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## 17. TRANSPORTATION AND CIRCULATION

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This chapter of the EIR describes existing and projected transportation conditions, analyzes potential impacts, and recommends mitigation measures for identified significant impacts. The chapter addresses roadways, transit, pedestrians, bicycles, and parking. The chapter evaluates roadway operational conditions for the following scenarios:

- Existing conditions,
- Baseline Conditions,
- Baseline plus Project Conditions,
- Cumulative (year 2030) conditions, and
- Cumulative (year 2030) Plus Project Conditions.

The findings in this chapter are based on independent research and analysis undertaken by the EIR transportation consultant, Abrams Associates Traffic Engineering.

Detailed technical data developed for the EIR analysis, including traffic modeling and intersection level of service computation details, are included in a Middle Green Valley Specific Plan Draft EIR *Traffic Analysis Appendix*, available for review at the Solano County Department of Resource Management, Planning Division, at 675 Texas Street, Fairfield, CA.

### 17.1 SETTING

This section describes the existing local and regional roadway network, transit services, pedestrian system and bicycle facilities serving the plan area, and associated existing and background conditions.

#### **17.1.1 Existing Roadway Conditions**

Figure 17.1 illustrates the existing regional and local roadway network serving the plan area. Important regional and local roadways serving the plan area vicinity are described below.

**(a) Regional Roadways.** Regional access to the plan area is provided by Interstate 80 (I-80), Interstate 680 (I-680) and State Route 12 (SR 12). Local access from these regional routes is provided by Green Valley Road and Suisun Valley Road.

**(1) Interstate 80.** Interstate 80 (I-80) is an eight-lane east-west freeway located south of the plan area and serving regional traffic between San Francisco and Sacramento. Local access to I-80 is provided via interchanges at Green Valley Road and Suisun Valley Road. In the vicinity

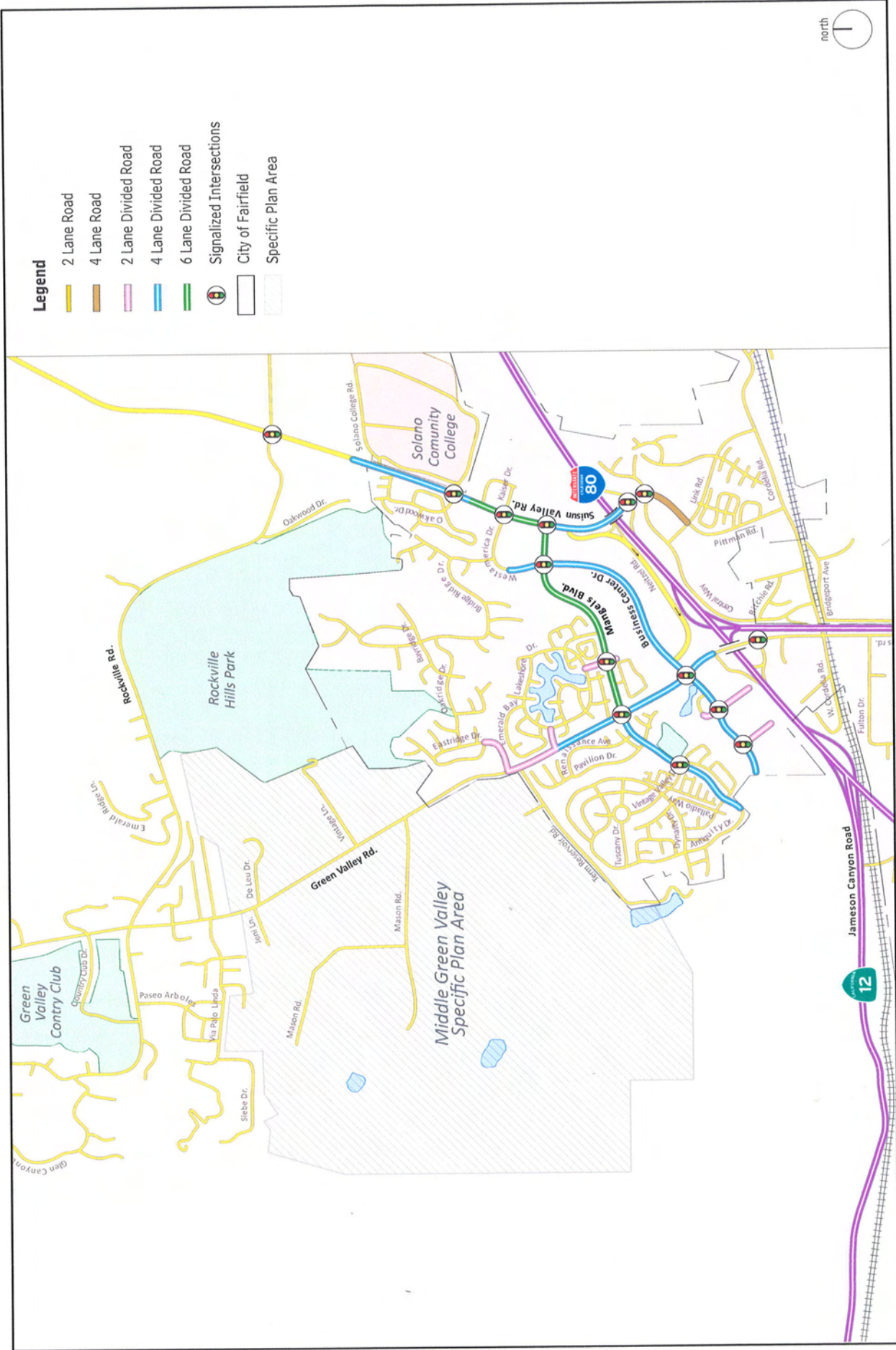


Figure 17.1

# EXISTING ROADWAY NETWORK

Middle Green Valley Specific Plan EIR

SOURCE: Abrams Associates, Transportation Consultants

Wagstaff and Associates ■ Urban and Environmental Planners

of Suisun Valley Road, I-80 has an existing average annual daily traffic volume (AADT) of approximately 189,000 vehicles (Caltrans, 2008)

(2) *Interstate 680.* Interstate 680 (I-680) is a four-lane north-south freeway south of the plan area that extends from an I-80 interchange at Green Valley Road south to San Jose. I-680 has an existing AADT of approximately 60,000 vehicles south of the I-80 junction (Caltrans, 2008). Local access to I-680 is provided via a Green Valley Road interchange.

(3) *State Route 12.* State Route 12 (SR 12) is a four-lane east-west highway east of the project site that extends from Napa County to Sacramento County. SR 12 has an existing AADT of approximately 33,000 vehicles west of I-80 (Caltrans, 2008). Local access to SR 12 is provided via SR 12 interchanges on I-80.

(b) Local Roadways. Local roadways serving the plan area and vicinity are described below:

(1) *Green Valley Road.* Green Valley Road is the principal north-south local roadway extending through the plan area. The roadway extends from the I-80 freeway and terminates north of the Green Valley Country Club area. The route is designated in the Solano County General Plan as a minor arterial from Eastridge Drive to the freeway. From Eastridge Drive north to Rockville Road, the route is designated in the General Plan as a collector. In the immediate vicinity of the plan area the route is a standard two-lane county rural roadway with one travel lane in each direction and limited shoulders on each side. From Eastridge Drive to the freeway, the route is an improved, divided city roadway with multiple lanes and a center median. A paved multi-use trail is provided on the west side of the road between Rockville Road and Business Center Drive. The speed limit on Green Valley Road varies from 30 to 45 mph.

(2) *Mangels Boulevard.* Mangels Boulevard is a four to six lane divided east-west city roadway that extends from Antiquity Drive on the west to Suisun Valley Road on the east. Mangels Boulevard has a posted speed limit of 40 mph and paved sidewalks.

(3) *Business Center Drive.* Business Center Drive is a four lane divided east-west city roadway that provides access to commercial areas just north of I-80. Business Center Drive is a divided roadway with paved sidewalks and a posted speed limit that varies from 35 to 40 mph.

(4) *Rockville Road.* Rockville Road is an east-west county local road that extends from a point west of Green Valley Road east to I-80 and Texas Street in the City of Fairfield. The route has two travel lanes and a posted speed limit of 55 miles per hour (mph). The route also has marked bicycle lanes and paved shoulders. Rockville Road is designated as a collector in the Solano County General Plan. The route provides access to Rockville Hills Park.

(5) *Suisun Valley Road.* Suisun Valley Road is a County General Plan-designated minor arterial from Rockville Road to I-80. The route provides the main north-south arterial connection in the area between I-80 in the south and SR 121 in the north. In the plan area vicinity, Suisun Valley Road provides between two and six travel lanes with intermittent medians and a posted speed limit of 35 mph.

(c) Roadway Operation Analysis Methodology. Intersections, rather than midblock roadway segments, are typically the critical capacity-controlling locations for vehicular travel on suburban and urban roadway networks and are the focus of analysis for determining traffic impacts.

(1) *Study Intersections.* Thirteen (13) "study intersections" have been selected by the County and the EIR transportation consultant as those most likely to be affected by the proposed Specific Plan and therefore warranting study in this EIR. The thirteen study intersections are illustrated on Figure 17.2 and listed below:

- (1) Green Valley Road and Rockville Road (stop sign),
- (2) Green Valley Road and Via Palo Linda (stop sign),
- (3) Green Valley Road and Mason Road (stop sign),
- (4) Green Valley Road and Eastridge Drive (stop sign),
- (5) Green Valley Road and Westlake Drive (stop sign),
- (6) Green Valley Road and Mangels Blvd (traffic signal),
- (7) Green Valley Road and Business Center Drive (traffic signal),
- (8) Neitzel Road and Business Center Drive (stop sign),
- (9) I-80 WB On-ramp and Green Valley Road (stop sign),
- (10) I-80 EB Ramps and Green Valley Road (traffic signal),
- (11) Pittman Road and I-80 EB Ramps (traffic signal),
- (12) Mangels Blvd and Suisun Valley Road (traffic signal), and
- (13) Rockville Road and Suisun Valley Road (traffic signal).

