city of san luis obispo

INITIAL STUDY
ENVIRONMENTAL CHECKLIST FORM
For ER # 1098-15

1. **Project Title:** Calle Joaquin Hotel Development

2. **Lead Agency Name and Address:** City of San Luis Obispo
990 Palm Street, San Luis Obispo, CA 93401

3. **Contact Person and Phone Number:** Phil Dunsmore, Senior Planner, Community Development – Development Review (805) 781-7522

4. **Project Location:** 1301 Calle Joaquin Road, San Luis Obispo, California

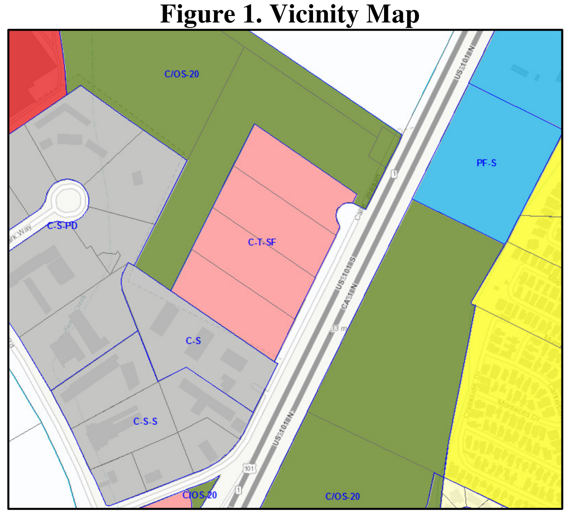
5. **Project Sponsor's Name and Address:** Agent: Tim Walters, RRM Design Group
Applicant: Myhre Group Architects
620 SW 5th Avenue, Suite #500
Portland, Oregon 97204

6. **General Plan Designation:** Tourist Commercial, Special Focus

7. **Zoning:** Commercial Tourist, Special Focus (C-T-SF)

8. **Description of the Project:**

Figure 1. Vicinity Map



The applicant, Myhre Group Architects, represented by Philip Stewart, has applied for Architectural Review to allow for a 69,293-square foot, four-story, 114-unit extended-stay hotel on a 2.84-acre parcel accessed from Calle Joaquin. The maximum height of the structure would be 45 feet. Hotel room types would include: studio and accessible studio (40 units), double queen and accessible double queen (54 units), one bedroom and accessible one bedroom (13 units), and two bedrooms and accessible bedrooms (7 units). Hotel amenities would include an outdoor swimming pool, fire pits, and barbeque patio within an approximately 5,000-square foot fenced enclosure; guest laundry room; fitness room; breakfast buffet room with tables and serving areas; breakfast patio; and a meeting/multi-purpose room. No conference or commercial cooking facilities are proposed. A noise wall (concrete with stone veneer) would be constructed along the edge of the outdoor patio. Occupancy would be 221 persons, including 206 guests and 15 employees.

The parking lot would include 117 vehicular spaces (including five accessible spaces and one wheelchair user only space), and six motorcycle spaces. The parking lot would consist of asphalt paving, and permeable pavement parking stalls. Eight bicycle spaces are proposed, including six wall-mounted, long term bike storage spaces located within the first floor, and two short-term spaces. As proposed, the project would result in 21,699 square feet of permeable paver area and 33,100 square feet of sidewalk/paving area. The building footprint would be 18,390 square feet. The project includes 48,455 square feet of landscaped area, 47,215 square feet of landscaping and four bio-swales (1,240 square feet). Landscaping would include: a variety of trees (ranging in height from 20 to 80 feet at maturity); shrubs and groundcover; turf areas; shade-tolerant shrubs; and bio-infiltration and vegetated swales. Signage would include an illuminated 20-square foot monument sign at the entrance, and three illuminated wall mounted signs (approximately 100 square feet each) on the north, east, and south elevations. The project includes a 30-foot tall flag pole, 21-foot tall parking lot light poles, post-top light fixtures mounted at 6 feet, 3-foot tall light bollards, and lighted wall sconces mounted at 6 feet.

The project would include disturbance of the entire 2.84-acre parcel, including 55 cubic yards of cut and 6,330 cubic yards of imported fill. Approximately 7,850 cubic yards of spoils would be generated, resulting in a total export of 1,575 cubic yards. The remainder of the material would be balanced onsite. Stormwater management would include use of the existing drainage easements along the northeast and southwest property boundaries, and four internal bio-swales.

9. **Project Entitlements:**
The project requires approval by the Architectural Review Commission (ARC).

10. **Surrounding Land Uses and Settings:**
The project site is located at 1301 Calle Joaquin Road, Assessor's Parcel Number (APN) 053-152-003. The project site is within the Tourist Commercial land use designation, and is located within the Calle Joaquin Auto Sales Site Area, Special Focus area. The project site and adjacent parcels to the northeast and southwest are within the Commercial Tourist, Special Focus zone. The parcel to the northwest is within the Conservation/Open Space, 20-acre minimum zone. Other surrounding land use zones include Commercial Retail and Commercial Services-Planned Development to the west, along Los Osos Valley Road and Auto Park Way. Conservation-Open Space and Public/Public Facilities zones are located east of U.S. Highway 101. The parcel was created by a previous subdivision, was graded, and supports drainage easements. The nearly level project site does not support any significant amount of vegetation, and no trees are present. The project parcel and adjacent parcels are vacant. The City Farm property is located on the parcel to the northwest, adjacent to Prefumo Creek. Calle Joaquin and U.S. Highway 101 are located to the southeast. Land uses in the area include auto sales to the west and south, and a motel and commercial development to the south.

11. **Other public agencies whose approval is required:**
Regional Water Quality Control Board, Air Pollution Control District, County Airport Land Use Commission

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.

X	Aesthetics		Greenhouse Gas Emissions		Population / Housing
	Agriculture Resources	X	Hazards & Hazardous Materials		Public Services
X	Air Quality	X	Hydrology / Water Quality		Recreation
X	Biological Resources		Land Use / Planning	X	Transportation / Traffic
X	Cultural Resources		Mineral Resources	X	Utilities / Service Systems
X	Geology / Soils	X	Noise		Mandatory Findings of Significance

FISH AND WILDLIFE FEES

	The Department of Fish and Wildlife has reviewed the CEQA document and written no effect determination request and has determined that the project will not have a potential effect on fish, wildlife, or habitat (see attached determination).
X	The project has potential to impact fish and wildlife resources and shall be subject to the payment of Fish and Game fees pursuant to Section 711.4 of the California Fish and Game Code. This initial study has been circulated to the California Department of Fish and Wildlife for review and comment.

STATE CLEARINGHOUSE

X	This environmental document must be submitted to the State Clearinghouse for review by one or more State agencies (e.g. Cal Trans, California Department of Fish and Game, Department of Housing and Community Development). The public review period shall not be less than 30 days (CEQA Guidelines 15073(a)).

DETERMINATION (To be completed by the Lead Agency):

On the basis of this initial evaluation:

I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.	
I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made, by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.	--X--
I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.	
I find that the proposed project MAY have a "potentially significant" impact(s) or "potentially significant unless mitigated" impact(s) on the environment, but at least one effect (1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and (2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed	
I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (1) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (2) have been avoided or mitigated pursuant to that earlier EIR of NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.	

Signature

Date

Printed Name

For: Derek Johnson,
Community Development Director

EVALUATION OF ENVIRONMENTAL IMPACTS:

1. A brief explanation is required for all answers except “No Impact” answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A “No Impact” answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g. the project falls outside a fault rupture zone). A “No Impact” answer should be explained where it is based on project-specific factors as well as general standards (e.g. the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).

2. All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.

3. Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact' is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.

4. “Negative Declaration: Less Than Significant With Mitigation Incorporated” applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less than Significant Impact." The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level (mitigation measures from Section 19, "Earlier Analysis," as described in (5) below, may be cross-referenced).

5. Earlier analysis may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration (Section 15063 (c) (3) (D)). In this case, a brief discussion should identify the following:
   a) Earlier Analysis Used. Identify and state where they are available for review.

   b) Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.

   c) Mitigation Measures. For effects that are “Less than Significant with Mitigation Measures Incorporated,” describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they addressed site-specific conditions for the project.

6. Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g. general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.

7. Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.

8. The explanation of each issue should identify:

   a) the significance criteria or threshold, if any, used to evaluate each question; and

   b) the mitigation measure identified, if any, to reduce the impact to less than significance

1. AESTHETICS. Would the project:					
a) Have a substantial adverse effect on a scenic vista?	1, 2		--X--		
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, open space, and historic buildings within a local or state scenic highway?	2		--X--		
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	2		--X--		
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	1, 3		--X--		

Evaluation

The project site is located along the northern terminus of Calle Joaquin Road, approximately 90 feet west of U.S. Highway 101 (U.S. 101), and approximately 750 to 1,000 feet east of Los Osos Valley Road. U.S. 101 and Los Osos Valley Road are designated in the Conservation and Open Space Element (COE) as having view corridors of “high scenic value” southwest of the site, and “moderate scenic value” northeast of the site (Figure 11: Scenic Roadways and Vistas). The project site is not located within a specific “cone of view” as identified by the COSE. The project site is currently vacant, and appears agricultural in nature, due to the presence of low growing crops to the immediate north and northeast. Development visible from both Los Osos Valley Road and U.S. 101 include car dealerships, gas stations, commercial centers, and Motel 6; the Embassy Suites hotel and large shopping centers and parking areas are visible near Madonna Road (approximately 0.5 mile to the north). The City’s water resource recovery facility (WRRF) is visible to the east of U.S. 101, although vegetation provides screening. Other development includes the Los Osos Valley Road interchange (currently undergoing re-construction), billboards, and transmission towers and lines. The Irish Hills, Santa Lucia Foothills, South Hills, Cerro San Luis, and Bishop’s Peak provide a topographic and scenic backdrop to the City.

The project site is visible from both the southbound and northbound travel lanes of U.S. 101 for approximately 0.9 mile. As seen from the northbound lanes, the site is visible after a driver passes the Los Osos Valley Road southbound off-ramp, and the site dominates the western view after passing the Motel 6 and Chevrolet car dealership. As seen from U.S. 101 south of the site, Cerro San Luis and Bishop’s Peak provide a solid backdrop. As seen from U.S. 101 directly east of the project site, the project site is located within a valley between the Irish Hills and Cerro San Luis, and the natural setting to the northwest is generally level, with large trees along the Prefumo Creek corridor visible in the distance. As a driver travels further north, Cerro San Luis, Embassy Suites, and the Promenade shopping center become more visible, in the primary view corridor looking north. As seen from U.S. 101 southbound travel lanes, the site is visible after the driver passes the Promenade shopping center and Embassy Suites; the Irish Hills provide a solid backdrop, looking south. Commercial development along Los Osos Valley Road can be seen behind the Prefumo Creek corridor.

Policy 9.2.1 of the COE and Policy 15.1.2 of the Circulation Element mandate that new development projects not wall off scenic roadways and block views and that the Architectural Review Commission (ARC) review consider protection of view corridors. Pursuant to COE Policy 9.3.6 and 15.1.2 of the Circulation Element, view blockage along scenic roadways is considered a significant impact and requires consideration during environmental review. LUCE Program 8.11, Calle Joaquin Auto Sales Area, states that development must address viewshed preservation and treatment as a gateway to the City visible from Highway 101.

a), b), c) The project site is most visible along a stretch of U.S. 101 designated to have high to moderate scenic value. Any development on the project site would be clearly visible as seen from U.S. 101, similar to existing development. Any structure would partially block views of the Irish Hills, Cerro San Luis, and Bishop’s Peak, and would result in a visual change from open space to urban development. Construction of the proposed project would require the use of equipment and temporary structures, which would be visible from U.S. 101. These effects would be temporary, and limited to the construction phase. Therefore, potential short-term impacts would be less than significant.

The proposed project would be 45 feet in height and would include structures, a parking area, landscaping, signage, and lighting. The structure would be setback approximately 90 feet the edge of Calle Joaquin, and separated by a landscaping and parking areas. Proposed elevations for the building show stucco-finished walls in varying muted colors (tans and greens), with stone veneer, and flat roofing of varying heights, with fiberglass cornice and metal parapet cap. Accents include aluminum window frames, windows with varying pane sizing and framing, and wood framed canopy and wood trellises stained to match the window frames and metal cornice. The project style incorporates natural-appearing exterior features including stucco and stone that incorporate the colors of the surrounding landscape. The project has an extended, generally rectangular form, but includes wall offsets along all elevations, and covered entryways. Architectural details, including use of muted colors and stone, are consistently provided on all sides of the building. The structure includes flat roofing along all elevations at varying heights. The front entry includes a canopy over the entryway. Wall signage is illuminated (teal and red during the day, white and red at night), and is located on the north, east, and south facades (100 square feet each). Due to exposure to noise generated on U.S. Highway 101, noise attenuation consisting of a solid wall is identified within the swimming pool and barbeque patio areas; landscaping is provided along the perimeter of the wall.

Parking areas would be located along the northwestern, northeastern, and eastern sides of the building. Landscaping including a variety of tall trees, shrubs, and groundcover would be installed and maintained between the structure and Calle Joaquin, between Calle Joaquin and U.S. 101, and along all property boundaries and within the parking areas. The landscaping plan incorporates predominantly native, drought-tolerant species.

The ARC reviewed conceptual plans and elevations for the proposed hotel on July 7, 2014. Recommendations provided by the ARC generally included: provision of parking around the structure to facilitate access for guests; design of outdoor use areas should consider high winds in the area; incorporate permeable surfaces; add horizontal and vertical offsets to break up the massing of the structure; provide more complementary and harmonious architectural styles, embrace one style as opposed to separate styles for exterior features and elements; add details for lighting and landscaping; use natural earth tone colors that blend with the stone features; and incorporate less stone on the exterior walls. Following conceptual review by the ARC, the applicant has worked with City staff to redesign the structure to reduce the massing and singular blocky shape of the building through horizontal and vertical offsets, reduce the height of the building to 45 feet (consistent with the Ordinance), incorporate taller trees, colors, and materials to reduce the appearance of massing and encourage compatibility with the regional landscape, and present a consistent architectural theme and appropriate accents and details. The applicant will return to the ARC for final design review and approval.

The proposed development would be visible for approximately 0.9 mile as seen from U.S. 101. The structure would partially block views of the Irish Hills, Cerro San Luis, and Bishop's Peak (in the distance). As seen from the northbound travel lanes, views of vegetation, the western extent of Cerro San Luis, and Bishop's Peak (in the distance) would be partially blocked for up to approximately 0.25 mile; the project's approximately 90-foot front setback would retain primary views of Cerro San Luis. As seen from the southbound lanes, views of the Irish Hills are partially blocked by existing trees adjacent to the highway, and the foreground of the western extent of the hills (as seen from this section of U.S. 101) would be partially blocked for approximately 0.4 mile.

Based on the size and location of the proposed structure, a majority of existing views of prominent hillsides would be retained as viewers travel along U.S. 101. Proposed setbacks, variations in vertical and horizontal elevations, exterior colors and materials, and landscaping would help blend the structure with the natural backdrop and proximate urban development, including the Hampton Inn and Embassy Suites, both near the U.S. 101 corridor. Mitigation is identified, which would further ensure that the project would not result in significant visual impacts.

<u>Mitigation Measures:</u> The applicant shall comply with the following measures:

AES-1 Prior to issuance of construction permits, final project design shall require architectural review to assure that impacts to scenic resources are addressed in accordance with City policy. The Architectural Review Commission shall review site design, building architecture, colors, grading, lighting, landscaping, and signage for consistency with General Plan polices for viewshed protection and the City's Community Design Guidelines, and all recommendations shall be incorporated into the proposed project. In addition, the following standards shall supplement City policy, and shall apply to the project site:

a. All free-standing exterior light fixtures shall have a maximum height of twenty feet as measured from the fixture to finished grade. All lighting shall incorporate fully shielded light sources, with illumination levels at or below 10-foot candles when measured below the light source at finished grade. Light levels at and beyond the property lines shall not exceed 1 foot-candle. The City shall review a complete lighting plan and photometrics plan as part of the construction plans to ensure compliance.

b. The final site plan shall incorporate landscaping and site improvements in order to create a "soft edge" along all lot boundaries, including drought-tolerant native trees and shrubs. The landscaping plan shall include drought-tolerant, native tree plantings and irrigation within the Calle Joaquin right-of-way; trees shall be spaced to preserve primary views through the project site.
c. All mechanical equipment (including backflow plumbing devices and water meters), whether on the ground or installed elsewhere, shall be painted a flat green color and screened from public view with appropriate landscape material, earthen berms, or landscaped walls.
d. The final elevations shall identify exterior colors and materials that include natural, muted colors (i.e., muted browns, greens, and tans) consistent with the natural backdrop.

AES-2 Prior to issuance of construction permits, the applicant shall submit a final landscape plan with road improvement plans for review and approval by the Community Development Department, Utilities Department, and Public Works Department. The landscape plan shall identify the size, quantity, and variety of all landscape plants and trees. Appropriate groundcover mulch and erosion control methods shall be indicated on the plan. The landscape plan shall include an irrigation plan (drip irrigation) and if feasible, connection to the City's recycled water "purple pipe" system, for all proposed landscape areas. The landscape plan shall comply with the following standards, unless otherwise superseded by the Architectural Review Commission:

a. Small trees that are no taller than 15-20 feet, numbers of which are calculated based on a spacing of 50 feet, shall be clustered and interspersed with other plant materials including low to medium-height shrubs and groundcovers (native and native-appearing choices) to create a variety of textures and canopies within the 12-foot wide planting strip between the eastern edge of the Calle Joaquin and U.S. Highway 101 right-of-ways.
b. Larger trees with an open character, numbers of which are calculated based on a spacing of 50 feet, shall be clustered along the western edge of the Calle Joaquin right-of-way to maximize views through the southwestern and northeastern lot boundaries. Other smaller trees that are not taller than 40 feet, numbers of which are calculated based on a spacing of 50 feet, shall be interspersed with the larger trees along the frontage of the lot. Trees shall also be planted to complement the hotel building by choosing species that will ultimately meet the roofline of the building at maturity and be planted in locations close to the building.
c. Size and quantity of all plants shall be clearly identified on the final landscape plan. Street trees shall be a minimum size of 24-inch box specimens.
d. Use of recycled water is regulated by the State Water Board and CDPH. The City delivers recycled water under its Master Reclamation Permit from the State Water Board. The irrigation plans shall be prepared in compliance with the City's *Procedures for Recycled Water Use*.
f. On-site landscaping, and landscaping located within the parkway, between Calle Joaquin and U.S. Highway 101, shall be maintained by the developer/landowner. A landscape maintenance agreement shall be recorded prior to issuance of construction permits. The agreement shall run with the land and the responsibility for on-going maintenance shall be transferred to future property owners, as applicable. Maintenance shall be overseen by the Community Development Director in consultation with the Natural Resources Manager.

Conclusion: Less than significant impact with mitigation.

d) Existing sources of light and glare in the area include street lighting, car dealerships, and shopping centers. COE Policy 9.2.3 states that outdoor lighting shall avoid unnecessary operation, spillage of lighting to areas not needing or wanting illumination, glare, and frequencies that interfere with astronomical viewing. The project would comply with Section 17.23.050 of the Zoning Regulations (Night Sky Preservation). The additional lighting created by the project would not result in a noticeable increase in light or glare, or effect on the night sky. During certain times of the day, sunlight may reflect against windows creating glare visible from U.S. 101. Mitigation is identified that would reduce this potential impact to less than significant.

Mitigation Measure: The applicant shall comply with the following measure:

AES-3 Prior to issuance of construction permits, the applicant shall submit construction plans showing the use of measures to reduce glare on windows facing U.S. Highway 101, which may include but not be limited to recessed windows or coatings.

Conclusion: Less than significant impact with mitigation.

As discussed above, the proposed project appears to be consistent with the City General Plan and Zoning Code, and would not include any features that would result in a significant adverse effect to aesthetic resources following implementation of mitigation measures. The project may be further refined through review and approval by the Architectural Review Commission.

2. AGRICULTURE RESOURCES. Would the project:

	Sources	Potentially Significant Issues	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	2, 4, 5, 6			--X--	
b) Conflict with existing zoning for agricultural use or a Williamson Act contract?	2			--X--	
c) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use?	2			--X--	

Evaluation

Onsite soils within Lots 1, 2, 3, and 4 include: Cropley clay (0 to 2 percent slopes) and Salinas silty clay loam (0 to 2 percent slopes). These soils types are Class III, non-irrigated. The site would be considered prime farmland, if irrigated. Based on review of the Farmland Mapping and Monitoring Program Important Farmland Map (2010), the project site is designated "Prime Farmland". The project site is zoned Commercial Tourist - Special Focus, and was previously graded. The project site is not irrigated and does not support agricultural uses. Land to the north and northeast is under agricultural production. The project site and adjacent parcels are not under Williamson Act contracts.

The 1994 General Plan Land Use Element EIR identified a significant, unavoidable impact to prime farmland as a result of proposed and approved land use changes and anticipated future development of the project site. At the time, the City Council adopted a Statement of Overriding Considerations upon approval of the Land Use Element, and designation of the site as "Services and Manufacturing" (Resolution 8332). The overriding considerations stated the following: "Accommodating a reasonable share of anticipated regional growth within the urban reserve line, contiguous to existing development, while preserving land outside the urban reserve line". Mitigation for the loss of prime farmland is incorporated into General Plan Land Use Element Policy 1.13.5, and was implemented when the property was annexed into the City. The mitigation required that half of the ownership area to be annexed be preserved as open space, which was achieved upon approval of the annexation.

The 2014 LUCE Final EIR identified a Class II (less than significant impact with mitigation) as a result of future development on prime farmland, unique farmland, and/or farmland of statewide importance (refer to Impact AG-2 in the Final EIR). Required mitigation includes permanent protection of an area of equal quality, which was previously achieved when the property was annexed into the City, and the site was zoned for urban development.

The proposed project has no bearing on the adequacy of the 1994 Land Use Element EIR's or 2014 LUCE EIR's conclusions regarding the loss of prime farmland or statement of overriding considerations because: the amount of land to be converted by the development is the same as what was considered in the Land Use Element (1994); the proposed project does not adversely affect the existing open space parcel; and, since the adoption of the Land Use Element Update in 1994, the City has acquired many acres of agricultural lands and other properties with unique natural resources, primarily outside the City limits and in cases, outside the City's urban reserve area, and this proactive natural resources program was a key consideration to evaluating the specific impacts of the loss of prime farmland on this property and adjacent properties.

a), b) The site is currently zoned for urban development and does not currently support agricultural production. As noted above, the loss of prime farmland was evaluated as part of the 1994 Land Use Element Update Final EIR, and the resulting impact was mitigated by the creation of the adjacent open space parcel (Open Space Lot 5). Therefore, the proposed project would not result in any changes that would affect the basis of the overriding considerations. Therefore, potential impacts would be less than significant.

Conclusion: Less than significant impact.

c) Property to the northeast is within the City Farm, and supports irrigated row crops. Implementation of the proposed project would not directly affect Open Space Lot 5, which provides a buffer to the north and northeast. Based on review by the County Agricultural Commissioner's Office: "The proposed project appears to be adequately buffered from adjacent ag [sic] land based on the building location, room orientation, and landscaping represented on the plan. Development on remaining lots should be similar. Disclosure of the County's Right-to-Farm Ordinance is recommended" (Lynda Auchinachie 2014). The applicant provided a shadow study (MGA 2015), which demonstrates that due to the distance between the building and the northern property line (180 feet), shadows cast by the building would not extend beyond the northern property boundary; although landscape trees along the northern boundary would cast shadows to the north, beyond the property boundary, during a portion of the day. The effects would be minimal, as the light would be filtered and the shadow would not be constant. Therefore, potential impacts would be less than significant. Approval of the proposed project would not result in any uses that would impair or otherwise adversely affect crop production, and the project would not result in any other changes that would result in conversion of Farmland to non-agricultural use.

Conclusion: Less than significant impact.

As discussed above, the proposed project would not result in any adverse effects to agricultural, on or off-site. No mitigation is necessary.

3. AIR QUALITY. Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:

a) Conflict with or obstruct implementation of the applicable air quality plan?	7			--X--	
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	2, 8, 9		--X--		
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	2, 8, 9		--X--		
d) Expose sensitive receptors to substantial pollutant concentrations?	8, 9		--X--		
e) Create objectionable odors affecting a substantial number of people?				--X--	

Evaluation

The City of San Luis Obispo is located within the jurisdiction of the San Luis Obispo Air Pollution Control District (SLOAPCD). SLOAPCD is located within the South Central Coast Air Basin. Based on review by the SLOAPCD (Melissa Guise, 2014), implementation of the project may result in the generation of construction emissions, exposure to naturally occurring asbestos (if present), potential exposure to material containing asbestos (if present), generation of fugitive dust, and operational emissions. Air emissions modeling was conducted using CalEEMod, and worksheets are attached to this Initial Study. The project does not include demolition activities. Compliance with existing regulations and consistency with the SLOAPCD CEQA Handbook (2012) would address potential air quality impacts, as noted below.

a) SLOAPCD adopted the 2001 Clean Air Plan (CAP) in 2002. The 2001 CAP is a comprehensive planning document intended to provide guidance to the SLOAPCD and other local agencies, including the City, on how to attain and maintain the state standards for ozone and PM10. The CAP presents a detailed description of the sources and pollutants which impact the jurisdiction, future air quality impacts to be expected under current growth trends, and an appropriate control strategy for reducing ozone precursor emissions, thereby improving air quality. The proposed project is consistent with the general level of development anticipated and projected in the CAP. The project is consistent with the CAP's land use planning strategies, including locating a business within an urban area on an existing roadway, near transit services and shopping areas. Therefore, potential impacts would be less than significant.

Conclusion: Less than significant impact.

b), c) SLOAPCD monitors air pollutant levels to assure that air quality standards are met, and if they are not met, to develop strategies to meet the standards. Depending on whether the standards are met or exceeded, the air basin is classified as being in "attainment" or as "non-attainment". SLOAPCD is currently in non-attainment for 1-hour and 8-hour ozone and 24-hour and annual arithmetic mean respirable particulate matter (PM_{10}).

Pursuant to the 2014 LUCE Final EIR, required mitigation measures include standards to reduce fugitive dust and combustion emissions, consistent with the most current SLOAPCD-recommended construction-related mitigation measures. Compliance with these standards is monitored during the building permit plan check process and by field inspections conducted by Building Division inspectors. All secondary effects caused by construction are expected to be short term. Long-term operational impacts may require implementation of mitigation measures, which would reduce vehicle miles traveled, energy consumption, and off-gassing of architectural coatings.

Implementation of the proposed project would require grading and construction, which would generate air emissions. Up to 2.84 acres of grading may occur. Use of portable equipment over 50 horsepower (hp) would require a permit from SLOAPCD. Operation of the hotel would result in additional trips, including employees and guests.

Grading and Construction. The project would result in the disturbance of approximately 2.84 acres. Grading activities would result in the import of 6,330 cubic yards of soil, and the export of 1,575 cubic yards of soil. Construction activities would generate fugitive dust particles, ozone precursors, and diesel exhaust that could result in an increase in criteria pollutants and could also contribute to the existing non-attainment status for ozone and PM_{10}. Reactive organic gasses (ROG) would be released during drying of architectural coatings. Site preparation and grading would involve the greatest amount of heavy equipment and the most substantial generation of fugitive dust. Potential construction emissions were estimated using CalEEMod. Based on limited information about grading and construction, defaults were applied. Table 1 below shows the estimated construction-related emissions. Based on the air quality modeling, the construction of the project would generate emissions exceeding quarterly Tier 1 thresholds, and mitigation is necessary.

Table 1. Construction Emissions (Unmitigated)

	ROG and NOx (lbs/day)	PM10 (lbs/day)	DPM (lbs/day)[1]	ROG and NOx (tons/quarter)	PM10 (tons/quarter)	DPM (tons/quarter)[1]
Project Emissions	233.55	9.16	4.25	1.12	0.065	0.095
Daily Threshold	137	n/a	7.0	---	---	---
Mitigation Required	**Yes**	n/a	No	---	---	---
Tier 1 Threshold (t/q)	---	---	---	2.5	2.5	0.13
Mitigation Required	---	---	---	No	No	No

1. The DPM estimations were derived from the "PM10 Exhaust" output from CalEEMod as recommended by SLOAPCD. This estimation represents a worst case scenario because it includes other PM10 exhaust other than DPM.

Construction of the proposed project would generate ROG and NO_x emissions exceeding identified daily (pounds/day). Pursuant to the SLOAPCD CEQA Handbook (2012), required mitigation includes implementation of Standard Mitigation Measures and Best Available Control Technology (BACT) for construction equipment. The proposed project would not exceed identified thresholds for PM_{10}; however, ground disturbance may generate fugitive dust that may create a dust nuisance. Standard dust control mitigation measures would apply.

Table 2 below shows implementation of Tier 3 engines, diesel particulate filters (Tier 3), and use of low VOC architectural coatings (71 grams/liter). Based on implementation of these measures, potential adverse impacts during the construction phase of the project would be mitigated to less than significant and off-site mitigation would not be required. Emissions from actual construction fleet would be verified by the SLOAPCD, including review and approval of BACT prior to construction.

Table 2. Construction Emissions (Mitigated)

	ROG and NOx (lbs/day)	PM10 (lbs/day)	DPM (lbs/day)[1]	ROG and NOx (tons/quarter)	PM10 (tons/quarter)	DPM (tons/quarter)[1]
Project Emissions	103.45	5.43	1.2	0.548	0.01	0.009
Daily Threshold	137	n/a	7.0	---	---	---
Additional Mitigation Required	No	n/a	No	---	---	---
Tier 1 Threshold (t/q)	---	---	---	2.5	2.5	0.13
Mitigation Required	---	---	---	No	No	No

1. The DPM estimations were derived from the "PM10 Exhaust" output from CalEEMod as recommended by SLOAPCD. This estimation represents a worst case scenario because it includes other PM10 exhaust other than DPM.

Operation and Area Source. The majority of project-related operational emissions would be due to vehicle trips to and from the site. Based on the default trip generation rates identified in CalEEMod, the project is expected to generate 931 average daily (weekday) trips and up to 934 average daily (weekend) trips during operation. Area sources would also contribute to emissions. As shown in Table 3 below, the proposed project would not generate emissions exceeding SLOAPCD thresholds during operation (both daily and annual).

Table 3. Area Source and Operational Emissions (Unmitigated)

	ROG	NOx	CO	SO_2	PM_{10}	DPM
Project Emissions (lbs/day)	5.98	8.52	34.70	0.050	3.19	0.29
Threshold (lbs/day)	25		550	n/a	25	1.25
Mitigation Required	No		No	n/a	No	No
Project Emissions (tons/year)	1.01	1.49	5.73	8.85e-003	0.54	0.05
Annual Threshold (tons/year)	25		n/a	n/a	25	n/a
Mitigation Required	No		n/a	n/a	No	n/a

<u>Mitigation Measures</u>: Construction-related air quality impacts could be reduced to a less than significant level through implementation of the following standard mitigation measures:

AQ-1 Fugitive Dust Control Measures. The proposed project shall implement the following dust control measures so as to reduce PM10 emissions in accordance with SLOAPCD requirements.

a. Reduce the amount of the disturbed area where possible;
b. Use of water trucks or sprinkler systems in sufficient quantities to prevent airborne dust from leaving the site. Increased watering frequency would be required whenever wind speeds exceed 15 mph. Reclaimed (nonpotable) water should be used whenever possible;
c. All dirt stock pile areas should be sprayed daily as needed;
d. Permanent dust control measures identified in the approved project revegetation and landscape plans should be implemented as soon as possible following completion of any soil disturbing activities;
e. Exposed ground areas that are planned to be reworked at dates greater than one month after initial grading should be sown with a fast germinating, non-invasive grass seed and watered until vegetation is established;
f. All disturbed soil areas not subject to revegetation should be stabilized using approved chemical soil binders, jute netting, or other methods approved in advance by the APCD;
g. All roadways, driveways, sidewalks, etc. to be paved should be completed as soon as possible after grading unless seeding or soil binders are used;
h. Vehicle speed for all construction vehicles shall not exceed 15 mph on any unpaved surface at the construction site;
i. All trucks hauling dirt, sand, soil, or other loose materials are to be covered or should maintain at least two feet of freeboard (min.vertical distance between top of load and top of trailer) in accordance with CVC Section 23114;
j. Install wheel washers where vehicles enter and exit unpaved roads onto streets, or wash off trucks and equipment leaving the site;
k. Sweep streets at the end of each day if visible soil material is carried onto adjacent paved roads. Water sweepers with reclaimed water should be used where feasible;
l. All of these fugitive dust mitigation measures shall be shown on grading and building plans; and
m. The contractor or builder shall designate a person or persons to monitor the fugitive dust emissions and enhance the implementation of the measures as necessary to minimize dust complaints, reduce visible emissions below 20 percent opacity, and to prevent transport of dust offsite. Their duties shall include holidays and weekend periods when work may not be in progress. The name and telephone number of such persons shall be provided to the APCD Compliance Division prior to the start of any grading, earthwork or demolition.

AQ-2 Construction Equipment. The proposed project shall implement the following Standard Control Measures for construction equipment as to reduce air emissions in accordance with SLOAPCD requirements.

a. Maintain all construction equipment in proper tune according to manufacturer's specifications;
b. Fuel all off-road and portable diesel powered equipment with ARB certified motor vehicle diesel fuel (non-taxed version suitable for sue off-road);
c. Use diesel construction equipment meeting ARB's Tier 2 certified engines or cleaner off-road heavy-duty diesel engines, and comply with the State Off-Road Regulation;
d. Use on-road heavy-duty trucks that meet the ARB's 2007 or cleaner certification standard for on-road heavy-duty diesel engines, and comply with the State On-Road Regulation;
e. Construction or trucking companies with fleets that do not have engines in their fleet that meet the engine standards identified in the above two measures (e.g. captive or NOx exempt area fleets) may be eligible by proving alternative compliance;
f. All on and off-road diesel equipment shall not idle for more than 5 minutes. Signs shall be posted in the designated queuing areas and or job sites to remind drivers and operators of the 5 minute idling limit;
g. Diesel idling within 1,000 feet of sensitive receptors is not permitted;
h. Staging and queuing areas shall not be located within 1,000 feet of sensitive receptors;
i. Electrify equipment when feasible;
j. Substitute gasoline-powered in place of diesel-powered equipment, where feasible; and
k. Use alternatively fueled construction equipment on-site where feasible, such as compressed natural gas (CNG), liquefied natural gas (LNG), propane or biodiesel.

AQ-3 Construction. In the event the estimated construction phase ozone precursor emissions from the actual fleet for a given phase (site preparation, grading, construction, architectural coatings) exceed the APCD's threshold of significance after Standard Mitigation Measures are factored into the estimation, the following Best Available Control Technologies

(BACT) shall be implemented, including, but not limited to the following.

a. Further reducing emissions by expanding use of Tier 3 and Tier 4 off-road and 2010 on-road compliant engines;
b. Repowering equipment with the cleanest engines available;
c. Installing California Verified Diesel Emission Control Strategies (refer to www.arb.ca.gov/diesel/verdev/vt/cvt.htm; and
d. Use of low VOC architectural coatings (71 grams/liter or less).

AQ-4 Developmental Burning. APCD regulations prohibit developmental burning of vegetative material within San Luis Obispo County; therefore, burning of vegetative material shall not occur.

AQ-5 Permits. Prior to construction, the applicant shall obtain all required permits from SLOAPCD. Portable equipment and engines 50 horsepower (hp) or greater, used during construction activities will require California statewide portable equipment registration (issued by the ARB) or an Air District permit. The following list is provided as a guide to equipment and operations that may have permitting requirements, but should not be viewed as exclusive:

a. Power screens, conveyors, diesel engines, and/or crushers;
b. Portable generators and equipment with engines that are 50 hp or greater;
c. Internal combustion engines;
d. Unconfined abrasive blasting operations;
e. Concrete batch plants;
f. Rock and pavement crushing;
g. Tub grinders; and,
h. Trommel screens.

Conclusion: Less than significant impact with mitigation.

d) The project site is not located in the vicinity of sensitive receptors. Residential development is located approximately 900 feet from the project site, across from U.S. 101 and San Luis Obispo Creek. Mitigation measures identified above would reduce the emission of DPM below identified thresholds, including prohibition of diesel idling within 1,000 feet of sensitive receptors. Hotel guests and employees may be exposed to toxic air contaminants (TOCs) generated by trucks and vehicles on U.S. Highway 101. Based on the *Health Risk Assessment* (Intrinsik Environmental Sciences, US, Inc. 2014) prepared for the site, the maximum predicted cancer risk associated with exposures to TOCs would be 27.6 in one million, which is well below the SLOAPCD projected cancer risk threshold (for residential uses) of 89 in one million.

According to the SLOAPCD Naturally Occurring Asbestos Zones map, the project site is located in an area that is known to contain naturally occurring asbestos. Naturally occurring asbestos has been identified by the State Air Resources Board as a toxic air contaminant. Serpentine and ultramafic rocks are common in the City of San Luis Obispo and may contain naturally occurring asbestos. The proposed project would result in grading and therefore may encounter naturally occurring asbestos. Under the State Air Resources Board Air Toxics Control Measure (ATCM) for Construction, Grading, Quarrying, and Surface Mining Operations, prior to any construction or grading activities at the site, the applicant must comply with all applicable requirements outlined in the Asbestos ATCM, which include preparation of an Asbestos Dust Mitigation Plan and/or an Asbestos Health and Safety Program.

Therefore, implementation of the proposed project would not exposure sensitive receptors to substantial pollutant concentrations.

Mitigation Measures: Construction-related air quality impacts could be reduced to a less than significant level through implementation of the following standard mitigation measures:

AQ-6 Naturally Occurring Asbestos. Naturally Occurring Asbestos (NOA) has been identified as a toxic air contaminant by the California Air Resources Board (ARB). Under the ARB Air Toxics Control Measure (ATCM) for Construction, Grading, Quarrying, and Surface Mining Operations, prior to any grading activities a geologic evaluation shall be conducted to determine if NOA is present within the area that will be disturbed. If NOA is not present, an exemption request must be filed with the District. If NOA is found at the site, the applicant must comply with all requirements outlined in the Asbestos ATCM. This may include development of an Asbestos Dust Mitigation Plan and an Asbestos Health and Safety Program for approval by the APCD. More information on NOA can be found at http://www.slocleanair.org/business/asbestos.asp.

Conclusion: Less than significant impact with mitigation.

e) The project site is located approximately 700 feet from the City WRRF at its closest point. The WRRF occasionally generates objectionable odors, a situation that is immediately remedied by City Utilities staff. Guests and employees of the proposed hotel development may occasionally be affected by objectionable odors, however, these effects would be infrequent, short term, and would not affect a substantial number of people. The proposed project does not include any elements that would generate objectionable odors. Therefore, potential impacts would be less than significant.

Conclusion: Less than significant impact with mitigation.

As proposed, the project would not result in significant air quality impacts due to exceedance of an identified threshold. Mitigation is identified to address potential effects during construction. Therefore, potential impacts would be mitigated to less than significant.

4. BIOLOGICAL RESOURCES. Would the project:

	Sources	Potentially Significant Issues	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	10		--X--		
b) Have a substantial adverse effect, on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	10, 11		--X--		
c) Have a substantial adverse effect on federally protected wetlands as defined in Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	10, 11		--X--		
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	10			--X--	
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	1, 3			--X--	
f) Conflict with the provisions of an adopted habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?					--X--

Evaluation

The project site was previously subdivided and graded for development, and Lots 1, 2, 3, and 4 are disturbed and vacant. Prior to the City's approval of the subdivision, the project site was farmed. Based on a previous biological resources assessment conducted for the site (Althouse and Meade 2005), no special-status plants were documented onsite. A *Wetland Determination Study* (Althouse and Meade 2005) identified a farmed wetland in the southwest portion of the overall property, within Lot 5 (Open Space lot); however, this feature was determined to be non-jurisdictional. Prefumo Creek is located adjacent to the western boundary of Lot 5, approximately 200 feet from the northwestern boundary of Lots 1, 2, 3, and 4. Prefumo Creek is a perennial blue-line creek, which acts as an overflow for Laguna Lake (approximately 0.6 mile north/northwest of the project site). The previous biological assessment identified five special-status species with the potential to occur within the Prefumo Creek corridor: California red-legged frog (*Rana draytonii*) a Federally Threatened (FT) and California Species of Concern (SCS); South/Central steelhead, (*Oncorhynchus mykiss irideus*) FT species; southwestern pond turtle (*Actinemys marmorata*) CSC; Coast range newt (*Taricha torosa*), SCS; and Cooper's hawk (*Accipter cooperii*). No trees are onsite; however, the site may serve as foraging habitat for raptors and other birds. Based on review by the City Natural Resources Manager, an updated biological survey was not determined to be necessary based on the current condition of the site and existing information regarding Prefumo Creek.

a) Based on the project location, potential impacts to special-status species within the Prefumo Creek corridor and adjacent upland habitat would be short-term (limited to the construction period) and long-term effects would be indirect, and related to stormwater runoff, water quality, and the installation of night lighting. Based on the existing lot configuration, no development would occur within 200 feet of Prefumo Creek, and conditions of the project site do not support habitat for special-status species, aside from foraging by avian species. Inadvertent disturbance outside of the project boundaries, or accidental discharge of sediment, materials, or pollutants into the creek would result in an adverse impact to special-status species including South-central California coast steelhead, southwest pond turtle, California red-legged frog, and coast range newt. In the long-term, the creation of additional light sources may adversely affect special-status species within and proximate to the creek corridor. The applicant is required to comply with Regional Water Quality Control Board stormwater regulations and Low Impact Development (LID) standards, which would protect down-gradient water quality. Additional mitigation is identified to minimize exterior lighting, incorporate landscaping between the development and the adjacent Open Space Lot 5, installation of temporary construction fencing to avoid inadvertent disturbance, and compliance with erosion control, water quality, and required hazardous materials spill prevention and contingency plans. Based on implementation of identified mitigation, potential impacts to special-status species would be less than significant.

<u>Mitigation Measures:</u> The applicant shall be required to implement the mitigation identified below:

BR-1 Upon application for construction permits, the following measures shall be included on applicable plans:

a. If feasible, construction should be limited to the typical dry season (April 15 to October 15) in order to avoid impacts (e.g., erosion and sedimentation, pollutant discharge) to Prefumo Creek and water quality. If work must occur during the rainy season, the applicant shall install adequate erosion and sedimentation controls to prevent any sediment-laden run-off from entering Prefumo Creek.
b. Upon completion of construction, disturbed areas will be stabilized or appropriately planted.
c. The lot boundaries shall be marked with temporary construction fencing and flagging to prevent inadvertent disturbances. Soil stockpiling, construction equipment access, and staging areas shall not occur within Lot 5.
d. Appropriate permanent hydrocarbon filtering and sedimentation and erosion control measure shall be included in the parking lot design in order to minimize long-term impacts associated with vehicular traffic. No parking lot or roadway drainage shall be directly routed to the Prefumo Creek corridor or City stormdrain system within adequate filtration methods such as an oil/water separator or bioswale planted with grasses and groundcover species designed for such use. A bioswale within a designated landscape area is the preferred method of water filtration.
e. Light levels within 35 feet of Prefumo Creek shall be less than 0.5 foot candle and native landscape screening shall be planted between the proposed development and the Lot 5 property boundary to reduce potential light intrusion into the riparian area.

<u>Conclusion:</u> Less than significant impact with mitigation.

b), c) Prefumo Creek is located approximately 200 feet from the property line, and Open Space Lot 5 provides a natural buffer between the proposed development and the creek. The City Zoning Regulations require a 35-foot setback for Prefumo Creek, which is accommodated by the existing lot configuration. No jurisdictional riparian or wetland habitat or sensitive natural communities are present within or adjacent to the project site. Inadvertent disturbance or discharge of pollutants into the creek corridor would have an adverse effect on vegetation and water quality. Mitigation is identified, which would mitigate potential effects to less than significant.

Mitigation Measure: Implement BR-1.

Conclusion: Less than significant impact with mitigation.

d) The proposed change would not introduce new development within a migration corridor, or within 200 feet of Prefumo Creek. No trees are located onsite. Therefore, the proposed change would not have an adverse effect on species migration.
Conclusion: Less than significant impact.

e) The City Zoning Regulations identify a 35-foot setback from Prefumo Creek (Section 17.16.025), which is accommodated within Open Space Lot 5 (200-foot buffer). The project complies with the required 35-foot setback for Prefumo Creek, and no trees are onsite or proposed for removal. Therefore, the proposed project is consistent with noted regulations regarding biological resources.

Conclusion: Less than significant impact.

f) The project site is not located in an area subject to an adopted habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. No impact would occur.

Conclusion: No impact.

Implementation of the proposed project would result in potentially significant impacts to biological resources, primarily indirect effects related to the construction phase, operational lighting, and stormwater quality. Mitigation is identified that would address identified effects.

5. CULTURAL RESOURCES. Would the project:

	Sources	Potentially Significant Issues	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Cause a substantial adverse change in the significance of a historic resource as defined in §15064.5.	12, 13				--X--
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5)	12, 13		--X--		
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?			--X--		
d) Disturb any human remains, including those interred outside of formal cemeteries?	12, 13		--X--		

Evaluation

The project site is considered to be within an “archeologically sensitive area” because it is proximate to Prefumo Creek. Based on a surface archaeological survey of the site (Singer 2004), no prehistoric or historic cultural materials were document. The site has subsequently been graded in preparation for a previously-approved development. Pursuant to Government Code Section 65352.3 (Senate Bill 18), the City consulted with California Native American Tribes about the previously proposed General Plan Amendment and rezoning (no longer required due to the approval of the City’s LUCE) for the purpose of protecting traditional tribal cultural places and sacred sites. The project site is not located in an area known to present significant paleontological resources.

a) Based on the previous investigation and lack of structural development onsite, there are no structures or architectural features of historical significance; therefore, no impact would occur.

Conclusion: No impact.

b), c), d) Based on the previous investigation, no archaeological resources are present onsite. Standard City conditions would apply in the event cultural or paleontological resources are exposed during site development.

Mitigation Measure: The following measure shall apply to the proposed project:

CR-1 Prior to issuance of grading and construction permits, the following shall be included on all grading and construction plan sets: If excavations encounter significant paleontological resources, archaeological resources, or cultural materials, then construction activities that may affect them shall cease until the extent of the resource is determined and the Community Development Director approves appropriate protective measures. The Community Development Director shall be notified of the extent and location of discovered materials so that a qualified archaeologist may record them. If pre-historic Native American artifacts are encountered, a Native American monitor should be called into work with the archaeologist to document and remove the items. Disposition of artifacts shall comply with state and federal laws.

Conclusion: Less than significant impact with mitigation.

No significant cultural resources were identified during referenced surveys; however, standard City conditions are required in the event of inadvertent discovery.

6. GEOLOGY AND SOILS. Would the project:

	Sources	Potentially Significant Issues	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury or death involving:	14, 15, 16, 17		--X--		
I. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.				--X--	
II. Strong seismic ground shaking?			--X--		
III. Seismic-related ground failure, including liquefaction?			--X--		
IV. Landslides?				--X--	
b) Result in substantial soil erosion or the loss of topsoil?	5			--X--	
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on or off site landslide, lateral spreading, subsidence, liquefaction or collapse?	14, 15, 17		--X--		
d) Be located on expansive soil, as defined in Table 1802.3.2 of the California Building Code (2013), creating substantial risks to life or property?	17		--X--		
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?					--X--

Evaluation

The project site is located within the Coast Range Geomorphic Province, which extends along the coastline from central California into Oregon. This region is characterized by extensive folding, faulting, and fracturing of variable intensity. In general, the folds and faults of this province comprise the pronounced northwest trending ridge-valley system of the central and northern coast of California. There are no known fault lines on the site or in the immediate vicinity. However, there are active faults within 5 miles north of the project area. The fault system is within the Los Osos Valley area and is known as the Los Osos/Hosgri fault. Other active faults in the region include the San Andreas fault zone (approximately 30 miles to the northeast), the Nacimiento fault (approximately 12 miles to the northeast), and the San Simeon-Hosgri fault (approximately 12 miles to the west). The City is in Seismic Zone 4, a seismically active region of California and strong ground shaking should be expected during the life of proposed structures. Structures must be designed in compliance with seismic design criteria established in the Uniform Building Code and City Codes. The project site is generally level, and is not subject to potential geologic hazards including landslides and slope stability.

Based on a *Geotechnical Engineering Report* (Buena Geotechnical Services, Inc. 2004) submitted for the project site (associated with the previous subdivision), the site is generally suitable for development. Underlying soils consist of generally loose sandy clays on top of firm clayey sands, with a potential for expansion. The site has a low potential for liquefaction. Recommendations identified by the soils engineer must be incorporated into the grading and construction plans, including grading and foundation plans. Grading will be conducted pursuant to the City's grading regulations, which would adequately address potential soil concerns.

a), c) There are no known fault lines on the site or in the immediate vicinity; however, there are active faults within five miles of the project site. Based on compliance with existing regulations and standards identified by Buena Geotechnical Services, Inc., which will be verified by the City Building Inspector, potential effects as a result of seismic activity would be less than significant, and no additional measures are necessary.

Mitigation Measure: The following measure shall apply to the proposed project:

GEO-1 Prior to issuance of grading and construction permits, the applicant shall submit grading and construction plans demonstrating compliance with the *Geotechnical Engineering Report* (Buena Geotechnical Services, Inc., December 2004) and/or subsequent geotechnical and soils engineering reports prepared and stamped by a certified engineer.

Conclusion: Less than significant impact with mitigation.

b) The erosion hazard for the project site is less than significant. The project site is nearly level, and substantial grading is not expected (approximately 2.84 acres). Exposure of soils to rainwater and other runoff may result in erosion and down-gradient sedimentation during construction and post-construction if soils are not stabilized. Development of the project site is subject to the City's Storm Water Management Program, which was required under the State Water Resources Control Board (SWRCB) Phase II Storm Water Regulations. Under the City Program, Best Management Practices (BMPs) and Pollution Prevention Methods (PPMs) are required to be incorporated into grading and construction plans to protect water quality by minimizing or controlling the amount of pollutants and runoff exiting the site, and by eliminating the use of polluting materials and/or avoiding exposure of potential pollutants to rainwater and other runoff.

Erosion control measures that would be required for the project during construction may include, but not be limited to: scheduling ground disturbance to avoid the rain events (if feasible), use of hydroseeding, planting, and mulch to stabilize soils, dust control to stabilize stockpiles, unpaved roads, and graded areas, protection of storm drain inlets, use of sediment traps, construction of a stabilized page of aggregate and filter fabric at the construction access entrance, street sweeping, and use of silt fencing, sand/gravel bags, and fiber rolls. All construction projects in the city require the installation, maintenance, routine inspection (i.e. weekly, before predicted rain events, after rain events and during prolonged rain events) and the repair or replacement as needed BMPs throughout the course of the construction project in order to protect local water quality. Most BMPs (i.e. concrete / tool washouts and street sweeping) are required year long and others are specifically required during the rainy season (i.e. October 15th through April 15th) or prior to a predicted rain event, even if that rain event is predicted during the summer months. Enforcement of stormwater regulations occurs all year long. Failure to develop a plan and/or failure to implement the plan in accordance with the Central Coast Regional Water Quality Control Board's erosion and sediment control requirements prior to October 15, 2008, will result in the issuance of a "Notice to Comply." For sites with exposed soil, a Project Stop Work Notice may be issued at this time unless you are actively installing the erosion and siltation control measures. After October 15th, a Project Stop Work Notice will be issued for all work except the installation of erosion control measures, and the Regional Water Quality Control Board will be notified. Therefore, based on compliance with existing state and local regulations, potential impacts as a result of erosion and down-gradient sedimentation would be less than significant, and no additional mitigation measures are necessary.

Conclusion: Less than significant impact.

d) There is a potential for expansive material at the project site. Based on compliance with existing regulations and recommendations identified in the *Geotechnical Engineering Report*, which will be verified by the City during review of the building permit, potential impacts would be less than significant.
Mitigation Measure: Implement GEO-1.

Conclusion: Less than significant impact with mitigation.

e) Development would connect to the municipal sewer system, and onsite septic or wastewater treatment and disposal would not occur; therefore, no impact would occur.

Conclusion: No impact.

As noted above, the proposed development is subject to existing codes and regulations, which address geologic and soils hazards. Development would be constructed consistent with recommendations identified by the previous site engineer, or as determined by the project engineer and the City Building Inspector.

7. GREENHOUSE GAS EMISSIONS. Would the project:					
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	8			--X--	
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	8, 18, 19			--X--	

Evaluation

Human activities, such as fossil fuel combustion and land use changes release carbon dioxide (CO_2) and other compounds, cumulatively termed greenhouse gas (GHG) emissions. GHGs are effective in trapping infra-red radiation which otherwise would have escaped the atmosphere, thereby warming the atmosphere, the oceans, and earth's surface. GHGs are any gas that absorbs infrared radiation in the atmosphere. AB 32, the "California Global Warming Solutions Act of 2006" codifies the Statewide goal of reducing GHG emissions to 1990 levels by 2020 (essentially a 15% reduction below 2005 emission levels) and the adoption of regulations to require reporting and verification of statewide GHG emissions. GHGs include the following gases: CO_2, methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6). In California, the main sources of GHG emissions are from the transportation and energy sectors. Potential impacts of climate change in California may include loss in snow pack, sea level rise, more extreme heat days per year, more high ozone days, more large forest fires, and more drought years (CalEPA, April 2010). Senate Bill (SB) 97, signed in August 2007, acknowledges that climate change is an environmental issue that requires analysis in California Environmental Quality Act (CEQA) documents. In March 2010, the California Resources Agency (Resources Agency) adopted amendments to the State CEQA Guidelines for the feasible mitigation of GHG emissions or the effects of GHG emissions. The adopted guidelines give lead agencies the discretion to set quantitative or qualitative thresholds for the assessment and mitigation of GHGs and climate change impacts.

In 2008, the City of San Luis Obispo conducted a baseline GHG emissions inventory, which was followed by adoption of a Climate Action Plan (2012 CAP) for reducing greenhouse gas emissions. The CAP includes a GHG emissions reduction target and emissions reduction strategies designed to help the City achieve that target. The adopted target is a reduction of community-wide emissions to 1990 levels by 2020, consistent with AB 32. The 2012 CAP identifies strategies to guide the development and implementation of GHG reduction measures in the City of San Luis Obispo and quantifies the emissions reductions that are anticipated to result from these strategies. Community GHG reduction strategies are divided into six sectors: buildings, renewable energy, transportation & land use, water, solid waste, and parks & open space. The GHG emissions forecast in the 2012 CAP shows that implementation of all of the strategies in the 2012 CAP would achieve a 15% reduction from baseline levels by 2020, which would meet required AB 32 State reduction goals. Having an adopted CAP allows the City of San Luis Obispo to streamline the CEQA review process of certain development projects – the CAP serves as the City's qualified GHG reduction plan because it contains the following required plan elements:

- Community-wide GHG emissions inventory and "business-as-usual" forecast of 2020 community-wide GHG emissions;
- GHG reduction targets consistent with AB 32 (i.e. a level, based on substantial evidence, below which the contribution to greenhouse gas emissions from activities covered by the plan would not be cumulatively considerable);
- Analysis of local and state policies and actions that may impact GHG emissions within the jurisdiction;
- Quantification of GHG reduction measures demonstrating that, if implemented, the GHG reduction targets will be met;

- Implementation and monitoring strategy and timeline; and
- Adequate environmental review of the CAP.

Incorporation of these plan elements allows the CAP to be used in the cumulative impacts analysis of projects where the City of San Luis Obispo is the lead agency. As described in the 2012 CAP, to analyze a project's consistency with the CAP, "the environmental document for the project must identify those requirements specified in the CAP that apply to the project, and if those requirements are not otherwise binding or enforceable, should be incorporated as mitigation measures applicable to the project (CEQA 15183.5b)." The City is in the process of developing a mitigation matrix for projects that exceed specified GHG thresholds. The matrix will include quantifiable CAP reduction measures consistent with SB 97 direction. The proposed project's consistency with the 2012 CAP is analyzed qualitatively against State and local GHG reduction policies, and the applicable implementation strategies contained in the 2012 CAP.

The City of San Luis Obispo has not yet adopted GHG emissions thresholds for use in CEQA documents. In March 2012, the SLOAPCD adopted CEQA thresholds for GHG emissions in order to achieve goals outlined in the County's EnergyWise Plan. In addition the 2014 LUCE includes policies in place to minimize cumulative GHG emissions resulting from build-out of the City. There are three thresholds that can be used to evaluate the level of significance of GHG emissions impacts for residential and commercial projects. The three thresholds are described below:

- Qualified GHG Reductions Strategies. A project would have a significant impact if it is not consistent with a qualified GHG reduction strategy that meets the requirements of the State CEQA Guidelines. If a project is consistent with a qualified GHG reduction strategy, it would not have a significant impact; or
- Bright-Line Threshold. A project would have a significant impact if it exceeds the "bright-line threshold" of 1,150 metric tons CO2E/year; or
- "Efficiency" Threshold. A project would have a significant impact if the efficiency threshold exceeds 4.9 metric tons of CO2E/service population/year. The service population is defined as the number of residents plus employees for a given project.

a) Construction and development of the project would generate GHG emissions as a result of construction equipment operation, generation of vehicle trips, and area sources including consumer products, landscape maintenance, architectural coating, waste disposal, and water and wastewater uses. As noted in the Air Quality section of this Initial Study, emissions modeling was conducted using CalEEMod (refer to Table 4 below). Operational GHG emissions would be generated from energy use, vehicle trips, and area sources. In addition to consistency with the City's Climate Action Plan (2012 CAP) (refer to discussion under [b] below), the project currently incorporates many measures identified in the SLOAPCD CEQA Handbook (2012), including the following:

- Improvement of job/housing balance opportunities within the city
- Provides good access to and from the project for pedestrians, bicyclists, and transit users
- Provides shade tree planting in parking lots
- Transit stop approximately 0.5 mile from the site on Auto Park Way/Los Osos Valley Road
- Constructed within the city near commercial, recreational, and residential areas
- Includes onsite showers
- Would be constructed to be consistent with 2013 Title 24 requirements
- Provides shade trees along southern exposure of the building
- Includes drought-tolerant landscaping
- Increases development density within the urban reserve line
- Provides onsite eating (continental breakfast) and vending machines

Based on the results of CalEEMod emissions modeling, the proposed project would not exceed the identified "Bright Line Threshold" of 1,150 metric tons CO_2e (refer to Table 4 below).

Table 4. GHG Emissions

	Annual Emissions (metric tons CO_2e)
Construction Emissions	327.92
Amortized (25 years)	13.12
Operational Emissions	1,012.11
Total	1,025.23
Bright-line Threshold	1,150.00
Mitigation Required	No

Based on the project's consistency with the 2012 CAP and results of air emission modeling, the project would not result in cumulatively considerable generation of GHG, and impacts would be less than significant.

Conclusion: Less than significant impact.

b) The proposed project would result in development consistent with the anticipated growth under the inventory and assumptions of the 2012 Climate Action Plan (CAP). As described in the 2012 CAP, State policies to reduce GHG emissions associated with energy use, including the Renewable Portfolio Standard, Title 24 of the California Building Code, and the California Solar Initiative, would reduce anticipated emissions associated with future projects. In addition, the City General Plan, Community Design Guidelines, and Zoning Regulations include policies that reduce energy use from buildings and equipment, including design standards that maximize passive ventilation and cooling systems and use of natural lighting within buildings, and energy efficiency performance standards for proposed buildings taller than 50 feet. The proposed project is consistent with anticipated growth under the inventory and assumptions of the 2012 CAP. The project will comply with the City General Plan, Community Design Guidelines, and Zoning Regulations, which include policies that reduce energy use from buildings and equipment, including design standards that maximize passive ventilation and cooling systems and use of natural lighting within buildings. The project would be conditioned to comply with these existing requirements. Therefore, GHG emissions from the project would not conflict with California's commitment to GHG reduction under AB 32.

Conclusion: Less than significant impact.

As noted above, the project would not result in a significant impact related to GHG emissions, due to the inclusion of mitigation measures and compliance with existing standards.

8. HAZARDS AND HAZARDOUS MATERIALS. Would the project:

	Sources	Potentially Significant Issues	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?				--X--	
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?				--X--	
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?					--X--
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section	20				--X--

65962.5 and, as a result, would it create a significant hazard to the public or the environment?					
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	21, 22		--X--		
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?			--X--		
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	23			--X--	
h) Expose people or structures to a significant risk of-loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	2, 15			--X--	

Evaluation

a) Construction and operation of the project would not require routine transport, use, or disposal of hazardous materials; therefore, potential impacts would be less than significant.

Conclusion: Less than significant impact.

b) Construction of the proposed project would require the use of fuels and materials, if spilled, could result in a hazard to the public. In addition to compliance with state and local water quality regulations (refer to Sections 6 and 9 of this Initial Study), the applicant would implement mitigation requiring the development and implementation of a Storm Water Pollution Prevention Plan, which would include regular inspection of equipment and materials, and feasible measures to quickly contain and clean up an accidental spill or leak. Any remaining materials onsite prior to construction would be removed and transported to an approved facility. In the long-term, the applicant would be required to prepare a Hazardous Materials Business Plan, which would approved by the County Department of Public Health. This plan would document the safe and legal storage and use of standard materials, including paints, oils, fuels, cleaning materials, and other compounds onsite. Therefore, potential impacts would be less than significant.

Conclusion: Less than significant impact.

c) The proposed project is not located within 0.25 mile of an existing or proposed school; therefore, no impact would occur.

Conclusion: No impact.

d) Based on review of the California Department of Toxic Substances Control EnviroStor and California State Water Board Geotracker databases (accessed June 1, 2014), and review of the California Toxic Substances Control Cortese List, the project site is not included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5. Therefore, no impact would occur.

Conclusion: No impact.

e), f) The project site is subject to the Airport Land Use Plan (ALUP, amended 2005). The project site is located within Airport Land Use Plan Aviation Safety Area S1b, is located within the City's Airport Compatible Open Space Plan (ACOS), and is located over one nautical mile from the San Luis Obispo County Airport active runways (1.66 miles or 1.44 nautical miles). This is described as an area within gliding distance of prescribed flight paths for aircraft operations at less than 500 feet above ground level. The Airport Land Use Plan (ALUP) provides development standards for Aviation Safety Compatibility. If projects are consistent with the ALUP, then it can be assured that potential impacts are reduced to a less than significant level.

The applicant's requested density is based on 5.13 gross acres, which includes 2.84 acres (project Lot 3) and 2.29 acres (25 percent of Open Space Lot 5), which was approved by the County ALUC. Based on ALUP Table 7, a maximum non-residential density of up to 75 persons per acre is allowed because the project site is within an approved ACOS and is located over one nautical mile from the airport's active runways. Based on ALUP Table 8, density is determined for Transient Lodgings (Hotels, Motels, bed and breakfasts) as 1.8 persons per room, plus one person per 60 square feet of floor area of any restaurants, coffee shops, bars, or night clubs, plus one person per 10 square feet of floor area of meeting rooms. As proposed, the project would be consistent with identified density limitations:

Calculations: 5.13 gross acres x 75 persons per acre = 384.75 persons total
Max occupancy = 114 rooms x 1.8 persons per room = 206 persons + 15 staff persons = 221 persons

The proposed structure would be 45 feet in height. At this height, the building would not be an obstruction to air navigation (the identified limit is 200 feet above ground level in this area). As proposed, the project would not be inconsistent with the ALUP, and would not result in a safety hazard related to airport operations. Standard conditions included as part of the ALUC consistency determination (April 16, 2014) are included as mitigation measures (refer to HAZ-1 through HAZ-6). Therefore, potential impacts would be less than significant.

<u>Mitigation Measures:</u> Development shall comply with the following mitigation measures:

HAZ-1 Non-residential density for Lot 3 is limited to 384.75 persons.

HAZ-2 All tall structures shall be reviewed by the Air Traffic Division of the FAA regional office having jurisdiction over San Luis Obispo County to determine compliance with the provisions of FAR Part 77. In addition, applicable construction activities must be reported via FAA Form 7460-1 at least 30 days before proposed construction or application for building permit.

No structure, landscaping, apparatus, or other feature, whether temporary or permanent in nature shall constitute an obstruction to air navigation or a hazard to air navigation, as defined by the ALUP.

HAZ-4 Any use is prohibited that may entail characteristics which would potentially interfere with the takeoff, landing, or maneuvering of aircraft at the Airport, including:

a. creation of electrical interference with navigation signals or radio communication between the aircraft and airport;
b. lighting which is difficult to distinguish from airport lighting;
c. glare in the eyes of pilots using the airport;
d. uses which attract birds and create bird strike hazards;
e. uses which produce visually significant quantities of smoke; and
f. uses which entail a risk of physical injury to operators or passengers of aircraft (e.g., exterior laser light demonstrations or shows).

HAZ-5 Avigation easements will be recorded for each property developed within the area included in the proposed local action prior to the issuance of any building permit or conditional use permit.

HAZ-6 All owners, potential purchasers, occupants (whether as owners or renters), and potential occupants (whether as owners or renters) will receive full and accurate disclosure concerning the noise, safety, or overflight impacts associated with airport operations prior to entering any contractual obligation to purchase, lease, rent, or otherwise occupy any property or properties within the airport area.

<u>Conclusion:</u> Less than significant impact based on compliance with mitigation measures listed above.

g) Based on review of the City of San Luis Obispo Local Hazard Mitigation Plan, the proposed project would not conflict with or impair implementation of the plan. The project would not impede emergency access. Therefore, potential impacts would be less than significant.

Conclusion: Less than significant impact.

h) The project site is located within a moderate fire severity area. The proposed project would be constructed consistent with the California Building Code and Fire Code, and would be reviewed and inspected for compliance by the City Fire Department prior to occupation. The site design includes access suitable for emergency responders and safe egress onto Calle Joaquin. Therefore, potential impacts related to fire would be less than significant.

Conclusion: Less than significant impact.

As proposed, the project would not be exposed to or create a significant hazard to occupants or the public. Standard mitigation related to the San Luis Obispo County Airport shall be implemented.

9. HYDROLOGY AND WATER QUALITY. Would the project:

	Sources	Potentially Significant Issues	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Violate any water quality standards or waste discharge requirements?	2		--X--		
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g. the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	2, 24			--X--	
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on or off site?	2, 25		--X--		
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on or off site?	2, 25, 26, 27, 28		--X--		
e) Create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff?	2, 25, 26, 28		--X--		
f) Otherwise substantially degrade water quality?	2		--X--		
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?			--X--		
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	2, 25, 26, 27		--X--		
i) Expose people or structures to significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	2				--X--
j) Inundation by seiche, tsunami, or mudflow?	2				--X--

Evaluation

Information regarding municipal water and the underlying groundwater basin was obtained from the *City of San Luis Obispo 2010 Urban Water Management Plan* (2011). Data from this report and the City Public Works Department is incorporated into the discussion below. In addition, the project is required to comply with the Waterway Management Plan Drainage Design Manual City Engineering Standard 1010.B., Floodplain Management Regulations, and the Central Coast Regional Water Quality Control Board's Post-Construction Stormwater Regulations (effective March 6, 2014).

Water Supply. The applicant proposes to use City water as the domestic water source. Groundwater, the Whale Rock Reservoir, the Salinas Reservoir, and the Nacimiento Reservoir contribute water to the City's supply. The water is treated at the City water treatment plant prior to distribution. Total annual water use in the City was 5,541 acre feet in 2012. The 2014 LUCE estimated that water demand will increase to 7,815 acre feet per year upon build-out. The estimated water supply is 9,980 acre feet, including the City's primary water supply (7,815 acre feet), reliability reserve (1,214 acre feet), and secondary water supply (951 acre feet). Based on the City's *Urban Water Management Plan* and 2014 LUCE Final EIR, the City does not anticipate a need for supplemental water supplies through the year 2035 and build-out of the LUCE.

In October 2006, the City completed construction of a Water Reuse Project, which included eight miles of distribution pipelines and improvements to the City's Water Reclamation Facility. In 2013, 176.82 acre feet of recycled water was used for landscape irrigation for several City parks, the Laguna Lake Golf Course, a middle school, landscaping along U.S. 101, and other landscape medians. The project site is located within the Water Reuse Master Plan Area, and the distribution system extends to the site.

Drainage and Flooding. The entire project site is located within a 100-year flood zone, based on the Waterway Management Plan (2003) and Federal Emergency Management Agency (FEMA) maps, and is subject to compliance with the Waterway Management Plan Drainage Design Manual, City Engineering Standard 1010.B, Floodplain Management Regulations. The site is located within the lower Prefumo Creek basin, which is a sub-basin of the San Luis Obispo Creek Watershed. The project site is also located within a special floodplain management zone, which has been determined to have a potentially significant effect on downstream flooding and bank stability. In accordance with City Policy for this zone, projects must demonstrate that: the project would not significantly increase the floodwater surface elevations for the 100-year storm, and the project would not significantly decrease floodplain storage volume onsite. Prefumo Creek is located along the western property boundary, approximately 200 feet from the edges of the project's northern boundary. Lot 5 provides an open space buffer between the project site and the creek.

Land Use Element Policies 6.6.5, 6.6.6., and 6.6.7 require the following: use of methods to facilitate rainwater percolation for roof areas and outdoor hardscaped areas where practical to reduce surface water runoff and aid in groundwater recharge; project designs must minimize drainage concentrations and impervious coverage; and, appropriate runoff control measures shall be included that minimize discharge of urban pollutants into area drainages. Policy 6.6.8 requires implementation of erosion control measures. Consistent with these policies and the Low Impact Development guidelines required in the City's Storm Water Management Program, new construction will be required to utilize Best Management Practices in handling site drainage and runoff.

Based on *Hydrologic and Hydraulic Analysis* (KC Design Group, Inc. 2005) prepared for the previous annexation and subdivision project (prior to grading of the site), site development can be designed to comply with City Policy, and reduce potential drainage impacts to less than significant. Since the site is located in Flood Zone A (as determined by FEMA), the finished floor elevation for all structures must be raised one foot above the 100-year storm elevation. All facilities and utilities onsite must be protected from inundation by floodwater.

a), f) Implementation of the project would include approximately 2.84 acres of site disturbance within a nearly level area. Disturbance of soils and use of equipment may result in the discharge of sediment, hydrocarbons, and other pollutants into the City storm system, and potentially Prefumo Creek. Operation of the project would include use of parking areas; accidental leaks or spill may result in the transport of oils and fuels into stormwater and down-gradient surface waters. Discharge of any pollutants (e.g. herbicides, pesticides, janitorial cleaning products, and toxic substances such as motor oil, gasoline, and anti-freeze) or heated water (e.g. from steam cleaning sidewalks) into a storm water system or directly into surface waters is illegal and subject to enforcement action by the Regional Water Quality Control Board. The proposed project is subject to several existing regulations and programs, including the City's Storm Water Management Program, the 2014 LUCE, the City's Waterway Management Plan Drainage Design Manual (City Engineering Standard 1010.B., Floodplain Management, State Water Resources Control Board (SWRCB) Phase II Storm Water Regulations, and Central Coast Regional Water Quality Control Board Post-Construction Stormwater Regulations (effective March 6, 2014). BMPs and PPMs are required to be incorporated into grading and construction plans for the short and long-term management and protection of water quality. Based on compliance with existing regulations, and incorporation of identified mitigation measures to protect water quality, the project would not violate any water quality standards or waste discharge requirements, and potential impacts would be less than significant.

Mitigation Measures: In addition to compliance with existing stormwater regulations, the applicant shall comply with the following mitigation measures:

HYD-1 Prior to issuance of grading and construction permits, the applicant shall submit construction plans to the Community Development Department and Public Works Department for review and approval. Plans shall incorporate the following measures:

a. All site drainage shall be directed towards the public right-of-way unless other provisions are approved by the City.
b. Oil and sand separators or other filtering media shall be installed at each drain inlet intercepting runoff as a means of filtering toxic substances from run off before it is discharged off-site and enters the storm water system. The separator shall be regularly maintained to ensure efficient pollutant removal.
c. The project shall, where feasible, incorporate porous paving, landscaping, or other design element to reduce surface water runoff in driveways, parking areas, and outdoor use areas consistent with Land Use Element Policy 6.5.7 (or as amended).
d. The project shall comply with the City's *Waterway Management Plan* and any additional recommendations prescribed in the *Hydrologic and Hydraulic Report* (KC Design Group, May 18, 2005).

Conclusion: Less than significant impact with mitigation.

b) The water use factor for hotel rooms is 0.43 acre feet per year (afy) per unit; therefore, development of a 114-unit hotel would result in a water demand of 49 afy. The project site is located within the Water Reuse Master Plan Area, and the distribution system extends to the site. Recycled water may be available for use by the applicant for landscaping within the Calle Joaquin right-of way. Based on review of the Urban Water Management Plan (2011) and review by the City Utilities Department, existing water supply is available to serve the project, and use of municipal water for the project would not deplete groundwater resources.

Conclusion: Less than significant impact.

c), d), e) The proposed project does not include any modifications to Prefumo Creek, and would therefore not alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on or off site.

Based on the *Hydrologic and Hydraulic Report* (KC Design Group, Inc. 2005) prepared for the project site, the 100-year runoff rate for the project site (Lot 3) and adjacent Lots 1, 2, 4, and 5 was 0.20 cubic meters per second (cms), and upon full development, the rate was estimated to be 0.46 cms, resulting in a net increase of 0.26 cms. This was estimated to raise the upstream and downstream 100-year flood elevation by 5 millimeters (mm) and 4 mm, respectively. Grading conducted onsite consisted of balanced cut and fill, which raised the minimum building floor elevation by one foot above the FEMA 100-year flood elevation, and created drainage swales between Lots 1, 2, 3, and 4, and created onsite stormwater storage of 66,140 cubic yards (cy).

The project site is currently vacant, and includes no impervious surfaces. Implementation of the project would create approximately 51,490 square feet of impervious surfaces, including sidewalk/paving (33,100 square feet) and the building itself (18,390 square feet). The project incorporates the use of permeable pavers within the parking area, totaling 21,699 square feet. In addition to the permeable pavers, runoff reduction measures include roof drain disconnects, infiltration, bio-filtration, and soil amendment. The project would displace approximately 64,350 cubic feet of floodplain surface storage, which is addressed by the use of permeable pavers (22,000 cubic feet of paver storage volume) and construction of an underground retention chamber (42,350 cubic feet of storage). The project would also maintain existing drainage basins located along the northeastern and southwestern property boundaries, and would include a stormwater management system including four bio-swales, permeable pavers, piping, curbs, and rock slope protection (RSP, or rip-rap). In addition to LID features, the project is required to implement BMPs consistent with Central Coast Regional Water Quality Control Board regulations (effective March 6, 2014).

Additional concerns regarding erosion and down-gradient sedimentation are addressed in Section 6 (Geology and Soils). Based on the proposed project design and compliance with existing regulations, the project would not change existing drainage patterns in a manner that would result in substantial erosion or siltation, or discharge of pollutants into surface waters on or off-site.
As noted above, past grading onsite created stormwater drainage swales that would accommodate a 100-year storm and associated flooding, without increasing flood water elevations upstream or downstream. The proposed project includes stormwater easements consistent with existing conditions. As required by mitigation measure HYD-1, the applicant is required to submit plans consistent with the City's *Waterway Management Plan* (Waterway Management Plan Drainage Design Manual, City Engineering Standard 1010.B. Floodplain Management Regulations) for review and approval by the City Public Works Department. Therefore, based on the project's stormwater management and drainage plans, and approval by the City Public Works Department, the project would not change drainage patterns or stormwater runoff resulting in flooding on or offsite.

Conclusion: Less than significant impact with mitigation.

Mitigation Measure: The applicant shall comply with the following measure:

HYD-2 Prior to issuance of grading and construction permits, the applicant shall submit a detailed final hydraulic analysis to the Director of Public Works for review and approval. The analysis shall demonstrate how the project will comply with the requirement to have a design capacity for a 100-year storm. The analysis shall include any needed drainage channel erosion control protection to the satisfaction of the Director of Public Works and Natural Resources Manager.

g), h) The 100-year floodplain for Prefumo Creek is located over the project site. The Flood Zone is designated Zone A (FEMA 2012), which indicates that no base flood elevation is determined. Past grading raised the elevation of the site one foot over the base flood elevation, and natural drainage swales were constructed between Lots 1, 2, 3, and 4. Based on the existing condition of the site, stormwater management measure summarized above (see c, d, and e) compliance with existing regulations and plans including the *Waterway Management Plan* (Waterway Management Plan Drainage Design Manual, City Engineering Standard 1010.B. Floodplain Management Regulations), and review and approval of grading and construction plans by City Public Works, the proposed development would not impede or redirect flood flows. Therefore, potential impacts would be less than significant.

Mitigation Measure: Implement HYD-1 and HYD-2.

Conclusion: Less than significant impact with mitigation.

i), j) The project site is not located in an area at risk of flooding as result of levee or dam failure, mudflow, tsunami, or seiche; therefore, no impact would occur.

Conclusion: Less than significant/no impact.

Based on review by the City Public Works and Utility Departments, proposed project design, and compliance with existing regulations, no significant impacts would occur.

10. LAND USE AND PLANNING. Would the project:

a) Physically divide an established community?					--X--
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	1, 2, 3, 14, 18, 21, 26, 28			--X--	
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?					--X--

Evaluation

a) The proposed hotel development would not physically divide the City. Therefore, no impact would occur.

Conclusion: No impact.

b) The project site is currently vacant, and surrounding uses include car dealerships, Motel 6, a tire shop, AAA offices, and commercial development along Calle Joaquin, Los Osos Valley Road, and the Auto Park Way cul-de-sac. The proposed project is subject to the City General Plan and Zoning Code, Land Use and Circulation Element (LUCE), the Airport Area Specific Plan, San Luis Obispo Creek Waterway Management Program, and Airport Land Use Plan. These plans include standards to protect aesthetic quality and scenic viewsheds, biological resources, cultural resources, and public health and safety. Specific requirements or policies identified in these documents are discussed in specific resource sections. Based on project design and compliance with existing regulations, the project would not be inconsistent with policies adopted for the purpose of avoiding or mitigating environmental effects.

Conclusion: Less than significant impact.

c) The project site is not located in an area subject to a habitat conservation plan or community conservation plan; therefore, no impact would occur.

Conclusion: No impact.

As proposed, the project is consistent with the City General Plan and applicable regional plans.

11. MINERAL RESOURCES. Would the project:

a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?					--X--
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?					--X--

Evaluation

a), b) No known mineral resources are present within the project site; therefore implementation of the proposed hotel development plan would not result in the loss of valuable mineral resources.

Conclusion: No impact.

12. NOISE. Would the project result in:

a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	29, 30		--X--		
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	29			--X--	
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?				--X--	
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?				--X--	
e) For a project located within an airport land use plan, or where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	21			--X--	
				--X--	

f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?					

Evaluation

The project site is located approximately 100 feet from U.S. 101, and the structure itself would be located 191 feet from the nearest highway travel lane. Based on the City Noise Ordinance (1996), the acceptable threshold of exposure to transportation noise sources is 60 decibels (dB) (outdoor) and 45 dB (indoor) for hotels, motels, and office buildings. Noise exposure ranging from 60 dB to 75 dB is conditionally acceptable (mitigation may be required). The project site is also located within the 50 dB noise contour for the San Luis Obispo County Airport. The project site is located approximately 300 feet northeast of Motel 6, which is considered a noise-sensitive use. The maximum stationary noise exposure for noise-sensitive uses is 50 dB (hourly daytime) and 45 dB (hourly nighttime). The applicant submitted an *Acoustic Study* (David Dubbink Associates 2014). The results of the study are incorporated into the analysis below.

a), b) Based on the *Acoustic Study*, the proposed hotel would be affected by transportation-related noise generated along the U.S. 101 corridor. Noise levels would range from 72 dB approximately 80 feet from the Calle Joaquin frontage to 62 dB in the rear of the lot, at a distance measured approximately 15 feet above ground level. The hotel would be located approximately 90 feet from the edge of Calle Joaquin, and a proposed outdoor use area including the swimming pool and patio would be located approximately 135 feet from the edge of Calle Joaquin, and 244 feet from the centerline of U.S. 101.

Outdoor use areas, including the swimming pool and barbeque facilities, would be exposed to noise levels exceeding the Noise Element threshold (60 dB) by approximately 5 to 7 decibels. Although it is expected that noise generated by pool users may reach this noise level, attenuation is recommended to ensure consistency with the Noise Element. The applicant proposes to construct a concrete noise wall with stone veneer around the swimming pool and associated patio, as recommended in the *Acoustic Study*. The pool would be located within the southeastern portion of the outdoor use area, and the barbeque/patio facilities would be located to northwest of the pool.

Regarding interior noise levels, the indoor standard for occupied spaces is a not to exceed level of 45 Ldn. Based on the *Acoustic Study*, the highest noise exposure levels are at the front portion of the hotel measured at the second floor elevation. The assumed future level at this elevation is approximately 71 decibels. Estimates made of noise levels at the third and fourth floor levels increase at a decibel per floor. A noise level reduction of at least 26 to 28 decibels will be required to meet the City's interior noise standard of 45 Ldn. Conventional construction reduces noise transmission by around 20 decibels and the needed additional reduction can be achieved by specifying appropriate construction materials and techniques.

Based on the location and anticipated use of the proposed hotel, and distance to the nearest sensitive receptor (Motel 6, approximately 300 away), operational noise would not exceed allowable thresholds in the long-term. In the short-term, construction related noise may generate noise and vibrations, however, the effects would be short-term and therefore, less than significant assuming compliance with the Noise Ordinance.

