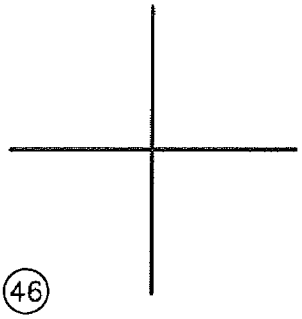
(44)

PROSPECT AVE/
FANITA DR



(45)

PROSPECT AVE/
CUYAMACA ST

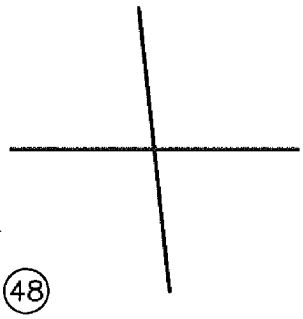


(46)

PROSPECT AVE/
COTTONWOOD ST

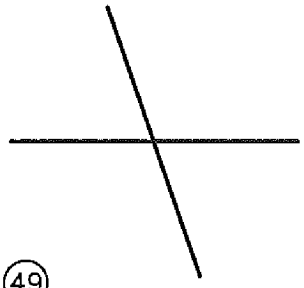
(47)

PROSPECT AVE/
MAGNOLIA AVE



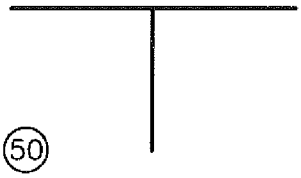
(48)

PROSPECT AVE/
SR 67 SB ON-RAMP



(49)

PROSPECT AVE/
SR 67 NB OFF-RAMP



(50)

WB OFF-RAMP/
SR 52/ FANITA DR

DOES NOT EXIST

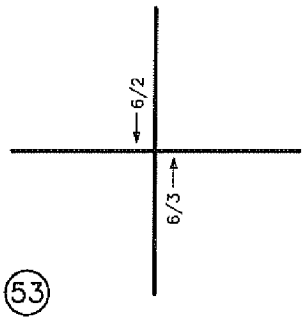
(51)

EB ON-RAMP/
SR 52/ FANITA DR

DOES NOT EXIST

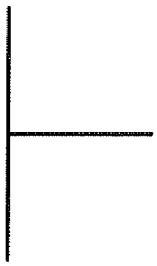
(52)

BECK DR/
CUYAMACA ST




(53)

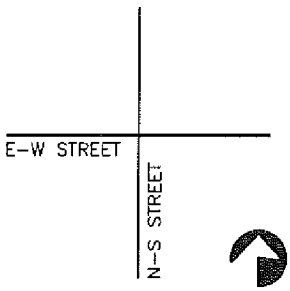
GANLEY RD/
FANITA PKWY/
SANTEE LAKES RD



(54)

NOTES:

- AM/PM Peak hour volumes are shown at the intersections
- EAST–WEST STREET/
  NORTH–SOUTH STREET




NO SCALE

LINSCOTT LAW & GREENSPAN engineers

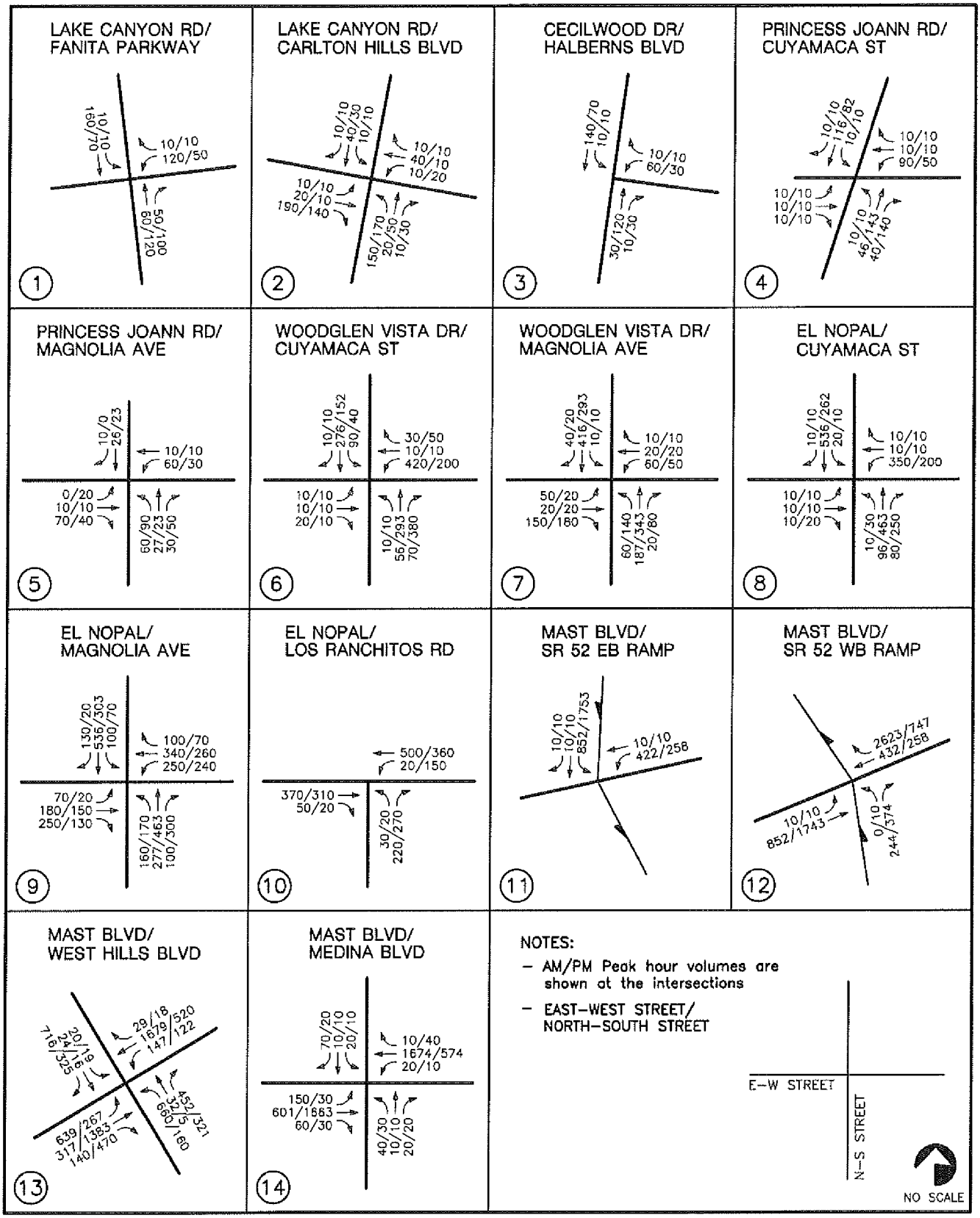
REV. 2/8/07
LLG1545 FIG8-1.DWG

# Figure 8-1

(4 OF 4)

## TOTAL CUMULATIVE TRAFFIC VOLUMES AM/PM PEAK HOURS

**Fanita**




LINSCOTT LAW & GREENSPAN engineers

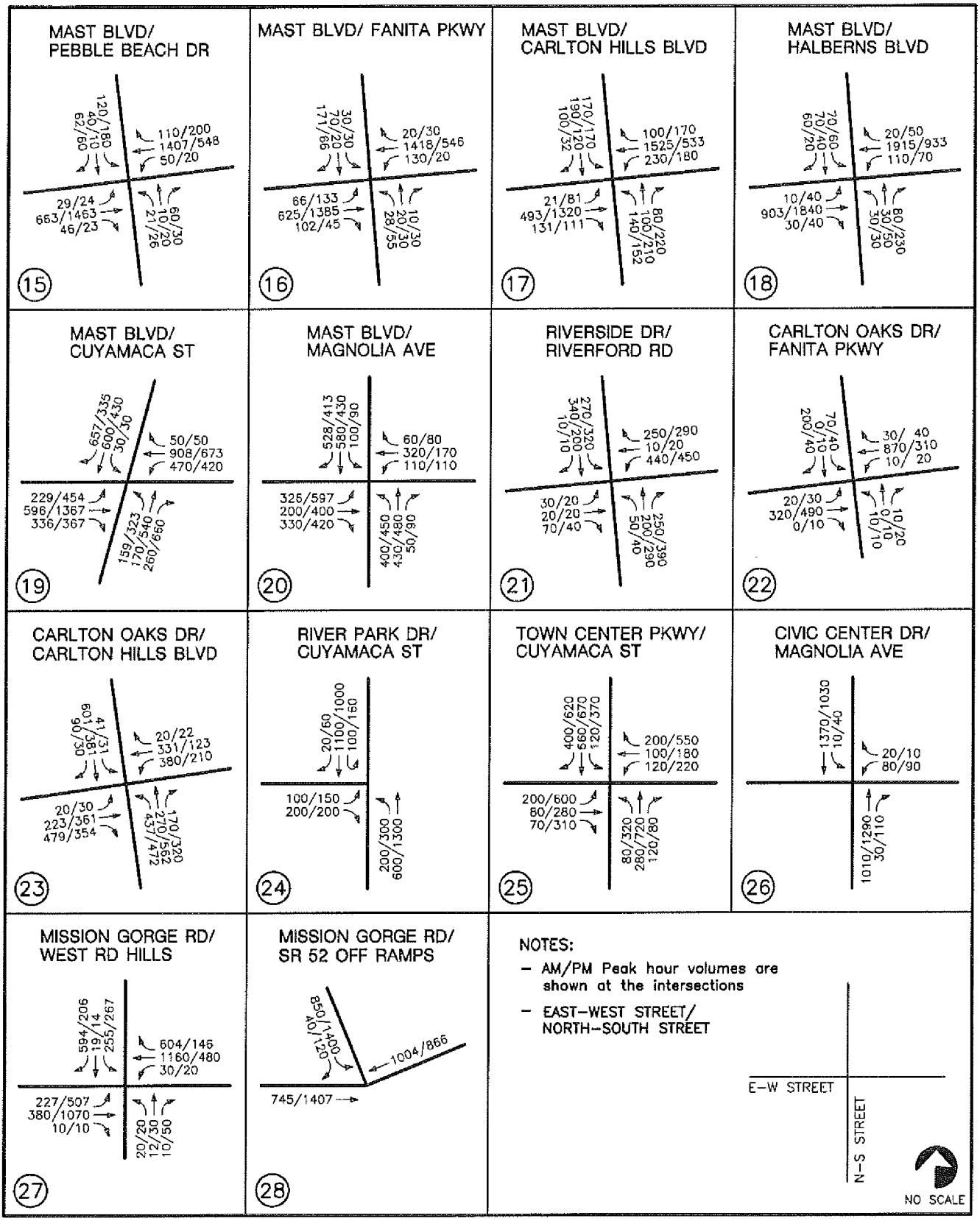
REV. 2/8/07
LLG1545 FIG9-1.DWG

# Figure 9-1

(1 OF 4)

## YEAR 2010 WITHOUT PROJECT TRAFFIC VOLUMES WITHOUT SR 52 EXTENDED EAST OF SR 125 AM/PM PEAK HOURS

Fanita




LINSCOTT LAW & GREENSPAN engineers

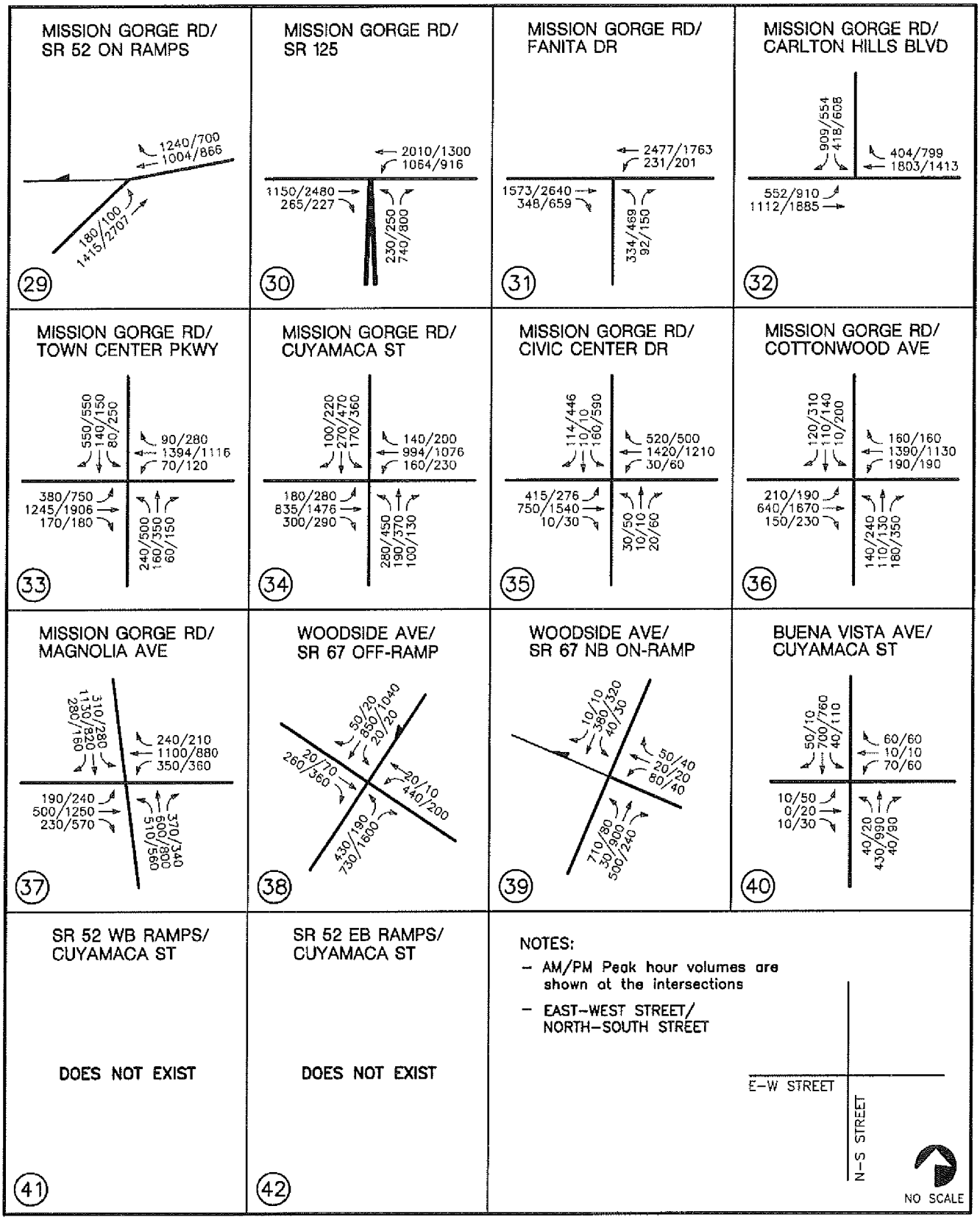
REV. 2/8/07
LLG1545 FIG9-1.DWG

# Figure 9-1

(2 OF 4)

## YEAR 2010 WITHOUT PROJECT TRAFFIC VOLUMES WITHOUT SR 52 EXTENDED EAST OF SR 125 AM/PM PEAK HOURS

Fanita




LINSCOTT LAW & GREENSPAN engineers

REV. 2/8/07
LLG1545 FIG9-1.DWG

# Figure 9-1

(3 OF 4)

## YEAR 2010 WITHOUT PROJECT TRAFFIC VOLUMES WITHOUT SR 52 EXTENDED EAST OF SR 125 AM/PM PEAK HOURS

Fanita

SR 52 WB RAMPS/
MAGNOLIA AVE/
SR 67 SB RAMPS

DOES NOT EXIST

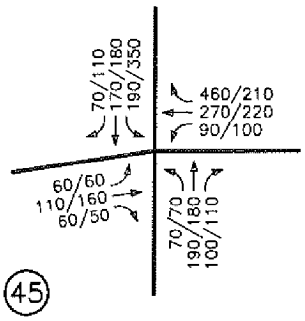
(43)

SR 52 EB RAMPS/
MAGNOLIA AVE

DOES NOT EXIST

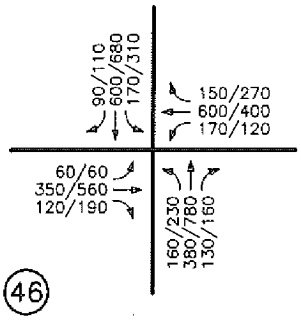
(44)

PROSPECT AVE/
FANITA DR



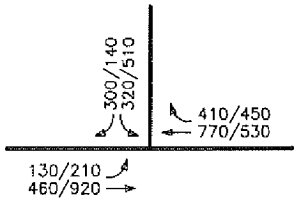

(45)

PROSPECT AVE/
CUYAMACA ST



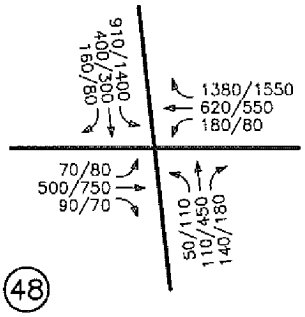

(46)

PROSPECT AVE/
COTTONWOOD ST



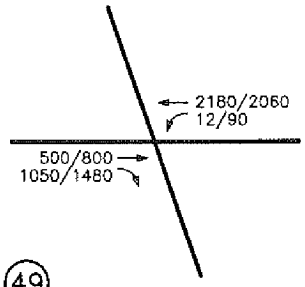

(47)

PROSPECT AVE/
MAGNOLIA AVE



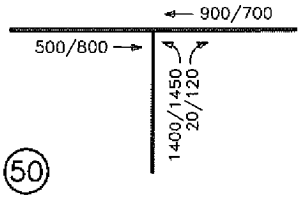

(48)

PROSPECT AVE/
SR 67 SB ON-RAMP




(49)

PROSPECT AVE/
SR 67 NB OFF-RAMP




(50)

WB OFF-RAMP/
SR 52/ FANITA DR

DOES NOT EXIST

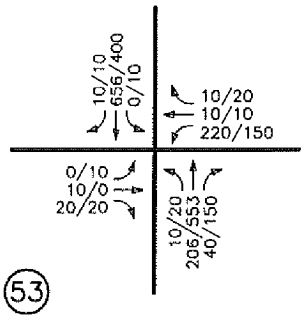
(51)

EB ON-RAMP/
SR 52/ FANITA DR

DOES NOT EXIST

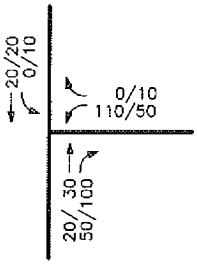
(52)

BECK DR/
CUYAMACA ST




(53)

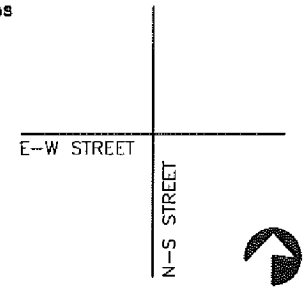
GANLEY RD/
FANITA PKWY/
SANTEE LAKES RD




(54)

NOTES:

- AM/PM Peak hour volumes are shown at the intersections
- EAST-WEST STREET/ NORTH-SOUTH STREET




NO SCALE

LINSCOTT LAW & GREENSPAN engineers

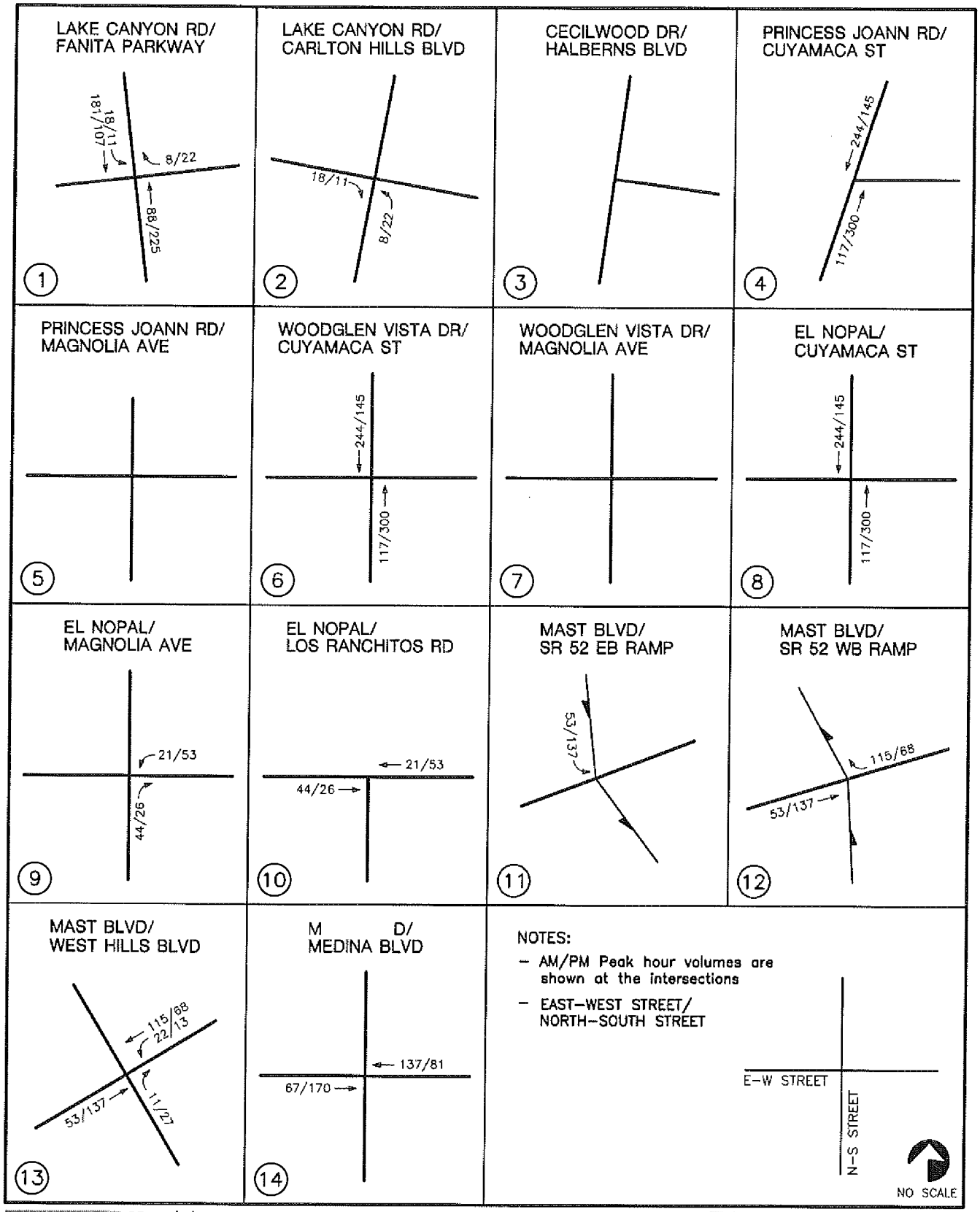
REV. 2/8/07
LLG1545 FIG9-1.DWG

# Figure 9-1

(4 OF 4)

## YEAR 2010 WITHOUT PROJECT TRAFFIC VOLUMES WITHOUT SR 52 EXTENDED EAST OF SR 125 AM/PM PEAK HOURS

Fanita



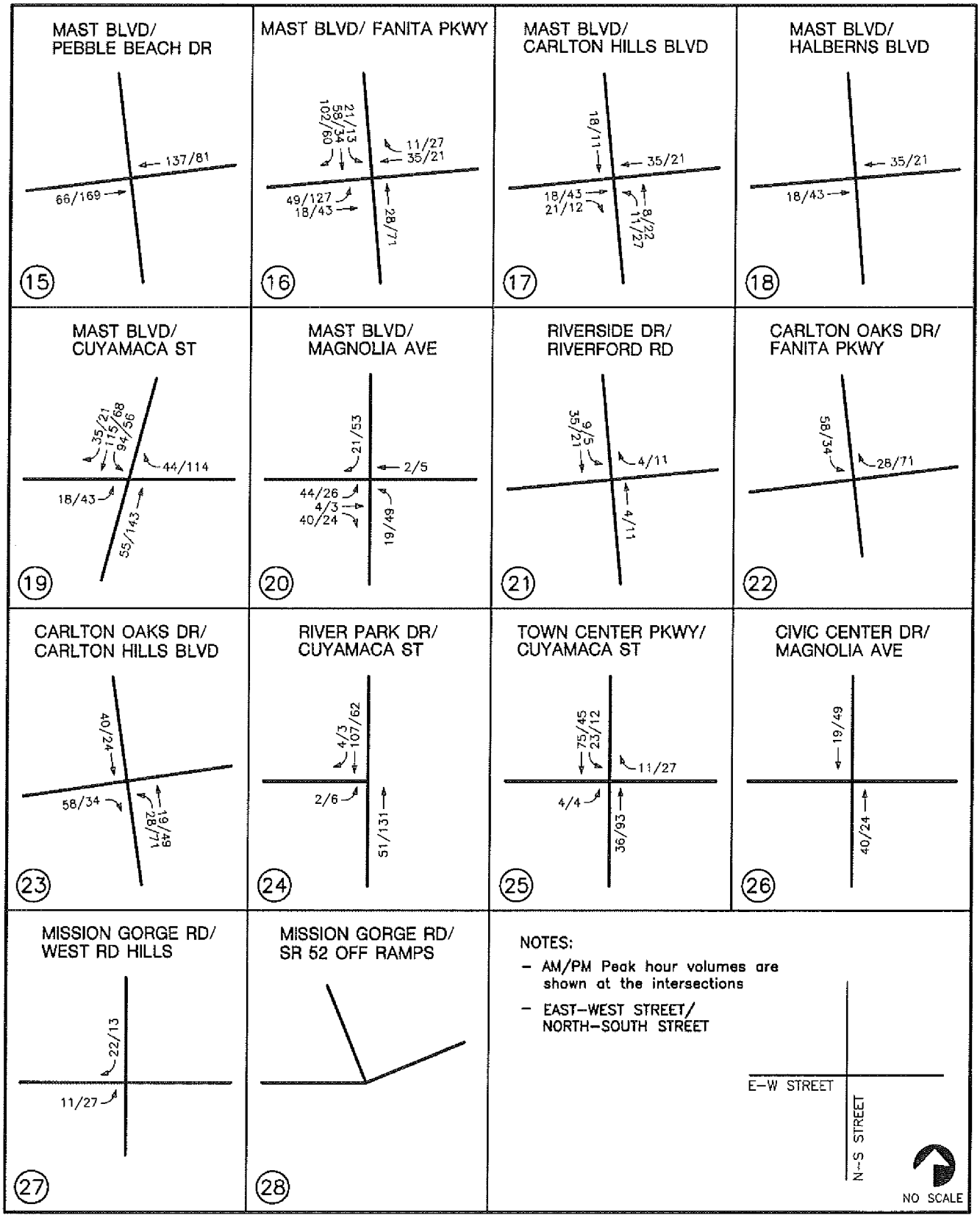

LINSCOTT LAW & GREENSPAN engineers

REV. 2/8/07
LLG1545 FIG9-2.DWG

# Figure 9-2

(1 OF 4)

## PROJECT (50%) ONLY TRAFFIC VOLUMES WITHOUT SR 52 EXTENDED EAST OF SR 125 AM/PM PEAK HOURS




LINSCOTT LAW & GREENSPAN engineers

REV. 2/8/07
LLG1545 FIG9-2.DWG

# Figure 9-2

(2 OF 4)

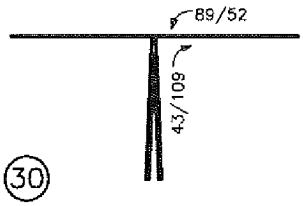
## PROJECT (50%) ONLY TRAFFIC VOLUMES WITHOUT SR 52 EXTENDED EAST OF SR 125 AM/PM PEAK HOURS

Fanita

MISSION GORGE RD/
SR 52 ON RAMPS

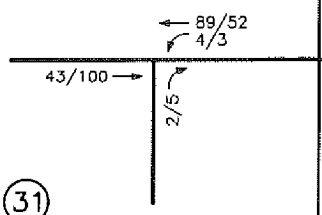
29

MISSION GORGE RD/
SR 125



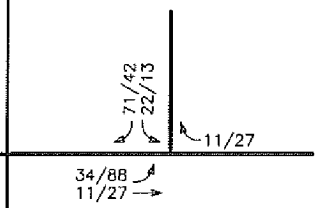

30

MISSION GORGE RD/
FANITA DR



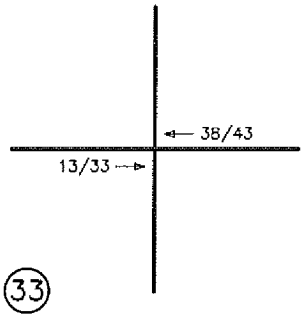

31

MISSION GORGE RD/
CARLTON HILLS BLVD



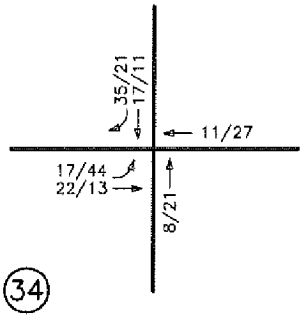

32

MISSION GORGE RD/
TOWN CENTER PKWY



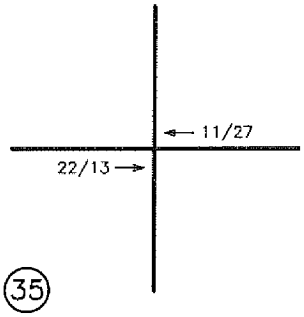

33

MISSION GORGE RD/
CUYAMACA ST



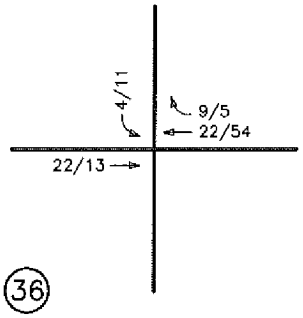

34

MISSION GORGE RD/
CIVIC CENTER DR



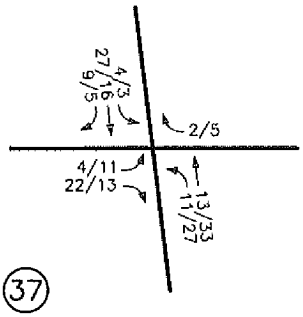

35

MISSION GORGE RD/
COTTONWOOD AVE



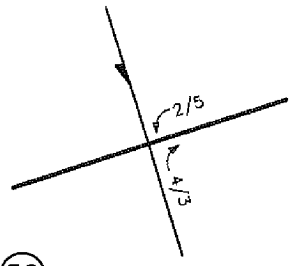

36

MISSION GORGE RD/
MAGNOLIA AVE



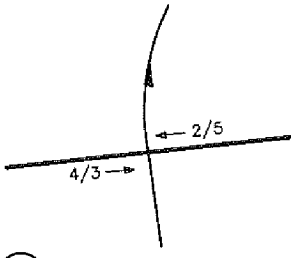

37

WOODSIDE AVE/
SR 67 OFF-RAMP



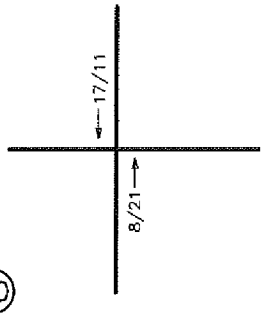

38

WOODSIDE AVE/
SR 67 NB ON-RAMP




39

BUENA VISTA AVE/
CUYAMACA ST




40

SR 52 WB RAMPS/
CUYAMACA ST

DOES NOT EXIST

41

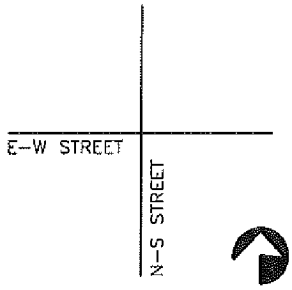
SR 52 EB RAMPS/
CUYAMACA ST

DOES NOT EXIST

42

NOTES:

