

April 4, 2012

Mr. Shin Furukawa, P.E., City Engineer  
City of South Pasadena  
Public Works Department  
14714 Mission Street  
South Pasadena, CA 91030

**SUBJECT: Construction Traffic Analysis Technical Report for  
Wilson Reservoir Replacement Project**

Dear Mr. Furukawa,

Willdan Engineering (Willdan) is pleased to present this Construction Traffic Analysis Technical Report for a proposed replacement of an existing water reservoir and pump station located in the City of San Gabriel. The proposed project, to be developed by the City of South Pasadena, consists of the demolition of the existing one million gallon partly underground reservoir and pump station and the construction of a 1.3 million gallon concrete water tank and related pump station facilities at the same location. The Wilson Reservoir is located at 545 Adelyn Drive in the City of San Gabriel.

While this project would not change existing traffic volumes or patterns once completed, it is clear that temporary construction activity of a project of this scale in an established residential community will cause quality of life disturbances for the neighbors. As such, this construction traffic analysis has been commissioned by the City of South Pasadena to identify those temporary traffic conditions and propose conditions that will minimize such annoyances through proper management of construction activities.

This report summarizes our evaluation of the potential construction traffic impacts, alternative construction haul routes, and various measures intended to minimize residential impacts related to the proposed work. The following sections explain our methodology, findings, and recommendations in reaching the conclusions at the end of this report.



## **I. PROJECT DESCRIPTION**

The City of South Pasadena owns and operates the Wilson Reservoir, a one million gallon clean water tank and pumping facility located at 545 Adelyn Drive in the City of San Gabriel. Built in the 1920's, the reservoir needs upgrading to meet current seismic standards and address deterioration. The existing reservoir structure will be completely replaced with a 1.3 million gallon reservoir, along with replacement of the current pumping, operation and chlorine treatment systems and related piping. Construction is expected to begin in early 2012 and continue for 18 to 24 months.

Exhibit 1 shows a conceptual design layout of the project location. It is estimated that the proposed project will be completed by the end of 2013.

## **II. EXISTING ROADWAY CONDITIONS**

Exhibit 2 details the surrounding roadway system within the project area and includes an aerial photo of the project location. Existing access to the location consists of direct driveway access to Adelyn Drive. Streets immediately adjacent to the project site are local residential streets as defined in the City of San Gabriel's Circulation and Accessibility Element. Regional access is via Interstate 10 (San Bernardino Freeway) to the south.

Adelyn Drive is a 40-foot wide two-lane local residential street between North Mission Drive to the west and San Marino Avenue to the east that carries approximately 230 vehicles per day. The roadway is improved with curb, gutter and sidewalks. Several north-south local streets intersect with Adelyn Drive, including Duane Avenue, Bradbury Drive, Rosemont Boulevard, Milton Drive and Doyle Drive. Within the neighborhood, the prima facie speed limit is 25 miles per hour. The nearest primary arterial streets are Las Tunas Drive, approximately 0.4 miles to the south and Del Mar Avenue, approximately 0.5 miles to the east. Mission Drive and Roses Road are collector streets, located to the west and north of the project site respectively.

Near the project location, signalized intersections are located at Las Tunas Boulevard/Mission Drive, Las Tunas/Santa Anita Street, Las Tunas Boulevard/San Marino Avenue, Las Tunas Boulevard/Del Mar Avenue, and Hermosa Street/Del Mar Avenue.

Two schools are located within ½ mile of the project site. Coolidge Elementary School is located on Mission Drive at Adelyn Drive, and George Washington Elementary School is located on San Marino Avenue at Hermosa Drive.

## **III. SIGNIFICANT IMPACT CRITERIA AND METHODOLOGY**

For the purpose of CEQA evaluation, specific performance criteria are utilized to determine if a proposed project may cause a significant impact. For this project, the potential traffic impact was evaluated using the City of South Pasadena and City of San Gabriel traffic impact guidelines. Both cities have adopted



the methodology and significance thresholds contained in the *2010 Los Angeles County Congestion Management Plan “Guidelines for CMP Transportation Impact Analysis”*. This methodology is consistent with the standards and practices for CEQA analysis. Pursuant to this document, projects that generate fewer than 50 peak hour trips are not required to conduct a traffic impact Analysis.