Mitigation Measures: The applicant is required to incorporate the following measures into proposed plans to ensure consistency with the Noise Element:

N-1 Prior to issuance of construction permits, the applicant shall submit plans including the following:

a. Screened noise barriers shall be installed along the northern and eastern boundaries of proposed outdoor use areas, including the pool and barbeque patio. The barriers shall be constructed to attenuate noise by a minimum of 7 decibels for the pool area, and 5 decibels for the barbeque patio.
b. The design of the hotel shall incorporate the following standards, consistent with the Uniform Building Code, to attenuate transportation-related noise by 30 dB:
    1. Provide air conditioning or a mechanical ventilation system, so windows and doors may remain closed.
    2. Mount windows and sliding glass doors in low air infiltration rate frames (0.5 cfm or less, per ANSI specifications).
    3. Provide solid-core exterior doors with perimeter weather stripping and threshold seals.

4. Cover exterior walls with stucco or brick veneer.
5. Keep glass area in windows and doors below 20% of the floor area in a room.
6. Baffle roof or attic vents facing the noise source.
7. At exterior walls, attach interior sheetrock to studs by resilient channels, or use staggered studs or double walls.
8. Provide windows with a laboratory-tested STC rating of 30 or more.

Conclusion: Less than significant impact with mitigation.

e), f) The project site is within the projected 50 dB airport noise contour for the San Luis Obispo County Airport, as shown on ALUP Figure 1 (Airport Noise Contours). The Airport is located approximately 1.6 miles to the south. Uses categorized as "Extremely Noise Sensitive" and "Moderately Noise Sensitive" are allowable outside of the 55 dB contour. The site is located outside of the 65 dB single event noise contour. Based on the ALUP, the maximum allowable interior noise exposure from single event aviation noise sources for noise sensitive land uses is 50 to 60 dB (depending on the use); therefore development would not be exposed to interior noise levels exceeding the allowable threshold for a single event. Therefore, based on the project location, the project would be consistent with ALUP noise policies, and would not be exposed to aircraft noise exceeding identified thresholds.

Based on review of ALUP Section 5.3 Land Use Compatibility Table: 1) Hotels and Motels within the "Less than 55" Airport Noise Exposure (dB CNEL) contour are an Allowed land use. In addition, mitigation is identified to attenuate transportation-related noise to 45 dB (interior exposure), which would further reduce potential exposure to aircraft-related noise. Therefore, potential impacts would be less than significant.

Conclusion: Less than significant impact.

Based on the proposed project design, detailed noise analysis, and incorporation of mitigation measures, no significant impact would occur.

13. POPULATION AND HOUSING. Would the project:

a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?				--X--	
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?					--X—
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?					--X--

Evaluation

a) The proposed project is not anticipated to induce substantial population growth in the City as a result of new jobs resulting in relocation into the City, and would not include an extension of City infrastructure. Therefore, the project would not induce growth within or outside of the City.

Conclusion: Less than significant impact.

b), c) The proposed project would not require the removal or displacement of existing housing or persons. No impact would occur.

Conclusion: No impact.

The proposed hotel development would not result in any changes to the General Plan or City infrastructure that would increase population or affect the population/housing balance.

14. PUBLIC SERVICES. Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:					
a) Fire protection?				--X--	
b) Police protection?				--X--	
c) Schools?				--X--	
d) Parks?				--X--	
e) Other public facilities?				--X--	

<u>Evaluation</u>

The proposed project site is served by the City Police Department and City Fire Department. CalFire, the County Sheriff, and California Highway Patrol may also respond to emergencies in the area. The project site is within the San Luis Coastal Unified School District. Solid waste is managed by the San Luis Obispo Regional Integrated Waste Management Authority and Santa Barbara Regional Integrated Waste Management Authority (depending on the nature of the solid waste). Several parks and public recreational facilities are located within the City.

a), b), c), d), e) The proposed development project is consistent with the City General Plan, Zoning Code, and Airport Area Specific Plan, and would not create significant impacts to local public services because it would not induce population growth and does not include a use that would significantly increase demand resulting in the requirement for new facilities. Regarding cumulative effects, the applicant is required to pay fees, which would go towards provision of municipal services. Therefore, potential impacts would be less than significant.

<u>Conclusion:</u> Less than significant impact.

The proposed 114-unit hotel would be adequately served by City, County, and State public services. Payment of standard development (fair-share) fees would be required to address each project's contribution to cumulative demand.

15. RECREATION.					
a) Would the project increase the use of existing neighborhood or regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?				--X--	
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?				--X--	

<u>Evaluation</u>

a), b) The proposed project would not generate population growth affecting existing or future recreational facilities through increased use. No additional public recreational facilities or opportunities are proposed, aside from continued preservation of Lot 5 (Open Space) and the City's potential construction of a pedestrian or bike path within the open space area. The project would not impede City plans for additional facilities; therefore, potential impacts to recreation would be less than significant.

<u>Conclusion:</u> Less than significant impact.

The proposed 114-unit hotel would be adequately served by existing City and regional parks and recreational opportunities.

16. TRANSPORTATION/TRAFFIC. Would the project:					
a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	2, 31, 35		--X--		
b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	2, 31, 32, 35		--X--		
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	21, 22		--X--		
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g. farm equipment)?	35		--X--		
e) Result in inadequate emergency access?				--X--	
f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	2, 35		--X--		

Evaluation

The evaluation of potential transportation/traffic impacts is based on a *Transportation Impact Analysis Report* (Omni-Means 2014) and review by the City Public Works Department. The results of the report are incorporated by reference in to the analysis below. The report is appended to this Initial Study. Access to the project site is provided by Calle Joaquin. Roadways affected by project development include Calle Joaquin, Los Osos Valley Road, and U.S. 101. The intersection of Calle Joaquin Road and Los Osos Valley Road is signalized. Los Osos Valley Road is designed as a Parkway Arterial in the City's Circulation Element. Calle Joaquin is an arterial. The desired level of service (LOS) for City arterial streets (outside of the Downtown area) is LOS D or better. Existing LOS is shown in Table 5 below; all existing intersections are operating at acceptable levels of service.

Table 5. Existing Intersection Level of Service

Intersection	Target LOS	AM Peak Hour		PM Peak Hour	
		Delay (sec)	LOS	Delay	LOS
LOVR/Calle Joaquin (signalized)	D	7.1	A	11.1	B
LOVR/U.S. 101 Southbound (signalized)	D	22.7	C	30.8	C
LOVR/U.S. 101 Northbound (signalized)	D	20.8	C	27.0	C

Source: 2014 LUCE, Omni Means 2014

The City, with California Department of Transportation (Caltrans) oversight, is currently constructing improvements to correct operational deficiencies at the U.S. 101/Los Osos Valley Road Interchange, including widening Los Osos Valley Road and the adjacent bridge crossing over San Luis Obispo Creek, improving pedestrian and bicycle access, improving the South Higuera Street/Los Osos Valley Road intersection, and reconstruction of all four on and off-ramps. Without the project, all noted intersections would operate at LOS F at General Plan build-out (2035). With the project, LOS at the noted intersections would improve to LOS C or D at General Plan build-out (2035). In addition, the City of San Luis Obispo Bicycle Transportation Plan provides the location of bicycle routes in the vicinity of the project, including a Class I bike path from Prado Road, east side of the drainage swale, south of Prefumo Creek, and east of Calle Joaquin Road.

a), b) Based on Institute of Transportation Engineers (ITE) Trip Generation Manual standard rates, hotels generate 8.17 average daily trips per room; therefore operation of the proposed 114-room hotel would result in the generation of approximately 931 average daily trips. Peak hour trip generation for the proposed project is shown below, in Table 6.

Table 6. Project Trip Generation

Project Type	AM Peak Hour Trips			PM Peak Hour Trips		
	Total	In	Out	Total	In	Out
Hotel	61	36	25	69	35	34

Source: Omni Means 2014

At the time the traffic study was conducted, it considered the proposed hotel development on Lot 3, and future development of adjacent Lots 1, 2, and 4, under a reasonable worst case scenario (shopping center development). Table 7 shows the resulting effect of this cumulative development on intersection level of service. Based on this analysis, the development of all four lots would not result in a project-specific impact under existing plus project (Year 2016) conditions. Additional trips generated by the development of all four lots would degrade level of service, but not below the City's LOS D threshold; therefore, no mitigation is required to alleviate peak hour congestion.

Table 7. Existing Plus Project Intersection Level of Service

Intersection	Existing		Plus Project AM Peak Hour		Plus Project PM Peak Hour	
	AM Peak	PM Peak	Delay (sec)	LOS	Delay	LOS
LOVR/Calle Joaquin (signalized)	A	B	10.6	B	36.5	C
LOVR/U.S. 101 Southbound (signalized)	C	C	25.5	C	52.9	D
LOVR/U.S. 101 Northbound (signalized)	C	C	22.6	C	37.6	D

Source: 2014 LUCE, Omni Means 2014

By the year 2035, the City predicts that full improvements to U.S. 101/Los Osos Valley Road would be implemented. Table 8 on the following page shows predicted cumulative intersection level of service in the year 2035 and development of all four lots under a reasonable worst-case scenario. Additional traffic resulting from the development of all four lots would increase delays and traffic congestion at the Calle Joaquin/Los Osos Valley Road intersection and along the Los Osos Valley Road corridor and U.S. 101 interchange by the year 2035. Based on the transportation analysis (Omni Means 2014), the project would not result in project-specific adverse effects, but would contribute to the cumulative degradation of LOS at the Los Osos Valley Road/Calle Joaquin Road intersection under worst-case conditions.

Table 8. Year 2035 Cumulative No-Project Plus Project Intersection Level of Service

Intersection	No Project		Plus Project AM Peak Hour		Plus Project PM Peak Hour	
	AM Peak	PM Peak	Delay (sec)	LOS	Delay	LOS
LOVR/Calle Joaquin (signalized)	A	A	12.1	B	**71.4**	**E**
LOVR/U.S. 101 Southbound (signalized)	B	C	24.4	C	48.4	D
LOVR/U.S. 101 Northbound (signalized)	C	B	24.7	C	21.1	C

Source: Omni Means 2014

City recommended mitigation for this cumulative impact includes upgrading the traffic signal at the intersection of Los Osos Valley Road and Calle Joaquin Road, construction of a second left-turn lane on the Calle Joaquin approach to Los Osos Valley Road, and modification of lane usage on the westbound approach of Calle Joaquin where the project is located. These mitigation measures would apply to all four lots; therefore, design of the improvements is required prior to initial development of the lots, and fair share contribution would be required from each of the lot developers at the building permit stage. In addition, the current and future applicants would be required to contribute to the City's Transportation Impact Fee program, in addition to the Los Osos Valley Road interchange sub-area fee program. This additional fee mechanism was developed by the City to assess planned area development to contribute its fair share to the cost of proposed interchange improvements. Based on implementation of these mitigation measures, potentially significant cumulative impacts would be less than significant.

Based on consultation with the City Public Works Department, the applicant has submitted a design schematic showing intersection striping and improvements at the Los Osos Valley Road and Calle Joaquin intersection and an engineer's cost estimate to implement the improvements (RRM Design Group 2015), consistent with City recommended mitigation for this intersection under cumulative conditions. These improvements show reconstruction of the existing intersection and roadway approach, sidewalks, removal of one ornamental tree adjacent to the roadway, driveway improvements serving adjacent lots, a relocated utility pole, curb and gutter improvements, signage, and striping. The construction of these improvements would occur within an existing developed and paved area, and would be subject to all City ordinance and standard requirements in place for resource protection. These ordinances and standards include, but are not limited to, compliance with SLOAPCD air quality measures, cultural resources protection, hazardous materials documentation and remediation (as applicable), protection of creek corridors, stormwater management and water quality regulations, and implementation of a traffic control plan addressing vehicular, pedestrian, and bicycle traffic during construction. Based on compliance with existing regulations, no additional significant impacts would occur as a result of the identified road improvements. It should be noted that implementation of these improvements would only occur if future development of Lots 1, 2, and 4 would generate traffic that would result in a reduction in LOS below LOS D, as determined by the City Public Works Department.

If construction and operation of the hotel occurs while the Los Osos Valley Road/U.S. 101 Interchange project is underway, the cumulative effect could be significant. However, this effect would be short-term; therefore, potential short-term construction related impacts would be less than significant.

<u>Mitigation Measure:</u> The applicant shall comply with the following measure:

TC-1 Prior to issuance of grading and construction permits, the applicant shall contribute its fair share of Los Osos Valley Road interchange sub-area fees and Traffic Impact Fees as determined by the Deputy Director of Public Works. The applicant shall contribute fair share fees, or shall comply with a cost recovery agreement, for the potential future implementation of Los Osos Valley Road/Calle Joaquin intersection improvements, as determined and conditioned by the Deputy Director of Public Works.

Conclusion: Less than significant with mitigation.

c) The project site is located within Airport Land Use Plan Aviation Safety Area S1b, is located within the City's Airport Compatible Open Space Plan (ACOS), and is located over one nautical mile from the San Luis Obispo County Airport active runways (1.66 miles or 1.44 nautical miles). The applicant's requested density is 221 persons, which is within the density allowed by the ALUP. The proposed structure would be 45 feet in height (maximum). At this height, the building would not be an obstruction to air navigation (the identified limit is 200 feet above ground level in this area). As proposed, the project would not be inconsistent with the ALUP, and would not result in a safety hazard related to airport operations. Standard conditions included as part of the ALUC consistency determination (April 16, 2014) are included as mitigation measures (refer Mitigation Measures HAZ-1 through HAZ-6). Therefore, potential impacts would be less than significant.

Mitigation Measures: Comply with Measures HAZ-1 through HAZ-6.

Conclusion: Less than significant impact with mitigation.

d) The proposed project would be accessed from Calle Joaquin, a dead-end cul-de-sac at its northern extent near the project site. The roadway in this location is not currently striped, and does not provide a safe environment for vehicles, pedestrians, and bicyclists accessing the project area. Based on review by the Public Works Department, recommendations for roadway improvements to ensure public safety for all transportation modes include: striping, incorporation of a bicycle lane, construction of sidewalks, and maintenance of a vegetated buffer between the side walk and the curb.

The proposed project includes two options for safe access onto the project site; the first identifies a driveway easement area to be added to the existing 40-foot reciprocal driveway on the northeast property boundary, and the second identifies use of the existing reciprocal driveway, and provision of a 24-foot wide access entrance extending to Lot 4 (northeast property boundary). The project site improvements include trees to either side of the driveway connection with Calle Joaquin Road would potentially result in safe sight distance obstructions creating a potentially significant safety impact. Mitigation to clear obstructions from sight lines would mitigate this impact to less than significant. Public Works review and approval of final road improvement plans and access improvements, in addition to issuance of an Encroachment Permit, would be required prior to grading and construction. Therefore, potential impacts would be less than significant.

Mitigation Measure: The applicant shall comply with the following measure:

TC-2 Prior to issuance of grading and construction permits, the applicant shall submit final road improvement plans demonstrating adequate stopping sight distance studies to the City Public Works Department for review and approval. Issuance of an Encroachment Permit shall be required prior to grading and construction of road improvements.

Conclusion: Less than significant impact with mitigation.

e) Emergency access is adequate on all sides of the development. Standard City Fire conditions would be required regarding access to the site and all floors of the structure. Based on compliance with the Fire Code, potential impacts would be less than significant.

Conclusion: Less than significant impact.

f) The project site is accessible to pedestrians and bicyclists, and as noted above, proposed improvements to the Los Osos Valley Road/U.S. 101 interchange would include improved pedestrian and bicycle facilities. The project site is approximately 0.5 mile from the transit stop at Auto Park Way. The adopted Bicycle Transportation Plan calls for an East / West Class I bicycle connection in the vicinity of the project. Based on review by the City Public Works Department provision of a bicycle lane on Calle Joaquin Road is required, and would be partially funded by contribution of fair share fees (Mitigation Measure TC-1 above). Based on implementation of this condition, potential impacts would be less than significant.

Mitigation Measures: Comply with Mitigation Measure TC-1.

Conclusion: Less than significant impact with mitigation.

Implementation of the proposed project would contribute to traffic congestion on Los Osos Valley Road and Calle Joaquin Road, and would result contribute to a potentially unacceptable level of service under cumulative conditions. Mitigation, including roadway and intersection improvements have been addressed by the applicant and are incorporated as mitigation measures. The applicant would provide fair-share contributions to these road improvements, in addition to payment of fees to City programs to improve circulation and reduce congestion in the area.

17. UTILITIES AND SERVICE SYSTEMS. Would the project:

	Sources	Potentially Significant Issues	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?				--X--	
b) Require or result in the construction or expansion of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	24, 33		--X--		
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	25			--X--	
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new and expanded entitlements needed?	24			--X--	
e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	24, 33			--X--	
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	34			--X--	
g) Comply with federal, state, and local statutes and regulations related to solid waste?				--X--	

Evaluation

The proposed project would be served by the City Utilities Department for domestic water supply, recycled water supply, and wastewater collection and treatment. Solid waste is managed by the San Luis Obispo Regional Integrated Waste Management Authority and Santa Barbara Regional Integrated Waste Management Authority (depending on the nature of the solid waste). Several parks and public recreational facilities are located within the City.

a) The proposed project would not include an onsite septic system. Therefore, no impact would occur.

Conclusion: Less than significant impact.

b), d), e) Based on the *2013 Water and Wastewater Development Impact Fee Study,* non-residential retail uses generate 60 gallons of wastewater per day, per 1,000 square feet of structural area. The proposed 69,293-square foot hotel would generate approximately 4,158 gallons of wastewater per day. Based on the *Urban Water Management Plan* and review by the City Utilities Department, existing water and wastewater treatment facilities have the capacity to serve the project (please also refer to Section 9 Hydrology). The applicant is required to pay water and wastewater impact fees, which were adopted to ensure that new development pays its fair share of the cost of constructing the water supply, treatment, and distribution facilities that will be necessary to service it, as well as wastewater treatment facilities. Utility connections are located within Calle Joaquin, and the applicant would not require the construction of new lines or pump stations to serve the project. Therefore, impacts would be less than significant.

Mitigation Measure: The applicant shall comply with the following measure:

Mitigation Measure USS 1: The City's hydraulic model identifies capacity constraints at the existing sewer crossing of US 101 to just upstream of the Laguna Lift Station. The existing sewer crossing is over capacity during current peak wet weather flows and the pipes surcharge. Replacement of the sewer main, including upsizing to accommodate the project, is planned under the City's *2015 Infrastructure Renewal Strategy*. The project will be responsible for contributing its fair share to these off-site improvements to the City's wastewater collection system.

Conclusion: Less than significant with mitigation.

c) As discussed in Sections 6 and 9 (Geology/Soils and Hydrology/Water Quality), the proposed project is require to comply with existing City and RWQCB standards to manage and filter stormwater and runoff. Based on review by the City Public Works Department, no off-site drainage facilities or features would be required.

Conclusion: Less than significant impact.

f), g) Construction and operation of the proposed project would generate solid waste. It is anticipated that a majority of waste would be disposed at the Cold Canyon Landfill. Operational waste would be temporarily stored onsite, consistent with City Municipal Code Section collected by the San Luis Garbage Company. As of 2009, the Cold Canyon Landfill operated at 32 percent of its permitted daily capacity, and as of June 2010, the landfill had a remaining capacity of approximately 1.83 million cubic yards. In November 2012, the County Board of Supervisors approved a proposed to expand the landfill's disposal-area footprint by approximately 46 acres (additional 13.1 million cubic yards) (San Luis Obispo County 2012). Therefore, existing landfills would have the capacity to serve the project.

Implementation of the proposed project would contribute to the demand for public utilities and services. The applicant would provide fair-share contributions, which would be used by the City to improve facilities pursuant to adopted plans and programs.

18. MANDATORY FINDINGS OF SIGNIFICANCE.

a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?			--X-		

Please refer to Section 4 Biological Resources, which includes an assessment of the project's potential effects on special status fish and wildlife species and their habitat. Based on the project's location, existing condition, and implementation of mitigation measures, the project would not have the potential to significantly degrade the quality of the environment, or substantially reduce habitat or species populations.

b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of the past projects, the effects of other current projects, and the effects of probable future projects)?			--X--		

Based on the location of the project, existing condition of the project site, and implementation of mitigation measures including contribution of fees to existing programs, the project would not result in any impacts that are cumulatively considerable.

c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?			--X--		

Please refer to Sections 3 (Air Quality), 8 (Hazards and Hazardous Materials), 12 (Noise), and 16 (Transportation/Traffic). Based on the location of the proposed project and implementation of mitigation measures, the project would not have a substantially adverse direct or indirect effect on the public.

19. EARLIER ANALYSES.
Earlier analysis may be used where, pursuant to the tiering, program EIR, or other CEQA process, one or more effects have been adequately analyzed in an earlier EIR or Negative Declaration. Section 15063 (c) (3) (D). In this case a discussion should identify the following items:
a) Earlier analysis used. Identify earlier analyses and state where they are available for review.
N/A
b) Impacts adequately addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.
N/A
c) Mitigation measures. For effects that are "Less than Significant with Mitigation Incorporated," describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions of the project.

20. SOURCE REFERENCES.	
1.	City of SLO Conservation & Open Space Element, 2006.
2.	City of SLO Land Use and Circulation Element and Final EIR, last revised December 2014.
3.	City of San Luis Obispo Zoning Regulations, December 2013.
4.	California Department of Conservation Farmland Mapping and Monitoring Program, July 2013
5.	Natural Resources Conservation Service Web Soil Survey, Accessed May 9, 2014
6.	General Plan Land Use Element Update Final EIR, 1994
7.	Clean Air Plan for San Luis Obispo County, Air Pollution Control District, 2001.
8.	CEQA Air Quality Handbook, Air Pollution Control District, 2012.
9.	Health Risk Assessment, Intrinsik Environmental Sciences (US), Inc., May 16, 2014
10.	Biological Assessment, Althouse and Meade, May 2005
11.	Wetland Determination Study, Althouse and Meade, June 23, 2005
12.	Cultural Resources Survey and Impact Assessment, C.A. Singer & Associates, Inc., December 7, 2004
13.	City of San Luis Obispo Archaeological Resource Preservation Program Guidelines, October 2009.
14.	City of SLO General Plan Safety Element, July 2000
15.	California Building Code, 2013
16.	San Luis Obispo Quadrangle Map, prepared by the State Geologist in compliance with the Alquist-Priolo Earthquake Fault Zoning Act, effective January 1, 1990
17.	Geotechnical Engineering Report, Buena Geotechnical Services, December 31, 2004
18.	City of SLO 2012 Climate Action Plan, August 2012
19.	CALEPA Climate Action Team Biennial Report, April 2010
20.	California Department of Toxic Substances Control, Envirostor and GeoTracker, Accessed June 1, 2014
21.	County Airport Land Use Plan dated May 18, 2005.
22.	City of SLO Airport Compatible Open Space Plan, April 2005
23.	City of SLO Local Hazard Mitigation Plan
24.	City of SLO 2010 Urban Water Management Plan, 2011
25.	Hydrologic and Hydraulic Analysis, KC Design Group, Inc., June 21, 2005
26.	Waterway Management Plan, City and County of San Luis Obispo, 2003
27.	Federal Emergency Management Agency, FIRM, November 16, 2012
28.	City of SLO Land Use Element, 1994
29.	City of SLO Noise Element, 1996
30.	Acoustic Study, David Dubbink Associates, May 7, 2014
31.	Los Osos Valley Road Interchange in the City of San Luis Obispo on US-101 Project Report, August 1, 2011
32.	Institute of Transportation Engineers (ITE) Trip Generation Manuals.
33.	City of SLO 2013 Water and Wastewater Development Impact Fee Study, 2013
34.	Cold Canyon Landfill Final EIR, May 2012
35.	Transportation Impact Analysis Report, Omni Means, August 2014

Attachments:

1. Location Map
2. Land Use Map
3. Zoning Map
4. Site Plans
5. CalEEMod Worksheets
   A. Winter Unmitigated Emissions
   B. Winter Mitigated Emissions
   C. Annual Unmitigated Emissions
   D. Annual Mitigated Emissions
6. Health Risk Assessment, Intrinsik Environmental Sciences, 2014
7. Acoustic Study, David Dubbink, 2014
8. Transportation Impact Analysis Report, Omni Means, August 2014

REQUIRED MITIGATION AND MONITORING PROGRAMS

Aesthetics

AES-1 Prior to issuance of construction permits, final project design shall require architectural review to assure that impacts to scenic resources are addressed in accordance with City policy. The Architectural Review Commission shall review site design, building architecture, colors, grading, lighting, landscaping, and signage for consistency with General Plan polices for viewshed protection and the City's Community Design Guidelines, and all recommendations shall be incorporated into the proposed project. In addition, the following standards shall supplement City policy, and shall apply to the project site:

a. All free-standing exterior light fixtures shall have a maximum height of twenty feet as measured from the fixture to finished grade. All lighting shall incorporate fully shielded light sources, with illumination levels at or below 10-foot candles when measured below the light source at finished grade. Light levels at and beyond the property lines shall not exceed 1 foot-candle. The City shall review a complete lighting plan and photometrics plan as part of the construction plans to ensure compliance.
b. The final site plan shall incorporate landscaping and site improvements in order to create a "soft edge" along all lot boundaries, including drought-tolerant native trees and shrubs. The landscaping plan shall include drought-tolerant, native tree plantings and irrigation within the Calle Joaquin right-of-way; trees shall be spaced to preserve primary views through the project site.
c. All mechanical equipment (including backflow plumbing devices and water meters), whether on the ground or installed elsewhere, shall be painted a flat green color and screened from public view with appropriate landscape material, earthen berms, or landscaped walls.
d. The final elevations shall identify exterior colors and materials that include natural, muted colors (i.e., muted browns, greens, and tans) consistent with the natural backdrop.

Monitoring Program: These measures shall be incorporated into project grading and building plans for review and approval by the City Community Development Department. Compliance shall be verified by the City during building inspections.

AES-2 Prior to issuance of construction permits, the applicant shall submit a final landscape plan with road improvement plans for review and approval by the Community Development Department, Utilities Department, and Public Works Department. The landscape plan shall identify the size, quantity, and variety of all landscape plants and trees. Appropriate groundcover mulch and erosion control methods shall be indicated on the plan. The landscape plan shall include an irrigation plan (drip irrigation) and if feasible, connection to the City's recycled water "purple pipe" system, for all proposed landscape areas. The landscape plan shall comply with the following standards, unless otherwise superseded by the Architectural Review Commission:

a. Small trees that are no taller than 15-20 feet, numbers of which are calculated based on a spacing of 50 feet, shall be clustered and interspersed with other plant materials including low to medium-height shrubs and groundcovers (native and native-appearing choices) to create a variety of textures and canopies within the 12-foot wide planting strip between the eastern edge of the Calle Joaquin and U.S. Highway 101 right-of-ways.
b. Larger trees with an open character, numbers of which are calculated based on a spacing of 50 feet, shall be clustered along the western edge of the Calle Joaquin right-of-way to maximize views through the southwestern and northeastern lot boundaries. Other smaller trees that are not taller than 40 feet, numbers of which are calculated based on a spacing of 50 feet, shall be interspersed with the larger trees along the frontage of the lot. Trees shall also be planted to complement the hotel building by choosing species that will ultimately meet the roofline of the building at maturity and be planted in locations close to the building.
c. Size and quantity of all plants shall be clearly identified on the final landscape plan. Street trees shall be a minimum size of 24-inch box specimens.
d. Use of recycled water is regulated by the State Water Board and CDPH. The City delivers recycled water under its Master Reclamation Permit from the State Water Board. The irrigation plans shall be prepared in compliance with the City's *Procedures for Recycled Water Use*.
f. On-site landscaping, and landscaping located within the parkway, between Calle Joaquin and U.S. Highway 101, shall be maintained by the developer/landowner. A landscape maintenance agreement shall be recorded prior to issuance of construction permits. The agreement shall run with the land and the responsibility for on-going

maintenance shall be transferred to future property owners, as applicable. Maintenance shall be overseen by the Community Development Director in consultation with the Natural Resources Manager.

e. Use of recycled water is regulated by the State Water Board and CDPH. The City delivers recycled water under its Master Reclamation Permit from the State Water Board. The irrigation plans shall be prepared in compliance with the City's *Procedures for Recycled Water Use*.

f. On-site landscaping, and landscaping located within the parkway, between Calle Joaquin and U.S. Highway 101, shall be maintained by the developer/landowner. A landscape maintenance agreement shall be recorded prior to issuance of construction permits. The agreement shall run with the land and the responsibility for on-going maintenance shall be transferred to future property owners, as applicable. Maintenance shall be overseen by the Community Development Director in consultation with the Natural Resources Manager.

Monitoring Program: These measures shall be incorporated into project landscape plans for review and approval by the City Community Development Department. Compliance shall be verified by the City during building inspections.

AES-3 Prior to issuance of construction permits, the applicant shall submit construction plans showing the use of measures to reduce glare on windows facing U.S. Highway 101, which may include but not be limited to recessed windows or coatings.

Monitoring Program: These measures shall be incorporated into project building plans for review and approval by the City Community Development Department. Compliance shall be verified by the City during building inspections.

<u>Air Quality</u>

AQ-1 Fugitive Dust Control Measures. The proposed project shall implement the following dust control measures so as to reduce PM10 emissions in accordance with SLOAPCD requirements.

a. Reduce the amount of the disturbed area where possible;

b. Use of water trucks or sprinkler systems in sufficient quantities to prevent airborne dust from leaving the site. Increased watering frequency would be required whenever wind speeds exceed 15 mph. Reclaimed (nonpotable) water should be used whenever possible;

c. All dirt stock pile areas should be sprayed daily as needed;

d. Permanent dust control measures identified in the approved project revegetation and landscape plans should be implemented as soon as possible following completion of any soil disturbing activities;

e. Exposed ground areas that are planned to be reworked at dates greater than one month after initial grading should be sown with a fast germinating, non-invasive grass seed and watered until vegetation is established;

f. All disturbed soil areas not subject to revegetation should be stabilized using approved chemical soil binders, jute netting, or other methods approved in advance by the APCD;

g. All roadways, driveways, sidewalks, etc. to be paved should be completed as soon as possible after grading unless seeding or soil binders are used;

h. Vehicle speed for all construction vehicles shall not exceed 15 mph on any unpaved surface at the construction site;

i. All trucks hauling dirt, sand, soil, or other loose materials are to be covered or should maintain at least two feet of freeboard (minimum vertical distance between top of load and top of trailer) in accordance with CVC Section 23114;

j. Install wheel washers where vehicles enter and exit unpaved roads onto streets, or wash off trucks and equipment leaving the site;

k. Sweep streets at the end of each day if visible soil material is carried onto adjacent paved roads. Water sweepers with reclaimed water should be used where feasible;

l. All of these fugitive dust mitigation measures shall be shown on grading and building plans; and

m. The contractor or builder shall designate a person or persons to monitor the fugitive dust emissions and enhance the implementation of the measures as necessary to minimize dust complaints, reduce visible emissions below 20 percent opacity, and to prevent transport of dust offsite. Their duties shall include holidays and weekend periods when work may not be in progress. The name and telephone number of such persons shall be provided to the APCD Compliance Division prior to the start of any grading, earthwork or demolition.

Monitoring Program: These conditions shall be noted on all project grading and building plans. The applicant shall present evidence of a plan for complying with these requirements prior to issuance of a grading or building permit from the City. The applicant shall provide the City with the name and telephone number of the person responsible for ensuring compliance with these requirements. The Building Inspector and Public Works Inspectors shall conduct field monitoring.

AQ-2 Construction Equipment. The proposed project shall implement the following Standard Control Measures for construction equipment as to reduce air emissions in accordance with SLOAPCD requirements.

a. Maintain all construction equipment in proper tune according to manufacturer's specifications;
b. Fuel all off-road and portable diesel powered equipment with ARB certified motor vehicle diesel fuel (non-taxed version suitable for sue off-road);
c. Use diesel construction equipment meeting ARB's Tier 2 certified engines or cleaner off-road heavy-duty diesel engines, and comply with the State Off-Road Regulation;
d. Use on-road heavy-duty trucks that meet the ARB's 2007 or cleaner certification standard for on-road heavy-duty diesel engines, and comply with the State On-Road Regulation;
e. Construction or trucking companies with fleets that do not have engines in their fleet that meet the engine standards identified in the above two measures (e.g. captive or NOx exempt area fleets) may be eligible by proving alternative compliance;
f. All on and off-road diesel equipment shall not idle for more than 5 minutes. Signs shall be posted in the designated queuing areas and or job sites to remind drivers and operators of the 5 minute idling limit;
g. Diesel idling within 1,000 feet of sensitive receptors is not permitted;
h. Staging and queuing areas shall not be located within 1,000 feet of sensitive receptors;
i. Electrify equipment when feasible;
j. Substitute gasoline-powered in place of diesel-powered equipment, where feasible; and
k. Use alternatively fueled construction equipment on-site where feasible, such as compressed natural gas (CNG), liquefied natural gas (LNG), propane or biodiesel.

Monitoring Program: These conditions shall be noted on all project grading and building plans. The applicant shall present evidence of a plan for complying with these requirements prior to issuance of a grading or building permit from the City. The applicant shall provide the City with the name and telephone number of the person responsible for ensuring compliance with these requirements. The Building Inspector and Public Works Inspectors shall conduct field monitoring.

AQ-3 Construction. In the event the estimated construction phase ozone precursor emissions from the actual fleet for a given phase (site preparation, grading, construction, architectural coatings) exceed the APCD's threshold of significance after Standard Mitigation Measures are factored into the estimation, the following Best Available Control Technologies (BACT) shall be implemented, including, but not limited to the following.

a. Further reducing emissions by expanding use of Tier 3 and Tier 4 off-road and 2010 on-road compliant engines;
b. Repowering equipment with the cleanest engines available;
c. Installing California Verified Diesel Emission Control Strategies (refer to www.arb.ca.gov/diesel/verdev/vt/cvt.htm; and
d. Use of low VOC architectural coatings (71 grams/liter or less).

Monitoring Program: These conditions shall be noted on all project grading and building plans. The applicant shall present evidence of a plan for complying with these requirements prior to issuance of a grading or building permit from the City. The applicant shall provide the City with the name and telephone number of the person responsible for ensuring compliance with these requirements. The Building Inspector and Public Works Inspectors shall conduct field monitoring.

AQ-4 Developmental Burning. APCD regulations prohibit developmental burning of vegetative material within San Luis Obispo County; therefore, burning of vegetative material shall not occur.

Monitoring Program: These conditions shall be noted on all project grading and building plans. The applicant shall provide the City with the name and telephone number of the person responsible for ensuring compliance with these requirements. The Building Inspector and Public Works Inspectors shall conduct field monitoring.

AQ-5 Permits. Prior to construction, the applicant shall obtain all required permits from SLOAPCD. Portable equipment and engines 50 horsepower (hp) or greater, used during construction activities will require California statewide portable equipment registration (issued by the ARB) or an Air District permit. The following list is provided as a guide to equipment and operations that may have permitting requirements, but should not be viewed as exclusive:

a. Power screens, conveyors, diesel engines, and/or crushers;
b. Portable generators and equipment with engines that are 50 hp or greater;
c. Internal combustion engines;
d. Unconfined abrasive blasting operations;
e. Concrete batch plants;
f. Rock and pavement crushing;
g. Tub grinders; and,
h. Trommel screens.

Monitoring Program: These conditions shall be noted on all project grading and building plans. The applicant shall provide the City any required permits or exemptions issued by APCD.

AQ-6 Naturally Occurring Asbestos. Naturally Occurring Asbestos (NOA) has been identified as a toxic air contaminant by the California Air Resources Board (ARB). Under the ARB Air Toxics Control Measure (ATCM) for Construction, Grading, Quarrying, and Surface Mining Operations, prior to any grading activities a geologic evaluation shall be conducted to determine if NOA is present within the area that will be disturbed. If NOA is not present, an exemption request must be filed with the District. If NOA is found at the site, the applicant must comply with all requirements outlined in the Asbestos ATCM. This may include development of an Asbestos Dust Mitigation Plan and an Asbestos Health and Safety Program for approval by the APCD. More information on NOA can be found at http://www.slocleanair.org/business/asbestos.asp.

Monitoring Program: These conditions shall be noted on all project grading and building plans. The applicant shall provide the City any required permits or exemptions issued by APCD.

Biological Resources

BR-1 Upon application for construction permits, the following measures shall be included on applicable plans:

a. If feasible, construction should be limited to the typical dry season (April 15 to October 15) in order to avoid impacts (e.g., erosion and sedimentation, pollutant discharge) to Prefumo Creek and water quality. If work must occur during the rainy season, the applicant shall install adequate erosion and sedimentation controls to prevent any sediment-laden run-off from entering Prefumo Creek.
b. Upon completion of construction, disturbed areas will be stabilized or vegetated.
c. The lot boundaries shall be marked with temporary construction fencing and flagging to prevent inadvertent disturbances. Soil stockpiling, construction equipment access, and staging areas shall not occur within Lot 5.
d. Appropriate permanent hydrocarbon filtering and sedimentation and erosion control measure shall be included in the parking lot design in order to minimize long-term impacts associated with vehicular traffic. No parking lot or roadway drainage shall be directly routed to the Prefumo Creek corridor or City stormdrain system within adequate filtration methods such as an oil/water separator or bioswale planted with grasses and groundcover species designed for such use. A bioswale within a designated landscape area is the preferred method of water filtration.
e. Light levels within 35 feet of Prefumo Creek shall be less than 0.5 foot candle and native landscape screening shall be planted between the proposed development and the Lot 5 property boundary to reduce potential light intrusion into the riparian area.

Monitoring Program: These conditions and measures shall be noted on all grading and construction plans. The City Community Development Department shall verify compliance during building inspections.

Cultural Resources

CR-1 Prior to issuance of grading and construction permits, the following shall be included on all grading and construction plan sets: If excavations encounter significant paleontological resources, archaeological resources, or cultural materials, then construction activities that may affect them shall cease until the extent of the resource is determined and the Community Development Director approves appropriate protective measures. The Community Development

Director shall be notified of the extent and location of discovered materials so that a qualified archaeologist may record them. If pre-historic Native American artifacts are encountered, a Native American monitor should be called into work with the archaeologist to document and remove the items. Disposition of artifacts shall comply with state and federal laws.

Monitoring Program: These conditions shall be noted on all grading and construction plans.

Geology and Soils

GEO-1 Prior to issuance of grading and construction permits, the applicant shall submit grading and construction plans demonstrating compliance with the *Geotechnical Engineering Report* (Buena Geotechnical Services, Inc., December 2004) and/or subsequent geotechnical and soils engineering reports prepared and stamped by a certified engineer.

Monitoring Program: The City Community Development Department and Building Inspector shall verify compliance.

Hazards and Hazardous Materials

HAZ-1 Non-residential density for Lot 3 is limited to 384.75 persons.

Monitoring Program: These conditions shall be noted on, and incorporated into, construction plans. The City Community Development Department and Building Inspector shall verify compliance.

HAZ-2 All tall structures shall be reviewed by the Air Traffic Division of the FAA regional office having jurisdiction over San Luis Obispo County to determine compliance with the provisions of FAR Part 77. In addition, applicable construction activities must be reported via FAA Form 7460-1 at least 30 days before proposed construction or application for building permit.

Monitoring Program: These conditions shall be noted on, and incorporated into, construction plans. The City Community Development Department and Building Inspector shall verify compliance.

No structure, landscaping, apparatus, or other feature, whether temporary or permanent in nature shall constitute an obstruction to air navigation or a hazard to air navigation, as defined by the ALUP.

Monitoring Program: These conditions shall be noted on, and incorporated into, construction plans. The City Community Development Department and Building Inspector shall verify compliance.

HAZ-4 Any use is prohibited that may entail characteristics which would potentially interfere with the takeoff, landing, or maneuvering of aircraft at the Airport, including:

a. creation of electrical interference with navigation signals or radio communication between the aircraft and airport;
b. lighting which is difficult to distinguish from airport lighting;
c. glare in the eyes of pilots using the airport;
d. uses which attract birds and create bird strike hazards;
e. uses which produce visually significant quantities of smoke; and
f. uses which entail a risk of physical injury to operators or passengers of aircraft (e.g., exterior laser light demonstrations or shows).

Monitoring Program: These conditions shall be noted on, and incorporated into, construction plans. The City Community Development Department and Building Inspector shall verify compliance.

HAZ-5 Avigation easements will be recorded for each property developed within the area included in the proposed local action prior to the issuance of any building permit or conditional use permit.

Monitoring Program: These conditions shall be noted on, and incorporated into, construction plans. The City Community Development Department and Building Inspector shall verify compliance.

HAZ-6 All owners, potential purchasers, occupants (whether as owners or renters), and potential occupants (whether as owners or renters) will receive full and accurate disclosure concerning the noise, safety, or overflight impacts associated with airport operations prior to entering any contractual obligation to purchase, lease, rent, or otherwise occupy any property or properties within the airport area.

Monitoring Program: These conditions shall be noted on, and incorporated into, construction plans. The City Community Development Department and Building Inspector shall verify compliance.

Hydrology and Water Quality

HYD-1 Prior to issuance of grading and construction permits, the applicant shall submit construction plans to the Community Development Department and Public Works Department for review and approval. Plans shall incorporate the following measures:

a. All site drainage shall be directed towards the public right-of-way unless other provisions are approved by the City.
b. Oil and sand separators or other filtering media shall be installed at each drain inlet intercepting runoff as a means of filtering toxic substances from run off before it is discharged off-site and enters the storm water system. The separator shall be regularly maintained to ensure efficient pollutant removal.
c. The project shall, where feasible, incorporate porous paving, landscaping, or other design element to reduce surface water runoff in driveways, parking areas, and outdoor use areas consistent with Land Use Element Policy 6.5.7 (or as amended).
d. The project shall comply with the City's *Waterway Management Plan* and any additional recommendations prescribed in the *Hydrologic and Hydraulic Report* (KC Design Group, May 18, 2005).

Monitoring Program: These conditions shall be noted on, and incorporated into, grading and construction plans. The City Community Development Department and Building Inspector shall verify compliance.

HYD-2 Prior to issuance of grading and construction permits, the applicant shall submit a detailed final hydraulic analysis to the Director of Public Works for review and approval. The analysis shall demonstrate how the project will comply with the requirement to have a design capacity for a 100-year storm. The analysis shall include any needed drainage channel erosion control protection to the satisfaction of the Director of Public Works and Natural Resources Manager.

Monitoring Program: The City Public Works Department shall verify receipt and approval of required final analysis.

Noise

N-1 Prior to issuance of construction permits, the applicant shall submit plans including the following:

a. Screened noise barriers shall be installed along the northern and eastern boundaries of proposed outdoor use areas, including the pool and barbeque patio. The barriers shall be constructed to attenuate noise by a minimum of 7 decibels for the pool area, and 5 decibels for the barbeque patio.
b. The design of the hotel shall incorporate the following standards, consistent with the Uniform Building Code, to attenuate transportation-related noise by 30 dB:
    1. Provide air conditioning or a mechanical ventilation system, so windows and doors may remain closed.
    2. Mount windows and sliding glass doors in low air infiltration rate frames (0.5 cfm or less, per ANSI specifications).
    3. Provide solid-core exterior doors with perimeter weather stripping and threshold seals.
    4. Cover exterior walls with stucco or brick veneer.
    5. Keep glass area in windows and doors below 20% of the floor area in a room.
    6. Baffle roof or attic vents facing the noise source.
    7. At exterior walls, attach interior sheetrock to studs by resilient channels, or use staggered studs or double walls.
    8. Provide windows with a laboratory-tested STC rating of 30 or more.

Monitoring Program: These conditions shall be noted on, and incorporated into, construction plans. The City Community Development Department and Building Inspector shall verify compliance.

Transportation and Traffic

TC-1 Prior to issuance of grading and construction permits, the applicant shall contribute its fair share of Los Osos Valley Road interchange sub-area fees and Traffic Impact Fees as determined by the Deputy Director of Public Works. The applicant shall contribute fair share fees, or shall comply with a cost recovery agreement, for the potential future implementation of Los Osos Valley Road/Calle Joaquin intersection improvements, as determined and conditioned by the Deputy Director of Public Works.

Monitoring Program: The City Public Works Department shall verify receipt of fair share fees and cost sharing agreement, as applicable.

TC-2 Prior to issuance of grading and construction permits, the applicant shall submit final road improvement plans demonstrating adequate stopping sight distance studies to the City Public Works Department for review and approval. Issuance of an Encroachment Permit shall be required prior to grading and construction of road improvements.

Monitoring Program: The City Public Works Department shall verify issuance of an Encroachment Permit and receipt of road improvement plans.

Utilities and Service Systems

USS-1 The City's hydraulic model identifies capacity constraints at the existing sewer crossing of US 101 to just upstream of the Laguna Lift Station. The existing sewer crossing is over capacity during current peak wet weather flows and the pipes surcharge. Replacement of the sewer main, including upsizing to accommodate the project, is planned under the City's *2015 Infrastructure Renewal Strategy*. The project will be responsible for contributing its fair share to these off-site improvements to the City's wastewater collection system.

Monitoring Program: In conjunction with Community Development, the City Utilities Department shall verify payment of appropriate impact fees prior to issuance of the construction permit.

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Attachment 1: Location Map

Attachment 2: Land Use Map

August 19, 2015

1:4,514

0 0.0375 0.075 0.15 mi

0 0.05 0.1 0.2 km

Parcels

City Limits

Buildings

GerneralPlanLandUse

Other

Low Density Residential

Medium Density Residential

Public

General Retail

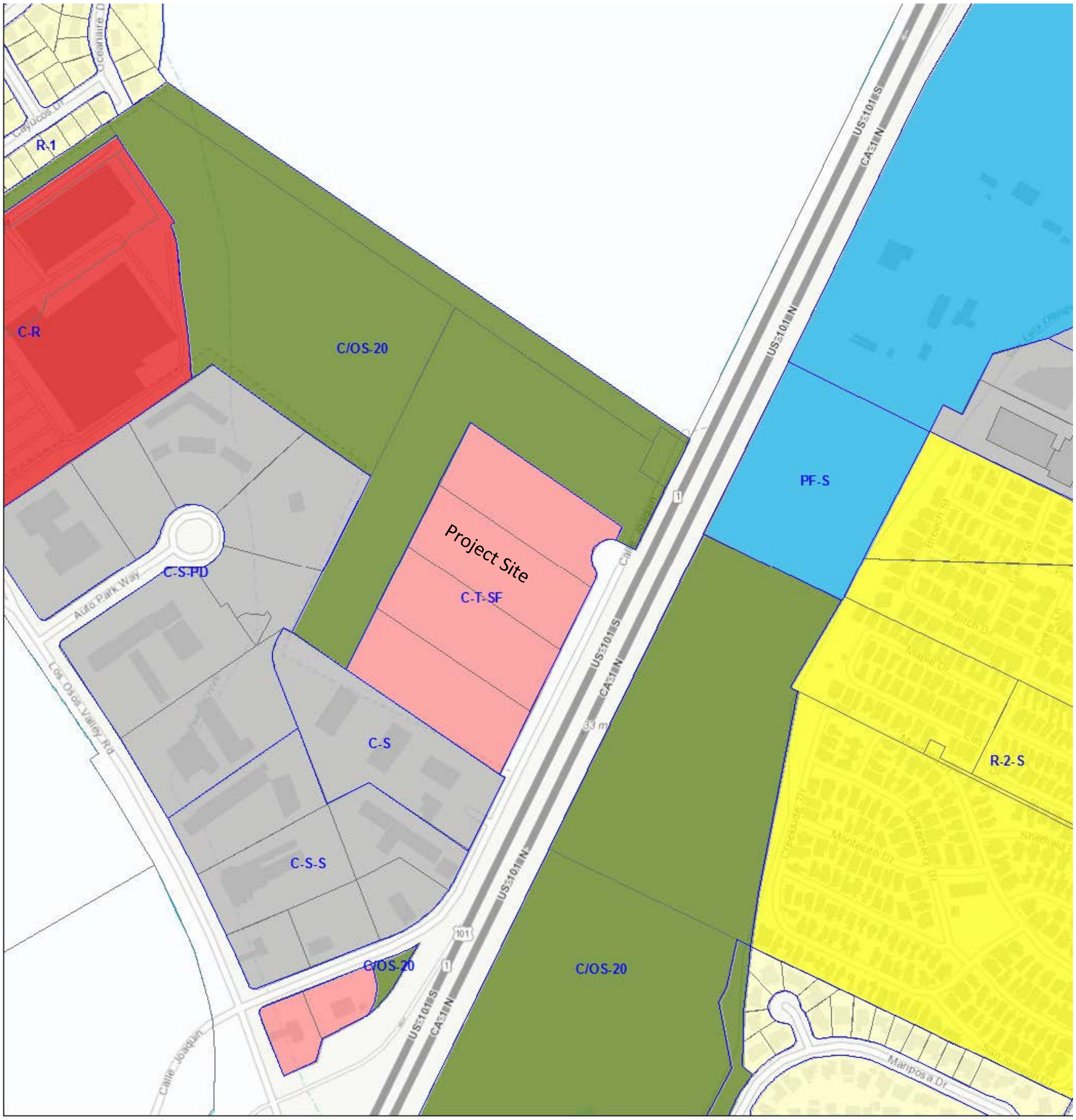
Tourist Commercial

Sevrices & Manufacturing

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

maryandrews

Attachment 3: Zoning Map



August 19, 2015

Zoning Labels

Parcels

zoning

- R-1
- R-2
- PF
- C/OS
- C-S
- C-R
- C-T

City Limits

Buildings

1:4,514

0 0.05 0.1 0.2 mi

0 0.075 0.15 0.3 km

Sources: Esri, HERE, DeLorme, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community

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SITE PLAN LEGEND

- BUILDING
- ASPHALT PAVING
- CONCRETE PAVING
- STAMPED CONCRETE (INTEGRAL COLOR)
- PERMEABLE PAVEMENT (INTEGRAL COLOR)
- PERMEABLE PAVEMENT @ ACCESSIBLE PARKING (INTEGRAL ACCENT COLOR)
- PERMEABLE PAVEMENT @ MAIN ENTRANCE (INTEGRAL ACCENT COLOR)
- SITE ACCESSIBLE ROUTE 3'-0" MINIMUM CLEAR, TYP
- POLE-MOUNTED PARKING LIGHT FIXTURE
- DECORATIVE LIGHT FIXTURE WALL MOUNTED SCONCE
- DECORATIVE LIGHT FIXTURE LIGHT BOLLARD
- FIRE HYDRANT

SITE PLAN KEYNOTES

1. MONUMENT SIGN - UNDER SEPARATE PERMIT - COORDINATE WITH LANDSCAPING
2. NEW ACCESSIBLE CONCRETE RAMP TO COMPLY WITH STATE DISABLED ACCESS STANDARDS - SEE CIVIL FOR ADD'L INFO
3. LINE OF ROOF ABOVE
4. 'INVERTED U-BIKE RACKS' - 4 SHORT TERM BIKE SPACES PROVIDED
5. NEW 42" GUARDRAIL OVER RETAINING WALL - SEE CIVIL FOR ADD'L INFO
6. EXISTING FIRE HYDRANT - SEE CIVIL FOR ADD'L INFO
7. NEW FIRE HYDRANT - SEE CIVIL FOR ADD'L INFO
8. NEW GAS METER - SEE PLUMBING FOR ADD'L INFO
9. NEW PARKING LOT LIGHT POLE (21'-0" A.F.F.)
10. NEW POST/WALL-TOP FIXTURES (MOUNTED 6'-0" A.F.F.)
11. NEW LIGHT BOLLARD (3'-0 A.F.F.)
12. NEW WALL SCONCE (MOUNTED 6'-0" A.F.F.)

EXTERIOR LIGHTING - REFER TO E1 FOR ADDITIONAL INFORMATION

SITE PLAN NOTES

A. FIELD VERIFY ALL INFORMATION PRIOR TO CONSTRUCTION. IF CONDITIONS VARY FROM CONTRACT DOCUMENTS, NOTIFY ARCHITECT IN WRITING IMMEDIATELY

B. FINISH GRADE & HARD SURFACES SHALL SLOPE AWAY FROM BUILDING(S), SEE CIVIL DRAWINGS (TYP.)

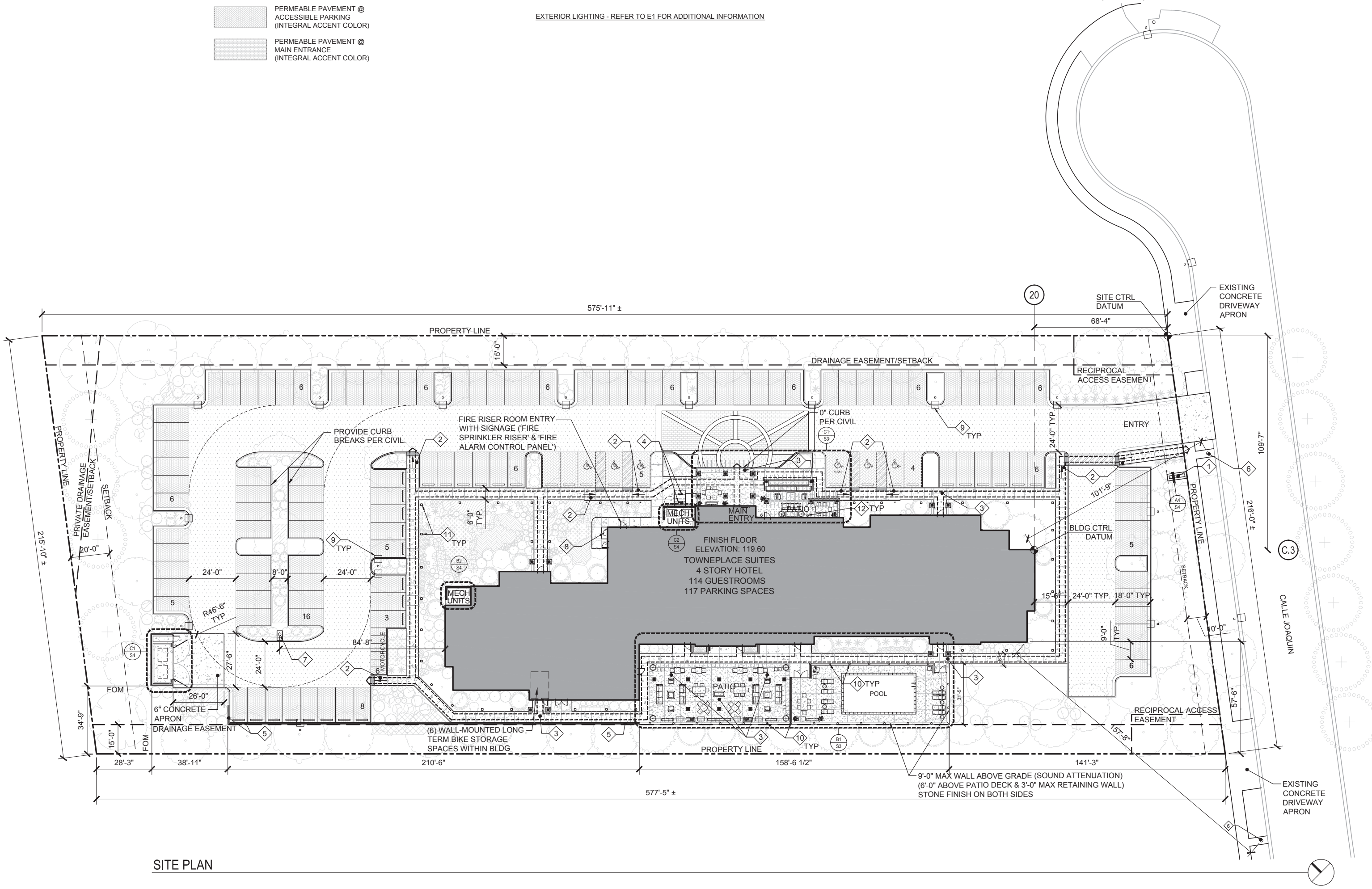
C. REFER TO CIVIL DRAWINGS FOR COORDINATION OF ALL PROPERTY LINES, DIMENSIONS, AND SITE UTILITIES.

D. REFER TO CIVIL DRAWINGS FOR COORDINATION OF SITE ACCESSIBILITY, ADA PARKING, PARKING STALLS, AND CURBS.

E. LANDSCAPE SHOWN FOR DESIGN INTENT ONLY - REFER TO LANDSCAPE DRAWINGS FOR ADDITIONAL INFORMATION.

F. EXTERIOR LIGHT FIXTURES SHOWN FOR DESIGN INTENT ONLY - REFER TO ELECTRICAL DRAWINGS FOR ADDITIONAL INFORMATION.

G. REFER TO COVER SHEET FOR PROJECT DEVELOPMENT SUMMARY (STATISTICS).



SITE PLAN

TownePlace Suites - San Luis Obispo, CA

INTERMOUNTAIN MANAGEMENT
ARCHITECTURAL REVIEW SET
1"=30'-0"
July 24,2015

121050

620 SW 5th Avenue, Suite 500
Portland, Oregon 97204
503.236.6000
www.myhregroup.com

MGA MYHRE GROUP ARCHITECTS

S1

A | NORTH ELEVATION

B | EAST ELEVATION

C | WEST ELEVATION

D | SOUTH ELEVATION

TownePlace Suites - San Luis Obispo, CA

INTERMOUNTAIN MANAGEMENT
ARCHITECTURAL REVIEW SET
3/32" = 1'-0"
July 24th , 2015

121050

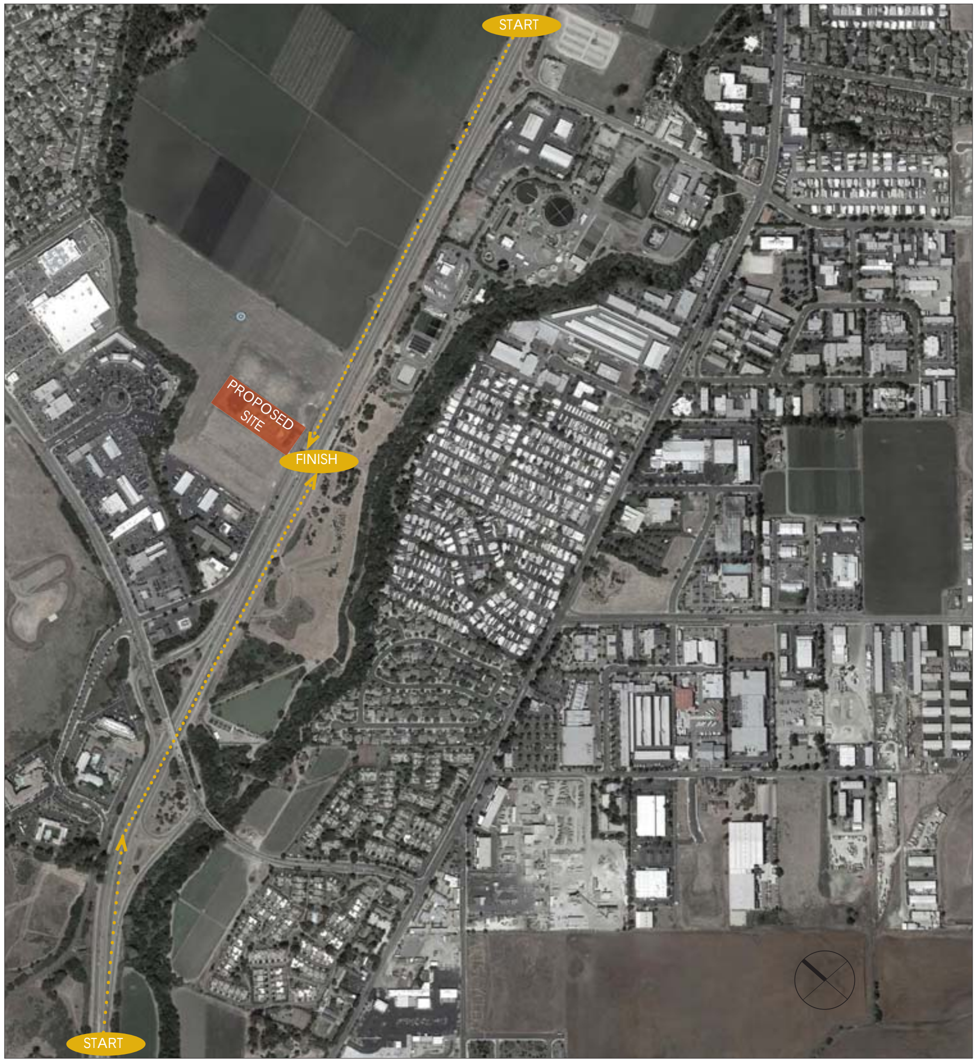
620 SW 5th Avenue, Suite 500
Portland, Oregon 97204
503.236.6000
www.myhregroup.com

MGA MYHRE GROUP ARCHITECTS

A5

NORTHEAST CORNER

SOUTHEAST CORNER



ANIMATION TRAVEL PATH

EXISTING CONDITIONS SITE VIEW LOOKING SOUTH FROM HWY-101

PROPOSED CONDITIONS SITE VIEW LOOKING SOUTH FROM HWY-101

EXISTING CONDITIONS SITE VIEW LOOKING NORTH FROM HWY-101

PROPOSED CONDITIONS SITE VIEW LOOKING NORTH FROM HWY-101

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1 SH SHADOW STUDY - VERNAL EQUINOX @ NOON

2 SH SHADOW STUDY - SUMMER SOLSTICE @ NOON

3 SH SHADOW STUDY - AUTUMNAL EQUINOX @ NOON

4 SH SHADOW STUDY - WINTER SOLSTICE @ NOON
NTS

TownePlace Suites - San Luis Obispo, CA

INTERMOUNTAIN MANAGEMENT
ARCHITECTURAL REVIEW SET

July 24,2015

121050

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MGA MYHRE GROUP ARCHITECTS

SH

CONCEPT PLANT SCHEDULE

TREES	BOTANICAL NAME	HEIGHT*	WUCOLS
	CUPRESSUS ARIZONICA 'GLAUCA'	40	LOW
	CUPRESSUS SEMPERVIRES	60	LOW
	GINKGO BILOBA	35-50	MED
	PINUS CANARIENSIS	50-80	LOW
	PLATANUS x ACERIFOLIA 'BLOODGOOD'	40-80	LOW
	QUERCUS AGRIFOLIA	20-70	LOW
	ULMUS PARVIFOLIA	40-60	LOW

* AVG. HEIGHT ACCORDING TO SUNSET WESTERN GARDEN BOOK, 2001

SHRUBS AND GROUNDCOVER — LOW
ARCTOSTAPHYLOS D. "HOWARD MCMINN" / MANZANITA
BACCHARIS PILULARIS / DWARF COYOTE BRUSH
CALLISTEMON VIMINALIS 'LITTLE JOHN' / DWARF WEEPING BOTTLEBRUSH
DIETES BICOLOR / FORTNIGHT LILY
ELAEAGNUS PUNGENS 'FRUITLANDII' / SILVERBERRY
EURYOPS PECTINATUS / GOLDEN DAISY BUSH
FESTUCA SPECIES / FESCUE
FORSYTHIA X INTERMEDIA / BORDER FORSYTHIA
ILEX VOMITORIA / YAUPON HOLLY
LANTANA CAMARA / LANTANA
LEUCOPHYLLUM FRUTESCENS / TEXAS SAGE
MAHONIA REPENS / CREEPING MAHONIA
MYRTUS COMMUNIS / COMMON MYRTLE
PITTOSPORUM TOBIRA 'VARIEGATA' / VARIEGATED MOCK ORANGE
PLUMBAGO AURICULATA 'MONITE' / WHITE CAPE PLUMBAGO
RHAPHIOLEPIS INDICA "BALLERINA" / INDIAN HAWTHORN
ROSMARINUS OFFICINALIS 'PROSTRATUS' / DWARF ROSEMARY
ROSMARINUS OFFICINALIS 'TUSCAN BLUE' / TUSCAN BLUE ROSEMARY

TURF AREAS — MED
DROUGHT TOLERANT FESCUE BLEND

BIO-INFILTRATION AND VEGATATED SWALES — LOW
DESCHAMPSIA CESPITOSA / TUFTED HAIR GRASS
ELYMUS TRITICOIDES / CREEPING WILD RYE
FESTUCA CALIFORNICA / CALIFORNIA FESCUE
FESTUCA RUBRA / RED FESCUE
MUHLENBERGIA RIGENS / DEER GRASS
ROSA CALIFORNICA / CALIFORNIA WILD ROSE

SHADE TOLERANT SHRUBS — MED
AJUGA REPTANS / CARPET BUGLE
BUXUS MICROPHYLLA / LITTLELEAF BOXWOOD
CAMELLIA JAPONICA / CAMELLIA
LIRIOPE MUSCARI / LILY TURF
MAHONIA AQUIFOLIUM / OREGON GRAPE
NEPHROLEPIS EXALTATA / BOSTON FERN
PODOCARPUS MACROPHYLLUS / YEW PINE
TRACHELOSPERMUM JASMINOIDES / CHINESE STAR JASMINE

LANDSCAPE PLAN
1" = 30'-0"

SITE SECTION
1" = 30'-0"

WATER SAVING MEASURES

The project will utilize the City of San Luis Obispo's reclaimed water line for all landscape irrigation. Landscaping will primarily consist of drought-tolerant trees and shrubs, with moderate water required for a small turf area, a few deciduous trees species, and planting areas in dense shade. Bio-infiltration areas are proposed between the building and parking lot. Bio-infiltration areas will contain drought-tolerant species that can also tolerate periodic flows and standing water. Downspouts will flow into the bio-infiltration areas. Permeable paving will be provided where feasible in the parking areas and entries.

Water saving measures include:

- Utilizing a primarily drought-tolerant and California native plant palette
- Specifying a 3" layer of mulch and soil amendments for all planting areas
- Locating large tree species along the northwest property line to reduce winds
- Minimizing turf areas and using low water use sod
- Implementing hydrozone areas for irrigation
- Installing a high efficiency irrigation system
- Recycled water use for irrigation

METHOD OF IRRIGATION

All of the proposed landscape areas have been designed according to Water Efficient Landscape Standards. The project utilizes plant material that is well suited to the environmental conditions, and the majority of the plants thrive within the same range.

The irrigation system will utilize the following methods:

- Drip and bubbler irrigation will be primarily used to apply water accurately in the plant root zones, at the rate that it can infiltrate to improve irrigation efficiency.
- Low flow sprinkler heads will be used where needed to apply water uniformly and [illegible] spray and evaporation will be minimized and matched precipitation rate nozzles will be used within each control valve and zone.
- A weather based, self adjusting irrigation controller with a rain shut off device will be installed. The irrigation system will be controlled by a time clock with the ability to adjust run times by data collected from rain and ET sensors.
- The watering schedule will be based upon the plant needs, soil type, slope and season. Irrigation will be scheduled to avoid watering during rain and freeze events.
- Plants will be located according to microclimate conditions and watering requirements.

WATER USAGE PROJECTIONS

PER CITY OF SAN LUIS OBISPO STANDARDS

RESOURCES SPECIES EVALUATION LIST	
TOTAL LANDSCAPE AREA	47,215 sf
TURF	1,310 sf
LOW(DROUGHT TOLERANT)	38,377 sf
MODERATE	8,838 sf
HIGH (THIRSTY)	0 sf
SPORTS FIELD	0 sf
VEGETABLES	0 sf

MAXIMUM APPLIED WATER ALLOWANCE (MAWA)	
MAWA GALLONS	1,098,952
MAWA UNITS	1,469

ESTIMATED TOTAL WATER USE (ETWU)	
ETWU GALLONS	543,991
ETWU UNITS	727

CONCEPTUAL LANDSCAPE PLAN

TownePlace Suites - San Luis Obispo, CA

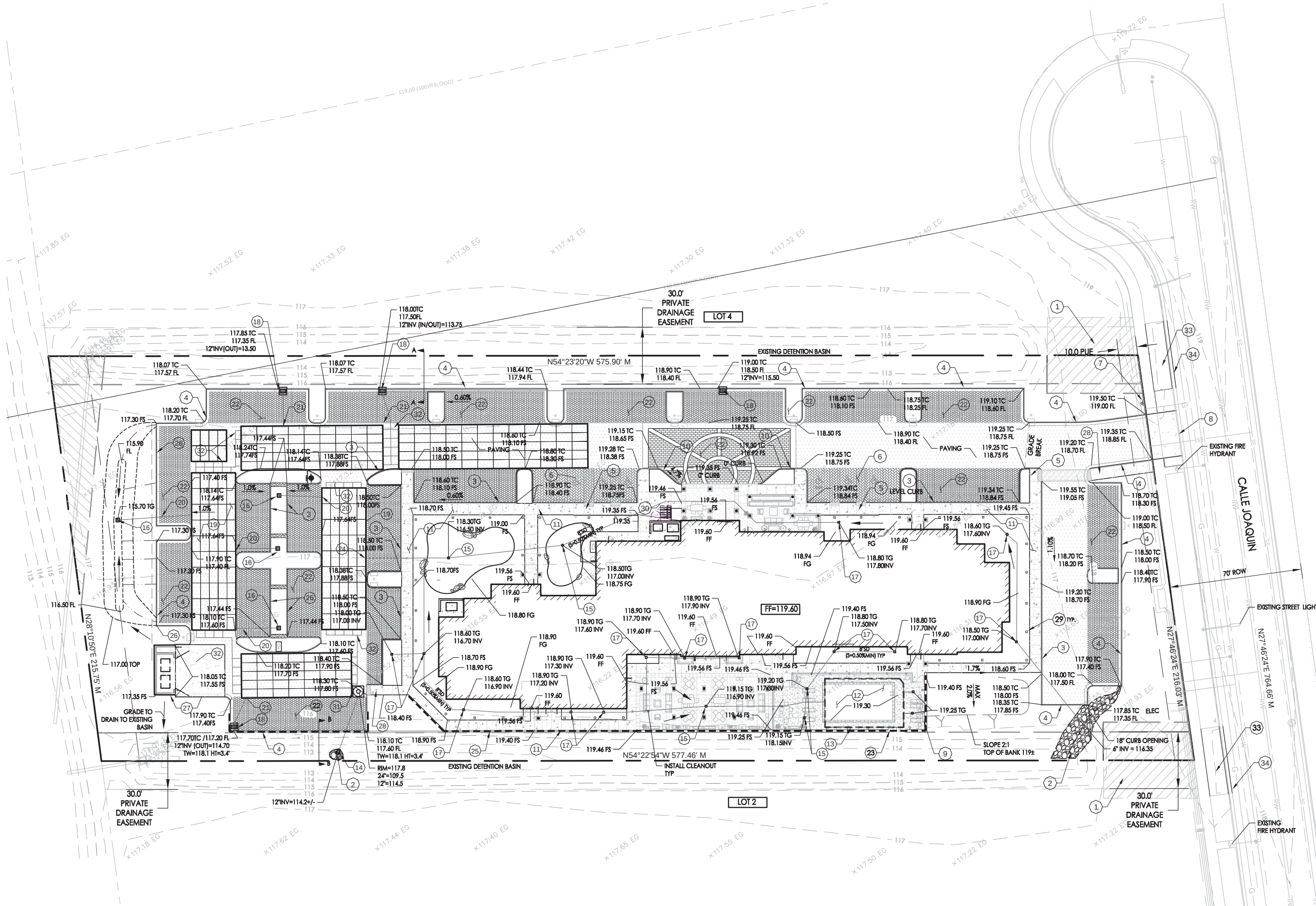
interMountain Management
Architectural Review Set
July 24, 2015

121050

620 SW 5th Avenue, Suite 500
Portland, Oregon 97204
503.236.6000
www.myhregroup.com

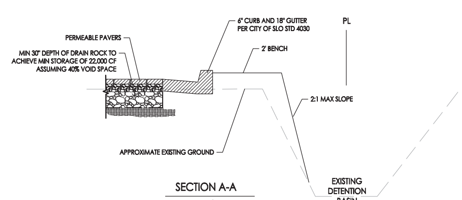
rrm design group

L1



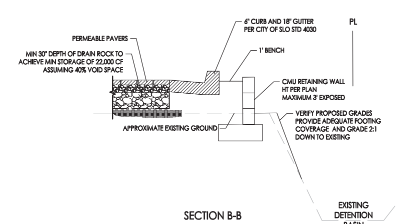
GRADING AND DRAINAGE

1" = 30'-0"



SECTION A-A

N.T.S.



SECTION B-B

N.T.S.

NOTES:
1. PROJECT IS LOCATED WITHIN FEMA FLOODPLAIN ZONE 'A' PER MAP 06079C1068G.
2. EXISTING STREET LIGHTS LOCATED IN FRONT OF THE PROPERTY TO BE ENERGIZED WITH THE DEVELOPMENT OF THE PARCEL.
3. CONTRACTOR TO REPAIR EXISTING PAVING ALONG THE FRONTAGE TO CORRECT THE EXISTING SEPARATION BETWEEN ASPHALT AND THE ADJOINING GUTTER LINE AT THE DIRECTION OF THE INSPECTOR.

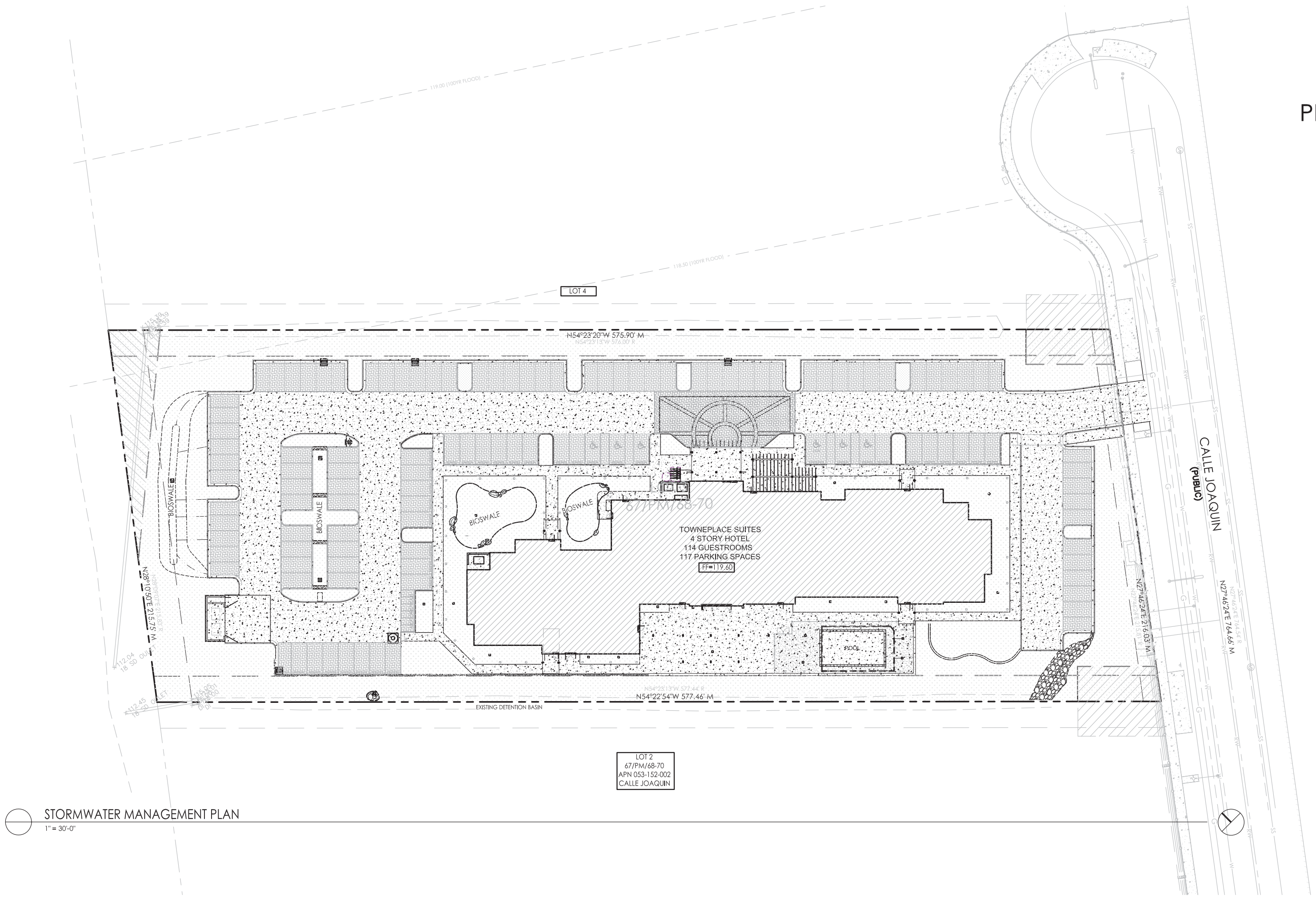
CONSTRUCTION KEY

1. EXISTING 40' RECIPROCAL ACCESS EASEMENT TO BE ABANDONED
2. 30 SF (12" DEEP) OF LIGHT RSP PER SECTION 72 OF CALTRANS PLACEMENT METHOD B AND FABRIC PER SECTION 88 OF CALTRANS STANDARD PLANS.
3. 6" CURB PER CITY OF SLO STD. 4020
4. 6" CURB AND 18" GUTTER PER CITY OF SLO STD. 4030
5. CONSTRUCT CURB RAMP PER CASE C PER CALTRANS RSP A88A
6. SIGNAGE AND STRIPING TO BE INSTALLED PER CALTRANS STANDARD PLAN A90A. ALL SIGNS TO BE INSTALLED PER CITY OF SLO STANDARD 7210.
7. INSTALL SIGN R100B PER CALTRANS STD A90A
8. CONSTRUCT DRIVEWAY PER CITY OF SLO STD 2115 MIN 24' WIDE
9. STEP FOOTING WITH GRADE
10. TRANSITION FROM FULL HEIGHT CURB TO 0" CURB.
11. CONSTRUCT SIDEWALK PER CITY OF SLO STD 4110
12. POOL TO BE DESIGNED BY OTHERS
13. INSTALL MICRO CHANNEL DRAIN MANUFACTURED BY NDS OR APPROVED EQUAL
14. INSTALL 12" HDPE FLARED END SECTION
15. 8" NYLOPLAST IN-LINE DRAIN BY NYLOPLAST OR APPROVED EQUAL
16. 10" NYLOPLAST IN-LINE DRAIN BY NYLOPLAST OR APPROVED EQUAL
17. 8" SPEE D BASIN BY NDS OR APPROVED EQUAL
18. INSTALL CURB INLET C3 MANUFACTURED BY MIDSTATE CONCRETE PRODUCTS OR APPROVED EQUAL
19. INSTALL UNDERGROUND RETENTION SYSTEM (MANUFACTURED BY STORMTECH MC-4500 OR APPROVED EQUAL) CAPABLE OF HOLDING 42,350 CF OF WATER.
20. CONNECT TO UNDERGROUND CHAMBERS WITH 10" HDPE PIPE
21. CONNECT TO UNDERGROUND CHAMBERS WITH 12" HDPE PIPE
22. PERMEABLE PAVERS CAPABLE OF HOLDING A CUMULATIVE VOLUME OF 22,000 CF OF WATER (95TH PERCENTILE VOLUME)
23. CONSTRUCT 4' RETAINING WALL WILL A 8' SCREENING WALL. (SEE ARCH PLANS)
24. CONNECT TO UNDERGROUND CHAMBERS WITH 8" HDPE PIPE
25. CONSTRUCT 4.0 RETAINING WALL
26. CONSTRUCT 2' WIDE CURB CUTS LOCATED AT THE ENDS AND MID POINT OF EACH BAY OF PARKING
27. CONSTRUCT TRASH ENCLOSURE PER CITY OF SLO STD 9110
28. CONSTRUCT CURB RAMP PER CASE F PER CALTRANS RAP A88A
29. INSTALL BOLLARDS (SEE ELECTRICAL PLANS)
30. INSTALL FLAGPOLE (SEE ARCHITECTS PLANS)
31. CONSTRUCT STORM DRAIN MANHOLE PER CITY OF SLO STD 3520
32. CONSTRUCT 18" MIN HDPE STORM DRAIN MANIFOLD AND CONNECT TO CHAMBER END CAP PER MANUFACTURER SPECIFICATIONS
33. SAWCUT AND REMOVE EXISTING DRIVEWAY. CONTRACTOR TO PROTECT EXISTING SIDEWALK
34. CONSTRUCT 6" CURB AND 18" GUTTER PER CITY OF SLO STD 4030. CONTRACTOR TO REPLACE REMOVED PAVING IN KIND

GRADING AND DRAINAGE

620 SW 5th Avenue, Suite 500
Portland, Oregon 97204
503.236.6000
www.myhregroup.com

rrm design group



EXISTING STATISTICS

EXISTING IMPERVIOUS AREA
SITE AREA: 0 SF

EXISTING PERVIOUS AREA
SITE AREA: 123398 SF

PROPOSED STATISTICS

(A) PROPOSED NEW IMPERVIOUS AREA
SITE AREA: 51,481 SF

PERMEABLE PAVER AREA: 21,699 SF

SIDEWALK/PAVING AREA: 33,100 SF

BUILDING AREA: 18,390 SF

(B) TOTAL REPLACED IMPERVIOUS AREA
SITE AREA: 0 SF

(C) PROPOSED LANDSCAPE (BIO SWALES INCLUDED)
SITE AREA: 48,455 SF

(D) TOTAL IMPERVIOUS AREA
SITE AREA: 51,490 SF

(E) NET IMPERVIOUS AREA
SITE AREA: 51,490 SF

RUNOFF MEASURES:
(1) RUNOFF REDUCTION
- PERMEABLE PAVERS
- ROOF DRAIN DISCONNECT
- INFILTRATION
- BIO FILTRATION
- AMEND SOILS

PROJECT IS IN THE SPECIAL FLOODPLAIN MANAGEMENT ZONE. THIS PROJECT DISPLACES AN ESTIMATED 64,350 CU FT OF FLOODPLAIN SURFACE STORAGE. THIS IS MITIGATED BY THE FOLLOWING MEASURES:

A) PERMEABLE PAVER STORAGE VOLUME (MINIMUM) = 22,000 CU FT
B) UNDERGROUND RETENTION CHAMBER STORAGE VOLUME (MINIMUM) = 42,350 CU FT

TOTAL ESTIMATED STORAGE = 64,350 CU FT

THERE IS NO LOSS IN FLOOD PLAIN SURFACE STORAGE. THIS PROJECT COMPLIES WITH THE CITY OF SAN LUIS OBISPO WATER WAY MANAGEMENT PLAN V. III

STORMWATER MANAGEMENT PLAN

TownePlace Suites - San Luis Obispo, CA

interMountain Management
Architectural Review Set
JULY 24, 2015

121050

620 SW 5th Avenue, Suite 500
Portland, Oregon 97204
503.236.6000
www.myhregroup.com

rrm design group

Calle Joaquin Towneplace Suites

San Luis Obispo County APCD Air District, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Hotel	114.00	Room	2.84	69,293.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	3.2	**Precipitation Freq (Days)**	44
Climate Zone	4			**Operational Year**	2016
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Lot acreage = 2.84 acres
Building = 69,293 square feet

Construction Phase -

Grading - Total site to be graded = 2.84 acres

Land Use Change -

Sequestration -

Construction Off-road Equipment Mitigation - Mitigation Identified.

