

***ADDENDUM TO THE ENVIRONMENTAL IMPACT REPORT***

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***APPENDICES***

***The Village At Calabasas***

*Prepared for:*  
City of Calabasas

*Prepared By:*



CHRISTOPHER A. JOSEPH & ASSOCIATES  
Environmental Planning and Research

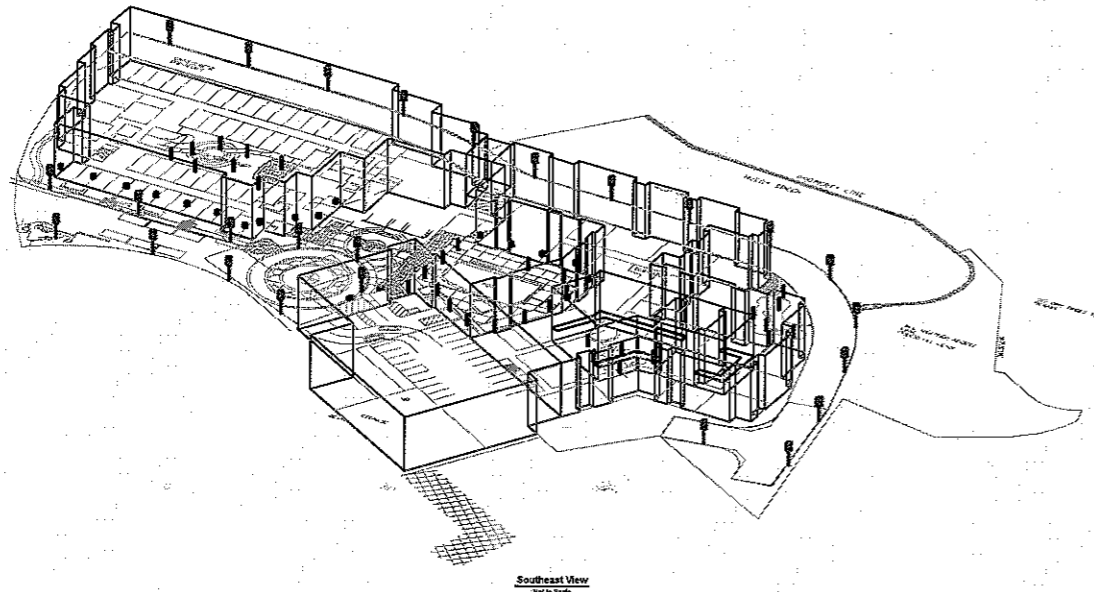
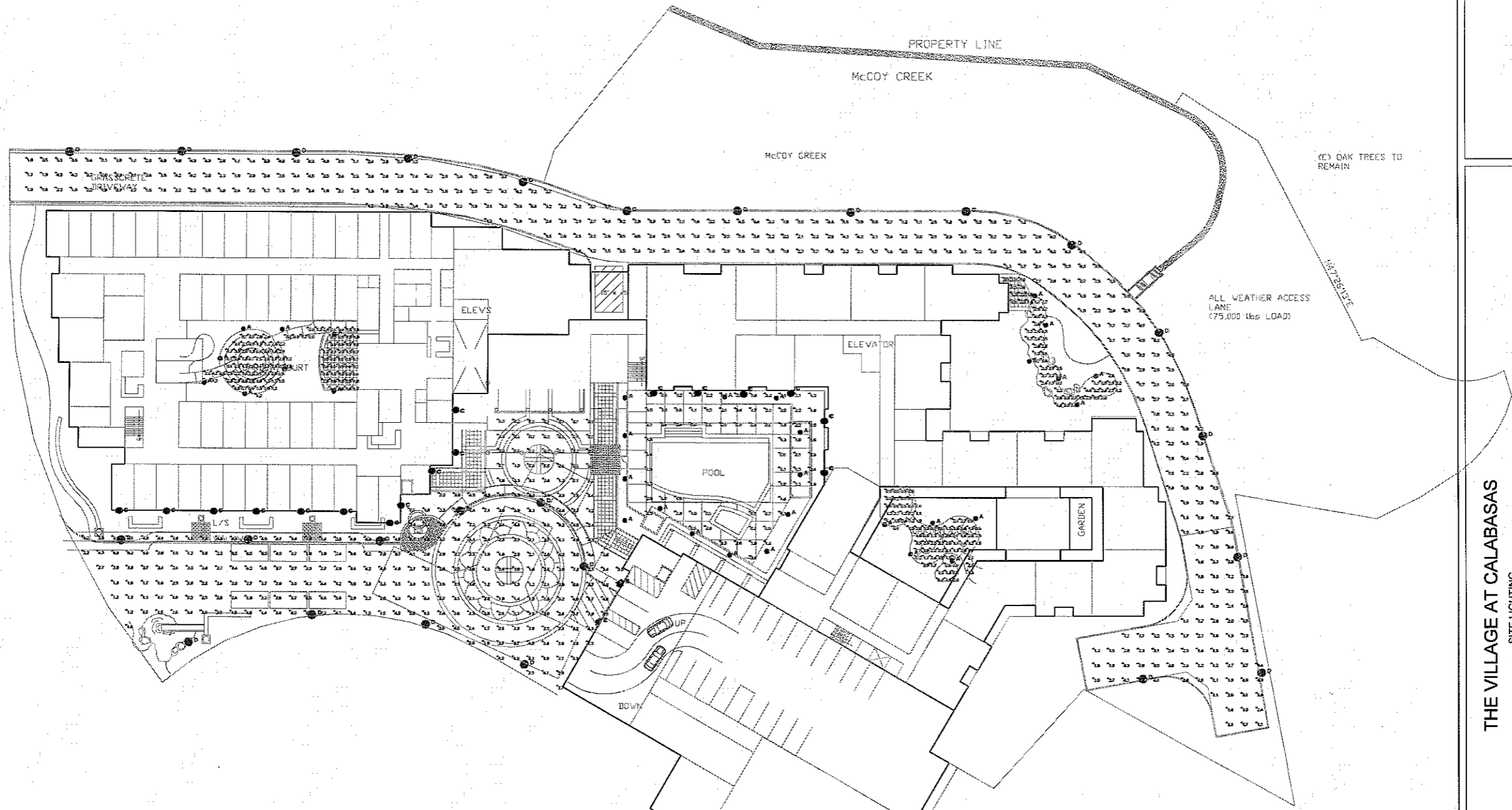
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June 2010

# Appendices

# Appendix A

## Site Lighting Plan



**LUMINAIRE SCHEDULE**

Symbol	Label	Qty	Class	Number	Description	Lamp	Lumens	LLF
●	A	32	LSI - HYTR	TOUCHNUTS MIT	HYPERION BOLLARD	1-70W CLEAR MH	6000	0.76
●	B	2	LSI - CHMS	PT 70	CHALLENGER SMALL	1-70W CLEAR MH BU	6000	0.72
●	C	17	MOIRE - CLASSIC	MOIRE CLASSIC	ONE ROW CLEAR EGYPT	METAL HALIDE LAMP	5800	0.72
●	D	25	LSI - LWS	PTLV-S	LEKINGTON POST TOP	1-170W P/WH CLEAR	17000	0.76

**STATISTICS**

Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min
Back of Building near the road	→	2.1 fc	4.4 fc	0.7 fc	22.0:1	18.5:1
Fire Road	→	2.7 fc	9.0 fc	1.0 fc	9.0:1	2.7:1
Plant Area - Near road	→	3.1 fc	9.9 fc	0.1 fc	96.0:1	31.0:1
Garage Court	→	1.4 fc	3.1 fc	0.0 fc	N/A	N/A
Garage Court	→	1.4 fc	4.2 fc	0.0 fc	N/A	N/A
Plant Area	→	1.6 fc	3.8 fc	0.1 fc	35.8:1	18.0:1

**THE VILLAGE AT CALABASAS**  
SITE LIGHTING

Client  
Date  
Dec 8 2009  
Calcs By  
RM  
Drawing No.

# Appendix B

## Visual Impact Analysis

# *The Village at Calabazas*

VISUAL IMPACTS ANALYSIS



November 2009

Development  
Construction

# THE VILLAGE AT CALABASAS VISUAL IMPACTS ANALYSIS

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### Attachments

Project View Locations A, B & C

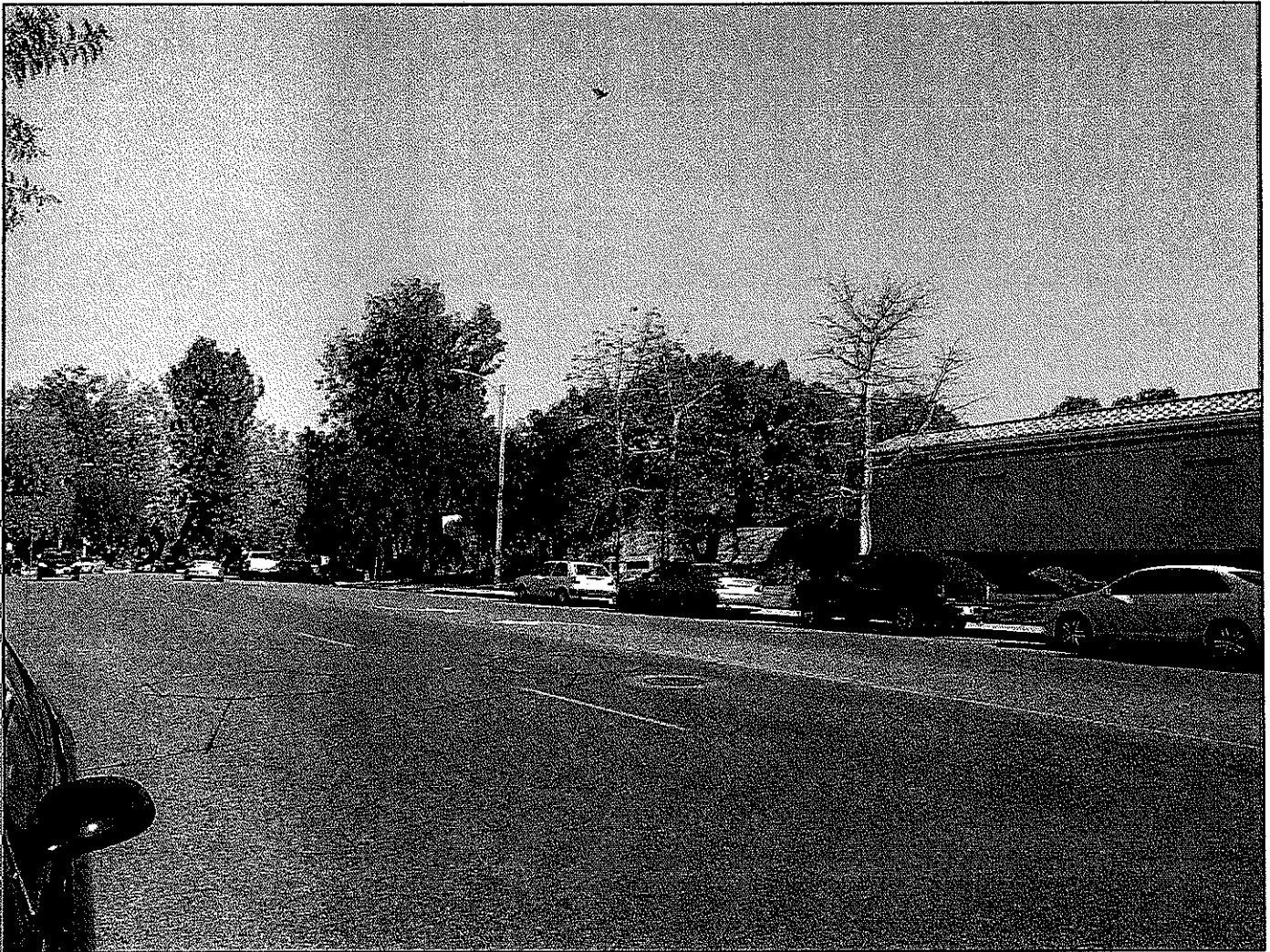


Park Sorrento With Project View.

**PARK SORRENTO VIEW  
BASELINE DATA SUMMARY**

Date Photograph Taken:	December 14, 2007
Location of Photograph:	Park Sorrento/Park Granada
Direction View Reference:	East
Project Site Address:	23500 Park Sorrento

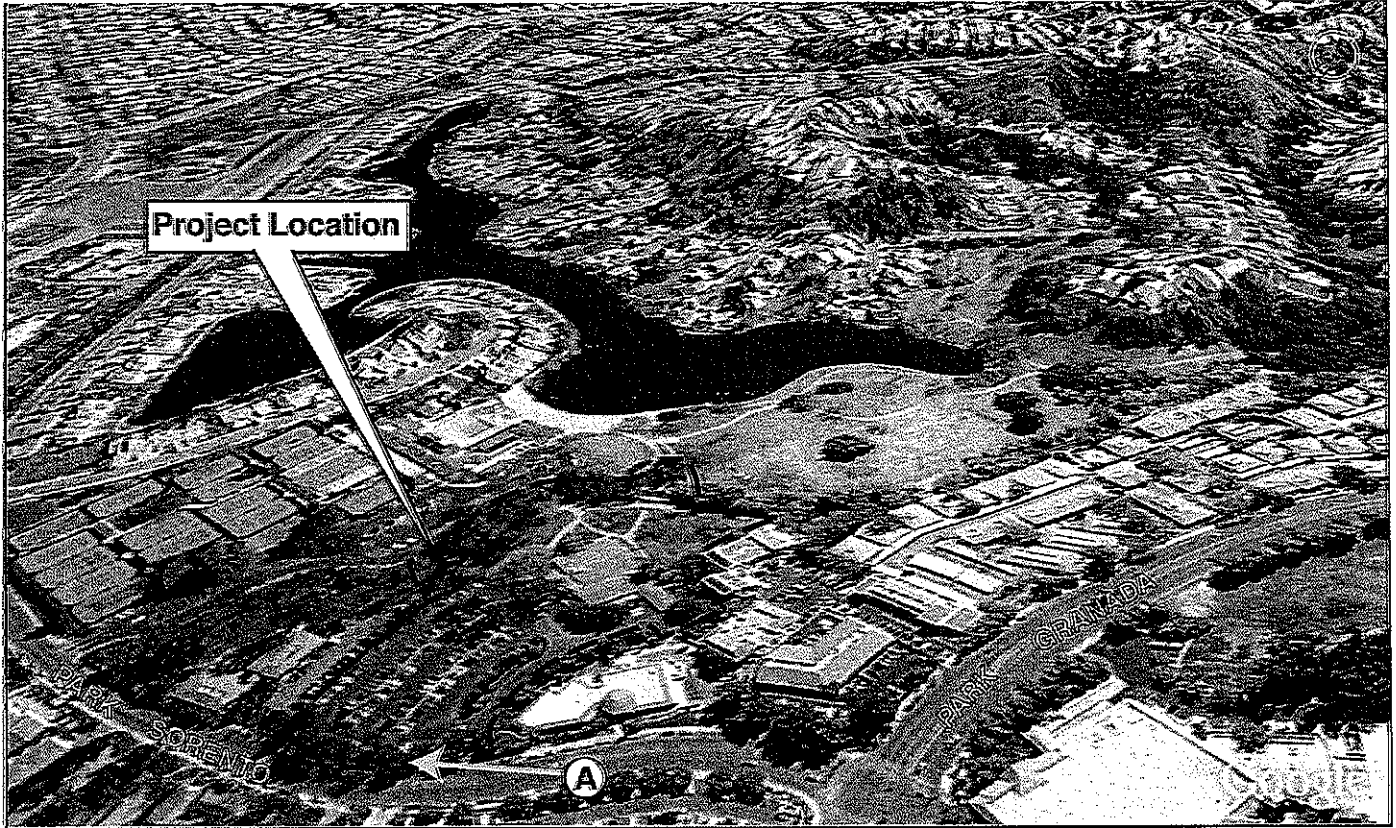




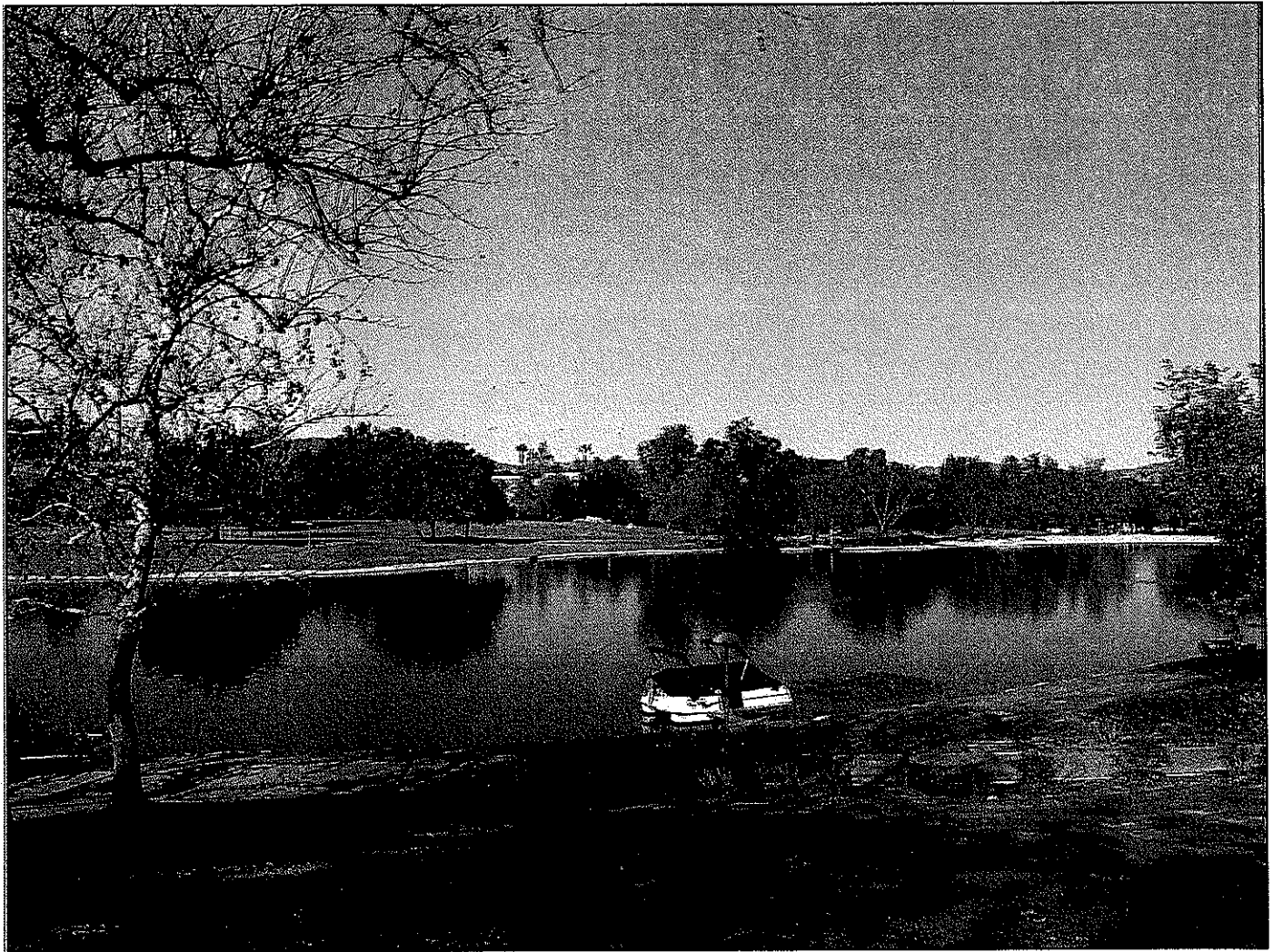
Park Sorrento With Existing View.

PARK SORRENTO VIEW  
BASELINE DATA SUMMARY

Date Photograph Taken:	December 14, 2007
Location of Photograph:	Park Sorrento/Park Granada
Direction View Reference:	East
Project Site Address:	23500 Park Sorrento



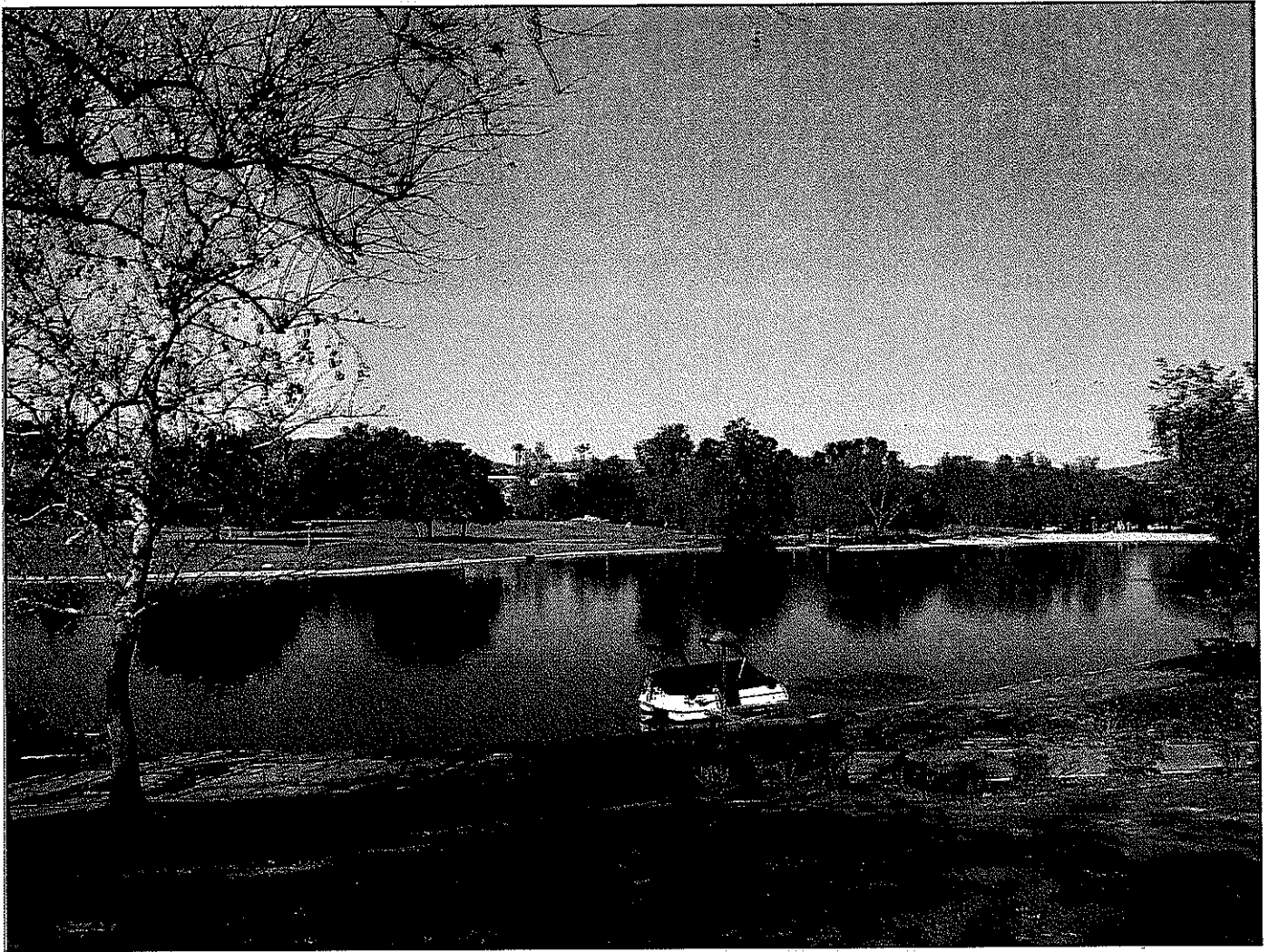
Park Sorrento Reference Map.



Park Allegra With Project View.

PARK ALLEGRA VIEW  
BASELINE DATA SUMMARY

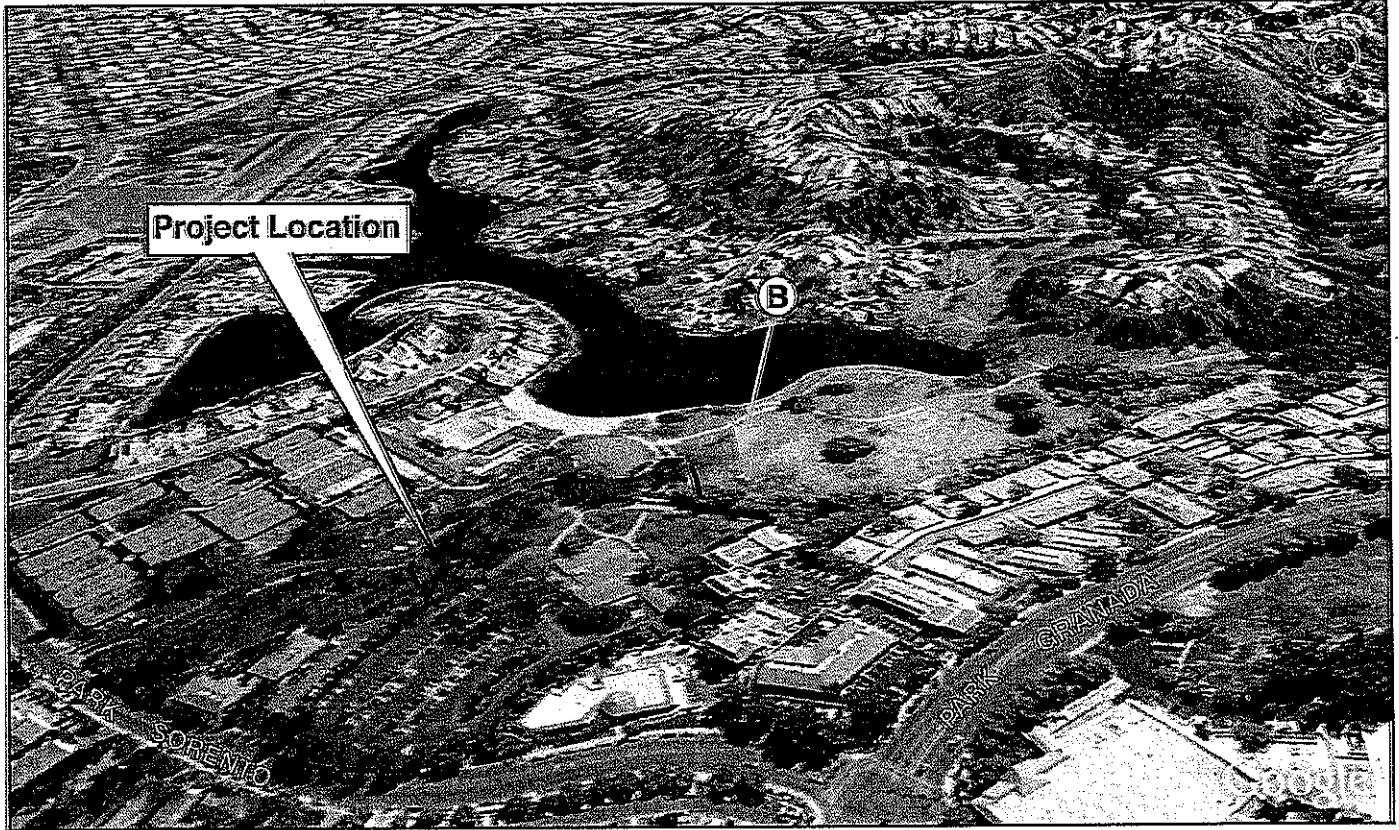
Date Photograph Taken:	December 14, 2007
Location of Photograph:	Park Allegra
Direction View Reference:	West-Northwest



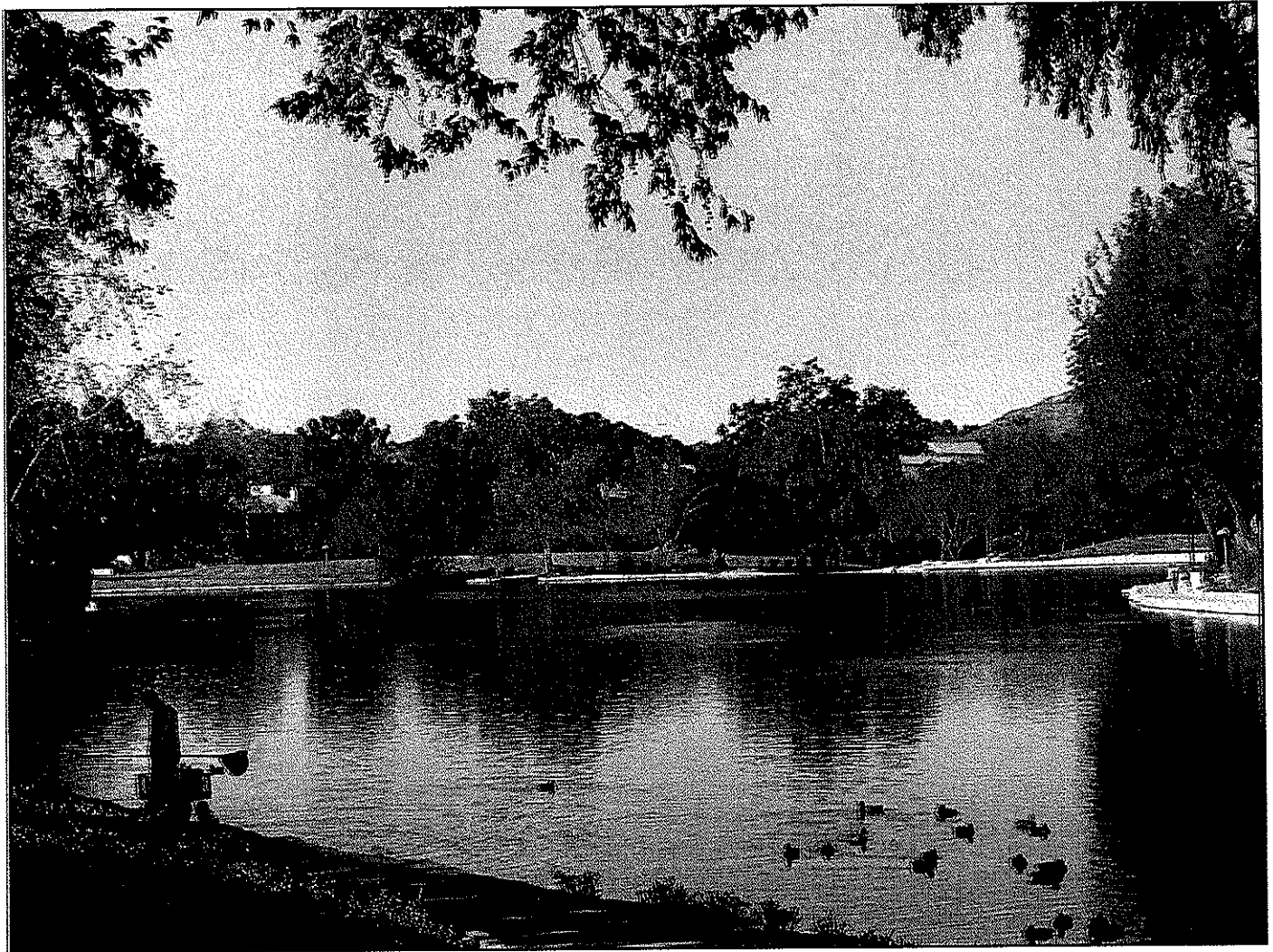
Park Allegra With Existing View.

PARK ALLEGRA VIEW  
BASELINE DATA SUMMARY

Date Photograph Taken:	December 14, 2007
Location of Photograph:	Park Allegra
Direction View Reference:	West-Northwest



Park Allegra Reference Map.



Park Cordero With Project View.

PARK CORDERO VIEW  
BASELINE DATA SUMMARY

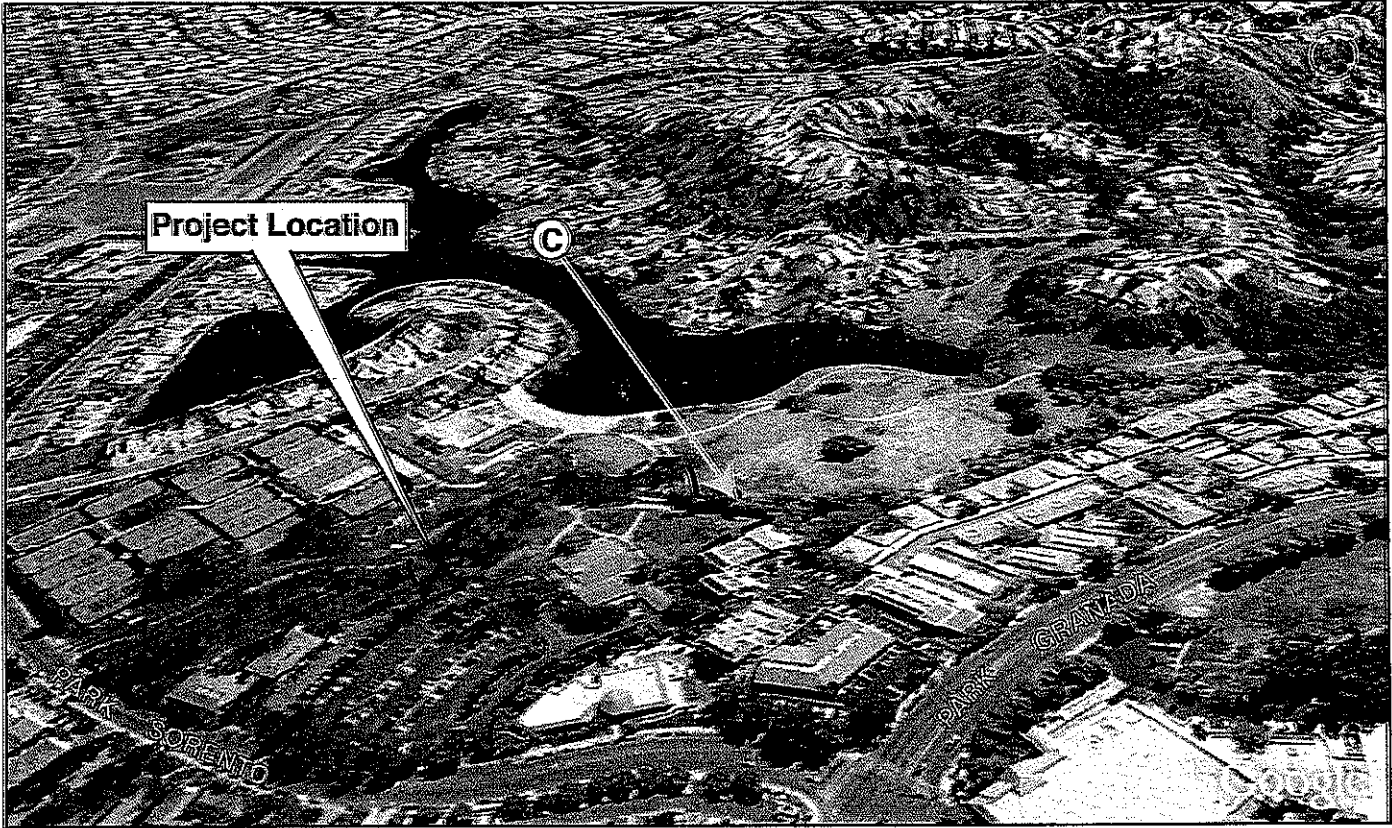
Date Photograph Taken:	December 14, 2007
Location of Photograph:	Park Cordero
Direction View Reference:	West-Northwest



Park Cordero With Existing View.

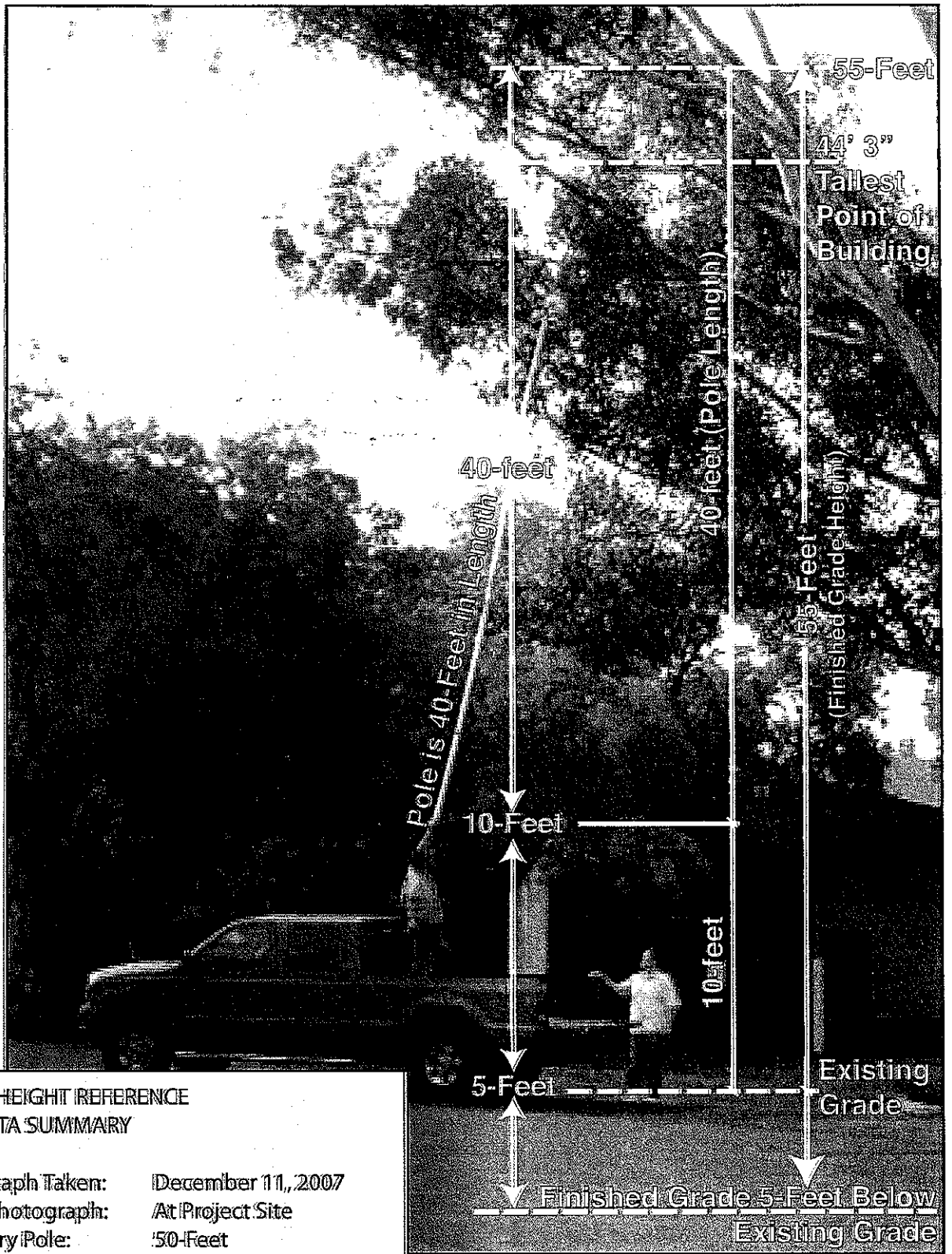
**PARK CORDERO VIEW  
BASELINE DATA SUMMARY**

Date Photograph Taken:	December 14, 2007
Location of Photograph:	Park Cordero
Direction View Reference:	West-Northwest



Park Allegra Reference Map.