Since intersections are typically the constraining feature of a roadway network because of delays generated by traffic controls, the volume to capacity (V/C) ratio is a reasonable indicator of the ability for the street system to accommodate traffic demand. Further, these measures have a relationship to changes in delay and congestion that may cause other significant impacts in air quality and noise.

Based on the volume/capacity ratio at intersections, a Level-of-Service (LOS) is defined. Traffic LOS is given an A through F designation, with LOS-A representing free-flow conditions, and LOS-F representing severe traffic congestion. Both the V/C ratio and LOS are used in determining significant impact. Certain LOS values are deemed unacceptable by the City, and an increase in the V/C ratio that cause degradation of the LOS may also be deemed unacceptable.

In addition, the City of South Pasadena has established recommended Level of Service for street segments based on the ratio of existing daily volume to the daily roadway capacity. Daily capacity is affected by a number of factors, including roadway type, actual geometry, street and lane widths, number of lanes and other roadside conditions. Level-of-Service C is used to define the desirable maximum volumes pursuant to the City of South Pasadena’s Circulation and Accessibility Element of the General Plan. 24-hour traffic counts were conducted on three streets within the neighborhood to determine existing daily traffic volumes on potential haul route streets, including Adelyn Drive (230 vehicles per day), Bradbury Drive (420 vehicle per day), and Hermosa Drive (1,611 vehicles per day). These traffic counts are attached in Appendix A.

A summary of the City’s applicable significant impact thresholds is listed in Table 2 below:

**Table 2  
SIGNIFICANT IMPACT PERFORMANCE CRITERIA**

<b>PERFORMANCE STANDARD</b>	<b>SIGNIFICANCE THRESHOLD</b>
<b>Intersections</b>	
LOS-F	2% or more increase in ICU caused by project and the intersection operates at LOS-F
<b>Street Segments</b>	
LOS-C	Local Road -4,000 vehicles per day 2 Lanes (Undivided) – 10,000 vehicles per day 2 lanes (Divided) – 13,300 vehicles per day 4 Lanes (Undivided) – 20,000 vehicles per day
<small>Source: City of South Pasadena General Plan (2001) and 2010 LA County Traffic Congestion Management Plan City of San Gabriel uses 2010 LA County Traffic Congestion Management Plan Thresholds only</small>	

Changes caused by a project to the LOS of an intersection or street segment that remain below the significance threshold and/or continue to operate at a level-of-service better than the performance standard are not considered significant impact. Conversely, LOS changes caused by the project in excess



of the significance threshold and/or degrade below the performance standard would be considered a significant impact.

#### IV. CONSTRUCTION TRIP GENERATION

Traffic generation is generally defined in terms of vehicle trip ends, which is a one-way vehicle movement, either entering or exiting the land use that generates the trip. Numerous studies of similar land uses have been made and compiled by the Institute of Transportation Engineers (ITE) in the publication *Trip Generation, Eighth Edition* (Washington D.C. 2008). The equations, rates and methodology contained in *Trip Generation* are considered an industry standard to calculate expected project-related trips. However, for this project, the trip generation rate for the completed project will be negligible and similar to existing maintenance operations. During construction, there will be a large number of trips generated by construction activities, including working crews, debris hauling, deliveries, and other related work. Thus, standard Trip Generation Rates are not applicable to this project. Therefore, this analysis estimated the number of construction trips based on the expected quantities of material to be removed from and delivered to the project site, as well as the magnitude and type of work that will be necessary for the project. The trips generated by each construction activity were then calculated on a daily basis by using the expected duration for each activity as well as the proposed construction phasing and schedule. Table 3 summarizes the anticipated construction trips generated by the proposed project as well as the maximum number of expected daily trips.