Mobile Land Use Mitigation -

Area Mitigation - Low VOC = 71 g/L
No residential uses.

Energy Mitigation -

Area Coating -

Architectural Coating - No residential use. Require use of 71 g/L VOC.

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Residential_Exterior	250.00	0.00
tblArchitecturalCoating	EF_Residential_Interior	250.00	0.00
tblAreaMitigation	UseLowVOCPaintNonresidentialExteriorValue	250	71
tblAreaMitigation	UseLowVOCPaintNonresidentialInteriorValue	250	71
tblAreaMitigation	UseLowVOCPaintResidentialExteriorValue	250	0
tblAreaMitigation	UseLowVOCPaintResidentialInteriorValue	250	0
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
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tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
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tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
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tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
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tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblGrading	AcresOfGrading	3.00	2.84
tblGrading	AcresOfGrading	4.50	2.84
tblGrading	MaterialExported	0.00	1,575.00
tblGrading	MaterialImported	0.00	6,330.00
tblLandUse	LandUseSquareFeet	165,528.00	69,293.00
tblLandUse	LotAcreage	3.80	2.84
tblProjectCharacteristics	OperationalYear	2014	2016
tblSequestration	NumberOfNewTrees	0.00	100.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	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
Year	lb/day										lb/day					
2016	160.9853	72.5704	58.8131	0.1210	9.1587	2.2137	11.3724	4.0549	2.0364	6.0913	0.0000	12,224.8978	12,224.8978	0.7524	0.0000	12,240.6989
Total	**160.9853**	**72.5704**	**58.8131**	**0.1210**	**9.1587**	**2.2137**	**11.3724**	**4.0549**	**2.0364**	**6.0913**	**0.0000**	**12,224.8978**	**12,224.8978**	**0.7524**	**0.0000**	**12,240.6989**

Mitigated Construction

	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
Year	lb/day										lb/day					
2016	160.6762	52.7513	52.6099	0.1210	5.4371	0.6234	6.0605	2.1843	0.5794	2.7637	0.0000	12,224.8978	12,224.8978	0.7524	0.0000	12,240.6989
Total	**160.6762**	**52.7513**	**52.6099**	**0.1210**	**5.4371**	**0.6234**	**6.0605**	**2.1843**	**0.5794**	**2.7637**	**0.0000**	**12,224.8978**	**12,224.8978**	**0.7524**	**0.0000**	**12,240.6989**

	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**	**N20**	**CO2e**
Percent Reduction	**0.19**	**27.31**	**10.55**	**0.00**	**40.63**	**71.84**	**46.71**	**46.13**	**71.55**	**54.63**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

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	lb/day										lb/day					
Area	1.9240	1.1000e-004	0.0119	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.0250	0.0250	7.0000e-005		0.0264
Energy	0.0950	0.8632	0.7251	5.1800e-003		0.0656	0.0656		0.0656	0.0656		1,035.8773	1,035.8773	0.0199	0.0190	1,042.1815
Mobile	3.9566	7.6578	33.9654	0.0451	3.1933	0.0852	3.2785	0.8539	0.0782	0.9321		3,964.5987	3,964.5987	0.2005		3,968.8083
Total	**5.9755**	**8.5211**	**34.7025**	**0.0502**	**3.1933**	**0.1508**	**3.3442**	**0.8539**	**0.1438**	**0.9978**		**5,000.5010**	**5,000.5010**	**0.2204**	**0.0190**	**5,011.0162**

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	lb/day										lb/day					
Area	1.4981	1.1000e-004	0.0119	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.0250	0.0250	7.0000e-005		0.0264
Energy	0.0950	0.8632	0.7251	5.1800e-003		0.0656	0.0656		0.0656	0.0656		1,035.8773	1,035.8773	0.0199	0.0190	1,042.1815
Mobile	3.9566	7.6578	33.9654	0.0451	3.1933	0.0852	3.2785	0.8539	0.0782	0.9321		3,964.5987	3,964.5987	0.2005		3,968.8083
Total	**5.5496**	**8.5211**	**34.7025**	**0.0502**	**3.1933**	**0.1508**	**3.3442**	**0.8539**	**0.1438**	**0.9978**		**5,000.5010**	**5,000.5010**	**0.2204**	**0.0190**	**5,011.0162**

	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	N20	CO2e
Percent Reduction	7.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/1/2016	1/5/2016	5	3	
2	Grading	Grading	1/6/2016	1/13/2016	5	6	
3	Building Construction	Building Construction	1/14/2016	11/16/2016	5	220	
4	Paving	Paving	11/17/2016	11/30/2016	5	10	
5	Architectural Coating	Architectural Coating	12/1/2016	12/14/2016	5	10	

Acres of Grading (Site Preparation Phase): 2.84

Acres of Grading (Grading Phase): 2.84

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 103,940; Non-Residential Outdoor: 34,647 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Graders	1	8.00	174	0.41
Site Preparation	Scrapers	1	8.00	361	0.48
Site Preparation	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Grading	Graders	1	8.00	174	0.41
Grading	Rubber Tired Dozers	1	8.00	255	0.40
Grading	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Building Construction	Cranes	1	8.00	226	0.29
Building Construction	Forklifts	2	7.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45
Paving	Cement and Mortar Mixers	1	8.00	9	0.56
Paving	Pavers	1	8.00	125	0.42
Paving	Paving Equipment	1	8.00	130	0.36
Paving	Rollers	2	8.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	3	8.00	0.00	0.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	791.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	8	29.00	11.00	0.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	6.00	0.00	0.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use DPF for Construction Equipment

Use Soil Stabilizer

Replace Ground Cover

Water Exposed Area

Clean Paved Roads

3.2 Site Preparation - 2016

Unmitigated Construction On-Site

	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	lb/day										lb/day					
Fugitive Dust					1.0039	0.0000	1.0039	0.1084	0.0000	0.1084			0.0000			0.0000
Off-Road	2.6992	30.8238	18.0600	0.0239		1.5116	1.5116		1.3907	1.3907		2,480.1000	2,480.1000	0.7481		2,495.8099
Total	**2.6992**	**30.8238**	**18.0600**	**0.0239**	**1.0039**	**1.5116**	**2.5156**	**0.1084**	**1.3907**	**1.4991**		**2,480.1000**	**2,480.1000**	**0.7481**		**2,495.8099**

3.2 Site Preparation - 2016

Unmitigated Construction Off-Site

	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	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0388	0.0581	0.5185	8.6000e-004	0.0791	6.2000e-004	0.0797	0.0210	5.6000e-004	0.0215		71.8239	71.8239	4.3500e-003		71.9152
Total	**0.0388**	**0.0581**	**0.5185**	**8.6000e-004**	**0.0791**	**6.2000e-004**	**0.0797**	**0.0210**	**5.6000e-004**	**0.0215**		**71.8239**	**71.8239**	**4.3500e-003**		**71.9152**

Mitigated Construction On-Site

	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	lb/day										lb/day					
Fugitive Dust					0.4518	0.0000	0.4518	0.0488	0.0000	0.0488			0.0000			0.0000
Off-Road	0.5842	11.5269	14.6507	0.0239		0.0774	0.0774		0.0774	0.0774	0.0000	2,480.1000	2,480.1000	0.7481		2,495.8099
Total	**0.5842**	**11.5269**	**14.6507**	**0.0239**	**0.4518**	**0.0774**	**0.5292**	**0.0488**	**0.0774**	**0.1262**	**0.0000**	**2,480.1000**	**2,480.1000**	**0.7481**		**2,495.8099**

3.2 Site Preparation - 2016

Mitigated Construction Off-Site

	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	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0388	0.0581	0.5185	8.6000e-004	0.0791	6.2000e-004	0.0797	0.0210	5.6000e-004	0.0215		71.8239	71.8239	4.3500e-003		71.9152
Total	**0.0388**	**0.0581**	**0.5185**	**8.6000e-004**	**0.0791**	**6.2000e-004**	**0.0797**	**0.0210**	**5.6000e-004**	**0.0215**		**71.8239**	**71.8239**	**4.3500e-003**		**71.9152**

3.3 Grading - 2016

Unmitigated Construction On-Site

	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	lb/day										lb/day					
Fugitive Dust					6.7666	0.0000	6.7666	3.4012	0.0000	3.4012			0.0000			0.0000
Off-Road	2.8530	29.9470	19.6345	0.0206		1.6671	1.6671		1.5337	1.5337		2,139.2742	2,139.2742	0.6453		2,152.8251
Total	**2.8530**	**29.9470**	**19.6345**	**0.0206**	**6.7666**	**1.6671**	**8.4337**	**3.4012**	**1.5337**	**4.9349**		**2,139.2742**	**2,139.2742**	**0.6453**		**2,152.8251**

3.3 Grading - 2016

Unmitigated Construction Off-Site

	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	lb/day										lb/day					
Hauling	3.6150	42.5508	38.5304	0.0994	2.2933	0.5458	2.8391	0.6275	0.5020	1.1295		9,995.843 7	9,995.843 7	0.0714		9,997.343 3
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0485	0.0727	0.6481	1.0800e-003	0.0989	7.8000e-004	0.0996	0.0262	7.0000e-004	0.0269		89.7799	89.7799	5.4300e-003		89.8940
Total	**3.6635**	**42.6234**	**39.1785**	**0.1005**	**2.3922**	**0.5466**	**2.9387**	**0.6538**	**0.5027**	**1.1564**		**10,085.62 36**	**10,085.62 36**	**0.0768**		**10,087.23 73**

Mitigated Construction On-Site

	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	lb/day										lb/day					
Fugitive Dust					3.0450	0.0000	3.0450	1.5305	0.0000	1.5305			0.0000			0.0000
Off-Road	0.4998	10.1279	13.4314	0.0206		0.0768	0.0768		0.0768	0.0768	0.0000	2,139.274 2	2,139.274 2	0.6453		2,152.825 1
Total	**0.4998**	**10.1279**	**13.4314**	**0.0206**	**3.0450**	**0.0768**	**3.1217**	**1.5305**	**0.0768**	**1.6073**	**0.0000**	**2,139.274 2**	**2,139.274 2**	**0.6453**		**2,152.825 1**

3.3 Grading - 2016

Mitigated Construction Off-Site

	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	lb/day										lb/day					
Hauling	3.6150	42.5508	38.5304	0.0994	2.2933	0.5458	2.8391	0.6275	0.5020	1.1295		9,995.8437	9,995.8437	0.0714		9,997.3433
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0485	0.0727	0.6481	1.0800e-003	0.0989	7.8000e-004	0.0996	0.0262	7.0000e-004	0.0269		89.7799	89.7799	5.4300e-003		89.8940
Total	**3.6635**	**42.6234**	**39.1785**	**0.1005**	**2.3922**	**0.5466**	**2.9387**	**0.6538**	**0.5027**	**1.1564**		**10,085.6236**	**10,085.6236**	**0.0768**		**10,087.2373**

3.4 Building Construction - 2016

Unmitigated Construction On-Site

	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	lb/day										lb/day					
Off-Road	3.6984	24.6320	16.7166	0.0249		1.6257	1.6257		1.5569	1.5569		2,352.2239	2,352.2239	0.5420		2,363.6057
Total	**3.6984**	**24.6320**	**16.7166**	**0.0249**		**1.6257**	**1.6257**		**1.5569**	**1.5569**		**2,352.2239**	**2,352.2239**	**0.5420**		**2,363.6057**

3.4 Building Construction - 2016

Unmitigated Construction Off-Site

	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	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1565	0.8963	1.8241	1.8600e-003	0.0501	0.0127	0.0628	0.0143	0.0117	0.0260		185.2176	185.2176	1.6200e-003		185.2516
Worker	0.1408	0.2107	1.8796	3.1200e-003	0.2867	2.2500e-003	0.2890	0.0760	2.0400e-003	0.0781		260.3617	260.3617	0.0158		260.6926
Total	**0.2972**	**1.1069**	**3.7037**	**4.9800e-003**	**0.3368**	**0.0150**	**0.3518**	**0.0903**	**0.0137**	**0.1041**		**445.5793**	**445.5793**	**0.0174**		**445.9442**

Mitigated Construction On-Site

	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	lb/day										lb/day					
Off-Road	0.7108	13.5628	15.3416	0.0249		0.1223	0.1223		0.1223	0.1223	0.0000	2,352.2239	2,352.2239	0.5420		2,363.6057
Total	**0.7108**	**13.5628**	**15.3416**	**0.0249**		**0.1223**	**0.1223**		**0.1223**	**0.1223**	**0.0000**	**2,352.2239**	**2,352.2239**	**0.5420**		**2,363.6057**

3.4 Building Construction - 2016

Mitigated Construction Off-Site

	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	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1565	0.8963	1.8241	1.8600e-003	0.0501	0.0127	0.0628	0.0143	0.0117	0.0260		185.2176	185.2176	1.6200e-003		185.2516
Worker	0.1408	0.2107	1.8796	3.1200e-003	0.2867	2.2500e-003	0.2890	0.0760	2.0400e-003	0.0781		260.3617	260.3617	0.0158		260.6926
Total	**0.2972**	**1.1069**	**3.7037**	**4.9800e-003**	**0.3368**	**0.0150**	**0.3518**	**0.0903**	**0.0137**	**0.1041**		**445.5793**	**445.5793**	**0.0174**		**445.9442**

3.5 Paving - 2016

Unmitigated Construction On-Site

	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	lb/day										lb/day					
Off-Road	1.7811	17.9300	12.1433	0.0176		1.1252	1.1252		1.0363	1.0363		1,804.8600	1,804.8600	0.5344		1,816.0828
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.7811**	**17.9300**	**12.1433**	**0.0176**		**1.1252**	**1.1252**		**1.0363**	**1.0363**		**1,804.8600**	**1,804.8600**	**0.5344**		**1,816.0828**

3.5 Paving - 2016

Unmitigated Construction Off-Site

	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	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0728	0.1090	0.9722	1.6200e-003	0.1483	1.1600e-003	0.1495	0.0393	1.0500e-003	0.0404		134.6699	134.6699	8.1500e-003		134.8410
Total	**0.0728**	**0.1090**	**0.9722**	**1.6200e-003**	**0.1483**	**1.1600e-003**	**0.1495**	**0.0393**	**1.0500e-003**	**0.0404**		**134.6699**	**134.6699**	**8.1500e-003**		**134.8410**

Mitigated Construction On-Site

	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	lb/day										lb/day					
Off-Road	0.4148	8.7357	12.7897	0.0176		0.0785	0.0785		0.0785	0.0785	0.0000	1,804.8600	1,804.8600	0.5344		1,816.0828
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.4148**	**8.7357**	**12.7897**	**0.0176**		**0.0785**	**0.0785**		**0.0785**	**0.0785**	**0.0000**	**1,804.8600**	**1,804.8600**	**0.5344**		**1,816.0828**

3.5 Paving - 2016

Mitigated Construction Off-Site

	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	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0728	0.1090	0.9722	1.6200e-003	0.1483	1.1600e-003	0.1495	0.0393	1.0500e-003	0.0404		134.6699	134.6699	8.1500e-003		134.8410
Total	**0.0728**	**0.1090**	**0.9722**	**1.6200e-003**	**0.1483**	**1.1600e-003**	**0.1495**	**0.0393**	**1.0500e-003**	**0.0404**		**134.6699**	**134.6699**	**8.1500e-003**		**134.8410**

3.6 Architectural Coating - 2016

Unmitigated Construction On-Site

	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	lb/day										lb/day					
Archit. Coating	160.5877					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3685	2.3722	1.8839	2.9700e-003		0.1966	0.1966		0.1966	0.1966		281.4481	281.4481	0.0332		282.1449
Total	**160.9562**	**2.3722**	**1.8839**	**2.9700e-003**		**0.1966**	**0.1966**		**0.1966**	**0.1966**		**281.4481**	**281.4481**	**0.0332**		**282.1449**

3.6 Architectural Coating - 2016

Unmitigated Construction Off-Site

	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	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0291	0.0436	0.3889	6.5000e-004	0.0593	4.7000e-004	0.0598	0.0157	4.2000e-004	0.0162		53.8679	53.8679	3.2600e-003		53.9364
Total	**0.0291**	**0.0436**	**0.3889**	**6.5000e-004**	**0.0593**	**4.7000e-004**	**0.0598**	**0.0157**	**4.2000e-004**	**0.0162**		**53.8679**	**53.8679**	**3.2600e-003**		**53.9364**

Mitigated Construction On-Site

	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	lb/day										lb/day					
Archit. Coating	160.5877					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0594	1.3570	1.8324	2.9700e-003		0.0143	0.0143		0.0143	0.0143	0.0000	281.4481	281.4481	0.0332		282.1449
Total	**160.6471**	**1.3570**	**1.8324**	**2.9700e-003**		**0.0143**	**0.0143**		**0.0143**	**0.0143**	**0.0000**	**281.4481**	**281.4481**	**0.0332**		**282.1449**

3.6 Architectural Coating - 2016

Mitigated Construction Off-Site

	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	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0291	0.0436	0.3889	6.5000e-004	0.0593	4.7000e-004	0.0598	0.0157	4.2000e-004	0.0162		53.8679	53.8679	3.2600e-003		53.9364
Total	**0.0291**	**0.0436**	**0.3889**	**6.5000e-004**	**0.0593**	**4.7000e-004**	**0.0598**	**0.0157**	**4.2000e-004**	**0.0162**		**53.8679**	**53.8679**	**3.2600e-003**		**53.9364**

4.0 Operational Detail - Mobile

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	lb/day										lb/day					
Mitigated	3.9566	7.6578	33.9654	0.0451	3.1933	0.0852	3.2785	0.8539	0.0782	0.9321		3,964.5987	3,964.5987	0.2005		3,968.8083
Unmitigated	3.9566	7.6578	33.9654	0.0451	3.1933	0.0852	3.2785	0.8539	0.0782	0.9321		3,964.5987	3,964.5987	0.2005		3,968.8083

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Hotel	931.38	933.66	678.30	1,442,986	1,442,986
Total	931.38	933.66	678.30	1,442,986	1,442,986

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
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	Primary	Diverted	Pass-by
Hotel	13.00	5.00	5.00	19.40	61.60	19.00	58	38	4

4.4 Fleet Mix

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.455937	0.042338	0.214948	0.150714	0.068093	0.009944	0.017510	0.022507	0.002330	0.001401	0.008743	0.000855	0.004680

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Install High Efficiency Lighting

	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	lb/day										lb/day					
NaturalGas Mitigated	0.0950	0.8632	0.7251	5.1800e-003		0.0656	0.0656		0.0656	0.0656		1,035.8773	1,035.8773	0.0199	0.0190	1,042.1815
NaturalGas Unmitigated	0.0950	0.8632	0.7251	5.1800e-003		0.0656	0.0656		0.0656	0.0656		1,035.8773	1,035.8773	0.0199	0.0190	1,042.1815

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/yr	lb/day										lb/day					
Hotel	8804.96	0.0950	0.8632	0.7251	5.1800e-003		0.0656	0.0656		0.0656	0.0656		1,035.8773	1,035.8773	0.0199	0.0190	1,042.1815
Total		**0.0950**	**0.8632**	**0.7251**	**5.1800e-003**		**0.0656**	**0.0656**		**0.0656**	**0.0656**		**1,035.8773**	**1,035.8773**	**0.0199**	**0.0190**	**1,042.1815**

5.2 Energy by Land Use - NaturalGas

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/yr	lb/day										lb/day					
Hotel	8.80496	0.0950	0.8632	0.7251	5.1800e-003		0.0656	0.0656		0.0656	0.0656		1,035.8773	1,035.8773	0.0199	0.0190	1,042.1815
Total		**0.0950**	**0.8632**	**0.7251**	**5.1800e-003**		**0.0656**	**0.0656**		**0.0656**	**0.0656**		**1,035.8773**	**1,035.8773**	**0.0199**	**0.0190**	**1,042.1815**

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

Use only Natural Gas Hearths

Use Low VOC Cleaning Supplies

	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	lb/day										lb/day					
Mitigated	1.4981	1.1000e-004	0.0119	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.0250	0.0250	7.0000e-005		0.0264
Unmitigated	1.9240	1.1000e-004	0.0119	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.0250	0.0250	7.0000e-005		0.0264

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	lb/day										lb/day					
Architectural Coating	0.4400					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.4829					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.1600e-003	1.1000e-004	0.0119	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.0250	0.0250	7.0000e-005		0.0264
Total	**1.9240**	**1.1000e-004**	**0.0119**	**0.0000**		**4.0000e-005**	**4.0000e-005**		**4.0000e-005**	**4.0000e-005**		**0.0250**	**0.0250**	**7.0000e-005**		**0.0264**

6.2 Area by SubCategory

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	lb/day										lb/day					
Architectural Coating	0.1250					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.3720					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.1600e-003	1.1000e-004	0.0119	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.0250	0.0250	7.0000e-005		0.0264
Total	**1.4981**	**1.1000e-004**	**0.0119**	**0.0000**		**4.0000e-005**	**4.0000e-005**		**4.0000e-005**	**4.0000e-005**		**0.0250**	**0.0250**	**7.0000e-005**		**0.0264**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Vegetation

Calle Joaquin Towneplace Suites

San Luis Obispo County APCD Air District, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Hotel	114.00	Room	2.84	69,293.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	3.2	**Precipitation Freq (Days)**	44
Climate Zone	4			**Operational Year**	2016
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Lot acreage = 2.84 acres
Building = 69,293 square feet

Construction Phase -

Grading - Total site to be graded = 2.84 acres

Land Use Change -

Sequestration -

Construction Off-road Equipment Mitigation - Mitigation Identified.

Mobile Land Use Mitigation -

Area Mitigation - Low VOC = 71 g/L
No residential uses.

Energy Mitigation -

Area Coating -

Architectural Coating - No residential use. Require use of 71 g/L VOC.

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	250.00	71.00
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	71.00
tblArchitecturalCoating	EF_Residential_Exterior	250.00	0.00
tblArchitecturalCoating	EF_Residential_Interior	250.00	0.00
tblAreaMitigation	UseLowVOCPaintNonresidentialExteriorValue	250	71
tblAreaMitigation	UseLowVOCPaintNonresidentialInteriorValue	250	71
tblAreaMitigation	UseLowVOCPaintResidentialExteriorValue	250	0
tblAreaMitigation	UseLowVOCPaintResidentialInteriorValue	250	0
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3

tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3

tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblGrading	AcresOfGrading	3.00	2.84
tblGrading	AcresOfGrading	4.50	2.84
tblGrading	MaterialExported	0.00	1,575.00
tblGrading	MaterialImported	0.00	6,330.00
tblLandUse	LandUseSquareFeet	165,528.00	69,293.00
tblLandUse	LotAcreage	3.80	2.84
tblProjectCharacteristics	OperationalYear	2014	2016
tblSequestration	NumberOfNewTrees	0.00	100.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	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
Year	lb/day										lb/day					
2016	46.0045	72.5704	58.8131	0.1210	9.1587	2.2137	11.3724	4.0549	2.0364	6.0913	0.0000	12,224.8978	12,224.8978	0.7524	0.0000	12,240.6989
Total	**46.0045**	**72.5704**	**58.8131**	**0.1210**	**9.1587**	**2.2137**	**11.3724**	**4.0549**	**2.0364**	**6.0913**	**0.0000**	**12,224.8978**	**12,224.8978**	**0.7524**	**0.0000**	**12,240.6989**

Mitigated Construction

	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
Year	lb/day										lb/day					
2016	45.6955	52.7513	52.6099	0.1210	5.4371	0.6234	6.0605	2.1843	0.5794	2.7637	0.0000	12,224.8978	12,224.8978	0.7524	0.0000	12,240.6989
Total	**45.6955**	**52.7513**	**52.6099**	**0.1210**	**5.4371**	**0.6234**	**6.0605**	**2.1843**	**0.5794**	**2.7637**	**0.0000**	**12,224.8978**	**12,224.8978**	**0.7524**	**0.0000**	**12,240.6989**

	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**	**N20**	**CO2e**
Percent Reduction	**0.67**	**27.31**	**10.55**	**0.00**	**40.63**	**71.84**	**46.71**	**46.13**	**71.55**	**54.63**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

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	lb/day										lb/day					
Area	1.9240	1.1000e-004	0.0119	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.0250	0.0250	7.0000e-005		0.0264
Energy	0.0950	0.8632	0.7251	5.1800e-003		0.0656	0.0656		0.0656	0.0656		1,035.8773	1,035.8773	0.0199	0.0190	1,042.1815
Mobile	3.9566	7.6578	33.9654	0.0451	3.1933	0.0852	3.2785	0.8539	0.0782	0.9321		3,964.5987	3,964.5987	0.2005		3,968.8083
Total	**5.9755**	**8.5211**	**34.7025**	**0.0502**	**3.1933**	**0.1508**	**3.3442**	**0.8539**	**0.1438**	**0.9978**		**5,000.5010**	**5,000.5010**	**0.2204**	**0.0190**	**5,011.0162**

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	lb/day										lb/day					
Area	1.4981	1.1000e-004	0.0119	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.0250	0.0250	7.0000e-005		0.0264
Energy	0.0950	0.8632	0.7251	5.1800e-003		0.0656	0.0656		0.0656	0.0656		1,035.8773	1,035.8773	0.0199	0.0190	1,042.1815
Mobile	3.9566	7.6578	33.9654	0.0451	3.1933	0.0852	3.2785	0.8539	0.0782	0.9321		3,964.5987	3,964.5987	0.2005		3,968.8083
Total	**5.5496**	**8.5211**	**34.7025**	**0.0502**	**3.1933**	**0.1508**	**3.3442**	**0.8539**	**0.1438**	**0.9978**		**5,000.5010**	**5,000.5010**	**0.2204**	**0.0190**	**5,011.0162**

	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	N20	CO2e
Percent Reduction	7.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/1/2016	1/5/2016	5	3	
2	Grading	Grading	1/6/2016	1/13/2016	5	6	
3	Building Construction	Building Construction	1/14/2016	11/16/2016	5	220	
4	Paving	Paving	11/17/2016	11/30/2016	5	10	
5	Architectural Coating	Architectural Coating	12/1/2016	12/14/2016	5	10	

Acres of Grading (Site Preparation Phase): 2.84

Acres of Grading (Grading Phase): 2.84

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 103,940; Non-Residential Outdoor: 34,647 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Graders	1	8.00	174	0.41
Site Preparation	Scrapers	1	8.00	361	0.48
Site Preparation	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Grading	Graders	1	8.00	174	0.41
Grading	Rubber Tired Dozers	1	8.00	255	0.40
Grading	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Building Construction	Cranes	1	8.00	226	0.29
Building Construction	Forklifts	2	7.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45
Paving	Cement and Mortar Mixers	1	8.00	9	0.56
Paving	Pavers	1	8.00	125	0.42
Paving	Paving Equipment	1	8.00	130	0.36
Paving	Rollers	2	8.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	3	8.00	0.00	0.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	791.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	8	29.00	11.00	0.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	6.00	0.00	0.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use DPF for Construction Equipment

Use Soil Stabilizer

Replace Ground Cover

Water Exposed Area

Clean Paved Roads

3.2 Site Preparation - 2016

Unmitigated Construction On-Site

	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	lb/day										lb/day					
Fugitive Dust					1.0039	0.0000	1.0039	0.1084	0.0000	0.1084			0.0000			0.0000
Off-Road	2.6992	30.8238	18.0600	0.0239		1.5116	1.5116		1.3907	1.3907		2,480.100 0	2,480.100 0	0.7481		2,495.809 9
Total	**2.6992**	**30.8238**	**18.0600**	**0.0239**	**1.0039**	**1.5116**	**2.5156**	**0.1084**	**1.3907**	**1.4991**		**2,480.100 0**	**2,480.100 0**	**0.7481**		**2,495.809 9**

3.2 Site Preparation - 2016

Unmitigated Construction Off-Site

	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	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0388	0.0581	0.5185	8.6000e-004	0.0791	6.2000e-004	0.0797	0.0210	5.6000e-004	0.0215		71.8239	71.8239	4.3500e-003		71.9152
Total	**0.0388**	**0.0581**	**0.5185**	**8.6000e-004**	**0.0791**	**6.2000e-004**	**0.0797**	**0.0210**	**5.6000e-004**	**0.0215**		**71.8239**	**71.8239**	**4.3500e-003**		**71.9152**

Mitigated Construction On-Site

	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	lb/day										lb/day					
Fugitive Dust					0.4518	0.0000	0.4518	0.0488	0.0000	0.0488			0.0000			0.0000
Off-Road	0.5842	11.5269	14.6507	0.0239		0.0774	0.0774		0.0774	0.0774	0.0000	2,480.1000	2,480.1000	0.7481		2,495.8099
Total	**0.5842**	**11.5269**	**14.6507**	**0.0239**	**0.4518**	**0.0774**	**0.5292**	**0.0488**	**0.0774**	**0.1262**	**0.0000**	**2,480.1000**	**2,480.1000**	**0.7481**		**2,495.8099**

3.2 Site Preparation - 2016

Mitigated Construction Off-Site

	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	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0388	0.0581	0.5185	8.6000e-004	0.0791	6.2000e-004	0.0797	0.0210	5.6000e-004	0.0215		71.8239	71.8239	4.3500e-003		71.9152
Total	**0.0388**	**0.0581**	**0.5185**	**8.6000e-004**	**0.0791**	**6.2000e-004**	**0.0797**	**0.0210**	**5.6000e-004**	**0.0215**		**71.8239**	**71.8239**	**4.3500e-003**		**71.9152**

3.3 Grading - 2016

Unmitigated Construction On-Site

	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	lb/day										lb/day					
Fugitive Dust					6.7666	0.0000	6.7666	3.4012	0.0000	3.4012			0.0000			0.0000
Off-Road	2.8530	29.9470	19.6345	0.0206		1.6671	1.6671		1.5337	1.5337		2,139.2742	2,139.2742	0.6453		2,152.8251
Total	**2.8530**	**29.9470**	**19.6345**	**0.0206**	**6.7666**	**1.6671**	**8.4337**	**3.4012**	**1.5337**	**4.9349**		**2,139.2742**	**2,139.2742**	**0.6453**		**2,152.8251**

3.3 Grading - 2016

Unmitigated Construction Off-Site

	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	lb/day										lb/day					
Hauling	3.6150	42.5508	38.5304	0.0994	2.2933	0.5458	2.8391	0.6275	0.5020	1.1295		9,995.8437	9,995.8437	0.0714		9,997.3433
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0485	0.0727	0.6481	1.0800e-003	0.0989	7.8000e-004	0.0996	0.0262	7.0000e-004	0.0269		89.7799	89.7799	5.4300e-003		89.8940
Total	**3.6635**	**42.6234**	**39.1785**	**0.1005**	**2.3922**	**0.5466**	**2.9387**	**0.6538**	**0.5027**	**1.1564**		**10,085.6236**	**10,085.6236**	**0.0768**		**10,087.2373**

Mitigated Construction On-Site

	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	lb/day										lb/day					
Fugitive Dust					3.0450	0.0000	3.0450	1.5305	0.0000	1.5305			0.0000			0.0000
Off-Road	0.4998	10.1279	13.4314	0.0206		0.0768	0.0768		0.0768	0.0768	0.0000	2,139.2742	2,139.2742	0.6453		2,152.8251
Total	**0.4998**	**10.1279**	**13.4314**	**0.0206**	**3.0450**	**0.0768**	**3.1217**	**1.5305**	**0.0768**	**1.6073**	**0.0000**	**2,139.2742**	**2,139.2742**	**0.6453**		**2,152.8251**

3.3 Grading - 2016

Mitigated Construction Off-Site

	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	lb/day										lb/day					
Hauling	3.6150	42.5508	38.5304	0.0994	2.2933	0.5458	2.8391	0.6275	0.5020	1.1295		9,995.843 7	9,995.843 7	0.0714		9,997.343 3
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0485	0.0727	0.6481	1.0800e-003	0.0989	7.8000e-004	0.0996	0.0262	7.0000e-004	0.0269		89.7799	89.7799	5.4300e-003		89.8940
Total	**3.6635**	**42.6234**	**39.1785**	**0.1005**	**2.3922**	**0.5466**	**2.9387**	**0.6538**	**0.5027**	**1.1564**		**10,085.62 36**	**10,085.62 36**	**0.0768**		**10,087.23 73**

3.4 Building Construction - 2016

Unmitigated Construction On-Site

	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	lb/day										lb/day					
Off-Road	3.6984	24.6320	16.7166	0.0249		1.6257	1.6257		1.5569	1.5569		2,352.223 9	2,352.223 9	0.5420		2,363.605 7
Total	**3.6984**	**24.6320**	**16.7166**	**0.0249**		**1.6257**	**1.6257**		**1.5569**	**1.5569**		**2,352.223 9**	**2,352.223 9**	**0.5420**		**2,363.605 7**

3.4 Building Construction - 2016

Unmitigated Construction Off-Site

	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	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1565	0.8963	1.8241	1.8600e-003	0.0501	0.0127	0.0628	0.0143	0.0117	0.0260		185.2176	185.2176	1.6200e-003		185.2516
Worker	0.1408	0.2107	1.8796	3.1200e-003	0.2867	2.2500e-003	0.2890	0.0760	2.0400e-003	0.0781		260.3617	260.3617	0.0158		260.6926
Total	**0.2972**	**1.1069**	**3.7037**	**4.9800e-003**	**0.3368**	**0.0150**	**0.3518**	**0.0903**	**0.0137**	**0.1041**		**445.5793**	**445.5793**	**0.0174**		**445.9442**

Mitigated Construction On-Site

	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	lb/day										lb/day					
Off-Road	0.7108	13.5628	15.3416	0.0249		0.1223	0.1223		0.1223	0.1223	0.0000	2,352.2239	2,352.2239	0.5420		2,363.6057
Total	**0.7108**	**13.5628**	**15.3416**	**0.0249**		**0.1223**	**0.1223**		**0.1223**	**0.1223**	**0.0000**	**2,352.2239**	**2,352.2239**	**0.5420**		**2,363.6057**

3.4 Building Construction - 2016

Mitigated Construction Off-Site

	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	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1565	0.8963	1.8241	1.8600e-003	0.0501	0.0127	0.0628	0.0143	0.0117	0.0260		185.2176	185.2176	1.6200e-003		185.2516
Worker	0.1408	0.2107	1.8796	3.1200e-003	0.2867	2.2500e-003	0.2890	0.0760	2.0400e-003	0.0781		260.3617	260.3617	0.0158		260.6926
Total	**0.2972**	**1.1069**	**3.7037**	**4.9800e-003**	**0.3368**	**0.0150**	**0.3518**	**0.0903**	**0.0137**	**0.1041**		**445.5793**	**445.5793**	**0.0174**		**445.9442**

3.5 Paving - 2016

Unmitigated Construction On-Site

	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	lb/day										lb/day					
Off-Road	1.7811	17.9300	12.1433	0.0176		1.1252	1.1252		1.0363	1.0363		1,804.8600	1,804.8600	0.5344		1,816.0828
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.7811**	**17.9300**	**12.1433**	**0.0176**		**1.1252**	**1.1252**		**1.0363**	**1.0363**		**1,804.8600**	**1,804.8600**	**0.5344**		**1,816.0828**

3.5 Paving - 2016

Unmitigated Construction Off-Site

	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	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0728	0.1090	0.9722	1.6200e-003	0.1483	1.1600e-003	0.1495	0.0393	1.0500e-003	0.0404		134.6699	134.6699	8.1500e-003		134.8410
Total	**0.0728**	**0.1090**	**0.9722**	**1.6200e-003**	**0.1483**	**1.1600e-003**	**0.1495**	**0.0393**	**1.0500e-003**	**0.0404**		**134.6699**	**134.6699**	**8.1500e-003**		**134.8410**

Mitigated Construction On-Site

	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	lb/day										lb/day					
Off-Road	0.4148	8.7357	12.7897	0.0176		0.0785	0.0785		0.0785	0.0785	0.0000	1,804.8600	1,804.8600	0.5344		1,816.0828
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.4148**	**8.7357**	**12.7897**	**0.0176**		**0.0785**	**0.0785**		**0.0785**	**0.0785**	**0.0000**	**1,804.8600**	**1,804.8600**	**0.5344**		**1,816.0828**

3.5 Paving - 2016

Mitigated Construction Off-Site

	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	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0728	0.1090	0.9722	1.6200e-003	0.1483	1.1600e-003	0.1495	0.0393	1.0500e-003	0.0404		134.6699	134.6699	8.1500e-003		134.8410
Total	**0.0728**	**0.1090**	**0.9722**	**1.6200e-003**	**0.1483**	**1.1600e-003**	**0.1495**	**0.0393**	**1.0500e-003**	**0.0404**		**134.6699**	**134.6699**	**8.1500e-003**		**134.8410**

3.6 Architectural Coating - 2016

Unmitigated Construction On-Site

	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	lb/day										lb/day					
Archit. Coating	45.6069					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3685	2.3722	1.8839	2.9700e-003		0.1966	0.1966		0.1966	0.1966		281.4481	281.4481	0.0332		282.1449
Total	**45.9754**	**2.3722**	**1.8839**	**2.9700e-003**		**0.1966**	**0.1966**		**0.1966**	**0.1966**		**281.4481**	**281.4481**	**0.0332**		**282.1449**

3.6 Architectural Coating - 2016

Unmitigated Construction Off-Site

	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	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0291	0.0436	0.3889	6.5000e-004	0.0593	4.7000e-004	0.0598	0.0157	4.2000e-004	0.0162		53.8679	53.8679	3.2600e-003		53.9364
Total	**0.0291**	**0.0436**	**0.3889**	**6.5000e-004**	**0.0593**	**4.7000e-004**	**0.0598**	**0.0157**	**4.2000e-004**	**0.0162**		**53.8679**	**53.8679**	**3.2600e-003**		**53.9364**

Mitigated Construction On-Site

	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	lb/day										lb/day					
Archit. Coating	45.6069					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0594	1.3570	1.8324	2.9700e-003		0.0143	0.0143		0.0143	0.0143	0.0000	281.4481	281.4481	0.0332		282.1449
Total	**45.6663**	**1.3570**	**1.8324**	**2.9700e-003**		**0.0143**	**0.0143**		**0.0143**	**0.0143**	**0.0000**	**281.4481**	**281.4481**	**0.0332**		**282.1449**

3.6 Architectural Coating - 2016

Mitigated Construction Off-Site

	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	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0291	0.0436	0.3889	6.5000e-004	0.0593	4.7000e-004	0.0598	0.0157	4.2000e-004	0.0162		53.8679	53.8679	3.2600e-003		53.9364
Total	**0.0291**	**0.0436**	**0.3889**	**6.5000e-004**	**0.0593**	**4.7000e-004**	**0.0598**	**0.0157**	**4.2000e-004**	**0.0162**		**53.8679**	**53.8679**	**3.2600e-003**		**53.9364**

4.0 Operational Detail - Mobile

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	lb/day										lb/day					
Mitigated	3.9566	7.6578	33.9654	0.0451	3.1933	0.0852	3.2785	0.8539	0.0782	0.9321		3,964.5987	3,964.5987	0.2005		3,968.8083
Unmitigated	3.9566	7.6578	33.9654	0.0451	3.1933	0.0852	3.2785	0.8539	0.0782	0.9321		3,964.5987	3,964.5987	0.2005		3,968.8083

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Hotel	931.38	933.66	678.30	1,442,986	1,442,986
Total	931.38	933.66	678.30	1,442,986	1,442,986

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
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	Primary	Diverted	Pass-by
Hotel	13.00	5.00	5.00	19.40	61.60	19.00	58	38	4

4.4 Fleet Mix

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.455937	0.042338	0.214948	0.150714	0.068093	0.009944	0.017510	0.022507	0.002330	0.001401	0.008743	0.000855	0.004680

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Install High Efficiency Lighting

	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	lb/day										lb/day					
NaturalGas Mitigated	0.0950	0.8632	0.7251	5.1800e-003		0.0656	0.0656		0.0656	0.0656		1,035.8773	1,035.8773	0.0199	0.0190	1,042.1815
NaturalGas Unmitigated	0.0950	0.8632	0.7251	5.1800e-003		0.0656	0.0656		0.0656	0.0656		1,035.8773	1,035.8773	0.0199	0.0190	1,042.1815

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/yr	lb/day										lb/day					
Hotel	8804.96	0.0950	0.8632	0.7251	5.1800e-003		0.0656	0.0656		0.0656	0.0656		1,035.8773	1,035.8773	0.0199	0.0190	1,042.1815
Total		**0.0950**	**0.8632**	**0.7251**	**5.1800e-003**		**0.0656**	**0.0656**		**0.0656**	**0.0656**		**1,035.8773**	**1,035.8773**	**0.0199**	**0.0190**	**1,042.1815**

5.2 Energy by Land Use - NaturalGas

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/yr	lb/day										lb/day					
Hotel	8.80496	0.0950	0.8632	0.7251	5.1800e-003		0.0656	0.0656		0.0656	0.0656		1,035.8773	1,035.8773	0.0199	0.0190	1,042.1815
Total		**0.0950**	**0.8632**	**0.7251**	**5.1800e-003**		**0.0656**	**0.0656**		**0.0656**	**0.0656**		**1,035.8773**	**1,035.8773**	**0.0199**	**0.0190**	**1,042.1815**

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

Use only Natural Gas Hearths

Use Low VOC Cleaning Supplies

	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	lb/day										lb/day					
Mitigated	1.4981	1.1000e-004	0.0119	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.0250	0.0250	7.0000e-005		0.0264
Unmitigated	1.9240	1.1000e-004	0.0119	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.0250	0.0250	7.0000e-005		0.0264

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	lb/day										lb/day					
Architectural Coating	0.4400					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.4829					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.1600e-003	1.1000e-004	0.0119	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.0250	0.0250	7.0000e-005		0.0264
Total	**1.9240**	**1.1000e-004**	**0.0119**	**0.0000**		**4.0000e-005**	**4.0000e-005**		**4.0000e-005**	**4.0000e-005**		**0.0250**	**0.0250**	**7.0000e-005**		**0.0264**

6.2 Area by SubCategory

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	lb/day										lb/day					
Architectural Coating	0.1250					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.3720					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.1600e-003	1.1000e-004	0.0119	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.0250	0.0250	7.0000e-005		0.0264
Total	**1.4981**	**1.1000e-004**	**0.0119**	**0.0000**		**4.0000e-005**	**4.0000e-005**		**4.0000e-005**	**4.0000e-005**		**0.0250**	**0.0250**	**7.0000e-005**		**0.0264**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Vegetation

Calle Joaquin Towneplace Suites

San Luis Obispo County APCD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Hotel	114.00	Room	2.84	69,293.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	3.2	**Precipitation Freq (Days)**	44
Climate Zone	4			**Operational Year**	2016
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Lot acreage = 2.84 acres
Building = 69,293 square feet

Construction Phase -

Grading - Total site to be graded = 2.84 acres

Land Use Change -

Sequestration -

Construction Off-road Equipment Mitigation - Mitigation Identified.

Mobile Land Use Mitigation -

Area Mitigation - Low VOC = 71 g/L
No residential uses.

Energy Mitigation -

Area Coating -

Architectural Coating - No residential use. Require use of 71 g/L VOC.

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Residential_Exterior	250.00	0.00
tblArchitecturalCoating	EF_Residential_Interior	250.00	0.00
tblAreaMitigation	UseLowVOCPaintNonresidentialExteriorValue	250	71
tblAreaMitigation	UseLowVOCPaintNonresidentialInteriorValue	250	71
tblAreaMitigation	UseLowVOCPaintResidentialExteriorValue	250	0
tblAreaMitigation	UseLowVOCPaintResidentialInteriorValue	250	0
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3

tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3

tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblGrading	AcresOfGrading	3.00	2.84
tblGrading	AcresOfGrading	4.50	2.84
tblGrading	MaterialExported	0.00	1,575.00
tblGrading	MaterialImported	0.00	6,330.00
tblLandUse	LandUseSquareFeet	165,528.00	69,293.00
tblLandUse	LotAcreage	3.80	2.84
tblProjectCharacteristics	OperationalYear	2014	2016
tblSequestration	NumberOfNewTrees	0.00	100.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	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
Year	tons/yr										MT/yr					
2016	1.2742	3.1993	2.4881	3.8000e-003	0.0660	0.1960	0.2620	0.0223	0.1871	0.2094	0.0000	326.6277	326.6277	0.0614	0.0000	327.9177
Total	**1.2742**	**3.1993**	**2.4881**	**3.8000e-003**	**0.0660**	**0.1960**	**0.2620**	**0.0223**	**0.1871**	**0.2094**	**0.0000**	**326.6277**	**326.6277**	**0.0614**	**0.0000**	**327.9177**

Mitigated Construction

	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
Year	tons/yr										MT/yr					
2016	0.9270	1.8422	2.3161	3.8000e-003	0.0541	0.0176	0.0716	0.0166	0.0173	0.0339	0.0000	326.6274	326.6274	0.0614	0.0000	327.9174
Total	**0.9270**	**1.8422**	**2.3161**	**3.8000e-003**	**0.0541**	**0.0176**	**0.0716**	**0.0166**	**0.0173**	**0.0339**	**0.0000**	**326.6274**	**326.6274**	**0.0614**	**0.0000**	**327.9174**

	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**	**N20**	**CO2e**
Percent Reduction	**27.25**	**42.42**	**6.91**	**0.00**	**18.16**	**91.05**	**72.67**	**25.57**	**90.77**	**83.83**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

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	0.3511	2.0000e-005	1.9700e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	3.7300e-003	3.7300e-003	1.0000e-005	0.0000	3.9600e-003
Energy	0.0173	0.1575	0.1323	9.5000e-004		0.0120	0.0120		0.0120	0.0120	0.0000	341.6357	341.6357	0.0110	4.7400e-003	343.3344
Mobile	0.6413	1.3327	5.5981	7.9000e-003	0.5431	0.0148	0.5579	0.1455	0.0136	0.1591	0.0000	631.2347	631.2347	0.0317	0.0000	631.9002
Waste						0.0000	0.0000		0.0000	0.0000	12.6687	0.0000	12.6687	0.7487	0.0000	28.3913
Water						0.0000	0.0000		0.0000	0.0000	0.9174	4.8792	5.7967	0.0945	2.2700e-003	8.4840
Total	**1.0097**	**1.4902**	**5.7324**	**8.8500e-003**	**0.5431**	**0.0268**	**0.5699**	**0.1455**	**0.0255**	**0.1711**	**13.5861**	**977.7534**	**991.3395**	**0.8858**	**7.0100e-003**	**1,012.1139**

2.2 Overall Operational

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	0.2734	2.0000e-005	1.9700e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	3.7300e-003	3.7300e-003	1.0000e-005	0.0000	3.9600e-003
Energy	0.0173	0.1575	0.1323	9.5000e-004		0.0120	0.0120		0.0120	0.0120	0.0000	341.6357	341.6357	0.0110	4.7400e-003	343.3344
Mobile	0.6413	1.3327	5.5981	7.9000e-003	0.5431	0.0148	0.5579	0.1455	0.0136	0.1591	0.0000	631.2347	631.2347	0.0317	0.0000	631.9002
Waste						0.0000	0.0000		0.0000	0.0000	12.6687	0.0000	12.6687	0.7487	0.0000	28.3913
Water						0.0000	0.0000		0.0000	0.0000	0.9174	4.8792	5.7967	0.0944	2.2700e-003	8.4825
Total	**0.9320**	**1.4902**	**5.7324**	**8.8500e-003**	**0.5431**	**0.0268**	**0.5699**	**0.1455**	**0.0255**	**0.1711**	**13.5861**	**977.7534**	**991.3395**	**0.8858**	**7.0100e-003**	**1,012.1124**

	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**	**N20**	**CO2e**
Percent Reduction	**7.70**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.3 Vegetation

Vegetation

Category	CO2e MT
New Trees	70.8000
Total	**70.8000**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/1/2016	1/5/2016	5	3	
2	Grading	Grading	1/6/2016	1/13/2016	5	6	
3	Building Construction	Building Construction	1/14/2016	11/16/2016	5	220	
4	Paving	Paving	11/17/2016	11/30/2016	5	10	
5	Architectural Coating	Architectural Coating	12/1/2016	12/14/2016	5	10	

Acres of Grading (Site Preparation Phase): 2.84

Acres of Grading (Grading Phase): 2.84

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 103,940; Non-Residential Outdoor: 34,647 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Graders	1	8.00	174	0.41
Site Preparation	Scrapers	1	8.00	361	0.48
Site Preparation	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Grading	Graders	1	8.00	174	0.41
Grading	Rubber Tired Dozers	1	8.00	255	0.40
Grading	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Building Construction	Cranes	1	8.00	226	0.29
Building Construction	Forklifts	2	7.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45
Paving	Cement and Mortar Mixers	1	8.00	9	0.56
Paving	Pavers	1	8.00	125	0.42
Paving	Paving Equipment	1	8.00	130	0.36
Paving	Rollers	2	8.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	3	8.00	0.00	0.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	791.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	8	29.00	11.00	0.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	6.00	0.00	0.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use DPF for Construction Equipment

Use Soil Stabilizer

Replace Ground Cover

Water Exposed Area

Clean Paved Roads

3.2 Site Preparation - 2016

Unmitigated Construction On-Site

	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					
Fugitive Dust					1.5100e-003	0.0000	1.5100e-003	1.6000e-004	0.0000	1.6000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.0500e-003	0.0462	0.0271	4.0000e-005		2.2700e-003	2.2700e-003		2.0900e-003	2.0900e-003	0.0000	3.3749	3.3749	1.0200e-003	0.0000	3.3962
Total	**4.0500e-003**	**0.0462**	**0.0271**	**4.0000e-005**	**1.5100e-003**	**2.2700e-003**	**3.7800e-003**	**1.6000e-004**	**2.0900e-003**	**2.2500e-003**	**0.0000**	**3.3749**	**3.3749**	**1.0200e-003**	**0.0000**	**3.3962**

3.2 Site Preparation - 2016

Unmitigated Construction Off-Site

	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					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.0000e-005	9.0000e-005	7.6000e-004	0.0000	1.2000e-004	0.0000	1.2000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0985	0.0985	1.0000e-005	0.0000	0.0987
Total	**5.0000e-005**	**9.0000e-005**	**7.6000e-004**	**0.0000**	**1.2000e-004**	**0.0000**	**1.2000e-004**	**3.0000e-005**	**0.0000**	**3.0000e-005**	**0.0000**	**0.0985**	**0.0985**	**1.0000e-005**	**0.0000**	**0.0987**

Mitigated Construction On-Site

	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					
Fugitive Dust					6.8000e-004	0.0000	6.8000e-004	7.0000e-005	0.0000	7.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	8.8000e-004	0.0173	0.0220	4.0000e-005		1.2000e-004	1.2000e-004		1.2000e-004	1.2000e-004	0.0000	3.3749	3.3749	1.0200e-003	0.0000	3.3962
Total	**8.8000e-004**	**0.0173**	**0.0220**	**4.0000e-005**	**6.8000e-004**	**1.2000e-004**	**8.0000e-004**	**7.0000e-005**	**1.2000e-004**	**1.9000e-004**	**0.0000**	**3.3749**	**3.3749**	**1.0200e-003**	**0.0000**	**3.3962**

3.2 Site Preparation - 2016

Mitigated Construction Off-Site

	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					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.0000e-005	9.0000e-005	7.6000e-004	0.0000	1.2000e-004	0.0000	1.2000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0985	0.0985	1.0000e-005	0.0000	0.0987
Total	**5.0000e-005**	**9.0000e-005**	**7.6000e-004**	**0.0000**	**1.2000e-004**	**0.0000**	**1.2000e-004**	**3.0000e-005**	**0.0000**	**3.0000e-005**	**0.0000**	**0.0985**	**0.0985**	**1.0000e-005**	**0.0000**	**0.0987**

3.3 Grading - 2016

Unmitigated Construction On-Site

	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					
Fugitive Dust					0.0203	0.0000	0.0203	0.0102	0.0000	0.0102	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	8.5600e-003	0.0898	0.0589	6.0000e-005		5.0000e-003	5.0000e-003		4.6000e-003	4.6000e-003	0.0000	5.8222	5.8222	1.7600e-003	0.0000	5.8590
Total	**8.5600e-003**	**0.0898**	**0.0589**	**6.0000e-005**	**0.0203**	**5.0000e-003**	**0.0253**	**0.0102**	**4.6000e-003**	**0.0148**	**0.0000**	**5.8222**	**5.8222**	**1.7600e-003**	**0.0000**	**5.8590**

3.3 Grading - 2016

Unmitigated Construction Off-Site

	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					
Hauling	0.0102	0.1287	0.1038	3.0000e-004	6.7200e-003	1.6300e-003	8.3600e-003	1.8400e-003	1.5000e-003	3.3500e-003	0.0000	27.2410	27.2410	1.9000e-004	0.0000	27.2450
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.4000e-004	2.1000e-004	1.9100e-003	0.0000	2.9000e-004	0.0000	2.9000e-004	8.0000e-005	0.0000	8.0000e-005	0.0000	0.2463	0.2463	1.0000e-005	0.0000	0.2466
Total	**0.0103**	**0.1289**	**0.1057**	**3.0000e-004**	**7.0100e-003**	**1.6300e-003**	**8.6500e-003**	**1.9200e-003**	**1.5000e-003**	**3.4300e-003**	**0.0000**	**27.4873**	**27.4873**	**2.0000e-004**	**0.0000**	**27.4916**

Mitigated Construction On-Site

	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					
Fugitive Dust					9.1300e-003	0.0000	9.1300e-003	4.5900e-003	0.0000	4.5900e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.5000e-003	0.0304	0.0403	6.0000e-005		2.3000e-004	2.3000e-004		2.3000e-004	2.3000e-004	0.0000	5.8221	5.8221	1.7600e-003	0.0000	5.8590
Total	**1.5000e-003**	**0.0304**	**0.0403**	**6.0000e-005**	**9.1300e-003**	**2.3000e-004**	**9.3600e-003**	**4.5900e-003**	**2.3000e-004**	**4.8200e-003**	**0.0000**	**5.8221**	**5.8221**	**1.7600e-003**	**0.0000**	**5.8590**

3.3 Grading - 2016

Mitigated Construction Off-Site

	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					
Hauling	0.0102	0.1287	0.1038	3.0000e-004	6.7200e-003	1.6300e-003	8.3600e-003	1.8400e-003	1.5000e-003	3.3500e-003	0.0000	27.2410	27.2410	1.9000e-004	0.0000	27.2450
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.4000e-004	2.1000e-004	1.9100e-003	0.0000	2.9000e-004	0.0000	2.9000e-004	8.0000e-005	0.0000	8.0000e-005	0.0000	0.2463	0.2463	1.0000e-005	0.0000	0.2466
Total	**0.0103**	**0.1289**	**0.1057**	**3.0000e-004**	**7.0100e-003**	**1.6300e-003**	**8.6500e-003**	**1.9200e-003**	**1.5000e-003**	**3.4300e-003**	**0.0000**	**27.4873**	**27.4873**	**2.0000e-004**	**0.0000**	**27.4916**

3.4 Building Construction - 2016

Unmitigated Construction On-Site

	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					
Off-Road	0.4068	2.7095	1.8388	2.7400e-003		0.1788	0.1788		0.1713	0.1713	0.0000	234.7292	234.7292	0.0541	0.0000	235.8650
Total	**0.4068**	**2.7095**	**1.8388**	**2.7400e-003**		**0.1788**	**0.1788**		**0.1713**	**0.1713**	**0.0000**	**234.7292**	**234.7292**	**0.0541**	**0.0000**	**235.8650**

3.4 Building Construction - 2016

Unmitigated Construction Off-Site

	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					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0158	0.0996	0.1769	2.1000e-004	5.3900e-003	1.3900e-003	6.7800e-003	1.5400e-003	1.2700e-003	2.8200e-003	0.0000	18.5990	18.5990	1.6000e-004	0.0000	18.6023
Worker	0.0145	0.0228	0.2030	3.5000e-004	0.0307	2.5000e-004	0.0310	8.1600e-003	2.2000e-004	8.3900e-003	0.0000	26.1913	26.1913	1.5700e-003	0.0000	26.2243
Total	**0.0303**	**0.1224**	**0.3800**	**5.6000e-004**	**0.0361**	**1.6400e-003**	**0.0377**	**9.7000e-003**	**1.4900e-003**	**0.0112**	**0.0000**	**44.7903**	**44.7903**	**1.7300e-003**	**0.0000**	**44.8266**

Mitigated Construction On-Site

	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					
Off-Road	0.0782	1.4919	1.6876	2.7400e-003		0.0135	0.0135		0.0135	0.0135	0.0000	234.7289	234.7289	0.0541	0.0000	235.8647
Total	**0.0782**	**1.4919**	**1.6876**	**2.7400e-003**		**0.0135**	**0.0135**		**0.0135**	**0.0135**	**0.0000**	**234.7289**	**234.7289**	**0.0541**	**0.0000**	**235.8647**

3.4 Building Construction - 2016

Mitigated Construction Off-Site

	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					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0158	0.0996	0.1769	2.1000e-004	5.3900e-003	1.3900e-003	6.7800e-003	1.5400e-003	1.2700e-003	2.8200e-003	0.0000	18.5990	18.5990	1.6000e-004	0.0000	18.6023
Worker	0.0145	0.0228	0.2030	3.5000e-004	0.0307	2.5000e-004	0.0310	8.1600e-003	2.2000e-004	8.3900e-003	0.0000	26.1913	26.1913	1.5700e-003	0.0000	26.2243
Total	**0.0303**	**0.1224**	**0.3800**	**5.6000e-004**	**0.0361**	**1.6400e-003**	**0.0377**	**9.7000e-003**	**1.4900e-003**	**0.0112**	**0.0000**	**44.7903**	**44.7903**	**1.7300e-003**	**0.0000**	**44.8266**

3.5 Paving - 2016

Unmitigated Construction On-Site

	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					
Off-Road	8.9100e-003	0.0897	0.0607	9.0000e-005		5.6300e-003	5.6300e-003		5.1800e-003	5.1800e-003	0.0000	8.1867	8.1867	2.4200e-003	0.0000	8.2376
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**8.9100e-003**	**0.0897**	**0.0607**	**9.0000e-005**		**5.6300e-003**	**5.6300e-003**		**5.1800e-003**	**5.1800e-003**	**0.0000**	**8.1867**	**8.1867**	**2.4200e-003**	**0.0000**	**8.2376**

3.5 Paving - 2016

Unmitigated Construction Off-Site

	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					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.4000e-004	5.4000e-004	4.7700e-003	1.0000e-005	7.2000e-004	1.0000e-005	7.3000e-004	1.9000e-004	1.0000e-005	2.0000e-004	0.0000	0.6158	0.6158	4.0000e-005	0.0000	0.6166
Total	**3.4000e-004**	**5.4000e-004**	**4.7700e-003**	**1.0000e-005**	**7.2000e-004**	**1.0000e-005**	**7.3000e-004**	**1.9000e-004**	**1.0000e-005**	**2.0000e-004**	**0.0000**	**0.6158**	**0.6158**	**4.0000e-005**	**0.0000**	**0.6166**

Mitigated Construction On-Site

	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					
Off-Road	2.0700e-003	0.0437	0.0640	9.0000e-005		3.9000e-004	3.9000e-004		3.9000e-004	3.9000e-004	0.0000	8.1867	8.1867	2.4200e-003	0.0000	8.2376
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**2.0700e-003**	**0.0437**	**0.0640**	**9.0000e-005**		**3.9000e-004**	**3.9000e-004**		**3.9000e-004**	**3.9000e-004**	**0.0000**	**8.1867**	**8.1867**	**2.4200e-003**	**0.0000**	**8.2376**

3.5 Paving - 2016

Mitigated Construction Off-Site

	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					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.4000e-004	5.4000e-004	4.7700e-003	1.0000e-005	7.2000e-004	1.0000e-005	7.3000e-004	1.9000e-004	1.0000e-005	2.0000e-004	0.0000	0.6158	0.6158	4.0000e-005	0.0000	0.6166
Total	**3.4000e-004**	**5.4000e-004**	**4.7700e-003**	**1.0000e-005**	**7.2000e-004**	**1.0000e-005**	**7.3000e-004**	**1.9000e-004**	**1.0000e-005**	**2.0000e-004**	**0.0000**	**0.6158**	**0.6158**	**4.0000e-005**	**0.0000**	**0.6166**

3.6 Architectural Coating - 2016

Unmitigated Construction On-Site

	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					
Archit. Coating	0.8029					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.8400e-003	0.0119	9.4200e-003	1.0000e-005		9.8000e-004	9.8000e-004		9.8000e-004	9.8000e-004	0.0000	1.2766	1.2766	1.5000e-004	0.0000	1.2798
Total	**0.8048**	**0.0119**	**9.4200e-003**	**1.0000e-005**		**9.8000e-004**	**9.8000e-004**		**9.8000e-004**	**9.8000e-004**	**0.0000**	**1.2766**	**1.2766**	**1.5000e-004**	**0.0000**	**1.2798**

3.6 Architectural Coating - 2016

Unmitigated Construction Off-Site

	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					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.4000e-004	2.1000e-004	1.9100e-003	0.0000	2.9000e-004	0.0000	2.9000e-004	8.0000e-005	0.0000	8.0000e-005	0.0000	0.2463	0.2463	1.0000e-005	0.0000	0.2466
Total	**1.4000e-004**	**2.1000e-004**	**1.9100e-003**	**0.0000**	**2.9000e-004**	**0.0000**	**2.9000e-004**	**8.0000e-005**	**0.0000**	**8.0000e-005**	**0.0000**	**0.2463**	**0.2463**	**1.0000e-005**	**0.0000**	**0.2466**

Mitigated Construction On-Site

	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					
Archit. Coating	0.8029					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.0000e-004	6.7800e-003	9.1600e-003	1.0000e-005		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005	0.0000	1.2766	1.2766	1.5000e-004	0.0000	1.2798
Total	**0.8032**	**6.7800e-003**	**9.1600e-003**	**1.0000e-005**		**7.0000e-005**	**7.0000e-005**		**7.0000e-005**	**7.0000e-005**	**0.0000**	**1.2766**	**1.2766**	**1.5000e-004**	**0.0000**	**1.2798**

3.6 Architectural Coating - 2016

Mitigated Construction Off-Site

	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					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.4000e-004	2.1000e-004	1.9100e-003	0.0000	2.9000e-004	0.0000	2.9000e-004	8.0000e-005	0.0000	8.0000e-005	0.0000	0.2463	0.2463	1.0000e-005	0.0000	0.2466
Total	**1.4000e-004**	**2.1000e-004**	**1.9100e-003**	**0.0000**	**2.9000e-004**	**0.0000**	**2.9000e-004**	**8.0000e-005**	**0.0000**	**8.0000e-005**	**0.0000**	**0.2463**	**0.2463**	**1.0000e-005**	**0.0000**	**0.2466**

4.0 Operational Detail - Mobile

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	0.6413	1.3327	5.5981	7.9000e-003	0.5431	0.0148	0.5579	0.1455	0.0136	0.1591	0.0000	631.2347	631.2347	0.0317	0.0000	631.9002
Unmitigated	0.6413	1.3327	5.5981	7.9000e-003	0.5431	0.0148	0.5579	0.1455	0.0136	0.1591	0.0000	631.2347	631.2347	0.0317	0.0000	631.9002

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Hotel	931.38	933.66	678.30	1,442,986	1,442,986
Total	931.38	933.66	678.30	1,442,986	1,442,986

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
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	Primary	Diverted	Pass-by
Hotel	13.00	5.00	5.00	19.40	61.60	19.00	58	38	4

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.455937	0.042338	0.214948	0.150714	0.068093	0.009944	0.017510	0.022507	0.002330	0.001401	0.008743	0.000855	0.004680

4.4 Fleet Mix

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Install High Efficiency Lighting

	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						0.0000	0.0000		0.0000	0.0000	0.0000	170.1346	170.1346	7.6900e-003	1.5900e-003	170.7896
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	170.1346	170.1346	7.6900e-003	1.5900e-003	170.7896
NaturalGas Mitigated	0.0173	0.1575	0.1323	9.5000e-004		0.0120	0.0120		0.0120	0.0120	0.0000	171.5011	171.5011	3.2900e-003	3.1400e-003	172.5448
NaturalGas Unmitigated	0.0173	0.1575	0.1323	9.5000e-004		0.0120	0.0120		0.0120	0.0120	0.0000	171.5011	171.5011	3.2900e-003	3.1400e-003	172.5448

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/yr	tons/yr										MT/yr					
Hotel	3.21381e+006	0.0173	0.1575	0.1323	9.5000e-004		0.0120	0.0120		0.0120	0.0120	0.0000	171.5011	171.5011	3.2900e-003	3.1400e-003	172.5448
Total		**0.0173**	**0.1575**	**0.1323**	**9.5000e-004**		**0.0120**	**0.0120**		**0.0120**	**0.0120**	**0.0000**	**171.5011**	**171.5011**	**3.2900e-003**	**3.1400e-003**	**172.5448**

5.2 Energy by Land Use - NaturalGas

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/yr	tons/yr										MT/yr					
Hotel	3.21381e+006	0.0173	0.1575	0.1323	9.5000e-004		0.0120	0.0120		0.0120	0.0120	0.0000	171.5011	171.5011	3.2900e-003	3.1400e-003	172.5448
Total		**0.0173**	**0.1575**	**0.1323**	**9.5000e-004**		**0.0120**	**0.0120**		**0.0120**	**0.0120**	**0.0000**	**171.5011**	**171.5011**	**3.2900e-003**	**3.1400e-003**	**172.5448**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Hotel	584833	170.1346	7.6900e-003	1.5900e-003	170.7896
Total		**170.1346**	**7.6900e-003**	**1.5900e-003**	**170.7896**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Hotel	584833	170.1346	7.6900e-003	1.5900e-003	170.7896
Total		**170.1346**	**7.6900e-003**	**1.5900e-003**	**170.7896**

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

Use only Natural Gas Hearths

Use Low VOC Cleaning Supplies

	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	0.2734	2.0000e-005	1.9700e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	3.7300e-003	3.7300e-003	1.0000e-005	0.0000	3.9600e-003
Unmitigated	0.3511	2.0000e-005	1.9700e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	3.7300e-003	3.7300e-003	1.0000e-005	0.0000	3.9600e-003

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	0.0803					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.2706					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.9000e-004	2.0000e-005	1.9700e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	3.7300e-003	3.7300e-003	1.0000e-005	0.0000	3.9600e-003
Total	**0.3511**	**2.0000e-005**	**1.9700e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**	**0.0000**	**3.7300e-003**	**3.7300e-003**	**1.0000e-005**	**0.0000**	**3.9600e-003**

6.2 Area by SubCategory

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	0.0228					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.2504					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.9000e-004	2.0000e-005	1.9700e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	3.7300e-003	3.7300e-003	1.0000e-005	0.0000	3.9600e-003
Total	**0.2734**	**2.0000e-005**	**1.9700e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**	**0.0000**	**3.7300e-003**	**3.7300e-003**	**1.0000e-005**	**0.0000**	**3.9600e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	5.7967	0.0944	2.2700e-003	8.4825
Unmitigated	5.7967	0.0945	2.2700e-003	8.4840

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Hotel	2.89181 / 0.321312	5.7967	0.0945	2.2700e-003	8.4840
Total		**5.7967**	**0.0945**	**2.2700e-003**	**8.4840**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Hotel	2.89181 / 0.321312	5.7967	0.0944	2.2700e-003	8.4825
Total		**5.7967**	**0.0944**	**2.2700e-003**	**8.4825**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	12.6687	0.7487	0.0000	28.3913
Unmitigated	12.6687	0.7487	0.0000	28.3913

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Hotel	62.41	12.6687	0.7487	0.0000	28.3913
Total		**12.6687**	**0.7487**	**0.0000**	**28.3913**

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Hotel	62.41	12.6687	0.7487	0.0000	28.3913
Total		**12.6687**	**0.7487**	**0.0000**	**28.3913**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Vegetation

	Total CO2	CH4	N2O	CO2e
Category	MT			
Unmitigated	70.8000	0.0000	0.0000	70.8000

10.2 Net New Trees

Species Class

	Number of Trees	Total CO2	CH4	N2O	CO2e
		MT			
Miscellaneous	100	70.8000	0.0000	0.0000	70.8000
Total		**70.8000**	**0.0000**	**0.0000**	**70.8000**

Calle Joaquin Towneplace Suites

San Luis Obispo County APCD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Hotel	114.00	Room	2.84	69,293.00	0

1.2 Other Project Characteristics

Urbanization Urban **Wind Speed (m/s)** 3.2 **Precipitation Freq (Days)** 44

Climate Zone 4 **Operational Year** 2016

Utility Company Pacific Gas & Electric Company

CO2 Intensity (lb/MWhr) 641.35 **CH4 Intensity (lb/MWhr)** 0.029 **N2O Intensity (lb/MWhr)** 0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Lot acreage = 2.84 acres
Building = 69,293 square feet

Construction Phase -

Grading - Total site to be graded = 2.84 acres

Land Use Change -

Sequestration -

Construction Off-road Equipment Mitigation - Mitigation Identified.

Mobile Land Use Mitigation -

Area Mitigation - Low VOC = 71 g/L
No residential uses.

Energy Mitigation -

Area Coating -

Architectural Coating - No residential use. Require use of 71 g/L VOC.