**STORY POLE HEIGHT REFERENCE  
BASELINE DATA SUMMARY**

Date Photograph Taken:	December 11, 2007
Location of Photograph:	At Project Site
Height of Story Pole:	50-Feet
Existing Grade Elevation:	957-Feet
Finished Grade Elevation:	952-Feet (5-Feet Lower)
Tallest Point of Building*:	44'3-Feet
Elevation At Tallest Point:	997-Feet

\*Building 2-4-Story Bldg. Per Plan A-8 (Attached)

The Village at Calabasas- Visual Study

Story Pole Height Reference

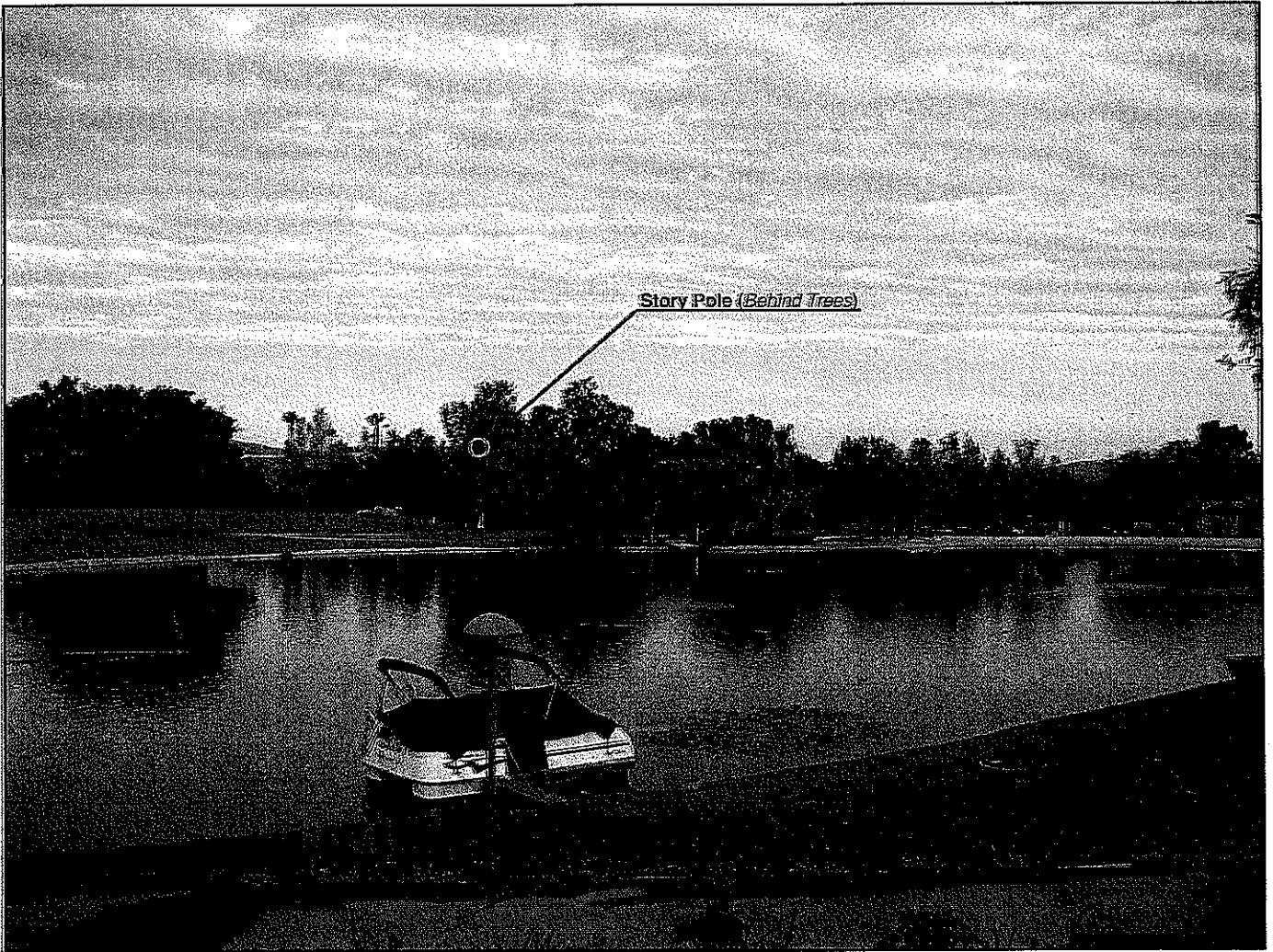
Exhibit D-1



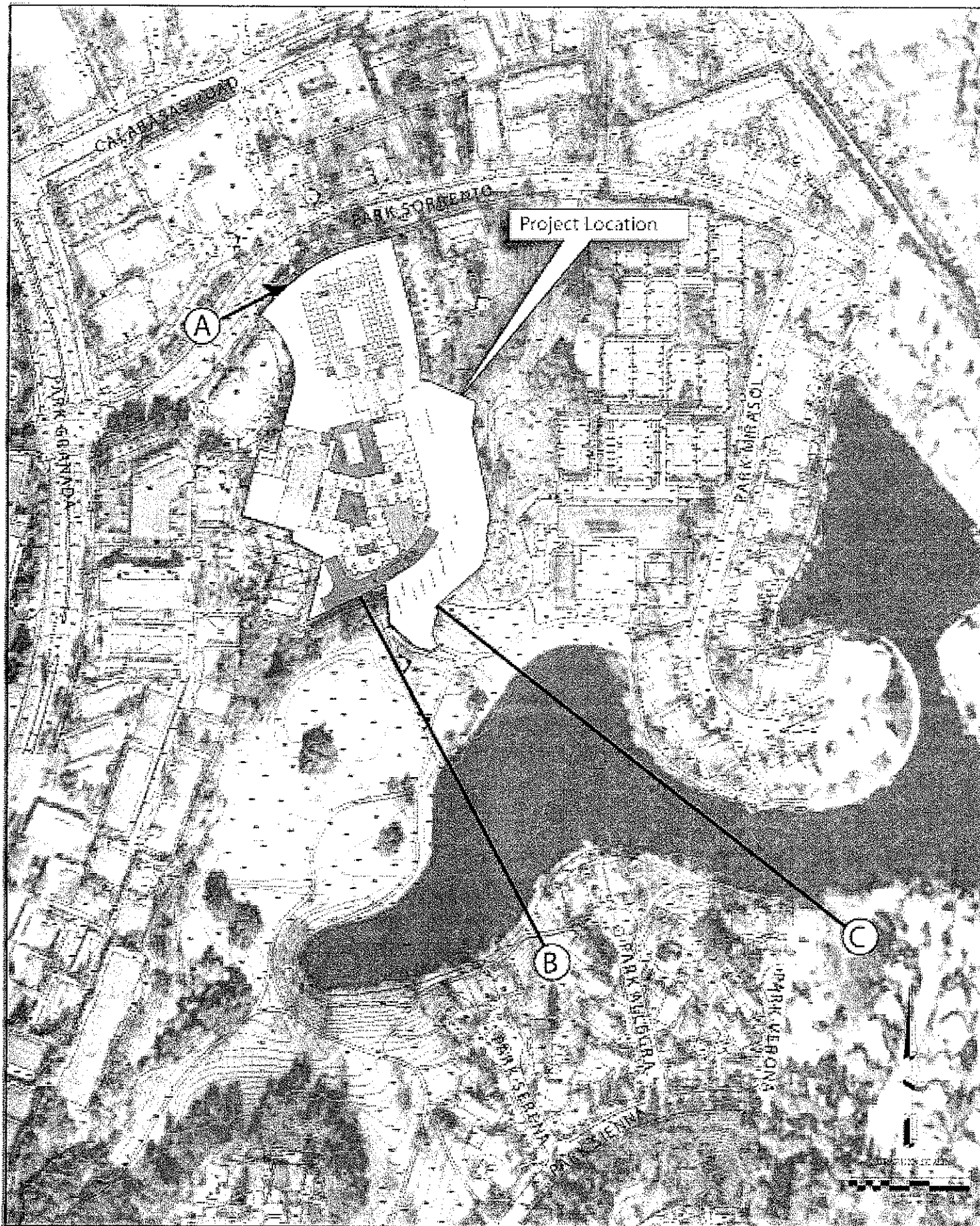
The Village at Calabasas- Visual Study

Story Pole Height Reference From Park Cordero

Exhibit D-2



The Village at Calabasas - Visual Study  
Story Pole Height Reference From Park Allegra  
Exhibit D-3



Project View Locations A.B. & C

# Appendix C

## Air Quality Analysis



**March 10, 2010**

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## ***Air Quality Analysis for the Revised Village at Calabasas Project – City of Calabasas, California***

Christopher A. Joseph & Associates (CAJA) has prepared the following air quality analysis for the Revised Village at Calabasas Project (the “Proposed Project”) located in the City of Calabasas. Whereas the previous version of the Proposed Project consisted of a mixed-use development of 79 residential condominium units combined with 13,135 square feet (sf) of commercial space, the Proposed Project has been revised and now consists of a senior residential development with assisted living component, an independent living component, and separate personal storage area for Village residents. The Proposed Project would be constructed in two phases: the first phase will include the assisted living facility with 112 beds, 21 of the independent units, and a portion of the proposed parking structure; the second phase would include the construction of 83 independent living units, the remaining portion of the parking structure, storage units, and resort-style amenities.

### **Project Effects**

#### ***Construction Period Emissions***

Construction activities associated with the Proposed Project include demolition of the existing Calabasas Inn facility and redevelopment of the Project Site with the proposed senior residential development with assisted living and independent living units. Three basic types of activities are expected to occur and generate construction-related emissions at the Project Site as a result of implementation of the Proposed Project. The first activity would involve the demolition of the existing Calabasas Inn facility at the Project Site. The debris from the demolished lot would be either recycled or repurposed. Secondly, the Project Site would be excavated and graded to accommodate the building foundation for the proposed building structures, with all of the excavated soil to be balanced onsite (i.e., no export of soil offsite). Finally, the proposed assisted living and independent living units along with the other associated amenities would be constructed. As the Proposed Project would be constructed in two phases, all of the site demolition and grading activities as well as construction of the assisted living facility, 21 of the independent living units, and a portion of the proposed parking structure would occur during Phase 1. During Phase 2 of construction, the remaining 83 independent living facility units would be constructed along with remaining portion



of the parking structure, the proposed storage units, and additional amenities. Commencement of Phase 2 construction would occur only after completion of Phase 1 construction. Overall, construction activities associated with Phase 1 of the Proposed Project would occur over an approximate 14-month period, with construction beginning approximately in May 2011, and construction activities associated with Phase 2 of the Proposed Project would occur over an approximate 14-month period, with construction beginning approximately in March 2013.

**Regional Air Quality Impacts**

The analysis of regional daily construction emissions has been prepared utilizing the URBEMIS 2007 computer model recommended by the South Coast Air Quality Management District (SCAQMD). Based on the construction time frame and the construction equipment mix for each of the various construction phases occurring at the Project Site, the maximum daily emissions that are generated during each of the construction years have been quantified. Table 1, Estimated Peak Daily Construction Emissions, identifies daily emissions that are estimated to occur on peak construction days for each construction year. These calculations assume that appropriate dust control measures would be implemented during each phase of development as required by SCAQMD Rule 403—Fugitive Dust.

**Table 1  
Estimated Peak Daily Construction Emissions**

Emissions Source	Emissions in Pounds per Day					
	ROG	NO <sub>x</sub>	CO	SO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
<b>Phase 1 Construction</b>						
<b>Demolition (2010)</b>						
Fugitive Dust	--	--	--	--	12.76	2.65
Off-Road Diesel	4.62	36.16	19.73	0.00	1.82	1.68
On-Road Diesel	1.44	18.77	7.21	0.02	0.85	0.73
Worker Trips	0.07	0.12	2.10	0.00	0.02	0.01
<b>Total Emissions</b>	<b>6.13</b>	<b>55.05</b>	<b>29.04</b>	<b>0.02</b>	<b>15.45</b>	<b>5.07</b>
SCAQMD Thresholds	75.00	100.00	550.00	150.00	150.00	55.00
Significant Impact?	No	No	No	No	No	No
<b>Site Grading/Excavation (2010)</b>						
Fugitive Dust	--	--	--	--	231.30	48.30
Off-Road Diesel Equipment	6.98	59.91	28.62	0.00	2.69	2.47
On-Road Diesel Equipment	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.06	0.11	1.83	0.00	0.02	0.01
<b>Total Emissions</b>	<b>7.04</b>	<b>60.02</b>	<b>30.45</b>	<b>0.00</b>	<b>234.07</b>	<b>50.78</b>
Dust Control Measures <sup>a</sup>	0.00	0.00	0.00	0.00	(111.52)	(23.27)
<b>Total Emissions after Dust Control Measures</b>	<b>7.04</b>	<b>60.02</b>	<b>30.45</b>	<b>0.00</b>	<b>122.55</b>	<b>27.51</b>
SCAQMD Thresholds	75.00	100.00	550.00	150.00	150.00	55.00
Significant Impact?	No	No	No	No	No	No
<b>Building Construction (2011)</b>						
Building Construction Off-Road Diesel Equipment	2.89	16.91	10.56	0.00	1.19	1.10



Building Construction Vendor Trips	0.27	3.05	2.42	0.01	0.15	0.12
Building Construction Worker Trips	0.33	0.63	10.82	0.01	0.10	0.06
Architectural Coatings	19.54	--	--	--	--	--
Architectural Coatings Worker Trips	0.03	0.05	0.88	0.00	0.01	0.00
Paving Off-Gas	0.24	--	--	--	--	--
Paving Off-Road Diesel Equipment	1.50	9.35	6.02	0.00	0.66	0.61
Paving On-Road Diesel Equipment	0.07	0.92	0.35	0.00	0.04	0.04
Paving Worker Trips	0.03	0.06	0.98	0.00	0.01	0.00
<b>Total Emissions</b>	<b>24.90</b>	<b>30.97</b>	<b>32.03</b>	<b>0.02</b>	<b>2.16</b>	<b>1.93</b>
SCAQMD Thresholds	75.00	100.00	550.00	150.00	150.00	55.00
Significant Impact?	No	No	No	No	No	No
<b>Phase 2 Construction</b>						
<b>Building Construction (2012)</b>						
Building Construction Off-Road Diesel Equipment	3.97	28.56	17.44	0.00	1.54	1.42
Building Construction Vendor Trips	0.15	1.70	1.40	0.00	0.08	0.07
Building Construction Worker Trips	0.33	0.62	10.85	0.02	0.11	0.06
<b>Total Emissions</b>	<b>4.45</b>	<b>30.88</b>	<b>29.69</b>	<b>0.02</b>	<b>1.73</b>	<b>1.55</b>
SCAQMD Thresholds	75.00	100.00	550.00	150.00	150.00	55.00
Significant Impact?	No	No	No	No	No	No
<b>Building Construction (2013)</b>						
Building Construction Off-Road Diesel Equipment	3.78	27.15	16.89	0.00	1.40	1.28
Building Construction Vendor Trips	0.14	1.50	1.29	0.00	0.07	0.06
Building Construction Worker Trips	0.30	0.57	10.08	0.02	0.11	0.06
Architectural Coatings	21.95	--	--	--	--	--
Architectural Coatings Worker Trips	0.03	0.05	0.85	0.00	0.01	0.01
<b>Total Emissions</b>	<b>26.20</b>	<b>29.27</b>	<b>29.11</b>	<b>0.02</b>	<b>1.59</b>	<b>1.41</b>
SCAQMD Thresholds	75.00	100.00	550.00	150.00	150.00	55.00
Significant Impact?	No	No	No	No	No	No
<p><sup>a</sup> Dust control measures as required by SCAQMD Rule 403—Fugitive Dust. Source: Christopher A. Joseph &amp; Associates, November 2009. Calculation sheets are provided in Attachment A.</p>						

As shown in Table 1, the peak daily emissions generated during Project construction would not exceed the regional emissions threshold recommended by the SCAQMD for any of the criteria pollutants (i.e., ROG, NO<sub>x</sub>, CO, SO<sub>x</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub>) during any of the construction activities associated with Phase 1 and Phase 2 of construction at the Project Site. As such, the regional air quality impacts associated with the Project-related construction emissions





would be less than significant. This finding is consistent with the significance conclusion that was determined for the previous version of the Project (“Approved Project”).

**Localized Air Quality Impacts**

The daily construction emissions generated by the Proposed Project are also analyzed against SCAQMD’s localized significance thresholds (LSTs) to determine whether the emissions would cause or contribute to adverse localized air quality impacts. LSTs represent the maximum emissions from a project that are not expected to cause or contribute to an exceedance of the most stringent applicable federal or State ambient air quality standards, and are developed based on the ambient concentrations of that pollutant for each source receptor area (SRA) in the South Coast Air Basin. The Project Site is located in the City of Calabasas and is located within SRA 6, which covers the West San Fernando Valley area.<sup>1</sup> Table 2, Localized Estimated Peak Daily Construction Emissions, identifies daily emissions that are estimated to occur during construction of the Proposed Project.

**Table 2**  
**Localized Estimated Peak Daily Construction Emissions**

Construction Phase	Total On-site Emissions (Pounds per Day)			
	NO <sub>x</sub> <sup>a</sup>	CO	PM <sub>10</sub>	PM <sub>2.5</sub>
<b>Phase 1 Construction</b>				
<b>Demolition (2010)</b>				
Onsite Combustion Emissions from Construction Equipment	38.46	19.27	2.31	2.12
Onsite Fugitive Dust Emissions from Construction Operations	--	--	0.48	0.10
Onsite Combustion Emissions from Mobile Vehicles	0.73	0.23	0.03	0.03
<b>Total Emissions</b>	<b>39.19</b>	<b>19.50</b>	<b>2.82</b>	<b>2.25</b>
SCAQMD Localized Thresholds <sup>b</sup>	172.00	1,138.00	11.00	6.00
Significant Impact?	No	No	No	No
<b>Grading/Excavation (2010)</b>				
Onsite Combustion Emissions from Construction Equipment	78.42	36.53	3.67	3.38
Onsite Fugitive Dust Emissions from Construction Operations	--	--	3.55	0.75
Onsite Combustion Emissions from Mobile Vehicles	1.35	0.42	0.06	0.06
<b>Total Emissions</b>	<b>79.77</b>	<b>36.95</b>	<b>7.28</b>	<b>4.19</b>
SCAQMD Localized Thresholds	172.00	1,138.00	11.00	6.00
Significant Impact?	No	No	No	No
<b>Building Construction (2011)</b>				
Onsite Combustion Emissions from Building Construction Equipment	34.04	19.79	2.09	1.93
Onsite Combustion Emissions from Mobile Vehicles	0.00	0.00	0.00	0.00
Onsite Combustion Emissions from Paving Construction Equipment	16.98	9.44	1.10	1.01

<sup>1</sup> SCAQMD, website: <http://www.aqmd.gov/telemweb/areamap.aspx>, November 20, 2009.



Construction Phase	Total On-site Emissions (Pounds per Day)			
	NO <sub>x</sub> <sup>a</sup>	CO	PM <sub>10</sub>	PM <sub>2.5</sub>
<b>Total Emissions</b>	<b>51.02</b>	<b>29.23</b>	<b>3.19</b>	<b>2.94</b>
SCAQMD Localized Thresholds	172.00	1,138.00	11.00	6.00
Significant Impact?	No	No	No	No
<b>Phase 2 Construction</b>				
<b>Building Construction (2012)</b>				
Onsite Combustion Emissions from Building Construction Equipment	52.86	28.80	2.67	2.46
Onsite Combustion Emissions from Mobile Vehicles	0.00	0.00	0.00	0.00
<b>Total Emissions</b>	<b>52.86</b>	<b>28.80</b>	<b>2.67</b>	<b>2.46</b>
SCAQMD Localized Thresholds	172.00	1,138.00	11.00	6.00
Significant Impact?	No	No	No	No
<b>Building Construction (2013)</b>				
Onsite Combustion Emissions from Building Construction Equipment	50.25	28.06	2.45	2.25
Onsite Combustion Emissions from Mobile Vehicles	0.00	0.00	0.00	0.00
<b>Total Emissions</b>	<b>50.25</b>	<b>28.06</b>	<b>2.45</b>	<b>2.25</b>
SCAQMD Localized Thresholds	172.00	1,138.00	11.00	6.00
Significant Impact?	No	No	No	No
<p><sup>a</sup> The localized thresholds listed for NO<sub>x</sub> in this table takes into consideration the gradual conversion of NO<sub>x</sub> to NO<sub>2</sub>. The analysis of localized air quality impacts associated with NO<sub>x</sub> emissions is focused on NO<sub>2</sub> levels as they are associated with adverse health effects.</p> <p><sup>b</sup> The localized significance thresholds for construction emissions at a receptor distance of 82 feet for a 5-acre site in SRA 6. Although some of the nearest off-site surrounding receptors to the Project Site are closer than 82 feet, the SCAQMD's LST methodology states that projects with boundaries located closer than 82 feet (25 meters) to the nearest receptor should use the LSTs for receptors located at 82 feet.</p> <p>Source: Christopher A. Joseph &amp; Associates, November 2009. Calculation sheets are provided in Attachment A.</p>				

As shown in Table 2, on-site emissions generated by the Proposed Project during the different phases of construction would not exceed the established SCAQMD localized thresholds for NO<sub>x</sub> (in the form of NO<sub>2</sub>), CO, PM<sub>10</sub>, and PM<sub>2.5</sub>. Therefore, the localized air quality impacts resulting from construction emissions associated with the Proposed Project would be less than significant. This finding is consistent with the significance conclusion that was determined for the Approved Project.

### **Operational Emissions**

Operational emissions generated by both stationary and mobile sources would result from normal day-to-day activities on the Project Site after the completion of construction. Stationary area source emissions would be generated by the consumption of natural gas for space and water heating devices, the operation of landscape maintenance equipment, and the use of consumer products. Mobile emissions would be generated by the motor vehicles traveling to and from the Project Site.

### **Regional Air Quality Impacts**



The analysis of the Proposed Project's daily operational emissions has been forecasted utilizing the URBEMIS 2007 computer model consistent with SCAQMD policies and procedures. The results of these calculations, and associated SCAQMD thresholds, are presented in Table 3, Estimated Daily Operational Emissions. The table presents the calculated emissions from Proposed Project operations during the summer and winter time periods in pounds per day.

**Table 3**  
**Estimated Daily Operational Emissions**

Emissions Source	Emissions in Pounds per Day					
	ROG	NO <sub>x</sub>	CO	SO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
<b>Summertime Emissions</b>						
Water and Space Heating, and Cooking Appliances	0.22	2.79	1.19	0.00	0.01	0.01
Landscape Maintenance Equipment	1.08	0.09	7.73	0.00	0.02	0.02
Consumer Products	11.08	--	--	--	--	--
Architectural Coatings	0.57	--	--	--	--	--
Mobile (Vehicle) Sources	5.70	4.54	58.47	0.07	11.45	2.17
<b>Total Summer Emissions</b>	<b>18.65</b>	<b>7.42</b>	<b>67.39</b>	<b>0.07</b>	<b>11.48</b>	<b>2.20</b>
SCAQMD Thresholds	55.00	55.00	550.00	150.00	150.00	55.00
Significant Impact?	No	No	No	No	No	No
<b>Wintertime Emissions</b>						
Water and Space Heating, and Cooking Appliances	0.22	2.79	1.19	0.00	0.01	0.01
Consumer Products	11.08	--	--	--	--	--
Architectural Coatings	0.57	--	--	--	--	--
Mobile (Vehicle) Sources	5.53	5.60	55.64	0.05	11.45	2.17
<b>Total Emissions</b>	<b>17.40</b>	<b>8.39</b>	<b>56.83</b>	<b>0.05</b>	<b>11.46</b>	<b>2.18</b>
SCAQMD Thresholds	55.00	55.00	550.00	150.00	150.00	55.00
Significant Impact?	No	No	No	No	No	No
<i>Source: Christopher A. Joseph &amp; Associates, November 2009. Calculation sheets are provided in Attachment A.</i>						

As shown, the Proposed Project's operational daily emissions would not exceed the thresholds of significance established by the SCAQMD during both the summertime and wintertime seasons. Therefore, impacts from mass daily operational emissions associated with the Proposed Project would be less than significant. This finding is consistent with the significance conclusion that was determined for the Approved Project.

**Localized Air Quality Impacts**

To determine whether operational emissions generated by the Proposed Project would result in localized air quality impacts, the operational emissions of the Proposed Project are analyzed against the SCAQMD's operational LSTs. For operational emissions, the LST methodology is applicable to projects where emission sources occupy a fixed location. Consequently, the analysis of localized air quality impacts only evaluates the emissions generated by the on-site stationary sources (e.g., water and space heaters, landscaping equipment, etc.) and mobile sources (i.e., vehicular travel within the proposed parking structure) associated with the Proposed Project.



The daily operational emissions generated by the on-site stationary and mobile sources associated with the Proposed Project are shown in Table 4, Localized Estimated Daily Operational Emissions.<sup>1</sup>

**Table 4**  
**Localized Estimated Daily Operational Emissions**

Operational Phase	Total On-site Emissions (Pounds per Day)			
	NO <sub>x</sub> <sup>a</sup>	CO	PM <sub>10</sub>	PM <sub>2.5</sub>
<b>Summertime Emissions</b>				
Water and Space Heating, and Cooking Appliances	2.79	1.19	0.01	0.01
Landscape Maintenance Equipment	0.09	7.73	0.02	0.02
Consumer Products	--	--	--	--
Architectural Coatings	--	--	--	--
Mobile (Vehicle) Sources	0.62	8.71	0.13	0.04
<b>Total Proposed Project Emissions</b>	<b>3.50</b>	<b>17.63</b>	<b>0.16</b>	<b>0.07</b>
SCAQMD Localized Thresholds <sup>b</sup>	172.00	1,138.00	3.00	2.00
Significant Impact?	No	No	No	No
<b>Wintertime Emissions</b>				
Water and Space Heating, and Cooking Appliances	2.79	1.19	0.01	0.01
Consumer Products	--	--	--	--
Architectural Coatings	--	--	--	--
Mobile (Vehicle) Sources	0.73	10.43	0.13	0.04
<b>Total Proposed Project Emissions</b>	<b>3.52</b>	<b>11.62</b>	<b>0.14</b>	<b>0.05</b>
SCAQMD Localized Thresholds <sup>b</sup>	172.00	1,138.00	3.00	2.00
Significant Impact?	No	No	No	No
<sup>a</sup> The localized thresholds listed for NO <sub>x</sub> in this table takes into consideration the gradual conversion of NO <sub>x</sub> to NO <sub>2</sub> . The analysis of localized air quality impacts associated with NO <sub>x</sub> emissions is focused on NO <sub>2</sub> levels as they are associated with adverse health effects. <sup>b</sup> The localized thresholds for construction emissions at a receptor distance of 82 feet for a 5-acre site in SRA 6 were calculated based on the linear regression methodology recommended by the SCAQMD. Although some of the nearest off-site surrounding receptors to the Project Site are closer than 82 feet, the SCAQMD's LST methodology states that projects with boundaries located closer than 82 feet (25 meters) to the nearest receptor should use the LSTs for receptors located at 82 feet. Source: Christopher A. Joseph & Associates, November 2009. Calculation sheets are provided in Attachment A.				

As shown in Table 4, the on-site operational emissions generated by the Proposed Project would not exceed the established SCAQMD's localized thresholds for NO<sub>x</sub>, CO, PM<sub>10</sub>, and PM<sub>2.5</sub>. Thus, the localized air quality impacts resulting from on-site operational emissions associated with the Proposed Project would be less than significant.

**CO Hotspots Analysis**

<sup>1</sup> The daily operational emissions generated by the stationary sources associated with the Project are taken from the emission sources (with the exception of the mobile sources) presented in Table 3 above that have been generated by the URBEMIS computer model. The daily operational emissions generated by the mobile sources onsite for the Project were generated by new URBEMIS runs using a travel distance of 0.1 mile per vehicle trip to represent vehicular travel within the Project Site.



Traffic-congested roadways and intersections have the potential to generate localized high levels of CO. Localized areas where ambient concentrations exceed national and/or state standards for CO are termed CO “hotspots.” The SCAQMD considers CO as a localized problem requiring additional analysis when a project is likely to subject sensitive receptors to CO hotspots.

In the air quality analysis conducted for the Approved Project, it was determined that future CO concentrations near the study intersections analyzed in the traffic study for the Approved Project would not exceed the national and State ambient air quality standards for CO. As such, the impact associated with the exposure of sensitive receptors to substantial CO concentrations was concluded to be less than significant.

For the Proposed Project, an updated traffic analysis was conducted for the new proposed uses at the Project Site. Based on the traffic analysis, it was determined that the Proposed Project would result in a significant decrease in average daily, A.M. peak hour, and P.M. peak hour traffic compared to the previous Approved Project. As the overall traffic generated by the Proposed Project would be less than the Approved Project, the exposure of sensitive receptors to CO concentrations associated with the Proposed Project-related traffic would also decrease. Thus, this impact would also be less than significant for the Proposed Project, and would be less in magnitude than the Approved Project.

**Greenhouse Gas Emissions**

The operational greenhouse gas (GHG) emissions for the Proposed Project have been calculated in metric tons per year and are shown in Table 5, Predicted Proposed Project GHG Emissions.

**Table 5  
Predicted Proposed Project GHG Emissions**

Emissions Source	CO <sub>2</sub> e Emissions in Metric Tons per Year
<b>Proposed Project Operation</b>	
Natural Gas Consumption	564.28
Electricity Generation	400.88
Water Generation	58.64
Motor Vehicles	842.56
Total Proposed Project Operational Emissions	1,866.35
<i>Source: Christopher A. Joseph &amp; Associates, November 2009. Calculation data and results provided in Attachment A.</i>	

Table 6, Approved and Proposed Project GHG Emissions Comparison, compares the operational GHG emissions for the Approved Project and the Project. As shown, the Proposed Project would result in less operational GHG emissions than the Approved Project.



**Table 6**  
**Approved and Proposed Project GHG Emissions Comparison**

Emissions Source	CO <sub>2</sub> e Emissions in Metric Tons per Year
Proposed Project	1,688.35
Approved Project	2,459.13

*Source: Christopher A. Joseph & Associates, November 2009.*

Based on the previous analysis conducted for the Approved Project, it was concluded that impacts associated with GHG emissions would be less than significant as the Approved Project would be consistent with all feasible and applicable strategies to reduce GHG emissions in California. As the Proposed Project would generate less GHG emissions than the Approved Project, it is also concluded that impacts associated with GHG emissions would be less than significant for the Proposed Project. Furthermore, the Proposed Project would be designed to support a pedestrian friendly environment that promotes connectivity to existing shopping, entertainment, businesses, and recreational opportunities, while the assisted living component of the Project would be subject to City Leadership in Energy and Environmental Design (LEED) compliance.

#### ***Air Quality Management Plan (AQMP) Consistency***

Projects that are consistent with the regional population, housing, and employment forecasts identified by SCAG are considered to be consistent with the AQMP growth projections, since the forecast assumptions by SCAG forms the basis of the land use and transportation control portions of the AQMP. Since SCAG's regional growth forecasts are based upon, among other things, land uses specified in city general plans, a project that is consistent with the land use designated in a city's general plan would also be consistent with the SCAG's regional forecast projections. Subsequently, a project that would introduce a land use that is consistent with what was designated in the city's general plan would then also be consistent with the AQMP growth projections. The proposed assisted living facility and independent living facility associated with the Project would be consistent with the land uses that are permitted in the current Commercial Mixed-Use (CMU) Zoning for the Project Site. Thus, development of the Proposed Project would be consistent with the land use designated in the City's General Plan. Therefore, the Proposed Project would not exceed the AQMP population and housing projections and would not jeopardize attainment of the air quality conditions projected in the AQMP. As the Project would be consistent with the underlying assumptions of the SCAQMD's 2007 AQMP and does not cause or worsen an exceedance of an ambient air quality standard, the Project is concluded to be consistent with that plan. This impact would be less than significant. This finding is consistent with the significance conclusion that was determined for the Approved Project.



## **Conclusions**

In summary, the regional air quality impacts associated with these Project-related construction and operational emissions would be less than significant. Additionally, the localized air quality impacts resulting from construction and operational emissions associated with the Proposed Project would be less than significant. As the Proposed Project would result in an overall decrease in traffic than the Approved Project, the CO concentration levels at the study intersections in the vicinity of the Project Site would also not exceed ambient air quality standards and remain less than significant. As the Project would be consistent with the underlying assumptions of the SCAQMD's 2007 AQMP and does not cause or worsen an exceedance of an ambient air quality standard, the Project is concluded to be consistent with that plan.

## **Christopher A. Joseph & Associates**

Terrance Wong  
Senior Environmental Scientist

Attachment

A: Air Quality Assessment Calculations



Attachment A

## **AIR QUALITY ASSESSMENT CALCULATIONS**



Urbemis 2007 Version 9.2.4

Combined Summer Emissions Reports (Pounds/Day)

File Name: F:\MSWord 2009 Projects\Village at Calabasas\AQ Data\URBEMIS Runs\Phase 1 Construction Emissions.urb924

Project Name: Village at Calabasas - Phase 1 Construction Emissions

Project Location: South Coast AQMD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

CONSTRUCTION EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10 Dust</u>	<u>PM10 Exhaust</u>	<u>PM10</u>	<u>PM2.5 Dust</u>	<u>PM2.5 Exhaust</u>	<u>PM2.5</u>	<u>CO2</u>
2010 TOTALS (lbs/day unmitigated)	7.03	60.02	30.46	0.03	231.31	2.69	234.01	48.31	2.48	50.79	6,102.45
2010 TOTALS (lbs/day mitigated)	7.03	60.02	30.46	0.03	119.85	2.69	122.54	25.03	2.48	27.51	6,102.45
2011 TOTALS (lbs/day unmitigated)	24.91	30.96	32.03	0.02	0.10	2.06	2.16	0.04	1.89	1.92	5,021.86
2011 TOTALS (lbs/day mitigated)	24.91	30.96	32.03	0.02	0.10	2.06	2.16	0.04	1.89	1.92	5,021.86

Construction Unmitigated Detail Report:

CONSTRUCTION EMISSION ESTIMATES Summer Pounds Per Day, Unmitigated

<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10 Dust</u>	<u>PM10 Exhaust</u>	<u>PM10</u>	<u>PM2.5 Dust</u>	<u>PM2.5 Exhaust</u>	<u>PM2.5</u>	<u>CO2</u>
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Time Slice 10/29/2010-11/12/2010 Active Days: 11	6.13	55.05	29.04	<u>0.03</u>	12.85	2.60	15.45	2.69	2.39	5.07	<u>6,102.45</u>
Demolition 10/29/2010-11/12/2010	6.13	55.05	29.04	0.03	12.85	2.60	15.45	2.69	2.39	5.07	6,102.45
Fugitive Dust	0.00	0.00	0.00	0.00	12.76	0.00	12.76	2.65	0.00	2.65	0.00
Demo Off Road Diesel	4.62	36.16	19.73	0.00	0.00	1.82	1.82	0.00	1.68	1.68	3,299.58
Demo On Road Diesel	1.44	18.77	7.21	0.02	0.08	0.77	0.85	0.03	0.71	0.73	2,554.08
Demo Worker Trips	0.07	0.12	2.10	0.00	0.01	0.01	0.02	0.00	0.01	0.01	248.79
Time Slice 11/15/2010-12/31/2010 Active Days: 35	<u>7.03</u>	<u>60.02</u>	<u>30.46</u>	0.00	<u>231.31</u>	<u>2.69</u>	<u>234.01</u>	<u>48.31</u>	<u>2.48</u>	<u>50.79</u>	5,731.52
Mass Grading 11/15/2010-12/31/2010	7.03	60.02	30.46	0.00	231.31	2.69	234.01	48.31	2.48	50.79	5,731.52
Mass Grading Dust	0.00	0.00	0.00	0.00	231.30	0.00	231.30	48.30	0.00	48.30	0.00
Mass Grading Off Road Diesel	6.98	59.91	28.62	0.00	0.00	2.69	2.69	0.00	2.47	2.47	5,513.83
Mass Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mass Grading Worker Trips	0.06	0.11	1.83	0.00	0.01	0.01	0.02	0.00	0.00	0.01	217.69
Time Slice 3/7/2011-10/14/2011 Active Days: 160	3.50	20.59	23.80	0.02	0.09	1.36	1.44	0.03	1.24	1.27	3,758.54
Building 03/07/2011-12/23/2011	3.50	20.59	23.80	0.02	0.09	1.36	1.44	0.03	1.24	1.27	3,758.54
Building Off Road Diesel	2.89	16.91	10.56	0.00	0.00	1.19	1.19	0.00	1.10	1.10	1,754.23
Building Vendor Trips	0.27	3.05	2.42	0.01	0.02	0.13	0.15	0.01	0.12	0.12	625.33
Building Worker Trips	0.33	0.63	10.82	0.01	0.07	0.04	0.10	0.02	0.03	0.06	1,378.99

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Time Slice 10/17/2011-12/9/2011	23.07	20.64	24.68	0.02	0.09	1.36	1.45	0.03	1.25	1.28	3,870.20
Active Days: 40											
Building 03/07/2011-12/23/2011	3.50	20.59	23.80	0.02	0.09	1.36	1.44	0.03	1.24	1.27	3,758.54
Building Off Road Diesel	2.89	16.91	10.56	0.00	0.00	1.19	1.19	0.00	1.10	1.10	1,754.23
Building Vendor Trips	0.27	3.05	2.42	0.01	0.02	0.13	0.15	0.01	0.12	0.12	625.33
Building Worker Trips	0.33	0.63	10.82	0.01	0.07	0.04	0.10	0.02	0.03	0.06	1,378.99
Coating 10/17/2011-12/23/2011	19.57	0.05	0.88	0.00	0.01	0.00	0.01	0.00	0.00	0.00	111.65
Architectural Coating	19.54	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.03	0.05	0.88	0.00	0.01	0.00	0.01	0.00	0.00	0.00	111.65
Time Slice 12/12/2011-12/23/2011	<b><u>24.91</u></b>	<b><u>30.96</u></b>	<b><u>32.03</u></b>	<b><u>0.02</u></b>	<b><u>0.10</u></b>	<b><u>2.06</u></b>	<b><u>2.16</u></b>	<b><u>0.04</u></b>	<b><u>1.89</u></b>	<b><u>1.92</u></b>	<b><u>5,021.86</u></b>
Active Days: 10											
Asphalt 12/12/2011-12/23/2011	1.84	10.32	7.35	0.00	0.01	0.70	0.71	0.00	0.64	0.65	1,151.67
Paving Off-Gas	0.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	1.50	9.35	6.02	0.00	0.00	0.66	0.66	0.00	0.61	0.61	888.85
Paving On Road Diesel	0.07	0.92	0.35	0.00	0.00	0.04	0.04	0.00	0.03	0.04	138.45
Paving Worker Trips	0.03	0.06	0.98	0.00	0.01	0.00	0.01	0.00	0.00	0.00	124.37
Building 03/07/2011-12/23/2011	3.50	20.59	23.80	0.02	0.09	1.36	1.44	0.03	1.24	1.27	3,758.54
Building Off Road Diesel	2.89	16.91	10.56	0.00	0.00	1.19	1.19	0.00	1.10	1.10	1,754.23
Building Vendor Trips	0.27	3.05	2.42	0.01	0.02	0.13	0.15	0.01	0.12	0.12	625.33
Building Worker Trips	0.33	0.63	10.82	0.01	0.07	0.04	0.10	0.02	0.03	0.06	1,378.99
Coating 10/17/2011-12/23/2011	19.57	0.05	0.88	0.00	0.01	0.00	0.01	0.00	0.00	0.00	111.65
Architectural Coating	19.54	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.03	0.05	0.88	0.00	0.01	0.00	0.01	0.00	0.00	0.00	111.65