**Table 3  
CONSTRUCTION TRIP GENERATION**

	CONSTRUCTION ACTIVITY	QUANTITY	TRIP RATE	TRIP METRIC	TRIP ENDS	DURATION (DAYS)	TRIPS PER DAY
	<b>DEMOLITION</b>						
1	Remove existing reservoir structure	1,000	0.2	per CY	<b>200</b>	20	<b>10</b>
2	Excavate reservoir base material	2,516	0.2	per CY	<b>504</b>	30	<b>17</b>
3	Remove existing pump/plant structures	100	2	per load	<b>200</b>	40	<b>5</b>
4	Excavate pump/plant base material	702	0.2	per CY	<b>141</b>	20	<b>8</b>
5	Miscellaneous excavation	100	0.2	per CY	<b>20</b>	40	<b>1</b>
	<b>RESERVOIR CONSTRUCTION</b>						
6	Import base material	980	0.3	per CY	<b>294</b>	10	<b>30</b>
7	Construct reservoir forms	150	2	per delivery	<b>300</b>	40	<b>8</b>
8	Pour concrete reservoir	1,455	0.2	per CY	<b>291</b>	10	<b>30</b>
9	Import pump/plant base material	937	0.2	per CY	<b>188</b>	20	<b>10</b>
10	Pour building/station foundations	469	0.2	per CY	<b>94</b>	20	<b>5</b>
11	Construct new pump station/plant	200	2	per load	<b>400</b>	50	<b>8</b>
	<b>SUBTOTAL</b>				<b>2,632</b>	300	-
12	Construction workers (daily average)	20	2	per worker	-	-	<b>40</b>
	Maximum Truck Trips Per Day						<b>30</b>
	Maximum Trips Per Day						<b>40+30=70</b>



As indicated in the table, the proposed project is expected to result in a temporary increase of up to 70 construction trips on a typical weekday.

## V. CONSTRUCTION TRIP DISTRIBUTION

Construction trip distribution is mainly predicated on the origins and destination of materials, equipment and hauling needed for the project in relation to accessibility to the regional roadway network and designated truck routes in adjacent cities. The closest truck route access to the freeway system is along San Gabriel Boulevard to the I-10 or I-210 Freeways. The closest arterial streets that connect the project to designated truck routes are Las Tunas Drive and Del Mar Avenue. In comparing distances of these two roadways, Las Tunas Drive is 0.4 miles from the project site, while Del Mar Avenue is 0.5 miles away. In addition, Las Tunas Drive is a signalized corridor in a commercial area with four lanes, while Del Mar Avenue has two lanes with a combination of stops and signals in a residential area.

Several alternative construction haul routes were considered and evaluated to determine the preferred route. The evaluation criteria included such objective factors as distance along residential streets, number of affected homes, Level-of-Service at major turning points, and number of required stops or turns. This evaluation also included subjective factors such as directness, proximity to schools, and potential for disturbance to the traveling public. It was concluded that a construction haul route along Bradbury Drive to Las Tunas Drive minimized the potential for adverse factors, as follows:

- Shortest distance to arterial roadway network
- Fewest number of residences along route
- Fewer expected delays at intersections
- Fewer required stops and turns
- Most direct route to project site from major streets
- No schools on route
- Less potential for disturbing traveling public

Based on the above analysis, the preferred construction haul route was determined to be San Gabriel Boulevard to Las Tunas Drive to Bradbury Drive to Adelyn Drive to the project site with the outbound route to be the opposite. Passenger vehicles are not subject to the construction haul route.

## VI. TRAFFIC IMPACT ANALYSIS CONCLUSION

Based on the nominal number of construction trips forecast to be generated by the project, construction traffic volumes are not expected to impact the roadway network. Specifically, a maximum of 70 trips per day are expected on a weekday. Since these trips are distributed throughout the day, peak hour trips will not exceed the minimum guideline for conducting a traffic impact analysis, namely 50 trips in a peak hour. In addition, the nature of this project and implementation of the recommended hauling



restrictions included in the construction management plan as outlined in Section VIII will ensure that a significant number of peak hour trips will not be generated.