- AM/PM Peak hour volumes are shown at the intersections
- EAST-WEST STREET/ NORTH-SOUTH STREET




NO SCALE

LINSCOTT LAW & GREENSPAN engineers

REV. 2/8/07
LLG1545 FIG9-2.DWG

# Figure 9-2

(3 OF 4)

## PROJECT (50%) ONLY TRAFFIC VOLUMES WITHOUT SR 52 EXTENDED EAST OF SR 125 AM/PM PEAK HOURS

Fanita

SR 52 WB RAMPS/
MAGNOLIA AVE/
SR 67 SB RAMPS

DOES NOT EXIST

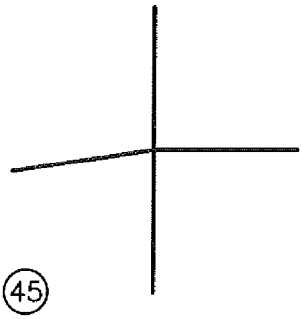
(43)

SR 52 EB RAMPS/
MAGNOLIA AVE

DOES NOT EXIST

(44)

PROSPECT AVE/
FANITA DR



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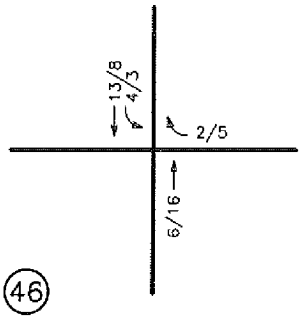
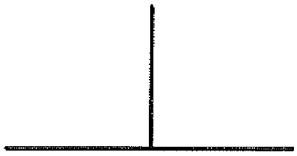
PROSPECT AVE/
CUYAMACA ST




(46)

PROSPECT AVE/
COTTONWOOD ST



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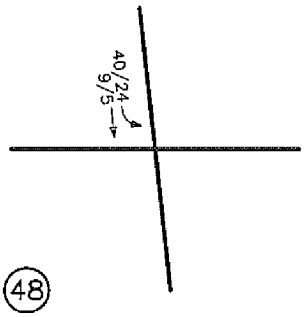
PROSPECT AVE/
MAGNOLIA AVE

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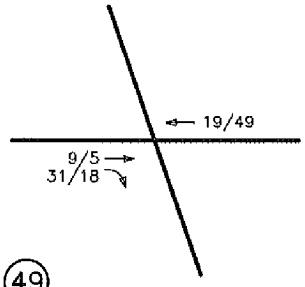
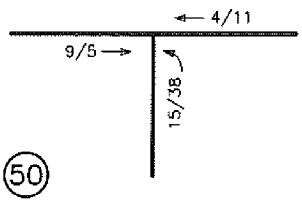
PROSPECT AVE/
SR 67 SB ON-RAMP




(49)

PROSPECT AVE/
SR 67 NB OFF-RAMP




(50)

WB OFF-RAMP/
SR 52/ FANITA DR

DOES NOT EXIST

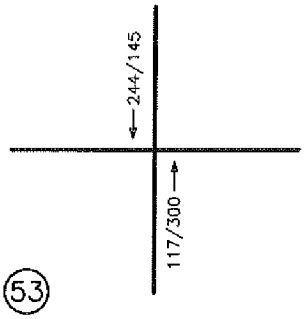
(51)

EB ON-RAMP/
SR 52/ FANITA DR

DOES NOT EXIST

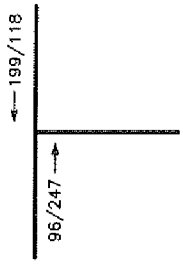
(52)

BECK DR/
CUYAMACA ST




(53)

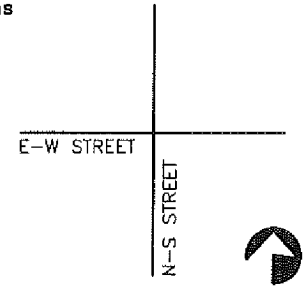
GANLEY RD/
FANITA PKWY/
SANTEE LAKES RD




(54)

NOTES:

- AM/PM Peak hour volumes are shown at the intersections
- EAST–WEST STREET/ NORTH–SOUTH STREET




NO SCALE

LINSCOTT LAW & GREENSPAN engineers

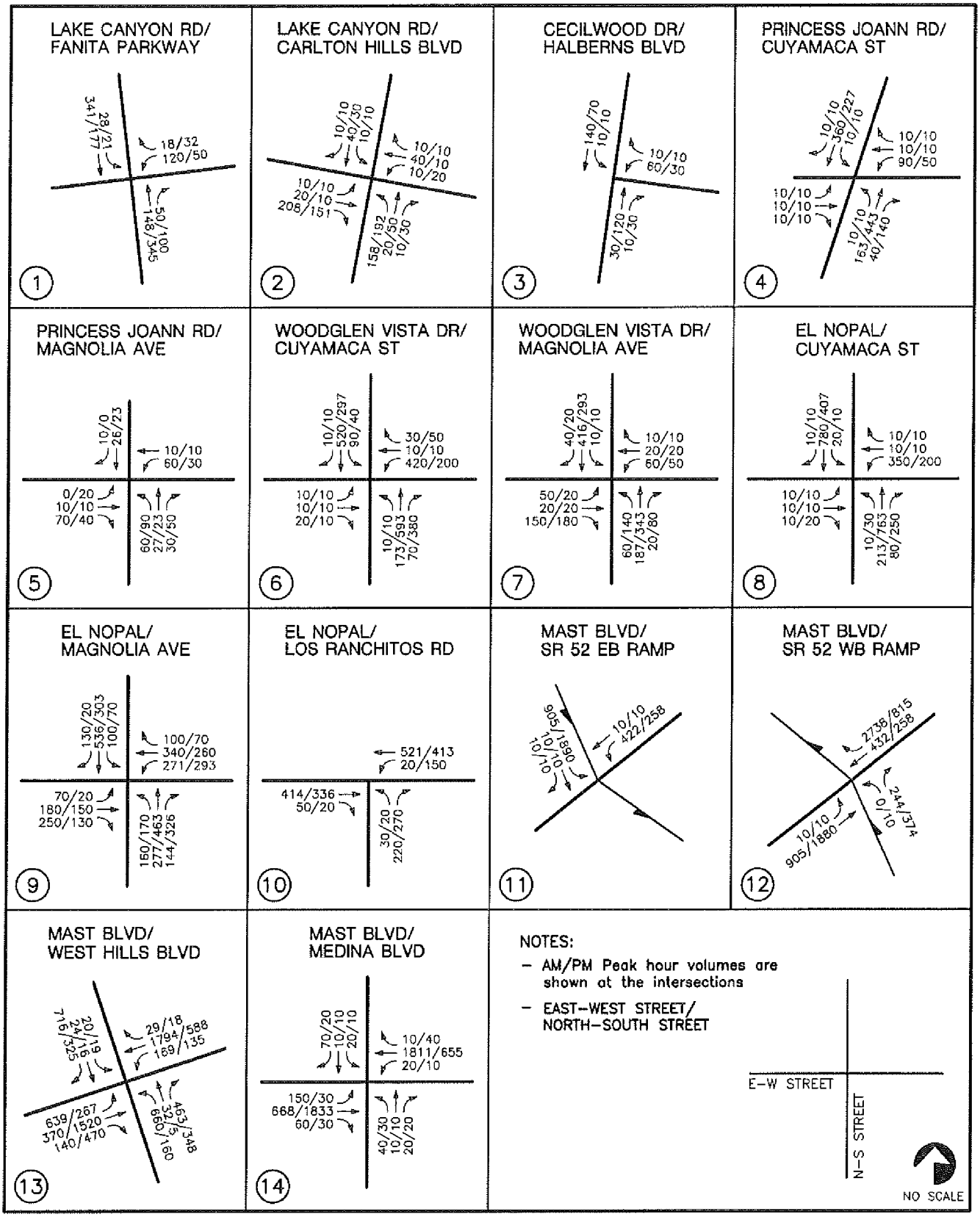
REV. 2/8/07
LLG1545 FIG9-2.DWG

# Figure 9-2

(4 OF 4)

## PROJECT (50%) ONLY TRAFFIC VOLUMES WITHOUT SR 52 EXTENDED EAST OF SR 125 AM/PM PEAK HOURS

Fanita




LINSCOTT LAW & GREENSPAN engineers

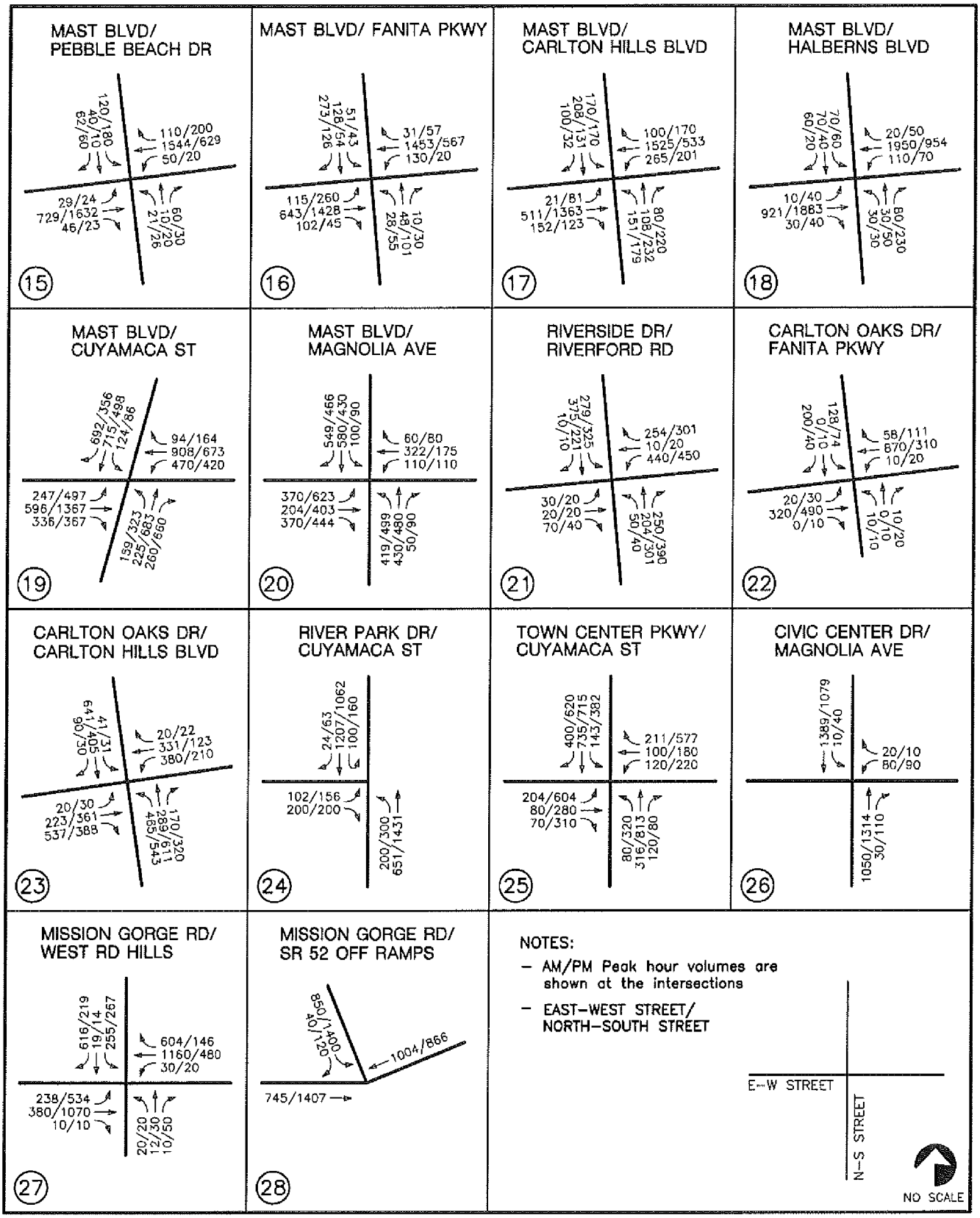
REV. 2/8/07
LLG1545 FIG9-3.DWG

# Figure 9-3

(1 OF 4)

## YEAR 2010 WITH (50%) PROJECT TRAFFIC VOLUMES WITHOUT SR 52 EXTENDED TO EAST OF SR 125 AM/PM PEAK HOURS

Fanita




REV. 2/8/07
LLG1545 FIG9-3.DWG

LINSCOTT LAW & GREENSPAN engineers

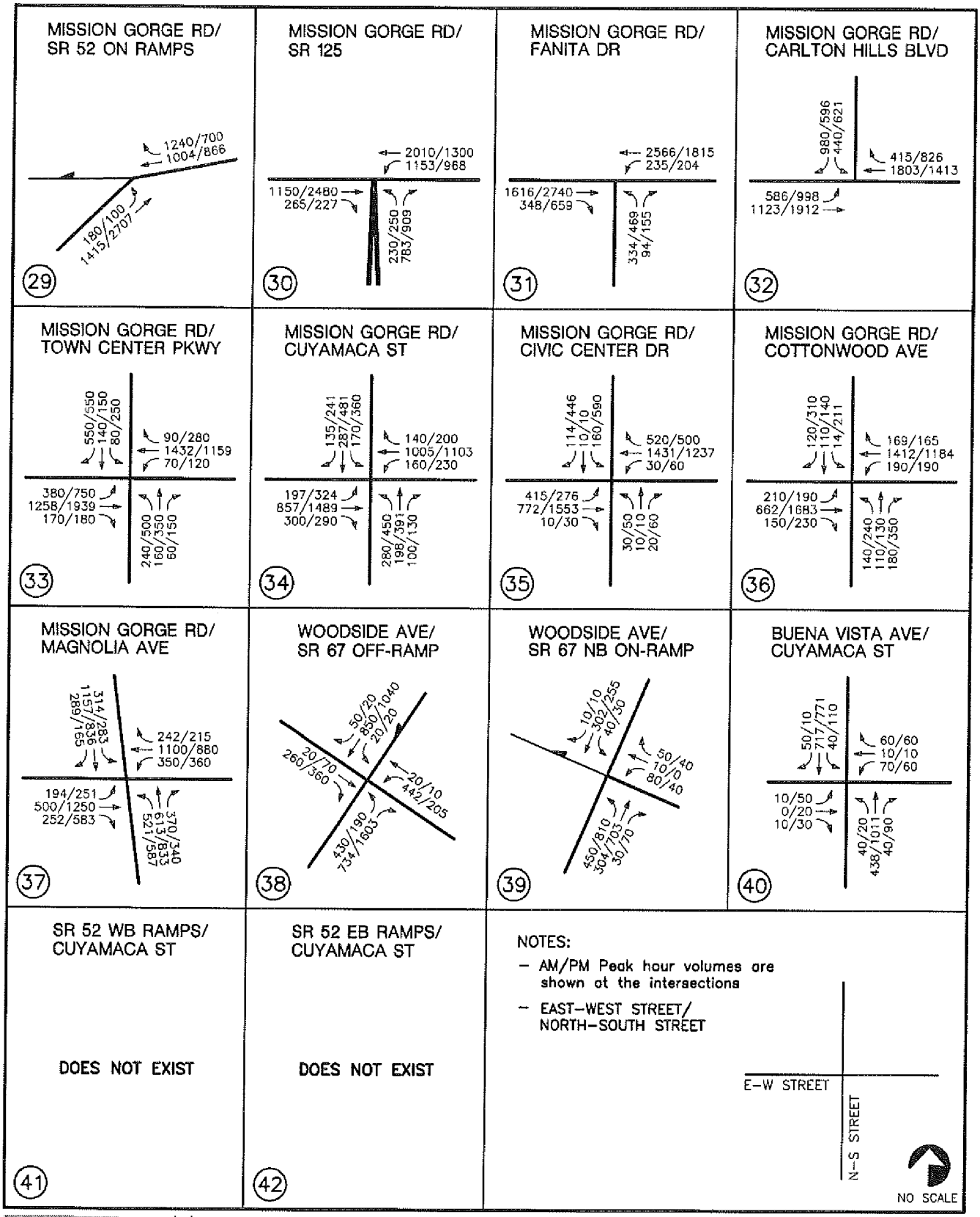
# Figure 9-3

(2 OF 4)

## YEAR 2010 WITH (50%) PROJECT TRAFFIC VOLUMES WITHOUT SR 52 EXTENDED TO EAST OF SR 125 AM/PM PEAK HOURS

**Fanita**

018689




REV. 2/8/07
LLG1545 FIG9-3.DWG

LINSCOTT LAW & GREENSPAN engineers

# Figure 9-3

(3 OF 4)

## YEAR 2010 WITH (50%) PROJECT TRAFFIC VOLUMES WITHOUT SR 52 EXTENDED TO EAST OF SR 125 AM/PM PEAK HOURS

Fanita

SR 52 WB RAMPS/
MAGNOLIA AVE/
SR 67 SB RAMPS

DOES NOT EXIST

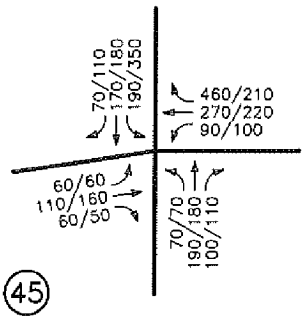
(43)

SR 52 EB RAMPS/
MAGNOLIA AVE

DOES NOT EXIST

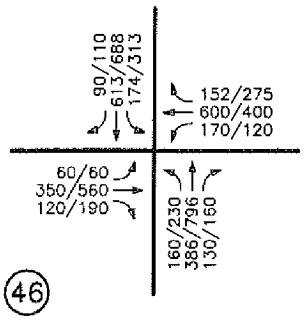
(44)

PROSPECT AVE/
FANITA DR



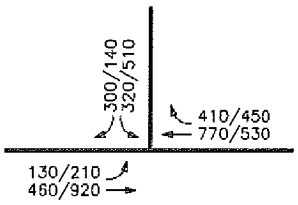

(45)

PROSPECT AVE/
CUYAMACA ST



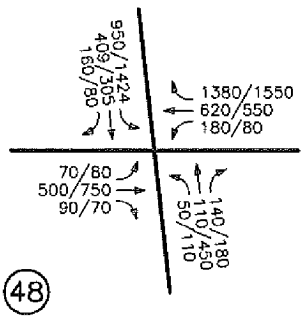

(46)

PROSPECT AVE/
COTTONWOOD ST



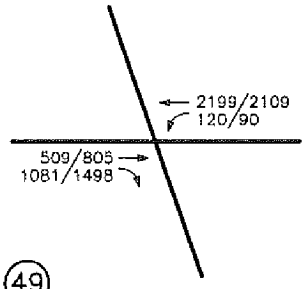

(47)

PROSPECT AVE/
MAGNOLIA AVE



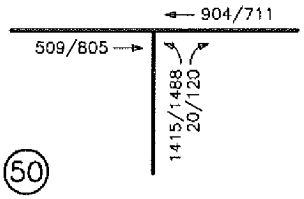

(48)

PROSPECT AVE/
SR 67 SB ON-RAMP




(49)

PROSPECT AVE/
SR 67 NB OFF-RAMP




(50)

WB OFF-RAMP/
SR 52/ FANITA DR

DOES NOT EXIST

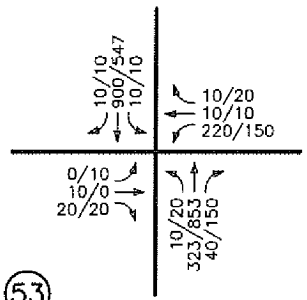
(51)

EB ON-RAMP/
SR 52/ FANITA DR

DOES NOT EXIST

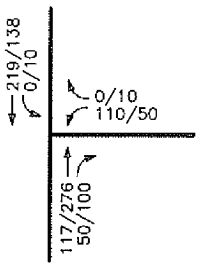
(52)

BECK DR/
CUYAMACA ST




(53)

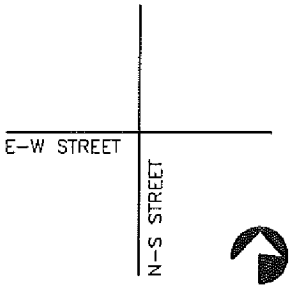
GANLEY RD/
FANITA PKWY/
SANTEE LAKES RD




(54)

NOTES:

- AM/PM Peak hour volumes are shown at the intersections
- EAST-WEST STREET/ NORTH-SOUTH STREET




NO SCALE

LINSCOTT LAW & GREENSPAN engineers

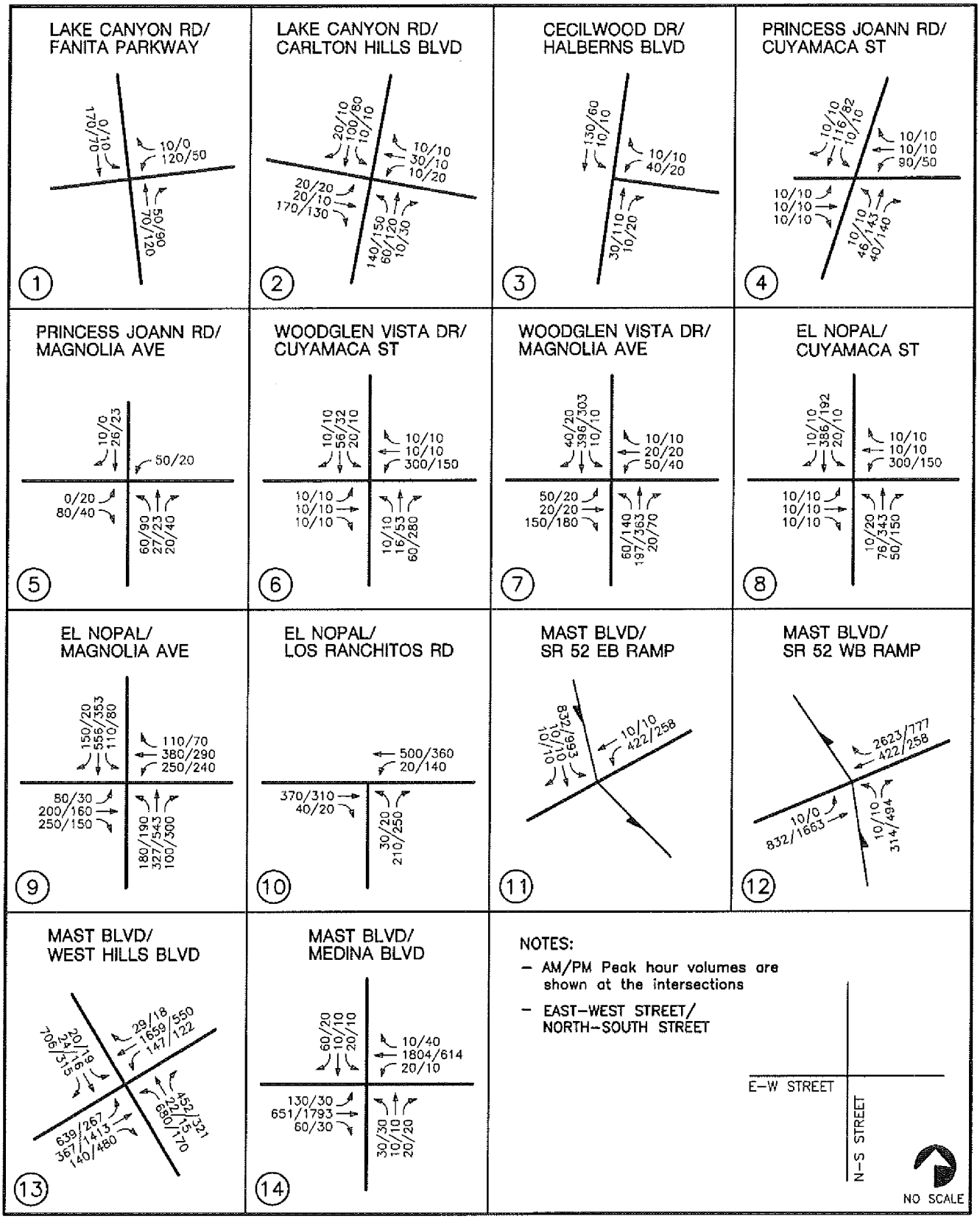
REV. 2/8/07
LLG1545 FIG9-3.DWG

# Figure 9-3

(4 OF 4)

## YEAR 2010 WITH (50%) PROJECT TRAFFIC VOLUMES WITHOUT SR 52 EXTENDED TO EAST OF SR 125 AM/PM PEAK HOURS

Fanita




REV. 2/13/07
LLG1545 FIG9-4.DWG

LINSCOTT LAW & GREENSPAN engineers

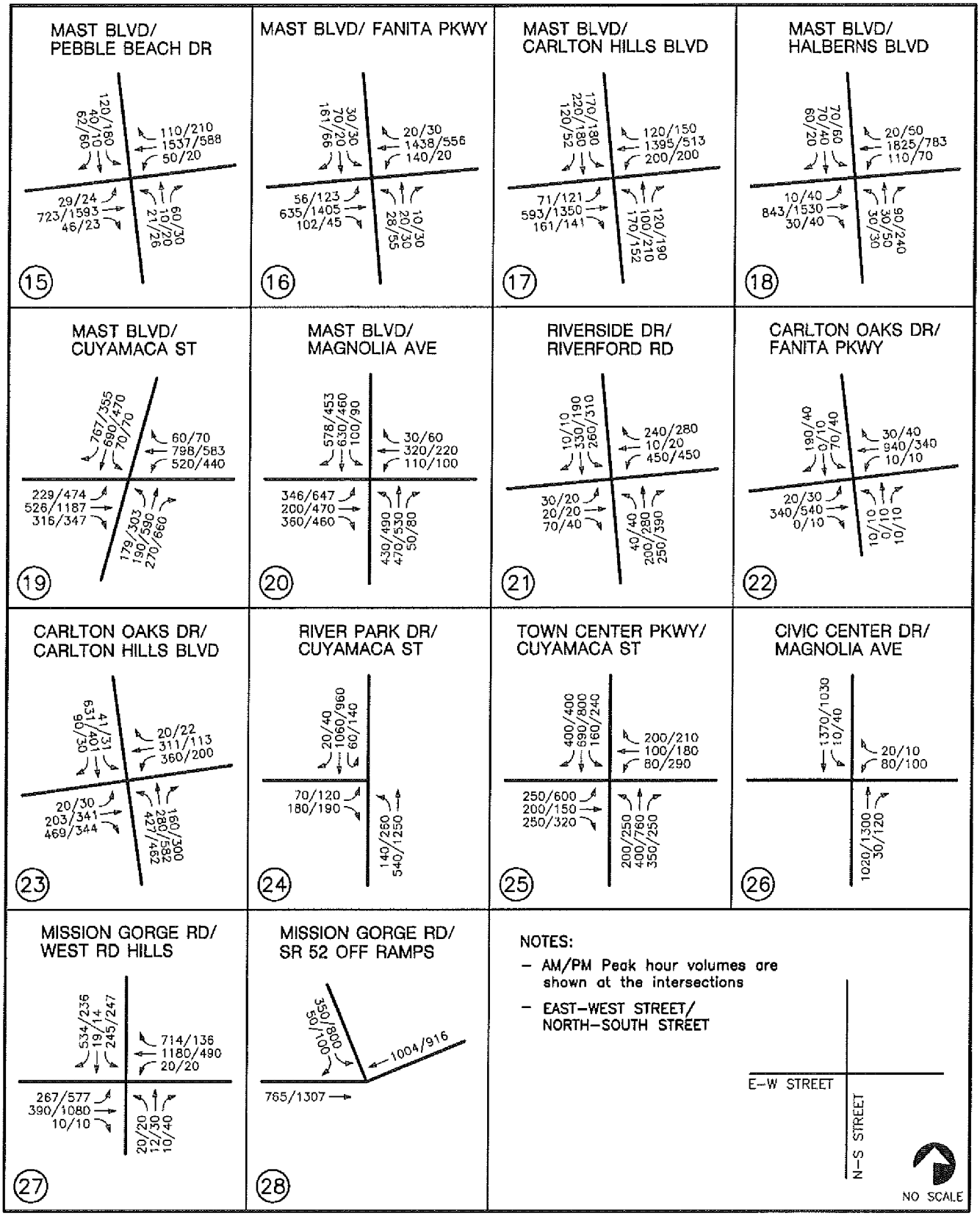
# Figure 9-4

(1 OF 4)

## YEAR 2010 WITHOUT PROJECT TRAFFIC VOLUMES WITH SR 52 EXTENDED TO CUYAMACA STREET AM/PM PEAK HOURS

Fanita

018692




LINSCOTT LAW & GREENSPAN engineers

REV. 2/13/07
LLG1545 FIG9-4.DWG

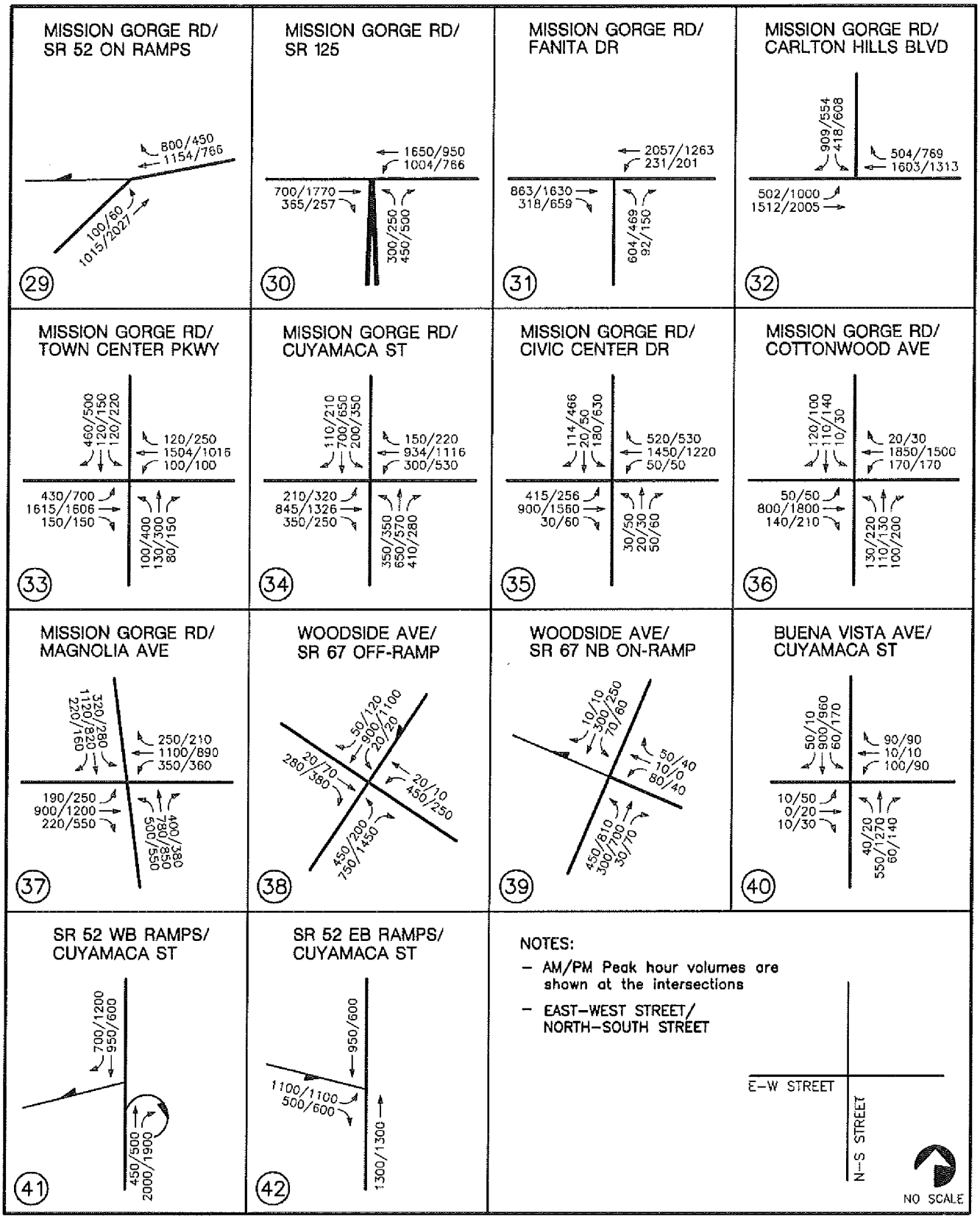
# Figure 9-4

(2 OF 4)

