

**APPENDIX H**  
**Traffic Evaluation**



**DRAFT – TRAFFIC EVALUATION – DRAFT  
FOR THE  
WALNUT CREEK  
HABITAT AND OPEN SPACE PROJECT  
IN THE CITY OF SAN DIMAS**

*Prepared for:*

**The City of San Dimas**

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**WALNUT CREEK HABITAT AND OPEN SPACE PROJECT  
TRAFFIC EVALUATION**

**TABLE OF CONTENTS**

INTRODUCTION ..... 1  
PROJECT DESCRIPTION..... 1  
STUDY METHODOLOGY ..... 5  
PROJECT TRAFFIC..... 13  
    Trip Generation – Proposed Habitat and Open Space Project..... 13  
    Trip Generation – Prior Proposed Residential Project ..... 15  
    Trip Distribution and Assignment ..... 15  
PROJECT PARKING..... 16  
SUMMARY ..... 16

**APPENDICES**

APPENDIX A – Traffic Data Collection Worksheets

**LIST OF FIGURES**

Figure 1 – Project Vicinity Map ..... 2  
Figure 2 – Project Site Plan..... 3  
Figure 3 – Access Alternatives ..... 4  
Figure 4 – Existing Roadway Traffic Volumes – Thursday ..... 8  
Figure 5 – Existing Roadway Traffic Volumes – Friday ..... 9  
Figure 6 – Existing Roadway Traffic Volumes – Saturday ..... 10  
Figure 7 – Existing Roadway Traffic Volumes – Sunday ..... 11  
Figure 8 – Project-Related Daily Traffic Volumes ..... 17

**LIST OF TABLES**

Table 1 – Summary of Existing Roadway Counts ..... 12  
Table 2 – Walnut Creek Habitat and Open Space Project Trip Generation ..... 14

**WALNUT CREEK HABITAT  
AND OPEN SPACE PROJECT  
TRAFFIC EVALUATION**

**INTRODUCTION**

This report has been prepared to provide an evaluation of the traffic-related impacts associated with the proposed Walnut Creek Habitat and Open Space Project in the City of San Dimas. This report has been prepared in support of the environmental documentation for the project per the requirements of the California Environmental Quality Act (CEQA).

**PROJECT DESCRIPTION**

The proposed Walnut Creek Habitat and Open Space Project site is located north of Avenida Vista Loma, less than a mile to the west of San Dimas Avenue and the SR-57 Freeway, in the City of San Dimas. The site occupies a total of 60.9 acres, and is bounded by the Tzu Chi Foundation campus to the north, single-family homes and open space to the west, South San Dimas Avenue and SR-57 to the east, and single-family homes and a private golf course to the south. A vicinity map is provided on **Figure 1**. A copy of the project site plan is provided on **Figure 2**.

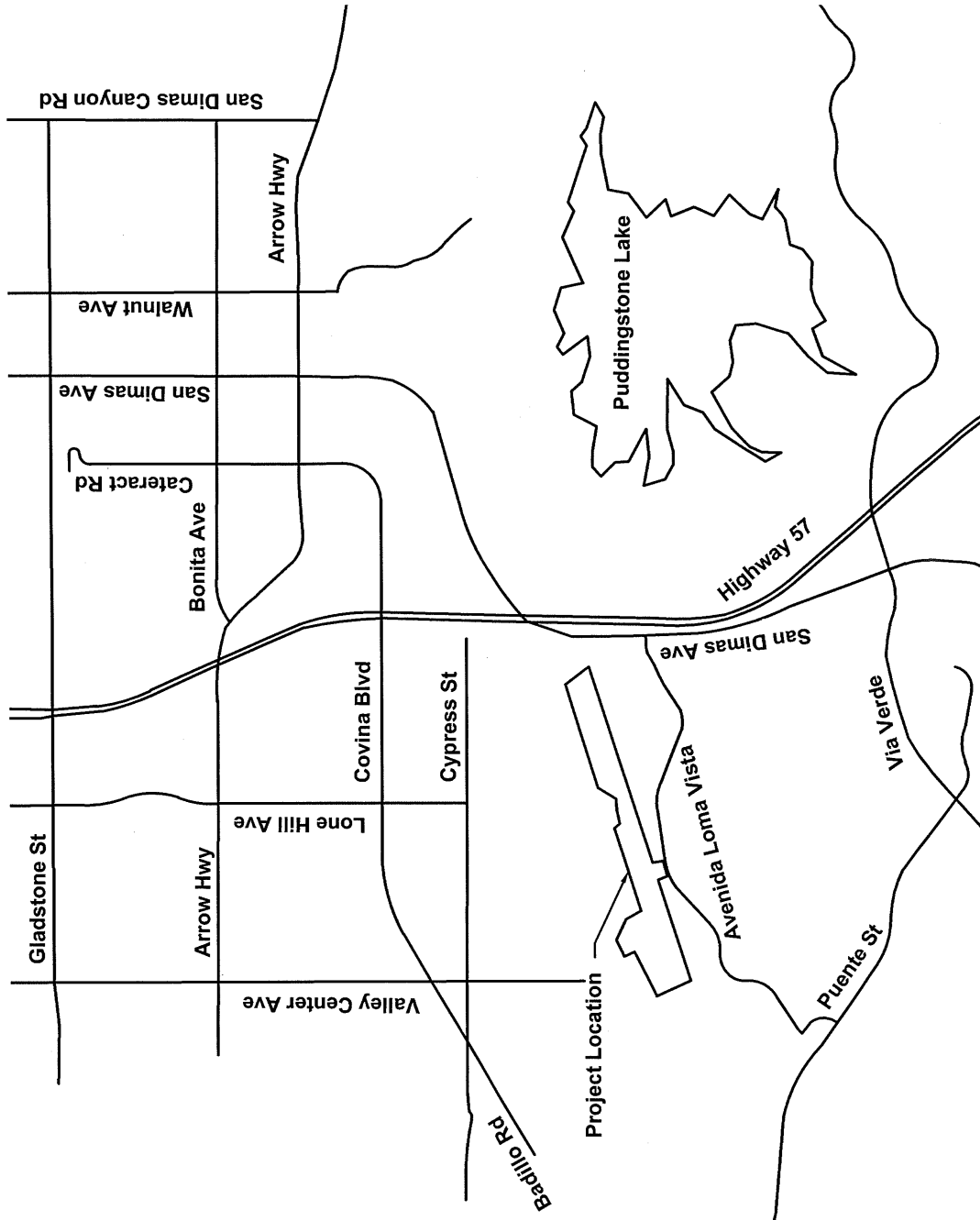
The proposed habitat and open space project would include a multi-use, educational trail system with overlook areas; garden, orchard, and native plant growing areas; and a natural play area for children. The park hours will be limited to daylight hours (sunrise to sunset).

