Division of Land / Environmental Review

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ENVIRONMENTAL IMPACT REPORT
Errata

NBC Universal Evolution Plan

ENV-2007-0254-EIR
STATE CLEARINGHOUSE NO. 2007071036
Council District 4

Project Address: 100 Universal City Plaza, Universal City, CA 91608

Project Description: Universal City Studios LLC, proposes the NBC Universal Evolution Plan (the "Project"), which sets forth the framework to guide the development of an approximately 391-acre site located in the east San Fernando Valley near the north end of the Cahuenga Pass (the "Project Site"). The Project, as proposed, would involve a net increase of approximately 2.01 million square feet of new commercial development, which includes 500 hotel guest rooms and related hotel facilities. In addition, a total of 2,937 dwelling units would be developed. Implementation of the proposed Project would occur pursuant to the development standards set forth in two proposed Specific Plans. The proposed Universal City Specific Plan addresses development within the portion of the Project Site located within the City of Los Angeles, whereas the proposed Universal Studios Specific Plan addresses development within the portion of the Project Site located under the jurisdiction of the County of Los Angeles. Under the proposed Project, portions of the Project Site that are currently in the County of Los Angeles would be annexed into the City of Los Angeles, while other areas would be detached from the City of Los Angeles and returned to the jurisdiction of the County of Los Angeles. The proposed annexation/detachment reflects the Applicant's objective to establish jurisdictional boundaries that follow existing and planned on-site land use patterns.

APPLICANT:
Universal City Studios LLC

PREPARED BY:
Environmental Review Section
Los Angeles City Planning Department

September 2012

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Errata

NBC Universal Evolution Plan Environmental Impact Report

This document provides minor revisions to the NBC Universal Evolution Plan Environmental Impact Report (EIR) (City of Los Angeles EIR No. ENV-2007-0254-EIR, State Clearinghouse No. 2007071036). Revisions to the EIR are presented below with deletions presented as ~~strikethrough~~ and additional language presented in <u>underline</u>.

A. Section II, Corrections and Additions, of the Final EIR, Section V.F, Table 209 Summary of Comparative Impacts: Proposed Project and Alternative 1 through Alternative 6 and Alternative 10, page 334, Air Quality Impact Area is revised as follows:

Air Quality	
Construction	~~[To Be Provided]~~ <u>Significant</u>
Operation	~~[To Be Provided]~~ <u>Significant</u>

B. Section V.K, Corrections and Additions, of the Final EIR, Section V.J,3.(b), Alternative 10: No Residential Alternative, Issue by Issue Comparison to Proposed Project, Physical Land Use, page 349, is revised as follows:

With regard to the existing Back Lot Area, Alternative 10 would not develop any of the residential, neighborhood retail and community-serving commercial uses that the proposed Project would develop. Instead, Alternative 10 would develop additional Studio Office uses in the northeastern portion of the Project Site and Studio uses in the existing County portion of the existing Back Lot Area. In addition, no permanent structures or parking facilities would be permitted within 100 feet of the majority of the eastern property boundary that abuts the Hollywood Manor (Blair Drive) community. See Figure ~~231~~ <u>227</u> on page ~~346~~ <u>340</u>. In sum, as compared to the proposed Project, Alternative 10 would include substantially less development within the existing Back Lot Area. Therefore, impacts with regard to physical land use under Alternative 10 would be less than significant, and further reduce the less than significant impacts of the proposed Project.

C. Section V.K, Corrections and Additions, of the Final EIR, Section V.J,3.(d), Alternative 10: No Residential Alternative, Issue by Issue Comparison to Proposed Project, Visual Qualities, page 354, second paragraph is revised as follows:

From those geographic areas close to and with views oriented towards the Back Lot Area, potential visual character impacts could occur from development within the Back Lot Area under Alternative 10. However, as with the proposed Project this impact is less than significant as not all three criteria (e.g., prominence, contrast, and coverage) would be significantly impacted. Though new Studio and Studio Office uses would occur within the existing Back Lot Area under Alternative 10, this alternative's removal of the residential, neighborhood retail and community-serving commercial uses and inclusion of the 100-foot setback would result in potential visual impacts that would be less than those of the proposed Project. In addition, similar to the proposed Project, the coverage of a prominent view resource would not occur for those vantage points with views in a northerly direction towards the Verdugo Mountains and San Fernando Valley or in a westerly direction towards the Cahuenga Pass West areas. Thus, view impacts under Alternative 10 would be less than significant, and further reduce the <u>less than</u> significant impacts of the proposed Project.

D. Section V.K, Corrections and Additions, of the Final EIR, Section V.J , Alternative 10: No Residential Alternative, Table 300, Summary of Comparative Impacts: Proposed Project and Alternative 10, is revised as follows:

Table 300

Summary of Comparative Impacts: Proposed Project and Alternative 10

Impact Area	Project	Alternative 10: No Residential Alternative
Land Use		
Land Use Plans	Less than Significant	Less than Significant
		Similar
Physical Land Use	Less than Significant	Less than Significant
		Less
Traffic/Access		
Traffic Circulation		
Construction	Less than Significant	Less than Significant
		Less
Operation		
Site Access	Significant	Significant
		Less
Neighborhood Intrusion	Significant	Significant
		Less
Roadways and Freeways	Significant	Significant

Impact Area	Project	Alternative 10: No Residential Alternative
		Less
Congestion Management Plan	Significant	~~Less than Significant~~ Significant
		Less
Parking		
Construction	Less than Significant	Less than Significant
		Less
Operation	Less than Significant	Less than Significant
		Less
Noise		
Construction		
Construction & Demolition	Significant	Significant
		Similar
Haul Trips	Less than Significant	Less than Significant
		Less
Vibration	Less than Significant	Less than Significant
		Similar
Operation		
On-Site Sources	Less than Significant	Less than Significant
		Similar
Off-Site Roadway	Less than Significant	Less than Significant
		Similar
Visual Qualities		
Visual Qualities		
Construction	Less than Significant	Less than Significant
		~~Similar~~ Less
Operation	Less than Significant	Less than Significant
		Less
Light and Glare		
Natural Light		
Construction	Less than Significant	Less than Significant
		Less
Operation	Less than Significant	Less than Significant
		Similar
Artificial Light		
Construction	Less than Significant	Less than Significant
		Less
Operation	Less than Significant	Less than Significant
		Less
Glare		
Construction	Less than Significant	Less than Significant
		Similar
Operation	Less than Significant	Less than Significant
		Similar

Impact Area	Project	Alternative 10: No Residential Alternative
Geotechnical	Less than Significant	Less than Significant
		Less
Water Resources		
Drainage	Less than Significant	Less than Significant
		Less
Surface Water	Less than Significant	Less than Significant
		Similar
Ground Water	Less than Significant	Less than Significant
		Less
Air Quality		
Construction	Significant	Significant
		Less
Operation	Significant	Significant
		Less
Biota	Less than Significant	Less than Significant
		Less
Cultural Resources		
Historical	Less than Significant	Less than Significant
		Similar
Archaeological	Less than Significant	Less than Significant
		Less
Paleontological	Less than Significant	Less than Significant
		Less
Public Services		
Fire		
Construction	Less than Significant	Less than Significant
		Less
Operation		
City	Less than Significant	Less than Significant
		Less
County	Less than Significant	Less than Significant
		Similar
Sheriff/Police		
Construction	Less than Significant	Less than Significant
		Less
Operation		
City	Less than Significant	Less than Significant
		Less
County	Less than Significant	Less than Significant
		Similar
Schools		
Construction	Less than Significant	Less than Significant
		Similar

Impact Area	Project	Alternative 10: No Residential Alternative
Operation	Less than Significant	Less than Significant
		Less
Parks and Recreation		
Construction	Less than Significant	Less than Significant
		Less
Operation		
City	Less than Significant	Less than Significant
		Greater
County	Less than Significant	Less than Significant
		Similar
Libraries		
Construction	Less than Significant	Less than Significant
		Similar
Operation		
City	Less than Significant	Less than Significant
		Less
County	Less than Significant	Less than Significant
		Greater
Utilities		
Sewer		
Construction	Less than Significant	Less than Significant
		Similar
Operation	Less than Significant	Less than Significant
		Less
Water		
Construction	Less than Significant	Less than Significant
		~~Similar~~ Less
Operation	Less than Significant	Less than Significant
		Less
Solid Waste		
Construction	Less than Significant	Less than Significant
		Less
Operation		
Landfill Capacity	Significant	Significant
		Less
Solid Waste Plan Consistency	Less than Significant	Less than Significant
		Similar
Electricity		
Construction	Less than Significant	Less than Significant
		~~Similar~~ Less
Operation		
City	Less than Significant	Less than Significant
		Less

Impact Area	Project	Alternative 10: No Residential Alternative
County	Less than Significant	Less than Significant
		Greater
Natural Gas		
Construction	Less than Significant	Less than Significant
		Less
Operation	Less than Significant	Less than Significant
		Less
Environmental Safety		
Construction	Less than Significant	Less than Significant
		Similar
Operation	Less than Significant	Less than Significant
		Similar
Employment, Population and Housing		
Employment		
Construction	Less than Significant	Less than Significant
		Greater
Operation	Less than Significant	Less than Significant
		Greater
Population		
Construction	Less than Significant	Less than Significant
		Similar
Operation	Less than Significant	Less than Significant
		Less
Housing		
Construction	Less than Significant	Less than Significant
		Similar
Operation	Less than Significant	Less than Significant
		Greater
Climate Change	Less than Significant	Less than Significant
		~~Less~~ Similar

E. Section III.D.1, Responses to Comments, Written Letters, of the Final EIR, Comment Letter No. 280, Comment No. 280-6, page 3302 is revised as follows:

Comment No. 280-6

The Board of Directors of Hollywood Knolls Community Club (HKCC) thanks you, the City of Los Angeles and the County of Los Angeles for the opportunity to respond in writing to the proposed NBC Universal Evolution Plan Draft Environmental Impact Report. HKCC is the residents' association covering close to 800 homes in the Hollywood Knolls, Hollywood Manor and Lakeridge Estates. Our

physical proximity to the proposed project makes us especially concerned with all aspects of it.

As Board President, I've asked representatives of all three neighborhoods to respond with comments, questions and concerns that are specific to their neighborhoods. Therefore, two individual sections: Hollywood Knolls/Lakeridge Estates and Hollywood Manor, follow below. While there are certainly areas of overlap and redundancy between the two sections, our concerns are major enough to warrant repeating some of them more than once.

~~Response to Comment No. 280-6~~

Additionally, as a member of the Communities United for Smart Growth (CUSG) organization, the HKCC would like to go on record as fully supporting the comments and questions submitted by CUSG included in their submitted response to the DEIR. Further this organization reserves all rights to comment and provide additional relevant information at some future date, without reservation and as allowed us by all past, present and future administrative processes.

F. Section III.D.1, Responses to Comments, Written Letters, of the Final EIR, Comment Letter No. 280, Comment No. 280-6, page 3310 is revised as follows:

If the residential component is approved, how can we make sure that when the Entitlements are sold, the developer will not amend the plans for maximum financial benefit?

Response to Comment No. 280-6

This comment incorporates the comment letter submitted by the Hollywood Knolls Community Club, dated February 4, 2011, which is included as Comment Letter No. 50 in this Final EIR. Please refer to Comment Letter No. 50 and responses thereto. The comment is noted and has been incorporated into the Final EIR for review and consideration by the decision-makers prior to any action on the Project.

G. Section III.D.1, Responses to Comments, Written Letters, of the Final EIR, add the following after Comment No. CC56 , page 3840:

Comment Letter No. CC57

David Zollman
10433 Valley Spring Ln.
Toluca Lake, CA 91602

Comment No. CC57-1

I support reasonable "evolution", however a revolution in our community is unacceptable. Noise levels & traffic are difficult now, what will they be after the "evolution"??

Response to Comment No. CC57-1

The comment is noted and has been incorporated into the Final EIR for review and consideration by the decision-makers prior to any action on the Project. The Project's potential traffic and noise impacts were thoroughly analyzed, as detailed in Section IV.B.1, Traffic/Access – Traffic/Circulation, and Section IV.C, Noise, of the Draft EIR. The commenter is referred to those sections for a detailed discussion of the potential impacts as well as proposed project design features and mitigation measures.

An extensive series of project design features and mitigation measures have been identified to address the Project's significant traffic impacts. While these measures would substantially reduce the Project's impacts, as discussed on pages 690–694 of the Draft EIR, with implementation of the project design features and identified mitigation measures, significant and unavoidable traffic impacts would remain. No additional feasible mitigation measures have been identified to reduce these impacts. The commenter is referred to Section IV.B.1, Traffic/Access – Traffic/Circulation, of the Draft EIR for further information.

With regard to noise, the Draft EIR provides a comprehensive analysis of both potential daytime and nighttime noise impacts resulting from the Project's operation (see Section IV.C, Noise, pages 998–1019). As noted on Tables 69 and 70 of the Draft EIR, the Project's operational noise would result in less than significant impacts during both daytime and nighttime hours.

With regard to construction noise impacts, the Draft EIR analyzed various potential construction scenarios, and the modeling was conducted to determine the potential construction noise impacts at all 47 receptor locations during the noisiest construction phase. Pages 998–1010 of Section IV.C, Noise, of the Draft EIR summarize the construction impacts under all potential construction scenarios, including construction in the Studio, Entertainment, and Business Areas; construction in the Mixed-Use Residential Area assuming both single-phase and multi-phase horizontal construction activities; and a composite construction scenario in which construction occurs throughout the Project Site at the same time. With regard to nighttime noise resulting from construction activities, the analysis found that noise levels may exceed nighttime noise standards at certain locations without

any mitigation measures implemented. However, it is important to note that the Draft EIR proposes several construction mitigation measures for general construction activities, as well as mitigation measures specifically designed to generally reduce nighttime construction noise to less than significant levels for the construction scenarios. For example, Mitigation Measure C-2 prohibits nighttime construction and grading activities, except for under limited circumstances. As noted on page 1036 of the Draft EIR, because "these limited types of nighttime construction activities would have the potential to exceed the established significance thresholds, the Draft EIR recognizes that a significant impact could occur. It is important to note that while a significant impact could result under these limited circumstances, the likelihood that these circumstances would actually occur is limited, and when they do occur, the extent of this significant impact would be limited in duration."

H. Appendix FEIR-2, Analysis In Response To Judicial Opinion Regarding Sunnyvale West Neighborhood Association v. City of Sunnyvale City Council, of the Final EIR, replace the Climate Change Technical Report attached thereto with the Supplemental Localized Carbon Monoxide Analysis for the NBC Universal Evolution Plan Draft Environmental Impact Report, dated July 5, 2012, prepared by ENVIRON International Corporation, attached hereto.

I. Appendix FEIR-7, Supplemental Assessment of Environmental Noise, NBC Universal Evolution Plan, Supplemental Noise Study – Technical Report, Forest Lawn Drive, dated April 2012, prepared by Veneklasen Associates, Inc., replace with the correct version attached hereto.

J. Appendix FEIR-12, Climate Change Technical Report, NBCU Universal Evolution Plan, dated June 2012, prepared by ENVIRON International Corporation, replace with the correct version attached hereto.

The above revisions reflect minor modifications to the EIR and do not change any of the impact conclusions reached in the EIR.

Appendix FEIR-2

Analysis In Response To Judicial Opinion Regarding Sunnyvale West Neighborhood Association v. City of Sunnyvale City Council

Supplemental Localized Carbon Monoxide Analysis for the NBC Universal Evolution Plan Draft Environmental Impact Report

ENVIRON

July 5, 2012

Bruce Lackow
Matrix Environmental
6701 Center Drive, Suite 900
Los Angeles, California 90045

Re: Supplemental Localized Carbon Monoxide Analysis for the NBC Universal Evolution Plan Draft Environmental Impact Report

Dear Mr. Lackow:

Per your request, ENVIRON International Corporation (ENVIRON) has prepared this letter for the NBC Universal Evolution Plan (Project) to supplement the localized carbon monoxide (CO) impacts analysis for the Project Draft Environmental Impact Report (Draft EIR). The Draft EIR air quality analysis was prepared consistent with the South Coast Air Quality Management District's California Environmental Quality Act ("CEQA") Air Quality Handbook ("CEQA Handbook"). The South Coast Air Quality Management District has also prepared supplemental guidance and recommendations on its website while the CEQA Handbook is updated, and these guidance documents have likewise been relied upon in the Draft EIR. Based in part on a recent California appellate court decision, *Sunnyvale West Neighborhood Association v. City of Sunnyvale City Council*, 190 Cal. App. 4th 1351 (2010) (the "Sunnyvale case"), we have performed this supplemental analysis to evaluate impacts associated with the Project's CO emissions and existing traffic conditions. This letter report includes a discussion of the methodology used and results of this updated analysis. As demonstrated herein, this supplemental analysis does not identify any new significant environmental impacts associated with the Project's CO emissions.

Methodology

ENVIRON performed the localized CO impacts analysis following the same two-step methodology described in the Section 2.4.6 of the Air Quality Technical Report.[1] First, the South Coast Air Quality Management District (SCAQMD) recommends performing a localized CO impacts analysis for (1) intersections that would change from Level of Service (LOS) C to D as a result of the Project, and (2) for all intersections rated D or worse where the Project increases the volume-to-capacity ratio (V/C) by two percent or more. LOS is a measure used to determine the traffic flow conditions, ranging from free-flow condition at LOS A to congested condition at LOS F. LOS D is typically known as the level approaching unstable flow. Similarly, V/C is used to assess the traffic saturation. Both these parameters are commonly used to describe the performance of a roadway or an intersection. Gibson Transportation Consulting, Inc. (Gibson) evaluated the LOS and V/C during morning and afternoon peak hours for 172 signalized and unsignalized intersections.

Second, potential CO concentrations are conservatively estimated for the intersections selected by the SCAQMD methodology described in the first step. Specifically, a conservative CALINE4 screening procedure developed by the Bay Area Air Quality Management District and accepted by the SCAQMD is used to estimate CO concentrations at selected intersections assuming worst-case conditions. This approach provides maximum, worst-case CO concentrations for an intersection for purposes of the analysis. The emission factors used in the simplified CALINE4

[1] See ENVIRON. 2010. NBC Universal Evolution Plan Air Quality Technical Report

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model are based on EMFAC2011[2] for the South Coast Air Basin. The traffic data used in this analysis were provided by Gibson.[3]

As a conservative approach, we analyzed the Existing plus Project before trip reduction and mitigations scenario for this supplemental localized CO impacts analysis. The Existing plus Project scenario is conservative for estimating the Project's CO emissions because it does not assume any traffic mitigation reductions or related emissions decreases that would result from the TDM or mitigation measures. The 2006 CO emission factors based on EMFAC2011 were used to calculate CO concentrations for the Existing plus Project before TDM trip reductions and mitigation measures scenario. The use of the 2006 emission factor is a conservative assumption as emissions from vehicles are expected to decrease over time, and the full Project traffic load is not expected to occur until 2030. Therefore, it is expected that the Existing plus Project with TDM trip reductions and mitigation measures would result in similar or fewer carbon monoxide emissions than the Existing plus Project before TDM trip reductions and mitigation measures scenario.

Results and Conclusion

ENVIRON reviewed the traffic data at the 164 intersections evaluated by the Gibson Transportation Study. As shown in Table 1, thirty-nine intersections satisfy the screening criteria. The localized CO impacts were evaluated for these 39 intersections based on the Existing plus Project traffic volumes before TDM trip reduction and mitigations. The calculations for each intersection are included as Attachment A to this letter. The results of the CO impacts for the existing conditions are summarized in Table 2.

As shown in the Table 2, this supplemental analysis does not identify any new significant environmental impacts associated with the Project's CO emissions under the Existing plus Project before TDM trip reductions and mitigation measures scenario. The maximum 1-hour and 8-hour CO concentrations are 10.7 ppm and 8.2 ppm, respectively.[4] These maximum concentrations are below the adopted Federal and State ambient air quality standards for CO [1-hour: 20 ppm (state) and 35 ppm (federal); 8-hour: 9.0 ppm (state/federal)]. Given the conservative nature of the Existing plus Project before TDM trip reductions and mitigation measures scenario, it is expected that the Existing plus Project with TDM program and mitigation measures scenario would result in similar or fewer carbon monoxide emissions and therefore would not result in any new significant localized carbon monoxide impacts.

The conclusions presented here are based on the best information available at the time of this letter. To the extent that this information changes, our conclusions may also change.

Sincerely,

Eric C. Lu, MS, PE
Senior Manager

Stan Hayes
Principal

EC:sb
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[2] See California Air Resource Board. 2011. The EMission FACtors (EMFAC) model 2011. EMFAC2011 is the current version available for use, which was not available when the original Air Quality Technical Report was prepared. This is the same methodology as originally discussed in the Air Quality Technical Report with an update to use the current version of EMFAC2011.

[3] Gibson Transportation Consulting, Inc., 2011. Sunnyvale Analysis for the NBCUniversal Evolution Plan. July.

[4] At the edge of Barham Boulevard & Buddy Holly Drive-Cahuenga Boulevard and Highland Avenue and Franklin Place-Franklin Avenue.

Tables

Table 1
SCAQMD Screening of Roadway Intersections

No.	Intersection	Peak Hour	Existing		Existing plus Project, Before TDM Trip Reduction and Mitigations		Increase in V/C due to Project	% Increase	Require CO Hotspot Analysis?[1]
			V/C	LOS	V/C	LOS			
1	Colfax Avenue & Ventura Boulevard	A.M.	0.580	A	0.611	B	0.031	5.34	Yes
		P.M.	0.840	D	0.878	D	0.038	4.52	
2	Kraft Avenue/SR 170 SB Off-Ramp & Riverside Drive	A.M.	0.471	A	0.517	A	0.046	9.77	No
		P.M.	0.425	A	0.437	A	0.012	2.82	
3	Tujunga Avenue & Riverside Drive/Camarillo Street	A.M.	0.944	E	1.004	F	0.060	6.36	Yes
		P.M.	0.849	D	0.876	D	0.027	3.18	
4	Tujunga Avenue & Ventura Boulevard	A.M.	0.487	A	0.517	A	0.030	6.16	No
		P.M.	0.659	B	0.702	C	0.043	6.53	
5	Eureka Drive & Ventura Boulevard	A.M.	0.464	A	0.503	A	0.039	8.41	No
		P.M.	0.552	A	0.592	A	0.040	7.25	
6	Lankershim Boulevard & Magnolia Boulevard	A.M.	0.799	C	0.812	D	0.013	1.63	Yes
		P.M.	0.726	C	0.737	C	0.011	1.52	
7	Studio City Place & Ventura Boulevard	A.M.	0.411	A	0.447	A	0.036	8.76	No
		P.M.	0.562	A	0.605	B	0.043	7.65	
8	Vineland Avenue & Magnolia Boulevard	A.M.	0.513	A	0.521	A	0.008	1.56	No
		P.M.	0.734	C	0.740	C	0.006	0.82	
9	Vineland Avenue/Lankershim Boulevard & Camarillo Street	A.M.	0.933	E	0.986	E	0.053	5.68	Yes
		P.M.	0.725	C	0.745	C	0.020	2.76	
10	Vineland Avenue & Riverside Drive	A.M.	0.809	D	0.881	D	0.072	8.90	Yes
		P.M.	0.559	A	0.605	B	0.046	8.23	
11	Vineland Avenue & Moorpark Street	A.M.	0.871	D	0.893	D	0.022	2.53	Yes
		P.M.	0.793	C	0.806	D	0.013	1.64	
12	Vineland Avenue & Whipple Street	A.M.	0.433	A	0.438	A	0.005	1.15	No
		P.M.	0.364	A	0.366	A	0.002	0.55	
13	Vineland Avenue & US 101 NB Off-Ramp	A.M.	0.307	A	0.322	A	0.015	4.89	No
		P.M.	0.282	A	0.285	A	0.003	1.06	
14	Vineland Avenue & Ventura Boulevard	A.M.	0.687	B	0.751	C	0.064	9.32	Yes
		P.M.	0.821	D	0.877	D	0.056	6.82	
15	SR 134 EB On-Ramp e/o Vineland Avenue & Riverside Drive	A.M.	0.987	E	1.000	E	0.013	1.32	Yes
		P.M.	0.913	E	0.951	E	0.038	4.16	
16	Plaza Parkway & Ventura Boulevard	A.M.	0.538	A	0.596	A	0.058	10.78	No
		P.M.	0.381	A	0.425	A	0.044	11.55	
17	Riverton Avenue/Campo de Cahuenga Way & Ventura Boulevard	A.M.	0.444	A	0.461	A	0.017	3.83	No
		P.M.	0.406	A	0.449	A	0.043	10.59	
18	Lankershim Boulevard & SR 134 WB Off-Ramp	A.M.	0.681	B	0.721	C	0.040	5.87	No
		P.M.	0.429	A	0.459	A	0.030	6.99	
19	Lankershim Boulevard & Riverside Drive	A.M.	0.850	D	0.953	E	0.103	12.12	Yes
		P.M.	0.775	C	0.829	D	0.054	6.97	
20	Lankershim Boulevard & Moorpark Street	A.M.	1.033	F	1.163	F	0.130	12.58	Yes
		P.M.	0.847	D	0.922	E	0.075	8.85	
21	Lankershim Boulevard & Whipple Street	A.M.	0.722	C	0.832	D	0.110	15.24	Yes
		P.M.	0.317	A	0.374	A	0.057	17.98	
22	US 101 NB Ramps & Campo de Cahuenga Way	A.M.	0.077	A	0.115	A	0.038	49.35	No
		P.M.	0.342	A	0.421	A	0.079	23.10	

Table 1
SCAQMD Screening of Roadway Intersections

No.	Intersection	Peak Hour	Existing		Existing plus Project, Before TDM Trip Reduction and Mitigations		Increase in V/C due to Project	% Increase	Require CO Hotspot Analysis?[1]
			V/C	LOS	V/C	LOS			
23	Metro Driveway & Campo de Cahuenga Way	A.M.	0.000	A	0.035	A	0.035	***	No
		P.M.	0.231	A	0.313	A	0.082	35.50	
24	Cahuenga Boulevard & Magnolia Boulevard	A.M.	1.141	F	1.163	F	0.022	1.93	No
		P.M.	0.963	E	0.970	E	0.007	0.73	
25	Cahuenga Boulevard & Huston Street	A.M.	0.712	C	0.734	C	0.022	3.09	No
		P.M.	0.463	A	0.471	A	0.008	1.73	
26	Cahuenga Boulevard & Camarillo Street	A.M.	0.989	E	1.013	F	0.024	2.43	Yes
		P.M.	0.649	B	0.656	B	0.007	1.08	
27	Cahuenga Boulevard & SR 134 WB Off-Ramp	A.M.	0.465	A	0.565	A	0.100	21.51	No
		P.M.	0.408	A	0.414	A	0.006	1.47	
28	Cahuenga Boulevard & SR 134 EB Ramps	A.M.	0.666	B	0.693	B	0.027	4.05	No
		P.M.	0.550	A	0.631	B	0.081	14.73	
29	Cahuenga Boulevard & Riverside Drive	A.M.	0.671	B	0.737	C	0.066	9.84	Yes
		P.M.	0.741	C	0.827	D	0.086	11.61	
30	Cahuenga Boulevard & Moorpark Street	A.M.	0.624	B	0.734	C	0.110	17.63	No
		P.M.	0.576	A	0.667	B	0.091	15.80	
31	Cahuenga Boulevard & Whipple Street	A.M.	0.382	A	0.464	A	0.082	21.47	No
		P.M.	0.251	A	0.341	A	0.090	35.86	
32	Cahuenga Boulevard & Valley Spring Lane	A.M.	0.554	A	0.660	B	0.106	19.13	No
		P.M.	0.398	A	0.513	A	0.115	28.89	
33	Lankershim Boulevard & Cahuenga Boulevard	A.M.	0.484	A	0.611	B	0.127	26.24	No
		P.M.	0.354	A	0.434	A	0.080	22.60	
34	Lankershim Boulevard & Valleyheart Drive/James Stewart Avenue	A.M.	0.329	A	0.396	A	0.067	20.36	No
		P.M.	0.356	A	0.474	A	0.118	33.15	
35	Lankershim Boulevard & Main Street	A.M.	0.431	A	0.502	A	0.071	16.47	No
		P.M.	0.390	A	0.677	B	0.287	73.59	
36	Lankershim Boulevard & Campo de Cahuenga Way/Universal Hollywood	A.M.	0.517	A	0.780	C	0.263	50.87	No
		P.M.	0.531	A	0.791	C	0.260	48.96	
37	Lankershim Boulevard & US 101 NB Off-Ramp	A.M.	0.520	A	0.707	C	0.187	35.96	No
		P.M.	0.445	A	0.581	A	0.136	30.56	
38	Lankershim Boulevard & Ventura Boulevard/Cahuenga Boulevard	A.M.	0.723	C	0.784	C	0.061	8.44	No
		P.M.	0.624	B	0.741	C	0.117	18.75	
39	US 101 SB Ramps/Regal Place & Cahuenga Boulevard	A.M.	0.607	B	0.672	B	0.065	10.71	No
		P.M.	0.528	A	0.647	B	0.119	22.54	
40	Ledge Avenue/Moorpark Way & Riverside Drive	A.M.	0.627	B	0.706	C	0.079	12.60	No
		P.M.	0.636	B	0.744	C	0.108	16.98	
41	Forman Avenue & Riverside Drive	A.M.	0.449	A	0.485	A	0.036	8.02	No
		P.M.	0.536	A	0.609	B	0.073	13.62	
42	Broadlawn Drive & Cahuenga Boulevard	A.M.	0.487	A	0.542	A	0.055	11.29	No
		P.M.	0.307	A	0.403	A	0.096	31.27	
43	Universal Center Drive/Universal Studios Boulevard & Coral Drive/Buddy	A.M.	0.065	A	0.219	A	0.154	236.92	No
		P.M.	0.159	A	0.332	A	0.173	108.81	
44	Universal Studios Boulevard & Cahuenga Boulevard	A.M.	0.473	A	0.631	B	0.158	33.40	No
		P.M.	0.329	A	0.468	A	0.139	42.25	

Table 1
SCAQMD Screening of Roadway Intersections

No.	Intersection	Peak Hour	Existing		Existing plus Project, Before TDM Trip Reduction and Mitigations		Increase in V/C due to Project	% Increase	Require CO Hotspot Analysis?[1]
			V/C	LOS	V/C	LOS			
45	Oakshire Drive & Cahuenga Boulevard	A.M.	0.529	A	0.669	B	0.140	26.47	No
		P.M.	0.396	A	0.514	A	0.118	29.80	
46	US 101 SB Ramps w/o Barham Boulevard/Cahuenga Boulevard &	A.M.	0.952	E	1.095	F	0.143	15.02	Yes
		P.M.	0.643	B	0.792	C	0.149	23.17	
47	Barham Boulevard & Cahuenga Boulevard	A.M.	1.146	F	1.184	F	0.038	3.32	Yes
		P.M.	1.047	F	1.086	F	0.039	3.72	
48	Barham Boulevard & Buddy Holly Drive/Cahuenga Boulevard	A.M.	[2]	E	[2]	E	0.009	***	Yes
		P.M.	[2]	E	[2]	E	0.118	***	
49	Oakcrest Drive & Cahuenga Boulevard	A.M.	0.753	C	0.833	D	0.080	10.62	Yes
		P.M.	0.494	A	0.542	A	0.048	9.72	
50	Mulholland Drive & Cahuenga Boulevard	A.M.	0.736	C	0.816	D	0.080	10.87	Yes
		P.M.	0.668	B	0.733	C	0.065	9.73	
51	Cahuenga Boulevard & Hillpark Drive	A.M.	0.659	B	0.715	C	0.056	8.50	No
		P.M.	0.521	A	0.556	A	0.035	6.72	
52	Barham Boulevard & De Witt Drive	A.M.	0.813	D	0.831	D	0.018	2.21	Yes
		P.M.	0.698	B	0.722	C	0.024	3.44	
53	Barham Boulevard & Lake Hollywood Drive	A.M.	0.820	D	0.830	D	0.010	1.22	Yes
		P.M.	0.826	D	0.852	D	0.026	3.15	
54	Barham Boulevard & Coyote Canyon Road	A.M.	0.745	C	0.753	C	0.008	1.07	No
		P.M.	0.668	B	0.691	B	0.023	3.44	
55	Barham Boulevard & Lakeside Plaza Drive/Forest Lawn Drive	A.M.	0.973	E	1.099	F	0.126	12.95	Yes
		P.M.	0.880	D	0.995	E	0.115	13.07	
56	Warner Brothers Studios Gate 7/Gate 8 & Forest Lawn Drive	A.M.	0.526	A	0.512	A	-0.014	-2.66	No
		P.M.	0.466	A	0.482	A	0.016	3.43	
57	Memorial Drive & Forest Lawn Drive	A.M.	0.402	A	0.388	A	-0.014	-3.48	No
		P.M.	0.464	A	0.480	A	0.016	3.45	
58	Mount Senai Drive & Forest Lawn Drive	A.M.	0.415	A	0.400	A	-0.015	-3.61	No
		P.M.	0.408	A	0.425	A	0.017	4.17	
59	Forest Lawn Drive & Zoo Drive	A.M.	0.831	D	0.829	D	-0.002	-0.24	No
		P.M.	0.600	A	0.652	B	0.052	8.67	
60	Forest Lawn Drive & SR 134 EB Ramps	A.M.	1.056	F	1.091	F	0.035	3.31	Yes
		P.M.	0.698	B	0.741	C	0.043	6.16	
61	Forest Lawn Drive & SR 134 WB Ramps	A.M.	0.574	A	0.597	A	0.023	4.01	No
		P.M.	0.303	A	0.327	A	0.024	7.92	
62	Cahuenga Boulevard/Highland Avenue & Pat Moore Way/US 101 On-Ramps	A.M.	0.519	A	0.555	A	0.036	6.94	No
		P.M.	0.463	A	0.500	A	0.037	7.99	
63	Highland Avenue & Odin Street	A.M.	0.643	B	0.680	B	0.037	5.75	No
		P.M.	0.523	A	0.560	A	0.037	7.07	
64	Highland Avenue & Camrose Drive	A.M.	0.586	A	0.618	B	0.032	5.46	No
		P.M.	0.511	A	0.541	A	0.030	5.87	
65	Highland Avenue & Franklin Avenue	A.M.	[2]	F	[2]	F	0.032	***	Yes
		P.M.	[2]	F	[2]	F	0.030	***	
66	Highland Avenue & Franklin Place/Franklin Avenue	A.M.	[2]	F	[2]	F	0.025	***	Yes
		P.M.	[2]	F	[2]	F	0.029	***	

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No.	Intersection	Peak Hour	Existing		Existing plus Project, Before TDM Trip Reduction and Mitigations		Increase in V/C due to Project	% Increase	Require CO Hotspot Analysis?[1]
			V/C	LOS	V/C	LOS			
67	Odin Street & Cahuenga Boulevard	A.M.	0.713	C	0.724	C	0.011	1.54	No
		P.M.	0.519	A	0.522	A	0.003	0.58	
68	Cahuenga Boulevard & US 101 NB Off-Ramp	A.M.	0.425	A	0.435	A	0.010	2.35	No
		P.M.	0.754	C	0.790	C	0.036	4.77	
69	Cahuenga Boulevard & Franklin Avenue	A.M.	0.739	C	0.743	C	0.004	0.54	No
		P.M.	1.170	F	1.183	F	0.013	1.11	
70	Cahuenga Boulevard & Hollywood Boulevard	A.M.	0.764	C	0.769	C	0.005	0.65	No
		P.M.	0.661	B	0.673	B	0.012	1.82	
71	Vine Street & Franklin Avenue/US 101 SB Off-Ramp	A.M.	0.343	A	0.344	A	0.001	0.29	No
		P.M.	0.459	A	0.465	A	0.006	1.31	
72	Lankershim Boulevard & Muddy Waters Drive	A.M.	0.576	A	0.668	B	0.092	15.97	No
		P.M.	0.549	A	0.760	C	0.211	38.43	
73	Lankershim Boulevard & Jimi Hendrix Drive	A.M.	0.574	A	0.646	B	0.072	12.54	No
		P.M.	0.506	A	0.658	B	0.152	30.04	
74	Pass Avenue & Magnolia Boulevard	A.M.	0.406	A	0.414	A	0.008	1.97	No
		P.M.	0.529	A	0.540	A	0.011	2.08	
75	Pass Avenue & Verdugo Lane	A.M.	0.477	A	0.485	A	0.008	1.68	No
		P.M.	0.590	A	0.605	B	0.015	2.54	
76	Pass Avenue & Oak Street	A.M.	0.369	A	0.376	A	0.007	1.90	No
		P.M.	0.425	A	0.434	A	0.009	2.12	
77	Evergreen Street/Riverside Drive & Alameda Avenue	A.M.	0.530	A	0.564	A	0.034	6.42	No
		P.M.	0.595	A	0.652	B	0.057	9.58	
78	Pass Avenue & SR 134 EB Off-Ramp	A.M.	0.499	A	0.511	A	0.012	2.40	No
		P.M.	0.508	A	0.517	A	0.009	1.77	
79	Pass Avenue & Alameda Avenue	A.M.	0.599	A	0.616	B	0.017	2.84	No
		P.M.	0.713	C	0.731	C	0.018	2.52	
80	Pass Avenue & Riverside Drive	A.M.	0.461	A	0.520	A	0.059	12.80	No
		P.M.	0.363	A	0.439	A	0.076	20.94	
81	Olive Avenue & Pass Avenue	A.M.	0.673	B	0.746	C	0.073	10.85	Yes
		P.M.	0.747	C	0.877	D	0.130	17.40	
82	Olive Avenue & Warner Brothers Studios Gate 2/Gate 3	A.M.	0.430	A	0.473	A	0.043	10.00	No
		P.M.	0.501	A	0.556	A	0.055	10.98	
83	Olive Avenue & Warner Brothers Studios Gate 1/Lakeside Drive	A.M.	0.655	B	0.695	B	0.040	6.11	Yes
		P.M.	0.744	C	0.833	D	0.089	11.96	
84	Hollywood Way & Alameda Avenue	A.M.	0.773	C	0.784	C	0.011	1.42	No
		P.M.	0.749	C	0.758	C	0.009	1.20	
85	Cordova Street/SR 134 WB Off-Ramp & Alameda Avenue	A.M.	0.641	B	0.643	B	0.002	0.31	No
		P.M.	0.503	A	0.511	A	0.008	1.59	
86	Hollywood Way & Olive Avenue	A.M.	0.550	A	0.584	A	0.034	6.18	No
		P.M.	0.681	B	0.711	C	0.030	4.41	
87	Olive Avenue & Riverside Drive	A.M.	0.602	B	0.617	B	0.015	2.49	No
		P.M.	0.572	A	0.583	A	0.011	1.92	
88	Lima Street & Olive Avenue	A.M.	0.434	A	0.439	A	0.005	1.15	No
		P.M.	0.396	A	0.413	A	0.017	4.29	

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No.	Intersection	Peak Hour	Existing		Existing plus Project, Before TDM Trip Reduction and Mitigations		Increase in V/C due to Project	% Increase	Require CO Hotspot Analysis?[1]
			V/C	LOS	V/C	LOS			
89	Olive Avenue & Alameda Avenue	A.M.	0.569	A	0.604	B	0.035	6.15	No
		P.M.	0.710	C	0.518	A	-0.192	-27.04	
90	California Street & Riverside Drive	A.M.	0.335	A	0.337	A	0.002	0.60	No
		P.M.	0.353	A	0.356	A	0.003	0.85	
91	Bob Hope Drive & Alameda Avenue	A.M.	0.622	B	0.628	B	0.006	0.96	No
		P.M.	0.636	B	0.643	B	0.007	1.10	
92	Buena Vista Street & Alameda Avenue	A.M.	0.750	C	0.755	C	0.005	0.67	No
		P.M.	0.838	D	0.845	D	0.007	0.84	
93	Buena Vista Street/SR 134 EB On-Ramp & Riverside Drive/SR 134 WB	A.M.	0.777	C	0.778	C	0.001	0.13	No
		P.M.	0.809	D	0.811	D	0.002	0.25	
94	SR 134 EB On-Ramp/Screenland Drive & Riverside Drive	A.M.	0.671	B	0.673	B	0.002	0.30	No
		P.M.	0.562	A	0.564	A	0.002	0.36	
95	Buena Vista Street & Olive Avenue	A.M.	0.796	C	0.804	D	0.008	1.01	Yes
		P.M.	0.776	C	0.780	C	0.004	0.52	
96	Sepulveda Boulevard & Ventura Boulevard	A.M.	1.024	F	1.034	F	0.010	0.98	No
		P.M.	1.221	F	1.221	F	0.000	0.00	
97	Noble Avenue & Ventura Boulevard	A.M.	0.579	A	0.597	A	0.018	3.11	No
		P.M.	0.707	C	0.713	C	0.006	0.85	
98	Kester Avenue & Ventura Boulevard	A.M.	0.663	B	0.664	B	0.001	0.15	No
		P.M.	0.635	B	0.649	B	0.014	2.20	
99	Willis Avenue & Ventura Boulevard	A.M.	0.434	A	0.453	A	0.019	4.38	No
		P.M.	0.549	A	0.574	A	0.025	4.55	
100	Cedros Avenue (West) & Ventura Boulevard	A.M.	0.551	A	0.570	A	0.019	3.45	Yes
		P.M.	0.782	C	0.807	D	0.025	3.20	
101	Cedros Avenue (East) & Ventura Boulevard	A.M.	0.805	D	0.826	D	0.021	2.61	Yes
		P.M.	0.699	B	0.706	C	0.007	1.00	
102	Van Nuys Boulevard & Ventura Boulevard	A.M.	0.849	D	0.853	D	0.004	0.47	Yes
		P.M.	1.003	F	1.032	F	0.029	2.89	
103	Tyrone Avenue/Beverly Glen Boulevard & Ventura Boulevard	A.M.	0.564	A	0.585	A	0.021	3.72	No
		P.M.	0.772	C	0.778	C	0.006	0.78	
104	Hazeltine Avenue (West) & Ventura Boulevard	A.M.	0.674	B	0.677	B	0.003	0.45	No
		P.M.	0.619	B	0.646	B	0.027	4.36	
105	Stern Avenue (West) & Ventura Boulevard	A.M.	0.419	A	0.423	A	0.004	0.95	No
		P.M.	0.427	A	0.455	A	0.028	6.56	
106	Woodman Avenue & Ventura Boulevard	A.M.	0.588	A	0.591	A	0.003	0.51	No
		P.M.	0.587	A	0.615	B	0.028	4.77	
107	Sunnyslope Avenue & Ventura Boulevard	A.M.	0.374	A	0.397	A	0.023	6.15	No
		P.M.	0.399	A	0.417	A	0.018	4.51	
108	Dixie Canyon Avenue & Ventura Boulevard	A.M.	0.415	A	0.439	A	0.024	5.78	No
		P.M.	0.491	A	0.501	A	0.010	2.04	
109	Fulton Avenue & Ventura Boulevard	A.M.	0.603	B	0.625	B	0.022	3.65	No
		P.M.	0.645	B	0.674	B	0.029	4.50	
110	Valley Vista Boulevard/Ethel Avenue & Ventura Boulevard	A.M.	0.493	A	0.521	A	0.028	5.68	No
		P.M.	0.519	A	0.537	A	0.018	3.47	