(2) *Intersection Analysis Methodology.* Existing operational conditions have been evaluated for this EIR analysis during the critical morning (AM) and evening (PM) peak hours at the thirteen (13) study intersections, using the 2000 *Highway Capacity Manual (HCM)* "Level of Service" methodology. The hours identified as the critical peak hours occur on weekdays between 8:00 AM and 9:00 AM and 5:00 PM and 6:00 PM for all of the transportation facilities analyzed. Throughout this chapter, these peak hours are identified as the AM peak hour and PM peak hour, respectively.

Level of Service (LOS) is a qualitative rating system used to describe the performance of a roadway facility in a given hour based on the average delay per hour per vehicle. The LOS rating system ranges from LOS A, which indicates free flow or excellent conditions with short delays, to LOS F, which indicates congested or overloaded conditions with extremely long delays.

For **signalized intersections**, the *HCM* methodology determines the capacity of each lane group approaching the intersection. The LOS rating is then based on average delay (in seconds per vehicle) for the various movements within the intersection. A combined weighted average delay and LOS are presented for the intersection. Table 17.1 summarizes the correlation between LOS designation and average delay at signalized intersections.

For **unsignalized intersections** (all-way stop controlled and two-way stop controlled), average delay and LOS operating conditions are calculated by approach (e.g., northbound) and movement (e.g., northbound left-turn) for those movements that are subject to delay. In general, operating conditions for unsignalized intersections are presented for the worst



Figure 17.2

# EXISTING INTERSECTION LANE CONFIGURATIONS

Middle Green Valley Specific Plan EIR

SOURCE: Abrams Associates, Transportation Consultants

Wagstaff and Associates ■ Urban and Environmental Planners

Table 17.1  
SIGNALIZED INTERSECTION LEVELS OF SERVICE DEFINITIONS

<u>Level of Service</u>	<u>Description of Operations</u>	<u>Average Delay (sec/veh)</u>
A	Insignificant Delays: No approach phase is fully used and no vehicle waits longer than one red indication.	≤ 10
B	Minimal Delays: An occasional approach phase is fully used. Drivers begin to feel restricted.	> 10 to 20
C	Acceptable Delays: Major approach phase may become fully used. Most drivers feel somewhat restricted.	> 20 to 35
D	Tolerable Delays: Drivers may wait through no more than one red indication. Queues may develop but dissipate rapidly without excessive delays.	> 35 to 55
E	Significant Delays: Volumes approaching capacity. Vehicles may wait through several signal cycles and long vehicle queues from upstream.	> 55 to 80
F	Excessive Delays: Represents conditions at capacity, with extremely long delays. Queues may block upstream intersections.	> 80

SOURCE: *Highway Capacity Manual*, Transportation Research Board, 2000.

approach. Table 17.2 summarizes the correlation between LOS designation and average vehicle delay at unsignalized intersections.

Six (6) of the 13 "study" intersections are currently signalized and seven (7) are controlled by stop signs.

(d) Existing Intersection Operations. AM and PM peak hour turning movement counts were conducted at all 13 study intersections in May and September of 2009 when local schools were in session. Figure 17.2 presents the existing lane configurations at the 13 study intersections and Figure 17.3 presents the existing traffic volumes (traffic count results). Table 17.3 summarizes the associated LOS computation results for the existing weekday AM and PM peak hour. Corresponding more detailed lane configuration information, traffic count data, and LOS analysis computation sheets are available for review at the Solano County Department of Resource Management, Planning Division.

For intersections and roadway segments in unincorporated Solano County, the minimum acceptable level of service is LOS C. For intersections and roadway segments in the City of Fairfield that are not Solano Transportation Authority (VTA)-identified *routes of regional significance* (see section 17.2.1 herein), the minimum acceptable level of service is LOS D. For VTA intersections, roadway segments, and freeway segments, the minimum acceptable level of service is LOS E.

As shown in Table 17.3, all signalized study intersections currently operate at acceptable conditions (LOS D or better) during the weekday AM and PM peak hours. For the unsignalized study intersections, the worst approaches all currently operate at LOS B or better. Overall, all

Table 17.2  
**UNSIGNALIZED INTERSECTION LEVEL OF SERVICE DEFINITIONS**

<u>Level of Service</u>	<u>Description of Operations</u>	<u>Average Delay (sec/veh)</u>
A	No delay for stop-controlled approaches.	0 to 10
B	Operations with minor delays.	> 10 to 15
C	Operations with moderate delays.	> 15 to 25
D	Operations with some delays.	> 25 to 35
E	Operations with high delays and long queues.	> 35 to 50
F	Operation with extreme congestion, with very high delays and long queues unacceptable to most drivers.	> 50

SOURCE: *Highway Capacity Manual*, Transportation Research Board, 2000.

13 study intersections currently operate at acceptable LOS ratings during the weekday AM and PM peak hours.

**17.1.2 Baseline Roadway Conditions**

(a) Baseline Development Assumptions. For purposes of this EIR transportation analysis, the "baseline condition" represents the background level-of-service at the 13 study intersections for the existing condition plus the addition of traffic from recently approved projects in the area plus some growth in background traffic based on the assumption that the earliest Specific Plan buildout date would be 2012. This scenario was developed in coordination with the City of Fairfield and includes traffic from recently approved office projects that total over 1.7 million square feet plus 465,000 square feet of retail from the Green Valley Plaza project.

The baseline scenario also assumes completion of a portion of the planned Northern Connector project with the planned new arterial roadway (connecting to Business Center Drive) between State Route 12 (SR-12) and Abernathy Road in the City of Fairfield.

(b) Baseline Intersection Operations. Baseline lane configuration and traffic control assumptions are shown on Figure 17.4. Projected intersection turning movement volumes for baseline (without and with project) conditions are shown on Figures 17.5 and 17.6. The results of the associated intersection LOS computations are presented in Table 17.4 (the detailed LOS calculation sheets for each study intersection are presented in the *Traffic Analysis Appendix*).

Table 17.4 indicates that, under the baseline conditions (without the project), the two I-80 freeway ramp intersections with Green Valley Road would operate at LOS F. The intersection

Table 17.3  
**EXISTING INTERSECTION LEVEL OF SERVICE CONDITIONS**

Intersection	Control	Peak Hour	Existing	
			Delay (Sec/Veh)	LOS
1 Green Valley Rd. & Rockville Rd.	Stop Sign	AM	7.3	A
		PM	7.4	A
2 Green Valley Rd. & Via Palo Linda	Stop Sign	AM	9.3	A
		PM	9.3	A
3 Green Valley Rd. & Mason Rd.	Stop Sign	AM	9.3	A
		PM	9.5	A
4 Green Valley Rd. & Eastridge Dr.	Stop Sign	AM	10.7	B
		PM	10.8	B
5 Green Valley Rd. & Westlake Dr.	Stop Sign	AM	11.7	B
		PM	12.2	B
6 Green Valley Rd. & Mangels Blvd.	Traffic Signal	AM	16.2	B
		PM	21.8	C
7 Green Valley Rd. & Business Center Dr.	Traffic Signal	AM	19.0	B
		PM	25.3	C
8 Neitzel Rd. & Business Center Dr.	Stop Sign	AM	9.6	A
		PM	10.1	B
9 I-80 WB On-Ramp & Green Valley Rd.	Stop Sign	AM	17.8	C
		PM	34.6	D
10 I-80 EB Ramps & Green Valley Rd.	Traffic Signal	AM	15.8	B
		PM	24.4	C
11 Pittman Rd. & I-80 EB Ramps	Traffic Signal	AM	14.1	B
		PM	16.1	B
12 Mangels Blvd. & Suisun Valley Rd.	Traffic Signal	AM	7.8	A
		PM	9.1	A
13 Rockville Rd. & Suisun Valley Rd.	Traffic Signal	AM	14.7	B
		PM	8.0	A

SOURCE: Abrams Associates, 2009

*Notes:* Intersection Delay is presented is presented in terms of seconds per vehicle. For Stop Controlled intersections, the level of service and delay are reported for the worst approach.





**Figure 17.3**  
**EXISTING INTERSECTION PEAK HOUR VOLUMES**  
SOURCE: Abrams Associates, Transportation Consultants  
Wagstaff and Associates ■ Urban and Environmental Planners  
Middle Green Valley Specific Plan EIR