**Site Access**

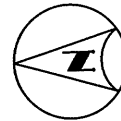
Primary access to the site is proposed to be provided in the vicinity of the Loma Vista Park, and Calle Bandera, both located on the north side of Avenida Loma Vista. Four different access alternatives, including a combination of one-way or two-way movements have been identified, as shown on **Figure 3**, and described below.

Alternative 1: One-way Access. This alternative proposes a 16-foot-wide one-way vehicular circulation drive with the entry through Loma Vista Park and the exit through the Calle Bandera gate. Pedestrian entry and exit would be provided at both gates.

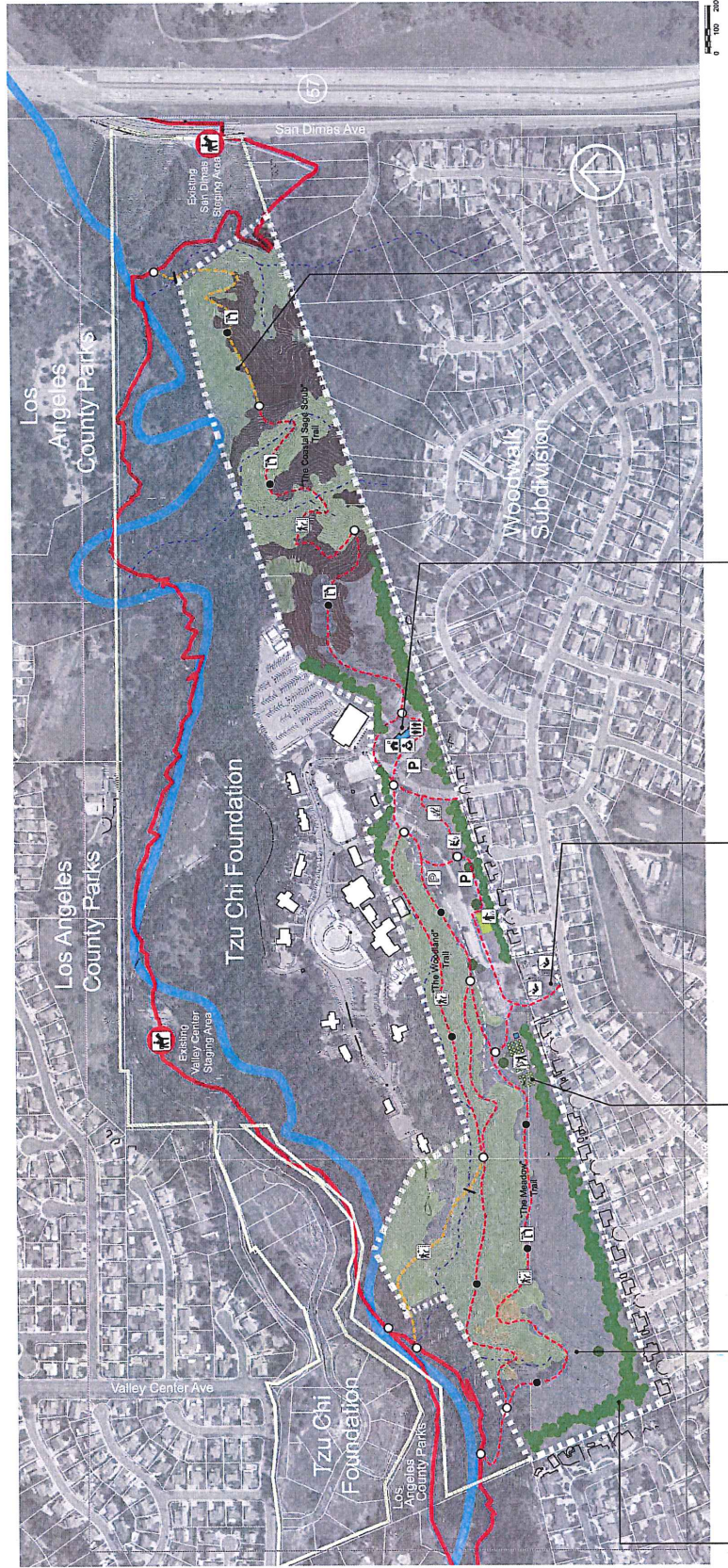
Alternative 2: Loma Vista Gate as Primary Entry and Exit. This alternative proposes a 22-foot-wide two-way drive, with modifications to the Loma Vista Park, including a new entry drive and gate as the site's primary vehicular entry and exit point. Pedestrian entry and exit would be provided at both the Loma Vista Park and the Calle Bandera gates.



**FIGURE 1  
VICINITY MAP**



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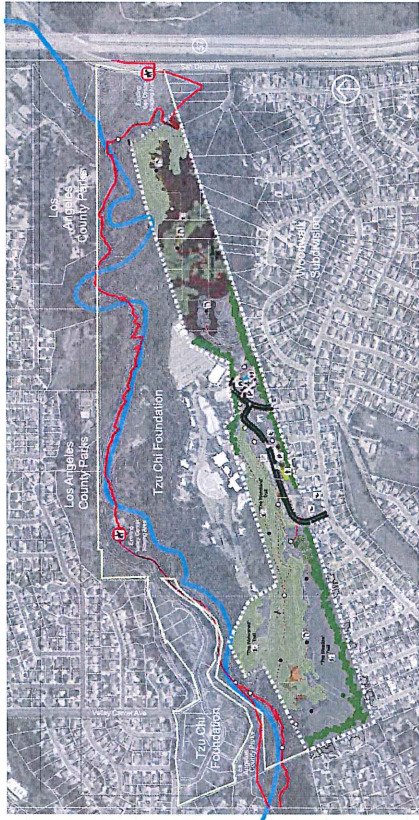