When the project-related trips are distributed on the roadway network, the local streets will experience higher traffic volumes for the project duration. As proposed in the recommended Construction Haul Route in Exhibit 3, the volume on Bradbury Drive would increase from 420 vehicles per day to a maximum of 490 vehicles per day, a 16.7% increase. This increase is far below the acceptable traffic volume for a local road as defined by the City of South Pasadena Street Segment significance criteria of 4,000 vehicles per day. While most cities do not have a street segment significant impact threshold including the City of San Gabriel, a comparison to other local city criteria indicates that this increase is within acceptable thresholds for similar local road street segments in Los Angeles, Culver City and San Marino (120 new daily trips) and in Santa Monica (25% increase).

No detours or road closures are anticipated for the project, since all work will occur off of the street and loading will occur out of travel lanes, therefore, public and emergency vehicle access will not be impacted. Lastly, the construction related trips will occur on a temporary basis for the duration of the project only. Therefore, there are no long-range traffic impacts expected as the result of this project. Based on this analysis, we conclude that the proposed project will not have a significant impact on the surrounding roadway network. Pursuant to the City's traffic impact performance criteria (Table 2), additional analysis is not required, because the minimal change in traffic volume is not great enough to trigger significant impact thresholds.

## **VII. PARKING ANALYSIS**

Construction parking is generally expected to be handled on-site, with a temporary off-street parking area recommended in the Construction Management Plan (See Section VIII below). A parking area of 10 vehicles would be expected to accommodate construction parking demand on most days. During some phases of the project, approximately 20 workers are expected for such activities as concrete placement and roof construction. During these times, sufficient street parking is available close to the project site to handle extra parking demand while providing ample parking for residents. No parking restrictions are anticipated to be needed, however, the option to designate certain on-street parking areas for project related vehicles is recommended as a Construction Management Plan requirement.

## **VIII. CONSTRUCTION MANAGEMENT PLAN**

As indicated above, a Construction Management Plan is recommended to specify the conditions under which the construction activities shall take place. Specifically, the intent of this Plan is to minimize disturbance to the neighborhood, identify those activities to be monitored, and make the contractor responsible for failure to adhere to the requirements. The elements of a Construction Management Plan for this project should include (but not be limited to) the following:



- Obtain approval for a Construction Management Plan from the cities of South Pasadena and San Gabriel.
- Require contractor to obtain all necessary hauling, traffic control and/or transportation permits.
- Require contractor to maintain a 24-hour hotline for complaints and questions from the public.
- Designation of a construction haul route along Las Tunas Drive to Bradbury Drive to Adelyn Drive.
- Require any large vehicles not classified as passenger vehicles or light trucks to use the haul route.
- Limitation of hauling to a maximum of 70 trips per day unless otherwise authorized by a City-approved revision to this Plan.
- Allow hauling and deliveries between 8am and 4pm on weekdays only and no city holidays, unless otherwise authorized by an approved revision to this Plan.
- Require the contractor to photo-document the before and after conditions of the local streets along the haul route.
- Require all public streets and driveways to remain open at all times, or submit a traffic control plan for any temporary lane closures to be approved by respective cities.
- Prohibit obstruction of street traffic, sidewalks or access to adjacent residences at any time.
- Require loading of all exported materials and earthwork to be conducted on-site unless authorized by an approved revision to this Plan.
- Require removal of any delivered materials and delivery trucks from streets immediately upon delivery.
- Require contractor to notify hauling and delivery companies of construction haul route prior to such activities.
- Require notification to neighbors along haul route prior to the start of any large hauling operation or any construction activities outside of designated hours, as well as notification to residential properties located within 300 feet of any construction activities that occur outside of normal business hours or generate significant or sustained noise.
- Require notification to the San Gabriel Unified School District, Coolidge Elementary School, local police and public works departments prior to start of construction, prior to any lane closures, and prior to any hauling or deliveries outside of designated hours.
- Prohibit staging or queuing of trucks on any residential streets except directly in front of project site. Radio-dispatch and/or approved remote staging locations may be used to accomplish this requirement. At no time shall construction vehicles, materials or equipment obstruct residential driveways.
- Require immediate clean-up of any spills, dirt or debris on public streets.
- Require submittal of a Standard Urban Storm Water Management Plan (SUSWMP) and follow all Best Management Practices (BMP) for the project.
- Require contractor to provide an off-street parking area for construction workers of not less than 10 spaces, unless otherwise approved. If a remote parking area is used, require contractor to provide personal transportation service for workers to/from the project site. Any remote parking area shall be approved by the cities of South Pasadena and San Gabriel.
- Require construction vehicles to fully utilize off-street parking prior to using street parking.