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	250.00	71.00
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	71.00
tblArchitecturalCoating	EF_Residential_Exterior	250.00	0.00
tblArchitecturalCoating	EF_Residential_Interior	250.00	0.00
tblAreaMitigation	UseLowVOCPaintNonresidentialExteriorValue	250	71
tblAreaMitigation	UseLowVOCPaintNonresidentialInteriorValue	250	71
tblAreaMitigation	UseLowVOCPaintResidentialExteriorValue	250	0
tblAreaMitigation	UseLowVOCPaintResidentialInteriorValue	250	0
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3

tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3

tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblGrading	AcresOfGrading	3.00	2.84
tblGrading	AcresOfGrading	4.50	2.84
tblGrading	MaterialExported	0.00	1,575.00
tblGrading	MaterialImported	0.00	6,330.00
tblLandUse	LandUseSquareFeet	165,528.00	69,293.00
tblLandUse	LotAcreage	3.80	2.84
tblProjectCharacteristics	OperationalYear	2014	2016
tblSequestration	NumberOfNewTrees	0.00	100.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	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
Year	tons/yr										MT/yr					
2016	0.6993	3.1993	2.4881	3.8000e-003	0.0660	0.1960	0.2620	0.0223	0.1871	0.2094	0.0000	326.6277	326.6277	0.0614	0.0000	327.9177
Total	**0.6993**	**3.1993**	**2.4881**	**3.8000e-003**	**0.0660**	**0.1960**	**0.2620**	**0.0223**	**0.1871**	**0.2094**	**0.0000**	**326.6277**	**326.6277**	**0.0614**	**0.0000**	**327.9177**

Mitigated Construction

	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
Year	tons/yr										MT/yr					
2016	0.3521	1.8422	2.3161	3.8000e-003	0.0541	0.0176	0.0716	0.0166	0.0173	0.0339	0.0000	326.6274	326.6274	0.0614	0.0000	327.9174
Total	**0.3521**	**1.8422**	**2.3161**	**3.8000e-003**	**0.0541**	**0.0176**	**0.0716**	**0.0166**	**0.0173**	**0.0339**	**0.0000**	**326.6274**	**326.6274**	**0.0614**	**0.0000**	**327.9174**

	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**	**N20**	**CO2e**
Percent Reduction	**49.66**	**42.42**	**6.91**	**0.00**	**18.16**	**91.05**	**72.67**	**25.57**	**90.77**	**83.83**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

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	0.3511	2.0000e-005	1.9700e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	3.7300e-003	3.7300e-003	1.0000e-005	0.0000	3.9600e-003
Energy	0.0173	0.1575	0.1323	9.5000e-004		0.0120	0.0120		0.0120	0.0120	0.0000	341.6357	341.6357	0.0110	4.7400e-003	343.3344
Mobile	0.6413	1.3327	5.5981	7.9000e-003	0.5431	0.0148	0.5579	0.1455	0.0136	0.1591	0.0000	631.2347	631.2347	0.0317	0.0000	631.9002
Waste						0.0000	0.0000		0.0000	0.0000	12.6687	0.0000	12.6687	0.7487	0.0000	28.3913
Water						0.0000	0.0000		0.0000	0.0000	0.9174	4.8792	5.7967	0.0945	2.2700e-003	8.4840
Total	**1.0097**	**1.4902**	**5.7324**	**8.8500e-003**	**0.5431**	**0.0268**	**0.5699**	**0.1455**	**0.0255**	**0.1711**	**13.5861**	**977.7534**	**991.3395**	**0.8858**	**7.0100e-003**	**1,012.1139**

2.2 Overall Operational

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	0.2734	2.0000e-005	1.9700e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	3.7300e-003	3.7300e-003	1.0000e-005	0.0000	3.9600e-003
Energy	0.0173	0.1575	0.1323	9.5000e-004		0.0120	0.0120		0.0120	0.0120	0.0000	341.6357	341.6357	0.0110	4.7400e-003	343.3344
Mobile	0.6413	1.3327	5.5981	7.9000e-003	0.5431	0.0148	0.5579	0.1455	0.0136	0.1591	0.0000	631.2347	631.2347	0.0317	0.0000	631.9002
Waste						0.0000	0.0000		0.0000	0.0000	12.6687	0.0000	12.6687	0.7487	0.0000	28.3913
Water						0.0000	0.0000		0.0000	0.0000	0.9174	4.8792	5.7967	0.0944	2.2700e-003	8.4825
Total	**0.9320**	**1.4902**	**5.7324**	**8.8500e-003**	**0.5431**	**0.0268**	**0.5699**	**0.1455**	**0.0255**	**0.1711**	**13.5861**	**977.7534**	**991.3395**	**0.8858**	**7.0100e-003**	**1,012.1124**

	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**	**N20**	**CO2e**
Percent Reduction	**7.70**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.3 Vegetation

Vegetation

	CO2e
Category	MT
New Trees	70.8000
Total	**70.8000**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/1/2016	1/5/2016	5	3	
2	Grading	Grading	1/6/2016	1/13/2016	5	6	
3	Building Construction	Building Construction	1/14/2016	11/16/2016	5	220	
4	Paving	Paving	11/17/2016	11/30/2016	5	10	
5	Architectural Coating	Architectural Coating	12/1/2016	12/14/2016	5	10	

Acres of Grading (Site Preparation Phase): 2.84

Acres of Grading (Grading Phase): 2.84

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 103,940; Non-Residential Outdoor: 34,647 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Graders	1	8.00	174	0.41
Site Preparation	Scrapers	1	8.00	361	0.48
Site Preparation	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Grading	Graders	1	8.00	174	0.41
Grading	Rubber Tired Dozers	1	8.00	255	0.40
Grading	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Building Construction	Cranes	1	8.00	226	0.29
Building Construction	Forklifts	2	7.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45
Paving	Cement and Mortar Mixers	1	8.00	9	0.56
Paving	Pavers	1	8.00	125	0.42
Paving	Paving Equipment	1	8.00	130	0.36
Paving	Rollers	2	8.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	3	8.00	0.00	0.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	791.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	8	29.00	11.00	0.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	6.00	0.00	0.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use DPF for Construction Equipment

Use Soil Stabilizer

Replace Ground Cover

Water Exposed Area

Clean Paved Roads

3.2 Site Preparation - 2016

Unmitigated Construction On-Site

	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					
Fugitive Dust					1.5100e-003	0.0000	1.5100e-003	1.6000e-004	0.0000	1.6000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.0500e-003	0.0462	0.0271	4.0000e-005		2.2700e-003	2.2700e-003		2.0900e-003	2.0900e-003	0.0000	3.3749	3.3749	1.0200e-003	0.0000	3.3962
Total	**4.0500e-003**	**0.0462**	**0.0271**	**4.0000e-005**	**1.5100e-003**	**2.2700e-003**	**3.7800e-003**	**1.6000e-004**	**2.0900e-003**	**2.2500e-003**	**0.0000**	**3.3749**	**3.3749**	**1.0200e-003**	**0.0000**	**3.3962**

3.2 Site Preparation - 2016

Unmitigated Construction Off-Site

	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					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.0000e-005	9.0000e-005	7.6000e-004	0.0000	1.2000e-004	0.0000	1.2000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0985	0.0985	1.0000e-005	0.0000	0.0987
Total	**5.0000e-005**	**9.0000e-005**	**7.6000e-004**	**0.0000**	**1.2000e-004**	**0.0000**	**1.2000e-004**	**3.0000e-005**	**0.0000**	**3.0000e-005**	**0.0000**	**0.0985**	**0.0985**	**1.0000e-005**	**0.0000**	**0.0987**

Mitigated Construction On-Site

	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					
Fugitive Dust					6.8000e-004	0.0000	6.8000e-004	7.0000e-005	0.0000	7.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	8.8000e-004	0.0173	0.0220	4.0000e-005		1.2000e-004	1.2000e-004		1.2000e-004	1.2000e-004	0.0000	3.3749	3.3749	1.0200e-003	0.0000	3.3962
Total	**8.8000e-004**	**0.0173**	**0.0220**	**4.0000e-005**	**6.8000e-004**	**1.2000e-004**	**8.0000e-004**	**7.0000e-005**	**1.2000e-004**	**1.9000e-004**	**0.0000**	**3.3749**	**3.3749**	**1.0200e-003**	**0.0000**	**3.3962**

3.2 Site Preparation - 2016

Mitigated Construction Off-Site

	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					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.0000e-005	9.0000e-005	7.6000e-004	0.0000	1.2000e-004	0.0000	1.2000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0985	0.0985	1.0000e-005	0.0000	0.0987
Total	**5.0000e-005**	**9.0000e-005**	**7.6000e-004**	**0.0000**	**1.2000e-004**	**0.0000**	**1.2000e-004**	**3.0000e-005**	**0.0000**	**3.0000e-005**	**0.0000**	**0.0985**	**0.0985**	**1.0000e-005**	**0.0000**	**0.0987**

3.3 Grading - 2016

Unmitigated Construction On-Site

	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					
Fugitive Dust					0.0203	0.0000	0.0203	0.0102	0.0000	0.0102	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	8.5600e-003	0.0898	0.0589	6.0000e-005		5.0000e-003	5.0000e-003		4.6000e-003	4.6000e-003	0.0000	5.8222	5.8222	1.7600e-003	0.0000	5.8590
Total	**8.5600e-003**	**0.0898**	**0.0589**	**6.0000e-005**	**0.0203**	**5.0000e-003**	**0.0253**	**0.0102**	**4.6000e-003**	**0.0148**	**0.0000**	**5.8222**	**5.8222**	**1.7600e-003**	**0.0000**	**5.8590**

3.3 Grading - 2016

Unmitigated Construction Off-Site

	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					
Hauling	0.0102	0.1287	0.1038	3.0000e-004	6.7200e-003	1.6300e-003	8.3600e-003	1.8400e-003	1.5000e-003	3.3500e-003	0.0000	27.2410	27.2410	1.9000e-004	0.0000	27.2450
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.4000e-004	2.1000e-004	1.9100e-003	0.0000	2.9000e-004	0.0000	2.9000e-004	8.0000e-005	0.0000	8.0000e-005	0.0000	0.2463	0.2463	1.0000e-005	0.0000	0.2466
Total	**0.0103**	**0.1289**	**0.1057**	**3.0000e-004**	**7.0100e-003**	**1.6300e-003**	**8.6500e-003**	**1.9200e-003**	**1.5000e-003**	**3.4300e-003**	**0.0000**	**27.4873**	**27.4873**	**2.0000e-004**	**0.0000**	**27.4916**

Mitigated Construction On-Site

	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					
Fugitive Dust					9.1300e-003	0.0000	9.1300e-003	4.5900e-003	0.0000	4.5900e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.5000e-003	0.0304	0.0403	6.0000e-005		2.3000e-004	2.3000e-004		2.3000e-004	2.3000e-004	0.0000	5.8221	5.8221	1.7600e-003	0.0000	5.8590
Total	**1.5000e-003**	**0.0304**	**0.0403**	**6.0000e-005**	**9.1300e-003**	**2.3000e-004**	**9.3600e-003**	**4.5900e-003**	**2.3000e-004**	**4.8200e-003**	**0.0000**	**5.8221**	**5.8221**	**1.7600e-003**	**0.0000**	**5.8590**

3.3 Grading - 2016

Mitigated Construction Off-Site

	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					
Hauling	0.0102	0.1287	0.1038	3.0000e-004	6.7200e-003	1.6300e-003	8.3600e-003	1.8400e-003	1.5000e-003	3.3500e-003	0.0000	27.2410	27.2410	1.9000e-004	0.0000	27.2450
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.4000e-004	2.1000e-004	1.9100e-003	0.0000	2.9000e-004	0.0000	2.9000e-004	8.0000e-005	0.0000	8.0000e-005	0.0000	0.2463	0.2463	1.0000e-005	0.0000	0.2466
Total	**0.0103**	**0.1289**	**0.1057**	**3.0000e-004**	**7.0100e-003**	**1.6300e-003**	**8.6500e-003**	**1.9200e-003**	**1.5000e-003**	**3.4300e-003**	**0.0000**	**27.4873**	**27.4873**	**2.0000e-004**	**0.0000**	**27.4916**

3.4 Building Construction - 2016

Unmitigated Construction On-Site

	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					
Off-Road	0.4068	2.7095	1.8388	2.7400e-003		0.1788	0.1788		0.1713	0.1713	0.0000	234.7292	234.7292	0.0541	0.0000	235.8650
Total	**0.4068**	**2.7095**	**1.8388**	**2.7400e-003**		**0.1788**	**0.1788**		**0.1713**	**0.1713**	**0.0000**	**234.7292**	**234.7292**	**0.0541**	**0.0000**	**235.8650**

3.4 Building Construction - 2016

Unmitigated Construction Off-Site

	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					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0158	0.0996	0.1769	2.1000e-004	5.3900e-003	1.3900e-003	6.7800e-003	1.5400e-003	1.2700e-003	2.8200e-003	0.0000	18.5990	18.5990	1.6000e-004	0.0000	18.6023
Worker	0.0145	0.0228	0.2030	3.5000e-004	0.0307	2.5000e-004	0.0310	8.1600e-003	2.2000e-004	8.3900e-003	0.0000	26.1913	26.1913	1.5700e-003	0.0000	26.2243
Total	**0.0303**	**0.1224**	**0.3800**	**5.6000e-004**	**0.0361**	**1.6400e-003**	**0.0377**	**9.7000e-003**	**1.4900e-003**	**0.0112**	**0.0000**	**44.7903**	**44.7903**	**1.7300e-003**	**0.0000**	**44.8266**

Mitigated Construction On-Site

	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					
Off-Road	0.0782	1.4919	1.6876	2.7400e-003		0.0135	0.0135		0.0135	0.0135	0.0000	234.7289	234.7289	0.0541	0.0000	235.8647
Total	**0.0782**	**1.4919**	**1.6876**	**2.7400e-003**		**0.0135**	**0.0135**		**0.0135**	**0.0135**	**0.0000**	**234.7289**	**234.7289**	**0.0541**	**0.0000**	**235.8647**

3.4 Building Construction - 2016

Mitigated Construction Off-Site

	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					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0158	0.0996	0.1769	2.1000e-004	5.3900e-003	1.3900e-003	6.7800e-003	1.5400e-003	1.2700e-003	2.8200e-003	0.0000	18.5990	18.5990	1.6000e-004	0.0000	18.6023
Worker	0.0145	0.0228	0.2030	3.5000e-004	0.0307	2.5000e-004	0.0310	8.1600e-003	2.2000e-004	8.3900e-003	0.0000	26.1913	26.1913	1.5700e-003	0.0000	26.2243
Total	**0.0303**	**0.1224**	**0.3800**	**5.6000e-004**	**0.0361**	**1.6400e-003**	**0.0377**	**9.7000e-003**	**1.4900e-003**	**0.0112**	**0.0000**	**44.7903**	**44.7903**	**1.7300e-003**	**0.0000**	**44.8266**

3.5 Paving - 2016

Unmitigated Construction On-Site

	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					
Off-Road	8.9100e-003	0.0897	0.0607	9.0000e-005		5.6300e-003	5.6300e-003		5.1800e-003	5.1800e-003	0.0000	8.1867	8.1867	2.4200e-003	0.0000	8.2376
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**8.9100e-003**	**0.0897**	**0.0607**	**9.0000e-005**		**5.6300e-003**	**5.6300e-003**		**5.1800e-003**	**5.1800e-003**	**0.0000**	**8.1867**	**8.1867**	**2.4200e-003**	**0.0000**	**8.2376**

3.5 Paving - 2016

Unmitigated Construction Off-Site

	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					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.4000e-004	5.4000e-004	4.7700e-003	1.0000e-005	7.2000e-004	1.0000e-005	7.3000e-004	1.9000e-004	1.0000e-005	2.0000e-004	0.0000	0.6158	0.6158	4.0000e-005	0.0000	0.6166
Total	**3.4000e-004**	**5.4000e-004**	**4.7700e-003**	**1.0000e-005**	**7.2000e-004**	**1.0000e-005**	**7.3000e-004**	**1.9000e-004**	**1.0000e-005**	**2.0000e-004**	**0.0000**	**0.6158**	**0.6158**	**4.0000e-005**	**0.0000**	**0.6166**

Mitigated Construction On-Site

	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					
Off-Road	2.0700e-003	0.0437	0.0640	9.0000e-005		3.9000e-004	3.9000e-004		3.9000e-004	3.9000e-004	0.0000	8.1867	8.1867	2.4200e-003	0.0000	8.2376
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**2.0700e-003**	**0.0437**	**0.0640**	**9.0000e-005**		**3.9000e-004**	**3.9000e-004**		**3.9000e-004**	**3.9000e-004**	**0.0000**	**8.1867**	**8.1867**	**2.4200e-003**	**0.0000**	**8.2376**

3.5 Paving - 2016

Mitigated Construction Off-Site

	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					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.4000e-004	5.4000e-004	4.7700e-003	1.0000e-005	7.2000e-004	1.0000e-005	7.3000e-004	1.9000e-004	1.0000e-005	2.0000e-004	0.0000	0.6158	0.6158	4.0000e-005	0.0000	0.6166
Total	**3.4000e-004**	**5.4000e-004**	**4.7700e-003**	**1.0000e-005**	**7.2000e-004**	**1.0000e-005**	**7.3000e-004**	**1.9000e-004**	**1.0000e-005**	**2.0000e-004**	**0.0000**	**0.6158**	**0.6158**	**4.0000e-005**	**0.0000**	**0.6166**

3.6 Architectural Coating - 2016

Unmitigated Construction On-Site

	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					
Archit. Coating	0.2280					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.8400e-003	0.0119	9.4200e-003	1.0000e-005		9.8000e-004	9.8000e-004		9.8000e-004	9.8000e-004	0.0000	1.2766	1.2766	1.5000e-004	0.0000	1.2798
Total	**0.2299**	**0.0119**	**9.4200e-003**	**1.0000e-005**		**9.8000e-004**	**9.8000e-004**		**9.8000e-004**	**9.8000e-004**	**0.0000**	**1.2766**	**1.2766**	**1.5000e-004**	**0.0000**	**1.2798**

3.6 Architectural Coating - 2016

Unmitigated Construction Off-Site

	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					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.4000e-004	2.1000e-004	1.9100e-003	0.0000	2.9000e-004	0.0000	2.9000e-004	8.0000e-005	0.0000	8.0000e-005	0.0000	0.2463	0.2463	1.0000e-005	0.0000	0.2466
Total	**1.4000e-004**	**2.1000e-004**	**1.9100e-003**	**0.0000**	**2.9000e-004**	**0.0000**	**2.9000e-004**	**8.0000e-005**	**0.0000**	**8.0000e-005**	**0.0000**	**0.2463**	**0.2463**	**1.0000e-005**	**0.0000**	**0.2466**

Mitigated Construction On-Site

	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					
Archit. Coating	0.2280					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.0000e-004	6.7800e-003	9.1600e-003	1.0000e-005		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005	0.0000	1.2766	1.2766	1.5000e-004	0.0000	1.2798
Total	**0.2283**	**6.7800e-003**	**9.1600e-003**	**1.0000e-005**		**7.0000e-005**	**7.0000e-005**		**7.0000e-005**	**7.0000e-005**	**0.0000**	**1.2766**	**1.2766**	**1.5000e-004**	**0.0000**	**1.2798**

3.6 Architectural Coating - 2016

Mitigated Construction Off-Site

	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					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.4000e-004	2.1000e-004	1.9100e-003	0.0000	2.9000e-004	0.0000	2.9000e-004	8.0000e-005	0.0000	8.0000e-005	0.0000	0.2463	0.2463	1.0000e-005	0.0000	0.2466
Total	**1.4000e-004**	**2.1000e-004**	**1.9100e-003**	**0.0000**	**2.9000e-004**	**0.0000**	**2.9000e-004**	**8.0000e-005**	**0.0000**	**8.0000e-005**	**0.0000**	**0.2463**	**0.2463**	**1.0000e-005**	**0.0000**	**0.2466**

4.0 Operational Detail - Mobile

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	0.6413	1.3327	5.5981	7.9000e-003	0.5431	0.0148	0.5579	0.1455	0.0136	0.1591	0.0000	631.2347	631.2347	0.0317	0.0000	631.9002
Unmitigated	0.6413	1.3327	5.5981	7.9000e-003	0.5431	0.0148	0.5579	0.1455	0.0136	0.1591	0.0000	631.2347	631.2347	0.0317	0.0000	631.9002

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Hotel	931.38	933.66	678.30	1,442,986	1,442,986
Total	931.38	933.66	678.30	1,442,986	1,442,986

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
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	Primary	Diverted	Pass-by
Hotel	13.00	5.00	5.00	19.40	61.60	19.00	58	38	4

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.455937	0.042338	0.214948	0.150714	0.068093	0.009944	0.017510	0.022507	0.002330	0.001401	0.008743	0.000855	0.004680

4.4 Fleet Mix

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Install High Efficiency Lighting

	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						0.0000	0.0000		0.0000	0.0000	0.0000	170.1346	170.1346	7.6900e-003	1.5900e-003	170.7896
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	170.1346	170.1346	7.6900e-003	1.5900e-003	170.7896
NaturalGas Mitigated	0.0173	0.1575	0.1323	9.5000e-004		0.0120	0.0120		0.0120	0.0120	0.0000	171.5011	171.5011	3.2900e-003	3.1400e-003	172.5448
NaturalGas Unmitigated	0.0173	0.1575	0.1323	9.5000e-004		0.0120	0.0120		0.0120	0.0120	0.0000	171.5011	171.5011	3.2900e-003	3.1400e-003	172.5448

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/yr	tons/yr										MT/yr					
Hotel	3.21381e+006	0.0173	0.1575	0.1323	9.5000e-004		0.0120	0.0120		0.0120	0.0120	0.0000	171.5011	171.5011	3.2900e-003	3.1400e-003	172.5448
Total		**0.0173**	**0.1575**	**0.1323**	**9.5000e-004**		**0.0120**	**0.0120**		**0.0120**	**0.0120**	**0.0000**	**171.5011**	**171.5011**	**3.2900e-003**	**3.1400e-003**	**172.5448**

5.2 Energy by Land Use - NaturalGas

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/yr	tons/yr										MT/yr					
Hotel	3.21381e+006	0.0173	0.1575	0.1323	9.5000e-004		0.0120	0.0120		0.0120	0.0120	0.0000	171.5011	171.5011	3.2900e-003	3.1400e-003	172.5448
Total		**0.0173**	**0.1575**	**0.1323**	**9.5000e-004**		**0.0120**	**0.0120**		**0.0120**	**0.0120**	**0.0000**	**171.5011**	**171.5011**	**3.2900e-003**	**3.1400e-003**	**172.5448**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Hotel	584833	170.1346	7.6900e-003	1.5900e-003	170.7896
Total		**170.1346**	**7.6900e-003**	**1.5900e-003**	**170.7896**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Hotel	584833	170.1346	7.6900e-003	1.5900e-003	170.7896
Total		**170.1346**	**7.6900e-003**	**1.5900e-003**	**170.7896**

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

Use only Natural Gas Hearths

Use Low VOC Cleaning Supplies

	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	0.2734	2.0000e-005	1.9700e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	3.7300e-003	3.7300e-003	1.0000e-005	0.0000	3.9600e-003
Unmitigated	0.3511	2.0000e-005	1.9700e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	3.7300e-003	3.7300e-003	1.0000e-005	0.0000	3.9600e-003

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	0.0803					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.2706					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.9000e-004	2.0000e-005	1.9700e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	3.7300e-003	3.7300e-003	1.0000e-005	0.0000	3.9600e-003
Total	**0.3511**	**2.0000e-005**	**1.9700e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**	**0.0000**	**3.7300e-003**	**3.7300e-003**	**1.0000e-005**	**0.0000**	**3.9600e-003**

6.2 Area by SubCategory

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	0.0228					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.2504					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.9000e-004	2.0000e-005	1.9700e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	3.7300e-003	3.7300e-003	1.0000e-005	0.0000	3.9600e-003
Total	**0.2734**	**2.0000e-005**	**1.9700e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**	**0.0000**	**3.7300e-003**	**3.7300e-003**	**1.0000e-005**	**0.0000**	**3.9600e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	5.7967	0.0944	2.2700e-003	8.4825
Unmitigated	5.7967	0.0945	2.2700e-003	8.4840

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Hotel	2.89181 / 0.321312	5.7967	0.0945	2.2700e-003	8.4840
Total		**5.7967**	**0.0945**	**2.2700e-003**	**8.4840**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Hotel	2.89181 / 0.321312	5.7967	0.0944	2.2700e-003	8.4825
Total		**5.7967**	**0.0944**	**2.2700e-003**	**8.4825**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	12.6687	0.7487	0.0000	28.3913
Unmitigated	12.6687	0.7487	0.0000	28.3913

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Hotel	62.41	12.6687	0.7487	0.0000	28.3913
Total		**12.6687**	**0.7487**	**0.0000**	**28.3913**

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Hotel	62.41	12.6687	0.7487	0.0000	28.3913
Total		**12.6687**	**0.7487**	**0.0000**	**28.3913**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Vegetation

	Total CO2	CH4	N2O	CO2e
Category	MT			
Unmitigated	70.8000	0.0000	0.0000	70.8000

10.2 Net New Trees

Species Class

	Number of Trees	Total CO2	CH4	N2O	CO2e
		MT			
Miscellaneous	100	70.8000	0.0000	0.0000	70.8000
Total		**70.8000**	**0.0000**	**0.0000**	**70.8000**

HEALTH RISK ASSESSMENT
TOWNPLACE SUITES HOTEL, CALLE JOAQUIN

CITY OF SAN LUIS OBISPO, CALIFORNIA

MAY 16, 2014

PREPARED FOR:
InterMountain Management
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PREPARED BY:
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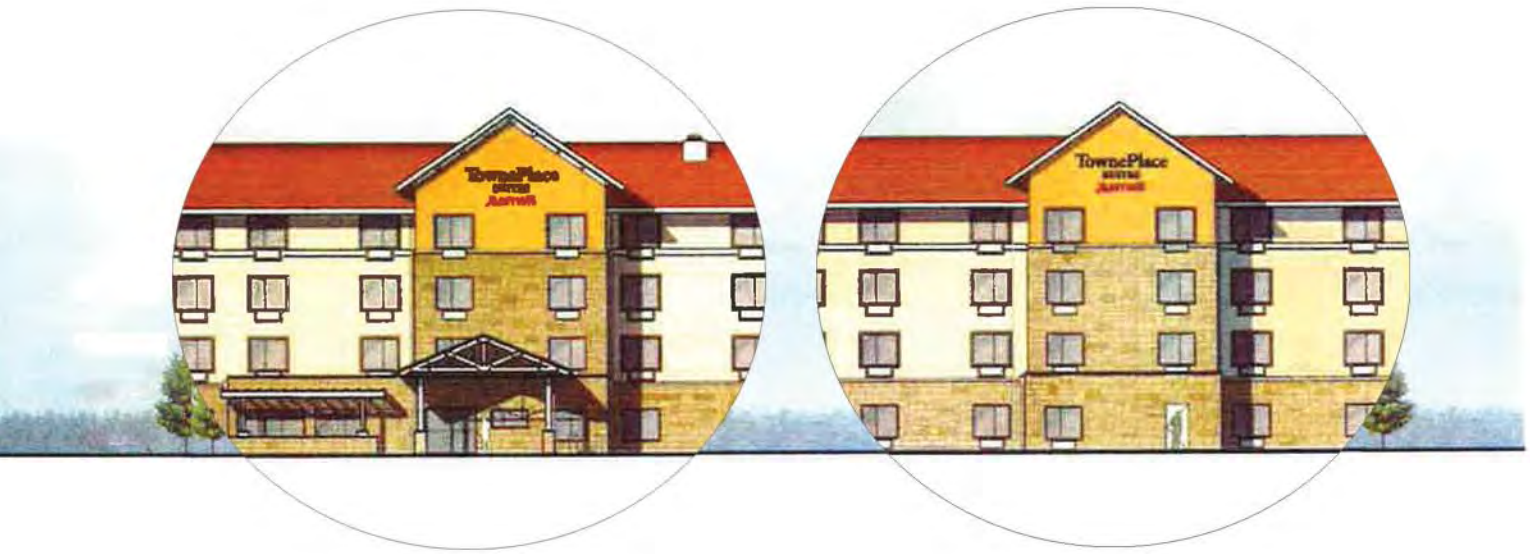

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HEALTH RISK ASSESSMENT
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GLOSSARY OF ACRONYMS & ABBREVIATIONS

Acronym	Explanation
AADT	Annual Average Daily Traffic
AT	Average Time
BAAQMD	Bay Area Air Quality Management District
CARB	California Air Resources Board
CDOT	California Department of Transportation
CEQA	California Environmental Quality Act
CPF	Cancer Potency Factor
CRAF	Chronic Risk Adjustment Factor
DBR	Daily Breathing Rate
DPM	Diesel Particulate Matter
ED	Exposure Duration
EF	Exposure Frequency
HRA	Health Risk Assessment
L/kg-d	Liters Per Kilogram Per Day
$\mu g/m^3$	Micrograms Per Cubic Meter
mg/kg-d	Milligrams Per Kilogram per Day
mph	Miles Per Hour
OEHHA	Office of Environmental Health Hazard Assessment
$PM_{2.5}$	Particulate Matter with diameter of 2.5 micron or less
PM_{10}	Particulate Matter with diameter of 10 micron or less
SLOCAPCD	San Luis Obispo County Air Pollution Control District
TAC	Toxic Air Contaminant
TOG	Total Organic Gases
USEPA	United States Environmental Protection Agency
VOC	Volatile Organic Compound
VMT	Vehicle Miles Traveled

Executive Summary

On behalf of InterMountain Management, Intrinsik, Inc. (Intrinsik) has prepared this health risk assessment report for the proposed TownPlace Suites Hotel, Calle Joaquin, San Luis Obispo, California. This report evaluated potential health risk impacts to future occupants at the proposed TownPlace Suites Hotel from exposures to nearby sources of toxic air contaminants (TACs). Mobile source emissions from highway US 101 is the predominant emission source of interest. The TACs of concern analyzed in this report included diesel particulate matter (DPM) and total organic gases (TOG) from US 101.

This assessment used methods approved by the U.S. Environmental Protection Agency (USEPA), the California Air Resources Board (CARB), the San Luis Obispo County Air Pollution Control District (SLOCAPCD), and the California Environmental Protection Agency, Office of Environmental Health Hazard Assessment (OEHHA) to derive the impact estimates, and it supports the following conclusions:

- The project is classified as a “Type B” project according to the SLOCAPCD Air Quality Handbook. A Type B project places new land uses with sensitive receptors in proximity to existing sources of TAC emissions. For Type B projects, the SLOCAPCD defines a significance threshold of 89 in one million in terms of estimated excess cancer risks from exposures to TAC emissions from nearby sources.
- A conservative residential receptor was used, even though future use is commercial (hotel).
- The maximum predicted cancer risk associated with exposures to TAC emissions for a residential receptor at the project was found to be 27.6 in one million, which is well below the SLOCAPCD Type B project cancer risk threshold of 89 in one million.
- TAC emissions from nearby sources are not anticipated to significantly impact future hotel occupants.

Section 1: Introduction

1.1 Purpose

The purpose of this assessment report is to estimate potential health risk impacts to future occupants resulting from exposures to toxic air contaminant emissions (TAC) at the proposed TownPlace Suites Hotel, Calle Joaquin, San Luis Obispo, California (the Project). The Project consists of a four-story hotel located at the end of the Calle Joaquin cul-de-sac. According to the Project site plan, the hotel would be situated within 250 feet of the nearest southbound lane of highway US 101 (Figure 1). Major highways such as the US 101 are significant sources of TACs, particularly diesel particulate matter (DPM), a monitored carcinogen of the California Air Resources Board (CARB). Through measurements derived from health risk models, the CARB and other air districts within California have established that cancer risk from DPM constitutes at least 80 percent of the total airborne cancer risk in California. Because the Project is proximal to US 101, a refined human health risk assessment (HHRA) has been performed to ensure that future occupants of the Project will not be exposed to excessive health risks from highway-related DPM emissions. This assessment quantifies TACs emissions from surrounding emission sources and estimates health risks to Project occupants. The potential health impacts were compared with the applicable San Luis Obispo County Air Pollution Control District (SLOCAPCD) health risk significance threshold for cancer risk to assess the regulatory significance of these impacts.

1.2 Risk Assessment Process

The Health Risk Assessment evaluates TAC emissions to future occupants at the Project site and quantifies the risk. As described below, the TACs assessment process consists of four distinct steps:

1. Quantify estimates of TAC emissions.
2. Identify receptor locations that may be affected by the emissions.
3. Perform air dispersion modeling analyses to estimate ambient pollutant concentrations at each receptor location using the calculated emissions and representative meteorological data to define the transport and dispersion of those emissions in the atmosphere.
4. Characterize and compare the calculated health risks with the applicable SLOCAPCD health risk significance threshold.

1.3 Methods of Analysis

This assessment employed several mathematical modeling tools and guidelines that are routinely used and approved by the SLOCAPCD for performing a health risk assessment:

1. The AERMOD Modeling System, a steady-state plume model preferred by the USEPA for complex terrain air dispersion modeling (USEPA 2005)
2. The AERMOD View modeling package, a graphical interface that provides tools and features to incorporate the necessary input files and parameters that the AERMOD model requires
3. The CARB EMFAC2011 Emissions Database, a web based data access to exhaust emissions estimated by the EMFAC2011 mobile emission source model

4. The CARB EMFAC2007 and EMFAC2011 BURDEN area planning inventory models, which are used to estimate total emissions in daily and hourly frequency
5. The OEHHA Tier I risk assessment methodology, used to estimate potential cancer risks from TAC emissions (OEHHA 2012)
6. The SLOCAPCD CEQA Air Quality Handbook (SLOCAPCD 2012)

The SLOCAPCD Air Quality Handbook guidelines are discussed below in Section 1.4. The assumptions and methodology incorporating the CARB EMFAC models are described in Section 3. The modeling parameters utilized in the AERMOD View package are described throughout Section 4. The guidelines set by the OEHHA Tier I risk assessment methodology are referenced throughout Section 5.

Section 2: Setting

2.1 Project Description and Location

The Project involves the development of a four-story hotel containing 115 rooms and a variety of outdoor amenities including a swimming pool within a fenced enclosure and a barbeque patio. The Project is located at the end of the Calle Joaquin cul-de-sac, adjacent to the US 101 highway which is located approximately 250 feet east of the closest hotel room (see Figure 2 for regional view). Undeveloped lots border the Project to the north, west, and south, while Calle Joaquin borders the Project to the east. Within the surrounding Project area are several car dealerships further west and a gasoline service station further south (Figure 1). The US 101 highway is identified as the major source of likely toxic air contaminants and diesel particulate matter. Figure 3 provides a site plan for the Project. For this assessment, a project build-out year of 2016 was assumed for all measurements and model parameters.

2.2 Toxic Air Contaminants (TACs)

According to the California Almanac of Emissions and Air Quality (CARB 2013a), a TAC is defined as an air pollutant that may cause or contribute to an increase in morbidity or mortality. Although TACs are often present at low levels in ambient air, their high toxicity may pose a risk to human health at low concentrations. A significant component of TACs which comprises the majority of the estimated health risk from TACs is DPM from diesel-fueled engines (CARB 2013a). Based on findings from a 10-year research program on the carcinogenicity of DPM, the State of California determined in 1998 that DPM from diesel-fueled engines is a human carcinogen. Long-term inhalation of DPM can result in adverse chronic health effects (CARB 1998). Exposure to diesel exhaust can cause eyes, nose, throat, and lung irritation, in addition to coughs, headaches, lightheadedness, and nausea (CARB 2008; CDC 2012). Because diesel exhaust is a major contributor to fine particulate pollution, studies have linked elevated levels of diesel exhaust particles in ambient air to increased hospital admissions, emergency room visits, asthma attacks, and premature deaths among respiratory sensitive populations.

Unlike single substance TACs (e.g., benzene), DPM is a complex mixture of hundreds of substances emitted from diesel-fueled, internal combustion engines. The composition of DPM emissions varies by engine type, operating conditions, fuel composition, lubricating oil, and the presence of an emission control system. Another characteristic of DPM which differs from other TACs is the absence of routine ambient monitoring data. As no method currently exists for measuring DPM, estimates of DPM are often based on limited data. The CARB however, has estimated preliminary concentrations using a DPM exposure method which incorporates the CARB emissions inventory's PM10 database, ambient PM10 monitoring data, and the results from several studies to estimate concentrations of DPM. This method measures DPM using PM10 because almost all of DPM mass is composed of particles of less than 10 micron in diameter. Additionally, PM10 includes the subgroup of finer particles of less than 2.5 microns in diameter (i.e., PM2.5) which accounts for approximately 94% of DPM mass (CARB 2008).

Another source of emissions which contributes to human health risk is organic compounds. These organic compounds, or TOGs, are defined as any carbon compound excluding carbon monoxide, carbon dioxide, metallic carbides or carbonates, and ammonium carbonate. Volatile organic compounds (VOCs) especially contribute to TOGs emissions and they are defined as any carbon compound that contributes to chemicals of potential concern. Exposure to VOCs can result in a variety of adverse health effects, and several VOCs have been identified by the CARB as carcinogenic including benzene, formaldehyde, 1,3-butadiene, ethylbenzene, acetaldehyde, and naphthalene. Statewide, the CARB estimates that DPM emissions from on-road mobile sources comprise 42% of total DPM emissions. County-wide however, San Luis Obispo County does not appear in the list of the state's top ten highest emitting counties for annual TAC emissions as measured by the CARB (CARB 2013a).

2.3 Sensitive Receptors

Compared to the general population, individuals with increased sensitivity to toxic exposures are considered sensitive receptors. Sensitive receptors may include young children and chronically ill individuals who may also stay at various lodging establishments such as hotels, hostels, and vacation rentals. Relevant sensitive receptors in this assessment are future occupants located at the Project site. Because of the multi-story design of the facility, sensitive receptors were also assumed to be present at 0 feet, 11 feet, 21 feet, 30 feet, and 45 feet corresponding ground level and to the heights of the first, second, third, and fourth stories.

Recommendations from the CARB Air Quality and Land Use Handbook (CARB 2005) were used to address potential health impacts associated with freeway emissions. The Handbook provides recommendations regarding the siting of new sensitive land uses near freeways and other large sources of TACs. Although the Handbook recommends avoiding the siting of new sensitive land uses within 500 feet of a freeway, the Handbook recognizes that site-specific information should be used to more adequately determine potential impacts to sensitive receptors. Accordingly, site-specific information was utilized in this HHRA.

2.4 Applicable Significance Health Risk Threshold

The SLOCAPCD CEQA Air Quality Handbook classifies the project as a Type B project, a new land use which places sensitive receptors (e.g., the Project) within 1,000 feet of existing sources of TACs. Primary emission sources of interest pertain to traffic-related TACs along the US 101 highway east of the project. For Type B projects, the SLOCAPCD has established a CEQA health risk threshold of 89 in one million for cancer risk. This risk level represents the health risk caused by ambient TAC concentrations in San Luis Obispo County. A Type B project which corresponds to a cancer risk in excess of 89 in one million is considered to be significantly impacted by surrounding TAC emission sources.

Section 3: Exposure Assessment – Toxic Air Contaminants

The first requirement in the risk assessment is the development of an emission inventory which involves identifying sources of TAC emissions and quantifying these emissions. Any emitting equipment is identified by its location and physical characteristics, (release height, release temperature, etc.) as well as the chemical nature of the emissions. In accordance with SLOCAPCD guidance, TAC emission sources located within 1,000 feet of the Project were identified and their emissions quantified. Mobile sources along US 101 highway were considered the primary source of emissions. While a service station was identified south of the Project site, the source was more than 1000 feet of the project and therefore considered insignificant. Other potential sources of TAC emissions such as dry cleaners, distribution centers, and rail yards were not identified within 1,000 feet of the Project. The Project in relation to possible sources of TAC emissions is shown in Figure 1.

US 101, with its attendant motor vehicle emissions, is located approximately 250 feet east of the nearest room location where occupants will reside at the Project site. Based on this information, a profile was created of daily traffic along the highway segment adjacent to the Project site. Emissions from vehicle traffic along US 101 were calculated using information derived from traffic count data collected by the California Department of Transportation (CDOT), vehicle miles travels projections provided by the CARB BURDEN area planning model, and emission factors from the CARB EMFAC2011 Emissions Database[1].

There are distinct steps involved in developing an appropriate emissions inventory:

1) Estimate the volume of traffic
2) Model the hourly distribution of vehicles
3) Model the distribution of vehicles by class (also called fleet mix)
4) Create a profile of vehicle counts using hourly and fleet mix estimates
5) Calculate variable emissions for each TAC of concern

---

[1] An emission factor is a representative value that attempts to relate the quantity of a pollutant released to the atmosphere with an activity associated with the release of that pollutant. These factors are usually expressed as the weight of pollutant divided by a unit of activity, volume, distance, or duration of the activity emitting the pollutant (e.g., grams of pollutant emitted per vehicle-mile traveled or grams of pollutant emitted per brake-horsepower).

3.1 Estimating Volume of Traffic

To estimate the volume of traffic, the portion of the US 101 highway relevant to the Project needs to be determined. The Project site is located on the west side of the US 101 between the Los Osos Valley Road ramp and the Prado Road ramp. The CDOT traffic volumes data, however, only displays traffic information for the freeway segment between the Los Osos Valley Road ramp and the Madonna Road ramp, further north of the Prado Road ramp. Therefore, the Los Osos ramp Ahead Leg, the freeway segment north of the Los Osos ramp, was used for this analysis. The estimated Annual Average Daily Traffic (AADT) of the Los Osos Ahead Leg is 58,700 vehicles per day (CDOT 2013).

3.2 Hourly Vehicle Distribution Modeling

Estimating the distribution of traffic by hour of the day requires data on vehicle miles traveled (VMT) by hour of the day. The CARB EMFAC BURDEN area planning inventory models provide, among other traffic data, VMT for a given county and projected year. VMT data is broken down by vehicle class and represent the total number of miles traveled by each vehicle class per hour of the day for a given county and projected year. Because the most current EMFAC BURDEN model, EMFAC2011-LDV (CARB 2011), does not provide hourly VMT data on heavy duty trucks, the EMFAC2007 model (CARB 2007) was used to estimate the hourly VMT of heavy duty trucks as needed. And so, the EMFAC BURDEN models were used to estimate VMT for San Luis Obispo County for the year 2016. The hourly VMT data for EMFAC2011 and EMFAC2007 are shown in Tables 1 and 2 respectively.

To appropriately model the distribution of vehicles by hour of the day, hourly VMT data were used to derive a diurnal scaling factor. This scaling factor could then be multiplied by the number of vehicles in each vehicle class to estimate the number of vehicles on the US 101 (in San Luis Obispo County in the year 2016). The diurnal scaling factor is calculated by dividing the hourly VMT by the total VMT of the day for each vehicle class. The diurnal scaling factors are detailed in Table 3.

3.3 Fleet Mix Distribution Modeling

After calculating the diurnal scaling factor, the number of vehicles in each vehicle class needs to be estimated. This can be done by estimating the distribution of the vehicles by their vehicle class (the fleet mix), which also requires VMT data. For fleet mix distribution, the current model EMFAC2011 provides VMT data for all vehicle classes and can be obtained through the CARB EMFAC2011 Emissions Database (CARB 2013b). To query the appropriate data from the web access database, a number of parameters are required. Emission rates for San Luis Obispo County for the projected year 2016 were selected. Because DPM and TOG emissions are the TACs of concern, all fuel types were selected. Annual Average emissions rates and vehicle speeds 45, 55, and 65 miles per hour (mph) were selected to accommodate emissions modeling assumptions. EMFAC2007 vehicle categorization, on the other hand, was selected for simplicity.

To model the fleet mix distribution, VMT by vehicle class was used to derive a vehicle class scaling factor, much like the diurnal scaling factor. This scaling factor could be multiplied by the total traffic volume to estimate the number of vehicles in each vehicle class on the US 101 (in

San Luis Obispo County in the year 2016 at speeds 45, 55, and 65 mph). The vehicle class scaling factor is simply the VMT of a vehicle class divided by the total VMT of all classes together. In this analysis, DPM emissions are modeled by diesel engine vehicles while TOG emissions are modeled by catalytic gasoline vehicles, noted in the output as CAT. Non-catalytic (NCAT) gasoline vehicles are excluded in this analysis; therefore, scaling factors are not calculated for those vehicle classes. The VMT data for speeds 45, 55, and 65 mph is available in Table 4, and the vehicle class scaling factors are in Table 5.

3.4 Traffic Profile

Using the estimates derived above, a detailed profile of traffic by hour and by vehicle class was developed. The AADT obtained from the CDOT traffic volumes data was multiplied by the vehicle class scaling factor to obtain the fleet mix distribution. The number of vehicles in each class (fleet mix) were multiplied by their respective diurnal scaling factors to obtain the number of vehicles on the US 101 (in San Luis Obispo County in the year 2016 at speeds 45, 55, and 65 mph) each hour by vehicle class. Table 6 contains this profile of vehicle counts. The diurnal pattern of vehicles on the US 101 indicates elevated traffic during the morning hours of 7am to 10am and afternoon hours of 5pm to 7pm.

3.5 Variable Emissions

The CARB EMFAC2011 Emissions Database also provides emissions rates by vehicle class and vehicle speed. Emission rates were available for TOG but not DPM. For this emissions modeling, DPM was assumed to be appropriately represented by PM_{10}. Because the diurnal pattern reveals clear trends for morning and afternoon traffic, vehicle speeds were grouped by time of day. Traffic was presumed to be slower for morning and afternoon traffic hours. Tables 7 and 8 show the emission parameters for DPM and TOG respectively.

Hourly emissions rates were calculated by multiplying the emissions factor (determined by vehicle class and speed), the vehicle count (by time of day and vehicle class), freeway length, and unit conversion factors (hour to second). The length of the freeway segment impacting the Project is difficult to determine precisely, so it was estimated conservatively. The impacting length was estimated to be the freeway segment encompassing the entirety of the Project lot (825 feet) plus 1500 feet in either direction, a distance well above the SLOCAPCD Air Quality Handbook standards for a "Type B" project designation. This amounts to 3825 feet or 0.725 miles. Thus, emissions rates (grams/second) were calculated for each hour by vehicle class.

The total emissions rates for each hour were calculated by summing across all vehicle classes. The final emissions rate to be used in the air dispersion model was selected to be the maximum hourly emission, divided by two to account for northbound and southbound traffic each way. The variable emissions coefficients were calculated by normalizing the hourly emissions rates to the maximum hourly emission rate. Hence, the variable emissions are unitless coefficients that are multiplied by the final emissions rate (grams/second) to obtain hourly emissions rates. The hourly variable emissions coefficients and final emissions rate are calculated separately for DPM and TOG and are shown in detail in Tables 9 and 10 respectively.

Section 4: Air Dispersion Modeling

The next step in the assessment process utilizes the emissions inventory calculated above along with a mathematical air dispersion model and representative meteorological data to calculate impacts at the various receptor locations. The American Meteorological Society/Environmental Protection Agency Regulatory Model Improvement Committee's AERMOD steady-state plume model, the preferred model of the USEPA (USEPA 2005), was used to estimate the health risk impacts at receptors located within the project from exposures to TACs. The software package AERMOD View (Lakes 2014) was used to determine source and receptor coordinates, incorporate appropriate meteorology and terrain data, run the AERMOD model, and produce graphical output. All measurements and model parameters are discussed in full below.

Air dispersion of DPM and TOG emissions was modeled at each receptor height: 0 feet, 11 feet, 21 feet, 30 feet, and 45 feet. Therefore, total of ten AERMOD model runs were completed for this HHRA.

4.1 Mapping Project Boundaries

In accordance with CARB Air Quality and Land Use Handbook guidelines (CARB 2005), the fence line of the lot encompassing the Project and associated parking and amenities constituted the Project Boundaries for the AERMOD model. The midpoint of the Project Boundary adjacent to the Calle Joaquin cul-de-sac was established as the point of reference in AERMOD View. The Polygonal Building tool was used to model the Project Boundary lines, which helped determine which receptors would be retained for analysis.

4.2 Receptors

Receptors encompassing the Project site were configured using the Uniform Cartesian Grid tool. After excluding receptors placed outside of the Project Boundaries, 160 receptors were retained. Three additional receptors were affixed to the boundary adjacent to the US101, one on each corner and another at the midpoint. A total of 163 receptors were utilized to output a detailed contour plot of the impact of emissions on the Project. Coordinates of the receptors are detailed in Appendix A.

4.3 Sources

The mobile source emissions from the US 101 were configured as two line volume sources, one for each direction (northbound and southbound) and labeled as such. Each line source was modeled to represent 1166 meters in length, equivalent to the 3825 feet of freeway segment impacting the Project as determined in Section 3.5. In addition, the line sources were configured as separated volumes and assume a release height of 12 feet (plume height of 4.31 meters) and a plume width of 30 feet (9.14 meters). The emission rate and variable emissions input used depended on whether DPM or TOG emissions were being modeled. The final emissions rate and variable emissions coefficients for DPM and TOG are shown in Tables 9 and 10 respectively. The location of the mobile source emissions in relation to the Project receptors are shown in Figure 4.

4.4 Meteorological Data

Hourly meteorological data consisting of air temperature, wind speed, wind direction, and atmospheric mixing heights are required to operate the AERMOD model to determine the direction and rate of dispersion of emissions released into the atmosphere. Surface data, such as surface reflection of radiation, heat flux, and surface roughness are also required to operate the model. In order to be incorporated into the AERMOD model, the meteorological and surface data need to be formatted appropriately by AERMET, the meteorological preprocessing program that accompanies the AERMOD modeling system.

The SLOCAPCD provided meteorological and surface data from the San Luis Obispo-Higuera Street air monitoring site, less than one mile from the project, for the year 2011. Though the data was formatted from a previous version of AERMET, this data was successfully incorporated in the air dispersion analysis. The monitoring site's base elevation of 55 meters was also used in the AERMOD model. Figure 5 provides a wind rose for the meteorological data from the San Luis Obispo-Higuera Street air monitoring site. The figure indicates that the most frequent wind directions are from northwest directions, which is potentially protective in regard to emissions from the US 101.

4.5 Terrain Data

AERMOD can handle both simple and complex terrain using USGS Digital Elevation Data. Similar to preprocessing meteorology data, AERMOD utilizes the preprocessing program AERMAP to prepare terrain data to be incorporated into the air dispersion analysis. Appropriate terrain data such as elevation and hill-height scaling factors was obtained from the Lakes Environmental terrain database (Lakes 2008). AERMAP incorporates terrain data with receptor height to model the air dispersion and needs to be rerun when changing the receptor height, as described below in Sections 4.6 and 4.8.

4.6 Other Model Parameters

The AERMOD model features a number of options for complex modeling scenarios, but only a few are of interest in this analysis. The averaging time of the impact concentrations was set to Period only with hourly (1 hour) or daily (24 hour) options not selected as this air dispersion analysis did not cover acute exposures. The model utilized an Urban Dispersion Coefficient, rather than Rural, to account for the additional turbulence and heat effects that urban land use has on plume dispersion. To use this dispersion coefficient, the estimated population of San Luis Obispo County (276,433) was obtained from the U. S. Census Bureau's QuickFacts database and included in the model (citation). The Flagpole Receptors feature was used to establish the various heights of the Project receptors. Building downwash is usually incorporated to account for building wake effects, but since no point or flare sources were utilized in this analysis, it was not included. The rest of the AERMOD modeling options were set to regulatory default.

4.7 Output

AERMOD View produces a variety of output that can be used to illustrate the dispersion of the TAC emissions and their impact on the Project receptors. The first of which is the raw ADO output file, which contains the emission concentrations impacting each of the 163 receptors as well as all of the input data and modeling options. A sample ADO file (DPM emissions modeled at ground level) is available in Appendix B. AERMOD View also produces reports that summarize the modeling inputs, such as the Source Pathway, Receptor Pathway, and Meteorology Pathway. In the contour plots, the large number of receptors help visualize how concentrations vary in distance from the US 101 highway and in height above the ground. This pattern with respect to height and distance from the US 101 highway can be seen in Appendix C.

4.8 Rerunning AERMOD Model

As stated earlier, ten AERMOD model runs were necessary for this analysis, each of which require different model parameters. For modeling the receptors at the different heights of the Project (0 feet, 11 feet, 21 feet, 30 feet, and 45 feet), the Flagpole Receptor parameter was changed. This required rerunning AERMAP each time in order to incorporate the new receptor height with the terrain data. Shifting analysis of DPM emissions to TOG emissions requires changing the Emission Rate of both line volume sources (northbound and southbound) and updating the Variable Emissions input in the Source Pathway. Output was saved at the end of each AERMOD model run.

Section 5: Cancer Risk Evaluation

5.1 Cancer Risk Characterization Methodology

The estimated TAC emissions can be used to assess potential health impacts to future occupants of the hotel from exposure to TAC emissions near the Project site. This cancer human health risk assessment approach follows current methodologies developed by the California Office of Environmental Health Hazard Assessment (OEHHA) under the Air Toxics "Hot Spots" Information and Assessment Act of 1987 (AB 2588 [Chapter 1252, Statutes of 1987, California Health and Safety Code Section 44306]). Specifically, exposure parameters are consistent with the 2012 *Technical Support Document for Exposure Assessment and Stochastic Analysis* while toxicity values were derived from the 2009 *Technical Support Document for Cancer Potency Factors: Methodologies for Derivation, Listing of Available Values, and Adjustments to Allow for Early Life Stage Exposures*. To be protective of potential sensitive receptors at the Project site (as recommended by SLOAPCD), this cancer risk assessment evaluated potential risks from highway emissions to a residential receptor, a highly conservative assumption for hotel workers or guests.

Risk characterization involves integrating the exposure analysis (inclusive of contaminant concentrations and receptor-specific exposure parameters) with chemical-specific toxicity information. The risk evaluation focuses exclusively on the inhalation of highway emission, which is the dominant exposure pathway for TACs. The cancer risks from TACs were estimated by multiplying the modeled daily annual average TAC concentration and a "cancer risk unit factor", which integrates the toxicity and exposure parameters, as described in Equation 1 and in additional detail below:

$$\text{Cancer Risk} = C_{TAC} \times \text{CRUF} \quad \text{(EQ-1)}$$

Where:

Cancer Risk =	Hypothetical individual cancer risk if exposed to carcinogenic emissions from a particular source for specified exposure durations (risk per million exposed individuals)
C_{TAC} =	Modeled daily annual average TAC concentration ($\mu g/m^3$)
CRUF =	Cancer Risk Unit Factor (per $\mu g/m^3$ per million)

The cancer risk unit factor (CRUF) is calculated by multiplying the cancer toxicity factor (inhalation cancer slope factor, or CSFi), an adjustment factor for early life stage exposures to carcinogens, and the inhalation exposure factor, as summarized in Equation 2:

$$\text{CRUF} = \text{CSFi} \times \text{ASF} \times \text{IEF} \quad \text{(EQ-2)}$$

Where:

CSFi =	TAC-specific Inhalation cancer slope factor $(mg/kg\text{-}day)^{-1}$
ASF =	Age sensitivity factor for early life exposure (unitless)
IEF =	Inhalation exposure factor (liters/kg-day)

The inhalation exposure factor combines receptor-specific exposure parameters, as expressed in Equation 3 below:

$$\text{Inhalation Exposure Factor} = \text{DBR} \times \text{EF} \times \text{ED} / \text{AT} \quad \text{(EQ-3)}$$

Where:

DBR =	Daily breathing rate (liters/kg-day)
EF =	Exposure frequency (days/year)
ED =	Exposure duration (years)
AT =	Averaging time period for carcinogens (lifetime; days)

5.1.1 Exposure Parameters

As noted above, although it is anticipated that hotel workers or visitors would be exposed to TAC emissions for a limited period of time, the SLOCAPCD considers hotel occupants as sensitive receptors. Therefore, cancer risks are based on residential exposure parameters, and include the 30-year exposure duration recommended by OEHHA (2012). The residential exposure frequency is 350 days per year and the carcinogenic averaging time is the lifetime expectance of 70 years. The daily breathing rate of 580 liters/kg body weight-day was calculated by averaging the age-specific values recommended by OEHHA, as shown in Table 11, below. *Inserting these values into Equation 3 above results in a residential inhalation exposure factor of 238 liter/kg-day*.

Table 11: 30-year Age Adjusted Breathing Rate

Receptor	Age Range	95th% Breathing Rate (l/kg-day)	Duration	Adjusted Rate (l/kg-day)
Resident	3rd Trimester	361	0.25/30	3.00
	0<2 years	1090	2/30	72.6
	2<16 yr	745	14/30	347.6
	16<30 yr	335	14/30	156.3
	30-year Exposure Duration			**580**

Age-specific breathing rates from Table 3.1 of OEHHA 2012.

5.1.2 Toxicity Factors

Inhalation slope factors were obtained from OEHHA (2009). Specifically, the diesel particulate matter inhalation cancer slope factor is 1.1 per mg/kg-day (or $[\text{mg/kg-day}]^{-1}$). However, no specific CSFi is available for the mixture of compounds that make up TOG (of which VOCs are the principal component). However, the Bay Area Air Quality Management District (BAAQMD) has developed an approach that can be used to quantify the toxicity associated with non-diesel VOCs, based on the speciation (or composition) of the TOG emissions (BAAQMD 2012). In this approach, the percentage composition of each of the TOG components is combined with the chemical-specific toxicity value to develop a "weighted toxicity value". As shown in Table 12 below, the summation of these weighted values is the cumulative inhalation cancer slope factor for those TOG emissions.

Table 12: TOG Inhalation Cancer Slope Factor Calculation

TOG Compound	Gasoline TOG Speciation (%TOG)	Inhalation Cancer Slope Factor $(\text{mg/kg-day})^{-1}$	Weighted CSF_i $(\text{mg/kg-day})^{-1}$
Acetaldehyde	0.25%	1.00E-02	2.50E-05
Benzene	2.19%	1.00E-01	2.19E-03
1,3-Butadiene	0.48%	6.00E-01	2.88E-03
Ethylbenzene	0.93%	8.70E-03	8.09E-05
Formaldehyde	1.40%	2.10E-02	2.94E-04
Naphthalene	0.04%	1.20E-01	4.80E-05
TOG Emissions Total			**5.52E-03**

Due to the potential increased susceptibility of infants and children, the age sensitivity factor is required for the calculation or residential cancer risks. The cancer risk adjustment factor was developed as shown in Table 13 below.

Table 13: Age Sensitivity Factors for Early life Exposures

Receptor	Age Range	ASF	Duration	Cancer Adjustment Factor
Resident	3^{rd} Trimester	10	0.25/30	0.083
	0<2 years	10	2/30	0.67
	2<16 yr	3	14/30	1.4
	16<30 yr	335	14/30	0.47
	30-year Exposure Duration ASF			2.6

See Section 11 of OEHHA 2012 or OEHHA 2009 for age-specific ASFs.

5.1.3 Cancer Risk Calculations

The "cancer risk unit factor" is calculated for each TAC by combining the exposure calculations and toxicity data provided in Sections 5.1.1 and 5.1.2 in Equation 2. The results of these calculations are summarized in Table 14 below.

Table 14: Cancer Risk Unit Factor Calculations

TAC	IEF (l/kg-day)	ASF (unitless)	CSF_i $(mg/kg\text{-}day)^{-1}$	CRUF $(\mu g/m3)^{-1}/10^{-6}$
DPM	238	2.6	1.1	690
TOG			0.0055	3.5

For each receptor height at each receptor location across the Project site, discrete DPM and TOG cancer risks are calculated by multiplying the corresponding dispersion model emissions data with the TAC-specific CRUF shown in Table 14 (see also Equation 1). These location-specific DPM and TOG emission-related cancer risks are presented in Appendix D.

5.2 Total Cancer Risk Results

The total cancer risk for each receptor location is obtained by summing the DPM and TOG risk estimates for that location (see Appendix D). The receptor location with the highest total cancer risk is considered the "maximally exposed receptor", which are summarized in Table 15 below. It should be noted that the maximum DPM and TOG cancer risks at a specific receptor height was not always associated with the maximally exposed receptor. The maximally exposed receptor total cancer risk from the surrounding sources of TAC emissions is 28 in one million (at ground level), which is below the SLOCAPCD Type B health risk significance threshold of 89 in one million. In addition, the estimated cancer risk decreases with increasing height above the ground. As shown in Table 15, the majority of the estimated cancer risk is attributable to DPM emissions from vehicle traffic along US 101.

Table 15: Total Cancer Risk Characterization

Building Level	Height Above Ground (feet)	Maximally Exposed Receptor Location Coordinates		Cancer Risk at Maximally Exposed Receptor (risk/million)		Exceeds SLOAPCD Cancer Risk Significance Threshold (89/million)?
		X	Y			
Ground Level	0	711134.84	3903268.8	DPM	23.1	No
				TOG	4.5	
				Total	***27.6***	
1st Floor	11	711134.84	3903268.8	DPM	19.8	No
				TOG	3.8	
				Total	***23.6***	
2nd Floor	21	711134.84	3903268.8	DPM	13.2	No
				TOG	2.5	
				Total	***15.7***	
3rd Floor	30	711117.53	3903260.44	DPM	7.5	No
				TOG	1.4	
				Total	***8.9***	
4th Floor	45	711064.07	3903317.84	DPM	3.5	No
				TOG	0.6	
				Total	***4.1***	

Section 6: Uncertainty

The goal of a health risk assessment is to provide scientific and objective risk estimates that enable effective risk management. However, when using health risk assessment results for decision-making, one should consider the methods employed in deriving the predicted risk values. Reviewers may be misled if they rely only on a simplified numerical representation of risk without considering the underlying uncertainties, limitations, and assumptions. In order to provide the reader with perspective on the quality of the predicted risk values, this section considers the uncertainty and associated conservatism inherent in this HRA.

There are substantial uncertainties involved in assessing the health risk of air pollutants. Uncertainties can originate from modeling emissions, modeling air dispersion, and quantifying risk. Once any type of uncertainty is introduced into the early stages of the process, it propagates as calculations proceed. Therefore, the methodology described above for assessing health risks in emissions modeling, dispersion modeling, and risk quantification have been developed to provide conservative results (in terms of over predicting health impacts).

6.1 Emissions Modeling

Developing the emissions inventory is a long process of intermediate calculations involving estimates of traffic volume, vehicle miles travelled, and emissions rates, where each of these estimates introduces a possible source of uncertainty. The Annual Average Daily Traffic (AADT) count was obtained from the CDOT 2012 Traffic Volumes. Although great care was taken to select the most appropriate AADT, subsequent calculations and estimates were modeled on the year 2016, the projected build-out date, and not 2012.

The EMFAC BURDEN models introduce significant points of uncertainty. Due to the absence of VMT data on heavy-duty diesel vehicles in the EMFAC2011 BURDEN model, supplemental VMT results were combined from the earlier EMFAC2007 version, which featured outdated projections of VMT data. This source uncertainty was mitigated in that these older projections were used only for hourly distribution of heavy-duty diesel vehicles, rather than number of vehicles on the road which would be a more significant source of uncertainty. Intermediate calculations using VMT data yielded a slightly lower (0.3% less) annual average daily vehicle count.

The EMFAC Emissions Database is also a significant source of uncertainty. VMT data and emissions rates obtained from the EMFAC emissions database assume very specific vehicle speeds. Lighter vehicle classes were associated with speeds 55 and 65 miles per hour while the heavier vehicle classes were associated with speeds 45 and 55 miles per hour. This assumption affects both the variable emissions coefficients as well as the final emissions rate. In addition, DPM was modeled by PM_{10} as no measurement method for DPM currently exists, introducing another source of uncertainty for diesel emissions. Both the EMFAC BURDEN models and the EMFAC Emissions Database are based on a particular fleet projection, San Luis Obispo County in 2016. The length of freeway segment that impacts the Project is difficult to model precisely and so was estimated conservatively.

6.2 Air Dispersion Modeling

Because the air dispersion model incorporates so many data inputs, a full inventory of assumptions and estimates needs to be taken. Receptors were generated using a Uniform Cartesian Grid but could have possibly been modeled more appropriately, such as parallel to the Project Boundaries. The Project Boundaries themselves, although carefully selected, were developed using the AERMOD View tools rather than with coordinates obtained from the site plan. This was counteracted by placing additional receptors at the Project Boundary closest to the US 101. Since the Project site was modeled by 163 receptors, this source of uncertainty is considered to be fairly low priority.

The sources of emissions, on the other hand, comprised a significant source of uncertainty. The sources were modeled as two line volume sources that assume a specific release height and freeway lane width. They were also developed to measure to a specific length, the estimated length of freeway. Most importantly, the emission sources incorporate the emissions rates and variable emissions coefficients calculated from the emissions modeling in Section 3.5, propagating uncertainties involved with those calculations.

6.3 Risk Quantification

Considerable uncertainty is associated with risk quantification of TAC emissions. Risk quantification is the process of characterizing the relationship between the exposure concentration of an agent and the incidence and severity of adverse health effects in an exposed population. As with emissions and air dispersion modeling, risk quantification involves a number of input parameters that may be sources of uncertainty. Many of these parameters were based on guidelines recommended by the regulatory agencies and professional organizations cited. To ensure that potential health impacts to the exposed receptors will not be underestimated, regulatory agencies use uncertainty (or safety) factors in calculating excess cancer risk.

The OEHHA recommends using the 30-year exposure duration for determining sensitive receptor cancer risks. This exposure duration also assumes an exposure frequency of 350 days per year, 24 hours per day and is representative of residential exposures. The exposure duration of 30 years assumes that people occupying a major urban area may be exposed to TAC emissions over the duration of residency. The OEHHA also recommends use of an age sensitivity factor to account for child receptors. The use of these factors is intended to be conservative but nonetheless introduce uncertainty. The use of the property is commercial, and the assumption of residential exposure overestimates risk.

Another source of uncertainty lies in the calculation of the toxicity factor for TOG emissions. Unlike the inhalation exposure factor calculated for DPM emissions, the toxicity factor for TOG involves taking a weighted average of residential cancer risk factors based on TOG speciation. Although the values for calculating the total weighted toxicity factor were obtained directly from BAAQMD guidelines, speciation of TOG was estimated using EMFAC models, introducing another source of uncertainty.

6.4 Conclusions Regarding Uncertainty

Although it is difficult to quantify the uncertainties associated with all the assumptions made in this risk assessment, the use of conservative assumptions likely contributed to a substantial overestimation of exposure and risk. Language suggested by the USEPA (1989) to explain the effect of using conservative assumptions in cancer risk assessments is as follows:

> *These values are upper-bound estimates of excess cancer risk potentially arising from lifetime exposure to the chemical in question. A number of assumptions have been made in the derivation of these values, many of which are likely to overestimate exposure and toxicity. The actual incidence of cancer is likely to be lower than these estimates and may be zero.*

In summary, the primary issues that likely result in overestimations of cancer risk to receptors at the Project site are:

- The estimated length of freeway segment used to calculate emissions impacting receptor locations at the Project;
- The location of receptors at Project fence line rather than areas of anticipated use; and
- The assumption of residential exposure for quantifying cancer risk even though future use is commercial.

Uncertainties that may lead to the underestimation of cancer risks are:

- Minor loss (0.3%) in annual average daily vehicle count due to intermediate calculations as shown in Table 6; and
- The observed hourly traffic pattern and assumed vehicle speed, which affect the vehicle class specific emissions rate and final emissions rate calculations.

Section 7: Discussion and Conclusions

This HRA evaluated the potential cancer risks to future occupants of the proposed TownPlace Suites Hotel in Calle Joaquin, San Luis Obispo, California. The Project site was evaluated for possible sources of TAC emissions and was determined to be within 250 feet of the US 101, a major highway with high volume of traffic. Because the location of the Project is within 1000 feet of a major source of TAC emissions, the Project is classified as a "Type B" project as determined by SLOCAPCD guidelines. SLOCAPCD defines a significance threshold of 89 in one million in terms of estimated excess cancer risks from exposures to TAC emissions from nearby sources.

Emissions from the US 101 were carefully modeled and involved an extensive estimation process as described in Section 3. In summary, the process involved estimating volume of traffic, modeling diurnal trends in vehicle counts, determining the traffic fleet mix, and calculating hourly estimates of traffic by vehicle class. A significant portion of these estimates were based on traffic in San Luis Obispo County for the projected build-out year of 2016. The intermediate calculations for emissions modeling are detailed in full in Tables 1 through 10.

Air dispersion incorporated data from several sources such as estimated mobile source emissions calculated in Section 3, meteorological data obtained from the SLOCAPCD, terrain data obtained from Lakes Environmental terrain database, and regulatory assumptions set as default options in AERMOD View. Modeling input, such as source coordinates and receptor coordinates are detailed in full in Appendix A. AERMOD View produces an ADO file showing a majority of the parameters used as well as detailed output on exposure concentrations at each receptor. A sample ADO file for DPM emissions modeled at ground level is available in Appendix B. In addition, AERMOD View provided a variety of other output, such as contour plots, to visualize the air dispersion.

As can be seen in the contour plots presented in Appendix C, estimated cancer risk decreases substantially with respect to height. In addition, the contour plots reveal that the location of the maximally exposed receptor location also changes with respect to height as noted in Table 15, specifically the 3rd and 4th Floors. The contour plots reveal that at ground level, the peak concentration impacting the Project is located at the edge of the Project Boundary and tends to remain there as height increases until the 4th Floor where the impacting concentrations are more or less equivalent throughout.

Total cancer risk from both TOG and DPM emissions were calculated for all receptor locations. Cancer risk was quantified in accordance with current regulatory guidance (OEHHA 2012) or currently recommended methods (BAAQMD 2012). Total cancer risk was calculated at heights 0 feet, 11 feet, 21 feet, 30 feet, and 45 feet and is shown in Table 15. Values incorporated into the risk calculations for DPM and TOG are shown in Tables 11 through 14.

The maximally exposed receptor location (assumed to be a residential receptor) at ground level was associated with the highest cancer risk for the entire Project site, and the cancer risk associated with this receptor location was compared with the SLOCAPCD's significance threshold. The cancer risk of the maximally exposed receptor location is 27.6 in one million, which is substantially less than the threshold of 89 in one million. Therefore, TAC emission from the US 101 freeway are not anticipated to significantly impact future occupants of the proposed TownPlace Suites Hotel.

Section 8: References

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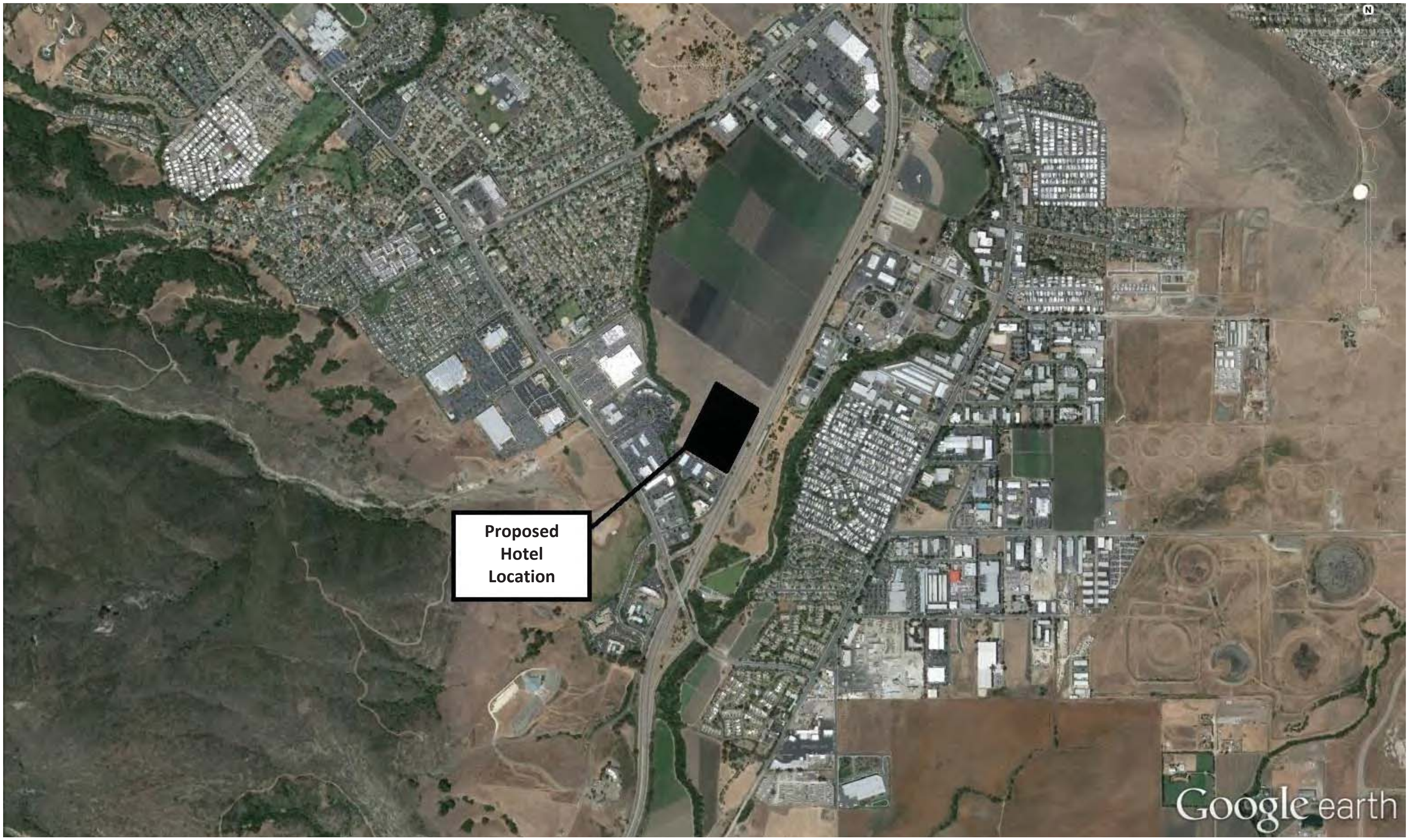
Figure 1: Location of Proposed TownPlace Suites Hotel

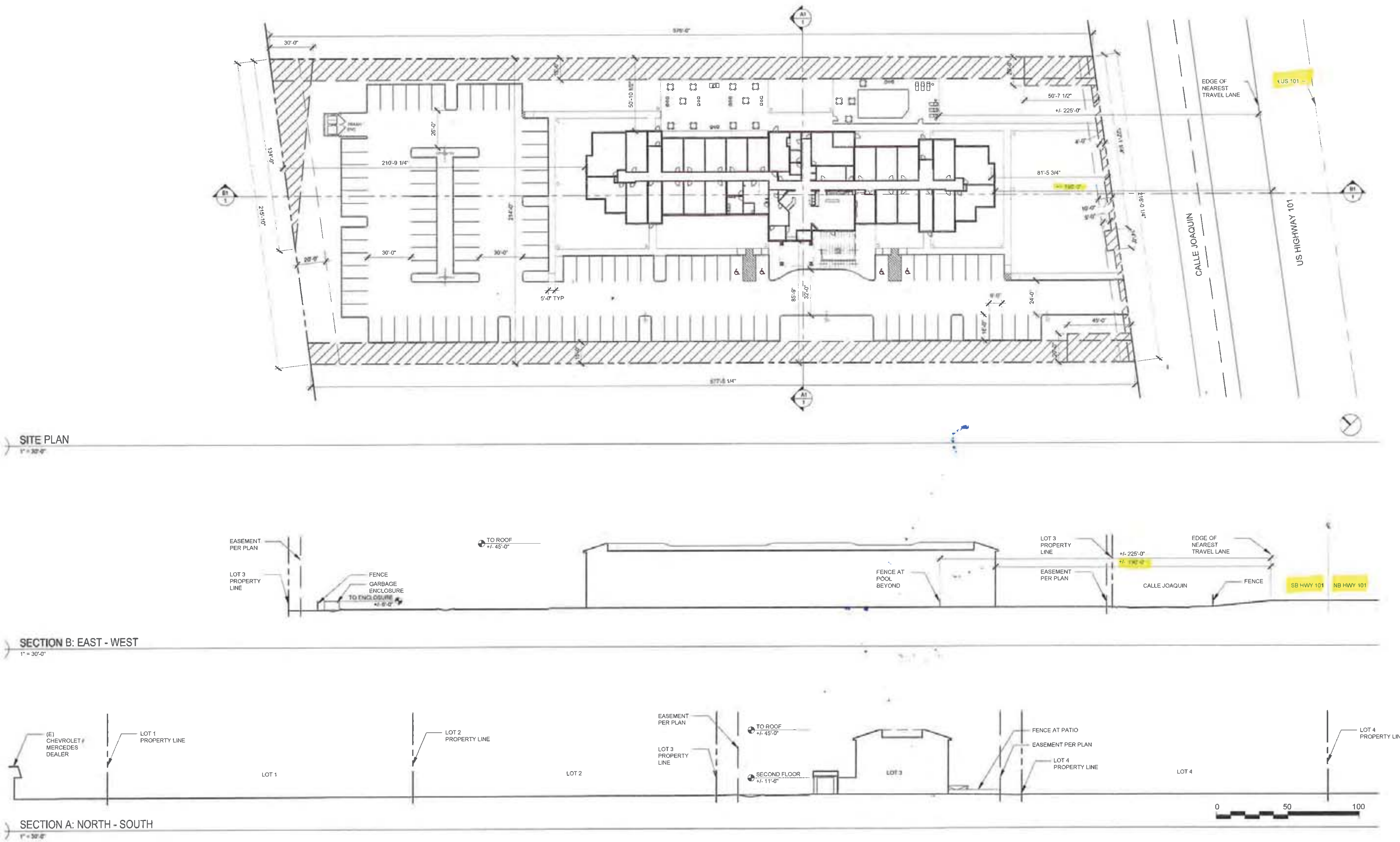
Source: 10 S, 710937.81 m E, 3903112.77 m N. Google Earth. 23 August 2013. 14 May 2014.

Figure 2: Regional Site Map



Source: 10 S, 710975.00 m E, 3903254.25 m N. Google Earth. 23 August 2013. 14 May 2014.

Figure 3: Proposed TownPlace Suites Hotel Plan



Source: MYHREA Group Architects

Figure 4: Receptor and Source Areas

Source: Lakes Environmental Software. 2008. Terrain Data – 7.5 DEM: San Luis Obispo – California.

Figure 5: Wind Rose

Source: 10 S, 711411.99 m E, 3903853.53 m N. Google Earth. 23 August 2013. 14 May 2014.

Table 1 - Hourly VMT (BURDEN2011 Model)

EMFAC2011 BURDEN Model - Hourly VMT/1000 for San Luis Obispo County in 2016

Title : San Luis Obispo County Subarea Annual CYr 2016 Default Title
Version : Emfac2011-LDV V2.50.58.094 Sp: Trip Assign Santa Clara County
Scen Year: 2016 -- All model years in the range 1972 to 2016 selected
Season : Annual
Area : San Luis Obispo County

Hour of Day	LDA-NCAT	LDA-CAT	LDA-DSL	LDA-TOT	LDT-NCAT	LDT-CAT	LDT-DSL	LDT-TOT	MDV-NCAT	MDV-CAT	MDV-DSL	MDV-TOT	LHDT1-NCAT	LHDT1-CAT	LHDT1-DSL	LHDT1-TOT	LHDT2-NCAT	LHDT2-CAT	LHDT2-DSL	LHDT2-TOT	T6-NCAT	T6-CAT	*T6-DSL* [a]	T6-TOT	T7-NCAT	T7-CAT	*T7-DSL* [a]	T7-TOT	ALL-TOT
0	0	38	0	38	0	21	0	22	0	13	0	13	0	2	15	17	0	0	4	4	0	0	*0*	0	0	0	*0*	0	93
1	0	12	0	12	0	7	0	7	0	4	0	4	0	1	22	23	0	0	5	5	0	0	*0*	0	0	0	*0*	0	51
2	0	9	0	9	0	5	0	5	0	3	0	3	0	17	29	46	0	1	7	8	0	0	*0*	0	0	0	*0*	0	72
3	0	5	0	5	0	3	0	4	0	2	0	2	0	2	4	6	0	0	1	1	0	0	*0*	0	0	0	*0*	0	17
4	0	15	0	15	0	8	0	8	0	5	0	5	0	4	9	13	0	0	2	2	0	0	*0*	0	0	0	*0*	0	45
5	0	28	0	28	0	16	0	16	0	9	0	9	0	8	0	8	0	0	0	0	0	1	*0*	1	0	0	*0*	0	62
6	0	134	1	135	0	75	0	77	0	44	0	45	0	4	0	4	0	0	0	0	0	0	*0*	0	0	0	*0*	0	260
7	1	284	2	287	0	161	0	162	0	95	0	95	0	8	5	13	0	1	1	2	0	0	*0*	0	0	0	*0*	0	558
8	1	251	2	254	0	143	0	144	0	84	0	84	0	27	16	43	0	2	4	6	0	3	*0*	3	0	0	*0*	0	534
9	1	150	1	152	0	85	0	85	0	50	0	50	0	20	15	35	0	1	4	5	0	3	*0*	3	0	0	*0*	0	330
10	1	163	1	165	0	92	0	93	0	54	0	54	0	21	14	36	0	1	3	5	0	1	*0*	1	0	0	*0*	0	354
11	1	207	1	210	0	118	0	118	0	69	0	69	0	18	15	32	0	1	3	5	0	2	*0*	2	0	0	*0*	0	436
12	1	220	2	222	0	125	0	126	0	73	0	74	0	14	10	23	0	1	2	3	0	1	*0*	1	0	0	*0*	0	449
13	1	215	2	217	0	122	0	122	0	72	0	72	0	18	11	30	0	1	3	4	0	1	*0*	1	0	0	*0*	0	446
14	1	253	2	256	0	143	0	145	0	84	0	85	0	13	7	20	0	1	2	3	0	1	*0*	1	0	0	*0*	0	509
15	1	259	2	262	0	147	0	147	0	86	0	87	0	20	8	27	0	1	2	3	0	1	*0*	1	0	0	*0*	0	528
16	1	264	2	266	0	149	0	151	0	88	0	88	0	42	8	49	0	3	2	5	0	1	*0*	1	0	0	*0*	0	559
17	1	297	2	301	0	168	0	170	0	99	0	99	0	20	17	37	0	1	4	5	0	2	*0*	2	0	0	*0*	0	615
18	1	208	1	211	0	118	0	119	0	69	0	70	0	8	12	20	0	1	3	3	0	1	*0*	1	0	0	*0*	0	423
19	1	157	1	159	0	90	0	90	0	52	0	52	0	6	4	10	0	0	1	1	0	1	*0*	1	0	0	*0*	0	313
20	0	118	1	119	0	67	0	67	0	39	0	39	0	3	10	13	0	0	2	2	0	0	*0*	0	0	0	*0*	0	241
21	0	118	1	119	0	67	0	67	0	39	0	39	0	3	7	10	0	0	2	2	0	0	*0*	0	0	0	*0*	0	237
22	0	88	1	89	0	50	0	50	0	29	0	30	0	4	10	14	0	0	2	3	0	0	*0*	0	0	0	*0*	0	186
23	0	68	0	69	0	38	0	38	0	23	0	23	0	5	4	10	0	0	1	1	0	0	*0*	0	0	0	*0*	0	141
Total	13	3562	25	3600	9	2022	2	2031	3	1186	1	1190	0	286	251	538	0	19	60	79	0	20	*0*	20	0	1	*0*	1	7460

[a] excluded from hourly vehicle distribution calculations
T6 = Medium-Heavy-Duty Truck
T7 = Heavy-Heavy-Duty Truck

Table 2 - Hourly VMT (BURDEN2007 Model)

EMFAC2007 BURDEN Model - Hourly VMT/1000 for San Luis Obispo County in 2016

Title : San Luis Obispo County Subarea Annual CYr 2016 Default Title
Version : Emfac2007 V2.3 Nov 1 2006
Scen Year: 2016 -- All model years in the range 1972 to 2016 selected
Season : Annual
Area : San Luis Obispo County

Hour of Day	LDA-NCAT	LDA-CAT	LDA-DSL	LDA-TOT	LDT-NCAT	LDT-CAT	LDT-DSL	LDT-TOT	MDV-NCAT	MDV-CAT	MDV-DSL	MDV-TOT	LHDT1-NCAT	LHDT1-CAT	LHDT1-DSL	LHDT1-TOT
0	0	45	0	46	0	40	1	41	0	8	0	8	0	1	4	5
1	0	15	0	15	0	13	0	13	0	3	0	3	0	1	5	6
2	0	11	0	11	0	10	0	10	0	2	0	2	0	10	7	17
3	0	6	0	6	0	6	0	6	0	1	0	1	0	1	1	2
4	0	18	0	19	0	16	0	16	0	3	0	3	0	3	2	5
5	0	33	0	34	0	29	1	29	0	6	0	6	0	4	0	4
6	0	161	0	161	0	140	3	143	0	30	0	30	0	2	0	2
7	0	342	0	343	1	297	6	304	0	63	0	63	0	5	1	6
8	0	303	0	304	1	264	5	269	0	56	0	56	0	16	4	20
9	0	181	0	181	0	157	3	161	0	33	0	33	0	12	4	15
10	0	196	0	197	0	171	3	174	0	36	0	36	0	13	3	16
11	0	250	0	250	0	217	4	222	0	46	0	46	0	10	3	14
12	0	265	0	266	0	230	5	236	0	49	0	49	0	8	2	10
13	0	259	0	259	0	224	4	230	0	48	0	48	0	11	3	14
14	0	305	0	306	1	266	5	271	0	56	0	56	0	8	2	9
15	0	312	0	313	1	271	5	277	0	57	0	58	0	12	2	14
16	0	318	0	318	1	276	5	283	0	58	0	59	0	25	2	27
17	0	358	1	359	1	311	6	318	0	66	0	66	0	12	4	16
18	0	251	0	252	0	218	4	223	0	46	0	46	0	5	3	8
19	0	189	0	190	0	165	3	168	0	35	0	35	0	4	1	5
20	0	142	0	142	0	123	2	126	0	26	0	26	0	2	2	4
21	0	142	0	142	0	123	2	126	0	26	0	26	0	2	2	3
22	0	106	0	107	0	93	2	95	0	20	0	20	0	2	2	5
23	0	82	0	82	0	71	1	73	0	15	0	15	0	3	1	4
Total	5	4292	6	4303	11	3727	78	3816	1	789	3	793	0	171	60	230

Hour of Day	LHDT2-NCAT	LHDT2-CAT	LHDT2-DSL	LHDT2-TOT	MHDT-NCAT	MHDT-CAT	MHDT-DSL[b]	MHDT-TOT	HHDT-NCAT	HHDT-CAT	HHDT-DSL[b]	HHDT-TOT	ALL-TOT
0	0	0	4	4	0	0	**4**	4	0	0	**6**	6	114
1	0	0	5	5	0	0	**3**	3	0	0	**2**	2	47
2	0	4	7	11	0	0	**0**	0	0	0	**5**	5	56
3	0	0	1	1	0	0	**0**	0	0	0	**11**	11	28
4	0	1	2	3	0	0	**0**	0	0	0	**6**	6	52
5	0	2	0	2	0	1	**3**	4	0	0	**9**	9	88
6	0	1	0	1	0	0	**6**	6	0	0	**12**	12	356
7	0	2	1	3	0	0	**2**	2	0	0	**10**	10	731
8	0	6	4	10	0	4	**8**	12	0	1	**8**	9	680
9	0	5	4	8	0	3	**11**	14	0	1	**10**	10	423
10	0	5	3	8	0	1	**8**	9	0	0	**10**	10	451
11	0	4	3	8	0	3	**10**	12	0	0	**10**	10	563
12	0	3	2	6	0	1	**9**	10	0	0	**9**	9	585
13	0	4	3	7	0	1	**8**	10	0	0	**9**	9	577
14	0	3	2	5	0	1	**8**	9	0	0	**7**	7	664
15	0	5	2	6	0	1	**5**	6	0	0	**4**	4	678
16	0	10	2	11	0	1	**9**	9	0	0	**6**	6	713
17	0	5	4	9	0	2	**3**	5	0	0	**3**	3	777
18	0	2	3	5	0	1	**1**	2	0	0	**4**	4	540
19	0	1	1	2	0	1	**0**	1	0	0	**2**	2	403
20	0	1	2	3	0	0	**3**	3	0	0	**5**	5	310
21	0	1	2	2	0	0	**7**	7	0	0	**5**	5	312
22	0	1	2	3	0	0	**4**	4	0	0	**2**	2	235
23	0	1	1	2	0	0	**0**	0	0	0	**2**	2	179
Total	0	66	60	127	0	23	**111**	134	0	4	**153**	158	9561

[b] included in hourly vehicle distribution calculations

Table 3 - Diurnal Scaling Factors

Diurnal Scaling Factors - San Luis Obispo County in 2016

Hour of Day	LDA-CAT (% Daily)	LDA-DSL (% Daily)	LDT-CAT (% Daily)	LDT-DSL (% Daily)	MDV-CAT (% Daily)	MDV-DSL (% Daily)	LHDT1-CAT (% Daily)	LHDT1-DSL (% Daily)	LHDT2-CAT (% Daily)	LHDT2-DSL (% Daily)	MHDT-CAT (% Daily)	MHDT-DSL (% Daily)	HHDT-CAT (% Daily)	HHDT-DSL (% Daily)
0	1.07%	0.00%	1.04%	*0*	1.10%	*0*	0.69%	5.95%	0.00%	6.67%	0.00%	3.57%	*0*	3.82%
1	0.34%	0.00%	0.35%	*0*	0.34%	*0*	0.35%	8.73%	0.00%	8.33%	0.00%	2.68%	*0*	1.27%
2	0.25%	0.00%	0.25%	*0*	0.25%	*0*	5.90%	11.51%	6.25%	11.67%	0.00%	0.00%	*0*	3.18%
3	0.14%	0.00%	0.15%	*0*	0.17%	*0*	0.69%	1.59%	0.00%	1.67%	0.00%	0.00%	*0*	7.01%
4	0.42%	0.00%	0.40%	*0*	0.42%	*0*	1.39%	3.57%	0.00%	3.33%	0.00%	0.00%	*0*	3.82%
5	0.79%	0.00%	0.79%	*0*	0.76%	*0*	2.78%	0.00%	0.00%	0.00%	5.26%	2.68%	*0*	5.73%
6	3.76%	4.00%	3.72%	*0*	3.71%	*0*	1.39%	0.00%	0.00%	0.00%	0.00%	5.36%	*0*	7.64%
7	7.98%	8.00%	7.98%	*0*	8.02%	*0*	2.78%	1.98%	6.25%	1.67%	0.00%	1.79%	*0*	6.37%
8	7.05%	8.00%	7.09%	*0*	7.09%	*0*	9.38%	6.35%	12.50%	6.67%	15.79%	7.14%	*0*	5.10%
9	4.21%	4.00%	4.21%	*0*	4.22%	*0*	6.94%	5.95%	6.25%	6.67%	15.79%	9.82%	*0*	6.37%
10	4.58%	4.00%	4.56%	*0*	4.56%	*0*	7.29%	5.56%	6.25%	5.00%	5.26%	7.14%	*0*	6.37%
11	5.81%	4.00%	5.85%	*0*	5.82%	*0*	6.25%	5.95%	6.25%	5.00%	10.53%	8.93%	*0*	6.37%
12	6.18%	8.00%	6.19%	*0*	6.16%	*0*	4.86%	3.97%	6.25%	3.33%	5.26%	8.04%	*0*	5.73%
13	6.04%	8.00%	6.05%	*0*	6.08%	*0*	6.25%	4.37%	6.25%	5.00%	5.26%	7.14%	*0*	5.73%
14	7.10%	8.00%	7.09%	*0*	7.09%	*0*	4.51%	2.78%	6.25%	3.33%	5.26%	7.14%	*0*	4.46%
15	7.27%	8.00%	7.28%	*0*	7.26%	*0*	6.94%	3.17%	6.25%	3.33%	5.26%	4.46%	*0*	2.55%
16	7.41%	8.00%	7.38%	*0*	7.43%	*0*	14.58%	3.17%	18.75%	3.33%	5.26%	8.04%	*0*	3.82%
17	8.34%	8.00%	8.33%	*0*	8.35%	*0*	6.94%	6.75%	6.25%	6.67%	10.53%	2.68%	*0*	1.91%
18	5.84%	4.00%	5.85%	*0*	5.82%	*0*	2.78%	4.76%	6.25%	5.00%	5.26%	0.89%	*0*	2.55%
19	4.41%	4.00%	4.46%	*0*	4.39%	*0*	2.08%	1.59%	0.00%	1.67%	5.26%	0.00%	*0*	1.27%
20	3.31%	4.00%	3.32%	*0*	3.29%	*0*	1.04%	3.97%	0.00%	3.33%	0.00%	2.68%	*0*	3.18%
21	3.31%	4.00%	3.32%	*0*	3.29%	*0*	1.04%	2.78%	0.00%	3.33%	0.00%	6.25%	*0*	3.18%
22	2.47%	4.00%	2.48%	*0*	2.45%	*0*	1.39%	3.97%	0.00%	3.33%	0.00%	3.57%	*0*	1.27%
23	1.91%	0.00%	1.88%	*0*	1.94%	*0*	1.74%	1.59%	0.00%	1.67%	0.00%	0.00%	*0*	1.27%
TOTAL	100.00%	100.00%	100.00%	*0*	100.00%	*0*	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	*0*	100.00%