Phase Assumptions

Phase: Demolition 10/29/2010 - 11/12/2010 - Default Demolition Description

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Building Volume Total (cubic feet): 30371.33

Building Volume Daily (cubic feet): 30371.33

On Road Truck Travel (VMT): 602.61

Off-Road Equipment:

- 2 Concrete/Industrial Saws (10 hp) operating at a 0.73 load factor for 8 hours per day
- 1 Crushing/Processing Equip (142 hp) operating at a 0.78 load factor for 8 hours per day
- 1 Excavators (168 hp) operating at a 0.57 load factor for 8 hours per day
- 1 Forklifts (145 hp) operating at a 0.3 load factor for 8 hours per day
- 1 Rubber Tired Dozers (357 hp) operating at a 0.59 load factor for 8 hours per day
- 1 Skid Steer Loaders (44 hp) operating at a 0.55 load factor for 8 hours per day
- 1 Water Trucks (189 hp) operating at a 0.5 load factor for 4 hours per day

Phase: Mass Grading 11/15/2010 - 12/31/2010 - Default Mass Site Grading/Excavation Description

Total Acres Disturbed: 5.43

Maximum Daily Acreage Disturbed: 5.43

Fugitive Dust Level of Detail: Low

Onsite Cut/Fill: 1500 cubic yards/day; Offsite Cut/Fill: 0 cubic yards/day

On Road Truck Travel (VMT): 0

Off-Road Equipment:

- 1 Plate Compactors (8 hp) operating at a 0.43 load factor for 8 hours per day
- 1 Rubber Tired Dozers (357 hp) operating at a 0.59 load factor for 8 hours per day
- 2 Scrapers (313 hp) operating at a 0.72 load factor for 8 hours per day
- 1 Skid Steer Loaders (44 hp) operating at a 0.55 load factor for 8 hours per day
- 1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 8 hours per day
- 1 Water Trucks (189 hp) operating at a 0.5 load factor for 8 hours per day

Phase: Paving 12/12/2011 - 12/23/2011 - Default Paving Description

Acres to be Paved: 0.91

Off-Road Equipment:

- 1 Plate Compactors (8 hp) operating at a 0.43 load factor for 8 hours per day

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- 1 Rollers (95 hp) operating at a 0.56 load factor for 7 hours per day
- 1 Rubber Tired Loaders (164 hp) operating at a 0.54 load factor for 8 hours per day
- 1 Skid Steer Loaders (44 hp) operating at a 0.55 load factor for 8 hours per day

Phase: Building Construction 3/7/2011 - 12/23/2011 - Default Building Construction Description

Off-Road Equipment:

- 2 Cement and Mortar Mixers (10 hp) operating at a 0.56 load factor for 8 hours per day
- 12 Concrete/Industrial Saws (10 hp) operating at a 0.73 load factor for 8 hours per day
- 2 Forklifts (145 hp) operating at a 0.3 load factor for 8 hours per day
- 1 Plate Compactors (8 hp) operating at a 0.43 load factor for 8 hours per day
- 1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 8 hours per day
- 1 Trenchers (63 hp) operating at a 0.75 load factor for 8 hours per day
- 1 Welders (45 hp) operating at a 0.45 load factor for 8 hours per day

Phase: Architectural Coating 10/17/2011 - 12/23/2011 - Default Architectural Coating Description

- Rule: Residential Interior Coatings begins 1/1/2005 ends 6/30/2008 specifies a VOC of 100
- Rule: Residential Interior Coatings begins 7/1/2008 ends 12/31/2040 specifies a VOC of 50
- Rule: Residential Exterior Coatings begins 1/1/2005 ends 6/30/2008 specifies a VOC of 250
- Rule: Residential Exterior Coatings begins 7/1/2008 ends 12/31/2040 specifies a VOC of 100
- Rule: Nonresidential Interior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250
- Rule: Nonresidential Exterior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250

Construction Mitigated Detail Report:

CONSTRUCTION EMISSION ESTIMATES Summer Pounds Per Day, Mitigated

<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10 Dust</u>	<u>PM10 Exhaust</u>	<u>PM10</u>	<u>PM2.5 Dust</u>	<u>PM2.5 Exhaust</u>	<u>PM2.5</u>	<u>CO2</u>
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Time Slice 10/29/2010-11/12/2010 Active Days: 11	6.13	55.05	29.04	<b>0.03</b>	12.85	2.60	15.45	2.69	2.39	5.07	<b>6,102.45</b>
Demolition 10/29/2010-11/12/2010	6.13	55.05	29.04	0.03	12.85	2.60	15.45	2.69	2.39	5.07	6,102.45
Fugitive Dust	0.00	0.00	0.00	0.00	12.76	0.00	12.76	2.65	0.00	2.65	0.00
Demo Off Road Diesel	4.62	36.16	19.73	0.00	0.00	1.82	1.82	0.00	1.68	1.68	3,299.58
Demo On Road Diesel	1.44	18.77	7.21	0.02	0.08	0.77	0.85	0.03	0.71	0.73	2,554.08
Demo Worker Trips	0.07	0.12	2.10	0.00	0.01	0.01	0.02	0.00	0.01	0.01	248.79
Time Slice 11/15/2010-12/31/2010 Active Days: 35	<u>7.03</u>	<u>60.02</u>	<u>30.46</u>	0.00	<u>119.85</u>	<u>2.69</u>	<u>122.54</u>	<u>25.03</u>	<u>2.48</u>	<u>27.51</u>	5,731.52
Mass Grading 11/15/2010-12/31/2010	7.03	60.02	30.46	0.00	119.85	2.69	122.54	25.03	2.48	27.51	5,731.52
Mass Grading Dust	0.00	0.00	0.00	0.00	119.84	0.00	119.84	25.03	0.00	25.03	0.00
Mass Grading Off Road Diesel	6.98	59.91	28.62	0.00	0.00	2.69	2.69	0.00	2.47	2.47	5,513.83
Mass Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mass Grading Worker Trips	0.06	0.11	1.83	0.00	0.01	0.01	0.02	0.00	0.00	0.01	217.69
Time Slice 3/7/2011-10/14/2011 Active Days: 160	3.50	20.59	23.80	0.02	0.09	1.36	1.44	0.03	1.24	1.27	3,758.54
Building 03/07/2011-12/23/2011	3.50	20.59	23.80	0.02	0.09	1.36	1.44	0.03	1.24	1.27	3,758.54
Building Off Road Diesel	2.89	16.91	10.56	0.00	0.00	1.19	1.19	0.00	1.10	1.10	1,754.23
Building Vendor Trips	0.27	3.05	2.42	0.01	0.02	0.13	0.15	0.01	0.12	0.12	625.33
Building Worker Trips	0.33	0.63	10.82	0.01	0.07	0.04	0.10	0.02	0.03	0.06	1,378.99

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Time Slice 10/17/2011-12/9/2011	23.07	20.64	24.68	0.02	0.09	1.36	1.45	0.03	1.25	1.28	3,870.20
Active Days: 40											
Building 03/07/2011-12/23/2011	3.50	20.59	23.80	0.02	0.09	1.36	1.44	0.03	1.24	1.27	3,758.54
Building Off Road Diesel	2.89	16.91	10.56	0.00	0.00	1.19	1.19	0.00	1.10	1.10	1,754.23
Building Vendor Trips	0.27	3.05	2.42	0.01	0.02	0.13	0.15	0.01	0.12	0.12	625.33
Building Worker Trips	0.33	0.63	10.82	0.01	0.07	0.04	0.10	0.02	0.03	0.06	1,378.99
Coating 10/17/2011-12/23/2011	19.57	0.05	0.88	0.00	0.01	0.00	0.01	0.00	0.00	0.00	111.65
Architectural Coating	19.54	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.03	0.05	0.88	0.00	0.01	0.00	0.01	0.00	0.00	0.00	111.65
Time Slice 12/12/2011-12/23/2011	<b><u>24.91</u></b>	<b><u>30.96</u></b>	<b><u>32.03</u></b>	<b><u>0.02</u></b>	<b><u>0.10</u></b>	<b><u>2.06</u></b>	<b><u>2.16</u></b>	<b><u>0.04</u></b>	<b><u>1.89</u></b>	<b><u>1.92</u></b>	<b><u>5,021.86</u></b>
Active Days: 10											
Asphalt 12/12/2011-12/23/2011	1.84	10.32	7.35	0.00	0.01	0.70	0.71	0.00	0.64	0.65	1,151.67
Paving Off-Gas	0.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	1.50	9.35	6.02	0.00	0.00	0.66	0.66	0.00	0.61	0.61	888.85
Paving On Road Diesel	0.07	0.92	0.35	0.00	0.00	0.04	0.04	0.00	0.03	0.04	138.45
Paving Worker Trips	0.03	0.06	0.98	0.00	0.01	0.00	0.01	0.00	0.00	0.00	124.37
Building 03/07/2011-12/23/2011	3.50	20.59	23.80	0.02	0.09	1.36	1.44	0.03	1.24	1.27	3,758.54
Building Off Road Diesel	2.89	16.91	10.56	0.00	0.00	1.19	1.19	0.00	1.10	1.10	1,754.23
Building Vendor Trips	0.27	3.05	2.42	0.01	0.02	0.13	0.15	0.01	0.12	0.12	625.33
Building Worker Trips	0.33	0.63	10.82	0.01	0.07	0.04	0.10	0.02	0.03	0.06	1,378.99
Coating 10/17/2011-12/23/2011	19.57	0.05	0.88	0.00	0.01	0.00	0.01	0.00	0.00	0.00	111.65
Architectural Coating	19.54	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.03	0.05	0.88	0.00	0.01	0.00	0.01	0.00	0.00	0.00	111.65

Construction Related Mitigation Measures

The following mitigation measures apply to Phase: Mass Grading 11/15/2010 - 12/31/2010 - Default Mass Site Grading/Excavation Description

**3/9/2010 7:42:42 PM**

For Soil Stabilizing Measures, the Water exposed surfaces 3x daily watering mitigation reduces emissions by:

PM10: 61% PM25: 61%





<b>Village at Calabasas Project</b>	<b>Construction Activity</b>		
	Phase 1 Demolition (2010)		15,000 Square Foot Structure <sup>a</sup>
<b>Demolition Schedule -</b>		<b>12 days<sup>a</sup></b>	

<b>Equipment Type<sup>a,b</sup></b>	<b>No. of Equipment</b>	<b>hr/day</b>	<b>Crew Size</b>
Concrete/Industrial Saws	2	8.0	15
Crushing/Proc. Equipment	1	8.0	
Excavators	1	8.0	
Forklifts	1	8.0	
Rubber Tired Loaders	1	8.0	
Skid Steer Loaders	1	8.0	

<b>Construction Equipment Emission Factors</b>			
<b>Equipment Type<sup>c</sup></b>	<b>CO</b>	<b>NOx</b>	<b>PM10</b>
	lb/hr	lb/hr	lb/hr
Concrete/Industrial Saws	0.068	0.128	0.006
Crushing/Proc. Equipment	0.726	1.439	0.094
Excavators	0.558	1.150	0.064
Forklifts	0.232	0.516	0.028
Rubber Tired Loaders	0.508	1.154	0.065
Skid Steer Loaders	0.249	0.292	0.025

<b>Building Dimensions</b>			
<b>Description<sup>a</sup></b>	<b>Width of Building</b>	<b>Length of Building</b>	<b>Height of Building</b>
	ft	ft	ft
Total Project	n/a	n/a	n/a

<b>Fugitive Dust Material Handling</b>			
<b>Aerodynamic Particle Size Multiplier<sup>d</sup></b>	<b>Mean Wind Speed<sup>e</sup></b>	<b>Moisture Content<sup>f</sup></b>	<b>Debris Handled<sup>g</sup></b>
	mph		ton/day
0.35	10	2.0	227

<b>Construction Vehicle (Mobile Source) Emission Factors</b>			
	<b>CO</b>	<b>NOx</b>	<b>PM10</b>
	lb/mile	lb/mile	lb/mile

Heavy-Duty Truck<sup>h</sup>

0.01195456

0.03822102

0.00183062

**Construction Worker Number of Trips and Trip Length**

Vehicle	No. of One-Way Trips/Day <sup>i</sup>	Trip Length (miles) <sup>j</sup>
Haul Trucks	20	0.1
Water Truck	1	7.5

**Incremental Increase in Onsite Combustion Emissions from Construction Equipmen**

**Equation:** Emission Factor (lb/BHP-hr) x No. of Equipment x Work Day (hr/day) x Equipment rating (hp) x Load Factor (%/100) = Onsite Construction Emissions (lb/day)

Equipment Type	CO lb/day	NOx lb/day	PM10 lb/day
Concrete/Industrial Saws	1.09	2.05	0.10
Crushing/Proc. Equipment	5.81	11.52	0.75
Excavators	4.47	9.20	0.51
Forklifts	1.86	4.13	0.22
Rubber Tired Loaders	4.06	9.23	0.52
Skid Steer Loaders	1.99	2.34	0.20
<b>Total</b>	<b>19.27</b>	<b>38.46</b>	<b>2.31</b>

**Incremental Increase in Onsite Fugitive Dust Emissions from Construction Equipmen**

Material Handling<sup>k</sup>:  $(0.0032 \times \text{Aerodynamic Particle Size Multiplier} \times (\text{wind speed (mph)/5})^{1.3} / (\text{moisture content}/2)^{1.4} \times \text{debris handled (ton/day)}) \times (1 - \text{control efficiency}) = \text{PM10 Emissions (lb/day)}$

Description	Control Efficiency %	PM10 Mitigated <sup>m</sup> lb/day
Material Handling (Demolition) <sup>l</sup>	61	0.24
Material Handling (Debris)	61	0.24
<b>Total</b>		<b>0.48</b>

**Incremental Increase in Onsite Combustion Emissions from Onroad Mobile Vehicle**

**Equation:** Emission Factor (lb/mile) x No. of One-Way Trips/Day x 2 x Trip length (mile) = Mobile Emissions (lb/day)

Vehicle	CO lb/day	NOx lb/day	PM10 lb/day
Haul Trucks	0.05	0.15	0.007
Water Truck	0.18	0.57	0.03
<b>Total</b>	<b>0.23</b>	<b>0.73</b>	<b>0.03</b>

<b>Total Incremental Localized Emissions from Construction Activities:</b>			
<b>Sources</b>	<b>CO</b> lb/day	<b>NOx</b> lb/day	<b>PM10</b> lb/day
On-site Emissions (Mitigated)	<b>19.49</b>	<b>39.18</b>	<b>2.82</b>
<b>Significance Threshold<sup>n</sup></b>	<b>1138.00</b>	<b>172.00</b>	<b>11.00</b>
<b>Exceed Significance?</b>	<b>NO</b>	<b>NO</b>	<b>NO</b>

<b>Combustion and Fugitive Summary</b>	<b>PM2.5 Fraction<sup>o</sup></b>	<b>PM10</b> lb/day	<b>PM2.5</b> lb/day
Combustion (Offroad)	0.92	2.31	2.12
Combustion (Onroad)	0.96	0.03	0.03
Fugitive	0.21	0.48	0.10
<b>Total</b>		<b>2.82</b>	<b>2.26</b>
<b>Significance Threshold<sup>n</sup></b>			<b>6.00</b>
<b>Exceed Significance?</b>			<b>NO</b>

**Notes:**

- a) Construction data provided for Project.
- b) Equipment name must match CARB Off-Road Model (see Off-Road Model EF worksheet) equipment name for sheet to look up EFs automatically.
- c) SCAB values provided by the ARB, Oct 2006. Assumed equipment is diesel fueled.
- d) USEPA, AP-42, Jan 1995, Section 13.2.4 Aggregate Handling and Storage Piles, p 13.2.4-3 Aerodynamic particle size multiplier for  $< 10 \mu\text{m}$
- e) Mean wind speed - maximum of daily average wind speeds reported in 1981 meteorological data.
- f) USEPA, Fugitive Dust Background Document and Technical Information Document for Best Available Control Measures, equation 2-13, p 2-28
- g) Amount of debris handled daily corresponds with input into the URBEMIS model.  
(15,000 sq ft x 0.046 ton/sq ft)/12 days = 227 ton/day
- h) 2010 fleet year. <http://www.aqmd.gov/ceqa/handbook/onroad/onroad.html>.
- i) Assumed 14 cubic yd truck capacity [(227 tons/day x 2,000 lb/ton x cyd/1,620 lb = 280 cyd)/14 cyd/truck = 20 one-way truck trips/day, where building debris density is assumed to be 1,620 lb/cyd]  
Multiple trucks may be used.
- j) Assumed trucks travel 0.1 mile through project site.
- k) USEPA, Fugitive Dust Background Document and Technical Information Document for Best Available Control Measures, equation 2-13, p 2-28. EPA suggests using the material handling equation for demolition emission estimates.
- l) EPA suggests using the material handling equation for demolition emission estimates.
- m) Includes watering at least three times a day per Rule 403 (68% control efficiency)
- n) LSTs for a 5-acre site in SRA 6.
- o) ARB's CEIDARS database PM2.5 fractions - construction dust category for fugitive and diesel vehicle exhaust category for combustion.

<b>Village at Calabasas Project</b>	<b>Construction Activity</b>
	Phase 1 Grading (2010) 184,329 Square Feet <sup>a</sup>
<b>Grading Schedule -</b>	<b>46 days<sup>a</sup></b>

<b>Equipment Type<sup>a,b</sup></b>	<b>No. of Equipment</b>	<b>hr/day</b>	<b>Crew Size</b>
Plate Compactors	1	8.0	5
Rubber Tired Dozers	1	8.0	
Scrapers	2	8.0	
Skid Steer Loaders	1	8.0	
Tractors/Loaders/Backhoes	1	8.0	

<b>Construction Equipment Emission Factors</b>			
	<b>CO</b>	<b>NOx</b>	<b>PM10</b>
<b>Equipment Type<sup>c</sup></b>	lb/hr	lb/hr	lb/hr
Plate Compactors	0.026	0.032	0.002
Rubber Tired Dozers	1.413	2.989	0.129
Scrapers	1.242	2.908	0.126
Skid Steer Loaders	0.249	0.292	0.025
Tractors/Loaders/Backhoes	0.393	0.675	0.052

<b>Fugitive Dust Grading Parameters</b>	
<b>Vehicle Speed (mph)<sup>d</sup></b>	<b>Vehicle Miles Traveled<sup>e</sup></b>
3	0.28

<b>Fugitive Dust Stockpiling Parameters</b>				
<b>Silt Content<sup>f</sup></b>	<b>Precipitation Days<sup>g</sup></b>	<b>Mean Wind Speed Percent<sup>h</sup></b>	<b>TSP Fraction</b>	<b>Area<sup>i</sup> (acres)</b>
6.9	10	100	0.5	0.21

<b>Fugitive Dust Material Handling</b>				
<b>Aerodynamic Particle Size Multiplier<sup>j</sup></b>	<b>Mean Wind Speed<sup>k</sup></b>	<b>Moisture Content<sup>f</sup></b>	<b>Dirt Handled<sup>a</sup></b>	<b>Dirt Handled<sup>l</sup></b>
	mph		cy	lb/day
0.35	10	7.9	9,000	3,750,000

<b>Construction Vehicle (Mobile Source) Emission Factors</b>
--------------------------------------------------------------

	<b>CO</b> lb/mile	<b>NOx</b> lb/mile	<b>PM10</b> lb/mile
Heavy-Duty Truck <sup>m</sup>	0.01195456	0.03822102	0.00183062



<b>Construction Worker Number of Trips and Trip Length</b>		
<b>Vehicle</b>	<b>No. of One-Way Trips/Day</b>	<b>One Way Trip Length (miles)</b>
Haul Truck <sup>n</sup>	0	0.1
Water Truck <sup>o</sup>	3	5.9

<b>Incremental Increase in Onsite Combustion Emissions from Construction Equipmen</b>			
<b>Equation:</b> Emission Factor (lb/BHP-hr) x No. of Equipment x Work Day (hr/day) x Equipment rating (hp) x Load Factor (%/100) = Onsite Construction Emissions (lb/day)			
<b>Equipment Type</b>	<b>CO lb/day</b>	<b>NOx lb/day</b>	<b>PM10 lb/day</b>
Plate Compactors	0.21	0.25	0.01
Rubber Tired Dozers	11.30	23.91	1.03
Scrapers	19.88	46.53	2.01
Skid Steer Loaders	1.99	2.34	0.20
Tractors/Loaders/Backhoes	3.14	5.40	0.42
<b>Total</b>	<b>36.53</b>	<b>78.42</b>	<b>3.67</b>

<b>Incremental Increase in Fugitive Dust Emissions from Construction Operation:</b>		
<b>Equations:</b>		
Gradingp: PM10 Emissions (lb/day) = 0.60 x 0.051 x mean vehicle speed <sup>2.0</sup> x VMT x (1 - control efficiency)		
Storage Piles <sup>q</sup> : PM10 Emissions (lb/day) = 1.7 x (silt content/1.5) x ((365-precipitation days)/235) x wind speed percent/15 x TSP fraction x Area) x (1 - control efficiency)		
Material Handling <sup>r</sup> : PM10 Emissions (lb/day) = (0.0032 x aerodynamic particle size multiplier x (wind speed (mph)/5) <sup>1.3</sup> /(moisture content/2) <sup>1.4</sup> x dirt handled (lb/day)/2,000 (lb/ton) (1 - control efficiency)		
<b>Description</b>	<b>Control Efficiency %</b>	<b>Unmitigated PM10<sup>s</sup> lb/day</b>
Earthmoving	61	0.03
Storage Piles	61	3.23
Material Handling	61	0.29
<b>Total</b>		<b>3.55</b>

**Incremental Increase in Onsite Combustion Emissions from Onroad Mobile Vehicle**

**Equation:** Emission Factor (lb/mile) x No. of One-Way Trips/Day x 2 x Trip length (mile) = Mobile Emissions (lb/day)

<b>Vehicle</b>	<b>CO</b> lb/day	<b>NOx</b> lb/day	<b>PM10</b> lb/day
Haul Truck	0.00	0.00	0.00
Water Truck	0.42	1.35	0.06
<b>Total</b>	<b>0.42</b>	<b>1.35</b>	<b>0.06</b>

**Total Incremental Localized Emissions from Construction Activities:**

<b>Sources</b>	<b>CO</b> lb/day	<b>NOx</b> lb/day	<b>PM10</b> lb/day
On-site Emissions	<b>36.95</b>	<b>79.77</b>	<b>7.28</b>
<b>Significance Threshold<sup>†</sup></b>	<b>1138.00</b>	<b>172.00</b>	<b>11.00</b>
<b>Exceed Significance?</b>	<b>NO</b>	<b>NO</b>	<b>NO</b>

<b>Combustion and Fugitive Summary</b>	<b>PM2.5 Fraction<sup>u</sup></b>	<b>PM10</b> lb/day	<b>PM2.5</b> lb/day
Combustion (Offroad)	0.92	3.67	3.38
Combustion (Onroad)	0.96	0.06	0.06
Fugitive	0.21	3.55	0.75
<b>Total</b>		<b>7.28</b>	<b>4.18</b>
<b>Significance Threshold<sup>†</sup></b>			<b>6.00</b>
<b>Exceed Significance?</b>			<b>NO</b>

**Notes:**

- a) Construction data provided for Project.
- b) Equipment name must match CARB Off-Road Model (see Off-Road Model EF worksheet) equipment name for sheet to look up EFs automatically
- c) SCAB values provided by the ARB, Oct 2006. Assumed equipment is diesel fueled.
- d) Caterpillar Performance Handbook, Edition 33, October 2003 Operating Speeds, p 2-3.
- e) Assumed 13 foot wide blade with 2 foot overlap (11 foot wide). Vehicle miles traveled (VMT) = (184,329 sq ft/11 foot x mile/5,280 ft)/ 1 days = 0.28 miles
- f) USEPA, AP-42, July 1998, Table 11.9-3 Typical Values for Correction Factors Applicable to the Predictive Emission Factor Equations
- g) Table A9-9-E2, SCAQMD CEQA Air Quality Handbook, 1993
- h) Mean wind speed percent - percent of time mean wind speed exceeds 12 mph. At least one meteorological site recorded wind speeds greater than 12 mph over a 24-hour period in 1981.
- i) Assumed storage piles are 0.21 acres in size
- j) USEPA, AP-42, Jan 1995, Section 13.2.4 Aggregate Handling and Storage Piles, p 13.2.4-3 Aerodynamic particle size multiplier for < 10 µm
- k) Mean wind speed - maximum of daily average wind speeds reported in 1981 meteorological data.
- l) The amount of dirt handled daily corresponds with the input in the URBEMIS model.
- m) 2010 fleet year. <http://www.aqmd.gov/ceqa/handbook/onroad/onroad.html>.

- n) No export of soil would be required during construction at the project site.
- o) Assumed six foot wide water truck traverses over 184,329 square feet of disturbed area
- p) USEPA, AP-42, July 1998, Table 11.9-1, Equation for Site Grading  $\leq 10 \mu\text{m}$
- q) USEPA, AP-42, Jan 1995, Section 13.2.4 Aggregate Handling and Storage Piles, Equation 1
- r) USEPA, Fugitive Dust Background Document and Technical Information Document for Best Available Control Measures, Sept 1992, EPA-450/2-92-004, Equation 2-12
- s) Includes watering at least three times a day per Rule 403 (61% control efficiency).
- t) LSTs for a 5-acre site in SRA 6.
- u) ARB's CEIDARS database PM2.5 fractions - construction dust category for fugitive and diesel vehicle exhaust category for combustion.

<b>Village at Calabasas Project</b>	<b>Construction Activity</b>
	Phase 1 Building (2011) 100,000 Square Foot Structure <sup>a</sup>
<b>Construction Schedule</b>	

<b>Equipment Type<sup>a,b</sup></b>	<b>No. of Equipment</b>	<b>hr/day</b>	<b>Crew Size</b>
Cement and Mortar Mixers	2	8.0	100
Concrete/Industrial Saws	12	8.0	
Forklifts	2	8.0	
Plate Compactors	1	8.0	
Tractors/Loaders/Backhoes	1	8.0	
Trenchers	1	8.0	
Welders	1	8.0	

<b>Construction Equipment Combustion Emission Factors</b>			
	<b>CO</b>	<b>NOx</b>	<b>PM10</b>
<b>Equipment Type<sup>c</sup></b>	lb/hr	lb/hr	lb/hr
Cement and Mortar Mixers	0.043	0.058	0.003
Concrete/Industrial Saws	0.068	0.127	0.006
Forklifts	0.228	0.474	0.026
Plate Compactors	0.026	0.032	0.001
Tractors/Loaders/Backhoes	0.387	0.628	0.048
Trenchers	0.483	0.730	0.061
Welders	0.220	0.282	0.026

<b>Construction Vehicle (Mobile Source) Emission Factors</b>			
	<b>CO</b>	<b>NOx</b>	<b>PM10</b>
	lb/mile	lb/mile	lb/mile
Heavy-Duty Truck <sup>d</sup>	0.01112463	0.03455809	0.00166087

<b>Construction Worker Number of Trips and Trip Length</b>		
<b>Vehicle</b>	<b>No. of One-Way Trips/Day</b>	<b>Trip Length (miles)</b>
Flatbed Truck <sup>a,e</sup>	0	0.1
Water Truck <sup>f</sup>	0	6.4

**Incremental Increase in Onsite Combustion Emissions from Construction Equipment**

**Equation:** Emission Factor (lb/BHP-hr) x No. of Equipment x Work Day (hr/day) x Equipment rating (hp) x Load Factor (%/100) = Onsite Construction Emissions (lb/day)

<b>Equipment Type</b>	<b>CO</b> lb/day	<b>NOx</b> lb/day	<b>PM10</b> lb/day
Cement and Mortar Mixers	0.69	0.92	0.05
Concrete/Industrial Saws	6.51	12.17	0.54
Forklifts	3.66	7.59	0.41
Plate Compactors	0.21	0.25	0.01
Tractors/Loaders/Backhoes	3.10	5.02	0.39
Trenchers	3.86	5.84	0.49
Welders	1.76	2.25	0.21
<b>Total</b>	<b>19.79</b>	<b>34.04</b>	<b>2.09</b>

**Incremental Increase in Onsite Combustion Emissions from Onroad Mobile Vehicles**

**Equation:** Emission Factor (lb/mile) x No. of One-Way Trips/Day x 2 x Trip length (mile) = Mobile Emissions (lb/day)

<b>Vehicle</b>	<b>CO</b> lb/day	<b>NOx</b> lb/day	<b>PM10</b> lb/day
Flatbed Truck	0.00	0.00	0.00
Water Truck	0.00	0.00	0.00
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

**Total Incremental Combustion Emissions from Construction Activities**

<b>Sources</b>	<b>CO</b> lb/day	<b>NOx</b> lb/day	<b>PM10</b> lb/day
On-Site Emissions	<b>19.79</b>	<b>34.04</b>	<b>2.09</b>
<b>Significance Threshold<sup>g</sup></b>	<b>1138.00</b>	<b>172.00</b>	<b>11.00</b>
<b>Exceed Significance?</b>	<b>NO</b>	<b>NO</b>	<b>NO</b>

<b>Combustion and Fugitive Summary</b>	<b>PM2.5 Fraction<sup>h</sup></b>	<b>PM10</b> lb/day	<b>PM2.5</b> lb/day
Combustion (Offroad)	0.92	2.09	1.93
Combustion (Onroad)	0.96	0.00	0.00
Fugitive	0.21	0.00	0.00
<b>Total</b>		<b>2.09</b>	<b>1.93</b>
<b>Significance Threshold<sup>g</sup></b>			<b>6.00</b>
<b>Exceed Significance?</b>			<b>NO</b>

**Notes:**

- a) Construction data provided for Project.
- b) Equipment name must match CARB Off-Road Model (see Off-Road Model EF worksheet) equipment name for sheet to look up EFs automatically
- c) SCAB values provided by the ARB, Oct 2006. Assumed equipment is diesel fueled except the welders which are powered by the generator.
- d) 2011 fleet year. <http://www.aqmd.gov/ceqa/handbook/onroad/onroad.html>.
- e) Assumed haul truck travels 0.1 miles through facility
- f) No water trucks would be used during this construction phase.
- g) LSTs for a 5-acre site in SRA 6.
- h) ARB's CEIDARS database PM2.5 fractions - construction dust category for fugitive and diesel vehicle exhaust category for combustion.

<b>Village at Calabasas Project</b>	<b>Construction Activity</b> Phase 1 Architectural Coating and Asphalt Paving (2011)
<b>Construction Schedule -</b>	<b>10 days<sup>a</sup></b>

<b>Equipment Type<sup>a,b</sup></b>	<b>No. of Equipment</b>	<b>hr/day</b>	<b>Crew Size</b>
Plate Compactors	1	8.0	10
Rollers	1	8.0	
Rubber Tired Loaders	1	8.0	
Skid Steer Loaders	1	8.0	
Tractors/Loaders/Backhoes	0	8.0	

<b>Construction Equipment Combustion Emission Factors</b>			
<b>Equipment Type<sup>c</sup></b>	<b>CO</b>	<b>NOx</b>	<b>PM10</b>
	lb/hr	lb/hr	lb/hr
Plate Compactors	0.026	0.032	0.001
Rollers	0.416	0.734	0.052
Rubber Tired Loaders	0.496	1.077	0.061
Skid Steer Loaders	0.242	0.280	0.023
Tractors/Loaders/Backhoes	0.387	0.628	0.048

<b>Construction Vehicle (Mobile Source) Emission Factors</b>			
	<b>CO</b>	<b>NOx</b>	<b>PM10</b>
	lb/mile	lb/mile	lb/mile
Heavy-Duty Truck <sup>d</sup>	0.01112463	0.03455809	0.00166087

<b>Construction Worker Number of Trips and Trip Length</b>		
<b>Vehicle</b>	<b>No. of One-Way Trips/Day</b>	<b>Trip Length (miles)</b>
Delivery Truck <sup>e</sup>	0	0.1
Water Truck <sup>f</sup>	0	6.4

**Incremental Increase in Onsite Combustion Emissions from Construction Equipment**

**Equation:** Emission Factor (lb/BHP-hr) x No. of Equipment x Work Day (hr/day) x Equipment rating (hp) x Load Factor (%/100) = Onsite Construction Emissions (lb/day)

<b>Equipment Type</b>	<b>CO</b> lb/day	<b>NOx</b> lb/day	<b>PM10</b> lb/day
Plate Compactors	0.21	0.25	0.01
Rollers	3.33	5.87	0.42
Rubber Tired Loaders	3.97	8.62	0.49
Skid Steer Loaders	1.93	2.24	0.18
Tractors/Loaders/Backhoes	0.00	0.00	0.00
<b>Total</b>	<b>9.44</b>	<b>16.98</b>	<b>1.10</b>

**Incremental Increase in Onsite Combustion Emissions from Onroad Mobile Vehicles**

**Equation:** Emission Factor (lb/mile) x No. of One-Way Trips/Day x 2 x Trip length (mile) = Mobile Emissions (lb/day)

<b>Vehicle</b>	<b>CO</b> lb/day	<b>NOx</b> lb/day	<b>PM10</b> lb/day
Delivery Truck	0.00	0.00	0.00
Water Truck	0.00	0	0
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

**Total Incremental Combustion Emissions from Construction Activities**

<b>Sources</b>	<b>CO</b> lb/day	<b>NOx</b> lb/day	<b>PM10</b> lb/day
On-Site Emissions	<b>9.44</b>	<b>16.98</b>	<b>1.10</b>
<b>Significance Threshold<sup>g</sup></b>	<b>1138.00</b>	<b>172.00</b>	<b>11.00</b>
<b>Exceed Significance?</b>	<b>NO</b>	<b>NO</b>	<b>NO</b>

<b>Combustion and Fugitive Summary</b>	<b>PM2.5 Fraction<sup>h</sup></b>	<b>PM10</b> lb/day	<b>PM2.5</b> lb/day
Combustion (Offroad)	0.92	1.10	1.01
Combustion (Onroad)	0.96	0.00	0.00
Fugitive	0.21	0.00	0.00
<b>Total</b>		<b>1.10</b>	<b>1.01</b>
<b>Significance Threshold<sup>g</sup></b>			<b>6.00</b>
<b>Exceed Significance?</b>			<b>NO</b>



**Notes:**

- a) Construction data provided for Project.
- b) Equipment name must match CARB Off-Road Model (see Off-Road Model EF worksheet) equipment name for sheet to look up EFs automatically
- c) SCAB values provided by the ARB, Oct 2006. Assumed equipment is diesel fueled except the welders which are powered by the generator.
- d) 2011 fleet year. <http://www.aqmd.gov/ceqa/handbook/onroad/onroad.html>.
- e) Assumed haul truck travels 0.1 miles through facility
- f) No water trucks would be used during this construction phase.
- g) LSTs for a 5-acre site in SRA 6.
- h) ARB's CEIDARS database PM2.5 fractions - construction dust category for fugitive and diesel vehicle exhaust category for combustion.