- With City of San Gabriel approval, certain on-street parking areas may be designated for project related vehicles. Require the contractor to post appropriate temporary parking signs to designate any approved street parking areas or prohibitions near the construction site.
- Encourage contractors and construction workers to carpool to the construction site.
- Specify penalties for failure to comply with Construction Management Plan.
- Provide for monitoring and enforcement of the Construction Management Plan to the satisfaction of the cities of South Pasadena and San Gabriel.
- The location of any construction trailers shall be subject to the approval of the Cities of South Pasadena and San Gabriel.
- Provide for revisions to this Plan upon approval by both cities.



## IX. CONCLUSION

Upon analysis of the existing and projected trip generation, we conclude that the proposed project will not significantly impact the existing roadway system due to the relatively small number of construction related project trips and temporary nature of those trips. However, construction related activities will generate truck traffic which is likely to disturb residents along the haul route for a period of 18-24 months. Therefore, the implementation of a construction traffic management plan with the conditions identified in this report is recommended to aid in minimizing disturbance to the surrounding residential neighborhood and roadway network users. Construction parking is expected to be accommodated by designation of an off-street parking area and limited on-street parking.



We appreciate the opportunity to prepare this analysis for the City of South Pasadena. Should you have any questions or need additional information, please feel free to contact us at (562) 908-6200.