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			V/C	LOS	V/C	LOS			
111	Coldwater Canyon Avenue & Ventura Boulevard	A.M.	0.859	D	0.885	D	0.026	3.03	Yes
		P.M.	1.073	F	1.110	F	0.037	3.45	
112	Whitsett Avenue/Laurel Terrace Drive & Ventura Boulevard	A.M.	0.555	A	0.584	A	0.029	5.23	No
		P.M.	0.661	B	0.697	B	0.036	5.45	
113	Laurelgrove Avenue & Ventura Boulevard	A.M.	0.459	A	0.486	A	0.027	5.88	No
		P.M.	0.548	A	0.583	A	0.035	6.39	
114	Vantage Avenue & Ventura Boulevard	A.M.	0.509	A	0.539	A	0.030	5.89	No
		P.M.	0.533	A	0.548	A	0.015	2.81	
115	Laurel Canyon Boulevard & Ventura Boulevard	A.M.	0.869	D	0.899	D	0.030	3.45	Yes
		P.M.	0.873	D	0.901	E	0.028	3.21	
116	Radford Avenue/Ventura Place & Ventura Boulevard	A.M.	0.456	A	0.489	A	0.033	7.24	No
		P.M.	0.574	A	0.588	A	0.014	2.44	
117	US 101 SB On-Ramp n/o Lankershim Boulevard & Ventura Boulevard	A.M.	0.577	A	0.579	A	0.002	0.35	No
		P.M.	0.381	A	0.392	A	0.011	2.89	
118	Lankershim Boulevard/Tujunga Avenue & Burbank Boulevard	A.M.	0.719	C	0.728	C	0.009	1.25	No
		P.M.	0.835	D	0.844	D	0.009	1.08	
119	Vineland Avenue & Burbank Boulevard	A.M.	0.805	D	0.814	D	0.009	1.12	No
		P.M.	0.756	C	0.759	C	0.003	0.40	
120	Cahuenga Boulevard & Burbank Boulevard	A.M.	0.587	A	0.594	A	0.007	1.19	No
		P.M.	0.649	B	0.656	B	0.007	1.08	
121	Cahuenga Boulevard & Chandler Boulevard	A.M.	0.293	A	0.301	A	0.008	2.73	No
		P.M.	0.478	A	0.487	A	0.009	1.88	
122	La Cienega Boulevard & Sunset Boulevard	A.M.	0.683	B	0.693	B	0.010	1.46	No
		P.M.	1.031	F	1.045	F	0.014	1.36	
123	La Cienega Boulevard & Santa Monica Boulevard	A.M.	0.979	E	0.980	E	0.001	0.10	No
		P.M.	0.863	D	0.866	D	0.003	0.35	
124	Laurel Canyon Boulevard & Hollywood Boulevard	A.M.	0.487	A	0.462	A	-0.025	-5.13	No
		P.M.	0.700	B	0.671	B	-0.029	-4.14	
125	Crescent Heights Boulevard & Sunset Boulevard	A.M.	0.985	E	0.969	E	-0.016	-1.62	No
		P.M.	0.870	D	0.843	D	-0.027	-3.10	
126	Fairfax Avenue & Hollywood Boulevard	A.M.	0.824	D	0.812	D	-0.012	-1.46	No
		P.M.	0.713	C	0.690	B	-0.023	-3.23	
127	Fairfax Avenue & Sunset Boulevard	A.M.	0.611	B	0.595	A	-0.016	-2.62	No
		P.M.	0.739	C	0.720	C	-0.019	-2.57	
128	La Brea Avenue & Franklin Avenue	A.M.	[2]	D	[2]	E	0.027	***	Yes
		P.M.	[2]	D	[2]	E	0.026	***	
129	La Brea Avenue & Hollywood Boulevard	A.M.	0.831	D	0.871	D	0.040	4.81	Yes
		P.M.	0.773	C	0.797	C	0.024	3.10	
130	La Brea Avenue & Sunset Boulevard	A.M.	0.767	C	0.788	C	0.021	2.74	Yes
		P.M.	0.830	D	0.857	D	0.027	3.25	
131	La Brea Avenue & Fountain Avenue	A.M.	0.921	E	0.936	E	0.015	1.63	No
		P.M.	0.868	D	0.879	D	0.011	1.27	
132	La Brea Avenue & Santa Monica Boulevard	A.M.	0.809	D	0.819	D	0.010	1.24	No
		P.M.	0.844	D	0.858	D	0.014	1.66	

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			V/C	LOS	V/C	LOS			
133	Highland Avenue & Hollywood Boulevard	A.M.	[2]	E	[2]	F	0.035	***	Yes
		P.M.	[2]	E	[2]	F	0.049	***	
134	Highland Avenue & Sunset Boulevard	A.M.	0.612	B	0.661	B	0.049	8.01	No
		P.M.	0.651	B	0.698	B	0.047	7.22	
135	Highland Avenue & Fountain Avenue	A.M.	0.834	D	0.846	D	0.012	1.44	No
		P.M.	0.658	B	0.673	B	0.015	2.28	
136	Highland Avenue & Santa Monica Boulevard	A.M.	0.776	C	0.787	C	0.011	1.42	No
		P.M.	0.805	D	0.809	D	0.004	0.50	
137	Kester Avenue (East) & Ventura Boulevard	A.M.	0.515	A	0.535	A	0.020	3.88	Yes
		P.M.	0.885	D	0.909	E	0.024	2.71	
138	San Vicente Boulevard/Clark St & Sunset Boulevard	A.M.	0.829	D	0.838	D	0.009	1.09	No
		P.M.	0.944	E	0.952	E	0.008	0.85	
139	Cahuenga Boulevard & Sunset Boulevard	A.M.	0.802	D	0.805	D	0.003	0.37	No
		P.M.	0.706	C	0.715	C	0.009	1.27	
140	Lankershim Boulevard & Chandler Boulevard (North)	A.M.	0.343	A	0.355	A	0.012	3.50	No
		P.M.	0.186	A	0.197	A	0.011	5.91	
141	SR 170 SB Ramps & Magnolia Boulevard	A.M.	0.515	A	0.528	A	0.013	2.52	No
		P.M.	0.488	A	0.492	A	0.004	0.82	
142	SR 170 NB Ramps & Magnolia Boulevard	A.M.	0.360	A	0.377	A	0.017	4.72	No
		P.M.	0.435	A	0.438	A	0.003	0.69	
143	Tujunga Avenue & SR 170 NB On-Ramp/Private Driveway	A.M.	0.622	B	0.644	B	0.022	3.54	No
		P.M.	0.608	B	0.636	B	0.028	4.61	
144	Coldwater Canyon Avenue & US 101 NB Ramps	A.M.	0.416	A	0.418	A	0.002	0.48	No
		P.M.	0.440	A	0.442	A	0.002	0.45	
145	Coldwater Canyon Avenue & US 101 SB Ramps	A.M.	0.485	A	0.486	A	0.001	0.21	No
		P.M.	0.449	A	0.452	A	0.003	0.67	
146	Coldwater Canyon Avenue & Moorpark Street	A.M.	0.749	C	0.752	C	0.003	0.40	No
		P.M.	0.844	D	0.846	D	0.002	0.24	
147	Laurel Canyon Boulevard & US 101 NB Ramps	A.M.	0.580	A	0.581	A	0.001	0.17	No
		P.M.	0.515	A	0.516	A	0.001	0.19	
148	Laurel Canyon Boulevard & US 101 SB Ramps	A.M.	0.518	A	0.518	A	0.000	0.00	No
		P.M.	0.541	A	0.541	A	0.000	0.00	
149	Laurel Canyon Boulevard & Moorpark Street	A.M.	0.919	E	0.921	E	0.002	0.22	No
		P.M.	1.077	F	1.086	F	0.009	0.84	
150	Colfax Avenue & Riverside Drive	A.M.	0.853	D	0.855	D	0.002	0.23	No
		P.M.	0.709	C	0.712	C	0.003	0.42	
151	Colfax Avenue & Moorpark Street	A.M.	0.739	C	0.743	C	0.004	0.54	No
		P.M.	0.569	A	0.571	A	0.002	0.35	
152	Lankershim Boulevard & Chandler Boulevard (South)	A.M.	0.480	A	0.492	A	0.012	2.50	No
		P.M.	0.337	A	0.352	A	0.015	4.45	
153	Hollywood Way & Verdugo Avenue	A.M.	0.814	D	0.826	D	0.012	1.47	Yes
		P.M.	0.800	C	0.809	D	0.009	1.13	
154	Hollywood Way & Magnolia Boulevard	A.M.	0.806	D	0.813	D	0.007	0.87	No
		P.M.	0.869	D	0.879	D	0.010	1.15	

Table 1
SCAQMD Screening of Roadway Intersections

No.	Intersection	Peak Hour	Existing		Existing plus Project, Before TDM Trip Reduction and Mitigations		Increase in V/C due to Project	% Increase	Require CO Hotspot Analysis?[1]
			V/C	LOS	V/C	LOS			
155	Buena Vista Street & Verdugo Avenue	A.M.	0.601	B	0.601	B	0.000	0.00	No
		P.M.	0.731	C	0.739	C	0.008	1.09	
156	Buena Vista Street & Magnolia Boulevard	A.M.	0.576	A	0.581	A	0.005	0.87	No
		P.M.	0.846	D	0.848	D	0.002	0.24	
157	Tujunga Avenue & US 101 SB Off-Ramp	A.M.	0.413	A	0.413	A	0.000	0.00	No
		P.M.	0.623	B	0.623	B	0.000	0.00	
158	Tujunga Avenue & US 101 NB On-Ramp	A.M.	0.473	A	0.473	A	0.000	0.00	No
		P.M.	0.463	A	0.463	A	0.000	0.00	
159	US 101 SB Off-Ramp & Riverside Drive	A.M.	0.522	A	0.603	B	0.081	15.52	No
		P.M.	0.366	A	0.393	A	0.027	7.38	
160	Vineland Avenue & US 101 SB Ramps	A.M.	0.527	A	0.574	A	0.047	8.92	No
		P.M.	0.369	A	0.389	A	0.020	5.42	
161	US 101 NB On-Ramp & Moorpark Street	A.M.	0.513	A	0.522	A	0.009	1.75	No
		P.M.	0.609	B	0.654	B	0.045	7.39	
162	Cahuenga Boulevard & US 101 SB Ramps	A.M.	1.238	F	1.256	F	0.018	1.45	Yes
		P.M.	1.456	F	1.489	F	0.033	2.27	
163	Bob Hope Drive & SR 134 EB Off-Ramp	A.M.	0.573	A	0.573	A	0.000	0.00	No
		P.M.	0.620	B	0.620	B	0.000	0.00	
164	SR 134 WB On-Ramp & Alameda Avenue	A.M.	0.421	A	0.424	A	0.003	0.71	No
		P.M.	0.615	B	0.615	B	0.000	0.00	
165	Hollywood Way & Thorton Avenue	A.M.	0.825	D	0.831	D	0.006	0.73	No
		P.M.	0.877	D	0.881	D	0.004	0.46	
166	Hollywood Way & Empire Avenue	A.M.	0.802	D	0.811	D	0.009	1.12	No
		P.M.	0.781	C	0.790	C	0.009	1.15	
167	Hollywood Way & Burbank Boulevard	A.M.	0.863	D	0.872	D	0.009	1.04	No
		P.M.	0.922	E	0.935	E	0.013	1.41	
168	Buena Vista Street & Empire Avenue	A.M.	0.627	B	0.629	B	0.002	0.32	No
		P.M.	0.752	C	0.752	C	0.000	0.00	
169	Buena Vista Street & Victory Boulevard	A.M.	0.696	B	0.698	B	0.002	0.29	No
		P.M.	0.776	C	0.779	C	0.003	0.39	
170	Buena Vista Street & Burbank Boulevard	A.M.	0.632	B	0.636	B	0.004	0.63	No
		P.M.	0.640	B	0.647	B	0.007	1.09	
171	Victory Boulevard & Olive Avenue	A.M.	0.699	B	0.707	C	0.008	1.14	No
		P.M.	0.847	D	0.850	D	0.003	0.35	
172	Victory Boulevard & Alameda Avenue	A.M.	0.603	B	0.605	B	0.002	0.33	No
		P.M.	0.735	C	0.737	C	0.002	0.27	

Notes:

1. SCAQMD Criteria for CO Hotspots Analysis:
   a. Intersections that change from LOS C to D as a result of the project; OR
   b. Intersections rated D or worse where the project increases the V/C ratio by 2% or more

2. No V/C data for these intersections was available; Table 1 of the Traffic emorandum provides the following note: "Traffic counts at this location was not fully representative of the situation due to downstream constraints and pedestrian conflicts. LOS is based on field observations and has not been calculated based on the Universal City Transportation Model." ENVIRON elected to perform CO hotspot analysis on these intersections. Data required for this analysis was found elswhere in the Traffic Report.

Abbreviations:

CO - Carbon monoxide

LOS - Level of Service

SCAQMD - South Coast Air Quality Management District

V/C - Volume/Capacity

Source:

Gibson Transportation Consulting, Inc., 2011. Sunnyvale Analysis for the NBCUniversal Evolution Plan. July.

Table 2. Localized CO Impacts at Roadway Intersections for Existing Plus Project Conditions

Intersection Number and Name	CO Concentrations (ppm)							
	Edge of Road (EOR)		25 feet from EOR		50 feet from EOR		100 feet from EOR	
	1-Hour	8-Hour	1-Hour	8-Hour	1-Hour	8-Hour	1-Hour	8-Hour
1. Colfax Avenue & Ventura Boulevard	8.6	6.7	6.7	5.4	6.1	5.0	5.5	4.6
3. Tujunga Avenue & Riverside Drive-Camarillo Street	8.1	6.4	6.6	5.3	6.0	4.9	5.5	4.6
6. Lankershim Boulevard & Magnolia Boulevard.xls	7.9	6.2	6.3	5.1	5.7	4.7	5.3	4.4
9. Vineland Avenue-Lankershim Boulevard & Camarillo Street	7.7	6.1	6.5	5.3	6.1	4.9	5.5	4.6
10. Vineland Avenue & Riverside Drive	7.4	5.9	6.3	5.1	5.9	4.8	5.4	4.5
11. Vineland Avenue & Moorpark Street	8.8	6.8	6.8	5.4	6.1	5.0	5.6	4.6
14. Vineland Avenue & Ventura Boulevard	8.1	6.4	6.5	5.3	6.0	4.9	5.4	4.5
15. SR 134 EB On-Ramp east of Vineland Avenue & Riverside Drive	7.4	5.9	6.1	5.0	5.6	4.6	5.2	4.3
19. Lankershim Boulevard & Riverside Drive	7.7	6.1	6.3	5.1	5.8	4.8	5.3	4.4
20. Lankershim Boulevard & Moorpark Street	7.7	6.1	6.3	5.1	5.8	4.8	5.3	4.4
21. Lankershim Boulevard & Whipple Street	7.4	5.9	6.0	4.9	5.6	4.6	5.1	4.3
26. Cahuenga Boulevard & Camarillo Street	7.4	5.9	5.9	4.9	5.5	4.5	5.1	4.2
29. Cahuenga Boulevard & Riverside Drive	7.5	6.0	6.2	5.0	5.7	4.7	5.3	4.4
46. US 101 SB Ramps west of Barham Blvd.-Cahuenga Blvd. & Cahuenga Blvd	8.2	6.4	6.6	5.3	6.0	4.9	5.4	4.5
47. Barham Boulevard & Cahuenga Boulevard	10.2	7.8	7.6	6.0	6.7	5.4	6.0	4.9
48. Barham Boulevard & Buddy Holly Drive-Cahuenga Boulevard	10.7	8.2	8.1	6.3	7.2	5.7	6.3	5.1
49. Oakcrest Drive & Cahuenga Boulevard	8.9	6.9	6.6	5.3	6.0	4.9	5.4	4.5
50. Mulholland Drive & Cahuenga Boulevard	8.4	6.6	6.4	5.2	5.8	4.8	5.3	4.4
52. Barham Boulevard & De Witt Drive.xls	9.9	7.6	7.5	5.9	6.7	5.4	5.9	4.8
53. Barham Boulevard & Lake Hollywood Drive	10.0	7.7	7.5	6.0	6.7	5.4	5.9	4.8

Table 2. Localized CO Impacts at Roadway Intersections for Existing Plus Project Conditions

Intersection Number and Name	CO Concentrations (ppm)							
	Edge of Road (EOR)		25 feet from EOR		50 feet from EOR		100 feet from EOR	
	1-Hour	8-Hour	1-Hour	8-Hour	1-Hour	8-Hour	1-Hour	8-Hour
55. Barham Boulevard & Lakeside Plaza Dr.-Forest Lawn Dr.	10.5	8.0	8.0	6.3	7.1	5.7	6.2	5.0
60. Forest Lawn Drive & SR 134 EB Ramps	6.9	5.5	5.6	4.6	5.2	4.3	4.9	4.1
65. Highland Avenue & Franklin Avenue	10.1	7.8	7.9	6.3	7.2	5.7	6.3	5.1
66. Highland Avenue & Franklin Place-Franklin Avenue	10.7	8.2	8.4	6.6	7.5	6.0	6.6	5.3
81. Olive Avenue & Pass Avenue	8.7	6.8	7.1	5.6	6.5	5.2	5.8	4.7
83. Olive&WarnerBros	8.9	6.9	6.9	5.5	6.2	5.1	5.6	4.6
95. Buena Vista and Olive.xls	7.0	5.6	5.9	4.8	5.5	4.6	5.1	4.3
100. Cedros and Ventura	7.7	6.1	6.4	5.2	5.9	4.9	5.4	4.5
101. Cedros (east) and Ventura	7.5	6.0	6.3	5.1	5.8	4.8	5.3	4.4
102. Van Nuys and Ventura	8.0	6.3	6.7	5.4	6.2	5.0	5.6	4.6
111.Coldwater Canyon and Ventura	8.3	6.5	6.9	5.5	6.4	5.2	5.7	4.7
115. Laurel Canyon and Ventura	7.7	6.1	6.5	5.3	6.1	4.9	5.6	4.6
128. La Brea & Franklin	7.2	5.7	6.1	5.0	5.7	4.7	5.3	4.4
129. La Brea & Hollywood	7.8	6.1	6.3	5.1	5.8	4.8	5.3	4.4
130. La Brea & Sunset	7.9	6.2	6.6	5.3	6.2	5.0	5.6	4.6
133. Highland & Hollywood	8.0	6.3	6.7	5.4	6.2	5.0	5.6	4.6
137. Kester & Ventura	8.1	6.4	6.7	5.4	6.2	5.0	5.6	4.6
161.US 101 NB & Moorpark.xls	7.6	6.0	6.1	5.0	5.6	4.6	5.2	4.3
162. Cahuenga & US 101 SB	9.1	7.1	7.1	5.7	6.4	5.2	5.7	4.7
Maximum Impact Intersection (48. Barham Boulevard & Buddy Holly Drive-Cahuenga Boulevard and 66. Highland Avenue & Franklin Place-Franklin Avenue)	**10.7**	**8.2**	**8.4**	**6.6**	**7.5**	**6.0**	**6.6**	**5.3**

Notes:

1. The 1-Hour and 8-Hour background CO concentration are 4.0 ppm and 3.5 ppm, respectively. Background CO concentrations were obtained from SCAQMD historical air quality data for East San Fernando Valley (2006): http://www.aqmd.gov/smog/historicaldata.htm.

2. Intersection number corresponds to numbers provided in the Gibson Transportation Consulting, Inc. Transportation Study prepared for the Project.

Attachment A

SIMPLIFIED CALINE4 CARBON MONOXIDE ANALYSIS

Project Title: Universal Evolution Plan

Background Information

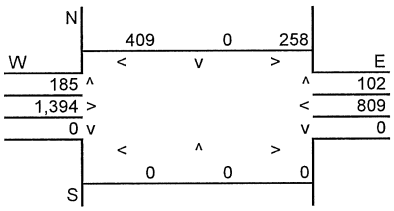
Nearest Air Monitoring Station measuring CO:	Burbank
Background 1-hour CO Concentration (ppm):	4.0
Background 8-hour CO Concentration (ppm):	3.5
Persistence Factor:	0.7
Analysis Year:	2006

Roadway Data

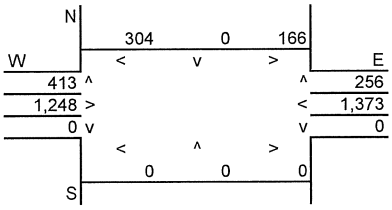
Intersection:	Colfax Avenue & Ventura Boulevard
Analysis Condition:	Existing (2006) Traffic Conditions

		Roadway Type	No. of Lanes	Average Speed A.M.	Average Speed P.M.
North-South Roadway:	Colfax Avenue	At Grade	2	5	5
East-West Roadway:	Ventura Boulevard	At Grade	4	5	5

A.M. Peak Hour Traffic Volumes



P.M. Peak Hour Traffic Volumes



Highest Traffic Volumes (Vehicles per Hour)

N-S Road:	954	N-S Road:	1,139
E-W Road:	2,797	E-W Road:	3,338

Roadway CO Contributions and Concentrations

Emissions = (A x B x C) / 100,000[1]

Roadway	A_1 E.O.R.	A_2 25 Feet	A_3 50 Feet	A_4 100 Feet	B Traffic Volume	C Emission Factors[2]	Estimated CO Concentrations E.O.R.	25 Feet	50 Feet	100 Feet
	Reference CO Concentrations									
A.M. Peak Traffic Hour										
North-South Road	3.7	2.7	2.2	1.7	954	10.36	0.37	0.27	0.22	0.17
East-West Road	11.9	7.0	5.4	3.8	2,797	10.36	3.45	2.03	1.57	1.10
P.M. Peak Traffic Hour										
North-South Road	3.7	2.7	2.2	1.7	1,139	10.36	0.44	0.32	0.26	0.20
East-West Road	11.9	7.0	5.4	3.8	3,338	10.36	4.12	2.42	1.87	1.31

[1] Methodology from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).
[2] Emission factors from EMFAC2007 (2003).

Total Roadway CO Concentrations

Peak Hour Emissions = North-South Concentration + East-West Concentration + Background 1-hour Concentration[2]
8-Hour Emissions = ((Highest Peak Hour Concentration - Background 1-hour Concentration) x Persistence Factor) + Background 8-hour Concentration[2]

	A.M. Peak Hour	P.M. Peak Hour	8-Hour
Roadway Edge	7.8	8.6	6.7
25 Feet from Roadway Edge	6.3	6.7	5.4
50 Feet from Roadway Edge	5.8	6.1	5.0
100 Feet from Roadway Edge	5.3	5.5	4.6

[2] Methodology from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).

SIMPLIFIED CALINE4 CARBON MONOXIDE ANALYSIS

Project Title: Universal Evolution Plan

Background Information

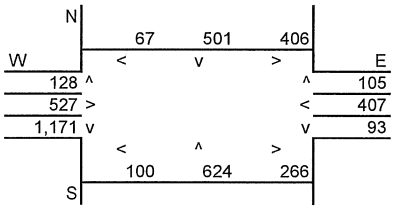
Nearest Air Monitoring Station measuring CO:	Burbank
Background 1-hour CO Concentration (ppm):	4.0
Background 8-hour CO Concentration (ppm):	3.5
Persistence Factor:	0.7
Analysis Year:	2006

Roadway Data

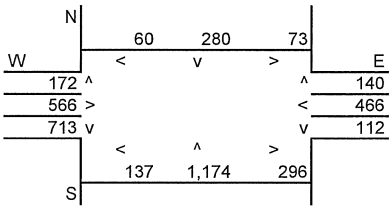
Intersection: Tujunga Avenue & Riverside Drive/Camarillo Street
Analysis Condition: Existing (2006) Traffic Conditions

		Roadway Type	No. of Lanes	Average Speed A.M.	Average Speed P.M.
North-South Roadway:	Tujunga Avenue	At Grade	4	5	5
East-West Roadway:	Riverside Drive/Camarillo St	At Grade	6	5	5

A.M. Peak Hour Traffic Volumes



P.M. Peak Hour Traffic Volumes



Highest Traffic Volumes (Vehicles per Hour)

N-S Road:	2,755	N-S Road:	2,712
E-W Road:	2,400	E-W Road:	2,114

Roadway CO Contributions and Concentrations

Emissions = (A x B x C) / 100,000[1]

Roadway	A_1 E.O.R.	A_2 25 Feet	A_3 50 Feet	A_4 100 Feet	B Traffic Volume	C Emission Factors[2]	Estimated CO Concentrations E.O.R.	25 Feet	50 Feet	100 Feet
	Reference CO Concentrations									
A.M. Peak Traffic Hour										
North-South Road	11.9	7.0	5.4	3.8	2,755	10.36	3.40	2.00	1.54	1.08
East-West Road	2.8	2.3	2.0	1.7	2,400	10.36	0.70	0.57	0.50	0.42
P.M. Peak Traffic Hour										
North-South Road	11.9	7.0	5.4	3.8	2,712	10.36	3.34	1.97	1.52	1.07
East-West Road	2.8	2.3	2.0	1.7	2,114	10.36	0.61	0.50	0.44	0.37

[1] Methodology from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).
[2] Emission factors from EMFAC2007 (2003).

Total Roadway CO Concentrations

Peak Hour Emissions = North-South Concentration + East-West Concentration + Background 1-hour Concentration[2]
8-Hour Emissions = ((Highest Peak Hour Concentration - Background 1-hour Concentration) x Persistence Factor) + Background 8-hour Concentration[2]

	A.M. Peak Hour	P.M. Peak Hour	8-Hour
Roadway Edge	8.1	8.0	6.4
25 Feet from Roadway Edge	6.6	6.5	5.3
50 Feet from Roadway Edge	6.0	6.0	4.9
100 Feet from Roadway Edge	5.5	5.4	4.6

[2] Methodology from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).

SIMPLIFIED CALINE4 CARBON MONOXIDE ANALYSIS

Project Title: Universal Vision Plan

Background Information

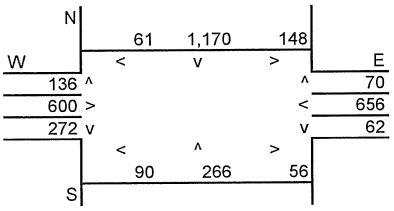
Nearest Air Monitoring Station measuring CO:	Burbank
Background 1-hour CO Concentration (ppm):	4.0
Background 8-hour CO Concentration (ppm):	3.5
Persistence Factor:	0.7
Analysis Year:	2006

Roadway Data

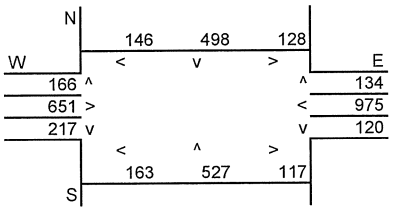
Intersection: Lankershim Boulevard & Magnolia Boulevard
Analysis Condition: Existing (2006) Plus Project Traffic Conditions

		Roadway Type	No. of Lanes	Average Speed A.M.	Average Speed P.M.
North-South Roadway:	Lankershim Boulevard	At Grade	4	5	5
East-West Roadway:	Magnolia Boulevard	At Grade	2	5	5

A.M. Peak Hour Traffic Volumes



P.M. Peak Hour Traffic Volumes



Highest Traffic Volumes (Vehicles per Hour)

N-S Road:	1,916	N-S Road:	1,642
E-W Road:	1,815	E-W Road:	2,318

Roadway CO Contributions and Concentrations

Emissions = (A x B x C) / 100,000[1]

Roadway	A_1 E.O.R.	A_2 25 Feet	A_3 50 Feet	A_4 100 Feet	B Traffic Volume	C Emission Factors[2]	Estimated CO Concentrations E.O.R.	25 Feet	50 Feet	100 Feet
	Reference CO Concentrations									
A.M. Peak Traffic Hour										
North-South Road	11.9	7.0	5.4	3.8	1,916	10.36	2.36	1.39	1.07	0.75
East-West Road	3.7	2.7	2.2	1.7	1,815	10.36	0.70	0.51	0.41	0.32
P.M. Peak Traffic Hour										
North-South Road	3.3	2.6	2.2	1.7	1,642	10.36	0.56	0.44	0.37	0.29
East-West Road	14.0	7.6	5.7	4.0	2,318	10.36	3.36	1.83	1.37	0.96

[1] Methodology from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).
[2] Emission factors from EMFAC2002 (2003).

Total Roadway CO Concentrations

Peak Hour Emissions = North-South Concentration + East-West Concentration + Background 1-hour Concentration[2]
8-Hour Emissions = ((Highest Peak Hour Concentration - Background 1-hour Concentration) x Persistence Factor) + Background 8-hour Concentration[2]

	A.M. Peak Hour	P.M. Peak Hour	8-Hour
Roadway Edge	7.1	7.9	6.2
25 Feet from Roadway Edge	5.9	6.3	5.1
50 Feet from Roadway Edge	5.5	5.7	4.7
100 Feet from Roadway Edge	5.1	5.3	4.4

[2] Methodology from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).

SIMPLIFIED CALINE4 CARBON MONOXIDE ANALYSIS

Project Title: Universal Evolution Plan

Background Information

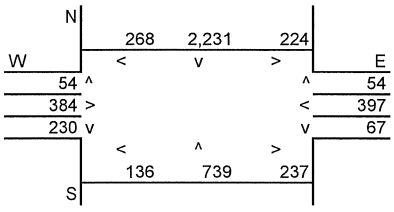
Nearest Air Monitoring Station measuring CO:	Burbank
Background 1-hour CO Concentration (ppm):	4.0
Background 8-hour CO Concentration (ppm):	3.5
Persistence Factor:	0.7
Analysis Year:	2006

Roadway Data

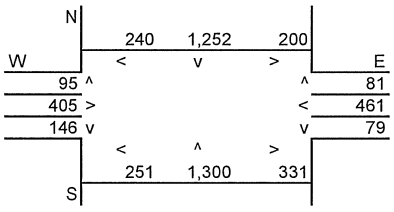
Intersection: Vineland Avenue/Lankershim Boulevard & Camarillo Street
Analysis Condition: Existing (2006) Traffic Conditions

		Roadway Type	No. of Lanes	Average Speed A.M.	Average Speed P.M.
North-South Roadway:	Vineland Avenue/Lankershin	At Grade	8	5	5
East-West Roadway:	Camarillo Street	At Grade	4	5	5

A.M. Peak Hour Traffic Volumes



P.M. Peak Hour Traffic Volumes



Highest Traffic Volumes (Vehicles per Hour)

N-S Road:	3,640	N-S Road:	3,359
E-W Road:	1,469	E-W Road:	1,598

Roadway CO Contributions and Concentrations

Emissions = (A x B x C) / 100,000[1]

Roadway	A_1 E.O.R.	A_2 25 Feet	A_3 50 Feet	A_4 100 Feet	B Traffic Volume	C Emission Factors[2]	Estimated CO Concentrations E.O.R.	25 Feet	50 Feet	100 Feet
	Reference CO Concentrations									
A.M. Peak Traffic Hour										
North-South Road	8.5	5.7	4.6	3.4	3,640	10.36	3.21	2.15	1.74	1.28
East-West Road	3.3	2.6	2.2	1.7	1,469	10.36	0.50	0.40	0.33	0.26
P.M. Peak Traffic Hour										
North-South Road	8.5	5.7	4.6	3.4	3,359	10.36	2.96	1.98	1.60	1.18
East-West Road	3.3	2.6	2.2	1.7	1,598	10.36	0.55	0.43	0.36	0.28

[1] Methodology from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).
[2] Emission factors from EMFAC2007 (2003).

Total Roadway CO Concentrations

Peak Hour Emissions = North-South Concentration + East-West Concentration + Background 1-hour Concentration[2]
8-Hour Emissions = ((Highest Peak Hour Concentration - Background 1-hour Concentration) x Persistence Factor) + Background 8-hour Concentration[2]

	A.M. Peak Hour	P.M. Peak Hour	8-Hour
Roadway Edge	7.7	7.5	6.1
25 Feet from Roadway Edge	6.5	6.4	5.3
50 Feet from Roadway Edge	6.1	6.0	4.9
100 Feet from Roadway Edge	5.5	5.5	4.6

[2] Methodology from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).

SIMPLIFIED CALINE4 CARBON MONOXIDE ANALYSIS

Project Title: Universal Evolution Plan

Background Information

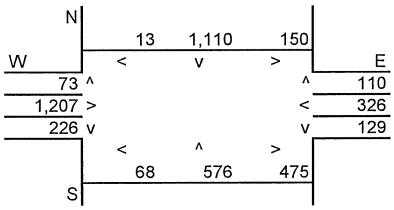
Nearest Air Monitoring Station measuring CO:	Burbank
Background 1-hour CO Concentration (ppm):	4.0
Background 8-hour CO Concentration (ppm):	3.5
Persistence Factor:	0.7
Analysis Year:	2006

Roadway Data

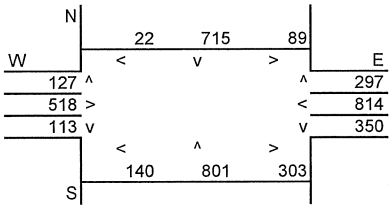
Intersection: Vineland Avenue & Riverside Drive
Analysis Condition: Existing (2006) Traffic Conditions

		Roadway Type	No. of Lanes	Average Speed A.M.	Average Speed P.M.
North-South Roadway:	Vineland Avenue	At Grade	6	5	5
East-West Roadway:	Riverside Drive	At Grade	4	5	5

A.M. Peak Hour Traffic Volumes



P.M. Peak Hour Traffic Volumes



Highest Traffic Volumes (Vehicles per Hour)

N-S Road:	2,584	N-S Road:	2,422
E-W Road:	2,397	E-W Road:	2,371

Roadway CO Contributions and Concentrations

Emissions = (A x B x C) / 100,000[1]

Roadway	A_1 E.O.R.	A_2 25 Feet	A_3 50 Feet	A_4 100 Feet	B Traffic Volume	C Emission Factors[2]	Estimated CO Concentrations E.O.R.	25 Feet	50 Feet	100 Feet
	Reference CO Concentrations									
A.M. Peak Traffic Hour										
North-South Road	9.5	6.1	4.9	3.5	2,584	10.36	2.54	1.63	1.31	0.94
East-West Road	3.3	2.6	2.2	1.7	2,397	10.36	0.82	0.65	0.55	0.42
P.M. Peak Traffic Hour										
North-South Road	9.5	6.1	4.9	3.5	2,422	10.36	2.38	1.53	1.23	0.88
East-West Road	3.3	2.6	2.2	1.7	2,371	10.36	0.81	0.64	0.54	0.42

[1] Methodology from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).
[2] Emission factors from EMFAC2007 (2003).

Total Roadway CO Concentrations

Peak Hour Emissions = North-South Concentration + East-West Concentration + Background 1-hour Concentration[2]
8-Hour Emissions = ((Highest Peak Hour Concentration - Background 1-hour Concentration) x Persistence Factor) + Background 8-hour Concentration[2]

	A.M. Peak Hour	P.M. Peak Hour	8-Hour
Roadway Edge	7.4	7.2	5.9
25 Feet from Roadway Edge	6.3	6.2	5.1
50 Feet from Roadway Edge	5.9	5.8	4.8
100 Feet from Roadway Edge	5.4	5.3	4.5

[2] Methodology from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).

SIMPLIFIED CALINE4 CARBON MONOXIDE ANALYSIS

Project Title: Universal Evolution Plan

Background Information

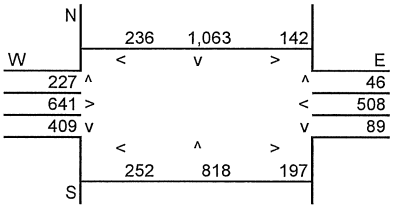
Nearest Air Monitoring Station measuring CO:	Burbanl
Background 1-hour CO Concentration (ppm):	4.0
Background 8-hour CO Concentration (ppm):	3.5
Persistence Factor:	0.7
Analysis Year:	2006

Roadway Data

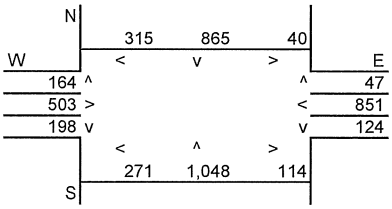
Intersection:	Vineland Avenue & Moorpark Street
Analysis Condition:	Existing (2006) Traffic Conditions

		Roadway Type	No. of Lanes	Average Speed A.M.	Average Speed P.M.
North-South Roadway:	Vineland Avenue	At Grade	2	5	5
East-West Roadway:	Moorpark Street	At Grade	6	5	5

A.M. Peak Hour Traffic Volumes



P.M. Peak Hour Traffic Volumes



Highest Traffic Volumes (Vehicles per Hour)

N-S Road:	2,828	N-S Road:	2,620
E-W Road:	2,273	E-W Road:	2,302

Roadway CO Contributions and Concentrations

Emissions = (A x B x C) / 100,000[1]

Roadway	A_1 Reference CO Concentrations E.O.R.	A_2 25 Feet	A_3 50 Feet	A_4 100 Feet	B Traffic Volume	C Emission Factors[2]	Estimated CO Concentrations E.O.R.	25 Feet	50 Feet	100 Feet
A.M. Peak Traffic Hour										
North-South Road	14.0	7.6	5.7	4.0	2,828	10.36	4.10	2.23	1.67	1.17
East-West Road	2.8	2.3	2.0	1.7	2,273	10.36	0.66	0.54	0.47	0.40
P.M. Peak Traffic Hour										
North-South Road	14.0	7.6	5.7	4.0	2,620	10.36	3.80	2.06	1.55	1.09
East-West Road	2.8	2.3	2.0	1.7	2,302	10.36	0.67	0.55	0.48	0.41

[1] Methodology from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).
[2] Emission factors from EMFAC2007 (2003).

Total Roadway CO Concentrations

Peak Hour Emissions = North-South Concentration + East-West Concentration + Background 1-hour Concentration[2]
8-Hour Emissions = ((Highest Peak Hour Concentration - Background 1-hour Concentration) x Persistence Factor) + Background 8-hour Concentration[2]

	A.M. Peak Hour	P.M. Peak Hour	8-Hour
Roadway Edge	8.8	8.5	6.8
25 Feet from Roadway Edge	6.8	6.6	5.4
50 Feet from Roadway Edge	6.1	6.0	5.0
100 Feet from Roadway Edge	5.6	5.5	4.6

[2] Methodology from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).

SIMPLIFIED CALINE4 CARBON MONOXIDE ANALYSIS

Project Title: Universal Evolution Plan

Background Information

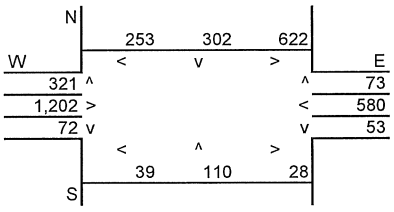
Nearest Air Monitoring Station measuring CO:	Burbank
Background 1-hour CO Concentration (ppm):	4.0
Background 8-hour CO Concentration (ppm):	3.5
Persistence Factor:	0.7
Analysis Year:	2006

Roadway Data

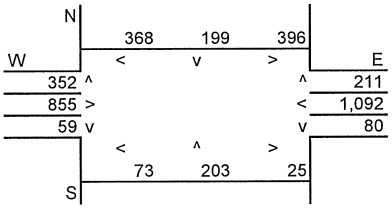
Intersection: Vineland Avenue & Ventura Boulevard
Analysis Condition: Existing (2006) Traffic Conditions

		Roadway Type	No. of Lanes	Average Speed A.M.	Average Speed P.M.
North-South Roadway:	Vineland Avenue	At Grade	2	5	5
East-West Roadway:	Ventura Boulevard	At Grade	4	5	5

A.M. Peak Hour Traffic Volumes



P.M. Peak Hour Traffic Volumes



Highest Traffic Volumes (Vehicles per Hour)

N-S Road:	1,681	N-S Road:	1,729
E-W Road:	2,558	E-W Road:	2,799

Roadway CO Contributions and Concentrations

Emissions = (A x B x C) / 100,000[1]

Roadway	A_1 E.O.R.	A_2 25 Feet	A_3 50 Feet	A_4 100 Feet	B Traffic Volume	C Emission Factors[2]	Estimated CO Concentrations E.O.R.	25 Feet	50 Feet	100 Feet
	Reference CO Concentrations									
A.M. Peak Traffic Hour										
North-South Road	3.7	2.7	2.2	1.7	1,681	10.36	0.64	0.47	0.38	0.30
East-West Road	11.9	7.0	5.4	3.8	2,558	10.36	3.15	1.86	1.43	1.01
P.M. Peak Traffic Hour										
North-South Road	3.7	2.7	2.2	1.7	1,729	10.36	0.66	0.48	0.39	0.30
East-West Road	11.9	7.0	5.4	3.8	2,799	10.36	3.45	2.03	1.57	1.10

[1] Methodology from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).
[2] Emission factors from EMFAC2007 (2003).

Total Roadway CO Concentrations

Peak Hour Emissions = North-South Concentration + East-West Concentration + Background 1-hour Concentration[2]
8-Hour Emissions = ((Highest Peak Hour Concentration - Background 1-hour Concentration) x Persistence Factor) + Background 8-hour Concentration[2]

	A.M. Peak Hour	P.M. Peak Hour	8-Hour
Roadway Edge	7.8	8.1	6.4
25 Feet from Roadway Edge	6.3	6.5	5.3
50 Feet from Roadway Edge	5.8	6.0	4.9
100 Feet from Roadway Edge	5.3	5.4	4.5

[2] Methodology from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).

SIMPLIFIED CALINE4 CARBON MONOXIDE ANALYSIS

Project Title: Universal Evolution Plan

Background Information

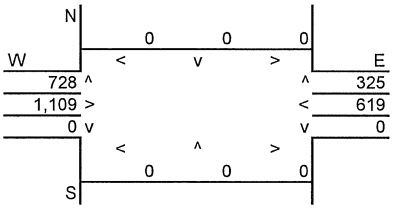
Nearest Air Monitoring Station measuring CO:	Burbank
Background 1-hour CO Concentration (ppm):	4.0
Background 8-hour CO Concentration (ppm):	3.5
Persistence Factor:	0.7
Analysis Year:	2006

Roadway Data

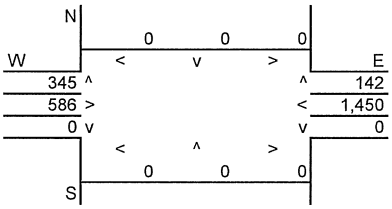
Intersection: SR 134 EB On-Ramp e/o Vineland Avenue & Riverside Drive
Analysis Condition: Existing (2006) Traffic Conditions

		Roadway Type	No. of Lanes	Average Speed A.M.	Average Speed P.M.
North-South Roadway:	SR 134 EB On-Ramp e/o Vir	At Grade	2	5	5
East-West Roadway:	Riverside Drive	At Grade	4	5	5

A.M. Peak Hour Traffic Volumes



P.M. Peak Hour Traffic Volumes



Highest Traffic Volumes (Vehicles per Hour)

N-S Road:	1,053	N-S Road:	487
E-W Road:	2,456	E-W Road:	2,381

Roadway CO Contributions and Concentrations

Emissions = (A x B x C) / 100,000[1]

Roadway	A_1 E.O.R.	A_2 25 Feet	A_3 50 Feet	A_4 100 Feet	B Traffic Volume	C Emission Factors[2]	Estimated CO Concentrations E.O.R.	25 Feet	50 Feet	100 Feet
	Reference CO Concentrations									
A.M. Peak Traffic Hour										
North-South Road	3.7	2.7	2.2	1.7	1,053	10.36	0.40	0.29	0.24	0.19
East-West Road	11.9	7.0	5.4	3.8	2,456	10.36	3.03	1.78	1.37	0.97
P.M. Peak Traffic Hour										
North-South Road	3.7	2.7	2.2	1.7	487	10.36	0.19	0.14	0.11	0.09
East-West Road	11.9	7.0	5.4	3.8	2,381	10.36	2.94	1.73	1.33	0.94

[1] Methodology from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).
[2] Emission factors from EMFAC2007 (2003).