## YEAR 2010 WITHOUT PROJECT TRAFFIC VOLUMES WITH SR 52 EXTENDED TO CUYAMACA STREET AM/PM PEAK HOURS

Fanita

018693




LINSCOTT LAW & GREENSPAN engineers

REV. 2/13/07
LLG1545 FIG9-4.DWG

# Figure 9-4

(3 OF 4)

## YEAR 2010 WITHOUT PROJECT TRAFFIC VOLUMES WITH SR 52 EXTENDED TO CUYAMACA STREET AM/PM PEAK HOURS

Fanita

SR 52 WB RAMPS/
MAGNOLIA AVE/
SR 67 SB RAMPS

DOES NOT EXIST

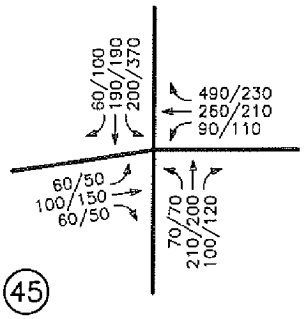
(43)

SR 52 EB RAMPS/
MAGNOLIA AVE

DOES NOT EXIST

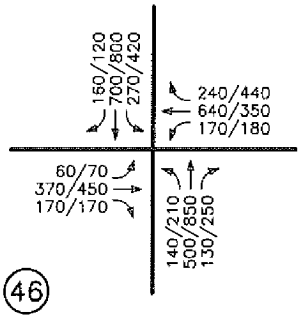
(44)

PROSPECT AVE/
FANITA DR



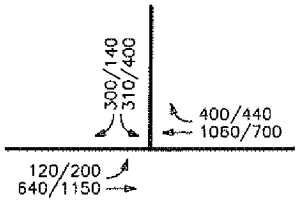

(45)

PROSPECT AVE/
CUYAMACA ST




(46)

PROSPECT AVE/
COTTONWOOD ST

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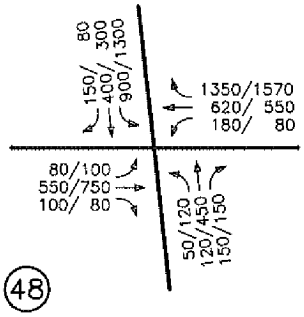
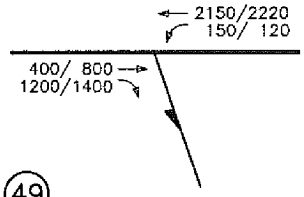
PROSPECT AVE/
MAGNOLIA AVE




(48)

PROSPECT AVE/
SR 67 SB ON-RAMP

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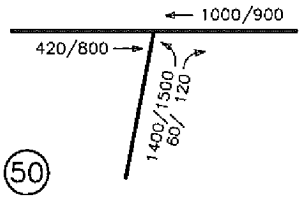
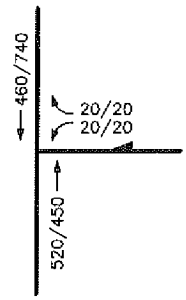
PROSPECT AVE/
SR 67 NB OFF-RAMP




(50)

WB OFF-RAMP/
SR 52/ FANITA DR

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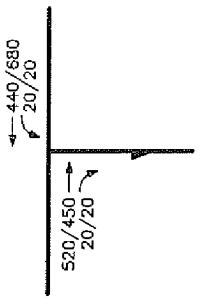
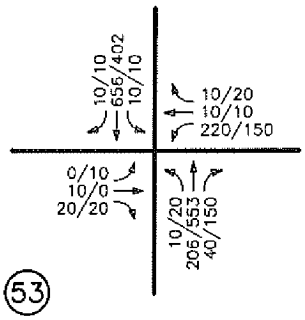
EB ON-RAMP/
SR 52/ FANITA DR




(52)

BECK DR/
CUYAMACA ST

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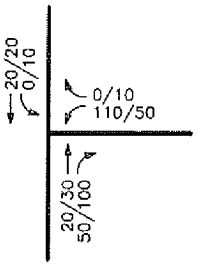
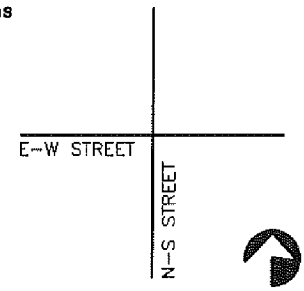
GANLEY RD/
FANITA PKWY/
SANTEE LAKES RD




(54)

NOTES:

- AM/PM Peak hour volumes are shown at the intersections
- EAST-WEST STREET/ NORTH-SOUTH STREET




NO SCALE

LINSCOTT LAW & GREENSPAN engineers

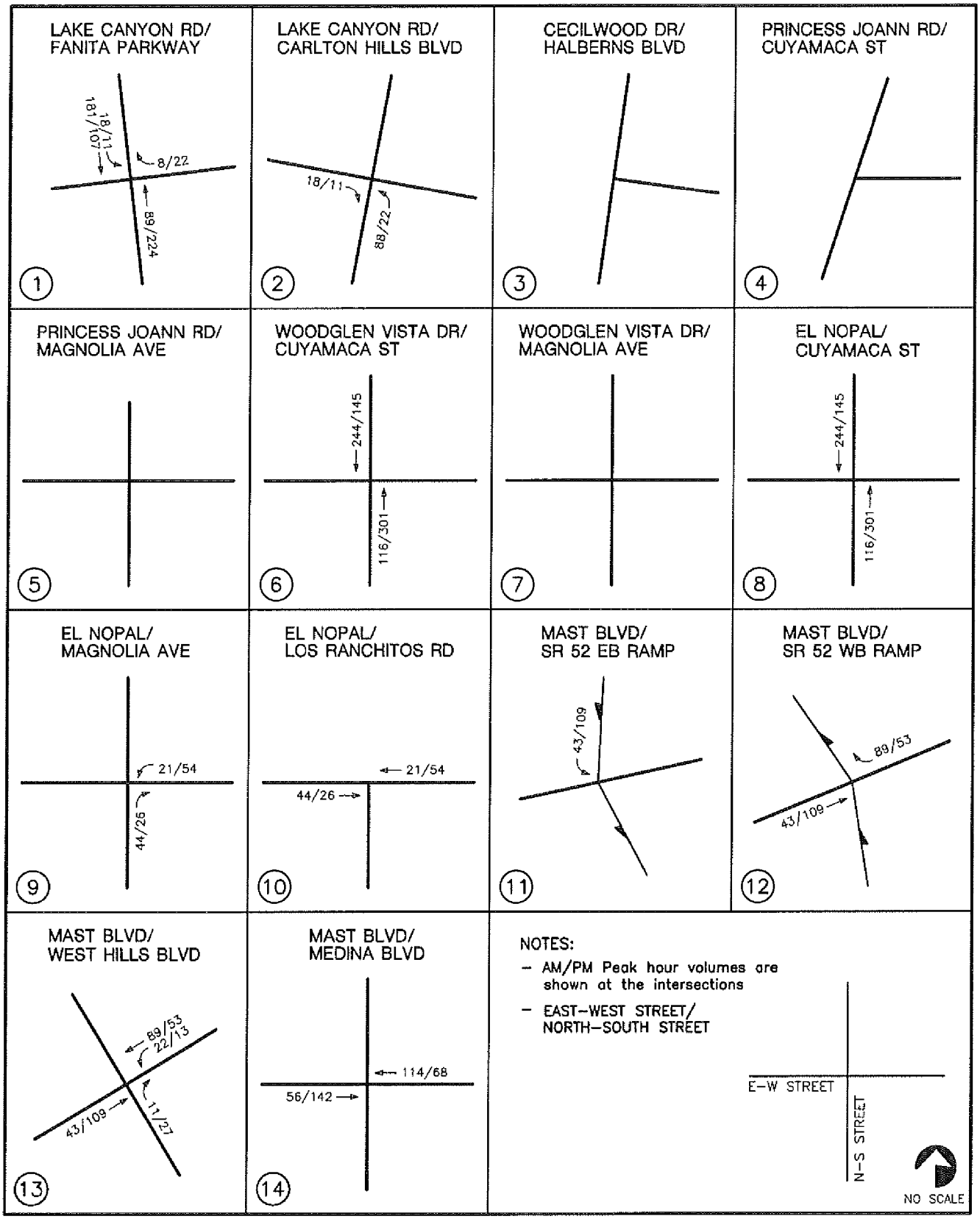
REV. 2/13/07
LLG1545 FIG9-4.DWG

# Figure 9-4

(4 OF 4)

## YEAR 2010 WITHOUT PROJECT TRAFFIC VOLUMES WITH SR 52 EXTENDED TO CUYAMACA STREET AM/PM PEAK HOURS

Fanita



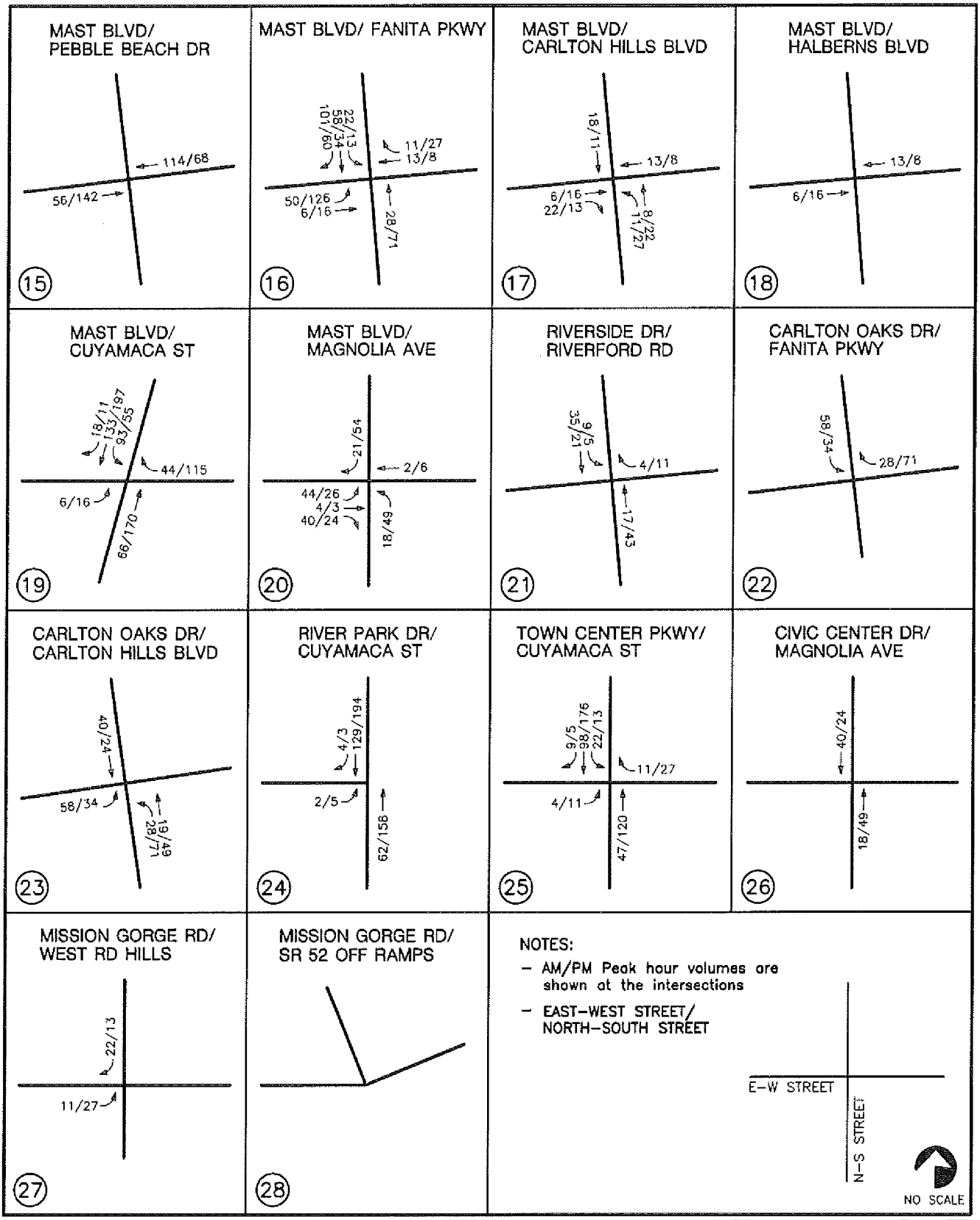

LINSCOTT LAW & GREENSPAN engineers

REV. 2/13/07
LLG1545 FIG9-5.DWG

# Figure 9-5

(1 OF 4)

## PROJECT (50%) ONLY TRAFFIC VOLUMES WITH SR 52 EXTENDED TO CUYAMACA STREET AM/PM PEAK HOURS




LINSCOTT LAW & GREENSPAN engineers

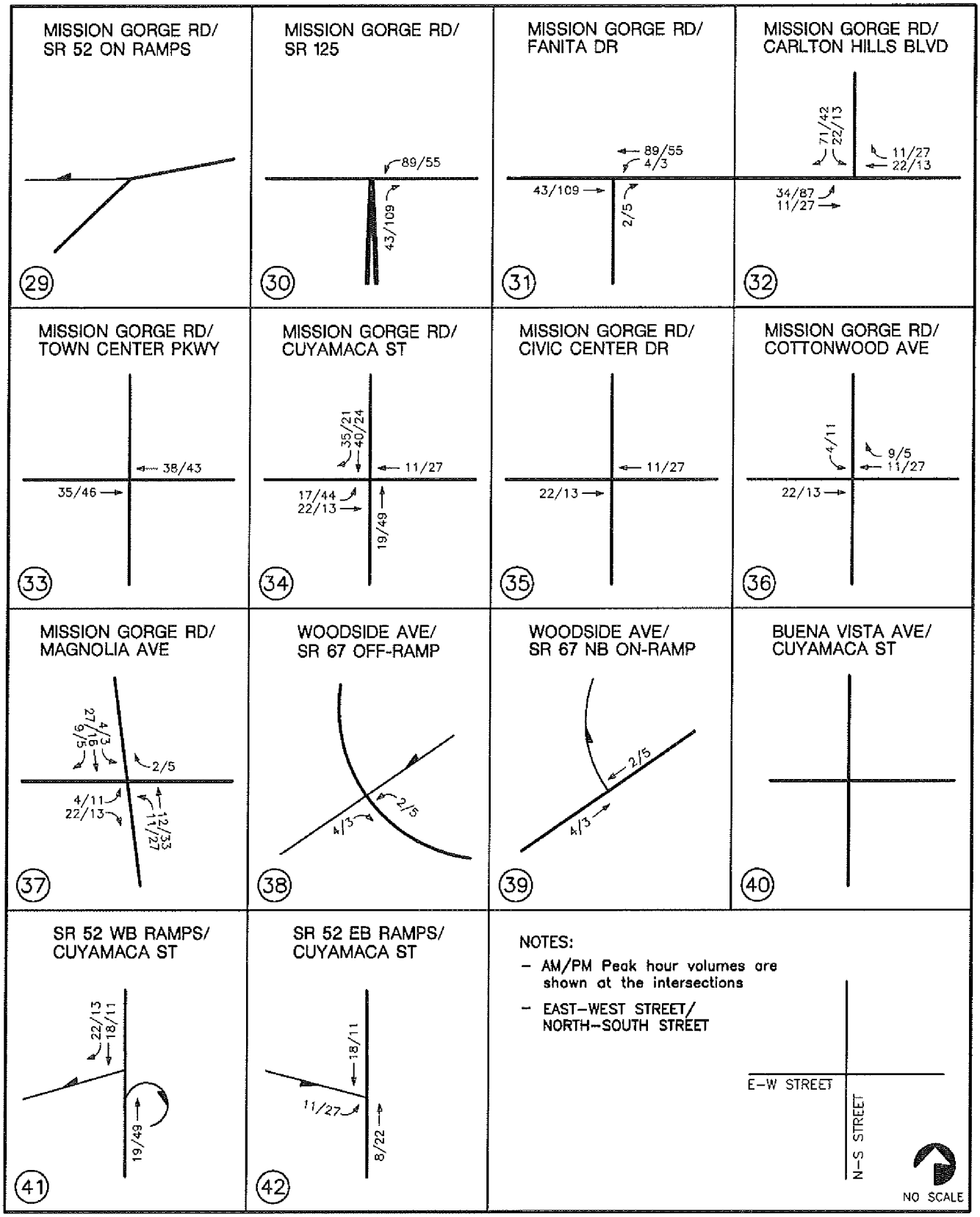
REV. 2/13/07
LLG1545 FIG9-5.DWG

# Figure 9-5

(2 OF 4)

## PROJECT (50%) ONLY TRAFFIC VOLUMES WITH SR 52 EXTENDED TO CUYAMACA STREET AM/PM PEAK HOURS

Fanita




LINSCOTT LAW & GREENSPAN engineers

REV. 2/13/07
LLG1545 FIG9-5.DWG

# Figure 9-5

(3 OF 4)

## PROJECT (50%) ONLY TRAFFIC VOLUMES WITH SR 52 EXTENDED TO CUYAMACA STREET AM/PM PEAK HOURS

Fanita

SR 52 WB RAMPS/
MAGNOLIA AVE/
SR 67 SB RAMPS

DOES NOT EXIST

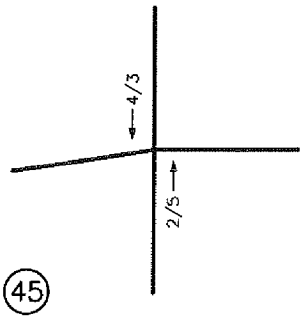
(43)

SR 52 EB RAMPS/
MAGNOLIA AVE

DOES NOT EXIST

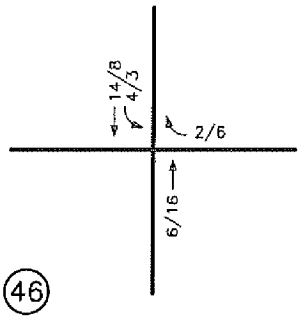
(44)

PROSPECT AVE/
FANITA DR



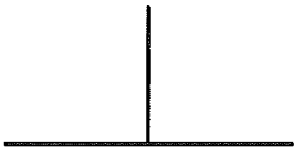

(45)

PROSPECT AVE/
CUYAMACA ST



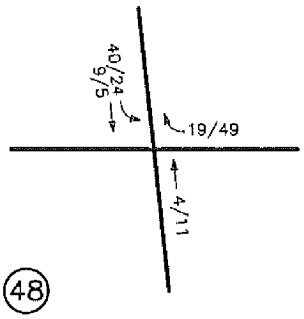

(46)

PROSPECT AVE/
COTTONWOOD ST



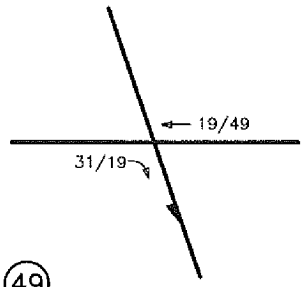
(47)

PROSPECT AVE/
MAGNOLIA AVE



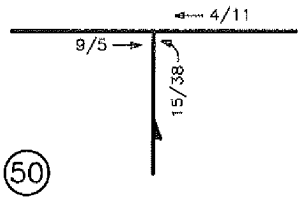

(48)

PROSPECT AVE/
SR 67 SB ON-RAMP



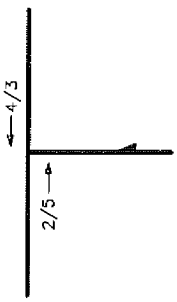

(49)

PROSPECT AVE/
SR 67 NB OFF-RAMP



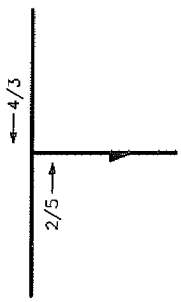

(50)

WB OFF-RAMP/
SR 52/ FANITA DR



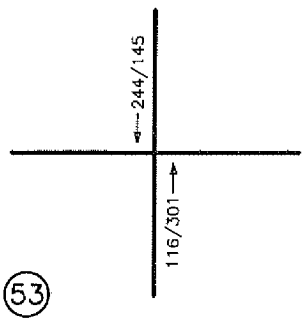

(51)

EB ON-RAMP/
SR 52/ FANITA DR



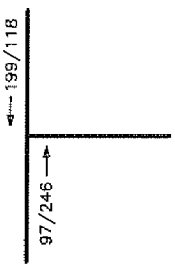

(52)

BECK DR/
CUYAMACA ST




(53)

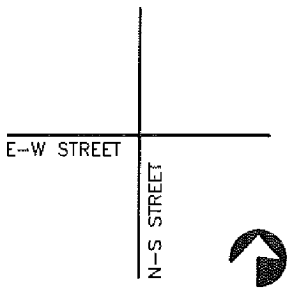
GANLEY RD/
FANITA PKWY/
SANTEE LAKES RD




(54)

NOTES:

- AM/PM Peak hour volumes are shown at the intersections
- EAST-WEST STREET/ NORTH-SOUTH STREET




NO SCALE

LINSCOTT LAW & GREENSPAN engineers

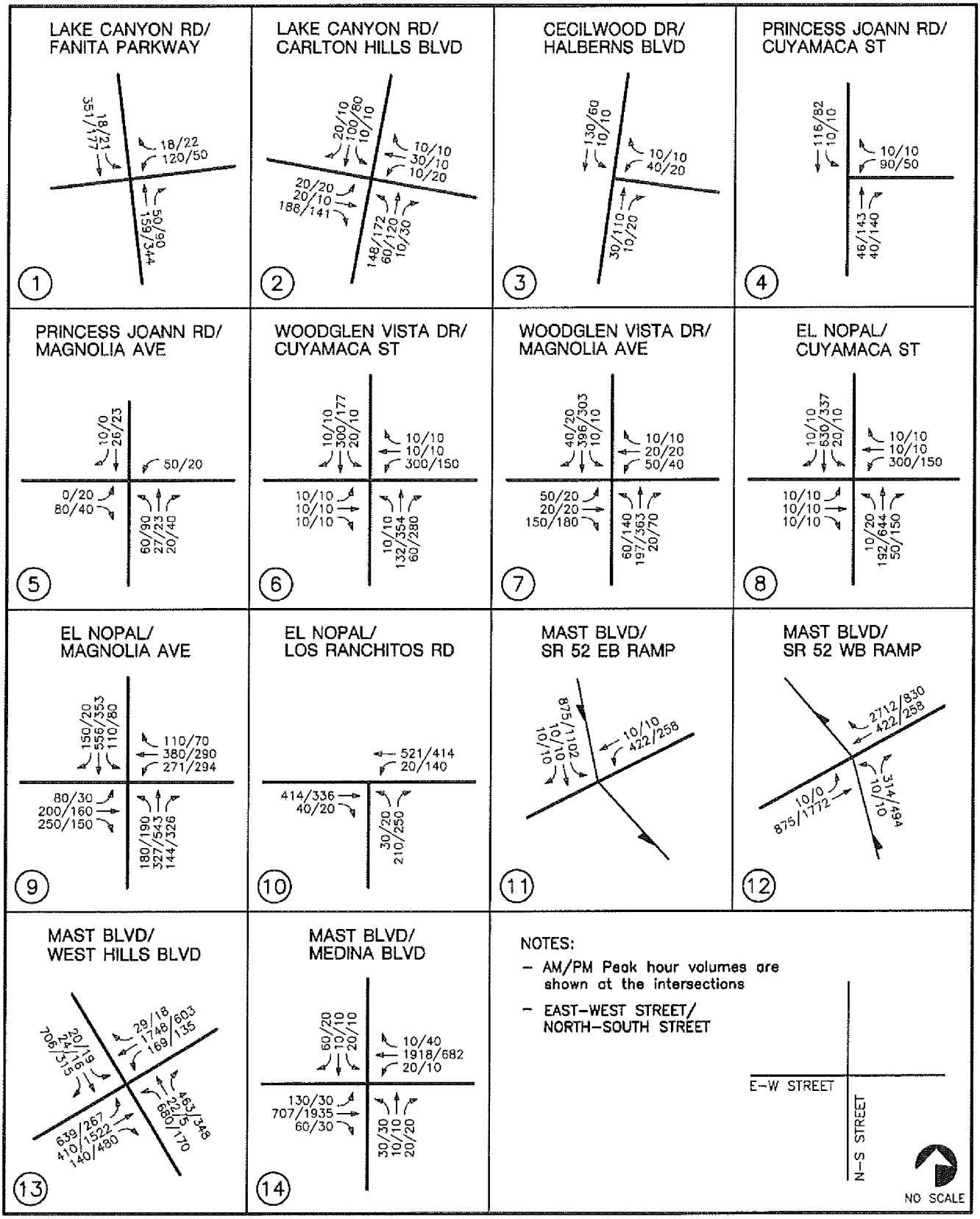
REV. 2/13/07
LLG1545 FIG9-5.DWG

# Figure 9-5

(4 OF 4)

## PROJECT (50%) ONLY TRAFFIC VOLUMES WITH SR 52 EXTENDED TO CUYAMACA STREET AM/PM PEAK HOURS

Fanita




LINSCOTT LAW & GREENSPAN engineers

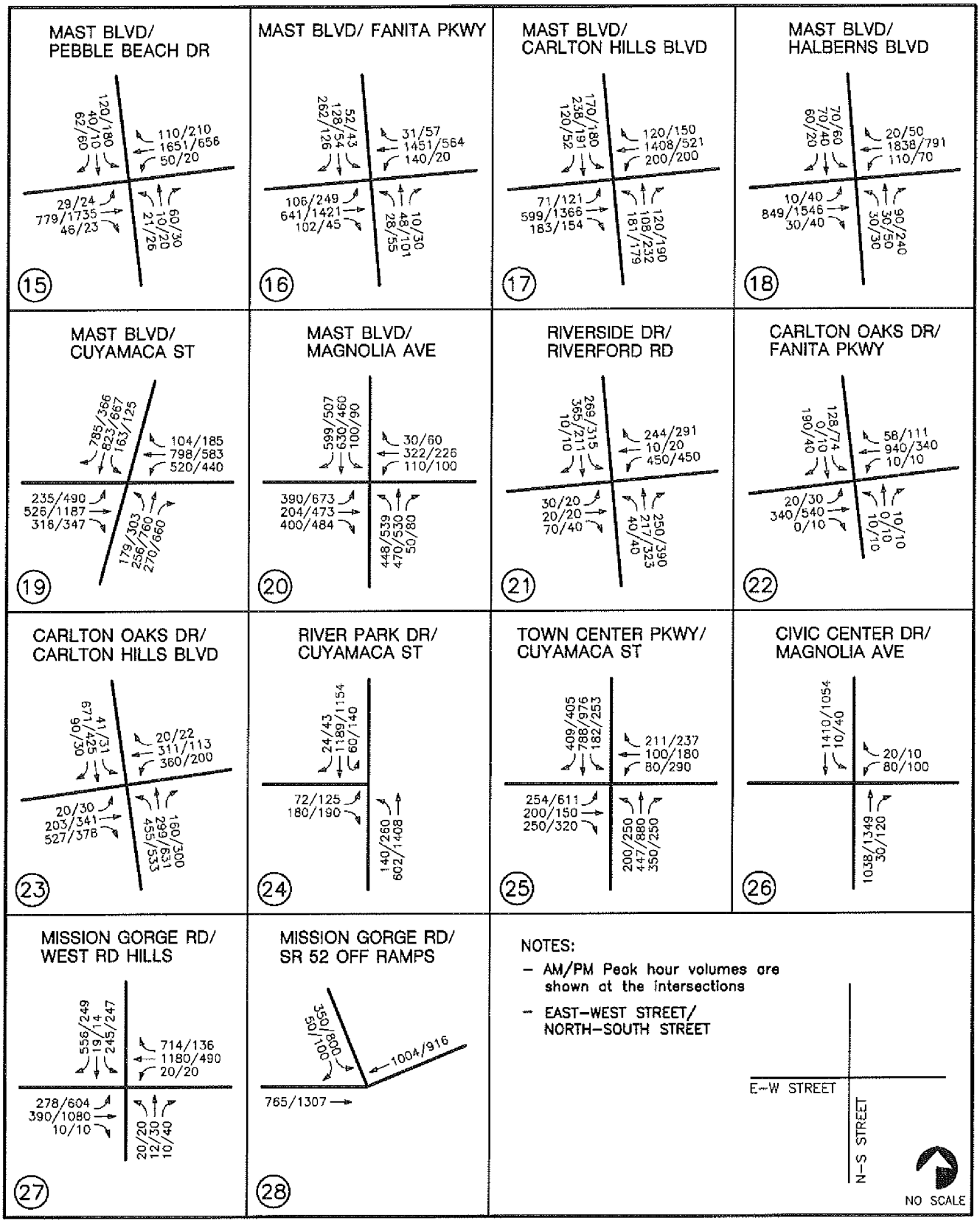
REV. 2/13/07
LLG1545 FIG9-6.DWG

# Figure 9-6

(1 OF 4)