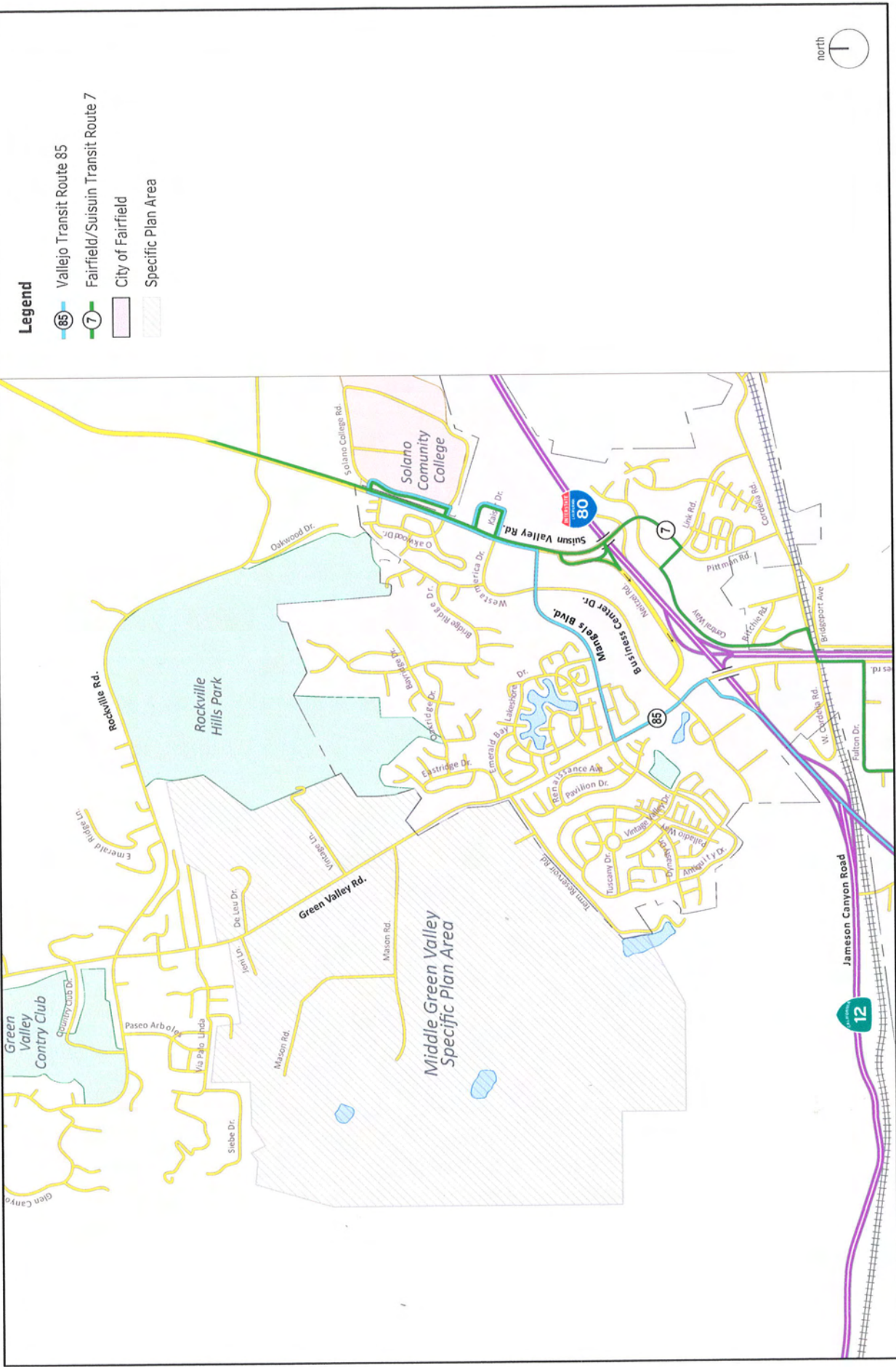


Figure 17.4

**EXISTING TRANSIT FACILITIES**

SOURCE: Abrams Associates, Transportation Consultants

Wagstaff and Associates ■ Urban and Environmental Planners

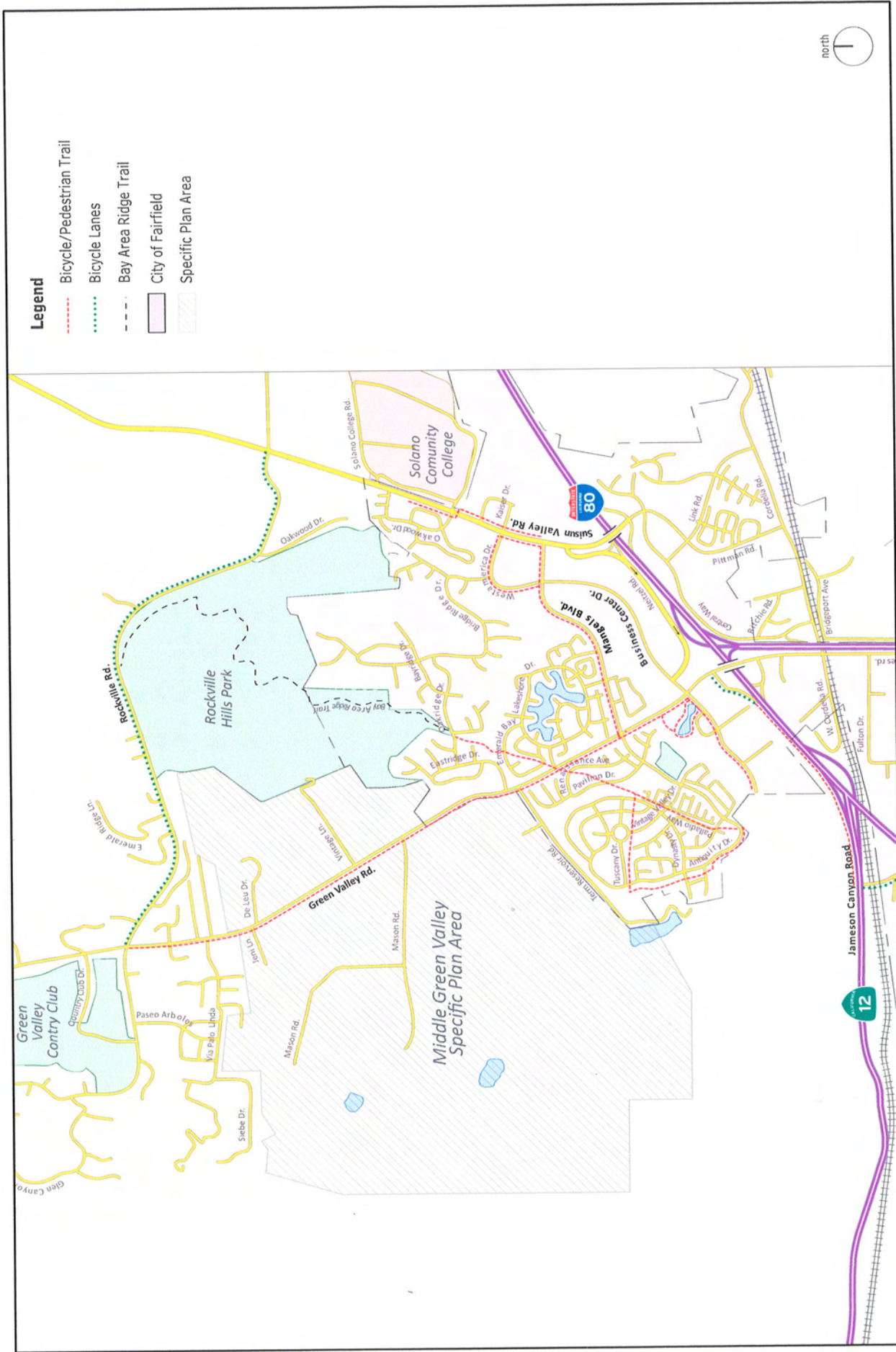


Figure 17.5

**EXISTING BICYCLE ROUTES**

SOURCE: Abrams Associates, Transportation Consultants

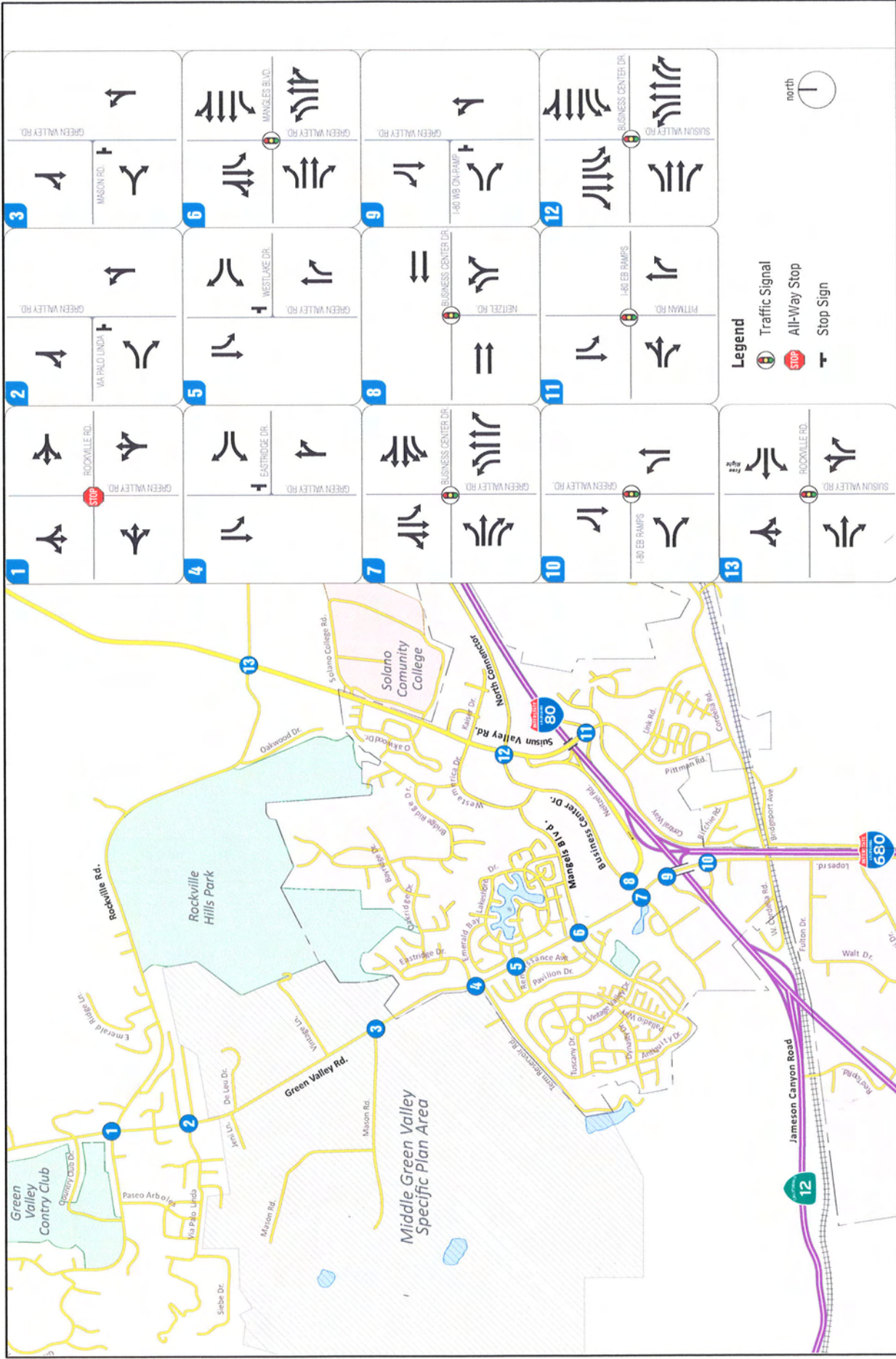


Figure 17.6

## BASELINE INTERSECTION LANE CONFIGURATIONS

SOURCE: Abrams Associates, Transportation Consultants

Table 17.4  
BASELINE INTERSECTION LEVEL OF SERVICE CONDITIONS

Intersection	Control	Peak Hour	Baseline		Control	Baseline+Project	
			Delay (Sec/Veh)	LOS		Delay (Sec/Veh)	LOS
1 Green Valley Rd. & Rockville Rd.	Stop Sign	AM	8.0	A	Stop Sign	8.6	A
		PM	8.1	A		8.6	A
2 Green Valley Rd. & Via Palo Linda	Stop Sign	AM	11.4	B	Stop Sign	13.8	B
		PM	13.0	B		14.5	B
3 Green Valley Rd. & Mason Rd.	Stop Sign	AM	10.2	B	Roundabout	4.2	A
		PM	10.8	B		3.7	A
4 Green Valley Rd. & Eastridge Dr.	Stop Sign	AM	13.0	B	Roundabout	4.5	A
		PM	14.0	B		6.1	A
5 Green Valley Rd. & Westlake Dr.	Stop Sign	AM	14.5	B	Stop Sign	28.7	D
		PM	16.7	C		<b>39.7</b>	<b>E</b>
6 Green Valley Rd. & Mangels Blvd.	Traffic Signal	AM	29.3	C	Traffic Signal	35.8	D
		PM	23.7	C		32.1	C
7 Green Valley Rd. & Business Center Dr.	Traffic Signal	AM	29.9	C	Traffic Signal	41.8	D
		PM	68.2	E		<b>&gt; 80</b>	<b>F</b>
8 Neitzel Rd. & Business Center Dr.	Traffic Signal	AM	7.5	A	Traffic Signal	7.9	A
		PM	12.2	B		12.8	B
9 Green Valley Rd. & I-80 WB On-Ramp	Stop Sign	AM	> 80	F	Stop Sign	<b>&gt; 80</b>	<b>F</b>
		PM	> 80	F		<b>&gt; 80</b>	<b>F</b>
10 Green Valley Rd. & I-80 EB Ramps	Traffic Signal	AM	> 80	F	Traffic Signal	<b>&gt; 80</b>	<b>F</b>
		PM	63.1	E		<b>&gt; 80</b>	<b>F</b>
11 Pittman Rd. & I-80 EB Ramps	Traffic Signal	AM	46.0	D	Traffic Signal	51.8	D
		PM	39.9	D		42.2	D
12 Business Center Rd. & Suisun Valley Rd.	Traffic Signal	AM	23.7	C	Traffic Signal	24.6	C
		PM	23.4	C		24.8	C
13 Rockville Rd. & Suisun Valley Rd.	Traffic Signal	AM	16.7	B	Traffic Signal	17.2	B
		PM	12.7	B		13.4	B

SOURCE: Abrams Associates, 2009

Notes: Intersection Delay is presented is presented in terms of seconds per vehicle. For Stop Sign Controlled intersections, the level of service and delay are reported for the worst approach.

of Green Valley Road with Business Center Drive would also operate at LOS F. All three of these intersections will therefore exceed acceptable LOS standards under the baseline condition, regardless of whether or not the proposed Specific Plan is implemented.

### **17.1.3 I-80/I-680/SR 12 Interchange Project**

The I-80/I-680/SR 12 Interchange Project, a cooperative improvement program being developed by Caltrans in coordination with STA, Solano County and the cities of Fairfield and Suisun City, is currently in the planning stages. The project would be implemented in phases over a 20-year period to begin upon project approval. Phase 1, including alternative designs for improvement and expansion of the I-80/I-680 interchange with high occupancy vehicle (HOV) lane connectors, reconstruction of the Green Valley Road interchange and Suisun Valley Road interchange, and improvements to the SR 12/I-80 interchange, could be built with funding currently identified in the STA-adopted 2035 Regional Transportation Plan.

Implementation of Phase 1 would serve to mitigate the baseline operational impacts of the three study intersections identified above from LOS F to acceptable LOS levels of D or better. However, it cannot be assumed that the interchange improvement project would be completed before the anticipated baseline development occurs.

### **17.1.4 Existing Transit System**

Figure 17.7 illustrates the existing transit service routes serving the plan area vicinity. As shown, there are no existing bus routes on Green Valley Road, and there is no existing transit service within close walking distance of the plan area. The nearest bus transit services are provided by Vallejo Transit and the Fairfield/Suisun Transit System (FAST). Vallejo Transit operates Route 85, with the nearest stops located at the Green Valley Road/Mangels Boulevard intersection, approximately one mile south of the plan area. The route operates on half-hour headways. FAST operates the next closest bus route, Route 7, with stops on Suisun Valley Road near Solano Community College. Route 7 extends from downtown Fairfield and the Solano Mall to a terminus at Gold Hill Road in Cordelia Village. The route operates on one-hour headways--i.e., provides relatively limited service. The current feasibility of adding a bus route on Green Valley Road, extending from Fairfield to the Green Valley Country Club area, has been analyzed and determined to be low due to funding limitations and comparatively low service demand. FAST has indicated that the feasibility of such a route may be reconsidered as possible growth in demand occurs, but implementation of this route is not expected in the near future.