Total Roadway CO Concentrations

Peak Hour Emissions = North-South Concentration + East-West Concentration + Background 1-hour Concentration[2]
8-Hour Emissions = ((Highest Peak Hour Concentration - Background 1-hour Concentration) x Persistence Factor) + Background 8-hour Concentration[2]

	A.M. Peak Hour	P.M. Peak Hour	8-Hour
Roadway Edge	7.4	7.1	5.9
25 Feet from Roadway Edge	6.1	5.9	5.0
50 Feet from Roadway Edge	5.6	5.4	4.6
100 Feet from Roadway Edge	5.2	5.0	4.3

[2] Methodology from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).

SIMPLIFIED CALINE4 CARBON MONOXIDE ANALYSIS

Project Title: Universal Evolution Plan

Background Information

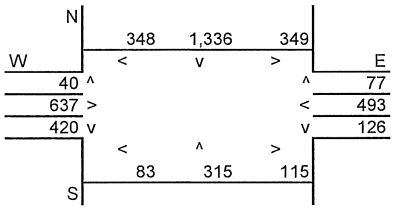
Nearest Air Monitoring Station measuring CO:	Burbank
Background 1-hour CO Concentration (ppm):	4.0
Background 8-hour CO Concentration (ppm):	3.5
Persistence Factor:	0.7
Analysis Year:	2006

Roadway Data

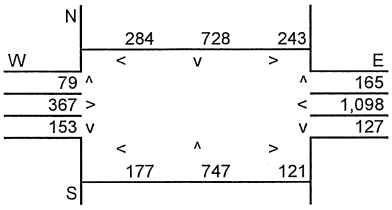
Intersection: Lankershim Boulevard & Riverside Drive
Analysis Condition: Existing (2006) Traffic Conditions

		Roadway Type	No. of Lanes	Average Speed A.M.	Average Speed P.M.
North-South Roadway:	Lankershim Boulevard	At Grade	4	5	5
East-West Roadway:	Riverside Drive	At Grade	4	5	5

A.M. Peak Hour Traffic Volumes



P.M. Peak Hour Traffic Volumes



Highest Traffic Volumes (Vehicles per Hour)

N-S Road:	2,465	N-S Road:	2,246
E-W Road:	2,021	E-W Road:	2,158

Roadway CO Contributions and Concentrations

Emissions = (A x B x C) / 100,000[1]

Roadway	A_1 E.O.R.	A_2 25 Feet	A_3 50 Feet	A_4 100 Feet	B Traffic Volume	C Emission Factors[2]	Estimated CO Concentrations E.O.R.	25 Feet	50 Feet	100 Feet
	Reference CO Concentrations									
A.M. Peak Traffic Hour										
North-South Road	11.9	7.0	5.4	3.8	2,465	10.36	3.04	1.79	1.38	0.97
East-West Road	3.3	2.6	2.2	1.7	2,021	10.36	0.69	0.54	0.46	0.36
P.M. Peak Traffic Hour										
North-South Road	11.9	7.0	5.4	3.8	2,246	10.36	2.77	1.63	1.26	0.88
East-West Road	3.3	2.6	2.2	1.7	2,158	10.36	0.74	0.58	0.49	0.38

[1] Methodology from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).
[2] Emission factors from EMFAC2007 (2003).

Total Roadway CO Concentrations

Peak Hour Emissions = North-South Concentration + East-West Concentration + Background 1-hour Concentration[2]
8-Hour Emissions = ((Highest Peak Hour Concentration - Background 1-hour Concentration) x Persistence Factor) + Background 8-hour Concentration[2]

	A.M. Peak Hour	P.M. Peak Hour	8-Hour
Roadway Edge	7.7	7.5	6.1
25 Feet from Roadway Edge	6.3	6.2	5.1
50 Feet from Roadway Edge	5.8	5.7	4.8
100 Feet from Roadway Edge	5.3	5.3	4.4

[2] Methodology from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).

SIMPLIFIED CALINE4 CARBON MONOXIDE ANALYSIS

Project Title: Universal Evolution Plan

Background Information

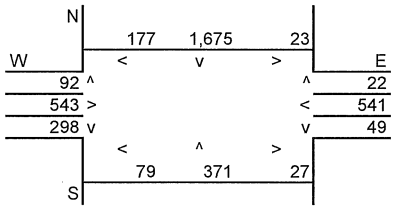
Nearest Air Monitoring Station measuring CO:	Burbank
Background 1-hour CO Concentration (ppm):	4.0
Background 8-hour CO Concentration (ppm):	3.5
Persistence Factor:	0.7
Analysis Year:	2006

Roadway Data

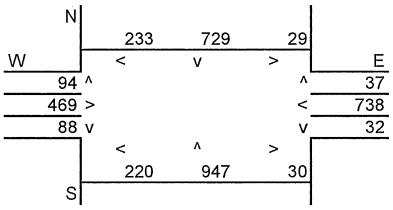
Intersection: Lankershim Boulevard & Moorpark Street
Analysis Condition: Existing (2006) Traffic Conditions

		Roadway Type	No. of Lanes	Average Speed A.M.	Average Speed P.M.
North-South Roadway:	Lankershim Boulevard	At Grade	4	5	5
East-West Roadway:	Moorpark Street	At Grade	2	5	5

A.M. Peak Hour Traffic Volumes



P.M. Peak Hour Traffic Volumes



Highest Traffic Volumes (Vehicles per Hour)

N-S Road:	2,499	N-S Road:	2,069
E-W Road:	1,730	E-W Road:	1,842

Roadway CO Contributions and Concentrations

Emissions = (A x B x C) / 100,000[1]

Roadway	A_1 Reference CO Concentrations E.O.R.	A_2 25 Feet	A_3 50 Feet	A_4 100 Feet	B Traffic Volume	C Emission Factors[2]	Estimated CO Concentrations E.O.R.	25 Feet	50 Feet	100 Feet
A.M. Peak Traffic Hour										
North-South Road	11.9	7.0	5.4	3.8	2,499	10.36	3.08	1.81	1.40	0.98
East-West Road	3.7	2.7	2.2	1.7	1,730	10.36	0.66	0.48	0.39	0.30
P.M. Peak Traffic Hour										
North-South Road	11.9	7.0	5.4	3.8	2,069	10.36	2.55	1.50	1.16	0.81
East-West Road	3.7	2.7	2.2	1.7	1,842	10.36	0.71	0.52	0.42	0.32

[1] Methodology from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).
[2] Emission factors from EMFAC2007 (2003).

Total Roadway CO Concentrations

Peak Hour Emissions = North-South Concentration + East-West Concentration + Background 1-hour Concentration[2]
8-Hour Emissions = ((Highest Peak Hour Concentration - Background 1-hour Concentration) x Persistence Factor) + Background 8-hour Concentration[2]

	A.M. Peak Hour	P.M. Peak Hour	8-Hour
Roadway Edge	7.7	7.3	6.1
25 Feet from Roadway Edge	6.3	6.0	5.1
50 Feet from Roadway Edge	5.8	5.6	4.8
100 Feet from Roadway Edge	5.3	5.1	4.4

[2] Methodology from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).

SIMPLIFIED CALINE4 CARBON MONOXIDE ANALYSIS

Project Title: Universal Evolution Plan

Background Information

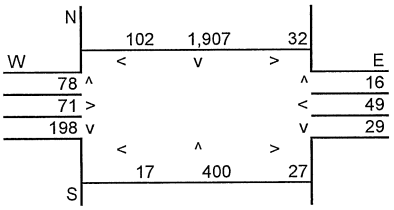
Nearest Air Monitoring Station measuring CO:	Burbank
Background 1-hour CO Concentration (ppm):	4.0
Background 8-hour CO Concentration (ppm):	3.5
Persistence Factor:	0.7
Analysis Year:	2006

Roadway Data

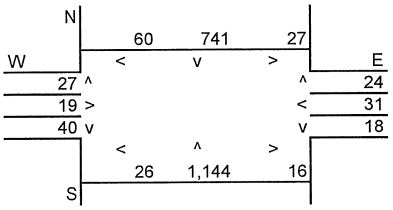
Intersection: Lankershim Boulevard & Whipple Street
Analysis Condition: Existing (2006) Traffic Conditions

		Roadway Type	No. of Lanes	Average Speed A.M.	Average Speed P.M.
North-South Roadway:	Lankershim Boulevard	At Grade	4	5	5
East-West Roadway:	Whipple Street	At Grade	2	5	5

A.M. Peak Hour Traffic Volumes



P.M. Peak Hour Traffic Volumes



Highest Traffic Volumes (Vehicles per Hour)

N-S Road:	2,578	N-S Road:	2,023
E-W Road:	515	E-W Road:	203

Roadway CO Contributions and Concentrations

Emissions = (A x B x C) / 100,000[1]

Roadway	A_1 E.O.R.	A_2 25 Feet	A_3 50 Feet	A_4 100 Feet	B Traffic Volume	C Emission Factors[2]	Estimated CO Concentrations E.O.R.	25 Feet	50 Feet	100 Feet
	Reference CO Concentrations									
A.M. Peak Traffic Hour										
North-South Road	11.9	7.0	5.4	3.8	2,578	10.36	3.18	1.87	1.44	1.02
East-West Road	3.7	2.7	2.2	1.7	515	10.36	0.20	0.14	0.12	0.09
P.M. Peak Traffic Hour										
North-South Road	11.9	7.0	5.4	3.8	2,023	10.36	2.49	1.47	1.13	0.80
East-West Road	3.7	2.7	2.2	1.7	203	10.36	0.08	0.06	0.05	0.04

[1] Methodology from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).
[2] Emission factors from EMFAC2007 (2003).

Total Roadway CO Concentrations

Peak Hour Emissions = North-South Concentration + East-West Concentration + Background 1-hour Concentration[2]
8-Hour Emissions = ((Highest Peak Hour Concentration - Background 1-hour Concentration) x Persistence Factor) + Background 8-hour Concentration[2]

	A.M. Peak Hour	P.M. Peak Hour	8-Hour
Roadway Edge	7.4	6.6	5.9
25 Feet from Roadway Edge	6.0	5.5	4.9
50 Feet from Roadway Edge	5.6	5.2	4.6
100 Feet from Roadway Edge	5.1	4.8	4.3

[2] Methodology from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).

SIMPLIFIED CALINE4 CARBON MONOXIDE ANALYSIS

Project Title: Universal Vision Plan

Background Information

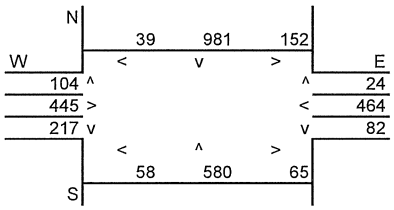
Nearest Air Monitoring Station measuring CO:	Burbank
Background 1-hour CO Concentration (ppm):	4.0
Background 8-hour CO Concentration (ppm):	3.5
Persistence Factor:	0.7
Analysis Year:	2006

Roadway Data

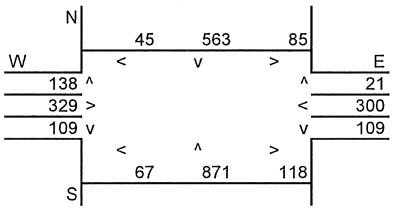
Intersection:	Cahuenga Boulevard & Camarillo Street
Analysis Condition:	Existing (2006) Plus Project Traffic Conditions

		Roadway Type	No. of Lanes	Average Speed A.M.	Average Speed P.M.
North-South Roadway:	Cahuenga Boulevard	At Grade	2	5	5
East-West Roadway:	Camarillo Street	At Grade	2	5	5

A.M. Peak Hour Traffic Volumes



P.M. Peak Hour Traffic Volumes



Highest Traffic Volumes (Vehicles per Hour)

N-S Road:	1,983	N-S Road:	1,837
E-W Road:	1,327	E-W Road:	988

Roadway CO Contributions and Concentrations

Emissions = (A x B x C) / 100,000[1]

Roadway	A_1 E.O.R.	A_2 25 Feet	A_3 50 Feet	A_4 100 Feet	B Traffic Volume	C Emission Factors[2]	Estimated CO Concentrations E.O.R.	25 Feet	50 Feet	100 Feet
	Reference CO Concentrations									
A.M. Peak Traffic Hour										
North-South Road	14.0	7.6	5.7	4.0	1,983	10.36	2.88	1.56	1.17	0.82
East-West Road	3.7	2.7	2.2	1.7	1,327	10.36	0.51	0.37	0.30	0.23
P.M. Peak Traffic Hour										
North-South Road	14.0	7.6	5.7	4.0	1,837	10.36	2.67	1.45	1.09	0.76
East-West Road	3.7	2.7	2.2	1.7	988	10.36	0.38	0.28	0.23	0.17

[1] Methodology from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).
[2] Emission factors from EMFAC2002 (2003).

Total Roadway CO Concentrations

Peak Hour Emissions = North-South Concentration + East-West Concentration + Background 1-hour Concentration[2]
8-Hour Emissions = ((Highest Peak Hour Concentration - Background 1-hour Concentration) x Persistence Factor) + Background 8-hour Concentration[2]

	A.M. Peak Hour	P.M. Peak Hour	8-Hour
Roadway Edge	7.4	7.0	5.9
25 Feet from Roadway Edge	5.9	5.7	4.9
50 Feet from Roadway Edge	5.5	5.3	4.5
100 Feet from Roadway Edge	5.1	4.9	4.2

[2] Methodology from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).

SIMPLIFIED CALINE4 CARBON MONOXIDE ANALYSIS

Project Title: Universal Evolution Plan

Background Information

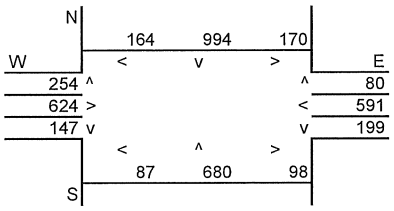
Nearest Air Monitoring Station measuring CO:	Burbank
Background 1-hour CO Concentration (ppm):	4.0
Background 8-hour CO Concentration (ppm):	3.5
Persistence Factor:	0.7
Analysis Year:	2006

Roadway Data

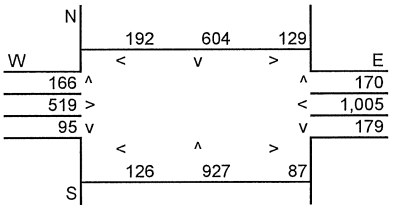
Intersection: Cahuenga Boulevard & Riverside Drive
Analysis Condition: Existing (2006) Plus Project Traffic Conditions

		Roadway Type	No. of Lanes	Average Speed A.M.	Average Speed P.M.
North-South Roadway:	Cahuenga Boulevard	At Grade	4	5	5
East-West Roadway:	Riverside Drive	At Grade	4	5	5

A.M. Peak Hour Traffic Volumes



P.M. Peak Hour Traffic Volumes



Highest Traffic Volumes (Vehicles per Hour)

N-S Road:	2,342	N-S Road:	2,188
E-W Road:	1,867	E-W Road:	2,103

Roadway CO Contributions and Concentrations

Emissions = (A x B x C) / 100,000[1]

Roadway	A_1 E.O.R.	A_2 25 Feet	A_3 50 Feet	A_4 100 Feet	B Traffic Volume	C Emission Factors[2]	Estimated CO Concentrations E.O.R.	25 Feet	50 Feet	100 Feet
	Reference CO Concentrations									
A.M. Peak Traffic Hour										
North-South Road	11.9	7.0	5.4	3.8	2,342	10.36	2.89	1.70	1.31	0.92
East-West Road	3.3	2.6	2.2	1.7	1,867	10.36	0.64	0.50	0.43	0.33
P.M. Peak Traffic Hour										
North-South Road	11.9	7.0	5.4	3.8	2,188	10.36	2.70	1.59	1.22	0.86
East-West Road	3.3	2.6	2.2	1.7	2,103	10.36	0.72	0.57	0.48	0.37

[1] Methodology from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).
[2] Emission factors from EMFAC2007 (2003).

Total Roadway CO Concentrations

Peak Hour Emissions = North-South Concentration + East-West Concentration + Background 1-hour Concentration[2]
8-Hour Emissions = ((Highest Peak Hour Concentration - Background 1-hour Concentration) x Persistence Factor) + Background 8-hour Concentration[2]

	A.M. Peak Hour	P.M. Peak Hour	8-Hour
Roadway Edge	7.5	7.4	6.0
25 Feet from Roadway Edge	6.2	6.2	5.0
50 Feet from Roadway Edge	5.7	5.7	4.7
100 Feet from Roadway Edge	5.3	5.2	4.4

[2] Methodology from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).

SIMPLIFIED CALINE4 CARBON MONOXIDE ANALYSIS

Project Title: Universal Evolution Plan

Background Information

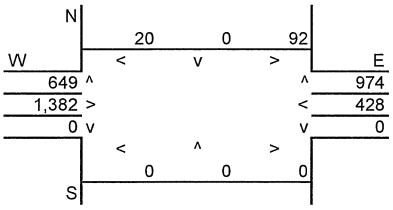
Nearest Air Monitoring Station measuring CO:	Burbank
Background 1-hour CO Concentration (ppm):	4.0
Background 8-hour CO Concentration (ppm):	3.5
Persistence Factor:	0.7
Analysis Year:	2006

Roadway Data

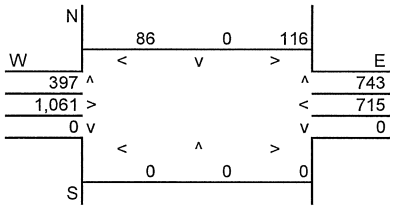
Intersection: US 101 SB Ramps w/o Barham Blvd./Cahuenga Blvd. & Cahuenga Blvd.
Analysis Condition: Existing (2006) Plus Project Traffic Conditions

		Roadway Type	No. of Lanes	Average Speed A.M.	Average Speed P.M.
North-South Roadway:	US 101 SB Ramps w/o Barh	At Grade	2	5	5
East-West Roadway:	Cahuenga Boulevard	At Grade	4	5	5

A.M. Peak Hour Traffic Volumes



P.M. Peak Hour Traffic Volumes



Highest Traffic Volumes (Vehicles per Hour)

N-S Road:	1,735	N-S Road:	1,342
E-W Road:	2,876	E-W Road:	2,635

Roadway CO Contributions and Concentrations

Emissions = (A x B x C) / 100,000[1]

Roadway	A_1 E.O.R.	A_2 25 Feet	A_3 50 Feet	A_4 100 Feet	B Traffic Volume	C Emission Factors[2]	Estimated CO Concentrations E.O.R.	25 Feet	50 Feet	100 Feet
	Reference CO Concentrations									
A.M. Peak Traffic Hour										
North-South Road	3.7	2.7	2.2	1.7	1,735	10.36	0.67	0.49	0.40	0.31
East-West Road	11.9	7.0	5.4	3.8	2,876	10.36	3.55	2.09	1.61	1.13
P.M. Peak Traffic Hour										
North-South Road	3.7	2.7	2.2	1.7	1,342	10.36	0.51	0.38	0.31	0.24
East-West Road	11.9	7.0	5.4	3.8	2,635	10.36	3.25	1.91	1.47	1.04

[1] Methodology from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).
[2] Emission factors from EMFAC2007 (2003).

Total Roadway CO Concentrations

Peak Hour Emissions = North-South Concentration + East-West Concentration + Background 1-hour Concentration[2]
8-Hour Emissions = ((Highest Peak Hour Concentration - Background 1-hour Concentration) x Persistence Factor) + Background 8-hour Concentration[2]

	A.M. Peak Hour	P.M. Peak Hour	8-Hour
Roadway Edge	8.2	7.8	6.4
25 Feet from Roadway Edge	6.6	6.3	5.3
50 Feet from Roadway Edge	6.0	5.8	4.9
100 Feet from Roadway Edge	5.4	5.3	4.5

[2] Methodology from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).

SIMPLIFIED CALINE4 CARBON MONOXIDE ANALYSIS

Project Title: Universal Evolution Plan

Background Information

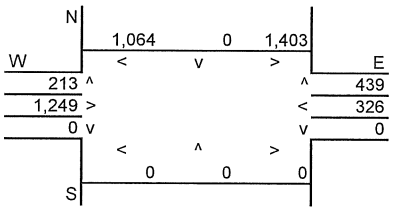
Nearest Air Monitoring Station measuring CO:	Burbank
Background 1-hour CO Concentration (ppm):	4.0
Background 8-hour CO Concentration (ppm):	3.5
Persistence Factor:	0.7
Analysis Year:	2006

Roadway Data

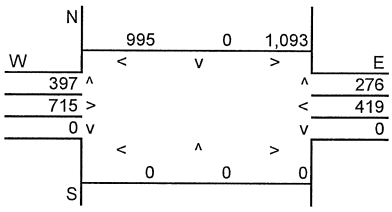
Intersection: Barham Boulevard & Cahuenga Boulevard
Analysis Condition: Existing (2006) Plus Project Traffic Conditions

		Roadway Type	No. of Lanes	Average Speed A.M.	Average Speed P.M.
North-South Roadway:	Barham Boulevard	At Grade	2	5	5
East-West Roadway:	Cahuenga Boulevard	At Grade	2	5	5

A.M. Peak Hour Traffic Volumes



P.M. Peak Hour Traffic Volumes



Highest Traffic Volumes (Vehicles per Hour)

N-S Road:	3,119	N-S Road:	2,761
E-W Road:	3,417	E-W Road:	2,526

Roadway CO Contributions and Concentrations

Emissions = (A x B x C) / 100,000[1]

Roadway	A_1 E.O.R.	A_2 25 Feet	A_3 50 Feet	A_4 100 Feet	B Traffic Volume	C Emission Factors[2]	Estimated CO Concentrations E.O.R.	25 Feet	50 Feet	100 Feet
	Reference CO Concentrations									
A.M. Peak Traffic Hour										
North-South Road	3.7	2.7	2.2	1.7	3,119	10.36	1.20	0.87	0.71	0.55
East-West Road	14.0	7.6	5.7	4.0	3,417	10.36	4.96	2.69	2.02	1.42
P.M. Peak Traffic Hour										
North-South Road	14.0	7.6	5.7	4.0	2,761	10.36	4.01	2.17	1.63	1.14
East-West Road	3.7	2.7	2.2	1.7	2,526	10.36	0.97	0.71	0.58	0.45

[1] Methodology from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).
[2] Emission factors from EMFAC2007 (2003).

Total Roadway CO Concentrations

Peak Hour Emissions = North-South Concentration + East-West Concentration + Background 1-hour Concentration[2]
8-Hour Emissions = ((Highest Peak Hour Concentration - Background 1-hour Concentration) x Persistence Factor) + Background 8-hour Concentration[2]

	A.M. Peak Hour	P.M. Peak Hour	8-Hour
Roadway Edge	10.2	9.0	7.8
25 Feet from Roadway Edge	7.6	6.9	6.0
50 Feet from Roadway Edge	6.7	6.2	5.4
100 Feet from Roadway Edge	6.0	5.6	4.9

[2] Methodology from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).

SIMPLIFIED CALINE4 CARBON MONOXIDE ANALYSIS

Project Title: Universal Evolution Plan

Background Information

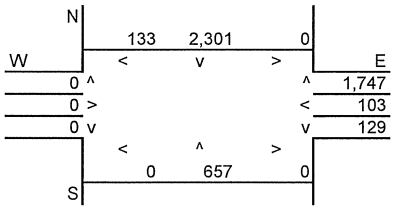
Nearest Air Monitoring Station measuring CO:	Burbank
Background 1-hour CO Concentration (ppm):	4.0
Background 8-hour CO Concentration (ppm):	3.5
Persistence Factor:	0.7
Analysis Year:	2006

Roadway Data

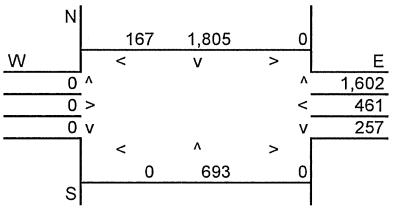
Intersection: Barham Boulevard & Buddy Holly Drive/Cahuenga Boulevard
Analysis Condition: Existing (2006) Plus Project Traffic Conditions

		Roadway Type	No. of Lanes	Average Speed A.M.	Average Speed P.M.
North-South Roadway:	Barham Boulevard	At Grade	4	5	5
East-West Roadway:	Buddy Holly Drive/Cahuenga	At Grade	2	5	5

A.M. Peak Hour Traffic Volumes



P.M. Peak Hour Traffic Volumes



Highest Traffic Volumes (Vehicles per Hour)

N-S Road:	4,838	N-S Road:	4,267
E-W Road:	1,979	E-W Road:	2,320

Roadway CO Contributions and Concentrations

Emissions = (A x B x C) / 100,000[1]

Roadway	A_1 E.O.R.	A_2 25 Feet	A_3 50 Feet	A_4 100 Feet	B Traffic Volume	C Emission Factors[2]	Estimated CO Concentrations E.O.R.	25 Feet	50 Feet	100 Feet
	Reference CO Concentrations									
A.M. Peak Traffic Hour										
North-South Road	11.9	7.0	5.4	3.8	4,838	10.36	5.97	3.51	2.71	1.91
East-West Road	3.7	2.7	2.2	1.7	1,979	10.36	0.76	0.55	0.45	0.35
P.M. Peak Traffic Hour										
North-South Road	11.9	7.0	5.4	3.8	4,267	10.36	5.26	3.10	2.39	1.68
East-West Road	3.7	2.7	2.2	1.7	2,320	10.36	0.89	0.65	0.53	0.41

[1] Methodology from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).
[2] Emission factors from EMFAC2007 (2003).

Total Roadway CO Concentrations

Peak Hour Emissions = North-South Concentration + East-West Concentration + Background 1-hour Concentration[2]
8-Hour Emissions = ((Highest Peak Hour Concentration - Background 1-hour Concentration) x Persistence Factor) + Background 8-hour Concentration[2]

	A.M. Peak Hour	P.M. Peak Hour	8-Hour
Roadway Edge	10.7	10.2	8.2
25 Feet from Roadway Edge	8.1	7.7	6.3
50 Feet from Roadway Edge	7.2	6.9	5.7
100 Feet from Roadway Edge	6.3	6.1	5.1

[2] Methodology from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).

SIMPLIFIED CALINE4 CARBON MONOXIDE ANALYSIS

Project Title: Universal Evolution Plan

Background Information

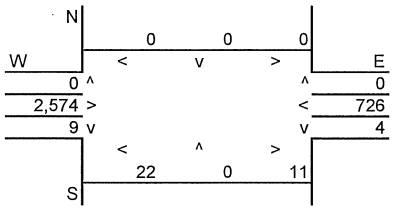
Nearest Air Monitoring Station measuring CO:	Burbank
Background 1-hour CO Concentration (ppm):	4.0
Background 8-hour CO Concentration (ppm):	3.5
Persistence Factor:	0.7
Analysis Year:	2006

Roadway Data

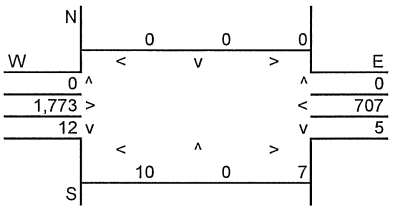
Intersection:	Oakcrest Drive & Cahuenga Boulevard
Analysis Condition:	Existing (2006) Plus Traffic Conditions

		Roadway Type	No. of Lanes	Average Speed A.M.	Average Speed P.M.
North-South Roadway:	Oakcrest drive	At Grade	2	5	5
East-West Roadway:	Cahuenga Boulevard	At Grade	2	5	5

A.M. Peak Hour Traffic Volumes



P.M. Peak Hour Traffic Volumes



Highest Traffic Volumes (Vehicles per Hour)

N-S Road:	46	N-S Road:	34
E-W Road:	3,331	E-W Road:	2,502

Roadway CO Contributions and Concentrations

Emissions = (A x B x C) / 100,000[1]

Roadway	A_1 Reference CO Concentrations E.O.R.	A_2 25 Feet	A_3 50 Feet	A_4 100 Feet	B Traffic Volume	C Emission Factors[2]	Estimated CO Concentrations E.O.R.	25 Feet	50 Feet	100 Feet
A.M. Peak Traffic Hour										
North-South Road	3.7	2.7	2.2	1.7	46	10.36	0.02	0.01	0.01	0.01
East-West Road	14.0	7.6	5.7	4.0	3,331	10.36	4.83	2.62	1.97	1.38
P.M. Peak Traffic Hour										
North-South Road	3.7	2.7	2.2	1.7	34	10.36	0.01	0.01	0.01	0.01
East-West Road	14.0	7.6	5.7	4.0	2,502	10.36	3.63	1.97	1.48	1.04

[1] Methodology from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).
[2] Emission factors from EMFAC2007 (2003).

Total Roadway CO Concentrations

Peak Hour Emissions = North-South Concentration + East-West Concentration + Background 1-hour Concentration[2]
8-Hour Emissions = ((Highest Peak Hour Concentration - Background 1-hour Concentration) x Persistence Factor) + Background 8-hour Concentration[2]

	A.M. Peak Hour	P.M. Peak Hour	8-Hour
Roadway Edge	8.9	7.6	6.9
25 Feet from Roadway Edge	6.6	6.0	5.3
50 Feet from Roadway Edge	6.0	5.5	4.9
100 Feet from Roadway Edge	5.4	5.0	4.5

[2] Methodology from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).

SIMPLIFIED CALINE4 CARBON MONOXIDE ANALYSIS

Project Title: Universal Evolution Plan

Background Information

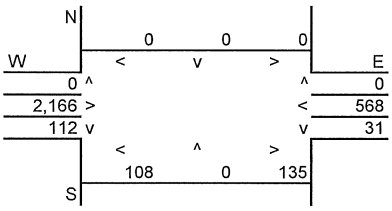
Nearest Air Monitoring Station measuring CO:	Burnabk
Background 1-hour CO Concentration (ppm):	4.0
Background 8-hour CO Concentration (ppm):	3.5
Persistence Factor:	0.7
Analysis Year:	2006

Roadway Data

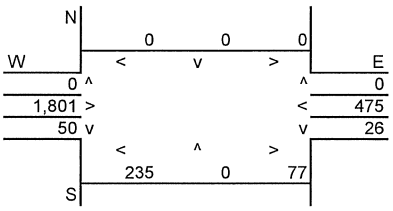
Intersection:	Mulholland Drive & Cahuenga Boulevard
Analysis Condition:	Existing (2006) Plus Project Traffic Conditions

		Roadway Type	No. of Lanes	Average Speed A.M.	Average Speed P.M.
North-South Roadway:	Mulholland Drive	At Grade	2	5	5
East-West Roadway:	Cahuenga Boulevard	At Grade	2	5	5

A.M. Peak Hour Traffic Volumes



P.M. Peak Hour Traffic Volumes



Highest Traffic Volumes (Vehicles per Hour)

N-S Road:	386	N-S Road:	388
E-W Road:	2,954	E-W Road:	2,561

Roadway CO Contributions and Concentrations

Emissions = (A x B x C) / 100,000[1]

Roadway	A_1 E.O.R.	A_2 25 Feet	A_3 50 Feet	A_4 100 Feet	B Traffic Volume	C Emission Factors[2]	Estimated CO Concentrations E.O.R.	25 Feet	50 Feet	100 Feet
	Reference CO Concentrations									
A.M. Peak Traffic Hour										
North-South Road	3.7	2.7	2.2	1.7	386	10.36	0.15	0.11	0.09	0.07
East-West Road	14.0	7.6	5.7	4.0	2,954	10.36	4.29	2.33	1.75	1.22
P.M. Peak Traffic Hour										
North-South Road	3.7	2.7	2.2	1.7	388	10.36	0.15	0.11	0.09	0.07
East-West Road	14.0	7.6	5.7	4.0	2,561	10.36	3.72	2.02	1.51	1.06

[1] Methodology from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).
[2] Emission factors from EMFAC2007 (2003).

Total Roadway CO Concentrations

Peak Hour Emissions = North-South Concentration + East-West Concentration + Background 1-hour Concentration[2]
8-Hour Emissions = ((Highest Peak Hour Concentration - Background 1-hour Concentration) x Persistence Factor) + Background 8-hour Concentration[2]

	A.M. Peak Hour	P.M. Peak Hour	8-Hour
Roadway Edge	8.4	7.9	6.6
25 Feet from Roadway Edge	6.4	6.1	5.2
50 Feet from Roadway Edge	5.8	5.6	4.8
100 Feet from Roadway Edge	5.3	5.1	4.4

[2] Methodology from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).

SIMPLIFIED CALINE4 CARBON MONOXIDE ANALYSIS

Project Title: Universal Vision Plan

Background Information

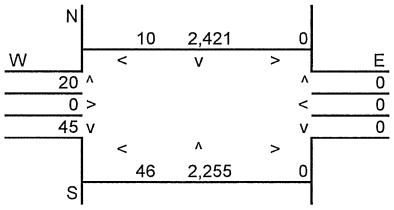
Nearest Air Monitoring Station measuring CO:	Burbank
Background 1-hour CO Concentration (ppm):	4.0
Background 8-hour CO Concentration (ppm):	3.5
Persistence Factor:	0.7
Analysis Year:	2006

Roadway Data

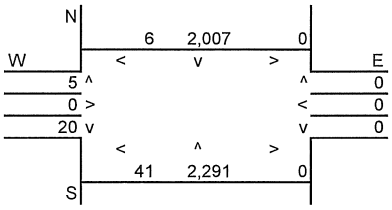
Intersection: Barham Boulevard & De Witt Drive
Analysis Condition: Existing (2006) Plus Project Traffic Conditions

		Roadway Type	No. of Lanes	Average Speed A.M.	Average Speed P.M.
North-South Roadway:	Barham Boulevard	At Grade	4	5	5
East-West Roadway:	De Witt Drive	At Grade	2	5	5

A.M. Peak Hour Traffic Volumes



P.M. Peak Hour Traffic Volumes



Highest Traffic Volumes (Vehicles per Hour)

N-S Road:	4,767	N-S Road:	4,359
E-W Road:	121	E-W Road:	72

Roadway CO Contributions and Concentrations

Emissions = (A x B x C) / 100,000[1]

Roadway	A_1 E.O.R.	A_2 25 Feet	A_3 50 Feet	A_4 100 Feet	B Traffic Volume	C Emission Factors[2]	Estimated CO Concentrations E.O.R.	25 Feet	50 Feet	100 Feet
	Reference CO Concentrations									
A.M. Peak Traffic Hour										
North-South Road	11.9	7.0	5.4	3.8	4,767	10.36	5.88	3.46	2.67	1.88
East-West Road	3.7	2.7	2.2	1.7	121	10.36	0.05	0.03	0.03	0.02
P.M. Peak Traffic Hour										
North-South Road	11.9	7.0	5.4	3.8	4,359	10.36	5.38	3.16	2.44	1.72
East-West Road	3.7	2.7	2.2	1.7	72	10.36	0.03	0.02	0.02	0.01

[1] Methodology from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).
[2] Emission factors from EMFAC2002 (2003).

Total Roadway CO Concentrations

Peak Hour Emissions = North-South Concentration + East-West Concentration + Background 1-hour Concentration[2]
8-Hour Emissions = ((Highest Peak Hour Concentration - Background 1-hour Concentration) x Persistence Factor) + Background 8-hour Concentration[2]

	A.M. Peak Hour	P.M. Peak Hour	8-Hour
Roadway Edge	9.9	9.4	7.6
25 Feet from Roadway Edge	7.5	7.2	5.9
50 Feet from Roadway Edge	6.7	6.5	5.4
100 Feet from Roadway Edge	5.9	5.7	4.8

[2] Methodology from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).

SIMPLIFIED CALINE4 CARBON MONOXIDE ANALYSIS

Project Title: Universal Evolution Plan

Background Information

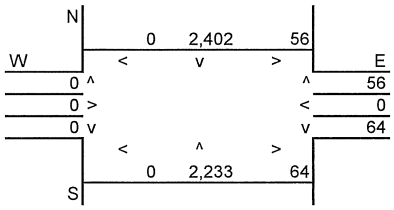
Nearest Air Monitoring Station measuring CO:	Burbank
Background 1-hour CO Concentration (ppm):	4.0
Background 8-hour CO Concentration (ppm):	3.5
Persistence Factor:	0.7
Analysis Year:	2006

Roadway Data

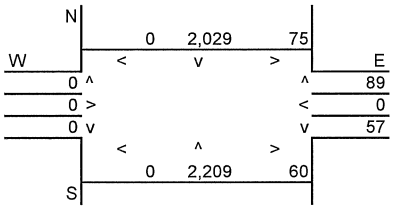
Intersection: Barham Boulevard & Lake Hollywood Drive
Analysis Condition: Existing (2006) Plus Project Traffic Conditions

		Roadway Type	No. of Lanes	Average Speed A.M.	Average Speed P.M.
North-South Roadway:	Barham Boulevard	At Grade	4	5	5
East-West Roadway:	Lake Hollywood Drive	At Grade	2	5	5

A.M. Peak Hour Traffic Volumes



P.M. Peak Hour Traffic Volumes



Highest Traffic Volumes (Vehicles per Hour)

N-S Road:	4,763	N-S Road:	4,402
E-W Road:	240	E-W Road:	281

Roadway CO Contributions and Concentrations

Emissions = (A x B x C) / 100,000[1]

Roadway	A_1 E.O.R.	A_2 25 Feet	A_3 50 Feet	A_4 100 Feet	B Traffic Volume	C Emission Factors[2]	Estimated CO Concentrations E.O.R.	25 Feet	50 Feet	100 Feet
	Reference CO Concentrations									
A.M. Peak Traffic Hour										
North-South Road	11.9	7.0	5.4	3.8	4,763	10.36	5.87	3.46	2.67	1.88
East-West Road	3.7	2.7	2.2	1.7	240	10.36	0.09	0.07	0.05	0.04
P.M. Peak Traffic Hour										
North-South Road	11.9	7.0	5.4	3.8	4,402	10.36	5.43	3.19	2.46	1.73
East-West Road	3.7	2.7	2.2	1.7	281	10.36	0.11	0.08	0.06	0.05

[1] Methodology from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).
[2] Emission factors from EMFAC2007 (2003).

Total Roadway CO Concentrations

Peak Hour Emissions = North-South Concentration + East-West Concentration + Background 1-hour Concentration[2]
8-Hour Emissions = ((Highest Peak Hour Concentration - Background 1-hour Concentration) x Persistence Factor) + Background 8-hour Concentration[2]

	A.M. Peak Hour	P.M. Peak Hour	8-Hour
Roadway Edge	10.0	9.5	7.7
25 Feet from Roadway Edge	7.5	7.3	6.0
50 Feet from Roadway Edge	6.7	6.5	5.4
100 Feet from Roadway Edge	5.9	5.8	4.8

[2] Methodology from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).

SIMPLIFIED CALINE4 CARBON MONOXIDE ANALYSIS

Project Title: Universal Evolution Plan

Background Information

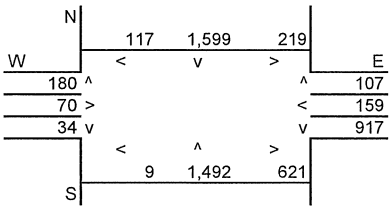
Nearest Air Monitoring Station measuring CO:	Burbank
Background 1-hour CO Concentration (ppm):	4.0
Background 8-hour CO Concentration (ppm):	3.5
Persistence Factor:	0.7
Analysis Year:	2006

Roadway Data

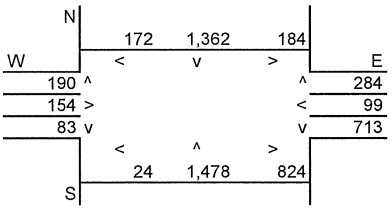
Intersection: Barham Boulevard & Lakeside Plaza Drive/Forest Lawn Drive
Analysis Condition: Existing (2006) Plus Project Traffic Conditions

		Roadway Type	No. of Lanes	Average Speed A.M.	Average Speed P.M.
North-South Roadway:	Barham Boulevard	At Grade	4	5	5
East-West Roadway:	Lakeside Plaza Drive/Forest	At Grade	4	5	5

A.M. Peak Hour Traffic Volumes



P.M. Peak Hour Traffic Volumes



Highest Traffic Volumes (Vehicles per Hour)

N-S Road:	4,672	N-S Road:	4,484
E-W Road:	2,093	E-W Road:	2,258

Roadway CO Contributions and Concentrations

Emissions = (A x B x C) / 100,000[1]

Roadway	A_1 Reference CO Concentrations E.O.R.	A_2 25 Feet	A_3 50 Feet	A_4 100 Feet	B Traffic Volume	C Emission Factors[2]	Estimated CO Concentrations E.O.R.	25 Feet	50 Feet	100 Feet
A.M. Peak Traffic Hour										
North-South Road	11.9	7.0	5.4	3.8	4,672	10.36	5.76	3.39	2.61	1.84
East-West Road	3.3	2.6	2.2	1.7	2,093	10.36	0.72	0.56	0.48	0.37
P.M. Peak Traffic Hour										
North-South Road	11.9	7.0	5.4	3.8	4,484	10.36	5.53	3.25	2.51	1.77
East-West Road	3.3	2.6	2.2	1.7	2,258	10.36	0.77	0.61	0.51	0.40

[1] Methodology from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).
[2] Emission factors from EMFAC2007 (2003).

Total Roadway CO Concentrations

Peak Hour Emissions = North-South Concentration + East-West Concentration + Background 1-hour Concentration[2]
8-Hour Emissions = ((Highest Peak Hour Concentration - Background 1-hour Concentration) x Persistence Factor) + Background 8-hour Concentration[2]

	A.M. Peak Hour	P.M. Peak Hour	8-Hour
Roadway Edge	10.5	10.3	8.0
25 Feet from Roadway Edge	8.0	7.9	6.3
50 Feet from Roadway Edge	7.1	7.0	5.7
100 Feet from Roadway Edge	6.2	6.2	5.0

[2] Methodology from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).