## YEAR 2010 WITH (50%) PROJECT TRAFFIC VOLUMES WITH SR 52 EXTENDED TO CUYAMACA STREET AM/PM PEAK HOURS

Fanita




REV. 2/13/07
LLG1545 FIG9-6.DWG

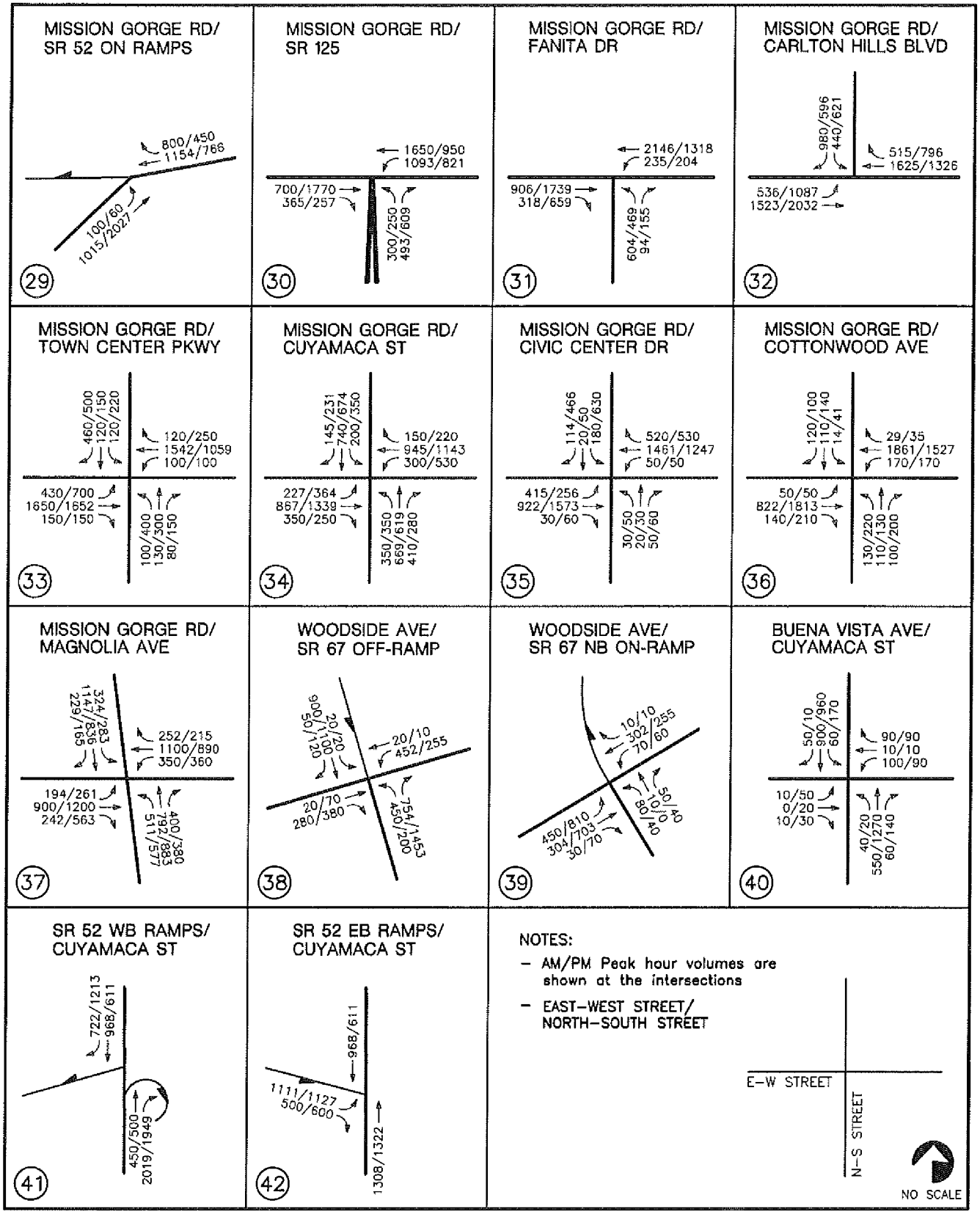
LINSCOTT LAW & GREENSPAN engineers

# Figure 9-6

(2 OF 4)

## YEAR 2010 WITH (50%) PROJECT TRAFFIC VOLUMES WITH SR 52 EXTENDED TO CUYAMACA STREET AM/PM PEAK HOURS

Fanita




LINSCOTT LAW & GREENSPAN engineers

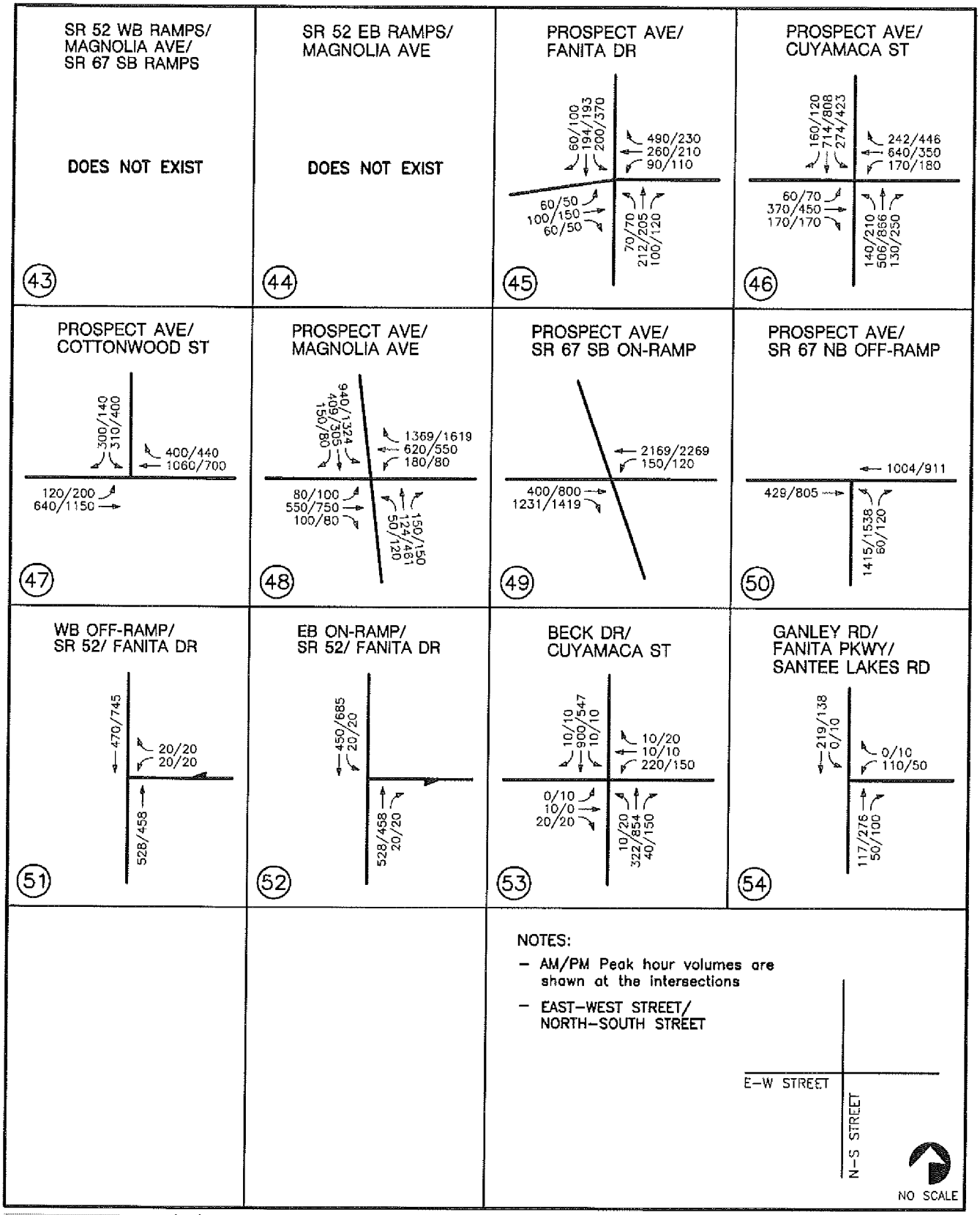
REV. 2/13/07
LLG1545 FIG9-6.DWG

# Figure 9-6

(3 OF 4)

## YEAR 2010 WITH (50%) PROJECT TRAFFIC VOLUMES WITH SR 52 EXTENDED TO CUYAMACA STREET AM/PM PEAK HOURS

Fanita




LINSCOTT LAW & GREENSPAN engineers

REV. 2/13/07
LLG1545 FIG9-6.DWG

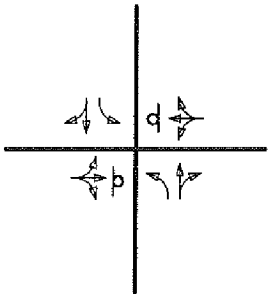
# Figure 9-6

(4 OF 4)

## YEAR 2010 WITH (50%) PROJECT TRAFFIC VOLUMES WITH SR 52 EXTENDED TO CUYAMACA STREET AM/PM PEAK HOURS

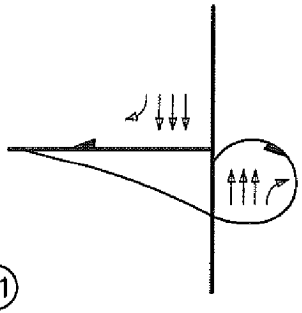
Fanita

PRINCESS TOWN RD/
CUYAMACA ST



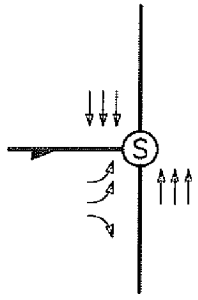
4

SR 52 WB RAMPS/
CUYAMACA ST



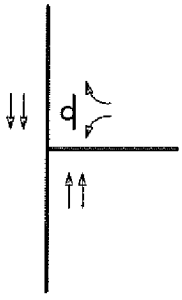
41

SR 52 EB RAMPS/
CUYAMACA ST



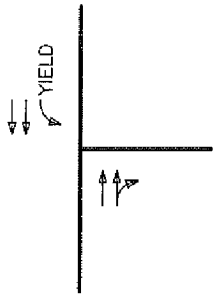
42

SR 52 WB OFF-RAMP/
FANITA DR



51

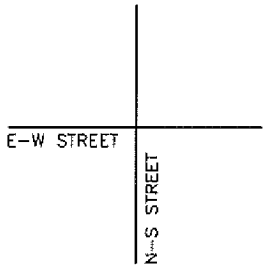
SR 52 WB OFF-RAMP/
FANITA DR




52

NOTES:

- AM/PM Peak hour volumes are shown at the intersections
- EAST-WEST STREET/ NORTH-SOUTH STREET




LEGEND

– STOP Sign

NO SCALE

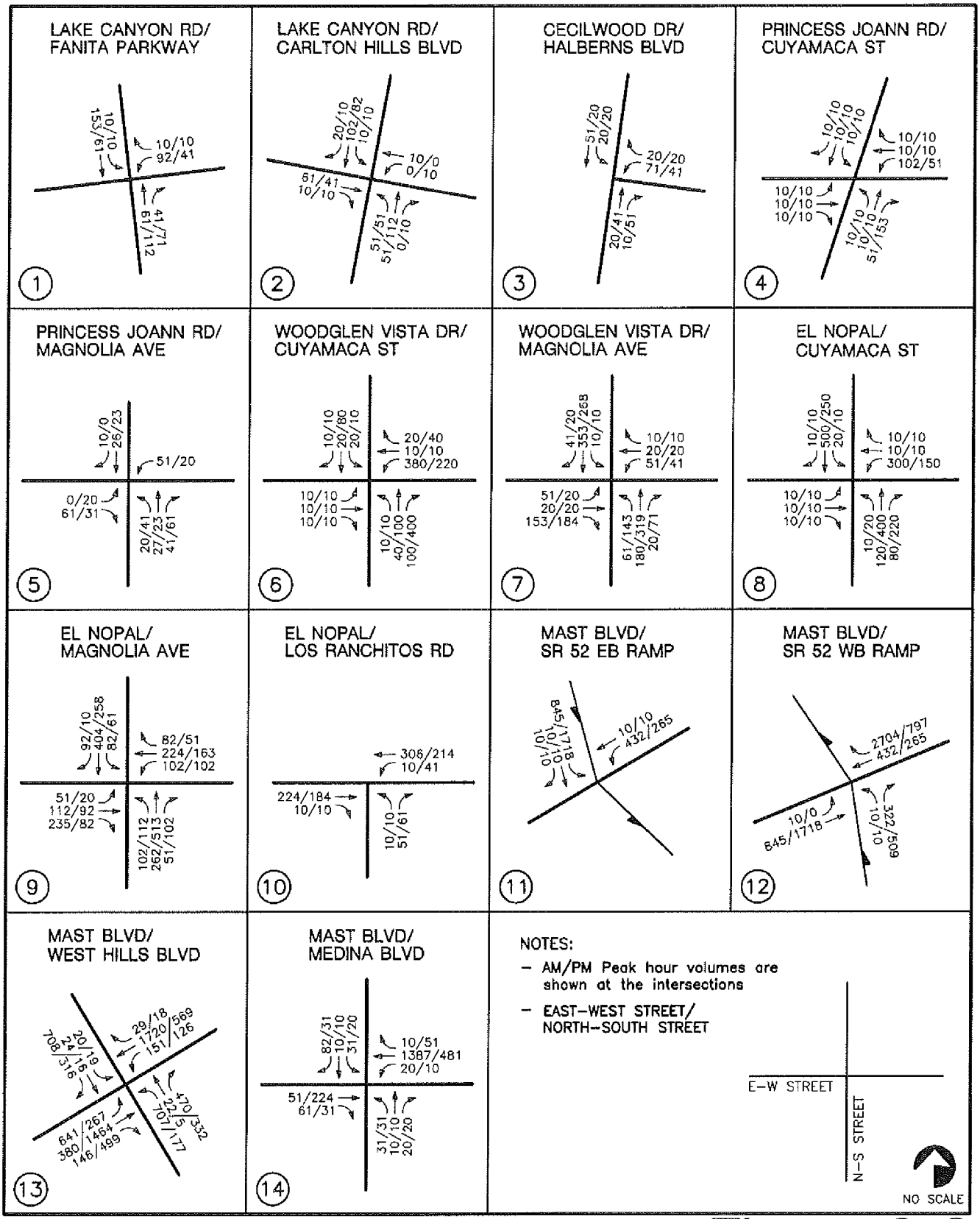
LINSCOTT LAW & GREENSPAN engineers

REV. 12/12/05
LLG1545 FIG9-7.DWG

# Figure 9-7

## YEAR 2010 INTERSECTION GEOMETRY WITH SR 52 EXTENDED TO CUYAMACA STREET AM/PM PEAK HOURS

Fanita




LINSCOTT LAW & GREENSPAN engineers

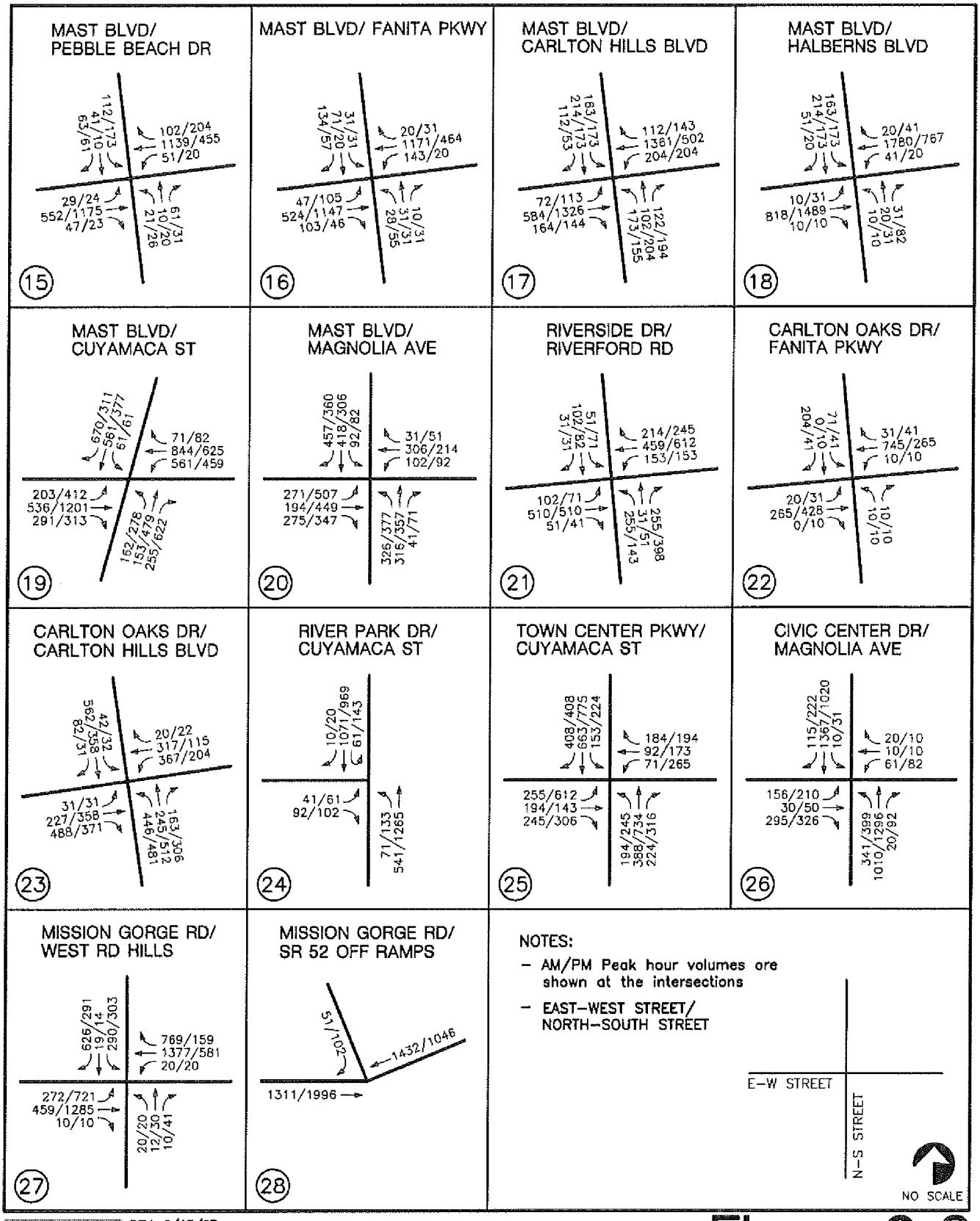
REV. 2/13/07
LLG1545 FIG 9-8

# Figure 9-8

(1 OF 4)

## YEAR 2012 WITHOUT PROJECT TRAFFIC VOLUMES WITH SR 52 EXTENDED TO SR 67 AM/PM PEAK HOURS

Fanita




LINSCOTT LAW & GREENSPAN engineers

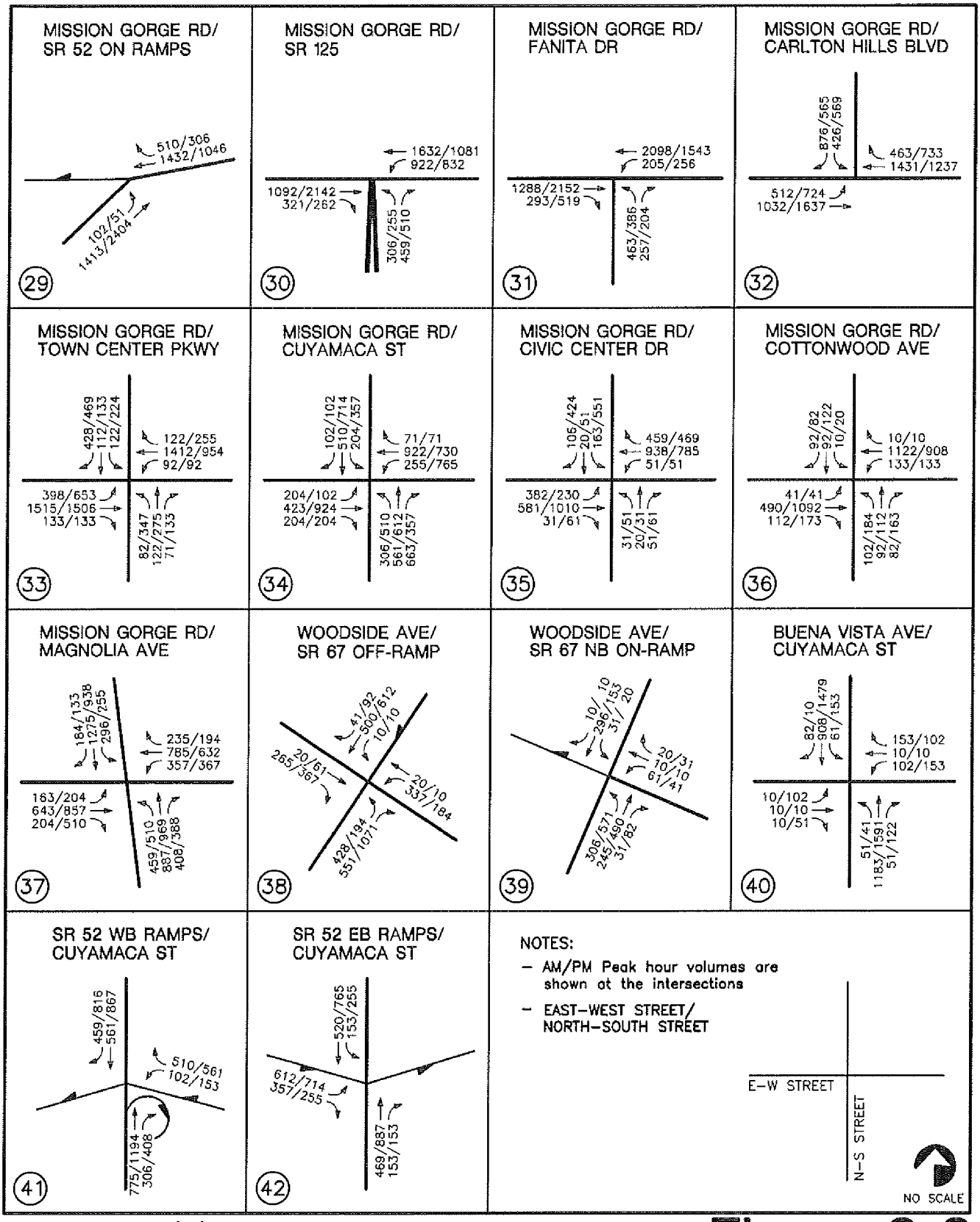
REV. 2/13/07
LLG1545 FIG 9-8

# Figure 9-8

(2 OF 4)

## YEAR 2012 WITHOUT PROJECT TRAFFIC VOLUMES WITH SR 52 EXTENDED TO SR 67 AM/PM PEAK HOURS

Fanita




LINSCOTT LAW & GREENSPAN engineers

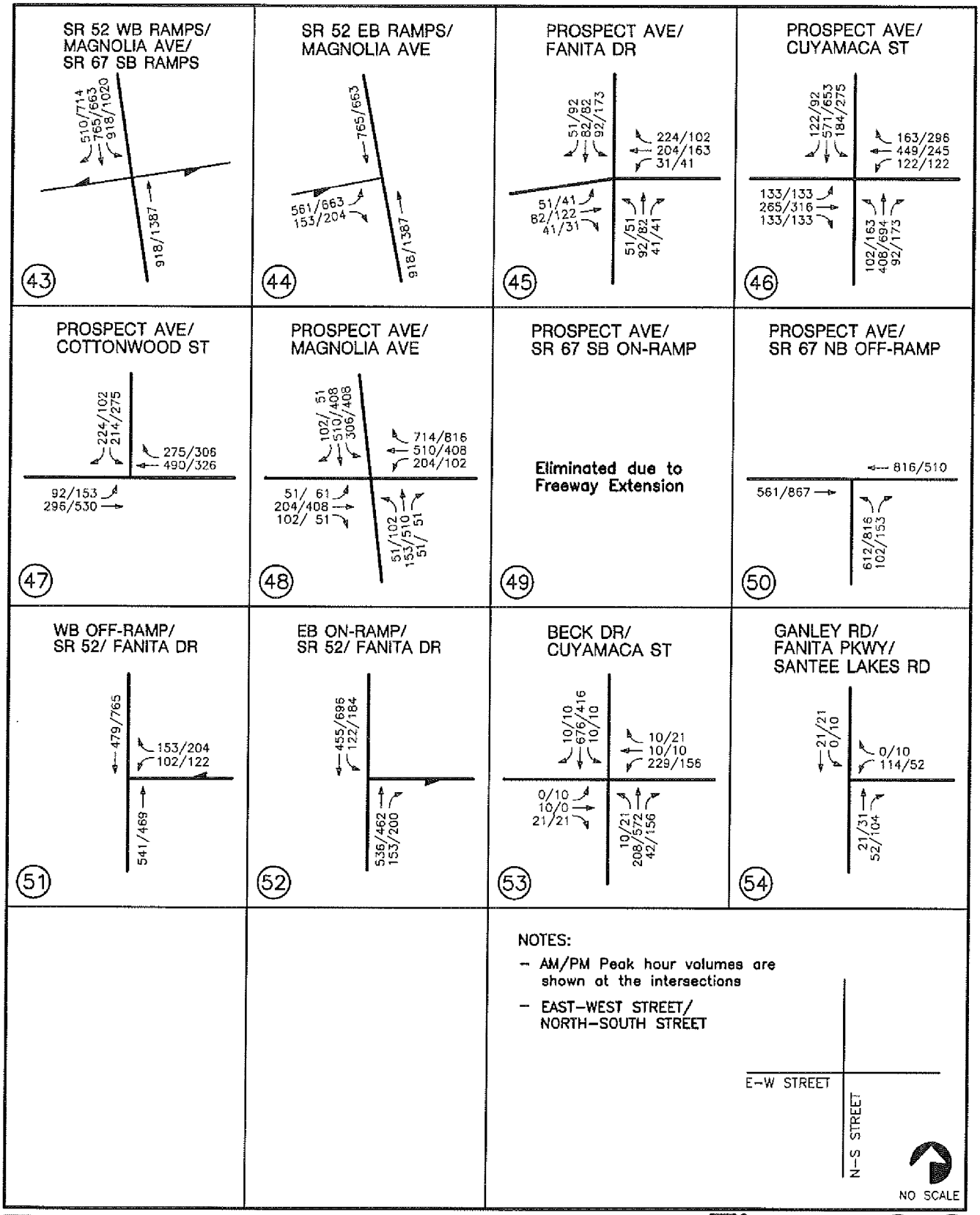
REV. 2/13/07
LLG1545 FIG 9-8

# Figure 9-8

(3 OF 4)

## YEAR 2012 WITHOUT PROJECT TRAFFIC VOLUMES WITH SR 52 EXTENDED TO SR 67 AM/PM PEAK HOURS

Fanita




LINSCOTT LAW & GREENSPAN engineers

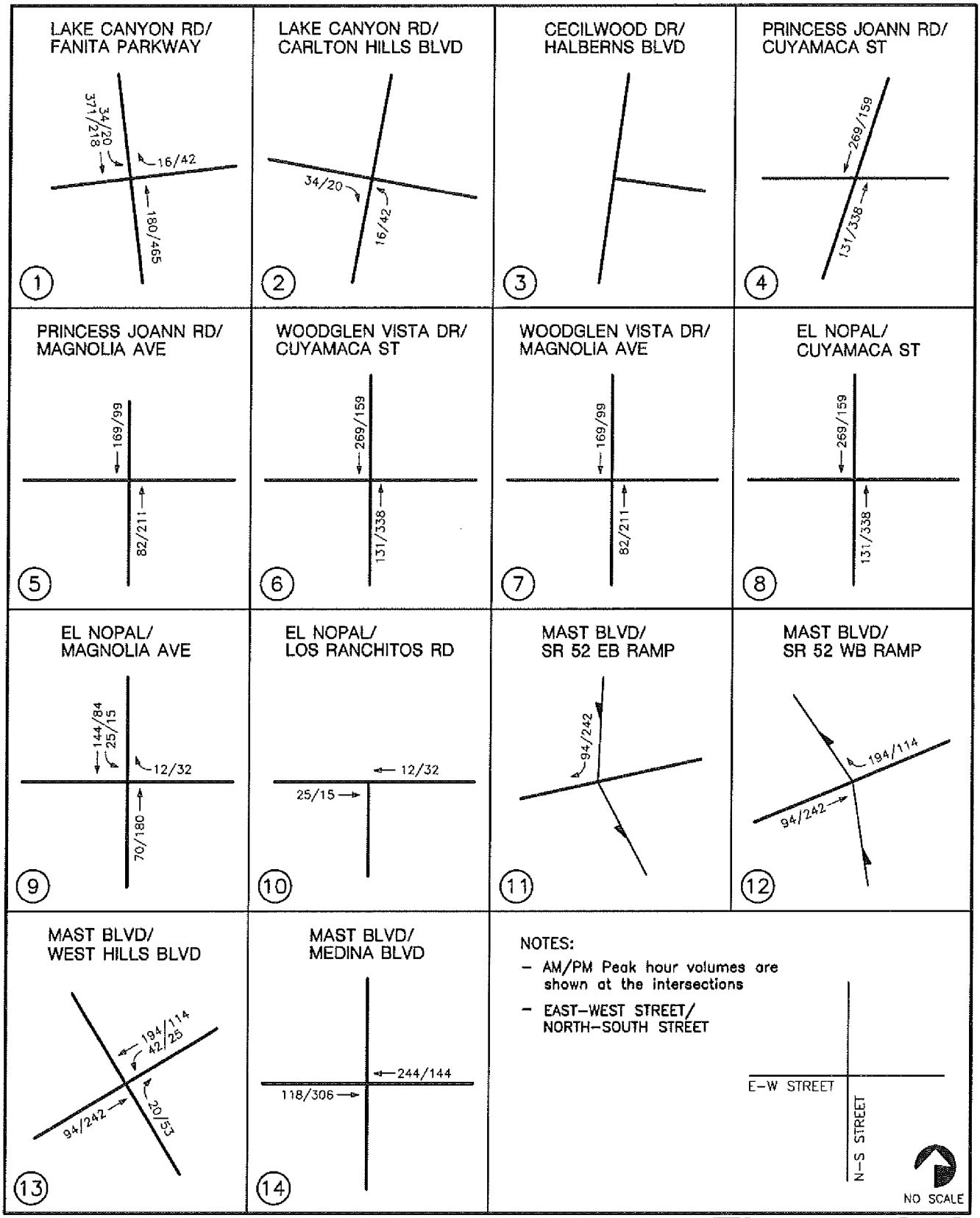
REV. 2/13/07
LLG1545 FIG 9-8

# Figure 9-8

(4 OF 4)