**FIGURE 2  
PROJECT SITE PLAN**



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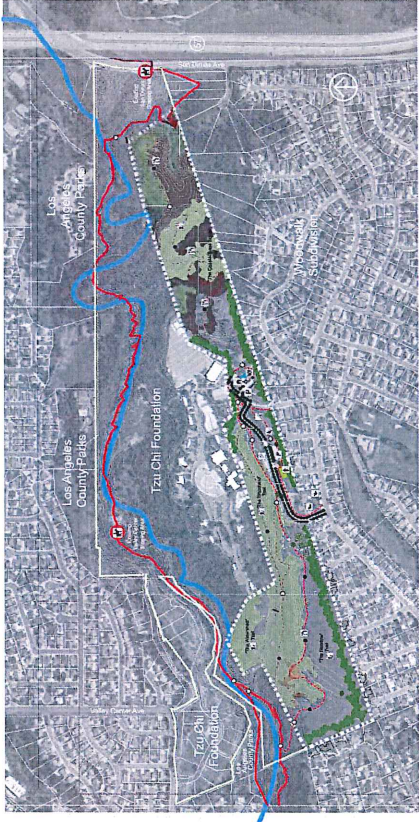
**Kimley»Horn**



**Alternative 1 - One Way Access**  
 This alternative proposes a one way vehicular circulation drive through the site, with ENTRY through Loma Vista Park, and EXIT through the existing Calle de Bandera Gate. Pedestrian entry and exit would be provided at both gates. Note the direction of traffic could be reversed.



**Alternative 2 - Loma Vista Gate as Primary Entry and Exit Gate**  
 This alternative proposes a new drive and gate at Loma Vista Park as the site's primary vehicular entry and exit point. Pedestrian entry and exit would be provided at both the Calle de Bandera gate and through Loma Vista park.



**Alternative 3 - Two Way Access with both Loma Vista Park and Calle de Bandera**  
 This alternative proposes shared entry and exit at two points within the site, one at a new gate at Loma Vista Park and one at the existing Calle de Bandera Gate. Pedestrian entry and exit would also be provided at both gates.



**Alternative 4 - Calle de Bandera Gate as Primary Entry and Exit Gate**  
 This alternative proposes the existing drive and gate at Calle de Bandera be the site's primary vehicular entry and exit point. Pedestrian entry and exit would be provided at both the Calle de Bandera gate and through Loma Vista park.



NOT TO SCALE

## FIGURE 3 ACCESS ALTERNATIVES



Alternative 3: Two-Way Access at both Loma Vista Park and Calle Bandera. This alternative proposes that the entry and exit would be shared between Loma Vista Park and Calle Bandera. A new 22-foot wide two-way drive and entry gate is proposed at Loma Vista Park, and would connect to the existing site roadway from the Calle Bandera gate. Pedestrian entry and exit would be provided at both the Loma Vista and the Calle Bandera gates.

Alternative 4: Calle Bandera as Primary Entry and Exit. This alternative proposes the existing drive and gate at Calle Bandera as the site's primary vehicular entry and exit point. Pedestrian entry and exit would be provided at both the Loma Vista Park and the Calle Bandera gates.

In addition to these access options from Loma Vista Park and/or Calle Bandera, the proposed trail system will ultimately connect to the existing Antonovich Trail system, and could also be accessed from the either of the existing staging areas serving the existing trail system.

### **STUDY METHODOLOGY**

The proposed habitat and open space project is not expected to cause peak hour capacity or intersection Level of Service concerns in the typical sense of a traffic impact analysis. The evaluation of project traffic will focus on the project-related traffic on the residential streets leading to the project site.

Although a two-lane undivided street or roadway can accommodate daily traffic volumes in the range of 10,000 to 12,000 vehicles per day (vpd) from a daily capacity standpoint, residential streets with homes on one or both sides of the street would ideally carry less than 2,000 vpd for a livable residential environment. This evaluation will identify current traffic volumes on neighborhood streets adjacent to the project site and the neighborhood entry streets providing access to the project site, and will identify the potential traffic to be added as a result of the proposed project.

## EXISTING CONDITIONS

### Existing Roadways

Regional access to the site is provided primarily by the State Route 57 (SR-57) Freeway, located approximately one-half mile to the east of the project site. In addition, the I-10 Freeway is located approximately 2 miles to the south of the site.

The following provides a description of the area roadways directly serving the project site.

**San Dimas Avenue** – In the vicinity of the project site, San Dimas Avenue is a two-lane divided roadway running parallel to and then crossing under the SR-57 Freeway, to the east of the project site. It is oriented in the north-south direction, with Class II (striped) bike lanes on both sides, and a multi-use trail along the east side of the road. The posted speed limit in the vicinity of the project site is 50 miles per hour (mph). San Dimas Avenue provides access to some of the local streets leading to the south side of the project site. A staging area for the Mike Antonovich Trail is located on the west side of San Dimas Avenue, on the east edge of the Walnut Creek Park. San Dimas Avenue is designated as a Major Arterial in the Circulation Element of the City of San Dimas General Plan.

**Via Verde** – In the vicinity of the project site, Via Verde is a four-lane divided roadway running generally in the east-west direction, approximately 1 mile south of the project site. Via Verde has a Class III bike route (signed route) on both sides of the road, and a multi-use trail along the south side of the road between Puente Street and San Dimas Avenue. Via Verde provides access to the Via Verde Country Club, and to some of the local streets leading to the south side of the project site. Via Verde is designated as a Major Arterial in the city's Circulation Element.

**Puente Street** – In the vicinity of the project site, Puente Street is a four-lane divided roadway running generally in the north-south direction, approximately 1 mile west of the project site. Puente Street has a combination of striped bike lanes and bike route signage in the project vicinity. Puente Street provides access to some of the local streets leading to the project site. Puente Street is designated as a Secondary Arterial in the city's Circulation Element.

**Avenida Loma Vista** – Avenida Loma Vista is a two-lane local residential street that runs generally in the east-west direction directly south of the project site. A number of short side streets extend north from Avenida Loma Vista, ending at the south edge of the project site. Loma Vista Park, a small city park, is also located on the north side of Avenida Loma Vista, immediately adjacent to the project site. A locked gate is located at the end of Calle Bandera, which connects to the end of an unimproved roadway on the project site. The speed limit on Avenida Loma Vista is 25 mph.