SIMPLIFIED CALINE4 CARBON MONOXIDE ANALYSIS

Project Title: Universal Evolution Plan

Background Information

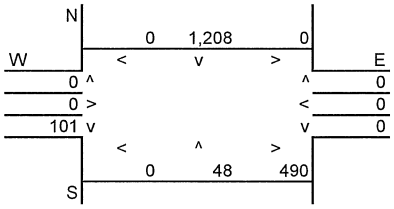
Nearest Air Monitoring Station measuring CO:	Burbank
Background 1-hour CO Concentration (ppm):	4.0
Background 8-hour CO Concentration (ppm):	3.5
Persistence Factor:	0.7
Analysis Year:	2006

Roadway Data

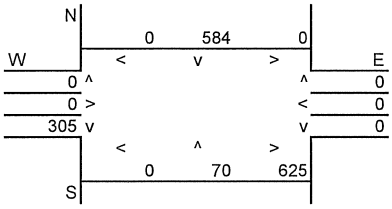
Intersection: Forest Lawn Drive & SR 134 EB Ramps
Analysis Condition: Existing (2006) Traffic Conditions

		Roadway Type	No. of Lanes	Average Speed A.M.	Average Speed P.M.
North-South Roadway:	Forest Lawn Drive	At Grade	2	5	5
East-West Roadway:	SR 134 EB Ramps	At Grade	2	5	5

A.M. Peak Hour Traffic Volumes



P.M. Peak Hour Traffic Volumes



Highest Traffic Volumes (Vehicles per Hour)

N-S Road:	1,847	N-S Road:	1,584
E-W Road:	490	E-W Road:	625

Roadway CO Contributions and Concentrations

Emissions = (A x B x C) / 100,000[1]

Roadway	A_1 E.O.R.	A_2 25 Feet	A_3 50 Feet	A_4 100 Feet	B Traffic Volume	C Emission Factors[2]	Estimated CO Concentrations E.O.R.	25 Feet	50 Feet	100 Feet
	Reference CO Concentrations									
A.M. Peak Traffic Hour										
North-South Road	14.0	7.6	5.7	4.0	1,847	10.36	2.68	1.45	1.09	0.77
East-West Road	3.7	2.7	2.2	1.7	490	10.36	0.19	0.14	0.11	0.09
P.M. Peak Traffic Hour										
North-South Road	14.0	7.6	5.7	4.0	1,584	10.36	2.30	1.25	0.94	0.66
East-West Road	3.7	2.7	2.2	1.7	625	10.36	0.24	0.17	0.14	0.11

[1] Methodology from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).
[2] Emission factors from EMFAC2007 (2003).

Total Roadway CO Concentrations

Peak Hour Emissions = North-South Concentration + East-West Concentration + Background 1-hour Concentration[2]
8-Hour Emissions = ((Highest Peak Hour Concentration - Background 1-hour Concentration) x Persistence Factor) + Background 8-hour Concentration[2]

	A.M. Peak Hour	P.M. Peak Hour	8-Hour
Roadway Edge	6.9	6.5	5.5
25 Feet from Roadway Edge	5.6	5.4	4.6
50 Feet from Roadway Edge	5.2	5.1	4.3
100 Feet from Roadway Edge	4.9	4.8	4.1

[2] Methodology from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).

SIMPLIFIED CALINE4 CARBON MONOXIDE ANALYSIS

Project Title: Universal Evolution Plan

Background Information

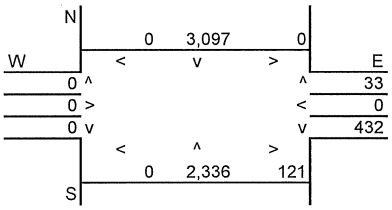
Nearest Air Monitoring Station measuring CO:	Burbank
Background 1-hour CO Concentration (ppm):	4.0
Background 8-hour CO Concentration (ppm):	3.5
Persistence Factor:	0.7
Analysis Year:	2006

Roadway Data

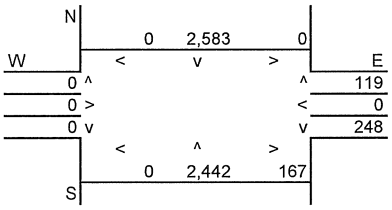
Intersection: Highland Avenue & Franklin Avenue
Analysis Condition: Existing (2006) Plus Project Traffic Conditions

		Roadway Type	No. of Lanes	Average Speed A.M.	Average Speed P.M.
North-South Roadway:	Highland Avenue	At Grade	6	5	5
East-West Roadway:	Franklin Avenue	At Grade	2	5	5

A.M. Peak Hour Traffic Volumes



P.M. Peak Hour Traffic Volumes



Highest Traffic Volumes (Vehicles per Hour)

N-S Road:	5,986	N-S Road:	5,440
E-W Road:	586	E-W Road:	534

Roadway CO Contributions and Concentrations

Emissions = (A x B x C) / 100,000[1]

Roadway	A_1 E.O.R.	A_2 25 Feet	A_3 50 Feet	A_4 100 Feet	B Traffic Volume	C Emission Factors[2]	Estimated CO Concentrations E.O.R.	25 Feet	50 Feet	100 Feet
	Reference CO Concentrations									
A.M. Peak Traffic Hour										
North-South Road	9.5	6.1	4.9	3.5	5,986	10.36	5.89	3.78	3.04	2.17
East-West Road	3.7	2.7	2.2	1.7	586	10.36	0.22	0.16	0.13	0.10
P.M. Peak Traffic Hour										
North-South Road	9.5	6.1	4.9	3.5	5,440	10.36	5.36	3.44	2.76	1.97
East-West Road	3.7	2.7	2.2	1.7	534	10.36	0.20	0.15	0.12	0.09

[1] Methodology from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).
[2] Emission factors from EMFAC2007 (2003).

Total Roadway CO Concentrations

Peak Hour Emissions = North-South Concentration + East-West Concentration + Background 1-hour Concentration[2]
8-Hour Emissions = ((Highest Peak Hour Concentration - Background 1-hour Concentration) x Persistence Factor) + Background 8-hour Concentration[2]

	A.M. Peak Hour	P.M. Peak Hour	8-Hour
Roadway Edge	10.1	9.6	7.8
25 Feet from Roadway Edge	7.9	7.6	6.3
50 Feet from Roadway Edge	7.2	6.9	5.7
100 Feet from Roadway Edge	6.3	6.1	5.1

[2] Methodology from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).

SIMPLIFIED CALINE4 CARBON MONOXIDE ANALYSIS

Project Title: Universal Evolution Plan

Background Information

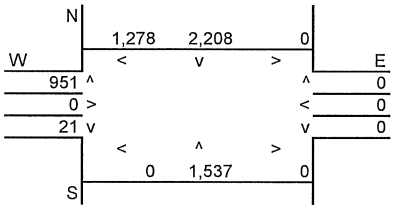
Nearest Air Monitoring Station measuring CO:	Burbank
Background 1-hour CO Concentration (ppm):	4.0
Background 8-hour CO Concentration (ppm):	3.5
Persistence Factor:	0.7
Analysis Year:	2006

Roadway Data

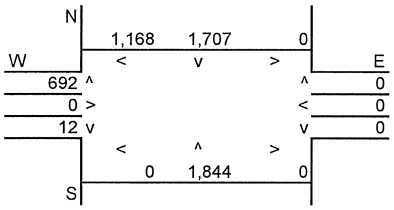
Intersection:	Highland Avenue & Franklin Place/Franklin Avenue
Analysis Condition:	Existing (2006) Plus Project Traffic Conditions

		Roadway Type	No. of Lanes	Average Speed A.M.	Average Speed P.M.
North-South Roadway:	Highland Avenue	At Grade	6	5	5
East-West Roadway:	Franklin Place/Franklin Aven	At Grade	2	5	5

A.M. Peak Hour Traffic Volumes



P.M. Peak Hour Traffic Volumes



Highest Traffic Volumes (Vehicles per Hour)

N-S Road:	5,974	N-S Road:	5,411
E-W Road:	2,250	E-W Road:	1,872

Roadway CO Contributions and Concentrations

Emissions = (A x B x C) / 100,000[1]

Roadway	A_1 E.O.R.	A_2 25 Feet	A_3 50 Feet	A_4 100 Feet	B Traffic Volume	C Emission Factors[2]	Estimated CO Concentrations E.O.R.	25 Feet	50 Feet	100 Feet
	Reference CO Concentrations									
A.M. Peak Traffic Hour										
North-South Road	9.5	6.1	4.9	3.5	5,974	10.36	5.88	3.78	3.03	2.17
East-West Road	3.7	2.7	2.2	1.7	2,250	10.36	0.86	0.63	0.51	0.40
P.M. Peak Traffic Hour										
North-South Road	9.5	6.1	4.9	3.5	5,411	10.36	5.33	3.42	2.75	1.96
East-West Road	3.7	2.7	2.2	1.7	1,872	10.36	0.72	0.52	0.43	0.33

[1] Methodology from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).
[2] Emission factors from EMFAC2007 (2003).

Total Roadway CO Concentrations

Peak Hour Emissions = North-South Concentration + East-West Concentration + Background 1-hour Concentration[2]
8-Hour Emissions = ((Highest Peak Hour Concentration - Background 1-hour Concentration) x Persistence Factor) + Background 8-hour Concentration[2]

	A.M. Peak Hour	P.M. Peak Hour	8-Hour
Roadway Edge	10.7	10.0	8.2
25 Feet from Roadway Edge	8.4	7.9	6.6
50 Feet from Roadway Edge	7.5	7.2	6.0
100 Feet from Roadway Edge	6.6	6.3	5.3

[2] Methodology from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).

SIMPLIFIED CALINE4 CARBON MONOXIDE ANALYSIS

Project Title: Universal Evolution Plan

Background Information

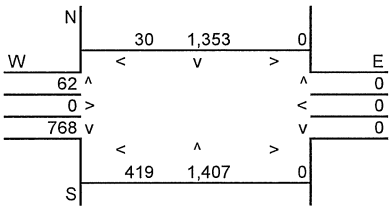
Nearest Air Monitoring Station measuring CO:	Burbannk
Background 1-hour CO Concentration (ppm):	4.0
Background 8-hour CO Concentration (ppm):	3.5
Persistence Factor:	0.7
Analysis Year:	2006

Roadway Data

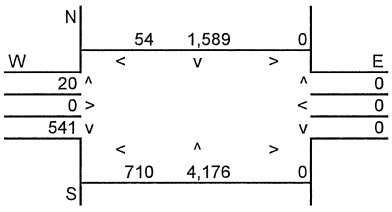
Intersection:	Olive Avenue & Pass Avenue
Analysis Condition:	Existing (2006) Plus Project Traffic Conditions

		Roadway Type	No. of Lanes	Average Speed A.M.	Average Speed P.M.
North-South Roadway:	Olive Avenue	At Grade	6	5	5
East-West Roadway:	Pass Avenue	At Grade	2	5	5

A.M. Peak Hour Traffic Volumes



P.M. Peak Hour Traffic Volumes



Highest Traffic Volumes (Vehicles per Hour)

N-S Road:	3,947	N-S Road:	7,016
E-W Road:	1,279	E-W Road:	1,325

Roadway CO Contributions and Concentrations

Emissions = (A x B x C) / 100,000[1]

Roadway	A_1 E.O.R.	A_2 25 Feet	A_3 50 Feet	A_4 100 Feet	B Traffic Volume	C Emission Factors[2]	Estimated CO Concentrations E.O.R.	25 Feet	50 Feet	100 Feet
	Reference CO Concentrations									
A.M. Peak Traffic Hour										
North-South Road	9.5	6.1	4.9	3.5	3,947	10.36	3.89	2.50	2.00	1.43
East-West Road	3.7	2.7	2.2	1.7	1,279	10.36	0.49	0.36	0.29	0.23
P.M. Peak Traffic Hour										
North-South Road	9.5	6.1	4.9	3.5	7,016	10.36	6.91	4.44	3.56	2.54
East-West Road	3.7	2.7	2.2	1.7	1,325	10.36	0.51	0.37	0.30	0.23

[1] Methodology from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).
[2] Emission factors from EMFAC2007 (2003).

Total Roadway CO Concentrations

Peak Hour Emissions = North-South Concentration + East-West Concentration + Background 1-hour Concentration[2]
8-Hour Emissions = ((Highest Peak Hour Concentration - Background 1-hour Concentration) x Persistence Factor) + Background 8-hour Concentration[2]

	A.M. Peak Hour	P.M. Peak Hour	8-Hour
Roadway Edge	8.4	11.4	8.7
25 Feet from Roadway Edge	6.9	8.8	6.9
50 Feet from Roadway Edge	6.3	7.9	6.2
100 Feet from Roadway Edge	5.7	6.8	5.4

[2] Methodology from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).

SIMPLIFIED CALINE4 CARBON MONOXIDE ANALYSIS

Project Title: Universal Evolution Plan

Background Information

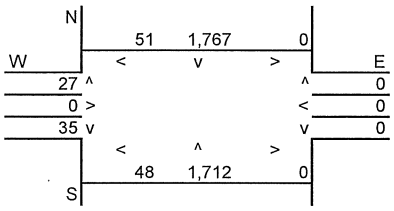
Nearest Air Monitoring Station measuring CO:	Burbank
Background 1-hour CO Concentration (ppm):	4.0
Background 8-hour CO Concentration (ppm):	3.5
Persistence Factor:	0.7
Analysis Year:	2006

Roadway Data

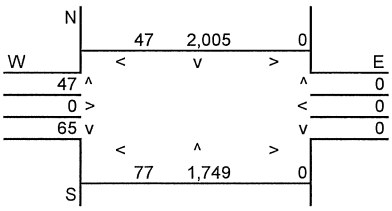
Intersection:	Olive & Warner Bros Gate 1
Analysis Condition:	Existing (2006) Plus Project Traffic Conditions

		Roadway Type	No. of Lanes	Average Speed A.M.	Average Speed P.M.
North-South Roadway:	Olive Ave	At Grade	4	5	5
East-West Roadway:	Warner Brothers	At Grade	4	5	5

A.M. Peak Hour Traffic Volumes



P.M. Peak Hour Traffic Volumes



Highest Traffic Volumes (Vehicles per Hour)

N-S Road:	3,562	N-S Road:	3,896
E-W Road:	161	E-W Road:	236

Roadway CO Contributions and Concentrations

Emissions = (A x B x C) / 100,000[1]

Roadway	A_1 Reference CO Concentrations E.O.R.	A_2 25 Feet	A_3 50 Feet	A_4 100 Feet	B Traffic Volume	C Emission Factors[2]	Estimated CO Concentrations E.O.R.	25 Feet	50 Feet	100 Feet
A.M. Peak Traffic Hour										
North-South Road	11.9	7.0	5.4	3.8	3,562	10.36	4.39	2.58	1.99	1.40
East-West Road	3.3	2.6	2.2	1.7	161	10.36	0.06	0.04	0.04	0.03
P.M. Peak Traffic Hour										
North-South Road	11.9	7.0	5.4	3.8	3,896	10.36	4.80	2.83	2.18	1.53
East-West Road	3.3	2.6	2.2	1.7	236	10.36	0.08	0.06	0.05	0.04

[1] Methodology from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).
[2] Emission factors from EMFAC2007 (2003).

Total Roadway CO Concentrations

Peak Hour Emissions = North-South Concentration + East-West Concentration + Background 1-hour Concentration[2]
8-Hour Emissions = ((Highest Peak Hour Concentration - Background 1-hour Concentration) x Persistence Factor) + Background 8-hour Concentration[2]

	A.M. Peak Hour	P.M. Peak Hour	8-Hour
Roadway Edge	8.4	8.9	6.9
25 Feet from Roadway Edge	6.6	6.9	5.5
50 Feet from Roadway Edge	6.0	6.2	5.1
100 Feet from Roadway Edge	5.4	5.6	4.6

[2] Methodology from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).

SIMPLIFIED CALINE4 CARBON MONOXIDE ANALYSIS

Project Title: Universal Vision

Background Information

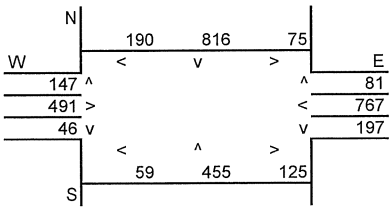
Nearest Air Monitoring Station measuring CO:	Burbank
Background 1-hour CO Concentration (ppm):	4.0
Background 8-hour CO Concentration (ppm):	3.5
Persistence Factor:	0.7
Analysis Year:	2006

Roadway Data

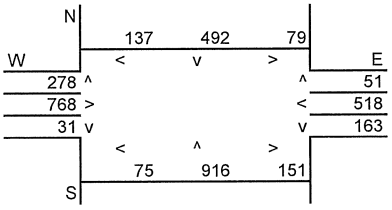
Intersection: Buena Vista and Olive
Analysis Condition: Existing (2006) Plus Project Traffic Conditions

		Roadway Type	No. of Lanes	Average Speed A.M.	Average Speed P.M.
North-South Roadway:	Buena Vista	At Grade	4	5	5
East-West Roadway:	Olive	At Grade	4	5	5

A.M. Peak Hour Traffic Volumes



P.M. Peak Hour Traffic Volumes



Highest Traffic Volumes (Vehicles per Hour)

N-S Road:	1,764	N-S Road:	1,953
E-W Road:	1,736	E-W Road:	1,807

Roadway CO Contributions and Concentrations

Emissions = (A x B x C) / 100,000[1]

Roadway	A_1 E.O.R.	A_2 25 Feet	A_3 50 Feet	A_4 100 Feet	B Traffic Volume	C Emission Factors[2]	Estimated CO Concentrations E.O.R.	25 Feet	50 Feet	100 Feet
	Reference CO Concentrations									
A.M. Peak Traffic Hour										
North-South Road	11.9	7.0	5.4	3.8	1,764	10.36	2.18	1.28	0.99	0.69
East-West Road	3.3	2.6	2.2	1.7	1,736	10.36	0.59	0.47	0.40	0.31
P.M. Peak Traffic Hour										
North-South Road	11.9	7.0	5.4	3.8	1,953	10.36	2.41	1.42	1.09	0.77
East-West Road	3.3	2.6	2.2	1.7	1,807	10.36	0.62	0.49	0.41	0.32

[1] Methodology from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).
[2] Emission factors from EMFAC2002 (2003).

Total Roadway CO Concentrations

Peak Hour Emissions = North-South Concentration + East-West Concentration + Background 1-hour Concentration[2]
8-Hour Emissions = ((Highest Peak Hour Concentration - Background 1-hour Concentration) x Persistence Factor) + Background 8-hour Concentration[2]

	A.M. Peak Hour	P.M. Peak Hour	8-Hour
Roadway Edge	6.8	7.0	5.6
25 Feet from Roadway Edge	5.7	5.9	4.8
50 Feet from Roadway Edge	5.4	5.5	4.6
100 Feet from Roadway Edge	5.0	5.1	4.3

[2] Methodology from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).

SIMPLIFIED CALINE4 CARBON MONOXIDE ANALYSIS

Project Title: Universal Evolution Plan

Background Information

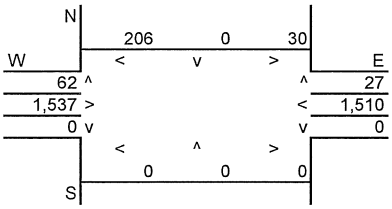
Nearest Air Monitoring Station measuring CO:	Burbank
Background 1-hour CO Concentration (ppm):	4.0
Background 8-hour CO Concentration (ppm):	3.5
Persistence Factor:	0.7
Analysis Year:	2006

Roadway Data

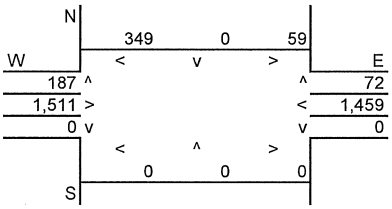
Intersection: Cedros and Ventura
Analysis Condition: Existing (2006) Plust Project Traffic Conditions

		Roadway Type	No. of Lanes	Average Speed A.M.	Average Speed P.M.
North-South Roadway:	Cedros	At Grade	2	5	5
East-West Roadway:	Ventura	At Grade	6	5	5

A.M. Peak Hour Traffic Volumes



P.M. Peak Hour Traffic Volumes



Highest Traffic Volumes (Vehicles per Hour)

N-S Road:	325	N-S Road:	667
E-W Road:	3,315	E-W Road:	3,506

Roadway CO Contributions and Concentrations

Emissions = (A x B x C) / 100,000[1]

Roadway	A_1 Reference CO Concentrations E.O.R.	A_2 25 Feet	A_3 50 Feet	A_4 100 Feet	B Traffic Volume	C Emission Factors[2]	Estimated CO Concentrations E.O.R.	25 Feet	50 Feet	100 Feet
A.M. Peak Traffic Hour										
North-South Road	3.7	2.7	2.2	1.7	325	10.36	0.12	0.09	0.07	0.06
East-West Road	9.5	6.1	4.9	3.5	3,315	10.36	3.26	2.10	1.68	1.20
P.M. Peak Traffic Hour										
North-South Road	3.7	2.7	2.2	1.7	667	10.36	0.26	0.19	0.15	0.12
East-West Road	9.5	6.1	4.9	3.5	3,506	10.36	3.45	2.22	1.78	1.27

[1] Methodology from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).
[2] Emission factors from EMFAC2007 (2003).

Total Roadway CO Concentrations

Peak Hour Emissions = North-South Concentration + East-West Concentration + Background 1-hour Concentration[2]
8-Hour Emissions = ((Highest Peak Hour Concentration - Background 1-hour Concentration) x Persistence Factor) + Background 8-hour Concentration[2]

	A.M. Peak Hour	P.M. Peak Hour	8-Hour
Roadway Edge	7.4	7.7	6.1
25 Feet from Roadway Edge	6.2	6.4	5.2
50 Feet from Roadway Edge	5.8	5.9	4.9
100 Feet from Roadway Edge	5.3	5.4	4.5

[2] Methodology from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).

SIMPLIFIED CALINE4 CARBON MONOXIDE ANALYSIS

Project Title: Universal Evolution Plan

Background Information

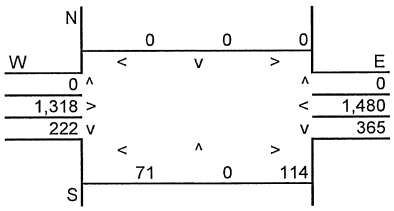
Nearest Air Monitoring Station measuring CO:	Burbank
Background 1-hour CO Concentration (ppm):	4.0
Background 8-hour CO Concentration (ppm):	3.5
Persistence Factor:	0.7
Analysis Year:	2006

Roadway Data

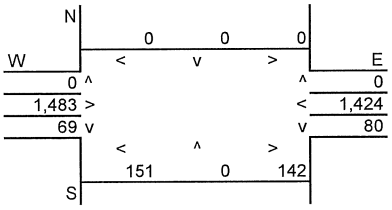
Intersection: Cedos (east) and Ventura
Analysis Condition: Existing (2006) Plust Project Traffic Conditions

		Roadway Type	No. of Lanes	Average Speed A.M.	Average Speed P.M.
North-South Roadway:	Cedos East	At Grade	2	5	5
East-West Roadway:	Ventura	At Grade	6	5	5

A.M. Peak Hour Traffic Volumes



P.M. Peak Hour Traffic Volumes



Highest Traffic Volumes (Vehicles per Hour)

N-S Road:	772	N-S Road:	442
E-W Road:	3,277	E-W Road:	3,129

Roadway CO Contributions and Concentrations

Emissions = (A x B x C) / 100,000[1]

Roadway	A_1 E.O.R.	A_2 25 Feet	A_3 50 Feet	A_4 100 Feet	B Traffic Volume	C Emission Factors[2]	Estimated CO Concentrations E.O.R.	25 Feet	50 Feet	100 Feet
	Reference CO Concentrations									
A.M. Peak Traffic Hour										
North-South Road	3.7	2.7	2.2	1.7	772	10.36	0.30	0.22	0.18	0.14
East-West Road	9.5	6.1	4.9	3.5	3,277	10.36	3.23	2.07	1.66	1.19
P.M. Peak Traffic Hour										
North-South Road	3.7	2.7	2.2	1.7	442	10.36	0.17	0.12	0.10	0.08
East-West Road	9.5	6.1	4.9	3.5	3,129	10.36	3.08	1.98	1.59	1.13

[1] Methodology from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).
[2] Emission factors from EMFAC2007 (2003).

Total Roadway CO Concentrations

Peak Hour Emissions = North-South Concentration + East-West Concentration + Background 1-hour Concentration[2]
8-Hour Emissions = ((Highest Peak Hour Concentration - Background 1-hour Concentration) x Persistence Factor) + Background 8-hour Concentration[2]

	A.M. Peak Hour	P.M. Peak Hour	8-Hour
Roadway Edge	7.5	7.3	6.0
25 Feet from Roadway Edge	6.3	6.1	5.1
50 Feet from Roadway Edge	5.8	5.7	4.8
100 Feet from Roadway Edge	5.3	5.2	4.4

[2] Methodology from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).

SIMPLIFIED CALINE4 CARBON MONOXIDE ANALYSIS

Project Title: Universal Evolution Plan

Background Information

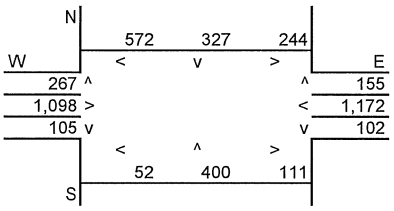
Nearest Air Monitoring Station measuring CO:	Burbank
Background 1-hour CO Concentration (ppm):	4.0
Background 8-hour CO Concentration (ppm):	3.5
Persistence Factor:	0.7
Analysis Year:	2006

Roadway Data

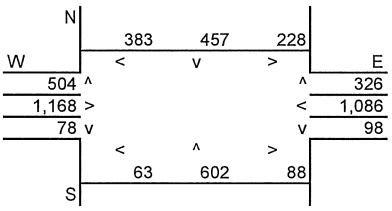
Intersection:	Van Nuys and Ventura
Analysis Condition:	Existing (2006) Plust Project Traffic Conditions

		Roadway Type	No. of Lanes	Average Speed A.M.	Average Speed P.M.
North-South Roadway:	Van Nuys	At Grade	6	5	5
East-West Roadway:	Ventura	At Grade	6	5	5

A.M. Peak Hour Traffic Volumes



P.M. Peak Hour Traffic Volumes



Highest Traffic Volumes (Vehicles per Hour)

N-S Road:	1,965	N-S Road:	2,500
E-W Road:	3,266	E-W Road:	3,282

Roadway CO Contributions and Concentrations

Emissions = (A x B x C) / 100,000[1]

Roadway	A_1 E.O.R.	A_2 25 Feet	A_3 50 Feet	A_4 100 Feet	B Traffic Volume	C Emission Factors[2]	Estimated CO Concentrations E.O.R.	25 Feet	50 Feet	100 Feet
	Reference CO Concentrations									
A.M. Peak Traffic Hour										
North-South Road	2.8	2.3	2.0	1.7	1,965	10.36	0.57	0.47	0.41	0.35
East-West Road	9.5	6.1	4.9	3.5	3,266	10.36	3.22	2.06	1.66	1.18
P.M. Peak Traffic Hour										
North-South Road	2.8	2.3	2.0	1.7	2,500	10.36	0.73	0.60	0.52	0.44
East-West Road	9.5	6.1	4.9	3.5	3,282	10.36	3.23	2.07	1.67	1.19

[1] Methodology from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).
[2] Emission factors from EMFAC2007 (2003).

Total Roadway CO Concentrations

Peak Hour Emissions = North-South Concentration + East-West Concentration + Background 1-hour Concentration[2]
8-Hour Emissions = ((Highest Peak Hour Concentration - Background 1-hour Concentration) x Persistence Factor) + Background 8-hour Concentration[2]

	A.M. Peak Hour	P.M. Peak Hour	8-Hour
Roadway Edge	7.8	8.0	6.3
25 Feet from Roadway Edge	6.5	6.7	5.4
50 Feet from Roadway Edge	6.1	6.2	5.0
100 Feet from Roadway Edge	5.5	5.6	4.6

[2] Methodology from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).

SIMPLIFIED CALINE4 CARBON MONOXIDE ANALYSIS

Project Title: Universal Evolution Plan

Background Information

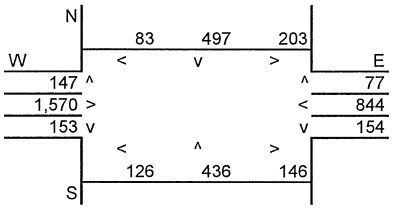
Nearest Air Monitoring Station measuring CO:	Burbank
Background 1-hour CO Concentration (ppm):	4.0
Background 8-hour CO Concentration (ppm):	3.5
Persistence Factor:	0.7
Analysis Year:	2006

Roadway Data

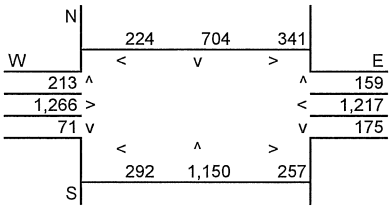
Intersection: Coldwater Canyon and Ventura
Analysis Condition: Existing (2006) Plust Project Traffic Conditions

		Roadway Type	No. of Lanes	Average Speed A.M.	Average Speed P.M.
North-South Roadway:	Coldwater Canyon	At Grade	4	5	5
East-West Roadway:	Ventura	At Grade	6	5	5

A.M. Peak Hour Traffic Volumes



P.M. Peak Hour Traffic Volumes



Highest Traffic Volumes (Vehicles per Hour)

N-S Road:	1,512	N-S Road:	2,791
E-W Road:	2,994	E-W Road:	3,415

Roadway CO Contributions and Concentrations

Emissions = (A x B x C) / 100,000[1]

Roadway	A_1 E.O.R.	A_2 25 Feet	A_3 50 Feet	A_4 100 Feet	B Traffic Volume	C Emission Factors[2]	Estimated CO Concentrations E.O.R.	25 Feet	50 Feet	100 Feet
	Reference CO Concentrations									
A.M. Peak Traffic Hour										
North-South Road	3.3	2.6	2.2	1.7	1,512	10.36	0.52	0.41	0.34	0.27
East-West Road	9.5	6.1	4.9	3.5	2,994	10.36	2.95	1.89	1.52	1.09
P.M. Peak Traffic Hour										
North-South Road	3.3	2.6	2.2	1.7	2,791	10.36	0.95	0.75	0.64	0.49
East-West Road	9.5	6.1	4.9	3.5	3,415	10.36	3.36	2.16	1.73	1.24

[1] Methodology from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).
[2] Emission factors from EMFAC2007 (2003).

Total Roadway CO Concentrations

Peak Hour Emissions = North-South Concentration + East-West Concentration + Background 1-hour Concentration[2]
8-Hour Emissions = ((Highest Peak Hour Concentration - Background 1-hour Concentration) x Persistence Factor) + Background 8-hour Concentration[2]

	A.M. Peak Hour	P.M. Peak Hour	8-Hour
Roadway Edge	7.5	8.3	6.5
25 Feet from Roadway Edge	6.3	6.9	5.5
50 Feet from Roadway Edge	5.9	6.4	5.2
100 Feet from Roadway Edge	5.4	5.7	4.7

[2] Methodology from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).

SIMPLIFIED CALINE4 CARBON MONOXIDE ANALYSIS

Project Title: Universal Evolution Plan

Background Information

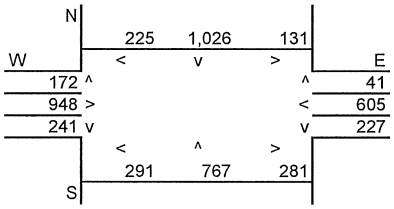
Nearest Air Monitoring Station measuring CO:	Burbank
Background 1-hour CO Concentration (ppm):	4.0
Background 8-hour CO Concentration (ppm):	3.5
Persistence Factor:	0.7
Analysis Year:	2006

Roadway Data

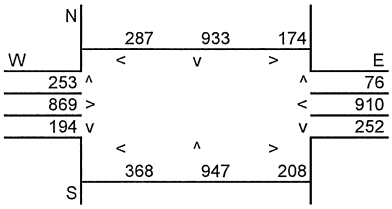
Intersection: Laurel Canyon and Ventura
Analysis Condition: Existing (2006) Plust Project Traffic Conditions

		Roadway Type	No. of Lanes	Average Speed A.M.	Average Speed P.M.
North-South Roadway:	Laurel Canyon	At Grade	6	5	5
East-West Roadway:	Ventura	At Grade	6	5	5

A.M. Peak Hour Traffic Volumes



P.M. Peak Hour Traffic Volumes



Highest Traffic Volumes (Vehicles per Hour)

N-S Road:	2,833	N-S Road:	2,902
E-W Road:	2,482	E-W Road:	2,881

Roadway CO Contributions and Concentrations

Emissions = (A x B x C) / 100,000[1]

Roadway	A_1 E.O.R.	A_2 25 Feet	A_3 50 Feet	A_4 100 Feet	B Traffic Volume	C Emission Factors[2]	Estimated CO Concentrations E.O.R.	25 Feet	50 Feet	100 Feet
	Reference CO Concentrations									
A.M. Peak Traffic Hour										
North-South Road	9.5	6.1	4.9	3.5	2,833	10.36	2.79	1.79	1.44	1.03
East-West Road	2.8	2.3	2.0	1.7	2,482	10.36	0.72	0.59	0.51	0.44
P.M. Peak Traffic Hour										
North-South Road	9.5	6.1	4.9	3.5	2,902	10.36	2.86	1.83	1.47	1.05
East-West Road	2.8	2.3	2.0	1.7	2,881	10.36	0.84	0.69	0.60	0.51

[1] Methodology from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).
[2] Emission factors from EMFAC2007 (2003).

Total Roadway CO Concentrations

Peak Hour Emissions = North-South Concentration + East-West Concentration + Background 1-hour Concentration[2]
8-Hour Emissions = ((Highest Peak Hour Concentration - Background 1-hour Concentration) x Persistence Factor) + Background 8-hour Concentration[2]

	A.M. Peak Hour	P.M. Peak Hour	8-Hour
Roadway Edge	7.5	7.7	6.1
25 Feet from Roadway Edge	6.4	6.5	5.3
50 Feet from Roadway Edge	6.0	6.1	4.9
100 Feet from Roadway Edge	5.5	5.6	4.6

[2] Methodology from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).

SIMPLIFIED CALINE4 CARBON MONOXIDE ANALYSIS

Project Title: Universal Evolution Plan

Background Information

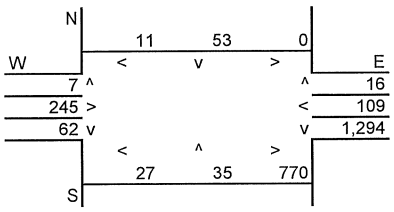
Nearest Air Monitoring Station measuring CO:	Burbank
Background 1-hour CO Concentration (ppm):	4.0
Background 8-hour CO Concentration (ppm):	3.5
Persistence Factor:	0.7
Analysis Year:	2006

Roadway Data

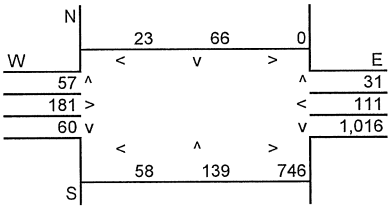
Intersection: La Brea and Franklin
Analysis Condition: Existing (2006) Plust Project Traffic Conditions

		Roadway Type	No. of Lanes	Average Speed A.M.	Average Speed P.M.
North-South Roadway:	La Brea	At Grade	4	5	5
East-West Roadway:	Franklin	At Grade	6	5	5

A.M. Peak Hour Traffic Volumes



P.M. Peak Hour Traffic Volumes



Highest Traffic Volumes (Vehicles per Hour)

N-S Road:	2,241	N-S Road:	2,085
E-W Road:	2,434	E-W Road:	2,085

Roadway CO Contributions and Concentrations

Emissions = (A x B x C) / 100,000[1]

Roadway	A_1 Reference CO Concentrations E.O.R.	A_2 25 Feet	A_3 50 Feet	A_4 100 Feet	B Traffic Volume	C Emission Factors[2]	Estimated CO Concentrations E.O.R.	25 Feet	50 Feet	100 Feet
A.M. Peak Traffic Hour										
North-South Road	3.3	2.6	2.2	1.7	2,241	10.36	0.77	0.60	0.51	0.39
East-West Road	9.5	6.1	4.9	3.5	2,434	10.36	2.40	1.54	1.24	0.88
P.M. Peak Traffic Hour										
North-South Road	11.9	7.0	5.4	3.8	2,085	10.36	2.57	1.51	1.17	0.82
East-West Road	2.8	2.3	2.0	1.7	2,085	10.36	0.61	0.50	0.43	0.37

[1] Methodology from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).
[2] Emission factors from EMFAC2007 (2003).

Total Roadway CO Concentrations

Peak Hour Emissions = North-South Concentration + East-West Concentration + Background 1-hour Concentration[2]
8-Hour Emissions = ((Highest Peak Hour Concentration - Background 1-hour Concentration) x Persistence Factor) + Background 8-hour Concentration[2]

	A.M. Peak Hour	P.M. Peak Hour	8-Hour
Roadway Edge	7.2	7.2	5.7
25 Feet from Roadway Edge	6.1	6.0	5.0
50 Feet from Roadway Edge	5.7	5.6	4.7
100 Feet from Roadway Edge	5.3	5.2	4.4

[2] Methodology from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).

SIMPLIFIED CALINE4 CARBON MONOXIDE ANALYSIS

Project Title: Universal Evolution Plan

Background Information

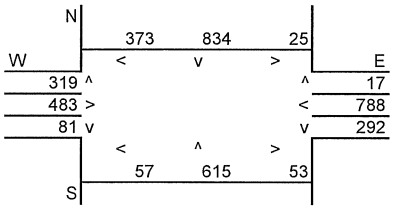
Nearest Air Monitoring Station measuring CO:	Burbank
Background 1-hour CO Concentration (ppm):	4.0
Background 8-hour CO Concentration (ppm):	3.5
Persistence Factor:	0.7
Analysis Year:	2006

Roadway Data

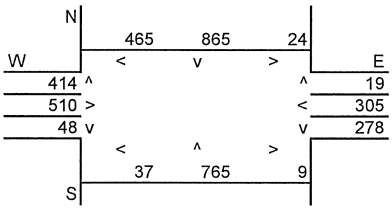
Intersection: La Brea and Hollywood
Analysis Condition: Existing (2006) Plust Project Traffic Conditions

		Roadway Type	No. of Lanes	Average Speed A.M.	Average Speed P.M.
North-South Roadway:	La Brea	At Grade	4	5	5
East-West Roadway:	Hollywood	At Grade	4	5	5

A.M. Peak Hour Traffic Volumes



P.M. Peak Hour Traffic Volumes



Highest Traffic Volumes (Vehicles per Hour)

N-S Road:	2,183	N-S Road:	2,552
E-W Road:	2,101	E-W Road:	1,779

Roadway CO Contributions and Concentrations

Emissions = (A x B x C) / 100,000[1]

Roadway	A_1 E.O.R.	A_2 25 Feet	A_3 50 Feet	A_4 100 Feet	B Traffic Volume	C Emission Factors[2]	Estimated CO Concentrations E.O.R.	25 Feet	50 Feet	100 Feet
	Reference CO Concentrations									
A.M. Peak Traffic Hour										
North-South Road	11.9	7.0	5.4	3.8	2,183	10.36	2.69	1.58	1.22	0.86
East-West Road	3.3	2.6	2.2	1.7	2,101	10.36	0.72	0.57	0.48	0.37
P.M. Peak Traffic Hour										
North-South Road	11.9	7.0	5.4	3.8	2,552	10.36	3.15	1.85	1.43	1.01
East-West Road	3.3	2.6	2.2	1.7	1,779	10.36	0.61	0.48	0.41	0.31

[1] Methodology from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).
[2] Emission factors from EMFAC2007 (2003).

Total Roadway CO Concentrations

Peak Hour Emissions = North-South Concentration + East-West Concentration + Background 1-hour Concentration[2]
8-Hour Emissions = ((Highest Peak Hour Concentration - Background 1-hour Concentration) x Persistence Factor) + Background 8-hour Concentration[2]

	A.M. Peak Hour	P.M. Peak Hour	8-Hour
Roadway Edge	7.4	7.8	6.1
25 Feet from Roadway Edge	6.1	6.3	5.1
50 Feet from Roadway Edge	5.7	5.8	4.8
100 Feet from Roadway Edge	5.2	5.3	4.4

[2] Methodology from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).

SIMPLIFIED CALINE4 CARBON MONOXIDE ANALYSIS

Project Title: Universal Evolution Plan

Background Information

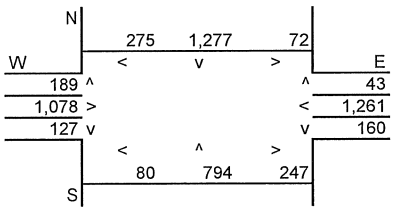
Nearest Air Monitoring Station measuring CO:	Burbank
Background 1-hour CO Concentration (ppm):	4.0
Background 8-hour CO Concentration (ppm):	3.5
Persistence Factor:	0.7
Analysis Year:	2006

Roadway Data

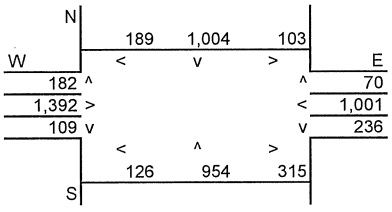
Intersection: La Brea and Sunset
Analysis Condition: Existing (2006) Plust Project Traffic Conditions

		Roadway Type	No. of Lanes	Average Speed A.M.	Average Speed P.M.
North-South Roadway:	La Brea	At Grade	6	5	5
East-West Roadway:	Sunset	At Grade	6	5	5

A.M. Peak Hour Traffic Volumes



P.M. Peak Hour Traffic Volumes



Highest Traffic Volumes (Vehicles per Hour)

N-S Road:	2,685	N-S Road:	2,744
E-W Road:	3,010	E-W Road:	3,117

Roadway CO Contributions and Concentrations

Emissions = (A x B x C) / 100,000[1]

Roadway	A_1 E.O.R.	A_2 25 Feet	A_3 50 Feet	A_4 100 Feet	B Traffic Volume	C Emission Factors[2]	Estimated CO Concentrations E.O.R.	25 Feet	50 Feet	100 Feet
	Reference CO Concentrations									
A.M. Peak Traffic Hour										
North-South Road	2.8	2.3	2.0	1.7	2,685	10.36	0.78	0.64	0.56	0.47
East-West Road	9.5	6.1	4.9	3.5	3,010	10.36	2.96	1.90	1.53	1.09
P.M. Peak Traffic Hour										
North-South Road	2.8	2.3	2.0	1.7	2,744	10.36	0.80	0.65	0.57	0.48
East-West Road	9.5	6.1	4.9	3.5	3,117	10.36	3.07	1.97	1.58	1.13

[1] Methodology from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).
[2] Emission factors from EMFAC2007 (2003).

Total Roadway CO Concentrations

Peak Hour Emissions = North-South Concentration + East-West Concentration + Background 1-hour Concentration[2]
8-Hour Emissions = ((Highest Peak Hour Concentration - Background 1-hour Concentration) x Persistence Factor) + Background 8-hour Concentration[2]

	A.M. Peak Hour	P.M. Peak Hour	8-Hour
Roadway Edge	7.7	7.9	6.2
25 Feet from Roadway Edge	6.5	6.6	5.3
50 Feet from Roadway Edge	6.1	6.2	5.0
100 Feet from Roadway Edge	5.6	5.6	4.6

[2] Methodology from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).