## YEAR 2012 WITHOUT PROJECT TRAFFIC VOLUMES WITH SR 52 EXTENDED TO SR 67 AM/PM PEAK HOURS

Fanita




REV. 2/13/07
LLG1545 FIG 9-9

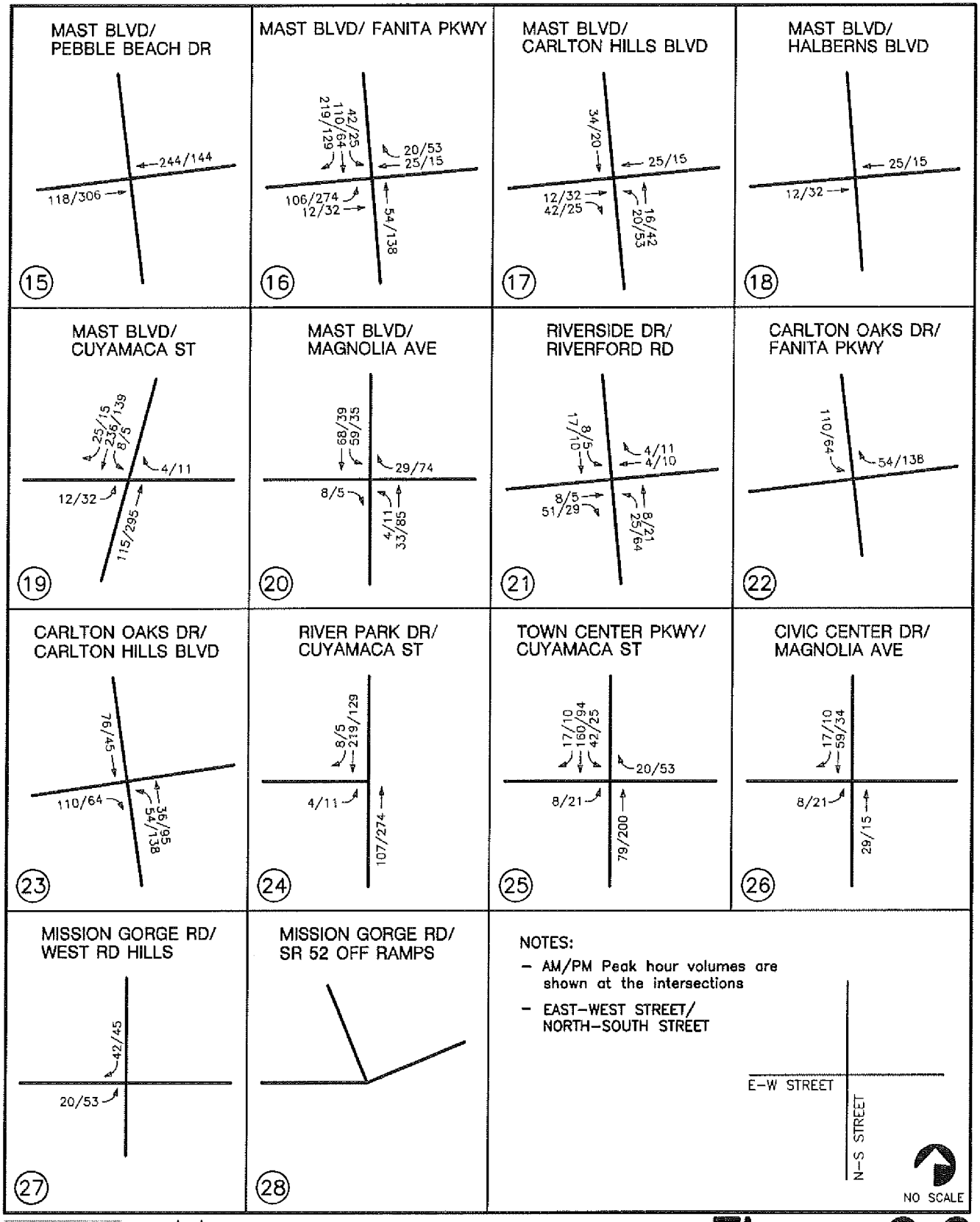
LINSCOTT LAW & GREENSPAN engineers

# Figure 9-9

(1 OF 4)

**100% PROJECT ONLY TRAFFIC VOLUMES WITH SR 52 EXTENDED TO SR 67 AM/PM PEAK HOURS**

Fanita




LINSCOTT LAW & GREENSPAN engineers

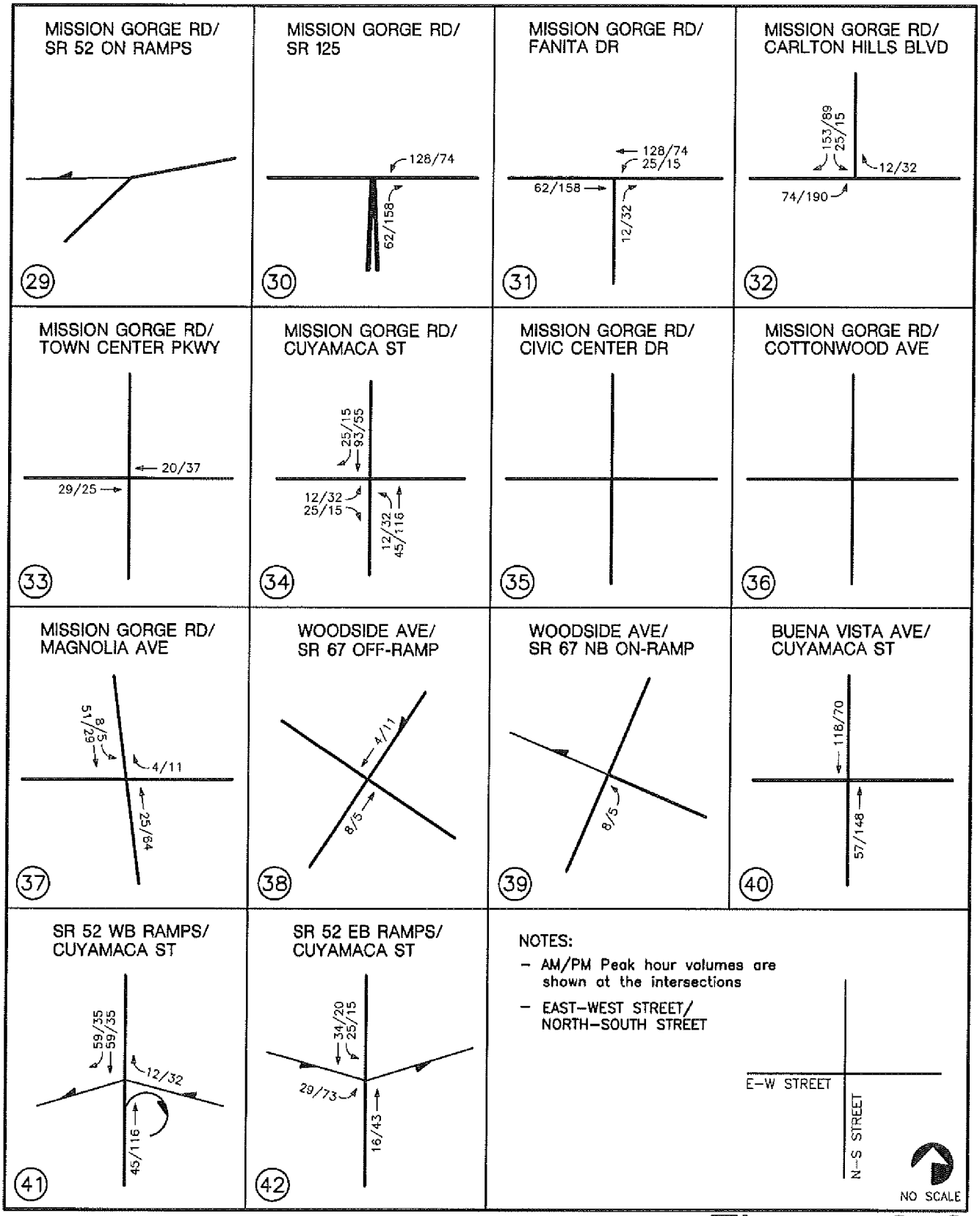
REV. 2/13/07
LLG1545 FIG 9-9

# Figure 9-9

(2 OF 4)

**100% PROJECT ONLY TRAFFIC VOLUMES WITH SR 52 EXTENDED TO SR 67 AM/PM PEAK HOURS**

Fanita




LINSCOTT LAW & GREENSPAN engineers

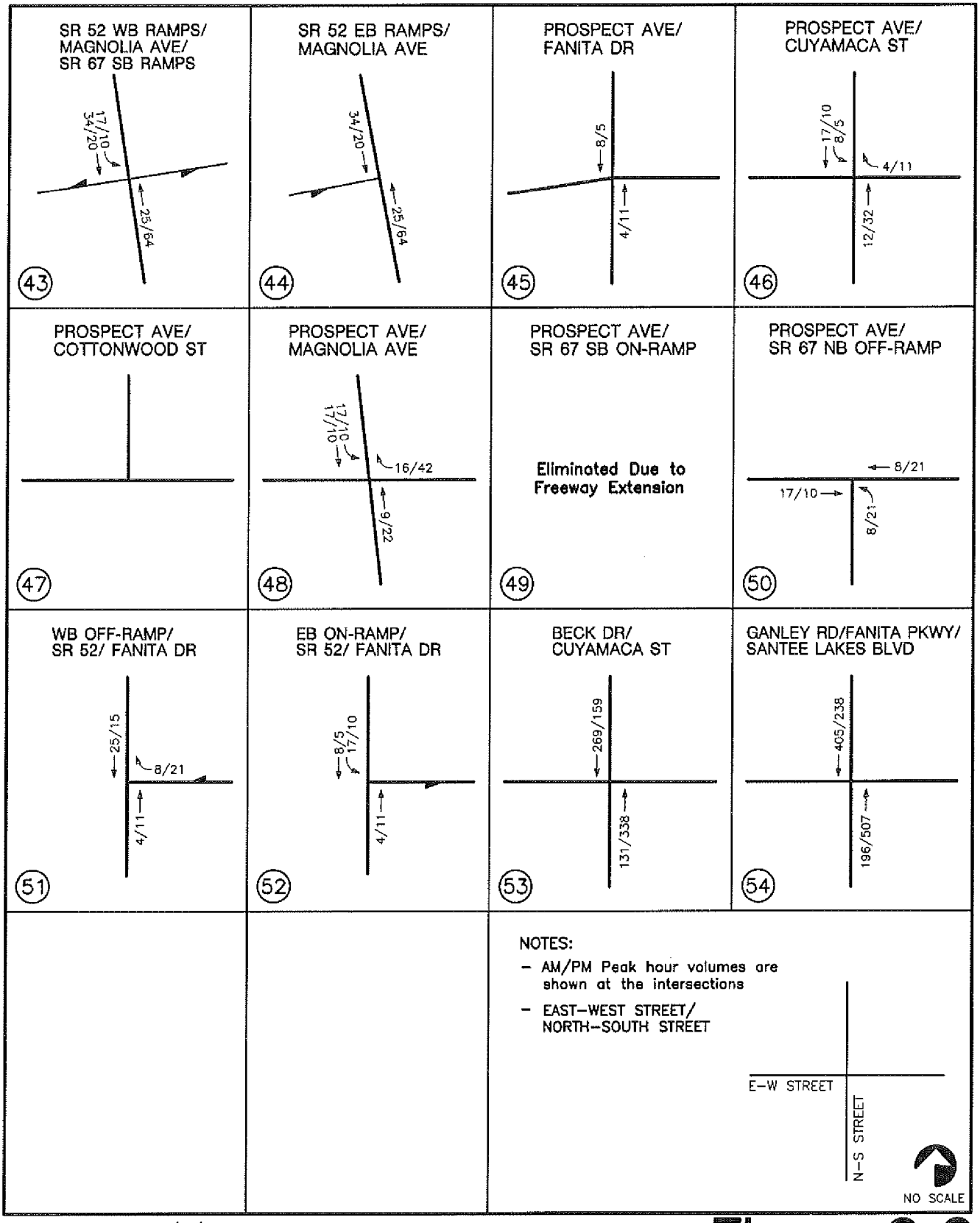
REV. 2/13/07
LLG1545 FIG 9-9

# Figure 9-9

(3 OF 4)

## 100% PROJECT ONLY TRAFFIC VOLUMES WITH SR 52 EXTENDED TO SR 67 AM/PM PEAK HOURS

Fanita




LINSCOTT LAW & GREENSPAN engineers

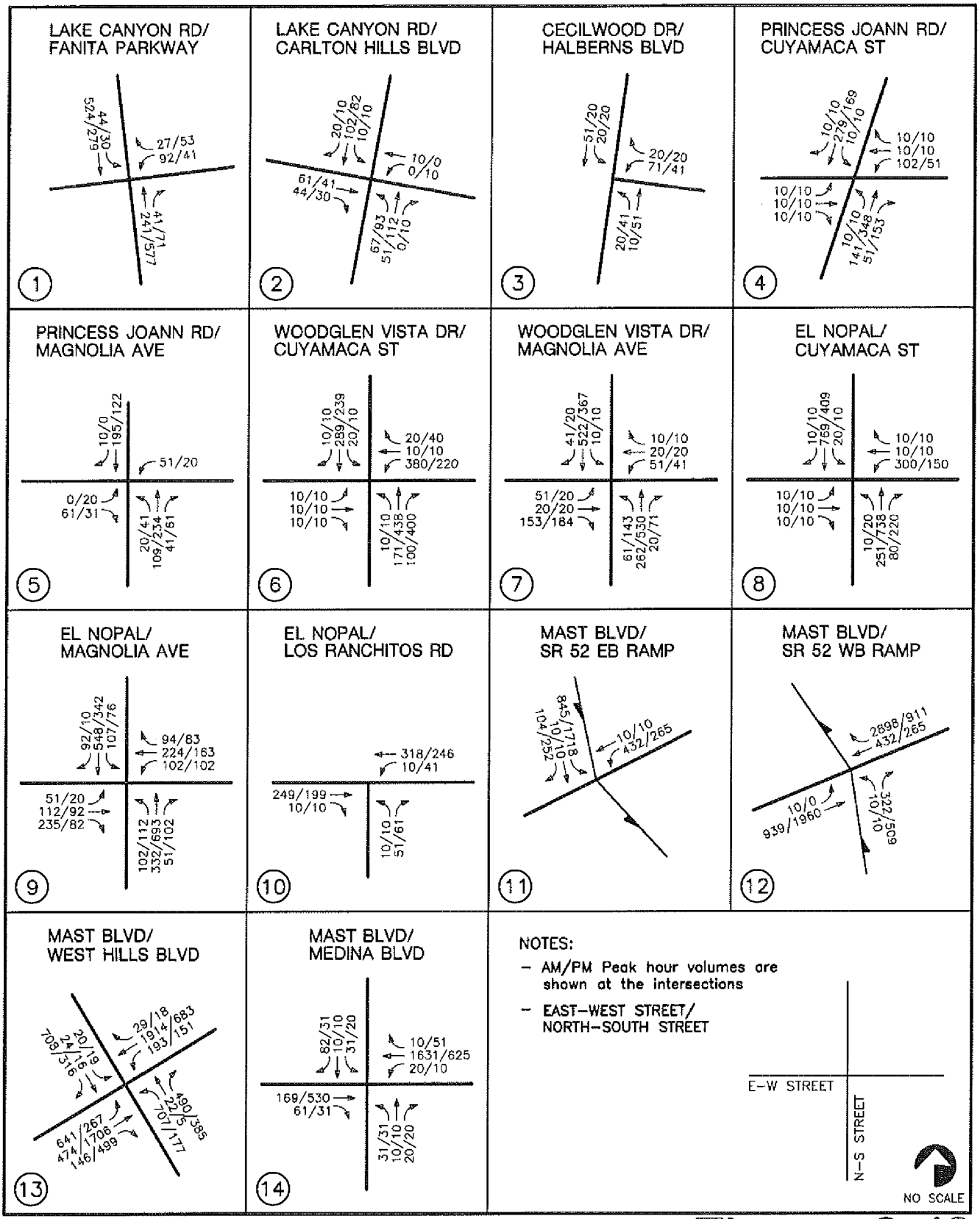
REV. 2/13/07
LLG1545 FIG 9-9

# Figure 9-9

(4 OF 4)

## 100% PROJECT ONLY TRAFFIC VOLUMES WITH SR 52 EXTENDED TO SR 67 AM/PM PEAK HOURS

Fanita




REV. 2/13/07
LLG1545 FIG 9-10

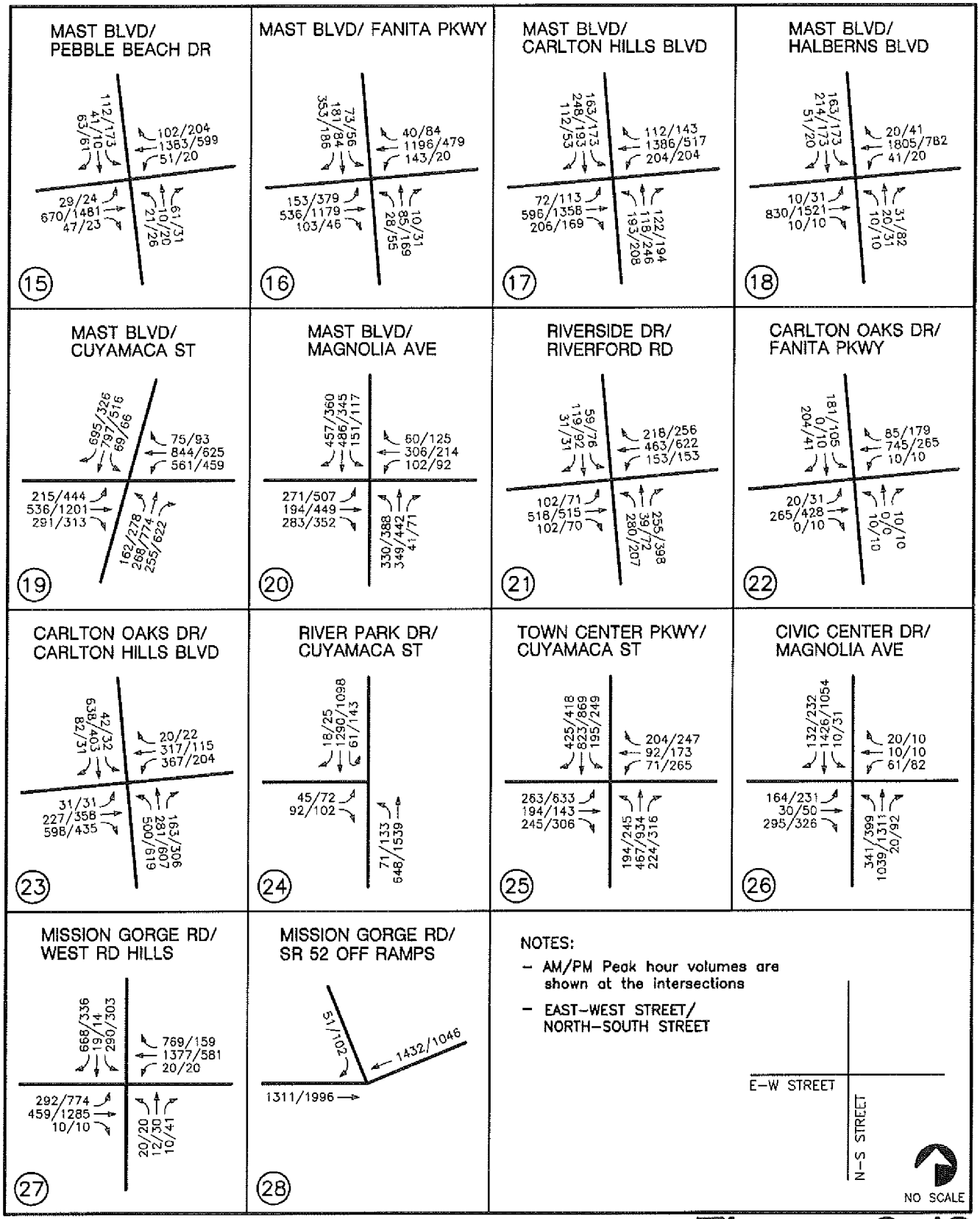
LIMSCOTT LAW & GREENSPAN engineers

# Figure 9-10

(1 OF 4)

## YEAR 2012 WITH 100% PROJECT TRAFFIC VOLUMES WITH SR 52 EXTENDED TO SR 67 AM/PM PEAK HOURS

Fanita




REV. 2/13/07
LLG1545 FIG 9-10

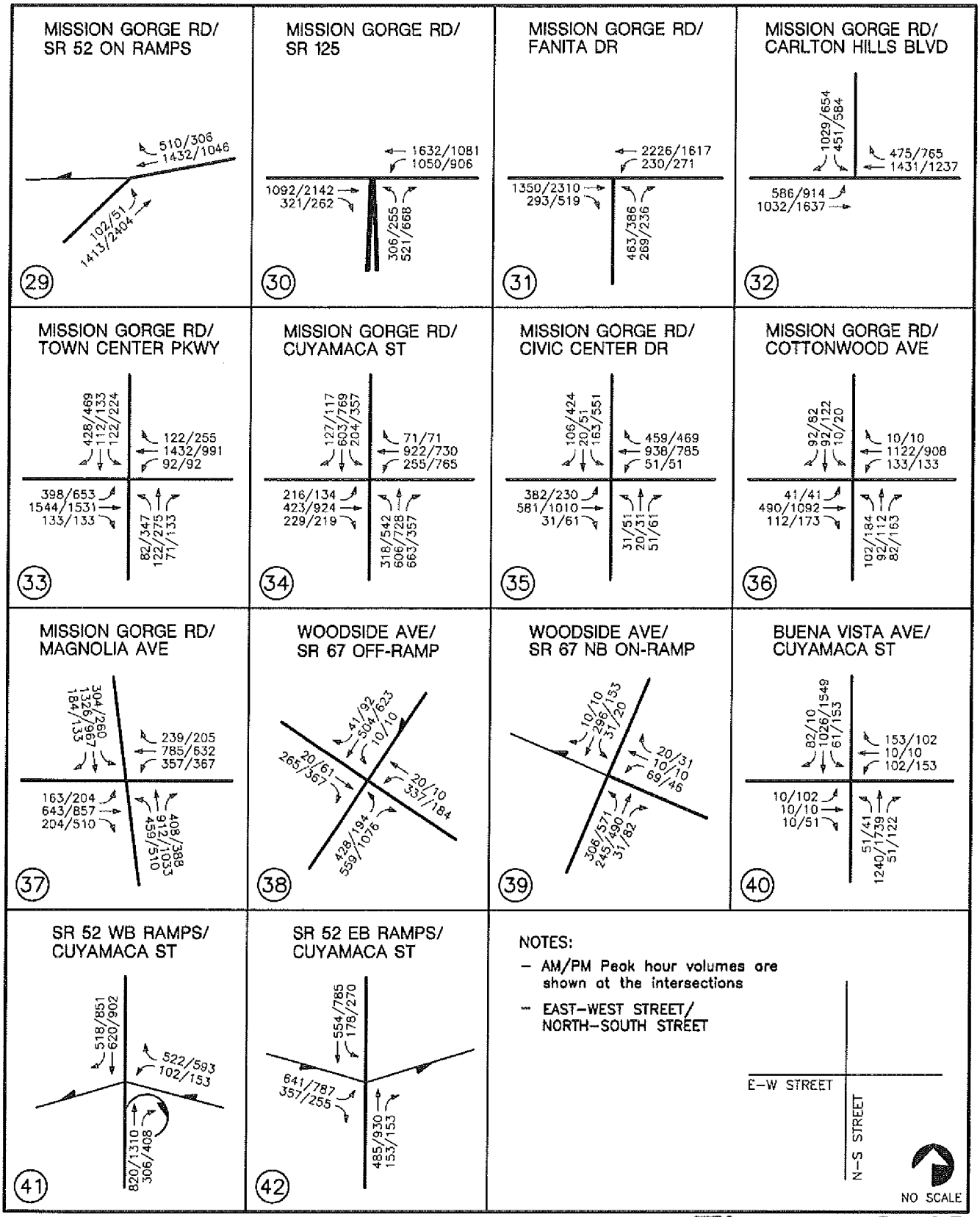
LINSCOTT LAW & GREENSPAN engineers

# Figure 9-10

(2 OF 4)

## YEAR 2012 WITH 100% PROJECT TRAFFIC VOLUMES WITH SR 52 EXTENDED TO SR 67 AM/PM PEAK HOURS

Fanita




LINSCOTT LAW & GREENSPAN engineers

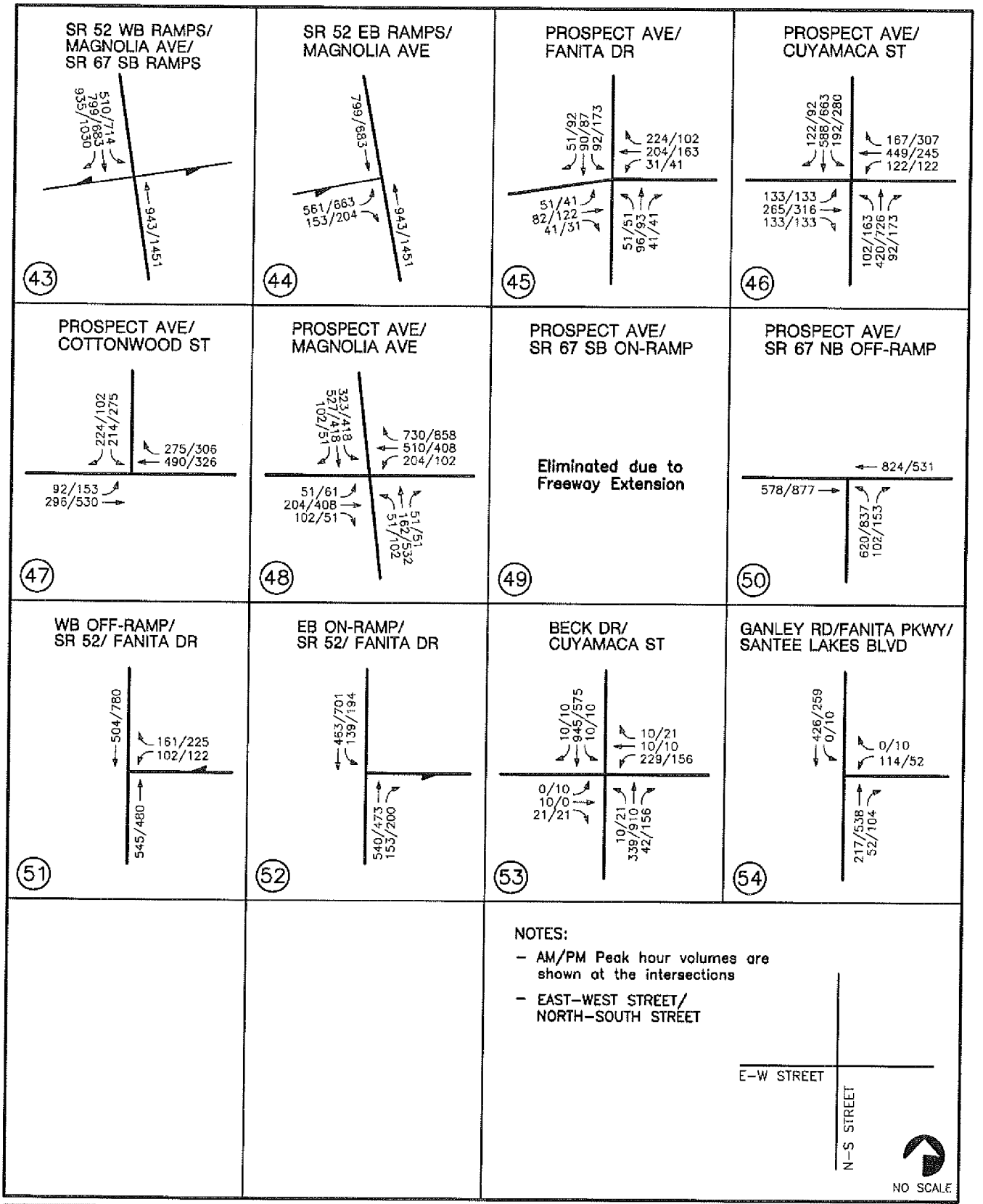
REV. 2/13/07
LLG1545 FIG 9-10

# Figure 9-10

(3 OF 4)

## YEAR 2012 WITH 100% PROJECT TRAFFIC VOLUMES WITH SR 52 EXTENDED TO SR 67 AM/PM PEAK HOURS

Fanita



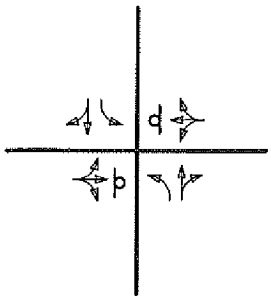

REV. 2/13/07
LLG1545 FIG 9-10

# Figure 9-10

(4 OF 4)

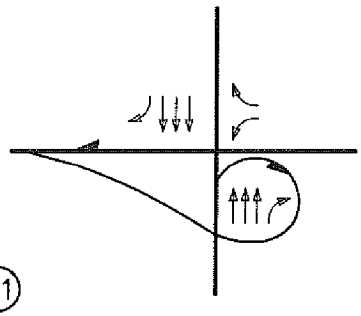
## YEAR 2012 WITH 100% PROJECT TRAFFIC VOLUMES WITH SR 52 EXTENDED TO SR 67 AM/PM PEAK HOURS

PRINCESS TOWN RD/
CUYAMACA ST



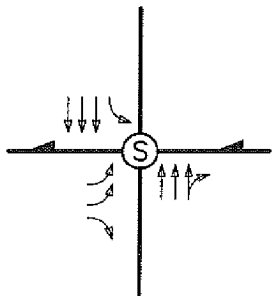

4

SR 52 WB RAMPS/
CUYAMACA ST



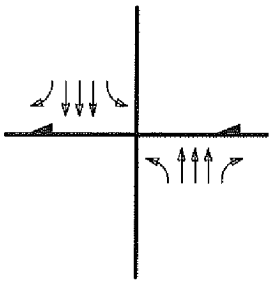
41

SR 52 EB RAMPS/
CUYAMACA ST



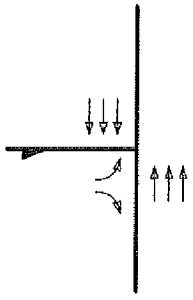

42

SR 52 WB ON-RAMP/
MAGNOLIA AVE/
SR 67 SB ON-RAMP



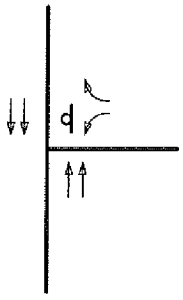
43

SR 52 EB OFF-RAMP/
FANITA DR



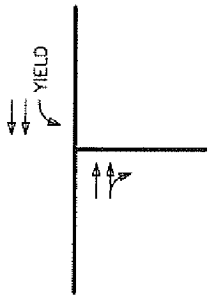
44

SR 52 WB OFF-RAMPS/
FANITA DR




51

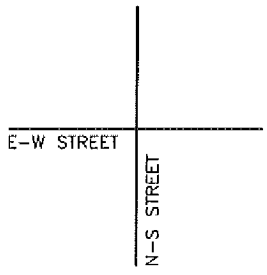
SR 52 EB ON-RAMPS/
FANITA DR




52

NOTES:

- AM/PM Peak hour volumes are shown at the intersections
- EAST-WEST STREET/ NORTH-SOUTH STREET