## Existing Traffic Volumes

Existing traffic volumes on neighborhood streets providing access to and adjacent to the project site were collected on a Thursday, Friday, Saturday, and Sunday in November, 2014 at the following locations:

1. Avenida Loma Vista, west of San Dimas Avenue
2. Avenida Entrada, north of Via Verde
3. Avenida Monte Vista, east of Puente Street
4. Avenida Loma Vista adjacent to the project site

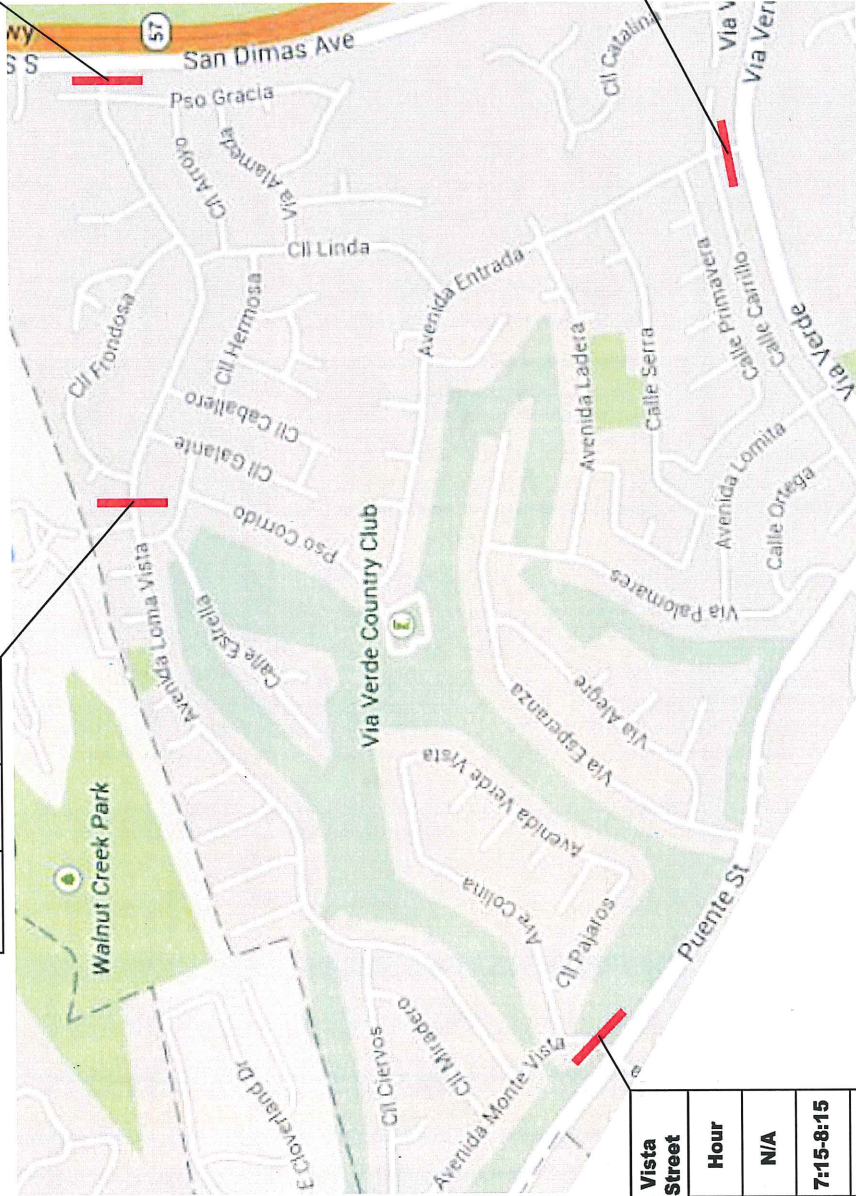
Locations 1 through 3 provide access from the surrounding street system to the neighborhood and also provide the most direct access to the proposed access points on Avenida Loma Vista. Location 4 is the street segment on Avenida Loma Vista closest to the proposed site access.

Existing daily and peak hour traffic volumes at these locations for Thursday through Sunday are shown on **Figure 4** through **Figure 7** respectively, and are summarized on **Table 1**. Roadway traffic volumes consist of a count of all vehicles traveling over a given spot on the roadway segment in either direction.

Review of the traffic volume figures shows that locations 1 and 2 carry the most traffic into and out of the neighborhood (from San Dimas Avenue and Via Verde), with 3,800 to 4,300 vehicles per day (vpd) on the Avenida Loma Vista entrance at San Dimas Avenue, and 2,800 to 3,400 vpd on the Avenida Entrada entrance at Via Verde. The daily volumes on Avenida Loma Vista adjacent to the project site were generally 1,100 to 1,250 vpd. Weekday peak hour volumes were in the range of 90 to 115 vehicles per hour along this area of Avenida Loma Vista.

Avenida Loma Vista Adjacent to Project Site		
	Volume	Hour
Daily	1,247	N/A
AM Peak Hour	105	7:15-8:15
PM Peak Hour	114	4:45-5:45

Avenida Loma Vista West of San Dimas Avenue		
	Volume	Hour
Daily	3,832	N/A
AM Peak Hour	273	7:15-8:15
PM Peak Hour	330	5:00-6:00



Avenida Entrada North of Via Verde		
	Volume	Hour
Daily	2,861	N/A
AM Peak Hour	217	7:30-8:30
PM Peak Hour	215	4:00-5:00

Avenida Monte Vista East of Puente Street		
	Volume	Hour
Daily	780	N/A
AM Peak Hour	65	7:15-8:15
PM Peak Hour	64	5:00-6:00