SIMPLIFIED CALINE4 CARBON MONOXIDE ANALYSIS

Project Title: Universal Evolution Plan

Background Information

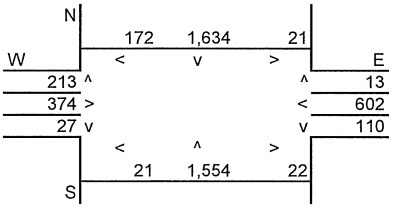
Nearest Air Monitoring Station measuring CO:	Burbank
Background 1-hour CO Concentration (ppm):	4.0
Background 8-hour CO Concentration (ppm):	3.5
Persistence Factor:	0.7
Analysis Year:	2006

Roadway Data

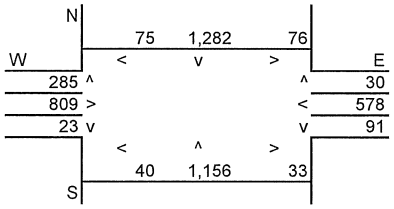
Intersection:	Highland and Hollywood
Analysis Condition:	Existing (2006) Plust Project Traffic Conditions

		Roadway Type	No. of Lanes	Average Speed A.M.	Average Speed P.M.
North-South Roadway:	Highland	At Grade	6	5	5
East-West Roadway:	Hollywood	At Grade	4	5	5

A.M. Peak Hour Traffic Volumes



P.M. Peak Hour Traffic Volumes



Highest Traffic Volumes (Vehicles per Hour)

N-S Road:	3,607	N-S Road:	2,904
E-W Road:	1,409	E-W Road:	1,810

Roadway CO Contributions and Concentrations

Emissions = (A x B x C) / 100,000[1]

Roadway	A_1 E.O.R.	A_2 25 Feet	A_3 50 Feet	A_4 100 Feet	B Traffic Volume	C Emission Factors[2]	Estimated CO Concentrations E.O.R.	25 Feet	50 Feet	100 Feet
	Reference CO Concentrations									
A.M. Peak Traffic Hour										
North-South Road	9.5	6.1	4.9	3.5	3,607	10.36	3.55	2.28	1.83	1.31
East-West Road	3.3	2.6	2.2	1.7	1,409	10.36	0.48	0.38	0.32	0.25
P.M. Peak Traffic Hour										
North-South Road	9.5	6.1	4.9	3.5	2,904	10.36	2.86	1.84	1.47	1.05
East-West Road	3.3	2.6	2.2	1.7	1,810	10.36	0.62	0.49	0.41	0.32

[1] Methodology from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).
[2] Emission factors from EMFAC2007 (2003).

Total Roadway CO Concentrations

Peak Hour Emissions = North-South Concentration + East-West Concentration + Background 1-hour Concentration[2]
8-Hour Emissions = ((Highest Peak Hour Concentration - Background 1-hour Concentration) x Persistence Factor) + Background 8-hour Concentration[2]

	A.M. Peak Hour	P.M. Peak Hour	8-Hour
Roadway Edge	8.0	7.5	6.3
25 Feet from Roadway Edge	6.7	6.3	5.4
50 Feet from Roadway Edge	6.2	5.9	5.0
100 Feet from Roadway Edge	5.6	5.4	4.6

[2] Methodology from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).

SIMPLIFIED CALINE4 CARBON MONOXIDE ANALYSIS

Project Title: Universal Evolution Plan

Background Information

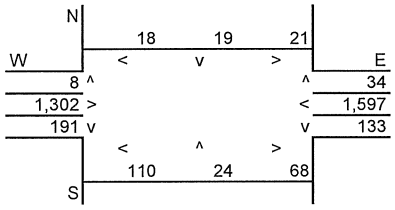
Nearest Air Monitoring Station measuring CO:	Burbank
Background 1-hour CO Concentration (ppm):	4.0
Background 8-hour CO Concentration (ppm):	3.5
Persistence Factor:	0.7
Analysis Year:	2006

Roadway Data

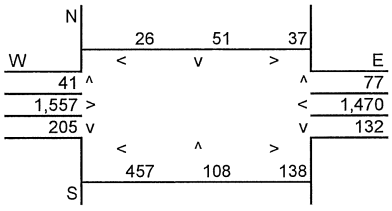
Intersection: Kester and Ventura
Analysis Condition: Existing (2006) Plust Project Traffic Conditions

		Roadway Type	No. of Lanes	Average Speed A.M.	Average Speed P.M.
North-South Roadway:	Ketser	At Grade	2	5	5
East-West Roadway:	Ventura	At Grade	6	5	5

A.M. Peak Hour Traffic Volumes



P.M. Peak Hour Traffic Volumes



Highest Traffic Volumes (Vehicles per Hour)

N-S Road:	545	N-S Road:	1,091
E-W Road:	3,226	E-W Road:	3,756

Roadway CO Contributions and Concentrations

Emissions = (A x B x C) / 100,000[1]

Roadway	A_1 Reference CO Concentrations E.O.R.	A_2 25 Feet	A_3 50 Feet	A_4 100 Feet	B Traffic Volume	C Emission Factors[2]	Estimated CO Concentrations E.O.R.	25 Feet	50 Feet	100 Feet
A.M. Peak Traffic Hour										
North-South Road	3.7	2.7	2.2	1.7	545	10.36	0.21	0.15	0.12	0.10
East-West Road	9.5	6.1	4.9	3.5	3,226	10.36	3.18	2.04	1.64	1.17
P.M. Peak Traffic Hour										
North-South Road	3.7	2.7	2.2	1.7	1,091	10.36	0.42	0.31	0.25	0.19
East-West Road	9.5	6.1	4.9	3.5	3,756	10.36	3.70	2.37	1.91	1.36

[1] Methodology from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).
[2] Emission factors from EMFAC2007 (2003).

Total Roadway CO Concentrations

Peak Hour Emissions = North-South Concentration + East-West Concentration + Background 1-hour Concentration[2]
8-Hour Emissions = ((Highest Peak Hour Concentration - Background 1-hour Concentration) x Persistence Factor) + Background 8-hour Concentration[2]

	A.M. Peak Hour	P.M. Peak Hour	8-Hour
Roadway Edge	7.4	8.1	6.4
25 Feet from Roadway Edge	6.2	6.7	5.4
50 Feet from Roadway Edge	5.8	6.2	5.0
100 Feet from Roadway Edge	5.3	5.6	4.6

[2] Methodology from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).

SIMPLIFIED CALINE4 CARBON MONOXIDE ANALYSIS

Project Title: Universal Evolution Plan

Background Information

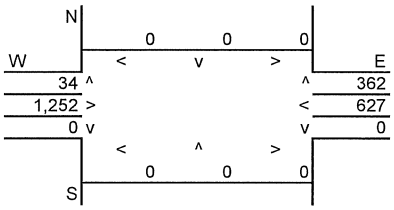
Nearest Air Monitoring Station measuring CO:	Burbank
Background 1-hour CO Concentration (ppm):	4.0
Background 8-hour CO Concentration (ppm):	3.5
Persistence Factor:	0.7
Analysis Year:	2006

Roadway Data

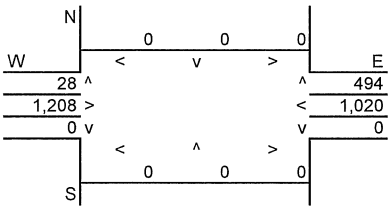
Intersection: US 101 NB and Moorpark
Analysis Condition: Existing (2006) Plus Project Traffic Conditions

		Roadway Type	No. of Lanes	Average Speed A.M.	Average Speed P.M.
North-South Roadway:	US 101 NB	At Grade	2	5	5
East-West Roadway:	Moorpark	At Grade	4	5	5

A.M. Peak Hour Traffic Volumes



P.M. Peak Hour Traffic Volumes



Highest Traffic Volumes (Vehicles per Hour)

N-S Road:	396	N-S Road:	522
E-W Road:	2,241	E-W Road:	2,722

Roadway CO Contributions and Concentrations

Emissions = (A x B x C) / 100,000[1]

Roadway	A_1 E.O.R.	A_2 25 Feet	A_3 50 Feet	A_4 100 Feet	B Traffic Volume	C Emission Factors[2]	Estimated CO Concentrations E.O.R.	25 Feet	50 Feet	100 Feet
	Reference CO Concentrations									
A.M. Peak Traffic Hour										
North-South Road	3.7	2.7	2.2	1.7	396	10.36	0.15	0.11	0.09	0.07
East-West Road	11.9	7.0	5.4	3.8	2,241	10.36	2.76	1.63	1.25	0.88
P.M. Peak Traffic Hour										
North-South Road	3.7	2.7	2.2	1.7	522	10.36	0.20	0.15	0.12	0.09
East-West Road	11.9	7.0	5.4	3.8	2,722	10.36	3.36	1.97	1.52	1.07

[1] Methodology from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).
[2] Emission factors from EMFAC2007 (2003).

Total Roadway CO Concentrations

Peak Hour Emissions = North-South Concentration + East-West Concentration + Background 1-hour Concentration[2]
8-Hour Emissions = ((Highest Peak Hour Concentration - Background 1-hour Concentration) x Persistence Factor) + Background 8-hour Concentration[2]

	A.M. Peak Hour	P.M. Peak Hour	8-Hour
Roadway Edge	6.9	7.6	6.0
25 Feet from Roadway Edge	5.7	6.1	5.0
50 Feet from Roadway Edge	5.3	5.6	4.6
100 Feet from Roadway Edge	5.0	5.2	4.3

[2] Methodology from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).

SIMPLIFIED CALINE4 CARBON MONOXIDE ANALYSIS

Project Title: Universal Evolution Plan

Background Information

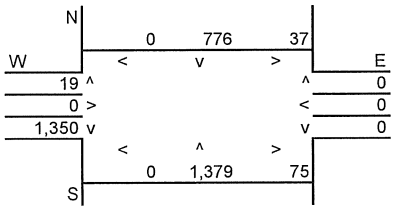
Nearest Air Monitoring Station measuring CO:	Burbank
Background 1-hour CO Concentration (ppm):	4.0
Background 8-hour CO Concentration (ppm):	3.5
Persistence Factor:	0.7
Analysis Year:	2006

Roadway Data

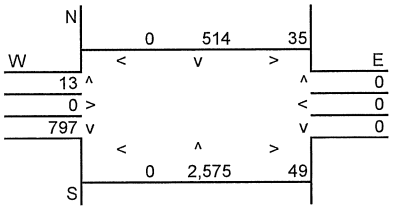
Intersection: Cahuenga and US 101 SB
Analysis Condition: Existing (2006) Traffic Conditions

		Roadway Type	No. of Lanes	Average Speed A.M.	Average Speed P.M.
North-South Roadway:	Cahuenga	At Grade	4	5	5
East-West Roadway:	US 101 SB	At Grade	4	5	5

A.M. Peak Hour Traffic Volumes



P.M. Peak Hour Traffic Volumes



Highest Traffic Volumes (Vehicles per Hour)

N-S Road:	3,580	N-S Road:	3,935
E-W Road:	1,369	E-W Road:	810

Roadway CO Contributions and Concentrations

Emissions = (A x B x C) / 100,000[1]

Roadway	A_1 E.O.R.	A_2 25 Feet	A_3 50 Feet	A_4 100 Feet	B Traffic Volume	C Emission Factors[2]	Estimated CO Concentrations E.O.R.	25 Feet	50 Feet	100 Feet
	Reference CO Concentrations									
A.M. Peak Traffic Hour										
North-South Road	11.9	7.0	5.4	3.8	3,580	10.36	4.42	2.60	2.00	1.41
East-West Road	3.3	2.6	2.2	1.7	1,369	10.36	0.47	0.37	0.31	0.24
P.M. Peak Traffic Hour										
North-South Road	11.9	7.0	5.4	3.8	3,935	10.36	4.85	2.85	2.20	1.55
East-West Road	3.3	2.6	2.2	1.7	810	10.36	0.28	0.22	0.18	0.14

[1] Methodology from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).
[2] Emission factors from EMFAC2002 (2003).

Total Roadway CO Concentrations

Peak Hour Emissions = North-South Concentration + East-West Concentration + Background 1-hour Concentration[2]
8-Hour Emissions = ((Highest Peak Hour Concentration - Background 1-hour Concentration) x Persistence Factor) + Background 8-hour Concentration[2]

	A.M. Peak Hour	P.M. Peak Hour	8-Hour
Roadway Edge	8.9	9.1	7.1
25 Feet from Roadway Edge	7.0	7.1	5.7
50 Feet from Roadway Edge	6.3	6.4	5.2
100 Feet from Roadway Edge	5.7	5.7	4.7

[2] Methodology from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).

Appendix FEIR-7

Supplemental Assessment of Environmental Noise, NBC Universal Evolution Plan, Supplemental Noise Study – Technical Report, Forest Lawn Drive

SUPPLEMENTAL ASSESSMENT OF ENVIRONMENTAL NOISE

NBC UNIVERSAL EVOLUTION PLAN

Supplemental Noise Study – Technical Report

Forest Lawn Drive

April 2012

By

Veneklasen Associates, Inc.

EXECUTIVE SUMMARY

The City of Los Angeles has released a Draft Environmental Impact Report (Draft EIR) for the proposed NBC Universal Evolution Plan. The Draft EIR included an analysis of the impacts of construction noise, including noise generated by haul truck trips traveling along haul routes, on noise sensitive uses as defined by the *L.A. CEQA Thresholds Guide* in the vicinity of the proposed Project. The Draft EIR did not include an analysis of impacts on Forest Lawn Memorial Park Association property because the *L.A. CEQA Thresholds Guide* does not identify this type of facility as a noise sensitive use.

As stated in the Draft EIR, the *L.A. CEQA Thresholds Guide* designates the following as noise sensitive uses: "residences, transient lodgings, schools, libraries, churches, hospitals, nursing homes, auditoriums, concert halls, amphitheaters, playgrounds, and parks." Cemeteries and memorial parks are not identified as noise sensitive uses by the *L.A. CEQA Thresholds Guide.* Therefore, Project construction noise impacts on the Forest Lawn Memorial Park Association property would not be considered significant.

In response to a comment to the Draft EIR, the following supplemental noise study was completed to analyze potential construction noise impacts on the Forest Lawn Memorial Park Association property. This supplemental analysis is provided for informational purposes only since the Forest Lawn Memorial Park Association property is not a noise sensitive use as defined by the *L.A. CEQA Thresholds Guide*. However, following the approach taken for the Draft EIR, the thresholds for noise sensitive uses were applied to the Forest Lawn Memorial Park Association property, and the following is an analysis of the potential construction hauling noise impacts on the Forest Lawn Memorial Park Association property that could result from development of the NBC Universal Evolution Plan.

Similar to the analysis in the Draft EIR, this supplemental analysis considers temporary noise impacts along the Forest Lawn Drive construction hauling route for the following conditions:

- Studio, Entertainment & Business (SEB) Area Construction - Only
- Universal Mixed-Use (UMU) Residential Construction - Only
- Composite (SEB & UMU) Construction
- Cumulative (SEB, UMU & Off-Site Related Projects) Construction

The supplemental noise analysis consisted of ambient noise monitoring and traffic noise modeling according to the means established by the Federal Highway Administration's (FHWA) Traffic Noise Model (TNM).

The ambient noise monitoring consisted of three (3) representative locations along Forest Lawn Drive adjacent to the Forest Lawn Memorial Park Association property and each location was monitored for 24 continuous hours. The noise levels are reported in the same fashion as in the Draft EIR, whereby the Equivalent Continuous Sound Level (L_{eq}) acoustical metric between the hours of 7 a.m. to 7 p.m. is reported.

The noise modeling utilized the calculation methods of the TNM computer model. The model considered the typical traffic flow conditions documented in the EIR[1] as well as the ''Peak" construction haul truck trips along Forest Lawn Drive.

INTRODUCTION

The Applicant has proposed the NBC Universal Evolution Plan, to be developed at the Applicant's Universal City property. The Project includes development in the Entertainment, Studio, Business, and Mixed-Use Residential Areas of the Project Site, as described in Section II, Project Description, of the Draft EIR. The Draft EIR considered construction haul routes along Lankershim Boulevard, Forest Lawn Drive, and Buddy Holly Drive. This analysis

[1] Table 29 Existing Daytime Hourly Traffic Conditions

considers the potential noise impacts on the Forest Lawn Memorial Park Association property along Forest Lawn Drive only, as noise from hauling activities on the Lankershim Boulevard and Buddy Holly Drive would attenuate due to distance and intervening barriers and would not be audible at Forest Lawn Memorial Park Association property.

The Project Site is bounded by the Los Angeles River Flood Control Channel to the north, the Hollywood Freeway to the south, Barham Boulevard and residences to the east, and Lankershim Boulevard and the Universal City Metro Red Line Station to the west. Forest Lawn Drive commences north of the Oakwood Garden Apartments at Barham Boulevard and continues eastbound to the (CA-134) Ventura Freeway. Forest Lawn Drive is bounded by the Los Angeles River Flood Control Channel to the north and by the Santa Monica Mountains, Forest Lawn Memorial Park and Mount Sinai Memorial Park cemeteries, and Griffith Park lands to the south.

The Forest Lawn Memorial Park Association property could experience increased noise levels from construction related activities, limited to construction haul truck trip noise. Construction activity related noise occurring within the Project Site would not be audible over ambient noise levels as the Forest Lawn Memorial Park Association property is located at relatively far distances (i.e., approximately 3,200 feet from the Forest Lawn Drive and Barham Boulevard intersection to the western-most property line of Forest Lawn cemetery) and the Santa Monica Mountains provide an effective natural noise barrier.

The Forest Lawn Memorial Park Association property is a cemetery/mortuary facility located in the City of Los Angeles. The *L.A. CEQA Thresholds Guide* identifies noise sensitive uses as: "residences, transient lodgings, schools, libraries, churches, hospitals, nursing homes, auditoriums, concert halls, amphitheaters, playgrounds, and parks." Cemeteries are not identified as noise sensitive uses, so the Project noise analysis focused on noise sensitive uses, such as the Rancho Neighborhood. Therefore, pursuant to the *L.A. CEQA Thresholds Guide,* the NBC Universal Evolution Plan's construction and haul truck trip noise impacts would not be considered significant with respect to the Forest Lawn Memorial Park Association property.[2] However, the Forest Lawn Memorial Park Association submitted a comment letter on the Draft EIR for the NBC Universal Evolution Plan asserting that noise from hauling operations associated with the NBC Universal Evolution Plan would have significant impacts on the Forest Lawn Memorial Park Association property. For purposes of the analysis contained herein, the thresholds for noise sensitive uses were applied to the Forest Lawn Memorial Park Association property, and the following is an analysis of the Project's potential construction haul truck trip noise impacts on the Forest Lawn Memorial Park Association property.

NOISE SIGNIFICANCE THRESHOLD

For informational purposes and consistent with the analysis presented in the Draft EIR, a significant impact would result if the Project or cumulative noise impacts associated with hauling activities exceeds the minimum ambient L_{eq} between the hours of 7 a.m. and 7 p.m. by more than 5 dB.

SITE CONDITIONS

A) Existing Ambient

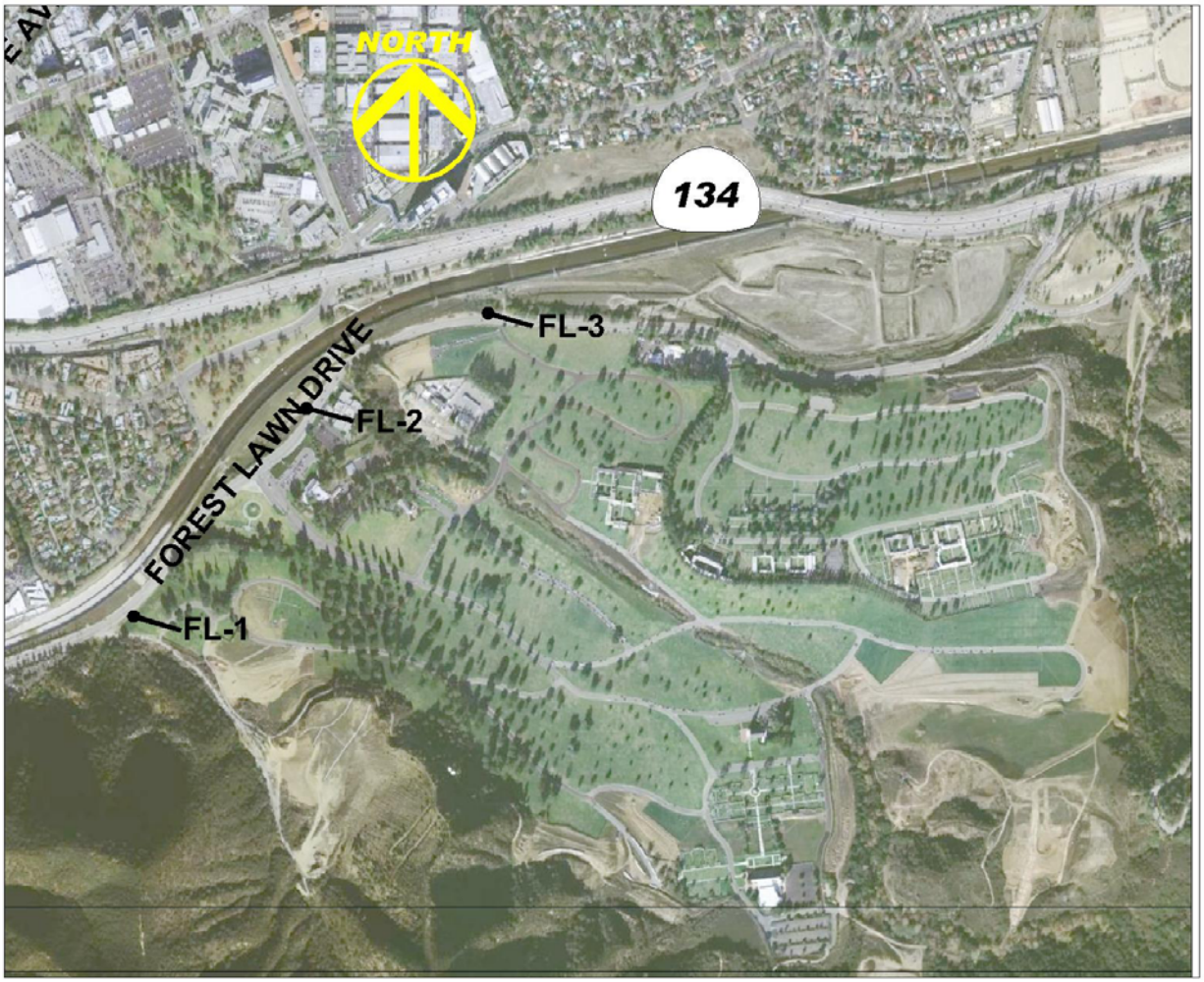
As defined by the *L.A. CEQA Thresholds Guide*, the Forest Lawn Memorial Park Association property is not considered to be a noise sensitive use. Therefore, the noise monitoring conducted for the Draft EIR did not include the Forest Lawn Memorial Park Association property. In order to conduct this supplemental analysis, additional monitoring was conducted.

[2] Similarly, Section IV.I of the Draft EIR for the Forest Lawn Memorial Park – Hollywood Hills Master Plan, February 2011, does not consider such uses to be noise sensitive pursuant to the *L.A CEQA Thresholds Guide*.

Ambient noise monitoring was performed along Forest Lawn Drive at three (3) representative locations adjacent to the Forest Lawn Memorial Park Association property. The field monitoring commenced on May 23, 2011 and ended on May 25, 2011 where a continuous 24-hour data set was acquired for the receptor locations along Forest Lawn Drive. The equipment used for the monitoring, presented in the Appendix, consisted of an American National Standard Institute (ANSI) S1.4 type 1 sound level meter manufactured by Brüel & Kjaer model 2260. The three locations are considered to be representative of the Forest Lawn Memorial Park Association property as the locations are adjacent to the construction hauling route for the NBC Universal Evolution Plan with respect to the Forest Lawn Memorial Park Association property. The receptor locations are shown in Figure 1 and are:

- **FL-1:** At the west end of Forest Lawn Memorial Park Association property (GPS 34° 08' 50.7" N, 118° 19' 52 W)
- **FL-2:** East of the intersection of Forest Lawn and Memorial Drives (GPS 34° 09' 3.5" N, 118° 19' 37.8" W)
- **FL-3:** Intersection of Forest Lawn Drive and Greenwood Way (GPS 34° 09' 10.5" N, 118° 19' 23.7 W)

Figure 1. Monitoring Locations



The noise data, shown in Table 1, presents the values in A-weighted decibels (dBA) for the Equivalent Continuous Noise Level (L_{eq}) metric for the lowest measured hourly level between the hours of 7 a.m. to 7 p.m. Since the hourly noise level changes throughout the day (hour to hour), the lowest measured hourly

level (between 7 a.m. and 7 p.m.) was utilized as the ambient noise level at each receptor location for the purposes of the threshold. Since the threshold of significance relates to whether there is an increase in the ambient L_{eq} by more than 5 dB, using the lowest measured hourly ambient level results in the most conservative threshold for purposes of this analysis.. Details of the measured data are included in the Appendix.

Table 1 Existing Lowest Measured L_{eq} Levels at Monitored Forest Lawn Drive Receptor Locations

Community Receptor Location	Designated Descriptor	Lowest Measured 7 a.m. – 7 p.m. L_{eq} (dBA)
Forest Lawn	FL-1	72.1
	FL-2	72.1
	FL-3	74.6

B) Noise Sources

There are various types of noise sources that impact the Forest Lawn Memorial Park Association property. The following noise sources represent the existing acoustical environment observed along Forest Lawn Drive.

1) Traffic Noise – Forest Lawn Drive

Vehicular noise along Forest Lawn drive occurs on a regular basis. The traffic flow is typically free flowing.

2) Traffic Noise – CA 134

Vehicular noise along the CA-134 Freeway is constant with free flow conditions during noise non-rush hour traffic conditions.

3) Aerial Fly-Overs

Aircraft (airplane & helicopters) routinely fly over the Forest Lawn Memorial Park Association property and the general area.

4) Maintenance/Operations – Forest Lawn Memorial Association property

Noise sources include general gardening (i.e., lawn mowers, etc.), visiting vehicular traffic, and funeral processions.

5) Construction Noise

Specifically at FL-3, construction related noise due to the Department of Water and Power's (DWP) underground reservoir project.

NOISE MODELING

The California Department of Transportation published TeNS "Technical Noise Supplement" in October of 1998 to define how to predict traffic noise for projects in California. Section N-5520 requires that any traffic noise study conducted after March 30, 2000, utilize the calculation methods used by FHWA Traffic Noise Model (TNM).

Construction haul truck trips along Forest Lawn Drive were modeled with the Federal Highway Administration's (FHWA) Traffic Noise Model (TNM). Details of the noise model's validation were presented in the EIR.[3]

The modeling considers many factors that influence the affects of noise. One of these is the decay rate of noise. A point source (i.e., loudspeaker) typically has a decay rate of 6 decibels (dB) per doubling of distance, while a line source (i.e., constant traffic) would have a decay rate of 3 dB per doubling of distance in free field conditions, where no obstructions are present. These decay rates may vary depending on the surface between the noise source and receiving location. If the ground is hard (i.e., asphalt) the decay will likely remain the same, but should the ground be soft (i.e., dirt, grassy) then the decay rate may increase by as much as 1.5 dB per doubling of distance. The modeling will consider other variables which consist of:

- Obstructions - berms, buildings, etc. that may provide shielding between the source and receptor;
- Topography changes (i.e., inclines, declines) along the roadway;
- Vehicle mixture – percentage of light duty automobiles, trucks, etc. and their respective roadway speeds; and
- Vehicle flow – the traffic volume for the various classifications of vehicles.

The supplemental noise modeling incorporated the recommended mitigation measures indicated in Section IV.C, Noise, of the Draft EIR, specifically Mitigation Measure C-4, which would require a 15-foot tall sound barrier that would extend 0.4 miles along Forest Lawn Drive if Project hauling would result in more than 78 haul trips per hour along Forest Lawn Drive. The sound barrier would provide appreciable attenuation to the Rancho Neighborhood within the City of Burbank as stated in the DEIR, but also could result in increased noise levels towards the Forest Lawn Memorial Park Association property due to the noise reflected from the barrier. Thus, the inclusion of the sound barrier in the supplemental noise modeling provides for a more conservative analysis.

The Forest Lawn Memorial Park Association property could experience increased noise levels from construction hauling noise. Construction activity related noise occurring within the Project Site would not be audible over ambient noise levels as the Forest Lawn Memorial Park Association property is located at a relatively far distance (i.e., approximately 3,200 feet from the Forest Lawn Drive and Barham Boulevard intersection to the western-most property line of the Forest Lawn Memorial Park Association property) and the Santa Monica Mountains provide an effective natural noise barrier and are expected to provide a minimum additional 10 dBA of attenuation versus distance alone. Therefore, this analysis only evaluates the noise resulting from construction haul truck trips along Forest Lawn Drive and not the construction related noise that would occur at the Project Site. Based on these factors, the on-site construction from the Project would not impact the Forest Lawn Memorial Park Association property.

The noise modeling was analyzed under peak construction haul truck trips along Forest Lawn Drive for the following construction conditions:

- Studio, Entertainment & Business (SEB) Area Construction - Only
- Universal Mixed-Use (UMU) Residential Construction - Only
- Composite (SEB & UMU) Construction
- Cumulative (SEB, UMU & Off-Site Projects) Construction

PROJECT IMPACTS

The NBC Universal Evolution Plan Draft EIR considers construction within the Mixed-Use Residential Area under two separate scenarios, whereas construction within the balance of the Project Site was analyzed in a single scenario. The haul routes evaluated in the Draft EIR were along Lankershim Boulevard, Forest Lawn Drive, and Buddy Holly Drive. This analysis considers the potential impacts to the Forest Lawn Memorial Park Association

[3] See NBC Universal Evolution Plan Draft EIR Volume 3, section IV.C.3.a.4

property resulting from construction haul truck trips along Forest Lawn Drive. As described in Section IV.B, Traffic/Access – Traffic/Circulation, of the Draft EIR, construction grading and associated haul truck trips will be limited to the hours of 7 a.m. to 7 p.m.[4] This analysis evaluated the scenarios under peak construction hauling conditions. In the first scenario, the "Studio, Entertainment and Business Areas", peak construction haul truck trips will generate 43 trips per hour. In the second scenario, the "Mixed-Use Residential Area", peak construction haul truck trips will generate 89 trips per hour. As stated in the Draft EIR, the maximum number of hourly haul truck trips on Forest Lawn Drive, due to the concurrent development of the two development areas, under the most conservative of assumptions (i.e., all haul truck trips on Forest Lawn Drive, peak Studio, Entertainment and Business areas hauling and Mixed-Use Residential Area hauling are occurring concurrently) is 132 trips per hour (43 trips and 89 trips, respectively).

It is also important to note, as discussed above, that the noise modeling presented in the following analyses incorporates the 15-foot tall sound barrier which would be required by Mitigation Measure C-4 in Section IV.C, Noise, of the Draft EIR if Project hauling would result in more than 78 haul trips per hour along Forest Lawn Drive. In terms of the three receptor locations analyzed in this report, the sound barrier would be located opposite location FL-2, but would not extend to be opposite or near locations FL-1 and FL-3. As a result, the noise environment at location FL-2 would also be affected by reflected noise from the sound barrier, a condition that would not occur at locations FL-1 or FL-3. For this reason, forecasted noise levels at location FL-2 are relatively higher than they are at locations FL-1 and FL-2 across the following analyses (see Tables 2 through 5).

A) Studio, Entertainment and Business Area Development

Table 2 presents the results of the modeling for hauling from the Studio, Entertainment and Business Area only. The greatest increase occurs at receptor location FL-2, with an increase of 2.2 dBA. As a result of the construction at the Studio, Entertainment and Business Area, hauling would have impacts that are not considered significant since the increases in noise levels are below the 5 dBA threshold.

Table 2 Construction Hauling - Studio, Entertainment, and Business Areas Maximum Flow Conditions (L_{eq})

Designated Descriptor	Existing Daytime (7 a.m. to 7 p.m.) Hourly Traffic Conditions L_{eq} (dBA)	Hauling along Forest Lawn Drive	
		Universal Studios Construction Scenario	Incremental Change Due to Construction Hauling
		L_{eq} (dBA)	L_{eq} (dBA)
FL-1	72.1	72.9	0.8
FL-2	72.1	74.3	2.2
FL-3	74.6	75.2	0.6

B) Mixed-Use Residential Development

Table 3 presents the results of the modeling for the hauling from the Mixed-Use Residential Area only. Based on the proposed development, more construction haul truck trips are anticipated for this scenario than for the Studio, Entertainment and Business Area development only. The modeling indicated that the greatest increase in noise levels occurs at FL-2 and is 3.9 dBA for construction haul truck trips. As a result of the construction haul truck trips for the Mixed-Use Residential Area, the impacts are not considered significant since the increases in noise levels are below the 5 dBA threshold.

[4] See NBC Universal Evolution Plan Volume 2, section IV.B.I.3.d.4.b.i

Table 3 Construction Hauling –Mixed-Use Residential Area Maximum Flow Conditions (L_{eq})

Designated Descriptor	Existing Daytime (7 a.m. to 7 p.m.) Hourly Traffic Conditions L_{eq} (dBA)	Hauling along Forest Lawn Drive	
		Mixed-Use Residential Construction Scenario	Incremental Change Due to Construction Hauling
		L_{eq} (dBA)	L_{eq} (dBA)
FL 1	72.1	73.3	1.2
FL 2	72.1	76.0	3.9
FL 3	74.6	76.0	1.4

C) Composite Construction of Project's Development

The Project has the potential to have concurrent construction between the Studio, Entertainment and Business Areas Development and the Mixed-Use Residential Development. It is possible that hauling from the two development areas could occur simultaneously. Therefore an analysis of the potential noise impact of concurrent construction haul truck trips from the two development areas was completed. In this particular scenario, the maximum construction hauling would be 132 trips per hour.

Table 4 presents the results of the modeling of composite noise for the case where the simultaneous hauling from the Studio, Entertainment and Business Areas and Mixed-Use Residential Area occurs. The greatest increase occurs at receptor location of FL-2, with an increase of 4.8 dBA. The increases on the other two receptor locations (FL-1 & FL-3) are less than 2 dBA increase. As a result of the composite construction hauling scenario, where the Studio, Entertainment and Business Areas and Mixed-Use Residential Area are simultaneously under construction, since the increases in noise levels are below the 5 dBA threshold, impacts related to construction hauling are less than significant.

Table 4 Composite of Studio, Entertainment, and Business Areas and Mixed-Use Residential Area Construction Hauling - Maximum Flow Conditions (L_{eq})

Designated Descriptor	Existing Daytime (7 a.m. to 7 p.m.) Hourly Traffic Conditions L_{eq} (dBA)	Hauling along Forest Lawn Drive	
		Universal Studios Construction Scenario	Incremental Change Due to Construction Hauling
		L_{eq} (dBA)	L_{eq} (dBA)
FL 1	72.1	73.5	1.4
FL 2	72.1	76.9	4.8
FL 3	74.6	76.5	1.9

CUMULATIVE IMPACTS

In addition to analyzing the impacts of the Project itself (Studio, Entertainment and Business Area and Universal Mixed-Use Residential Development Areas), the Draft EIR also considered the cumulative impacts from the Project with off-site related projects. This study has determined that there are two off-site related projects that have the potential to combine for cumulative impacts due to construction haul truck trips along Forest Lawn Drive thereby

increasing noise levels at the Forest Lawn Memorial Park Association property. The two off-site related projects are the Oakwood Garden Apartments Expansion project and the Forest Lawn Memorial Park – Hollywood Hills Master Plan project.

At the time the NBC Universal Evolution Plan Draft EIR was being developed, the Oakwood Garden Apartment Expansion project was actively being pursued, but at the time this Supplemental Noise Study was being prepared there had been no formal applications or environmental analysis filed with the City of Los Angeles Department of City Planning. Although it appears that this particular off-site related project may no longer be active, this study has included the construction haul truck trips impacts from this off-site related project, which will provide a conservative estimate, for the cumulative analysis.

A) Off-site Related Projects – Construction Hauling Conditions

As stated above, the Oakwood Garden Apartments has no formal applications or analysis filed with the Department of City Planning and consequently there is no available data that states the forecasted earth removal requirements or the number of haul truck trips that would utilize Forest Lawn Drive. The study has assumed, in the absence of independent data, the Oakwood Garden Expansion project would require a maximum (peak) 20 construction haul trips per hour and that the haul route would occur along Forest Lawn Drive.

The other off-site related project is the Forest Lawn Memorial Park – Hollywood Hills Master Plan for which the City of Los Angeles Department of City Planning published a Draft EIR on February 10, 2011. Within that project's Draft EIR, the following conditions have been determined:

- The peak earth removal requirements will involve 38 construction hauling trips per hour;
- The westernmost entrance to the Forest Lawn Memorial Park Association property would not be utilized; and
- The Forest Lawn Memorial Park - Hollywood Hills Master Plan construction hauling would originate at and increase noise levels at the site itself.

Based on the aforementioned information, cumulative construction hauling would generate 152 trips per hour at receptor location FL-1 (43 from Studio, Entertainment and Business Area Development; 89 from the Mixed-Use Residential Development; 20 from Oakwood Garden Expansion), as the construction hauling from the Forest Lawn Memorial Park – Hollywood Hills Master Plan would not pass by this receptor location. Receptor locations FL-2 & FL-3 would be passed by 190 trips per hour, with approximately 20 percent of those trips being generated by the Forest Lawn project itself. It is also important to note that under the cumulative analysis, Forest Lawn's own haul trucks would cross the Forest Lawn site itself before entering/exiting Forest Lawn Drive.

B) Off-site Related Projects - Analysis

The analysis conducted for the Project as described above has been replicated with regard to cumulative conditions as well. In the unlikely scenario that the Project (NBC Universal Evolution Plan) and the two off-site related projects are under concurrent development and are all in the earth removing stage, the noise increases from construction hauling may result in a significant impact to the Forest Lawn Memorial Park Association property utilizing the significance thresholds for a sensitive receptor. Table 5 presents the results of the modeling of the concurrent related projects. The increases in noise levels at receptor locations FL-1 & FL-3 are 1.5 dBA and 2.5 dBA, respectively, which are below the 5 dBA threshold; therefore, construction haul truck trip noise impacts would be less than significant at these locations. The greatest increase occurs at receptor location FL2, with an increase of 5.9 dBA.

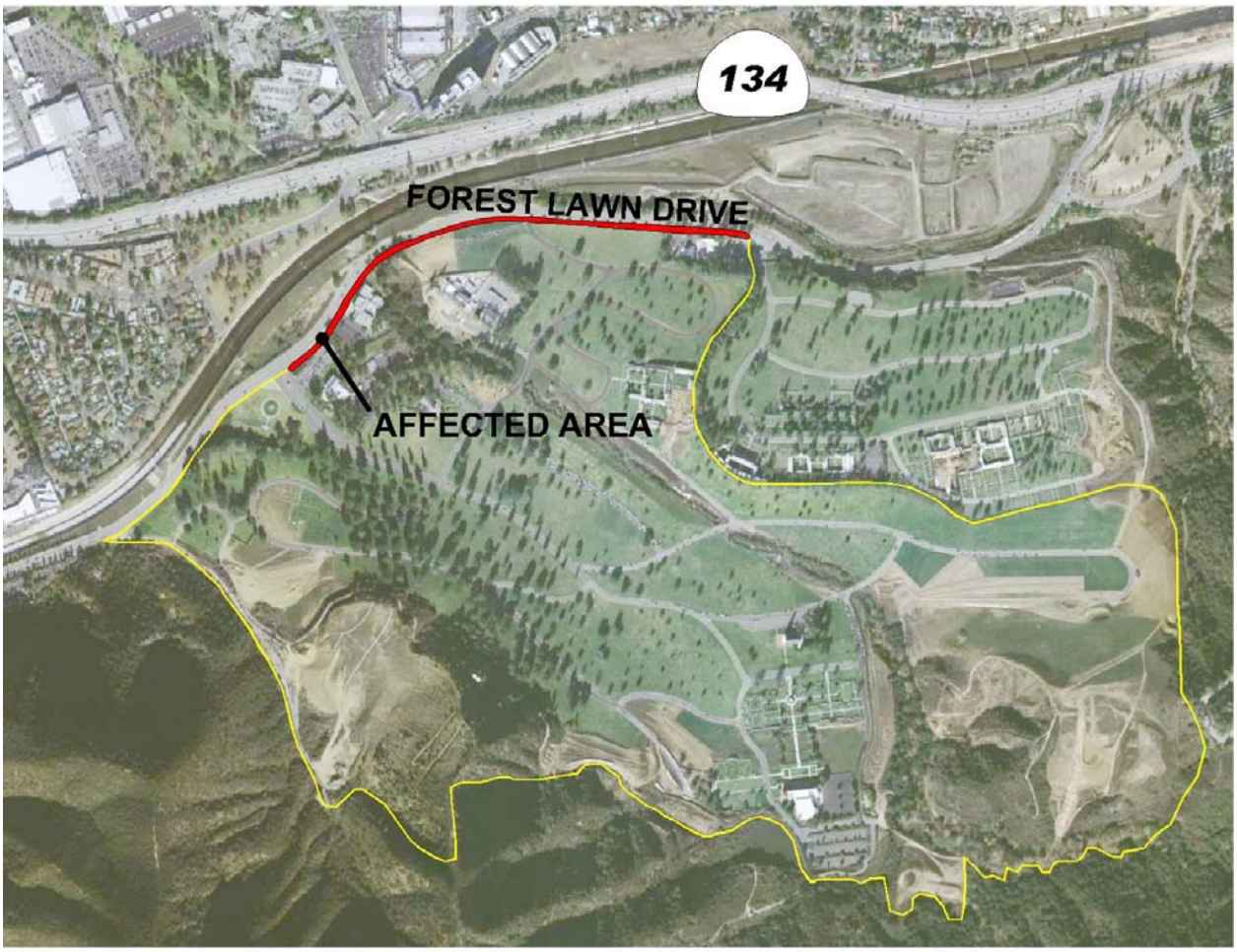
Table 5 Cumulative Construction Hauling
Maximum Flow Conditions, (L_{eq} – Equivalent Sound Level)

Designated Descriptor	Existing Daytime (7 a.m. to 7 p.m.) Hourly Traffic Conditions L_{eq} (dBA)	Hauling along Forest Lawn Drive	
		Universal Studios Construction Scenario	Incremental Change Due to Construction Hauling
		L_{eq} (dBA)	L_{eq} (dB)
FL 1	72.1	73.6	1.5
FL 2	72.1	78.0	5.9
FL 3	74.6	77.1	2.5

As a result of the cumulative construction hauling of the Project and the two specified related projects utilizing Forest Lawn Drive as a construction haul route, an increase that exceeds the 5 dBA threshold would occur and would be a significant impact if the *L.A. CEQA Thresholds Guide* defined the use as a noise sensitive use. It is important to note that such potential noise increases would only occur if hauling from the related projects along or adjacent to Forest Lawn Drive is concurrent with the Project's hauling, and if such concurrent hauling results in more than 141 haul trips per hour. Construction haul truck trips of less than 141 per hour along Forest Lawn Drive would yield a noise level increase of less than 5 dBA. When these trips numbers (141 per hour) are compared against the anticipated 190 trips per hour for the cumulative construction, the likelihood that a 5 dBA noise level increase would occur is small since all three projects (the NBC Universal Evolution Plan, Oakwood Garden Expansion and Forest Lawn Memorial Park - Hollywood Hills Master Plan) would require concurrent peak construction conditions. The probability for this scenario occurring is further reduced, as the Los Angeles Department of Transportation would likely seek to avoid such a condition through the implementation of each project's construction traffic plan.