Table 4 - Annual Emission Rates

Region	CalYr	Season	Veh_Class	Fuel	MdlYr	Speed (miles/hr)	VMT (miles/day)	TOG_RUNEX (gms/mile)	PM10_RUNEX (gms/mile)
San Luis Obispo	2016	Annual	LDA	DSL	Aggregated	45	2839.29614	0.0346835	0.02179907
San Luis Obispo	2016	Annual	LDT1	DSL	Aggregated	45	71.3789371	0.062041494	0.045777217
San Luis Obispo	2016	Annual	LDT2	DSL	Aggregated	45	76.0109775	0.042227518	0.029322419
San Luis Obispo	2016	Annual	LHD1	DSL	Aggregated	45	9841.40095	0.145913741	0.028344196
San Luis Obispo	2016	Annual	LHD2	DSL	Aggregated	45	2348.33704	0.133608168	0.026511173
San Luis Obispo	2016	Annual	MDV	DSL	Aggregated	45	130.422301	0.031059241	0.022126331
San Luis Obispo	2016	Annual	T6	DSL	Aggregated	45	10138.3719	0.130905168	0.092773346
San Luis Obispo	2016	Annual	T7	DSL	Aggregated	45	26214.8418	0.203266772	0.082233375
San Luis Obispo	2016	Annual	LDA	GAS	Aggregated	45	402019.714	0.04616571	0.001500907
San Luis Obispo	2016	Annual	LDT1	GAS	Aggregated	45	37523.6775	0.133034677	0.002801131
San Luis Obispo	2016	Annual	LDT2	GAS	Aggregated	45	190791.527	0.065981936	0.001807961
San Luis Obispo	2016	Annual	LHD1	GAS	Aggregated	45	5164.76038	0.07945365	0.001107939
San Luis Obispo	2016	Annual	LHD2	GAS	Aggregated	45	335.897771	0.048177925	0.000829734
San Luis Obispo	2016	Annual	MDV	GAS	Aggregated	45	133699.168	0.095013111	0.001866359
San Luis Obispo	2016	Annual	T6	GAS	Aggregated	45	2063.63745	0.161703813	0.000898178
San Luis Obispo	2016	Annual	T7	GAS	Aggregated	45	156.235715	1.253651724	0.001221643
San Luis Obispo	2016	Annual	LDA	DSL	Aggregated	55	3637.62518	0.031843652	0.019895501
San Luis Obispo	2016	Annual	LDT1	DSL	Aggregated	55	91.4486643	0.055814447	0.040786411
San Luis Obispo	2016	Annual	LDT2	DSL	Aggregated	55	97.3830832	0.038506257	0.026390815
San Luis Obispo	2016	Annual	LHD1	DSL	Aggregated	55	22884.4077	0.1278702	0.024839183
San Luis Obispo	2016	Annual	LHD2	DSL	Aggregated	55	5460.63502	0.117086333	0.023232831
San Luis Obispo	2016	Annual	MDV	DSL	Aggregated	55	167.093335	0.02900494	0.020363584
San Luis Obispo	2016	Annual	T6	DSL	Aggregated	55	16627.2483	0.117290281	0.117488186
San Luis Obispo	2016	Annual	T7	DSL	Aggregated	55	33245.3052	0.173647905	0.103450979
San Luis Obispo	2016	Annual	LDA	GAS	Aggregated	55	515056.154	0.046240743	0.001482086
San Luis Obispo	2016	Annual	LDT1	GAS	Aggregated	55	48074.2637	0.134110431	0.002764075
San Luis Obispo	2016	Annual	LDT2	GAS	Aggregated	55	244436.654	0.064572078	0.001766207
San Luis Obispo	2016	Annual	LHD1	GAS	Aggregated	55	10489.165	0.065846614	0.000924041
San Luis Obispo	2016	Annual	LHD2	GAS	Aggregated	55	682.178228	0.04024109	0.000692013
San Luis Obispo	2016	Annual	MDV	GAS	Aggregated	55	171291.539	0.093297049	0.001825221
San Luis Obispo	2016	Annual	T6	GAS	Aggregated	55	2626.73045	0.134821369	0.000749096
San Luis Obispo	2016	Annual	T7	GAS	Aggregated	55	239.957172	1.048176173	0.001018873
San Luis Obispo	2016	Annual	LDA	DSL	Aggregated	65	3438.55292	0.033342383	0.020607562
San Luis Obispo	2016	Annual	LDT1	DSL	Aggregated	65	86.4440424	0.056273153	0.040357387
San Luis Obispo	2016	Annual	LDT2	DSL	Aggregated	65	92.053709	0.039820113	0.026629791
San Luis Obispo	2016	Annual	MDV	DSL	Aggregated	65	157.948995	0.031293944	0.021414495
San Luis Obispo	2016	Annual	T6	DSL	Aggregated	65	3144.35085	0.130932568	0.160743061
San Luis Obispo	2016	Annual	T7	DSL	Aggregated	65	5547.13448	0.175694738	0.13916251
San Luis Obispo	2016	Annual	LDA	GAS	Aggregated	65	486869.273	0.056222361	0.001792747
San Luis Obispo	2016	Annual	LDT1	GAS	Aggregated	65	45443.3592	0.162744	0.003305846
San Luis Obispo	2016	Annual	LDT2	GAS	Aggregated	65	231059.642	0.0764633	0.002105788
San Luis Obispo	2016	Annual	MDV	GAS	Aggregated	65	161917.472	0.111329144	0.002182245
San Luis Obispo	2016	Annual	T6	GAS	Aggregated	65	473.651928	0.13303722	0.000737575
San Luis Obispo	2016	Annual	T7	GAS	Aggregated	65	31.7416813	1.027371463	0.001003202

Veh_Class	Fuel	Sum of VMT for 45,55,65 MPH	Fleet Mix
LDA	DSL	9915.474234	0.350%
LDT1	*DSL*	*249.2716437*	*0.009%*
LDT2	*DSL*	*265.4477697*	*0.009%*
LHD1	DSL	32725.80862	1.154%
LHD2	DSL	7808.972052	0.275%
MDV	DSL	455.4646305	0.016%
T6	DSL	29909.97105	1.054%
T7	DSL	65007.28148	2.292%
LDA	GAS	1403945.141	49.491%
LDT1	*GAS*	*131041.3003*	*4.619%*
LDT2	*GAS*	*666287.8236*	*23.487%*
LHD1	GAS	15653.92538	0.552%
LHD2	GAS	1018.075999	0.036%
MDV	GAS	466908.1779	16.459%
T6	GAS	5164.019832	0.182%
T7	GAS	427.934568	0.015%
LDT	DSL	514.7194134	0.018%
LDT	GAS	797329.1239	28.107%
Total		2836784.09	

Table 5 - Vehicle Class Scaling Factors

Vehicle Class Scaling Factors - San Luis Obispo County in 2016

All Vehicles	LDA-CAT	LDA-DSL	LDT-CAT	LDT-DSL	MDV-CAT	MDV-DSL	LHDT1-CAT	LHDT1-DSL	LHDT2-CAT	LHDT2-DSL	MHDT-CAT	MHDT-DSL	HHDT-CAT	HHDT-DSL	TOTAL
(% Daily)	49.49%	0.35%	28.11%	0.02%	16.46%	0.02%	0.55%	1.15%	0.04%	0.28%	0.18%	1.05%	0.02%	2.29%	100.00%

Gasoline Vehicles	LDA-CAT	LDT-CAT	MDV-CAT	LHDT1-CAT	LHDT2-CAT	MHDT-CAT	HHDT-CAT	TOTAL
(% Daily)	49.49%	28.11%	16.46%	0.55%	0.04%	0.18%	0.02%	94.84%
Diesel Vehicles	**LDA-DSL**	**LDT-DSL**	**MDV-DSL**	**LHDT1-DSL**	**LHDT2-DSL**	**MHDT-DSL**	**HHDT-DSL**	**TOTAL**
(% Daily)	0.35%	0.02%	0.02%	1.15%	0.28%	1.05%	2.29%	5.16%

Table 6: Hourly Traffic Profile

Hour	Gasoline (vehicles/hour)							Diesel (vehicles/hour)							Total
	LDA	LDT	MDT	LHDT1	LHDT2	MHDT	HHDT	LDA	LDT	MDT	LHDT1	LHDT2	MHDT	HHDT	
0	310	172	106	2	0	0	0	0	0	0	40	11	11	22	84
1	98	57	33	1	0	0	0	0	0	0	59	13	13	17	102
2	73	41	24	19	1	1	0	0	0	0	78	19	19	0	116
3	41	25	16	2	0	0	0	0	0	0	11	3	3	0	17
4	122	65	41	4	0	0	0	0	0	0	24	5	5	0	34
5	228	131	73	9	0	0	6	0	0	0	0	0	0	17	17
6	1093	613	359	4	0	0	0	8	0	0	0	0	0	33	41
7	2317	1316	775	9	1	1	0	16	0	0	13	3	3	11	46
8	2048	1169	685	30	3	3	17	16	0	0	43	11	11	44	125
9	1224	695	408	22	1	1	17	8	0	0	40	11	11	61	131
10	1330	752	440	24	1	1	6	8	0	0	38	8	8	44	106
11	1689	965	563	20	1	1	11	8	0	0	40	8	8	55	119
12	1795	1022	595	16	1	1	6	16	0	0	27	5	5	50	103
13	1754	997	587	20	1	1	6	16	0	0	30	8	8	44	106
14	2064	1169	685	15	1	1	6	16	0	0	19	5	5	44	89
15	2113	1202	701	22	1	1	6	16	0	0	21	5	5	28	75
16	2154	1218	717	47	4	4	6	16	0	0	21	5	5	50	97
17	2423	1374	807	22	1	1	11	16	0	0	46	11	11	17	101
18	1697	965	563	9	1	1	6	8	0	0	32	8	8	6	62
19	1281	736	424	7	0	0	6	8	0	0	11	3	3	0	25
20	963	548	318	3	0	0	0	8	0	0	27	5	5	17	62
21	963	548	318	3	0	0	0	8	0	0	19	5	5	39	76
22	718	409	236	4	0	0	0	8	0	0	27	5	5	22	67
23	555	311	188	6	0	0	0	0	0	0	11	3	3	0	17
Total	**29053**	**16500**	**9662**	**320**	**18**	**18**	**110**	**200**	**0**	**0**	**677**	**160**	**160**	**621**	**1818**
														GRAND TOTAL	**57499***

Annual Average Daily Total = 58700

*201 (0.3%) lost due to intermediate calculations and final rounding

LDA = Light-Duty Auto

LDT = Light-Duty Truck

MDV = Medium-Duty Truck

LHDT1 = Light-Heavy-Duty Truck (8501-10000 lbs)

LHDT2 = Light-Heavy-Duty Truck (10001-14000 lbs)

MHDT = Medium-Heavy-Duty Truck

HHDT = Heavy-Heavy-Duty Truck

Traffic profile derived from Caltrans daily traffic data and hourly VMT estimations from the Califonia ARB BURDEN mobile source emission model

Table 7: DPM Emission Parameters

Time of Day	Vehicle Class					
	LDA		LDT		MDT	
	Vehicle Speeds (miles/hr)	Emissions Factors (gms/mile)	Vehicle Speeds (miles/hr)	Emissions Factors (gms/mile)	Vehicle Speeds (miles/hr)	Emissions Factors (gms/mile)
Midnight to 6am	65	0.020607562	65	0.040357387	65	0.021414495
7am to 10am	55	0.019895501	55	0.040786411	55	0.020363584
11am to 3pm	65	0.020607562	65	0.040357387	65	0.021414495
4pm to 7pm	55	0.019895501	55	0.040786411	55	0.020363584
8pm to Midnight	65	0.020607562	65	0.040357387	65	0.021414495

Time of Day	Vehicle Class							
	LHDT1		LHDT2		MHDT		HHDT	
	Vehicle Speeds (miles/hr)	Emissions Factors (gms/mile)	Vehicle Speeds (miles/hr)	Emissions Factors (gms/mile)	Vehicle Speeds (miles/hr)	Emissions Factors (gms/mile)	Vehicle Speeds (miles/hr)	Emissions Factors (gms/mile)
Midnight to 6am	55	0.024839183	55	0.023232831	55	0.117488186	55	0.103450979
7am to 10am	45	0.028344196	45	0.026511173	45	0.092773346	45	0.082233375
11am to 3pm	55	0.024839183	55	0.023232831	55	0.117488186	55	0.103450979
4pm to 7pm	45	0.028344196	45	0.026511173	45	0.092773346	45	0.082233375
8pm to Midnight	55	0.024839183	55	0.023232831	55	0.117488186	55	0.103450979

Table 8: TOG Emission Parameters

Time of Day	Vehicle Class					
	LDA		LDT		MDT	
	Vehicle Speeds (miles/hr)	Emissions Factors (gms/mile)	Vehicle Speeds (miles/hr)	Emissions Factors (gms/mile)	Vehicle Speeds (miles/hr)	Emissions Factors (gms/mile)
Midnight to 6am	65	0.056222361	65	0.162744	65	0.111329144
7am to 10am	55	0.046240743	55	0.134110431	55	0.093297049
11am to 3pm	65	0.056222361	65	0.162744	65	0.111329144
4pm to 7pm	55	0.046240743	55	0.134110431	55	0.093297049
8pm to Midnight	65	0.056222361	65	0.162744	65	0.111329144

Time of Day	Vehicle Class							
	LHDT1		LHDT2		MHDT		HHDT	
	Vehicle Speeds (miles/hr)	Emissions Factors (gms/mile)	Vehicle Speeds (miles/hr)	Emissions Factors (gms/mile)	Vehicle Speeds (miles/hr)	Emissions Factors (gms/mile)	Vehicle Speeds (miles/hr)	Emissions Factors (gms/mile)
Midnight to 6am	55	0.065846614	55	0.04024109	55	0.134821369	55	1.048176173
7am to 10am	45	0.07945365	45	0.048177925	45	0.161703813	45	1.253651724
11am to 3pm	55	0.065846614	55	0.04024109	55	0.134821369	55	1.048176173
4pm to 7pm	45	0.07945365	45	0.048177925	45	0.161703813	45	1.253651724
8pm to Midnight	55	0.065846614	55	0.04024109	55	0.134821369	55	1.048176173

Table 9: DPM Emissions Rate and Variable Emissions Coefficients

Estimation of Hourly Traffic and DPM Emissions from Diesel Vehicles

US 101 Freeway Segment Length

0.725 miles

Vehicle Speeds (miles/hr)

Time	LDA, LDT, MDT	LDHT, MHDT, HHDT
Midnight to 6am	65	55
7am to 10am	55	45
11am to 3pm	65	55
4pm to 7pm	55	45
8pm to Midnight	65	55

Emissions Factors (gms/mile)

	65 mph	55 mph
LDA	0.020607562	0.019895501
LDT	0.040357387	0.040786411
MDT	0.021414495	0.020363584

	55 mph	45 mph
LHDT1	0.024839183	0.028344196
LHDT2	0.023232831	0.026511173
MHDT	0.117488186	0.092773346
HHDT	0.103450979	0.082233375

Hourly Emission Rate

Hour	LDA-DSL (grams/sec)	LDT-DSL (grams/sec)	MDV-DSL (grams/sec)	LHD1-DSL (grams/sec)	LHD2-DSL (grams/sec)	MHDT-DSL (grams/sec)	HHDT-DSL (grams/sec)	TOTAL (grams/sec)	Normalized to Max Hourly (unitless coefficient)
0	0	0	0	0.000200093	5.14672E-05	0.000260269	0.000458345	0.000970175	0.604140979
1	0	0	0	0.000295138	6.08248E-05	0.000307591	0.000354176	0.001017729	0.633753673
2	0	0	0	0.000390182	8.88978E-05	0.000449555	0	0.000928636	0.578273854
3	0	0	0	5.50257E-05	1.40365E-05	7.09824E-05	0	0.000140045	0.087207685
4	0	0	0	0.000120056	2.33942E-05	0.000118304	0	0.000261754	0.162997932
5	0	0	0	0	0	0	0.000354176	0.000354176	0.220550124
6	3.32011E-05	0	0	0	0	0	0.000687518	0.000720719	0.448801467
7	6.41077E-05	0	0	7.42067E-05	1.60172E-05	5.60506E-05	0.00018217	0.000392552	0.244447366
8	6.41077E-05	0	0	0.000245453	5.87296E-05	0.000205519	0.000728679	0.001302488	0.811076852
9	3.20539E-05	0	0	0.000228328	5.87296E-05	0.000205519	0.001010214	0.001534845	0.955768451
10	3.20539E-05	0	0	0.000216912	4.27124E-05	0.000149468	0.000728679	0.001169825	0.728466047
11	3.32011E-05	0	0	0.000200093	3.74307E-05	0.000189287	0.001145863	0.001605875	1
12	6.64021E-05	0	0	0.000135063	2.33942E-05	0.000118304	0.001041694	0.001384857	0.862369343
13	6.64021E-05	0	0	0.00015007	3.74307E-05	0.000189287	0.000916691	0.00135988	0.846815634
14	6.64021E-05	0	0	9.50444E-05	2.33942E-05	0.000118304	0.000916691	0.001219835	0.759607949
15	6.64021E-05	0	0	0.000105049	2.33942E-05	0.000118304	0.000583349	0.000896498	0.558261405
16	6.41077E-05	0	0	0.000119872	2.66953E-05	9.34176E-05	0.000828044	0.001132137	0.704997193
17	6.41077E-05	0	0	0.000262577	5.87296E-05	0.000205519	0.000281535	0.000872469	0.543297997
18	3.20539E-05	0	0	0.000182663	4.27124E-05	0.000149468	9.93653E-05	0.000506262	0.315256427
19	3.20539E-05	0	0	6.27903E-05	1.60172E-05	5.60506E-05	0	0.000166912	0.103938267
20	3.32011E-05	0	0	0.000135063	2.33942E-05	0.000118304	0.000354176	0.000664138	0.413567877
21	3.32011E-05	0	0	9.50444E-05	2.33942E-05	0.000118304	0.000812521	0.001082465	0.67406551
22	3.32011E-05	0	0	0.000135063	2.33942E-05	0.000118304	0.000458345	0.000768308	0.47843556
23	0	0	0	5.50257E-05	1.40365E-05	7.09824E-05	0	0.000140045	0.087207685
							Max Hourly	0.001605875	
							Northbound	0.000802937	
							Southbound	0.000802937	

Table 10: TOG Emissions Rate and Variable Emissions Coefficients

Estimation of Hourly Traffic and TOG Emissions from Gas Vehicles

US 101 Freeway Segment Length

0.725 miles

Vehicle Speeds (miles/hr)

Time	LDA, LDT, MDT	LDHT, MHDT, HHDT
Midnight to 6am	65	55
7am to 10am	55	45
11am to 3pm	65	55
4pm to 7pm	55	45
8pm to Midnight	65	55

Emissions Factors (gms/mile)

	65 mph	55 mph
LDA	0.056222361	0.046240743
LDT	0.162744	0.134110431
MDT	0.111329144	0.093297049

	55 mph	45 mph
LHDT1	0.065846614	0.07945365
LHDT2	0.04024109	0.048177925
MHDT	0.134821369	0.161703813
HHDT	1.048176173	1.253651724

Hourly Emission Rate

Hour	LDA-DSL (grams/sec)	LDT-DSL (grams/sec)	MDV-DSL (grams/sec)	LHD1-DSL (grams/sec)	LHD2-DSL (grams/sec)	MHDT-DSL (grams/sec)	HHDT-DSL (grams/sec)	TOTAL (grams/sec)	Normalized to Max Hourly (unitless coefficient)
0	0.003509993	0.005637271	0.002376568	2.65216E-05	0	0	0	0.011550354	0.14325098
1	0.001109611	0.001868166	0.000739875	1.32608E-05	0	0	0	0.003730912	0.046271897
2	0.000826547	0.001343768	0.000538091	0.000251955	8.10411E-06	2.71515E-05	0	0.002995616	0.037152537
3	0.000464225	0.000819371	0.000358727	2.65216E-05	0	0	0	0.001668845	0.020697514
4	0.001381352	0.002130364	0.000919239	5.30431E-05	0	0	0	0.004483998	0.055611897
5	0.002581543	0.004293503	0.001636693	0.000119347	0	0	0.001266546	0.009897633	0.122753431
6	0.012375557	0.020090973	0.008048942	5.30431E-05	0	0	0	0.040568515	0.503142978
7	0.021576766	0.03554299	0.014561467	0.00014401	9.7025E-06	3.25654E-05	0	0.071867499	0.891322429
8	0.019071738	0.031572762	0.012870457	0.000480032	2.91075E-05	9.76961E-05	0.004292016	0.068413809	0.848488721
9	0.011398343	0.018770804	0.007665908	0.000352024	9.7025E-06	3.25654E-05	0.004292016	0.042521362	0.527362774
10	0.012385455	0.02031028	0.008267155	0.000384026	9.7025E-06	3.25654E-05	0.001514829	0.042904012	0.53210852
11	0.019123802	0.031627714	0.012622715	0.000265216	8.10411E-06	2.71515E-05	0.002322001	0.065996703	0.818511047
12	0.020323993	0.03349588	0.013340169	0.000212172	8.10411E-06	2.71515E-05	0.001266546	0.068674016	0.85171589
13	0.019859768	0.032676509	0.013160806	0.000265216	8.10411E-06	2.71515E-05	0.001266546	0.0672641	0.834229683
14	0.023369761	0.03831378	0.01535801	0.000198912	8.10411E-06	2.71515E-05	0.001266546	0.078542265	0.974104892
15	0.023924567	0.03939535	0.015716737	0.000291737	8.10411E-06	2.71515E-05	0.001266546	0.080630193	1
16	0.020058849	0.032896171	0.013471705	0.000752051	3.881E-05	0.000130261	0.001514829	0.068862677	0.854055713
17	0.022563877	0.037109474	0.015162714	0.000352024	9.7025E-06	3.25654E-05	0.002777187	0.078007543	0.967473113
18	0.015803095	0.026063058	0.010578201	0.00014401	9.7025E-06	3.25654E-05	0.001514829	0.054145461	0.67152836
19	0.011929148	0.019878146	0.007966531	0.000112008	0	0	0.001514829	0.041400663	0.51346352
20	0.010903624	0.017960609	0.007129704	3.97823E-05	0	0	0	0.036033719	0.446901066
21	0.010903624	0.017960609	0.007129704	3.97823E-05	0	0	0	0.036033719	0.446901066
22	0.008129597	0.013404907	0.005291227	5.30431E-05	0	0	0	0.026878774	0.333358672
23	0.00628402	0.010192973	0.004215045	7.95647E-05	0	0	0	0.020771603	0.257615694

Max Hourly	0.080630193
Northbound	0.040315096
Southbound	0.040315096

Source Pathway - Source Inputs

AERMOD

Point Sources

No Point Sources Specified

Volume Sources

No Volume Sources Specified

Area Sources

No Area Sources Specified

Open Pit Sources

No Open Pit Sources Specified

Circular Area Sources

No Circular Area Sources Specified

Polygon Area Sources

No Polygon Area Sources Specified

Flare Sources

No Flare Sources Specified

Line Sources

No Line Sources Specified

Source Pathway - Source Inputs

AERMOD

Line Volume Sources

Source Type: LINE VOLUME

Source: US101N (US 101 Northbound)

Length of Side [m]	Emission Rate [g/ s]	Building Height [m]	X Coordinate for Points [m]	Y Coordinate for points [m]	Base Elevation [m]	Release Height [m]
9.14	0.00080		710916.23	3902682.91	40.00	0.00
			710989.05	3902839.03	40.00	0.00
			711085.62	3903041.88	40.00	0.00
			711204.79	3903293.21	40.00	0.00
			711324.90	3903550.77	40.00	0.00
			711413.52	3903737.51	40.00	0.00

Source Type: LINE VOLUME

Source: US101S (US 101 Southbound)

Length of Side [m]	Emission Rate [g/ s]	Building Height [m]	X Coordinate for Points [m]	Y Coordinate for points [m]	Base Elevation [m]	Release Height [m]
9.14	0.00080		710900.07	3902691.47	40.00	0.00
			711020.39	3902946.85	40.00	0.00
			711128.38	3903172.57	40.00	0.00
			711271.46	3903478.51	40.00	0.00
			711398.10	3903745.83	40.00	0.00

Source Pathway - Source Inputs

AERMOD

Volume Sources Generated from Line Sources

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
US101S	L0000421	710902.02	3902695.60	40.00	0.00	0.00001	9.14		8.41	1.00
	L0000422	710909.72	3902711.96	40.00	0.00	0.00001	9.14		8.41	1.00
	L0000423	710917.43	3902728.31	40.00	0.00	0.00001	9.14		8.41	1.00
	L0000424	710925.13	3902744.66	40.00	0.00	0.00001	9.14		8.41	1.00
	L0000425	710932.84	3902761.01	40.00	0.00	0.00001	9.14		8.41	1.00
	L0000426	710940.54	3902777.37	40.00	0.00	0.00001	9.14		8.41	1.00
	L0000427	710948.25	3902793.72	40.00	0.00	0.00001	9.14		8.41	1.00
	L0000428	710955.95	3902810.07	40.00	0.00	0.00001	9.14		8.41	1.00
	L0000429	710963.65	3902826.43	40.00	0.00	0.00001	9.14		8.41	1.00
	L0000430	710971.36	3902842.78	40.00	0.00	0.00001	9.14		8.41	1.00
	L0000431	710979.06	3902859.13	40.00	0.00	0.00001	9.14		8.41	1.00
	L0000432	710986.77	3902875.49	40.00	0.00	0.00001	9.14		8.41	1.00
	L0000433	710994.47	3902891.84	40.00	0.00	0.00001	9.14		8.41	1.00
	L0000434	711002.18	3902908.19	40.00	0.00	0.00001	9.14		8.41	1.00
	L0000435	711009.88	3902924.54	40.00	0.00	0.00001	9.14		8.41	1.00
	L0000436	711017.59	3902940.90	40.00	0.00	0.00001	9.14		8.41	1.00
	L0000437	711025.35	3902957.22	40.00	0.00	0.00001	9.14		8.41	1.00
	L0000438	711033.15	3902973.53	40.00	0.00	0.00001	9.14		8.41	1.00
	L0000439	711040.96	3902989.83	40.00	0.00	0.00001	9.14		8.41	1.00
	L0000440	711048.76	3903006.14	40.00	0.00	0.00001	9.14		8.41	1.00
	L0000441	711056.56	3903022.45	40.00	0.00	0.00001	9.14		8.41	1.00
	L0000442	711064.36	3903038.76	40.00	0.00	0.00001	9.14		8.41	1.00
	L0000443	711072.16	3903055.06	40.00	0.00	0.00001	9.14		8.41	1.00
	L0000444	711079.96	3903071.37	40.00	0.00	0.00001	9.14		8.41	1.00

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
US101S	L0000445	711087.76	3903087.68	40.00	0.00	0.00001	9.14		8.41	1.00
	L0000446	711095.56	3903103.98	40.00	0.00	0.00001	9.14		8.41	1.00
	L0000447	711103.37	3903120.29	40.00	0.00	0.00001	9.14		8.41	1.00
	L0000448	711111.17	3903136.60	40.00	0.00	0.00001	9.14		8.41	1.00
	L0000449	711118.97	3903152.90	40.00	0.00	0.00001	9.14		8.41	1.00
	L0000450	711126.77	3903169.21	40.00	0.00	0.00001	9.14		8.41	1.00
	L0000451	711134.46	3903185.57	40.00	0.00	0.00001	9.14		8.41	1.00
	L0000452	711142.12	3903201.95	40.00	0.00	0.00001	9.14		8.41	1.00
	L0000453	711149.77	3903218.32	40.00	0.00	0.00001	9.14		8.41	1.00
	L0000454	711157.43	3903234.70	40.00	0.00	0.00001	9.14		8.41	1.00
	L0000455	711165.09	3903251.07	40.00	0.00	0.00001	9.14		8.41	1.00
	L0000456	711172.75	3903267.45	40.00	0.00	0.00001	9.14		8.41	1.00
	L0000457	711180.41	3903283.82	40.00	0.00	0.00001	9.14		8.41	1.00
	L0000458	711188.07	3903300.19	40.00	0.00	0.00001	9.14		8.41	1.00
	L0000459	711195.72	3903316.57	40.00	0.00	0.00001	9.14		8.41	1.00
	L0000460	711203.38	3903332.94	40.00	0.00	0.00001	9.14		8.41	1.00
	L0000461	711211.04	3903349.32	40.00	0.00	0.00001	9.14		8.41	1.00
	L0000462	711218.70	3903365.69	40.00	0.00	0.00001	9.14		8.41	1.00
	L0000463	711226.36	3903382.07	40.00	0.00	0.00001	9.14		8.41	1.00
	L0000464	711234.02	3903398.44	40.00	0.00	0.00001	9.14		8.41	1.00
	L0000465	711241.67	3903414.82	40.00	0.00	0.00001	9.14		8.41	1.00
	L0000466	711249.33	3903431.19	40.00	0.00	0.00001	9.14		8.41	1.00
	L0000467	711256.99	3903447.57	40.00	0.00	0.00001	9.14		8.41	1.00
	L0000468	711264.65	3903463.94	40.00	0.00	0.00001	9.14		8.41	1.00
	L0000469	711272.32	3903480.31	40.00	0.00	0.00001	9.14		8.41	1.00

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
US101S	L0000470	711280.06	3903496.65	40.00	0.00	0.00001	9.14		8.41	1.00
	L0000471	711287.80	3903512.98	40.00	0.00	0.00001	9.14		8.41	1.00
	L0000472	711295.53	3903529.32	40.00	0.00	0.00001	9.14		8.41	1.00
	L0000473	711303.27	3903545.66	40.00	0.00	0.00001	9.14		8.41	1.00
	L0000474	711311.01	3903561.99	40.00	0.00	0.00001	9.14		8.41	1.00
	L0000475	711318.75	3903578.33	40.00	0.00	0.00001	9.14		8.41	1.00
	L0000476	711326.49	3903594.67	40.00	0.00	0.00001	9.14		8.41	1.00
	L0000477	711334.23	3903611.00	40.00	0.00	0.00001	9.14		8.41	1.00
	L0000478	711341.97	3903627.34	40.00	0.00	0.00001	9.14		8.41	1.00
	L0000479	711349.71	3903643.68	40.00	0.00	0.00001	9.14		8.41	1.00
	L0000480	711357.45	3903660.01	40.00	0.00	0.00001	9.14		8.41	1.00
	L0000481	711365.19	3903676.35	40.00	0.00	0.00001	9.14		8.41	1.00
	L0000482	711372.93	3903692.69	40.00	0.00	0.00001	9.14		8.41	1.00
	L0000483	711380.67	3903709.02	40.00	0.00	0.00001	9.14		8.41	1.00
	L0000484	711388.41	3903725.36	40.00	0.00	0.00001	9.14		8.41	1.00
	L0000485	711396.14	3903741.70	40.00	0.00	0.00001	9.14		8.41	1.00

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
US101N	L0000486	710918.17	3902687.05	40.00	0.00	0.00001	9.14		8.41	1.00
	L0000487	710925.81	3902703.43	40.00	0.00	0.00001	9.14		8.41	1.00
	L0000488	710933.45	3902719.82	40.00	0.00	0.00001	9.14		8.41	1.00
	L0000489	710941.09	3902736.20	40.00	0.00	0.00001	9.14		8.41	1.00
	L0000490	710948.73	3902752.58	40.00	0.00	0.00001	9.14		8.41	1.00
	L0000491	710956.37	3902768.96	40.00	0.00	0.00001	9.14		8.41	1.00
	L0000492	710964.01	3902785.34	40.00	0.00	0.00001	9.14		8.41	1.00

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
US101N	L0000493	710971.65	3902801.72	40.00	0.00	0.00001	9.14		8.41	1.00
	L0000494	710979.29	3902818.10	40.00	0.00	0.00001	9.14		8.41	1.00
	L0000495	710986.93	3902834.48	40.00	0.00	0.00001	9.14		8.41	1.00
	L0000496	710994.66	3902850.82	40.00	0.00	0.00001	9.14		8.41	1.00
	L0000497	711002.43	3902867.14	40.00	0.00	0.00001	9.14		8.41	1.00
	L0000498	711010.20	3902883.46	40.00	0.00	0.00001	9.14		8.41	1.00
	L0000499	711017.97	3902899.78	40.00	0.00	0.00001	9.14		8.41	1.00
	L0000500	711025.74	3902916.10	40.00	0.00	0.00001	9.14		8.41	1.00
	L0000501	711033.51	3902932.42	40.00	0.00	0.00001	9.14		8.41	1.00
	L0000502	711041.28	3902948.74	40.00	0.00	0.00001	9.14		8.41	1.00
	L0000503	711049.05	3902965.06	40.00	0.00	0.00001	9.14		8.41	1.00
	L0000504	711056.82	3902981.38	40.00	0.00	0.00001	9.14		8.41	1.00
	L0000505	711064.59	3902997.70	40.00	0.00	0.00001	9.14		8.41	1.00
	L0000506	711072.36	3903014.02	40.00	0.00	0.00001	9.14		8.41	1.00
	L0000507	711080.13	3903030.34	40.00	0.00	0.00001	9.14		8.41	1.00
	L0000508	711087.89	3903046.67	40.00	0.00	0.00001	9.14		8.41	1.00
	L0000509	711095.64	3903063.00	40.00	0.00	0.00001	9.14		8.41	1.00
	L0000510	711103.38	3903079.33	40.00	0.00	0.00001	9.14		8.41	1.00
	L0000511	711111.12	3903095.67	40.00	0.00	0.00001	9.14		8.41	1.00
	L0000512	711118.87	3903112.00	40.00	0.00	0.00001	9.14		8.41	1.00
	L0000513	711126.61	3903128.33	40.00	0.00	0.00001	9.14		8.41	1.00
	L0000514	711134.36	3903144.66	40.00	0.00	0.00001	9.14		8.41	1.00
	L0000515	711142.10	3903161.00	40.00	0.00	0.00001	9.14		8.41	1.00
	L0000516	711149.84	3903177.33	40.00	0.00	0.00001	9.14		8.41	1.00
	L0000517	711157.59	3903193.66	40.00	0.00	0.00001	9.14		8.41	1.00

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
US101N	L0000518	711165.33	3903209.99	40.00	0.00	0.00001	9.14		8.41	1.00
	L0000519	711173.07	3903226.33	40.00	0.00	0.00001	9.14		8.41	1.00
	L0000520	711180.82	3903242.66	40.00	0.00	0.00001	9.14		8.41	1.00
	L0000521	711188.56	3903258.99	40.00	0.00	0.00001	9.14		8.41	1.00
	L0000522	711196.31	3903275.32	40.00	0.00	0.00001	9.14		8.41	1.00
	L0000523	711204.05	3903291.66	40.00	0.00	0.00001	9.14		8.41	1.00
	L0000524	711211.70	3903308.03	40.00	0.00	0.00001	9.14		8.41	1.00
	L0000525	711219.34	3903324.42	40.00	0.00	0.00001	9.14		8.41	1.00
	L0000526	711226.98	3903340.80	40.00	0.00	0.00001	9.14		8.41	1.00
	L0000527	711234.62	3903357.18	40.00	0.00	0.00001	9.14		8.41	1.00
	L0000528	711242.26	3903373.56	40.00	0.00	0.00001	9.14		8.41	1.00
	L0000529	711249.90	3903389.94	40.00	0.00	0.00001	9.14		8.41	1.00
	L0000530	711257.53	3903406.32	40.00	0.00	0.00001	9.14		8.41	1.00
	L0000531	711265.17	3903422.71	40.00	0.00	0.00001	9.14		8.41	1.00
	L0000532	711272.81	3903439.09	40.00	0.00	0.00001	9.14		8.41	1.00
	L0000533	711280.45	3903455.47	40.00	0.00	0.00001	9.14		8.41	1.00
	L0000534	711288.09	3903471.85	40.00	0.00	0.00001	9.14		8.41	1.00
	L0000535	711295.73	3903488.23	40.00	0.00	0.00001	9.14		8.41	1.00
	L0000536	711303.37	3903504.62	40.00	0.00	0.00001	9.14		8.41	1.00
	L0000537	711311.01	3903521.00	40.00	0.00	0.00001	9.14		8.41	1.00
	L0000538	711318.65	3903537.38	40.00	0.00	0.00001	9.14		8.41	1.00
	L0000539	711326.31	3903553.75	40.00	0.00	0.00001	9.14		8.41	1.00
	L0000540	711334.06	3903570.08	40.00	0.00	0.00001	9.14		8.41	1.00
	L0000541	711341.81	3903586.41	40.00	0.00	0.00001	9.14		8.41	1.00
	L0000542	711349.56	3903602.74	40.00	0.00	0.00001	9.14		8.41	1.00

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
US101N	L0000543	711357.31	3903619.07	40.00	0.00	0.00001	9.14		8.41	1.00
	L0000544	711365.06	3903635.40	40.00	0.00	0.00001	9.14		8.41	1.00
	L0000545	711372.81	3903651.73	40.00	0.00	0.00001	9.14		8.41	1.00
	L0000546	711380.56	3903668.06	40.00	0.00	0.00001	9.14		8.41	1.00
	L0000547	711388.31	3903684.39	40.00	0.00	0.00001	9.14		8.41	1.00
	L0000548	711396.06	3903700.72	40.00	0.00	0.00001	9.14		8.41	1.00
	L0000549	711403.81	3903717.05	40.00	0.00	0.00001	9.14		8.41	1.00
	L0000550	711411.56	3903733.38	40.00	0.00	0.00001	9.14		8.41	1.00

Line Area Sources

No Line Area Sources Specified

Receptor Pathway

Receptor Networks

Note: Terrain Elevations and Flagpole Heights for Network Grids are in Page RE2 - 1 (If applicable)
Generated Discrete Receptors for Multi-Tier (Risk) Grid and Receptor Locations for Fenceline Grid are in Page RE3 - 1 (If applicable)

Uniform Cartesian Grid

Option not in use

Non-Uniform Cartesian Grid

Option not in use

Uniform Polar Grid

Option not in use

Non-Uniform Polar Grid

Option not in use

Discrete Receptors

Discrete Cartesian Receptors

Record Number	X-Coordinate [m]	Y-Coordinate [m]	Group Name (Optional)	Terrain Elevations	Flagpole Heights [m] (Optional)
1	711099.71	3903219.44	UCART1	40.00	
2	711108.62	3903219.44	UCART1	40.00	
3	711090.80	3903227.64	UCART1	40.00	
4	711099.71	3903227.64	UCART1	40.00	
5	711108.62	3903227.64	UCART1	40.00	
6	711072.98	3903235.84	UCART1	40.00	
7	711081.89	3903235.84	UCART1	40.00	
8	711090.80	3903235.84	UCART1	40.00	
9	711099.71	3903235.84	UCART1	40.00	
10	711108.62	3903235.84	UCART1	40.00	
11	711117.53	3903235.84	UCART1	40.00	
12	711064.07	3903244.04	UCART1	40.00	
13	711072.98	3903244.04	UCART1	40.00	
14	711081.89	3903244.04	UCART1	40.00	
15	711090.80	3903244.04	UCART1	40.00	
16	711099.71	3903244.04	UCART1	40.00	
17	711108.62	3903244.04	UCART1	40.00	
18	711117.53	3903244.04	UCART1	40.00	
19	711055.16	3903252.24	UCART1	40.00	
20	711064.07	3903252.24	UCART1	40.00	

21	711072.98	3903252.24	UCART1	40.00
22	711081.89	3903252.24	UCART1	40.00
23	711090.80	3903252.24	UCART1	40.00
24	711099.71	3903252.24	UCART1	40.00
25	711108.62	3903252.24	UCART1	40.00
26	711117.53	3903252.24	UCART1	40.00
27	711126.44	3903252.24	UCART1	40.00
28	711037.34	3903260.44	UCART1	40.00
29	711046.25	3903260.44	UCART1	40.00
30	711055.16	3903260.44	UCART1	40.00
31	711064.07	3903260.44	UCART1	40.00
32	711072.98	3903260.44	UCART1	40.00
33	711081.89	3903260.44	UCART1	40.00
34	711090.80	3903260.44	UCART1	40.00
35	711099.71	3903260.44	UCART1	40.00
36	711108.62	3903260.44	UCART1	40.00
37	711117.53	3903260.44	UCART1	40.00
38	711126.44	3903260.44	UCART1	40.00
39	711028.43	3903268.64	UCART1	40.00
40	711037.34	3903268.64	UCART1	40.00
41	711046.25	3903268.64	UCART1	40.00
42	711055.16	3903268.64	UCART1	40.00
43	711064.07	3903268.64	UCART1	40.00
44	711072.98	3903268.64	UCART1	40.00
45	711081.89	3903268.64	UCART1	40.00
46	711090.80	3903268.64	UCART1	40.00
47	711099.71	3903268.64	UCART1	40.00
48	711108.62	3903268.64	UCART1	40.00
49	711117.53	3903268.64	UCART1	40.00
50	711126.44	3903268.64	UCART1	40.00
51	711019.52	3903276.84	UCART1	40.00
52	711028.43	3903276.84	UCART1	40.00
53	711037.34	3903276.84	UCART1	40.00
54	711046.25	3903276.84	UCART1	40.00
55	711055.16	3903276.84	UCART1	40.00
56	711064.07	3903276.84	UCART1	40.00
57	711072.98	3903276.84	UCART1	40.00
58	711081.89	3903276.84	UCART1	40.00

59	711090.80	3903276.84	UCART1	40.00
60	711099.71	3903276.84	UCART1	40.00
61	711108.62	3903276.84	UCART1	40.00
62	711117.53	3903276.84	UCART1	40.00
63	711001.70	3903285.04	UCART1	40.00
64	711010.61	3903285.04	UCART1	40.00
65	711019.52	3903285.04	UCART1	40.00
66	711028.43	3903285.04	UCART1	40.00
67	711037.34	3903285.04	UCART1	40.00
68	711046.25	3903285.04	UCART1	40.00
69	711055.16	3903285.04	UCART1	40.00
70	711064.07	3903285.04	UCART1	40.00
71	711072.98	3903285.04	UCART1	40.00
72	711081.89	3903285.04	UCART1	40.00
73	711090.80	3903285.04	UCART1	40.00
74	711099.71	3903285.04	UCART1	40.00
75	711108.62	3903285.04	UCART1	40.00
76	710992.79	3903293.24	UCART1	40.00
77	711001.70	3903293.24	UCART1	40.00
78	711010.61	3903293.24	UCART1	40.00
79	711019.52	3903293.24	UCART1	40.00
80	711028.43	3903293.24	UCART1	40.00
81	711037.34	3903293.24	UCART1	40.00
82	711046.25	3903293.24	UCART1	40.00
83	711055.16	3903293.24	UCART1	40.00
84	711064.07	3903293.24	UCART1	40.00
85	711072.98	3903293.24	UCART1	40.00
86	711081.89	3903293.24	UCART1	40.00
87	711090.80	3903293.24	UCART1	40.00
88	711099.71	3903293.24	UCART1	40.00
89	710983.88	3903301.44	UCART1	40.00
90	710992.79	3903301.44	UCART1	40.00
91	711001.70	3903301.44	UCART1	40.00
92	711010.61	3903301.44	UCART1	40.00
93	711019.52	3903301.44	UCART1	40.00
94	711028.43	3903301.44	UCART1	40.00
95	711037.34	3903301.44	UCART1	40.00
96	711046.25	3903301.44	UCART1	40.00

97	711055.16	3903301.44	UCART1	40.00
98	711064.07	3903301.44	UCART1	40.00
99	711072.98	3903301.44	UCART1	40.00
100	711081.89	3903301.44	UCART1	40.00
101	710966.06	3903309.64	UCART1	40.00
102	710974.97	3903309.64	UCART1	40.00
103	710983.88	3903309.64	UCART1	40.00
104	710992.79	3903309.64	UCART1	40.00
105	711001.70	3903309.64	UCART1	40.00
106	711010.61	3903309.64	UCART1	40.00
107	711019.52	3903309.64	UCART1	40.00
108	711028.43	3903309.64	UCART1	40.00
109	711037.34	3903309.64	UCART1	40.00
110	711046.25	3903309.64	UCART1	40.00
111	711055.16	3903309.64	UCART1	40.00
112	711064.07	3903309.64	UCART1	40.00
113	711072.98	3903309.64	UCART1	40.00
114	710966.06	3903317.84	UCART1	40.00
115	710974.97	3903317.84	UCART1	40.00
116	710983.88	3903317.84	UCART1	40.00
117	710992.79	3903317.84	UCART1	40.00
118	711001.70	3903317.84	UCART1	40.00
119	711010.61	3903317.84	UCART1	40.00
120	711019.52	3903317.84	UCART1	40.00
121	711028.43	3903317.84	UCART1	40.00
122	711037.34	3903317.84	UCART1	40.00
123	711046.25	3903317.84	UCART1	40.00
124	711055.16	3903317.84	UCART1	40.00
125	711064.07	3903317.84	UCART1	40.00
126	710966.06	3903326.04	UCART1	40.00
127	710974.97	3903326.04	UCART1	40.00
128	710983.88	3903326.04	UCART1	40.00
129	710992.79	3903326.04	UCART1	40.00
130	711001.70	3903326.04	UCART1	40.00
131	711010.61	3903326.04	UCART1	40.00
132	711019.52	3903326.04	UCART1	40.00
133	711028.43	3903326.04	UCART1	40.00
134	711037.34	3903326.04	UCART1	40.00

135	711046.25	3903326.04	UCART1	40.00
136	710974.97	3903334.24	UCART1	40.00
137	710983.88	3903334.24	UCART1	40.00
138	710992.79	3903334.24	UCART1	40.00
139	711001.70	3903334.24	UCART1	40.00
140	711010.61	3903334.24	UCART1	40.00
141	711019.52	3903334.24	UCART1	40.00
142	711028.43	3903334.24	UCART1	40.00
143	711037.34	3903334.24	UCART1	40.00
144	710974.97	3903342.44	UCART1	40.00
145	710983.88	3903342.44	UCART1	40.00
146	710992.79	3903342.44	UCART1	40.00
147	711001.70	3903342.44	UCART1	40.00
148	711010.61	3903342.44	UCART1	40.00
149	711019.52	3903342.44	UCART1	40.00
150	711028.43	3903342.44	UCART1	40.00
151	710974.97	3903350.64	UCART1	40.00
152	710983.88	3903350.64	UCART1	40.00
153	710992.79	3903350.64	UCART1	40.00
154	711001.70	3903350.64	UCART1	40.00
155	711010.61	3903350.64	UCART1	40.00
156	710983.88	3903358.84	UCART1	40.00
157	710992.79	3903358.84	UCART1	40.00
158	711001.70	3903358.84	UCART1	40.00
159	710983.88	3903367.04	UCART1	40.00
160	710992.79	3903367.04	UCART1	40.00
161	711105.92	3903211.30	EDGES	40.00
162	711121.73	3903242.72	EDGES	40.00
163	711134.84	3903268.80	EDGES	40.00

Discrete Polar Receptors

Option not in use

Plant Boundary Receptors

Cartesian Plant Boundary

Primary

Option not in use

Intermediate

Option not in use

Discrete Cartesian Receptors (ARC) for EVALFILE Output

Option not in use

Receptor Groups

Record Number	Group ID	Group Description
1	UCART1	Receptors generated from Uniform Cartesian Grid
2	EDGES	Receptors placed at edge of project boundary

Appendix B – Sample AERMOD ADO Output File

```
**
****************************************
**
** AERMOD Input Produced by:
** AERMOD View Ver. 8.5.1
** Lakes Environmental Software Inc.
** Date: 5/2/2014
** File: C:\Lakes\AERMOD View Trial\Calle Joaquin Hotel\Calle Joaquin Hotel\Calle Joaquin Hotel.ADI
**
****************************************
**
**
****************************************
** AERMOD Control Pathway
****************************************
**
**
CO STARTING
   TITLEONE TownPlace Suites Hotel - Calle Joaquin, San Luis Obispo, CA
   TITLETWO Impacts of DPM Emissions, Ground Level
   MODELOPT DFAULT CONC
   AVERTIME PERIOD
   URBANOPT 276443
   POLLUTID DPM
   RUNORNOT RUN
   ERRORFIL "Calle Joaquin Hotel.err"
CO FINISHED
**
****************************************
** AERMOD Source Pathway
****************************************
**
**
SO STARTING
** Source Location **
** Source ID - Type - X Coord. - Y Coord. **
** ------------------------------------------------------------------
** Line Source Represented by Separated Volume Sources
** LINE VOLUME Source ID = US101S
** DESCRSRC US 101 Southbound
** PREFIX
** Length of Side = 9.14
** Configuration = Separated
** Emission Rate = 0.000802937
** Elevated
** Vertical Dimension = 4.31
** SZINIT = 1.00
** Nodes = 5
** 710900.069, 3902691.467, 40.00, 0.00, 8.41
** 711020.392, 3902946.850, 40.00, 0.00, 8.41
** 711128.378, 3903172.572, 40.00, 0.00, 8.41
** 711271.461, 3903478.505, 40.00, 0.00, 8.41
** 711398.102, 3903745.828, 40.00, 0.00, 8.41
** ------------------------------------------------------------------
   LOCATION L0000421     VOLUME   710902.017 3902695.603 40.00
   LOCATION L0000422     VOLUME   710909.722 3902711.956 40.00
   LOCATION L0000423     VOLUME   710917.426 3902728.309 40.00
   LOCATION L0000424     VOLUME   710925.131 3902744.662 40.00
   LOCATION L0000425     VOLUME   710932.836 3902761.015 40.00
   LOCATION L0000426     VOLUME   710940.540 3902777.368 40.00
   LOCATION L0000427     VOLUME   710948.245 3902793.721 40.00
   LOCATION L0000428     VOLUME   710955.950 3902810.074 40.00
   LOCATION L0000429     VOLUME   710963.654 3902826.426 40.00
   LOCATION L0000430     VOLUME   710971.359 3902842.779 40.00
   LOCATION L0000431     VOLUME   710979.064 3902859.132 40.00
   LOCATION L0000432     VOLUME   710986.768 3902875.485 40.00
   LOCATION L0000433     VOLUME   710994.473 3902891.838 40.00
   LOCATION L0000434     VOLUME   711002.178 3902908.191 40.00
   LOCATION L0000435     VOLUME   711009.882 3902924.544 40.00
   LOCATION L0000436     VOLUME   711017.587 3902940.897 40.00
   LOCATION L0000437     VOLUME   711025.353 3902957.220 40.00
   LOCATION L0000438     VOLUME   711033.154 3902973.528 40.00
   LOCATION L0000439     VOLUME   711040.956 3902989.835 40.00
   LOCATION L0000440     VOLUME   711048.757 3903006.142 40.00
   LOCATION L0000441     VOLUME   711056.558 3903022.449 40.00
   LOCATION L0000442     VOLUME   711064.359 3903038.756 40.00
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   LOCATION L0000443     VOLUME   711072.161 3903055.063 40.00
   LOCATION L0000444     VOLUME   711079.962 3903071.370 40.00
   LOCATION L0000445     VOLUME   711087.763 3903087.677 40.00
   LOCATION L0000446     VOLUME   711095.565 3903103.984 40.00
   LOCATION L0000447     VOLUME   711103.366 3903120.291 40.00
   LOCATION L0000448     VOLUME   711111.167 3903136.598 40.00
   LOCATION L0000449     VOLUME   711118.969 3903152.905 40.00
   LOCATION L0000450     VOLUME   711126.770 3903169.212 40.00
   LOCATION L0000451     VOLUME   711134.458 3903185.572 40.00
   LOCATION L0000452     VOLUME   711142.116 3903201.947 40.00
   LOCATION L0000453     VOLUME   711149.774 3903218.321 40.00
   LOCATION L0000454     VOLUME   711157.433 3903234.696 40.00
   LOCATION L0000455     VOLUME   711165.091 3903251.071 40.00
   LOCATION L0000456     VOLUME   711172.750 3903267.445 40.00
   LOCATION L0000457     VOLUME   711180.408 3903283.820 40.00
   LOCATION L0000458     VOLUME   711188.066 3903300.195 40.00
   LOCATION L0000459     VOLUME   711195.725 3903316.569 40.00
   LOCATION L0000460     VOLUME   711203.383 3903332.944 40.00
   LOCATION L0000461     VOLUME   711211.041 3903349.319 40.00
   LOCATION L0000462     VOLUME   711218.700 3903365.693 40.00
   LOCATION L0000463     VOLUME   711226.358 3903382.068 40.00
   LOCATION L0000464     VOLUME   711234.016 3903398.442 40.00
   LOCATION L0000465     VOLUME   711241.675 3903414.817 40.00
   LOCATION L0000466     VOLUME   711249.333 3903431.192 40.00
   LOCATION L0000467     VOLUME   711256.991 3903447.566 40.00
   LOCATION L0000468     VOLUME   711264.650 3903463.941 40.00
   LOCATION L0000469     VOLUME   711272.317 3903480.311 40.00
   LOCATION L0000470     VOLUME   711280.056 3903496.648 40.00
   LOCATION L0000471     VOLUME   711287.795 3903512.985 40.00
   LOCATION L0000472     VOLUME   711295.535 3903529.321 40.00
   LOCATION L0000473     VOLUME   711303.274 3903545.658 40.00
   LOCATION L0000474     VOLUME   711311.013 3903561.994 40.00
   LOCATION L0000475     VOLUME   711318.752 3903578.331 40.00
   LOCATION L0000476     VOLUME   711326.491 3903594.667 40.00
   LOCATION L0000477     VOLUME   711334.231 3903611.004 40.00
   LOCATION L0000478     VOLUME   711341.970 3903627.340 40.00
   LOCATION L0000479     VOLUME   711349.709 3903643.677 40.00
   LOCATION L0000480     VOLUME   711357.448 3903660.014 40.00
   LOCATION L0000481     VOLUME   711365.188 3903676.350 40.00
   LOCATION L0000482     VOLUME   711372.927 3903692.687 40.00
   LOCATION L0000483     VOLUME   711380.666 3903709.023 40.00
   LOCATION L0000484     VOLUME   711388.405 3903725.360 40.00
   LOCATION L0000485     VOLUME   711396.144 3903741.696 40.00
** End of LINE VOLUME Source ID = US101S
** ------------------------------------------------------------------------
** Line Source Represented by Separated Volume Sources
** LINE VOLUME Source ID = US101N
** DESCRSRC US 101 Northbound
** PREFIX
** Length of Side = 9.14
** Configuration = Separated
** Emission Rate = 0.000802937
** Elevated
** Vertical Dimension = 4.31
** SZINIT = 1.00
** Nodes = 6
** 710916.233, 3902682.909, 40.00, 0.00, 8.41
** 710989.051, 3902839.032, 40.00, 0.00, 8.41
** 711085.624, 3903041.881, 40.00, 0.00, 8.41
** 711204.787, 3903293.214, 40.00, 0.00, 8.41
** 711324.897, 3903550.774, 40.00, 0.00, 8.41
** 711413.520, 3903737.507, 40.00, 0.00, 8.41
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   LOCATION L0000486     VOLUME   710918.166 3902687.053 40.00
   LOCATION L0000487     VOLUME   710925.806 3902703.434 40.00
   LOCATION L0000488     VOLUME   710933.447 3902719.815 40.00
   LOCATION L0000489     VOLUME   710941.087 3902736.196 40.00
   LOCATION L0000490     VOLUME   710948.728 3902752.578 40.00
   LOCATION L0000491     VOLUME   710956.368 3902768.959 40.00
   LOCATION L0000492     VOLUME   710964.009 3902785.340 40.00
   LOCATION L0000493     VOLUME   710971.649 3902801.721 40.00
   LOCATION L0000494     VOLUME   710979.289 3902818.103 40.00
   LOCATION L0000495     VOLUME   710986.930 3902834.484 40.00
   LOCATION L0000496     VOLUME   710994.664 3902850.821 40.00
   LOCATION L0000497     VOLUME   711002.433 3902867.141 40.00
   LOCATION L0000498     VOLUME   711010.203 3902883.462 40.00
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Appendix B – Sample AERMOD ADO Output File

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   LOCATION L0000499     VOLUME   711017.973 3902899.782 40.00
   LOCATION L0000500     VOLUME   711025.743 3902916.102 40.00
   LOCATION L0000501     VOLUME   711033.513 3902932.422 40.00
   LOCATION L0000502     VOLUME   711041.282 3902948.743 40.00
   LOCATION L0000503     VOLUME   711049.052 3902965.063 40.00
   LOCATION L0000504     VOLUME   711056.822 3902981.383 40.00
   LOCATION L0000505     VOLUME   711064.592 3902997.703 40.00
   LOCATION L0000506     VOLUME   711072.362 3903014.024 40.00
   LOCATION L0000507     VOLUME   711080.131 3903030.344 40.00
   LOCATION L0000508     VOLUME   711087.894 3903046.668 40.00
   LOCATION L0000509     VOLUME   711095.637 3903063.000 40.00
   LOCATION L0000510     VOLUME   711103.381 3903079.333 40.00
   LOCATION L0000511     VOLUME   711111.125 3903095.666 40.00
   LOCATION L0000512     VOLUME   711118.868 3903111.998 40.00
   LOCATION L0000513     VOLUME   711126.612 3903128.331 40.00
   LOCATION L0000514     VOLUME   711134.356 3903144.664 40.00
   LOCATION L0000515     VOLUME   711142.099 3903160.996 40.00
   LOCATION L0000516     VOLUME   711149.843 3903177.329 40.00
   LOCATION L0000517     VOLUME   711157.587 3903193.662 40.00
   LOCATION L0000518     VOLUME   711165.331 3903209.994 40.00
   LOCATION L0000519     VOLUME   711173.074 3903226.327 40.00
   LOCATION L0000520     VOLUME   711180.818 3903242.660 40.00
   LOCATION L0000521     VOLUME   711188.562 3903258.992 40.00
   LOCATION L0000522     VOLUME   711196.305 3903275.325 40.00
   LOCATION L0000523     VOLUME   711204.049 3903291.658 40.00
   LOCATION L0000524     VOLUME   711211.698 3903308.035 40.00
   LOCATION L0000525     VOLUME   711219.338 3903324.416 40.00
   LOCATION L0000526     VOLUME   711226.977 3903340.798 40.00
   LOCATION L0000527     VOLUME   711234.617 3903357.180 40.00
   LOCATION L0000528     VOLUME   711242.256 3903373.561 40.00
   LOCATION L0000529     VOLUME   711249.895 3903389.943 40.00
   LOCATION L0000530     VOLUME   711257.535 3903406.325 40.00
   LOCATION L0000531     VOLUME   711265.174 3903422.707 40.00
   LOCATION L0000532     VOLUME   711272.814 3903439.088 40.00
   LOCATION L0000533     VOLUME   711280.453 3903455.470 40.00
   LOCATION L0000534     VOLUME   711288.092 3903471.852 40.00
   LOCATION L0000535     VOLUME   711295.732 3903488.233 40.00
   LOCATION L0000536     VOLUME   711303.371 3903504.615 40.00
   LOCATION L0000537     VOLUME   711311.010 3903520.997 40.00
   LOCATION L0000538     VOLUME   711318.650 3903537.379 40.00
   LOCATION L0000539     VOLUME   711326.309 3903553.751 40.00
   LOCATION L0000540     VOLUME   711334.059 3903570.080 40.00
   LOCATION L0000541     VOLUME   711341.809 3903586.410 40.00
   LOCATION L0000542     VOLUME   711349.559 3903602.740 40.00
   LOCATION L0000543     VOLUME   711357.310 3903619.069 40.00
   LOCATION L0000544     VOLUME   711365.060 3903635.399 40.00
   LOCATION L0000545     VOLUME   711372.810 3903651.729 40.00
   LOCATION L0000546     VOLUME   711380.560 3903668.058 40.00
   LOCATION L0000547     VOLUME   711388.310 3903684.388 40.00
   LOCATION L0000548     VOLUME   711396.060 3903700.718 40.00
   LOCATION L0000549     VOLUME   711403.810 3903717.047 40.00
   LOCATION L0000550     VOLUME   711411.560 3903733.377 40.00
** End of LINE VOLUME Source ID = US101N
** Source Parameters **
** LINE VOLUME Source ID = US101S
   SRCPARAM L0000421     0.0000123529      0.00      8.41      1.00
   SRCPARAM L0000422     0.0000123529      0.00      8.41      1.00
   SRCPARAM L0000423     0.0000123529      0.00      8.41      1.00
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   SRCPARAM L0000426     0.0000123529      0.00      8.41      1.00
   SRCPARAM L0000427     0.0000123529      0.00      8.41      1.00
   SRCPARAM L0000428     0.0000123529      0.00      8.41      1.00
   SRCPARAM L0000429     0.0000123529      0.00      8.41      1.00
   SRCPARAM L0000430     0.0000123529      0.00      8.41      1.00
   SRCPARAM L0000431     0.0000123529      0.00      8.41      1.00
   SRCPARAM L0000432     0.0000123529      0.00      8.41      1.00
   SRCPARAM L0000433     0.0000123529      0.00      8.41      1.00
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   SRCPARAM L0000435     0.0000123529      0.00      8.41      1.00
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   SRCPARAM L0000438     0.0000123529      0.00      8.41      1.00
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   SRCPARAM L0000441     0.0000123529      0.00      8.41      1.00
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Appendix B – Sample AERMOD ADO Output File

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   SRCPARAM L0000442     0.0000123529      0.00      8.41      1.00
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   SRCPARAM L0000447     0.0000123529      0.00      8.41      1.00
   SRCPARAM L0000448     0.0000123529      0.00      8.41      1.00
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   SRCPARAM L0000451     0.0000123529      0.00      8.41      1.00
   SRCPARAM L0000452     0.0000123529      0.00      8.41      1.00
   SRCPARAM L0000453     0.0000123529      0.00      8.41      1.00
   SRCPARAM L0000454     0.0000123529      0.00      8.41      1.00
   SRCPARAM L0000455     0.0000123529      0.00      8.41      1.00
   SRCPARAM L0000456     0.0000123529      0.00      8.41      1.00
   SRCPARAM L0000457     0.0000123529      0.00      8.41      1.00
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   SRCPARAM L0000463     0.0000123529      0.00      8.41      1.00
   SRCPARAM L0000464     0.0000123529      0.00      8.41      1.00
   SRCPARAM L0000465     0.0000123529      0.00      8.41      1.00
   SRCPARAM L0000466     0.0000123529      0.00      8.41      1.00
   SRCPARAM L0000467     0.0000123529      0.00      8.41      1.00
   SRCPARAM L0000468     0.0000123529      0.00      8.41      1.00
   SRCPARAM L0000469     0.0000123529      0.00      8.41      1.00
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   SRCPARAM L0000471     0.0000123529      0.00      8.41      1.00
   SRCPARAM L0000472     0.0000123529      0.00      8.41      1.00
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   SRCPARAM L0000474     0.0000123529      0.00      8.41      1.00
   SRCPARAM L0000475     0.0000123529      0.00      8.41      1.00
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   SRCPARAM L0000478     0.0000123529      0.00      8.41      1.00
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   SRCPARAM L0000485     0.0000123529      0.00      8.41      1.00
** ------------------------------------------------------------------
** LINE VOLUME Source ID = US101N
   SRCPARAM L0000486     0.0000123529      0.00      8.41      1.00
   SRCPARAM L0000487     0.0000123529      0.00      8.41      1.00
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   SRCPARAM L0000542     0.0000123529      0.00      8.41      1.00
   SRCPARAM L0000543     0.0000123529      0.00      8.41      1.00
   SRCPARAM L0000544     0.0000123529      0.00      8.41      1.00
   SRCPARAM L0000545     0.0000123529      0.00      8.41      1.00
   SRCPARAM L0000546     0.0000123529      0.00      8.41      1.00
   SRCPARAM L0000547     0.0000123529      0.00      8.41      1.00
   SRCPARAM L0000548     0.0000123529      0.00      8.41      1.00
   SRCPARAM L0000549     0.0000123529      0.00      8.41      1.00
   SRCPARAM L0000550     0.0000123529      0.00      8.41      1.00
** ---------------------------------------------------------------------
   URBANSRC ALL

** Variable Emissions Type: "By Hour-of-Day (HROFDY)"
** Variable Emission Scenario: "Hourly DPM"
   EMISFACT L0000486     HROFDY 0.604140979 0.633753673 0.578273854 0.087207685 0.162997932 0.220550124
   EMISFACT L0000486     HROFDY 0.448801467 0.244447366 0.811076852 0.955768451 0.728466047 1.0
   EMISFACT L0000486     HROFDY 0.862369343 0.846815634 0.759607949 0.558261405 0.704997193 0.543297997
   EMISFACT L0000486     HROFDY 0.315256427 0.103938267 0.413567877 0.67406551 0.47843556 0.087207685
   EMISFACT L0000487     HROFDY 0.604140979 0.633753673 0.578273854 0.087207685 0.162997932 0.220550124
   EMISFACT L0000487     HROFDY 0.448801467 0.244447366 0.811076852 0.955768451 0.728466047 1.0
   EMISFACT L0000487     HROFDY 0.862369343 0.846815634 0.759607949 0.558261405 0.704997193 0.543297997
   EMISFACT L0000487     HROFDY 0.315256427 0.103938267 0.413567877 0.67406551 0.47843556 0.087207685
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   EMISFACT L0000490     HROFDY 0.315256427 0.103938267 0.413567877 0.67406551 0.47843556 0.087207685
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Appendix B – Sample AERMOD ADO Output File

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EMISFACT L0000495     HROFDY 0.315256427 0.103938267 0.413567877 0.67406551 0.47843556 0.087207685
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EMISFACT L0000497     HROFDY 0.604140979 0.633753673 0.578273854 0.087207685 0.162997932 0.220550124
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EMISFACT L0000497     HROFDY 0.315256427 0.103938267 0.413567877 0.67406551 0.47843556 0.087207685
EMISFACT L0000498     HROFDY 0.604140979 0.633753673 0.578273854 0.087207685 0.162997932 0.220550124
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Appendix B – Sample AERMOD ADO Output File

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Appendix B – Sample AERMOD ADO Output File

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Appendix B – Sample AERMOD ADO Output File

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EMISFACT L0000478      HROFDY 0.315256427 0.103938267 0.413567877 0.67406551 0.47843556 0.087207685
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Appendix B – Sample AERMOD ADO Output File

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   EMISFACT L0000482     HROFDY 0.315256427 0.103938267 0.413567877 0.67406551 0.47843556 0.087207685
   EMISFACT L0000483     HROFDY 0.604140979 0.633753673 0.578273854 0.087207685 0.162997932 0.220550124
   EMISFACT L0000483     HROFDY 0.448801467 0.244447366 0.811076852 0.955768451 0.728466047 1.0
   EMISFACT L0000483     HROFDY 0.862369343 0.846815634 0.759607949 0.558261405 0.704997193 0.543297997
   EMISFACT L0000483     HROFDY 0.315256427 0.103938267 0.413567877 0.67406551 0.47843556 0.087207685
   EMISFACT L0000484     HROFDY 0.604140979 0.633753673 0.578273854 0.087207685 0.162997932 0.220550124
   EMISFACT L0000484     HROFDY 0.448801467 0.244447366 0.811076852 0.955768451 0.728466047 1.0
   EMISFACT L0000484     HROFDY 0.862369343 0.846815634 0.759607949 0.558261405 0.704997193 0.543297997
   EMISFACT L0000484     HROFDY 0.315256427 0.103938267 0.413567877 0.67406551 0.47843556 0.087207685
   EMISFACT L0000485     HROFDY 0.604140979 0.633753673 0.578273854 0.087207685 0.162997932 0.220550124
   EMISFACT L0000485     HROFDY 0.448801467 0.244447366 0.811076852 0.955768451 0.728466047 1.0
   EMISFACT L0000485     HROFDY 0.862369343 0.846815634 0.759607949 0.558261405 0.704997193 0.543297997
   EMISFACT L0000485     HROFDY 0.315256427 0.103938267 0.413567877 0.67406551 0.47843556 0.087207685
   SRCGROUP ALL
SO FINISHED
**
****************************************
** AERMOD Receptor Pathway
****************************************
**
**
RE STARTING
   INCLUDED "Calle Joaquin Hotel.rou"
RE FINISHED
**
****************************************
** AERMOD Meteorology Pathway
****************************************
**
**
ME STARTING
   SURFFILE "Z:\SLO - Calle Joaquin Hotel\Current Project\AERMET Data\SLOOS2011.SFC"
   PROFFILE "Z:\SLO - Calle Joaquin Hotel\Current Project\AERMET Data\SLOOS2011.PFL"
   SURFDATA 722897 2011
   UAIRDATA 103214 2011
   SITEDATA 2006 2011
   PROFBASE 55.0 METERS
ME FINISHED
**
****************************************
** AERMOD Output Pathway
****************************************
**
**
OU STARTING
** Auto-Generated Plotfiles
   PLOTFILE PERIOD ALL "CALLE JOAQUIN HOTEL.AD\PE00GALL.PLT" 31
   SUMMFILE "Calle Joaquin Hotel.sum"
OU FINISHED


  *** Message Summary For AERMOD Model Setup ***

  --------- Summary of Total Messages --------

 A Total of            0 Fatal Error Message(s)
 A Total of            1 Warning Message(s)
 A Total of            0 Informational Message(s)


    ******** FATAL ERROR MESSAGES ********
```

```
              ***  NONE  ***


   ********   WARNING MESSAGES   ********
ME W396     889       MEOPEN: Met data from outdated version of AERMET, version:        12345

***********************************
*** SETUP Finishes Successfully ***
***********************************
```

Appendix B – Sample AERMOD ADO Output File

```
*** AERMOD - VERSION  13350 ***   *** TownPlace Suites Hotel - Calle Joaquin, San Luis Obispo, CA          ***        05/02/14
*** AERMET - VERSION  12345 ***   *** Impacts of DPM Emissions, Ground Level                               ***        16:50:49
                                                                                                                      PAGE   1
**MODELOPTs:  RegDFAULT CONC                                             ELEV


                                          ***     MODEL SETUP OPTIONS SUMMARY       ***
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

**Model Is Setup For Calculation of Average CONCentration Values.

  --  DEPOSITION LOGIC  --
**NO GAS DEPOSITION Data Provided.
**NO PARTICLE DEPOSITION Data Provided.
**Model Uses NO DRY DEPLETION.  DRYDPLT  =  F
**Model Uses NO WET DEPLETION.  WETDPLT  =  F

**Model Uses URBAN Dispersion Algorithm for the SBL for   130 Source(s),
  for Total of    1 Urban Area(s):
  Urban Population =    276443.0 ;  Urban Roughness Length =  1.000 m

**Model Uses Regulatory DEFAULT Options:
        1. Stack-tip Downwash.
        2. Model Accounts for ELEVated Terrain Effects.
        3. Use Calms Processing Routine.
        4. Use Missing Data Processing Routine.
        5. No Exponential Decay for URBAN/Non-SO2.
        6. Urban Roughness Length of 1.0 Meter Assumed.

**Model Assumes No FLAGPOLE Receptor Heights.

**Model Calculates PERIOD Averages Only

**This Run Includes:    130 Source(s);       1 Source Group(s); and     163 Receptor(s)

**The Model Assumes A Pollutant Type of:  DPM

**Model Set To Continue RUNning After the Setup Testing.

**The AERMET Input Meteorological Data Version Date:  12345

**Output Options Selected:
         Model Outputs Tables of PERIOD Averages by Receptor
         Model Outputs External File(s) of High Values for Plotting (PLOTFILE Keyword)
         Model Outputs Separate Summary File of High Ranked Values (SUMMFILE Keyword)

**NOTE:  The Following Flags May Appear Following CONC Values:  c for Calm Hours
                                                                m for Missing Hours
                                                                b for Both Calm and Missing Hours

**Misc. Inputs:  Base Elev. for Pot. Temp. Profile (m MSL) =    55.00 ;  Decay Coef. =    0.000     ;  Rot. Angle =     0.0
                 Emission Units = GRAMS/SEC                                ;  Emission Rate Unit Factor =   0.10000E+07
                 Output Units   = MICROGRAMS/M**3

**Approximate Storage Requirements of Model =      3.6 MB of RAM.

**Detailed Error/Message File:   Calle Joaquin Hotel.err
**File for Summary of Results:   Calle Joaquin Hotel.sum
```

```
*** AERMOD - VERSION  13350 ***   *** TownPlace Suites Hotel - Calle Joaquin, San Luis Obispo, CA          ***        05/02/14
*** AERMET - VERSION  12345 ***   *** Impacts of DPM Emissions, Ground Level                               ***        16:50:49
                                                                                                                       PAGE   2
**MODELOPTs:  RegDFAULT CONC                                                ELEV
```

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0000421	0	0.12353E-04	710902.0	3902695.6	40.0	0.00	8.41	1.00	YES	HROFDY
L0000422	0	0.12353E-04	710909.7	3902712.0	40.0	0.00	8.41	1.00	YES	HROFDY
L0000423	0	0.12353E-04	710917.4	3902728.3	40.0	0.00	8.41	1.00	YES	HROFDY
L0000424	0	0.12353E-04	710925.1	3902744.7	40.0	0.00	8.41	1.00	YES	HROFDY
L0000425	0	0.12353E-04	710932.8	3902761.0	40.0	0.00	8.41	1.00	YES	HROFDY
L0000426	0	0.12353E-04	710940.5	3902777.4	40.0	0.00	8.41	1.00	YES	HROFDY
L0000427	0	0.12353E-04	710948.2	3902793.7	40.0	0.00	8.41	1.00	YES	HROFDY
L0000428	0	0.12353E-04	710956.0	3902810.1	40.0	0.00	8.41	1.00	YES	HROFDY
L0000429	0	0.12353E-04	710963.7	3902826.4	40.0	0.00	8.41	1.00	YES	HROFDY
L0000430	0	0.12353E-04	710971.4	3902842.8	40.0	0.00	8.41	1.00	YES	HROFDY
L0000431	0	0.12353E-04	710979.1	3902859.1	40.0	0.00	8.41	1.00	YES	HROFDY
L0000432	0	0.12353E-04	710986.8	3902875.5	40.0	0.00	8.41	1.00	YES	HROFDY
L0000433	0	0.12353E-04	710994.5	3902891.8	40.0	0.00	8.41	1.00	YES	HROFDY
L0000434	0	0.12353E-04	711002.2	3902908.2	40.0	0.00	8.41	1.00	YES	HROFDY
L0000435	0	0.12353E-04	711009.9	3902924.5	40.0	0.00	8.41	1.00	YES	HROFDY
L0000436	0	0.12353E-04	711017.6	3902940.9	40.0	0.00	8.41	1.00	YES	HROFDY
L0000437	0	0.12353E-04	711025.4	3902957.2	40.0	0.00	8.41	1.00	YES	HROFDY
L0000438	0	0.12353E-04	711033.2	3902973.5	40.0	0.00	8.41	1.00	YES	HROFDY
L0000439	0	0.12353E-04	711041.0	3902989.8	40.0	0.00	8.41	1.00	YES	HROFDY
L0000440	0	0.12353E-04	711048.8	3903006.1	40.0	0.00	8.41	1.00	YES	HROFDY
L0000441	0	0.12353E-04	711056.6	3903022.4	40.0	0.00	8.41	1.00	YES	HROFDY
L0000442	0	0.12353E-04	711064.4	3903038.8	40.0	0.00	8.41	1.00	YES	HROFDY
L0000443	0	0.12353E-04	711072.2	3903055.1	40.0	0.00	8.41	1.00	YES	HROFDY
L0000444	0	0.12353E-04	711080.0	3903071.4	40.0	0.00	8.41	1.00	YES	HROFDY
L0000445	0	0.12353E-04	711087.8	3903087.7	40.0	0.00	8.41	1.00	YES	HROFDY
L0000446	0	0.12353E-04	711095.6	3903104.0	40.0	0.00	8.41	1.00	YES	HROFDY
L0000447	0	0.12353E-04	711103.4	3903120.3	40.0	0.00	8.41	1.00	YES	HROFDY
L0000448	0	0.12353E-04	711111.2	3903136.6	40.0	0.00	8.41	1.00	YES	HROFDY
L0000449	0	0.12353E-04	711119.0	3903152.9	40.0	0.00	8.41	1.00	YES	HROFDY
L0000450	0	0.12353E-04	711126.8	3903169.2	40.0	0.00	8.41	1.00	YES	HROFDY
L0000451	0	0.12353E-04	711134.5	3903185.6	40.0	0.00	8.41	1.00	YES	HROFDY
L0000452	0	0.12353E-04	711142.1	3903201.9	40.0	0.00	8.41	1.00	YES	HROFDY
L0000453	0	0.12353E-04	711149.8	3903218.3	40.0	0.00	8.41	1.00	YES	HROFDY
L0000454	0	0.12353E-04	711157.4	3903234.7	40.0	0.00	8.41	1.00	YES	HROFDY
L0000455	0	0.12353E-04	711165.1	3903251.1	40.0	0.00	8.41	1.00	YES	HROFDY
L0000456	0	0.12353E-04	711172.8	3903267.4	40.0	0.00	8.41	1.00	YES	HROFDY
L0000457	0	0.12353E-04	711180.4	3903283.8	40.0	0.00	8.41	1.00	YES	HROFDY
L0000458	0	0.12353E-04	711188.1	3903300.2	40.0	0.00	8.41	1.00	YES	HROFDY
L0000459	0	0.12353E-04	711195.7	3903316.6	40.0	0.00	8.41	1.00	YES	HROFDY
L0000460	0	0.12353E-04	711203.4	3903332.9	40.0	0.00	8.41	1.00	YES	HROFDY

```
*** AERMOD - VERSION  13350 ***   *** TownPlace Suites Hotel - Calle Joaquin, San Luis Obispo, CA          ***        05/02/14
*** AERMET - VERSION  12345 ***   *** Impacts of DPM Emissions, Ground Level                               ***        16:50:49
                                                                                                                       PAGE   3
**MODELOPTs:  RegDFAULT CONC                                              ELEV
```

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0000461	0	0.12353E-04	711211.0	3903349.3	40.0	0.00	8.41	1.00	YES	HROFDY
L0000462	0	0.12353E-04	711218.7	3903365.7	40.0	0.00	8.41	1.00	YES	HROFDY
L0000463	0	0.12353E-04	711226.4	3903382.1	40.0	0.00	8.41	1.00	YES	HROFDY
L0000464	0	0.12353E-04	711234.0	3903398.4	40.0	0.00	8.41	1.00	YES	HROFDY
L0000465	0	0.12353E-04	711241.7	3903414.8	40.0	0.00	8.41	1.00	YES	HROFDY
L0000466	0	0.12353E-04	711249.3	3903431.2	40.0	0.00	8.41	1.00	YES	HROFDY
L0000467	0	0.12353E-04	711257.0	3903447.6	40.0	0.00	8.41	1.00	YES	HROFDY
L0000468	0	0.12353E-04	711264.7	3903463.9	40.0	0.00	8.41	1.00	YES	HROFDY
L0000469	0	0.12353E-04	711272.3	3903480.3	40.0	0.00	8.41	1.00	YES	HROFDY
L0000470	0	0.12353E-04	711280.1	3903496.6	40.0	0.00	8.41	1.00	YES	HROFDY
L0000471	0	0.12353E-04	711287.8	3903513.0	40.0	0.00	8.41	1.00	YES	HROFDY
L0000472	0	0.12353E-04	711295.5	3903529.3	40.0	0.00	8.41	1.00	YES	HROFDY
L0000473	0	0.12353E-04	711303.3	3903545.7	40.0	0.00	8.41	1.00	YES	HROFDY
L0000474	0	0.12353E-04	711311.0	3903562.0	40.0	0.00	8.41	1.00	YES	HROFDY
L0000475	0	0.12353E-04	711318.8	3903578.3	40.0	0.00	8.41	1.00	YES	HROFDY
L0000476	0	0.12353E-04	711326.5	3903594.7	40.0	0.00	8.41	1.00	YES	HROFDY
L0000477	0	0.12353E-04	711334.2	3903611.0	40.0	0.00	8.41	1.00	YES	HROFDY
L0000478	0	0.12353E-04	711342.0	3903627.3	40.0	0.00	8.41	1.00	YES	HROFDY
L0000479	0	0.12353E-04	711349.7	3903643.7	40.0	0.00	8.41	1.00	YES	HROFDY
L0000480	0	0.12353E-04	711357.4	3903660.0	40.0	0.00	8.41	1.00	YES	HROFDY
L0000481	0	0.12353E-04	711365.2	3903676.3	40.0	0.00	8.41	1.00	YES	HROFDY
L0000482	0	0.12353E-04	711372.9	3903692.7	40.0	0.00	8.41	1.00	YES	HROFDY
L0000483	0	0.12353E-04	711380.7	3903709.0	40.0	0.00	8.41	1.00	YES	HROFDY
L0000484	0	0.12353E-04	711388.4	3903725.4	40.0	0.00	8.41	1.00	YES	HROFDY
L0000485	0	0.12353E-04	711396.1	3903741.7	40.0	0.00	8.41	1.00	YES	HROFDY
L0000486	0	0.12353E-04	710918.2	3902687.1	40.0	0.00	8.41	1.00	YES	HROFDY
L0000487	0	0.12353E-04	710925.8	3902703.4	40.0	0.00	8.41	1.00	YES	HROFDY
L0000488	0	0.12353E-04	710933.4	3902719.8	40.0	0.00	8.41	1.00	YES	HROFDY
L0000489	0	0.12353E-04	710941.1	3902736.2	40.0	0.00	8.41	1.00	YES	HROFDY
L0000490	0	0.12353E-04	710948.7	3902752.6	40.0	0.00	8.41	1.00	YES	HROFDY
L0000491	0	0.12353E-04	710956.4	3902769.0	40.0	0.00	8.41	1.00	YES	HROFDY
L0000492	0	0.12353E-04	710964.0	3902785.3	40.0	0.00	8.41	1.00	YES	HROFDY
L0000493	0	0.12353E-04	710971.6	3902801.7	40.0	0.00	8.41	1.00	YES	HROFDY
L0000494	0	0.12353E-04	710979.3	3902818.1	40.0	0.00	8.41	1.00	YES	HROFDY
L0000495	0	0.12353E-04	710986.9	3902834.5	40.0	0.00	8.41	1.00	YES	HROFDY
L0000496	0	0.12353E-04	710994.7	3902850.8	40.0	0.00	8.41	1.00	YES	HROFDY
L0000497	0	0.12353E-04	711002.4	3902867.1	40.0	0.00	8.41	1.00	YES	HROFDY
L0000498	0	0.12353E-04	711010.2	3902883.5	40.0	0.00	8.41	1.00	YES	HROFDY
L0000499	0	0.12353E-04	711018.0	3902899.8	40.0	0.00	8.41	1.00	YES	HROFDY
L0000500	0	0.12353E-04	711025.7	3902916.1	40.0	0.00	8.41	1.00	YES	HROFDY