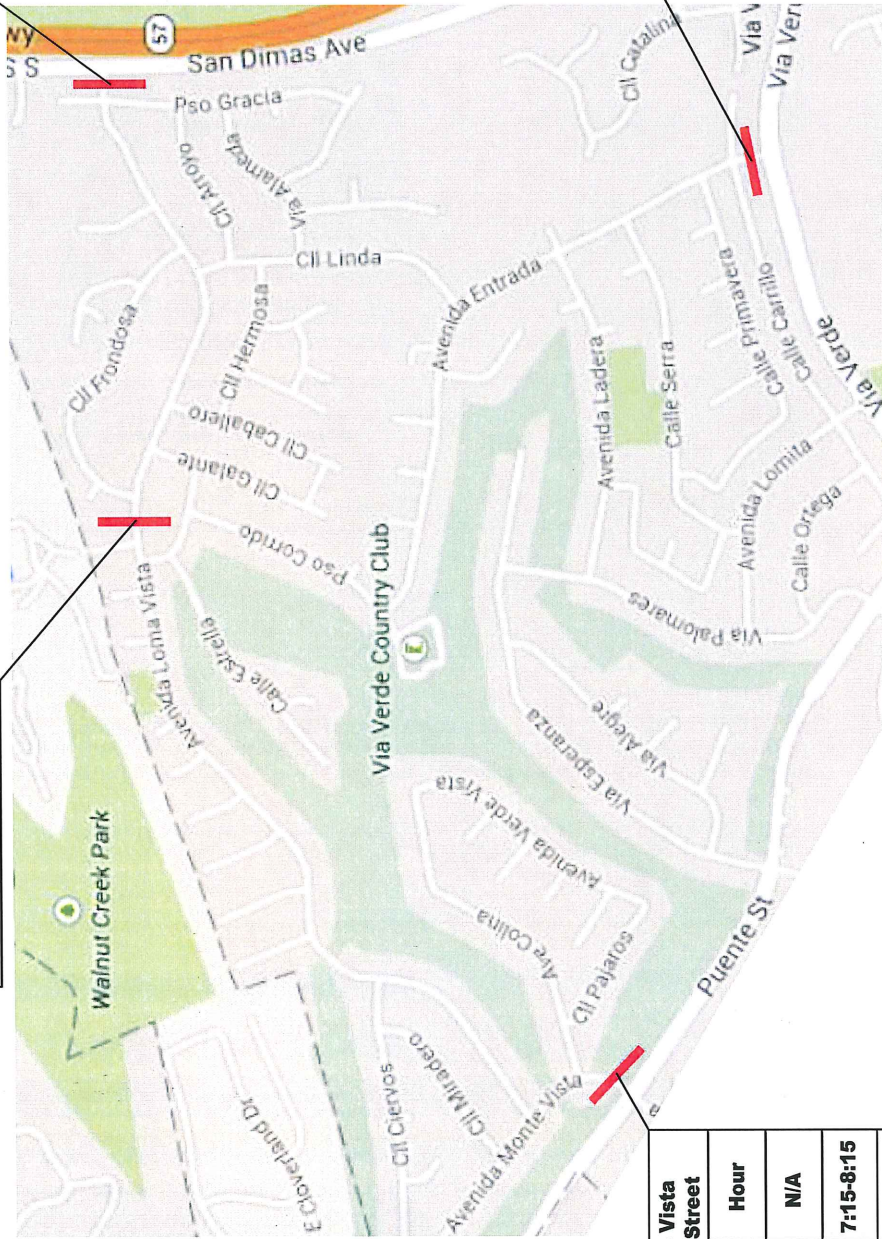
**FIGURE 4**  
**DAILY AND PEAK HOUR VOLUMES - THURSDAY**



Avenida Loma Vista West of San Dimas Avenue		
	Volume	Hour
Daily	4,283	N/A
AM Peak Hour	275	7:45-8:45
PM Peak Hour	337	5:00-6:00

Avenida Loma Vista Adjacent to Project Site		
	Volume	Hour
Daily	1,268	N/A
AM Peak Hour	92	7:15-8:15
PM Peak Hour	108	5:00-6:00

Avenida Entrada North of Via Verde		
	Volume	Hour
Daily	3,396	N/A
AM Peak Hour	243	7:30-8:30
PM Peak Hour	275	5:00-6:00



Avenida Monte Vista East of Puente Street		
	Volume	Hour
Daily	852	N/A
AM Peak Hour	71	7:15-8:15
PM Peak Hour	77	4:15-5:15