Although the *L.A. CEQA Thresholds Guide* does not consider this location to be a noise sensitive use, since the projected noise level increase exceeds the 5 dBA threshold at FL-2 based on the anticipated cumulative construction hauling, the extent of the potential impact on the Forest Lawn Memorial Park Association property was further analyzed. Only a limited area would be impacted by a noise level increase of more than 5 dBA within the Forest Lawn Memorial Park Association property and would extend only 10 feet into the property (along Forest Lawn Drive between Memorial Drive and Mount Sinai Drive). This area is highlighted in red in Figure 1.

Figure 2. Noise Impact onto the Forest Lawn Memorial Cemetery



The area that would be potentially impacted by the cumulative construction hauling is immediately adjacent to the Forest Lawn Drive roadway, and the noise content of the cumulative construction hauling noise would be consistent with existing acoustic environment.

The cumulative construction hauling impacts on the Forest Lawn Memorial Park Association property are concluded to be less than significant for the following reasons: 1) this property is not a noise sensitive land use; 2) cumulative noise impacts would only exceed 5 dBA at this property if hourly haul trips exceed 141 trips, a condition that is not likely to occur as the peak haul period for the three projects would have to happen concurrently; and 3) only a limited portion of this property within 10 feet of Forest Lawn Drive would experience noise level increases of 5 dBA or greater and only during concurrent peak hauling. However, to provide further assurance noise from concurrent hauling of the Project and the two related projects will not impact activities at the Forest Lawn Memorial Park Association property, the following additional mitigation is recommended:

1) Prior to initiation of Project hauling along Forest Lawn Drive, the Applicant shall coordinate with the Los Angeles Department of Transportation to determine the number of haul truck trips scheduled to occur along Forest Lawn Drive at that time in connection with the Forest Lawn Memorial Park – Hollywood Hills Master Plan and the Oakwood Garden Apartments expansion.
2) The Applicant shall limit the Project's haul truck trips such that cumulative haul truck trips on Forest Lawn Drive from the Project, Forest Lawn Memorial Park – Hollywood Hills Master Plan, and the Oakwood Garden Apartments expansion does not exceed 140 haul truck trips per hour.

3) At such time as the haul truck trips from the Forest Lawn Memorial Park Master Plan and the Oakwood Garden Apartments expansion are reduced from the level established at the time Project hauling is initiated, the Los Angeles Department of Transportation may allow the Applicant to increase the Project's haul truck trips up to a cumulative total of 140 haul trips per hour.

The Draft EIR concluded that the cumulative noise increase due to construction hauling along Forest Lawn Drive could be as high as 6.9 dBA[5] within the Rancho Neighborhood, while this supplemental study has concluded a noise increase of 5.9 dBA at the FL-2 receptor location, but only if there is concurrent hauling among the proposed Project and the two off-site related projects identified above. The mitigation measure recommended above would assure that the noise levels from such concurrent hauling would be less than 5dBA.

Despite the relatively greater distance from Forest Lawn Drive, 300 feet from the centerline of Forest Lawn Drive for the Rancho Neighborhood and 55 feet for the FL-2 location, the Rancho Neighborhood would experience a noise level increase that is somewhat similar to the increase at FL-2. This is because the ambient noise levels at the Rancho Neighborhood are much lower (51 dBA) than they are at FL-2 (72.1 dBA). Therefore, adding the new noise source has a greater effect on noise levels at the Rancho Neighborhood than at FL-2. Also, the noise increase at FL-2 also takes into account the reflection/attenuation of the sound barrier in Mitigation Measure C-4 within the Draft EIR.

CONCLUSIONS

The NBC Universal Evolution Plan Project has two development areas (Studio, Entertainment and Business Area and Universal Mixed-Use Residential Development Area) that would utilize Forest Lawn Drive for construction hauling. The forecasted earth removal where construction hauling would be required was analyzed during peak construction conditions. The analysis concluded that the noise impacts on the Forest Lawn Memorial Park Association property from construction hauling for the Studio, Entertainment and Business Areas and the Mixed-Use Residential Area would not be significant, since the increases would be below the 5 dBA threshold. The study considered the possibility of concurrent construction hauling from the two development areas from the Project. The analysis indicated that concurrent impacts would be less than significant as the increases above the ambient would be less than 5 dBA for the combined construction hauling conditions of both development areas.

The study considered the cumulative effects of the Project and two off-site related projects that would utilize the Forest Lawn Drive haul route and thereby potentially result in a cumulative impact to the Forest Lawn Memorial Park Association property. The analysis took a conservative approach as one of the off-site related projects considered was the Oakwood Garden Apartment Expansion, which has not submitted formal filings to the City of Los Angeles Department of City Planning and does not appear to be actively pursued at this time. For this particular off-site related project, the analysis anticipated the peak need for construction hauling at the rate of 20 trips per hour. The other off-site related project identified was the Forest Lawn Memorial Park – Hollywood Hills Master Plan, which according to the Draft EIR for that project published by the City of Los Angeles Department of City Planning in February 2011, would generate 38 haul trips per hour during peak conditions. The Draft EIR for the Forest Lawn Memorial Park – Hollywood Hills Master Plan stated that the westernmost entrance to the Forest Lawn Memorial Park Association property would not be utilized as an ingress/egress point for construction hauling. Thus, the analysis considered the maximum rate of 152 trips per hour at FL-1 (Evolution Plan developments and the Oakwood Garden Apartments Expansion) and 190 trips per hour at FL-2 & FL-3 (Evolution Plan developments, Oakwood Garden Apartments Expansion and the Forest Lawn Memorial Park – Hollywood Hills Master Plan). The analysis determined that cumulative noise levels at FL-2 receptor would increase by 5.9 dBA above the ambient noise level, which would exceed the 5 dBA threshold. However, the threshold would only be exceeded if cumulative construction hauling trips were to exceed 141 trips per hour. This number of cumulative trips would only be exceeded if all three projects engage in peak hauling at the same time. It is anticipated that the Los Angeles Department of Transportation would limit concurrent hauling through the implementation of each project's construction traffic management plan. Also, the analysis revealed that even if peak construction hauling from all three

[5] See NBC Universal Evolution Plan Draft EIR Volume 2, section IV.C, Table 73

projects were to occur concurrently , the impact on the Forest Lawn Memorial Park Association property would be limited to a depth of 10 feet within the property (along Forest Lawn Drive between Memorial Drive and Mount Sinai Drive). Although the Forest Lawn Memorial Park Association property is not identified as a noise sensitive use, by the *L.A. CEQA Thresholds Guide*, mitigation measures have been identified that would assure that the noise levels from concurrent hauling would be less than 5dBA.

Noise impacts on the Forest Lawn Memorial Park Association property, including construction noise from hauling and cumulative construction hauling, would be less than significant.

.

APPENDIX

Noise Monitoring Equipment

Measurement Data

Noise Monitoring Equipment

Equipment	SERIAL NUMBER
Brüel &Kjaer 2260 Unit #5	
Brüel & Kjaer 2260 Observer	2433562
Brüel & Kjaer Pre-Polarized Microphone type 4189	2386137
Pre-Amplifier ZC 0026	2567
3-inch Wind Screen	--
Power Cord	--
10-foot Microphone Cable	--
Brüel & Kjaer Sound Analysis SoftWare BZ7219 V1.1	--
Brüel &Kjaer 2260 Unit #7	
Brüel & Kjaer 2260 Observer	2433564
Brüel & Kjaer Pre-Polarized Microphone type 4189	2589592
Pre-Amplifier ZC 0026	3709
2-inch Wind Screen	--
Power Cord	--
10-foot Microphone Cable	--
Brüel & Kjaer Sound Analysis SoftWare BZ7219 V1.1	--
Brüel &Kjaer 2260 Unit #9	
Brüel & Kjaer 2260 Observer	2433567
Brüel & Kjaer Pre-Polarized Microphone type 4189	2199589
Pre-Amplifier ZC 0026	2142
3-inch Wind Screen	--
Power Cord	--
10-foot Microphone Cable	--
Brüel & Kjaer Sound Analysis SoftWare BZ7219 V1.1	--
Brüel &Kjaer 2260 Unit #11	
Brüel & Kjaer 2260 Observer	2349999
Brüel & Kjaer Pre-Polarized Microphone type 4189	2440387
Pre-Amplifier ZC 0026	--
2-inch Wind Screen	--
Power Cord	--
10-foot Microphone Cable	--
Brüel & Kjaer Sound Analysis SoftWare BZ7219 V1.1	--

Measurement Data

ID FL1 Forest Lawn 23-25 May, 2011									ID FL2 Forest Lawn 23-25 May, 2011							
Hour	L_{eq}	L_{max}	L_{min}	L_1	L_{10}	L_{50}	L_{90}	L_{99}	L_{eq}	L_{max}	L_{min}	L_1	L_{10}	L_{50}	L_{90}	L_{99}
0	66	84	45	78	69	54	48	46	65	82	46	76	69	56	52	49
1	64	86	44	77	65	51	46	45	63	82	43	75	65	54	50	46
2	64	93	44	77	66	52	47	45	63	88	45	76	65	54	49	46
3	61	83	43	74	60	48	46	45	61	83	44	73	61	53	49	46
4	63	82	45	75	65	52	48	47	64	84	48	77	65	56	52	50
5	68	87	49	78	73	60	53	50	70	93	53	81	74	62	57	55
6	72	85	48	80	76	67	57	51	73	91	58	82	78	68	61	59
7	74	91	50	82	78	73	62	53	76	89	58	83	80	74	63	60
8	75	88	50	82	78	73	62	55	76	90	58	83	80	74	65	60
9	73	87	49	81	77	71	60	53	75	93	57	82	79	72	62	59
10	72	88	48	80	76	69	58	51	73	88	57	81	77	70	62	59
11	72	94	48	81	76	69	59	52	72	96	55	81	76	69	60	57
12	72	86	47	81	77	68	57	50	72	93	55	80	76	69	59	57
13	72	86	48	81	77	69	55	50	73	86	54	81	76	70	61	57
14	73	90	48	81	77	69	56	51	72	89	54	81	76	70	59	57
15	73	89	49	81	77	69	56	51	73	88	54	81	77	70	59	56
16	74	92	47	82	78	71	58	51	74	87	54	81	78	72	60	56
17	75	95	49	82	79	73	62	52	75	94	51	82	79	73	63	56
18	75	86	49	82	79	74	64	52	75	85	52	82	78	73	64	56
19	74	94	51	82	78	70	60	54	73	88	56	81	77	71	61	58
20	72	92	52	81	76	67	57	54	71	88	56	79	75	67	60	58
21	71	87	48	80	75	65	56	52	70	87	55	79	75	66	59	56
22	71	85	50	80	76	65	55	52	70	86	55	79	74	65	58	57
23	69	95	48	79	73	61	52	50	68	89	52	78	72	62	56	54
CNEL	76								76							

Measurement Data

ID FL3 Forest Lawn
23-25 May, 2011

Hour	L_{eq}	L_{max}	L_{min}	L_1	L_{10}	L_{50}	L_{90}	L_{99}
0	67	89	47	79	70	57	53	50
1	65	87	45	79	65	54	51	48
2	66	93	45	79	66	55	50	47
3	63	87	45	76	61	55	51	48
4	66	85	48	79	66	57	53	50
5	72	94	52	83	76	63	58	55
6	75	92	57	84	80	68	61	59
7	78	91	58	85	82	75	64	60
8	78	97	58	85	82	76	66	62
9	77	94	56	84	81	73	63	59
10	75	90	56	83	80	71	62	58
11	75	93	55	83	79	71	62	58
12	75	97	54	83	79	72	62	57
13	75	89	54	83	79	72	61	57
14	75	88	54	83	79	72	61	57
15	75	88	52	83	79	71	60	56
16	76	89	53	84	81	74	63	56
17	77	95	51	84	81	75	64	57
18	77	88	53	84	81	75	65	58
19	76	92	51	84	80	72	62	56
20	73	94	55	82	78	67	60	57
21	72	88	54	82	77	66	59	56
22	72	88	55	82	77	65	59	57
23	70	90	52	81	74	62	57	54
CNEL	78							

Appendix FEIR-12

Climate Change Technical Report
NBC Universal Evolution Plan

Climate Change Technical Report
NBC Universal Evolution Plan

Prepared for:
Universal City Studios LLLP, L.P.
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Date:
June 2012

Project Numbers:
0317201A

ENVIRON

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Appendix A: CalEEMod Output Files

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Acronyms and Abbreviations

ARB	Air Resources Board
BAU	Business-As-Usual
CalEEMod	California Emission Estimator Model
CARB	California Air Resources Board
CEC	California Energy Commission
CEUS	California End Use Survey
CEQA	California Environmental Quality Act
CO_2	carbon dioxide
CO_2e	CO_2 equivalents
DEIR	Draft Environmental Impact Report
EIR	Environmental Impact Report
EMFAC	EMission FACtors software program
ENVIRON	ENVIRON International Corporation
FED	Final Supplement to the AB 32 Scoping Plan Functional Equivalent Document
FEIR	Final Environmental Impact Report
GHGs	greenhouse gases
GWP	global warming potential
IPCC	Intergovernmental Panel on Climate Change
LADWP	Los Angeles Department of Water and Power
LCFS	low-carbon fuel standard
MMT	Million metric tonne
MSW	municipal solid waste management
$MTCO_2e$	metric tonnes of CO_2 equivalent
OFFROAD	OFFROAD Emissions Inventory Program model
RASS	Residential Appliance Saturation Survey
SCAQMD	South Coast Air Quality Management District
SCE	Southern California Edison
the City	City of Los Angeles
the County	County of Los Angeles
the Project	NBC Universal Evolution Plan
the Project Site	391 acres located approximately two miles north of Hollywood and 10 miles northwest of downtown Los Angeles
tonnes	Metric tonnes; 1,000 kilograms
TDM	Transportation Demand Management
USEPA	United States Environmental Protection Agency
Working Group	Threshold Working Group

1 Executive Summary

In support of the Final Environmental Impact Report (FEIR) Climate Change section, ENVIRON International Corporation (ENVIRON) prepared this Climate Change Technical Report to update the assessment of the Greenhouse Gas (GHG) emissions associated with the NBC Universal Evolution Plan (the Project), including emissions generated during construction and operation. This analysis makes use of the assumptions previously reported in the Draft Environmental Impact Report (DEIR), but incorporates changes due to the evolving science of evaluating GHG issues since the completion of the DEIR. The primary technical change includes the evaluation of the GHG emissions using CalEEMod.[1] CalEEMod is a statewide program designed to calculate both criteria and GHG emissions from development projects in California. This model was developed under the auspices of the SCAQMD and received input from other California air districts. CalEEMod was developed for use in the assessment of project emissions after the release of the DEIR. CalEEMod utilizes widely accepted models for emission estimates combined with appropriate default data that can be used if site-specific information is not available.

As discussed in Section 2, the Project would include the development of approximately 1.83 million square feet of net new studio, studio office, entertainment, entertainment retail, and related uses, including 500 hotel rooms and related facilities. In addition, the Project would include approximately 2,937 residential dwelling units and 115,000 square feet of retail/commercial uses, and up to 65,000 square feet of community serving uses (e.g., community center). To accommodate the proposed development, approximately 638,000 square feet of existing studio, office, and entertainment uses would be demolished.

As discussed in Section 3, the regulatory setting also has changed since the completion of the DEIR. On August 19, 2011, CARB released a Final Supplement to the AB 32 Scoping Plan Functional Equivalent Document ("FED" or "2011 Scoping Plan") that updated the AB 32 Scoping Plan originally adopted in 2008. In the FED, CARB updated the projected Business-As-Usual (BAU) emissions for 2020 based on updated economic forecasts due to the economic downturn. The CARB 2020 BAU projection for GHG emissions in California was originally estimated to be 596 $MMTCO_2e$. The updated CARB 2020 BAU projection in the FED is approximately 545 $MMTCO_2e$.[2, 3] Considering the updated BAU estimate of 545 $MMTCO_2e$ by 2020, CARB now estimates a 21.7 percent reduction below the estimated statewide BAU levels is necessary to return to 1990 emission levels (i.e., 427 $MMTCO_2e$) by 2020, instead of the 28.5% BAU reduction previously reported under the AB 32 Scoping Plan (2008).[4]

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[1] SCAQMD, 2011, California Emissions Estimator Model. Available at: http://www.caleemod.com/ Accessed: December 2011.

[2] CARB, 2011. Attachment D, Final Supplement to the AB 32 Scoping Plan Functional Equivalent Document. August 19. Available at: http://www.arb.ca.gov/cc/scopingplan/document/final_supplement_to_sp_fed.pdf. Accessed: June 2012.

[3] CARB, 2011. Status of Scoping Plan Measures. Available at: http://www.arb.ca.gov/cc/scopingplan/sp_measures_implementation_timeline.pdf. Accessed: June 2012.

[4] Note that CARB also provided an even lower emissions 2020 BAU inventory forecast of approximately 507 $MMTCO_2e$, which took credit for certain GHG reduction measures already in place. If this lower forecast is

Section 4 describes the CEQA significance threshold utilized in the DEIR and herein. Section 5 describes the standard emission estimation methods employed to determine Project GHG emissions from construction and operations. Section 6 presents the Project's GHG emission inventories and compares them to the CEQA significance threshold.

Summary Table 9b shows total GHG emissions for construction and operation of the Project and the CARB 2020 BAU scenario. The CARB 2020 BAU GHG emissions inventory is 89,890 MT CO_2e per year. The Project GHG emissions inventory is 59,715 MT CO_2e per year. The Project represents a 33.6 percent reduction from a CARB 2020 BAU scenario due to the Project's sustainability commitments and changes in emission factors due to implementation of statewide GHG emissions reduction measures. The analysis set forth herein shows that the Project would be consistent with both the AB 32 Scoping Plan (2008) and the FED, as was concluded in the DEIR.

used, the necessary reduction from BAU is approximately 16%. However, in order to be consistent with the analysis in the 2008 Scoping Plan, which did not take credit for any GHG reduction measures, this analysis uses a comparison to the BAU inventory that only accounted for the economic adjustments to the BAU inventory (i.e., 545 $MMTCO_2e$).

2 Introduction

This report updates the evaluation of the greenhouse gas (GHG) emissions associated with the development of the Universal Studios property. This analysis includes the Project GHG emission inventory that is used to determine climate change impacts as proposed by the South Coast Air Quality Management District (SCAQMD). This report documents the methodologies used by ENVIRON in developing the GHG emission inventory and determining significance under the California Environmental Quality Act (CEQA) GHG thresholds.

2.1 Project Description

The Project is described in detail in the DEIR. For the convenience of the reader, the project description is summarized here.

The Universal Studios property comprises approximately 391 acres located approximately two miles north of Hollywood and 10 miles northwest of downtown Los Angeles (the Project Site). The Project Site is located approximately 1.5 miles south and east of the junction of US Route 101 (Hollywood Freeway) and State Route 134 (Ventura Freeway). The Project Site is generally bounded by the Los Angeles River Flood Control Channel to the north, the Hollywood Freeway to the south, Barham Boulevard and residences to the east, and Lankershim Boulevard and the Universal City Metro Rail Red Line Station to the west.

The Project Site is currently located within two jurisdictions, with approximately 95 acres (24 percent) located within the City of Los Angeles (the City) and 296 acres (76 percent) located within the unincorporated area of Los Angeles County (the County). The City portions are currently located within the northeastern corner of the Project Site along Barham Boulevard; the southeastern corner of the Project Site along Barham Boulevard and Buddy Holly Drive; the southwestern portion of the Project Site, adjacent to the Hollywood Freeway and along the south side of Universal Hollywood Drive as it extends towards Lankershim Boulevard; and two small slivers of land along the northern boundary. The portion of the Project Site within County jurisdiction is a contiguous area encompassing most of the northern, central, and western portions of the Project Site.

The proposed Project includes the development of approximately 1.83 million square feet of net new studio, studio office, office, entertainment, entertainment retail, and related uses, including 500 hotel rooms and related facilities, which would be constructed within the Studio, Entertainment and Business Areas. In addition, approximately 2,937 residential dwelling units and 115,000 square feet of retail/commercial uses and up to 65,000 square feet of community serving uses would be constructed within the proposed Mixed-Use Residential Area along the eastern portion of the Project Site. To accommodate the proposed development, approximately 638,000 square feet of existing studio, office, and entertainment uses would be demolished. The Project includes the proposed annexation of 76 acres of land from the County to the City and detachment of 32 acres of land from the City to the County. The result of the annexation would be to place all of the proposed Mixed-Use Residential Area uses within the City. The NBC Universal Evolution Plan EIR assesses Project impacts under proposed conditions (*i.e.*, with annexation) and under current jurisdictional boundaries (*i.e.*, no annexation). Table 1

provides a summary comparison of the net new square footage for the proposed development program in the column labeled proposed Project (Annexation Scenario).

Should the proposed annexation not occur, Table 1 also provides a summary comparison of the net new square footage for the proposed development program in the column labeled No Annexation Scenario. Similar to the Annexation Scenario, the development of approximately 1.83 million square feet of net new studio, studio office, office, entertainment, entertainment retail, and related uses, including 500 hotel rooms and related facilities, plus 2,937 residential units, 115,000 square feet of retail/commercial, and 65,000 square feet of community serving uses would occur; however, these uses would be positioned based on existing jurisdictional boundaries. Specifically, the residential land uses proposed for the eastern edge of the Project Site would be located on both City and County lands, while an increased mix of commercial, office, and studio office would be located within City boundaries. The proposed hotel would be situated within the boundaries of the City under the No Annexation scenario.

Four principal Areas are currently identifiable on the Project Site: (1) the Studio Area, which consists mainly of studio offices and production facilities for movie, television and commercial production; (2) the Entertainment Area, encompassing two discrete sub-areas: Universal Studios Hollywood, which is an admission based entertainment venue that includes a tram tour through the existing Back Lot Area, and Universal City Walk and its related uses which are mainly entertainment retail venues, including Universal City Cinemas, Gibson Amphitheater, retail, restaurant, and other entertainment opportunities; (3) the Business Area, which encompasses the offices and related structures along the western portion of the Project Site fronting Lankershim Boulevard; and (4) the Back Lot Area, which currently provides production facilities, movie sets, and portions of the Universal Studios Hollywood entertainment venue. The proposed Project builds upon the four existing Areas and modifies portions of the existing Back Lot Area to create a new Mixed-Use Residential Area and incorporates the remaining Back Lot Area into the Studio Area.

2.2 Report Overview

The City of Los Angeles is the lead agency for the Project under the California Environmental Quality Act (CEQA). The City previously determined that an Environmental Impact Report (EIR) be prepared as part of its CEQA review process.[5] In support of the EIR's Climate Change section, a Greenhouse Gas (GHG) Technical Report was prepared by CTG Energetics, Inc., in March 2010.[6]The analysis set forth herein has been prepared to incorporate several changes in evaluating a project's potential impacts on climate change that have arisen since preparation of the original technical report. The key changes include the following:

- Using CalEEMod model to estimate GHG emissions;
- Utilizing the FED to inform the comparison between Project emissions and BAU emissions; and

[5] City of Los Angeles (LAC). 2007. "Notice of Preparation and Notice of Public Scoping Meeting." City of Los Angeles, Department of City Planning. July 19.
[6] CTG. 2010. Appendix Q. Global Warming Technical Report.

- Incorporating new state law regarding an increase in the Renewable Portfolio Standard (RPS).

These updates are discussed in more detail in following sections of the Technical Report. The remaining sections of this report describe the methods used to conduct this analysis.

3 Regulatory Environment for the GHG Inventory

The climate change regulatory setting – federal, state and local – is complex and rapidly evolving. This section identifies only regulatory developments germane to this updated GHG emissions report.

3.1 California Legislation

California has enacted several pieces of legislation that relate to GHG emissions and climate change, much of which sets aggressive goals for GHG reductions within the state. Per Senate Bill 97, the California Natural Resources Agency adopted amendments to the CEQA Guidelines, which address the specific obligations of public agencies when analyzing GHG emissions under CEQA to determine a project's effects on the environment. However, neither a threshold of significance nor any specific mitigation measures are included or provided in these CEQA Guideline amendments.

3.1.1 Assembly Bill 32 (Statewide GHG Reductions)

The California Global Warming Solutions Act of 2006, widely known as AB 32, requires the California Air Resources Board (CARB) to develop and enforce regulations for the reporting and verification of statewide GHG emissions. CARB is directed to set a statewide GHG emission limit, based on 1990 levels, to be achieved by 2020. The bill set a timeline for adopting a scoping plan for achieving GHG reductions in a technologically and economically feasible manner.

The heart of the bill is the requirement that statewide GHG emissions be reduced to 1990 levels by 2020. As determined by CARB, California must reduce GHG emissions to a level that is approximately 28.4% below CARB's 2020 "business-as-usual" GHG emission projections (as set forth in the 2008 Scoping Plan) to achieve this goal.[7] The bill requires CARB to adopt rules and regulations in an open public process to achieve the maximum technologically feasible and cost-effective GHG reductions. Key AB 32 milestones were as follows:

June 30, 2007—Identification of discrete early action greenhouse gas emissions reduction measures. On June 21, 2007, CARB satisfied this requirement by approving three early action measures. These were later supplemented by adding six other discrete early action measures.

January 1, 2008—Identification of the 1990 baseline GHG emissions level and approval of a statewide limit equivalent to that level. Adoption of reporting and verification requirements concerning GHG emissions. On December 6, 2007, CARB approved a statewide limit on GHG emissions levels for the year 2020 consistent with the determined 1990 baseline.

January 1, 2009—Adoption of a scoping plan for achieving GHG emission reductions. On October 15, 2008, CARB issued a "discussion draft" Scoping Plan entitled "Climate Change

[7] CARB has not calculated the percent reduction required to achieve AB 32's mandate of returning to 1990 levels of GHG emissions by 2020. The value of 28.4% as the required reduction to achieve 1990 emissions in 2020 is an approximate value. Based on the Scoping Plan estimates and conservative rounding, the value could be 28.5%.

Draft Scoping Plan: A Framework for Change" (Draft Scoping Plan). CARB adopted the Draft Scoping Plan at its December 11, 2008 meeting.

January 1, 2010—Adoption and enforcement of regulations to implement the "discrete" actions.

January 1, 2011—Adoption of GHG emissions limits and reduction measures by regulation.

January 1, 2012—GHG emissions limits and reduction measures adopted in 2011 become enforceable.

Emission reduction measures that cannot be initiated in the 2007-2012 timeframe were considered in the Scoping Plan, which was published by CARB in December 2008. The Scoping Plan is defined by AB 32 as "achieving the maximum technologically feasible and cost-effective reductions in GHG emissions from sources or categories of sources of GHGs by 2020." Scoping Plan measures include direct emission reductions, alternative compliance mechanisms, market-based compliance mechanisms, and potential monetary and non-monetary incentives for sources for categories. By January 1, 2014 and every five years thereafter, CARB will update its Scoping Plan.

As discussed above, CARB developed a list of "discrete early actions" to reduce GHG emissions. Early action measures are those that were developed for implementation by January 2010. CARB approved the expanded list of early action measures on October 25, 2007. The nine discrete early action measures are:

- Increased Methane Capture from Landfills: On June 17, 2010, the regulation to reduce CH_4 emissions from municipal solid waste (MSW) landfills became effective. It requires owners and operators of certain uncontrolled MSW landfills to install gas collection and control systems, and requires existing and newly installed gas collection and control systems to operate in an optimal manner. The regulation is a discrete early action measure to reduce greenhouse gas emissions in California as described in the Global Warming Solutions Act. The Landfill Methane Control Measure incorporates the Intergovernmental Panel on Climate Change (IPCC's) calculation methods, as indicated in Appendix I of the final rule[8].
- Low-carbon fuel standard (LCFS): Requires the implementation of a low carbon fuel standard that reduces the carbon content of fuels used for motor vehicles.
- Reduction of Motor Vehicle A/C Refrigerant Losses: This measure restricts the sale of "do-it-yourself" automotive refrigerants to the public. This will restrict the refrigerant changes to professionals and will, as a result, reduce losses of these high global warming potential (GWP) gases.
- Smartway Truck Efficiency: Requires existing trucks and trailers to be retrofitted with devices that reduce aerodynamic drag, thus resulting in a 1.3 million metric tonne (MMT) reduction of GHG equivalents as well as reducing fuel consumption.

[8] Available at: http://www.arb.ca.gov/regact/2009/landfills09/landfillfinalfro.pdf. Accessed: August 2011.

- Port electrification: This measure will require docked ships to shut off their auxiliary engines by plugging into shoreside electrical outlets. This project will also reduce GHG emissions by 500,000 MT every year.
- Reduction of perfluorocarbons from the semiconductor industry: Alternative chemistry development, emissions abatement, and recovery and recycling will lessen GHG emissions by 500,000 MT annually.
- Reduction of propellants in consumer products: Aerosols, tire inflators, electronics cleaning, and dust removal products all contain propellants that contribute an estimated 300,000 MT of GHG emissions in California every year.
- Tire inflation: CARB will craft regulations requiring tune-up, smog check, and oil change mechanics to ensure proper tire inflation as part of overall service. California will see a 200,000 MT reduction in GHG emissions.
- SF_6 reductions from non-electricity sector: CARB proposes to ban the use of SF_6 from non-essential uses if viable alternatives are available.

As of April 22, 2010, 14 of 30 CARB regulations were approved, including all nine discrete early actions as required by AB 32.[9]It is estimated that the nine proposed discrete early actions will provide approximately 16 $MMTCO_2e$ of GHG reductions while the other early actions will provide approximately 26 $MMTCO_2e$ of GHG reductions. It also is anticipated that an additional 30 $MMTCO_2e$ in reductions will be achieved from the passage of anti-idling measures and AB 1493.[10]The remaining reductions necessary to achieve the goals of AB 32 (*i.e.,* 1990 levels by 2020) are expected to be achieved through CARB's Scoping Plan and other emission reduction efforts by members of the Climate Action Team (CAT).

On August 19, 2011, CARB released a Final Supplement to the AB 32 Scoping Plan Functional Equivalent Document ("FED" or "2011 Scoping Plan") that updated the AB 32 Scoping Plan originally adopted in 2008. In the FED, CARB updated the projected Business-As-Usual (BAU) emissions for 2020 based on updated economic forecasts due to the economic downturn. The CARB 2020 BAU projection for GHG emissions in California was originally estimated to be 596 $MMTCO_2e$. The updated CARB 2020 BAU projection in the FED is approximately 545 $MMTCO_2e$.[11, 12] Considering the updated BAU estimate of 545 $MMTCO_2e$ by 2020, CARB now estimates a 21.7 percent reduction below the estimated statewide BAU levels is necessary

[9] CARB. 2010. AB 32 Climate Change Scoping Plan Implementation Update. April 22. http://www.arb.ca.gov/board/books/2010/042110/10-4-1pres.pdf. Accessed: June 2011.

[10] AB 1493 (Pavley) requires a reduction in GHG emissions from passenger vehicles in California. Setting GHG emission standards for California passenger vehicles requires a waiver from the USEPA.

[11] CARB, 2011. Attachment D, Final Supplement to the AB 32 Scoping Plan Functional Equivalent Document. August 19. Available at: http://www.arb.ca.gov/cc/scopingplan/document/final_supplement_to_sp_fed.pdf. Accessed: June 2012.

[12] CARB, 2011. Status of Scoping Plan Measures. Available at: http://www.arb.ca.gov/cc/scopingplan/sp_measures_implementation_timeline.pdf. Accessed: June 2012.

to return to 1990 emission levels (i.e., 427 $MMTCO_2e$) by 2020, instead of the approximate 28.4% BAU reduction previously reported under the AB 32 Scoping Plan (2008).[13]

3.1.2 California Senate Bills 1078, 107, and 2; Renewables Portfolio Standard

Established in 2002 under California Senate Bill 1078 and accelerated in 2006 under California Senate Bill 107, California's RPS requires retail suppliers of electric services to increase procurement from eligible renewable energy resources by at least 1 percent of their retail sales annually, until they reach 20 percent by 2010.

On April 2, 2011, Governor Jerry Brown signed California Senate Bill 2 to increase California's RPS to 33 percent by 2020. This new standard also requires regulated sellers of electricity to procure 25 percent of their energy supply from certified renewable resources by 2016.

3.1.3 Low Carbon Fuel Standard

California Executive Order S-01-07 (January 18, 2007) requires a 10 percent or greater reduction in the average carbon intensity for transportation fuels in California regulated by CARB. CARB identified the LCFS as a Discrete Early Action item under AB 32, and the final resolution (09-31) was issued on April 23, 2009.[14]

[13] Note that CARB also provided an even lower emissions 2020 BAU inventory forecast of approximately 507 MMTCO2e, which took credit for certain GHG reduction measures already in place. If this lower forecast is used, the necessary reduction from BAU is approximately 16%. However, in order to be consistent with the analysis in the 2008 Scoping Plan, which did not take credit for any GHG reduction measures, this analysis uses a comparison to the BAU inventory that only accounted for the economic adjustments to the BAU inventory (i.e., 545 MMTCO2e).

[14] Available at: www.arb.ca.gov/fuels/lcfs/lcfs.htm. Accessed: June 2012.

4 GHG Significance Threshold

The DEIR used consistency with AB 32 as the method of determining whether the Project's impacts were significant. The DEIR compared the Project's emissions as proposed to the Project's emissions if the Project were built using a BAU approach in terms of design, methodology, and technology. If the difference between the Project's emissions as proposed and the Project's emissions under a CARB 2020 BAU scenario is at least the difference that has been determined by CARB as necessary to meet AB 32's goals, then the Project can be determined to be consistent with AB 32 and thus not significant for GHG emissions. Previously, based on state-wide growth projections, CARB indicated that achieving AB 32's goals would require approximately a 28.4% break from a CARB 2020 BAU projection.

This updated Climate Change Technical Report follows the same method of determining significance by analyzing consistency with AB 32 through evaluating the Project's break from a CARB 2020 BAU projection. However, CARB has approved an update to the 2008 AB 32 Scoping Plan (i.e., the FED) as discussed in Section 3. This update included lower state-wide growth projections and, thus, a lower break from CARB 2020 BAU projection that is necessary to achieve AB 32's goals. Based on current state-wide growth projections, CARB has indicated that achieving AB 32's goals would require approximately a 21.7% break from the CARB 2020 BAU projection. To be consistent with updated regulations and methodologies, this updated Climate Change Technical Report uses the more recently approved value from CARB (i.e., 21.7%) to determine significance of the Project's GHG emissions.

5 Emission Estimation Methods

This section describes the methodology that was used to develop the GHG emissions inventories for construction and operational emissions associated with the Project. Legislation and rules regarding climate change, as well as the scientific understanding of the extent to which different activities emit GHGs, continue to evolve. As such, the inventories in this report are a reflection of the guidance and knowledge currently available.

ENVIRON primarily utilized CalEEMod version 2011.1.1[15] to assist in quantifying the GHG emissions in the inventories presented in this report for the Project.[16] CalEEMod is a statewide program designed to calculate both criteria and GHG emissions from development projects in California. This model was developed under the auspices of the SCAQMD and received input from other California air districts. CalEEMod utilizes widely accepted models for emission estimates combined with appropriate default data that can be used if site-specific information is not available. These models and default estimates use sources such as the United States Environmental Protection Agency (USEPA) AP-42 emission factors,[17] CARB's on-road and off-road equipment emission models such as the EMission FACtor model (EMFAC) and the Offroad Emissions Inventory Program model (OFFROAD), and studies commissioned by California agencies such as the California Energy Commission (CEC) and CalRecycle.

OFFROAD is an emissions factor model used to calculate emission rates from off-road mobile sources (e.g., construction equipment, agricultural equipment).[18] EMFAC is an emissions factor model used to calculate emissions rates from on-road vehicles (e.g. passenger vehicles, haul trucks).[19] The off-road diesel emission factors used by CalEEMod are based on the CARB OFFROAD2007 program.[20]

ENVIRON used LA South Coast County CalEEMod defaults in the model runs unless otherwise noted in the methodology descriptions below. Electrical power will be supplied to the Project Site by both Los Angeles Department of Water and Power (LADWP) for the City areas and Southern California Edison (SCE) for the County areas. Accordingly, indirect GHG emissions from electricity usage are calculated using the LADWP's and SCE's carbon-intensity factors in

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[15] SCAQMD, 2011, California Emissions Estimator Model. Available at: http://www.caleemod.com/, Accessed: December 2011.

[16] The 2010 GHG Technical Report used the CTG Sustainable Communities Model (SCM)® methodology to estimate GHG emissions from the Project. While this model was accepted for use by the California Attorney General at the time of the analysis, technological advances since 2010 have led to other approved models for GHG analyses. Specifically, the SCAQMD recommends the use of CalEEMod for all CEQA projects for which the SCAQMD is the lead agency or commenting agency. As a result, this update used CalEEMod for operational emissions.

[17] The USEPA maintains a compilation of Air Pollutant Emission Factors and process information for several air pollution source categories. The data is based on source test data, material balance studies, and engineering estimates. Available at: http://epa.gov/ttnchie1/ap42/, Accessed: December 2011

[18] SCAQMD, 1993. Off Road Mobile Source Emission factors. Available at:http://www.aqmd.gov/ceqa/handbook/offroad/offroad.html, Accessed December 2011.

[19] CARB, 2010. EMFAC 2007 Release. Available at: http://arb.ca.gov/msei/onroad/latest_version.htm, December 2011.

[20] Correction factor of 33% reduction in emission factors as suggested by CARB in 2010 for programs like CalEEMod using OFFROAD 2007 was not considered in this Project analysis. While CARB finds that it is justifiable to include this correction factor, the analysis conservatively evaluates the Project without this reduction.

CalEEMod based on the 2008 Power/Utility Reporting Protocol. Details regarding the specific methodologies used by CalEEMod can be found in the CalEEMod User's Guide and associated appendices.[21] The CalEEMod output files are provided for reference in Appendix A to this report, which includes separate runs for the LADWP and SCE jurisdictions.

5.1 Greenhouse Gas Emission Estimation – Construction

GHG emissions from construction of the Project were calculated as described in the Air Quality Technical Report and corresponding appendices.[22] They are also reported in Section IV.O Climate Change, Table 204 of the DEIR. Due to the complexity of the potential construction schedule for the Project, the construction assumptions were not re-modeled in CalEEMod. However, the construction emissions previously estimated were completed using the same methodology as that used in CalEEMod. The emission estimates are based on emission factors as provided by the SCAQMD and USEPA. On-Road emission factors were obtained from the SCAQMD[23] and are based on an EMFAC2007 model run that is specific to the South Coast Air Basin. Off-Road emission factors were also obtained from the SCAQMD[24] and are based on an OFFROAD2007 model run. The construction emissions for the Project are shown in Table 2.

5.2 Greenhouse Gas Emission Estimation – Operations

Five sub-categories of GHG emissions are included: building energy use; mobile sources; solid waste; water and wastewater; and vegetation. The sections below describe specific sources of GHGs during operation of the Project. A 30-year annualized construction value is added to operational emissions, as discussed in Section 5.1. Use of a 30-year project life is based on draft guidance provided by SCAQMD. The total emissions are compared to the significance threshold described in Section 4. The subsections below describe the methodology used in developing the GHG emission inventories and, in particular, any project specific assumptions. The methodology and calculations are more fully described in CalEEMod User's Guide Appendix A. The CalEEMod output files are provided for reference in Appendix A to this report.

5.2.1 Building Energy Usage

For the Project, the energy intensity value was estimated based on site specific data and CalEEMod default energy intensity values specific to land use were used in the analysis.[25] The Project was assumed to exceed Title 24 (2005) standards by 15%. The program uses the California Commercial End Use Survey (CEUS)[26] database to develop energy intensity values (electricity or natural gas usage per square feet per year) for non-residential buildings and the

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[21] SCAQMD, 2011, California Emissions Estimator Model User's Guide. Version 2011.1.1. February. Available at: http://www.caleemod.com/.Accessed: April 2012.

[22] ENVIRON, 2010. Air Quality Technical Report, Appendix March. (Appendix J of the DEIR)

[23] SCAQMD. http://www.aqmd.gov/CEQA/handbook/onroad/onroad.html.

[24] SCAQMD. http://www.aqmd.gov/ceqa/handbook/offroad/offroad.html.

[25] CalEEMod bases values for energy intensity on CEUS and RASS whereas the previous analysis used CTG's SCM, which bases energy intensity values on DEER (Database for Energy Efficient Resources). Because DEER, CEUS, and RASS are based on different data, they result in different energy intensity values for the same land use.

[26] Itron, 2006. California Commercial End Use Survey. CEC-400-2006-005. March. Available at: http://www.energy.ca.gov/ceus/. Accessed: December 2011.

Residential Appliance Saturation Survey (RASS) database to develop energy intensity values for residential buildings. ENVIRON used Project-specific information for energy usage for several land uses, including infrastructure in the Mixed-Use Residential District (parking lots, parking structures, paseo paths, and roadways) as shown in Table 3a. The energy use related to pools and spas in the Mixed-Use Residential District is also estimated as shown in Table 3b. CalEEMod converts the resulting energy intensity quantities to GHG emissions by multiplying the energy intensity by the appropriate emission factors obtained by incorporating information on local electricity production. ENVIRON used both LADWP and SCE as the utility providers for the Project consistent with the specific buildings areas expected in each jurisdiction based on the Project description. It is assumed that LADWP and SCE will meet the 33% RPS requirements and that the Mixed-Use Residential District would obtain an additional 20% green power. This calculation of the LADWP and SCE emission factors are shown in Table 4. The inventory also includes an estimate for the growth of the existing liquid fuel, natural gas, and electricity uses. These emissions were estimated to increase in proportion to the square footage increase of Alternative 10.

The CARB 2020 BAU scenario assumes Title 24 (2005) standards to estimate the energy intensity values and default emission factors for each utility for the local electricity production.

5.2.2 Mobile Sources

CalEEMod calculates the emissions associated with on-road mobile sources. These are associated with workers, customers, and delivery vehicles visiting the Project Site. Project-specific traffic information was obtained from the traffic consultant.[27] The Project assumptions include the Transportation Demand Management (TDM) trip reductions,[28] implementation of Pavley[29] and LCFS regulations which reduce the emissions from mobile sources, and reductions in trip lengths for residential home-based work trips due to the development of the Project as an infill residential development near commercial centers and transportation hubs to reduce vehicle miles traveled.

Consistent with the AB 32 Scoping Plan, the CARB 2020 BAU scenario assumes that the Pavley and LCFS regulations are not in place, that the Project is not an infill development and the Project has not incorporated the various TDM features. The CARB 2020 BAU scenario assumes default residential trip lengths for the region. The trip characteristics for the Project and CARB 2020 BAU scenario are shown in Table 5.

5.2.3 Solid Waste

GHG emissions from solid waste disposal were calculated using Project-specific waste generation information as provided in the DEIR and assuming waste is sent to a landfill with landfill gas capture flaring. Defaults from CalEEMod were used for other assumptions

[27] Gibson Transportation Consulting, Inc. Table 14 and Table 20 of Appendix E of the DEIR.

[28] The TDM program includes trip reductions due to measures such as increases in transit, transit incentives, carpooling, bicycle-oriented infrastructure, etc.