### **17.1.5 Existing Pedestrian System**

North of the Fairfield city limits, the majority of roadways in the plan area vicinity are rural in nature and have no sidewalks. A paved multi-use trail is provided on the west side of Green Valley Road between Rockville Road and Business Center Drive and there are a number of multi-use hiking trails nearby within Rockville Hills Park. A section of the Bay Area Ridge Trail extends between Oakridge Drive and Rockville Road. There are sidewalks on both sides of most of the newer developments in the incorporated areas closer to I-80. There is also pedestrian signal phasing at each signalized intersection in these incorporated areas.



SOURCE: Abrams Associates, Transportation Consultants

Figure 17.7

# BASELINE INTERSECTION PEAK HOUR VOLUMES WITHOUT PROJECT

### **17.1.6 Existing Bicycle System**

Bicycle routes serving the plan area vicinity are illustrated in Figure 17.8. There are three designated major bicycle routes in the vicinity, consisting of Class II and Class III route types. Class II bicycle routes are separate bicycle lanes adjacent to the curb lane. Class III bicycle facilities are signed routes, where bicyclist share travel lanes with vehicles. There is an existing 8-foot wide multi-use trail on the west side of Green Valley Road extending from Rockville Road to Business Center Drive. There are also marked on-street bicycle lanes along Rockville Road between Green Valley Road and Suisun Valley Road. A number of other multi-use paths exist in the area within newer residential developments and along some major streets. Beyond these facilities, bicycles in the area must share the roadways with vehicular traffic.

## **17.2 PERTINENT PLANS AND POLICIES**

CEQA requires an EIR to identify the plan and policy setting within which the project is proposed and discuss any inconsistencies between the proposed project and applicable plans and policies adopted to minimize environmental impacts [CEQA Guidelines sections 15124(b) and 15125(d)]. Jurisdictional authority and adopted policies pertinent to consideration of the potential transportation and circulation impacts of the proposed Specific Plan are described below.

### **17.2.1 Solano Transportation Authority**

State statute requires that a Congestion Management Agency (CMA) be established and a Congestion Management Program (CMP) be developed, adopted, and updated biennially by every county that includes an urbanized area. The Solano Transportation Authority (STA) was created in 1990 as the CMA for Solano County through a Joint Powers Agreement between the cities of Benicia, Dixon, Fairfield, Rio Vista, Suisun City, Vacaville, Vallejo and the County of Solano. The STA also partners with various transportation and planning agencies, such as the Metropolitan Transportation Commission (MTC) and Caltrans District 4.

As the CMA for Solano County, the STA is responsible for countywide transportation planning, programming transportation funds, managing and providing transportation programs and services, delivering transportation projects, and setting transportation priorities. The Solano Comprehensive Transportation Plan (SCTP) has been adopted by the VTA as the County CMP. As required by state statute, the SCTP identifies a network of key regional routes--i.e., *routes of regional significance*--and establishes associated operational standards (traffic service objectives), monitoring requirements and impact review procedures for local conformance. For the purposes of this EIR, the SCTP-identified *routes of regional significance* are referred to as "VTA routes" and "VTA intersections."

### **17.2.2 Solano County**

Solano County General Plan Transportation and Circulation Element goals and policies pertinent to consideration of Specific Plan impacts are listed below.