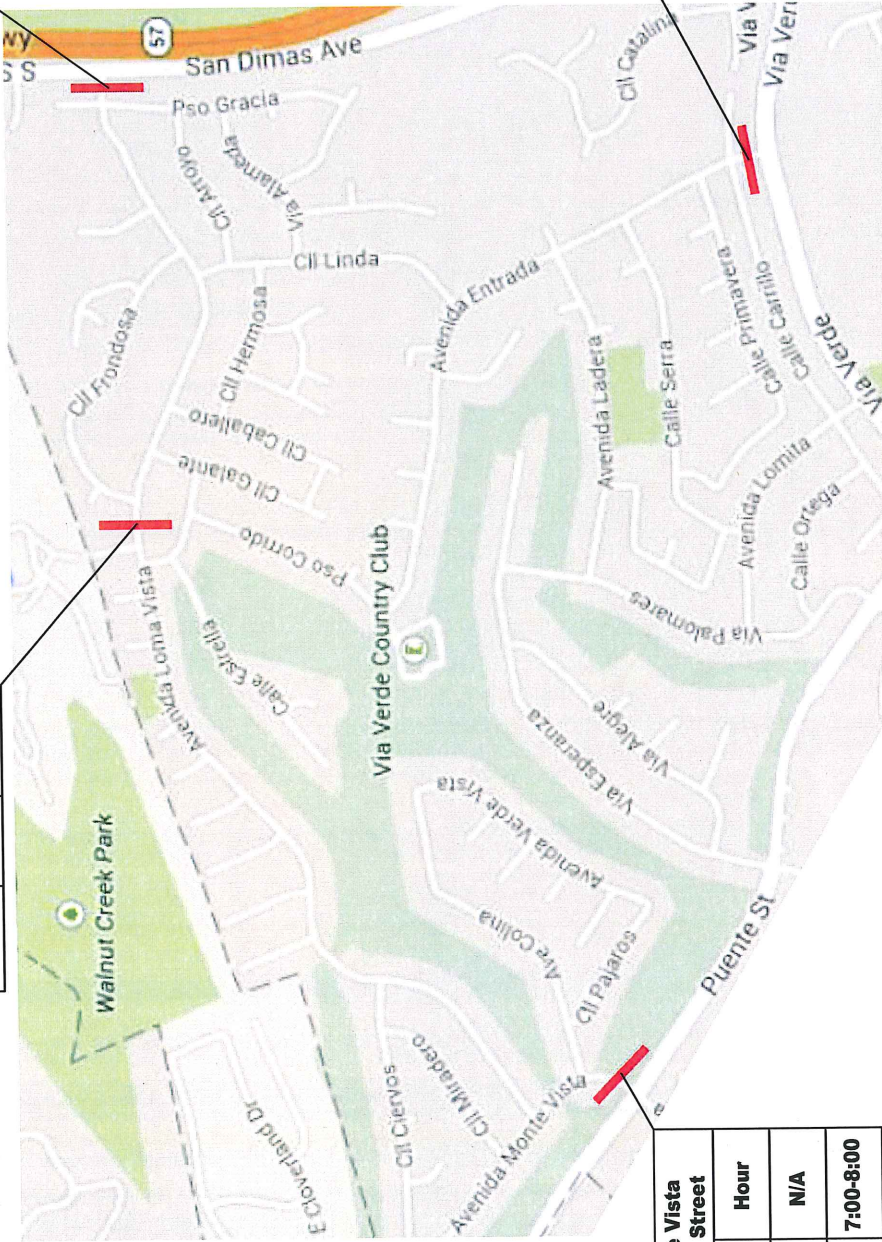


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**FIGURE 5**  
**DAILY AND PEAK HOUR VOLUMES - FRIDAY**

Avenida Loma Vista Adjacent to Project Site		
	Volume	Hour
Daily	1,138	N/A
AM Peak Hour	51	7:45-8:45
PM Peak Hour	85	4:00-5:00

Avenida Loma Vista West of San Dimas Avenue		
	Volume	Hour
Daily	3,722	N/A
AM Peak Hour	173	8:00-9:00
PM Peak Hour	265	4:00-5:00



Avenida Entrada North of Via Verde		
	Volume	Hour
Daily	3,155	N/A
AM Peak Hour	184	8:00-9:00
PM Peak Hour	218	4:45-5:45

Avenida Monte Vista East of Puente Street		
	Volume	Hour
Daily	698	N/A
AM Peak Hour	30	7:00-8:00
PM Peak Hour	46	4:30-5:30

**FIGURE 6**  
**DAILY AND PEAK HOUR VOLUMES - SATURDAY**



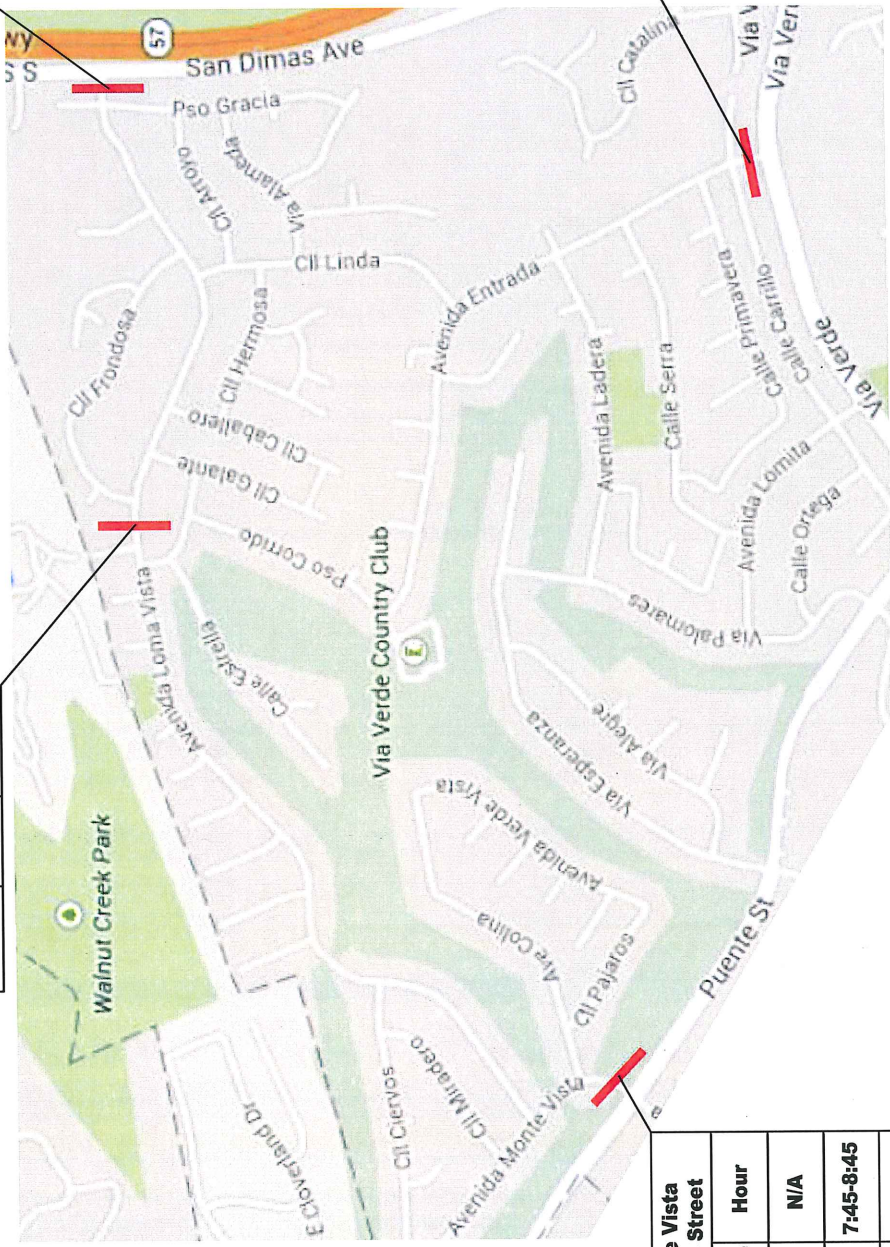
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Avenida Loma Vista West of San Dimas Avenue		
	Volume	Hour
Daily	3,375	N/A
AM Peak Hour	120	8:00-9:00
PM Peak Hour	331	4:15-5:15

Avenida Loma Vista Adjacent to Project Site		
	Volume	Hour
Daily	1,145	N/A
AM Peak Hour	36	8:00-9:00
PM Peak Hour	116	4:30-5:30