Sincerely,  
WILLDAN ENGINEERING

Mr. Erik Zandvliet, T.E.  
City Traffic Engineer

Attachments



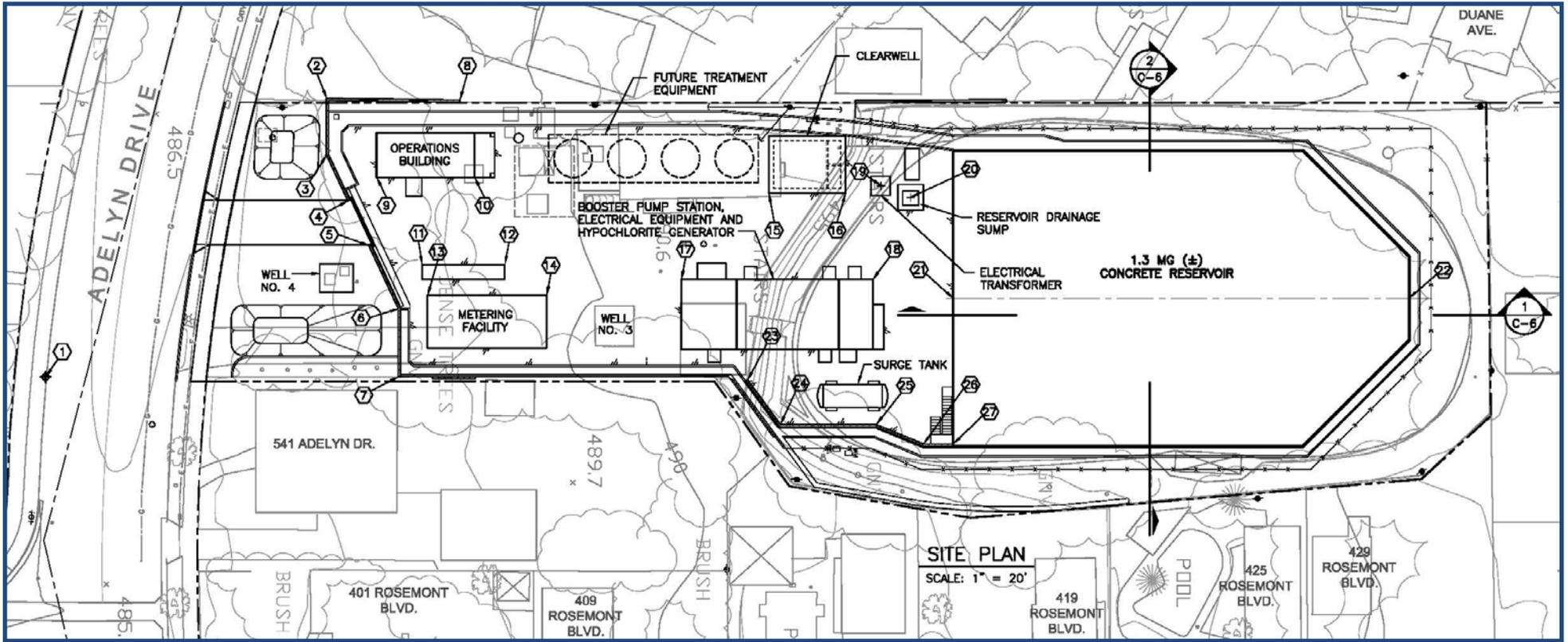
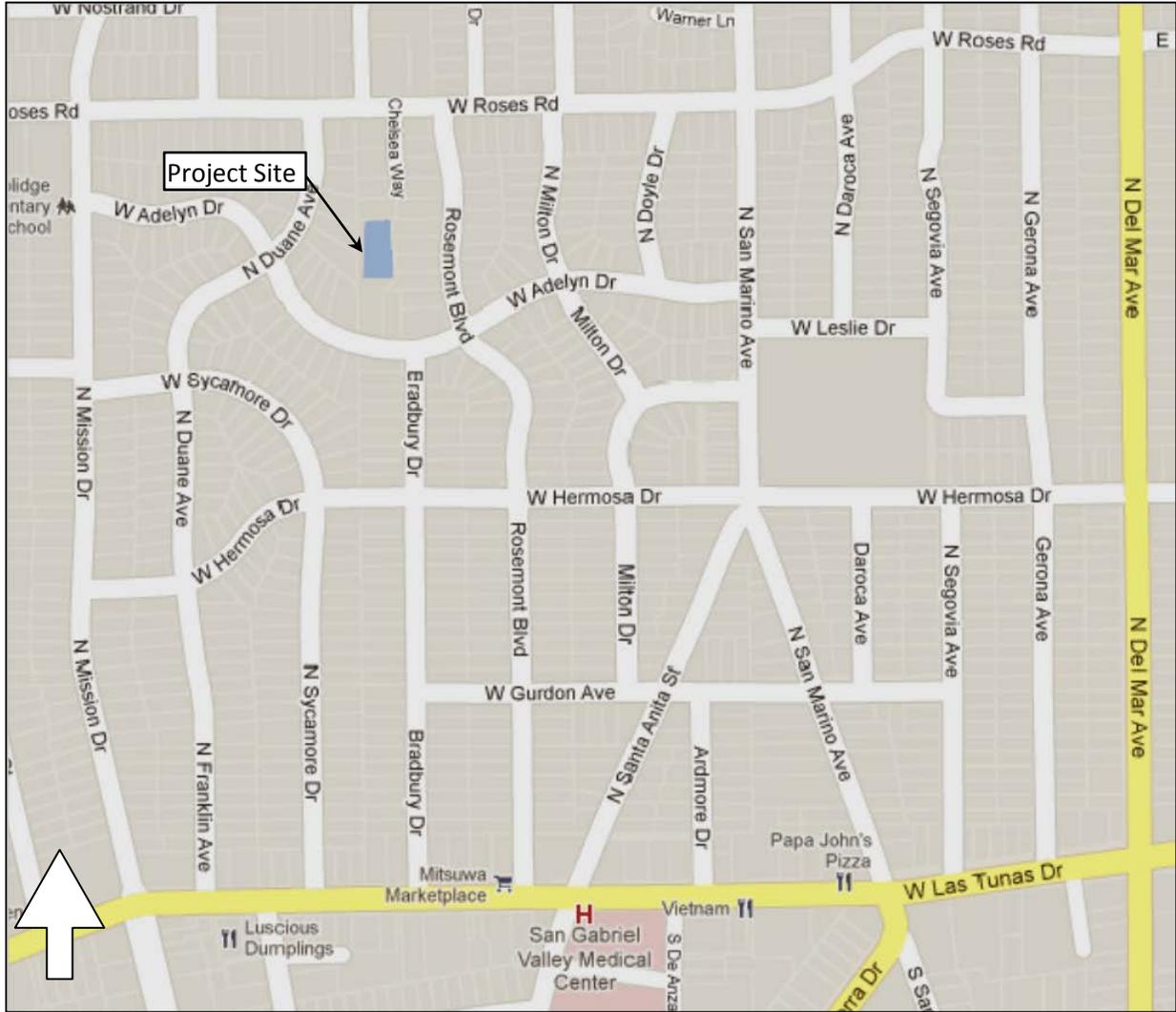