- *Maintain and improve the County's transportation systems to enhance safety, resident access to basic needs, mobility, and convenience.* (Goal TC.G-1)



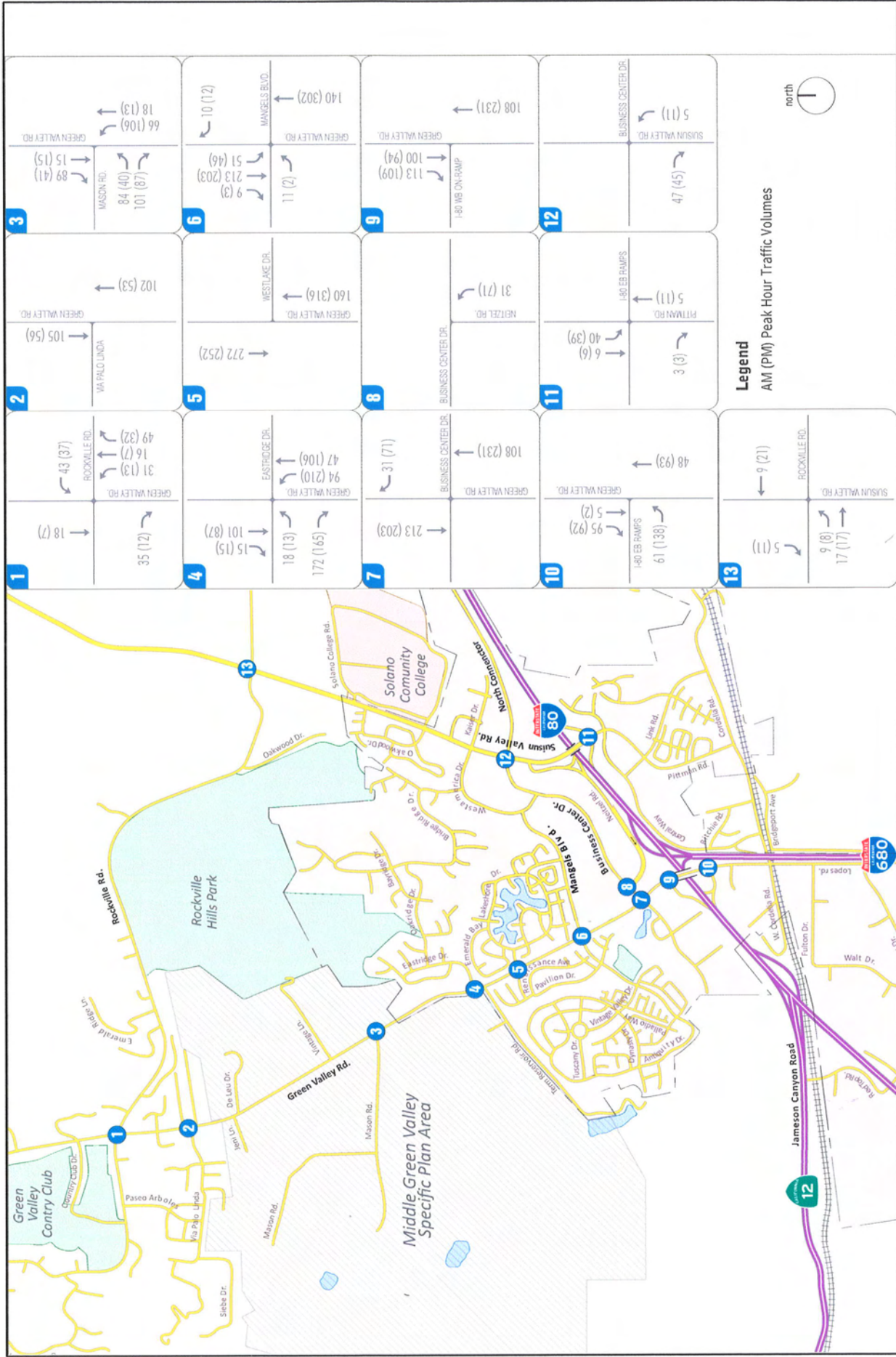


Figure 17.8

# PROJECT PEAK HOUR TRIPS

SOURCE: Abrams Associates, Transportation Consultants

- *Promote coordinated approaches to creating, maintaining and improving transportation corridors and facilities by "Planning for a Sustainable Solano County" working with other jurisdictions and transportation agencies in funding and implementing projects. (Goal TC.G-2)*
- *Encourage land use patterns that maximize access and mobility options for commuting and other types of trips, and minimize traffic congestion, vehicle miles traveled (VMT), and greenhouse gas emissions. (Goal TC.G-3)*
- *Encourage the use of alternative forms of transportation such as transit, walking and bicycling to alleviate congestion and promote recreation. (Goal TC.G-4)*
- *Encourage and maintain the safe, convenient transfer of goods and services from agricultural lands and industrial locations to regional and interregional transportation facilities. (Goal TC.G-5)*
- *Establish land use patterns that facilitate shorter travel distances and non-auto modes of travel, and limit the extent of additional transportation improvements and maintenance that may be needed with a more dispersed land use pattern. (Policy TC.P-3)*
- *Fairly attribute to each development the cost of on- and off-site improvements needed for state and county roads and other transportation systems to accommodate that development, including the potential use of development impact fees to generate revenue. (Policy TC.P-5)*
- *Anticipate increases in vehicular traffic on rural roads that serve agricultural-tourist centers, value-added agricultural uses in the interior valleys, and other unique land uses; complete related roadway improvements that support the viability of such uses. (Policy TC.P-10)*
- *Promote development review and mitigation (including the use of transportation impact fees) that focuses on upgrading county roads to County design standards if the new development significantly contributes to the need to upgrade these roads, whether the new development occurs inside or outside of a city. (Implementation Measure TC.I-2)*
- *Maintain and improve the current roadways and highway system to meet recommended design standards set forth by the County, including streets that also carry transit and nonmotorized traffic. (Policy TC.P-11)*
- *Maintain and improve the design of the current roadway system to serve areas where growth is desired and anticipated as identified in the General Plan Land Use Diagram, while minimizing conversion of agricultural and open space areas. (Policy TC.P-12)*
- *Prioritize, secure funding for, design, and build new roadways and complete roadway improvements using the established Capital Improvement Program process to implement the circulation system shown in the General Plan Circulation diagram (Figure TC-1). Ensure that future roadways meet design specifications and performance criteria for each roadway classification. (Implementation Program TC.I-10)*

- *Encourage the development of transit facilities and operations along major corridors to connect the county with surrounding activity centers and regional destinations. (Policy TC.P-14)*
- *Promote the careful location and design of bus stops, transit centers, and complementary roadway projects that maximize the speed and productivity of fixed-route buses. (Policy TC.P-15)*
- *In collaboration with other agencies and cities, continue to plan, design, and create additional bikeways and bikeway connections to provide intercity and intercounty access and incorporate system needs when approving adjacent developments. (Policy TC.P-24)*
- *Encourage access to open space and recreation through the development of safe, convenient, and connected walking paths, trails, bikeways, and neighborhood-based parks and recreation options. (Policy TC.P-25)*
- *Accommodate pedestrians and bicyclists in the design and construction of roadway improvements on County facilities. (Policy TC.P-26)*
- *Require projects to facilitate bicycle and walking access when feasible. Adopt development standards and design guidelines that support such access. (Policy TC.I-25)*

## **17.3 IMPACTS AND MITIGATION MEASURES**

### **17.3.1 Significance Criteria**

(a) CEQA Guidelines. Based on the CEQA Guidelines, the project--i.e., the proposed Specific Plan and all Specific Plan-facilitated redevelopment activities--would be considered in this EIR to have a *significant* environmental impact if it would:<sup>1</sup>

- (1) Cause an increase in traffic that is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume-to-capacity ratio on roads, or congestion at intersections).
- (2) Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways;
- (3) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses;
- (4) Result in inadequate emergency access;
- (5) Result in inadequate parking adequacy; or

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<sup>1</sup>CEQA Guidelines, 2009, Appendix G, item XV(a, b, d, e, and g).

- (6) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks).

(b) Local Level of Service Goals and Policies. The Solano County *Road Improvement Standards and Land Development Requirements* (adopted February 2006) establishes LOS C as the standard for all roads and intersections within the County's jurisdiction. The City of Fairfield's General Plan establishes LOS D as the standard for intersections on arterial streets within the City of Fairfield.

(1) *Signalized Intersections:* For signalized intersections, this EIR assumes that a significant impact would occur if project generated traffic causes intersection operations to deteriorate from an acceptable level of LOS C or better to LOS D, E or F for intersections within Solano County, and LOS D or better to LOS E or F for intersections on arterials within Fairfield. In addition, a significant impact would occur if project generated traffic exacerbates already unacceptable operations (LOS D, E, or F for intersections within Solano County and LOS E or F for intersections within Fairfield) by increasing the overall intersection's volume by more than one percent.

(2) *Unsignalized Intersections:* For unsignalized intersections, this EIR assumes that a significant impact would occur if project generated traffic causes the worst-case movement (or average of all movements for all-way stop-controlled intersections and roundabouts) to deteriorate from an acceptable level of service (LOS C or better for intersections within Solano County and LOS D or better for intersections within Fairfield) to an unacceptable level. In addition, a significant impact would occur if project generated traffic exacerbates unacceptable operations (LOS D, E, or F for intersections within Solano County and LOS E or F for intersections within Fairfield) by increasing the overall intersection's volume by more than one percent.

(3) *Roadway Segments:* For roadway segments, this EIR assumes that a significant impact would occur if project generated traffic causes roadway segments under Solano County jurisdiction to deteriorate from an acceptable level (LOS C or better) to an unacceptable level (LOS D, E or F). In addition, a significant impact would occur if project generated traffic increases the traffic volumes on a roadway segment already operating at LOS D, E or F by more than five percent.

(4) *Parking:* For parking, this EIR assumes that a significant impact would occur if the project-proposed parking provisions result in inadequate parking capacity under County parking standards, and secondary physical impacts could be triggered by the parking deficiency, such as increased traffic congestion at intersections, air quality impacts, safety impacts, or noise impacts caused by congestion (CEQA Guidelines section 15131[a]).

(5) *Transit:* For transit, this EIR assumes that a significant impact would occur if the project would cause a substantial increase in transit demand that could not be accommodated by adjacent transit capacity, resulting in unacceptable levels of transit service; or cause a substantial increase in operating delay or costs such that significant adverse impacts in transit service levels could result.