Urbemis 2007 Version 9.2.4

Combined Summer Emissions Reports (Pounds/Day)

File Name: F:\MSWord 2009 Projects\Village at Calabasas\AQ Data\URBEMIS Runs\Phase 2 Construction Emissions.urb924

Project Name: Village at Calabasas - Phase 2 Construction Emissions

Project Location: South Coast AQMD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

CONSTRUCTION EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10 Dust</u>	<u>PM10 Exhaust</u>	<u>PM10</u>	<u>PM2.5 Dust</u>	<u>PM2.5 Exhaust</u>	<u>PM2.5</u>	<u>CO2</u>
2012 TOTALS (lbs/day unmitigated)	4.45	30.88	29.69	0.02	0.08	1.65	1.74	0.03	1.52	1.55	4,875.77
2013 TOTALS (lbs/day unmitigated)	26.19	29.26	29.11	0.02	0.09	1.50	1.59	0.03	1.38	1.41	5,000.99

Construction Unmitigated Detail Report:

CONSTRUCTION EMISSION ESTIMATES Summer Pounds Per Day, Unmitigated

<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10 Dust</u>	<u>PM10 Exhaust</u>	<u>PM10</u>	<u>PM2.5 Dust</u>	<u>PM2.5 Exhaust</u>	<u>PM2.5</u>	<u>CO2</u>
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Time Slice 3/7/2012-12/31/2012 Active Days: 214	<u>4.45</u>	<u>30.88</u>	<u>29.69</u>	<u>0.02</u>	<u>0.08</u>	<u>1.65</u>	<u>1.74</u>	<u>0.03</u>	<u>1.52</u>	<u>1.55</u>	<u>4,875.77</u>
Building 03/07/2012-03/29/2013	4.45	30.88	29.69	0.02	0.08	1.65	1.74	0.03	1.52	1.55	4,875.77
Building Off Road Diesel	3.97	28.56	17.44	0.00	0.00	1.54	1.54	0.00	1.42	1.42	2,999.34
Building Vendor Trips	0.15	1.70	1.40	0.00	0.01	0.07	0.08	0.00	0.06	0.07	390.25
Building Worker Trips	0.33	0.62	10.85	0.02	0.07	0.04	0.11	0.03	0.03	0.06	1,486.18
Time Slice 1/1/2013-3/1/2013 Active Days: 44	4.22	29.22	28.26	0.02	0.08	1.50	1.58	0.03	1.37	1.40	4,875.61
Building 03/07/2012-03/29/2013	4.22	29.22	28.26	0.02	0.08	1.50	1.58	0.03	1.37	1.40	4,875.61
Building Off Road Diesel	3.78	27.15	16.89	0.00	0.00	1.40	1.40	0.00	1.28	1.28	2,999.34
Building Vendor Trips	0.14	1.50	1.29	0.00	0.01	0.06	0.07	0.00	0.06	0.06	390.26
Building Worker Trips	0.30	0.57	10.08	0.02	0.07	0.04	0.11	0.03	0.03	0.06	1,486.01
Time Slice 3/4/2013-3/29/2013 Active Days: 20	<u>26.19</u>	<u>29.26</u>	<u>29.11</u>	<u>0.02</u>	<u>0.09</u>	<u>1.50</u>	<u>1.59</u>	<u>0.03</u>	<u>1.38</u>	<u>1.41</u>	<u>5,000.99</u>
Building 03/07/2012-03/29/2013	4.22	29.22	28.26	0.02	0.08	1.50	1.58	0.03	1.37	1.40	4,875.61
Building Off Road Diesel	3.78	27.15	16.89	0.00	0.00	1.40	1.40	0.00	1.28	1.28	2,999.34
Building Vendor Trips	0.14	1.50	1.29	0.00	0.01	0.06	0.07	0.00	0.06	0.06	390.26
Building Worker Trips	0.30	0.57	10.08	0.02	0.07	0.04	0.11	0.03	0.03	0.06	1,486.01
Coating 03/04/2013-05/10/2013	21.98	0.05	0.85	0.00	0.01	0.00	0.01	0.00	0.00	0.01	125.38
Architectural Coating	21.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.03	0.05	0.85	0.00	0.01	0.00	0.01	0.00	0.00	0.01	125.38
Time Slice 4/1/2013-5/10/2013 Active Days: 30	21.98	0.05	0.85	0.00	0.01	0.00	0.01	0.00	0.00	0.01	125.38
Coating 03/04/2013-05/10/2013	21.98	0.05	0.85	0.00	0.01	0.00	0.01	0.00	0.00	0.01	125.38
Architectural Coating	21.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.03	0.05	0.85	0.00	0.01	0.00	0.01	0.00	0.00	0.01	125.38

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Phase Assumptions

Phase: Building Construction 3/7/2012 - 3/29/2013 - Default Building Construction Description

Off-Road Equipment:

2 Cement and Mortar Mixers (10 hp) operating at a 0.56 load factor for 8 hours per day

12 Concrete/Industrial Saws (10 hp) operating at a 0.73 load factor for 8 hours per day

2 Forklifts (145 hp) operating at a 0.3 load factor for 8 hours per day

1 Rubber Tired Dozers (357 hp) operating at a 0.59 load factor for 8 hours per day

1 Skid Steer Loaders (44 hp) operating at a 0.55 load factor for 8 hours per day

2 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 8 hours per day

Phase: Architectural Coating 3/4/2013 - 5/10/2013 - Default Architectural Coating Description

Rule: Residential Interior Coatings begins 1/1/2005 ends 6/30/2008 specifies a VOC of 100

Rule: Residential Interior Coatings begins 7/1/2008 ends 12/31/2040 specifies a VOC of 50

Rule: Residential Exterior Coatings begins 1/1/2005 ends 6/30/2008 specifies a VOC of 250

Rule: Residential Exterior Coatings begins 7/1/2008 ends 12/31/2040 specifies a VOC of 100

Rule: Nonresidential Interior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250

Rule: Nonresidential Exterior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250

<b>Village at Calabasas Project</b>	<b>Construction Activity</b>
	Phase 2 Building (2012) 124,818 Square Foot Structure <sup>a</sup>
<b>Construction Schedule</b>	

<b>Equipment Type<sup>a,b</sup></b>	<b>No. of Equipment</b>	<b>hr/day</b>	<b>Crew Size</b>
Cement and Mortar Mixers	2	8.0	100
Concrete/Industrial Saws	12	8.0	
Forklifts	2	8.0	
Rubber Tired Dozers	1	8.0	
Skid Steer Loaders	1	8.0	
Tractors/Loaders/Backhoes	2	8.0	
Welders	0	8.0	

<b>Construction Equipment Combustion Emission Factors</b>			
	<b>CO</b>	<b>NOx</b>	<b>PM10</b>
<b>Equipment Type<sup>c</sup></b>	lb/hr	lb/hr	lb/hr
Cement and Mortar Mixers	0.042	0.056	0.003
Concrete/Industrial Saws	0.068	0.126	0.005
Forklifts	0.226	0.433	0.023
Rubber Tired Dozers	1.249	2.685	0.114
Skid Steer Loaders	0.236	0.269	0.021
Tractors/Loaders/Backhoes	0.382	0.581	0.044
Welders	0.215	0.270	0.024

<b>Construction Vehicle (Mobile Source) Emission Factors</b>			
	<b>CO</b>	<b>NOx</b>	<b>PM10</b>
	lb/mile	lb/mile	lb/mile
Heavy-Duty Truck <sup>d</sup>	0.01021519	0.03092379	0.00149566

<b>Construction Worker Number of Trips and Trip Length</b>		
<b>Vehicle</b>	<b>No. of One-Way Trips/Day</b>	<b>Trip Length (miles)</b>
Flatbed Truck <sup>a,e</sup>	0	0.1
Water Truck <sup>f</sup>	0	6.4

**Incremental Increase in Onsite Combustion Emissions from Construction Equipment**

**Equation:** Emission Factor (lb/BHP-hr) x No. of Equipment x Work Day (hr/day) x Equipment rating (hp) x Load Factor (%/100) = Onsite Construction Emissions (lb/day)

<b>Equipment Type</b>	<b>CO</b> lb/day	<b>NOx</b> lb/day	<b>PM10</b> lb/day
Cement and Mortar Mixers	0.68	0.90	0.05
Concrete/Industrial Saws	6.51	12.10	0.48
Forklifts	3.61	6.93	0.37
Rubber Tired Dozers	9.99	21.48	0.91
Skid Steer Loaders	1.89	2.15	0.17
Tractors/Loaders/Backhoes	6.12	9.30	0.70
Welders	0.00	0.00	0.00
<b>Total</b>	<b>28.80</b>	<b>52.86</b>	<b>2.67</b>

**Incremental Increase in Onsite Combustion Emissions from Onroad Mobile Vehicles**

**Equation:** Emission Factor (lb/mile) x No. of One-Way Trips/Day x 2 x Trip length (mile) = Mobile Emissions (lb/day)

<b>Vehicle</b>	<b>CO</b> lb/day	<b>NOx</b> lb/day	<b>PM10</b> lb/day
Flatbed Truck	0.00	0.00	0.00
Water Truck	0.00	0.00	0.00
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

**Total Incremental Combustion Emissions from Construction Activities**

<b>Sources</b>	<b>CO</b> lb/day	<b>NOx</b> lb/day	<b>PM10</b> lb/day
On-Site Emissions	<b>28.80</b>	<b>52.86</b>	<b>2.67</b>
<b>Significance Threshold<sup>g</sup></b>	<b>1138.00</b>	<b>172.00</b>	<b>11.00</b>
<b>Exceed Significance?</b>	<b>NO</b>	<b>NO</b>	<b>NO</b>

<b>Combustion and Fugitive Summary</b>	<b>PM2.5 Fraction<sup>h</sup></b>	<b>PM10</b> lb/day	<b>PM2.5</b> lb/day
Combustion (Offroad)	0.92	2.67	2.46
Combustion (Onroad)	0.96	0.00	0.00
Fugitive	0.21	0.00	0.00
<b>Total</b>		<b>2.67</b>	<b>2.46</b>
<b>Significance Threshold<sup>g</sup></b>			<b>6.00</b>
<b>Exceed Significance?</b>			<b>NO</b>

**Notes:**

- a) Construction data provided for Project.
- b) Equipment name must match CARB Off-Road Model (see Off-Road Model EF worksheet) equipment name for sheet to look up EFs automatically
- c) SCAB values provided by the ARB, Oct 2006. Assumed equipment is diesel fueled except the welders which are powered by the generator.
- d) 2012 fleet year. <http://www.aqmd.gov/ceqa/handbook/onroad/onroad.html>.
- e) Assumed haul truck travels 0.1 miles through facility
- f) No water trucks would be used during this construction phase.
- g) LSTs for a 5-acre site in SRA 6.
- h) ARB's CEIDARS database PM2.5 fractions - construction dust category for fugitive and diesel vehicle exhaust category for combustion.

<b>Village at Calabasas Project</b>	<b>Construction Activity</b>
	Phase 2 Building (2013) 124,818 Square Foot Structure <sup>a</sup>
<b>Construction Schedule</b>	

<b>Equipment Type<sup>a,b</sup></b>	<b>No. of Equipment</b>	<b>hr/day</b>	<b>Crew Size</b>
Cement and Mortar Mixers	2	8.0	100
Concrete/Industrial Saws	12	8.0	
Forklifts	2	8.0	
Rubber Tired Dozers	1	8.0	
Skid Steer Loaders	1	8.0	
Tractors/Loaders/Backhoes	2	8.0	
Welders	0	8.0	

<b>Construction Equipment Combustion Emission Factors</b>			
	<b>CO</b>	<b>NOx</b>	<b>PM10</b>
<b>Equipment Type<sup>c</sup></b>	lb/hr	lb/hr	lb/hr
Cement and Mortar Mixers	0.042	0.056	0.003
Concrete/Industrial Saws	0.068	0.126	0.005
Forklifts	0.223	0.395	0.020
Rubber Tired Dozers	1.175	2.542	0.106
Skid Steer Loaders	0.231	0.252	0.018
Tractors/Loaders/Backhoes	0.378	0.539	0.039
Welders	0.210	0.256	0.022

<b>Construction Vehicle (Mobile Source) Emission Factors</b>			
	<b>CO</b>	<b>NOx</b>	<b>PM10</b>
	lb/mile	lb/mile	lb/mile
Heavy-Duty Truck <sup>d</sup>	0.00931790	0.02742935	0.00133697

<b>Construction Worker Number of Trips and Trip Length</b>		
<b>Vehicle</b>	<b>No. of One-Way Trips/Day</b>	<b>Trip Length (miles)</b>
Flatbed Truck <sup>a,e</sup>	0	0.1
Water Truck <sup>f</sup>	0	6.4



**Incremental Increase in Onsite Combustion Emissions from Construction Equipment**

**Equation:** Emission Factor (lb/BHP-hr) x No. of Equipment x Work Day (hr/day) x Equipment rating (hp) x Load Factor (%/100) = Onsite Construction Emissions (lb/day)

<b>Equipment Type</b>	<b>CO</b> lb/day	<b>NOx</b> lb/day	<b>PM10</b> lb/day
Cement and Mortar Mixers	0.67	0.89	0.04
Concrete/Industrial Saws	6.51	12.07	0.47
Forklifts	3.58	6.32	0.33
Rubber Tired Dozers	9.40	20.34	0.85
Skid Steer Loaders	1.85	2.02	0.14
Tractors/Loaders/Backhoes	6.05	8.62	0.62
Welders	0.00	0.00	0.00
<b>Total</b>	<b>28.06</b>	<b>50.25</b>	<b>2.45</b>

**Incremental Increase in Onsite Combustion Emissions from Onroad Mobile Vehicles**

**Equation:** Emission Factor (lb/mile) x No. of One-Way Trips/Day x 2 x Trip length (mile) = Mobile Emissions (lb/day)

<b>Vehicle</b>	<b>CO</b> lb/day	<b>NOx</b> lb/day	<b>PM10</b> lb/day
Flatbed Truck	0.00	0.00	0.00
Water Truck	0.00	0.00	0.00
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

**Total Incremental Combustion Emissions from Construction Activities**

<b>Sources</b>	<b>CO</b> lb/day	<b>NOx</b> lb/day	<b>PM10</b> lb/day
On-Site Emissions	<b>28.06</b>	<b>50.25</b>	<b>2.45</b>
<b>Significance Threshold<sup>g</sup></b>	<b>1138.00</b>	<b>172.00</b>	<b>11.00</b>
<b>Exceed Significance?</b>	<b>NO</b>	<b>NO</b>	<b>NO</b>

<b>Combustion and Fugitive Summary</b>	<b>PM2.5 Fraction<sup>h</sup></b>	<b>PM10</b> lb/day	<b>PM2.5</b> lb/day
Combustion (Offroad)	0.92	2.45	2.25
Combustion (Onroad)	0.96	0.00	0.00
Fugitive	0.21	0.00	0.00
<b>Total</b>		<b>2.45</b>	<b>2.25</b>
<b>Significance Threshold<sup>g</sup></b>			<b>6.00</b>
<b>Exceed Significance?</b>			<b>NO</b>

**Notes:**

- a) Construction data provided for Project.
- b) Equipment name must match CARB Off-Road Model (see Off-Road Model EF worksheet) equipment name for sheet to look up EFs automatically
- c) SCAB values provided by the ARB, Oct 2006. Assumed equipment is diesel fueled except the welders which are powered by the generator.
- d) 2012 fleet year. <http://www.aqmd.gov/ceqa/handbook/onroad/onroad.html>.
- e) Assumed haul truck travels 0.1 miles through facility
- f) No water trucks would be used during this construction phase.
- g) LSTs for a 5-acre site in SRA 6.
- h) ARB's CEIDARS database PM2.5 fractions - construction dust category for fugitive and diesel vehicle exhaust category for combustion.

Urbemis 2007 Version 9.2.4

Combined Summer Emissions Reports (Pounds/Day)

File Name: F:\MSWord 2009 Projects\Village at Calabasas\AQ Data\URBEMIS Runs\Proposed Project Operational Emissions.urb924

Project Name: Village at Calabasas - Project Operational Emissions

Project Location: South Coast AQMD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

AREA SOURCE EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (lbs/day, unmitigated)	12.95	2.88	8.92	0.00	0.03	0.03	3,577.51

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (lbs/day, unmitigated)	5.70	4.54	58.47	0.07	11.45	2.17	6,270.81

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (lbs/day, unmitigated)	18.65	7.42	67.39	0.07	11.48	2.20	9,848.32

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Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Summer Pounds Per Day, Unmitigated

<u>Source</u>	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
Natural Gas	0.22	2.79	1.19	0.00	0.01	0.01	3,564.44
Hearth							
Landscape	1.08	0.09	7.73	0.00	0.02	0.02	13.07
Consumer Products	11.08						
Architectural Coatings	0.57						
<b>TOTALS (lbs/day, unmitigated)</b>	<b>12.95</b>	<b>2.88</b>	<b>8.92</b>	<b>0.00</b>	<b>0.03</b>	<b>0.03</b>	<b>3,577.51</b>

Area Source Changes to Defaults

Operational Unmitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Summer Pounds Per Day, Unmitigated

<u>Source</u>	<u>ROG</u>	<u>NOX</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM25</u>	<u>CO2</u>
Retirement community	3.03	2.49	32.07	0.04	6.28	1.19	3,439.52
Congregate care (Assisted Living) Facility	2.67	2.05	26.40	0.03	5.17	0.98	2,831.29
<b>TOTALS (lbs/day, unmitigated)</b>	<b>5.70</b>	<b>4.54</b>	<b>58.47</b>	<b>0.07</b>	<b>11.45</b>	<b>2.17</b>	<b>6,270.81</b>

Operational Settings:

Does not include correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2012 Temperature (F): 80 Season: Summer

Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Retirement community	5.43	3.48	dwelling units	104.00	361.92	3,656.41
Congregate care (Assisted Living) Facility	5.43	2.66	dwelling units	112.00	297.92	3,009.83
					659.84	6,666.24

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	59.7	0.6	99.2	0.2
Light Truck < 3750 lbs	8.4	1.4	95.9	2.7
Light Truck 3751-5750 lbs	26.6	0.4	99.6	0.0
Med Truck 5751-8500 lbs	0.7	0.9	99.1	0.0
Lite-Heavy Truck 8501-10,000 lbs	0.1	0.0	81.2	18.8
Lite-Heavy Truck 10,001-14,000 lbs	0.0	0.0	60.0	40.0
Med-Heavy Truck 14,001-33,000 lbs	0.1	0.0	22.2	77.8
Heavy-Heavy Truck 33,001-60,000 lbs	0.0	0.0	0.0	100.0
Other Bus	0.0	0.0	0.0	100.0
Urban Bus	0.1	0.0	0.0	100.0
Motorcycle	3.2	60.7	39.3	0.0
School Bus	0.1	0.0	0.0	100.0
Motor Home	1.0	0.0	88.9	11.1

Travel Conditions

	Residential			Commute	Commercial	
	Home-Work	Home-Shop	Home-Other		Non-Work	Customer
Urban Trip Length (miles)	12.7	7.0	9.5	13.3	7.4	8.9
Rural Trip Length (miles)	17.6	12.1	14.9	15.4	9.6	12.6
Trip speeds (mph)	30.0	30.0	30.0	30.0	30.0	30.0
% of Trips - Residential	32.9	18.0	49.1			

% of Trips - Commercial (by land use)

Urbemis 2007 Version 9.2.4

Combined Winter Emissions Reports (Pounds/Day)

File Name: F:\MSWord 2009 Projects\Village at Calabasas\AQ Data\URBEMIS Runs\Proposed Project Operational Emissions.urb924

Project Name: Village at Calabasas - Project Operational Emissions

Project Location: South Coast AQMD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

AREA SOURCE EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (lbs/day, unmitigated)	11.87	2.79	1.19	0.00	0.01	0.01	3,564.44

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (lbs/day, unmitigated)	5.53	5.60	56.64	0.05	11.45	2.17	5,635.75

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (lbs/day, unmitigated)	17.40	8.39	56.83	0.05	11.46	2.18	9,200.19

11/20/2009 1:01:32 PM

Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Winter Pounds Per Day, Unmitigated

<u>Source</u>	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
Natural Gas	0.22	2.79	1.19	0.00	0.01	0.01	3,564.44
Hearth							
Landscaping - No Winter Emissions							
Consumer Products	11.08						
Architectural Coatings	0.57						
<b>TOTALS (lbs/day, unmitigated)</b>	<b>11.87</b>	<b>2.79</b>	<b>1.19</b>	<b>0.00</b>	<b>0.01</b>	<b>0.01</b>	<b>3,564.44</b>

Area Source Changes to Defaults

Operational Unmitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Winter Pounds Per Day, Unmitigated

<u>Source</u>	<u>ROG</u>	<u>NOX</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM25</u>	<u>CO2</u>
Retirement community	2.99	3.07	30.52	0.03	6.28	1.19	3,091.19
Congregate care (Assisted Living) Facility	2.54	2.53	25.12	0.02	5.17	0.98	2,544.56
<b>TOTALS (lbs/day, unmitigated)</b>	<b>5.53</b>	<b>5.60</b>	<b>55.64</b>	<b>0.05</b>	<b>11.45</b>	<b>2.17</b>	<b>5,635.75</b>

Operational Settings:

Does not include correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2012 Temperature (F): 60 Season: Winter



Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Retirement community	5.43	3.48	dwelling units	104.00	361.92	3,656.41
Congregate care (Assisted Living) Facility	5.43	2.66	dwelling units	112.00	297.92	3,009.83
					659.84	6,666.24

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	59.7	0.6	99.2	0.2
Light Truck < 3750 lbs	8.4	1.4	95.9	2.7
Light Truck 3751-5750 lbs	26.6	0.4	99.6	0.0
Med Truck 5751-8500 lbs	0.7	0.9	99.1	0.0
Lite-Heavy Truck 8501-10,000 lbs	0.1	0.0	81.2	18.8
Lite-Heavy Truck 10,001-14,000 lbs	0.0	0.0	60.0	40.0
Med-Heavy Truck 14,001-33,000 lbs	0.1	0.0	22.2	77.8
Heavy-Heavy Truck 33,001-60,000 lbs	0.0	0.0	0.0	100.0
Other Bus	0.0	0.0	0.0	100.0
Urban Bus	0.1	0.0	0.0	100.0
Motorcycle	3.2	60.7	39.3	0.0
School Bus	0.1	0.0	0.0	100.0
Motor Home	1.0	0.0	88.9	11.1

Travel Conditions

	Residential			Commute	Commercial	
	Home-Work	Home-Shop	Home-Other		Non-Work	Customer
Urban Trip Length (miles)	12.7	7.0	9.5	13.3	7.4	8.9
Rural Trip Length (miles)	17.6	12.1	14.9	15.4	9.6	12.6
Trip speeds (mph)	30.0	30.0	30.0	30.0	30.0	30.0
% of Trips - Residential	32.9	18.0	49.1			

% of Trips - Commercial (by land use)

Urbemis 2007 Version 9.2.4

Combined Summer Emissions Reports (Pounds/Day)

File Name: F:\MSWord 2009 Projects\Village at Calabasas\AQ Data\URBEMIS Runs\Proposed Project On-site Vehicular Emissions.urb924

Project Name: Village at Calabasas - Project On-site Vehicular Emissions

Project Location: South Coast AQMD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (lbs/day, unmitigated)	2.37	0.62	8.71	0.00	0.13	0.04	215.68

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (lbs/day, unmitigated)	2.37	0.62	8.71	0.00	0.13	0.04	215.68

Operational Unmitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Summer Pounds Per Day, Unmitigated

<u>Source</u>	ROG	NOX	CO	SO2	PM10	PM25	CO2
Retirement community	1.20	0.34	4.78	0.00	0.07	0.02	118.30
Congregate care (Assisted Living) Facility	1.17	0.28	3.93	0.00	0.06	0.02	97.38
<b>TOTALS (lbs/day, unmitigated)</b>	<b>2.37</b>	<b>0.62</b>	<b>8.71</b>	<b>0.00</b>	<b>0.13</b>	<b>0.04</b>	<b>215.68</b>

Operational Settings:

- Does not include correction for passby trips
- Does not include double counting adjustment for internal trips
- Analysis Year: 2012 Temperature (F): 80 Season: Summer
- Emfac: Version : Emfac2007 V2.3 Nov 1 2006

Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Retirement community	5.43	3.48	dwelling units	104.00	361.92	36.19
Congregate care (Assisted Living) Facility	5.43	2.66	dwelling units	112.00	297.92	29.79
					<b>659.84</b>	<b>65.98</b>

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	59.7	0.6	99.2	0.2
Light Truck < 3750 lbs	8.4	1.4	95.9	2.7
Light Truck 3751-5750 lbs	26.6	0.4	99.6	0.0
Med Truck 5751-8500 lbs	0.7	0.9	99.1	0.0

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Lite-Heavy Truck 8501-10,000 lbs	0.1	0.0	81.2	18.8
Lite-Heavy Truck 10,001-14,000 lbs	0.0	0.0	60.0	40.0
Med-Heavy Truck 14,001-33,000 lbs	0.1	0.0	22.2	77.8
Heavy-Heavy Truck 33,001-60,000 lbs	0.0	0.0	0.0	100.0
Other Bus	0.0	0.0	0.0	100.0
Urban Bus	0.1	0.0	0.0	100.0
Motorcycle	3.2	60.7	39.3	0.0
School Bus	0.1	0.0	0.0	100.0
Motor Home	1.0	0.0	88.9	11.1

Travel Conditions

	Residential			Commuter	Commercial	
	Home-Work	Home-Shop	Home-Other		Non-Work	Customer
Urban Trip Length (miles)	0.1	0.1	0.1	0.1	0.1	0.1
Rural Trip Length (miles)	17.6	12.1	14.9	15.4	9.6	12.6
Trip speeds (mph)	30.0	30.0	30.0	30.0	30.0	30.0
% of Trips - Residential	32.9	18.0	49.1			

% of Trips - Commercial (by land use)

Urbemis 2007 Version 9.2.4

Combined Winter Emissions Reports (Pounds/Day)

File Name: F:\MSWord 2009 Projects\Village at Calabasas\AQ Data\URBEMIS Runs\Proposed Project On-site Vehicular Emissions.urb924

Project Name: Village at Calabasas - Project On-site Vehicular Emissions

Project Location: South Coast AQMD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (lbs/day, unmitigated)	1.70	0.73	10.43	0.00	0.13	0.04	209.41

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (lbs/day, unmitigated)	1.70	0.73	10.43	0.00	0.13	0.04	209.41

Operational Unmitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Winter Pounds Per Day, Unmitigated

<u>Source</u>	ROG	NOX	CO	SO2	PM10	PM25	CO2
Retirement community	0.89	0.40	5.72	0.00	0.07	0.02	114.86
Congregate care (Assisted Living) Facility	0.81	0.33	4.71	0.00	0.06	0.02	94.55
<b>TOTALS (lbs/day, unmitigated)</b>	<b>1.70</b>	<b>0.73</b>	<b>10.43</b>	<b>0.00</b>	<b>0.13</b>	<b>0.04</b>	<b>209.41</b>

Operational Settings:

- Does not include correction for passby trips
- Does not include double counting adjustment for internal trips
- Analysis Year: 2012 Temperature (F): 60 Season: Winter
- Emfac: Version : Emfac2007 V2.3 Nov 1 2006

Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Retirement community	5.43	3.48	dwelling units	104.00	361.92	36.19
Congregate care (Assisted Living) Facility	5.43	2.66	dwelling units	112.00	297.92	29.79
					<b>659.84</b>	<b>65.98</b>

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	59.7	0.6	99.2	0.2
Light Truck < 3750 lbs	8.4	1.4	95.9	2.7
Light Truck 3751-5750 lbs	26.6	0.4	99.6	0.0
Med Truck 5751-8500 lbs	0.7	0.9	99.1	0.0

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Lite-Heavy Truck 8501-10,000 lbs	0.1	0.0	81.2	18.8
Lite-Heavy Truck 10,001-14,000 lbs	0.0	0.0	60.0	40.0
Med-Heavy Truck 14,001-33,000 lbs	0.1	0.0	22.2	77.8
Heavy-Heavy Truck 33,001-60,000 lbs	0.0	0.0	0.0	100.0
Other Bus	0.0	0.0	0.0	100.0
Urban Bus	0.1	0.0	0.0	100.0
Motorcycle	3.2	60.7	39.3	0.0
School Bus	0.1	0.0	0.0	100.0
Motor Home	1.0	0.0	88.9	11.1

Travel Conditions

	Residential			Commuter	Commercial	
	Home-Work	Home-Shop	Home-Other		Non-Work	Customer
Urban Trip Length (miles)	0.1	0.1	0.1	0.1	0.1	0.1
Rural Trip Length (miles)	17.6	12.1	14.9	15.4	9.6	12.6
Trip speeds (mph)	30.0	30.0	30.0	30.0	30.0	30.0
% of Trips - Residential	32.9	18.0	49.1			

% of Trips - Commercial (by land use)



**EMISSIONS OF GREENHOUSE GAS EMISSIONS FROM NATURAL GAS CONSUMPTION**

**Project Name:** Project  
**Analysis Year:** 2012  
**Analysis Scenario:** Proposed Project

**NATURAL GAS DEMAND**

Land Use	Units	Consumption Rate (cubic feet/unit/month)	Natural Gas Demand (cubic feet/month)
Single Residential Units:		6,665.0	-
Multi-Family Residential Units:	216	4,011.5	866,484.0
Industrial (parcels):		241,611.0	-
Hotel/Motel (square feet):		4.8	-
Retail/Shopping (square feet):		2.9	-
Office (square feet):		2.0	-
<b>Total Natural Gas Demand:</b>			<b>866,484.0</b>
Heating Value of Natural Gas (Btu/cubic foot):		1,020.0	
Monthly BTU:		883,813,680.0	
Monthly Million Btu (MMBtu):		883.8	

**GREENHOUSE GAS EMISSIONS**

Emissions	Emission Factors (kg/MMBtu)	Emissions (metric tons/year)	CO <sub>2</sub> Equivalency Factors	CO <sub>2</sub> Equivalent Emissions (tons per year)
Carbon Dioxide	53.06	562.74	1	562.74
Methane	0.00500	0.053	23	1.22
Nitrous Oxide	0.00010	0.001	296	0.31
<b>Total Emissions:</b>		<b>562.80</b>		<b>564.28</b>

## EMISSIONS OF GREENHOUSE GAS EMISSIONS FROM ELECTRICITY GENERATION

**Project Name:** Project  
**Analysis Year:** 2012  
**Analysis Scenario:** Proposed Project

### ELECTRICITY DEMAND

Land Use	Units	Useage Rate (KWh/unit/year)	Electricity Demand (KWh/year)
Residential Units	216	5626.5	1,215,324.0
Food Store (square feet):		53.3	-
Restaurant (square feet):		47.45	-
Hospital (square feet):		21.7	-
Retail (square feet):		13.55	-
College/University (square feet):		11.55	-
High School (square feet):		10.5	-
Elementary School (square feet):		5.9	-
Office (square feet):		12.95	-
Hotel/Motel (square feet):		9.95	-
Warehouse (square feet):		4.35	-
Miscellaneous (square feet):		10.5	-
Total Electricity Demand:			1,215,324.0

Total Megawatt Hours (MWh) per Year: 1,215.3

### GREENHOUSE GAS EMISSIONS

Emissions	Emission Factors (lbs/MWh)	Emissions (metric tons)	CO <sub>2</sub> Equivalency Factors	CO <sub>2</sub> Equivalent Emissions (tons per year)
Carbon Dioxide	724.12	399.18	1	399.18
Methane	0.030	0.017	23	0.38
Nitrous Oxide	0.008	0.004	296	1.32
Total Emissions:		399.20		400.88

**EMISSIONS OF GREENHOUSE GAS EMISSIONS FROM WATER USE**

**Project Name:** Project  
**Analysis Year:** 2012  
**Analysis Scenario:** Proposed Project

Gallons/month 1166400

Water Use Intensities (kwh/MG) 12700

Total Megawatt Hours (MWh) per Year 177.75936

**GREENHOUSE GAS EMISSIONS**

Emissions	Emission Factors (lbs/MWh)	Emissions (metric tons)	CO <sub>2</sub> Equivalent	
			CO <sub>2</sub> Equivalency Factors	Emissions tons per year
Carbon Dioxide	724.12	58.39	1	58.39
Methane	0.030	0.00	23	0.06
Nitrous Oxide	0.008	0.00	296	0.19
Total Emissions:		58.39		58.64

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Source of Water Use Intensity: California Energy Commission. Water-Energy Relationship 2005.

Source of greenhouse gas emission factors: *California Climate Action Registry General Reporting Protocol, v.3.1* January 2009.

**EMISSIONS OF GREENHOUSE GAS EMISSIONS FROM MOTOR VEHICLES**

**Project Name:** Project  
**Analysis Year:** 2012  
**Analysis Scenario:** Proposed Project

Vehicle Miles Per Day: 6,666.24  
 Days of Operation Per Year: 365

**Vehicle Fleet Mix**

Vehicle Type	Assumed				mpg
	Percent Type	Non-Catalyst	Catalyst	Diesel	
Light Auto	59.70%	0.60%	99.20%	0.20%	29.8
Light Truck <3,750 lbs	8.40%	1.40%	95.90%	2.70%	22.0
Light Truck 3,751-5,750	26.60%	0.40%	99.60%	0.00%	22.0
Medium Truck 5,751-8,500	0.70%	0.90%	99.10%	0.00%	17.6
Light Heavy 8,501-10,000	0.10%	0.00%	81.20%	18.80%	14.3
Light Heavy 10,001-14,000	0.00%	0.00%	60.00%	40.00%	10.5
Med-Heavy 14,001-33,000	0.10%	0.00%	22.20%	77.80%	8.0
Heavy-Heavy 33,001-60,000	0.00%	0.00%	0.00%	100.00%	5.7
Line Haul >60,000 lbs	0.00%	0.00%	0.00%	100.00%	5.7
Urban Bus	0.10%	0.00%	0.00%	100.00%	5.7
Motorcycle	3.20%	60.70%	39.30%	0.00%	27.5
School Bus	0.10%	0.00%	0.00%	100.00%	14.3
Motor Home	1.00%	0.00%	88.90%	11.10%	8.0

**Mobile Source Emission Factors**

Vehicle Type	Carbon Dioxide (kg/gallon)		Methane (g/mile)		Nitrous Oxide (g/mile)	
	Gasoline	Diesel	Gasoline	Diesel	Gasoline	Diesel
	Light Auto	8.81	10.15	0.0147	0.0005	0.0079
Light Truck <3,750 lbs	8.81	10.15	0.0157	0.0010	0.0101	0.0015
Light Truck 3,751-5,750	8.81	10.15	0.0157	0.0010	0.0101	0.0015
Medium Truck 5,751-8,500	8.81	10.15	0.0326	0.0051	0.0177	0.0051
Light Heavy 8,501-10,000	8.81	10.15	0.0326	0.0051	0.0177	0.0051
Light Heavy 10,001-14,000	8.81	10.15	0.0326	0.0051	0.0177	0.0051
Med-Heavy 14,001-33,000	8.81	10.15	0.0326	0.0051	0.0177	0.0051
Heavy-Heavy 33,001-60,000	8.81	10.15	0.0326	0.0051	0.0177	0.0051
Line Haul >60,000 lbs	8.81	10.15	0.0326	0.0051	0.0177	0.0051
Urban Bus	8.81	10.15	0.0326	0.0051	0.0177	0.0051
Motorcycle	8.81	10.15	0.0900	0.0000	0.0100	0.0000
School Bus	8.81	10.15	0.0326	0.0051	0.0177	0.0051
Motor Home	8.81	10.15	0.0326	0.0051	0.0177	0.0051

**Greenhouse Gas Emissions (metric tons per year)**

Vehicle Type	Carbon Dioxide		Methane		Nitrous Oxide	
	Gasoline	Diesel	Gasoline	Diesel	Gasoline	Diesel
Light Auto	428.59	0.99	0.0007	0.0000	0.0004	0.0000
Light Truck <3,750 lbs	79.64	2.55	0.0001	0.0000	0.0001	0.0000
Light Truck 3,751-5,750	259.18	-	0.0005	-	0.0003	-
Medium Truck 5,751-8,500	8.53	-	0.0000	-	0.0000	-
Light Heavy 8,501-10,000	1.22	0.32	0.0000	0.0000	0.0000	0.0000
Light Heavy 10,001-14,000	-	-	-	-	-	-
Med-Heavy 14,001-33,000	0.59	2.40	0.0000	0.0000	0.0000	0.0000
Heavy-Heavy 33,001-60,000	-	-	-	-	-	-
Line Haul >60,000 lbs	-	-	-	-	-	-
Urban Bus	-	4.33	-	0.0000	-	0.0000
Motorcycle	24.94	-	0.0003	-	0.0000	-
School Bus	-	1.73	-	0.0000	-	0.0000
Motor Home	23.82	3.43	0.0001	0.0000	0.0000	0.0000
Total Emissions by Fuel Type:	826.51	15.75	0.0017	0.0000	0.0009	0.0000
Total Emissions by Pollutant:	842.26	-	0.00	-	0.00	-
CO <sub>2</sub> Equivalency Factors	1.00	-	23.00	-	296.00	-
CO <sub>2</sub> Equivalent Emissions:	842.26	-	0.04	-	0.26	-
Total Emissions (CO <sub>2</sub> e):	842.56	-	-	-	-	-

Source of vehicle miles per day and vehicle fleet mix: URBEMIS 2007 model results for this analysis.

Sources of assumed mpg: National Highway Traffic Safety Administration Summary of Fuel Economy Performance (for passenger vehicles and light trucks for model years 2000-2008) (November 25, 2008); U.S. Department of Energy Transportation Energy Book: Edition 27 (2008)

Source of greenhouse gas emission factors: California Climate Action Registry General Reporting Protocol, v.3.1. January 2009.

# Appendix D

## Revised Oak Tree Impacts

**LAND DESIGN CONSULTANTS, INC.***Land Planning, Civil Engineering, Surveying & Environmental Services*

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February 26, 2010

**(Via Email & Regular Mail)**

Mr. Larry Dinovitz  
D2 Development, Inc.  
23500 Park Sorrento  
Calabasas, CA 91302

RE: Revised Project Oak Tree Impacts  
VTTM 66208 – Village at Calabasas  
Our Project Number 95018-024

Dear Mr. Dinovitz:

This letter summarizes the updated impacts to existing oak trees on “The Village at Calabasas” project based on the latest site plan design dated 1/7/2010 for Vesting Tentative Tract No. 66208. The newly designed project is a mixed-use development with assisted living component as the commercial use and independent living component as residential use. Parking will be accommodated through an above-grade parking structure, consisting of 267 parking spaces over four levels of parking. The proposed project will be built in two phases. The first phase will include the assisted living component (106 units) with twenty-one penthouse units (independent living), and a portion of the parking structure that will accommodate 102 cars. The second phase will consist of 83 independent living units as well as the remainder of the parking structure, storage units, and resort-style amenities.

As indicated in the following summary table, of the surveyed 134 oak trees with a DBH greater than two (2) inches, 108 will remain unaffected by the proposed project, twenty-two (22) will have their protected zones permanently encroached upon, and four (4) will be removed. Based on the current site plan, the previously proposed footpath will not be developed as part of the project at this time; therefore, 33 previously encroached-upon oaks will incur no impacts associated the revised project development.

The summary table also includes descriptions of the impacts illustrated in four (4) cross-sections that have been prepared to illustrate areas with the greatest encroachment concerns, as requested by the City's consulting arborist, Mr. James Dean.

Revised Oak Tree Impact Summary Table						
Tree No.	Genus & Species	Overall Grade	Project Impact			Reason for Impact
			NI	R	E	
1	<i>Q. agrifolia</i>	B-	X			No Impact
2	<i>Q. agrifolia</i>	B	X			No Impact
3	<i>Q. agrifolia</i>	C+	X			No Impact
4(H)	<i>Q. agrifolia</i>	B	X			No Impact
5	<i>Q. agrifolia</i>	B	X			No Impact
6(H)	<i>Q. agrifolia</i>	B+	X			No Impact
7	<i>Q. agrifolia</i>	C	X			No Impact
8	<i>Q. agrifolia</i>	C-	X			No Impact
9	<i>Q. agrifolia</i>	C-	X			No Impact
10	<i>Q. agrifolia</i>	B	X			No Impact
11	<i>Q. agrifolia</i>	C	X			No Impact
12(H)	<i>Q. lobata</i>	B	X			No Impact
13(H)	<i>Q. lobata</i>	B	X			No Impact
14	<i>Q. agrifolia</i>	C+	X			No Impact
15	<i>Q. agrifolia</i>	B	X			No Impact
16	<i>Q. agrifolia</i>	B-	X			No Impact
17	<i>Q. agrifolia</i>	C+	X			No Impact
18	<i>Q. agrifolia</i>	B	X			No Impact
19	<i>Q. agrifolia</i>	B-	X			No Impact
20	<i>Q. lobata</i>	C+	X			No Impact
21	<i>Q. lobata</i>	C	X			No Impact
22	<i>Q. lobata</i>	C	X			No Impact
23	<i>Q. lobata</i>	C	X			No Impact
24(H)	<i>Q. lobata</i>	B-	X			No Impact
25	<i>Q. lobata</i>	C	X			No Impact
26	<i>Q. lobata</i>	D	X			No Impact
27	<i>Q. agrifolia</i>	B-	X			No Impact
28	<i>Q. agrifolia</i>	B-	X			No Impact
29	<i>Q. agrifolia</i>	B-	X			No Impact
30	<i>Q. lobata</i>	B	X			No Impact
31(H)	<i>Q. lobata</i>	B	X			No Impact
32	<i>Q. agrifolia</i>	C	X			No Impact
33	<i>Q. agrifolia</i>	B	X			No Impact

Tree No.	Genus & Species	Overall Grade	Project Impact			Reason for Impact
			NI	R	E	
34	<i>Q. agrifolia</i>	B	X			No Impact
35	<i>Q. agrifolia</i>	C	X			No Impact
36	<i>Q. agrifolia</i>	B-	X			No Impact
37	<i>Q. lobata</i>	F	X			No Impact
38	<i>Q. agrifolia</i>	B	X			No Impact
39	<i>Q. agrifolia</i>	D	X			No Impact
40	<i>Q. agrifolia</i>	C-	X			No Impact
41	<i>Q. agrifolia</i>	D	X			No Impact
42	<i>Q. agrifolia</i>	C+	X			No Impact
43	<i>Q. agrifolia</i>	C-	X			No Impact
44	<i>Q. agrifolia</i>	B-	X			No Impact
45	<i>Q. agrifolia</i>	B-	X			No Impact
46	<i>Q. agrifolia</i>	C	X			No Impact
47	<i>Q. agrifolia</i>	C+	X			No Impact
48	<i>Q. agrifolia</i>	D+	X			No Impact
49	<i>Q. agrifolia</i>	C	X			No Impact
50	<i>Q. agrifolia</i>	C-	X			No Impact
51	<i>Q. agrifolia</i>	C	X			No Impact
52	<i>Q. agrifolia</i>	D-	X			No Impact
53	<i>Q. agrifolia</i>	C	X			No Impact
54	<i>Q. agrifolia</i>	C	X			No Impact
55	<i>Q. agrifolia</i>	C	X			No Impact
56	<i>Q. agrifolia</i>	C	X			No Impact
57	<i>Q. agrifolia</i>	B	X			No Impact
58	<i>Q. agrifolia</i>	B-	X			No Impact
59	<i>Q. agrifolia</i>	C	X			No Impact
60	<i>Q. agrifolia</i>	C	X			No Impact
61	<i>Q. agrifolia</i>	B	X			No Impact
62	<i>Q. agrifolia</i>	B-	X			No Impact
63	<i>Q. agrifolia</i>	C+	X			No Impact
64	<i>Q. agrifolia</i>	D	X			No Impact
65	<i>Q. agrifolia</i>	B	X			No Impact
66	<i>Q. agrifolia</i>	C	X			No Impact
67	<i>Q. agrifolia</i>	C+	X			No Impact
68	<i>Q. agrifolia</i>	B	X			No Impact
69	<i>Q. agrifolia</i>	B	X			No Impact
70	<i>Q. agrifolia</i>	D+	X			No Impact
71	<i>Q. agrifolia</i>	C-	X			No Impact
72	<i>Q. agrifolia</i>	C+	X			No Impact



Tree No.	Genus & Species	Overall Grade	Project Impact			Reason for Impact
			NI	R	E	
73	<i>Q. agrifolia</i>	D	X			No Impact
74(H)	<i>Q. agrifolia</i>	B-			X	Permanent encroachment within 28' under the westerly portion of the protected zone due to the construction of the proposed fire lane; no canopy pruning or root disturbance is anticipated during construction due to distance and grade difference; minor pruning may be required periodically along the westerly most branches to provide fire clearance.
75	<i>Q. agrifolia</i>	B-	X			No Impact
76	<i>Q. agrifolia</i>	B+	X			No Impact
77	<i>Q. agrifolia</i>	B	X			No Impact
78	<i>Q. agrifolia</i>	B-	X			No Impact
79(H)	<i>Q. agrifolia</i>	B			X	Up to 20' of permanent encroachment within the westerly portion of the protected zone will occur due to the construction of the fire lane and wall; no canopy pruning or root disturbance is anticipated, see Cross-Section 3-3.
80(H)	<i>Q. agrifolia</i>	C			X	Up to 15' of permanent encroachment within the westerly portion of the protected zone will occur due to the construction of the fire lane and wall; no canopy pruning or root disturbance is anticipated, see Cross-Section 3-3.
81(H)	<i>Q. agrifolia</i>	B-			X	Permanent encroachment 5' to 23' within the westerly portion of the protected zone due to the proposed fire lane and wall. No pruning or root disturbance is anticipated during construction due to distance and grade difference; minor pruning may be required periodically along the westerly most branches to provide fire clearance.
82	<i>Q. agrifolia</i>	B-	X			No Impact
83	<i>Q. agrifolia</i>	B			X	Up to 5' of permanent encroachment within the westerly portion of the protected zone will occur due to the construction of the fire lane and wall; westerly portion of the canopy will be required to be raised due to fire clearance and construction access. Though located downslope, there is potential for root disturbance due to grading and retaining wall placement.
84	<i>Q. agrifolia</i>	B-			X	Up to 9' of permanent encroachment within the westerly portion of the protected zone will occur due to the construction of the fire lane and wall; westerly portion of the canopy will be required to be raised due to clearance and construction access. Though located downslope, there is potential for root disturbance due to grading and retaining wall placement.