Appendix B – Sample AERMOD ADO Output File

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0000501	0	0.12353E-04	711033.5	3902932.4	40.0	0.00	8.41	1.00	YES	HROFDY
L0000502	0	0.12353E-04	711041.3	3902948.7	40.0	0.00	8.41	1.00	YES	HROFDY
L0000503	0	0.12353E-04	711049.1	3902965.1	40.0	0.00	8.41	1.00	YES	HROFDY
L0000504	0	0.12353E-04	711056.8	3902981.4	40.0	0.00	8.41	1.00	YES	HROFDY
L0000505	0	0.12353E-04	711064.6	3902997.7	40.0	0.00	8.41	1.00	YES	HROFDY
L0000506	0	0.12353E-04	711072.4	3903014.0	40.0	0.00	8.41	1.00	YES	HROFDY
L0000507	0	0.12353E-04	711080.1	3903030.3	40.0	0.00	8.41	1.00	YES	HROFDY
L0000508	0	0.12353E-04	711087.9	3903046.7	40.0	0.00	8.41	1.00	YES	HROFDY
L0000509	0	0.12353E-04	711095.6	3903063.0	40.0	0.00	8.41	1.00	YES	HROFDY
L0000510	0	0.12353E-04	711103.4	3903079.3	40.0	0.00	8.41	1.00	YES	HROFDY
L0000511	0	0.12353E-04	711111.1	3903095.7	40.0	0.00	8.41	1.00	YES	HROFDY
L0000512	0	0.12353E-04	711118.9	3903112.0	40.0	0.00	8.41	1.00	YES	HROFDY
L0000513	0	0.12353E-04	711126.6	3903128.3	40.0	0.00	8.41	1.00	YES	HROFDY
L0000514	0	0.12353E-04	711134.4	3903144.7	40.0	0.00	8.41	1.00	YES	HROFDY
L0000515	0	0.12353E-04	711142.1	3903161.0	40.0	0.00	8.41	1.00	YES	HROFDY
L0000516	0	0.12353E-04	711149.8	3903177.3	40.0	0.00	8.41	1.00	YES	HROFDY
L0000517	0	0.12353E-04	711157.6	3903193.7	40.0	0.00	8.41	1.00	YES	HROFDY
L0000518	0	0.12353E-04	711165.3	3903210.0	40.0	0.00	8.41	1.00	YES	HROFDY
L0000519	0	0.12353E-04	711173.1	3903226.3	40.0	0.00	8.41	1.00	YES	HROFDY
L0000520	0	0.12353E-04	711180.8	3903242.7	40.0	0.00	8.41	1.00	YES	HROFDY
L0000521	0	0.12353E-04	711188.6	3903259.0	40.0	0.00	8.41	1.00	YES	HROFDY
L0000522	0	0.12353E-04	711196.3	3903275.3	40.0	0.00	8.41	1.00	YES	HROFDY
L0000523	0	0.12353E-04	711204.0	3903291.7	40.0	0.00	8.41	1.00	YES	HROFDY
L0000524	0	0.12353E-04	711211.7	3903308.0	40.0	0.00	8.41	1.00	YES	HROFDY
L0000525	0	0.12353E-04	711219.3	3903324.4	40.0	0.00	8.41	1.00	YES	HROFDY
L0000526	0	0.12353E-04	711227.0	3903340.8	40.0	0.00	8.41	1.00	YES	HROFDY
L0000527	0	0.12353E-04	711234.6	3903357.2	40.0	0.00	8.41	1.00	YES	HROFDY
L0000528	0	0.12353E-04	711242.3	3903373.6	40.0	0.00	8.41	1.00	YES	HROFDY
L0000529	0	0.12353E-04	711249.9	3903389.9	40.0	0.00	8.41	1.00	YES	HROFDY
L0000530	0	0.12353E-04	711257.5	3903406.3	40.0	0.00	8.41	1.00	YES	HROFDY
L0000531	0	0.12353E-04	711265.2	3903422.7	40.0	0.00	8.41	1.00	YES	HROFDY
L0000532	0	0.12353E-04	711272.8	3903439.1	40.0	0.00	8.41	1.00	YES	HROFDY
L0000533	0	0.12353E-04	711280.5	3903455.5	40.0	0.00	8.41	1.00	YES	HROFDY
L0000534	0	0.12353E-04	711288.1	3903471.9	40.0	0.00	8.41	1.00	YES	HROFDY
L0000535	0	0.12353E-04	711295.7	3903488.2	40.0	0.00	8.41	1.00	YES	HROFDY
L0000536	0	0.12353E-04	711303.4	3903504.6	40.0	0.00	8.41	1.00	YES	HROFDY
L0000537	0	0.12353E-04	711311.0	3903521.0	40.0	0.00	8.41	1.00	YES	HROFDY
L0000538	0	0.12353E-04	711318.7	3903537.4	40.0	0.00	8.41	1.00	YES	HROFDY
L0000539	0	0.12353E-04	711326.3	3903553.8	40.0	0.00	8.41	1.00	YES	HROFDY
L0000540	0	0.12353E-04	711334.1	3903570.1	40.0	0.00	8.41	1.00	YES	HROFDY

Appendix B – Sample AERMOD ADO Output File

```
*** AERMOD - VERSION  13350 ***   *** TownPlace Suites Hotel - Calle Joaquin, San Luis Obispo, CA          ***          05/02/14
*** AERMET - VERSION  12345 ***   *** Impacts of DPM Emissions, Ground Level                               ***          16:50:49
                                                                                                                        PAGE   5
**MODELOPTs:  RegDFAULT CONC                                                    ELEV


                                                         *** VOLUME SOURCE DATA ***

              NUMBER EMISSION RATE                       BASE     RELEASE    INIT.    INIT.    URBAN  EMISSION RATE
  SOURCE       PART.  (GRAMS/SEC)     X         Y        ELEV.    HEIGHT      SY       SZ      SOURCE  SCALAR VARY
    ID         CATS.                (METERS)  (METERS) (METERS) (METERS) (METERS) (METERS)               BY
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

L0000541         0    0.12353E-04  711341.8 3903586.4    40.0      0.00      8.41     1.00      YES    HROFDY
L0000542         0    0.12353E-04  711349.6 3903602.7    40.0      0.00      8.41     1.00      YES    HROFDY
L0000543         0    0.12353E-04  711357.3 3903619.1    40.0      0.00      8.41     1.00      YES    HROFDY
L0000544         0    0.12353E-04  711365.1 3903635.4    40.0      0.00      8.41     1.00      YES    HROFDY
L0000545         0    0.12353E-04  711372.8 3903651.7    40.0      0.00      8.41     1.00      YES    HROFDY
L0000546         0    0.12353E-04  711380.6 3903668.1    40.0      0.00      8.41     1.00      YES    HROFDY
L0000547         0    0.12353E-04  711388.3 3903684.4    40.0      0.00      8.41     1.00      YES    HROFDY
L0000548         0    0.12353E-04  711396.1 3903700.7    40.0      0.00      8.41     1.00      YES    HROFDY
L0000549         0    0.12353E-04  711403.8 3903717.0    40.0      0.00      8.41     1.00      YES    HROFDY
L0000550         0    0.12353E-04  711411.6 3903733.4    40.0      0.00      8.41     1.00      YES    HROFDY
```

```
*** AERMOD - VERSION  13350 ***   *** TownPlace Suites Hotel - Calle Joaquin, San Luis Obispo, CA          ***        05/02/14
*** AERMET - VERSION  12345 ***   *** Impacts of DPM Emissions, Ground Level                               ***        16:50:49
                                                                                                                      PAGE   6
**MODELOPTs:  RegDFAULT CONC                                                  ELEV


                                              *** SOURCE IDs DEFINING SOURCE GROUPS ***

GROUP ID                                                    SOURCE IDs


 ALL       L0000421    , L0000422    , L0000423    , L0000424    , L0000425    , L0000426    , L0000427    , L0000428    ,

           L0000429    , L0000430    , L0000431    , L0000432    , L0000433    , L0000434    , L0000435    , L0000436    ,

           L0000437    , L0000438    , L0000439    , L0000440    , L0000441    , L0000442    , L0000443    , L0000444    ,

           L0000445    , L0000446    , L0000447    , L0000448    , L0000449    , L0000450    , L0000451    , L0000452    ,

           L0000453    , L0000454    , L0000455    , L0000456    , L0000457    , L0000458    , L0000459    , L0000460    ,

           L0000461    , L0000462    , L0000463    , L0000464    , L0000465    , L0000466    , L0000467    , L0000468    ,

           L0000469    , L0000470    , L0000471    , L0000472    , L0000473    , L0000474    , L0000475    , L0000476    ,

           L0000477    , L0000478    , L0000479    , L0000480    , L0000481    , L0000482    , L0000483    , L0000484    ,

           L0000485    , L0000486    , L0000487    , L0000488    , L0000489    , L0000490    , L0000491    , L0000492    ,

           L0000493    , L0000494    , L0000495    , L0000496    , L0000497    , L0000498    , L0000499    , L0000500    ,

           L0000501    , L0000502    , L0000503    , L0000504    , L0000505    , L0000506    , L0000507    , L0000508    ,

           L0000509    , L0000510    , L0000511    , L0000512    , L0000513    , L0000514    , L0000515    , L0000516    ,

           L0000517    , L0000518    , L0000519    , L0000520    , L0000521    , L0000522    , L0000523    , L0000524    ,

           L0000525    , L0000526    , L0000527    , L0000528    , L0000529    , L0000530    , L0000531    , L0000532    ,

           L0000533    , L0000534    , L0000535    , L0000536    , L0000537    , L0000538    , L0000539    , L0000540    ,

           L0000541    , L0000542    , L0000543    , L0000544    , L0000545    , L0000546    , L0000547    , L0000548    ,

           L0000549    , L0000550    ,
```

Appendix B – Sample AERMOD ADO Output File

**MODELOPTs: RegDFAULT CONC ELEV

* SOURCE EMISSION RATE SCALARS WHICH VARY FOR EACH HOUR OF THE DAY *

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
SOURCE ID = L0000421		; SOURCE TYPE = VOLUME		:							
1	.60414E+00	2	.63375E+00	3	.57827E+00	4	.87208E-01	5	.16300E+00	6	.22055E+00
7	.44880E+00	8	.24445E+00	9	.81108E+00	10	.95577E+00	11	.72847E+00	12	.10000E+01
13	.86237E+00	14	.84682E+00	15	.75961E+00	16	.55826E+00	17	.70500E+00	18	.54330E+00
19	.31526E+00	20	.10394E+00	21	.41357E+00	22	.67407E+00	23	.47844E+00	24	.87208E-01
SOURCE ID = L0000422		; SOURCE TYPE = VOLUME		:							
1	.60414E+00	2	.63375E+00	3	.57827E+00	4	.87208E-01	5	.16300E+00	6	.22055E+00
7	.44880E+00	8	.24445E+00	9	.81108E+00	10	.95577E+00	11	.72847E+00	12	.10000E+01
13	.86237E+00	14	.84682E+00	15	.75961E+00	16	.55826E+00	17	.70500E+00	18	.54330E+00
19	.31526E+00	20	.10394E+00	21	.41357E+00	22	.67407E+00	23	.47844E+00	24	.87208E-01
SOURCE ID = L0000423		; SOURCE TYPE = VOLUME		:							
1	.60414E+00	2	.63375E+00	3	.57827E+00	4	.87208E-01	5	.16300E+00	6	.22055E+00
7	.44880E+00	8	.24445E+00	9	.81108E+00	10	.95577E+00	11	.72847E+00	12	.10000E+01
13	.86237E+00	14	.84682E+00	15	.75961E+00	16	.55826E+00	17	.70500E+00	18	.54330E+00
19	.31526E+00	20	.10394E+00	21	.41357E+00	22	.67407E+00	23	.47844E+00	24	.87208E-01
SOURCE ID = L0000424		; SOURCE TYPE = VOLUME		:							
1	.60414E+00	2	.63375E+00	3	.57827E+00	4	.87208E-01	5	.16300E+00	6	.22055E+00
7	.44880E+00	8	.24445E+00	9	.81108E+00	10	.95577E+00	11	.72847E+00	12	.10000E+01
13	.86237E+00	14	.84682E+00	15	.75961E+00	16	.55826E+00	17	.70500E+00	18	.54330E+00
19	.31526E+00	20	.10394E+00	21	.41357E+00	22	.67407E+00	23	.47844E+00	24	.87208E-01
SOURCE ID = L0000425		; SOURCE TYPE = VOLUME		:							
1	.60414E+00	2	.63375E+00	3	.57827E+00	4	.87208E-01	5	.16300E+00	6	.22055E+00
7	.44880E+00	8	.24445E+00	9	.81108E+00	10	.95577E+00	11	.72847E+00	12	.10000E+01
13	.86237E+00	14	.84682E+00	15	.75961E+00	16	.55826E+00	17	.70500E+00	18	.54330E+00
19	.31526E+00	20	.10394E+00	21	.41357E+00	22	.67407E+00	23	.47844E+00	24	.87208E-01

Appendix B – Sample AERMOD ADO Output File


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                                * SOURCE EMISSION RATE SCALARS WHICH VARY FOR EACH HOUR OF THE DAY *

    HOUR    SCALAR       HOUR    SCALAR       HOUR    SCALAR       HOUR    SCALAR       HOUR    SCALAR       HOUR    SCALAR
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
-


SOURCE ID = L0000426     ; SOURCE TYPE = VOLUME    :
      1   .60414E+00      2   .63375E+00      3   .57827E+00      4   .87208E-01      5   .16300E+00      6   .22055E+00
      7   .44880E+00      8   .24445E+00      9   .81108E+00     10   .95577E+00     11   .72847E+00     12   .10000E+01
     13   .86237E+00     14   .84682E+00     15   .75961E+00     16   .55826E+00     17   .70500E+00     18   .54330E+00
     19   .31526E+00     20   .10394E+00     21   .41357E+00     22   .67407E+00     23   .47844E+00     24   .87208E-01

SOURCE ID = L0000427     ; SOURCE TYPE = VOLUME    :
      1   .60414E+00      2   .63375E+00      3   .57827E+00      4   .87208E-01      5   .16300E+00      6   .22055E+00
      7   .44880E+00      8   .24445E+00      9   .81108E+00     10   .95577E+00     11   .72847E+00     12   .10000E+01
     13   .86237E+00     14   .84682E+00     15   .75961E+00     16   .55826E+00     17   .70500E+00     18   .54330E+00
     19   .31526E+00     20   .10394E+00     21   .41357E+00     22   .67407E+00     23   .47844E+00     24   .87208E-01

SOURCE ID = L0000428     ; SOURCE TYPE = VOLUME    :
      1   .60414E+00      2   .63375E+00      3   .57827E+00      4   .87208E-01      5   .16300E+00      6   .22055E+00
      7   .44880E+00      8   .24445E+00      9   .81108E+00     10   .95577E+00     11   .72847E+00     12   .10000E+01
     13   .86237E+00     14   .84682E+00     15   .75961E+00     16   .55826E+00     17   .70500E+00     18   .54330E+00
     19   .31526E+00     20   .10394E+00     21   .41357E+00     22   .67407E+00     23   .47844E+00     24   .87208E-01

SOURCE ID = L0000429     ; SOURCE TYPE = VOLUME    :
      1   .60414E+00      2   .63375E+00      3   .57827E+00      4   .87208E-01      5   .16300E+00      6   .22055E+00
      7   .44880E+00      8   .24445E+00      9   .81108E+00     10   .95577E+00     11   .72847E+00     12   .10000E+01
     13   .86237E+00     14   .84682E+00     15   .75961E+00     16   .55826E+00     17   .70500E+00     18   .54330E+00
     19   .31526E+00     20   .10394E+00     21   .41357E+00     22   .67407E+00     23   .47844E+00     24   .87208E-01

SOURCE ID = L0000430     ; SOURCE TYPE = VOLUME    :
      1   .60414E+00      2   .63375E+00      3   .57827E+00      4   .87208E-01      5   .16300E+00      6   .22055E+00
      7   .44880E+00      8   .24445E+00      9   .81108E+00     10   .95577E+00     11   .72847E+00     12   .10000E+01
     13   .86237E+00     14   .84682E+00     15   .75961E+00     16   .55826E+00     17   .70500E+00     18   .54330E+00
     19   .31526E+00     20   .10394E+00     21   .41357E+00     22   .67407E+00     23   .47844E+00     24   .87208E-01
```

Appendix B – Sample AERMOD ADO Output File

**MODELOPTs: RegDFAULT CONC ELEV

* SOURCE EMISSION RATE SCALARS WHICH VARY FOR EACH HOUR OF THE DAY *

SOURCE ID = L0000431 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
1	.60414E+00	2	.63375E+00	3	.57827E+00	4	.87208E-01	5	.16300E+00	6	.22055E+00
7	.44880E+00	8	.24445E+00	9	.81108E+00	10	.95577E+00	11	.72847E+00	12	.10000E+01
13	.86237E+00	14	.84682E+00	15	.75961E+00	16	.55826E+00	17	.70500E+00	18	.54330E+00
19	.31526E+00	20	.10394E+00	21	.41357E+00	22	.67407E+00	23	.47844E+00	24	.87208E-01

SOURCE ID = L0000432 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
1	.60414E+00	2	.63375E+00	3	.57827E+00	4	.87208E-01	5	.16300E+00	6	.22055E+00
7	.44880E+00	8	.24445E+00	9	.81108E+00	10	.95577E+00	11	.72847E+00	12	.10000E+01
13	.86237E+00	14	.84682E+00	15	.75961E+00	16	.55826E+00	17	.70500E+00	18	.54330E+00
19	.31526E+00	20	.10394E+00	21	.41357E+00	22	.67407E+00	23	.47844E+00	24	.87208E-01

SOURCE ID = L0000433 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
1	.60414E+00	2	.63375E+00	3	.57827E+00	4	.87208E-01	5	.16300E+00	6	.22055E+00
7	.44880E+00	8	.24445E+00	9	.81108E+00	10	.95577E+00	11	.72847E+00	12	.10000E+01
13	.86237E+00	14	.84682E+00	15	.75961E+00	16	.55826E+00	17	.70500E+00	18	.54330E+00
19	.31526E+00	20	.10394E+00	21	.41357E+00	22	.67407E+00	23	.47844E+00	24	.87208E-01

SOURCE ID = L0000434 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
1	.60414E+00	2	.63375E+00	3	.57827E+00	4	.87208E-01	5	.16300E+00	6	.22055E+00
7	.44880E+00	8	.24445E+00	9	.81108E+00	10	.95577E+00	11	.72847E+00	12	.10000E+01
13	.86237E+00	14	.84682E+00	15	.75961E+00	16	.55826E+00	17	.70500E+00	18	.54330E+00
19	.31526E+00	20	.10394E+00	21	.41357E+00	22	.67407E+00	23	.47844E+00	24	.87208E-01

SOURCE ID = L0000435 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
1	.60414E+00	2	.63375E+00	3	.57827E+00	4	.87208E-01	5	.16300E+00	6	.22055E+00
7	.44880E+00	8	.24445E+00	9	.81108E+00	10	.95577E+00	11	.72847E+00	12	.10000E+01
13	.86237E+00	14	.84682E+00	15	.75961E+00	16	.55826E+00	17	.70500E+00	18	.54330E+00
19	.31526E+00	20	.10394E+00	21	.41357E+00	22	.67407E+00	23	.47844E+00	24	.87208E-01

```
*** AERMOD - VERSION  13350 ***   *** TownPlace Suites Hotel - Calle Joaquin, San Luis Obispo, CA          ***        05/02/14
*** AERMET - VERSION  12345 ***   *** Impacts of DPM Emissions, Ground Level                               ***        16:50:49
                                                                                                                      PAGE  10
**MODELOPTs:  RegDFAULT CONC                                                   ELEV

                                   * SOURCE EMISSION RATE SCALARS WHICH VARY FOR EACH HOUR OF THE DAY *

    HOUR    SCALAR       HOUR    SCALAR       HOUR    SCALAR       HOUR    SCALAR       HOUR    SCALAR       HOUR    SCALAR
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
-


SOURCE ID = L0000436     ; SOURCE TYPE = VOLUME    :
      1   .60414E+00      2   .63375E+00      3   .57827E+00      4   .87208E-01      5   .16300E+00      6   .22055E+00
      7   .44880E+00      8   .24445E+00      9   .81108E+00     10   .95577E+00     11   .72847E+00     12   .10000E+01
     13   .86237E+00     14   .84682E+00     15   .75961E+00     16   .55826E+00     17   .70500E+00     18   .54330E+00
     19   .31526E+00     20   .10394E+00     21   .41357E+00     22   .67407E+00     23   .47844E+00     24   .87208E-01

SOURCE ID = L0000437     ; SOURCE TYPE = VOLUME    :
      1   .60414E+00      2   .63375E+00      3   .57827E+00      4   .87208E-01      5   .16300E+00      6   .22055E+00
      7   .44880E+00      8   .24445E+00      9   .81108E+00     10   .95577E+00     11   .72847E+00     12   .10000E+01
     13   .86237E+00     14   .84682E+00     15   .75961E+00     16   .55826E+00     17   .70500E+00     18   .54330E+00
     19   .31526E+00     20   .10394E+00     21   .41357E+00     22   .67407E+00     23   .47844E+00     24   .87208E-01

SOURCE ID = L0000438     ; SOURCE TYPE = VOLUME    :
      1   .60414E+00      2   .63375E+00      3   .57827E+00      4   .87208E-01      5   .16300E+00      6   .22055E+00
      7   .44880E+00      8   .24445E+00      9   .81108E+00     10   .95577E+00     11   .72847E+00     12   .10000E+01
     13   .86237E+00     14   .84682E+00     15   .75961E+00     16   .55826E+00     17   .70500E+00     18   .54330E+00
     19   .31526E+00     20   .10394E+00     21   .41357E+00     22   .67407E+00     23   .47844E+00     24   .87208E-01

SOURCE ID = L0000439     ; SOURCE TYPE = VOLUME    :
      1   .60414E+00      2   .63375E+00      3   .57827E+00      4   .87208E-01      5   .16300E+00      6   .22055E+00
      7   .44880E+00      8   .24445E+00      9   .81108E+00     10   .95577E+00     11   .72847E+00     12   .10000E+01
     13   .86237E+00     14   .84682E+00     15   .75961E+00     16   .55826E+00     17   .70500E+00     18   .54330E+00
     19   .31526E+00     20   .10394E+00     21   .41357E+00     22   .67407E+00     23   .47844E+00     24   .87208E-01

SOURCE ID = L0000440     ; SOURCE TYPE = VOLUME    :
      1   .60414E+00      2   .63375E+00      3   .57827E+00      4   .87208E-01      5   .16300E+00      6   .22055E+00
      7   .44880E+00      8   .24445E+00      9   .81108E+00     10   .95577E+00     11   .72847E+00     12   .10000E+01
     13   .86237E+00     14   .84682E+00     15   .75961E+00     16   .55826E+00     17   .70500E+00     18   .54330E+00
     19   .31526E+00     20   .10394E+00     21   .41357E+00     22   .67407E+00     23   .47844E+00     24   .87208E-01
```

Appendix B – Sample AERMOD ADO Output File


```
                           * SOURCE EMISSION RATE SCALARS WHICH VARY FOR EACH HOUR OF THE DAY *

    HOUR    SCALAR      HOUR    SCALAR      HOUR    SCALAR      HOUR    SCALAR      HOUR    SCALAR      HOUR    SCALAR
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
-


SOURCE ID = L0000441     ; SOURCE TYPE = VOLUME    :
     1   .60414E+00     2   .63375E+00     3   .57827E+00     4   .87208E-01     5   .16300E+00     6   .22055E+00
     7   .44880E+00     8   .24445E+00     9   .81108E+00    10   .95577E+00    11   .72847E+00    12   .10000E+01
    13   .86237E+00    14   .84682E+00    15   .75961E+00    16   .55826E+00    17   .70500E+00    18   .54330E+00
    19   .31526E+00    20   .10394E+00    21   .41357E+00    22   .67407E+00    23   .47844E+00    24   .87208E-01

SOURCE ID = L0000442     ; SOURCE TYPE = VOLUME    :
     1   .60414E+00     2   .63375E+00     3   .57827E+00     4   .87208E-01     5   .16300E+00     6   .22055E+00
     7   .44880E+00     8   .24445E+00     9   .81108E+00    10   .95577E+00    11   .72847E+00    12   .10000E+01
    13   .86237E+00    14   .84682E+00    15   .75961E+00    16   .55826E+00    17   .70500E+00    18   .54330E+00
    19   .31526E+00    20   .10394E+00    21   .41357E+00    22   .67407E+00    23   .47844E+00    24   .87208E-01

SOURCE ID = L0000443     ; SOURCE TYPE = VOLUME    :
     1   .60414E+00     2   .63375E+00     3   .57827E+00     4   .87208E-01     5   .16300E+00     6   .22055E+00
     7   .44880E+00     8   .24445E+00     9   .81108E+00    10   .95577E+00    11   .72847E+00    12   .10000E+01
    13   .86237E+00    14   .84682E+00    15   .75961E+00    16   .55826E+00    17   .70500E+00    18   .54330E+00
    19   .31526E+00    20   .10394E+00    21   .41357E+00    22   .67407E+00    23   .47844E+00    24   .87208E-01

SOURCE ID = L0000444     ; SOURCE TYPE = VOLUME    :
     1   .60414E+00     2   .63375E+00     3   .57827E+00     4   .87208E-01     5   .16300E+00     6   .22055E+00
     7   .44880E+00     8   .24445E+00     9   .81108E+00    10   .95577E+00    11   .72847E+00    12   .10000E+01
    13   .86237E+00    14   .84682E+00    15   .75961E+00    16   .55826E+00    17   .70500E+00    18   .54330E+00
    19   .31526E+00    20   .10394E+00    21   .41357E+00    22   .67407E+00    23   .47844E+00    24   .87208E-01

SOURCE ID = L0000445     ; SOURCE TYPE = VOLUME    :
     1   .60414E+00     2   .63375E+00     3   .57827E+00     4   .87208E-01     5   .16300E+00     6   .22055E+00
     7   .44880E+00     8   .24445E+00     9   .81108E+00    10   .95577E+00    11   .72847E+00    12   .10000E+01
    13   .86237E+00    14   .84682E+00    15   .75961E+00    16   .55826E+00    17   .70500E+00    18   .54330E+00
    19   .31526E+00    20   .10394E+00    21   .41357E+00    22   .67407E+00    23   .47844E+00    24   .87208E-01
```

Appendix B – Sample AERMOD ADO Output File

* SOURCE EMISSION RATE SCALARS WHICH VARY FOR EACH HOUR OF THE DAY *

SOURCE ID = L0000446 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
1	.60414E+00	2	.63375E+00	3	.57827E+00	4	.87208E-01	5	.16300E+00	6	.22055E+00
7	.44880E+00	8	.24445E+00	9	.81108E+00	10	.95577E+00	11	.72847E+00	12	.10000E+01
13	.86237E+00	14	.84682E+00	15	.75961E+00	16	.55826E+00	17	.70500E+00	18	.54330E+00
19	.31526E+00	20	.10394E+00	21	.41357E+00	22	.67407E+00	23	.47844E+00	24	.87208E-01

SOURCE ID = L0000447 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
1	.60414E+00	2	.63375E+00	3	.57827E+00	4	.87208E-01	5	.16300E+00	6	.22055E+00
7	.44880E+00	8	.24445E+00	9	.81108E+00	10	.95577E+00	11	.72847E+00	12	.10000E+01
13	.86237E+00	14	.84682E+00	15	.75961E+00	16	.55826E+00	17	.70500E+00	18	.54330E+00
19	.31526E+00	20	.10394E+00	21	.41357E+00	22	.67407E+00	23	.47844E+00	24	.87208E-01

SOURCE ID = L0000448 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
1	.60414E+00	2	.63375E+00	3	.57827E+00	4	.87208E-01	5	.16300E+00	6	.22055E+00
7	.44880E+00	8	.24445E+00	9	.81108E+00	10	.95577E+00	11	.72847E+00	12	.10000E+01
13	.86237E+00	14	.84682E+00	15	.75961E+00	16	.55826E+00	17	.70500E+00	18	.54330E+00
19	.31526E+00	20	.10394E+00	21	.41357E+00	22	.67407E+00	23	.47844E+00	24	.87208E-01

SOURCE ID = L0000449 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
1	.60414E+00	2	.63375E+00	3	.57827E+00	4	.87208E-01	5	.16300E+00	6	.22055E+00
7	.44880E+00	8	.24445E+00	9	.81108E+00	10	.95577E+00	11	.72847E+00	12	.10000E+01
13	.86237E+00	14	.84682E+00	15	.75961E+00	16	.55826E+00	17	.70500E+00	18	.54330E+00
19	.31526E+00	20	.10394E+00	21	.41357E+00	22	.67407E+00	23	.47844E+00	24	.87208E-01

SOURCE ID = L0000450 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
1	.60414E+00	2	.63375E+00	3	.57827E+00	4	.87208E-01	5	.16300E+00	6	.22055E+00
7	.44880E+00	8	.24445E+00	9	.81108E+00	10	.95577E+00	11	.72847E+00	12	.10000E+01
13	.86237E+00	14	.84682E+00	15	.75961E+00	16	.55826E+00	17	.70500E+00	18	.54330E+00
19	.31526E+00	20	.10394E+00	21	.41357E+00	22	.67407E+00	23	.47844E+00	24	.87208E-01

Appendix B – Sample AERMOD ADO Output File

**MODELOPTs: RegDFAULT CONC ELEV

* SOURCE EMISSION RATE SCALARS WHICH VARY FOR EACH HOUR OF THE DAY *

SOURCE ID = L0000451 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
1	.60414E+00	2	.63375E+00	3	.57827E+00	4	.87208E-01	5	.16300E+00	6	.22055E+00
7	.44880E+00	8	.24445E+00	9	.81108E+00	10	.95577E+00	11	.72847E+00	12	.10000E+01
13	.86237E+00	14	.84682E+00	15	.75961E+00	16	.55826E+00	17	.70500E+00	18	.54330E+00
19	.31526E+00	20	.10394E+00	21	.41357E+00	22	.67407E+00	23	.47844E+00	24	.87208E-01

SOURCE ID = L0000452 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
1	.60414E+00	2	.63375E+00	3	.57827E+00	4	.87208E-01	5	.16300E+00	6	.22055E+00
7	.44880E+00	8	.24445E+00	9	.81108E+00	10	.95577E+00	11	.72847E+00	12	.10000E+01
13	.86237E+00	14	.84682E+00	15	.75961E+00	16	.55826E+00	17	.70500E+00	18	.54330E+00
19	.31526E+00	20	.10394E+00	21	.41357E+00	22	.67407E+00	23	.47844E+00	24	.87208E-01

SOURCE ID = L0000453 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
1	.60414E+00	2	.63375E+00	3	.57827E+00	4	.87208E-01	5	.16300E+00	6	.22055E+00
7	.44880E+00	8	.24445E+00	9	.81108E+00	10	.95577E+00	11	.72847E+00	12	.10000E+01
13	.86237E+00	14	.84682E+00	15	.75961E+00	16	.55826E+00	17	.70500E+00	18	.54330E+00
19	.31526E+00	20	.10394E+00	21	.41357E+00	22	.67407E+00	23	.47844E+00	24	.87208E-01

SOURCE ID = L0000454 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
1	.60414E+00	2	.63375E+00	3	.57827E+00	4	.87208E-01	5	.16300E+00	6	.22055E+00
7	.44880E+00	8	.24445E+00	9	.81108E+00	10	.95577E+00	11	.72847E+00	12	.10000E+01
13	.86237E+00	14	.84682E+00	15	.75961E+00	16	.55826E+00	17	.70500E+00	18	.54330E+00
19	.31526E+00	20	.10394E+00	21	.41357E+00	22	.67407E+00	23	.47844E+00	24	.87208E-01

SOURCE ID = L0000455 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
1	.60414E+00	2	.63375E+00	3	.57827E+00	4	.87208E-01	5	.16300E+00	6	.22055E+00
7	.44880E+00	8	.24445E+00	9	.81108E+00	10	.95577E+00	11	.72847E+00	12	.10000E+01
13	.86237E+00	14	.84682E+00	15	.75961E+00	16	.55826E+00	17	.70500E+00	18	.54330E+00
19	.31526E+00	20	.10394E+00	21	.41357E+00	22	.67407E+00	23	.47844E+00	24	.87208E-01

Appendix B – Sample AERMOD ADO Output File


```
                           * SOURCE EMISSION RATE SCALARS WHICH VARY FOR EACH HOUR OF THE DAY *

    HOUR    SCALAR      HOUR    SCALAR      HOUR    SCALAR      HOUR    SCALAR      HOUR    SCALAR      HOUR    SCALAR
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
-


SOURCE ID = L0000456     ; SOURCE TYPE = VOLUME    :
      1   .60414E+00     2   .63375E+00     3   .57827E+00     4   .87208E-01     5   .16300E+00     6   .22055E+00
      7   .44880E+00     8   .24445E+00     9   .81108E+00    10   .95577E+00    11   .72847E+00    12   .10000E+01
     13   .86237E+00    14   .84682E+00    15   .75961E+00    16   .55826E+00    17   .70500E+00    18   .54330E+00
     19   .31526E+00    20   .10394E+00    21   .41357E+00    22   .67407E+00    23   .47844E+00    24   .87208E-01

SOURCE ID = L0000457     ; SOURCE TYPE = VOLUME    :
      1   .60414E+00     2   .63375E+00     3   .57827E+00     4   .87208E-01     5   .16300E+00     6   .22055E+00
      7   .44880E+00     8   .24445E+00     9   .81108E+00    10   .95577E+00    11   .72847E+00    12   .10000E+01
     13   .86237E+00    14   .84682E+00    15   .75961E+00    16   .55826E+00    17   .70500E+00    18   .54330E+00
     19   .31526E+00    20   .10394E+00    21   .41357E+00    22   .67407E+00    23   .47844E+00    24   .87208E-01

SOURCE ID = L0000458     ; SOURCE TYPE = VOLUME    :
      1   .60414E+00     2   .63375E+00     3   .57827E+00     4   .87208E-01     5   .16300E+00     6   .22055E+00
      7   .44880E+00     8   .24445E+00     9   .81108E+00    10   .95577E+00    11   .72847E+00    12   .10000E+01
     13   .86237E+00    14   .84682E+00    15   .75961E+00    16   .55826E+00    17   .70500E+00    18   .54330E+00
     19   .31526E+00    20   .10394E+00    21   .41357E+00    22   .67407E+00    23   .47844E+00    24   .87208E-01

SOURCE ID = L0000459     ; SOURCE TYPE = VOLUME    :
      1   .60414E+00     2   .63375E+00     3   .57827E+00     4   .87208E-01     5   .16300E+00     6   .22055E+00
      7   .44880E+00     8   .24445E+00     9   .81108E+00    10   .95577E+00    11   .72847E+00    12   .10000E+01
     13   .86237E+00    14   .84682E+00    15   .75961E+00    16   .55826E+00    17   .70500E+00    18   .54330E+00
     19   .31526E+00    20   .10394E+00    21   .41357E+00    22   .67407E+00    23   .47844E+00    24   .87208E-01

SOURCE ID = L0000460     ; SOURCE TYPE = VOLUME    :
      1   .60414E+00     2   .63375E+00     3   .57827E+00     4   .87208E-01     5   .16300E+00     6   .22055E+00
      7   .44880E+00     8   .24445E+00     9   .81108E+00    10   .95577E+00    11   .72847E+00    12   .10000E+01
     13   .86237E+00    14   .84682E+00    15   .75961E+00    16   .55826E+00    17   .70500E+00    18   .54330E+00
     19   .31526E+00    20   .10394E+00    21   .41357E+00    22   .67407E+00    23   .47844E+00    24   .87208E-01
```

Appendix B – Sample AERMOD ADO Output File

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*** AERMOD - VERSION  13350 ***   *** TownPlace Suites Hotel - Calle Joaquin, San Luis Obispo, CA          ***        05/02/14
*** AERMET - VERSION  12345 ***   *** Impacts of DPM Emissions, Ground Level                               ***        16:50:49
                                                                                                                      PAGE  15
**MODELOPTs:  RegDFAULT CONC                                              ELEV


                            * SOURCE EMISSION RATE SCALARS WHICH VARY FOR EACH HOUR OF THE DAY *

    HOUR    SCALAR      HOUR    SCALAR      HOUR    SCALAR      HOUR    SCALAR      HOUR    SCALAR      HOUR    SCALAR
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
-


SOURCE ID = L0000461     ; SOURCE TYPE = VOLUME    :
     1   .60414E+00      2   .63375E+00      3   .57827E+00      4   .87208E-01      5   .16300E+00      6   .22055E+00
     7   .44880E+00      8   .24445E+00      9   .81108E+00     10   .95577E+00     11   .72847E+00     12   .10000E+01
    13   .86237E+00     14   .84682E+00     15   .75961E+00     16   .55826E+00     17   .70500E+00     18   .54330E+00
    19   .31526E+00     20   .10394E+00     21   .41357E+00     22   .67407E+00     23   .47844E+00     24   .87208E-01

SOURCE ID = L0000462     ; SOURCE TYPE = VOLUME    :
     1   .60414E+00      2   .63375E+00      3   .57827E+00      4   .87208E-01      5   .16300E+00      6   .22055E+00
     7   .44880E+00      8   .24445E+00      9   .81108E+00     10   .95577E+00     11   .72847E+00     12   .10000E+01
    13   .86237E+00     14   .84682E+00     15   .75961E+00     16   .55826E+00     17   .70500E+00     18   .54330E+00
    19   .31526E+00     20   .10394E+00     21   .41357E+00     22   .67407E+00     23   .47844E+00     24   .87208E-01

SOURCE ID = L0000463     ; SOURCE TYPE = VOLUME    :
     1   .60414E+00      2   .63375E+00      3   .57827E+00      4   .87208E-01      5   .16300E+00      6   .22055E+00
     7   .44880E+00      8   .24445E+00      9   .81108E+00     10   .95577E+00     11   .72847E+00     12   .10000E+01
    13   .86237E+00     14   .84682E+00     15   .75961E+00     16   .55826E+00     17   .70500E+00     18   .54330E+00
    19   .31526E+00     20   .10394E+00     21   .41357E+00     22   .67407E+00     23   .47844E+00     24   .87208E-01

SOURCE ID = L0000464     ; SOURCE TYPE = VOLUME    :
     1   .60414E+00      2   .63375E+00      3   .57827E+00      4   .87208E-01      5   .16300E+00      6   .22055E+00
     7   .44880E+00      8   .24445E+00      9   .81108E+00     10   .95577E+00     11   .72847E+00     12   .10000E+01
    13   .86237E+00     14   .84682E+00     15   .75961E+00     16   .55826E+00     17   .70500E+00     18   .54330E+00
    19   .31526E+00     20   .10394E+00     21   .41357E+00     22   .67407E+00     23   .47844E+00     24   .87208E-01

SOURCE ID = L0000465     ; SOURCE TYPE = VOLUME    :
     1   .60414E+00      2   .63375E+00      3   .57827E+00      4   .87208E-01      5   .16300E+00      6   .22055E+00
     7   .44880E+00      8   .24445E+00      9   .81108E+00     10   .95577E+00     11   .72847E+00     12   .10000E+01
    13   .86237E+00     14   .84682E+00     15   .75961E+00     16   .55826E+00     17   .70500E+00     18   .54330E+00
    19   .31526E+00     20   .10394E+00     21   .41357E+00     22   .67407E+00     23   .47844E+00     24   .87208E-01
```

Appendix B – Sample AERMOD ADO Output File


```
                            * SOURCE EMISSION RATE SCALARS WHICH VARY FOR EACH HOUR OF THE DAY *

    HOUR    SCALAR       HOUR    SCALAR       HOUR    SCALAR       HOUR    SCALAR       HOUR    SCALAR       HOUR    SCALAR
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
-


SOURCE ID = L0000466     ; SOURCE TYPE = VOLUME    :
      1   .60414E+00      2   .63375E+00      3   .57827E+00      4   .87208E-01      5   .16300E+00      6   .22055E+00
      7   .44880E+00      8   .24445E+00      9   .81108E+00     10   .95577E+00     11   .72847E+00     12   .10000E+01
     13   .86237E+00     14   .84682E+00     15   .75961E+00     16   .55826E+00     17   .70500E+00     18   .54330E+00
     19   .31526E+00     20   .10394E+00     21   .41357E+00     22   .67407E+00     23   .47844E+00     24   .87208E-01

SOURCE ID = L0000467     ; SOURCE TYPE = VOLUME    :
      1   .60414E+00      2   .63375E+00      3   .57827E+00      4   .87208E-01      5   .16300E+00      6   .22055E+00
      7   .44880E+00      8   .24445E+00      9   .81108E+00     10   .95577E+00     11   .72847E+00     12   .10000E+01
     13   .86237E+00     14   .84682E+00     15   .75961E+00     16   .55826E+00     17   .70500E+00     18   .54330E+00
     19   .31526E+00     20   .10394E+00     21   .41357E+00     22   .67407E+00     23   .47844E+00     24   .87208E-01

SOURCE ID = L0000468     ; SOURCE TYPE = VOLUME    :
      1   .60414E+00      2   .63375E+00      3   .57827E+00      4   .87208E-01      5   .16300E+00      6   .22055E+00
      7   .44880E+00      8   .24445E+00      9   .81108E+00     10   .95577E+00     11   .72847E+00     12   .10000E+01
     13   .86237E+00     14   .84682E+00     15   .75961E+00     16   .55826E+00     17   .70500E+00     18   .54330E+00
     19   .31526E+00     20   .10394E+00     21   .41357E+00     22   .67407E+00     23   .47844E+00     24   .87208E-01

SOURCE ID = L0000469     ; SOURCE TYPE = VOLUME    :
      1   .60414E+00      2   .63375E+00      3   .57827E+00      4   .87208E-01      5   .16300E+00      6   .22055E+00
      7   .44880E+00      8   .24445E+00      9   .81108E+00     10   .95577E+00     11   .72847E+00     12   .10000E+01
     13   .86237E+00     14   .84682E+00     15   .75961E+00     16   .55826E+00     17   .70500E+00     18   .54330E+00
     19   .31526E+00     20   .10394E+00     21   .41357E+00     22   .67407E+00     23   .47844E+00     24   .87208E-01

SOURCE ID = L0000470     ; SOURCE TYPE = VOLUME    :
      1   .60414E+00      2   .63375E+00      3   .57827E+00      4   .87208E-01      5   .16300E+00      6   .22055E+00
      7   .44880E+00      8   .24445E+00      9   .81108E+00     10   .95577E+00     11   .72847E+00     12   .10000E+01
     13   .86237E+00     14   .84682E+00     15   .75961E+00     16   .55826E+00     17   .70500E+00     18   .54330E+00
     19   .31526E+00     20   .10394E+00     21   .41357E+00     22   .67407E+00     23   .47844E+00     24   .87208E-01
```

Appendix B – Sample AERMOD ADO Output File

**MODELOPTs: RegDFAULT CONC   ELEV

* SOURCE EMISSION RATE SCALARS WHICH VARY FOR EACH HOUR OF THE DAY *

SOURCE ID = L0000471   ; SOURCE TYPE = VOLUME   :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
1	.60414E+00	2	.63375E+00	3	.57827E+00	4	.87208E-01	5	.16300E+00	6	.22055E+00
7	.44880E+00	8	.24445E+00	9	.81108E+00	10	.95577E+00	11	.72847E+00	12	.10000E+01
13	.86237E+00	14	.84682E+00	15	.75961E+00	16	.55826E+00	17	.70500E+00	18	.54330E+00
19	.31526E+00	20	.10394E+00	21	.41357E+00	22	.67407E+00	23	.47844E+00	24	.87208E-01

SOURCE ID = L0000472   ; SOURCE TYPE = VOLUME   :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
1	.60414E+00	2	.63375E+00	3	.57827E+00	4	.87208E-01	5	.16300E+00	6	.22055E+00
7	.44880E+00	8	.24445E+00	9	.81108E+00	10	.95577E+00	11	.72847E+00	12	.10000E+01
13	.86237E+00	14	.84682E+00	15	.75961E+00	16	.55826E+00	17	.70500E+00	18	.54330E+00
19	.31526E+00	20	.10394E+00	21	.41357E+00	22	.67407E+00	23	.47844E+00	24	.87208E-01

SOURCE ID = L0000473   ; SOURCE TYPE = VOLUME   :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
1	.60414E+00	2	.63375E+00	3	.57827E+00	4	.87208E-01	5	.16300E+00	6	.22055E+00
7	.44880E+00	8	.24445E+00	9	.81108E+00	10	.95577E+00	11	.72847E+00	12	.10000E+01
13	.86237E+00	14	.84682E+00	15	.75961E+00	16	.55826E+00	17	.70500E+00	18	.54330E+00
19	.31526E+00	20	.10394E+00	21	.41357E+00	22	.67407E+00	23	.47844E+00	24	.87208E-01

SOURCE ID = L0000474   ; SOURCE TYPE = VOLUME   :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
1	.60414E+00	2	.63375E+00	3	.57827E+00	4	.87208E-01	5	.16300E+00	6	.22055E+00
7	.44880E+00	8	.24445E+00	9	.81108E+00	10	.95577E+00	11	.72847E+00	12	.10000E+01
13	.86237E+00	14	.84682E+00	15	.75961E+00	16	.55826E+00	17	.70500E+00	18	.54330E+00
19	.31526E+00	20	.10394E+00	21	.41357E+00	22	.67407E+00	23	.47844E+00	24	.87208E-01

SOURCE ID = L0000475   ; SOURCE TYPE = VOLUME   :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
1	.60414E+00	2	.63375E+00	3	.57827E+00	4	.87208E-01	5	.16300E+00	6	.22055E+00
7	.44880E+00	8	.24445E+00	9	.81108E+00	10	.95577E+00	11	.72847E+00	12	.10000E+01
13	.86237E+00	14	.84682E+00	15	.75961E+00	16	.55826E+00	17	.70500E+00	18	.54330E+00
19	.31526E+00	20	.10394E+00	21	.41357E+00	22	.67407E+00	23	.47844E+00	24	.87208E-01

**MODELOPTs: RegDFAULT CONC   ELEV

* SOURCE EMISSION RATE SCALARS WHICH VARY FOR EACH HOUR OF THE DAY *

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
SOURCE ID = L0000476		; SOURCE TYPE = VOLUME		:							
1	.60414E+00	2	.63375E+00	3	.57827E+00	4	.87208E-01	5	.16300E+00	6	.22055E+00
7	.44880E+00	8	.24445E+00	9	.81108E+00	10	.95577E+00	11	.72847E+00	12	.10000E+01
13	.86237E+00	14	.84682E+00	15	.75961E+00	16	.55826E+00	17	.70500E+00	18	.54330E+00
19	.31526E+00	20	.10394E+00	21	.41357E+00	22	.67407E+00	23	.47844E+00	24	.87208E-01
SOURCE ID = L0000477		; SOURCE TYPE = VOLUME		:							
1	.60414E+00	2	.63375E+00	3	.57827E+00	4	.87208E-01	5	.16300E+00	6	.22055E+00
7	.44880E+00	8	.24445E+00	9	.81108E+00	10	.95577E+00	11	.72847E+00	12	.10000E+01
13	.86237E+00	14	.84682E+00	15	.75961E+00	16	.55826E+00	17	.70500E+00	18	.54330E+00
19	.31526E+00	20	.10394E+00	21	.41357E+00	22	.67407E+00	23	.47844E+00	24	.87208E-01
SOURCE ID = L0000478		; SOURCE TYPE = VOLUME		:							
1	.60414E+00	2	.63375E+00	3	.57827E+00	4	.87208E-01	5	.16300E+00	6	.22055E+00
7	.44880E+00	8	.24445E+00	9	.81108E+00	10	.95577E+00	11	.72847E+00	12	.10000E+01
13	.86237E+00	14	.84682E+00	15	.75961E+00	16	.55826E+00	17	.70500E+00	18	.54330E+00
19	.31526E+00	20	.10394E+00	21	.41357E+00	22	.67407E+00	23	.47844E+00	24	.87208E-01
SOURCE ID = L0000479		; SOURCE TYPE = VOLUME		:							
1	.60414E+00	2	.63375E+00	3	.57827E+00	4	.87208E-01	5	.16300E+00	6	.22055E+00
7	.44880E+00	8	.24445E+00	9	.81108E+00	10	.95577E+00	11	.72847E+00	12	.10000E+01
13	.86237E+00	14	.84682E+00	15	.75961E+00	16	.55826E+00	17	.70500E+00	18	.54330E+00
19	.31526E+00	20	.10394E+00	21	.41357E+00	22	.67407E+00	23	.47844E+00	24	.87208E-01
SOURCE ID = L0000480		; SOURCE TYPE = VOLUME		:							
1	.60414E+00	2	.63375E+00	3	.57827E+00	4	.87208E-01	5	.16300E+00	6	.22055E+00
7	.44880E+00	8	.24445E+00	9	.81108E+00	10	.95577E+00	11	.72847E+00	12	.10000E+01
13	.86237E+00	14	.84682E+00	15	.75961E+00	16	.55826E+00	17	.70500E+00	18	.54330E+00
19	.31526E+00	20	.10394E+00	21	.41357E+00	22	.67407E+00	23	.47844E+00	24	.87208E-01

Appendix B – Sample AERMOD ADO Output File


```
                                  * SOURCE EMISSION RATE SCALARS WHICH VARY FOR EACH HOUR OF THE DAY *

    HOUR    SCALAR      HOUR    SCALAR      HOUR    SCALAR      HOUR    SCALAR      HOUR    SCALAR      HOUR    SCALAR
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
-


SOURCE ID = L0000481     ; SOURCE TYPE = VOLUME    :
      1   .60414E+00     2   .63375E+00     3   .57827E+00     4   .87208E-01     5   .16300E+00     6   .22055E+00
      7   .44880E+00     8   .24445E+00     9   .81108E+00    10   .95577E+00    11   .72847E+00    12   .10000E+01
     13   .86237E+00    14   .84682E+00    15   .75961E+00    16   .55826E+00    17   .70500E+00    18   .54330E+00
     19   .31526E+00    20   .10394E+00    21   .41357E+00    22   .67407E+00    23   .47844E+00    24   .87208E-01

SOURCE ID = L0000482     ; SOURCE TYPE = VOLUME    :
      1   .60414E+00     2   .63375E+00     3   .57827E+00     4   .87208E-01     5   .16300E+00     6   .22055E+00
      7   .44880E+00     8   .24445E+00     9   .81108E+00    10   .95577E+00    11   .72847E+00    12   .10000E+01
     13   .86237E+00    14   .84682E+00    15   .75961E+00    16   .55826E+00    17   .70500E+00    18   .54330E+00
     19   .31526E+00    20   .10394E+00    21   .41357E+00    22   .67407E+00    23   .47844E+00    24   .87208E-01

SOURCE ID = L0000483     ; SOURCE TYPE = VOLUME    :
      1   .60414E+00     2   .63375E+00     3   .57827E+00     4   .87208E-01     5   .16300E+00     6   .22055E+00
      7   .44880E+00     8   .24445E+00     9   .81108E+00    10   .95577E+00    11   .72847E+00    12   .10000E+01
     13   .86237E+00    14   .84682E+00    15   .75961E+00    16   .55826E+00    17   .70500E+00    18   .54330E+00
     19   .31526E+00    20   .10394E+00    21   .41357E+00    22   .67407E+00    23   .47844E+00    24   .87208E-01

SOURCE ID = L0000484     ; SOURCE TYPE = VOLUME    :
      1   .60414E+00     2   .63375E+00     3   .57827E+00     4   .87208E-01     5   .16300E+00     6   .22055E+00
      7   .44880E+00     8   .24445E+00     9   .81108E+00    10   .95577E+00    11   .72847E+00    12   .10000E+01
     13   .86237E+00    14   .84682E+00    15   .75961E+00    16   .55826E+00    17   .70500E+00    18   .54330E+00
     19   .31526E+00    20   .10394E+00    21   .41357E+00    22   .67407E+00    23   .47844E+00    24   .87208E-01

SOURCE ID = L0000485     ; SOURCE TYPE = VOLUME    :
      1   .60414E+00     2   .63375E+00     3   .57827E+00     4   .87208E-01     5   .16300E+00     6   .22055E+00
      7   .44880E+00     8   .24445E+00     9   .81108E+00    10   .95577E+00    11   .72847E+00    12   .10000E+01
     13   .86237E+00    14   .84682E+00    15   .75961E+00    16   .55826E+00    17   .70500E+00    18   .54330E+00
     19   .31526E+00    20   .10394E+00    21   .41357E+00    22   .67407E+00    23   .47844E+00    24   .87208E-01
```

Appendix B – Sample AERMOD ADO Output File

```
*** AERMOD - VERSION  13350 ***   *** TownPlace Suites Hotel - Calle Joaquin, San Luis Obispo, CA        ***        05/02/14
*** AERMET - VERSION  12345 ***   *** Impacts of DPM Emissions, Ground Level                             ***        16:50:49
                                                                                                                    PAGE  20
**MODELOPTs:  RegDFAULT CONC                                                  ELEV


                                * SOURCE EMISSION RATE SCALARS WHICH VARY FOR EACH HOUR OF THE DAY *

    HOUR    SCALAR      HOUR    SCALAR      HOUR    SCALAR      HOUR    SCALAR      HOUR    SCALAR      HOUR    SCALAR
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
-


SOURCE ID = L0000486     ; SOURCE TYPE = VOLUME    :
     1   .60414E+00      2   .63375E+00      3   .57827E+00      4   .87208E-01      5   .16300E+00      6   .22055E+00
     7   .44880E+00      8   .24445E+00      9   .81108E+00     10   .95577E+00     11   .72847E+00     12   .10000E+01
    13   .86237E+00     14   .84682E+00     15   .75961E+00     16   .55826E+00     17   .70500E+00     18   .54330E+00
    19   .31526E+00     20   .10394E+00     21   .41357E+00     22   .67407E+00     23   .47844E+00     24   .87208E-01

SOURCE ID = L0000487     ; SOURCE TYPE = VOLUME    :
     1   .60414E+00      2   .63375E+00      3   .57827E+00      4   .87208E-01      5   .16300E+00      6   .22055E+00
     7   .44880E+00      8   .24445E+00      9   .81108E+00     10   .95577E+00     11   .72847E+00     12   .10000E+01
    13   .86237E+00     14   .84682E+00     15   .75961E+00     16   .55826E+00     17   .70500E+00     18   .54330E+00
    19   .31526E+00     20   .10394E+00     21   .41357E+00     22   .67407E+00     23   .47844E+00     24   .87208E-01

SOURCE ID = L0000488     ; SOURCE TYPE = VOLUME    :
     1   .60414E+00      2   .63375E+00      3   .57827E+00      4   .87208E-01      5   .16300E+00      6   .22055E+00
     7   .44880E+00      8   .24445E+00      9   .81108E+00     10   .95577E+00     11   .72847E+00     12   .10000E+01
    13   .86237E+00     14   .84682E+00     15   .75961E+00     16   .55826E+00     17   .70500E+00     18   .54330E+00
    19   .31526E+00     20   .10394E+00     21   .41357E+00     22   .67407E+00     23   .47844E+00     24   .87208E-01

SOURCE ID = L0000489     ; SOURCE TYPE = VOLUME    :
     1   .60414E+00      2   .63375E+00      3   .57827E+00      4   .87208E-01      5   .16300E+00      6   .22055E+00
     7   .44880E+00      8   .24445E+00      9   .81108E+00     10   .95577E+00     11   .72847E+00     12   .10000E+01
    13   .86237E+00     14   .84682E+00     15   .75961E+00     16   .55826E+00     17   .70500E+00     18   .54330E+00
    19   .31526E+00     20   .10394E+00     21   .41357E+00     22   .67407E+00     23   .47844E+00     24   .87208E-01

SOURCE ID = L0000490     ; SOURCE TYPE = VOLUME    :
     1   .60414E+00      2   .63375E+00      3   .57827E+00      4   .87208E-01      5   .16300E+00      6   .22055E+00
     7   .44880E+00      8   .24445E+00      9   .81108E+00     10   .95577E+00     11   .72847E+00     12   .10000E+01
    13   .86237E+00     14   .84682E+00     15   .75961E+00     16   .55826E+00     17   .70500E+00     18   .54330E+00
    19   .31526E+00     20   .10394E+00     21   .41357E+00     22   .67407E+00     23   .47844E+00     24   .87208E-01
```

Appendix B – Sample AERMOD ADO Output File

```
*** AERMOD - VERSION  13350 ***   *** TownPlace Suites Hotel - Calle Joaquin, San Luis Obispo, CA          ***        05/02/14
*** AERMET - VERSION  12345 ***   *** Impacts of DPM Emissions, Ground Level                               ***        16:50:49
                                                                                                                      PAGE  21
**MODELOPTs:  RegDFAULT CONC                                                 ELEV


                           * SOURCE EMISSION RATE SCALARS WHICH VARY FOR EACH HOUR OF THE DAY *

    HOUR    SCALAR       HOUR    SCALAR       HOUR    SCALAR       HOUR    SCALAR       HOUR    SCALAR       HOUR    SCALAR
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
-


SOURCE ID = L0000491     ; SOURCE TYPE = VOLUME   :
      1   .60414E+00      2   .63375E+00      3   .57827E+00      4   .87208E-01      5   .16300E+00      6   .22055E+00
      7   .44880E+00      8   .24445E+00      9   .81108E+00     10   .95577E+00     11   .72847E+00     12   .10000E+01
     13   .86237E+00     14   .84682E+00     15   .75961E+00     16   .55826E+00     17   .70500E+00     18   .54330E+00
     19   .31526E+00     20   .10394E+00     21   .41357E+00     22   .67407E+00     23   .47844E+00     24   .87208E-01

SOURCE ID = L0000492     ; SOURCE TYPE = VOLUME   :
      1   .60414E+00      2   .63375E+00      3   .57827E+00      4   .87208E-01      5   .16300E+00      6   .22055E+00
      7   .44880E+00      8   .24445E+00      9   .81108E+00     10   .95577E+00     11   .72847E+00     12   .10000E+01
     13   .86237E+00     14   .84682E+00     15   .75961E+00     16   .55826E+00     17   .70500E+00     18   .54330E+00
     19   .31526E+00     20   .10394E+00     21   .41357E+00     22   .67407E+00     23   .47844E+00     24   .87208E-01

SOURCE ID = L0000493     ; SOURCE TYPE = VOLUME   :
      1   .60414E+00      2   .63375E+00      3   .57827E+00      4   .87208E-01      5   .16300E+00      6   .22055E+00
      7   .44880E+00      8   .24445E+00      9   .81108E+00     10   .95577E+00     11   .72847E+00     12   .10000E+01
     13   .86237E+00     14   .84682E+00     15   .75961E+00     16   .55826E+00     17   .70500E+00     18   .54330E+00
     19   .31526E+00     20   .10394E+00     21   .41357E+00     22   .67407E+00     23   .47844E+00     24   .87208E-01

SOURCE ID = L0000494     ; SOURCE TYPE = VOLUME   :
      1   .60414E+00      2   .63375E+00      3   .57827E+00      4   .87208E-01      5   .16300E+00      6   .22055E+00
      7   .44880E+00      8   .24445E+00      9   .81108E+00     10   .95577E+00     11   .72847E+00     12   .10000E+01
     13   .86237E+00     14   .84682E+00     15   .75961E+00     16   .55826E+00     17   .70500E+00     18   .54330E+00
     19   .31526E+00     20   .10394E+00     21   .41357E+00     22   .67407E+00     23   .47844E+00     24   .87208E-01

SOURCE ID = L0000495     ; SOURCE TYPE = VOLUME   :
      1   .60414E+00      2   .63375E+00      3   .57827E+00      4   .87208E-01      5   .16300E+00      6   .22055E+00
      7   .44880E+00      8   .24445E+00      9   .81108E+00     10   .95577E+00     11   .72847E+00     12   .10000E+01
     13   .86237E+00     14   .84682E+00     15   .75961E+00     16   .55826E+00     17   .70500E+00     18   .54330E+00
     19   .31526E+00     20   .10394E+00     21   .41357E+00     22   .67407E+00     23   .47844E+00     24   .87208E-01
```

Appendix B – Sample AERMOD ADO Output File

```
*** AERMOD - VERSION  13350 ***   *** TownPlace Suites Hotel - Calle Joaquin, San Luis Obispo, CA          ***        05/02/14
*** AERMET - VERSION  12345 ***   *** Impacts of DPM Emissions, Ground Level                               ***        16:50:49
                                                                                                                      PAGE  22
**MODELOPTs:  RegDFAULT CONC                                                 ELEV


                                * SOURCE EMISSION RATE SCALARS WHICH VARY FOR EACH HOUR OF THE DAY *

    HOUR    SCALAR      HOUR    SCALAR      HOUR    SCALAR      HOUR    SCALAR      HOUR    SCALAR      HOUR    SCALAR
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
-


SOURCE ID = L0000496     ; SOURCE TYPE = VOLUME    :
      1   .60414E+00     2   .63375E+00     3   .57827E+00     4   .87208E-01     5   .16300E+00     6   .22055E+00
      7   .44880E+00     8   .24445E+00     9   .81108E+00    10   .95577E+00    11   .72847E+00    12   .10000E+01
     13   .86237E+00    14   .84682E+00    15   .75961E+00    16   .55826E+00    17   .70500E+00    18   .54330E+00
     19   .31526E+00    20   .10394E+00    21   .41357E+00    22   .67407E+00    23   .47844E+00    24   .87208E-01

SOURCE ID = L0000497     ; SOURCE TYPE = VOLUME    :
      1   .60414E+00     2   .63375E+00     3   .57827E+00     4   .87208E-01     5   .16300E+00     6   .22055E+00
      7   .44880E+00     8   .24445E+00     9   .81108E+00    10   .95577E+00    11   .72847E+00    12   .10000E+01
     13   .86237E+00    14   .84682E+00    15   .75961E+00    16   .55826E+00    17   .70500E+00    18   .54330E+00
     19   .31526E+00    20   .10394E+00    21   .41357E+00    22   .67407E+00    23   .47844E+00    24   .87208E-01

SOURCE ID = L0000498     ; SOURCE TYPE = VOLUME    :
      1   .60414E+00     2   .63375E+00     3   .57827E+00     4   .87208E-01     5   .16300E+00     6   .22055E+00
      7   .44880E+00     8   .24445E+00     9   .81108E+00    10   .95577E+00    11   .72847E+00    12   .10000E+01
     13   .86237E+00    14   .84682E+00    15   .75961E+00    16   .55826E+00    17   .70500E+00    18   .54330E+00
     19   .31526E+00    20   .10394E+00    21   .41357E+00    22   .67407E+00    23   .47844E+00    24   .87208E-01

SOURCE ID = L0000499     ; SOURCE TYPE = VOLUME    :
      1   .60414E+00     2   .63375E+00     3   .57827E+00     4   .87208E-01     5   .16300E+00     6   .22055E+00
      7   .44880E+00     8   .24445E+00     9   .81108E+00    10   .95577E+00    11   .72847E+00    12   .10000E+01
     13   .86237E+00    14   .84682E+00    15   .75961E+00    16   .55826E+00    17   .70500E+00    18   .54330E+00
     19   .31526E+00    20   .10394E+00    21   .41357E+00    22   .67407E+00    23   .47844E+00    24   .87208E-01

SOURCE ID = L0000500     ; SOURCE TYPE = VOLUME    :
      1   .60414E+00     2   .63375E+00     3   .57827E+00     4   .87208E-01     5   .16300E+00     6   .22055E+00
      7   .44880E+00     8   .24445E+00     9   .81108E+00    10   .95577E+00    11   .72847E+00    12   .10000E+01
     13   .86237E+00    14   .84682E+00    15   .75961E+00    16   .55826E+00    17   .70500E+00    18   .54330E+00
     19   .31526E+00    20   .10394E+00    21   .41357E+00    22   .67407E+00    23   .47844E+00    24   .87208E-01
```

Appendix B – Sample AERMOD ADO Output File

* SOURCE EMISSION RATE SCALARS WHICH VARY FOR EACH HOUR OF THE DAY *

SOURCE ID = L0000501 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
1	.60414E+00	2	.63375E+00	3	.57827E+00	4	.87208E-01	5	.16300E+00	6	.22055E+00
7	.44880E+00	8	.24445E+00	9	.81108E+00	10	.95577E+00	11	.72847E+00	12	.10000E+01
13	.86237E+00	14	.84682E+00	15	.75961E+00	16	.55826E+00	17	.70500E+00	18	.54330E+00
19	.31526E+00	20	.10394E+00	21	.41357E+00	22	.67407E+00	23	.47844E+00	24	.87208E-01

SOURCE ID = L0000502 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
1	.60414E+00	2	.63375E+00	3	.57827E+00	4	.87208E-01	5	.16300E+00	6	.22055E+00
7	.44880E+00	8	.24445E+00	9	.81108E+00	10	.95577E+00	11	.72847E+00	12	.10000E+01
13	.86237E+00	14	.84682E+00	15	.75961E+00	16	.55826E+00	17	.70500E+00	18	.54330E+00
19	.31526E+00	20	.10394E+00	21	.41357E+00	22	.67407E+00	23	.47844E+00	24	.87208E-01

SOURCE ID = L0000503 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
1	.60414E+00	2	.63375E+00	3	.57827E+00	4	.87208E-01	5	.16300E+00	6	.22055E+00
7	.44880E+00	8	.24445E+00	9	.81108E+00	10	.95577E+00	11	.72847E+00	12	.10000E+01
13	.86237E+00	14	.84682E+00	15	.75961E+00	16	.55826E+00	17	.70500E+00	18	.54330E+00
19	.31526E+00	20	.10394E+00	21	.41357E+00	22	.67407E+00	23	.47844E+00	24	.87208E-01

SOURCE ID = L0000504 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
1	.60414E+00	2	.63375E+00	3	.57827E+00	4	.87208E-01	5	.16300E+00	6	.22055E+00
7	.44880E+00	8	.24445E+00	9	.81108E+00	10	.95577E+00	11	.72847E+00	12	.10000E+01
13	.86237E+00	14	.84682E+00	15	.75961E+00	16	.55826E+00	17	.70500E+00	18	.54330E+00
19	.31526E+00	20	.10394E+00	21	.41357E+00	22	.67407E+00	23	.47844E+00	24	.87208E-01

SOURCE ID = L0000505 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
1	.60414E+00	2	.63375E+00	3	.57827E+00	4	.87208E-01	5	.16300E+00	6	.22055E+00
7	.44880E+00	8	.24445E+00	9	.81108E+00	10	.95577E+00	11	.72847E+00	12	.10000E+01
13	.86237E+00	14	.84682E+00	15	.75961E+00	16	.55826E+00	17	.70500E+00	18	.54330E+00
19	.31526E+00	20	.10394E+00	21	.41357E+00	22	.67407E+00	23	.47844E+00	24	.87208E-01

```
*** AERMOD - VERSION  13350 ***   *** TownPlace Suites Hotel - Calle Joaquin, San Luis Obispo, CA          ***          05/02/14
*** AERMET - VERSION  12345 ***   *** Impacts of DPM Emissions, Ground Level                                ***          16:50:49
                                                                                                                          PAGE  24
**MODELOPTs:  RegDFAULT CONC                                                ELEV

                            * SOURCE EMISSION RATE SCALARS WHICH VARY FOR EACH HOUR OF THE DAY *

    HOUR    SCALAR      HOUR    SCALAR      HOUR    SCALAR      HOUR    SCALAR      HOUR    SCALAR      HOUR    SCALAR
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
-


SOURCE ID = L0000506     ; SOURCE TYPE = VOLUME    :
      1   .60414E+00      2   .63375E+00      3   .57827E+00      4   .87208E-01      5   .16300E+00      6   .22055E+00
      7   .44880E+00      8   .24445E+00      9   .81108E+00     10   .95577E+00     11   .72847E+00     12   .10000E+01
     13   .86237E+00     14   .84682E+00     15   .75961E+00     16   .55826E+00     17   .70500E+00     18   .54330E+00
     19   .31526E+00     20   .10394E+00     21   .41357E+00     22   .67407E+00     23   .47844E+00     24   .87208E-01

SOURCE ID = L0000507     ; SOURCE TYPE = VOLUME    :
      1   .60414E+00      2   .63375E+00      3   .57827E+00      4   .87208E-01      5   .16300E+00      6   .22055E+00
      7   .44880E+00      8   .24445E+00      9   .81108E+00     10   .95577E+00     11   .72847E+00     12   .10000E+01
     13   .86237E+00     14   .84682E+00     15   .75961E+00     16   .55826E+00     17   .70500E+00     18   .54330E+00
     19   .31526E+00     20   .10394E+00     21   .41357E+00     22   .67407E+00     23   .47844E+00     24   .87208E-01

SOURCE ID = L0000508     ; SOURCE TYPE = VOLUME    :
      1   .60414E+00      2   .63375E+00      3   .57827E+00      4   .87208E-01      5   .16300E+00      6   .22055E+00
      7   .44880E+00      8   .24445E+00      9   .81108E+00     10   .95577E+00     11   .72847E+00     12   .10000E+01
     13   .86237E+00     14   .84682E+00     15   .75961E+00     16   .55826E+00     17   .70500E+00     18   .54330E+00
     19   .31526E+00     20   .10394E+00     21   .41357E+00     22   .67407E+00     23   .47844E+00     24   .87208E-01

SOURCE ID = L0000509     ; SOURCE TYPE = VOLUME    :
      1   .60414E+00      2   .63375E+00      3   .57827E+00      4   .87208E-01      5   .16300E+00      6   .22055E+00
      7   .44880E+00      8   .24445E+00      9   .81108E+00     10   .95577E+00     11   .72847E+00     12   .10000E+01
     13   .86237E+00     14   .84682E+00     15   .75961E+00     16   .55826E+00     17   .70500E+00     18   .54330E+00
     19   .31526E+00     20   .10394E+00     21   .41357E+00     22   .67407E+00     23   .47844E+00     24   .87208E-01

SOURCE ID = L0000510     ; SOURCE TYPE = VOLUME    :
      1   .60414E+00      2   .63375E+00      3   .57827E+00      4   .87208E-01      5   .16300E+00      6   .22055E+00
      7   .44880E+00      8   .24445E+00      9   .81108E+00     10   .95577E+00     11   .72847E+00     12   .10000E+01
     13   .86237E+00     14   .84682E+00     15   .75961E+00     16   .55826E+00     17   .70500E+00     18   .54330E+00
     19   .31526E+00     20   .10394E+00     21   .41357E+00     22   .67407E+00     23   .47844E+00     24   .87208E-01
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Appendix B – Sample AERMOD ADO Output File

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*** AERMOD - VERSION  13350 ***   *** TownPlace Suites Hotel - Calle Joaquin, San Luis Obispo, CA          ***        05/02/14
*** AERMET - VERSION  12345 ***   *** Impacts of DPM Emissions, Ground Level                               ***        16:50:49
                                                                                                                      PAGE  25
**MODELOPTs:  RegDFAULT CONC                                                 ELEV
```

* SOURCE EMISSION RATE SCALARS WHICH VARY FOR EACH HOUR OF THE DAY *

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
SOURCE ID = L0000511		; SOURCE TYPE = VOLUME		:							
1	.60414E+00	2	.63375E+00	3	.57827E+00	4	.87208E-01	5	.16300E+00	6	.22055E+00
7	.44880E+00	8	.24445E+00	9	.81108E+00	10	.95577E+00	11	.72847E+00	12	.10000E+01
13	.86237E+00	14	.84682E+00	15	.75961E+00	16	.55826E+00	17	.70500E+00	18	.54330E+00
19	.31526E+00	20	.10394E+00	21	.41357E+00	22	.67407E+00	23	.47844E+00	24	.87208E-01
SOURCE ID = L0000512		; SOURCE TYPE = VOLUME		:							
1	.60414E+00	2	.63375E+00	3	.57827E+00	4	.87208E-01	5	.16300E+00	6	.22055E+00
7	.44880E+00	8	.24445E+00	9	.81108E+00	10	.95577E+00	11	.72847E+00	12	.10000E+01
13	.86237E+00	14	.84682E+00	15	.75961E+00	16	.55826E+00	17	.70500E+00	18	.54330E+00
19	.31526E+00	20	.10394E+00	21	.41357E+00	22	.67407E+00	23	.47844E+00	24	.87208E-01
SOURCE ID = L0000513		; SOURCE TYPE = VOLUME		:							
1	.60414E+00	2	.63375E+00	3	.57827E+00	4	.87208E-01	5	.16300E+00	6	.22055E+00
7	.44880E+00	8	.24445E+00	9	.81108E+00	10	.95577E+00	11	.72847E+00	12	.10000E+01
13	.86237E+00	14	.84682E+00	15	.75961E+00	16	.55826E+00	17	.70500E+00	18	.54330E+00
19	.31526E+00	20	.10394E+00	21	.41357E+00	22	.67407E+00	23	.47844E+00	24	.87208E-01
SOURCE ID = L0000514		; SOURCE TYPE = VOLUME		:							
1	.60414E+00	2	.63375E+00	3	.57827E+00	4	.87208E-01	5	.16300E+00	6	.22055E+00
7	.44880E+00	8	.24445E+00	9	.81108E+00	10	.95577E+00	11	.72847E+00	12	.10000E+01
13	.86237E+00	14	.84682E+00	15	.75961E+00	16	.55826E+00	17	.70500E+00	18	.54330E+00
19	.31526E+00	20	.10394E+00	21	.41357E+00	22	.67407E+00	23	.47844E+00	24	.87208E-01
SOURCE ID = L0000515		; SOURCE TYPE = VOLUME		:							
1	.60414E+00	2	.63375E+00	3	.57827E+00	4	.87208E-01	5	.16300E+00	6	.22055E+00
7	.44880E+00	8	.24445E+00	9	.81108E+00	10	.95577E+00	11	.72847E+00	12	.10000E+01
13	.86237E+00	14	.84682E+00	15	.75961E+00	16	.55826E+00	17	.70500E+00	18	.54330E+00
19	.31526E+00	20	.10394E+00	21	.41357E+00	22	.67407E+00	23	.47844E+00	24	.87208E-01

Appendix B – Sample AERMOD ADO Output File

**MODELOPTs: RegDFAULT CONC ELEV

* SOURCE EMISSION RATE SCALARS WHICH VARY FOR EACH HOUR OF THE DAY *

SOURCE ID = L0000516 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
1	.60414E+00	2	.63375E+00	3	.57827E+00	4	.87208E-01	5	.16300E+00	6	.22055E+00
7	.44880E+00	8	.24445E+00	9	.81108E+00	10	.95577E+00	11	.72847E+00	12	.10000E+01
13	.86237E+00	14	.84682E+00	15	.75961E+00	16	.55826E+00	17	.70500E+00	18	.54330E+00
19	.31526E+00	20	.10394E+00	21	.41357E+00	22	.67407E+00	23	.47844E+00	24	.87208E-01

SOURCE ID = L0000517 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
1	.60414E+00	2	.63375E+00	3	.57827E+00	4	.87208E-01	5	.16300E+00	6	.22055E+00
7	.44880E+00	8	.24445E+00	9	.81108E+00	10	.95577E+00	11	.72847E+00	12	.10000E+01
13	.86237E+00	14	.84682E+00	15	.75961E+00	16	.55826E+00	17	.70500E+00	18	.54330E+00
19	.31526E+00	20	.10394E+00	21	.41357E+00	22	.67407E+00	23	.47844E+00	24	.87208E-01

SOURCE ID = L0000518 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
1	.60414E+00	2	.63375E+00	3	.57827E+00	4	.87208E-01	5	.16300E+00	6	.22055E+00
7	.44880E+00	8	.24445E+00	9	.81108E+00	10	.95577E+00	11	.72847E+00	12	.10000E+01
13	.86237E+00	14	.84682E+00	15	.75961E+00	16	.55826E+00	17	.70500E+00	18	.54330E+00
19	.31526E+00	20	.10394E+00	21	.41357E+00	22	.67407E+00	23	.47844E+00	24	.87208E-01

SOURCE ID = L0000519 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
1	.60414E+00	2	.63375E+00	3	.57827E+00	4	.87208E-01	5	.16300E+00	6	.22055E+00
7	.44880E+00	8	.24445E+00	9	.81108E+00	10	.95577E+00	11	.72847E+00	12	.10000E+01
13	.86237E+00	14	.84682E+00	15	.75961E+00	16	.55826E+00	17	.70500E+00	18	.54330E+00
19	.31526E+00	20	.10394E+00	21	.41357E+00	22	.67407E+00	23	.47844E+00	24	.87208E-01

SOURCE ID = L0000520 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
1	.60414E+00	2	.63375E+00	3	.57827E+00	4	.87208E-01	5	.16300E+00	6	.22055E+00
7	.44880E+00	8	.24445E+00	9	.81108E+00	10	.95577E+00	11	.72847E+00	12	.10000E+01
13	.86237E+00	14	.84682E+00	15	.75961E+00	16	.55826E+00	17	.70500E+00	18	.54330E+00
19	.31526E+00	20	.10394E+00	21	.41357E+00	22	.67407E+00	23	.47844E+00	24	.87208E-01

Appendix B – Sample AERMOD ADO Output File


```
                                 * SOURCE EMISSION RATE SCALARS WHICH VARY FOR EACH HOUR OF THE DAY *

    HOUR    SCALAR      HOUR    SCALAR      HOUR    SCALAR      HOUR    SCALAR      HOUR    SCALAR      HOUR    SCALAR
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
-


SOURCE ID = L0000521     ; SOURCE TYPE = VOLUME    :
      1   .60414E+00      2   .63375E+00      3   .57827E+00      4   .87208E-01      5   .16300E+00      6   .22055E+00
      7   .44880E+00      8   .24445E+00      9   .81108E+00     10   .95577E+00     11   .72847E+00     12   .10000E+01
     13   .86237E+00     14   .84682E+00     15   .75961E+00     16   .55826E+00     17   .70500E+00     18   .54330E+00
     19   .31526E+00     20   .10394E+00     21   .41357E+00     22   .67407E+00     23   .47844E+00     24   .87208E-01

SOURCE ID = L0000522     ; SOURCE TYPE = VOLUME    :
      1   .60414E+00      2   .63375E+00      3   .57827E+00      4   .87208E-01      5   .16300E+00      6   .22055E+00
      7   .44880E+00      8   .24445E+00      9   .81108E+00     10   .95577E+00     11   .72847E+00     12   .10000E+01
     13   .86237E+00     14   .84682E+00     15   .75961E+00     16   .55826E+00     17   .70500E+00     18   .54330E+00
     19   .31526E+00     20   .10394E+00     21   .41357E+00     22   .67407E+00     23   .47844E+00     24   .87208E-01

SOURCE ID = L0000523     ; SOURCE TYPE = VOLUME    :
      1   .60414E+00      2   .63375E+00      3   .57827E+00      4   .87208E-01      5   .16300E+00      6   .22055E+00
      7   .44880E+00      8   .24445E+00      9   .81108E+00     10   .95577E+00     11   .72847E+00     12   .10000E+01
     13   .86237E+00     14   .84682E+00     15   .75961E+00     16   .55826E+00     17   .70500E+00     18   .54330E+00
     19   .31526E+00     20   .10394E+00     21   .41357E+00     22   .67407E+00     23   .47844E+00     24   .87208E-01

SOURCE ID = L0000524     ; SOURCE TYPE = VOLUME    :
      1   .60414E+00      2   .63375E+00      3   .57827E+00      4   .87208E-01      5   .16300E+00      6   .22055E+00
      7   .44880E+00      8   .24445E+00      9   .81108E+00     10   .95577E+00     11   .72847E+00     12   .10000E+01
     13   .86237E+00     14   .84682E+00     15   .75961E+00     16   .55826E+00     17   .70500E+00     18   .54330E+00
     19   .31526E+00     20   .10394E+00     21   .41357E+00     22   .67407E+00     23   .47844E+00     24   .87208E-01

SOURCE ID = L0000525     ; SOURCE TYPE = VOLUME    :
      1   .60414E+00      2   .63375E+00      3   .57827E+00      4   .87208E-01      5   .16300E+00      6   .22055E+00
      7   .44880E+00      8   .24445E+00      9   .81108E+00     10   .95577E+00     11   .72847E+00     12   .10000E+01
     13   .86237E+00     14   .84682E+00     15   .75961E+00     16   .55826E+00     17   .70500E+00     18   .54330E+00
     19   .31526E+00     20   .10394E+00     21   .41357E+00     22   .67407E+00     23   .47844E+00     24   .87208E-01
```