[29] As discussed in the CTG Energetics Global Warming Technical Report, California Assembly Bill 1493 ("the Pavley Standard"), requires the development and adoption of regulations to achieve "the maximum feasible reduction of greenhouse gases" emitted by noncommercial passenger vehicles, light-duty trucks, and other vehicles used primarily for personal transportation in the State.

(e.g., method of disposal); these defaults are based on data from CalRecycle[30] and CARB Local Government Operations Protocol for degradation of solid waste material. CalEEMod captures all of the future GHG emissions resulting from the waste degradation in the landfill and attributes it to the year it was placed into the landfill. The analysis herein assumes the Project is diverting 65% of the non-hazardous operational waste, but does not quantify the Project's additional construction and demolition debris waste diversion commitment. The CARB 2020 BAU scenario assumed 49% of the waste would be diverted based on the LA regional solid waste diversion rate.[31] The solid waste GHG emissions and waste diversion assumptions are shown in Tables 6a and 6b.

5.2.4 Water and Wastewater

Water use and wastewater generation by a project will result in indirect GHG emissions. These emissions are a result of the energy used to supply, distribute, and treat the water and wastewater. ENVIRON used Project-specific information for water usage as provided in the DEIR. The Project committed to water conservation features that were estimated to reduce the domestic, potable water usage by 20%. CalEEMod allows the user to enter an overall water reduction value. The domestic, potable water was 60% of the total water usage, so an overall reduction factor of 12% (i.e., 20% reduction of 60% of the total water) was used in CalEEMod. CalEEMod defaults were otherwise used to estimate the GHG emissions associated with water and wastewater.

The CARB 2020 BAU scenario assumed zero water reduction. The water and wastewater assumptions are shown in Tables 7a and 7b.

5.2.5 Vegetation Changes

The permanent removal of existing vegetation can contribute to net GHG increases by reducing existing carbon sequestration capacity. When vegetation is removed, it may undergo biodegradation or it may be combusted. Either pathway results in the carbon (C) present in the plants being combined with oxygen (O_2) to form CO_2. The addition of vegetation can contribute to net GHG decreases by increasing carbon sequestration capacity. The Project involves both the removal and planting of trees.

CalEEMod calculates GHG emissions due to vegetation changes by accepting inputs regarding the number and species of trees planted. The model then calculates net sequestration changes by assuming a 20-year active growth period and carbon sequestration rate specific to the species selected.

Because the Project involves both the removal and planting of trees, a net weighted number of trees was calculated for input into CalEEMod. This methodology parallels that used in the DEIR. The net weighted number was calculated by multiplying the number of trees by the percent to full growth. The result was a negative number as shown in Table 8, which suggests that the Project reduces the overall mass of trees compared to what currently exists. Although

[30] CalRecycle, 2011. Available at: http://www.calrecycle.ca.gov/, Accessed: December 2011.

[31] CTG, Global Warming Technical Report. March 2010. Pg 24. (Appendix Q of the DEIR)

the Project will plant more trees than currently exists, the trees being removed are closer to their full growth than the new trees will be in the 20-year active growth period assumed by CalEEMod. The weighted number was entered into CalEEMod and the result was assumed to be a positive emission, indicating that the Project reduces the sequestration capacity of the site.

6 Results

We compare the Project GHG emissions inventory to the GHG emissions that would occur from a development that would be built without the project design features and energy reduction commitments made by the Project, and without the regulations that have been promulgated to comply with AB 32 (i.e., the CARB 2020 Business-As-Usual Scenario). The CARB 2020 BAU scenario represents the GHG emission inventory if projects continued to be built according to standards at the time AB 32 was enacted, and was the scenario that the CARB used to estimate the percent reduction in GHG emissions required to return to 1990 levels by 2020.

The Project is consistent with AB 32. Table 9a and Table 9b show total GHG emissions for construction and operation of the Project and the CARB 2020 BAU scenario. The Project GHG emissions inventory is 59,715 MT CO_2e per year. The CARB 2020 BAU GHG emissions inventory is 89,890 MT CO_2e per year. The Project represents a 33.6 percent reduction from a CARB 2020 BAU scenario taking into consideration the Project's sustainability commitments (e.g., 20% green power commitment for the Mixed-Use Residential District, buildings that are 15% better than Title 24 (2005) standards) and changes in emission factors due to implementation of the Renewables Portfolio Standard of 33 percent, the Pavley regulation mandating higher fuel efficiency standards for light-duty vehicles, and the LCFS.

Tables

Table 1. Comparison of Net New Square Footage

	Proposed Project (Annexation Scenario)	No Annexation Scenario
City		
Amphitheater	-	-2,500
Entertainment Retail	-	17,400
Entertainment	-42,240	67,100
Office	-	24,400
Studio	48,020	77,220
Studio Office	222,552	244,430
Mixed-Use Residential Area Commercial	180,000	72,200
Commercial Total	**408,332**	**500,250**
Hotel	**-**	**500 (rooms)**
Residential	**2,937 (units)**	**1,178 (units)**
County		
Amphitheater	-50,600	-48,100
Entertainment Retail	39,216	21,816
Entertainment	187,895	78,555
Office	495,406	471,006
Studio	259,929	230,729
Studio Office	214,774	192,896
Mixed-Use Residential Area Commercial	-	107,800
Commercial Total	**1,146,620**	**1,054,702**
Hotel	**500 (rooms)**	**-**
Residential	**-**	**1,759 (units)**

Table 2. Construction Emissions Summary

Source	Total Emissions ($MT\ CO_2e$)	Annualized Emissions ($MT\ CO_2e/yr$)
Water (construction-related)	307	10
Construction	180,055	6,002
Total	180,362	6,012

Ref: Section IV.O Climate Change, Table 204 of the DEIR.

Table 3a. Infrastructure Energy Usage Assumptions

Land Use	Energy Usage (kWh/yr)[1]	CalEEMod Input (kWh/sq ft/yr)
Business-As-Usual Scenario[2]		
Parking - Surface Parking	498,304	0.19
Parking - Subterranean Garage	13,494,658	9.49
Roadways and Paseo Path (Total)	256,318	0.39
Roadways	150,063	
Paseo Path	106,255	
Project		
Parking - Surface Parking[1,3]	253,710	0.10
Parking - Subterranean Garage[1,4]	9,541,750	6.71
Roadways and Paseo Path (Total)	250,254	0.39
Roadways[1,5]	143,999	
Paseo Path[1]	106,255	

Notes

1. Data as relied upon by CTG in Appendix Q of the DEIR.
2. The Business-As-Usual Scenario represents the GHG emissions that would occur from a development that would be built without the project design features and energy reduction commitments made by the Project, and without the regulations that have been promulgated to comply with AB 32.
3. Reduced energy usage due to basic metal halide lighting.
4. Reduced energy usage due to demand control ventilation.
5. Reduced energy usage due to induction lighting.

Table 3b. Pools and Spas Natural Gas Usage Assumptions

Land Use	Energy Usage (therms/yr)[1]	Energy Usage (BTU/yr)[1]	CalEEMod Input (kBTU/sq ft/yr)
Business-As-Usual Scenario[2]			
Pools	103,692	10,369,200,000	13,685
Spas	48,624	4,862,400,000	
Project[3]			
Pools	72,108	7,210,800,000	9,885
Spas	37,920	3,792,000,000	

Notes

1. Data as relied upon by CTG in Appendix Q of the DEIR.

2. The Business-As-Usual Scenario represents the GHG emissions that would occur from a development that would be built without the project design features and energy reduction commitments made by the Project, and without the regulations that have been promulgated to comply with AB 32.

3. Reduced energy usage due to use of solar covers and lower set points.

Table 4. Utility Carbon Intensity Factors

	LADWP	SCE
% of Total Energy From Renewables[1,2]	13%	13%
% of Total Energy From Non-Renewables	87%	87%
Total Energy Delivery (MWh)[3,4]	29,141,703	83,958,770
from renewables (MWh)	3,671,855	11,234,288
from non-renewables (MWh)	25,469,848	72,724,482
CO_2 Emissions per Total Energy Delivered (lb CO_2/MWh)	1228	631
Total CO_2 Emissions (MT CO_2)[5,6]	16,230,815	24,026,108
CO_2 Emissions per Total Non-Renewable Energy (lb CO_2/MWh)[7]	1405	728
Estimated Emission Factors for Total Energy Delivered[8]		
2010 RPS (20%) (lb CO_2/MWh)	1123.93	583
2020 RPS (33%) (lb CO_2/MWh)	941	488

Notes

1. The renewable energy portfolio for LADWP. The total energy is based on information available at: http://www.ladwpnews.com/go/doc/1475/161230/

2. The renewable energy portfolio for Southern California Edison, the power utility that is most likely to provide power to the Project. The renewable energy distribution is based on the 2008 data available at http://www.sce.com/PowerandEnvironment/renewables/

3. Total energy value reported for 2007 by LADWP in California Climate Action Registry. Available at: http://www.climateregistry.org/CarrotDocs/16/2007/LADWP_2007_PUP_Report.pdf

4. Total energy value reported for 2007 by Southern California Edison in california Climate Action Registry. Available at: http://www.climateregistry.org/CarrotDocs/26/2007/SCEPUP07r3.xls

5. The amount of CO_2 emissions is provided in LADWP's Power/Utility Protocol (PUP) report for 2007 available at: http://www.climateregistry.org/CarrotDocs/16/2007/LADWP_2007_PUP_Report.pdf

6. The amount of CO_2 emissions is provided in Southern California Edison's Power/Utility Protocol (PUP) report for 2007 available at: http://www.climateregistry.org/CarrotDocs/26/2007/SCEUPU07r3.xls

7. The emissions metric presented here is calculated based on the total CO_2 emissions divided by the energy delivered from non-renewable sources.

8. The emission factors for total energy delivered are estimated by multiplying the percentage of energy delivered from non-renewable energy by the CO_2 emissions per total non-renewable energy metric calculated above. Two emission factors are presented here for the current 20% RPS goal for 2010 and the presumed 33% RPS for 2020. The estimate provided here and the 2007 PUP report issued by Southern California Edison assume that renewable energy sources do not result in any CO_2 emissions. This is not necessarily true for biogas- and biomass-sourced energy but some consider these sources to be "carbon neutral."

Table 5. Traffic/Transportation Assumptions

Land Use	Proposed Project	Metric	Project		BAU	
			growth trips/day/size metric[1, 2]	Trip Length (miles)	growth trips/day/size metric[1, 2]	Trip Length (miles)
SCE Jurisdiction						
Studio, Business, and Entertainment						
Studio	307.949	1000 sq ft	2.31	Defaults	2.99	Defaults
Studio Office						
Studio Office (not "child care" land use)	422.326	1000 sq ft	1.29	Defaults	1.67	Defaults
Child Care	15.000	1000 sq ft	0.20	Defaults	0.25	Defaults
Office	495.406	1000 sq ft	1.25	Defaults	1.63	Defaults
Total General Office Building[3]			*1.27*		*1.64*	
Entertainment	145.655	1000 sq ft	0.72	Defaults	0.93	Defaults
Entertainment Retail	39.216	1000 sq ft	0.80	Defaults	1.04	Defaults
Amphitheatre	0	acre	0.00		0.00	
Hotel	500	Room	1.31	Defaults	1.69	Defaults
LADWP Jurisdiction						
Neighborhood Retail						
Retail	69.000	1000 sq ft	2.17	Defaults	2.82	Defaults
Restaurant	46.000	1000 sq ft	2.17	Defaults	2.82	Defaults
Community Serving Facilities	65.000	1000 sq ft	2.17	Defaults	2.82	Defaults
Mixed Use Residential (LADWP)						
Housing						
Condos	2,257	dwelling unit	4.67	10.3 for H-W defaults for other	6.06	Defaults
Apartments: 1-bedroom	340	dwelling unit	4.67	10.3 for H-W defaults for other	6.06	Defaults
Apartments: 2-bedroom	340	dwelling unit	4.67	10.3 for H-W defaults for other	6.06	Defaults

Notes

1. Growth trips are calculated based on information provided by the traffic consultant (Gibson Transportation Consulting, Inc.). Ref: Table 14 and Table 20 of Appendix E of the DEIR.

2. The analysis assumes that certain trips to and from the Project are not new trips in the context of Global Climate Change and would occur even if the Project is not implemented. Specifically, all residential trips and all commercial non-work trips were derived using default percent trip purpose values from CalEEMod and are included in the GHG inventory.

3. Total general office building is the combination of Studio Office (not "child care" land use) and Office.

Table 6a. Solid Waste Generation

Land Use	Solid Waste Generated[1,2] (ton/day)	Solid Waste Generated[2,3] (ton/year)
SCE Jurisdiction		
Studio, Business, and Entertainment		
Studio	2.41	880
Studio Office		
Studio Office (not "child care" land use)	1.17	427
Child Care	0.03	11
Office	1.35	493
Total General Office Building[4]	*2.52*	*920*
Entertainment	2.67	975
Entertainment Retail	0.92	336
Amphitheatre	--	--
Hotel	3.51	1,281
LADWP Jurisdiction		
Neighborhood Retail[5]		
Retail[5]	1.64	599
Restaurant[5]	--	--
Community Serving Facilities	0.49	179
Mixed Use Residential (LADWP)		
Housing[6]		
Condos[6]	7.48	2,730
Apartments: 1-bedroom[6]	--	--
Apartments: 2-bedroom[6]	--	--

Notes

1. CTG Global Warming Technical Report. Appendix A. pg. 24 (Appendix A is in Appendix Q).
2. Solid waste generated is the same for the Project and BAU scenarios.
3. Annual solid waste generated is calculated by assuming the daily solid waste generated occurs 365 days of the year.
4. Total general office building is the sum of Studio Office (not "child care" land use) and Office.
5. Total waste generated for neighborhood retail was estimated by CTG. All waste generated was assigned to the retail category in CalEEMod (note that the assignment between retail or restaurant will not affect overall emissions due to waste generated).
6. Total waste generated for housing was provided by CTG. All waste generated was assigned to the condos category in CalEEMod (note that the assignment among condos, apartments: 1-bedroom, or apartments: 2-bedroom will not affect overall emissions due to waste generated).

6b. Waste Diversion

	Project (% Diversion)	BAU (% Diversion)
Assumption	Divert 65% of solid waste	Divert 49% of solid waste

Note: Project Design Feature targets a higher waste diversion rate.

Table 7a. Water Usage Assumptions

Land Use	Project Water Demand[1] (gal/yr)	BAU Water Demand[1] (gal/yr)
SCE Jurisdiction		
Studio, Business, and Entertainment		
Studio	7,913,083	8,992,140
Studio Office		
Studio Office (not "child care" land use)	24,995,142	28,403,570
Child Care	128,480	146,000
Office	28,642,368	32,548,145
Total General Office Building[2]	*53,637,510*	*60,951,715*
Entertainment	8,421,222	9,569,570
Entertainment Retail	5,139,200	5,840,000
Amphitheatre	0	0
Hotel	41,756,000	47,450,000
Irrigation[3]	38,298,720	38,298,720
LADWP Jurisdiction		
Neighborhood Retail[4]		
Retail[4]	15,070,704	17,125,800
Restaurant[4]	--	--
Community Serving Facilities	8,518,224	9,679,800
Irrigation[3]	--	--
Mixed Use Residential (LADWP)		
Housing[5]		
Condos[5]	150,938,304	171,520,800
Apartments: 1-bedroom[5]	--	--
Apartments: 2-bedroom[5]	--	--
Irrigation[3]	41,816,225	41,816,225

Notes

1. CTG Global Warming Technical Report. Appendix A. pg. 20-21 (Appendix A is in Appendix Q).
2. Total general office building is the sum of Studio Office (not "child care" land use) and Office.
3. This analysis conservatively assumes irrigation water is potable water and does not take credit for potential use of recalimed water. The irrigation water under LADWP jurisdiction is included as part of the Mixed-use residential CalEEMod run even though some irrigation would also be used related to the other uses listed.
4. Total water demand for neighborhood retail was provided. All water demand was assigned to the retail category in CalEEMod (note that the assignment between retail or restaurant will not affect overall emissions due to water use).
5. Total water demand for housing was provided. All water demand was assigned to the condos category in CalEEMod (note that the assignment among condos, apartments: 1-bedroom, or apartments: 2-bedroom will not affect overall emissions due to water use).

7b. Water Project Design Feature Assumptions

	Project (% Reduction)	BAU (% Reduction)
Assumption	Reduce potable water consumption by 20% for 60% of non-landscaping related, indoor water uses. Assume this results in an overall reduction of 12%.	0%
Note: Project Design Feature targets reduced potable water consumption.		

Table 8. Vegetation Change Evaluation

Category	Coast Live Oak (Growth A)	So Cal Black Walnut	California Sycamore	Coast Live Oak (Growth B)	Coast Live Oak (Growth C)
Existing					
Number of trees[1]	317	75	34	76	201
Growth (% to full population maturity)[1]	100%	73%	75%	81%	85%
Weighted number of trees[2]	317	55	26	62	171
Project					
Number of trees[1]	634	150	68	152	402
Growth (% to full population maturity)[1]	37%	37%	37%	37%	37%
Weighted number of trees[2]	234.58	55.5	25.16	56.24	148.74
Increment					
Weighted number of trees[3]	-82.42	0.75	-0.34	-5.32	-22.11
				TOTAL (weighted number of trees)[4]	-109.44

Notes

1. CTG Global Warming Technical Report Appendix A. Page 29 (Appendix A is in Appendix Q).

2. The weighted number of trees is calculated as follows: weighted = number of trees * (growth % to full maturity). Note that mortality is not taken into account because CalEEMod accounts for it.

3. The incremental change due to the project.

4. The total number of weighted trees is entered into CalEEMod as a positive number and CalEEMod estimates the resulting GHG emissions change. Because the number is negative, indicating that there is less sequestration potential after Project implementation, the result from CalEEMod is assumed to be a net increase in emissions from the Project.

Table 9a. Project and CARB 2020 BAU GHG inventories (detailed)

	Project (metric tonnes)	BAU (metric tonnes)	% change from BAU
Front Lot - Combined	15,255	18,533	-18%
Direct Combustion[1]	4,978	4,978	0%
Natural Gas	2,744	2,744	0%
Other Liquid Fuel	2,234	2,234	0%
Process Loads	4,904	6,332	-23%
Studio	1,215	1,598	-24%
Studio Office	--	--	--
Studio Office (not "child care" land use)	1,591	2,167	-27%
Child Care	31	40	-24%
Office	1,871	2,543	-26%
Entertainment	530	689	-23%
Entertainment Retail	135	186	-27%
Amphitheatre[2]	0	0	--
Back Lot	8,441	12,357	-32%
Condos	6,292	9,107	-31%
Apartments: 1-bedroom	625	953	-34%
Apartments: 2-bedroom	625	953	-34%
Back Lot - Other	--	--	--
Community Serving Facilities	397	527	-25%
Swimming Pool	502	816	-38%
Front Lot - Hotel	1,403	1,817	-23%
Back Lot - Neighborhood Retail	1,939	2,460	-21%
Retail	456	629	-27%
Restaurant	1,483	1,831	-19%
Infrastructure	2,926	8,022	-64%
Subterranean Garage	2,778	7,600	-63%
Surface Parking	74	280	-73%
Paseo path and roadways	74	142	-48%
Water	1,869	2,640	-29%
Solid Waste	1,260	1,835	-31%
Transportation	20,530	36,134	-43%
Subtotal	53,623	83,798	-36%
Construction[3]	6,012	6,012	--
Trees[4]	80	80	--
Total	59,715	89,890	-33.6%

Notes

1. Direct combustion data were obtained from NBCU data for 2006. Direct combustion emissions were calculated by applying a growth factor to reflect Project development and subtracting the baseline (i.e., 2006) to represent incremental emissions.

2. Amphitheatre emissions are conservatively assumed to be zero although there is an area reduction (i.e., resulting in fewer emissions).

3. Construction emissions were obtained from Section IV.O Climate Change, Table 204 and the Air Quality Technical Report (Appendix J, DEIR).

4. Positive emissions for Trees represent a loss of sequestration ability.

Table 9b. Project and CARB 2020 BAU GHG inventories

	Project (metric tonnes)	BAU (metric tonnes)	% change from BAU
Front Lot - Combined	15,255	18,533	-18%
Back Lot	8,441	12,357	-32%
Front Lot - Hotel	1,403	1,817	-23%
Back Lot - Neighborhood Retail	1,939	2,460	-21%
Infrastructure	2,926	8,022	-64%
Water	1,869	2,640	-29%
Solid Waste	1,260	1,835	-31%
Transportation	20,530	36,134	-43%
Subtotal	53,623	83,798	-36%
Construction[1]	6,012	6,012	--
Trees[2]	80	80	--
Total	59,715	89,890	-33.6%

Notes

1. Construction emissions were obtained from Section IV.O Climate Change, Table 204 and the Air Quality Technical Report (Appendix J, DEIR).
2. Positive emissions for Trees represent a loss of sequestration ability.

Appendix A

CalEEMod Output File

NBCU Project LADWP

Los Angeles-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric
General Office Building	0	1000sqft
Refrigerated Warehouse-No Rail	0	1000sqft
Health Club	65	1000sqft
High Turnover (Sit Down Restaurant)	46	1000sqft
Recreational Swimming Pool	1.11	1000sqft
Strip Mall	69	1000sqft

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Utility Company**	Los Angeles Department of Water & Power
Climate Zone	12	**Precipitation Freq (Days)**	33		

1.3 User Entered Comments

Project Characteristics - Project GHG
Land Use - Based on Project description
Construction Phase - Construction calculated separately.
Off-road Equipment -
Vehicle Trips - trip rate based on trips from traffic analysis
Woodstoves -
Consumer Products -
Area Coating -
Landscape Equipment -
Energy Use - Historical Data checkbox selected to reflect Title 24-2005.
Water And Wastewater - Water use set based on information in the DEIR.
Solid Waste - Solid waste generation set to reflect DEIR.
Energy Mitigation - Using Title 24 - 2005 + 15%
Water Mitigation -
Waste Mitigation - Divert 65%

2.0 Emissions Summary

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area											0.00	0.00	0.00	0.00	0.00	0.00
Energy											0.00	3,004.45	3,004.45	0.08	0.04	3,019.53
Mobile											0.00	252.35	252.35	0.01	0.00	252.57
Waste											157.93	0.00	157.93	9.33	0.00	353.92
Water											0.00	131.37	131.37	0.72	0.02	152.58
Total											157.93	3,388.17	3,546.10	10.14	0.06	3,778.60

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area											0.00	0.00	0.00	0.00	0.00	0.00
Energy											0.00	2,824.46	2,824.46	0.07	0.04	2,838.56
Mobile											0.00	252.35	252.35	0.01	0.00	252.57
Waste											55.27	0.00	55.27	3.27	0.00	123.87
Water											0.00	131.37	131.37	0.72	0.02	152.58
Total											**55.27**	**3,208.18**	**3,263.45**	**4.07**	**0.06**	**3,367.58**

3.0 Construction Detail

3.1 Mitigation Measures Construction

4.0 Mobile Detail

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated											0.00	252.35	252.35	0.01	0.00	252.57
Unmitigated											0.00	252.35	252.35	0.01	0.00	252.57
Total	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Office Building	0.00	0.00	0.00		
Health Club	141.05	141.05	141.05	235,070	235,070
High Turnover (Sit Down Restaurant)	99.82	99.82	99.82	114,490	114,490
Recreational Swimming Pool	0.00	0.00	0.00		
Refrigerated Warehouse-No Rail	0.00	0.00	0.00		
Strip Mall	149.73	149.73	149.73	222,640	222,640
Total	390.60	390.60	390.60	572,200	572,200

4.3 Trip Type Information

	Miles			Trip %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW
General Office Building	8.90	13.30	7.40	0.00	0.00	100.00
Health Club	8.90	13.30	7.40	0.00	0.00	100.00
High Turnover (Sit Down Restaurant)	8.90	13.30	7.40	0.00	0.00	100.00
Recreational Swimming Pool	8.90	13.30	7.40	0.00	0.00	100.00
Refrigerated Warehouse-No Rail	8.90	13.30	7.40	0.00	0.00	100.00
Strip Mall	8.90	13.30	7.40	0.00	0.00	100.00

5.0 Energy Detail

5.1 Mitigation Measures Energy

Exceed Title 24

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated											0.00	1,700.62	1,700.62	0.05	0.02	1,707.88
Electricity Unmitigated											0.00	1,766.68	1,766.68	0.05	0.02	1,774.22
NaturalGas Mitigated											0.00	1,123.84	1,123.84	0.02	0.02	1,130.68
NaturalGas Unmitigated											0.00	1,237.78	1,237.78	0.02	0.02	1,245.31
Total	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU	tons/yr										MT/yr					
General Office Building	0											0.00	0.00	0.00	0.00	0.00	0.00
Health Club	1.287e+006											0.00	68.68	68.68	0.00	0.00	69.10
High Turnover (Sit Down Restaurant)	1.07801e+007											0.00	575.27	575.27	0.01	0.01	578.77
Recreational Swimming Pool	1.10024e+007											0.00	587.13	587.13	0.01	0.01	590.70
Refrigerated Warehouse-No Rail	0											0.00	0.00	0.00	0.00	0.00	0.00
Strip Mall	125560											0.00	6.70	6.70	0.00	0.00	6.74
Total												0.00	1,237.78	1,237.78	0.02	0.02	1,245.31

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU	tons/yr										MT/yr					
General Office Building	0											0.00	0.00	0.00	0.00	0.00	0.00
Health Club	1.13734e+006											0.00	60.69	60.69	0.00	0.00	61.06
High Turnover (Sit Down Restaurant)	1.04588e+007											0.00	558.12	558.12	0.01	0.01	561.52
Recreational Swimming Pool	9.35204e+006											0.00	499.06	499.06	0.01	0.01	502.10
Refrigerated Warehouse-No Rail	0											0.00	0.00	0.00	0.00	0.00	0.00
Strip Mall	111815											0.00	5.97	5.97	0.00	0.00	6.00
Total												0.00	1,123.84	1,123.84	0.02	0.02	1,130.68

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	kWh	tons/yr				MT/yr			
General Office Building	0					0.00	0.00	0.00	0.00
Health Club	815100					347.91	0.01	0.00	349.40
High Turnover (Sit Down Restaurant)	2.22272e+006					948.72	0.03	0.01	952.78
Recreational Swimming Pool	0					0.00	0.00	0.00	0.00
Refrigerated Warehouse-No Rail	0					0.00	0.00	0.00	0.00
Strip Mall	1.10124e+006					470.04	0.01	0.01	472.05
Total						**1,766.67**	**0.05**	**0.02**	**1,774.23**

Mitigated

	Electricity Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	kWh	tons/yr				MT/yr			
General Office Building	0					0.00	0.00	0.00	0.00
Health Club	786435					335.67	0.01	0.00	337.11
High Turnover (Sit Down Restaurant)	2.15013e+006					917.74	0.03	0.01	921.66
Recreational Swimming Pool	0					0.00	0.00	0.00	0.00
Refrigerated Warehouse-No Rail	0					0.00	0.00	0.00	0.00
Strip Mall	1.04773e+006					447.20	0.01	0.01	449.11
Total						**1,700.61**	**0.05**	**0.02**	**1,707.88**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated											0.00	0.00	0.00	0.00	0.00	0.00
Unmitigated											0.00	0.00	0.00	0.00	0.00	0.00
Total	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating											0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products											0.00	0.00	0.00	0.00	0.00	0.00
Landscaping											0.00	0.00	0.00	0.00	0.00	0.00
Total											**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating											0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products											0.00	0.00	0.00	0.00	0.00	0.00
Landscaping											0.00	0.00	0.00	0.00	0.00	0.00
Total											**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

7.0 Water Detail

7.1 Mitigation Measures Water

	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr				MT/yr			
Mitigated					131.37	0.72	0.02	152.58
Unmitigated					131.37	0.72	0.02	152.58
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	tons/yr				MT/yr			
General Office Building	0 / 0					0.00	0.00	0.00	0.00
Health Club	8.51822 / 0					47.44	0.26	0.01	55.10
High Turnover (Sit Down Restaurant)	0 / 0					0.00	0.00	0.00	0.00
Recreational Swimming Pool	0 / 0					0.00	0.00	0.00	0.00
Refrigerated Warehouse-No Rail	0 / 0					0.00	0.00	0.00	0.00
Strip Mall	15.0707 / 0					83.93	0.46	0.01	97.48
Total						**131.37**	**0.72**	**0.02**	**152.58**

Mitigated

	Indoor/Outdoor Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	tons/yr				MT/yr			
General Office Building	0 / 0					0.00	0.00	0.00	0.00
Health Club	8.51822 / 0					47.44	0.26	0.01	55.10
High Turnover (Sit Down Restaurant)	0 / 0					0.00	0.00	0.00	0.00
Recreational Swimming Pool	0 / 0					0.00	0.00	0.00	0.00
Refrigerated Warehouse-No Rail	0 / 0					0.00	0.00	0.00	0.00
Strip Mall	15.0707 / 0					83.93	0.46	0.01	97.48
Total						**131.37**	**0.72**	**0.02**	**152.58**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

Category/Year

	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
	tons/yr				MT/yr			
Mitigated					55.27	3.27	0.00	123.87
Unmitigated					157.93	9.33	0.00	353.92
Total	NA	NA	NA	NA	NA	NA	NA	NA

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	tons	tons/yr				MT/yr			
General Office Building	0					0.00	0.00	0.00	0.00
Health Club	179					36.34	2.15	0.00	81.43
High Turnover (Sit Down Restaurant)	0					0.00	0.00	0.00	0.00
Recreational Swimming Pool	0					0.00	0.00	0.00	0.00
Refrigerated Warehouse-No Rail	0					0.00	0.00	0.00	0.00
Strip Mall	599					121.59	7.19	0.00	272.49
Total						**157.93**	**9.34**	**0.00**	**353.92**

Mitigated

	Waste Disposed	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	tons	tons/yr				MT/yr			
General Office Building	0					0.00	0.00	0.00	0.00
Health Club	62.65					12.72	0.75	0.00	28.50
High Turnover (Sit Down Restaurant)	0					0.00	0.00	0.00	0.00
Recreational Swimming Pool	0					0.00	0.00	0.00	0.00
Refrigerated Warehouse-No Rail	0					0.00	0.00	0.00	0.00
Strip Mall	209.65					42.56	2.52	0.00	95.37
Total						**55.28**	**3.27**	**0.00**	**123.87**

9.0 Vegetation

NBCU Project Residential

Los Angeles-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric
Parking Lot	1422.1	1000sqft
Parking Structure	2597.9	1000sqft
User Defined Parking	649.28	User Defined Unit
Apartments High Rise	340	Dwelling Unit
Apartments Mid Rise	340	Dwelling Unit
Condo/Townhouse	2257	Dwelling Unit

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Utility Company**	Los Angeles Department of Water & Power
Climate Zone	12	**Precipitation Freq (Days)**	33		

1.3 User Entered Comments

Project Characteristics - Project GHG

Land Use - Based on Project Description.

Construction Phase - Construction calculated separately.

Off-road Equipment -

Vehicle Trips - Based on transportation study.

Woodstoves -

Consumer Products -

Area Coating -

Landscape Equipment -

Energy Use - Using Title 24 - 2005 for electricity intensity.

Water And Wastewater - Water demand based on DEIR.

Solid Waste - Solid waste generation based on DEIR.

Energy Mitigation - Using Title 24 - 2005 + 15%. Green power = 20%.

Water Mitigation -

Waste Mitigation - Solid waste = divert 65%

2.0 Emissions Summary

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area											311.97	1,871.53	2,183.49	1.02	0.04	2,218.38
Energy											0.00	13,482.39	13,482.39	0.37	0.18	13,546.48
Mobile											0.00	17,723.07	17,723.07	0.67	0.00	17,737.23
Waste											554.17	0.00	554.17	32.75	0.00	1,241.92
Water											0.00	1,038.87	1,038.87	4.64	0.13	1,175.47
Total											866.14	34,115.86	34,981.99	39.45	0.35	35,919.48

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area											311.97	1,871.53	2,183.49	1.02	0.04	2,218.38
Energy											0.00	10,419.06	10,419.06	0.28	0.14	10,469.23
Mobile											0.00	17,723.07	17,723.07	0.67	0.00	17,737.23
Waste											193.96	0.00	193.96	11.46	0.00	434.67
Water											0.00	1,038.87	1,038.87	4.64	0.13	1,175.47
Total											**505.93**	**31,052.53**	**31,558.45**	**18.07**	**0.31**	**32,034.98**

3.0 Construction Detail

3.1 Mitigation Measures Construction

4.0 Mobile Detail

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated											0.00	17,723.07	17,723.07	0.67	0.00	17,737.23
Unmitigated											0.00	17,723.07	17,723.07	0.67	0.00	17,737.23
Total	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments High Rise	1,587.80	1,587.80	1587.80	4,793,403	4,793,403
Apartments Mid Rise	1,587.80	1,587.80	1587.80	4,793,403	4,793,403
Condo/Townhouse	10,540.19	10,540.19	10540.19	31,819,736	31,819,736
Parking Lot	0.00	0.00	0.00		
Parking Structure	0.00	0.00	0.00		
User Defined Parking	0.00	0.00	0.00		
Total	13,715.79	13,715.79	13,715.79	41,406,542	41,406,542

4.3 Trip Type Information

	Miles			Trip %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW
Apartments High Rise	10.30	7.00	9.50	40.20	19.20	40.60
Apartments Mid Rise	10.30	7.00	9.50	40.20	19.20	40.60
Condo/Townhouse	10.30	7.00	9.50	40.20	19.20	40.60
Parking Lot	8.90	13.30	7.40	0.00	0.00	0.00
Parking Structure	8.90	13.30	7.40	0.00	0.00	0.00
User Defined Parking	8.90	13.30	7.40	0.00	0.00	0.00

5.0 Energy Detail

5.1 Mitigation Measures Energy

Exceed Title 24

Percent of Electricity Use Generated with Renewable Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated											0.00	7,296.53	7,296.53	0.22	0.09	7,327.69
Electricity Unmitigated											0.00	9,893.32	9,893.32	0.30	0.12	9,935.58
NaturalGas Mitigated											0.00	3,122.53	3,122.53	0.06	0.06	3,141.54
NaturalGas Unmitigated											0.00	3,589.06	3,589.06	0.07	0.07	3,610.90
Total	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU	tons/yr										MT/yr					
Apartments High Rise	3.9238e+006											0.00	209.39	209.39	0.00	0.00	210.66
Apartments Mid Rise	3.9238e+006											0.00	209.39	209.39	0.00	0.00	210.66
Condo/Townhouse	5.94089e+007											0.00	3,170.28	3,170.28	0.06	0.06	3,189.58
Parking Lot	0											0.00	0.00	0.00	0.00	0.00	0.00
Parking Structure	0											0.00	0.00	0.00	0.00	0.00	0.00
User Defined Parking	0											0.00	0.00	0.00	0.00	0.00	0.00
Total												0.00	3,589.06	3,589.06	0.06	0.06	3,610.90

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU	tons/yr										MT/yr					
Apartments High Rise	3.43592e+006											0.00	183.35	183.35	0.00	0.00	184.47
Apartments Mid Rise	3.43592e+006											0.00	183.35	183.35	0.00	0.00	184.47
Condo/Townhouse	5.16422e+007											0.00	2,755.82	2,755.82	0.05	0.05	2,772.60
Parking Lot	0											0.00	0.00	0.00	0.00	0.00	0.00
Parking Structure	0											0.00	0.00	0.00	0.00	0.00	0.00
User Defined Parking	0											0.00	0.00	0.00	0.00	0.00	0.00
Total												0.00	3,122.52	3,122.52	0.05	0.05	3,141.54

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	kWh	tons/yr				MT/yr			
Apartments High Rise	1.31796e+006					562.54	0.02	0.01	564.95
Apartments Mid Rise	1.31796e+006					562.54	0.02	0.01	564.95
Condo/Townhouse	1.04992e+007					4,481.37	0.14	0.05	4,500.51
Parking Lot	255978					109.26	0.00	0.00	109.73
Parking Structure	9.53429e+006					4,069.53	0.13	0.05	4,086.91
User Defined Parking	253220					108.06	0.00	0.00	108.54
Total						9,893.32	0.31	0.12	9,935.59

Mitigated

	Electricity Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	kWh	tons/yr				MT/yr			
Apartments High Rise	1.02668e+006					438.22	0.01	0.01	440.09
Apartments Mid Rise	1.02668e+006					438.22	0.01	0.01	440.09
Condo/Townhouse	8.21175e+006					3,505.02	0.11	0.04	3,519.99
Parking Lot	174065					74.30	0.00	0.00	74.61
Parking Structure	6.48332e+006					2,767.28	0.09	0.03	2,779.10
User Defined Parking	172189					73.50	0.00	0.00	73.81
Total						7,296.54	0.22	0.09	7,327.69

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated											311.97	1,871.53	2,183.49	1.02	0.04	2,218.38
Unmitigated											311.97	1,871.53	2,183.49	1.02	0.04	2,218.38
Total	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating											0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products											0.00	0.00	0.00	0.00	0.00	0.00
Hearth											311.97	1,798.47	2,110.44	0.95	0.04	2,143.83
Landscaping											0.00	73.05	73.05	0.07	0.00	74.55
Total											**311.97**	**1,871.52**	**2,183.49**	**1.02**	**0.04**	**2,218.38**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating											0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products											0.00	0.00	0.00	0.00	0.00	0.00
Hearth											311.97	1,798.47	2,110.44	0.95	0.04	2,143.83
Landscaping											0.00	73.05	73.05	0.07	0.00	74.55
Total											**311.97**	**1,871.52**	**2,183.49**	**1.02**	**0.04**	**2,218.38**

7.0 Water Detail

7.1 Mitigation Measures Water

	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr				MT/yr			
Mitigated					1,038.87	4.64	0.13	1,175.47
Unmitigated					1,038.87	4.64	0.13	1,175.47
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	tons/yr				MT/yr			
Apartments High Rise	0 / 0					0.00	0.00	0.00	0.00
Apartments Mid Rise	0 / 0					0.00	0.00	0.00	0.00
Condo/Townhouse	150.938 / 41.8162					1,038.87	4.64	0.13	1,175.47
Parking Lot	0 / 0					0.00	0.00	0.00	0.00
Parking Structure	0 / 0					0.00	0.00	0.00	0.00
User Defined Parking	0 / 0					0.00	0.00	0.00	0.00
Total						**1,038.87**	**4.64**	**0.13**	**1,175.47**

Mitigated

	Indoor/Outdoor Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	tons/yr				MT/yr			
Apartments High Rise	0 / 0					0.00	0.00	0.00	0.00
Apartments Mid Rise	0 / 0					0.00	0.00	0.00	0.00
Condo/Townhouse	150.938 / 41.8162					1,038.87	4.64	0.13	1,175.47
Parking Lot	0 / 0					0.00	0.00	0.00	0.00
Parking Structure	0 / 0					0.00	0.00	0.00	0.00
User Defined Parking	0 / 0					0.00	0.00	0.00	0.00
Total						1,038.87	4.64	0.13	1,175.47

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

Category/Year

	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
	tons/yr				MT/yr			
Mitigated					193.96	11.46	0.00	434.67
Unmitigated					554.17	32.75	0.00	1,241.92
Total	NA	NA	NA	NA	NA	NA	NA	NA

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	tons	tons/yr				MT/yr			
Apartments High Rise	0					0.00	0.00	0.00	0.00
Apartments Mid Rise	0					0.00	0.00	0.00	0.00
Condo/Townhouse	2730					554.17	32.75	0.00	1,241.92
Parking Lot	0					0.00	0.00	0.00	0.00
Parking Structure	0					0.00	0.00	0.00	0.00
User Defined Parking	0					0.00	0.00	0.00	0.00
Total						554.17	32.75	0.00	1,241.92

Mitigated

	Waste Disposed	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	tons	tons/yr				MT/yr			
Apartments High Rise	0					0.00	0.00	0.00	0.00
Apartments Mid Rise	0					0.00	0.00	0.00	0.00
Condo/Townhouse	955.5					193.96	11.46	0.00	434.67
Parking Lot	0					0.00	0.00	0.00	0.00
Parking Structure	0					0.00	0.00	0.00	0.00
User Defined Parking	0					0.00	0.00	0.00	0.00
Total						193.96	11.46	0.00	434.67

9.0 Vegetation

NBCU Project SCE

Los Angeles-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric
General Office Building	422.33	1000sqft
General Office Building	495.41	1000sqft
Day-Care Center	15	1000sqft
General Light Industry	145.66	1000sqft
Refrigerated Warehouse-No Rail	307.95	1000sqft
Hotel	500	Room
Regional Shopping Center	39.22	1000sqft

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Utility Company**	Southern California Edison
Climate Zone	12	**Precipitation Freq (Days)**	33		

1.3 User Entered Comments

Project Characteristics - Project GHG

Land Use - Based on Project Description

Vehicle Trips - Mobile trip/day/size based on traffic data

Woodstoves -

Consumer Products -

Area Coating -

Landscape Equipment -

Energy Use - Historical data selected to reflect Title 24-2005.

Water And Wastewater - Water set to reflect DEIR. Irrigation is outdoor water for hotel.

Solid Waste - Waste generation set to reflect DEIR.

Land Use Change -

Sequestration -

Energy Mitigation -

Water Mitigation -

Waste Mitigation - Divert 65%

Construction Phase - Construction calculated separately.