(6) *Pedestrian System:* For the pedestrian system, this EIR assumes that a significant impact would occur if the project would result in substantial overcrowding on sidewalks, create

potentially hazardous conditions for pedestrians, or otherwise interfere with pedestrian accessibility to the site and adjoining areas.

(7) *Bicycle System*: For the bicycle system, this EIR assumes that a significant impact would occur if the project would create potentially hazardous conditions for bicyclists or otherwise substantially interfere with bicycle accessibility to the site and adjoining areas.

(8) *Construction Period*: Construction-related transportation and circulation impacts generally would not be considered significant due to their temporary and limited duration.

### **17.3.2 Planned Roadway Improvements**

Significant planned roadway improvements in the plan area vicinity include the reconfiguration of the I-80/I-680/SR 12/Green Valley Road interchange--i.e., the I-80/I-680/SR 12 Interchange Project as described in section 17.1.3 herein, the widening of the I-80 freeway, and the completion of the North Connector Road (the extension of Business Center Drive, both east and west). These improvements, funded by various sources, are currently being programmed by the STA.

### **17.3.3 Project Characteristics**

The major traffic-generating components of the proposed Specific Plan are the three single family residential neighborhoods with up to 400 new primary units and up to 100 new secondary dwelling units (SDU). A SDU is assumed in this analysis to be attached or detached from the primary residential unit on the same single-family lot. Other traffic-generating components of the project include a limited amount of retail and office space, a chapel, a community center/conservancy office, a public elementary school, some light industrial areas used for agricultural processing, and a possible 25-room inn.

As shown on Figure 2.9, Proposed Specific Plan Circulation System, in chapter 2 (Project Description), two plan area vehicular access points are proposed along Green Valley Road, and both are proposed to be controlled by roundabouts. The project-generated vehicular traffic has been distributed to these two access points in this EIR analysis based on the Specific Plan-proposed land use layout and internal circulation system.

### **17.3.4 Project Trip Generation and Distribution**

(a) *Trip Generation*. Trip generation for development projects, such as the proposed Specific Plan, is typically calculated based on rates contained in the Institute of Transportation Engineer's (ITE) publication, *Trip Generation 8<sup>th</sup> Edition*, a standard reference used by jurisdictions throughout the country for the estimation of potential vehicular trips from proposed developments. A summary of the project's trip generation characteristics is shown in Table 17.5.

The proposed project includes nine different land use components that would generate trips. The components and associated ITE trip generation categories assumed for each in this analysis are listed below:

- (1) Single Family Residential (ITE Land Use Code 210)--400 Units
- (2) Secondary Dwelling Units (ITE Land Use Code 220)--100 Units

Table 17.5  
 TRIP GENERATION CHARACTERISTICS OF THE MIDDLE GREEN VALLEY SPECIFIC  
 PLAN

No.	Land Use	Size	ADT	AM Peak Hour			PM Peak Hour		
				In	Out	Total	In	Out	Total
1	Single Family Residential	400 units	3,071	74	221	295	235	138	373
2	Second Units (Apartment rates)	100 units	732	11	45	56	44	24	68
3	Chapel (External Trips)	2,000 sq. ft.	61	1	0	1	1	2	2
4	Community Center, Conservancy Office	10,000 sq. ft.	110	14	2	16	3	12	15
	Internal Trip Reduction	70 percent	77	10	1	11	2	9	10
	Net New Public Facility Trips		33	4	1	5	1	4	5
5	Commercial/Retail/Farmstand	23,000 sq. ft.	2,153	55	35	90	151	164	315
	Internal Trip Reduction	34 percent	732	19	12	31	51	56	107
	Diverted Linked Trip Reduction	25 percent	538	14	9	23	38	41	79
	Net New Commercial/Retail Trips		883	23	14	37	62	67	129
6	Public Elementary School	300 students	930	155	121	276	24	36	60
	Internal Trip Reduction	30 percent	279	47	36	83	7	11	18
	Net New Elementary School Trips		651	109	85	193	17	25	43
7	Agricultural Processing (Light Industrial)	50,000 sq. ft.	349	40	6	46	6	43	49
	Internal Trip Reduction	20 percent	70	8	1	9	1	9	10
	Diverted Linked Trip Reduction	15 percent	52	6	1	7	1	6	7
	Net New Agricultural Processing Trips		227	26	4	30	4	28	32
8	Bed & Breakfast (Resort Hotel rates)	25 rooms	82	7	3	9	5	7	12
9	Office Space in RC Residential	10,000 sq. ft.	110	14	2	16	3	12	15
	Internal Trip Reduction	23 percent	25	3	0	4	1	3	3
	Net New Commercial/Retail Trips		<u>85</u>	<u>11</u>	<u>1</u>	<u>12</u>	<u>2</u>	<u>10</u>	<u>11</u>
	<b>Net New Trip Generation</b>		<b>5,823</b>	<b>264</b>	<b>374</b>	<b>638</b>	<b>371</b>	<b>304</b>	<b>676</b>

SOURCE: Abrams Associates Transportation Engineering, October 2009.

- (3) Chapel (ITE Land Use Code 560)--200 seats/2,000 square feet
- (4) Community Center / Conservancy Office (ITE Land Use Code 710)--10,000 square feet
- (5) Commercial/Retail Space (ITE Land Use Code 820)--23,000 square feet
- (6) Elementary School (ITE Land Use Code 520)--300 students
- (7) Agricultural Processing (ITE Land Use Code 110)--50,000 square feet
- (8) Bed and Breakfast (ITE Land Use Code 330)--25 rooms
- (9) Other Office Space (ITE Land Use Code 710)--10,000 square feet

A "trip" is defined in ITE's *Trip Generation* publication as a single or one-directional vehicular movement with either the origin or destination at the project site. As a result, a trip can be either "to" or "from" the site. Consistently, a single customer visit to a site is counted as two trips (i.e., one to and one from the site).

For purposes of determining the reasonable worst-case project impacts on the surrounding street network, trip generation is typically estimated for the peak weekday traffic hours--i.e., between the hours of 8:00 to 9:00 AM and 5:00 to 6:00 PM. While a particular individual land use may generate more traffic during some other time of the day, the peak of "adjacent street traffic" represents the time period when the land use will generally contribute to the greatest amount of congestion.

The Specific Plan office space allowance and a portion of the commercial space allowance would be in lieu of up to 10 residential units in the Elkhorn Neighborhood Rural Mixed-Use (RC) designation--i.e., up to 10 residential units at this location could be converted to higher trip generating commercial and office uses (amounting to a maximum of 10,000 square feet of each). It should also be noted that up to 10 of the 400 new primary residential units are proposed to be "compound lots" that could have up to 15,000 square feet of building space. A significant portion of this space would be for agricultural and other ancillary uses. Trip generation from these 10 compound lots has been estimated to be the equivalent of three standard residential lots. There are also approximately 55 existing single-family residential homes in the plan area. It has been assumed that these will remain in place.

(b) Trip Distribution. The trip distribution assumptions developed in this analysis are based on the project's proximity to freeway interchanges, existing traffic volumes, and existing land use patterns in the area. The Specific Plan-generated vehicular trips to and from the plan area were assigned to the local and regional roadway network based on the most direct local and regional access routes. Figure 17.9 shows the estimated AM and PM peak hour trips generated by the proposed project at each study intersection.

### **17.3.5 Baseline Plus Project Roadway Conditions**

Previous Table 17.4 compares intersection impact findings for the baseline and baseline plus project conditions. As shown, project-generated traffic would:

- exacerbate already unacceptable baseline operations (LOS F) at two intersections (#9 and #10) in the AM peak hour and at one intersection (#9) in the PM peak hour;
- change already unacceptable baseline operations from LOS E to LOS F at two intersections (#7 and #10) in the PM peak hour; and