Tree No.	Genus & Species	Overall Grade	Project Impact			Reason for Impact
			NI	R	E	
85	<i>Q. agrifolia</i>	B			X	Up to 9' of permanent encroachment within the westerly portion of the protected zone will occur due to the construction of the fire lane and wall; westerly portion of the canopy will be required to be raised due to clearance and construction access. Though located downslope, there is potential for root disturbance due to grading and retaining wall placement.
86	<i>Q. agrifolia</i>	C+			X	Up to 9' of permanent encroachment within the westerly portion of the protected zone will occur due to the construction of the fire lane and wall; westerly portion of the canopy will be required to be raised due to clearance and construction access. Though located downslope, there is potential for root disturbance due to grading and retaining wall placement.
87	<i>Q. agrifolia</i>	B+		X		Grading and construction of proposed fire lane.
88	<i>Q. agrifolia</i>	B			X	Up to 10' of permanent encroachment with the westerly portion of the protected zone will occur and minor pruning of approximately 70' sq. ft. will be required due to construction of the fire lane. Since the finish grade is at approximately 951', and the trunk is located down slope at 949.2', grading would require disturbance of 21' into the root protection zone with footing depth up to 5'6" max., see Cross-Section 3-3.
89	<i>Q. agrifolia</i>	B+		X		Grading and construction of proposed fire lane
90	<i>Q. agrifolia</i>	B			X	Permanent encroachment of 11' into the westerly portion of protected zone will occur due to the grading and construction of the fire lane and the block wall. Since the finish grade will be at approximately 954.5' while the tree is located down slope at an elevation approximately at 951.6', approximately 36 sq. ft. of the westerly portion of the canopy may require pruning for clearance. Grading will require disturbance of 19' into the root protection zone with footing depth up to 5'6" max., see Cross-Section 4-4.
91(H)	<i>Q. agrifolia</i>	B+			X	Permanent encroachment of 5' to 30' into the protected zone will occur due to the new building structure. Approximately 400 sq. ft. of northeasterly portion of the canopy would be pruned due to construction clearance, while grading would require disturbance of 14' into the root protection zone with footing depth up to 3'6" max., see Cross-Section 2-2.
92	<i>Q. agrifolia</i>	B+			X	Construction of proposed building will permanently encroach 5 to 10 feet into the protected zone. Minor pruning of the outer canopy twigs will occur during project construction, approximately 164 sq. ft. of northeasterly portion of the canopy would be pruned due to construction clearance while grading would require disturbance of 13' into the root protection zone with footing depth up to 3'6" max., see Cross-Section 2-2.

Tree No.	Genus & Species	Overall Grade	Project Impact			Reason for Impact
			NI	R	E	
93	<i>Q. lobata</i>	A-			X	Minor encroachment to the protected zone will occur due to the construction of the building. Only minor outer canopy twigs would be required to be pruned due for temporary construction access purposes.
94	<i>Q. agrifolia</i>	B+		X		Grading and construction of proposed building structure.
95(H)	<i>Q. agrifolia</i>	B			X	Approx. 5' to 30' permanent encroachment into the protected zone will occur due to project grading and proposed building. Approximately 283 sq. ft. of northwesterly portion of the canopy would be pruned for construction of building and clearance purposes, while grading would require disturbance of 19' into the root protection zone with footing depth up to 42" max. see Cross-Section 1-1.
96(H)	<i>Q. agrifolia</i>	C			X	Permanent encroachment up to 30' into the protected zone will occur due to the new building structure and grading, but no pruning will be required and significant root disturbance is not anticipated; see Cross-Section 1-1.
97	<i>Q. agrifolia</i>	B			X	Permanent encroachment up to 5' into the protected zone will occur due to the site grading. No significant root disturbance is anticipated.
98	<i>Q. lobata</i>	C			X	Permanent encroachment of 10' into the protected zone will occur due to the new building structure. Approximately 43 sq. ft. of northerly portion of the canopy would be pruned for construction of building and clearance purposes while grading would require disturbance of 19' into the root protection zone with footing depth up to 42" max., see Cross-Section 1-1.
99	<i>Q. agrifolia</i>	B-	X			No Impact
100	<i>Q. agrifolia</i>	B-	X			No Impact
101	<i>Q. agrifolia</i>	B			X	10' permanent encroachment within the protected zone will occur due to the project building and grading; no pruning is anticipated but roots may be impacted due to grading for the building foundation.
102	<i>Q. agrifolia</i>	B		X		Grading and construction of proposed parking structure
103(H)	<i>Q. agrifolia</i>	B+	X			No Impact
104(H)	<i>Q. agrifolia</i>	B+	X			No Impact
105(H)	<i>Q. agrifolia</i>	B-			X	Grading and construction of project fire lane and retaining wall will occur at the edge of the protected zone, but no impact to the canopy or roots will occur.
106(H)	<i>Q. agrifolia</i>	B			X	Grading and construction of project fire lane and retaining wall will permanently encroach 5' into the protected zone, but no impacts to canopy or the roots will occur.
107	<i>Q. agrifolia</i>	C+	X			No Impact

Tree No.	Genus & Species	Overall Grade	Project Impact			Reason for Impact
			NI	R	E	
108	<i>Q. agrifolia</i>	B-	X			No Impact
109	<i>Q. agrifolia</i>	C	X			No Impact
110	<i>Q. agrifolia</i>	B+	X			No Impact
111	<i>Q. agrifolia</i>	C+	X			No Impact
112	<i>Q. agrifolia</i>	C	X			No Impact
113	<i>Q. agrifolia</i>	B	X			No Impact
114	<i>Q. agrifolia</i>	B-	X			No Impact
115	<i>Q. agrifolia</i>	C+	X			No Impact
116(H)	<i>Q. agrifolia</i>	B+	X			No Impact
117	<i>Q. agrifolia</i>	B	X			No Impact
118	<i>Q. agrifolia</i>	B	X			No Impact
119	<i>Q. agrifolia</i>	B	X			No Impact
120	<i>Q. agrifolia</i>	B+	X			No Impact
121(H)	<i>Q. agrifolia</i>	B+	X			No Impact
122(H)	<i>Q. agrifolia</i>	B+	X			No Impact
123	<i>Q. agrifolia</i>	B	X			No Impact
124	<i>Q. agrifolia</i>	D	X			No Impact
125	<i>Q. agrifolia</i>	C+	X			No Impact
126	<i>Q. agrifolia</i>	C+	X			No Impact
127(H)	<i>Q. agrifolia</i>	B			X	Project grading will occur within 20' under the protected zone, and the construction of a retaining wall will be at the edge of the protected zone. No pruning or root disturbance will occur.
128	<i>Q. agrifolia</i>	B	X			No Impact
129	<i>Q. agrifolia</i>	B+	X			No Impact
130	<i>Q. agrifolia</i>	D	X			No Impact
131	<i>Q. agrifolia</i>	D			X	Grading and construction of proposed fire lane & retaining wall will permanently encroach 12' into the protected zone; due to this tree's location downslope and its sapling size (2, 1 inch trunks), the canopy may be tied back or minimally reduced, and only minor root impacts are anticipated.
132	<i>Q. agrifolia</i>	B	X			No Impact
133	<i>Q. agrifolia</i>	D	X			No Impact
134	<i>Q. agrifolia</i>	B	X			No Impact
<b>Total:</b>			<b>108</b>	<b>4</b>	<b>22</b>	
<b>(H) = Heritage Oak Tree      NI = No Impact      R = Removal      E = Encroachment</b> Please refer to the original project oak tree report for specific tree evaluation and data.						

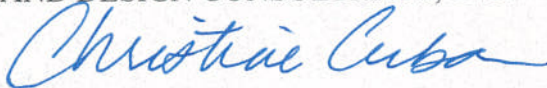
Overall, the impacts to the onsite oak resources due to the project revisions has been reduced. Removal of four (4) oaks represents 2% of the ordinance-sized oaks onsite, and the 22 encroachments represent 16% of the existing ordinance-sized oak trees. Canopy and root pruning for the proposed buildings and fire road will require monitoring by a certified arborist.

In response to Mr. Dean's other comments, we have enlarged the font used to denote the oak tree numbers on the enclosed "Oak Tree Location Map" and have changed the color of the line work on the map to all black. It is my understanding that you have re-tagged the trees as requested by embossing the metal tags that I sent to you earlier this month. It is also my understanding that you have submitted color photographs with some of the aforementioned impact limits drawn to scale to the City yourself. Please find enclosed the 11" x 17" Index Map for the Oak Tree Cross-Sections dated 2/25/10 and Exhibit 1 & Exhibit 2 that illustrate the four cross-sectional analyses that you requested of us. A folded bond copy of the Oak Tree Location Map is also attached.

Please call me if you have any questions or require additional information. Thank you.

Respectfully submitted,

LAND DESIGN CONSULTANTS, INC.



Christy Cuba  
*Director of Environmental Services*  
*ISA Certified Arborist, WE-1982A*  
*Member, American Society of Consulting Arborists*  
*WTI Certified Wildlife Protector, #536*

c. Steve Hunter/LDC  
Jimmy Lee/LDC

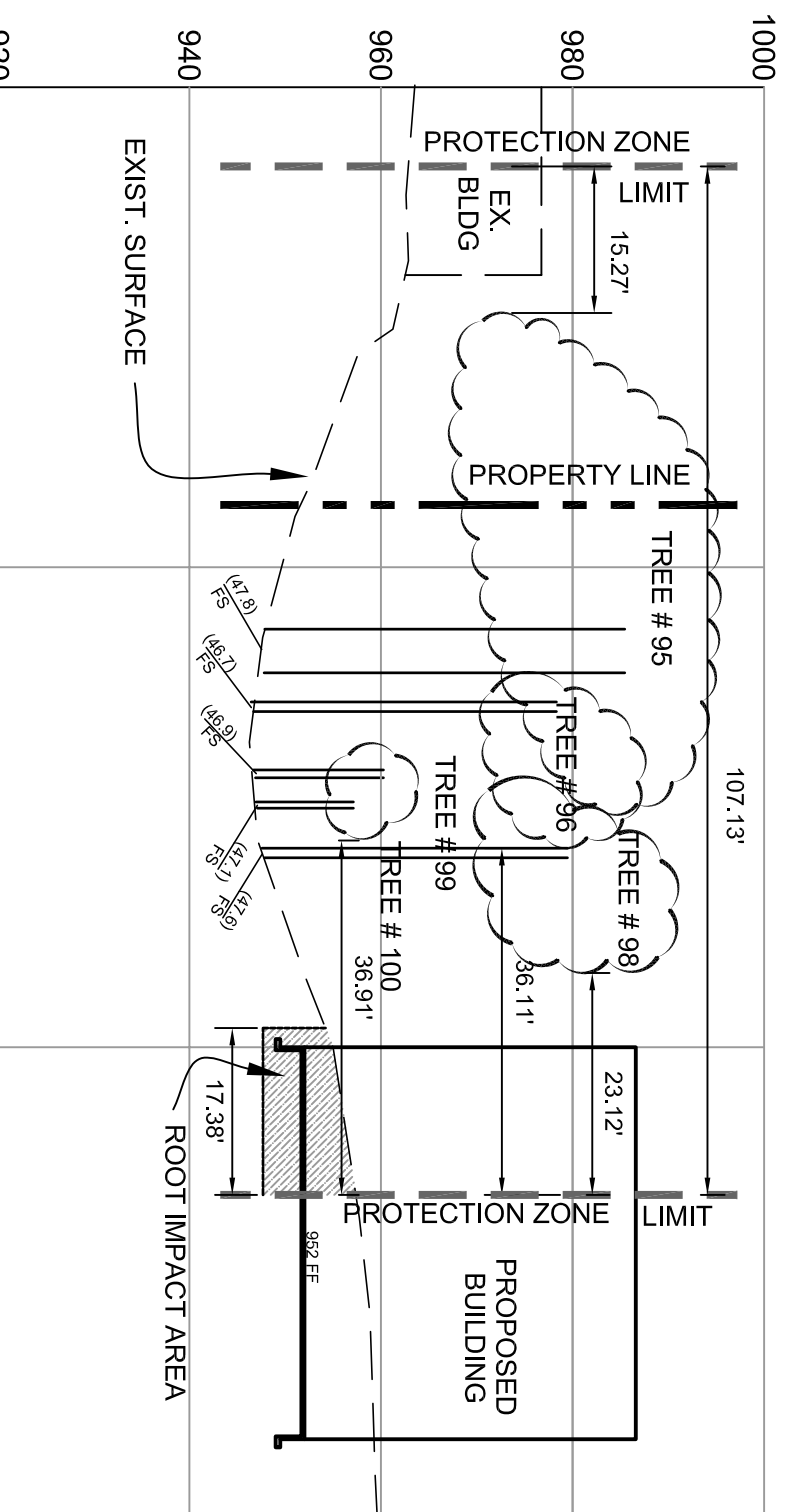


SCALE:  
1"=60'

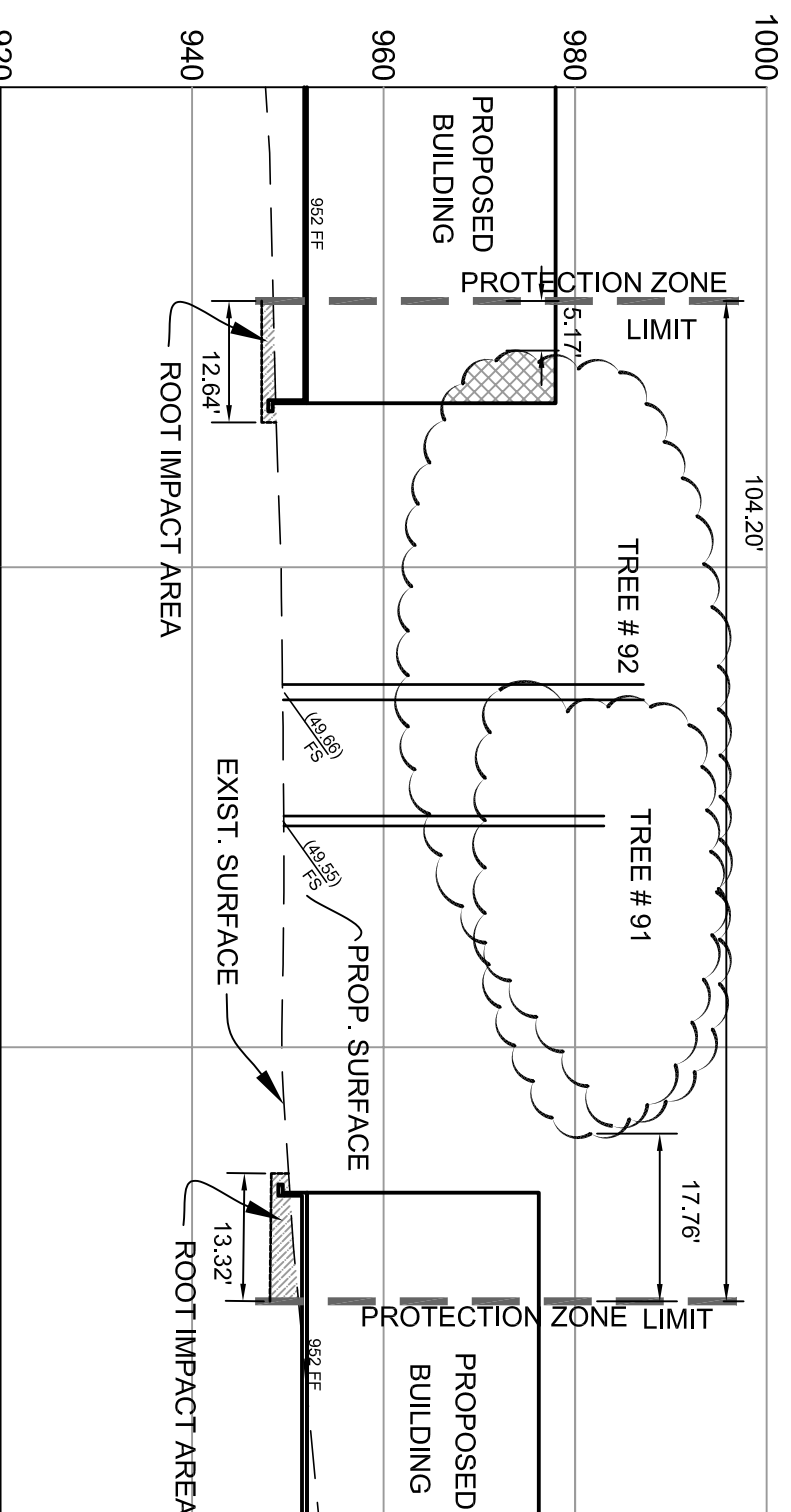
**INDEX MAP - OAK TREE  
CROSS-SECTIONS VILLAGE  
AT CALABASAS**

**LAND DESIGN CONSULTANTS, INC.**  
Land Planning, Civil Engineering, Surveying & Environmental Services  
199 South Los Robles Ave., Suite 250, Pasadena, California 91101  
Ph.: (626) 578-7000, Fax: (626) 578-7373  
<http://www.ldcla.com>

DATE: 02/25/10 PROJ: 95018-24





**SECTION 1-1**  
SCALE: H:1" = 20'  
V:1" = 20'



**SECTION 2-2**  
SCALE: H:1" = 20'  
V:1" = 20'

- NOTE:**
1. PRUNING OF CANOPY OF TREE # 91 & 92 EXPECTED FOR BUILDING CLEARANCE
  2. DUE TO BUILDING CLEARANCE, PRUNING TREE # 95 WILL OCCUR AT THE NORTH WESTERLY PORTION OF CANOPY. PRUNING OF TREE # 98 WILL OCCUR AT THE NORTHERLY PORTION OF CANOPY.
  3. NO CANOPY PRUNING EXPECTED ON TREES # 96, 99 & 100
  4. CANOPY EDGES MAPPED FROM SURVEYED DRIPPLINES PREPARED BY DAVID R. GRAY, INC.
  5. CANOPY TO GRADE IS APPROXIMATE ESTIMATION

**LEGEND:**

-  ROOT IMPACT AREA, BUILDING FOOTING IS 36" AND EXTEND 6".
-  AREA OF TREE PRUNING.

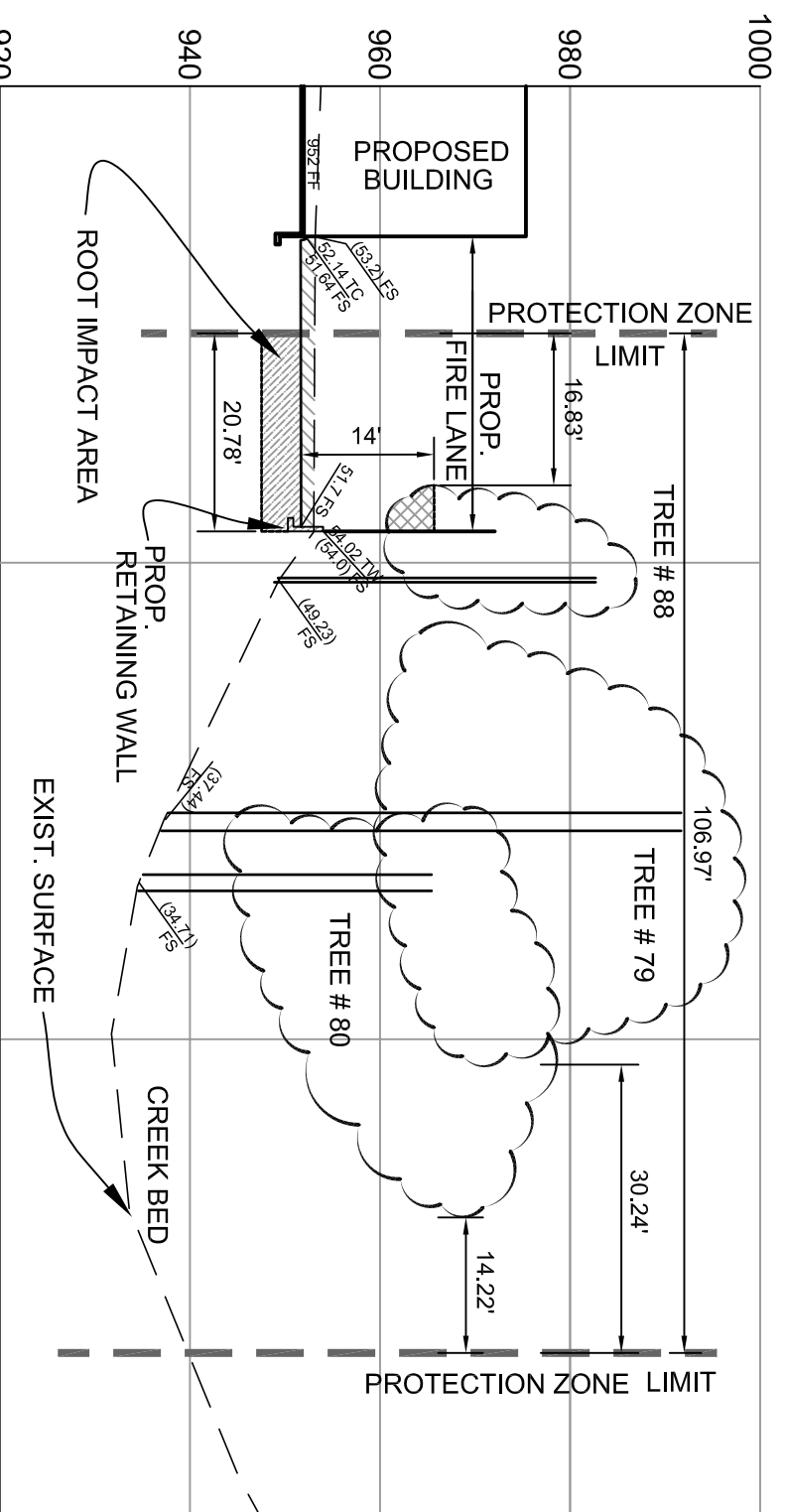
**EXHIBIT #1 of OAK TREE  
CROSS-SECTIONS VILLAGE  
AT CALABASAS**

**LAND DESIGN CONSULTANTS, INC.**

*Land Planning, Civil Engineering, Surveying & Environmental Services*  
199 South Los Robles Ave., Suite 250, Pasadena, California 91101  
Ph.: (626) 578-7000, Fax: (626) 578-7373  
<http://www.ldca.com>




DATE: 02/25/10

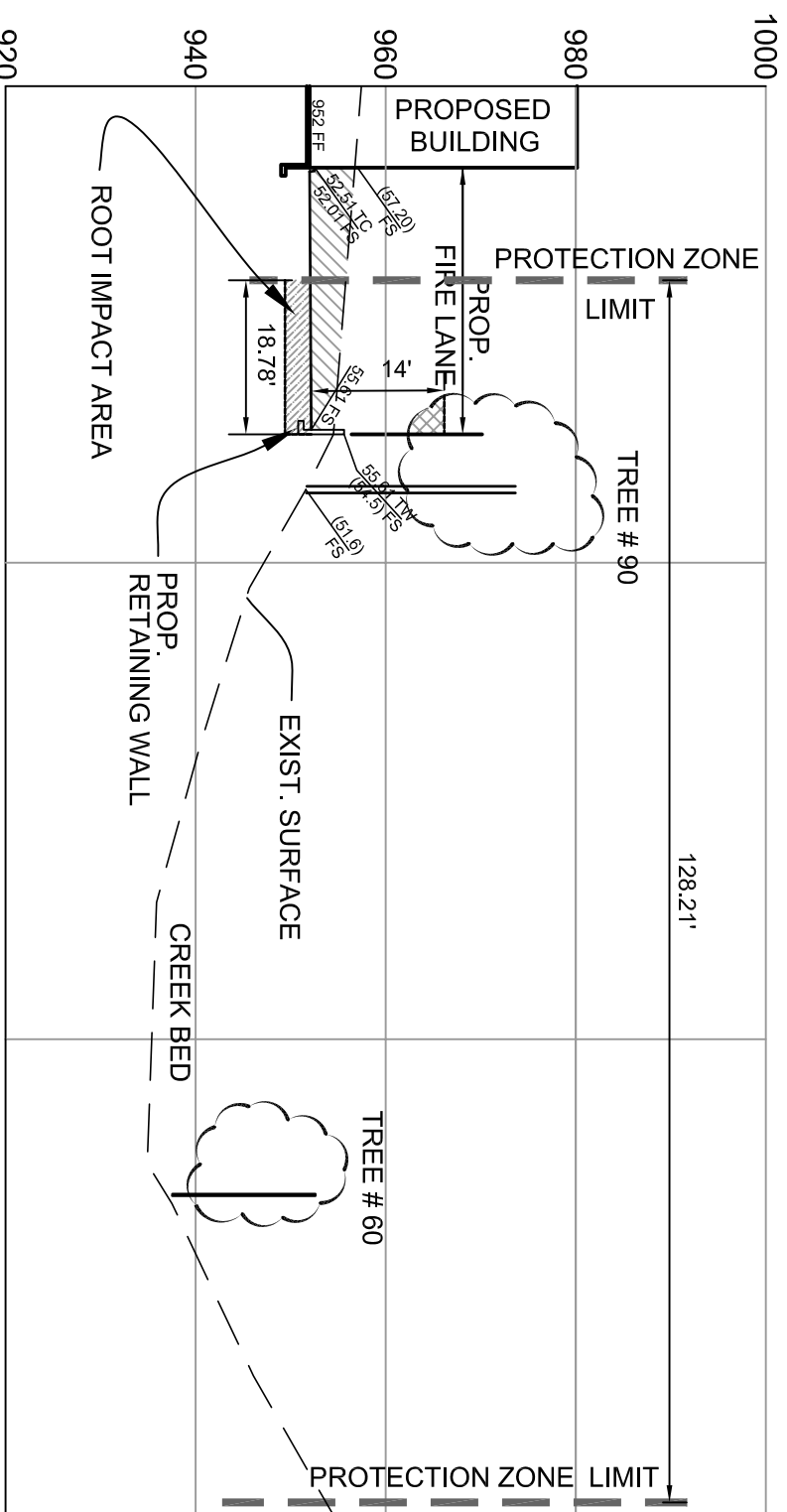
PROJ: 95018-24



- NOTE:**
1. PRUNING OF CANOPY OF TREE # 88 & 90 EXPECTED FOR FIRE ROAD CLEARANCE
  2. NO CANOPY PRUNING EXPECTED ON TREES # 79 & 80
  3. ROOT PRUNING IS EXPECTED FOR TREES # 88 & 90, FEET OF THE PROTECTION ZONE WILL BE IMPACTED BY ROOT ZONE CUT/FILL AS SHOWN
  4. CANOPY EDGES MAPPED FROM SURVEYED DRIPLINES PREPARED BY DAVID R. GRAY, INC.
  5. CANOPY TO GRADE IS APPROXIMATE ESTIMATION

**LEGEND:**

-  ROOT IMPACT AREA, PROPOSED RETAINING WALL DEPTH IS 5' MAX AND EXTEND 6".
-  AREA OF TREE PRUNING.
-  AREA OF CUT FOR FIRE LANE.



**EXHIBIT #2 of OAK TREE CROSS-SECTIONS VILLAGE AT CALABASAS**

**LAND DESIGN CONSULTANTS, INC.**  
*Land Planning, Civil Engineering, Surveying & Environmental Services*  
 199 South Los Robles Ave., Suite 250, Pasadena, California 91101  
 Ph.: (626) 578-7000, Fax: (626) 578-7373  
 http://www.ldca.com

DATE: 02/25/10  
 PROJ: 95018-24



# Appendix E

## Archaeological Investigation

Greenwood and Associates  
725 Jacon Way  
Pacific Palisades, California 90272  
(310) 454-3091

NOV 08 2009

October 28, 2009

D2 Development, Inc.  
Larry Dinovitz  
23500 Park Sorrento  
Calabasas, CA 91302

RE: Village at Calabasas, Seniors Community Living -- Archaeological Investigation

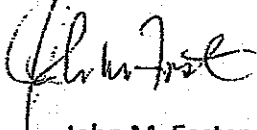
Dear Mr. Larry Dinovitz:

At your request, we have reviewed our previous report on the archaeological investigation for the Village at Calabasas, dated March 2007, with the revised project the Village at Calabasas, Seniors Community Living, dated September 2009. The purpose of the review was to determine if the findings and impacts are the same compared to the approved project.

We compared the footprint of our projects maps, Figure 1 (Foster 2007:2), with the proposed footprint as represented by the construction plans of Hochhauser Blatter dated August 26, 2009. Our comparison reveals minor variations between the two graphics, but the overall intent appears to represent the same general configuration. In any event, our original survey encompassed the currently proposed project area.

We do not recommend additional survey and analysis of the new project. If you have any questions, please do not hesitate to call.

Sincerely,  
Greenwood and Associates



John M. Foster, RPA  
Vice President

# Appendix F

## Geotechnical Engineering Report

01/13/10 1:00 PM

**UPDATE**  
**GEOTECHNICAL ENGINEERING REPORT**

Proposed Mixed-Use Development  
Lot 1, Tract 29325  
23500 Park Sorrento  
Calabasas, California  
**LA-01124-01**

Prepared For

**D2 DEVELOPMENT, INC.**

**December 30, 2009**

Prepared By

**Earth Systems Southern California**  
14550 Haynes Street, Suite 202  
Van Nuys, California 91411

(818) 901-8075  
FAX (818) 901-8084



**Earth Systems**  
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www.earthsystems.com

December 30, 2009

LA-01124-01

D2 Development, Inc.  
23622 Calabasas Road, Suite 200  
Calabasas, California 91302

Attention: Mr. Larry Dinovitz

Subject: **Update Geotechnical Engineering Report**  
Proposed Mixed-Use Development  
Lot 1, Tract 29325  
23500 Park Sorrento  
Calabasas, California

References: *Preliminary Geotechnical Engineering Report, Proposed Mixed-Use Development Lot 1, Tract 29325, 23500 Park Sorrento, Calabasas, California*, by Earth Systems Southern California, LA-01124-01 dated February 13, 2007.

*Site Development Plan, Vesting Tentative Tract Map 066208 (Mixed Use Condominium Purposes)*, by Pacific Coast Civil, Inc., PCC W.O. 06-521, dated 9-16-2009.

## **INTRODUCTION**

This Update Geotechnical Engineering Report has been prepared for the site of a proposed mixed-use development in Calabasas, California. This update report has been prepared per your request to address changes in the proposed development and to provide revised recommendations relevant to changes in the plans and changes in the building code since the referenced Preliminary Geotechnical Engineering report was prepared. An update geotechnical report (ESSC, 12/7/2009) had also been prepared but the design that report was based on was further modified. This update report (12/30/2009) is intended to completely replace the 12/7/2009 report. An electronic (.pdf) copy of the referenced Preliminary Geotechnical Engineering report (ESSC, 2/13/2007) is included for reference on disk in a pocket at the end of this report.

## **SITE DESCRIPTION**

The approximate four-acre site is at 23500 Park Sorrento in the City of Calabasas, California. The site is approximately 1/4 mile south of the Ventura (Hwy 101) freeway and approximately 1/4 mile west of Mulholland Drive. The irregular-shaped project site is currently occupied by a one-and two-

story wood-frame structure. The structure is located in the central portion of the property and is currently used as a banquet hall. An asphalt parking lot is located in the northern portion of the site and a domestic lawn is located behind the structure to the south. McCoy Creek, a perennial stream, trends through the property along the southeast property line. Access to the property is available from Park Sorrento located at the northwest corner of the site (see Site Geologic Map, Plate I).

Topographically, the property consists of gently sloping ground at an elevation of approximately 950-feet above mean sea level (msl). Slopes along the southeast portion of the property descend approximately 15-feet at a gradient of up to approximately two horizontal to one vertical (2H:1V) to McCoy Creek. Portions of the stream course in the vicinity of the subject site have been protected against erosion and a concrete-paved ford extends from the subject site to the adjacent property to the southeast. The above-cited descriptions are intended to be illustrative, and are specifically not intended for use as a legal description of the subject property.

### **PROJECT DESCRIPTION**

The development concept addressed in the above referenced report included multiple, four-story mixed-use buildings, constructed over two levels of subterranean parking. The lower floor of the parking garage was to extend below the water table and was to be supported entirely on the underlying bedrock.

Based on review of the current Site Development Plan (Pacific Coast Civil, Inc, 9-16-09) and discussions with representatives of Pacific Coast Civil, Inc., Earth Systems Southern California (ESSC) understands that the proposed project will include multiple, four-story residential and mixed-use buildings constructed generally "at grade" as well as a five-level parking garage structure with a partial subterranean level. The lower level of the parking garage will have finish floor elevations ranging from 949 feet msl to 959 feet msl, while the residential and mixed-use structures will have finished ground floor elevations of 954 feet msl. The grade will be lowered approximately 10 feet around the southwest corner of the proposed parking structure, while the grade will be raised approximately ten feet by means of retaining walls and fill beneath proposed residential structures at the south end of the development. The development will also include a pool centrally located on the site and a storm water detention/treatment system for the southwest portion of the site.

### **SUBSURFACE CONDITIONS**

Artificial fill (af) was observed to mantel the majority of the property and was observed as deep as ten feet in some areas. The fill is undocumented and considered unsuitable for support of structures or slabs. The fill was observed to consist primarily of moderately compact sandy silts and clays (ML and CL soil types based upon the Unified Soil Classification System).

Native site soils are comprised of consolidated older alluvium referred to herein as Terrace (Qt) deposits. The terrace deposits were found to consist predominantly of sandy clays with layers of silts, clays, silty sand, and gravel rich layers (SC, ML, CL, SM, GC and GM soil types).

Bedrock was encountered in all of the borings at depths ranging from near the surface in the southwest part of the site (near boring B2) to 21 feet below the adjacent grade in the center-easterly portion of the site (near boring B4). The bedrock is late Miocene age marine deposits referred to as upper Modelo Formation (Tmu). The bedrock was typically observed as a clayey siltstone and appeared as massive to well-bedded with some very hard and indurated layers. Bedding was observed to vary drastically; typically with a shallow dip.

Based upon results of the Expansion Index (EI) Tests (ASTM D 4829) conducted for this investigation, the upper on-site soils are considered to have a "Very Low" (0-20) expansion potential, and the bedrock is considered to have a "Medium" (EI = 51-90) expansion potential.

Groundwater was encountered during exploratory drilling at the site at depths of approximately 10 to 18 feet below existing site grade. The groundwater observed was generally in the form of relatively slow seepage along fractures or bedding. The groundwater level in a monitoring well installed at the site was measured at a depth of 7.8 feet below grade (~936 ft amsl) on January 21, 2007. Fluctuations in groundwater levels may occur due to variations in rainfall, regional climate, and other factors.

The depth to bedrock, thickness of existing fill, and thickness of natural soil vary considerably across the site. Surface elevations of natural soil (Qt) and bedrock (Tmu) at each boring are shown on the update Site Geologic Map (Plate I). Depth to bedrock below proposed finished floor elevation for the proposed residential and mixed-use structures will vary from approximately zero (bedrock at surface) adjacent to the proposed parking garage to about 20 feet in the east-central part of the site (near boring B4). Since the total thickness of soil beneath the structures will vary by 20 feet or more, the amount of settlement due to soil compression (consolidation) will be variable across the site. See discussion of foundation settlement below.

## **UPDATED DISCUSSION**

### **Bearing Materials**

Based on the current plans, the majority of the parking garage structure (with partial subterranean level) will extend down to bedrock. Most of the remaining development (with the exception of the fill area at the south end) will now be situated near existing grade which is on the order of five feet to 20 feet above the underlying bedrock surface. The proposed parking garage structure should bear entirely in bedrock and be made structurally independent of the residential and mixed use structures. The proposed residential structures, mixed-use structures, and swimming pool, should bear entirely on compacted soil prepared as described herein.

### **Foundation Design and Settlements**

If the preliminary recommendations herein for site preparation and grading are followed, either conventional shallow continuous and isolated foundations or drilled piers (cast-in-drilled-hole piles) may be used to support the proposed structures. As discussed above, based on the current plans, it is understood that the proposed parking structure will be supported by conventional spread footings

bearing in competent bedrock, while the residential and mixed-use structures and pool will be supported by conventional spread footings bearing in new compacted fill.

Refer to Sections E and F of the Recommendations section of the referenced Preliminary Geotechnical Engineering Report (ESSC, 2/13/2007) for more detailed discussions and recommendations regarding design of pier foundations and conventional foundations bearing in bedrock. Refer to the Updated Recommendations herein (see below) for more detailed recommendations regarding design of conventional foundations bearing in compacted fill.

If the preliminary recommendations for foundation design and construction are followed, settlement of the proposed structures should not exceed approximately three quarters of an inch (3/4"). Differential settlement of neighboring footings of varying loads, depths or sizes may be as high as fifty percent of the total settlement. The recommendations herein for depth of over-excavation, degree of compaction, and allowable bearing pressures are intended to limit settlements to less than 3/4 inch. If the owner wishes to reduce any of the over-excavation or compaction requirements or increase allowable bearing pressures, detailed analysis of potential settlement should be completed based on actual design foundation loads. Additional soil investigation including extensive consolidation testing would be necessary for such an analysis.

### Seismic Design Parameters

The following table is a summary of the estimated seismic parameters typically used for structural design per the building code.