Exhibit 1  
Conceptual Plan



Exhibit 2  
Location Map





**APPENDIX A**  
**EXISTING TRAFFIC COUNTS**



# City Traffic Counters, LLC.

626.256.4171

Site Code: 00000000181  
 Station ID:  
 Bradbury  
 N/O Las Tunas  
 Latitude: -999' 0.000 South

Start Time	07-Sep-11 Wed	North		Hour Totals		South		Hour Totals		Combined Totals	
		Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00		0	1			0	0				
12:15		0	4			0	3				
12:30		0	4			0	2				
12:45		0	1	0	10	0	3	0	8	0	18
01:00		0	3			0	2				
01:15		0	2			0	1				
01:30		0	1			0	5				
01:45		0	3	0	9	0	3	0	11	0	20
02:00		0	2			1	3				
02:15		0	4			0	1				
02:30		0	7			0	2				
02:45		0	4	0	17	0	2	1	8	1	25
03:00		0	6			0	6				
03:15		0	5			0	4				
03:30		0	5			0	2				
03:45		0	1	0	17	0	4	0	16	0	33
04:00		0	6			0	5				
04:15		0	9			0	6				
04:30		0	8			0	9				
04:45		0	9	0	32	1	9	1	29	1	61
05:00		1	6			1	5				
05:15		1	6			0	6				
05:30		0	6			0	11				
05:45		1	4	3	22	2	3	3	25	6	47
06:00		0	5			1	2				
06:15		0	7			3	3				
06:30		4	4			4	2				
06:45		1	7	5	23	6	0	14	7	19	30
07:00		1	2			2	1				
07:15		2	6			2	3				
07:30		3	0			4	3				
07:45		5	5	11	13	5	2	13	9	24	22
08:00		1	4			5	3				
08:15		3	2			6	0				
08:30		2	2			5	2				
08:45		3	2	9	10	3	0	19	5	28	15
09:00		0	1			1	0				
09:15		2	0			1	1				
09:30		2	0			4	1				
09:45		5	1	9	2	2	1	8	3	17	5
10:00		1	1			4	0				
10:15		0	1			1	1				
10:30		4	1			2	0				
10:45		1	1	6	4	2	1	9	2	15	6
11:00		4	1			2	1				
11:15		2	0			2	0				
11:30		5	0			3	0				
11:45		5	0	16	1	2	0	9	1	25	2
Total		59	160			77	124			136	284
Percent		26.9%	73.1%			38.3%	61.7%			32.4%	67.6%
Grand Total		59	160			77	124			136	284
Percent		26.9%	73.1%			38.3%	61.7%			32.4%	67.6%

ADT Not Calculated

# City Traffic Counters, LLC.

626.256.4171

Site Code: 00000000197  
 Station ID:  
 Adelyn  
 W/O Bradbury  
 Latitude: 0' 0.000 Undefined