Avenida Entrada North of Via Verde		
	Volume	Hour
Daily	2,479	N/A
AM Peak Hour	105	7:45-8:45
PM Peak Hour	233	4:15-5:15



Avenida Monte Vista East of Puente Street		
	Volume	Hour
Daily	586	N/A
AM Peak Hour	34	7:45-8:45
PM Peak Hour	47	4:15-5:15



NOT TO SCALE

**FIGURE 7**  
**DAILY AND PEAK HOUR VOLUMES - SUNDAY**



**TABLE 1  
SUMMARY OF ROADWAY COUNTS**

Segment	Thursday			Friday			Saturday			Sunday		
	Daily	AM Peak	PM Peak	Daily	AM Peak	PM Peak	Daily	AM Peak	PM Peak	Daily	AM Peak	PM Peak
1. Avenida Loma Vista, west of San Dimas Avenue	3,832	273	330	4,283	275	337	3,722	173	265	3,375	120	331
2. Avenida Entrada, north of Via Verde	2,861	217	215	3,396	243	275	3,155	184	218	2,479	105	233
3. Avenida Monte Vista, east of Puente Street	780	65	69	852	71	77	698	30	46	586	34	47
4. Avenida Loma Vista, adjacent to the project site	1,247	105	114	1,268	92	108	1,138	51	85	1,145	36	116



## PROJECT TRAFFIC

### Trip Generation – Proposed Habitat and Open Space Project

The traffic expected to be generated by the proposed Walnut Creek Habitat and Open Space Project was estimated using the Institute of Transportation Engineers (ITE) Trip Generation Manual, 9th Edition.

The ITE Trip Generation Manual contains trip generation rate information for a number of types of parks, including city park, county park, state park, regional park, recreational vehicle park, and beach park. In all cases, the ITE descriptions for the park land uses include the following note:

“Parks surveyed vary widely as to location, type, and number of facilities, including boating or swimming facilities, ball fields, soccer fields, campsites, and picnic facilities.”

This would indicate that the traffic activity observed for the surveyed park sites and the resulting trip rates represent trip patterns for active, rather than passive park facilities. ITE does not provide trip generation estimates specifically for passive parks or open space facilities.

The San Diego Association of Governments (SANDAG) *Brief Guide of Vehicular Traffic Generation Rates* does provide some guidance on trip generation for “undeveloped” parks, indicating that the daily trip generation rate would be 5.0 trips per acre, and that additional trips should be added for specific sport uses. The ITE trip generation rates for Regional Park (Land Use 417) are most similar to the 5.0 daily trips in the SANDAG publication, and therefore, the rates for Regional Park were used for this analysis. The ITE trip generation rates and the resulting trips for the proposed project for weekday, Saturday, and Sunday are summarized on **Table 2**.

Based on the ITE trip rates, the trip generation for the Walnut Creek Habitat and Open Space Project is estimated to generate 278 trips (139 in and 139 out) on a typical weekday basis, with 12 trips (5 in and 7 out) in the evening peak hour. Based on the ITE trip rates, the Saturday trip generation is estimated to be 344 trips (172 in and 172 out) trips on a daily basis with 21 trips during the peak hour, and the Sunday trip generation is estimated to be 392 trips (196 in and 196 out) with 26 trips during the peak hour.

These trip generation estimates represent trip-making potential for the entire proposed 60.9-acre development, using the ITE trip generation rates for Regional Park (Land Use 417). Given the predominantly passive nature of the proposed habitat and open space project, and the fact that the ITE trip rates were based on park sites with active uses and sports activities, the trip generation estimates for the proposed project would be assumed to be very conservative (worse case) trip estimates.

**TABLE 2  
SUMMARY OF PROJECT TRIP GENERATION**

Land Use	ITE Code	Unit	Trip Generation Rates <sup>1</sup>			
			Daily	Peak Hour <sup>2</sup>		
				In	Out	Total
Regional Park - Weekday	417	Acre	4.570	0.090	0.110	0.200
Regional Park - Saturday	417	Acre	5.650	0.163	0.177	0.340
Regional Park - Sunday	417	Acre	6.440	0.143	0.277	0.420

Land Use	Quantity	Unit	Trip Generation Estimates			
			Daily	Peak Hour <sup>2</sup>		
				In	Out	Total
Regional Park - Weekday	60.9	Acre	278	5	7	12
Regional Park - Saturday	60.9	Acre	344	10	11	21
Regional Park - Sunday	60.9	Acre	392	9	17	26

<sup>1</sup> Source: Institute of Transportation Engineers (ITE) Trip Generation Manual, 9th Edition

<sup>2</sup> For Weekday, the peak hour is the PM peak hour. For Saturday and Sunday, the peak hour is the peak hour of the generator.

## **Trip Generation – Prior Proposed Residential Project**

A previous project proposal for the project site proposed the development of single-family homes on the project site. The original project proposal in 2002 was for 92 single-family homes, with trip generation estimates of 957 daily trips, 75 morning peak hour trips, and 101 evening peak hour trips. Access to project site would have been via an entrance on San Dimas Avenue.

A revised residential project with 70 single-family homes was evaluated in 2005, with trip generation estimates of 670 daily trips, 52 morning peak hour trips, and 71 evening peak hour trips. The revised project would also have taken access via an entrance on San Dimas Avenue. A project alternative with 64 single-family homes taking access via Calle Bandera was also evaluated, with trip generation estimates of 612 daily trips, 48 morning peak hour trips, and 65 evening peak hour trips.

The trip generation for the proposed habitat and open space project represents less than 1/3 of the trip generation for the originally proposed residential project, and less than ½ of the trip generation for the subsequently revised residential proposal.