#### **Summary of Seismic Parameters – 2007 CBC**

Site Class	(2007 CBC Table 1613.5.2)	C
<u>Maximum Considered Earthquake (MCE) Ground Motion</u>		
Spectral Response Acceleration, Short Period – $S_s$		1.500g
Spectral Response Acceleration at 1 sec. – $S_1$		0.600g
Site Coefficient – $F_a$		1.0
Site Coefficient – $F_v$		1.3
Adjusted Spectral Response Acceleration, Short Period – $S_{MS}$		1.500g
Adjusted Spectral Response Acceleration at 1 sec. – $S_{M1}$		0.780g
<u>Design Earthquake (MCE) Ground Motion</u>		
Short Period Spectral Response – $S_{DS}$		1.000g
One Second Spectral Response – $S_{D1}$		0.520g
Reference: USGS, 2007 Lat: 34.155 degrees Lon: -118.640 degrees		

### Site Grading

Typical cut and fill grading will be required to create the desired finished line and grades. According to the plans, cuts up to 10 feet deep will be necessary to create the partial subterranean level for the



proposed parking garage and fills in excess of 10 feet will be necessary at the south end of the site. Remedial grading (soil removal and recompaction) will be necessary to mitigate the effects of unsuitable soil (uncompacted fill and compressible natural soils).

Uncompacted artificial fill soils are present within the project site to depths of as much as 10 feet below existing grade. To provide more firm uniform bearing for the proposed structure foundations and slab-on-grade construction, it is recommended that all existing artificial fill be removed and recompacted. Remedial excavation bottom for an individual structure shall be relatively level in order to provide a uniform thickness of compacted fill. Relative compaction of 95 percent is presently recommended due to the varying depth to bedrock and the anticipated relatively high foundation loads. Refer to Section A of the Recommendations of this report for more detailed discussions and recommendations regarding site preparation.

Consideration should be given to the type of equipment to be used for compaction at the site. Different types of equipment are more effective with some soil types than with others. It should be understood that failure to provide the most appropriate equipment could result in inability to achieve the required degree of relative compaction, disturbance or displacement of subsequent and adjacent layers of fill, and/or the potential cost of removal of inadequately compacted fill that has been placed and subsequent delay in the grading progress.

Conventional compaction equipment (bulldozers, self propelled or static or dynamic sheepsfoot compaction rollers, heavy rubber tired construction equipment, etc.) has a limited ability to consolidate layers of fill to the required density. Typically, loose layer thickness should not exceed 6-8 inches for heavy construction equipment and 2-4 inches for light manual equipment. Thicker layers of fill may be consolidated by utilizing specialized deep dynamic compaction; however this requires detailed geotechnical evaluation prior to being used.

Fine grained soils (clays and silts) typically should not be subjected to vibration or heavy widely distributed loads (such as smooth rollers or wide rubber tired construction equipment) during the compaction process, as this will cause an increase in the soil pore pressure resulting in 'pumping' or failure to consolidate the soil particles by expelling water and air. These soil types are best compacted by using a 'kneading' action (such as a 'sheepsfoot' compactor or impact from a sharp blow on a small area (such as a dynamic or high speed tamping foot).

### Stormwater

A stormwater treatment and/or detention system of some type is proposed for the southwest part of the site where bedrock and groundwater are shallow. Based on the depth to groundwater, the relatively impervious nature of the earth materials and the depth to ground water, an infiltration type system would not be feasible for this site; however a stormwater filtration/detention system should be feasible from a geotechnical standpoint.

## UPDATED GEOTECHNICAL RECOMMENDATIONS

### Site Preparation

The following recommendations should be applied for the structures that will be supported on compacted fill rather than bedrock (i.e. structures outside the limits of the proposed subterranean parking level).

1. All vegetation, uncompacted fill, trash, pavements, abandoned underground utilities, and other debris should be removed from the proposed grading areas. All strippings and debris should be removed from the site in order to preclude their incorporation in site fill or remedial excavation backfill. Depressions resulting from such removals should have debris and loose soils removed and filled with suitable soils placed as recommended below.
2. Any seepage pits, underground tanks, or other similar substructures should be removed in their entirety including any liquids or sediment remaining at the bottom of the pits or tanks. Any brick, concrete or steel lining should be completely removed. The void resulting from removal of the pits or tanks should be backfilled with suitable soils placed as recommended below. This may require ramping and/or laying back side slopes to an angle to allow safe entry of personnel and equipment. Alternatively, deep shaft seepage pit excavations may be backfilled with a low-cement concrete slurry mix to within 5 feet of proposed final grade or proposed footing elevations. The final 5 feet should consist of compacted engineered fill as described below.
3. In order to minimize potential settlement problems associated with structures supported on a non-uniform thickness of compacted fill, the geotechnical engineers should be consulted for site grading recommendations relative to backfilling large and/or deep depressions resulting from removals under Item 1.
4. To provide more uniform bearing conditions for the proposed structure foundations and slab-on-grade construction, ESSC recommends the following:
  - a. Native soils, existing artificial fill, and bedrock (as necessary) beneath the proposed building areas, should be excavated a minimum of five feet (5 ft) below the bottom of proposed footings or seven feet (7 ft) below existing grade, **whichever is deeper**. Remedial excavations should be performed to a distance of at least seven feet (7 ft) laterally beyond the building perimeter.
  - b. All existing fill within the proposed building areas and pavement areas should be removed. The depth of fill ranged from approximately two feet (boring BA2) to 10 feet (boring B4). It should be understood that deeper depths of fill material may be encountered at the time of grading.
  - c. All exposed ground surfaces (subgrades) at the base of the remedial excavations should expose firm, unyielding native material and should not be excessively wet or dry. If any of these conditions are not acceptable at the minimum recommended over-excavation depth, additional excavation will be required until suitable subgrade conditions are found.

The density of the exposed ground may be tested and an "in-place density" of 85% relative compaction may be used as criteria for acceptable subgrade.

- d. The base of the remedial excavation across the building pad should be at a relatively level elevation. The change in final thickness of compacted fill beneath foundations should not vary by more than five feet (5 ft) over a 200-foot span. Foundation plans and details should be checked carefully during grading to establish the actual bottom of footing elevations in the field.
  - e. After a satisfactory bottom of remedial excavation has been reached, the exposed surface should be scarified (ripped) 6 inches and recompacted.
  - f. The excavated soil and bedrock may be reused to backfill the remedial excavations provided they are processed to remove any deleterious materials and debris, and are properly moisture conditioned and compacted. During replacement of the excavated soils in the remedial excavations, and recompaction of the scarified soils, the soils should be moisture conditioned to near optimum moisture content and be uniformly compacted to at least 95% of maximum dry density as determined by ASTM D 1557 test procedures using mechanical compaction equipment. To aid in the compaction operation, fill should be placed in lifts not exceeding 6 inches compacted thickness. **Compaction should be verified by testing.**
  - g. The geotechnical consultant's representative should review the site grading prior to scarification of the bottom of the remedial excavation. Local variations in soil and bedrock conditions may warrant increasing the depth of remedial excavation. Any deeper areas of loose soils should be removed and be replaced as compacted, engineered fill.
5. Backfill around or adjacent to confined areas (i.e. interior utility trench excavations, etc.) may be performed with a lean sand/cement slurry (aka "flowable fill" or "controlled low strength material -CLSM"). The fluidity and lift placement thickness of any such material should be controlled in order to prevent "floating" of any "submerged" structure.
  6. Shrinkage because of excavation and compaction of the upper site soils is expected to be approximately 20 percent of any excavated or scarified site soils. This estimate is based upon compactive effort needed to produce an average degree of relative compaction of approximately 95 percent and may vary depending on contractor methods. Losses from site clearing and grubbing operations may affect quantity calculations and should also be taken into account. The grading contractor should verify shrinkage and earthwork yardage estimates.
  7. Roof drainage systems for the proposed structures should be designed so that runoff water is diverted away from any structure.
  8. Final site grades should be designed and constructed so that all water is diverted away from all structures and not allowed to pond on or near pavement. Drainage devices should be constructed to divert drainage from the project site.

9. It is recommended that ESSC be retained to provide geotechnical engineering services during the grading, excavation, and foundation phases of development. This continuity of services will allow for the geotechnical review of the design concepts and specifications relative to the recommendations of this report and will more readily allow for design changes in the event that subsurface conditions differ from those currently anticipated.

#### Conventional Foundations in Compacted Fill

It is recommended that any building or structure constructed on this site be designed to at least the minimum standards of the 2007 edition of the California Building Code (CBC). Relevant seismic design parameters per the CBC are presented above.

1. Conventional shallow continuous (strip) foundations or isolated pad (column) foundations may be used to support the proposed structures provided the foundations are embedded sufficiently deep into properly compacted fill to provide adequate setback from slopes.
2. Excavations for foundations should be cleaned of all loose or unsuitable soils and debris prior to placement of concrete. **Soil generated from the foundation excavations should not be placed below the floor slab unless properly moisture conditioned and compacted, and only after the area to receive fill has been properly prepared and approved.**
3. Continuous (wall or strip) foundations for the proposed structures founded in the recommended compacted soil pad may be proportioned for the following values:
  - a. Design Values: An allowable "net" bearing capacity of 2,500 pounds per square foot (psf) can be utilized for dead and sustained live loads. This value includes a minimum safety factor of three, and may be increased by 1/3 when transient loads (such as wind and seismic forces) are included.
  - b. Continuous foundations should be embedded a minimum of 18 inches below adjacent grade of compacted fill and be a minimum of 24 inches in width. For interior footings, the top of floor slab may be considered the adjacent grade; however, footings should extend at least 12 inches into compacted fill. Actual depth, width, and reinforcement requirements for continuous foundations depend on the Expansion Index of the bearing material (refer to Section J of Recommendations included in the referenced report), applicable sections of the governing building code, and requirements of the structural engineer.
  - c. The allowable bearing capacity for continuous foundations may be increased by 500 psf for each additional 6 inches of foundation depth, and by 250 psf for each additional 6 inches of foundation width. The allowable bearing capacity should not exceed 4,000 psf to keep estimated settlements within allowable limits. Also, the edge pressure of any eccentrically loaded footing should not exceed this bearing value for either permanent or temporary loads.
  - d. Continuous foundations on slopes should be stepped to maintain horizontal bottoms along all portions of the foundation.

4. Isolated pad (column) foundations for the proposed structures founded in the recommended compacted soil pad may be proportioned for the following values:
  - a. Design Values: An allowable "net" bearing capacity of 3,000 psf can be utilized for dead and sustained live loads. This value includes a minimum safety factor of three, and may be increased by 1/3 when transient loads (such as wind and seismic forces) are included.
  - b. Isolated pad foundations should be embedded a minimum of 18 inches below adjacent grade and be a minimum of 30 inches in width. For interior footings, the top of floor slab may be considered the adjacent grade; however, footings should extend at least 12 inches into compacted fill. Actual depth, width, and reinforcement requirements will be dependent on the Expansion Index of the bearing material (refer to Section J of Recommendations in the referenced report), applicable sections of the governing building code, and requirements of the structural engineer.
  - c. Isolated pad foundations should be restrained laterally in both directions by means of grade beams, structural slab, or other approved method.
  - d. The allowable bearing capacity for isolated pad foundations may be increased by 500 psf for each additional 6 inches of foundation depth, and by 250 psf for each additional 6 inches of foundation width. The allowable bearing capacity should not exceed 4,500 psf for isolated pad (column) foundations to keep estimated settlements within allowable limits. Also, the edge pressure of any eccentrically loaded footing should not exceed this bearing value for either permanent or temporary loads.
5. Foundations to be placed along the property lines may be placed in firm native soils. An allowable "net" bearing capacity of 1,500 psf can be utilized for dead and sustained live loads on those footings. The edge pressure of any eccentrically loaded footing should not exceed this bearing value for either permanent or temporary loads. This value includes a minimum safety factor of three, and may be increased by 1/3 when transient loads (such as wind and seismic forces) are included. No increase in the allowable bearing capacity for increased foundation widths and depths are allowed.
6. A grade beam at least 12 inches in width and at least 18 inches below the lowest adjacent soil grade should be provided across the garage entrances.
7. Resistance to lateral loading may be provided by friction acting along the foundation base. A coefficient of friction of 0.35 may be used for concrete foundations bearing in site soils recompacted to at least 95% of maximum dry density as determined by ASTM D 1557 test methods, and may be used with dead loads. This value includes a safety factor of 1.5.
8. Additional resistance to lateral loading may be provided by passive earth pressure acting against the sides of foundations or grade beams. Passive pressure may be taken as  $350 Z$  psf, where  $Z$  = Depth (in feet) below the finished ground elevation. In passive pressure calculations, the upper one-foot of soil should be subtracted from the depth,  $Z$ , unless confined by pavement or slab. The maximum passive pressure used for design should not

exceed 5,000 psf. The resisting pressure provided is an ultimate value. An appropriate factor of safety should be used for design calculations (minimum of 1.5 recommended). Frictional and passive resistance to lateral forces may be combined without further reduction.

**LIMITATIONS AND UNIFORMITY OF CONDITIONS**

The conclusions and recommendations submitted in this report relative to the proposed development are based, in part, upon the data obtained from the site observations during the field exploration operations, and past experience. The nature and extent of variations between the borings may not become evident until construction. If variations then appear evident, it will be necessary to re-evaluate the recommendations of this addendum report.

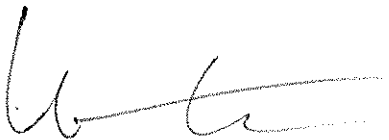
This Update Report should be made part of the referenced Preliminary Geotechnical Engineering report dated February 13, 2007. All conclusions, recommendations, and limitations of that report, except as specifically amended in this addendum report, remain valid and apply to the currently proposed project.

**CLOSURE**

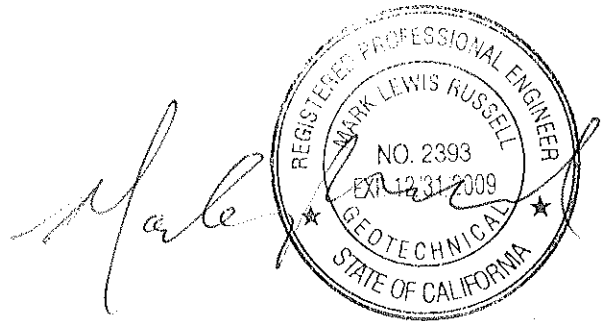
ESSC trusts this report is sufficient at this time and meets your current needs. ESSC appreciates this opportunity to provide professional geotechnical engineering services for this project. If you have any questions regarding the information contained in this report, or if you require additional geotechnical engineering services, please contact the undersigned.

Respectfully submitted,

**Earth Systems  
Southern California**



Christopher F. Allen  
Staff Geologist



Mark L. Russell, G.E.  
Project Geotechnical Engineer

END OF TEXT

**ATTACHMENTS**

- Plate I - Geologic Site Map
- Plate II - Geologic Cross Sections A-A' and B-B'
- Plate III- Geologic Cross Sections C-C' and D-D'
- Copy of Preliminary Geotechnical Engineering report (ESSC, 2/13/2007) on disk - in pocket

Distribution: 2-Addressee, 1-Architect, 1-Civil Engineer

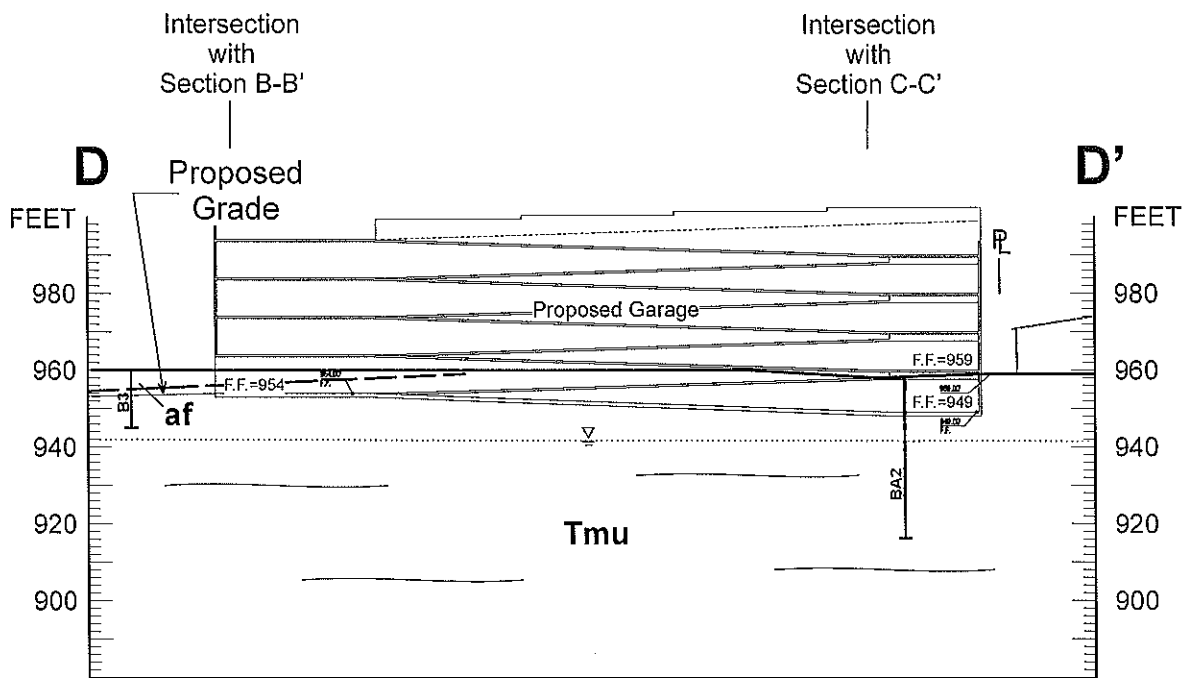
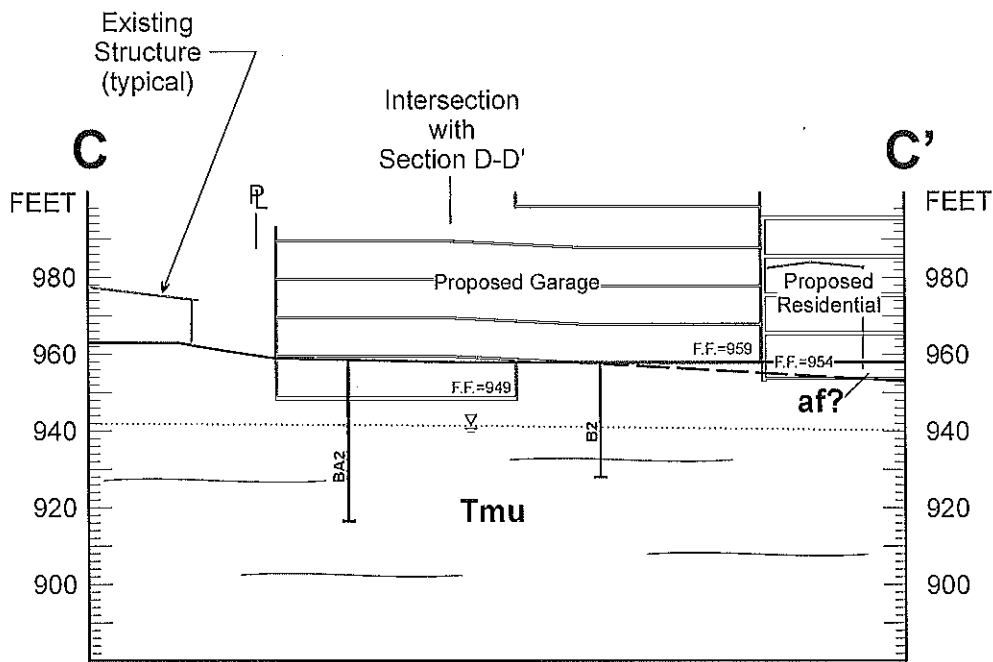


PLATE III

**GEOLOGIC CROSS SECTIONS**

PROPOSED MIXED-USE DEVELOPMENT  
 23500 PARK SORRENTO  
 CALABASAS, CALIFORNIA



**Earth Systems**  
 Southern California

12/30/2009

LA-01124-01

SCALE  
 1 in = 50 ft (H&V)

NOTE: Elevations based on feet above mean sea level

# Appendix G

## LEED Checklist





# LEED for New Construction v 2.2 Registered Project Checklist

Project Name: The Village at Calabasas

Project Address: 23500 Park Sorrento, Calabasas, CA

Yes	?	No		
47	5	8	<b>Project Totals (Pre-Certification Estimates) 69 Points</b>	
GOLD			<b>Certified: 26-32 points</b>	<b>Silver: 33-38 points</b>
			<b>Gold: 39-51 points</b>	<b>Platinum: 52-69 points</b>

Yes	?	No		
11		3	<b>Sustainable Sites 14 Points</b>	

Yes	?	No		Required	
			Prereq 1	<b>Construction Activity Pollution Prevention</b>	
1			Credit 1	<b>Site Selection</b>	1
1			Credit 2	<b>Development Density &amp; Community Connectivity</b>	1
		1	Credit 3	<b>Brownfield Redevelopment</b>	1
1			Credit 4.1	<b>Alternative Transportation, Public Transportation</b>	1
		1	Credit 4.2	<b>Alternative Transportation, Bicycle Storage &amp; Changing Rooms</b>	1
1			Credit 4.3	<b>Alternative Transportation, Low-Emitting &amp; Fuel Efficient Vehicles</b>	1
1			Credit 4.4	<b>Alternative Transportation, Parking Capacity</b>	1
1			Credit 5.1	<b>Site Development, Protect or Restore Habitat</b>	1
		1	Credit 5.2	<b>Site Development, Maximize Open Space</b>	1
1			Credit 6.1	<b>Stormwater Design, Quantity Control</b>	1
1			Credit 6.2	<b>Stormwater Design, Quality Control</b>	1
1			Credit 7.1	<b>Heat Island Effect, Non-Roof</b>	1
1			Credit 7.2	<b>Heat Island Effect, Roof</b>	1
1			Credit 8	<b>Light Pollution Reduction</b>	1

Yes	?	No		
3	1	1	<b>Water Efficiency 5 Points</b>	

Yes	?	No		Required	
1			Credit 1.1	<b>Water Efficient Landscaping, Reduce by 50%</b>	1
		1	Credit 1.2	<b>Water Efficient Landscaping, No Potable Use or No Irrigation</b>	1
1			Credit 2	<b>Innovative Wastewater Technologies</b>	1
1			Credit 3.1	<b>Water Use Reduction, 20% Reduction</b>	1
	1		Credit 3.2	<b>Water Use Reduction, 30% Reduction</b>	1

Powered by



# LEED for New Construction v 2.2 Registered Project Checklist

Yes	?	No		
7	1	1	<b>Energy &amp; Atmosphere</b>	<b>17 Points</b>

Yes	Prereq 1	<b>Fundamental Commissioning of the Building Energy Systems</b>	Required
Yes	Prereq 1	<b>Minimum Energy Performance</b>	Required
Yes	Prereq 1	<b>Fundamental Refrigerant Management</b>	Required

**\*Note for EAc1:** All LEED for New Construction projects registered after June 26, 2007 are required to achieve at least two (2) points.

4	Credit 1	<b>Optimize Energy Performance</b>	1 to 10		
		10.5% New Buildings or 3.5% Existing Building Renovations	1		
		14% New Buildings or 7% Existing Building Renovations	2		
		17.5% New Buildings or 10.5% Existing Building Renovations	3		
	-->	21% New Buildings or 14% Existing Building Renovations	4		
		24.5% New Buildings or 17.5% Existing Building Renovations	5		
		28% New Buildings or 21% Existing Building Renovations	6		
		31.5% New Buildings or 24.5% Existing Building Renovations	7		
		35% New Buildings or 28% Existing Building Renovations	8		
		38.5% New Buildings or 31.5% Existing Building Renovations	9		
		42% New Buildings or 35% Existing Building Renovations	10		
1	Credit 2	<b>On-Site Renewable Energy</b>	1 to 3		
	-->	2.5% Renewable Energy	1		
		7.5% Renewable Energy	2		
		12.5% Renewable Energy	3		
1	Credit 3	<b>Enhanced Commissioning</b>	1		
1	Credit 4	<b>Enhanced Refrigerant Management</b>	1		
	1	Credit 5	<b>Measurement &amp; Verification</b>	1	
		1	Credit 6	<b>Green Power</b>	1



# LEED for New Construction v 2.2 Registered Project Checklist

Yes	?	No		
10	1	2	<b>Materials &amp; Resources</b>	<b>13 Points</b>

Yes					
		1	Prereq 1	<b>Storage &amp; Collection of Recyclables</b>	Required
		1	Credit 1.1	<b>Building Reuse</b> , Maintain 75% of Existing Walls, Floors & Roof	1
0		1	Credit 1.2	<b>Building Reuse</b> , Maintain 95% of Existing Walls, Floors & Roof	1
0	1		Credit 1.3	<b>Building Reuse</b> , Maintain 50% of Interior Non-Structural Elements	1
1			Credit 2.1	<b>Construction Waste Management</b> , Divert 50% from Disposal	1
1			Credit 2.2	<b>Construction Waste Management</b> , Divert 75% from Disposal	1
1			Credit 3.1	<b>Materials Reuse</b> , 5%	1
1			Credit 3.2	<b>Materials Reuse</b> , 10%	1
1			Credit 4.1	<b>Recycled Content</b> , 10% (post-consumer + 1/2 pre-consumer)	1
1			Credit 4.2	<b>Recycled Content</b> , 20% (post-consumer + 1/2 pre-consumer)	1
1			Credit 5.1	<b>Regional Materials</b> , 10% Extracted, Processed & Manufactured	1
1			Credit 5.2	<b>Regional Materials</b> , 20% Extracted, Processed & Manufactured	1
1	0		Credit 6	<b>Rapidly Renewable Materials</b>	1
1		0	Credit 7	<b>Certified Wood</b>	1

Yes	?	No		
12	2	1	<b>Indoor Environmental Quality</b>	<b>14 Points</b>

Yes					
Yes			Prereq 1	<b>Minimum IAQ Performance</b>	Required
Yes			Prereq 2	<b>Environmental Tobacco Smoke (ETS) Control</b>	Required
1			Credit 1	<b>Outdoor Air Delivery Monitoring</b>	1
1			Credit 2	<b>Increased Ventilation</b>	1
1			Credit 3.1	<b>Construction IAQ Management Plan</b> , During Construction	1
1			Credit 3.2	<b>Construction IAQ Management Plan</b> , Before Occupancy	1
1			Credit 4.1	<b>Low-Emitting Materials</b> , Adhesives & Sealants	1
1			Credit 4.2	<b>Low-Emitting Materials</b> , Paints & Coatings	1
1			Credit 4.3	<b>Low-Emitting Materials</b> , Carpet Systems	1
1			Credit 4.4	<b>Low-Emitting Materials</b> , Composite Wood & Agrifiber Products	1
1			Credit 5	<b>Indoor Chemical &amp; Pollutant Source Control</b>	1
1			Credit 6.1	<b>Controllability of Systems</b> , Lighting	1
1			Credit 6.2	<b>Controllability of Systems</b> , Thermal Comfort	1
1			Credit 7.1	<b>Thermal Comfort</b> , Design	1
	1		Credit 7.2	<b>Thermal Comfort</b> , Verification	1
0	1		Credit 8.1	<b>Daylight &amp; Views</b> , Daylight 75% of Spaces	1
0		1	Credit 8.2	<b>Daylight &amp; Views</b> , Views for 90% of Spaces	1



# LEED for New Construction v 2.2 Registered Project Checklist

Yes	?	No		
4	0		<b>Innovation &amp; Design Process</b>	<b>5 Points</b>
1			Credit 1.1 <b>Innovation in Design:</b> 100% Non-Smoking Project	1
1			Credit 1.2 <b>Innovation in Design:</b> Green Cleaning Products	1
1			Credit 1.3 <b>Innovation in Design:</b> Education Center- Kiosk	1
			Credit 1.4 <b>Innovation in Design:</b> Provide Specific Title	1
1	0		Credit 2 <b>LEED® Accredited Professional</b>	1

# Appendix H

## FEMA Flood Hazard Letter



# Federal Emergency Management Agency

Washington, D.C. 20472

**MAY 15 2008**

CERTIFIED MAIL  
RETURN RECEIPT REQUESTED

IN REPLY REFER TO:  
Case No.: 08-09-0541R

The Honorable Mary Sue Maurer  
Mayor, City of Calabasas  
26135 Mureau Road  
Calabasas, CA 91302

Community: City of Calabasas, CA  
Community No.: 060749

104

Dear Mayor Maurer:

This responds to a request that the Department of Homeland Security's Federal Emergency Management Agency (FEMA) comment on the effects that a proposed project would have on the flood hazard data for your community. In a letter dated December 31, 2007, Mr. Christopher Ming H. Neo, P.E., requested that FEMA evaluate the effects that a new hydrologic and hydraulic analysis, up-to-date topographic information, and a proposed project along McCoy Canyon Creek from approximately 1,100 feet downstream of Park Sorrento to approximately 675 feet downstream would have on the flood hazards. The proposed project will consist of the placement of fill behind a proposed retaining wall and channelization along McCoy Canyon Creek. The proposed area of revision will extend from approximately 1,380 feet downstream of Park Sorrento to approximately 100 feet upstream along McCoy Canyon Creek.

All data required to complete our review of this request for a Conditional Letter of Map Revision (CLOMR) were submitted with letters from Mr. Neo.

The City of Calabasas does not have a separately printed Flood Insurance Rate Map (FIRM) and is designated Zone C, an area of minimal flooding. The City of Calabasas is located on FIRM Panel 065043 0612 B for the unincorporated areas of Los Angeles County; however, the FIRM panel is not printed because the entire panel is designated Zone C. Because no flood hazard data exists, the submitted information included an analysis of the existing conditions for McCoy Canyon Creek.

~~The submitted existing conditions HEC-RAS hydraulic computer model, dated April 26, 2008,~~ based on a new hydrologic analysis and updated topographic information, was used as the base conditions model in our review of the proposed conditions model for this CLOMR request. We reviewed the submitted data and determined that the proposed project meets the minimum floodplain management criteria of the National Flood Insurance Program (NFIP). We believe that, if the proposed project is constructed as shown on the submitted plans entitled "Site Development Plan," prepared by Pacific Coast Civil, Inc., dated August 24, 2007, and the data listed below are received, the floodplain boundaries of the base (1-percent-annual-chance) flood will be delineated as shown on the submitted topographic work map entitled "McCoy Canyon Creek Floodplain Exhibit (Proposed Condition), the Village at Calabasas," prepared by Pacific Coast Civil, Inc., dated April 7, 2008.

As a result of the proposed project, the base flood water-surface elevations (WSELs) will increase and decrease compared to the existing conditions base flood WSELs along the revised reach of McCoy Canyon Creek. The maximum increase in base flood WSEL, 2.7 feet, will occur approximately

820 feet downstream of Park Sorrento. The maximum decrease in base flood WSEL, 0.4 foot, will occur approximately 720 feet downstream of Park Sorrento.

As a result of the proposed project, the width of the Special Flood Hazard Area (SFHA), the area that would be inundated by the base flood, will increase in some areas and decrease in other areas compared to the existing conditions SFHA width. The maximum increase in SFHA width, approximately 25 feet, will occur approximately 820 feet downstream of Park Sorrento. The maximum decrease in SFHA width, approximately 50 feet, will occur approximately 900 feet downstream of Park Sorrento.

Because the FIRM panel is not currently printed for your community, the effects of this project on the flood hazard areas cannot be mapped until a request for the Physical Map Revision (PMR) is submitted. The City of Calabasas will remain in an area designated as Zone C until revised through the PMR process.

Upon completion of the project, your community may submit the data listed below and request that we make a final determination issuing the effective FIRM and FIS report.

- Detailed application and certification forms, which were used in processing this request, must be used for requesting final revisions to the maps. Therefore, when the map revision request for the area covered by this letter is submitted, Form 1, entitled "Overview & Concurrence Form," must be included. (A copy of this form is enclosed.)
- The detailed application and certification forms listed below are required. Please submit new forms (copies of which are enclosed).

Form 2, entitled "Riverine Hydrology & Hydraulics Form"

Form 3, entitled "Riverine Structures Form"

Hydraulic analyses, for as-built conditions, of the base flood, and a topographic work map showing the revised floodplain boundaries must be submitted with Form 2.

- Effective October 1, 2007, FEMA revised the fee schedule for reviewing and processing requests for conditional and final modifications to published flood information and maps. In accordance with this schedule, the current fee for this map revision request is \$4,800 and must be received before we can begin processing the request. Please note, however, that the fee schedule is subject to change, and requesters are required to submit the fee in effect at the time of the submittal. Payment of this fee shall be made in the form of a check or money order, made payable in U.S. funds to the National Flood Insurance Program, or by credit card (Visa or MasterCard only). The payment, along with the revision application, must be forwarded to the following address:

FEMA National Service Provider  
3601 Eisenhower Avenue  
Alexandria, VA 22304-6425

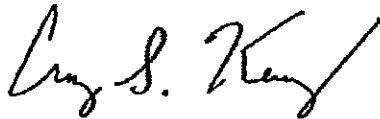
- As-built plans, certified by a registered professional engineer, of all proposed project elements
- Community acknowledgment of the map revision request

The basis of this CLOMR is, in whole or in part, a channel-modification project. NFIP regulations, as cited in Paragraph 60.3(b)(7), require that communities assure that the flood-carrying capacity within the altered or relocated portion of any watercourse is maintained. This provision is incorporated into your community's existing floodplain management regulations. Consequently, the ultimate responsibility for maintenance of the modified channel rests with your community.

This CLOMR is based on minimum floodplain management criteria established under the NFIP. Your community is responsible for approving all floodplain development and for ensuring all necessary permits required by Federal or State law have been received. State, county, and community officials, based on knowledge of local conditions and in the interest of safety, may set higher standards for construction in the SFHA. If the State, county, or community has adopted more restrictive or comprehensive floodplain management criteria, these criteria take precedence over the minimum NFIP criteria.

If you have any questions regarding floodplain management regulations for your community or the NFIP in general, please contact the Consultation Coordination Officer (CCO) for your community. Information on the CCO for your community may be obtained by calling the Director, Mitigation Division of FEMA in Oakland, California, at (510) 627-7175. If you have any questions regarding this CLOMR, please call our Map Assistance Center, toll free, at 1-877-FEMA MAP (1-877-336-2627).

Sincerely,



Craig S. Kennedy, CFM, Program Specialist  
Engineering Management Branch  
Mitigation Directorate

For: William R. Blanton Jr., CFM, Chief  
Engineering Management Branch  
Mitigation Directorate

Enclosures

cc: Mr. Robert B. Yalda  
Director  
Public Works  
City of Calabasas

Ms. Yvonne B. Burke  
Los Angeles County Supervisor

D2 Development and Construction, Inc.

Mr. Christopher Ming Hoe Neo, P.E.  
Pacific Coast Civil South, Inc.



# Appendix I-1

## Acoustical Analysis

Davy

 **Associates, Inc.**  
*Consultants In Acoustics*

2100 North Sepulveda Blvd, Suite 42 • Manhattan Beach, CA 90266 • Tel: 310-802-8900 • Fax: 310-802-8002 • Email: DavyAssoc@aol.com

JN2006-108C

November 20, 2009

Ms. Veritas Shatengco  
Project Manager  
D2 Development, Inc.  
5023 N. Parkway Calabasas, Suite 200  
Calabasas, CA 91302

**SUBJECT: TASK 3 ACOUSTICAL ANALYSIS AND REPORT**  
**The Village at Calabasas, Seniors Community Living**  
**Calabasas, California**

Dear Veritas:

In accordance with your request, we have reviewed the revised Project Description for the proposed Village at Calabasas Seniors Project in Calabasas, California. We have also reviewed the current traffic report for the Project. The Proposed Project is a mixed-use development with an assisted living component.

This report is an amendment to the Acoustical Analysis report dated April 16, 2007 by Davy & Associates, Inc. for the Approved Project.

The Approved Project included a 24-hour noise monitoring at the north property line. The results of this monitoring indicated that the north property line is exposed to a CNEL 62.3 noise level due to traffic on Calabasas Road and U.S. 101 SB Ramps. The traffic report by Associated Transportation Engineers dated November 11, 2009 indicates that the Approved Project would generate 1,510 Average Daily Trips and the Proposed Project would generate 660 Average Daily Trips which is a decrease of 850 Average Daily Trips for the Proposed Project over the Approved Project.

Table 6 in the April, 2007 Acoustical Report shows that increases in CNEL values due to the Approved Project range from 0.6 dB to 1.1 dB. With the decrease in Average Daily Trips for the Proposed Project, increases in CNEL values at the site will be less than 1 dB.

Ms. Veritas Shatengco  
D2 Development, Inc.

November 20, 2009  
Page Two

Most people cannot distinguish noise level changes of 1 or 2 dB. A noise level change of 3 dB begins to become noticeable and a noise level change of 5 dB is considered significant. Based on this analysis, there will be no significant noise level changes or noise level impacts due to future year traffic volumes with the Proposed Project.

With an exterior noise level less than CNEL 65 the buildings on the Proposed Project must provide an A-weighted noise reduction value of less than 20 dB to achieve an interior CNEL 45 value.

Standard construction consisting of 2x4 studs with R-11 insulation, exterior stucco, interior gypboard, and standard glazing provides a minimum A-weighted noise reduction of 20 dB.

This means that with the use of standard construction interior noise levels should not exceed CNEL 45. Therefore, the buildings will comply with the California Noise Insulation Standards as enforced by the City of Calabasas.

Construction noise was also discussed Section 5.0 of the April, 2007 Acoustical Report. This analysis concluded that construction noise will be insignificant for the Approved Project. This conclusion also holds for the Proposed Project.

If you have any questions concerning the enclosed report, please call me. It has been a pleasure working with you on this project.

Sincerely,

**DAVY & ASSOCIATES, INC.**

  
Bruce A. Davy  
President

BD/kbd

cc: Nancy Johns

# Appendix I-2

## Acoustical Analysis Supplemental

DAVY

 ASSOCIATES, INC.

Consultants in Acoustics

*2100 Sepulveda Blvd, Suite 42 \* Manhattan Beach\* CA 90266 \* Tel 310 802-8900 \* Fax 310 802-8002 \* e-mail: davyassoc@aol.com*

JN2006-106D

March 15, 2010

Mr. Larry Dinovitz  
D2 Development, Inc.  
5023 N. Parkway Calabasas, Suite 200  
Calabasas, CA 91302

SUBJECT: TASK 5 ACOUSTICAL ANALYSIS AND REPORT  
**The Village at Calabasas, Seniors Community Living  
Calabasas, California**

Dear Larry:

In accordance with your request, we have reviewed the revised Project Description for the proposed Village at Calabasas Seniors Project in Calabasas, California. We have also reviewed the comments from ESA to Michael Klein the Associate Planner in Calabasas. The comment on noise states that our updated Acoustical Analysis and Report (dated November 20, 2009) does not address the fact that when Phase 1 is completed and occupied, there may be a potential impact due to construction of Phase 2.

The approved project consists of a single Building and a Parking Structure. The Building and Parking Structure will be constructed in two phases. Phase 1 will include all of the grading for the entire project and the 3 story northerly portion of the Building. Phase 1 will also include construction of the first 3 levels of the Parking Structure located just to the west of the Building

As part of Phase 1, a four story Sound Wall will be constructed at the southern end of the Phase 1 Building. This Sound Wall will not have any windows or openings.

Since there will be not grading during Phase 2, construction noise sources will be limited to equipment involved in building construction. Noise measurements have been conducted on various pieces of construction equipment on other projects. This data has been maintained in our files. Noise measurements were generally made at a distance of 50 feet from the operating equipment. Other distances were required for some of the pieces of equipment, and this data was extrapolated to a 50 foot standard distance. These measured noise levels are summarized for the proposed equipment schedule as follows. These anticipated noise sources are listed below in Table 1.