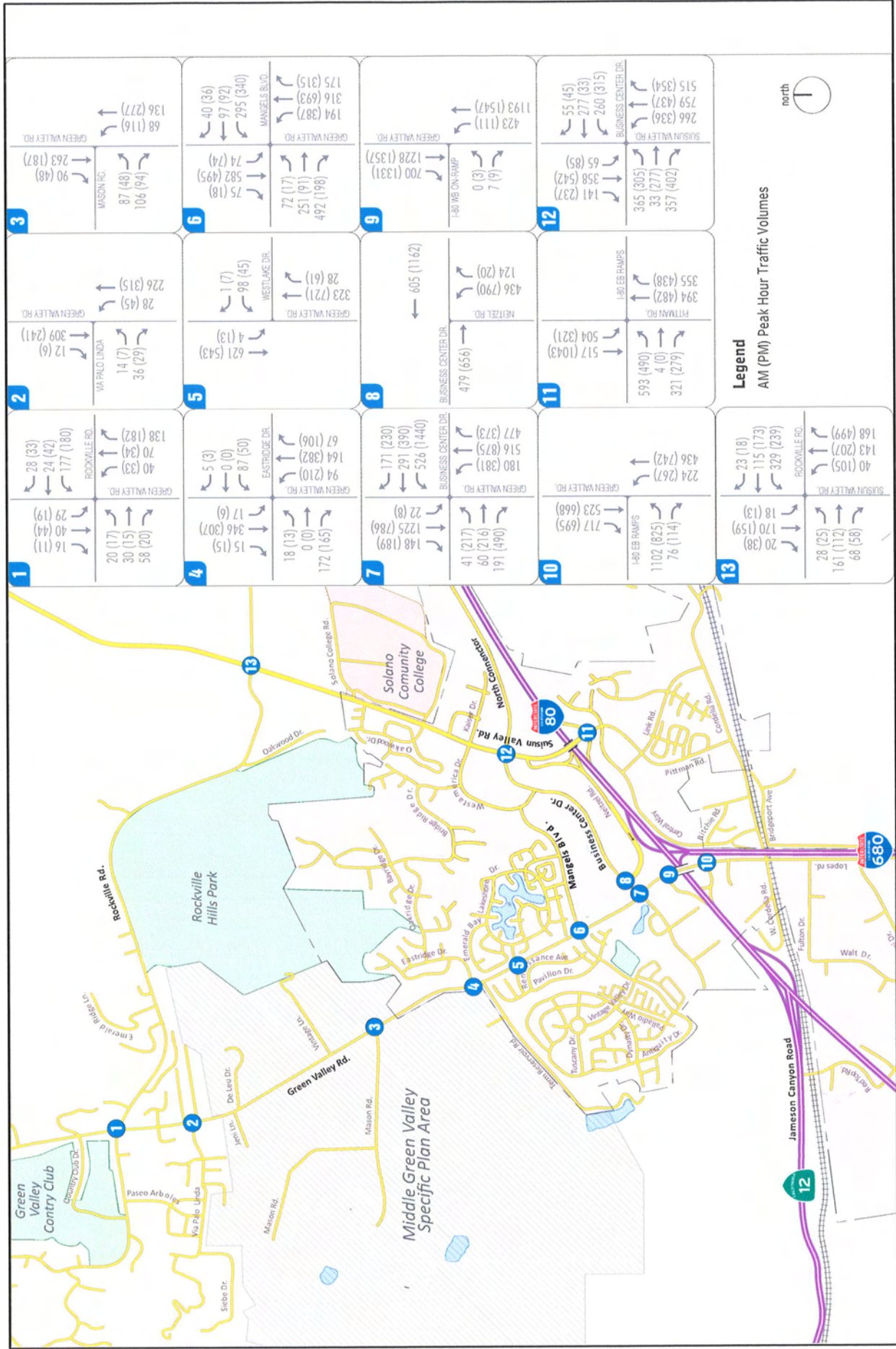


Figure 17.9

SOURCE: Abrams Associates, Transportation Consultants

# BASELINE INTERSECTION PEAK HOUR VOLUMES WITH PROJECT



- change baseline operations from an acceptable LOS C to an unacceptable LOS E at one intersection in the PM peak hour (#5).

In summary, the project would exacerbate already unacceptable baseline operations at three intersections (#7, 9, and 10) and change the LOS from an acceptable baseline condition (LOS C) to an unacceptable LOS E at one intersection (#5).

Under the baseline plus project condition, intersection #5 would not meet the standard warrants for a traffic signal. It is recommended that the intersection remain in its current configuration since the significant delay would be limited to the one side street left-turn movement in the PM peak hour only. The projected background plus project conditions do not appear to warrant major physical changes to the intersection (i.e., an added turning lane) and alternate routes are available to motorists.

### **17.3.6 Baseline Plus Project Roadway System Impacts**

**Impact 17-1: Baseline Plus Project Impacts on Intersection Operations.** As shown in Table 17.4, the project would contribute significantly to baseline level of services impacts (i.e., intersection turning movement volumes) at the following local intersections during typical weekday peak hours:

*Weekday AM Peak Hour:*

(Intersection #9) Green Valley Road at the I-80 Westbound On-Ramp (project-generated traffic would exacerbate already unacceptable baseline operations [LOS F] by increasing the overall intersection traffic volume by more than one percent at this stop-sign controlled intersection)

(Intersection #10) Green Valley Road at the I-80 Eastbound Ramps (project-generated traffic would exacerbate already unacceptable baseline operations [LOS F] by increasing the overall intersection traffic volume by more than one percent at this signalized intersection)

*Weekday PM Peak Hour:*

(Intersection #5) Green Valley Road at Westlake Drive (project-generated traffic would result in an LOS change from C under baseline conditions to E under baseline plus project conditions at this stop sign controlled intersection)

(Intersection #7) Green Valley Road at Business Center Drive (project-generated traffic would result in an LOS change from E under baseline conditions to F under baseline plus project conditions at this signalized intersection)

**(continued)**

**Impact 17-1 (continued):**

(Intersection #9) Green Valley Road at the I-80 Westbound On-Ramp (project-generated traffic would exacerbate already unacceptable baseline operations [LOS F] by increasing the overall intersection traffic volume by more than one percent at this stop-sign controlled intersection)

(Intersection #10) Green Valley Road at the I-80 Eastbound Ramps (project-generated traffic would result in an LOS change from E under baseline conditions to F under baseline plus project conditions at this signalized intersection)

These project-generated intersection LOS changes would represent a **significant impact** (see criteria [a][1], [b][1] and [b][2] under subsection 17.3.1, "Significance Criteria," above).

**Mitigation 17-1:**

(1) Baseline plus project impacts on this stop sign controlled intersection 5, Green Valley Road at Westlake Drive, would not warrant installation of a traffic signal. It is recommended that the intersection remain in its current configuration, since the project-related significant delay would be limited to the side street left-turn movement in the PM peak hour only (Westlake Drive approach), and alternative routes are available to motorists at this location. This impact is therefore considered to be **significant and unavoidable**. If the City of Fairfield determines in the future that a traffic signal is warranted at this intersection, the City and County could agree on a portion of the signal installation cost to be assigned to the plan area, and the County could identify an associated fair share per residential unit contribution as a condition of subsequent individual subdivision map approvals in the plan area.

(2) For project impacts on intersections 7 and 9, future subdivision and other discretionary development approvals in the plan area shall pay a proportionate fair share of the cost<sup>1</sup> of planned interim improvements to the Green Valley Road/I-80 interchange that have been identified by the City of Fairfield, including:

**(continued)**

<sup>1</sup>California Assembly Bill 1600 (AB 1600), the "Enforced Master Plan Act of 1988" (CGC sections 66000-66009) establishes legal procedures for charging development impact fees (DIFs) in California. The codified legislation provides a fair means of distributing development-generated capital infrastructure capital costs between various types of development on a fair share basis, based on plan formulated to indicate the infrastructure needs to serve anticipated private sector development proposals. The plan must be based on the City or County's adopted land use map, the existing level of service currently provided, identification of the capital facilities necessary to maintain this level of service with the anticipated additional development, identification of the level of responsibility for the identified additional capital facilities needs, and distribution of this capital cost responsibility to differing additional land uses based on relative (or proportional) use.

**Mitigation 17-1 (continued):**

- At signalized intersection 7, Green Valley Road at Business Center Drive, improvement plans are being developed to allow for free right-turn movements on the northbound and southbound approaches to the intersection. The southbound free right-turn would also include construction of a separate right-turn lane for the southbound Green Valley Road approach to Business Center Drive.
- At unsignalized intersection 9, Green Valley Road at the I-80 Westbound on-ramp, the on ramp leg of the intersection is to be realigned to allow for the addition of a separate left-turn lane for northbound Green Valley Road, along with a new traffic signal.

(3) For project impacts on signalized intersection 10, Green Valley Road at the I-80 Eastbound Ramps, the planned reconstruction of the Green Valley Road/I-80 interchange would ultimately mitigate the anticipated AM and PM peak hour baseline plus project operational impacts; however, no feasible interim improvements to the interchange have been identified to mitigate these impact (mitigation would ultimately require reconstruction--i.e., widening--of the overpass).

Implementation of the mitigation measures identified above for intersections 7 and 9 would substantially reduce the amount of peak hour delay per vehicle at these two intersections, but not to less than significant levels. The projected background plus project peak hour ratings at each of the four study intersections would remain at LOS E or F. In addition, because the County does not have jurisdiction over these intersections (within the City of Fairfield), implementation of the mitigation measures listed above for intersections 7 and 9 is not assured. Therefore, until implementation of the planned I-80/I-680/SR 12 Interchange Improvement Project (the planned reconstruction of the I-80/I-680/SR 12 and Green Valley Road interchange, as described in section 17.1.3 herein) is funded and implemented, the projected baseline plus project intersection impacts on intersections (7), (9) and (10) are considered to be ***significant and unavoidable***.

**17.3.6 Cumulative (2030) Plus Project Roadway Conditions**

The 2030 Cumulative Scenario assumes build-out of the area under the currently adopted Solano County and City of Fairfield General Plans. Roadway system improvements assumed under this 2030 scenario include the planned I-80/I-680/SR 12 Interchange Project, including reconstruction of the Green Valley Road/I-80 interchange, as described in section 17.1.3 herein (i.e., reconfiguration of the I-80/I-680/SR 12/Green Valley Road interchange). These improvements would substantially improve operations on the subregional freeway system, as well as on the local street system.

Given the significant year 2030 land use and roadway network changes anticipated in the plan area vicinity, the recently updated Solano County Travel Demand Model which has been formulated to reflect these changes, has been utilized to provide future cumulative traffic projections. The model includes all capital improvement program roadway improvements programmed between 2005 and 2030 as well as full General Plan build-out within Solano County.

Implementation of the planned roadway improvements assumed for the Cumulative condition would significantly alter the traffic patterns along and around I-80, I-680, and SR 12--i.e., both on freeway segments and on the surrounding local network. Specifically, the planned reconfiguration of I-80/I-680 interchange and Green Valley Road/I-80 interchange would greatly improve the operations of nearby local street intersections and roadways. Much of the traffic that currently uses the local street system to bypass I-80 and I-680 would be better accommodated by the planned freeway expansions.

Anticipated cumulative (year 2030) intersection geometries (without the project) for each study intersection are shown on Figure 17.10. The projected intersection turning movement volumes for Cumulative 2030 conditions (without the project) at the 13 study intersections during the weekday AM and PM peak hours are shown on Figure 17.11. The projected intersection turning movement volumes for Cumulative plus Project conditions are shown in Figure 17.12. The results of the associated intersection LOS computations are presented in Table 17.6. The detailed LOS calculation sheets for each study intersection are presented in the *Traffic Analysis Appendix*, available for review at the Planning Services Division of the Solano County Department of Resource Management.

As shown in Table 17.6, the cumulative analysis findings developed using the updated Solano County Travel Demand Model, indicate that all project study intersections would have acceptable operations under the cumulative without project condition with the exception of intersection 5, Green Valley Road at Westlake Drive, where the Westlake Drive left-turn movement would continue to operate at LOS F in the PM peak hour.