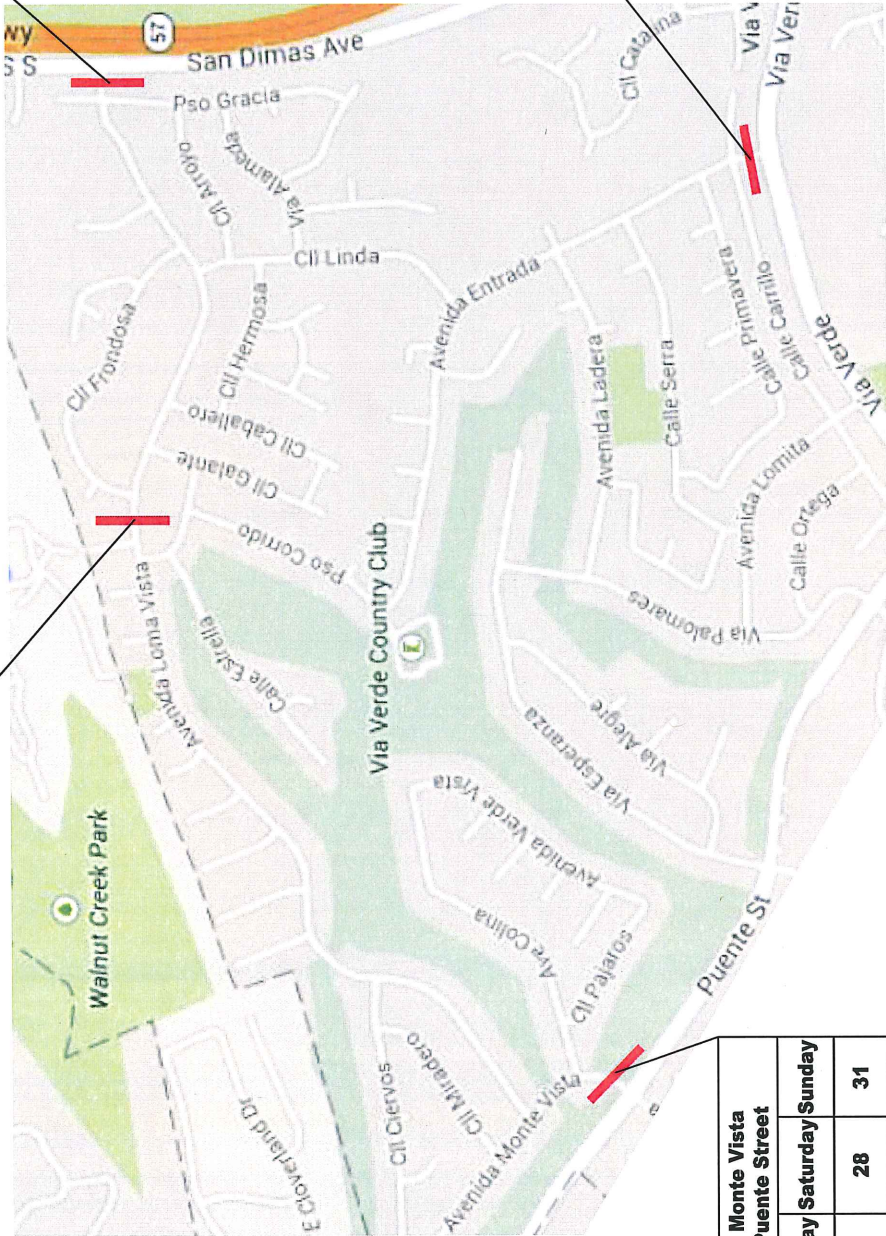
## **Trip Distribution and Assignment**

Project trips to and from the Walnut Creek Habitat and Open Space site have a number of street options to enter and exit the project area, from San Dimas Avenue, Via Verde, and Puente Street. Some portion of park users can be assumed to come from the surrounding neighborhoods, and to walk or ride their bikes; and some portion of users can be assumed to access to the trail system from one of the existing staging areas for the Antonovich Trail system.

Distribution assumptions for the project site were developed based on the surrounding neighborhood and street system, and based on existing traffic patterns for the area. Ten percent of park users are assumed to walk or bike from the immediately surrounding neighborhood, and ten percent are assumed to access the site from one of the existing staging areas for the Antonovich Trail. The remaining vehicular trips are assumed to approach the project site in proportion to the observed existing traffic patterns from San Dimas Avenue, Via Verde, and Puente Street. Based on these trip distribution assumptions, the new trips to be added to the street system by the proposed project are shown on **Figure 8**.

Avenida Loma Vista Adjacent to Project Site		
Volume	Weekday	Saturday/Sunday
Daily	222	275
Peak Hour	10	17
		20

Avenida Loma Vista West of San Dimas Avenue		
Volume	Weekday	Saturday/Sunday
Daily	111	138
Peak Hour	5	8
		10



Avenida Monte Vista East of Puente Street		
Volume	Weekday	Saturday/Sunday
Daily	22	28
Peak Hour	1	2
		2

Avenida Entrada North of Via Verde		
Volume	Weekday	Saturday/Sunday
Daily	89	110
Peak Hour	4	7
		8



NOT TO SCALE

**FIGURE 8**  
**PROJECT-RELATED TRAFFIC VOLUMES**

Upon full development of the habitat and open space project, the project is expected to add approximately 200 to 300 trips per day, with 10 to 20 peak hour trips to the neighborhood, with the largest increase in traffic occurring on Avenida Loma Vista, adjacent to the proposed site access points. This increase in traffic would represent a 20 to 30% increase in traffic for Avenida Loma Vista, bringing the daily traffic volume to approximately 1,500 vpd. While this increase in traffic may be a noticeable increase, the volume of traffic would not exceed the capacity of the street or cause an impact as it relates to the volume-to-capacity ratio of the street. No street or intersection improvements would be needed to accommodate the project traffic. Measures should be taken to encourage pedestrian and bicycle access to the project site to minimize the project impact.

## **PROJECT PARKING**

Parking for the Walnut Creek Habitat and Open Space project is proposed to consist of three on-site parking areas. These would include a small public parking area next to a multi-use building near the Calle Bandera entrance; and a second parking area with a nearby overflow parking area between the Loma Vista park entrance and the Calle Bandera entrance.

In the first phase of the site development, a limited amount of the overall park development and trail system will be completed. During the first phase, public access to the site will be limited to pedestrian access through the Loma Vista Park, and the existing staging area for the Antonovich Trail system. Some park users who drive to the Loma Vista Park entrance will likely park on Avenida Loma Vista, adjacent to Loma Vista Park during the first phase of the park development. This will be a temporary condition. The park website should encourage park users to access the park through the existing staging area during the first phase of the site development. It is also recommended that adequate bicycling parking (bike racks) be provided in the Loma Vista Park to encourage people to bicycle to the area.

## **SUMMARY**

- TO BE FINALIZED UPON RECEIPT OF REVIEW COMMENTS