Table 1

**A-Weighted Noise Levels in dB at 50 feet  
For Various Types of Construction Equipment**

<u>Type</u>	<u>Noise Level</u>
Concrete Trucks	83 dBA
Rear Loading Trucks	83
Concrete Pump Trucks	80
Flat Bed Trucks	83
Fork Lifts	84
Skip Loaders	84
Diesel Generators	76
Diesel Compressors	77

The windows that will be utilized in Phase 1 construction will be dual-pane with a minimum 1/2" airspace. These window assemblies along with standard construction consisting of studs with insulation, interior gypboard and exterior stucco or plaster provides a minimum noise reduction between exterior noise and interior noise of 30 dBA.

Sleep studies have shown that at an interior maximum noise level of 55 dBA, fewer than 10 % of the general population would be awakened or disturbed. (Dr. Jerome Lukas, State Department of Health, Berkeley, California) Interior noise levels of 75 to 80 dBA would be required to result in speech interference or interference with activities such as watching TV or reading.

Therefore, if exterior noise levels do not exceed 85 dBA, interior noise levels will not exceed 55 dBA and there would be no significant noise impact. As can be seen from the data in Table 1, none of the equipment that will be used to complete Phase 2 will produce noise levels in excess of 85 dBA at a distance of 50 feet. If all noise producing equipment is operated at a distance of 50 feet or greater from the Sound Wall separating Phase 1 and Phase 2 interior noise levels in Phase 1 will not exceed 55 dBA and construction noise will not be significant.

Once the exterior shell of Phase 2 is completed, the major noise sources of construction noise will be hand-held electric drills and possibly hand-held sanders. These tools will not produce noise levels in excess of 85 dBA at a distance of 50 feet. Additionally, the Sound Wall separating Phase 1 from Phase 2 will reduce noise levels to values well below 55 dBA in the units of Phase 1.

As part of the original analysis, some noise mitigation measures were recommended. These measures are repeated here for emphasis. However, they are not included solely for this amended analysis.

It is recommended that the following measures be adopted to minimize noise impacts at the Phase 1 occupied units during the construction of Phase 2.

1. Restrict construction activities to daily operation between 7:00 a.m. and 7:00 p.m. Monday through Friday and 8:00 a.m. to 5:00 p.m. on Saturdays. There should be no work on Sundays or Federal holidays.
2. Ensure that all construction equipment is properly maintained. All vehicles and compressors should utilize exhaust mufflers, and engine enclosure covers as provided by the manufacturer should be in place at all times.

Mr. Larry Dinovitz  
D2 Development, Inc.

March 15, 2010  
Page Four

If you have any questions concerning the enclosed report, please call me. It has been a pleasure working with you on this project.

Sincerely,

**DAVY & ASSOCIATES, INC.**

*Bruce A. Davy*

Bruce A. Davy, P.E.  
President

BD/kbd

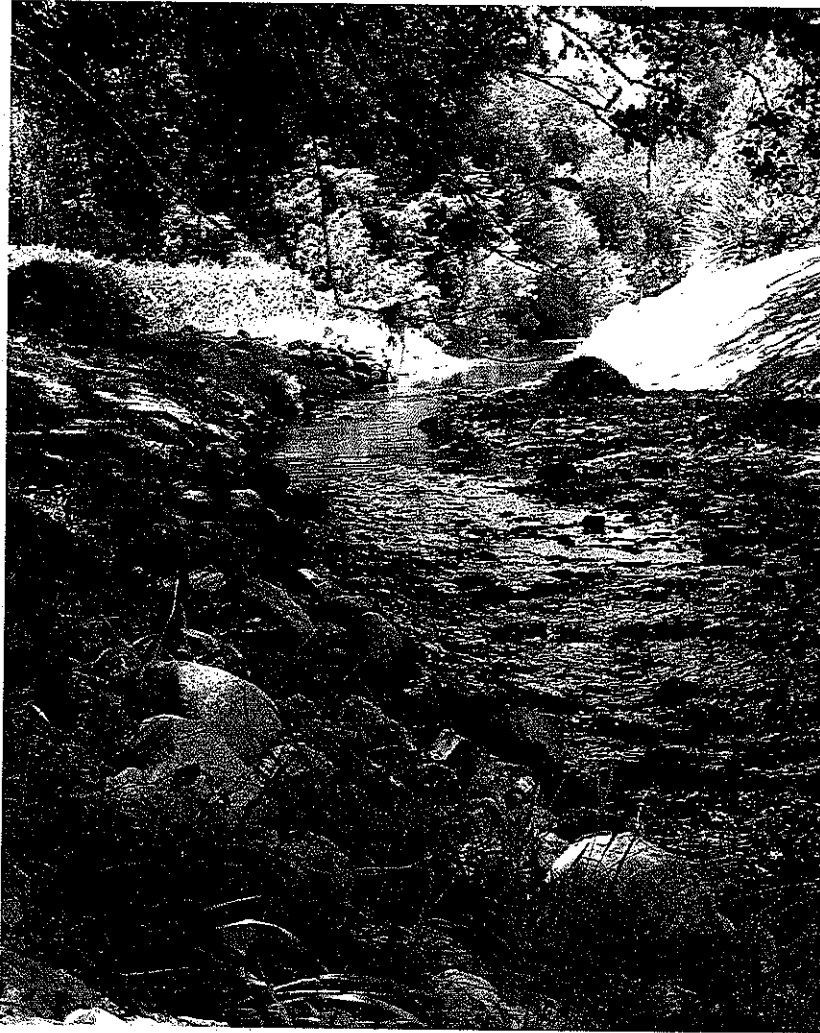
cc: Nancy Johns



# Appendix J

## Quimby Act Justification Analysis

**THE VILLAGE AT CALABASAS**  
**QUIMBY ACT JUSTIFICATION ANALYSIS**



Presented by:

D2 Development  
23500 Park Sorrento  
Calabasas, California 91302

November 2009

## THE VILLAGE AT CALABASAS QUIMBY ACT JUSTIFICATION ANALYSIS

### I. PROJECT OVERVIEW

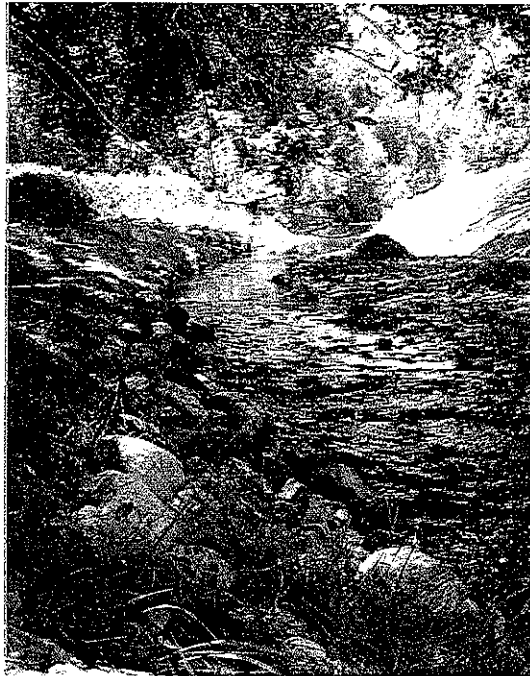
The Village at Calabasas Project has been redesigned since Project approval in September 2008. The new design supports a Seniors' independent living lifestyle with pedestrian and bicycle friendly environment that promotes connectivity to existing shopping, entertainment, businesses, and recreational opportunities. There is also an Assisted Living and Memory Care Unit in a separate building located along Park Sorrento. The Assisted Living component is a commercial medical use and is not subject to QUIMBY ACT requirements. The mixed-use development is an excellent example of "compact development", using less land for development by designing multi-story, stacked buildings in order to retain and create open space. The Village offers a variety of open space and recreational opportunities in the form of Project amenities tailored to Senior users. These areas are private spaces which will be maintained by The Village Homeowner's Association, and are further described below.

The subject property is a unique parcel in that the existing development footprint provides for a large amount of open space/natural areas. This is attributed to the site's topography in regards to McCoy Creek and its many stately oak trees. The approved Village of Calabasas development retains these open space areas, resulting in the preservation of this beautiful natural open space. The natural open space consists of McCoy Creek and associated riparian habitat, the Village Walk along the eastern border of the property, and various trees and grassy areas along the slope of the creek. McCoy Creek and its environs is not a limiting factor, but a fantastic site amenity.

The Project, as designed, provides for its fair share of parks and recreation space to satisfy the intent of the Quimby Act. The recreational needs and scope of services offered for the revised project will exclusively accommodate Seniors' type uses. The prior project Environmental Impact Report states that, "the Projects impacts to public parks would be less than significant and, other than the requirement either to dedicate 0.675 acres of parkland or pay the in lieu Quimby fee to the City of Calabasas, no mitigation measures are required". The new plan, with a reduced number of persons per household, would only require 0.459 acres of private open space and passive and active recreational space. This is further detailed in Section III below.

A variety of recreation, leisure, and open space areas have been incorporated into the Project as Project amenities. Some of the Project's activities include; an exercise path and nature interpretive trails, gardening, art, painting, photography, and cooking, a shuffleboard court, fireplace reading areas, lap pool /jacuzzi, active organic gardening area, and plaza gathering areas. The community room provides space for indoor recreation including; a pilates/yoga/martial arts studio, theater/music room, library and computer area, art room, and photography dark room. The combination of these areas result in the Project's compliance with the acreage requirement dedicated for Quimby Act purposes.

It is our position, supported by this analysis, that in-lieu of fees are not required.



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*Village residents can enjoy the peaceful creek side setting under spectacular oak trees*

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*McCoy Creek, a perennial stream, which runs through the property along its eastern border. The "Village Walk" Nature Trail will be constructed along the site's eastern border between the creek. This walking trail will include interpretive plaques which identify onsite flora and fauna. Benches will be located along the trail way to provide sitting areas for resting, reading, painting, and other outdoor leisure activities.*

## II. QUIMBY ACT LAW AND INTENT

### 1) Government Code Section 66477 (Quimby Act)

Government Code Section 66477 is commonly referred to as the "Quimby Act" was first passed by our California legislature in 1975. This passage of this law authorizes local agencies to adopt an ordinance requiring developers to set aside land, donate conservation easements, or pay in-lieu of fees specifically for park improvements. In 1982, the Quimby Act was substantially amended in response to the negative, unintended impacts to developers. The amended code, known as AB1600, required agencies to "show a reasonable relationship between the public need for the recreation facility or park land and the type of development project upon which the fee is imposed"<sup>1</sup>.

The intent of the Quimby Act is to provide adequate park areas and recreational facilities to accommodate new developments, while limiting impacts to existing park and recreation areas. This is essentially mitigation to offset impacts due to property improvements.

There are a number of subsections to this code that apply to The Village at Calabasas Project, listed as follows:

*Government Code Section 66447 (a) (5): The amount and location of land to be dedicated or the fees to be paid shall bear a reasonable relationship to the use of the park and recreational facilities by future inhabitants of the subdivision.<sup>2</sup> ;*

*Government Code Section 66447 (a) (9): If the subdivider provides park and recreational improvements to the dedicated land, the value of improvements together with any equipment located thereon shall be a credit against the payment of fees or dedication of land required by the ordinance.<sup>3</sup> ; and*

*Government Code Section 66447 (a)(9)(f): Parks and recreation purposes shall include land and facilities for the activity of "recreational community gardening", which actively consists of the cultivation by persons other than, or in addition to, the owner of the land, of plant material not for sale.<sup>4</sup>*

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<sup>1</sup> Westrup, Laura. *Quimby Act 101: An Abbreviated Overview*, Volume 38, No. 3, Page 8, prepared by the Planning Division, California State Parks, Summer 2002.

<sup>2</sup> State of California Government Codes website, [www.leginfo.ca.gov](http://www.leginfo.ca.gov) , Government Code Section 66475-66478.

<sup>3</sup> Ibid

<sup>4</sup> Ibid

2) City of Calabasas Ordinance 98-132

The City's Municipal Code, Chapter 17.50 entitled "Dedications and Exactions" establishes standards for subdivider dedications of land or payment of in lieu of fees as a condition of map approval. There are two calculations that follow. They are; amount of land to be dedicated and fees for in lieu of land.

*Land Dedication Calculation*

Based on the City's code, the amount of land to be dedicated is calculated as follows:

$$A = .003 \times UP$$

Where:

A= Amount of parkland required, in acres.

U= Total number of approved dwelling units in the subdivision.

P= Population Density per dwelling unit.

.003= 3 acres of park land per 1,000 population.

Therefore, the calculation specific to The Village is:

$$.003 \times 104 \text{ (units)} \times 1.47^* \text{ (persons per household)} = \mathbf{0.459 \text{ Acres of Parkland}}$$

\*Based on the following:

$$\text{Phase 1- } 21 \text{ units @ } 1.5/\text{unit} = 31.5$$

$$\text{Phase 2- } 79 \text{ units @ } 1.5/\text{unit} = 118.5$$

$$4 \text{ units @ } 1/\text{unit} = 4.0$$

*Total of 154 people*

*In-Lieu Fee Calculation*

Based on the City's code, the formula to calculate the in-lieu of fee is:

Fair Market Value of Project divided by the gross site acreage divided by the parkland obligation in acres as calculated above.

Therefore, the calculation specific to The Village is:

$$\$9,531,000 \text{ (01/09 value)} / 5.43 \text{ (acreage)} \times .459 \text{ (land dedication)} = \$805,659.12 \text{ Fee}$$

**Proposed Fee (with 100% Reduction\*\*) is \$0**

\*\*Based on City Staff Draft Credit Matrix for onsite improvements

The following section sets forth justification to support the argument that adequate open space and recreation areas will be provided by the Project amenities to satisfy the intent of the Quimby requirement.

### III. SITE PERVIOUS SURFACE COVERAGE

One of the Project's conditions of approval is the requirement to provide easements and pervious surface areas in accordance with City code. This analysis takes into consideration the site's pervious surface coverage requirement for the site. The remaining areas are used in the QUIMBY area analysis. The following chart tabulates these pervious surface and QUIMBY area calculations.

<i>VILLAGE AT CALABASAS</i>	
<i>PERVIOUS SURFACE/QUIMBY AREA CALCULATIONS</i>	
Project Gross Acreage	5.43
Project Gross SF	236,636
Building Footprint (SF)	(115,461)
Non-Pervious Surface Area (SF)	(2,148)
Area Available for Pervious Surface (SF)	<u>119,027</u>
Area Available for Parks (SF)	<b>29,105</b>
City Pervious Surface Requirement @38%	89,922 SF
Required Area = .459 AC	<b>19,994 SF</b>

### IV. SITE SPECIFIC PARK AND RECREATION AREAS

#### *Recreation Zones*

There are four distinct areas (Zones) located onsite. These areas are illustrated on the Quimby Calculation Areas Diagram, which can be found on the following page.

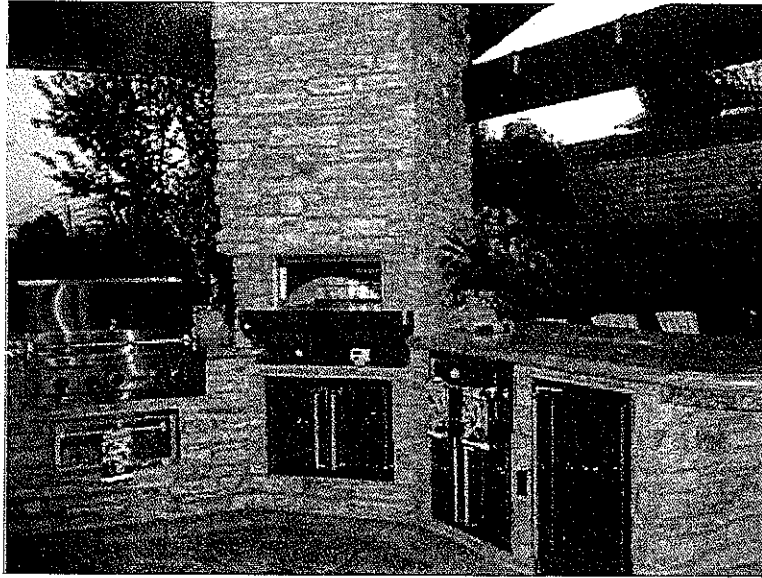
1) ZONE 1: PARK/RECREATION SPACE (Green Color, 13,741 SF)

Adjacent to the riparian open space to the west is the fire access lane. As required by the County of Los Angeles Fire Department, this fire lane is 28-feet wide and extends along the southern boundary of the independent living units, terminating at the hammerhead turn-around near the site's western border. The fire access lane will be comprised of a porous paving material.

This area can be utilized for a number of recreational games and activities. Some examples of these are:

- Open Multi-Use Grass Area
- Shuffleboard
- Croquet
- Volleyball
- Badminton
- Walking & Exercise Area/Internal Walkway
- Basketball (Back board)\*
- Barbeque/Outdoor Kitchen Area (Built Outside Fire Lane)

\*The basketball hoop will be placed just outside the fire lane as part of the outside community space (orange zone on Quimby Diagram).



**Outdoor Kitchen/BBO**

*The outdoor kitchen area will be available for use by The Village residents on a reservation basis. The kitchen will also be used in conjunction with the indoor teaching kitchen located in the community room for cooking classes. As shown in the sample picture, the kitchen will be fashioned in a rustic Tuscan-style with quality stone and stainless steel appliances.*

D2 Development met with Captain Jordan and his staff at our local Los Angeles County Fire Department office. Captain Jordan stated that the Fire Department will approve any use within the Fire Department access area that does not create a permanent, above-grade impediment to their access. In accordance with the County Fire regulation, no permanent facilities will be construction anywhere along the designated fire access lane.



Waterfall along MCoy Creek- View from Zone 2



3) ZONE 2: ACTIVE PARK/RECREATION SPACE (Khaki Color, 8,324 SF)

The site design and layout lends to creation of a large amount of open space as an integrated part of the Project. The khaki zone contains active recreation areas, which is consistent with natural park uses, such as:

- Infinity Lap Swimming Pool and Jacuzzi
- Fireplace Gathering Area
- Picnic Seating Areas
- Bird Watching
- Reading, Writing, & Painting Area
- Flower/Garden Club Areas
- Croquet Tournament Area

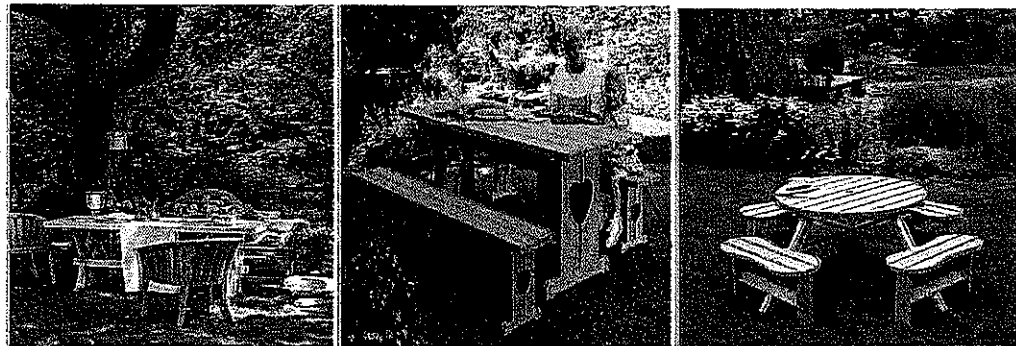


***Fireplace Gathering Area***  
*An outdoor fireplace provides the perfect setting for a conversation and gathering area for Village residents. The dramatic fireplace will be surrounded with ample seating and stonework and artwork for the residents to enjoy.*

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*Outdoor seating areas will be located throughout the site*

---





**Outdoor Lap Pool**

*The Village will have an impressive outdoor lap pool and Jacuzzi located within Zone 2, as illustrated on the Quimby Diagram. This pool will be an infinity edge pool with curtains of water continuously cascading into the pool. There will also seating and garden areas surrounding the pool to complete this fantastic amenity. This luxury pool will provide the residents a place for onsite exercise and poolside leisure activities.*

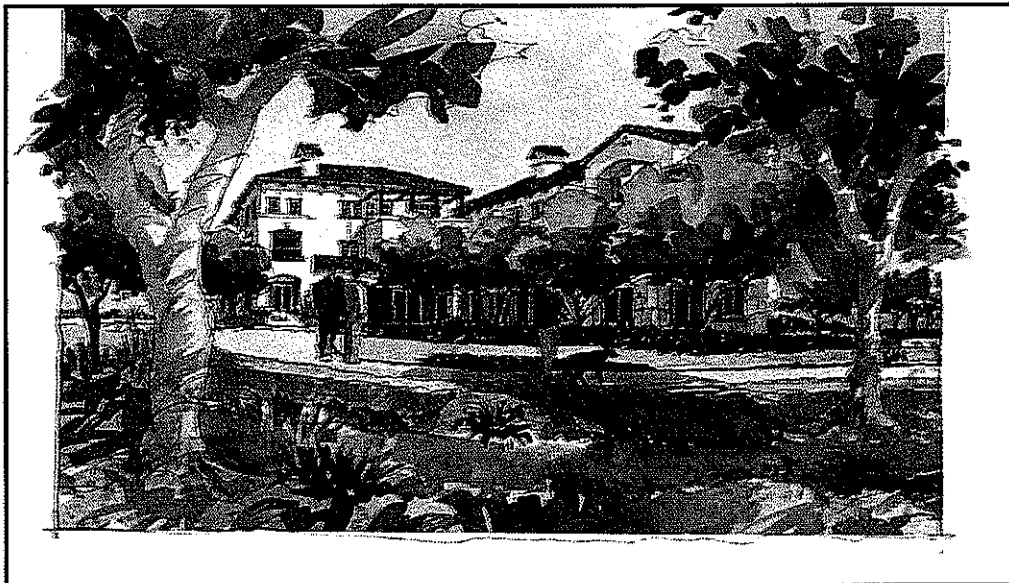
3) **ZONE 3: PLAZAS AND COURTYARDS (Red Color; 7,040 SF)**

The design of The Village at Calabasas Mixed-Use Project incorporates Santa Barbara Mission style architecture. This rustic, yet elegant style includes plazas and courtyards as an integral part of the development. The design includes clustered buildings with a grand plaza area along with center and side courtyards and gardens. This layout provides an intimate venue for both large and small cultural and social activities and gathering places.

The courtyards throughout the project create outdoor living spaces for the residents which are connected with walkways and paths. These defined areas offer an ideal space for relaxation, outdoor eating, and conversation areas to get outside and enjoy the beautiful outdoor setting. These areas will be equipped with a variety of outdoor furniture, including; tables and chairs, chaise lounges, benches along with additional seating areas natural stone to complete the recreation and leisure concept. The courtyards will also have shaded areas, "mistlers" providing relief on hot summer days,

hardscape and landscape, speakers with music, and lighting. The end result is an inviting space to gather and enjoy either some quiet time alone or with friends.

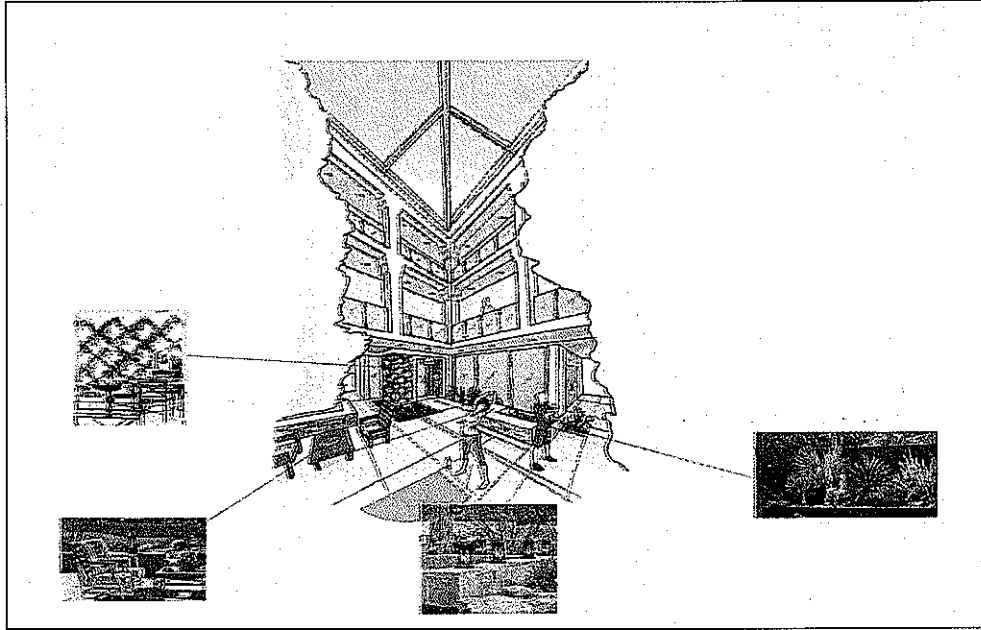
Further, community gardening space, located within the main courtyard, will be constructed for Village residents as part of the outdoor gardening recreation program. A letter from Valley Crest Landscape Development regarding the viability of this program is attached. The plaza and courtyard area will also display unique works of art interspersed at various locations throughout the development.



Village Creekside View

**The Village Courtyard Sketch**

*The Plaza and Courtyard areas are well defined areas within Zone 3 that offer casual seating and gathering areas for Senior residents for relaxation, outdoor eating, and conversation gathering areas. The patio seating sections will be a mixed of classic mission style outdoor furniture made of wood and iron and stone benches with ambient lighting and specialty artwork. Community gardens, maintained by the residents as part of the Garden Club, will be intermixed throughout the plaza.*



4) ZONE 4: COMMUNITY RECREATION SPACE (Yellow Color; 5,500 SF Indoor )

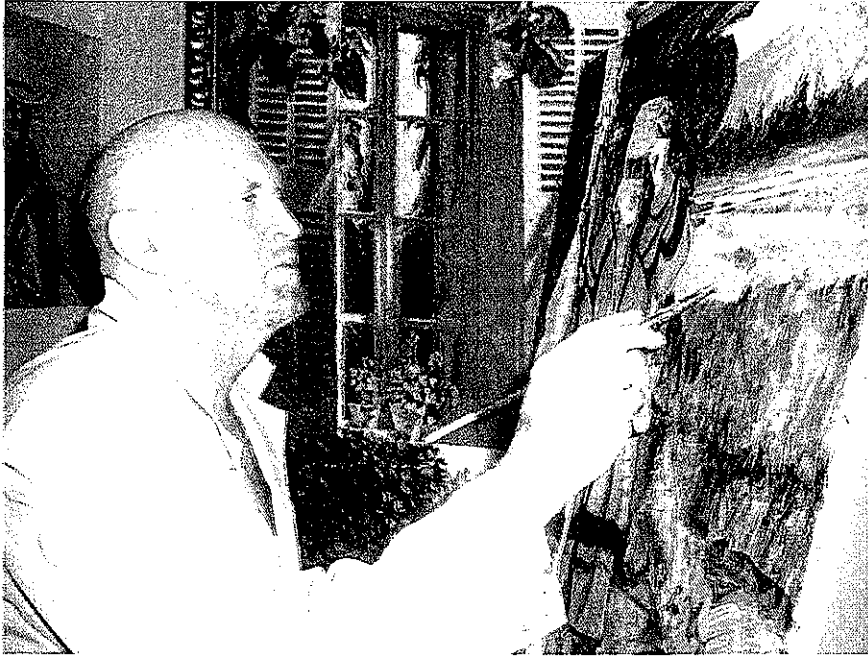
The Village at Calabasas has designated indoor private community space. The indoor space is located on the lower building level. This private recreational space will be administered by Engage, a non-profit organization. A number of recreational programs which are tailored to the residents will be offered in this community space.



Examples of the indoor programs are:

- Pilates/Yoga/ Martial Arts Studio
- Exercise Workout Area
- Photography Dark Room & Art Room
- Theater & Music Room
- Library Area
- Activities and Assembly Room
- Teaching Kitchen
- Writing & Painting Areas
- Internet Lounge

It should be noted that these amenities and programs will be offered to all of The Village at Calabasas residents.



## 6) OTHER CONSIDERATIONS

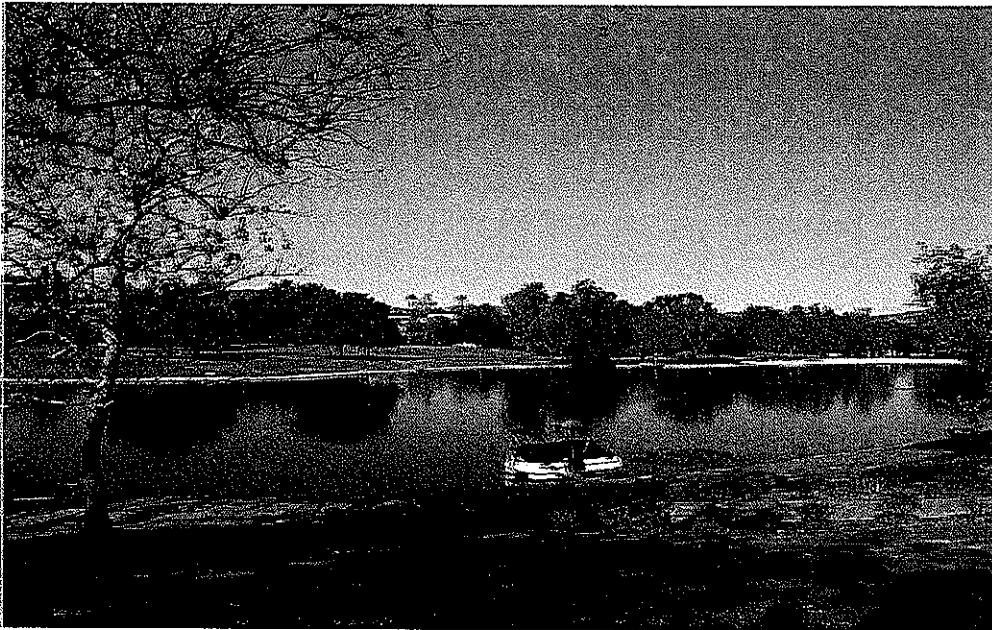
Other recreational related contributing factors are the adjacent to Calabasas Tennis and Swim Center and Calabasas Lake.

### *Calabasas Tennis and Swim Center*

This City-owned facility offers tennis, swimming, and exercise fitness classes. This membership-only club offers prime time and non prime time membership or individual classes or passes for purchase. Tennis is the only recreation this is offered at this Center that is not provided at The Village. Further, the Club is membership restricted and has a long waiting list for memberships. Based on this, the probable impact to this City facility is minimal.

### *Calabasas Lake*

Calabasas Lake and its associated recreational park and trail system can be found at the southern property line. This is the only body of water in Calabasas and is privately owned by the Calabasas Park Homeowner's Association (CPHA). Owners of The Village residential units will have the right and opportunity to become members of CPHA which will permit access to the lake, greenbelt area, and trails. This is an exceptional amenity to The Village development and should be strongly considered as a credit along with the onsite Recreation Zones.



*Calabasas Lake*

### *Village Homeowner's Association (HOA)*

A new HOA will be formed for The Village at Calabasas that will be part of the Calabasas Park Master Homeowner's Association. The Village HOA will develop its own set of Covenants, Conditions & Restriction (CC&Rs) providing bylaws for the development. The CC & Rs will also govern control of all onsite private facilities in perpetuity. Since the HOA will be responsible for maintenance and operation of these private recreation and open space areas, there will no impact to the City's budget for these areas.

## V. CITY GENERAL PLAN APPLICATION

The City of Calabasas *Parks and Recreation Master Plan* provides a framework for future park and recreation systems within the City. According to the Plan, "meeting these needs will be a challenge due to lack of developable land suitable for active park use."<sup>5</sup> The *Master Plan* identifies goals and policies and sets forth strategies for Plan implementation. The Plan further states that, "just as important, the Plan recommends policies on natural open space, which is highly valued by Calabasas residents"<sup>6</sup>.

The Village at Calabasas is consistent with the General Plan and land use policies related to *Parks and Recreation* in that the design provides for both open space and recreational space interspersed throughout the Project. The Master Plan defines natural open space and greenbelt areas as, "undeveloped lands primarily left in their natural environment with recreation uses as a secondary objective".<sup>7</sup> Accordingly, Zones 1- 4, include a wide variety of active and passive recreational areas with an emphasis on cultural, educational, and social leisure activities which also qualify for Quimby purposes.

While it is likely that some Village residents may utilize nearby recreational facilities from time-to-time, there is an abundance and wide variety of recreational options available onsite. Again, The Village concept plan is considered an inclusive Seniors' development, with integrated recreation and commercial areas but is also situated within an urban setting connecting to local services and entertainment. Consequently, Project impacts to existing parks, recreation, and open space areas are not significant due to the areas set-aside onsite for recreation and leisure activities in conjunction with the retained open space. The Village at Calabasas *Environmental Impact Report* determined that no significant impacts would occur to public parks due to Project development, but noted that compliance with the Quimby Act is required.

## VI. SUMMARY

In conclusion, this *Village at Calabasas Quimby Justification Analysis* verifies that the intent and requirements of the Quimby Act have been met. As analyzed in this report, the Seniors' development exceeds the Quimby baseline acreage requirements for recreational and leisure opportunities for residents onsite.

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<sup>5</sup> City of Calabasas Park and Recreation Master Plan website: [www.cityofcalabasas.com/Parks-Master-Plan.html](http://www.cityofcalabasas.com/Parks-Master-Plan.html), January, 2008.

<sup>6</sup> Ibid

<sup>7</sup> Ibid





Appendix K  
County of Los Angeles Fire Department Letter



COUNTY OF LOS ANGELES

FIRE DEPARTMENT

5823 Rickenbacker Road
Commerces, California 90040

WATER SYSTEM REQUIREMENTS - INCORPORATED

Subdivision No: TR 66208 Map Date September 24, 2009
23500 Park Sorrento

Revised Yes City Calabasas

- Provide water mains, fire hydrants and fire flows as required by the County of Los Angeles Fire Department, for all land shown on map which shall be recorded.
The required fire flow for public fire hydrants at this location is 2500 gallons per minute at 20 psi for a duration of 5 hours, over and above maximum daily domestic demand. 2 Hydrant(s) flowing simultaneously may be used to achieve the required fire flow.
The required fire flow for private on-site hydrants is 2500 gallons per minute at 20 psi. Each private on-site hydrant must be capable of flowing 1250 gallons per minute at 20 psi with two hydrants flowing simultaneously, one of which must be the furthest from the public water source.
Fire hydrant requirements are as follows:
Install \_\_\_ public fire hydrant(s). Upgrade / Verify \_\_\_ existing Public fire hydrant(s).
Install 4 private on-site fire hydrant(s). Relocate 1 public fire hydrant(s).
All hydrants shall measure 6"x 4"x 2-1/2" brass or bronze, conforming to current AWWA standard C503 or approved equal. All on-site hydrants shall be installed a minimum of 25' feet from a structure or protected by a two (2) hour rated firewall.
Location: As per map on file with this office.
Other location: Relocate one public fire hydrant approximately 55 feet east of its existing location.
Install 4 new on-site fire hydrants (see site plan mark-up dated September 24, 2009 on file in this office.
All required fire hydrants shall be installed, tested and accepted or bonded for prior to Final Map approval. Vehicular access must be provided and maintained serviceable throughout construction.
The County of Los Angeles Fire Department is not setting requirements for water mains, fire hydrants and fire flows as a condition of approval for this division of land as presently zoned and/or submitted.
Additional water system requirements will be required when this land is further subdivided and/or during the building permit process.
Hydrants and fire flows are adequate to meet current Fire Department requirements.
Upgrade not necessary, if existing hydrant(s) meet(s) fire flow requirements.

SUBMIT COMPLETED (ORIGINAL ONLY) FIRE FLOW AVAILABILITY FORM TO THIS OFFICE FOR REVIEW.

COMMENTS: Per Los Virgenes Municipal Water District, the Fire Flow Availability form dated July 29, 2009, hydrants and flows for public fire hydrants meet the current Fire Department requirements.
On-site hydrants required, see above.

All hydrants shall be installed in conformance with Title 20, County of Los Angeles Government Code and County of Los Angeles Fire Code, or appropriate City regulations. This shall include minimum six-inch diameter mains. Arrangements to meet these requirements must be made with the water purveyor serving the area.

By Inspector Nancy Redheffer Date September 24, 2009



# COUNTY OF LOS ANGELES

## FIRE DEPARTMENT

5823 Rickenbacker Road  
Commerce, California 90040

### CONDITIONS OF APPROVAL FOR SUBDIVISIONS - INCORPORATED

Subdivision No: TR 66208  
23500 Park Sorrento

Map Date September 24, 2009

C.U.P. \_\_\_\_\_ City Calabasas

- FIRE DEPARTMENT HOLD on the tentative map shall remain until verification from the Los Angeles County Fire Dept. Planning Section is received, stating adequacy of service. Contact (323) 881-2404.
- Access shall comply with Section 902 of the Fire Code, which requires all weather access. All weather access may require paving.
- Fire Department Access shall be extended to within 150 feet distance of any exterior portion of all structures.
- Where driveways extend further than 150 feet and are of single access design, turnarounds suitable for fire protection equipment use shall be provided and shown on the final map. Turnarounds shall be designed, constructed and maintained to insure there integrity for Fire Department use. Where topography dictates, turnarounds shall be provided for driveways that extend over 150 feet in length.
- Private driveways shall be indicated on the final map as "Private Driveway and Firelane" with the widths clearly depicted and shall be maintained in accordance with the Fire Code. All required fire hydrants shall be installed, tested and accepted prior to construction.
- Vehicular access must be provided and maintained serviceable throughout construction to all required fire hydrants. All required fire hydrants shall be installed, tested and accepted prior to construction.
- This property is located within the area described by the Fire Department as "Very High Fire Hazard Severity Zone" (formerly Fire Zone 4). A "Fuel Modification Plan" shall be submitted and approved prior to final map clearance. (Contact Fuel Modification Unit, Fire Station #32, 605 North Angeleno Avenue, Azusa, CA 91702-2904, Phone (626) 969-5205, for details).
- Provide Fire Department or City approved street signs and building access numbers prior to occupancy.
- Additional fire protection systems shall be installed in lieu of suitable access and/or fire protection water.
- The final concept map, which has been submitted to this department for review, has fulfilled the conditions of approval recommended by this department for access only.
- These conditions shall be secured by a C.U.P. and/or Covenant and Agreement approved by the County of Los Angeles Fire Department prior to final map clearance.
- The Fire Department has no additional requirements for this division of land.

Comments: Access is adequate as shown on the Tentative Tract Map dated September 24, 2009 (FD) on file in this office.  
Submit two sets of fire hydrant improvement plans for the public fire hydrant that is to be relocated, to this office for review and approval prior to clearance of the final map.  
Submit two sets of plans for the required On-Site Fire Hydrant(s) to Fire Prevention Sprinkler Unit, 5823 Rickenbacker Rd., Commerce, CA 90040 for review and approval.  
Upon approval from Land Development, architectural drawings shall be submitted to Fire Prevention Engineering, Calabasas, Contact (818-880-0341) for additional Fire Department requirements for the building plan check.  
SUBMIT TWO COPIES OF THE FINAL MAP TO LACoFD, LAND DEVELOPMENT FOR REVIEW AND APPROVAL PRIOR TO RECORDATION.