Appendix B – Sample AERMOD ADO Output File


```
                                   * SOURCE EMISSION RATE SCALARS WHICH VARY FOR EACH HOUR OF THE DAY *

    HOUR    SCALAR      HOUR    SCALAR      HOUR    SCALAR      HOUR    SCALAR      HOUR    SCALAR      HOUR    SCALAR
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
-


SOURCE ID = L0000526     ; SOURCE TYPE = VOLUME   :
      1   .60414E+00     2   .63375E+00     3   .57827E+00     4   .87208E-01     5   .16300E+00     6   .22055E+00
      7   .44880E+00     8   .24445E+00     9   .81108E+00    10   .95577E+00    11   .72847E+00    12   .10000E+01
     13   .86237E+00    14   .84682E+00    15   .75961E+00    16   .55826E+00    17   .70500E+00    18   .54330E+00
     19   .31526E+00    20   .10394E+00    21   .41357E+00    22   .67407E+00    23   .47844E+00    24   .87208E-01

SOURCE ID = L0000527     ; SOURCE TYPE = VOLUME   :
      1   .60414E+00     2   .63375E+00     3   .57827E+00     4   .87208E-01     5   .16300E+00     6   .22055E+00
      7   .44880E+00     8   .24445E+00     9   .81108E+00    10   .95577E+00    11   .72847E+00    12   .10000E+01
     13   .86237E+00    14   .84682E+00    15   .75961E+00    16   .55826E+00    17   .70500E+00    18   .54330E+00
     19   .31526E+00    20   .10394E+00    21   .41357E+00    22   .67407E+00    23   .47844E+00    24   .87208E-01

SOURCE ID = L0000528     ; SOURCE TYPE = VOLUME   :
      1   .60414E+00     2   .63375E+00     3   .57827E+00     4   .87208E-01     5   .16300E+00     6   .22055E+00
      7   .44880E+00     8   .24445E+00     9   .81108E+00    10   .95577E+00    11   .72847E+00    12   .10000E+01
     13   .86237E+00    14   .84682E+00    15   .75961E+00    16   .55826E+00    17   .70500E+00    18   .54330E+00
     19   .31526E+00    20   .10394E+00    21   .41357E+00    22   .67407E+00    23   .47844E+00    24   .87208E-01

SOURCE ID = L0000529     ; SOURCE TYPE = VOLUME   :
      1   .60414E+00     2   .63375E+00     3   .57827E+00     4   .87208E-01     5   .16300E+00     6   .22055E+00
      7   .44880E+00     8   .24445E+00     9   .81108E+00    10   .95577E+00    11   .72847E+00    12   .10000E+01
     13   .86237E+00    14   .84682E+00    15   .75961E+00    16   .55826E+00    17   .70500E+00    18   .54330E+00
     19   .31526E+00    20   .10394E+00    21   .41357E+00    22   .67407E+00    23   .47844E+00    24   .87208E-01

SOURCE ID = L0000530     ; SOURCE TYPE = VOLUME   :
      1   .60414E+00     2   .63375E+00     3   .57827E+00     4   .87208E-01     5   .16300E+00     6   .22055E+00
      7   .44880E+00     8   .24445E+00     9   .81108E+00    10   .95577E+00    11   .72847E+00    12   .10000E+01
     13   .86237E+00    14   .84682E+00    15   .75961E+00    16   .55826E+00    17   .70500E+00    18   .54330E+00
     19   .31526E+00    20   .10394E+00    21   .41357E+00    22   .67407E+00    23   .47844E+00    24   .87208E-01
```

Appendix B – Sample AERMOD ADO Output File

**MODELOPTs: RegDFAULT CONC ELEV

* SOURCE EMISSION RATE SCALARS WHICH VARY FOR EACH HOUR OF THE DAY *

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
SOURCE ID = L0000531		; SOURCE TYPE = VOLUME		:							
1	.60414E+00	2	.63375E+00	3	.57827E+00	4	.87208E-01	5	.16300E+00	6	.22055E+00
7	.44880E+00	8	.24445E+00	9	.81108E+00	10	.95577E+00	11	.72847E+00	12	.10000E+01
13	.86237E+00	14	.84682E+00	15	.75961E+00	16	.55826E+00	17	.70500E+00	18	.54330E+00
19	.31526E+00	20	.10394E+00	21	.41357E+00	22	.67407E+00	23	.47844E+00	24	.87208E-01
SOURCE ID = L0000532		; SOURCE TYPE = VOLUME		:							
1	.60414E+00	2	.63375E+00	3	.57827E+00	4	.87208E-01	5	.16300E+00	6	.22055E+00
7	.44880E+00	8	.24445E+00	9	.81108E+00	10	.95577E+00	11	.72847E+00	12	.10000E+01
13	.86237E+00	14	.84682E+00	15	.75961E+00	16	.55826E+00	17	.70500E+00	18	.54330E+00
19	.31526E+00	20	.10394E+00	21	.41357E+00	22	.67407E+00	23	.47844E+00	24	.87208E-01
SOURCE ID = L0000533		; SOURCE TYPE = VOLUME		:							
1	.60414E+00	2	.63375E+00	3	.57827E+00	4	.87208E-01	5	.16300E+00	6	.22055E+00
7	.44880E+00	8	.24445E+00	9	.81108E+00	10	.95577E+00	11	.72847E+00	12	.10000E+01
13	.86237E+00	14	.84682E+00	15	.75961E+00	16	.55826E+00	17	.70500E+00	18	.54330E+00
19	.31526E+00	20	.10394E+00	21	.41357E+00	22	.67407E+00	23	.47844E+00	24	.87208E-01
SOURCE ID = L0000534		; SOURCE TYPE = VOLUME		:							
1	.60414E+00	2	.63375E+00	3	.57827E+00	4	.87208E-01	5	.16300E+00	6	.22055E+00
7	.44880E+00	8	.24445E+00	9	.81108E+00	10	.95577E+00	11	.72847E+00	12	.10000E+01
13	.86237E+00	14	.84682E+00	15	.75961E+00	16	.55826E+00	17	.70500E+00	18	.54330E+00
19	.31526E+00	20	.10394E+00	21	.41357E+00	22	.67407E+00	23	.47844E+00	24	.87208E-01
SOURCE ID = L0000535		; SOURCE TYPE = VOLUME		:							
1	.60414E+00	2	.63375E+00	3	.57827E+00	4	.87208E-01	5	.16300E+00	6	.22055E+00
7	.44880E+00	8	.24445E+00	9	.81108E+00	10	.95577E+00	11	.72847E+00	12	.10000E+01
13	.86237E+00	14	.84682E+00	15	.75961E+00	16	.55826E+00	17	.70500E+00	18	.54330E+00
19	.31526E+00	20	.10394E+00	21	.41357E+00	22	.67407E+00	23	.47844E+00	24	.87208E-01

```
*** AERMOD - VERSION  13350 ***   *** TownPlace Suites Hotel - Calle Joaquin, San Luis Obispo, CA          ***        05/02/14
*** AERMET - VERSION  12345 ***   *** Impacts of DPM Emissions, Ground Level                               ***        16:50:49
                                                                                                                      PAGE  30
**MODELOPTs:  RegDFAULT CONC                                                  ELEV


                                * SOURCE EMISSION RATE SCALARS WHICH VARY FOR EACH HOUR OF THE DAY *

    HOUR    SCALAR      HOUR    SCALAR      HOUR    SCALAR      HOUR    SCALAR      HOUR    SCALAR      HOUR    SCALAR
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
-


SOURCE ID = L0000536     ; SOURCE TYPE = VOLUME    :
      1   .60414E+00      2   .63375E+00      3   .57827E+00      4   .87208E-01      5   .16300E+00      6   .22055E+00
      7   .44880E+00      8   .24445E+00      9   .81108E+00     10   .95577E+00     11   .72847E+00     12   .10000E+01
     13   .86237E+00     14   .84682E+00     15   .75961E+00     16   .55826E+00     17   .70500E+00     18   .54330E+00
     19   .31526E+00     20   .10394E+00     21   .41357E+00     22   .67407E+00     23   .47844E+00     24   .87208E-01

SOURCE ID = L0000537     ; SOURCE TYPE = VOLUME    :
      1   .60414E+00      2   .63375E+00      3   .57827E+00      4   .87208E-01      5   .16300E+00      6   .22055E+00
      7   .44880E+00      8   .24445E+00      9   .81108E+00     10   .95577E+00     11   .72847E+00     12   .10000E+01
     13   .86237E+00     14   .84682E+00     15   .75961E+00     16   .55826E+00     17   .70500E+00     18   .54330E+00
     19   .31526E+00     20   .10394E+00     21   .41357E+00     22   .67407E+00     23   .47844E+00     24   .87208E-01

SOURCE ID = L0000538     ; SOURCE TYPE = VOLUME    :
      1   .60414E+00      2   .63375E+00      3   .57827E+00      4   .87208E-01      5   .16300E+00      6   .22055E+00
      7   .44880E+00      8   .24445E+00      9   .81108E+00     10   .95577E+00     11   .72847E+00     12   .10000E+01
     13   .86237E+00     14   .84682E+00     15   .75961E+00     16   .55826E+00     17   .70500E+00     18   .54330E+00
     19   .31526E+00     20   .10394E+00     21   .41357E+00     22   .67407E+00     23   .47844E+00     24   .87208E-01

SOURCE ID = L0000539     ; SOURCE TYPE = VOLUME    :
      1   .60414E+00      2   .63375E+00      3   .57827E+00      4   .87208E-01      5   .16300E+00      6   .22055E+00
      7   .44880E+00      8   .24445E+00      9   .81108E+00     10   .95577E+00     11   .72847E+00     12   .10000E+01
     13   .86237E+00     14   .84682E+00     15   .75961E+00     16   .55826E+00     17   .70500E+00     18   .54330E+00
     19   .31526E+00     20   .10394E+00     21   .41357E+00     22   .67407E+00     23   .47844E+00     24   .87208E-01

SOURCE ID = L0000540     ; SOURCE TYPE = VOLUME    :
      1   .60414E+00      2   .63375E+00      3   .57827E+00      4   .87208E-01      5   .16300E+00      6   .22055E+00
      7   .44880E+00      8   .24445E+00      9   .81108E+00     10   .95577E+00     11   .72847E+00     12   .10000E+01
     13   .86237E+00     14   .84682E+00     15   .75961E+00     16   .55826E+00     17   .70500E+00     18   .54330E+00
     19   .31526E+00     20   .10394E+00     21   .41357E+00     22   .67407E+00     23   .47844E+00     24   .87208E-01
```

```
*** AERMOD - VERSION  13350 ***   *** TownPlace Suites Hotel - Calle Joaquin, San Luis Obispo, CA          ***        05/02/14
*** AERMET - VERSION  12345 ***   *** Impacts of DPM Emissions, Ground Level                               ***        16:50:49
                                                                                                                      PAGE  31
**MODELOPTs:  RegDFAULT CONC                                                  ELEV


                           * SOURCE EMISSION RATE SCALARS WHICH VARY FOR EACH HOUR OF THE DAY *

    HOUR    SCALAR      HOUR    SCALAR      HOUR    SCALAR      HOUR    SCALAR      HOUR    SCALAR      HOUR    SCALAR
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
-



SOURCE ID = L0000541     ; SOURCE TYPE = VOLUME    :
     1   .60414E+00      2   .63375E+00      3   .57827E+00      4   .87208E-01      5   .16300E+00      6   .22055E+00
     7   .44880E+00      8   .24445E+00      9   .81108E+00     10   .95577E+00     11   .72847E+00     12   .10000E+01
    13   .86237E+00     14   .84682E+00     15   .75961E+00     16   .55826E+00     17   .70500E+00     18   .54330E+00
    19   .31526E+00     20   .10394E+00     21   .41357E+00     22   .67407E+00     23   .47844E+00     24   .87208E-01

SOURCE ID = L0000542     ; SOURCE TYPE = VOLUME    :
     1   .60414E+00      2   .63375E+00      3   .57827E+00      4   .87208E-01      5   .16300E+00      6   .22055E+00
     7   .44880E+00      8   .24445E+00      9   .81108E+00     10   .95577E+00     11   .72847E+00     12   .10000E+01
    13   .86237E+00     14   .84682E+00     15   .75961E+00     16   .55826E+00     17   .70500E+00     18   .54330E+00
    19   .31526E+00     20   .10394E+00     21   .41357E+00     22   .67407E+00     23   .47844E+00     24   .87208E-01

SOURCE ID = L0000543     ; SOURCE TYPE = VOLUME    :
     1   .60414E+00      2   .63375E+00      3   .57827E+00      4   .87208E-01      5   .16300E+00      6   .22055E+00
     7   .44880E+00      8   .24445E+00      9   .81108E+00     10   .95577E+00     11   .72847E+00     12   .10000E+01
    13   .86237E+00     14   .84682E+00     15   .75961E+00     16   .55826E+00     17   .70500E+00     18   .54330E+00
    19   .31526E+00     20   .10394E+00     21   .41357E+00     22   .67407E+00     23   .47844E+00     24   .87208E-01

SOURCE ID = L0000544     ; SOURCE TYPE = VOLUME    :
     1   .60414E+00      2   .63375E+00      3   .57827E+00      4   .87208E-01      5   .16300E+00      6   .22055E+00
     7   .44880E+00      8   .24445E+00      9   .81108E+00     10   .95577E+00     11   .72847E+00     12   .10000E+01
    13   .86237E+00     14   .84682E+00     15   .75961E+00     16   .55826E+00     17   .70500E+00     18   .54330E+00
    19   .31526E+00     20   .10394E+00     21   .41357E+00     22   .67407E+00     23   .47844E+00     24   .87208E-01

SOURCE ID = L0000545     ; SOURCE TYPE = VOLUME    :
     1   .60414E+00      2   .63375E+00      3   .57827E+00      4   .87208E-01      5   .16300E+00      6   .22055E+00
     7   .44880E+00      8   .24445E+00      9   .81108E+00     10   .95577E+00     11   .72847E+00     12   .10000E+01
    13   .86237E+00     14   .84682E+00     15   .75961E+00     16   .55826E+00     17   .70500E+00     18   .54330E+00
    19   .31526E+00     20   .10394E+00     21   .41357E+00     22   .67407E+00     23   .47844E+00     24   .87208E-01
```

Appendix B – Sample AERMOD ADO Output File

```
*** AERMOD - VERSION  13350 ***   *** TownPlace Suites Hotel - Calle Joaquin, San Luis Obispo, CA          ***        05/02/14
*** AERMET - VERSION  12345 ***   *** Impacts of DPM Emissions, Ground Level                               ***        16:50:49
                                                                                                                      PAGE  32
**MODELOPTs:  RegDFAULT CONC                                                ELEV


                                    * SOURCE EMISSION RATE SCALARS WHICH VARY FOR EACH HOUR OF THE DAY *

    HOUR    SCALAR       HOUR    SCALAR       HOUR    SCALAR       HOUR    SCALAR       HOUR    SCALAR       HOUR    SCALAR
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
-


SOURCE ID = L0000546     ; SOURCE TYPE = VOLUME    :
      1   .60414E+00      2   .63375E+00      3   .57827E+00      4   .87208E-01      5   .16300E+00      6   .22055E+00
      7   .44880E+00      8   .24445E+00      9   .81108E+00     10   .95577E+00     11   .72847E+00     12   .10000E+01
     13   .86237E+00     14   .84682E+00     15   .75961E+00     16   .55826E+00     17   .70500E+00     18   .54330E+00
     19   .31526E+00     20   .10394E+00     21   .41357E+00     22   .67407E+00     23   .47844E+00     24   .87208E-01

SOURCE ID = L0000547     ; SOURCE TYPE = VOLUME    :
      1   .60414E+00      2   .63375E+00      3   .57827E+00      4   .87208E-01      5   .16300E+00      6   .22055E+00
      7   .44880E+00      8   .24445E+00      9   .81108E+00     10   .95577E+00     11   .72847E+00     12   .10000E+01
     13   .86237E+00     14   .84682E+00     15   .75961E+00     16   .55826E+00     17   .70500E+00     18   .54330E+00
     19   .31526E+00     20   .10394E+00     21   .41357E+00     22   .67407E+00     23   .47844E+00     24   .87208E-01

SOURCE ID = L0000548     ; SOURCE TYPE = VOLUME    :
      1   .60414E+00      2   .63375E+00      3   .57827E+00      4   .87208E-01      5   .16300E+00      6   .22055E+00
      7   .44880E+00      8   .24445E+00      9   .81108E+00     10   .95577E+00     11   .72847E+00     12   .10000E+01
     13   .86237E+00     14   .84682E+00     15   .75961E+00     16   .55826E+00     17   .70500E+00     18   .54330E+00
     19   .31526E+00     20   .10394E+00     21   .41357E+00     22   .67407E+00     23   .47844E+00     24   .87208E-01

SOURCE ID = L0000549     ; SOURCE TYPE = VOLUME    :
      1   .60414E+00      2   .63375E+00      3   .57827E+00      4   .87208E-01      5   .16300E+00      6   .22055E+00
      7   .44880E+00      8   .24445E+00      9   .81108E+00     10   .95577E+00     11   .72847E+00     12   .10000E+01
     13   .86237E+00     14   .84682E+00     15   .75961E+00     16   .55826E+00     17   .70500E+00     18   .54330E+00
     19   .31526E+00     20   .10394E+00     21   .41357E+00     22   .67407E+00     23   .47844E+00     24   .87208E-01

SOURCE ID = L0000550     ; SOURCE TYPE = VOLUME    :
      1   .60414E+00      2   .63375E+00      3   .57827E+00      4   .87208E-01      5   .16300E+00      6   .22055E+00
      7   .44880E+00      8   .24445E+00      9   .81108E+00     10   .95577E+00     11   .72847E+00     12   .10000E+01
     13   .86237E+00     14   .84682E+00     15   .75961E+00     16   .55826E+00     17   .70500E+00     18   .54330E+00
     19   .31526E+00     20   .10394E+00     21   .41357E+00     22   .67407E+00     23   .47844E+00     24   .87208E-01
```

Appendix B – Sample AERMOD ADO Output File

```
*** AERMOD - VERSION  13350 ***   *** TownPlace Suites Hotel - Calle Joaquin, San Luis Obispo, CA          ***        05/02/14
*** AERMET - VERSION  12345 ***   *** Impacts of DPM Emissions, Ground Level                               ***        16:50:49
                                                                                                                      PAGE  33
**MODELOPTs:  RegDFAULT CONC                                                 ELEV

                                             *** DISCRETE CARTESIAN RECEPTORS ***
                                           (X-COORD, Y-COORD, ZELEV, ZHILL, ZFLAG)
                                                          (METERS)

   ( 711099.7, 3903219.4,      40.0,     293.0,       0.0);        ( 711108.6, 3903219.4,      40.0,     293.0,       0.0);
   ( 711090.8, 3903227.6,      40.0,     294.0,       0.0);        ( 711099.7, 3903227.6,      40.0,     293.0,       0.0);
   ( 711108.6, 3903227.6,      40.0,     293.0,       0.0);        ( 711073.0, 3903235.8,      40.0,     297.0,       0.0);
   ( 711081.9, 3903235.8,      40.0,     294.0,       0.0);        ( 711090.8, 3903235.8,      40.0,     294.0,       0.0);
   ( 711099.7, 3903235.8,      40.0,     293.0,       0.0);        ( 711108.6, 3903235.8,      40.0,     293.0,       0.0);
   ( 711117.5, 3903235.8,      40.0,     288.0,       0.0);        ( 711064.1, 3903244.0,      40.0,     303.0,       0.0);
   ( 711073.0, 3903244.0,      40.0,     297.0,       0.0);        ( 711081.9, 3903244.0,      40.0,     294.0,       0.0);
   ( 711090.8, 3903244.0,      40.0,     293.0,       0.0);        ( 711099.7, 3903244.0,      40.0,     293.0,       0.0);
   ( 711108.6, 3903244.0,      40.0,     293.0,       0.0);        ( 711117.5, 3903244.0,      40.0,     288.0,       0.0);
   ( 711055.2, 3903252.2,      40.0,     307.0,       0.0);        ( 711064.1, 3903252.2,      40.0,     297.0,       0.0);
   ( 711073.0, 3903252.2,      40.0,     297.0,       0.0);        ( 711081.9, 3903252.2,      40.0,     294.0,       0.0);
   ( 711090.8, 3903252.2,      40.0,     293.0,       0.0);        ( 711099.7, 3903252.2,      40.0,     293.0,       0.0);
   ( 711108.6, 3903252.2,      40.0,     293.0,       0.0);        ( 711117.5, 3903252.2,      40.0,     288.0,       0.0);
   ( 711126.4, 3903252.2,      40.0,     288.0,       0.0);        ( 711037.3, 3903260.4,      40.0,     307.0,       0.0);
   ( 711046.2, 3903260.4,      40.0,     307.0,       0.0);        ( 711055.2, 3903260.4,      40.0,     307.0,       0.0);
   ( 711064.1, 3903260.4,      40.0,     297.0,       0.0);        ( 711073.0, 3903260.4,      40.0,     294.0,       0.0);
   ( 711081.9, 3903260.4,      40.0,     293.0,       0.0);        ( 711090.8, 3903260.4,      40.0,     293.0,       0.0);
   ( 711099.7, 3903260.4,      40.0,     293.0,       0.0);        ( 711108.6, 3903260.4,      40.0,     288.0,       0.0);
   ( 711117.5, 3903260.4,      40.0,     288.0,       0.0);        ( 711126.4, 3903260.4,      40.0,     288.0,       0.0);
   ( 711028.4, 3903268.6,      40.0,     312.0,       0.0);        ( 711037.3, 3903268.6,      40.0,     307.0,       0.0);
   ( 711046.2, 3903268.6,      40.0,     307.0,       0.0);        ( 711055.2, 3903268.6,      40.0,     303.0,       0.0);
   ( 711064.1, 3903268.6,      40.0,     297.0,       0.0);        ( 711073.0, 3903268.6,      40.0,     294.0,       0.0);
   ( 711081.9, 3903268.6,      40.0,     293.0,       0.0);        ( 711090.8, 3903268.6,      40.0,     293.0,       0.0);
   ( 711099.7, 3903268.6,      40.0,     293.0,       0.0);        ( 711108.6, 3903268.6,      40.0,     288.0,       0.0);
   ( 711117.5, 3903268.6,      40.0,     288.0,       0.0);        ( 711126.4, 3903268.6,      40.0,     285.0,       0.0);
   ( 711019.5, 3903276.8,      40.0,     312.0,       0.0);        ( 711028.4, 3903276.8,      40.0,     307.0,       0.0);
   ( 711037.3, 3903276.8,      40.0,     307.0,       0.0);        ( 711046.2, 3903276.8,      40.0,     307.0,       0.0);
   ( 711055.2, 3903276.8,      40.0,     297.0,       0.0);        ( 711064.1, 3903276.8,      40.0,     297.0,       0.0);
   ( 711073.0, 3903276.8,      40.0,     294.0,       0.0);        ( 711081.9, 3903276.8,      40.0,     293.0,       0.0);
   ( 711090.8, 3903276.8,      40.0,     293.0,       0.0);        ( 711099.7, 3903276.8,      40.0,     288.0,       0.0);
   ( 711108.6, 3903276.8,      40.0,     288.0,       0.0);        ( 711117.5, 3903276.8,      40.0,     288.0,       0.0);
   ( 711001.7, 3903285.0,      40.0,     322.0,       0.0);        ( 711010.6, 3903285.0,      40.0,     312.0,       0.0);
   ( 711019.5, 3903285.0,      40.0,     312.0,       0.0);        ( 711028.4, 3903285.0,      40.0,     307.0,       0.0);
   ( 711037.3, 3903285.0,      40.0,     307.0,       0.0);        ( 711046.2, 3903285.0,      40.0,     307.0,       0.0);
   ( 711055.2, 3903285.0,      40.0,     297.0,       0.0);        ( 711064.1, 3903285.0,      40.0,     294.0,       0.0);
   ( 711073.0, 3903285.0,      40.0,     293.0,       0.0);        ( 711081.9, 3903285.0,      40.0,     293.0,       0.0);
   ( 711090.8, 3903285.0,      40.0,     293.0,       0.0);        ( 711099.7, 3903285.0,      40.0,     288.0,       0.0);
   ( 711108.6, 3903285.0,      40.0,     288.0,       0.0);        ( 710992.8, 3903293.2,      40.0,     322.0,       0.0);
   ( 711001.7, 3903293.2,      40.0,     315.0,       0.0);        ( 711010.6, 3903293.2,      40.0,     312.0,       0.0);
   ( 711019.5, 3903293.2,      40.0,     312.0,       0.0);        ( 711028.4, 3903293.2,      40.0,     307.0,       0.0);
   ( 711037.3, 3903293.2,      40.0,     307.0,       0.0);        ( 711046.2, 3903293.2,      40.0,     303.0,       0.0);
   ( 711055.2, 3903293.2,      40.0,     297.0,       0.0);        ( 711064.1, 3903293.2,      40.0,     294.0,       0.0);
   ( 711073.0, 3903293.2,      40.0,     293.0,       0.0);        ( 711081.9, 3903293.2,      40.0,     293.0,       0.0);
   ( 711090.8, 3903293.2,      40.0,     293.0,       0.0);        ( 711099.7, 3903293.2,      40.0,     288.0,       0.0);
   ( 710983.9, 3903301.4,      40.0,     394.0,       0.0);        ( 710992.8, 3903301.4,      40.0,     394.0,       0.0);
```

Appendix B – Sample AERMOD ADO Output File

**MODELOPTs: RegDFAULT CONC ELEV

*** DISCRETE CARTESIAN RECEPTORS ***
(X-COORD, Y-COORD, ZELEV, ZHILL, ZFLAG)
(METERS)

(711001.7,	3903301.4,	40.0,	394.0,	0.0);	(711010.6,	3903301.4,	40.0,	394.0,	0.0);
(711019.5,	3903301.4,	40.0,	394.0,	0.0);	(711028.4,	3903301.4,	40.0,	394.0,	0.0);
(711037.3,	3903301.4,	40.0,	394.0,	0.0);	(711046.2,	3903301.4,	40.0,	394.0,	0.0);
(711055.2,	3903301.4,	40.0,	394.0,	0.0);	(711064.1,	3903301.4,	40.0,	394.0,	0.0);
(711073.0,	3903301.4,	40.0,	394.0,	0.0);	(711081.9,	3903301.4,	40.0,	394.0,	0.0);
(710966.1,	3903309.6,	40.0,	394.0,	0.0);	(710975.0,	3903309.6,	40.0,	394.0,	0.0);
(710983.9,	3903309.6,	40.0,	394.0,	0.0);	(710992.8,	3903309.6,	40.0,	394.0,	0.0);
(711001.7,	3903309.6,	40.0,	394.0,	0.0);	(711010.6,	3903309.6,	40.0,	394.0,	0.0);
(711019.5,	3903309.6,	40.0,	394.0,	0.0);	(711028.4,	3903309.6,	40.0,	394.0,	0.0);
(711037.3,	3903309.6,	40.0,	394.0,	0.0);	(711046.2,	3903309.6,	40.0,	394.0,	0.0);
(711055.2,	3903309.6,	40.0,	394.0,	0.0);	(711064.1,	3903309.6,	40.0,	394.0,	0.0);
(711073.0,	3903309.6,	40.0,	394.0,	0.0);	(710966.1,	3903317.8,	40.0,	394.0,	0.0);
(710975.0,	3903317.8,	40.0,	394.0,	0.0);	(710983.9,	3903317.8,	40.0,	394.0,	0.0);
(710992.8,	3903317.8,	40.0,	394.0,	0.0);	(711001.7,	3903317.8,	40.0,	394.0,	0.0);
(711010.6,	3903317.8,	40.0,	394.0,	0.0);	(711019.5,	3903317.8,	40.0,	394.0,	0.0);
(711028.4,	3903317.8,	40.0,	394.0,	0.0);	(711037.3,	3903317.8,	40.0,	394.0,	0.0);
(711046.2,	3903317.8,	40.0,	394.0,	0.0);	(711055.2,	3903317.8,	40.0,	394.0,	0.0);
(711064.1,	3903317.8,	40.0,	394.0,	0.0);	(710966.1,	3903326.0,	40.0,	394.0,	0.0);
(710975.0,	3903326.0,	40.0,	394.0,	0.0);	(710983.9,	3903326.0,	40.0,	394.0,	0.0);
(710992.8,	3903326.0,	40.0,	394.0,	0.0);	(711001.7,	3903326.0,	40.0,	394.0,	0.0);
(711010.6,	3903326.0,	40.0,	394.0,	0.0);	(711019.5,	3903326.0,	40.0,	394.0,	0.0);
(711028.4,	3903326.0,	40.0,	394.0,	0.0);	(711037.3,	3903326.0,	40.0,	394.0,	0.0);
(711046.2,	3903326.0,	40.0,	394.0,	0.0);	(710975.0,	3903334.2,	40.0,	394.0,	0.0);
(710983.9,	3903334.2,	40.0,	394.0,	0.0);	(710992.8,	3903334.2,	40.0,	394.0,	0.0);
(711001.7,	3903334.2,	40.0,	394.0,	0.0);	(711010.6,	3903334.2,	40.0,	394.0,	0.0);
(711019.5,	3903334.2,	40.0,	394.0,	0.0);	(711028.4,	3903334.2,	40.0,	394.0,	0.0);
(711037.3,	3903334.2,	40.0,	394.0,	0.0);	(710975.0,	3903342.4,	40.0,	394.0,	0.0);
(710983.9,	3903342.4,	40.0,	394.0,	0.0);	(710992.8,	3903342.4,	40.0,	394.0,	0.0);
(711001.7,	3903342.4,	40.0,	394.0,	0.0);	(711010.6,	3903342.4,	40.0,	394.0,	0.0);
(711019.5,	3903342.4,	40.0,	394.0,	0.0);	(711028.4,	3903342.4,	40.0,	394.0,	0.0);
(710975.0,	3903350.6,	40.0,	394.0,	0.0);	(710983.9,	3903350.6,	40.0,	394.0,	0.0);
(710992.8,	3903350.6,	40.0,	394.0,	0.0);	(711001.7,	3903350.6,	40.0,	394.0,	0.0);
(711010.6,	3903350.6,	40.0,	394.0,	0.0);	(710983.9,	3903358.8,	40.0,	394.0,	0.0);
(710992.8,	3903358.8,	40.0,	394.0,	0.0);	(711001.7,	3903358.8,	40.0,	394.0,	0.0);
(710983.9,	3903367.0,	40.0,	394.0,	0.0);	(710992.8,	3903367.0,	40.0,	394.0,	0.0);
(711105.9,	3903211.3,	40.0,	293.0,	0.0);	(711121.7,	3903242.7,	40.0,	288.0,	0.0);
(711134.8,	3903268.8,	40.0,	284.0,	0.0);					

```
*** AERMOD - VERSION  13350 ***   *** TownPlace Suites Hotel - Calle Joaquin, San Luis Obispo, CA          ***         05/02/14
*** AERMET - VERSION  12345 ***   *** Impacts of DPM Emissions, Ground Level                               ***         16:50:49
                                                                                                                       PAGE  35
**MODELOPTs:  RegDFAULT CONC                                                 ELEV

                                             *** METEOROLOGICAL DAYS SELECTED FOR PROCESSING ***
                                                               (1=YES; 0=NO)

           1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
           1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
           1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
           1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
           1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
           1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
           1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
           1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1

              NOTE:  METEOROLOGICAL DATA ACTUALLY PROCESSED WILL ALSO DEPEND ON WHAT IS INCLUDED IN THE DATA FILE.


                                   *** UPPER BOUND OF FIRST THROUGH FIFTH WIND SPEED CATEGORIES ***
                                                           (METERS/SEC)

                                                    1.54,   3.09,   5.14,   8.23,  10.80,
```

Appendix B – Sample AERMOD ADO Output File

```
*** AERMOD - VERSION  13350 ***   *** TownPlace Suites Hotel - Calle Joaquin, San Luis Obispo, CA          ***        05/02/14
*** AERMET - VERSION  12345 ***   *** Impacts of DPM Emissions, Ground Level                               ***        16:50:49
                                                                                                                      PAGE  36
**MODELOPTs:  RegDFAULT CONC                                                 ELEV
```

*** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

```
  Surface file:   Z:\SLO - Calle Joaquin Hotel\Current Project\AERMET Data\SLOOS2011.SFC            Met Version:  12345
  Profile file:   Z:\SLO - Calle Joaquin Hotel\Current Project\AERMET Data\SLOOS2011.PFL
  Surface format: FREE
  Profile format: FREE
  Surface station no.:   722897                 Upper air station no.:   103214
                 Name: UNKNOWN                                  Name: UNKNOWN
                 Year:   2011                                   Year:   2011
```

First 24 hours of scalar data

YR MO DY	JDY HR	H0	U*	W*	DT/DZ	ZICNV	ZIMCH	M-O LEN	Z0	BOWEN	ALBEDO	REF WS	WD	HT	REF TA	HT
11 01 01	1 01	-4.5	0.073	-9.000	-9.000	-999.	45.	7.7	0.03	1.20	1.00	2.16	130.	10.0	278.1	2.0
11 01 01	1 02	-3.1	0.063	-9.000	-9.000	-999.	37.	7.3	0.03	1.20	1.00	1.88	139.	10.0	279.2	2.0
11 01 01	1 03	-5.6	0.074	-9.000	-9.000	-999.	46.	6.4	0.03	1.20	1.00	2.18	140.	10.0	279.9	2.0
11 01 01	1 04	-6.7	0.118	-9.000	-9.000	-999.	94.	22.2	0.03	1.20	1.00	2.42	137.	10.0	279.9	2.0
11 01 01	1 05	-5.7	0.100	-9.000	-9.000	-999.	72.	15.7	0.03	1.20	1.00	2.27	137.	10.0	279.2	2.0
11 01 01	1 06	-1.9	0.050	-9.000	-9.000	-999.	26.	5.7	0.03	1.20	1.00	1.47	138.	10.0	278.8	2.0
11 01 01	1 07	-9.5	0.139	-9.000	-9.000	-999.	120.	25.7	0.03	1.20	1.00	2.74	122.	10.0	278.1	2.0
11 01 01	1 08	-13.1	0.237	-9.000	-9.000	-999.	265.	92.1	0.03	1.20	0.65	3.83	124.	10.0	280.4	2.0
11 01 01	1 09	-2.4	0.285	-9.000	-9.000	-999.	350.	892.8	0.03	1.20	0.36	4.26	132.	10.0	280.9	2.0
11 01 01	1 10	12.5	0.241	0.298	0.005	76.	273.	-101.8	0.03	1.20	0.26	3.40	132.	10.0	283.8	2.0
11 01 01	1 11	22.3	0.276	0.403	0.005	106.	333.	-85.1	0.03	1.20	0.23	3.86	136.	10.0	284.2	2.0
11 01 01	1 12	27.7	0.182	0.490	0.005	153.	181.	-19.6	0.03	1.20	0.22	2.33	159.	10.0	284.9	2.0
11 01 01	1 13	28.0	0.295	0.563	0.005	230.	368.	-82.6	0.03	1.20	0.22	4.12	155.	10.0	284.2	2.0
11 01 01	1 14	23.4	0.313	0.565	0.005	278.	403.	-118.7	0.03	1.20	0.23	4.44	143.	10.0	283.1	2.0
11 01 01	1 15	14.8	0.309	0.500	0.005	305.	396.	-181.2	0.03	1.20	0.25	4.44	139.	10.0	283.8	2.0
11 01 01	1 16	2.1	0.166	0.262	0.005	309.	167.	-197.4	0.03	1.20	0.33	2.39	166.	10.0	283.8	2.0
11 01 01	1 17	-7.2	0.144	-9.000	-9.000	-999.	126.	37.5	0.03	1.20	0.56	2.61	153.	10.0	282.5	2.0
11 01 01	1 18	-1.4	0.043	-9.000	-9.000	-999.	29.	4.9	0.03	1.20	1.00	1.26	234.	10.0	282.0	2.0
11 01 01	1 19	-7.0	0.124	-9.000	-9.000	-999.	101.	24.7	0.03	1.20	1.00	2.47	138.	10.0	282.0	2.0
11 01 01	1 20	-7.8	0.138	-9.000	-9.000	-999.	118.	30.3	0.03	1.20	1.00	2.61	123.	10.0	281.4	2.0
11 01 01	1 21	-8.4	0.148	-9.000	-9.000	-999.	131.	34.9	0.03	1.20	1.00	2.72	126.	10.0	281.4	2.0
11 01 01	1 22	-1.4	0.042	-9.000	-9.000	-999.	31.	4.9	0.03	1.20	1.00	1.25	174.	10.0	281.4	2.0
11 01 01	1 23	-1.7	0.046	-9.000	-9.000	-999.	23.	5.4	0.03	1.20	1.00	1.37	248.	10.0	280.9	2.0
11 01 01	1 24	-2.3	0.055	-9.000	-9.000	-999.	29.	6.3	0.03	1.20	1.00	1.62	105.	10.0	281.4	2.0

First hour of profile data

YR MO DY HR	HEIGHT	F	WDIR	WSPD	AMB_TMP	sigmaA	sigmaW	sigmaV
11 01 01 01	10.0	1	130.	2.16	278.2	99.0	-99.00	-99.00

F indicates top of profile (=1) or below (=0)

Appendix B – Sample AERMOD ADO Output File

```
*** AERMOD - VERSION  13350 ***   *** TownPlace Suites Hotel - Calle Joaquin, San Luis Obispo, CA          ***        05/02/14
*** AERMET - VERSION  12345 ***   *** Impacts of DPM Emissions, Ground Level                               ***        16:50:49
                                                                                                                      PAGE  37
**MODELOPTs:  RegDFAULT CONC                                                ELEV


                              *** THE PERIOD (  8760 HRS) AVERAGE CONCENTRATION   VALUES FOR SOURCE GROUP: ALL      ***
                                 INCLUDING SOURCE(S):     L0000421    , L0000422    , L0000423    , L0000424    , L0000425    ,
             L0000426    , L0000427    , L0000428    , L0000429    , L0000430    , L0000431    , L0000432    , L0000433    ,
             L0000434    , L0000435    , L0000436    , L0000437    , L0000438    , L0000439    , L0000440    , L0000441    ,
             L0000442    , L0000443    , L0000444    , L0000445    , L0000446    , L0000447    , L0000448    , . . .       ,

                                            *** DISCRETE CARTESIAN RECEPTOR POINTS ***

                                        ** CONC OF DPM      IN MICROGRAMS/M**3                          **

     X-COORD (M)  Y-COORD (M)        CONC                    X-COORD (M)  Y-COORD (M)        CONC
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
-
       711099.71   3903219.44        0.02727                   711108.62   3903219.44        0.03163
       711090.80   3903227.64        0.02290                   711099.71   3903227.64        0.02577
       711108.62   3903227.64        0.02957                   711072.98   3903235.84        0.01812
       711081.89   3903235.84        0.01981                   711090.80   3903235.84        0.02186
       711099.71   3903235.84        0.02444                   711108.62   3903235.84        0.02779
       711117.53   3903235.84        0.03235                   711064.07   3903244.04        0.01618
       711072.98   3903244.04        0.01749                   711081.89   3903244.04        0.01904
       711090.80   3903244.04        0.02092                   711099.71   3903244.04        0.02325
       711108.62   3903244.04        0.02622                   711117.53   3903244.04        0.03018
       711055.16   3903252.24        0.01463                   711064.07   3903252.24        0.01568
       711072.98   3903252.24        0.01690                   711081.89   3903252.24        0.01834
       711090.80   3903252.24        0.02006                   711099.71   3903252.24        0.02218
       711108.62   3903252.24        0.02484                   711117.53   3903252.24        0.02832
       711126.44   3903252.24        0.03310                   711037.34   3903260.44        0.01260
       711046.25   3903260.44        0.01336                   711055.16   3903260.44        0.01423
       711064.07   3903260.44        0.01521                   711072.98   3903260.44        0.01635
       711081.89   3903260.44        0.01769                   711090.80   3903260.44        0.01928
       711099.71   3903260.44        0.02121                   711108.62   3903260.44        0.02361
       711117.53   3903260.44        0.02670                   711126.44   3903260.44        0.03083
       711028.43   3903268.64        0.01165                   711037.34   3903268.64        0.01230
       711046.25   3903268.64        0.01303                   711055.16   3903268.64        0.01384
       711064.07   3903268.64        0.01477                   711072.98   3903268.64        0.01584
       711081.89   3903268.64        0.01709                   711090.80   3903268.64        0.01856
       711099.71   3903268.64        0.02033                   711108.62   3903268.64        0.02251
       711117.53   3903268.64        0.02526                   711126.44   3903268.64        0.02888
       711019.52   3903276.84        0.01084                   711028.43   3903276.84        0.01140
       711037.34   3903276.84        0.01202                   711046.25   3903276.84        0.01271
       711055.16   3903276.84        0.01348                   711064.07   3903276.84        0.01436
       711072.98   3903276.84        0.01536                   711081.89   3903276.84        0.01653
       711090.80   3903276.84        0.01789                   711099.71   3903276.84        0.01952
       711108.62   3903276.84        0.02151                   711117.53   3903276.84        0.02399
       711001.70   3903285.04        0.00969                   711010.61   3903285.04        0.01014
       711019.52   3903285.04        0.01062                   711028.43   3903285.04        0.01115
       711037.34   3903285.04        0.01174                   711046.25   3903285.04        0.01240
       711055.16   3903285.04        0.01314                   711064.07   3903285.04        0.01397
       711072.98   3903285.04        0.01491                   711081.89   3903285.04        0.01600
       711090.80   3903285.04        0.01727                   711099.71   3903285.04        0.01878
       711108.62   3903285.04        0.02060                   710992.79   3903293.24        0.00912
       711001.70   3903293.24        0.00952                   711010.61   3903293.24        0.00994
       711019.52   3903293.24        0.01041                   711028.43   3903293.24        0.01092
```

Appendix B – Sample AERMOD ADO Output File

```
*** AERMOD - VERSION  13350 ***   *** TownPlace Suites Hotel - Calle Joaquin, San Luis Obispo, CA          ***        05/02/14
*** AERMET - VERSION  12345 ***   *** Impacts of DPM Emissions, Ground Level                               ***        16:50:49
                                                                                                                      PAGE  38
**MODELOPTs:  RegDFAULT CONC                                                  ELEV


                             *** THE PERIOD (  8760 HRS) AVERAGE CONCENTRATION   VALUES FOR SOURCE GROUP: ALL      ***
                                 INCLUDING SOURCE(S):     L0000421    , L0000422    , L0000423    , L0000424    , L0000425    ,
                L0000426    , L0000427    , L0000428    , L0000429    , L0000430    , L0000431    , L0000432    , L0000433    ,
                L0000434    , L0000435    , L0000436    , L0000437    , L0000438    , L0000439    , L0000440    , L0000441    ,
                L0000442    , L0000443    , L0000444    , L0000445    , L0000446    , L0000447    , L0000448    ,  . . .      ,

                                              *** DISCRETE CARTESIAN RECEPTOR POINTS ***

                                        ** CONC OF DPM      IN MICROGRAMS/M**3                          **

      X-COORD (M)   Y-COORD (M)        CONC                           X-COORD (M)   Y-COORD (M)        CONC
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
-
        711037.34    3903293.24        0.01149                          711046.25    3903293.24        0.01211
        711055.16    3903293.24        0.01281                          711064.07    3903293.24        0.01360
        711072.98    3903293.24        0.01449                          711081.89    3903293.24        0.01551
        711090.80    3903293.24        0.01670                          711099.71    3903293.24        0.01810
        710983.88    3903301.44        0.00862                          710992.79    3903301.44        0.00897
        711001.70    3903301.44        0.00935                          711010.61    3903301.44        0.00976
        711019.52    3903301.44        0.01021                          711028.43    3903301.44        0.01070
        711037.34    3903301.44        0.01124                          711046.25    3903301.44        0.01183
        711055.16    3903301.44        0.01250                          711064.07    3903301.44        0.01325
        711072.98    3903301.44        0.01409                          711081.89    3903301.44        0.01505
        710966.06    3903309.64        0.00788                          710974.97    3903309.64        0.00817
        710983.88    3903309.64        0.00848                          710992.79    3903309.64        0.00882
        711001.70    3903309.64        0.00918                          711010.61    3903309.64        0.00958
        711019.52    3903309.64        0.01001                          711028.43    3903309.64        0.01048
        711037.34    3903309.64        0.01100                          711046.25    3903309.64        0.01157
        711055.16    3903309.64        0.01221                          711064.07    3903309.64        0.01291
        711072.98    3903309.64        0.01371                          710966.06    3903317.84        0.00776
        710974.97    3903317.84        0.00804                          710983.88    3903317.84        0.00834
        710992.79    3903317.84        0.00867                          711001.70    3903317.84        0.00902
        711010.61    3903317.84        0.00941                          711019.52    3903317.84        0.00982
        711028.43    3903317.84        0.01027                          711037.34    3903317.84        0.01077
        711046.25    3903317.84        0.01132                          711055.16    3903317.84        0.01192
        711064.07    3903317.84        0.01260                          710966.06    3903326.04        0.00764
        710974.97    3903326.04        0.00792                          710983.88    3903326.04        0.00821
        710992.79    3903326.04        0.00853                          711001.70    3903326.04        0.00887
        711010.61    3903326.04        0.00924                          711019.52    3903326.04        0.00964
        711028.43    3903326.04        0.01008                          711037.34    3903326.04        0.01055
        711046.25    3903326.04        0.01108                          710974.97    3903334.24        0.00780
        710983.88    3903334.24        0.00809                          710992.79    3903334.24        0.00839
        711001.70    3903334.24        0.00872                          711010.61    3903334.24        0.00908
        711019.52    3903334.24        0.00946                          711028.43    3903334.24        0.00988
        711037.34    3903334.24        0.01034                          710974.97    3903342.44        0.00769
        710983.88    3903342.44        0.00796                          710992.79    3903342.44        0.00826
        711001.70    3903342.44        0.00858                          711010.61    3903342.44        0.00892
        711019.52    3903342.44        0.00929                          711028.43    3903342.44        0.00970
        710974.97    3903350.64        0.00757                          710983.88    3903350.64        0.00784
        710992.79    3903350.64        0.00813                          711001.70    3903350.64        0.00844
        711010.61    3903350.64        0.00877                          710983.88    3903358.84        0.00772
        710992.79    3903358.84        0.00800                          711001.70    3903358.84        0.00830
        710983.88    3903367.04        0.00761                          710992.79    3903367.04        0.00788
```

Appendix B – Sample AERMOD ADO Output File

```
*** AERMOD - VERSION  13350 ***   *** TownPlace Suites Hotel - Calle Joaquin, San Luis Obispo, CA          ***        05/02/14
*** AERMET - VERSION  12345 ***   *** Impacts of DPM Emissions, Ground Level                               ***        16:50:49
                                                                                                                       PAGE  39
**MODELOPTs:  RegDFAULT CONC                                                  ELEV


                             *** THE PERIOD (  8760 HRS) AVERAGE CONCENTRATION   VALUES FOR SOURCE GROUP: ALL      ***
                                 INCLUDING SOURCE(S):     L0000421    , L0000422    , L0000423    , L0000424    , L0000425    ,
                L0000426    , L0000427    , L0000428    , L0000429    , L0000430    , L0000431    , L0000432    , L0000433    ,
                L0000434    , L0000435    , L0000436    , L0000437    , L0000438    , L0000439    , L0000440    , L0000441    ,
                L0000442    , L0000443    , L0000444    , L0000445    , L0000446    , L0000447    , L0000448    ,  . . .      ,

                                              *** DISCRETE CARTESIAN RECEPTOR POINTS ***

                                        ** CONC OF DPM      IN MICROGRAMS/M**3                          **

      X-COORD (M)   Y-COORD (M)        CONC                        X-COORD (M)   Y-COORD (M)        CONC
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
-
        711105.92    3903211.30        0.03228                       711121.73    3903242.72        0.03294
        711134.84    3903268.80        0.03350
```

Appendix B – Sample AERMOD ADO Output File

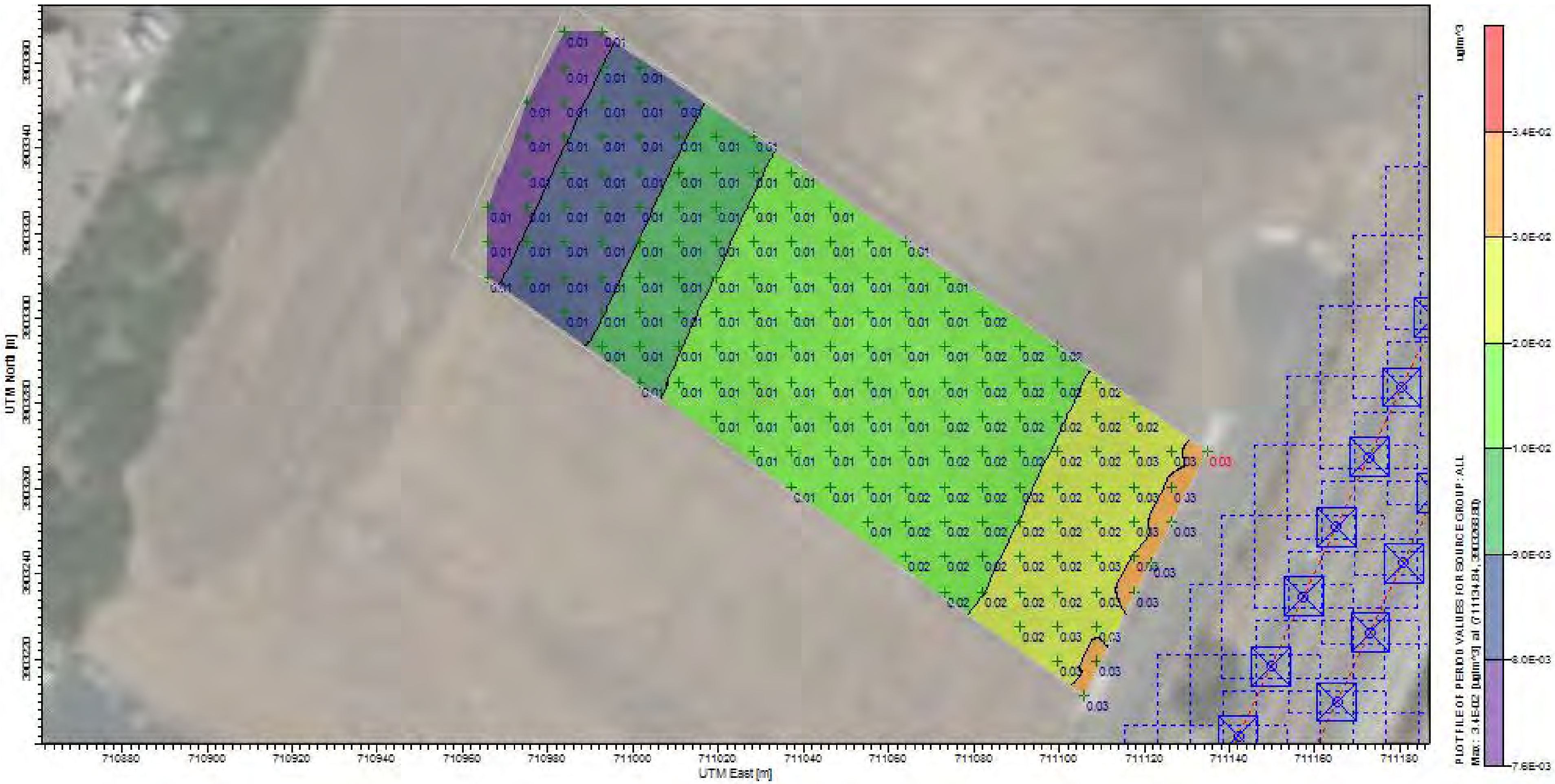
```
 *** AERMOD - VERSION  13350 ***   *** TownPlace Suites Hotel - Calle Joaquin, San Luis Obispo, CA          ***        05/02/14
 *** AERMET - VERSION  12345 ***   *** Impacts of DPM Emissions, Ground Level                               ***        16:50:49
                                                                                                                       PAGE  40
 **MODELOPTs:  RegDFAULT CONC                                                  ELEV


                                                 *** THE SUMMARY OF MAXIMUM PERIOD (  8760 HRS) RESULTS ***


                                             ** CONC OF DPM      IN MICROGRAMS/M**3                          **

                                                                                                                 NETWORK
GROUP ID                      AVERAGE CONC                RECEPTOR  (XR, YR, ZELEV, ZHILL, ZFLAG)  OF TYPE  GRID-ID
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -


ALL       1ST HIGHEST VALUE IS       0.03350 AT (  711134.84,  3903268.80,    40.00,   284.00,    0.00)  DC
          2ND HIGHEST VALUE IS       0.03310 AT (  711126.44,  3903252.24,    40.00,   288.00,    0.00)  DC
          3RD HIGHEST VALUE IS       0.03294 AT (  711121.73,  3903242.72,    40.00,   288.00,    0.00)  DC
          4TH HIGHEST VALUE IS       0.03235 AT (  711117.53,  3903235.84,    40.00,   288.00,    0.00)  DC
          5TH HIGHEST VALUE IS       0.03228 AT (  711105.92,  3903211.30,    40.00,   293.00,    0.00)  DC
          6TH HIGHEST VALUE IS       0.03163 AT (  711108.62,  3903219.44,    40.00,   293.00,    0.00)  DC
          7TH HIGHEST VALUE IS       0.03083 AT (  711126.44,  3903260.44,    40.00,   288.00,    0.00)  DC
          8TH HIGHEST VALUE IS       0.03018 AT (  711117.53,  3903244.04,    40.00,   288.00,    0.00)  DC
          9TH HIGHEST VALUE IS       0.02957 AT (  711108.62,  3903227.64,    40.00,   293.00,    0.00)  DC
         10TH HIGHEST VALUE IS       0.02888 AT (  711126.44,  3903268.64,    40.00,   285.00,    0.00)  DC

 *** RECEPTOR TYPES:  GC = GRIDCART
                      GP = GRIDPOLR
                      DC = DISCCART
                      DP = DISCPOLR
```

Appendix B – Sample AERMOD ADO Output File

```
*** AERMOD - VERSION  13350 ***   *** TownPlace Suites Hotel - Calle Joaquin, San Luis Obispo, CA          ***        05/02/14
*** AERMET - VERSION  12345 ***   *** Impacts of DPM Emissions, Ground Level                               ***        16:50:49
                                                                                                                      PAGE  41
**MODELOPTs:  RegDFAULT CONC                                                ELEV


*** Message Summary : AERMOD Model Execution ***

 --------- Summary of Total Messages --------

A Total of           0 Fatal Error Message(s)
A Total of           9 Warning Message(s)
A Total of         331 Informational Message(s)

A Total of        8760 Hours Were Processed

A Total of          44 Calm Hours Identified

A Total of         287 Missing Hours Identified (  3.28 Percent)


   ******** FATAL ERROR MESSAGES ********
              ***  NONE  ***


   ********   WARNING MESSAGES   ********
ME W396     889       MEOPEN: Met data from outdated version of AERMET, version:        12345
MX W441    8025        METQA: Vert Pot Temp Grad abv ZI set to min .005, KURDAT=     11120109
MX W441    8026        METQA: Vert Pot Temp Grad abv ZI set to min .005, KURDAT=     11120110
MX W441    8027        METQA: Vert Pot Temp Grad abv ZI set to min .005, KURDAT=     11120111
MX W441    8028        METQA: Vert Pot Temp Grad abv ZI set to min .005, KURDAT=     11120112
MX W441    8029        METQA: Vert Pot Temp Grad abv ZI set to min .005, KURDAT=     11120113
MX W441    8030        METQA: Vert Pot Temp Grad abv ZI set to min .005, KURDAT=     11120114
MX W441    8031        METQA: Vert Pot Temp Grad abv ZI set to min .005, KURDAT=     11120115
MX W441    8032        METQA: Vert Pot Temp Grad abv ZI set to min .005, KURDAT=     11120116

   ************************************
   *** AERMOD Finishes Successfully ***
   ************************************
```