LEGEND

STOP Sign

NO SCALE

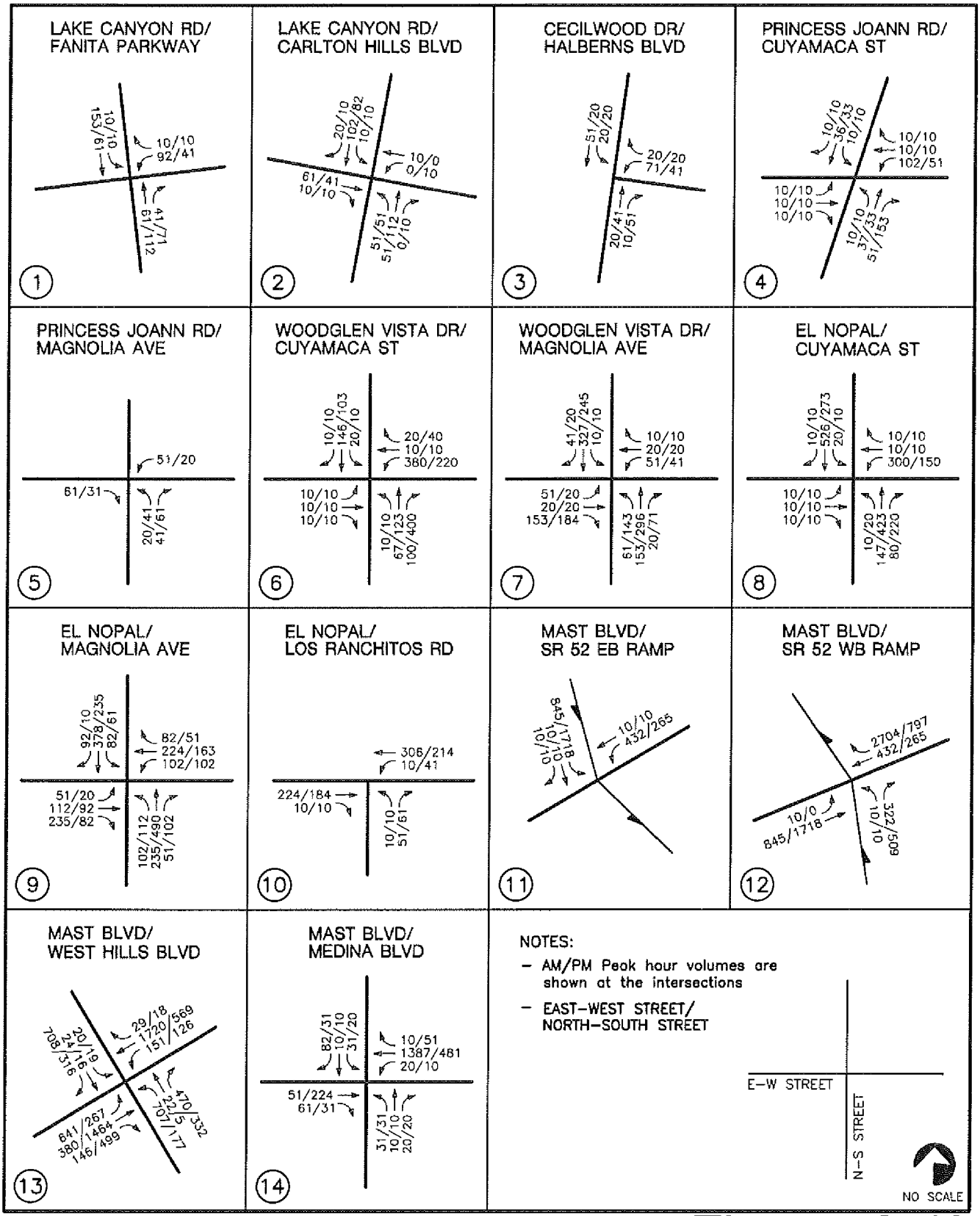
LINSCOTT LAW & GREENSPAN engineers

REV. 12/12/05
LLG1545 FIG9-11.DWG

# Figure 9-11

## YEAR 2012 INTERSECTION GEOMETRY WITH SR 52 EXTENDED TO 67 AM/PM PEAK HOURS

Fanita




LINSCOTT LAW & GREENSPAN engineers

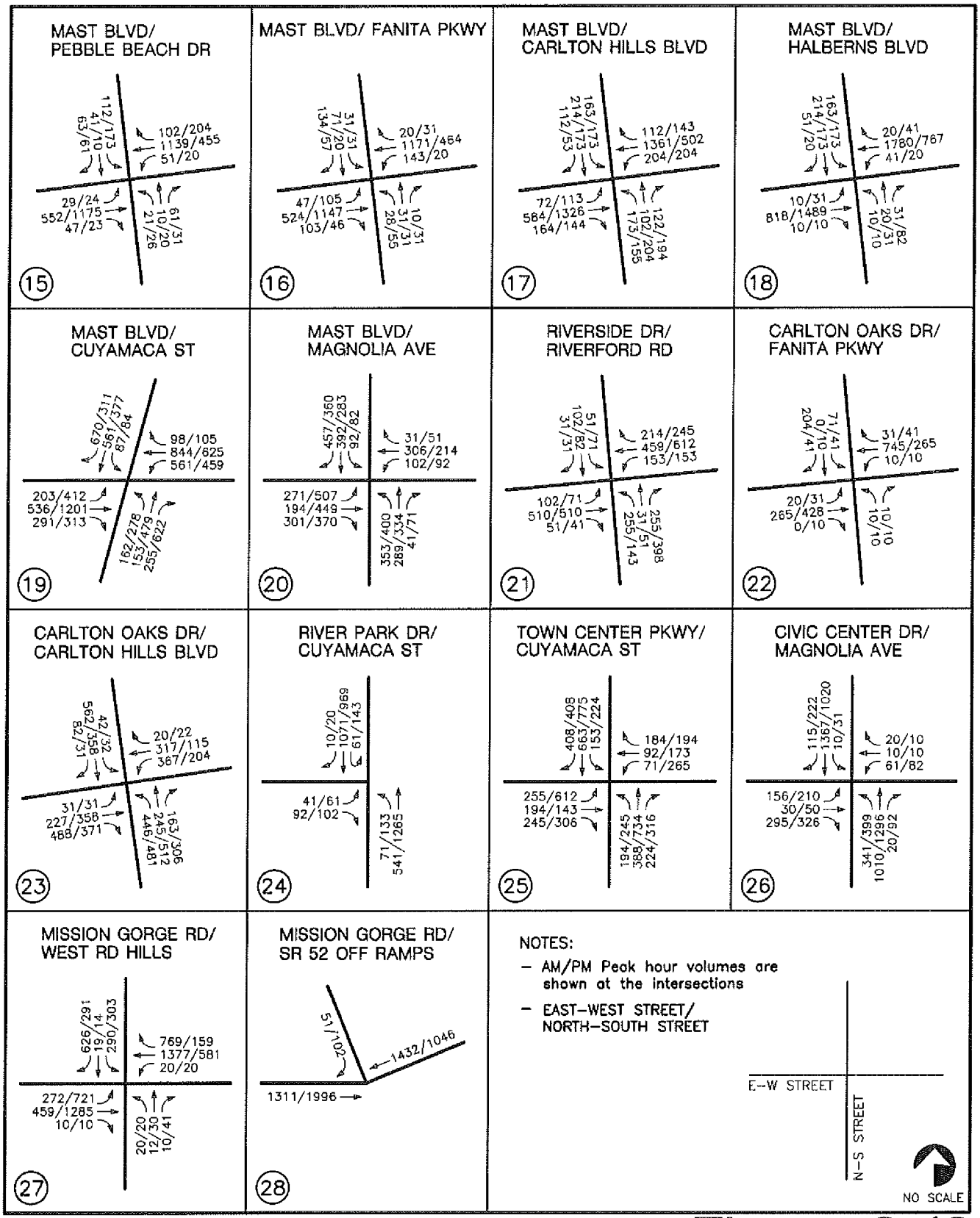
REV. 2/14/07
LLG1545 FIG 9-12

# Figure 9-12

(1 OF 4)

## YEAR 2012 WITH SR 52 WITHOUT MAGNOLIA AVENUE EXTENSION WITH SR 52 EXTENDED TO SR 67 & WITHOUT PROJECT TRAFFIC VOLUMES AM/PM PEAK HOURS

Fanita




LINSCOTT LAW & GREENSPAN engineers

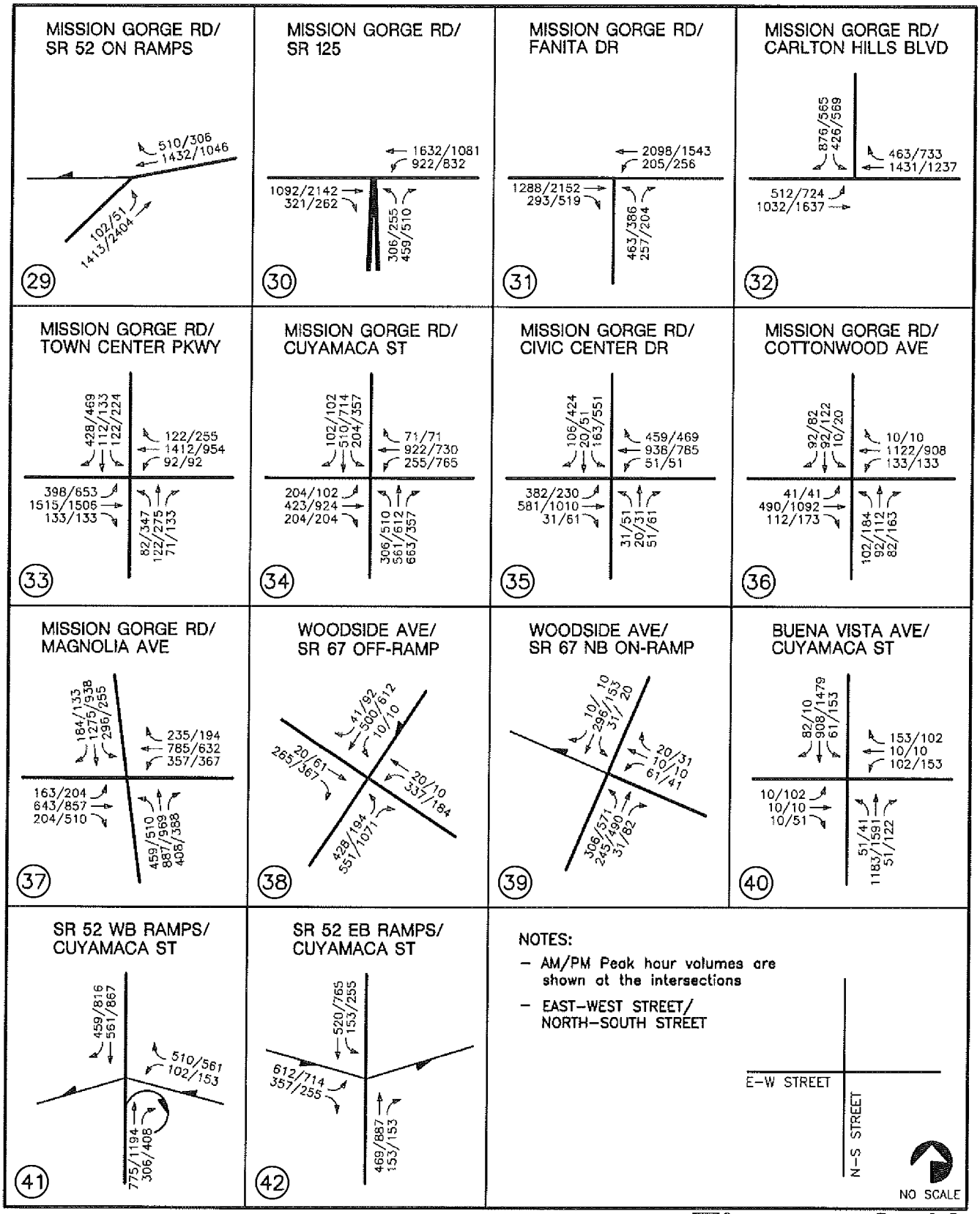
REV. 2/14/07
LLG1545 FIG 9-12

# Figure 9-12

(2 OF 4)

## YEAR 2012 WITH SR 52 WITHOUT MAGNOLIA AVENUE EXTENSION WITH SR 52 EXTENDED TO SR 67 & WITHOUT PROJECT TRAFFIC VOLUMES AM/PM PEAK HOURS

Fanita




LINSCOTT LAW & GREENSPAN engineers

REV. 2/14/07
LLG1545 FIG 9–12

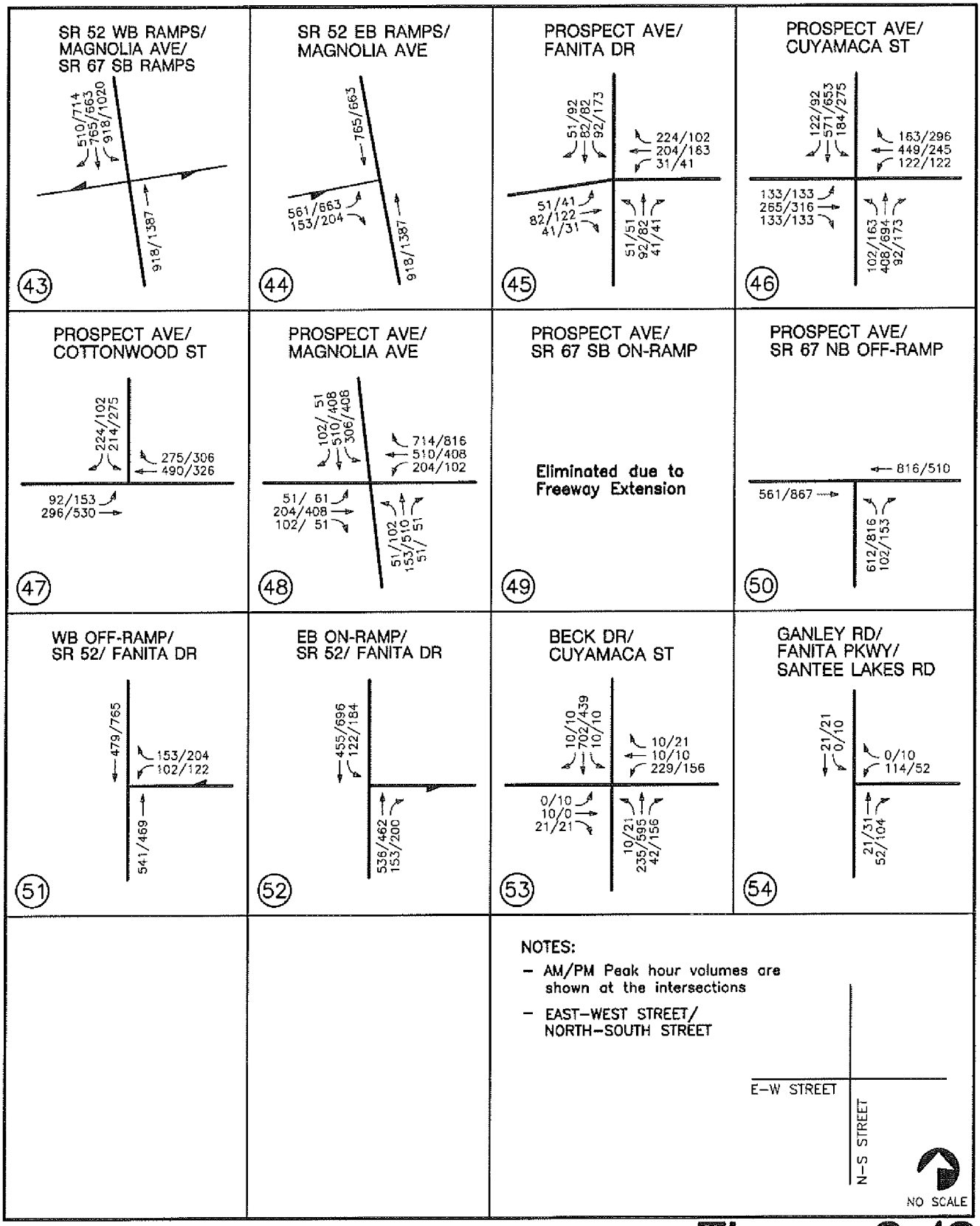
# Figure 9-12

(3 OF 4)

## YEAR 2012 WITH SR 52 WITHOUT MAGNOLIA AVENUE EXTENSION WITH SR 52 EXTENDED TO SR 67 & WITHOUT PROJECT TRAFFIC VOLUMES AM/PM PEAK HOURS

Fanita

018720



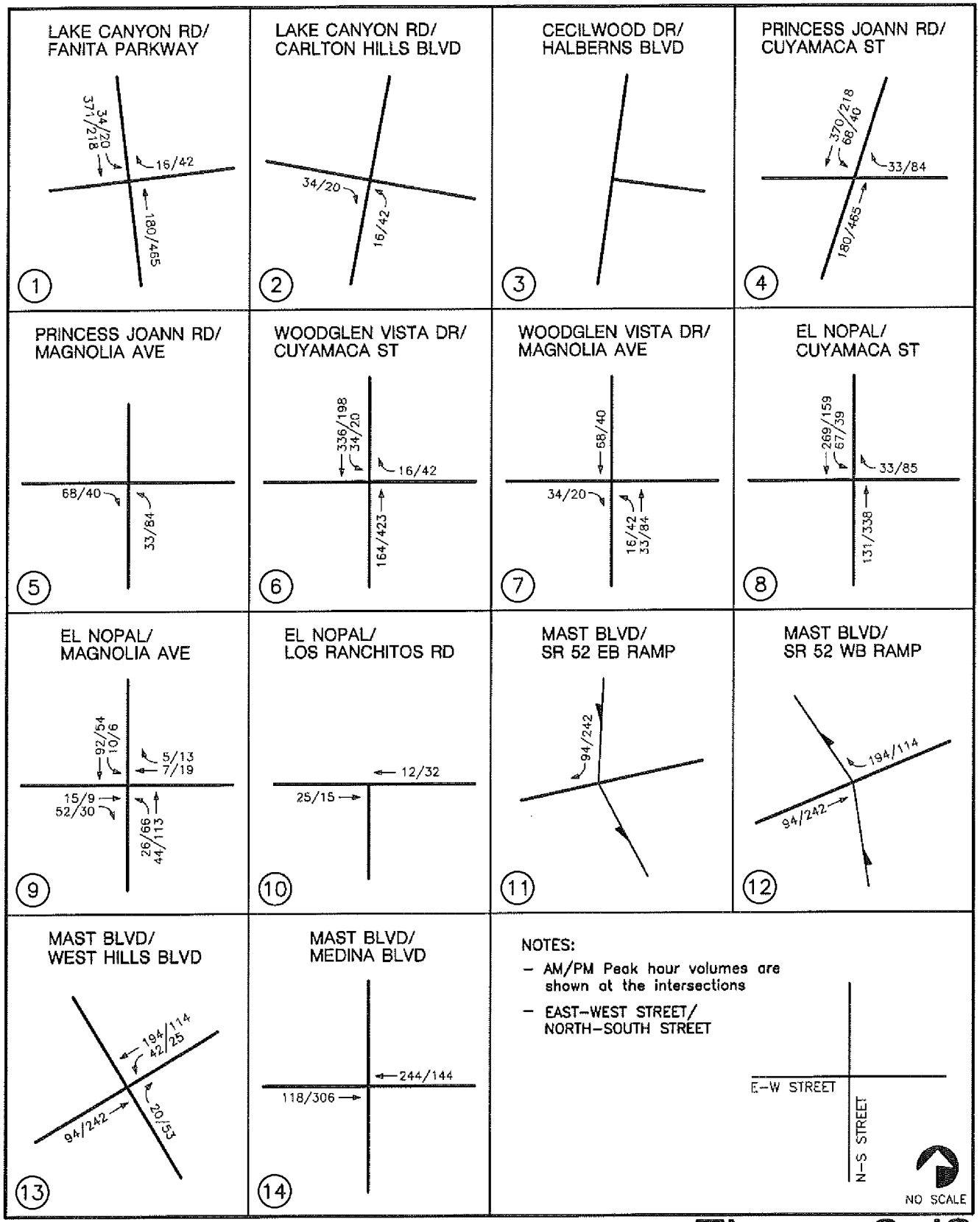

REV. 2/14/07
LLG1545 FIG 9-12

# Figure 9-12

(4 OF 4)

## YEAR 2012 WITH SR 52 WITHOUT MAGNOLIA AVENUE EXTENSION WITH SR 52 EXTENDED TO SR 67 & WITHOUT PROJECT TRAFFIC VOLUMES AM/PM PEAK HOURS

Fanita




LINSCOTT LAW & GREENSPAN engineers

REV. 2/14/07
LLG1545 FIG 9-13

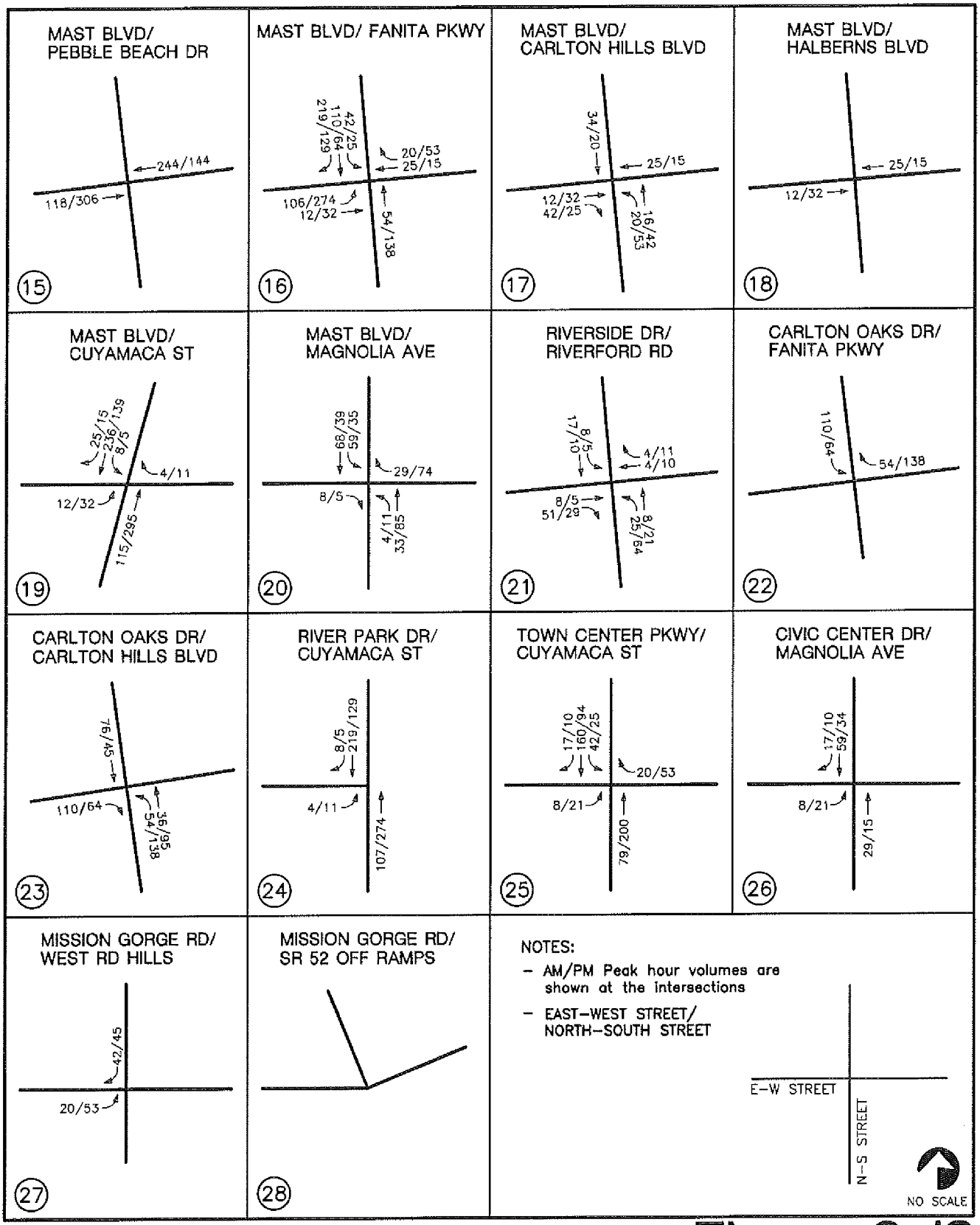
# Figure 9-13

(1 OF 4)

**100% PROJECT VOLUMES WITHOUT MAGNOLIA AVENUE EXTENSION WITH SR 52 EXTENDED TO SR 67 AM/PM PEAK HOURS**

Fanita

018722




LINSCOTT LAW & GREENSPAN engineers

REV. 2/14/07
LLG1545 FIG 9-13

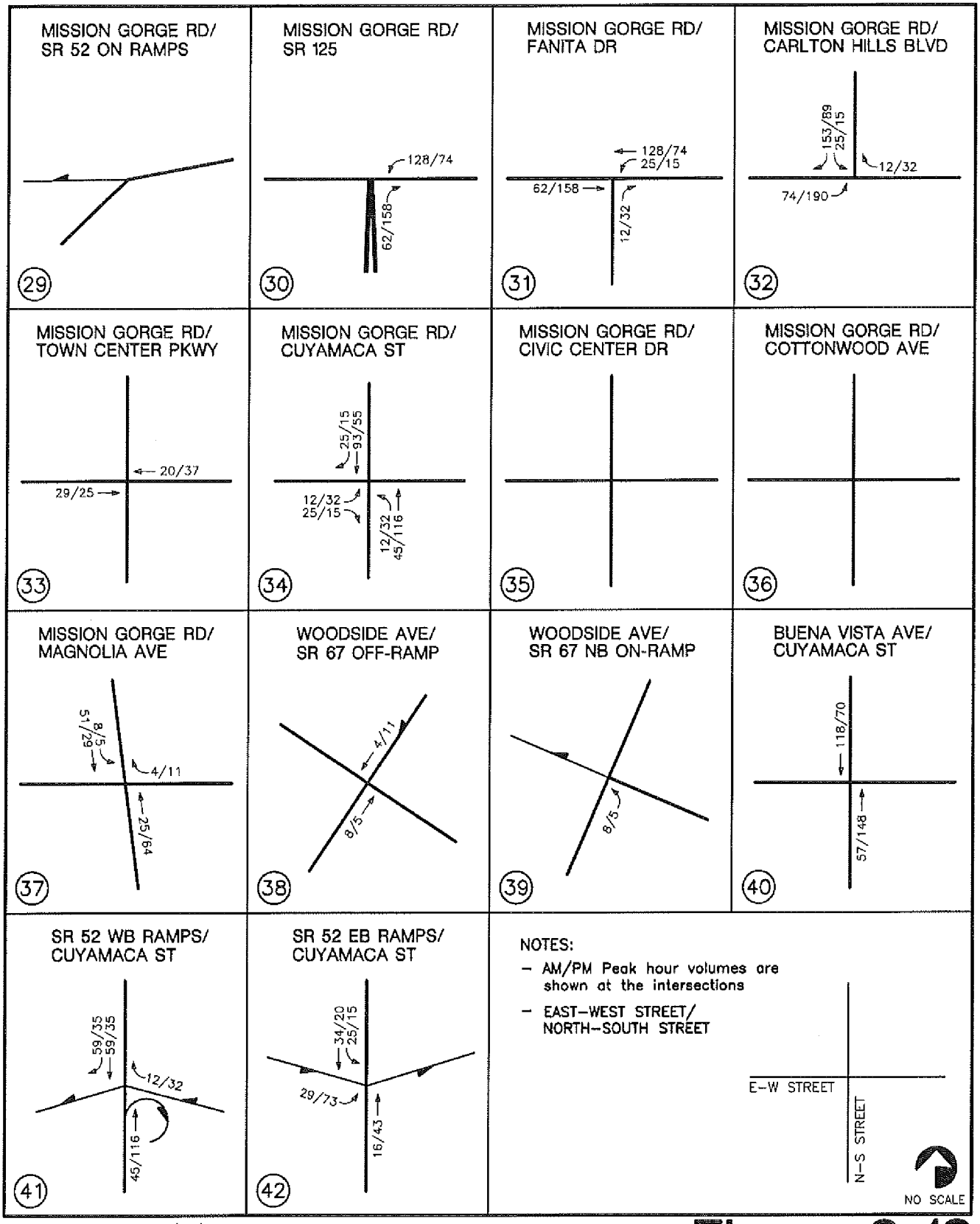
# Figure 9-13

(2 OF 4)

**100% PROJECT VOLUMES WITHOUT MAGNOLIA AVENUE EXTENSION WITH SR 52 EXTENDED TO SR 67 AM/PM PEAK HOURS**

Fanita

018723




REV. 2/14/07
LLG1545 FIG 9-13

LINSCOTT LAW & GREENSPAN engineers

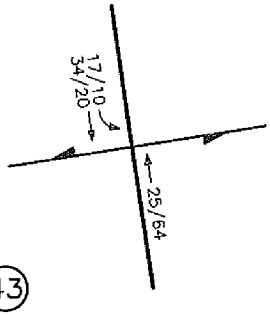
# Figure 9-13

(3 OF 4)

## 100% PROJECT VOLUMES WITHOUT MAGNOLIA AVENUE EXTENSION WITH SR 52 EXTENDED TO SR 67 AM/PM PEAK HOURS

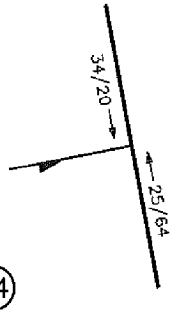
Fanita

SR 52 WB RAMPS/
MAGNOLIA AVE/
SR 67 SB RAMPS



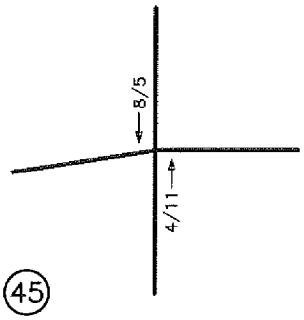

(43)

SR 52 EB RAMPS/
MAGNOLIA AVE



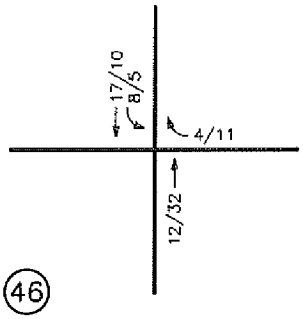

(44)

PROSPECT AVE/
FANITA DR



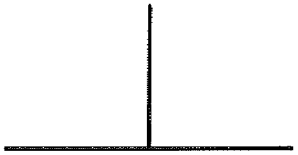

(45)

PROSPECT AVE/
CUYAMACA ST



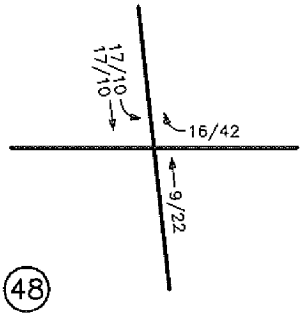

(46)

PROSPECT AVE/
COTTONWOOD ST



(47)

PROSPECT AVE/
MAGNOLIA AVE



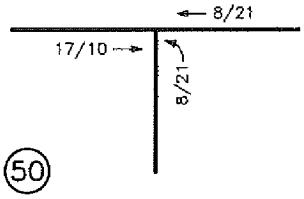

(48)

PROSPECT AVE/
SR 67 SB ON-RAMP

**Eliminated Due to Freeway Extension**

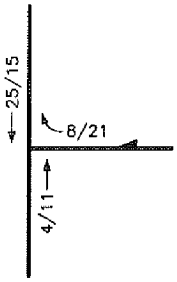
(49)

PROSPECT AVE/
SR 67 NB OFF-RAMP



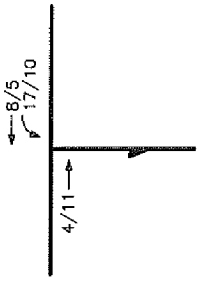

(50)

WB OFF-RAMP/
SR 52/ FANITA DR



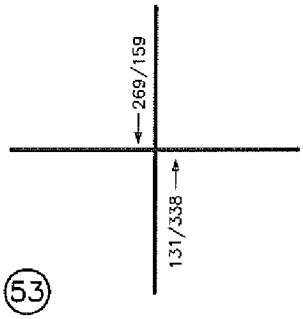

(51)