Start Time	15-Sep-11 Thu	East		Hour Totals		West		Hour Totals		Combined Totals	
		Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00		0	1			0	1				
12:15		1	1			0	1				
12:30		0	5			0	1				
12:45		0	2	1	9	0	3	0	6	1	15
01:00		0	1			0	2				
01:15		0	1			0	1				
01:30		0	2			0	1				
01:45		0	2	0	6	0	0	0	4	0	10
02:00		0	4			0	1				
02:15		0	3			1	3				
02:30		0	0			0	8				
02:45		0	12	0	19	0	3	1	15	1	34
03:00		0	3			0	0				
03:15		0	3			0	2				
03:30		0	4			0	2				
03:45		0	3	0	13	0	1	0	5	0	18
04:00		0	4			0	0				
04:15		0	1			0	0				
04:30		0	3			0	4				
04:45		0	2	0	10	0	3	0	7	0	17
05:00		0	0			0	0				
05:15		0	0			0	1				
05:30		0	0			0	1				
05:45		0	3	0	3	0	1	0	3	0	6
06:00		0	6			0	0				
06:15		0	5			0	3				
06:30		1	6			0	1				
06:45		0	0	1	17	0	1	0	5	1	22
07:00		2	3			1	1				
07:15		0	5			1	3				
07:30		3	1			1	1				
07:45		2	1	7	10	1	0	4	5	11	15
08:00		2	1			0	0				
08:15		1	2			4	1				
08:30		6	3			6	1				
08:45		14	1	23	7	3	0	13	2	36	9
09:00		1	0			0	0				
09:15		1	1			2	0				
09:30		2	3			1	0				
09:45		4	1	8	5	1	1	4	1	12	6
10:00		1	1			0	0				
10:15		1	0			2	0				
10:30		4	0			0	0				
10:45		1	0	7	1	0	0	2	0	9	1
11:00		1	0			0	0				
11:15		1	0			0	0				
11:30		2	1			0	0				
11:45		4	1	8	2	0	0	0	0	8	2
Total		55	102			24	53			79	155
Percent		35.0%	65.0%			31.2%	68.8%			33.8%	66.2%
Grand Total		55	102			24	53			79	155
Percent		35.0%	65.0%			31.2%	68.8%			33.8%	66.2%

ADT

ADT 231

AADT 231

# City Traffic Counters, LLC.

626.256.4171

Site Code: 00000000169  
 Station ID:  
 Hermosa  
 Bt Bradbury & Rosemont  
 Latitude: 0' 0.000 Undefined

Start Time	07-Sep-11 Wed	West		Hour Totals		East		Hour Totals		Combined Totals	
		Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00		0	9			1	21				
12:15		3	9			0	11				
12:30		2	11			0	20				
12:45		0	11	5	40	0	20	1	72	6	112
01:00		0	10			0	16				
01:15		1	9			0	16				
01:30		0	19			0	12				
01:45		0	12	1	50	1	23	1	67	2	117
02:00		0	5			0	19				
02:15		0	15			0	15				
02:30		0	17			0	24				
02:45		0	21	0	58	0	12	0	70	0	128
03:00		0	2			0	21				
03:15		0	11			0	14				
03:30		0	10			1	11				
03:45		1	9	1	32	0	14	1	60	2	92
04:00		0	8			0	11				
04:15		0	12			0	24				
04:30		0	15			0	20				
04:45		0	12	0	47	0	17	0	72	0	119
05:00		2	16			1	26				
05:15		0	12			2	17				
05:30		1	21			2	15				
05:45		3	10	6	59	1	28	6	86	12	145
06:00		1	17			5	18				
06:15		0	12			5	13				
06:30		5	11			10	17				
06:45		12	18	18	58	4	17	24	65	42	123
07:00		11	11			10	10				
07:15		14	8			16	6				
07:30		15	16			27	6				
07:45		20	11	60	46	23	10	76	32	136	78
08:00		29	11			12	15				
08:15		21	3			14	9				
08:30		24	7			11	9				
08:45		9	4	83	25	6	7	43	40	126	65
09:00		11	9			5	6				
09:15		10	7			5	6				
09:30		9	5			6	2				
09:45		7	3	37	24	9	5	25	19	62	43
10:00		14	2			12	2				
10:15		17	3			8	4				
10:30		11	3			8	2				
10:45		12	2	54	10	14	2	42	10	96	20
11:00		12	0			11	1				
11:15		13	0			12	0				
11:30		7	0			7	1				
11:45		15	2	47	2	4	0	34	2	81	4
Total		312	451			253	595			565	1046
Percent		40.9%	59.1%			29.8%	70.2%			35.1%	64.9%
Grand Total		312	451			253	595			565	1046
Percent		40.9%	59.1%			29.8%	70.2%			35.1%	64.9%

ADT            Not Calculated