SOURCE: Abrams Associates, Transportation Consultants

# CUMULATIVE (2030) INTERSECTION LANE CONFIGURATIONS

Wagstaff and Associates ■ Urban and Environmental Planners

Figure 17.10

Middle Green Valley Specific Plan EIR



**Figure 17.11**  
**CUMULATIVE (2030) INTERSECTION PEAK HOUR VOLUMES WITHOUT PROJECT**

SOURCE: Abrams Associates, Transportation Consultants  
Wagstaff and Associates ■ Urban and Environmental Planners



SOURCE: Abrams Associates, Transportation Consultants

Figure 17.12  
**CUMULATIVE (2030) INTERSECTION PEAK HOUR  
VOLUMES WITH PROJECT**

Table 17.6  
CUMULATIVE (2030) INTERSECTION LEVEL OF SERVICE CONDITIONS

Intersection	Control	Peak Hour	Cumulative		Control	Cumulative + Project	
			Delay (Sec/Veh)	LOS		Delay (Sec/Veh)	LOS
1 Green Valley Rd. & Rockville Rd.	Stop Sign	AM	7.7	A	Stop Sign	8.4	A
		PM	8.3	A		8.8	A
2 Green Valley Rd. & Via Palo Linda	Stop Sign	AM	11.7	B	Stop Sign	14.1	B
		PM	13.5	B		14.9	B
3 Green Valley Rd. & Mason Rd.	Stop Sign	AM	10.3	B	Roundabout	4.2	A
		PM	10.9	B		4.3	A
4 Green Valley Rd. & Eastridge Dr.	Stop Sign	AM	13.4	B	Roundabout	4.6	A
		PM	14.6	B		6.3	A
5 Green Valley Rd. & Westlake Dr.	Stop Sign	AM	15.5	C	Stop Sign	33.6	D
		PM	17.8	C		<b>45.7</b>	<b>E</b>
6 Green Valley Rd. & Mangels Blvd.	Traffic Signal	AM	24.9	C	Traffic Signal	32.8	C
		PM	22.0	C		30.7	C
7 Green Valley Rd. & Business Center Dr.	Traffic Signal	AM	21.3	C	Traffic Signal	22.1	C
		PM	33.0	C		38.3	D
8 Neitzel Rd. & Business Center Dr.	Intersection will be removed as part of the I-80/I-680/SR12 interchange project.						
9 Green Valley Rd. & I-80 WB On-Ramp	Traffic Signal	AM	7.9	A	Traffic Signal	8.6	A
		PM	12.1	B		18.5	B
10 Green Valley Rd. & I-80 EB Ramps	Traffic Signal	AM	10.1	B	Traffic Signal	10.8	B
		PM	10.1	B		11.1	B
11 Pittman Rd. & I-80 EB Ramps	Traffic Signal	AM	14.8	B	Traffic Signal	16.1	B
		PM	13.6	B		15.1	B
12 Business Center Rd. & Suisun Valley Rd.	Traffic Signal	AM	34.8	C	Traffic Signal	35.2	D
		PM	51.1	D		53.0	D
13 Rockville Rd. & Suisun Valley Rd.	Traffic Signal	AM	15.3	B	Traffic Signal	15.8	B
		PM	10.8	B		11.1	B

SOURCE: Abrams Associates, 2009

Notes: Intersection Delay is presented is presented in terms of seconds per vehicle. For Stop Sign Controlled intersections, the level of service and delay are reported for the worst approach.



### **17.3.7 Cumulative (2030) Plus Project Roadway System Impacts**

#### **Impact 17-2: Cumulative Plus Project Impacts on Intersection Operations.**

Under projected cumulative (2030) plus project conditions, the project would contribute significantly to further deterioration of traffic operations at intersection 5, Green Valley Road at Westlake Drive, in the PM peak hour, reducing operations from LOS C to LOS E. This intersection LOS change would represent a **potentially significant cumulative impact** (see criteria [a][1], [a][2] and [b][2] in subsection 17.3.1, "Significance Criteria," above).

**Mitigation 17-2:** The cumulative plus project condition at this intersection would not warrant installation of a traffic signal. It is recommended that this intersection remain in its current unsignalized condition, since the project-related significant delay would be limited to the left-turn movement at the side street (Westlake Drive) approach in the PM peak hour only, and alternative routes are available to motorists at this location. This impact is therefore considered to be **significant and unavoidable**.

### **17.3.8 Pedestrian Impacts**

**Project Impacts on Vehicular/Pedestrian Safety Conditions.** The proposed project would not significantly impact any existing pedestrian facilities or result in significant safety problems in the area.

**Mitigation.** No significant impact has been identified; no mitigation is required.

### **17.3.9 Bicycle Impacts**

**Project Impacts on Bicycles Conditions.** The proposed project would not significantly impact any existing bicycle and pedestrian facilities, including bike lanes, routes, or paths in the area.

**Mitigation.** No significant impact has been identified; no mitigation is required.

### **17.3.10 Circulation, Access and Parking Impacts**

**Project Impacts on Internal Circulation, Access and Parking.** No internal site circulation or access issues have been identified that would cause a traffic safety problem or any unusual traffic congestion or delay. Both of the proposed project access points on Green Valley Road are proposed to incorporate roundabouts and the LOS analysis summarized in Tables 17.5 and 17.6 indicate that the two intersections would operate well (within the County's acceptable LOS standard of C). With the proposed roundabout improvements, both intersections would have adequate sight distances and could readily accommodate the estimated baseline plus project and cumulative plus project traffic volumes. The proposed project would provide an adequate supply of on-site parking. The project is proposing to meet or exceed the County's parking requirements and, as such, no significant parking spillover impacts to the surrounding properties are expected.

**Mitigation.** No significant impact has been identified; no mitigation is required.

### **17.3.11 Roadway Segment Impacts**

**Project Impacts on Roadway Segment Operations.** A detailed review has been conducted of potential project impacts on traffic operations for the "study" segment of Green Valley Road extending from Eastridge Drive south of the plan area in the City of Fairfield, to Via Palo Linda north of the plan area in the Upper Green Valley subdivision. This section of Green Valley Road has been reviewed on numerous occasions in the past to determine whether widening to provide graded (i.e., gravel) shoulders may be warranted. Previous analyses have indicated that traffic from approved projects in the area would trigger the need to widen the roadway shoulders on this segment of Green Valley Road by an additional four feet to meet County Roadway Standards. However, numerous constraints and other factors were identified that ultimately resulted in a County decision not to widen the roadway. It was determined, for example, that widening could potentially require installation of major new drainage facilities along the roadway and the removal of numerous existing mature trees. In addition, local residents have opposed shoulder widening along this segment because of the possibility of increased travel speeds.

Because this roadway section is currently not controlled by stop signs or traffic signals, a detailed roadway segment LOS analysis was conducted to verify that this section would continue to operate at the County's standard of LOS C under both baseline plus project and cumulative plus project conditions. Both analysis scenarios assumed installation of the Specific Plan-proposed roundabouts at the two proposed plan area access points. The detailed roadway segment LOS calculations for the two scenarios are presented in the *Traffic Analysis Appendix*, available for review at the Solano County Department of Resource Management, Planning Division. The calculations indicate that future traffic volumes would continue to fall within the design capacity of the roadway and that the project would not result in any significant impacts on traffic operations or safety. In addition, it is expected that the Specific Plan-proposed roundabout at Mason Drive could reduce speeding and improve safety on this segment of Green Valley Road.

Solano County-adopted current Road Improvement Standards (February, 2006) specify minimum standards for roadways based on the posted speed limit and traffic volumes. The EIR analysis of baseline plus project and cumulative plus project conditions indicates that the proposed project would not trigger any changes to the required design standards already identified for this segment of Green Valley Road.

The previously-identified finding that the roadway shoulders along this segment warrant widening due to traffic from already approved projects in the area in order to meet County Roadway Standards would remain regardless of whether or not the proposed Specific Plan is implemented. With Specific Plan approval, the County would need to continue to closely monitor traffic safety conditions along this study roadway segment to determine whether the previously-identified shoulder widening need to meet County Roadway Standards should be implemented.

**Mitigation.** No significant impact has been identified; no mitigation is required.

### **17.3.12 Construction Period Impacts**

**Project-Related Construction Period Transportation and Circulation Impacts.** In general, County consideration of temporary construction period traffic impacts is specific to individual development projects, and includes consideration of the potential for temporary roadway and sidewalk closures, potential effects on local roadway circulation due to: (1) construction trucks; and (2) increases in vehicle-trips, transit trips and parking demand associated with construction workers. Following standard County practice, separate, site-specific analyses would be conducted for all future substantive individual development projects in the plan area and any need for a construction period mitigation plan would be identified.

In general, Specific Plan-related construction activities would typically occur Monday through Friday, between 6:00 AM and 6:00 PM. Any necessary construction staging would typically occur within individual development sites or from the adjacent roadways. Affected sidewalks and multi-use trails along construction site frontages may need to be temporarily closed during construction. In such situations, temporary pedestrian walkways are typically constructed. Such lane and sidewalk closures are subject to review and approval by the County's Department of Public Works.

During individual development construction periods, temporary and intermittent traffic and transit impacts may also result from truck movements to and from the development sites. Truck movements during periods of peak traffic flow would have greater potential to create conflicts than truck movements during non-peak hours. It is also possible that construction activity associated with an individual development would overlap with that of other nearby developments. Following standard County procedures, the sponsors of individual subdivision and other discretionary development activities in the plan area would be required to consult with Solano County and other responsible agencies to coordinate construction activities so as to minimize temporary impacts on vehicular, transit and pedestrian traffic.

Based on these considerations, environmental impacts from project-related construction activities would be ***less-than-significant***.

**Mitigation.** No significant environmental impact has been identified; no mitigation is required.