EB ON-RAMP/
SR 52/ FANITA DR



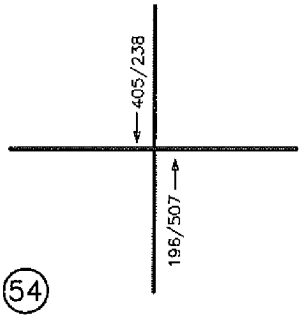

(52)

BECK DR/
CUYAMACA ST




(53)

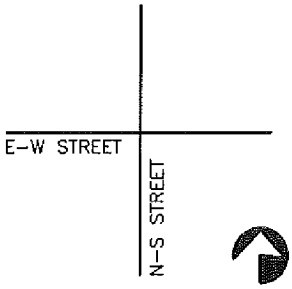
GANLEY RD/FANITA PKWY/
SANTEE LAKES BLVD




(54)

NOTES:

- AM/PM Peak hour volumes are shown at the intersections
- EAST-WEST STREET/ NORTH-SOUTH STREET




NO SCALE

LINSCOTT LAW & GREENSPAN engineers

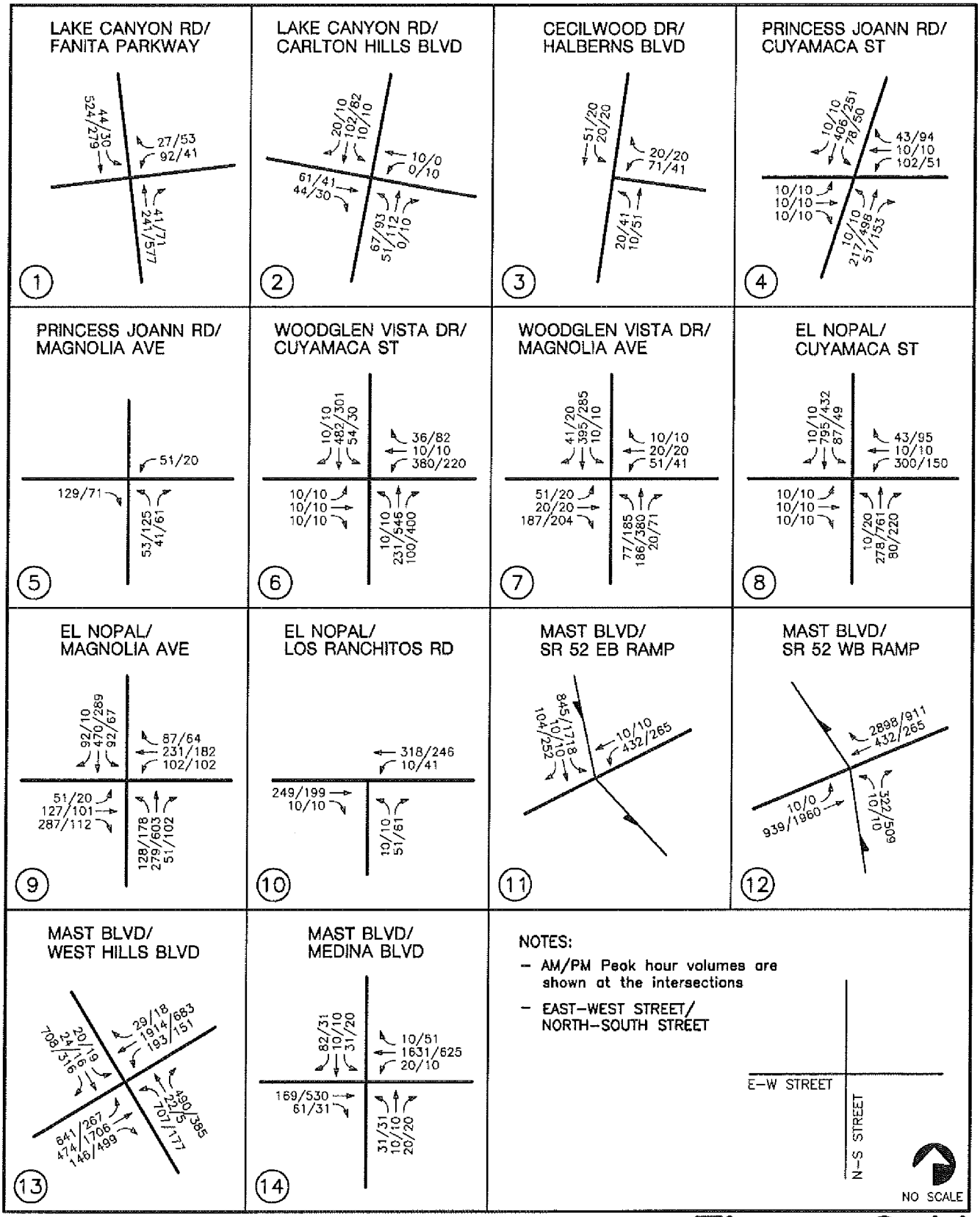
REV. 2/14/07
LLG1545 FIG 9-13

# Figure 9-13

(4 OF 4)

## 100% PROJECT VOLUMES WITHOUT MAGNOLIA AVENUE EXTENSION WITH SR 52 EXTENDED TO SR 67 AM/PM PEAK HOURS

Fanita




REV. 2/14/07
LLG1545 FIG 9-14

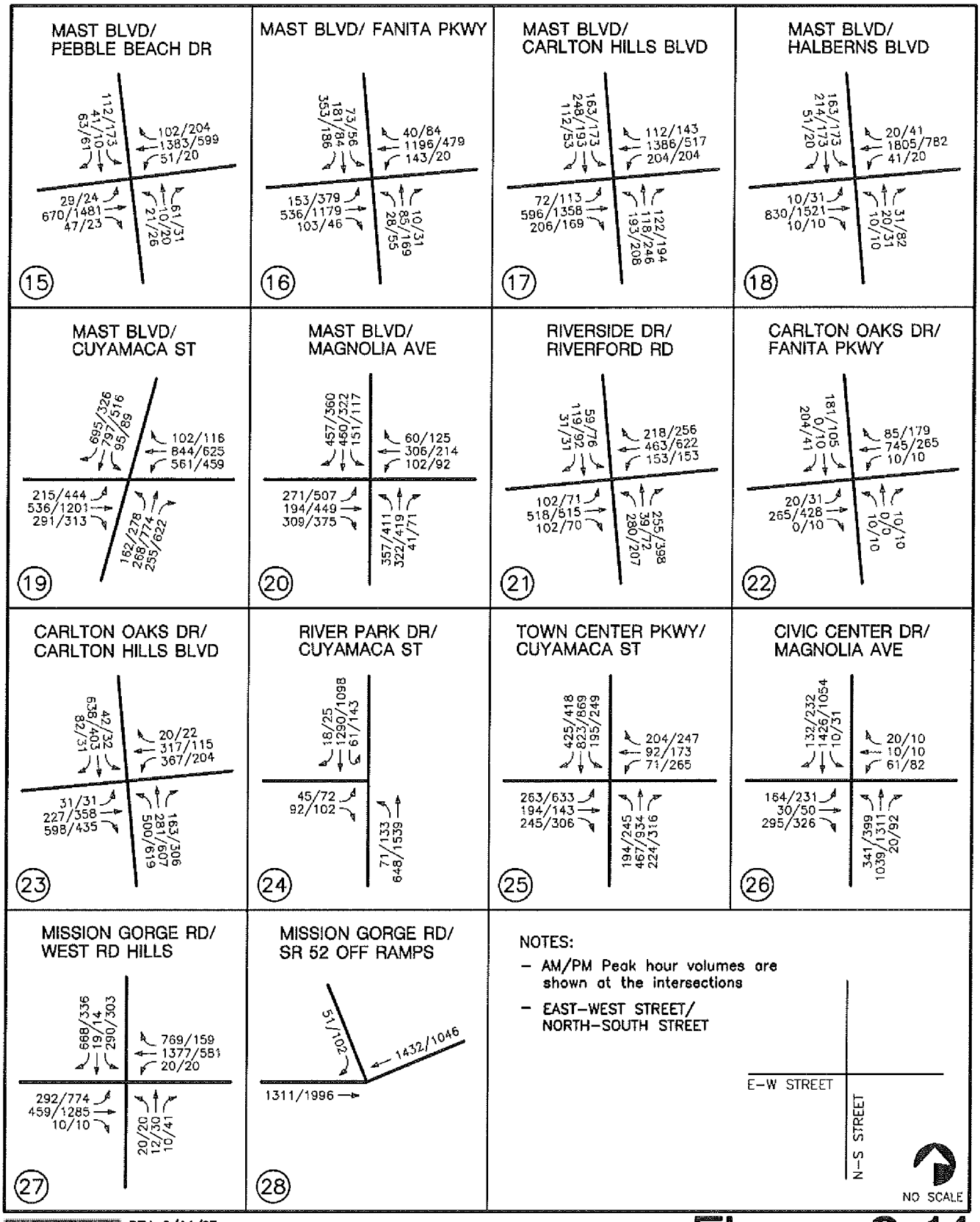
LINSCOTT LAW & GREENSPAN engineers

# Figure 9-14

(1 OF 4)

## YEAR 2012 WITHOUT MAGNOLIA AVENUE EXTENSION WITH 100% PROJECT TRAFFIC VOLUMES, WITH SR 52 EXTENDED TO SR 67 AM/PM PEAK HOURS

Fanita




LINSCOTT LAW & GREENSPAN engineers

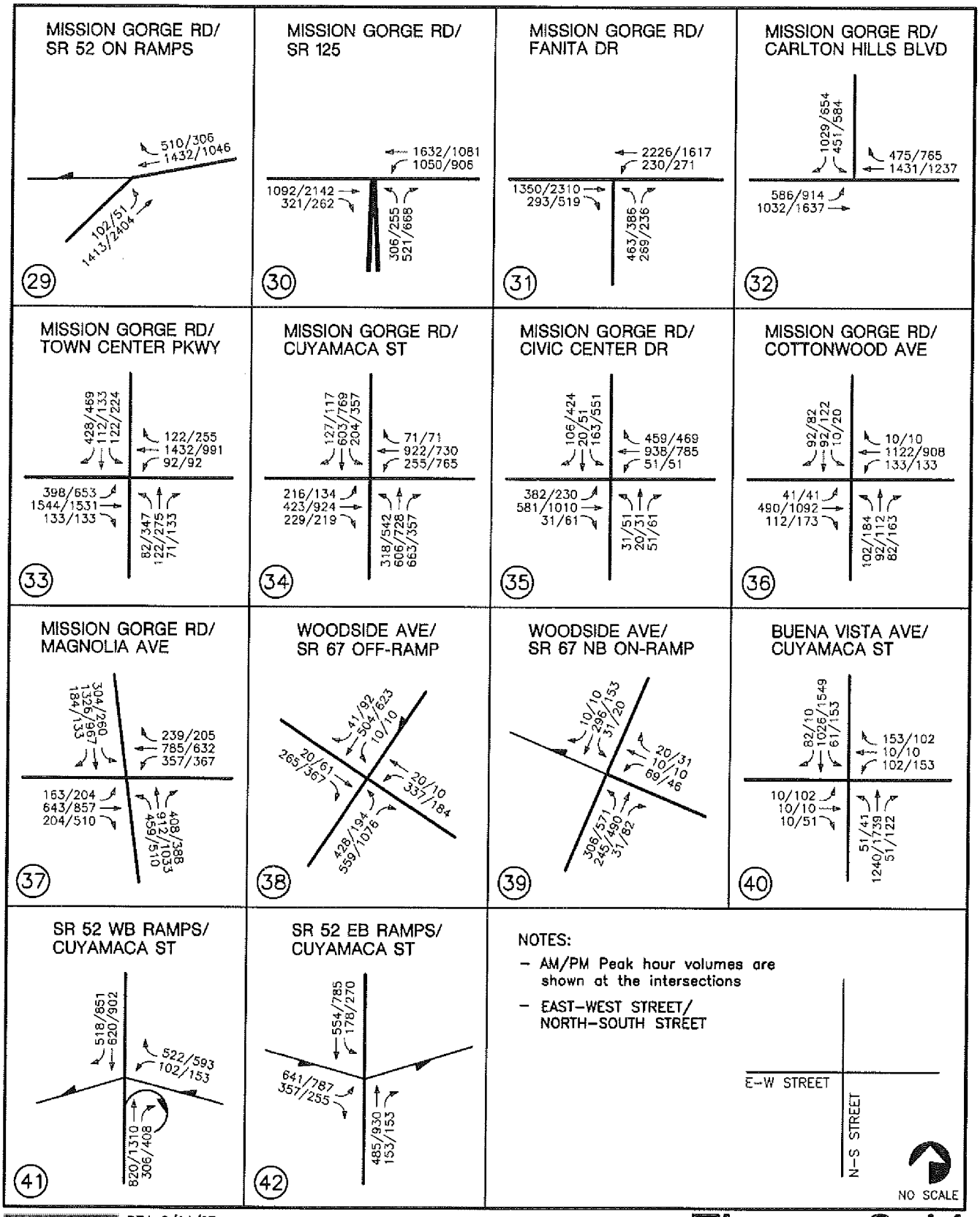
REV. 2/14/07
LLG1545 FIG 9-14

# Figure 9-14

(2 OF 4)

## YEAR 2012 WITHOUT MAGNOLIA AVENUE EXTENSION WITH 100% PROJECT TRAFFIC VOLUMES, WITH SR 52 EXTENDED TO SR 67 AM/PM PEAK HOURS

Fanita




LINSCOTT LAW & GREENSPAN engineers

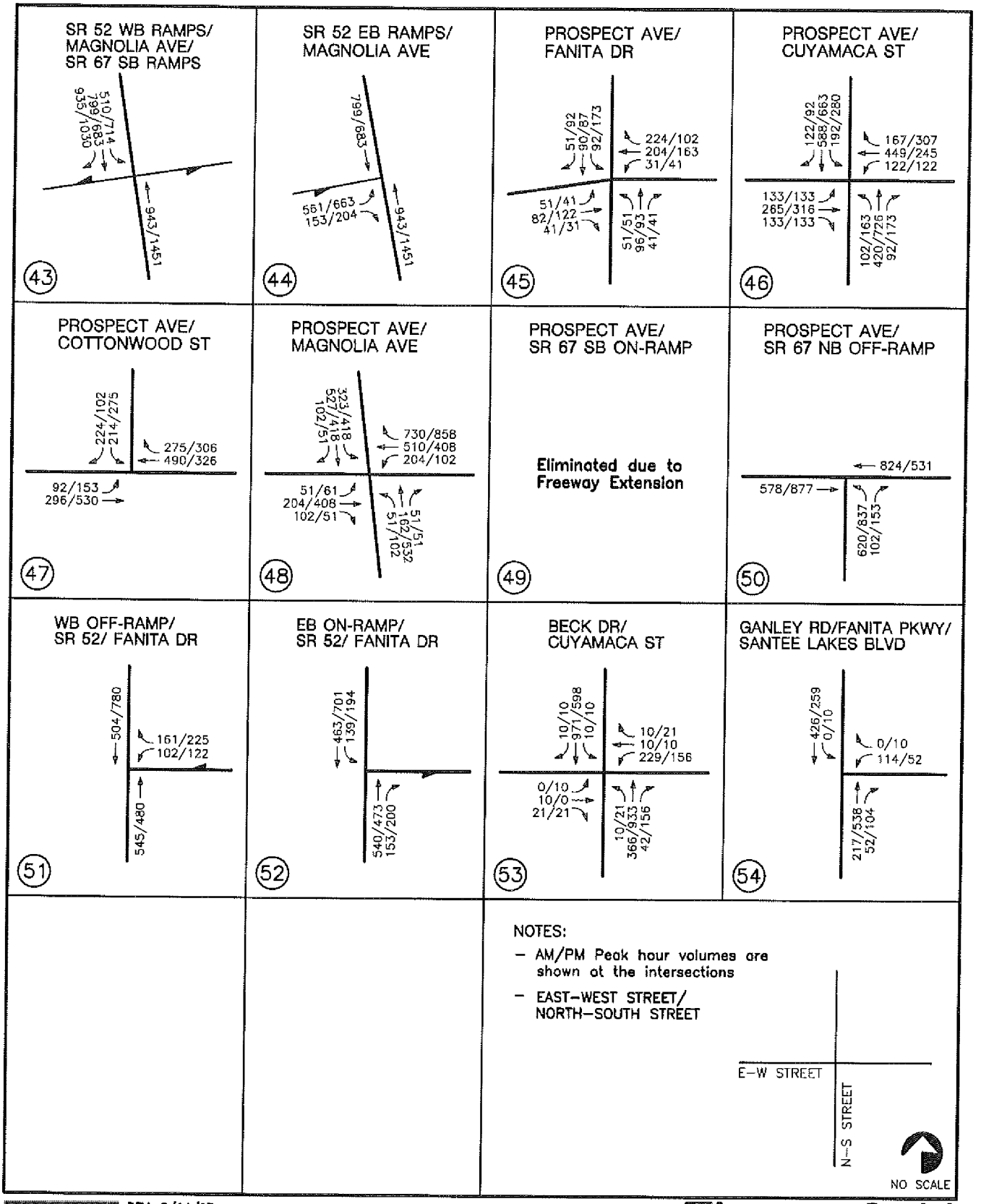
REV. 2/14/07
LLG1545 FIG 9–14

# Figure 9-14

(3 OF 4)

## YEAR 2012 WITHOUT MAGNOLIA AVENUE EXTENSION WITH 100% PROJECT TRAFFIC VOLUMES, WITH SR 52 EXTENDED TO SR 67 AM/PM PEAK HOURS

Fanita



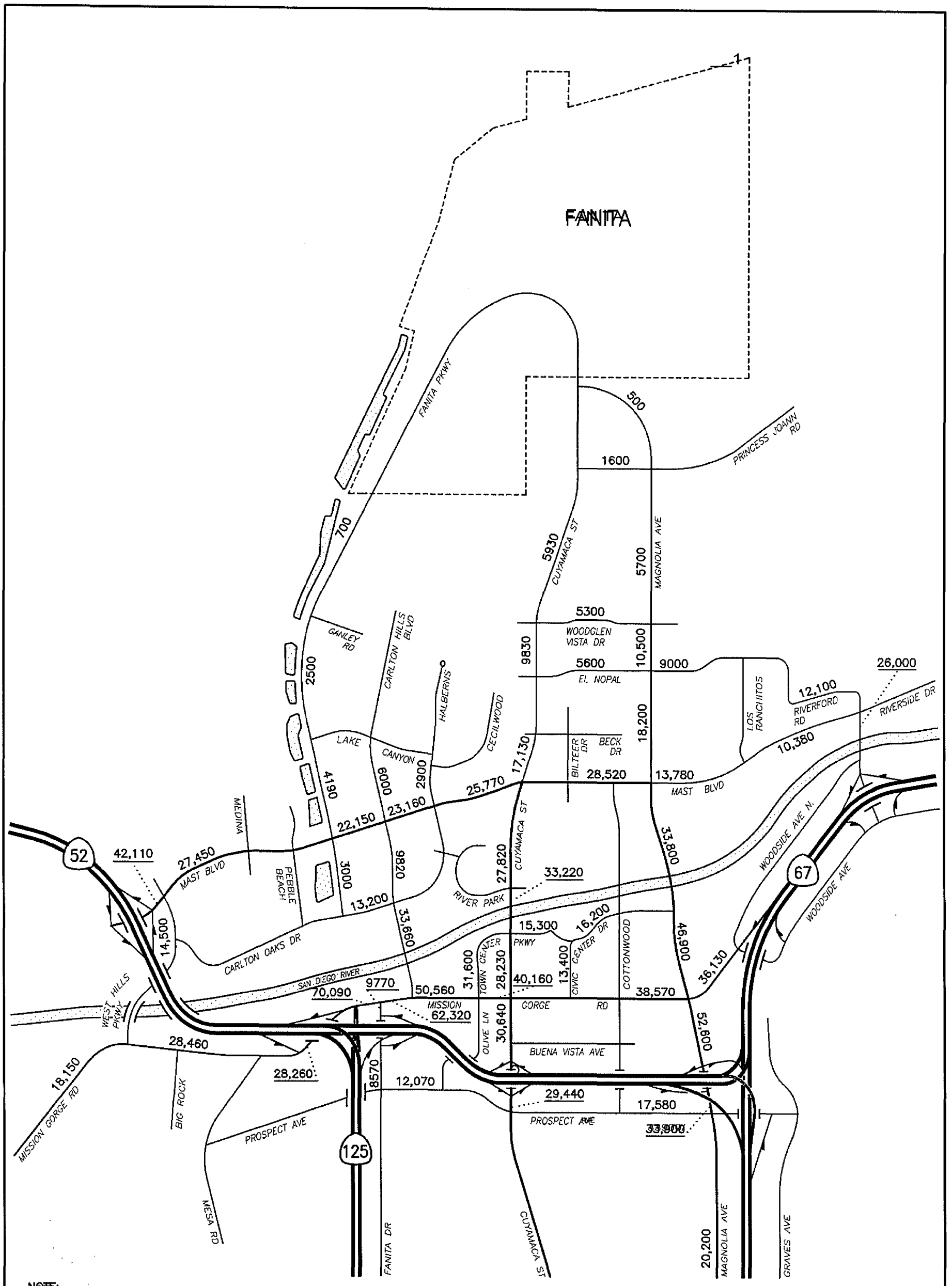

REV. 2/14/07
LLG1545 FIG 9–14

# Figure 9-14

(4 OF 4)

## YEAR 2012 WITHOUT MAGNOLIA AVENUE EXTENSION WITH 100% PROJECT TRAFFIC VOLUMES, WITH SR 52 EXTENDED TO SR 67 AM/PM PEAK HOURS