Off-road Equipment -

2.0 Emissions Summary

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area											0.00	0.00	0.00	0.00	0.00	0.00
Energy											0.00	7,174.64	7,174.64	0.37	0.16	7,230.69
Mobile											0.00	2,538.46	2,538.46	0.10	0.00	2,540.55
Waste											893.77	0.00	893.77	52.82	0.00	2,002.99
Water											0.00	432.71	432.71	3.60	0.10	538.71
Total											**893.77**	**10,145.81**	**11,039.58**	**56.89**	**0.26**	**12,312.94**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area											0.00	0.00	0.00	0.00	0.00	0.00
Energy											0.00	6,722.84	6,722.84	0.35	0.15	6,775.57
Mobile											0.00	2,538.46	2,538.46	0.10	0.00	2,540.55
Waste											312.82	0.00	312.82	18.49	0.00	701.05
Water											0.00	432.71	432.71	3.60	0.10	538.71
Total											**312.82**	**9,694.01**	**10,006.83**	**22.54**	**0.25**	**10,555.88**

2.3 Vegetation

Vegetation

	ROG	NOx	CO	SO2	CO2e
Category	tons				MT
New Trees					80.01
Total					**80.01**

3.0 Construction Detail

3.1 Mitigation Measures Construction

4.0 Mobile Detail

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated											0.00	2,538.46	2,538.46	0.10	0.00	2,540.55
Unmitigated											0.00	2,538.46	2,538.46	0.10	0.00	2,540.55
Total	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Day-Care Center	3.00	3.00	3.00	3,450	3,450
General Light Industry	104.88	104.88	104.88	263,538	263,538
General Office Building	536.36	536.36	536.36	1,181,853	1,181,853
General Office Building	629.17	629.17	629.17	1,386,361	1,386,361
Hotel	655.00	655.00	655.00	1,191,862	1,191,862
Refrigerated Warehouse-No Rail	711.36	711.36	711.36	1,787,569	1,787,569
Regional Shopping Center	31.38	31.38	31.38	53,158	53,158
Total	2,671.15	2,671.15	2,671.15	5,867,792	5,867,792

4.3 Trip Type Information

	Miles			Trip %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW
Day-Care Center	8.90	13.30	7.40	0.00	0.00	100.00
General Light Industry	8.90	13.30	7.40	0.00	0.00	100.00
General Office Building	8.90	13.30	7.40	0.00	0.00	100.00
General Office Building	8.90	13.30	7.40	0.00	0.00	100.00
Hotel	8.90	13.30	7.40	0.00	0.00	100.00
Refrigerated Warehouse-No Rail	8.90	13.30	7.40	0.00	0.00	100.00
Regional Shopping Center	8.90	13.30	7.40	0.00	0.00	100.00

5.0 Energy Detail

5.1 Mitigation Measures Energy

Exceed Title 24

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated											0.00	5,495.75	5,495.75	0.33	0.12	5,541.01
Electricity Unmitigated											0.00	5,758.28	5,758.28	0.34	0.13	5,805.71
NaturalGas Mitigated											0.00	1,227.09	1,227.09	0.02	0.02	1,234.56
NaturalGas Unmitigated											0.00	1,416.36	1,416.36	0.03	0.03	1,424.98
Total	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU	tons/yr										MT/yr					
Day-Care Center	176850											0.00	9.44	9.44	0.00	0.00	9.49
General Light Industry	2.88397e+006											0.00	153.90	153.90	0.00	0.00	154.84
General Office Building	5.25374e+006											0.00	280.36	280.36	0.01	0.01	282.07
General Office Building	6.16285e+006											0.00	328.87	328.87	0.01	0.01	330.87
Hotel	1.16325e+007											0.00	620.75	620.75	0.01	0.01	624.53
Refrigerated Warehouse-No Rail	360300											0.00	19.23	19.23	0.00	0.00	19.34
Regional Shopping Center	71373.1											0.00	3.81	3.81	0.00	0.00	3.83
Total												0.00	1,416.36	1,416.36	0.03	0.03	1,424.97

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU	tons/yr										MT/yr					
Day-Care Center	152753											0.00	8.15	8.15	0.00	0.00	8.20
General Light Industry	2.5486e+006											0.00	136.00	136.00	0.00	0.00	136.83
General Office Building	4.49038e+006											0.00	239.62	239.62	0.00	0.00	241.08
General Office Building	5.2674e+006											0.00	281.09	281.09	0.01	0.01	282.80
Hotel	1.01617e+007											0.00	542.27	542.27	0.01	0.01	545.57
Refrigerated Warehouse-No Rail	310413											0.00	16.56	16.56	0.00	0.00	16.67
Regional Shopping Center	63549.5											0.00	3.39	3.39	0.00	0.00	3.41
Total												0.00	1,227.08	1,227.08	0.02	0.02	1,234.56

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	kWh	tons/yr				MT/yr			
Day-Care Center	106200					23.51	0.00	0.00	23.70
General Light Industry	1.82651e+006					404.30	0.02	0.01	407.63
General Office Building	6.43625e+006					1,424.68	0.08	0.03	1,436.42
General Office Building	7.54999e+006					1,671.21	0.10	0.04	1,684.98
Hotel	4.077e+006					902.46	0.05	0.02	909.89
Refrigerated Warehouse-No Rail	5.39219e+006					1,193.58	0.07	0.03	1,203.41
Regional Shopping Center	625887					138.54	0.01	0.00	139.68
Total						**5,758.28**	**0.33**	**0.13**	**5,805.71**

Mitigated

	Electricity Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	kWh	tons/yr				MT/yr			
Day-Care Center	101048					22.37	0.00	0.00	22.55
General Light Industry	1.76228e+006					390.09	0.02	0.01	393.30
General Office Building	6.05679e+006					1,340.69	0.08	0.03	1,351.73
General Office Building	7.10487e+006					1,572.68	0.09	0.04	1,585.64
Hotel	3.84075e+006					850.16	0.05	0.02	857.16
Refrigerated Warehouse-No Rail	5.36678e+006					1,187.95	0.07	0.03	1,197.74
Regional Shopping Center	595475					131.81	0.01	0.00	132.90
Total						**5,495.75**	**0.32**	**0.13**	**5,541.02**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated											0.00	0.00	0.00	0.00	0.00	0.00
Unmitigated											0.00	0.00	0.00	0.00	0.00	0.00
Total	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating											0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products											0.00	0.00	0.00	0.00	0.00	0.00
Landscaping											0.00	0.00	0.00	0.00	0.00	0.00
Total											**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating											0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products											0.00	0.00	0.00	0.00	0.00	0.00
Landscaping											0.00	0.00	0.00	0.00	0.00	0.00
Total											**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

7.0 Water Detail

7.1 Mitigation Measures Water

	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr				MT/yr			
Mitigated					432.71	3.60	0.10	538.71
Unmitigated					432.71	3.60	0.10	538.71
Total	NA	NA	NA	NA	NA	NA	NA	NA

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	tons/yr				MT/yr			
Day-Care Center	0.12848 / 0					0.37	0.00	0.00	0.49
General Light Industry	8.42122 / 0					24.37	0.26	0.01	31.94
General Office Building	53.6375 / 0					155.20	1.65	0.04	203.44
Hotel	41.756 / 38.2987					215.00	1.29	0.04	253.34
Refrigerated Warehouse-No Rail	7.91308 / 0					22.90	0.24	0.01	30.01
Regional Shopping Center	5.1392 / 0					14.87	0.16	0.00	19.49
Total						**432.71**	**3.60**	**0.10**	**538.71**

Mitigated

	Indoor/Outdoor Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	tons/yr				MT/yr			
Day-Care Center	0.12848 / 0					0.37	0.00	0.00	0.49
General Light Industry	8.42122 / 0					24.37	0.26	0.01	31.94
General Office Building	53.6375 / 0					155.20	1.65	0.04	203.44
Hotel	41.756 / 38.2987					215.00	1.29	0.04	253.34
Refrigerated Warehouse-No Rail	7.91308 / 0					22.90	0.24	0.01	30.01
Regional Shopping Center	5.1392 / 0					14.87	0.16	0.00	19.49
Total						**432.71**	**3.60**	**0.10**	**538.71**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

Category/Year

	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
	tons/yr				MT/yr			
Mitigated					312.82	18.49	0.00	701.05
Unmitigated					893.77	52.82	0.00	2,002.99
Total	NA	NA	NA	NA	NA	NA	NA	NA

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	tons	tons/yr				MT/yr			
Day-Care Center	11					2.23	0.13	0.00	5.00
General Light Industry	975					197.92	11.70	0.00	443.54
General Office Building	920					186.75	11.04	0.00	418.52
Hotel	1281					260.03	15.37	0.00	582.75
Refrigerated Warehouse-No Rail	880					178.63	10.56	0.00	400.33
Regional Shopping Center	336					68.20	4.03	0.00	152.85
Total						**893.76**	**52.83**	**0.00**	**2,002.99**

Mitigated

	Waste Disposed	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	tons	tons/yr				MT/yr			
Day-Care Center	3.85					0.78	0.05	0.00	1.75
General Light Industry	341.25					69.27	4.09	0.00	155.24
General Office Building	322					65.36	3.86	0.00	146.48
Hotel	448.35					91.01	5.38	0.00	203.96
Refrigerated Warehouse-No Rail	308					62.52	3.69	0.00	140.11
Regional Shopping Center	117.6					23.87	1.41	0.00	53.50
Total						**312.81**	**18.48**	**0.00**	**701.04**

9.0 Vegetation

	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Category	tons				MT			
Unmitigated					80.01	0.00	0.00	80.01
Total	NA	NA	NA	NA	NA	NA	NA	NA

9.1 Net New Trees

Species Class

	Number of Trees	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
		tons				MT			
Mixed Hardwood	109					80.01	0.00	0.00	80.01
Total						**80.01**	**0.00**	**0.00**	**80.01**

NBCU BAU LADWP

Los Angeles-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric
General Office Building	0	1000sqft
Refrigerated Warehouse-No Rail	0	1000sqft
Health Club	65	1000sqft
High Turnover (Sit Down Restaurant)	46	1000sqft
Recreational Swimming Pool	1.11	1000sqft
Strip Mall	69	1000sqft

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Utility Company**	Los Angeles Department of Water & Power
Climate Zone	12	**Precipitation Freq (Days)**	33		

1.3 User Entered Comments

Project Characteristics - Project GHG

Land Use - Based on Project Description

Vehicle Trips - Based on transportation study.

Vechicle Emission Factors - EFs changed to not account for Pavley (Appendix D)

Vechicle Emission Factors - EFs changed to not account for Pavley (Appendix D)

Vechicle Emission Factors - EFs changed to not account for Pavley (Appendix D)

Woodstoves -

Consumer Products -

Area Coating -

Landscape Equipment -

Energy Use - Historical Data checkbox selected to reflect Title 24-2005.

Water And Wastewater - Water use set based on information in the DEIR.

Solid Waste - Solid waste generation set to reflect DEIR.

Land Use Change -

Sequestration -

Energy Mitigation -

Water Mitigation -

Waste Mitigation - Divert 49%

Construction Phase - Construction calculated separately.

Off-road Equipment -

2.0 Emissions Summary

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area											0.00	0.00	0.00	0.00	0.00	0.00
Energy											0.00	3,788.74	3,788.74	0.08	0.05	3,805.19
Mobile											0.00	408.76	408.76	0.01	0.00	409.05
Waste											157.93	0.00	157.93	9.33	0.00	353.92
Water											0.00	196.38	196.38	0.82	0.02	220.49
Total											**157.93**	**4,393.88**	**4,551.81**	**10.24**	**0.07**	**4,788.65**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area											0.00	0.00	0.00	0.00	0.00	0.00
Energy											0.00	3,788.74	3,788.74	0.08	0.05	3,805.19
Mobile											0.00	408.76	408.76	0.01	0.00	409.05
Waste											80.54	0.00	80.54	4.76	0.00	180.50
Water											0.00	196.38	196.38	0.82	0.02	220.49
Total											**80.54**	**4,393.88**	**4,474.42**	**5.67**	**0.07**	**4,615.23**

3.0 Construction Detail

3.1 Mitigation Measures Construction

4.0 Mobile Detail

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated											0.00	408.76	408.76	0.01	0.00	409.05
Unmitigated											0.00	408.76	408.76	0.01	0.00	409.05
Total	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Office Building	0.00	0.00	0.00		
Health Club	183.30	183.30	183.30	305,483	305,483
High Turnover (Sit Down Restaurant)	129.72	129.72	129.72	148,784	148,784
Recreational Swimming Pool	0.00	0.00	0.00		
Refrigerated Warehouse-No Rail	0.00	0.00	0.00		
Strip Mall	194.58	194.58	194.58	289,329	289,329
Total	507.60	507.60	507.60	743,596	743,596

4.3 Trip Type Information

Land Use	Miles			Trip %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW
General Office Building	8.90	13.30	7.40	0.00	0.00	100.00
Health Club	8.90	13.30	7.40	0.00	0.00	100.00
High Turnover (Sit Down Restaurant)	8.90	13.30	7.40	0.00	0.00	100.00
Recreational Swimming Pool	8.90	13.30	7.40	0.00	0.00	100.00
Refrigerated Warehouse-No Rail	8.90	13.30	7.40	0.00	0.00	100.00
Strip Mall	8.90	13.30	7.40	0.00	0.00	100.00

5.0 Energy Detail

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated											0.00	2,325.25	2,325.25	0.05	0.02	2,332.80
Electricity Unmitigated											0.00	2,325.25	2,325.25	0.05	0.02	2,332.80
NaturalGas Mitigated											0.00	1,463.48	1,463.48	0.03	0.03	1,472.39
NaturalGas Unmitigated											0.00	1,463.48	1,463.48	0.03	0.03	1,472.39
Total	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU	tons/yr										MT/yr					
General Office Building	0											0.00	0.00	0.00	0.00	0.00	0.00
Health Club	1.287e+006											0.00	68.68	68.68	0.00	0.00	69.10
High Turnover (Sit Down Restaurant)	1.07801e+007											0.00	575.27	575.27	0.01	0.01	578.77
Recreational Swimming Pool	1.5232e+007											0.00	812.83	812.83	0.02	0.01	817.78
Refrigerated Warehouse-No Rail	0											0.00	0.00	0.00	0.00	0.00	0.00
Strip Mall	125580											0.00	6.70	6.70	0.00	0.00	6.74
Total												0.00	1,463.48	1,463.48	0.03	0.02	1,472.39

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU	tons/yr										MT/yr					
General Office Building	0											0.00	0.00	0.00	0.00	0.00	0.00

Health Club	1.287e+006												0.00	68.68	68.68	0.00	0.00	69.10
High Turnover (Sit Down Restaurant)	1.07801e+007												0.00	575.27	575.27	0.01	0.01	578.77
Recreational Swimming Pool	1.5232e+007												0.00	812.83	812.83	0.02	0.01	817.78
Refrigerated Warehouse-No Rail	0												0.00	0.00	0.00	0.00	0.00	0.00
Strip Mall	125580												0.00	6.70	6.70	0.00	0.00	6.74
Total													0.00	1,463.48	1,463.48	0.03	0.02	1,472.39

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	kWh	tons/yr				MT/yr			
General Office Building	0					0.00	0.00	0.00	0.00
Health Club	815100					457.91	0.01	0.00	459.40
High Turnover (Sit Down Restaurant)	2.22272e+006					1,248.69	0.03	0.01	1,252.74
Recreational Swimming Pool	0					0.00	0.00	0.00	0.00
Refrigerated Warehouse-No Rail	0					0.00	0.00	0.00	0.00
Strip Mall	1.10124e+006					618.66	0.01	0.01	620.67
Total						2,325.26	0.05	0.02	2,332.81

Mitigated

	Electricity Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	kWh	tons/yr				MT/yr			
General Office Building	0					0.00	0.00	0.00	0.00
Health Club	815100					457.91	0.01	0.00	459.40
High Turnover (Sit Down Restaurant)	2.22272e+006					1,248.69	0.03	0.01	1,252.74
Recreational Swimming Pool	0					0.00	0.00	0.00	0.00
Refrigerated Warehouse-No Rail	0					0.00	0.00	0.00	0.00
Strip Mall	1.10124e+006					618.66	0.01	0.01	620.67
Total						2,325.26	0.05	0.02	2,332.81

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated											0.00	0.00	0.00	0.00	0.00	0.00
Unmitigated											0.00	0.00	0.00	0.00	0.00	0.00
Total	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating											0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products											0.00	0.00	0.00	0.00	0.00	0.00
Landscaping											0.00	0.00	0.00	0.00	0.00	0.00

Total											0.00	0.00	0.00	0.00	0.00	0.00

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating											0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products											0.00	0.00	0.00	0.00	0.00	0.00
Landscaping											0.00	0.00	0.00	0.00	0.00	0.00
Total											0.00	0.00	0.00	0.00	0.00	0.00

7.0 Water Detail

7.1 Mitigation Measures Water

	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr				MT/yr			
Mitigated					196.38	0.82	0.02	220.49
Unmitigated					196.38	0.82	0.02	220.49
Total	NA	NA	NA	NA	NA	NA	NA	NA

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	tons/yr				MT/yr			
General Office Building	0 / 0					0.00	0.00	0.00	0.00
Health Club	9.6798 / 0					70.92	0.30	0.01	79.62
High Turnover (Sit Down Restaurant)	0 / 0					0.00	0.00	0.00	0.00
Recreational Swimming Pool	0 / 0					0.00	0.00	0.00	0.00
Refrigerated Warehouse-No Rail	0 / 0					0.00	0.00	0.00	0.00
Strip Mall	17.1258 / 0					125.47	0.53	0.01	140.87
Total						196.39	0.83	0.02	220.49

Mitigated

	Indoor/Outdoor Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	tons/yr				MT/yr			
General Office Building	0 / 0					0.00	0.00	0.00	0.00
Health Club	9.6798 / 0					70.92	0.30	0.01	79.62
High Turnover (Sit Down Restaurant)	0 / 0					0.00	0.00	0.00	0.00
Recreational Swimming Pool	0 / 0					0.00	0.00	0.00	0.00
Refrigerated Warehouse-No Rail	0 / 0					0.00	0.00	0.00	0.00
Strip Mall	17.1258 / 0					125.47	0.53	0.01	140.87
Total						196.39	0.83	0.02	220.49

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

Category/Year

	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
	tons/yr				MT/yr			
Mitigated					80.54	4.76	0.00	180.50
Unmitigated					157.93	9.33	0.00	353.92
Total	NA	NA	NA	NA	NA	NA	NA	NA

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	tons	tons/yr				MT/yr			
General Office Building	0					0.00	0.00	0.00	0.00
Health Club	179					36.34	2.15	0.00	81.43
High Turnover (Sit Down Restaurant)	0					0.00	0.00	0.00	0.00
Recreational Swimming Pool	0					0.00	0.00	0.00	0.00
Refrigerated Warehouse-No Rail	0					0.00	0.00	0.00	0.00
Strip Mall	599					121.59	7.19	0.00	272.49
Total						157.93	9.34	0.00	353.92

Mitigated

	Waste Disposed	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	tons	tons/yr				MT/yr			
General Office Building	0					0.00	0.00	0.00	0.00
Health Club	91.29					18.53	1.10	0.00	41.53
High Turnover (Sit Down Restaurant)	0					0.00	0.00	0.00	0.00
Recreational Swimming Pool	0					0.00	0.00	0.00	0.00
Refrigerated Warehouse-No Rail	0					0.00	0.00	0.00	0.00
Strip Mall	305.49					62.01	3.66	0.00	138.97
Total						80.54	4.76	0.00	180.50

9.0 Vegetation

NBCU Project BAU Residential

Los Angeles-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric
Parking Lot	1422.1	1000sqft
Parking Structure	2597.9	1000sqft
User Defined Parking	649.28	User Defined Unit
Apartments High Rise	340	Dwelling Unit
Apartments Mid Rise	340	Dwelling Unit
Condo/Townhouse	2257	Dwelling Unit

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Utility Company**	Los Angeles Department of Water & Power
Climate Zone	12	**Precipitation Freq (Days)**	33		

1.3 User Entered Comments

Project Characteristics - Project GHG

Land Use - Based on Project Description

Construction Phase - Construction calculated separately.

Off-road Equipment -

Vehicle Trips - Based on transportation study.

Vechicle Emission Factors - EFs changed to not account for Pavley (Appendix D)

Vechicle Emission Factors - EFs changed to not account for Pavley (Appendix D)

Vechicle Emission Factors - EFs changed to not account for Pavley (Appendix D)

Woodstoves - No wood fireplaces.

Consumer Products -

Area Coating -

Landscape Equipment -

Energy Use - Using Title 24 - 2005 for electricity intensity.

Water And Wastewater - Water demand based on information in DEIR

Solid Waste - Solid waste generation based on information in DEIR.

Sequestration -

Energy Mitigation -

Water Mitigation -

Waste Mitigation - Divert 49%

2.0 Emissions Summary

2.2 Overall Operational

<u>Unmitigated Operational</u>

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area											196.55	1,871.53	2,068.08	1.02	0.03	2,099.82
Energy											0.00	18,964.59	18,964.59	0.43	0.20	19,036.33
Mobile											0.00	31,609.08	31,609.08	0.96	0.00	31,629.14
Waste											554.17	0.00	554.17	32.75	0.00	1,241.92
Water											0.00	1,517.59	1,517.59	5.27	0.14	1,672.70
Total											**750.72**	**53,962.79**	**54,713.51**	**40.43**	**0.37**	**55,679.91**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area											196.55	1,871.53	2,068.08	1.02	0.03	2,099.82
Energy											0.00	18,964.59	18,964.59	0.43	0.20	19,036.33
Mobile											0.00	31,609.08	31,609.08	0.96	0.00	31,629.14
Waste											282.62	0.00	282.62	16.70	0.00	633.38
Water											0.00	1,517.59	1,517.59	5.27	0.14	1,672.70
Total											**479.17**	**53,962.79**	**54,441.96**	**24.38**	**0.37**	**55,071.37**

3.0 Construction Detail

3.1 Mitigation Measures Construction

4.0 Mobile Detail

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated											0.00	31,609.08	31,609.08	0.96	0.00	31,629.14
Unmitigated											0.00	31,609.08	31,609.08	0.96	0.00	31,629.14
Total	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments High Rise	2,060.40	2,060.40	2060.40	6,862,316	6,862,316
Apartments Mid Rise	2,060.40	2,060.40	2060.40	6,862,316	6,862,316
Condo/Townhouse	13,677.42	13,677.42	13677.42	45,553,667	45,553,667
Parking Lot	0.00	0.00	0.00		
Parking Structure	0.00	0.00	0.00		
User Defined Parking	0.00	0.00	0.00		
Total	17,798.22	17,798.22	17,798.22	59,278,298	59,278,298

4.3 Trip Type Information

	Miles			Trip %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW
Apartments High Rise	12.70	7.00	9.50	40.20	19.20	40.60
Apartments Mid Rise	12.70	7.00	9.50	40.20	19.20	40.60
Condo/Townhouse	12.70	7.00	9.50	40.20	19.20	40.60
Parking Lot	8.90	13.30	7.40	0.00	0.00	0.00
Parking Structure	8.90	13.30	7.40	0.00	0.00	0.00
User Defined Parking	8.90	13.30	7.40	0.00	0.00	0.00

5.0 Energy Detail

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated											0.00	15,375.53	15,375.53	0.36	0.14	15,425.42
Electricity Unmitigated											0.00	15,375.53	15,375.53	0.36	0.14	15,425.42
NaturalGas Mitigated											0.00	3,589.06	3,589.06	0.07	0.07	3,610.90
NaturalGas Unmitigated											0.00	3,589.06	3,589.06	0.07	0.07	3,610.90
Total	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU	tons/yr										MT/yr					
Apartments High Rise	3.9238e+006											0.00	209.39	209.39	0.00	0.00	210.66
Apartments Mid Rise	3.9238e+006											0.00	209.39	209.39	0.00	0.00	210.66
Condo/Townhouse	5.94089e+007											0.00	3,170.28	3,170.28	0.06	0.06	3,189.58
Parking Lot	0											0.00	0.00	0.00	0.00	0.00	0.00
Parking Structure	0											0.00	0.00	0.00	0.00	0.00	0.00
User Defined Parking	0											0.00	0.00	0.00	0.00	0.00	0.00
Total												0.00	3,589.06	3,589.06	0.06	0.06	3,610.90

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU	tons/yr										MT/yr					
Apartments High Rise	3.9238e+006											0.00	209.39	209.39	0.00	0.00	210.66
Apartments Mid Rise	3.9238e+006											0.00	209.39	209.39	0.00	0.00	210.66
Condo/Townhouse	5.94089e+007											0.00	3,170.28	3,170.28	0.06	0.06	3,189.58
Parking Lot	0											0.00	0.00	0.00	0.00	0.00	0.00
Parking Structure	0											0.00	0.00	0.00	0.00	0.00	0.00

User Defined Parking	0											0.00	0.00	0.00	0.00	0.00	0.00
Total												**0.00**	**3,589.06**	**3,589.06**	**0.06**	**0.06**	**3,610.90**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	kWh	tons/yr				MT/yr			
Apartments High Rise	1.31796e+006					740.41	0.02	0.01	742.81
Apartments Mid Rise	1.31796e+006					740.41	0.02	0.01	742.81
Condo/Townhouse	1.04992e+007					5,898.26	0.14	0.05	5,917.40
Parking Lot	497735					279.62	0.01	0.00	280.53
Parking Structure	1.34831e+007					7,574.58	0.18	0.07	7,599.16
User Defined Parking	253220					142.25	0.00	0.00	142.72
Total						**15,375.53**	**0.37**	**0.14**	**15,425.43**

Mitigated

	Electricity Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	kWh	tons/yr				MT/yr			
Apartments High Rise	1.31796e+006					740.41	0.02	0.01	742.81
Apartments Mid Rise	1.31796e+006					740.41	0.02	0.01	742.81
Condo/Townhouse	1.04992e+007					5,898.26	0.14	0.05	5,917.40
Parking Lot	497735					279.62	0.01	0.00	280.53
Parking Structure	1.34831e+007					7,574.58	0.18	0.07	7,599.16
User Defined Parking	253220					142.25	0.00	0.00	142.72
Total						**15,375.53**	**0.37**	**0.14**	**15,425.43**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated											196.55	1,871.53	2,068.08	1.02	0.03	2,099.82
Unmitigated											196.55	1,871.53	2,068.08	1.02	0.03	2,099.82
Total	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating											0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products											0.00	0.00	0.00	0.00	0.00	0.00
Hearth											196.55	1,798.47	1,995.03	0.95	0.03	2,025.27
Landscaping											0.00	73.05	73.05	0.07	0.00	74.55
Total											**196.55**	**1,871.52**	**2,068.08**	**1.02**	**0.03**	**2,099.82**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCatagory	tons/yr										MT/yr					
Architectural Coating											0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products											0.00	0.00	0.00	0.00	0.00	0.00
Hearth											196.55	1,798.47	1,995.03	0.95	0.03	2,025.27
Landscaping											0.00	73.05	73.05	0.07	0.00	74.55
Total											**196.55**	**1,871.52**	**2,068.08**	**1.02**	**0.03**	**2,099.82**

7.0 Water Detail

7.1 Mitigation Measures Water

	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr				MT/yr			
Mitigated					1,517.59	5.27	0.14	1,672.70
Unmitigated					1,517.59	5.27	0.14	1,672.70
Total	NA	NA	NA	NA	NA	NA	NA	NA

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	tons/yr				MT/yr			
Apartments High Rise	0 / 0					0.00	0.00	0.00	0.00
Apartments Mid Rise	0 / 0					0.00	0.00	0.00	0.00
Condo/Townhouse	171.521 / 41.8162					1,517.59	5.27	0.14	1,672.70
Parking Lot	0 / 0					0.00	0.00	0.00	0.00
Parking Structure	0 / 0					0.00	0.00	0.00	0.00
User Defined Parking	0 / 0					0.00	0.00	0.00	0.00
Total						**1,517.59**	**5.27**	**0.14**	**1,672.70**

Mitigated

	Indoor/Outdoor Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	tons/yr				MT/yr			
Apartments High Rise	0 / 0					0.00	0.00	0.00	0.00
Apartments Mid Rise	0 / 0					0.00	0.00	0.00	0.00
Condo/Townhouse	171.521 / 41.8162					1,517.59	5.27	0.14	1,672.70
Parking Lot	0 / 0					0.00	0.00	0.00	0.00
Parking Structure	0 / 0					0.00	0.00	0.00	0.00
User Defined Parking	0 / 0					0.00	0.00	0.00	0.00
Total						**1,517.59**	**5.27**	**0.14**	**1,672.70**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

Category/Year

	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
	tons/yr				MT/yr			
Mitigated					282.62	16.70	0.00	633.38
Unmitigated					554.17	32.75	0.00	1,241.92
Total	NA	NA	NA	NA	NA	NA	NA	NA

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	tons	tons/yr				MT/yr			
Apartments High Rise	0					0.00	0.00	0.00	0.00
Apartments Mid Rise	0					0.00	0.00	0.00	0.00
Condo/Townhouse	2730					554.17	32.75	0.00	1,241.92
Parking Lot	0					0.00	0.00	0.00	0.00
Parking Structure	0					0.00	0.00	0.00	0.00
User Defined Parking	0					0.00	0.00	0.00	0.00
Total						**554.17**	**32.75**	**0.00**	**1,241.92**

Mitigated

	Waste Disposed	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	tons	tons/yr				MT/yr			
Apartments High Rise	0					0.00	0.00	0.00	0.00
Apartments Mid Rise	0					0.00	0.00	0.00	0.00
Condo/Townhouse	1392.3					282.62	16.70	0.00	633.38
Parking Lot	0					0.00	0.00	0.00	0.00
Parking Structure	0					0.00	0.00	0.00	0.00
User Defined Parking	0					0.00	0.00	0.00	0.00
Total						**282.62**	**16.70**	**0.00**	**633.38**

9.0 Vegetation

NBCU Project BAU SCE

Los Angeles-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric
General Office Building	422.33	1000sqft
General Office Building	495.41	1000sqft
Day-Care Center	15	1000sqft
General Light Industry	145.66	1000sqft
Refrigerated Warehouse-No Rail	307.95	1000sqft
Hotel	500	Room
Regional Shopping Center	39.22	1000sqft

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Utility Company**	Southern California Edison
Climate Zone	12	**Precipitation Freq (Days)**	33		

1.3 User Entered Comments

Project Characteristics - Project GHG

Land Use - Based on Project Description.

Vehicle Trips - trip rates based on the traffic study

Vechicle Emission Factors - EFs changed to not account for Pavley (Appendix D)

Vechicle Emission Factors - EFs changed to not account for Pavley (Appendix D)

Vechicle Emission Factors - EFs changed to not account for Pavley (Appendix D)

Woodstoves -

Consumer Products -

Area Coating -

Landscape Equipment -

Energy Use - Historical data selected to reflect Title 24-2005.

Water And Wastewater - Water set to reflect DEIR.

Solid Waste - Waste generation set to reflect DEIR.

Land Use Change -

Sequestration -

Energy Mitigation -

Water Mitigation -

Waste Mitigation - Divert 49%

Construction Phase - Construction calculated separately.

Off-road Equipment -

2.0 Emissions Summary

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area											0.00	0.00	0.00	0.00	0.00	0.00

Energy											0.00	8,983.08	8,983.08	0.37	0.16	9,039.12
Mobile											0.00	4,093.42	4,093.42	0.13	0.00	4,096.12
Waste											893.77	0.00	893.77	52.82	0.00	2,002.99
Water											0.00	628.79	628.79	4.09	0.11	749.15
Total											893.77	13,705.29	14,599.06	57.41	0.27	15,887.38

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area											0.00	0.00	0.00	0.00	0.00	0.00
Energy											0.00	8,983.08	8,983.08	0.37	0.16	9,039.12
Mobile											0.00	4,093.42	4,093.42	0.13	0.00	4,096.12
Waste											455.82	0.00	455.82	26.94	0.00	1,021.53
Water											0.00	628.79	628.79	4.09	0.11	749.15
Total											455.82	13,705.29	14,161.11	31.53	0.27	14,905.92

2.3 Vegetation

Vegetation

	ROG	NOx	CO	SO2	CO2e
Category	tons				MT
New Trees					80.01
Total					80.01

3.0 Construction Detail

3.1 Mitigation Measures Construction

4.0 Mobile Detail

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated											0.00	4,093.42	4,093.42	0.13	0.00	4,096.12
Unmitigated											0.00	4,093.42	4,093.42	0.13	0.00	4,096.12
Total	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Day-Care Center	3.75	3.75	3.75	4,312	4,312
General Light Industry	135.46	135.46	135.46	340,403	340,403
General Office Building	692.62	692.62	692.62	1,526,173	1,526,173
General Office Building	812.47	812.47	812.47	1,790,262	1,790,262
Hotel	845.00	845.00	845.00	1,537,592	1,537,592
Refrigerated Warehouse-No Rail	920.77	920.77	920.77	2,313,780	2,313,780
Regional Shopping Center	40.79	40.79	40.79	69,106	69,106
Total	3,450.87	3,450.87	3,450.87	7,581,629	7,581,629

4.3 Trip Type Information

Land Use	Miles			Trip %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW
Day-Care Center	8.90	13.30	7.40	0.00	0.00	100.00
General Light Industry	8.90	13.30	7.40	0.00	0.00	100.00
General Office Building	8.90	13.30	7.40	0.00	0.00	100.00
General Office Building	8.90	13.30	7.40	0.00	0.00	100.00
Hotel	8.90	13.30	7.40	0.00	0.00	100.00
Refrigerated Warehouse-No Rail	8.90	13.30	7.40	0.00	0.00	100.00
Regional Shopping Center	8.90	13.30	7.40	0.00	0.00	100.00

5.0 Energy Detail

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated											0.00	7,566.72	7,566.72	0.34	0.13	7,614.14
Electricity Unmitigated											0.00	7,566.72	7,566.72	0.34	0.13	7,614.14
NaturalGas Mitigated											0.00	1,416.36	1,416.36	0.03	0.03	1,424.98
NaturalGas Unmitigated											0.00	1,416.36	1,416.36	0.03	0.03	1,424.98
Total	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU	tons/yr										MT/yr					
Day-Care Center	176850											0.00	9.44	9.44	0.00	0.00	9.49
General Light Industry	2.88397e+006											0.00	153.90	153.90	0.00	0.00	154.84
General Office Building	5.25374e+006											0.00	280.36	280.36	0.01	0.01	282.07
General Office Building	6.16285e+006											0.00	328.87	328.87	0.01	0.01	330.87
Hotel	1.16325e+007											0.00	620.75	620.75	0.01	0.01	624.53
Refrigerated Warehouse-No Rail	360300											0.00	19.23	19.23	0.00	0.00	19.34
Regional Shopping Center	71373.1											0.00	3.81	3.81	0.00	0.00	3.83
Total												0.00	1,416.36	1,416.36	0.03	0.03	1,424.97

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU	tons/yr										MT/yr					
Day-Care Center	176850											0.00	9.44	9.44	0.00	0.00	9.49
General Light Industry	2.88397e+006											0.00	153.90	153.90	0.00	0.00	154.84
General Office Building	5.25374e+006											0.00	280.36	280.36	0.01	0.01	282.07
General Office Building	6.16285e+006											0.00	328.87	328.87	0.01	0.01	330.87
Hotel	1.16325e+007											0.00	620.75	620.75	0.01	0.01	624.53
Refrigerated Warehouse-No Rail	360300											0.00	19.23	19.23	0.00	0.00	19.34
Regional Shopping Center	71373.1											0.00	3.81	3.81	0.00	0.00	3.83
Total												0.00	1,416.36	1,416.36	0.03	0.03	1,424.97

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	kWh	tons/yr				MT/yr			
Day-Care Center	106200					30.89	0.00	0.00	31.08
General Light Industry	1.82851e+006					531.28	0.02	0.01	534.61
General Office Building	6.43625e+006					1,872.12	0.08	0.03	1,883.85
General Office Building	7.54999e+006					2,196.07	0.10	0.04	2,209.83
Hotel	4.077e+006					1,185.88	0.05	0.02	1,193.31
Refrigerated Warehouse-No Rail	5.39219e+006					1,568.43	0.07	0.03	1,578.26
Regional Shopping Center	625887					182.05	0.01	0.00	183.19
Total						7,566.72	0.33	0.13	7,614.13

Mitigated

	Electricity Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	kWh	tons/yr				MT/yr			
Day-Care Center	106200					30.89	0.00	0.00	31.08
General Light Industry	1.82851e+006					531.28	0.02	0.01	534.61
General Office Building	6.43625e+006					1,872.12	0.08	0.03	1,883.85
General Office Building	7.54999e+006					2,196.07	0.10	0.04	2,209.83
Hotel	4.077e+006					1,185.88	0.05	0.02	1,193.31
Refrigerated Warehouse-No Rail	5.39219e+006					1,568.43	0.07	0.03	1,578.26
Regional Shopping Center	625887					182.05	0.01	0.00	183.19
Total						7,566.72	0.33	0.13	7,614.13

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated											0.00	0.00	0.00	0.00	0.00	0.00
Unmitigated											0.00	0.00	0.00	0.00	0.00	0.00
Total	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating											0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products											0.00	0.00	0.00	0.00	0.00	0.00
Landscaping											0.00	0.00	0.00	0.00	0.00	0.00
Total											0.00	0.00	0.00	0.00	0.00	0.00

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating											0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products											0.00	0.00	0.00	0.00	0.00	0.00
Landscaping											0.00	0.00	0.00	0.00	0.00	0.00
Total											0.00	0.00	0.00	0.00	0.00	0.00

7.0 Water Detail

7.1 Mitigation Measures Water

	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr				MT/yr			
Mitigated					628.79	4.09	0.11	749.15
Unmitigated					628.79	4.09	0.11	749.15
Total	NA	NA	NA	NA	NA	NA	NA	NA

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	tons/yr				MT/yr			
Day-Care Center	0.146 / 0					0.55	0.00	0.00	0.69
General Light Industry	9.56957 / 0					36.35	0.29	0.01	44.96
General Office Building	60.9517 / 0					231.53	1.87	0.05	286.36
Hotel	47.45 / 38.2987					304.01	1.46	0.04	347.46
Refrigerated Warehouse-No Rail	8.99214 / 0					34.16	0.28	0.01	42.25
Regional Shopping Center	5.84 / 0					22.18	0.18	0.00	27.44
Total						628.78	4.08	0.11	749.16

Mitigated

	Indoor/Outdoor Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	tons/yr				MT/yr			
Day-Care Center	0.146 / 0					0.55	0.00	0.00	0.69
General Light Industry	9.56957 / 0					36.35	0.29	0.01	44.96
General Office Building	60.9517 / 0					231.53	1.87	0.05	286.36
Hotel	47.45 / 38.2987					304.01	1.46	0.04	347.46
Refrigerated Warehouse-No Rail	8.99214 / 0					34.16	0.28	0.01	42.25
Regional Shopping Center	5.84 / 0					22.18	0.18	0.00	27.44
Total						628.78	4.08	0.11	749.16

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

Category/Year

	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
	tons/yr				MT/yr			
Mitigated					455.82	26.94	0.00	1,021.53
Unmitigated					893.77	52.82	0.00	2,002.99
Total	NA	NA	NA	NA	NA	NA	NA	NA

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	tons	tons/yr				MT/yr			
Day-Care Center	11					2.23	0.13	0.00	5.00
General Light Industry	975					197.92	11.70	0.00	443.54
General Office Building	920					186.75	11.04	0.00	418.52
Hotel	1281					260.03	15.37	0.00	582.75
Refrigerated Warehouse-No Rail	880					178.63	10.56	0.00	400.33
Regional Shopping Center	336					68.20	4.03	0.00	152.85
Total						893.76	52.83	0.00	2,002.99

Mitigated

	Waste Disposed	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	tons	tons/yr				MT/yr			
Day-Care Center	5.61					1.14	0.07	0.00	2.55
General Light Industry	497.25					100.94	5.97	0.00	226.21
General Office Building	469.2					95.24	5.63	0.00	213.45
Hotel	653.31					132.62	7.84	0.00	297.20
Refrigerated Warehouse-No Rail	448.8					91.10	5.38	0.00	204.17
Regional Shopping Center	171.36					34.78	2.06	0.00	77.95
Total						**455.82**	**26.95**	**0.00**	**1,021.53**

9.0 Vegetation

	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Category	tons				MT			
Unmitigated					80.01	0.00	0.00	80.01
Total	NA	NA	NA	NA	NA	NA	NA	NA

9.1 Net New Trees

Species Class

	Number of Trees	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
		tons				MT			
Mixed Hardwood	109					80.01	0.00	0.00	80.01
Total						**80.01**	**0.00**	**0.00**	**80.01**

Errata No. 2

NBC Universal Evolution Plan Environmental Impact Report

The following provides one additional minor revision to the NBC Universal Evolution Plan Environmental Impact Report (EIR) (City of Los Angeles EIR No. ENV-2007-0254-EIR, State Clearinghouse No. 2007071036). Revisions to the EIR are presented below with deletions presented as ~~strikethrough~~ and additional language presented in <u>underline</u>.

A. Section II, Corrections and Additions, of the Final EIR, Section V.K, Environmentally Superior Alternative[1], starting with the fourth paragraph on page 2432 and continuing through the end of page 2433 of the Draft EIR, are revised as follows:

> "However, CEQA requires that when the No Project Alternative is the environmentally superior alternative, another alternative needs to be selected as environmentally superior. In accordance with this directive, the ~~Reduced Intensity (Alternative 4)~~ <u>No Residential Alternative (Alternative 10)</u> is selected as the environmentally superior alternative.
>
> This alternative was selected because it would reduce all of the Project's significant impacts ~~except noise (construction)~~ without resulting in new significant impacts that do not occur under the proposed Project. This occurs as Alternative ~~4 would reduce the amount of development within the Project Site by 25 percent across all of the proposed Project's land use categories~~ <u>10 represents a significant reduction in the overall density of the proposed Project by eliminating the entire residential portion of the proposed Project while increasing the Studio Office and Entertainment uses of the proposed Project</u>. Even though most of the proposed Project's significant impacts would be reduced under Alternative

[1] *The analysis of the Environmentally Superior Alternative was presented as Section V.J. of the Draft EIR. Correction and Addition V.K as set forth in Section II, Corrections and Additions, of the Final EIR, added Section V.J, Alternative 10: No Residential Alternative to the Draft EIR, and changed the subsequent section heading from "Section V.J, Environmentally Superior Alternative" to "Section V.K, Environmentally Superior Alternative".*

~~4~~ 10, they would not be sufficiently reduced to less than significant levels. As such, Alternative ~~4~~ 10, as is the case with the proposed Project, would result in significant impacts with regard to traffic (operation), air quality, construction noise, and solid waste disposal. While impacts for a number of issues would be reduced under Alternative ~~4~~ 10, the reduced levels of development under this alternative also serve to reduce some of the beneficial effects of the proposed Project, particularly with regard to ~~advancing key land use policies and the provision of new employment and housing in an existing urbanized area in proximity to multiple transit lines and major employment centers~~ the provision of housing as well as advancing those land use policies that relate to housing. However, Alternative 10 would implement other land use policies to a greater extent than the proposed Project. Specifically, Alternative 10 would provide a greater level of commercial growth at a regional transportation hub than the proposed Project, and a greater expansion to the entertainment and tourism industries, which are key economic engines in Southern California. In summary, Alternative ~~4~~ 10 would not introduce additional significant environmental impacts, and in many cases would lessen the proposed Project's overall impacts ~~including~~ as well as some of its beneficial ~~impacts~~ effects, while increasing other beneficial effects.

Alternative ~~4~~ 10 would meet most, but not all of the Project's objectives, ~~but to a lesser degree than what occurs under the proposed Project due to the overall decrease in the amount of development. For example, the objectives for continuing the Project Site's role in the entertainment industry and the enhancement of the Project Site as a media-oriented commercial district would be met under Alternative 4, but to a lesser degree given the reduced amount of studio and studio-related uses. In addition, Alternative 4 would not promote the regional economy to as great an extent as the proposed Project by providing lower levels of office, studio, and entertainment uses. With regard to the proposed residential development, as Alternative 4 would provide less housing than the Project, it would not meet the Project objective to maximize the overall amount of housing units on the Project Site to help meet regional housing needs consistent with the City and County General Plans and SCAG's Regional Housing Needs Assessment~~ due to the overall elimination of the proposed residential, neighborhood retail and community-serving commercial uses in the existing Back Lot Area. For example, the objectives that would not be met include those that pertain to the proposed Project's residential component such as locating residential development in proximity to an employment center, providing efficient and aesthetically attractive streets in the residential community, and creating a pedestrian

friendly mixed use community. In addition, Alternative 10 would not provide a mixed-use community that fulfills adopted land use and transportation policies that ultimately decrease dependency on the automobile with resultant traffic, air quality, and noise benefits, nor create greater efficiencies in the utilization of infrastructure.

Conversely, the objectives for the continuation of the Project Site's role in the entertainment industry and the enhancement of the Project Site as a media-oriented commercial district would be met and increased under Alternative 10. For instance, Alternative 10 would meet, to a greater extent than the proposed Project, the objectives to expand the entertainment industry and complementary uses at the Project Site as well as to maintain and enhance the Project Site's role in the entertainment industry, and to continue the tradition of outdoor film and television production facilities uniquely integrated with the theme park and business uses within the Project Site."