INSPECTOR Nancy Rodheffer

DATE September 24, 2009

Land Development Unit - Fire Prevention Division - (323) 890-4243, Fax (323) 890-9783

# Appendix L-1

## Traffic and Parking Study



# ASSOCIATED TRANSPORTATION ENGINEERS

100 N. Hope Avenue, Suite 4, Santa Barbara, CA 93110 • (805) 687-4418 • FAX (805) 682-8509

Since 1978

Richard L. Pool, P.E.  
Scott A. Schell, AICP, PTP

November 11, 2009

09066L03.WPD

Larry Dinovitz  
D2 Construction, Inc.  
23500 Park Sorrento  
Calabasas, CA 91302

## **TRAFFIC AND PARKING STUDY FOR THE REVISED VILLAGE AT CALABASAS PROJECT - CITY OF CALABASAS**

Associated Transportation Engineers (ATE) has prepared the following traffic and parking study for the Revised Village at Calabasas Project, located in the City of Calabasas. The Village at Calabasas Project was approved by the City as a mixed-use development with residential and retail uses. The project has changed and now consists of a senior residential development with assisted living and independent living units.

This study compares the traffic generation of the approved project and the proposed project to determine the change in traffic that would result. The study also provides an analysis of the parking demands that would be generated by the proposed project and assesses the adequacy of the proposed parking supply.

### **PROJECT DESCRIPTION**

The project site is located at 23500 Park Sorrento, approximately 500 feet east of the Park Granada/Park Sorrento intersection. The site is currently occupied by the Calabasas Inn facility. The Calabasas Inn is permitted to host events with up to 180 guests and currently accommodates 2,583 square-feet (sf) of office uses.

The Village at Calabasas Project was approved by the City in 2008 as a mixed-use development with 79 residential condominiums and 13,135 SF of commercial space, including two restaurants with indoor and outdoor seating areas (Approved Project). The applicant is now proposing to develop a senior residential development with a 103 unit (112 bed) Assisted Living facility and 104 Independent Living residential units (Proposed Project). Access to the site would be provide via two driveway connections to Park Sorrento, and parking would be provided in a 265-space parking structure.

The project would be constructed in two phases with specific parking requirements for each phase. The parking analysis therefore addresses each of the project phases, which are outlined below.

Phase 1. Demolish the existing Calabasas Inn building and construct the Assisted Living facility with 112 beds and 21 of the Independent Living units. The project will also construct the first level of the proposed parking structure, which will provide 100 parking spaces to be used to accommodate the parking demands associated with Phase 1 of the project.

Phase 2. Construct the 83 Independent Living facility units, underground storage units, and additional amenities. The remaining levels of the parking structure will also be constructed, providing an additional 165 on-site parking spaces (265 total spaces).

### **TRIP GENERATION COMPARISON**

The following section reviews the traffic associated with the Approved Project and compares that to the traffic that would be generated by the Proposed Project. The analysis then determines if the Proposed Project would generate the same level of traffic impacts that were identified previously for the Approved Project.

#### **Approved Project**

Trip generation estimates were developed for the Approved Project based on the methodology presented in the traffic study and environmental documents prepared for the project. Table 1 shows the trip generation estimates for the Approved Project.

**Table 1**  
**Trip Generation Estimates - Approved Project**

Land Use	Size	Average Daily		A.M. Peak Hour		P.M. Peak Hour	
		Rate	Trips	Rate	Trips	Rate	Trips
Market Rate Condominiums	79 units	5.86	463	0.44	35	0.52	41
Specialty Retail	6,034 SF	46.55	281	1.40	8	4.55	27
Quality Restaurant	4,801 SF	89.95	432	0.81	4	7.49	36
Outdoor Seating - Quality	64 seats	2.86	183	0.03	2	0.26	17
High Turnover Restaurant	2,300 SF	127.15	292	11.52	26	10.92	25
Outdoor Seating - High Turnover	26 seats	4.83	126	0.47	12	0.42	11
<b>Subtotal</b>			<b>1,777</b>		<b>87</b>		<b>157</b>
<b>Less 15% Mixed-Use/Pass-By</b>			<b>-267</b>		<b>-13</b>		<b>-24</b>
<b>TOTAL</b>			<b>1,510</b>		<b>74</b>		<b>133</b>

The data presented in Table 1 show that the Approved Project would generate 1,510 average daily trips, 74 A.M. peak hour trips and 133 P.M. peak hour trips.

### Proposed Project

Trip generation estimates were developed for the Proposed Project based on the rates presented in the Institute of Transportation Engineers (ITE) Trip Generation report.<sup>1</sup> The rates for Assisted Living beds (Land Use Code 254) and Attached Senior Housing units (Land Use Code 252) were used for the analysis. Table 2 summarizes the trip generation estimates developed for the Proposed Project.

<sup>1</sup> Trip Generation, Institute of Transportation Engineers, 8<sup>th</sup> Edition, 2008.

**Table 2**  
**Trip Generation Estimates - Proposed Project**

Land Use	Size	Average Daily		A.M. Peak Hour		P.M. Peak Hour	
		Rate	Trips	Rate	Trips	Rate	Trips
Assisted Living Facility	112 Beds	2.66	298	0.14	16	0.22	25
Attached Senior Housing	104 Units	3.48	362	0.13	14	0.16	17
<b>TOTAL</b>			<b>660</b>		<b>30</b>		<b>42</b>

The data presented in Table 2 show that the proposed project would generate 660 ADT, 30 A.M. peak hour trips and 42 P.M. peak hour trips.

Table 3 compares the trip generation estimates for the Approved Project and the Proposed Project and shows the net change in traffic that would result.

**Table 3**  
**Approved and Proposed Project Trip Generation Comparison**

Scenario	Average Daily Trips	A.M. Peak Hour Trips	P.M. Peak Hour Trips
Approved Project	1,510	74	133
Proposed Project	660	30	42
<b>Net Change</b>	<b>-850</b>	<b>-44</b>	<b>-91</b>

The data presented in Table 3 show that the proposed project would result in a significant decrease in average daily, A.M. peak hour and P.M. peak hour traffic compared to the Approved Project (-850 ADT, -44 A.M. peak hour trips, and -91 P.M. peak hour trips).



### Impact Analysis

The information presented in the traffic study and EIR completed for the Approved Project found that the project would generate cumulative impacts at one intersection located in the project study area. The Calabasas Road(W)/U.S. 101 Southbound Ramps intersection was forecast to operate in the LOS F range during the A.M. peak period with Cumulative+ Project volumes. The Approved Project's traffic additions to this intersection were forecast to exceed the City of Calabasas traffic impact threshold of a V/C 0.003 change for intersections operating at LOS F. The Approved Project was conditioned to participate in the implementation of the improvements identified by the City for this intersection.

The Proposed Project results in a reduction of 44 A.M. peak hour trips compared to the Approved Project. The impacts of the Proposed Project were therefore reevaluated at the Calabasas Road(W)/U.S. 101 Southbound Ramps intersection to determine if a significant cumulative impact would still be generated (LOS worksheet attached for reference). Table 4 summarizes the results of the updated cumulative impact analysis.

**Table 4**  
**Cumulative + Project**  
**A.M. Peak Hour Intersection Peak Hour Levels of Service**

Intersection	A.M. Peak Hour V/C / LOS			Impact?
	Cumulative VC/LOS	Cumulative + Proposed Project	V/C Increase	
Calabasas Rd (W)/U.S. 101 SB Ramps	1.005/LOS F	1.007/LOS F	0.002	NO

The data presented in Table 4 indicate that the Proposed Project would not generate a significant cumulative impact at the Calabasas Road(W)/U.S. 101 Southbound Ramps intersection, thus no mitigation is required. The reduction in trips generated by the Proposed Project would reduce the V/C ratio increase at this location to 0.002, which would not exceed the City's threshold of 0.003.

### PARKING

As noted in the introduction, the project would be completed in two phases. The parking analysis therefore reviews the parking requirements for each project phase.

### **Phase 1 Parking Analysis**

Phase 1 of the project includes construction of an Assisted Living building with 112 beds and 21 Independent Living residential units. The Calabasas Inn building would be demolished and the first level of the proposed parking structure would be constructed to provide 100 parking spaces. The parking demand assumptions utilized for this phase of the project are summarized below:

#### Assisted Living Facility

Parking demand estimates for the Assisted Living facility were developed based on the rates listed in the ITE Parking Generation Report for Assisted Living facilities (0.36 spaces per occupied bed). Assisted living complexes are a medical service that ITE defines as "residential settings that provide either routine general protective oversight or assistance with activities necessary for independent living to mentally or physically limited people."

The ITE parking demand rates for the Assisted Living units were also validated through studies conducted by ATE at three similar sites located in the Goleta/Santa Barbara area. The studies found that the peak parking demand rate for the three sites was 0.35 spaces per unit which is almost identical to the ITE rate. A copy of the study data is attached for reference.

#### Independent Living Units

The ITE rates for condominiums were used to calculate the parking demand estimates for the Independent Living units (1.68 spaces per unit). It is noted that the ITE condominium rates are conservative for senior housing developments as studies show that senior independent living units typically generate demands ranging from 1.0 to 1.25 spaces per unit.

#### Leased Spaces for Off-Site Tenant

The project proposes to provide 7 on-site parking spaces for the tenants of the building located on the opposite side of Park Sorrento.

#### Loss of On-Street Parking Replacement

Development of the project would result in a loss of 6 on-street parking spaces adjacent to the site, as red curb areas would be installed in order to provide adequate sight distance at the project driveways (see following Sight Distance analysis section). As requested by the City, the 6 on-street spaces would be replaced within the on-site parking garage and would be available for public use.

Table 5 shows the parking demand estimates developed for Phase 1 of the Proposed Project.

**Table 5**  
**Phase 1 Shared Parking Demand Estimates**

Project Component	Size	Parking Rate	Parking Demand
Assisted Living	112 Beds	0.36 Spaces/Bed	40 Spaces
Independent Living	21 Units	1.68 spaces/Unit	35 Spaces
Leased Spaces	-	-	7 Spaces
On-Street Replacement	-	-	6 Spaces
<b>Total Parking Demand</b>			<b>88 Spaces</b>

The data presented in Table 5 show that Phase 1 of the Proposed Project would generate a peak parking demand of 88 spaces. The proposed interim parking supply of 100-spaces would adequately accommodate the parking demands associated with Phase 1 of the Proposed Project and provide a reserve of 12 parking spaces.

#### **Proposed Project (Phase 1+Phase 2) Parking Analysis**

The Proposed Project (Phase 1 +Phase 2) parking demand analysis assumes completion and occupancy of the entire project (112 Assisted Living beds and 104 Independent Living units). The analysis assumes that the proposed 265-space parking structure would be constructed and fully operational during Phase 2. Table 6 shows shared parking requirement for the Proposed Project.

**Table 6**  
**Proposed Project Parking Demand Estimates**

Project Component	Size	Parking Rate	Parking Provided
Assisted Living	112 Beds	0.36 Spaces/Bed	40 Spaces
Independent Living	104 Units	1.68 Spaces/Unit	175 Spaces
Leased Spaces	-	-	7 Spaces
On-Street Replacement	-	-	6 Spaces
<b>TOTAL</b>			<b>228 Spaces</b>

The data presented in Table 6 show that Phase 2 of the Proposed Project would generate a peak parking demand of 228 spaces. The proposed 265-space parking structure would adequately accommodate the parking demands associated with completion of the Proposed Project and provide a reserve parking supply of 37 spaces.

### City Zoning Ordinance Requirement

The City's Zoning Ordinance parking requirements for the Proposed Project were calculated as summarized in Table 7.

**Table 7**  
**Project Zoning Ordinance Parking Requirements**

Proposed	Size	Parking Requirement	Required Parking Spaces
Assisted Living	112 Units	0.75 space/unit	84 spaces
Independent Living 2-Bedroom	70 Units	2.0 spaces/unit	140 spaces
Independent Living 1-Bedroom/Studio	34 Units	1.5 spaces/Unit	51 spaces
Independent Living Guest Parking	104 Units	1.0 Space/3 units	35 Spaces
<b>Total</b>			<b>310 spaces</b>

As shown, the City's Zoning Ordinance requirement for the Proposed Project is 310 spaces. The proposed parking supply of 265 spaces does not meet the City's Zoning Ordinance requirements for the project.

The City allows parking reductions to the Zoning Ordinance requirements of up to 25%, if sufficient evidence is provided to show that the number of parking spaces proposed would meet the parking demands of the project. The proposed parking supply of 252 spaces (265 total spaces provided - 13 spaces allocated for public-use/off-site tenants) represents a 19% reduction to the Zoning Ordinance requirements. As reviewed in the previous section, the proposed parking supply would meet the anticipated parking demands of the project, provide and provide a reserve supply of 37 spaces. Based on this parking demand analysis, the reduction in the parking supply from 310 spaces to 265 spaces is justified and could be supported by the City.

## SITE ACCESS

Access to the site would be provided via two driveways on Park Sorrento. The proposed driveways would be constructed in the same locations as under the approved project. The western driveway would be designed to align with the existing Calabasas Square driveway, located on the north side of Park Sorrento. This driveway would provide access to the motor court, the above ground parking area, and the subterranean parking garage. The eastern driveway would provide access for emergency vehicles. The eastern driveway would also be used to provide shared access with the adjacent parcel to the east through a proposed modification to the existing easement. The project would enter in to a shared access agreement with the adjacent parcel to allow inbound access through the proposed driveway (agreement letter attached for reference). Outbound access for the adjacent parcel would be provided through an existing driveway located approximately 54 feet east of the proposed project driveway.


## Sight Distance

ATE completed a sight distance analysis at the proposed site driveway locations on Park Sorrento. The Caltrans Highway Design Manual states in section 405.1(2)<sup>©</sup> that for private road intersections, "the minimum corner sight distance shall be equal to the stopping sight distance." The Manual also states in section 405.1(2)(d) that "corner sight distance requirements...are not applied to urban driveways." Decision sight distance requirements are more stringent than corner sight distance and are generally applied to major decision points such as public road intersections and freeway and expressway merging points. Thus, stopping sight distance was used to evaluate the sight distance at the project driveways. The posted speed limit on Park Sorrento is 35 mph. It is noted, however, that there are speed humps and 15 MPH advisory signs on Park Sorrento adjacent to the project site. The minimum required stopping sight distance listed in the Caltrans Highway Design Manual for an intersection on a roadway with a speed of 35 mph is 250 feet. This analysis will use 250 feet as a conservative standard.

At the proposed western driveway, the sight distance looking to the west towards Park Granada is over 400 feet. The sight distance looking to the east would be limited by cars parking along the south side of Park Sorrento. Similarly, the sight distance looking to the east of the proposed driveway at the eastern boundary of the property is 260 feet, but the sight distance looking to the west from the driveway is limited to 120 feet by on-street parking. It is recommended that on-street parking be prohibited along the south side of Park Sorrento between the two proposed driveway locations (approximately 6 on-street parking spaces to be replaced on site). This would increase the sight distances from both driveways in both directions to over 250 feet, which is the Caltrans standard for minimum stopping sight distance for a 35 mph design speed.

This concludes ATE's traffic and parking study for the Revised Village at Calabasas Project.

Associated Transportation Engineers



Scott A. Schell, AICP, PTP  
Principal Transportation Planner

SAS/MMF

Attachments:       LOS Calculation Worksheet  
                          Assisted Living Facility Parking Demand Study  
                          Shared Access Agreement Letter

COUNT DATE: 03-21-2006  
 TIME PERIOD: A.M. PEAK HOUR 7:15 - 8:15  
 N/S STREET: US 101 SOUTHBOUND RAMP (WEST)  
 E/W STREET: CALABASAS ROAD  
 CONTROL TYPE: SIGNAL

REF 4 AM

**TRAFFIC VOLUME SUMMARY**

VOLUMES	NORTH BOUND			SOUTH BOUND			EAST BOUND			WEST BOUND		
	L	T	R	L	T	R	L	T	R	L	T	R
(A) EXISTING:	0	0	0	568	0	40	234	303	0	0	501	49
(B) YEAR 2009:	0	0	0	129	0	43	32	57	0	0	122	15
(C) PROJECT:	0	0	0	5	0	0	0	1	0	0	1	0
(D) CUMULATIVE-ADDED:	0	0	0	0	0	83	16	23	0	0	195	0

**GEOMETRICS**

EXISTING GEOMETRICS	NORTH BOUND		SOUTH BOUND		EAST BOUND		WEST BOUND	
	L	T	L	R(a)	L	T	T	R(a)

**TRAFFIC SCENARIOS**

- SCENARIO 1 = EXISTING VOLUMES (A)
- SCENARIO 2 = YEAR 2009 VOLUMES(A+B)
- SCENARIO 3 = YEAR 2009 + PROJECT VOLUMES (A+B+C)
- SCENARIO 4 = CUMULATIVE VOLUMES (A+B+D)
- SCENARIO 5 = CUMULATIVE + PROJECT VOLUMES (A+B+C+D)

**LEVEL OF SERVICE CALCULATIONS**

MOVE- MENTS	# OF LANES	CAPACITY	SCENARIO VOLUMES					SCENARIO V/C RATIOS				
			1	2	3	4	5	1	2	3	4	5
NBL	0	0	0	0	0	0	0	-	-	-	-	-
NBT	0	0	0	0	0	0	0	-	-	-	-	-
NBR	0	0	0	0	0	0	0	-	-	-	-	-
SBL	2	3200	568	697	702	697	702	0.178 *	0.218 *	0.219 *	0.218 *	0.219 *
SBT	0	0	0	0	0	0	0	-	-	-	-	-
SBR	1	1600	48	91	91	174	174	0.03	0.057	0.057	0.109	0.109
EBL	1	1600	234	266	266	282	282	0.146 *	0.166 *	0.166 *	0.176 *	0.176 *
EBT	1	1600	303	360	361	383	384	0.189	0.225	0.226	0.239	0.240
EBR	0	0	0	0	0	0	0	-	-	-	-	-
WBL	0	0	0	0	0	0	0	-	-	-	-	-
WBT	1	1600	501	623	624	818	819	0.313 *	0.389 *	0.390 *	0.511 *	0.512 *
WBR	1	1600	49	64	64	64	64	0.031	0.040	0.040	0.040	0.040
LOST TIME:								0.1 *	0.100 *	0.100 *	0.100	0.100
TOTAL INTERSECTION CAPACITY UTILIZATION: SCENARIO LEVEL OF SERVICE:								0.737 C	0.873 D	0.875 D	1.005 F	1.007 F

NOTES:  
 RTOR: (a) yield

**Parking Site:** Wood Glen Hall  
3010 Foot Hill Rd.

**Name:** Enrique Biche  
**Date:** 8/02/2007

**Capacity**      **Handicap**      **Visitor**      **Staff**      **Reserved**  
29                      1                      10                      10                      8

**Parked Vehicles**

Time:	Handicap	Visitor	Staff	Reserved	Illegal	Total	% Occupied
9:00am	1	3	9	7	0	20	69%
10:00am	1	6	10	8	0	25	86%
11:00am	1	5	11	9	0	26	90%
12:00pm	1	5	9	8	1	24	83%
1:00pm	1	3	10	8	2	24	83%
2:00pm	0	4	9	6	0	19	66%
3:00pm	0	5	8	8	0	21	72%
4:00pm	1	6	6	7	0	20	69%

**Parking Site:** Heritage House  
5200 Hollister Ave.

**Name:** Enrique Biche  
**Date:** 8/02/2007

**Capacity**      **Handicap**      **Visitor**      **Staff**      **Other:** Roundabout  
25                      2                      3                      20

**Parked Vehicles**

Time	Handicap	Visitor	Staff	Illegal	Other	Total	% Occupied
9:00am	1	2	16	2	0	21	84%
10:00am	0	2	16	2	0	20	80%
11:00am	0	3	20	2	2	27	108%
12:00pm	1	0	16	1	1	19	76%
1:00pm	0	0	14	2	0	16	64%
2:00pm	0	2	16	1	0	19	76%
3:00pm	1	3	14	0	1	19	76%
4:00pm	2	1	16	2	1	22	88%

**Parking Site:** Villa Alamar  
45 E. Alamar St.

**Name:** Enrique Biche  
**Date:** 8/02/2007

**Capacity**      **Handicap**      **Staff/Visitor**  
14                      1                      13

**Parked Vehicles**

Time	Handicap	Staff/Visitor	Illegal	Other	Total	% Occupied
9:00am	0	8	1	0	9	64%
10:00am	0	9	0	0	9	64%
11:00am	0	12	0	0	12	86%
12:00pm	0	11	0	0	11	79%
1:00pm	0	8	0	0	8	57%
2:00pm	0	9	0	0	9	64%
3:00pm	0	10	0	0	10	71%
4:00pm	0	10	0	0	10	71%



### Assisted Living Community Parking Demand

SITE	VEHICLES	BEDS	RATE
Wood Glen Hall	26	72	0.36
Heritage House	27	67	0.40
Villa Alamar	12	43	0.28
Average Rate			0.35

Mr. Larry Dinovitz  
23500 Park Sorrento Ventures, LLC  
23500 Park Sorrento  
Calabasas, CA, 91302

Re: Modifications Within Easement

Dear Larry:

This will confirm the terms of our understanding regarding modifications to the existing easement ("Easement") that the 23480 Park Sorrento property ("23480 Property") now has over the 23500 Park Sorrento property ("Calabasas Inn Property").

First American Plaza, L.P. ("23480 Owner") is the current owner of the 23480 Property. 23500 Park Sorrento Ventures, LLC ("Calabasas Inn Owner") is the current owner of the Calabasas Inn Property.

In 1973, prior to the creation of the Easement, a circle driveway was constructed by the previous owner of the 23480 Property (Currey Riach) upon the Easement land, which serves as the main entrance to the 23480 Property and is currently utilized by 23480 Owner as such.

On December 11, 1975, the Easement was created by a reservation in the deed by which Walter and Jean Hollenstien acquired the Calabasas Inn Property (Lot 1 of Tract 23925). The deed reserves a non exclusive easement for ingress and egress over the Calabasas Inn Property for the benefit of the 23480 Property (Lot 1 of Tract 23944). The existing Easement is shown on Exhibit A hereto.

Calabasas Inn Owner is currently processing a land use/entitlement application with the City Of Calabasas ("City") wherein Calabasas Inn Owner proposes to construct a new mixed use development consisting of approximately 80 for sale condominiums and 14,000 square feet of retail uses ("New Project"). As part of the New Project, Calabasas Inn Owner proposes to modify, reconstruct and use the Easement ("Modifications Within Easement") to include a new common driveway ("Common Driveway") and other improvements on the Easement land, and to construct certain improvements on the driveway area of the 23480 Property ("23480 Improvements"), all as shown on Exhibit B hereto. The 23480 Owner agrees to the foregoing on the terms and conditions stated below.

**1. City Conditions Of Approval:** The conditions of approval of the New Project approved by the City Council shall approve of the Modifications Within Easement and 23480 Improvements and require that they be constructed as part of the first phase of construction of the New Project. If the City determines that the 23480 Improvements are a separate project and cannot be processed as part of the New Project, then as soon as reasonably possible after approval of the New Project, Calabasas Inn Owner, with 23480 Owners cooperation as necessary, shall apply for and complete any necessary City land use approvals necessary for the 23480 Improvements ("23480 Approvals") at Calabasas Inn Owners sole cost and expense. In any event, the conditions of approval for the New

Project or the 23480 Approvals shall not cause the parking lot on the 23480 Property to lose its "grandfathered" status or to be modified or improved other than the 23480 Improvements.

BY CALABASAS INN OWNER AT ITS  
SOLE EXPENSE.

PP  
JD

2. Construction of Modifications Within Easement and 23480 Improvements: The Modifications Within Easement (including the Common Driveway) and the 23480 Improvements shall be constructed as part of the first phase of construction of the New Project. The driveway construction will be phased to permit access to the 23480 Property and/or the Calabasas Inn Property during construction. Unless and until the first phase of construction of the New Project commences, including without limitation the Modifications Within Easement (including the Common Driveway) and 23480 Improvements, the Easement shall remain in its existing condition and use and shall not be modified.

3. Use And Maintenance Of Easement: Following completion of construction of the Modifications Within Easement, the Common Driveway shall be used by both parties for ingress and egress to their respective properties. The 23480 Property shall maintain the 23480 Improvements. The Calabasas Inn Property shall maintain the Common Driveway and any other Modifications Within Easement improvements located on the Calabasas Inn Property. The Easement shall not be further modified without the prior written consent of both parties.

4. Easement Agreement: Following approval by City of the New Project, Modifications Within Easement and 23480 Improvements, Owner and Calabasas Inn owner shall promptly and in good faith prepare, execute and record a written Easement Agreement replacing and setting forth in more detail the terms of this agreement, including the location of the Common Driveway and other Modifications Within Easement improvements; each parties right of access, ingress, egress and use of Common Driveway; the maintenance obligations of the parties; the Calabasas Inn Owners construction of the Modifications Within Easement and 23480 improvements; a termination provision providing that the Easement Agreement shall terminate in the event that the land use approvals for the New Project expire or are terminated for any reason; and any other mutually agreeable matters. The 23480 Owner shall prepare and submit the first draft of the Easement Agreement to Calabasas Inn owner for review.

Thanks very much for your time, effort and consideration in helping to resolve this matter. Please indicate your agreement to the foregoing by executing this letter agreement where indicated below.

Very Truly Yours,

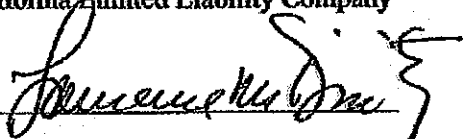


Robert Raznick  
For First American Plaza, L. P.

APPROVED AND AGREED:

23500 Park Sorrento Ventures, LLC, a  
California Limited Liability Company

By:

A handwritten signature in black ink, appearing to be "L. M. ...".

Title: MANAGER FOR 23500 PARK SORRENTO LLC

PTR  
FILE

#110

DEC 18 1975

46

RECORDING REQUESTED BY

AND WHEN ASSIGNED MAIL TO

Name: Mr. & Mrs. Walter Hollenstein  
Address: 23500 Park Sorrento  
City: Calabasas, California 91302

Return address above.

SPACE ABOVE THIS LINE FOR RECORDER'S USE

### Individual Grant Deed

THIS FORM FILLED OUT BY THE GRANTEE

A.P.M.

The undersigned grantor(s) hereby certify that the following is a true and correct copy of the original instrument as recorded in the public records of the County of Los Angeles, California.

Documentary transfer tax is \$600.00

SKD computed on full value of property conveyed or

SKD computed on full value less value of liens and encumbrances existing at time of sale.

SKD Unincorporated area: City of \_\_\_\_\_ and \_\_\_\_\_

FOR A VALUABLE CONSIDERATION and of which it is hereby acknowledged,  
**CALABASAS PARK CO.**, a partnership, formerly Calabasas Enterprises, a partnership,  
 Bechtel Corporation, a Delaware corporation, a partner,

hereby GRANTS to **WALTER HOLLENSTEIN and JEAN HOLLENSTEIN**, husband and wife as community property,

the following described real property in the unincorporated area of the County of Los Angeles, State of California, more particularly described in the Exhibit A attached hereto and made a part hereof.

**SUBJECT TO:**  
 Second Installment General and Special Taxes for the fiscal year 1975-1976;  
 Conditions, restrictions, reservations, covenants, easements, rights and rights of way, of record, if any

WITNESSED my hand and seal of office this 18th day of December, 1975.

Notary Public for the County of Los Angeles

BY: **ASSOCIATED SOUTHERN INVESTMENT COMPANY**  
 a partnership  
 Douglas S. St. John, Attorney-in-Fact

BY: **BECHTEL CORPORATION**, a corporation,  
 Douglas S. St. John, Attorney-in-Fact

Exhibit A

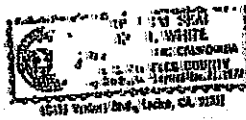
Description: Los Angeles, CA Pre-1976 Year-Date DocId 1975.1218.46 Page: 1 of 1  
Order: 1003736-28 Comment: RAMON

DEC 18 75

STATE OF CALIFORNIA }  
COUNTY OF LOS ANGELES } ss.

On December 13, 1975, before me, the undersigned, a Notary Public in and for said county and state, personally appeared ROYALAN S. ST. JOHN, known to me to be the person whose name is subscribed to the within instrument as Attorney-in-fact of ASSOCIATED SOUTHERN INVESTMENT COMPANY, a corporation, and of BECHEL CORPORATION, a corporation, all of the partners of the partnership that executed the within instrument and acknowledged to me that he subscribed the names of ASSOCIATED SOUTHERN INVESTMENT COMPANY, a corporation, and BECHEL CORPORATION, a corporation, as principals, and his own name as Attorney-in-fact and further acknowledged to me that such corporations executed the same as such partners and that such partnership executed the same.

WITNESS my hand and official seal.



*Royal S. St. John*  
Notary Public in and for Los Angeles County,  
state of California.  
(This acknowledgment is attached to and forms a  
part of that certain Declaration of Restrictions  
dated 12-8-75 by Calabasas Park Co. over Lot 1  
Tract 23228, Los Angeles County)

DEC 18 75

EXHIBIT A

Lot 1 of Tract 29325, in the unincorporated area of the county of Los Angeles, state of California, as per map recorded in book 657 pages 69 and 70 of Maps, in the office of the county recorder of said county.

Reserving unto the grantor herein a non-exclusive easement for ingress and egress over the following described area (also shown on map in Exhibit B attached hereto), which right shall inure to the benefit of all the present and future owners of the entire Tract 29325, recorded on December 13, 1972 in book 623 pages 83 and 84 of Maps, records of Los Angeles County:

That portion of Lot 1 of Tract 29325, in the unincorporated area of the county of Los Angeles, state of California, as per map recorded in book 657 pages 69 and 70 of Maps, in the office of the county recorder of said county, described as follows:

Beginning at a point on the southerly line of Park Sorrento as shown on map of Tract 20212 recorded in book 786 pages 42 to 46 inclusive of Maps, records of said county of Los Angeles, said point being the westerly terminus of the line which bears North 77° 53' 30" East 150.05 feet; thence along said line

1. North 72° 53' 30" East 15.23 feet; thence leaving said southerly line
2. South 15° 09' 00" East 57.77 feet; thence
3. South 74° 50' 05" West 25.00 feet; thence
4. North 45° 09' 00" West 66.00 feet to said southerly line of Park Sorrento; thence northeasterly along said southerly line
5. North 74° 50' 05" East 43.78 feet to the point of beginning.

Reserving unto the grantor herein, and its successors and assigns, all rights to minerals, oil, gas, kerosene, hydrocarbon and metalliferous substance of every kind, together with the right to drill or mine for the same without the right to drill or mine through the surface or the upper 500 feet of the subsurface of the land.

CALADAGAS TRUCK CO., a partnership

by: ASSOCIATED SOUTHERN INVESTMENT COMPANY,  
a corporation, as Partner

by: Douglas E. John  
Douglas E. John, Attorney-in-Fact

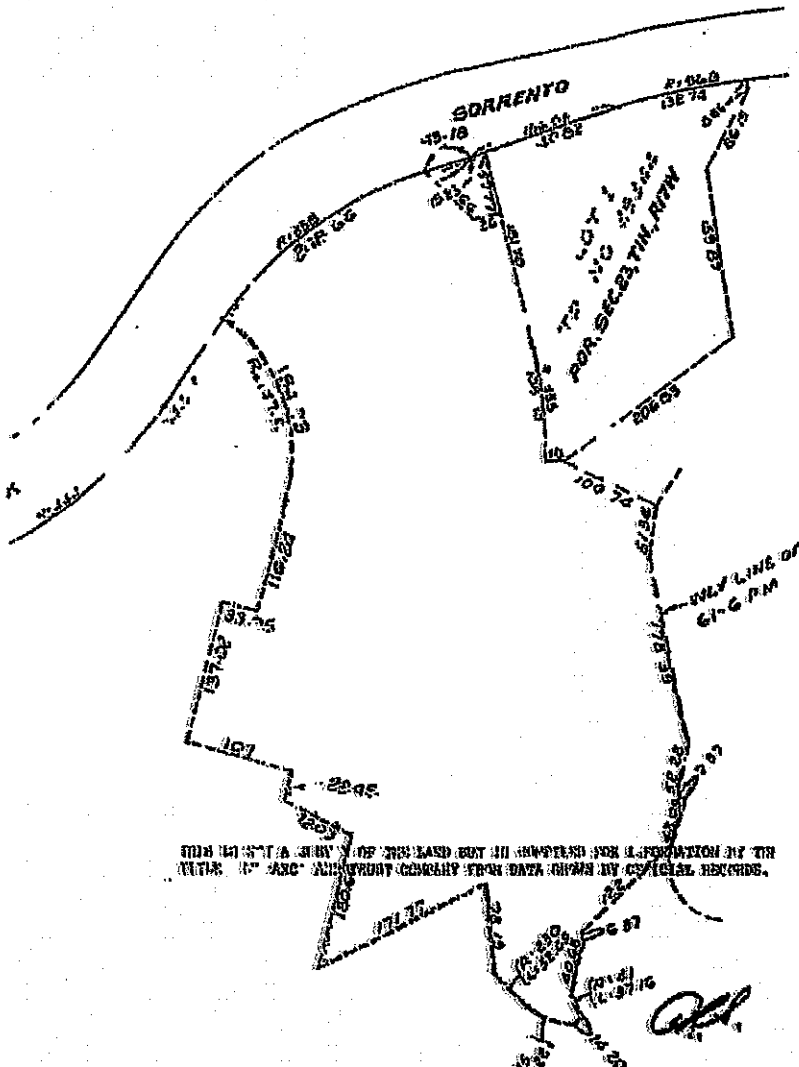
by: BECHTEL CORPORATION, a corporation, or  
Successor

by: Douglas E. John  
Douglas E. John, Attorney-in-Fact

DEC 18 1975

EXHIBIT A

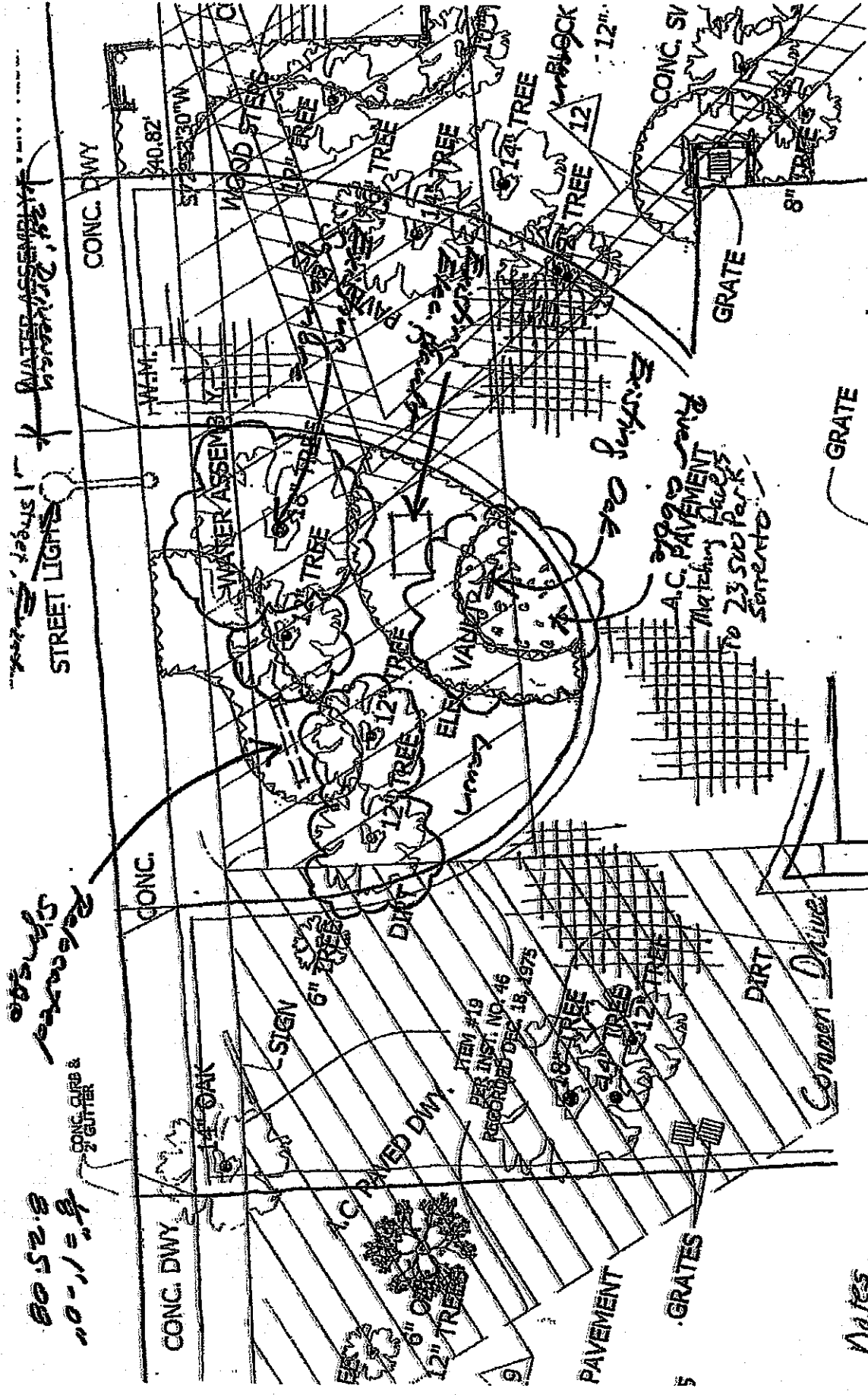
PORTION OF SECTION 23, T 1 N, R 17 W, S.R.M.



THIS IS NOT A COPY OF THE LAND BUT IS INTENDED FOR INFORMATION BY THE TITLE OF THE LAND AND SHOULD BE USED FROM DATA GIVEN BY OFFICIAL RECORDS.

Description: Los Angeles, CA Pre-1976 Year-Date Docid 1975.1218.46 Page: 4 of 45;  
Order: 1003756-24 Comment: RANON





80 52.8  
 10-11-8  
 CONG. CURB &  
 GUTTER  
 24' WATER ASSEMBLY  
 STREET LIGHT

Notes

1. No modifications to existing 23480 Park Somerset parking spaces
2. Callassee Inn owner to construct all work, including without limitation any necessary driveway & curb cut modifications, utility modifications, landscaping & irrigation.

Exhibit B

# Appendix L-2

## Traffic and Parking Study Addendum



# ASSOCIATED TRANSPORTATION ENGINEERS

100 N. Hope Avenue, Suite 4, Santa Barbara, CA 93110 • (805) 687-4418 • FAX (805) 682-8509

Since 1978

Richard L. Pool, P.E.  
Scott A. Schell, AICP, PTP

March 19, 2010

09066L04.WP

Larry Dinovitz  
D2 Construction, Inc.  
23500 Park Sorrento  
Calabasas, CA 91302

## ***ADDENDUM TO THE TRAFFIC AND PARKING STUDY FOR THE REVISED VILLAGE AT CALABASAS PROJECT - CITY OF CALABASAS***

Associated Transportation Engineers (ATE) has prepared the following addendum letter outlining the new frontage improvements that are proposed as part of the Village at Calabasas Project.

### **Frontage Improvements**

The Village at Calabasas Project is proposing to restripe the eastbound lane of Park Sorrento adjacent to the project site to provide a right-turn lane for vehicles entering the two site driveways. The right-turn lane would begin within the existing red curb area west of the western driveway and extend to the eastern driveway. The attached figure illustrates the location of the proposed right-turn lane.

No on-street parking would be displaced with this striping, as the project had been conditioned to install red curb in this area to ensure that adequate sight distance was provided at the project driveways. The proposed right-turn lane would enhance access to the project site and would improve operations along Park Sorrento adjacent to the site.

This concludes ATE's addendum letter for the traffic and parking study for the Revised Village at Calabasas Project.

Associated Transportation Engineers

A handwritten signature in black ink, appearing to read 'Scott A. Schell', written in a cursive style.

Scott A. Schell, AICP, PTP  
Principal Transportation Planner

SAS/MMF

Attachments