Fanita




NOTE:
- ADTs are shown midblock

REV. 6/22/07
LLG 1545 11x17 FIG 10-1

NO SCALE

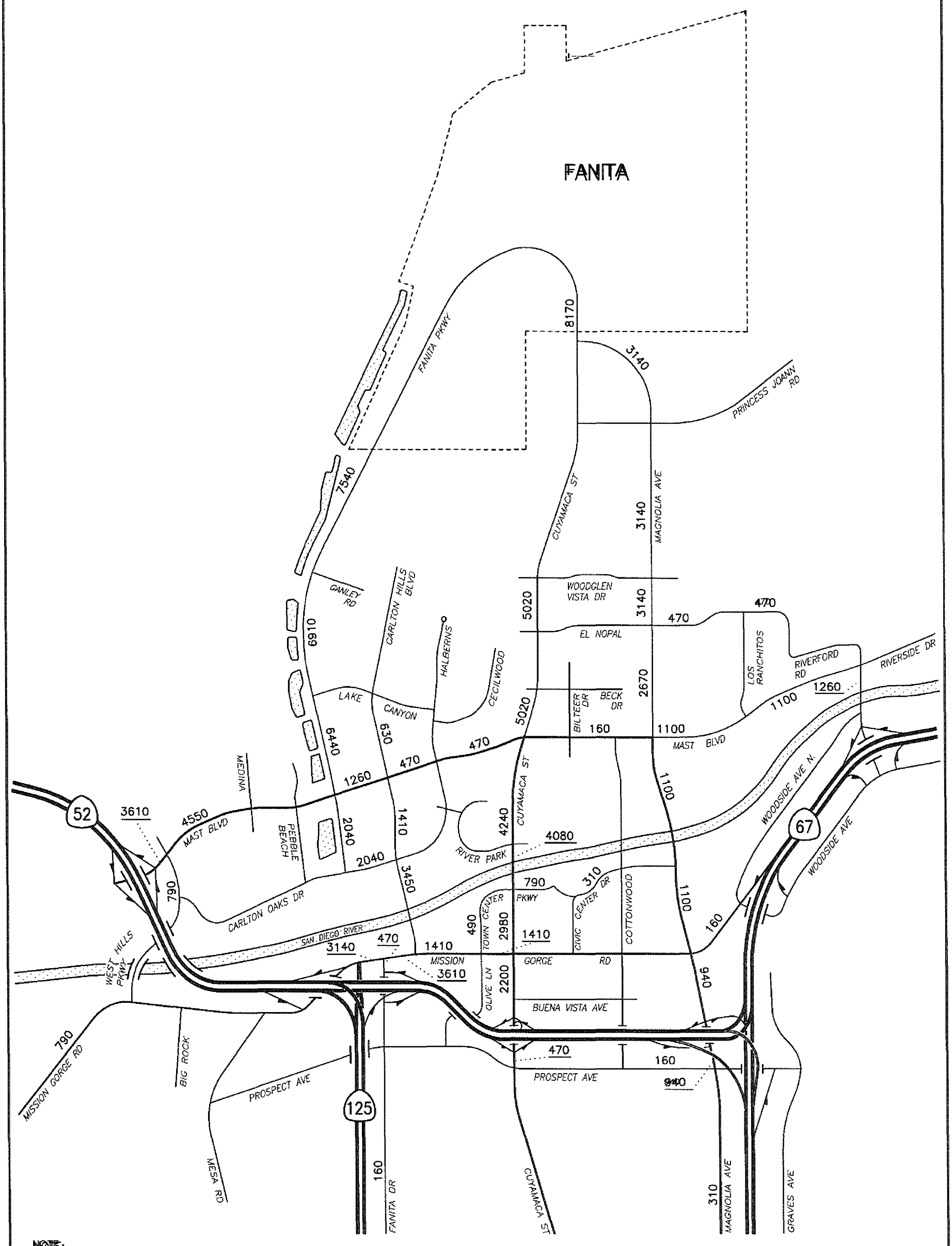
LINSCOTT LAW & GREENSPAN engineers

# Figure 10-1

## YEAR 2030 WITHOUT PROJECT TRAFFIC VOLUMES ADT

Fanita

01873.0




NOTE:
- ADTs are shown midblock

REV. 2/6/07
LLG1545 11x17 FIG 10-2

NO SCALE

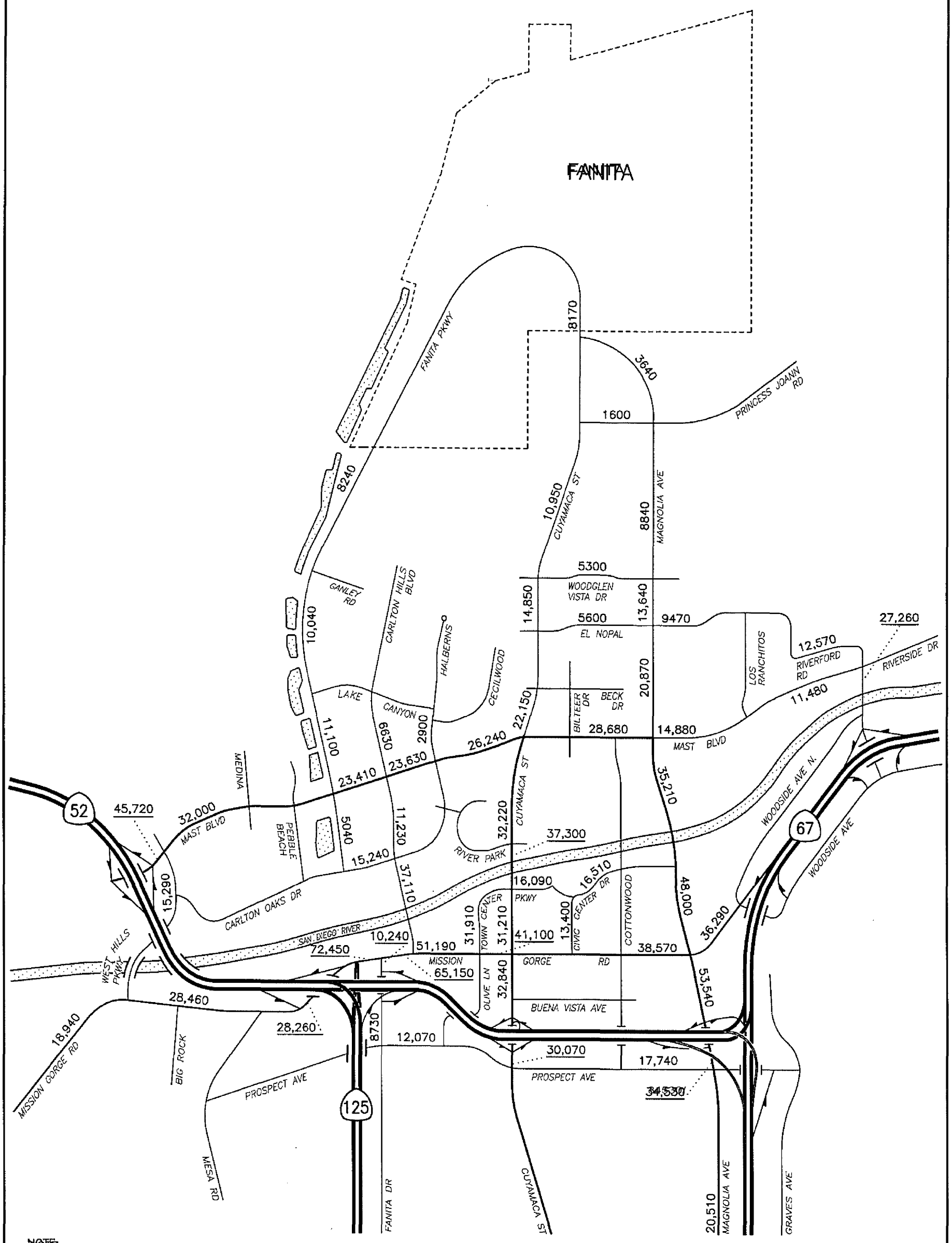
LINSCOTT LAW & GREENSPAN ENGINEERS

# Figure 10-2

## YEAR 2030 ENTIRE PROJECT TRAFFIC VOLUMES ADT

Fanita

018731




NOTE:
– ADTs are shown midblock

REV. 6/27/97
LLG1545 11x17 FIG 10-3

NO SCALE

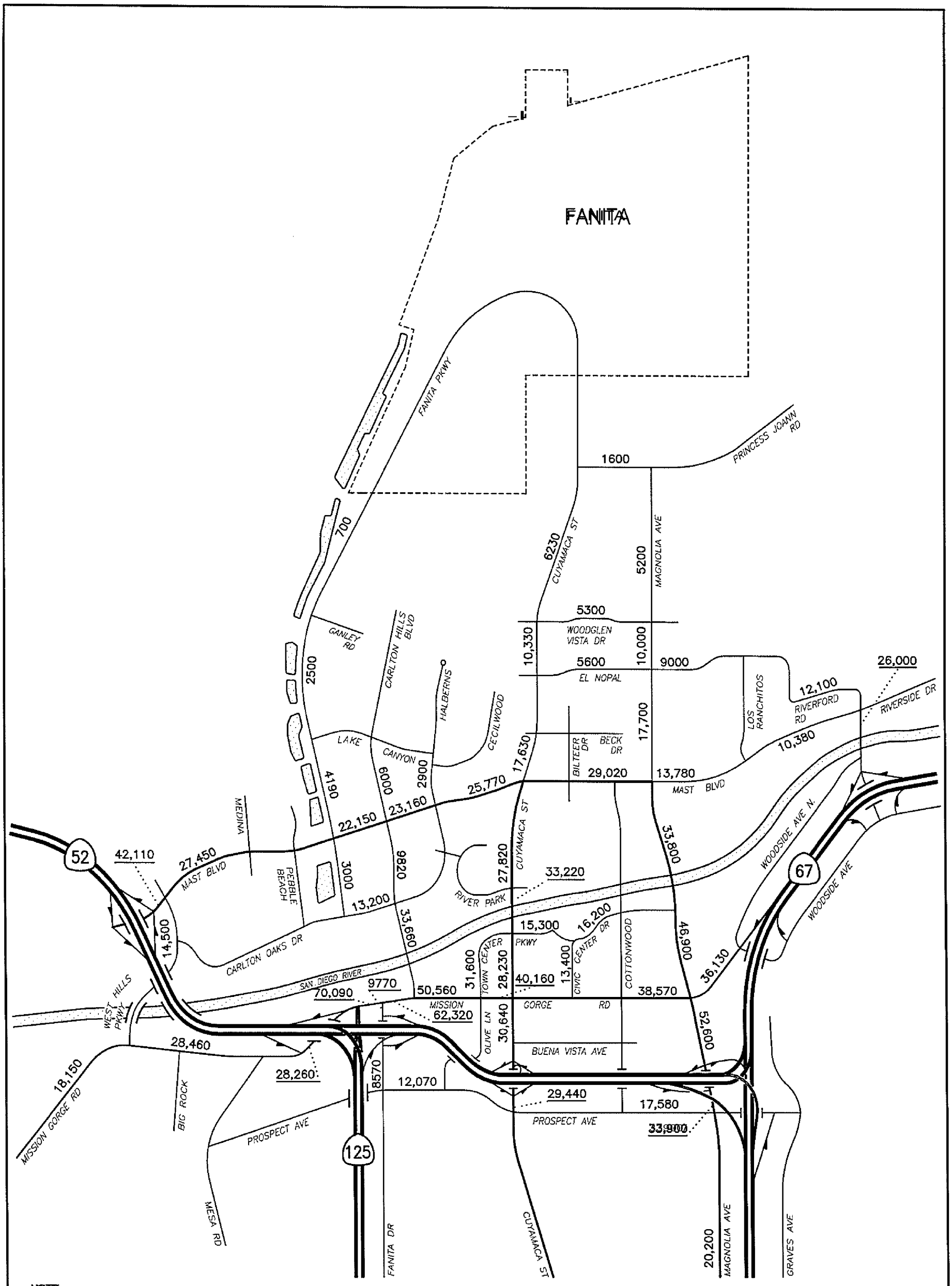
LINSCOTT LAW & GREENSPAN engineers

# Figure 10-3

YEAR 2030 WITH PROJECT TRAFFIC VOLUMES
ADT

Fanita

0187.32




NOTE:
— ADTs are shown midblock

REV. 6/22/07
LLG1545 11x17 FIG 10-4

NO SCALE

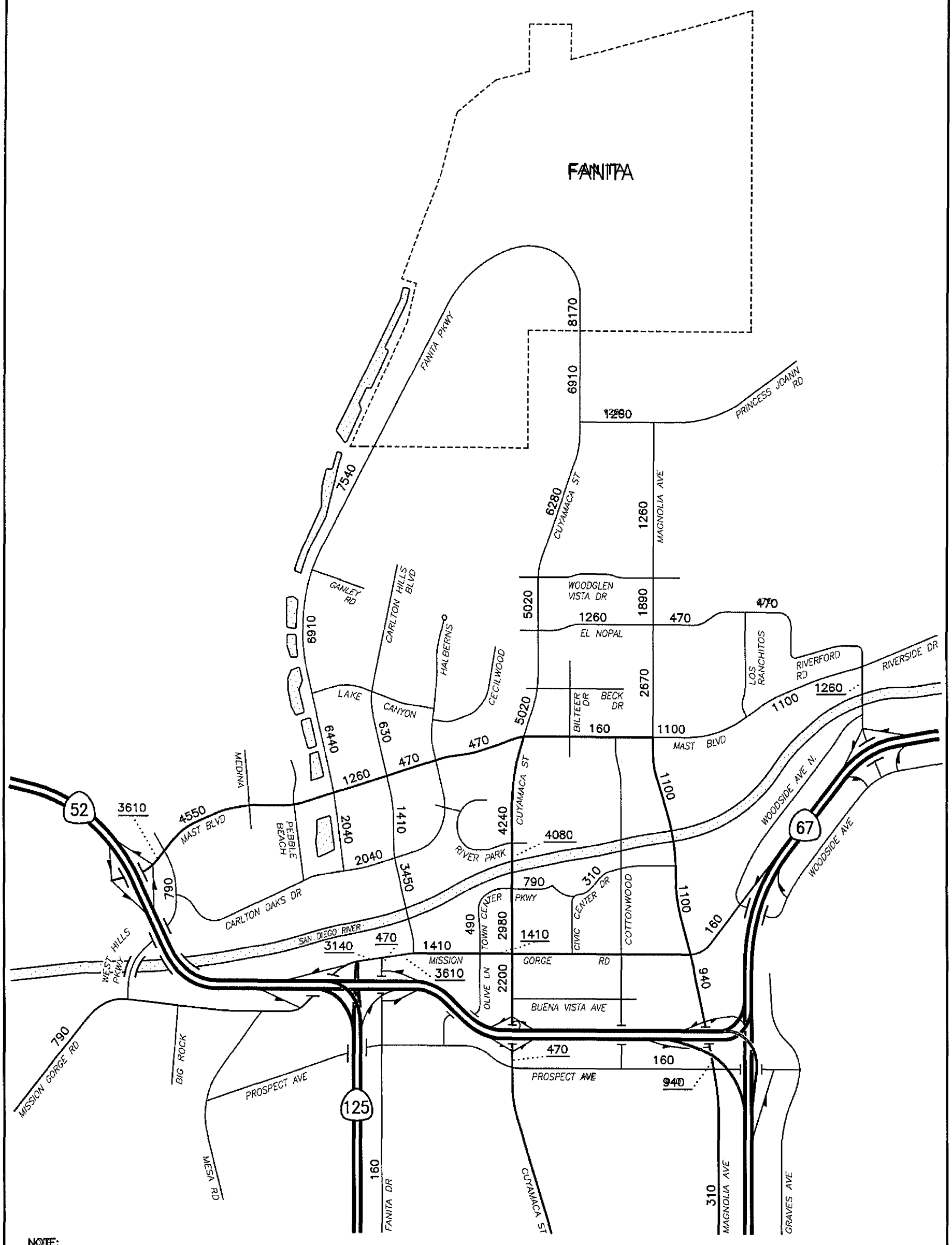
LINSCOTT LAW & GREENSPAN engineers

# Figure 10-4

**YEAR 2030 WITHOUT PROJECT TRAFFIC VOLUMES (NO MAGNOLIA AVENUE EXTENSION) ADT**

**Fanita**

018733




NOTE:
– ADTs are shown midblock

REV. 2/6/07
LLG1545 11x17 FIG 10-5

NO SCALE

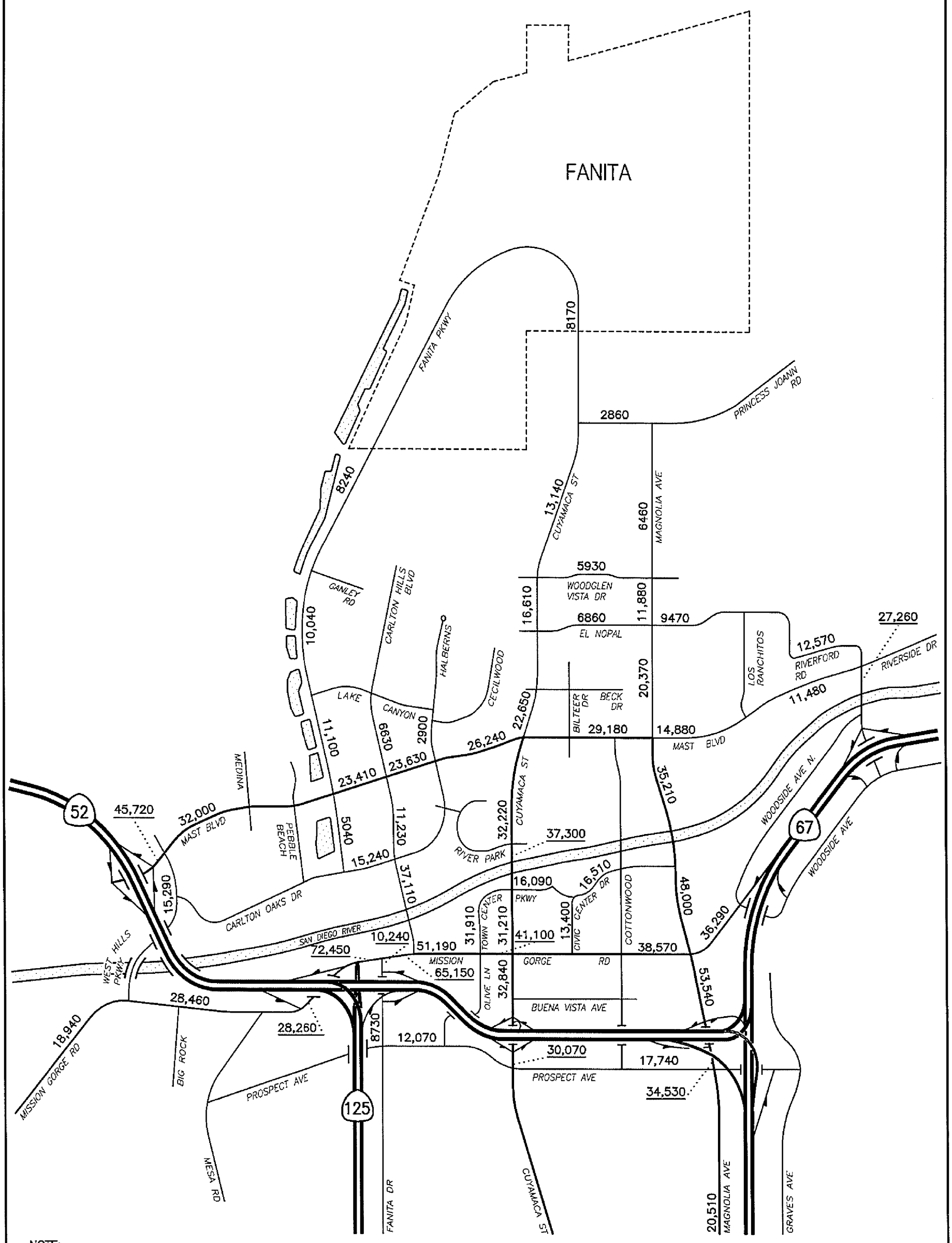
LINSCOTT LAW & GREENSPAN engineers

# Figure 10-5

**YEAR 2030 ENTIRE PROJECT TRAFFIC VOLUMES (NO MAGNOLIA AVENUE EXTENSION)**
**ADT**

**Fanita**

018734




NOTE:
– ADTs are shown midblock

REV. 6/22/07
LLG1545 11x17 FIG 10-6

NO SCALE

LINSCOTT LAW & GREENSPAN engineers

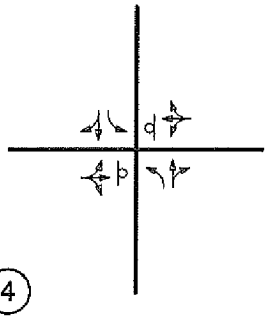
# Figure 10-6

**YEAR 2030 WITH PROJECT TRAFFIC VOLUMES (NO MAGNOLIA AVENUE EXTENSION) ADT**

**Fanita**

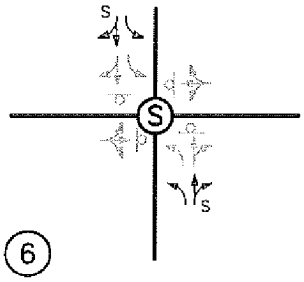
018735

PRINCESS JOANN RD/
CUYAMACA ST*



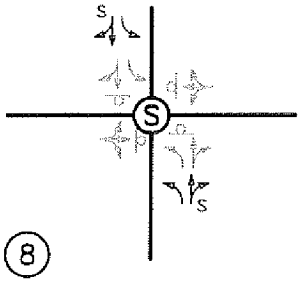
4

WOODGLEN VISTA DR/
CUYAMACA ST



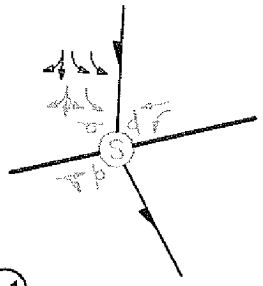

6

EL NOPAL/
CUYAMACA ST



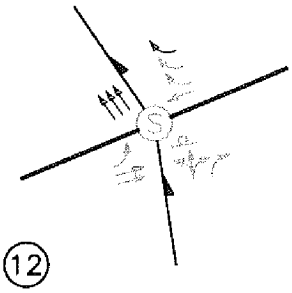

8

MAST BLVD/
SR 52 EB RAMP



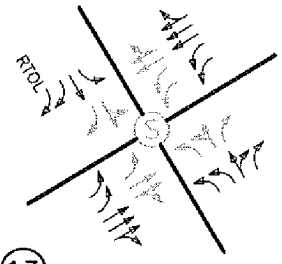
11

MAST BLVD/
SR 52 WB RAMP



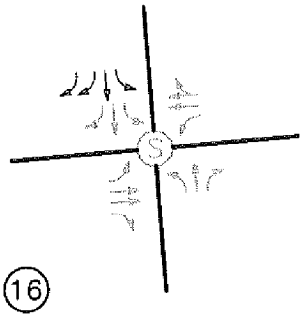
12

MAST BLVD/
WEST HILLS BLVD



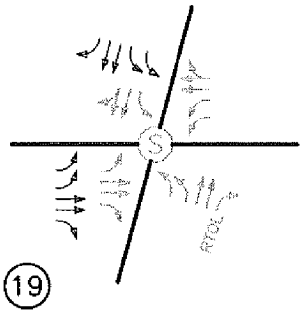

13

MAST BLVD/ FANITA PKWY



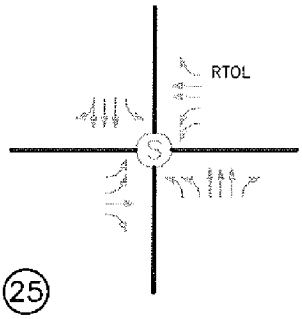
16

MAST BLVD/
CUYAMACA ST



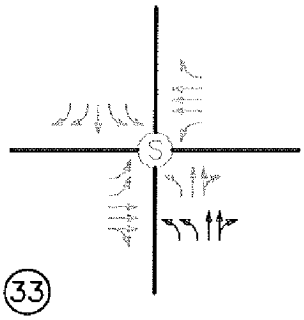
19

TOWN CENTER PKWY/
CUYAMACA ST



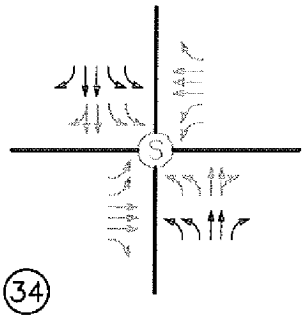

25

MISSION GORGE RD/
TOWN CENTER PKWY



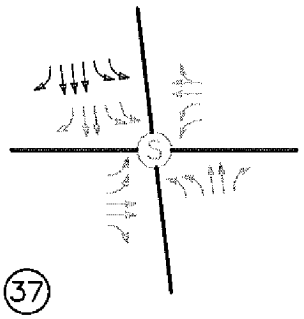
33

MISSION GORGE RD/
CUYAMACA ST



34

MISSION GORGE RD/
MAGNOLIA AVE



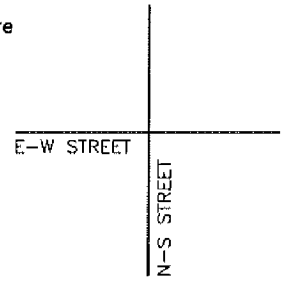
37

NOTES:

- AM/PM Peak hour volumes are shown at the intersections
- EAST-WEST STREET/ NORTH-SOUTH STREET

LEGEND

- (S) – New Traffic Signal
- → – New turn movements
- (S) – Existing Traffic Signal
- → – Existing turn movements
- – Existing stop sign
- RTOL – Right-turn overlap
- S – 20 foot curb lane with sneakers
- * – New intersection to be built by project with the extension of Cuyamaca Street to the project site.




NO SCALE

LINSCOTT LAW & GREENSPAN engineers

REV. 3/14/07
LLG1545 FIG13-1.DWG

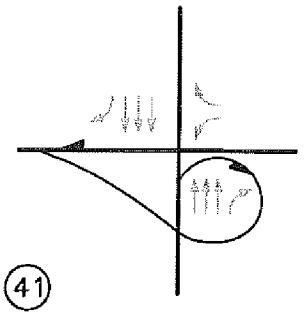
# Figure 13-1

(1 OF 2)

## RECOMMENDED MITIGATION

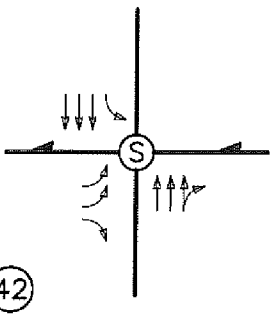
Fanita

SR 52 WB RAMPS/
CUYAMACA ST**



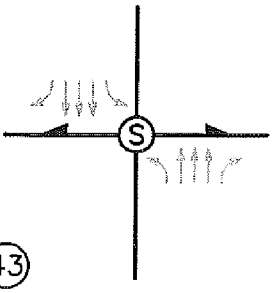
41

SR 52 EB RAMPS/
CUYAMACA ST**



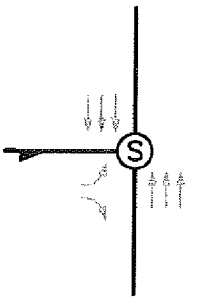

42

SR 52 WB RAMPS/
MAGNOLIA AVE/
SR 67 SB RAMPS***



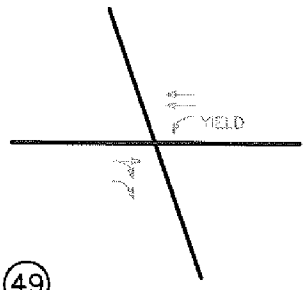

43

SR 52 EB RAMPS/
MAGNOLIA AVE**



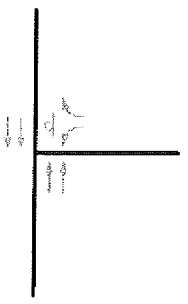

44

PROSPECT AVE/
SR 67 SB ON-RAMP**



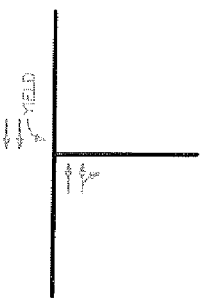

49

WB OFF-RAMP/
SR 52/ FANITA DR**



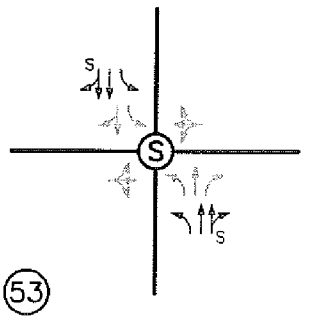
51

EB ON-RAMP/
SR 52/ FANITA DR**




52

BECK DR/
CUYAMACA ST



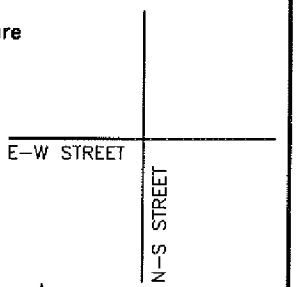

53

NOTES:

- AM/PM Peak hour volumes are shown at the intersections
- EAST–WEST STREET/ NORTH–SOUTH STREET

LEGEND

- (S) – New Traffic Signal
- → – New turn movements
- – Existing stop sign
- → – Existing turn movements
- S – 20 foot curb lane with sneakers
- ** – New intersection to be built by others (Caltrans)
- *** – Will be eliminated with the extension of SR 52 to SR 67




NO SCALE

LINSCOTT LAW & GREENSPAN engineers

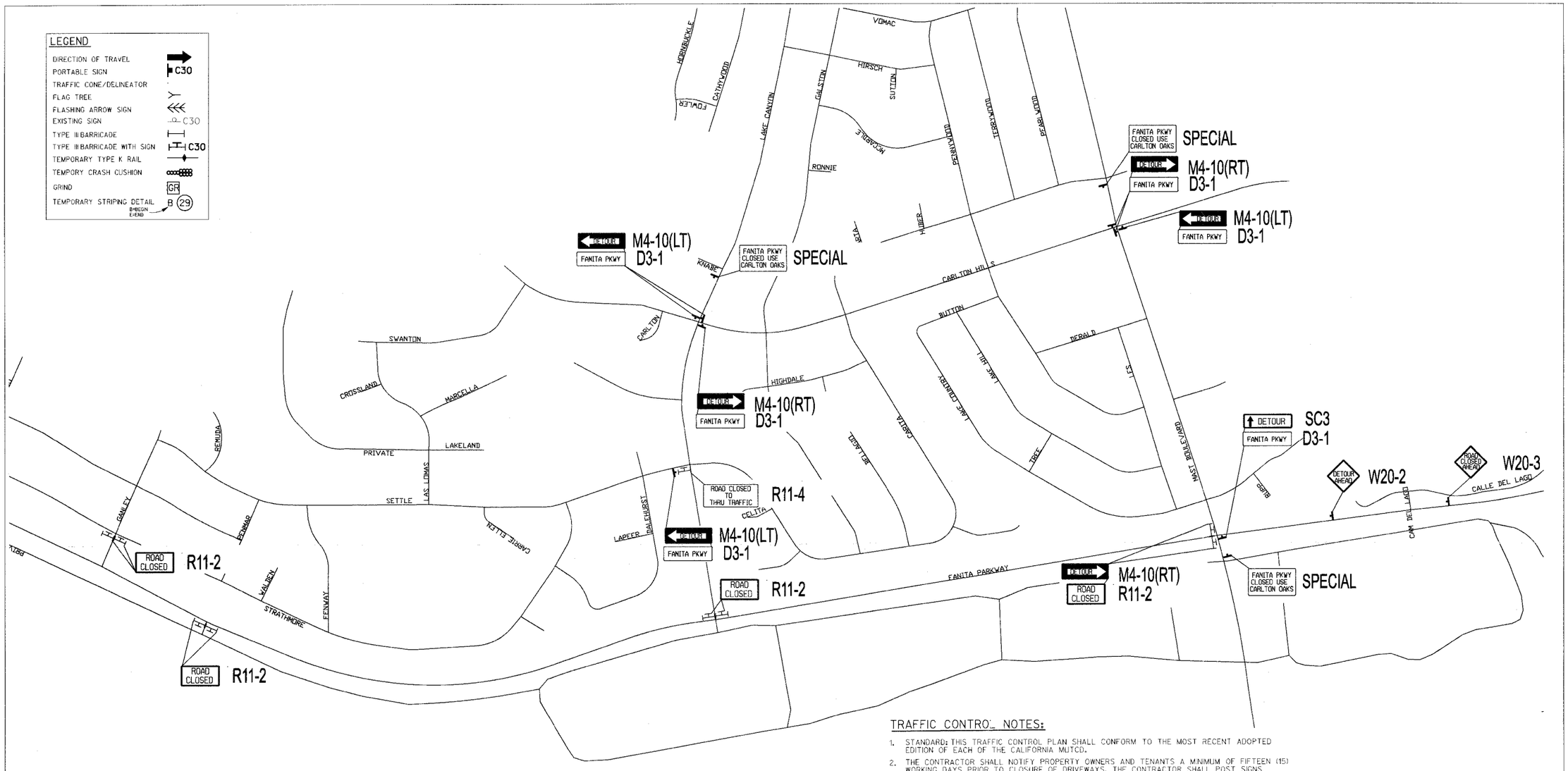
REV. 3/14/07
LLG1545 FIG13–1.DWG

# Figure 13-1

(2 OF 2)

## RECOMMENDED MITIGATION

Fanita




## TRAFFIC CONTROL NOTES:

1. STANDARD: THIS TRAFFIC CONTROL PLAN SHALL CONFORM TO THE MOST RECENT ADOPTED EDITION OF EACH OF THE CALIFORNIA MUTCD.
2. THE CONTRACTOR SHALL NOTIFY PROPERTY OWNERS AND TENANTS A MINIMUM OF FIFTEEN (15) WORKING DAYS PRIOR TO CLOSURE OF DRIVEWAYS. THE CONTRACTOR SHALL POST SIGNS NOTIFYING THE PUBLIC A MINIMUM OF TEN (10) WORKING DAYS PRIOR TO CLOSURE OF STREETS.
3. POSTING PARKING RESTRICTIONS: THE CONTRACTOR SHALL POST TOW-AWAY/NO PARKING SIGNS TWENTY-FOUR (24) HOURS IN ADVANCE OF PARKING REMOVAL. SIGNS SHALL INDICATE SPECIFIC DAYS, DATES AND TIMES OF RESTRICTIONS. PARKING METERS SHALL BE BAGGED WHERE APPLICABLE.
4. CHANGE IN WORK: THE CITY ENGINEER RESERVES THE RIGHT TO OBSERVE THESE TRAFFIC CONTROL PLANS IN OPERATION AND TO MAKE ANY CHANGES AS FIELD CONDITIONS WARRANT. ANY CHANGES SHALL BE DOCUMENTED AND SUPERSEDE THESE PLANS.
5. IT IS THE RESPONSIBILITY OF THE CONTRACTOR PERFORMING WORK ON A CITY STREET TO SUPPLY, INSTALL AND MAINTAIN THE TRAFFIC CONTROL DEVICES AS SHOWN HEREIN, AS WELL AS ANY SUCH ADDITIONAL TRAFFIC CONTROL DEVICES AS MAY BE REQUIRED, TO ENSURE THE SAFE MOVEMENT OF TRAFFIC, PEDESTRIANS AND BICYCLISTS THROUGH OR AROUND THE WORK AREA AND PROVIDE MAXIMUM PROTECTION AND SAFETY TO CONSTRUCTION WORKERS.
6. ALL ADVANCE WARNING SIGN INSTALLATIONS SHALL BE EQUIPPED WITH FLAGS FOR DAYTIME CLOSURES.
7. STATIONARY MOUNTED SIGNS SHOWN ON THESE PLANS SHALL USE TYPE IIIA REFLECTIVE SHEETING.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ALL SAFETY DEVICES SUCH AS BARRICADES, DELINEATORS, AND SIGNS IN GOOD CONDITION AND PROPERLY PLACED AS REQUIRED BY THE TRAFFIC CONTROL PLAN AT HIS EXPENSE.
9. CONTRACTOR WILL BE RESPONSIBLE FOR REPLACING ALL EXISTING TRAFFIC SIGNAL EQUIPMENT DAMAGED OR DESTROYED DURING CONSTRUCTION, INCLUDING ANY DAMAGED SIGNAL LOOPS. THIS WILL BE DONE PER CITY STANDARDS AND SPECIFICATIONS WITHIN (5)FIVE CALENDER DAYS AFTER PHASE IS COMPLETED.

REGISTERED PROFESSIONAL ENGINEER — MICHAEL L. KENNEY No. 56661 Exp. 6/30/09 CIVIL — STATE OF CALIFORNIA

NOT TO SCALE

RICK ENGINEERING COMPANY
5620 FRIARS ROAD
SAN DIEGO, CA 92110
619.291.0707
(FAX)619.291.4165
rickengineering.com
San Diego Riverside Sacramento Orange Phoenix Tucson

| CONSTRUCTION RECORD | REFERENCES | DATE | BY | REVISIONS | ACPTD | BENCH MARK | SCALE | OFFICE |
|---|---|---|---|---|---|---|---|---|
| CONTRACTOR | | | | | | | HORIZ: | FIELD |
| INSPECTOR | | | | | | | VERT: | TRAFFIC |
| DATE COMPLETED | | | | | | | | |

DESIGNED BY | DRAWN BY | CHECKED BY

PLANS PREPARED UNDER THE SUPERVISION OF
MICHAEL L. KENNEY DATE:
RCE NO. 56661 EXPIRES: 6/30/09

REVIEWED _____ ACCEPTED _____
BY _____ PROJECT ENGINEER BY _____ PRINCIPAL CIVIL ENGINEER
RCE NO. _____ EXPIRES _____

CITY OF SANTEE DEPARTMENT OF DEVELOPMENT SERVICES

PRELIMINARY TRAFFIC CONTROL PLAN FOR:
# FANITA PARKWAY CLOSURE

CITY W.O. NO.

DRAWING NO.

SHEET 1 OF 1

018738

**BEFORE THE ENERGY RESOURCES CONSERVATION AND DEVELOPMENT COMMISSION OF THE STATE OF CALIFORNIA**
**1516 NINTH STREET, SACRAMENTO, CA 95814**
**1-800-822-6228 – WWW.ENERGY.CA.GOV**

***APPLICATION FOR CERTIFICATION FOR THE QUAIL BRUSH GENERATION PROJECT***

DOCKET NO. 11-AFC-03
PROOF OF SERVICE
*(Revised 11/19/2012)*

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*indicates change

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## DECLARATION OF SERVICE

I, John T. Kaup, declare that on November 26, 2012 I served and filed copies of the attached Relevant excerpts from the administrative record for *Preserve Wild Santee v. City of Santee* (San Diego Superior Court Case No. 37-2008-00075168-CU-TT-CTL). This document is accompanied by the most recent Proof of Service list, located on the web page for this project at: http://www.energy.ca.gov/sitingcases/quailbrush/index.html.

The document has been sent to the other parties in this proceeding (as shown on the Proof of Service list) and to the Commission's Docket Unit or Chief Counsel, as appropriate, in the following manner:

(*Check all that Apply*)

For service to all other parties:

X Served electronically to all e-mail addresses on the Proof of Service list;

___ Served by delivering on this date, either personally, or for mailing with the U.S. Postal Service with first-class postage thereon fully prepaid, to the name and address of the person served, for mailing that same day in the ordinary course of business; that the envelope was sealed and placed for collection and mailing on that date to those addresses marked *"hard copy required" or where no e-mail address is provided.

*AND*

For filing with the Docket Unit at the Energy Commission:

X by sending an electronic copy to the e-mail address below (preferred method); *OR*

___ by depositing an original and 12 paper copies in the mail with the U.S. Postal Service with first class postage thereon fully prepaid, as follows:

CALIFORNIA ENERGY COMMISSION – DOCKET UNIT
Attn: Docket No. 11-AFC-03
1516 Ninth Street, MS-4
Sacramento, CA 95814-5512
docket@energy.ca.gov

*OR, if filing a Petition for Reconsideration of Decision or Order pursuant to Title 20, § 1720:*

___ Served by delivering on this date one electronic copy by e-mail, and an original paper copy to the Chief Counsel at the following address, either personally, or for mailing with the U.S. Postal Service with first class postage thereon fully prepaid:

California Energy Commission
Michael J. Levy, Chief Counsel
1516 Ninth Street MS-14
Sacramento, CA 95814
michael.levy@energy.ca.gov

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct, that I am employed in the county where this mailing occurred, and that I am over the age of 18 years and not a party to the proceeding.

John T. Kaup
John T. Kaup