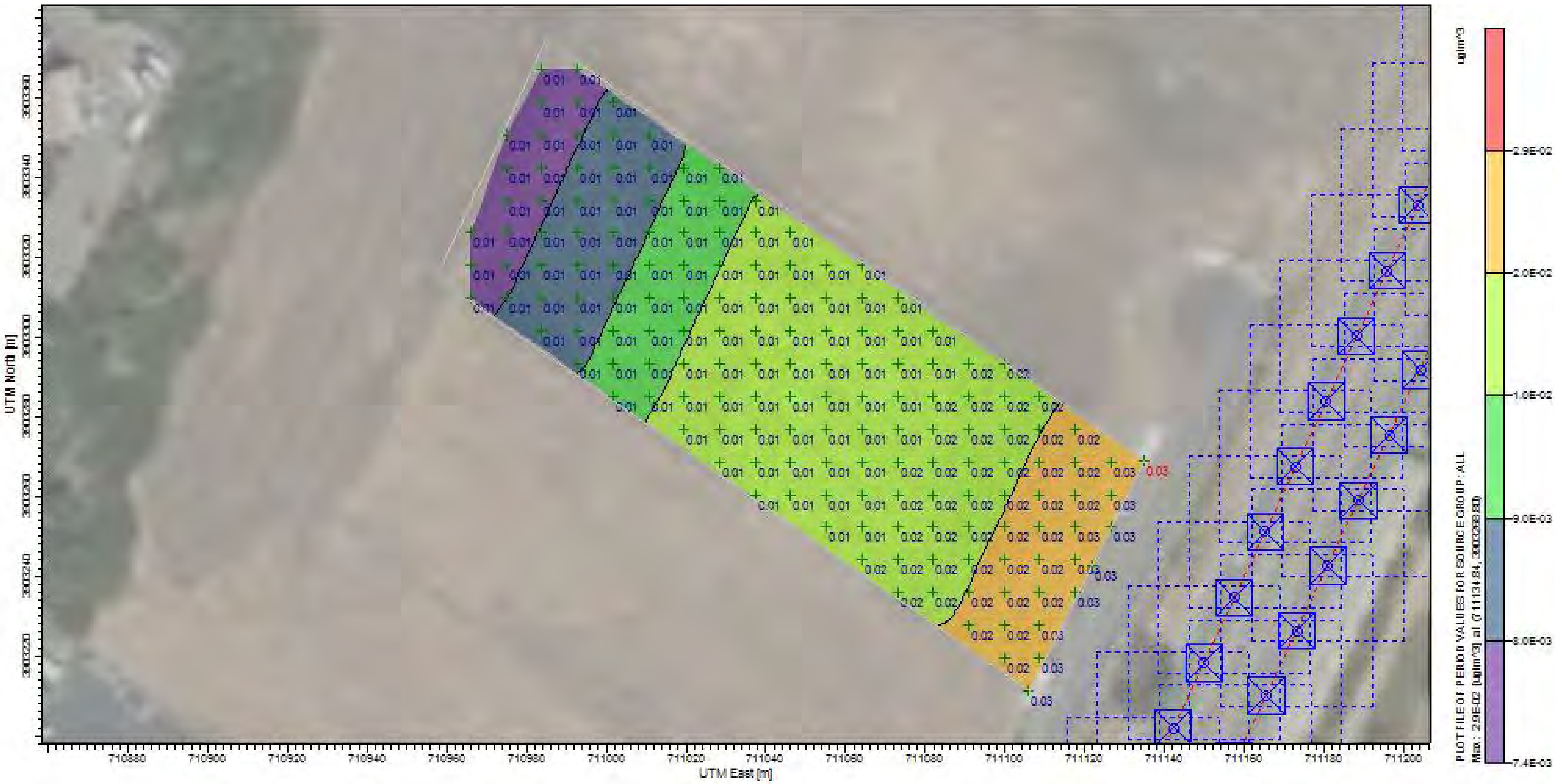
Appendix C – AERMOD Contour Plots

DPM, Ground Level



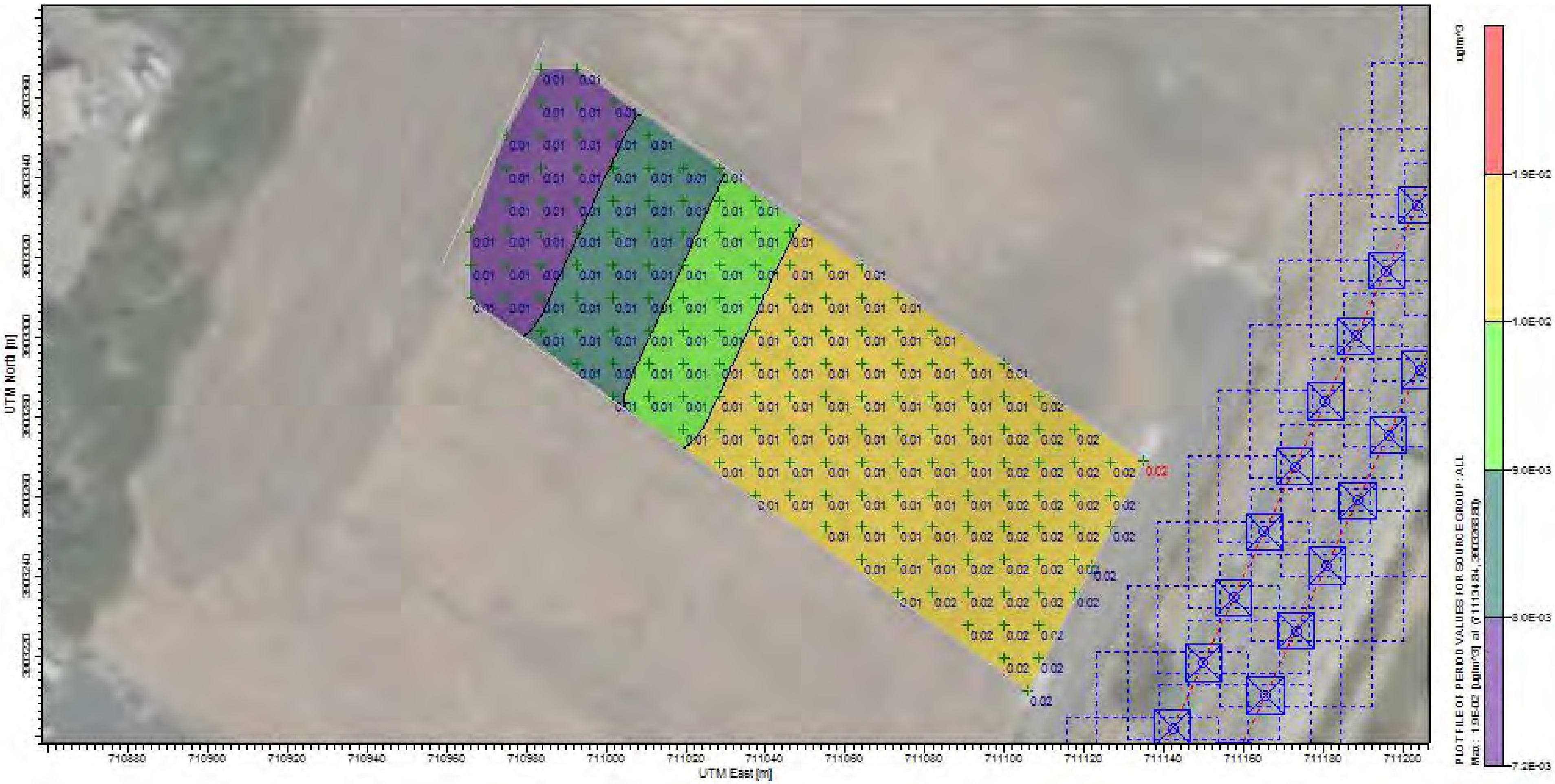
Appendix C – AERMOD Contour Plots

DPM, 1st Floor



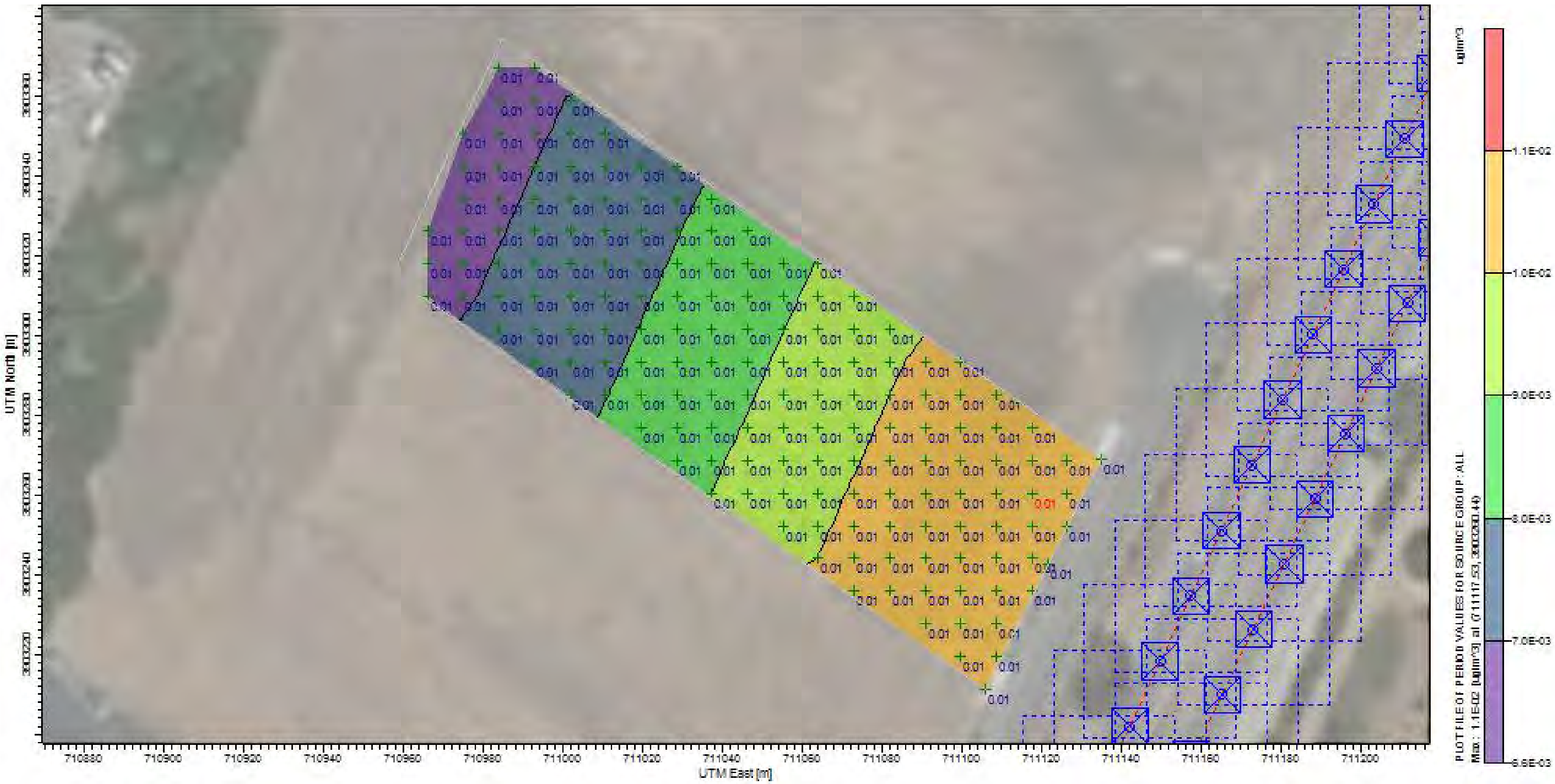
Appendix C – AERMOD Contour Plots

DPM, 2nd Floor



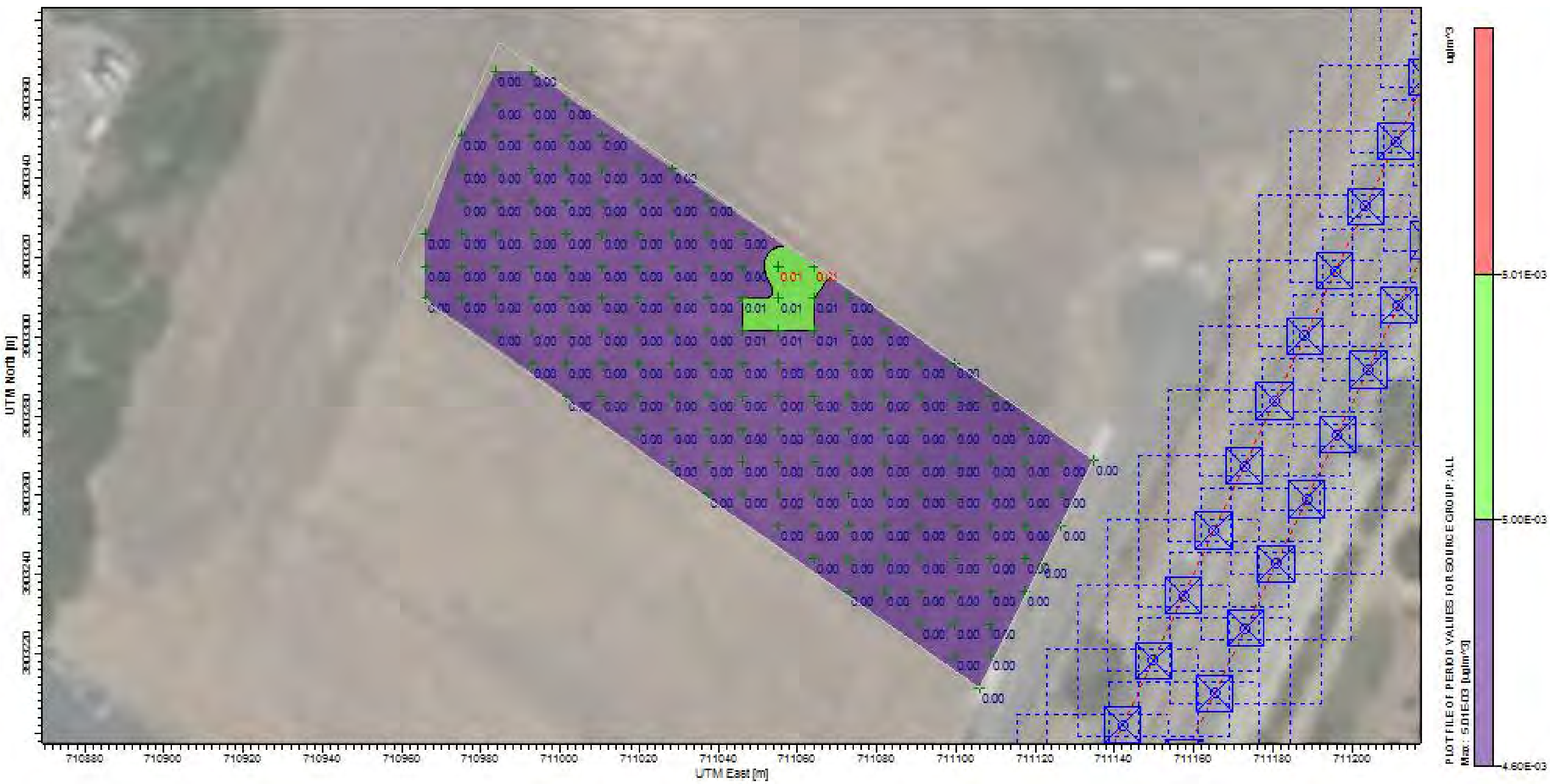
Appendix C – AERMOD Contour Plots

DPM, 3rd Floor



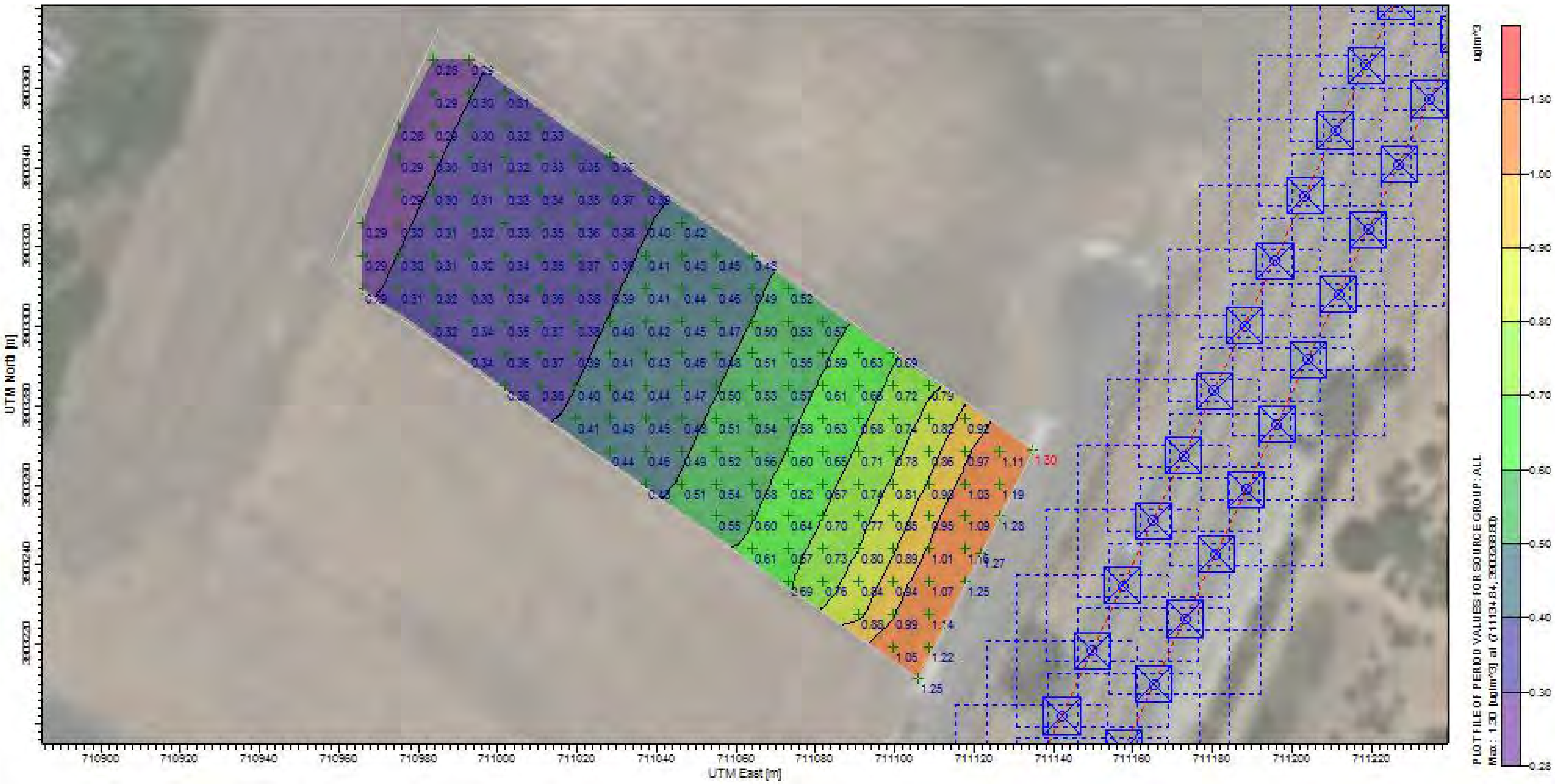
Appendix C – AERMOD Contour Plots

DPM, 4th Floor



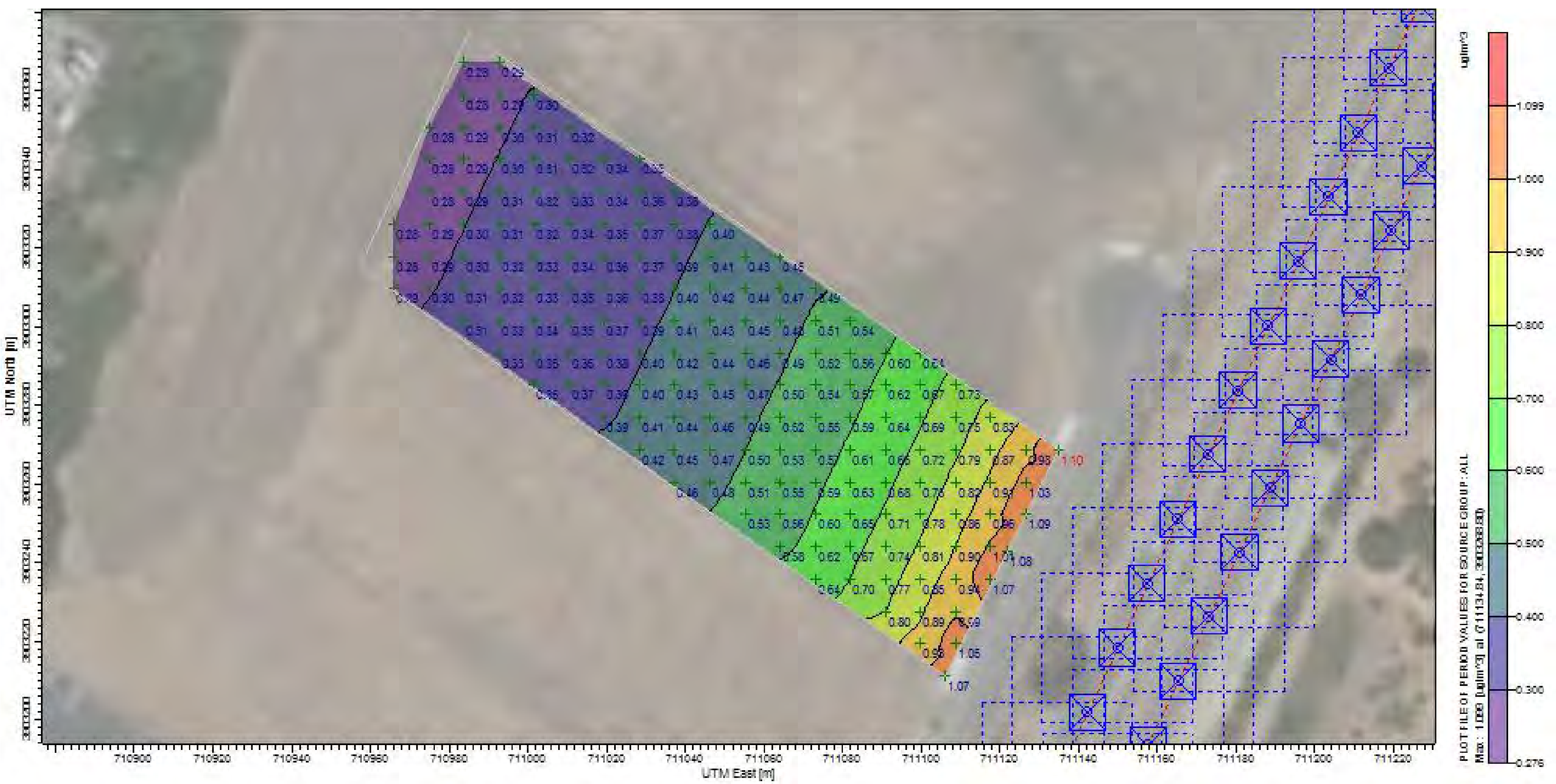
Appendix C – AERMOD Contour Plots

TOG, Ground Level



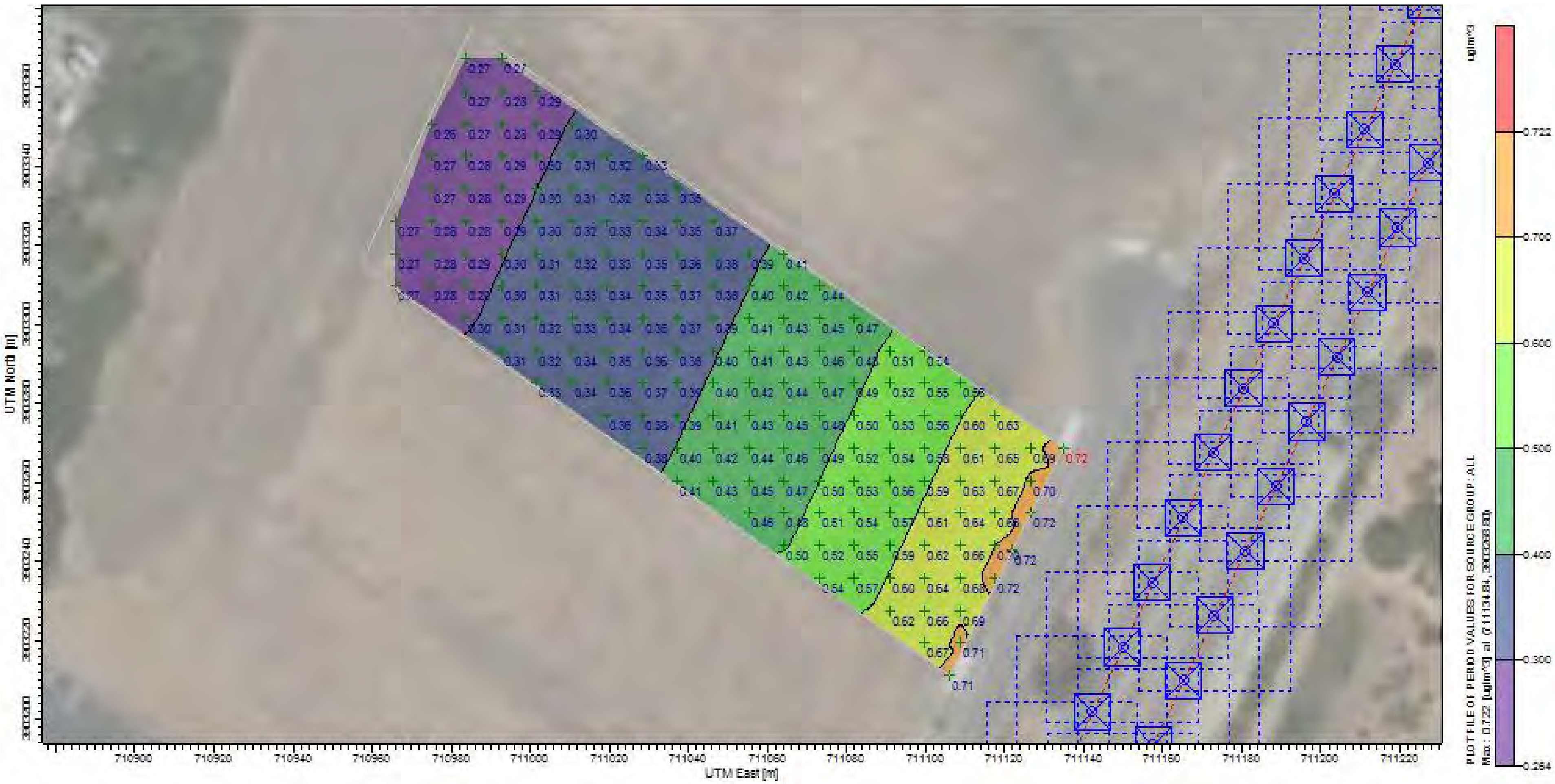
Appendix C – AERMOD Contour Plots

TOG, 1st Floor



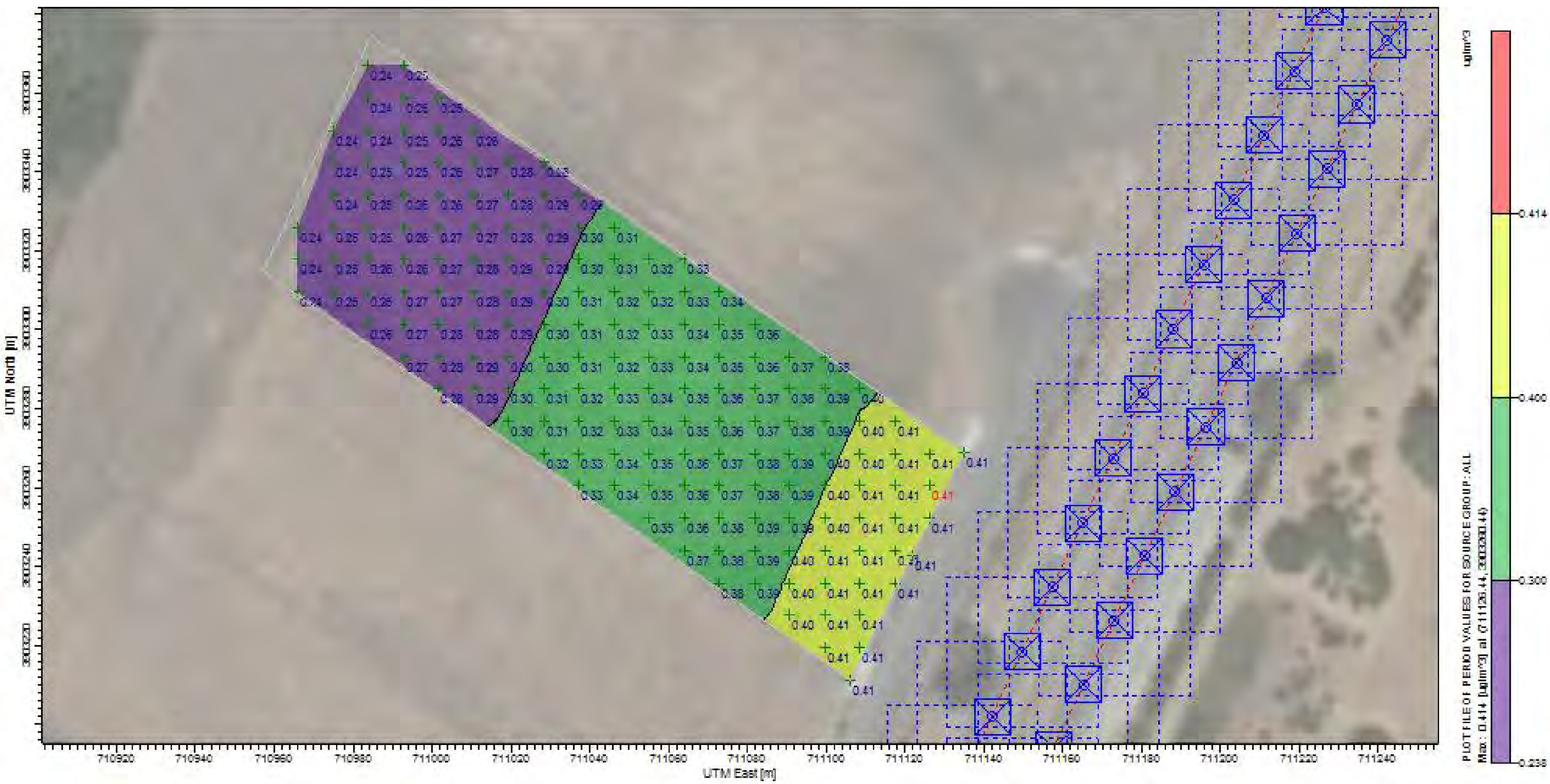
Appendix C – AERMOD Contour Plots

TOG, 2nd Floor



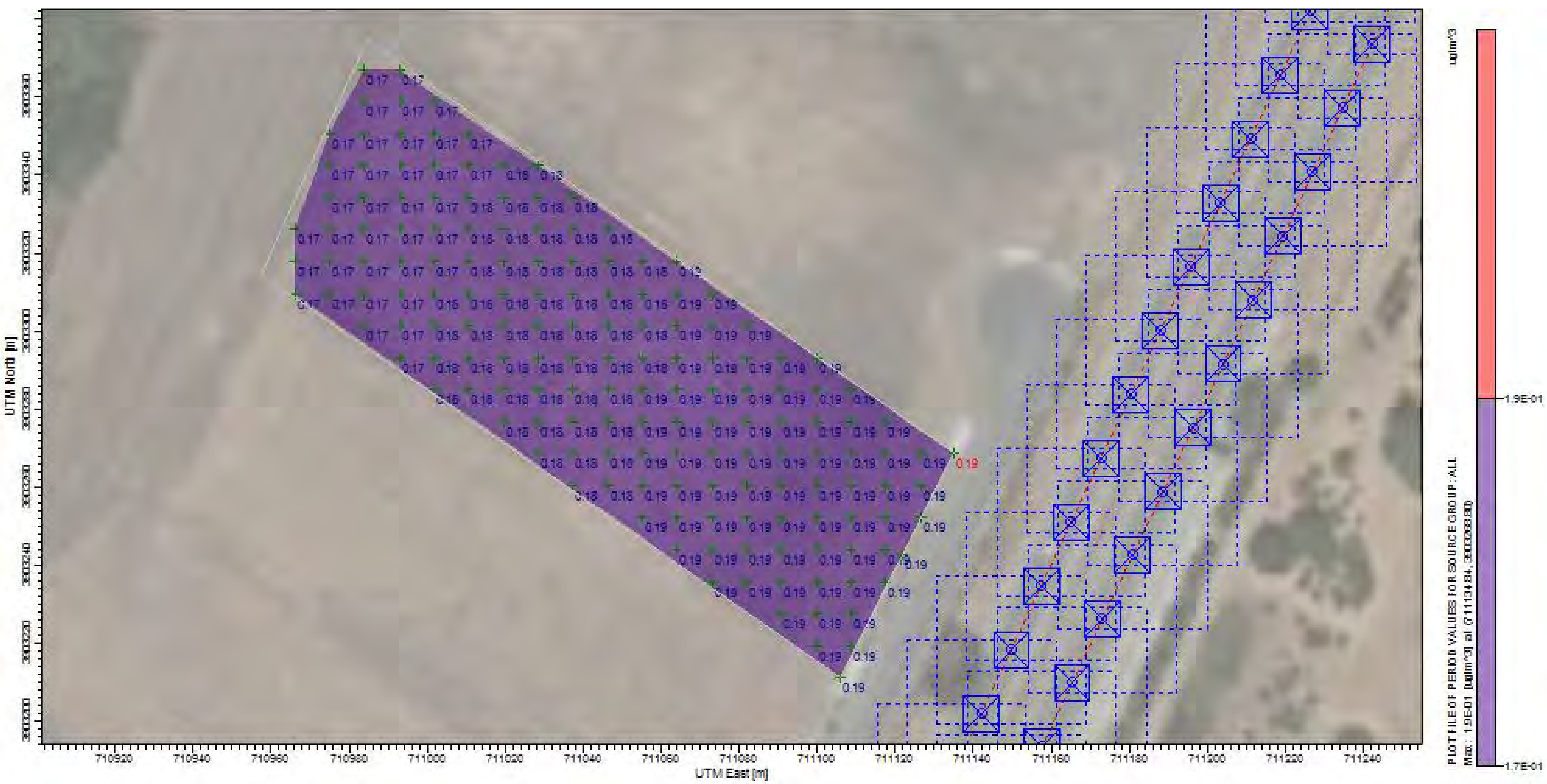
Appendix C – AERMOD Contour Plots

TOG, 3rd Floor



Appendix C – AERMOD Contour Plots

TOG, 4th Floor



Appendix D - Total Cancer Risk Characterization
Ground Level

Calle Joaquin Hotel
"Type B" Receptor Cancer Risk Analysis

Receptor Height Ground Level

Cancer Risk Unit Factors

DPM	690.753288	$(ug/m^3)^{-1}$	
TOG	4.7603	$(ug/m^3)^{-1}$	

Max Risk 29.30753701

Receptor Coordinates		Annual DPM Concentration	Cancer Risk from DPM	Annual TOG Concentration	Cancer Risk from TOG	Total Cancer Risk from All Sources
X (m)	Y (m)	$(ug/m^3)^{-1}$	(Risk/million)	$(ug/m^3)^{-1}$	(Risk/million)	(Risk/million)
711099.71	3903219.44	0.02727	18.83684215	1.04917	4.994363951	23.83120611
711090.80	3903227.64	0.0229	15.81825029	0.87697	4.174640291	19.99289058
711108.62	3903227.64	0.02957	20.42557472	1.13978	5.425694734	25.85126945
711081.89	3903235.84	0.01981	13.68382263	0.75581	3.597882343	17.28170497
711099.71	3903235.84	0.02444	16.88201035	0.9375	4.46278125	21.3447916
711117.53	3903235.84	0.03235	22.34586886	1.24977	5.949280131	28.29514899
711072.98	3903244.04	0.01749	12.081275	0.6654	3.16750362	15.24877862
711090.80	3903244.04	0.02092	14.45055878	0.79943	3.805526629	18.25608541
711108.62	3903244.04	0.02622	18.1115512	1.00779	4.797382737	22.90893394
711055.16	3903252.24	0.01463	10.1057206	0.5543	2.63863429	12.74435489
711072.98	3903252.24	0.0169	11.67373056	0.64248	3.058397544	14.73212811
711090.80	3903252.24	0.02006	13.85651095	0.76591	3.645961373	17.50247232
711108.62	3903252.24	0.02484	17.15831167	0.9534	4.53847002	21.69678169
711126.44	3903252.24	0.0331	22.86393382	1.27959	6.091232277	28.9551661
711046.25	3903260.44	0.01336	9.228463923	0.50511	2.404475133	11.63293906
711064.07	3903260.44	0.01521	10.50635751	0.57684	2.745931452	13.25228896
711081.89	3903260.44	0.01769	12.21942566	0.67318	3.204538754	15.42396441
711099.71	3903260.44	0.02121	14.65087723	0.81075	3.859413225	18.51029046
711117.53	3903260.44	0.0267	18.44311278	1.02634	4.885686302	23.32879908
711028.43	3903268.64	0.01165	8.047275801	0.43906	2.090057318	10.13733312
711046.25	3903268.64	0.01303	9.000515338	0.49207	2.342400821	11.34291616
711064.07	3903268.64	0.01477	10.20242606	0.55975	2.664577925	12.86700398
711081.89	3903268.64	0.01709	11.80497369	0.64971	3.092814513	14.8977882
711099.71	3903268.64	0.02033	14.04301434	0.77623	3.695087669	17.73810201
711117.53	3903268.64	0.02526	17.44842805	0.96983	4.616681749	22.0651098
711019.52	3903276.84	0.01084	7.487765638	0.40775	1.941012325	9.428777963
711037.34	3903276.84	0.01202	8.302854518	0.45306	2.156701518	10.45955604
711055.16	3903276.84	0.01348	9.311354318	0.50966	2.426134498	11.73748882
711072.98	3903276.84	0.01536	10.6099705	0.58266	2.773636398	13.3836069
711090.80	3903276.84	0.01789	12.35757632	0.68107	3.242097521	15.59967384
711108.62	3903276.84	0.02151	14.85810322	0.82234	3.914585102	18.77268832
711001.70	3903285.04	0.00969	6.693399358	0.36357	1.730702271	8.424101629
711019.52	3903285.04	0.01062	7.335799915	0.39926	1.900597378	9.236397293
711037.34	3903285.04	0.01174	8.109443597	0.44258	2.106813574	10.21625717
711055.16	3903285.04	0.01314	9.0764982	0.49637	2.362870111	11.43936831
711072.98	3903285.04	0.01491	10.29913152	0.56521	2.690569163	12.98970068
711090.80	3903285.04	0.01727	11.92930928	0.65702	3.127612306	15.05692158
711108.62	3903285.04	0.0206	14.22951773	0.78677	3.745261231	17.97477896
711001.70	3903293.24	0.00952	6.575971299	0.35681	1.698522643	8.274493942
711019.52	3903293.24	0.01041	7.190741725	0.39112	1.861848536	9.052590261
711108.62	3903219.44	0.03163	21.84852649	1.22143	5.814373229	27.66289972
711099.71	3903227.64	0.02577	17.80071222	0.98992	4.712316176	22.5130284
711072.98	3903235.84	0.01812	12.51644957	0.69012	3.285178236	15.80162781
711090.80	3903235.84	0.02186	15.09986687	0.83627	3.980896081	19.08076295
711108.62	3903235.84	0.02779	19.19603386	1.06947	5.090998041	24.28703191
711064.07	3903244.04	0.01618	11.17638819	0.6145	2.92520435	14.10159254
711081.89	3903244.04	0.01904	13.1519426	0.72596	3.455787388	16.60772999
711099.71	3903244.04	0.02325	16.06001394	0.89077	4.240332431	20.30034637
711117.53	3903244.04	0.03018	20.84693422	1.1641	5.54146523	26.38839945
711064.07	3903252.24	0.01568	10.83101155	0.59504	2.832568912	13.66358046
711081.89	3903252.24	0.01834	12.6684153	0.69852	3.325164756	15.99358005
711099.71	3903252.24	0.02218	15.32090792	0.84873	4.040209419	19.36111734
711117.53	3903252.24	0.02832	19.56213311	1.09063	5.191725989	24.7538591
711037.34	3903260.44	0.0126	8.703491425	0.4756	2.26399868	10.9674901
711055.16	3903260.44	0.01423	9.829419284	0.53855	2.563659565	12.39307885
711072.98	3903260.44	0.01635	11.29381625	0.62116	2.956907948	14.2507242
711090.80	3903260.44	0.01928	13.31772339	0.73523	3.499915369	16.81763876
711108.62	3903260.44	0.02361	16.30868512	0.90499	4.308023897	20.61670902
711126.44	3903260.44	0.03083	21.29592386	1.18958	5.662757674	26.95868153
711037.34	3903268.64	0.0123	8.496265438	0.46406	2.209064818	10.70533026
711055.16	3903268.64	0.01384	9.560025501	0.5237	2.49296911	12.05299461
711072.98	3903268.64	0.01584	10.94153208	0.60127	2.862225581	13.80375766
711090.80	3903268.64	0.01856	12.82038102	0.70707	3.365865321	16.18624634
711108.62	3903268.64	0.02251	15.54885651	0.86153	4.101141259	19.64999776
711126.44	3903268.64	0.02888	19.94895495	1.11268	5.296690604	25.24564555
711028.43	3903276.84	0.0114	7.874587479	0.42922	2.043215966	9.917803445
711046.25	3903276.84	0.01271	8.779474286	0.47969	2.283468307	11.06294259
711064.07	3903276.84	0.01436	9.919217211	0.54367	2.588032301	12.50724951
711081.89	3903276.84	0.01653	11.41815185	0.62789	2.988944767	14.40709661
711099.71	3903276.84	0.01952	13.48350418	0.74468	3.544900204	17.02840438
711117.53	3903276.84	0.02399	16.57117137	0.91964	4.377762292	20.94893366
711010.61	3903285.04	0.01014	7.004238337	0.3806	1.81177018	8.816008517
711028.43	3903285.04	0.01115	7.701899158	0.41982	1.998469146	9.700368304
711046.25	3903285.04	0.0124	8.565340767	0.46793	2.227487179	10.79282795
711064.07	3903285.04	0.01397	9.649823429	0.52852	2.515913756	12.16573718
711081.89	3903285.04	0.016	11.0520526	0.60754	2.892072662	13.94412526
711099.71	3903285.04	0.01878	12.97234674	0.71575	3.407184725	16.37953147
710992.79	3903293.24	0.00912	6.299669984	0.34178	1.626975334	7.926645318
711010.61	3903293.24	0.00994	6.866087679	0.3732	1.77654396	8.642631639
711028.43	3903293.24	0.01092	7.543025901	0.41082	1.955626446	9.498652347
711037.34	3903293.24	0.01149	7.936755275	0.43257	2.059162971	9.995918246
711055.16	3903293.24	0.01281	8.848549615	0.48376	2.302842728	11.15139234
711072.98	3903293.24	0.01449	10.00901514	0.5488	2.61245264	12.62146778

Receptor Coordinates		Annual DPM Concentration	Cancer Risk from DPM	Annual TOG Concentration	Cancer Risk from TOG	Total Cancer Risk from All Sources
X (m)	Y (m)	$(ug/m^3)^{-1}$	(Risk/million)	$(ug/m^3)^{-1}$	(Risk/million)	(Risk/million)
711090.80	3903293.24	0.0167	11.5355799	0.63467	3.021219601	14.55679951
710983.88	3903301.44	0.00862	5.95429334	0.32241	1.534768323	7.489061663
711001.70	3903301.44	0.00935	6.45854324	0.3503	1.66753309	8.12607633
711019.52	3903301.44	0.01021	7.052591067	0.38329	1.824575387	8.877166454
711037.34	3903301.44	0.01124	7.764066953	0.423	2.0136069	9.777673853
711055.16	3903301.44	0.0125	8.634416096	0.47177	2.245766731	10.88018283
711072.98	3903301.44	0.01409	9.732713823	0.53333	2.538810799	12.27152462
710966.06	3903309.64	0.00788	5.443135907	0.29389	1.399004567	6.842140474
710983.88	3903309.64	0.00848	5.857587879	0.31707	1.509348321	7.3669362
711001.70	3903309.64	0.00918	6.341115181	0.344	1.6375432	7.978658381
711019.52	3903309.64	0.01001	6.91444041	0.37576	1.788730328	8.703170738
711037.34	3903309.64	0.011	7.598286164	0.41383	1.969954949	9.568241113
711055.16	3903309.64	0.01221	8.434097642	0.46037	2.191499311	10.62559695
711072.98	3903309.64	0.01371	9.470227574	0.51872	2.469262816	11.93949039
710974.97	3903317.84	0.00804	5.553656433	0.30026	1.429327678	6.982984111
710992.79	3903317.84	0.00867	5.988831004	0.3244	1.54424132	7.533072324
711010.61	3903317.84	0.00941	6.499988437	0.35257	1.678338971	8.178327408
711028.43	3903317.84	0.01027	7.094036264	0.38593	1.837142579	8.931178843
711046.25	3903317.84	0.01132	7.819327216	0.42612	2.028459036	9.847786252
711064.07	3903317.84	0.0126	8.703491425	0.47558	2.263903474	10.9673949
710974.97	3903326.04	0.00792	5.470766038	0.29559	1.407097077	6.877863115
710992.79	3903326.04	0.00853	5.892125544	0.31896	1.518345288	7.410470832
711010.61	3903326.04	0.00924	6.382560378	0.34616	1.647825448	8.030385826
711028.43	3903326.04	0.01008	6.96279314	0.37827	1.800678681	8.763471821
711046.25	3903326.04	0.01108	7.653546427	0.41679	1.984045437	9.637591864
710983.88	3903334.24	0.00809	5.588194097	0.30197	1.437467791	7.025661888
711001.70	3903334.24	0.00872	6.023368668	0.32632	1.553381096	7.576749764
711019.52	3903334.24	0.00946	6.534526101	0.35477	1.688811631	8.223337732
711037.34	3903334.24	0.01034	7.142388995	0.3885	1.84937655	8.991765545
710983.88	3903342.44	0.00796	5.49839617	0.29721	1.414808763	6.913204933
711001.70	3903342.44	0.00858	5.926663208	0.32079	1.527056637	7.453719845
711019.52	3903342.44	0.00929	6.417098042	0.34825	1.657774475	8.074872517
710974.97	3903350.64	0.00757	5.229002388	0.2823	1.34383269	6.572835078
710992.79	3903350.64	0.00813	5.615824229	0.30359	1.445179477	7.061003706
711010.61	3903350.64	0.00877	6.057906333	0.32817	1.562187651	7.620093984
710992.79	3903358.84	0.008	5.526026301	0.29875	1.422139625	6.948165926
710983.88	3903367.04	0.00761	5.256632519	0.28368	1.350401904	6.607034423
711046.25	3903293.24	0.01211	8.365022314	0.45674	2.174219422	10.53924174
711064.07	3903293.24	0.0136	9.394244712	0.5142	2.44774626	11.84199097
711081.89	3903293.24	0.01551	10.71358349	0.58852	2.801531756	13.51511525
711099.71	3903293.24	0.0181	12.50263451	0.68907	3.280179921	15.78281443
710992.79	3903301.44	0.00897	6.19605699	0.33579	1.598461137	7.794518127
711010.61	3903301.44	0.00976	6.741752088	0.36607	1.742603021	8.484355109
711028.43	3903301.44	0.0107	7.391060178	0.40218	1.914497454	9.305557632
711046.25	3903301.44	0.01183	8.171611393	0.44606	2.123379418	10.29499081
711064.07	3903301.44	0.01325	9.152481602	0.50064	2.383196592	11.53567765
711081.89	3903301.44	0.01505	10.39583698	0.57068	2.716608004	13.11244498
710974.97	3903309.64	0.00817	5.64345436	0.30506	1.452177118	7.095631478
710992.79	3903309.64	0.00882	6.092443997	0.33001	1.570946603	7.6633906
711010.61	3903309.64	0.00958	6.617416496	0.3592	1.70989976	8.327316256
711028.43	3903309.64	0.01048	7.239094455	0.39389	1.875034567	9.114129022
711046.25	3903309.64	0.01157	7.992015538	0.43587	2.074871961	10.0668875
711064.07	3903309.64	0.01291	8.917624944	0.48779	2.322026737	11.23965168
710966.06	3903317.84	0.00776	5.360245512	0.28942	1.377726026	6.737971538
710983.88	3903317.84	0.00834	5.760882419	0.31189	1.484689967	7.245572386
711001.70	3903317.84	0.00902	6.230594655	0.33792	1.608600576	7.839195231
711019.52	3903317.84	0.00982	6.783197285	0.36851	1.754218153	8.537415438
711037.34	3903317.84	0.01077	7.439412908	0.40504	1.928111912	9.36752482
711055.16	3903317.84	0.01192	8.233779189	0.44949	2.139707247	10.37348644
710966.06	3903326.04	0.00764	5.277355118	0.28508	1.357066324	6.634421442
710983.88	3903326.04	0.00821	5.671084492	0.30685	1.460698055	7.131782547
711001.70	3903326.04	0.00887	6.126981662	0.33203	1.580562409	7.707544071
711019.52	3903326.04	0.00964	6.658861693	0.36152	1.720943656	8.379805349
711037.34	3903326.04	0.01055	7.287447185	0.39661	1.887982583	9.175429768
710974.97	3903334.24	0.0078	5.387875644	0.29104	1.385437712	6.773313356
710992.79	3903334.24	0.00839	5.795420084	0.31369	1.493258507	7.288678591
711010.61	3903334.24	0.00908	6.272039852	0.33997	1.618359191	7.890399043
711028.43	3903334.24	0.00988	6.824642482	0.37088	1.765500064	8.590142546
710974.97	3903342.44	0.00769	5.311892782	0.28662	1.364397186	6.676289968
710992.79	3903342.44	0.00826	5.705622156	0.30857	1.468885771	7.174507927
711010.61	3903342.44	0.00892	6.161519326	0.33397	1.589797391	7.751316717
711028.43	3903342.44	0.0097	6.70030689	0.36377	1.731654331	8.431961221
710983.88	3903350.64	0.00784	5.415505775	0.29258	1.392768574	6.808274349
711001.70	3903350.64	0.00844	5.829957748	0.31542	1.501493826	7.331451574
710983.88	3903358.84	0.00772	5.332615381	0.28807	1.371299621	6.703915002
711001.70	3903358.84	0.0083	5.733252288	0.31021	1.476692663	7.209944951
710992.79	3903367.04	0.00788	5.443135907	0.29404	1.399718612	6.842854519
711105.92	3903211.30	0.03228	22.29751613	1.2474	5.93799822	28.23551435
711134.84	3903268.80	0.0335	23.14023514	1.29557	6.167301871	29.30753701
711121.73	3903242.72	0.03294	22.7534133	1.27325	6.061051975	28.81446527

Appendix D - Total Cancer Risk Characterization
1st Floor

Calle Joaquin Hotel
"Type B" Receptor Cancer Risk Analysis

Receptor Height 1st Floor

Cancer Risk Unit Factors

DPM	690.753288	$(ug/m^3)^{-1}$
TOG	4.7603	$(ug/m^3)^{-1}$

Max Risk
25.02241304

Receptor Coordinates X (m)	Receptor Coordinates Y (m)	Annual DPM Concentration $(ug/m^3)^{-1}$	Cancer Risk from DPM (Risk/million)	Annual TOG Concentration $(ug/m^3)^{-1}$	Cancer Risk from TOG (Risk/million)	Total Cancer Risk from All Sources (Risk/million)
711099.71	3903219.44	0.02433	16.80602749	0.92985	4.426364955	21.23239244
711090.80	3903227.64	0.02097	14.48509644	0.79834	3.800337902	18.28543434
711108.62	3903227.64	0.02599	17.95267795	0.99486	4.735832058	22.68851
711081.89	3903235.84	0.01844	12.73749062	0.69995	3.331971985	16.06946261
711099.71	3903235.84	0.02219	15.32781545	0.84575	4.026023725	19.35383918
711117.53	3903235.84	0.02789	19.26510919	1.06959	5.091569277	24.35667847
711072.98	3903244.04	0.01647	11.37670665	0.62352	2.968142256	14.3448489
711090.80	3903244.04	0.01937	13.37989118	0.73593	3.503247579	16.88313876
711108.62	3903244.04	0.02355	16.26723992	0.89928	4.280842584	20.54808251
711055.16	3903252.24	0.01396	9.642915896	0.52647	2.506155141	12.14907104
711072.98	3903252.24	0.01596	11.02442247	0.6038	2.87426914	13.89869161
711090.80	3903252.24	0.01866	12.88945635	0.70838	3.372101314	16.26155766
711108.62	3903252.24	0.0225	15.54194897	0.858	4.0843374	19.62628637
711126.44	3903252.24	0.02839	19.61048584	1.08897	5.183823891	24.79430973
711046.25	3903260.44	0.01282	8.855457148	0.48247	2.296701941	11.15215909
711064.07	3903260.44	0.01448	10.00210761	0.54645	2.601265935	12.60337354
711081.89	3903260.44	0.01665	11.50104224	0.63024	3.000131472	14.50117371
711099.71	3903260.44	0.01961	13.54567197	0.74521	3.547423163	17.09309513
711117.53	3903260.44	0.02391	16.51591111	0.91307	4.346487121	20.86239823
711028.43	3903268.64	0.01126	7.777882019	0.42242	2.010845926	9.788727945
711046.25	3903268.64	0.01251	8.641323629	0.47071	2.240720813	10.88204444
711064.07	3903268.64	0.01409	9.732713823	0.53135	2.529385405	12.26209923
711081.89	3903268.64	0.01612	11.134943	0.61008	2.904163824	14.03910682
711099.71	3903268.64	0.01888	13.04142207	0.71693	3.412801879	16.45422395
711117.53	3903268.64	0.02282	15.76299002	0.87058	4.144221974	19.907212
711019.52	3903276.84	0.0105	7.252909521	0.39361	1.873701683	9.126611204
711037.34	3903276.84	0.01159	8.005830604	0.43526	2.071968178	10.07779878
711055.16	3903276.84	0.01293	8.93144001	0.48661	2.316409583	11.24784959
711072.98	3903276.84	0.01461	10.09190553	0.55163	2.625924289	12.71782982
711090.80	3903276.84	0.01682	11.6184703	0.63702	3.032406306	14.6508766
711108.62	3903276.84	0.01985	13.71145276	0.75464	3.592312792	17.30376555
711001.70	3903285.04	0.00943	6.513803503	0.35256	1.678291368	8.192094871
711019.52	3903285.04	0.0103	7.114758863	0.38576	1.836333328	8.951092191
711037.34	3903285.04	0.01134	7.833142282	0.42568	2.026364504	9.859506786
711055.16	3903285.04	0.01261	8.710398958	0.47463	2.259381189	10.96978015
711072.98	3903285.04	0.01421	9.815604218	0.53621	2.552520463	12.36812468
711090.80	3903285.04	0.01629	11.25237106	0.6164	2.93424892	14.18661998
711108.62	3903285.04	0.0191	13.19338779	0.72565	3.454311695	16.64769949
711001.70	3903293.24	0.00927	6.403282977	0.34626	1.648301478	8.051584455
711019.52	3903293.24	0.0101	6.976608205	0.37822	1.800440666	8.777048871
711108.62	3903219.44	0.02741	18.93354762	1.05085	5.002361255	23.93590887
711099.71	3903227.64	0.02321	16.03238381	0.88582	4.216768946	20.24915275
711072.98	3903235.84	0.01702	11.75662096	0.64466	3.068774998	14.82539595
711090.80	3903235.84	0.02014	13.91177121	0.76584	3.645628152	17.55739937
711108.62	3903235.84	0.02471	17.06851374	0.94469	4.497007807	21.56552155
711064.07	3903244.04	0.01533	10.5892479	0.57948	2.758498644	13.34774654
711081.89	3903244.04	0.0178	12.29540852	0.67499	3.213154897	15.50856342
711099.71	3903244.04	0.02125	14.67850736	0.80931	3.852558393	18.53106576
711117.53	3903244.04	0.02642	18.24970186	1.01185	4.816709555	23.06641142
711064.07	3903252.24	0.01489	10.28531645	0.56248	2.677573544	12.96289
711081.89	3903252.24	0.0172	11.88095655	0.65185	3.103001555	14.9839581
711099.71	3903252.24	0.02039	14.08445954	0.77586	3.693326358	17.77778589
711117.53	3903252.24	0.0251	17.33790752	0.95998	4.569792794	21.90770031
711037.34	3903260.44	0.01212	8.371929847	0.45578	2.169649534	10.54157938
711055.16	3903260.44	0.0136	9.394244712	0.51247	2.439510941	11.83375565
711072.98	3903260.44	0.01548	10.69286089	0.58533	2.786346399	13.47920729
711090.80	3903260.44	0.018	12.43355918	0.68281	3.250380443	15.68393962
711108.62	3903260.44	0.02154	14.87882582	0.82052	3.905921356	18.78474717
711126.44	3903260.44	0.02687	18.56054084	1.02925	4.899538775	23.46007961
711037.34	3903268.64	0.01185	8.185426459	0.44528	2.119666384	10.30509284
711055.16	3903268.64	0.01325	9.152481062	0.49919	2.376294157	11.52877522
711072.98	3903268.64	0.01504	10.38892945	0.56797	2.703707591	13.09263704
711090.80	3903268.64	0.01739	12.01219967	0.65913	3.137656539	15.14985621
711108.62	3903268.64	0.02066	14.27096292	0.78614	3.742262242	18.01322517
711126.44	3903268.64	0.0255	17.61420884	0.97571	4.644672313	22.25888115
711028.43	3903276.84	0.01102	7.61210123	0.4134	1.96790802	9.58000925
711046.25	3903276.84	0.01222	8.441005175	0.45953	2.187500659	10.62850583
711064.07	3903276.84	0.01372	9.477135107	0.51707	2.461408321	11.93854343
711081.89	3903276.84	0.01564	10.80338142	0.5912	2.81428936	13.61767078
711099.71	3903276.84	0.01821	12.57861737	0.69074	3.288129622	15.86674699
711117.53	3903276.84	0.02183	15.07914427	0.83196	3.960379188	19.03952346
711010.61	3903285.04	0.00985	6.803919884	0.36843	1.753837329	8.557757213
711028.43	3903285.04	0.0108	7.460135507	0.40477	1.926826631	9.386962138
711046.25	3903285.04	0.01194	8.247594255	0.44884	2.136613052	10.38420731
711064.07	3903285.04	0.01337	9.235371456	0.50355	2.397049065	11.63242052
711081.89	3903285.04	0.01518	10.48563491	0.57348	2.729936844	13.21557175
711099.71	3903285.04	0.01758	12.1434428	0.66648	3.172644744	15.31608754
710992.79	3903293.24	0.0089	6.14770426	0.33217	1.581228851	7.728933111
711010.61	3903293.24	0.00967	6.679584292	0.36156	1.721134068	8.40071836
711028.43	3903293.24	0.01058	7.308169784	0.39647	1.887316141	9.195485925
711037.34	3903293.24	0.0111	7.667361493	0.4165	1.98266495	9.650026443
711055.16	3903293.24	0.01232	8.510080504	0.46324	2.205161372	10.71524188
711072.98	3903293.24	0.01383	9.553117968	0.52165	2.483210495	12.03632846

Receptor Coordinates X (m)	Receptor Coordinates Y (m)	Annual DPM Concentration $(ug/m^3)^{-1}$	Cancer Risk from DPM (Risk/million)	Annual TOG Concentration $(ug/m^3)^{-1}$	Cancer Risk from TOG (Risk/million)	Total Cancer Risk from All Sources (Risk/million)
711090.80	3903293.24	0.01579	10.90699441	0.5971	2.84237513	13.74936954
710983.88	3903301.44	0.00842	5.816142682	0.31396	1.494543788	7.31068647
711001.70	3903301.44	0.00911	6.292762451	0.34017	1.619311251	7.912073702
711019.52	3903301.44	0.00991	6.845365081	0.37096	1.765880888	8.611245969
711037.34	3903301.44	0.01087	7.508488237	0.40771	1.940821913	9.44931015
711055.16	3903301.44	0.01203	8.309762051	0.45236	2.153369308	10.46313136
711072.98	3903301.44	0.01348	9.311354318	0.50787	2.417613561	11.72896788
710966.06	3903309.64	0.00771	5.325707848	0.287	1.3662061	6.691913948
710983.88	3903309.64	0.00829	5.726344755	0.30893	1.470599479	7.196944234
711001.70	3903309.64	0.00895	6.182241925	0.33428	1.591273084	7.773515009
711019.52	3903309.64	0.00973	6.721029489	0.36396	1.732558788	8.453588277
711037.34	3903309.64	0.01065	7.356522514	0.39927	1.900644981	9.257167495
711055.16	3903309.64	0.01176	8.123258663	0.44197	2.103909791	10.22716845
711072.98	3903309.64	0.01314	9.0764982	0.49478	2.355301234	11.43179943
710974.97	3903317.84	0.00787	5.436228374	0.29305	1.395005915	6.831234289
710992.79	3903317.84	0.00847	5.850680347	0.31585	1.503540755	7.354221102
711010.61	3903317.84	0.00916	6.327300115	0.34231	1.629498293	7.956798408
711028.43	3903317.84	0.00998	6.893717811	0.37342	1.777591226	8.671309037
711046.25	3903317.84	0.01095	7.5637485	0.4106	1.95457918	9.51832768
711064.07	3903317.84	0.01212	8.371929847	0.45582	2.169839946	10.54176979
710974.97	3903326.04	0.00775	5.353337979	0.28862	1.373917786	6.727255765
710992.79	3903326.04	0.00833	5.753974886	0.31074	1.479215622	7.233190508
711010.61	3903326.04	0.009	6.216779589	0.33632	1.600984096	7.817763685
711028.43	3903326.04	0.00979	6.762474686	0.3663	1.74369789	8.506172576
711046.25	3903326.04	0.01072	7.404875244	0.40201	1.913688203	9.318563447
710983.88	3903334.24	0.00791	5.463858505	0.29467	1.402717601	6.866576106
711001.70	3903334.24	0.00852	5.885218011	0.31767	1.512204501	7.397422512
711019.52	3903334.24	0.00922	6.368745312	0.34438	1.639352114	8.008097426
711037.34	3903334.24	0.01004	6.935163008	0.37582	1.789015946	8.724178954
710983.88	3903342.44	0.00779	5.380968111	0.29017	1.381296251	6.762264362
711001.70	3903342.44	0.00838	5.788512551	0.31247	1.487450941	7.275963492
711019.52	3903342.44	0.00906	6.258224786	0.33829	1.610361887	7.868586673
710974.97	3903350.64	0.00742	5.125389395	0.27602	1.313938006	6.439327401
710992.79	3903350.64	0.00795	5.491488637	0.29622	1.410096066	6.901584703
711010.61	3903350.64	0.00856	5.912848142	0.31942	1.520535026	7.433383168
710992.79	3903358.84	0.00783	5.408598242	0.29164	1.388292535	6.796892134
710983.88	3903367.04	0.00746	5.153019526	0.27734	1.320221602	6.473241128
711046.25	3903293.24	0.01168	8.0679984	0.43864	2.088057992	10.15605639
711064.07	3903293.24	0.01303	9.000515338	0.49071	2.335926813	11.33644215
711081.89	3903293.24	0.01475	10.18861099	0.55681	2.650582643	12.83919364
711099.71	3903293.24	0.017	11.74280589	0.64386	3.064966758	14.80777265
710992.79	3903301.44	0.00875	6.044091267	0.32656	1.554523568	7.598614835
711010.61	3903301.44	0.00949	6.5552487	0.35492	1.689525676	8.244774376
711028.43	3903301.44	0.01037	7.163111593	0.38848	1.849281344	9.012392937
711046.25	3903301.44	0.01142	7.888402545	0.42889	2.041645067	9.930047612
711064.07	3903301.44	0.01271	8.779474286	0.4785	2.27780355	11.05727784
711081.89	3903301.44	0.01434	9.905402145	0.54107	2.575655521	12.48105767
710974.97	3903309.64	0.00799	5.519118768	0.29759	1.416617677	6.935736445
710992.79	3903309.64	0.00861	5.947385807	0.32113	1.528675139	7.476060946
711010.61	3903309.64	0.00932	6.437820641	0.34851	1.659012153	8.096832794
711028.43	3903309.64	0.01017	7.024960936	0.38081	1.812769843	8.837730779
711046.25	3903309.64	0.01118	7.722621756	0.41955	1.997183865	9.719805621
711064.07	3903309.64	0.01241	8.5722483	0.4669	2.22258407	10.79483237
710966.06	3903317.84	0.0076	5.249724986	0.28277	1.346070031	6.595795017
710983.88	3903317.84	0.00816	5.636546827	0.30405	1.447369215	7.083916042
711001.70	3903317.84	0.0088	6.078628932	0.32857	1.564091771	7.642720703
711019.52	3903317.84	0.00955	6.596693897	0.35721	1.700426763	8.29712066
711037.34	3903317.84	0.01044	7.211464323	0.39115	1.861991345	9.073455668
711055.16	3903317.84	0.01151	7.950570341	0.43205	2.056687615	10.00725796
710966.06	3903326.04	0.00749	5.173742125	0.27864	1.326409992	6.500152117
710983.88	3903326.04	0.00803	5.5467489	0.2993	1.42475779	6.97150669
711001.70	3903326.04	0.00866	5.981923471	0.32304	1.537767312	7.519690783
711019.52	3903326.04	0.00938	6.479265838	0.35069	1.669389607	8.148655445
711037.34	3903326.04	0.01024	7.073313666	0.38334	1.824813402	8.898127068
710974.97	3903334.24	0.00764	5.277355118	0.28432	1.353448496	6.630803614
710992.79	3903334.24	0.0082	5.664176959	0.30577	1.455556931	7.11973389
711010.61	3903334.24	0.00885	6.113166596	0.33051	1.573326753	7.686493349
711028.43	3903334.24	0.00961	6.638139095	0.35944	1.711042232	8.349181327
710974.97	3903342.44	0.00753	5.201372256	0.28012	1.333455236	6.534827492
710992.79	3903342.44	0.00808	5.581286564	0.30093	1.432517079	7.013803643
711010.61	3903342.44	0.0087	6.009553603	0.32488	1.546526264	7.556079867
711028.43	3903342.44	0.00944	6.520711036	0.3528	1.67943384	8.200144876
710983.88	3903350.64	0.00768	5.304985249	0.28578	1.360398534	6.665383783
711001.70	3903350.64	0.00825	5.698714623	0.30741	1.463363823	7.162078446
710983.88	3903358.84	0.00757	5.229002388	0.28151	1.340072053	6.569074441
711001.70	3903358.84	0.00812	5.608916696	0.30248	1.439895544	7.04881224
710992.79	3903367.04	0.00772	5.332615381	0.28717	1.367015351	6.699630732
711105.92	3903211.30	0.02785	19.23747906	1.06794	5.083714782	24.32119384
711134.84	3903268.80	0.02865	19.79008169	1.09916	5.232331348	25.02241304
711121.73	3903242.72	0.02828	19.53450298	1.08476	5.163783028	24.698286

Appendix D - Total Cancer Risk Characterization
2nd Floor

Calle Joaquin Hotel
"Type B" Receptor Cancer Risk Analysis

Receptor Height 2nd Floor

Cancer Risk Unit Factors

DPM	690.753288	$(ug/m^3)^{-1}$
TOG	4.7603	$(ug/m^3)^{-1}$

Max Risk
16.66023947

Receptor Coordinates X (m)	Receptor Coordinates Y (m)	Annual DPM Concentration $(ug/m^3)^{-1}$	Cancer Risk from DPM (Risk/million)	Annual TOG Concentration $(ug/m^3)^{-1}$	Cancer Risk from TOG (Risk/million)	Total Cancer Risk from All Sources (Risk/million)
711099.71	3903219.44	0.0179	12.36448385	0.67252	3.201396956	15.56588081
711090.80	3903227.64	0.0165	11.39742925	0.61782	2.941008546	14.33843779
711108.62	3903227.64	0.01845	12.74439816	0.69441	3.305599923	16.04999808
711081.89	3903235.84	0.0152	10.49944997	0.56755	2.701708265	13.20115824
711099.71	3903235.84	0.01705	11.77734355	0.63932	3.043354996	14.82069855
711117.53	3903235.84	0.01896	13.09668233	0.71533	3.405185399	16.50186773
711072.98	3903244.04	0.01403	9.691268626	0.5231	2.49011293	12.18138156
711090.80	3903244.04	0.0157	10.84482662	0.58699	2.794248497	13.63907511
711108.62	3903244.04	0.01761	12.1641654	0.66132	3.148081596	15.31224699
711055.16	3903252.24	0.01237	8.544618168	0.45984	2.188976352	10.73359452
711072.98	3903252.24	0.01371	9.470227574	0.51092	2.432132476	11.90236005
711090.80	3903252.24	0.01532	10.58234037	0.57236	2.724605308	13.30694568
711108.62	3903252.24	0.01719	11.87404902	0.64471	3.069013013	14.94306203
711126.44	3903252.24	0.01908	13.17957273	0.7201	3.42789203	16.60746476
711046.25	3903260.44	0.01155	7.978200473	0.42875	2.040978625	10.0191791
711064.07	3903260.44	0.01273	8.793289352	0.47357	2.254335271	11.04762462
711081.89	3903260.44	0.01415	9.774159021	0.52737	2.510439411	12.28459843
711099.71	3903260.44	0.01583	10.93462454	0.59197	2.817954791	13.75257933
711117.53	3903260.44	0.01775	12.26087086	0.66672	3.173787216	15.43465807
711028.43	3903268.64	0.01037	7.163111593	0.38394	1.827669582	8.990781175
711046.25	3903268.64	0.01133	7.826234749	0.42025	2.000516075	9.826750824
711064.07	3903268.64	0.01247	8.613693497	0.46335	2.205685005	10.8193785
711081.89	3903268.64	0.01382	9.546210436	0.51501	2.451602103	11.99781254
711099.71	3903268.64	0.01545	10.67213829	0.57715	2.747407145	13.41954544
711117.53	3903268.64	0.01733	11.97075448	0.65007	3.094528221	15.0652827
711019.52	3903276.84	0.00978	6.755567153	0.36152	1.720943656	8.476510809
711037.34	3903276.84	0.01063	7.342707448	0.39383	1.874748949	9.217456397
711055.16	3903276.84	0.01164	8.040368268	0.43189	2.055925967	10.09629424
711072.98	3903276.84	0.01283	8.862364681	0.4772	2.27161516	11.13397984
711090.80	3903276.84	0.01426	9.850141882	0.53162	2.530670686	12.38081257
711108.62	3903276.84	0.01596	11.02442247	0.59692	2.841518276	13.86594075
711001.70	3903285.04	0.0089	6.14770426	0.32854	1.563948962	7.711653222
711019.52	3903285.04	0.00961	6.638139095	0.35537	1.691667811	8.329806906
711037.34	3903285.04	0.01044	7.211464323	0.38658	1.840236774	9.051701097
711055.16	3903285.04	0.01141	7.881495012	0.42325	2.014796975	9.896291987
711072.98	3903285.04	0.01256	8.675861293	0.46682	2.222203246	10.89806454
711090.80	3903285.04	0.01393	9.622193297	0.51908	2.470976524	12.09316982
711108.62	3903285.04	0.01557	10.75502869	0.58191	2.770066173	13.52509486
711001.70	3903293.24	0.00877	6.057906333	0.32343	1.539623829	7.597530162
711019.52	3903293.24	0.00946	6.534526101	0.34941	1.663296423	8.197822524
711108.62	3903219.44	0.01884	13.01379194	0.71035	3.381479105	16.39527104
711099.71	3903227.64	0.01747	12.06745994	0.65585	3.122042755	15.18950269
711072.98	3903235.84	0.01437	9.926124744	0.53578	2.550473534	12.47659828
711090.80	3903235.84	0.01609	11.1142204	0.60216	2.866462248	13.98068265
711108.62	3903235.84	0.01804	12.46118931	0.678	3.2274834	15.68867271
711064.07	3903244.04	0.0133	9.187018726	0.49527	2.357633781	11.54465251
711081.89	3903244.04	0.01483	10.24387126	0.55362	2.635397286	12.87926854
711099.71	3903244.04	0.01664	11.49413471	0.62313	2.966285739	14.46042045
711117.53	3903244.04	0.01858	12.83419608	0.69967	3.330639101	16.16483519
711064.07	3903252.24	0.01301	8.986700273	0.4842	2.30493726	11.29163753
711081.89	3903252.24	0.01448	10.00210761	0.54024	2.571704472	12.57381208
711099.71	3903252.24	0.01623	11.21092586	0.6073	2.89093019	14.10185605
711117.53	3903252.24	0.01817	12.55098724	0.6834	3.25318902	15.80417626
711037.34	3903260.44	0.01104	7.625916296	0.40913	1.947581539	9.573497835
711055.16	3903260.44	0.01212	8.371929847	0.45016	2.142896648	10.51482649
711072.98	3903260.44	0.01341	9.263001588	0.49923	2.376484569	11.63948616
711090.80	3903260.44	0.01495	10.32676165	0.55824	2.657389872	12.98415152
711108.62	3903260.44	0.01677	11.58393263	0.6284	2.99137252	14.57530515
711126.44	3903260.44	0.01871	12.92399401	0.70479	3.355011837	16.27900585
711037.34	3903268.64	0.01083	7.480858105	0.40134	1.910498802	9.391356907
711055.16	3903268.64	0.01187	8.199241525	0.44085	2.098578255	10.29781978
711072.98	3903268.64	0.01311	9.055775601	0.48799	2.322978797	11.3787544
711090.80	3903268.64	0.0146	10.084998	0.54468	2.592840204	12.6778382
711108.62	3903268.64	0.01636	11.30072379	0.61242	2.915302926	14.21602671
711126.44	3903268.64	0.01831	12.6476927	0.68869	3.278371007	15.9260637
711028.43	3903276.84	0.01019	7.038776001	0.37704	1.794823512	8.833599513
711046.25	3903276.84	0.01111	7.674269026	0.41206	1.961529218	9.635798244
711064.07	3903276.84	0.01221	8.434097642	0.45352	2.158891256	10.5929889
711081.89	3903276.84	0.01351	9.332076916	0.50314	2.395097342	11.72717426
711099.71	3903276.84	0.01507	10.40965205	0.56284	2.679287252	13.0889393
711117.53	3903276.84	0.01691	11.68063809	0.63364	3.016316492	14.69695459
711010.61	3903285.04	0.00925	6.389467911	0.34147	1.625499641	8.014967552
711028.43	3903285.04	0.01001	6.91444041	0.37036	1.763024708	8.677465118
711046.25	3903285.04	0.0109	7.529210836	0.40415	1.923875245	9.453086081
711064.07	3903285.04	0.01196	8.261409321	0.44407	2.113906421	10.37531574
711081.89	3903285.04	0.01321	9.12485093	0.49173	2.340782319	11.46563325
711099.71	3903285.04	0.01472	10.16788839	0.54908	2.613785524	12.78167392
710992.79	3903293.24	0.00846	5.843772814	0.31176	1.484071128	7.327843942
711010.61	3903293.24	0.0091	6.285854918	0.33595	1.599222785	7.885077703
711028.43	3903293.24	0.00984	6.797012351	0.36391	1.732320773	8.529333124
711037.34	3903293.24	0.01026	7.087128732	0.37957	1.806867071	8.893995803
711055.16	3903293.24	0.01119	7.729529289	0.41493	1.975191279	9.704720568
711072.98	3903293.24	0.01229	8.489357905	0.45684	2.174695452	10.66405336

Receptor Coordinates X (m)	Receptor Coordinates Y (m)	Annual DPM Concentration $(ug/m^3)^{-1}$	Cancer Risk from DPM (Risk/million)	Annual TOG Concentration $(ug/m^3)^{-1}$	Cancer Risk from TOG (Risk/million)	Total Cancer Risk from All Sources (Risk/million)
711090.80	3903293.24	0.01361	9.401152245	0.50703	2.413614909	11.81476715
710983.88	3903301.44	0.00805	5.560563966	0.29654	1.411619362	6.972183328
711001.70	3903301.44	0.00863	5.961200873	0.31846	1.515965138	7.477166011
711019.52	3903301.44	0.0093	6.424005575	0.34363	1.635781889	8.059787464
711037.34	3903301.44	0.01008	6.96279314	0.37279	1.774592237	8.737385377
711055.16	3903301.44	0.01098	7.584471099	0.4069	1.93696607	9.521437169
711072.98	3903301.44	0.01204	8.316669584	0.44724	2.128996572	10.44566616
710966.06	3903309.64	0.00744	5.13920446	0.27357	1.302275271	6.441479731
710983.88	3903309.64	0.00794	5.484581104	0.29233	1.391578499	6.876159603
711001.70	3903309.64	0.00851	5.878310478	0.31363	1.492972889	7.371283367
711019.52	3903309.64	0.00915	6.320392582	0.33803	1.609124209	7.929516791
711037.34	3903309.64	0.0099	6.838457548	0.36623	1.743364669	8.581822217
711055.16	3903309.64	0.01077	7.439412908	0.39915	1.900073745	9.339486653
711072.98	3903309.64	0.0118	8.150888795	0.43799	2.084963797	10.23585259
710974.97	3903317.84	0.00758	5.235909921	0.27883	1.327314449	6.56322437
710992.79	3903317.84	0.0081	5.59510163	0.29825	1.419759475	7.014861105
711010.61	3903317.84	0.00868	5.995738537	0.32035	1.524962105	7.520700642
711028.43	3903317.84	0.00936	6.465450773	0.34573	1.645778519	8.111229292
711046.25	3903317.84	0.01014	7.004238337	0.37515	1.785826545	8.790064882
711064.07	3903317.84	0.01105	7.632823829	0.40959	1.949771277	9.582595106
710974.97	3903326.04	0.00748	5.166834592	0.27508	1.309463324	6.476297916
710992.79	3903326.04	0.00798	5.512211236	0.29397	1.399385391	6.911596627
711010.61	3903326.04	0.00855	5.90594061	0.31543	1.501541429	7.407482039
711028.43	3903326.04	0.00921	6.361837779	0.34004	1.618692412	7.980530191
711046.25	3903326.04	0.00996	6.879902745	0.36849	1.754122947	8.634025692
710983.88	3903334.24	0.00762	5.263540052	0.28032	1.334407296	6.597947348
711001.70	3903334.24	0.00814	5.622731762	0.29989	1.427566367	7.050298129
711019.52	3903334.24	0.00873	6.030276201	0.32217	1.533625851	7.563902052
711037.34	3903334.24	0.00941	6.499988437	0.34776	1.655441928	8.155430365
710983.88	3903342.44	0.00752	5.194464723	0.2765	1.31622295	6.510687673
711001.70	3903342.44	0.00802	5.539841367	0.29554	1.406859062	6.946700429
711019.52	3903342.44	0.0086	5.940478274	0.31717	1.509824351	7.450302625
710974.97	3903350.64	0.0072	4.973423671	0.2643	1.25814729	6.231570961
710992.79	3903350.64	0.00766	5.291170184	0.28175	1.341214525	6.632384709
711010.61	3903350.64	0.00818	5.650361893	0.30146	1.435040038	7.085401931
710992.79	3903358.84	0.00756	5.222094855	0.27785	1.322649355	6.54474421
710983.88	3903367.04	0.00723	4.99414627	0.26553	1.264002459	6.258148729
711046.25	3903293.24	0.0107	7.391060178	0.39652	1.887554156	9.278614334
711064.07	3903293.24	0.01172	8.095628532	0.43497	2.070587691	10.16621622
711081.89	3903293.24	0.01292	8.924532477	0.48078	2.288657034	11.21318951
711099.71	3903293.24	0.01437	9.926124744	0.53583	2.550711549	12.47683629
710992.79	3903301.44	0.00833	5.753974886	0.30713	1.462030939	7.216005825
711010.61	3903301.44	0.00896	6.189149548	0.3306	1.57375518	7.762904638
711028.43	3903301.44	0.00968	6.686491825	0.35766	1.702568898	8.389060723
711046.25	3903301.44	0.01051	7.259817053	0.38916	1.852518348	9.112335401
711064.07	3903301.44	0.01149	7.936755275	0.4262	2.02883986	9.965595135
711081.89	3903301.44	0.01265	8.738029089	0.47024	2.238483472	10.97651256
710974.97	3903309.64	0.00768	5.304985249	0.28267	1.345594001	6.65057925
710992.79	3903309.64	0.00821	5.671084492	0.30263	1.440609589	7.111694081
711010.61	3903309.64	0.00882	6.092443997	0.3254	1.54900162	7.641445617
711028.43	3903309.64	0.00951	6.569063766	0.3516	1.67372148	8.242785246
711046.25	3903309.64	0.01032	7.128573929	0.38203	1.818577409	8.947151338
711064.07	3903309.64	0.01126	7.777882019	0.41774	1.988567722	9.766449741
710966.06	3903317.84	0.00735	5.077036664	0.26997	1.285138191	6.362174855
710983.88	3903317.84	0.00783	5.408598242	0.28824	1.372108872	6.780707114
711001.70	3903317.84	0.00838	5.788512551	0.30893	1.470599479	7.25911203
711019.52	3903317.84	0.00901	6.223687122	0.33259	1.583228177	7.806915299
711037.34	3903317.84	0.00973	6.721029489	0.35988	1.713136764	8.434166253
711055.16	3903317.84	0.01057	7.301262251	0.39167	1.864466701	9.165728952
710966.06	3903326.04	0.00725	5.007961336	0.26644	1.268334332	6.276295668
710983.88	3903326.04	0.00772	5.332615381	0.28423	1.353020069	6.68563545
711001.70	3903326.04	0.00826	5.705622156	0.30435	1.448797305	7.154419461
711019.52	3903326.04	0.00887	6.126981662	0.3273	1.55804619	7.685027852
711037.34	3903326.04	0.00957	6.610508963	0.35373	1.683860919	8.294369882
710974.97	3903334.24	0.00738	5.097759263	0.27141	1.291993023	6.389752286
710992.79	3903334.24	0.00787	5.436228574	0.2898	1.37953494	6.815763314
711010.61	3903334.24	0.00843	5.823050215	0.31065	1.478787195	7.30183741
711028.43	3903334.24	0.00906	6.258224786	0.33451	1.592367953	7.850592739
710974.97	3903342.44	0.00729	5.035591667	0.26782	1.274903546	6.310495013
710992.79	3903342.44	0.00776	5.360245512	0.28573	1.360160519	6.720406031
711010.61	3903342.44	0.0083	5.733252288	0.306	1.4566518	7.189904088
711028.43	3903342.44	0.00892	6.161519326	0.32914	1.566805142	7.728324468
710983.88	3903350.64	0.00742	5.125389395	0.27277	1.298467031	6.423856426
711001.70	3903350.64	0.00791	5.463858505	0.29129	1.386627787	6.850486292
710983.88	3903358.84	0.00732	5.056314066	0.26911	1.281044333	6.337358399
711001.70	3903358.84	0.0078	5.387875644	0.28714	1.366872542	6.754748186
710992.79	3903367.04	0.00745	5.146111993	0.27405	1.304560215	6.450672208
711105.92	3903211.30	0.01894	13.08286727	0.71466	3.401995998	16.48486327
711134.84	3903268.80	0.01914	13.22101793	0.72248	3.439221544	16.66023947
711121.73	3903242.72	0.01905	13.15885013	0.71907	3.422988921	16.58183905

Appendix D - Total Cancer Risk Characterization
3rd Floor

Calle Joaquin Hotel
"Type B" Receptor Cancer Risk Analysis

Receptor Height 3rd Floor

Cancer Risk Unit Factors

DPM	690.753288	$(ug/m^3)^{-1}$
TOG	4.7603	$(ug/m^3)^{-1}$

Max Risk
9.497837998

Receptor Coordinates X (m)	Receptor Coordinates Y (m)	Annual DPM Concentration $(ug/m^3)^{-1}$	Cancer Risk from DPM (Risk/million)	Annual TOG Concentration $(ug/m^3)^{-1}$	Cancer Risk from TOG (Risk/million)	Total Cancer Risk from All Sources (Risk/million)
711099.71	3903219.44	0.01088	7.51539577	0.41175	1.960053525	9.475449295
711090.80	3903227.64	0.01081	7.46704304	0.40468	1.926398204	9.393441244
711108.62	3903227.64	0.01085	7.494673171	0.41302	1.966099106	9.460772277
711081.89	3903235.84	0.01058	7.308169784	0.39322	1.871845166	9.18001495
711099.71	3903235.84	0.01087	7.508488237	0.40842	1.944201726	9.452689963
711117.53	3903235.84	0.01078	7.446320441	0.41301	1.966051503	9.412371944
711072.98	3903244.04	0.01027	7.094036264	0.37946	1.806343438	8.900379702
711090.80	3903244.04	0.0107	7.391060178	0.39842	1.896598726	9.287658904
711108.62	3903244.04	0.0109	7.529210836	0.41131	1.957958993	9.487169829
711055.16	3903252.24	0.00964	6.658861693	0.35419	1.686050657	8.34491235
711072.98	3903252.24	0.01016	7.018053403	0.37523	1.786207369	8.804260772
711090.80	3903252.24	0.01062	7.335799915	0.39485	1.879604455	9.21540437
711108.62	3903252.24	0.01089	7.522303303	0.4095	1.94934285	9.471646153
711126.44	3903252.24	0.01077	7.439412908	0.41304	1.966194312	9.40560722
711046.25	3903260.44	0.00927	6.403282977	0.3395	1.61612185	8.019404827
711064.07	3903260.44	0.0098	6.769382219	0.3604	1.71561212	8.484994339
711081.89	3903260.44	0.01031	7.121666396	0.38124	1.814816772	8.936483168
711099.71	3903260.44	0.01073	7.411782777	0.3999	1.90364397	9.315426747
711117.53	3903260.44	0.01091	7.536118368	0.4121	1.96171963	9.497837998
711028.43	3903268.64	0.00865	5.975015938	0.31562	1.502445886	7.477461824
711046.25	3903268.64	0.00916	6.327300115	0.33531	1.596176193	7.923476308
711064.07	3903268.64	0.00969	6.693399358	0.35604	1.694857212	8.38825657
711081.89	3903268.64	0.01021	7.052591067	0.377	1.7946331	8.847224167
711099.71	3903268.64	0.01066	7.363430047	0.39639	1.886935317	9.250365364
711117.53	3903268.64	0.0109	7.529210836	0.41045	1.953865135	9.483075971
711019.52	3903276.84	0.0083	5.733252288	0.3026	1.44046678	7.173719068
711037.34	3903276.84	0.00879	6.071721399	0.3213	1.52948439	7.601205789
711055.16	3903276.84	0.00931	6.430913108	0.34131	1.624737993	8.055651101
711072.98	3903276.84	0.00984	6.797012351	0.3622	1.72418066	8.521193011
711090.80	3903276.84	0.01035	7.149296527	0.38293	1.822861679	8.972158206
711108.62	3903276.84	0.01076	7.432505375	0.40128	1.910213184	9.342718559
711001.70	3903285.04	0.00776	5.360245512	0.28206	1.342690218	6.70293573
711019.52	3903285.04	0.00821	5.671084492	0.29898	1.423234494	7.094318986
711037.34	3903285.04	0.00869	6.00264607	0.31735	1.510681205	7.513327275
711055.16	3903285.04	0.0092	6.354930247	0.33707	1.604554321	7.959484568
711072.98	3903285.04	0.00973	6.721029489	0.3578	1.70323534	8.424264829
711090.80	3903285.04	0.01025	7.080221199	0.3787	1.80272561	8.882946809
711108.62	3903285.04	0.01069	7.384152645	0.39782	1.893742546	9.277895191
711001.70	3903293.24	0.00767	5.298077716	0.27884	1.327362052	6.625439768
711019.52	3903293.24	0.00811	5.602009163	0.29542	1.406287826	7.008296989
711108.62	3903219.44	0.01079	7.453227974	0.41282	1.965147046	9.41837502
711099.71	3903227.64	0.01088	7.51539577	0.41039	1.953579517	9.468975287
711072.98	3903235.84	0.01036	7.15620406	0.3836	1.82605108	8.98225514
711090.80	3903235.84	0.01076	7.432505375	0.40171	1.912260113	9.344765488
711108.62	3903235.84	0.01088	7.51539577	0.41251	1.963671353	9.479067123
711064.07	3903244.04	0.01001	6.91444041	0.36908	1.756931524	8.671371934
711081.89	3903244.04	0.0105	7.252909521	0.38938	1.853565614	9.106475135
711099.71	3903244.04	0.01084	7.487765638	0.406	1.9326818	9.420447438
711117.53	3903244.04	0.01085	7.494673171	0.41343	1.968050829	9.462724
711064.07	3903252.24	0.00991	6.845365081	0.36475	1.736319425	8.581684506
711081.89	3903252.24	0.01041	7.190741725	0.38538	1.834524414	9.025266139
711099.71	3903252.24	0.01079	7.453227974	0.40312	1.918972136	9.37220011
711117.53	3903252.24	0.01089	7.522303303	0.41313	1.966622739	9.488926042
711037.34	3903260.44	0.009	6.216779589	0.32936	1.567852408	7.784631997
711055.16	3903260.44	0.00953	6.582878832	0.34988	1.665533764	8.248412596
711072.98	3903260.44	0.01006	6.948978074	0.37093	1.765738079	8.714716153
711090.80	3903260.44	0.01054	7.280539652	0.39104	1.861467712	9.142007364
711108.62	3903260.44	0.01086	7.501580704	0.4072	1.93839416	9.439974864
711126.44	3903260.44	0.01084	7.487765638	0.41369	1.969288507	9.457054145
711037.34	3903268.64	0.0089	6.14770426	0.3253	1.54852559	7.69622985
711055.16	3903268.64	0.00942	6.50689597	0.34558	1.645064474	8.151960444
711072.98	3903268.64	0.00995	6.872995212	0.36657	1.744983171	8.617978383
711090.80	3903268.64	0.01045	7.218371856	0.38707	1.842569321	9.060941177
711108.62	3903268.64	0.01082	7.473950573	0.40441	1.925112923	9.399063496
711126.44	3903268.64	0.01089	7.522303303	0.4136	1.96886008	9.491163383
711028.43	3903276.84	0.00854	5.899033077	0.31177	1.484118731	7.383151808
711046.25	3903276.84	0.00905	6.251317253	0.33116	1.576420948	7.827738201
711064.07	3903276.84	0.00958	6.617416496	0.35169	1.674149907	8.291566403
711081.89	3903276.84	0.01011	6.983515738	0.37269	1.774116207	8.757631945
711099.71	3903276.84	0.01058	7.308169784	0.39262	1.868988986	9.17715877
711117.53	3903276.84	0.01088	7.51539577	0.40828	1.943535284	9.458931054
711010.61	3903285.04	0.00798	5.512211236	0.29034	1.382105502	6.894316738
711028.43	3903285.04	0.00844	5.829957748	0.30798	1.466077194	7.296034942
711046.25	3903285.04	0.00894	6.175334392	0.32705	1.556856115	7.732190507
711064.07	3903285.04	0.00947	6.541433634	0.34735	1.653490205	8.194923839
711081.89	3903285.04	0.01	6.907532877	0.36832	1.753313696	8.660846573
711099.71	3903285.04	0.01049	7.246001988	0.38867	1.850185801	9.096187789
710992.79	3903293.24	0.00746	5.153019526	0.27108	1.290422124	6.44344165
711010.61	3903293.24	0.00789	5.45004344	0.28695	1.365968085	6.816011525
711028.43	3903293.24	0.00835	5.767789952	0.30425	1.448321275	7.216111227
711037.34	3903293.24	0.00859	5.933570741	0.31345	1.492116035	7.425686776
711055.16	3903293.24	0.0091	6.285854918	0.33287	1.584561061	7.870415979
711072.98	3903293.24	0.00962	6.645046627	0.35342	1.682385226	8.327431853
711090.80	3903293.24	0.01015	7.01114587	0.37437	1.782113511	8.793259381
710983.88	3903301.44	0.00719	4.966516138	0.2608	1.24148624	6.208002378
711001.70	3903301.44	0.00759	5.242817453	0.27566	1.312224298	6.555041751
711019.52	3903301.44	0.00802	5.539841367	0.29192	1.389626776	6.929468143
711037.34	3903301.44	0.00849	5.864495412	0.30962	1.473884086	7.338379498
711055.16	3903301.44	0.00899	6.209872056	0.32872	1.564805816	7.774677872
711072.98	3903301.44	0.00951	6.569063766	0.34904	1.661535112	8.230598878
710966.06	3903309.64	0.00676	4.669492225	0.24465	1.164607395	5.83409962
710983.88	3903309.64	0.00711	4.911255875	0.25797	1.228014591	6.139270466
711001.70	3903309.64	0.0075	5.180649658	0.27254	1.297372162	6.47802182
711019.52	3903309.64	0.00793	5.477673571	0.28848	1.373251344	6.850924915
711037.34	3903309.64	0.00839	5.795420084	0.30584	1.455890152	7.251310236
711055.16	3903309.64	0.00888	6.133889195	0.32462	1.545288586	7.679177781
711072.98	3903309.64	0.0094	6.493080904	0.34469	1.640827807	8.133908711
710974.97	3903317.84	0.00686	4.738567553	0.24851	1.182982153	5.921549706
710992.79	3903317.84	0.00722	4.987238737	0.26217	1.248007851	6.235246588
711010.61	3903317.84	0.00762	5.263540052	0.27711	1.319126733	6.582666785
711028.43	3903317.84	0.00806	5.567471499	0.29343	1.396814829	6.964286328
711046.25	3903317.84	0.00853	5.892125544	0.31117	1.481262551	7.373388095
711064.07	3903317.84	0.00903	6.237502188	0.33032	1.572422296	7.809924484
710974.97	3903326.04	0.00679	4.690214823	0.2459	1.17055777	5.860772593
710992.79	3903326.04	0.00715	4.938886007	0.25929	1.234298187	6.173184194
711010.61	3903326.04	0.00754	5.208279789	0.27394	1.304036582	6.512316371
711028.43	3903326.04	0.00797	5.505303703	0.28994	1.380201382	6.885505085
711046.25	3903326.04	0.00843	5.823050215	0.30735	1.463078205	7.28612842
710983.88	3903334.24	0.00689	4.759290152	0.24974	1.188837322	5.948127474
711001.70	3903334.24	0.00726	5.014868868	0.26347	1.254196241	6.269065109
711019.52	3903334.24	0.00766	5.291170184	0.27849	1.325695947	6.616866131
711037.34	3903334.24	0.0081	5.59510163	0.29487	1.403669661	6.998771291
710983.88	3903342.44	0.00682	4.710937422	0.24708	1.176174924	5.887112346
711001.70	3903342.44	0.00718	4.959608605	0.26054	1.240248562	6.199857167
711019.52	3903342.44	0.00757	5.229002388	0.27526	1.310320178	6.539322566
710974.97	3903350.64	0.00659	4.552064166	0.23826	1.134189078	5.686253244
710992.79	3903350.64	0.00692	4.780012751	0.25091	1.194406873	5.974419624
711010.61	3903350.64	0.00729	5.035591467	0.26472	1.260146616	6.295738083
710992.79	3903358.84	0.00685	4.731660021	0.24819	1.181458857	5.913118878
710983.88	3903367.04	0.00661	4.565879232	0.23929	1.139092187	5.704971419
711046.25	3903293.24	0.00884	6.106259063	0.323	1.5375769	7.643835963
711064.07	3903293.24	0.00936	6.465450773	0.34303	1.632925709	8.098376482
711081.89	3903293.24	0.00989	6.831550015	0.36392	1.732368376	8.563918391
711099.71	3903293.24	0.01039	7.176926659	0.38454	1.830525762	9.007452421
710992.79	3903301.44	0.00738	5.097759263	0.26806	1.276046018	6.373805281
711010.61	3903301.44	0.0078	5.387875644	0.28361	1.350068683	6.737944327
711028.43	3903301.44	0.00825	5.698714623	0.30059	1.430898577	7.1296132
711046.25	3903301.44	0.00873	6.030276201	0.319	1.5185357	7.548811901
711064.07	3903301.44	0.00925	6.389467911	0.33875	1.612551625	8.002019536
711081.89	3903301.44	0.00978	6.755567153	0.35949	1.711280247	8.4668474
710974.97	3903309.64	0.00693	4.786920284	0.25116	1.195596948	5.982517232
710992.79	3903309.64	0.0073	5.042499	0.26509	1.261907927	6.304406927
711010.61	3903309.64	0.00771	5.325707848	0.28033	1.334454899	6.660162747
711028.43	3903309.64	0.00815	5.629639295	0.29698	1.413713894	7.043353189
711046.25	3903309.64	0.00863	5.961200873	0.31506	1.499780118	7.460980991
711064.07	3903309.64	0.00914	6.313485049	0.33452	1.592415556	7.905900605
710966.06	3903317.84	0.00669	4.621139495	0.24212	1.152563836	5.773703331
710983.88	3903317.84	0.00704	4.862903145	0.25519	1.214780957	6.077684102
711001.70	3903317.84	0.00742	5.125389395	0.26947	1.282758041	6.408147436
711019.52	3903317.84	0.00784	5.415505775	0.28509	1.357113927	6.772619702
711037.34	3903317.84	0.00829	5.726344755	0.30212	1.438181836	7.164526591
711055.16	3903317.84	0.00878	6.064813866	0.32058	1.526056974	7.59087084
710966.06	3903326.04	0.00662	4.572786764	0.23962	1.140663086	5.71344985
710983.88	3903326.04	0.00696	4.807642882	0.25244	1.201690132	6.009333014
711001.70	3903326.04	0.00734	5.070129152	0.26645	1.268381935	6.338511067
711019.52	3903326.04	0.00775	5.353337979	0.28176	1.341262128	6.694600107
711037.34	3903326.04	0.00819	5.657269426	0.29846	1.420759138	7.078028564
710974.97	3903334.24	0.00672	4.641862093	0.24332	1.158276196	5.800138289
710992.79	3903334.24	0.00707	4.883625744	0.25645	1.220778935	6.104404679
711010.61	3903334.24	0.00746	5.153019526	0.27081	1.289136843	6.442156369
711028.43	3903334.24	0.00787	5.436228374	0.2865	1.36382595	6.800054324
710974.97	3903342.44	0.00665	4.593509363	0.24077	1.146137431	5.739646794
710992.79	3903342.44	0.007	4.835273014	0.25366	1.207497698	6.042770712
711010.61	3903342.44	0.00737	5.09085173	0.26774	1.274522722	6.365374452
711028.43	3903342.44	0.00778	5.374060578	0.28312	1.347736136	6.721796714
710983.88	3903350.64	0.00675	4.662584692	0.24445	1.163655335	5.826240027
711001.70	3903350.64	0.0071	4.904348342	0.25766	1.226538898	6.13088724
710983.88	3903358.84	0.00668	4.614231962	0.24185	1.151278555	5.765510517
711001.70	3903358.84	0.00703	4.855995612	0.25481	1.212972043	6.068967655
710992.79	3903367.04	0.00678	4.68330729	0.24551	1.168701253	5.852008543
711105.92	3903211.30	0.01076	7.432505375	0.41243	1.963290529	9.395795904
711134.84	3903268.80	0.01076	7.432505375	0.41309	1.966432327	9.398937702
711121.73	3903242.72	0.01076	7.432505375	0.41292	1.965623076	9.398128451

Appendix D - Total Cancer Risk Characterization
4th Floor

Calle Joaquin Hotel
"Type B" Receptor Cancer Risk Analysis

Receptor Height 4th Floor

Cancer Risk Unit Factors

DPM	690.753288	$(ug/m^3)^{-1}$
TOG	4.7603	$(ug/m^3)^{-1}$

Max Risk
4.341710295

Receptor Coordinates X (m)	Receptor Coordinates Y (m)	Annual DPM Concentration $(ug/m^3)^{-1}$	Cancer Risk from DPM (Risk/million)	Annual TOG Concentration $(ug/m^3)^{-1}$	Cancer Risk from TOG (Risk/million)	Total Cancer Risk from All Sources (Risk/million)
711099.71	3903219.44	0.00464	3.205095255	0.18838	0.896745314	4.101840569
711090.80	3903227.64	0.0047	3.246540452	0.18717	0.890985351	4.137525803
711108.62	3903227.64	0.00463	3.198187722	0.18932	0.901219996	4.099407718
711081.89	3903235.84	0.00478	3.301800715	0.18656	0.888081568	4.189882283
711099.71	3903235.84	0.00468	3.232725386	0.1879	0.89446037	4.127185756
711117.53	3903235.84	0.00462	3.191280189	0.19021	0.905456663	4.096736852
711072.98	3903244.04	0.00485	3.350153445	0.18627	0.886701081	4.236854526
711090.80	3903244.04	0.00476	3.287985649	0.18708	0.890556924	4.178542573
711108.62	3903244.04	0.00467	3.225817853	0.18871	0.898316213	4.124134066
711055.16	3903252.24	0.00494	3.412321241	0.18545	0.882797635	4.295118876
711072.98	3903252.24	0.00487	3.363968511	0.18636	0.887129508	4.251098019
711090.80	3903252.24	0.00478	3.301800715	0.18709	0.890604527	4.192405242
711108.62	3903252.24	0.00469	3.239632919	0.18845	0.897078535	4.136711454
711126.44	3903252.24	0.00463	3.198187722	0.19071	0.907836813	4.106024535
711046.25	3903260.44	0.00497	3.43304384	0.18468	0.879132204	4.312176044
711064.07	3903260.44	0.00493	3.405413708	0.18599	0.885368197	4.290781905
711081.89	3903260.44	0.00486	3.357060978	0.18678	0.889128834	4.246189812
711099.71	3903260.44	0.00476	3.287985649	0.18758	0.892937074	4.180922723
711117.53	3903260.44	0.00468	3.232725386	0.18923	0.900791569	4.133516955
711028.43	3903268.64	0.00497	3.43304384	0.18238	0.868183514	4.301227354
711046.25	3903268.64	0.00498	3.439951373	0.18453	0.878418159	4.318369532
711064.07	3903268.64	0.00495	3.419228774	0.18597	0.885272991	4.304501765
711081.89	3903268.64	0.00488	3.370876044	0.18684	0.889414452	4.260290496
711099.71	3903268.64	0.00479	3.308708248	0.18756	0.892841868	4.201550116
711117.53	3903268.64	0.0047	3.246540452	0.18895	0.899458685	4.145999137
711019.52	3903276.84	0.00495	3.419228774	0.18068	0.860091004	4.279319778
711037.34	3903276.84	0.00498	3.439951373	0.18329	0.872515387	4.31246676
711055.16	3903276.84	0.00498	3.439951373	0.18522	0.881702766	4.321654139
711072.98	3903276.84	0.00494	3.412321241	0.18646	0.887605538	4.299926779
711090.80	3903276.84	0.00486	3.357060978	0.18722	0.891223366	4.248284344
711108.62	3903276.84	0.00477	3.294893182	0.18803	0.895079209	4.189972391
711001.70	3903285.04	0.00489	3.377783577	0.17704	0.842763512	4.220547089
711019.52	3903285.04	0.00495	3.419228774	0.18029	0.858234487	4.277463261
711037.34	3903285.04	0.00498	3.439951373	0.18301	0.871182503	4.311133876
711055.16	3903285.04	0.00499	3.446858905	0.18506	0.880941118	4.327800023
711072.98	3903285.04	0.00495	3.419228774	0.18643	0.887462729	4.306691503
711090.80	3903285.04	0.00489	3.377783577	0.18726	0.891413778	4.269197355
711108.62	3903285.04	0.00479	3.308708248	0.18797	0.894793591	4.203501839
711001.70	3903293.24	0.00488	3.370876044	0.17654	0.840383362	4.211259406
711019.52	3903293.24	0.00494	3.412321241	0.17987	0.856235161	4.268556402
711108.62	3903219.44	0.00461	3.184372656	0.18963	0.902695689	4.087068345
711099.71	3903227.64	0.00466	3.218910321	0.18812	0.895507636	4.114417957
711072.98	3903235.84	0.00482	3.329430847	0.18617	0.886225051	4.215655898
711090.80	3903235.84	0.00473	3.267263051	0.1871	0.89065213	4.157915181
711108.62	3903235.84	0.00465	3.212002788	0.189	0.8996967	4.111699488
711064.07	3903244.04	0.00489	3.377783577	0.18591	0.884987373	4.26277095
711081.89	3903244.04	0.0048	3.315615781	0.18663	0.888414789	4.20403057
711099.71	3903244.04	0.00471	3.253447985	0.18774	0.893698722	4.147146707
711117.53	3903244.04	0.00464	3.205095255	0.1899	0.90398097	4.109076225
711064.07	3903252.24	0.00491	3.391598642	0.18596	0.885225388	4.27682403
711081.89	3903252.24	0.00483	3.336338379	0.18671	0.888795613	4.225133992
711099.71	3903252.24	0.00474	3.274170584	0.18764	0.893222692	4.167393276
711117.53	3903252.24	0.00466	3.218910321	0.18956	0.902362468	4.121272789
711037.34	3903260.44	0.00497	3.43304384	0.18376	0.874752728	4.307796568
711055.16	3903260.44	0.00495	3.419228774	0.18542	0.882654826	4.3018836
711072.98	3903260.44	0.0049	3.38469111	0.18643	0.887462729	4.272153839
711090.80	3903260.44	0.00481	3.322523314	0.18712	0.890747336	4.21327065
711108.62	3903260.44	0.00472	3.260355518	0.18826	0.896174078	4.156529596
711126.44	3903260.44	0.00465	3.212002788	0.1904	0.90636112	4.118363908
711037.34	3903268.64	0.00498	3.439951373	0.18354	0.873705462	4.313656835
711055.16	3903268.64	0.00497	3.43304384	0.18534	0.882274002	4.315317842
711072.98	3903268.64	0.00492	3.398506175	0.18646	0.887605538	4.286111713
711090.80	3903268.64	0.00484	3.343245912	0.18718	0.891032954	4.234278866
711108.62	3903268.64	0.00474	3.274170584	0.18812	0.895507636	4.16967822
711126.44	3903268.64	0.00466	3.218910321	0.19004	0.904647412	4.123557733
711028.43	3903276.84	0.00497	3.43304384	0.18207	0.866707821	4.299751661
711046.25	3903276.84	0.00498	3.439951373	0.18435	0.877561305	4.317512678
711064.07	3903276.84	0.00496	3.426136307	0.18592	0.885034976	4.311171283
711081.89	3903276.84	0.0049	3.38469111	0.18688	0.889604864	4.274295974
711099.71	3903276.84	0.00482	3.329430847	0.18756	0.892841868	4.222272715
711117.53	3903276.84	0.00472	3.260355518	0.18872	0.898363816	4.158719334
711010.61	3903285.04	0.00492	3.398506175	0.17872	0.850760816	4.249266991
711028.43	3903285.04	0.00497	3.43304384	0.18173	0.865089319	4.298133159
711046.25	3903285.04	0.00499	3.446858905	0.18412	0.876466436	4.323325341
711064.07	3903285.04	0.00498	3.439951373	0.18583	0.884606549	4.324557922
711081.89	3903285.04	0.00492	3.398506175	0.18689	0.889652467	4.288158642
711099.71	3903285.04	0.00484	3.343245912	0.18759	0.892984677	4.236230589
710992.79	3903293.24	0.00484	3.343245912	0.17474	0.831814822	4.175060734
711010.61	3903293.24	0.00491	3.391598642	0.17826	0.848571078	4.24016972
711028.43	3903293.24	0.00497	3.43304384	0.18135	0.863280405	4.296324245
711037.34	3903293.24	0.00498	3.439951373	0.18269	0.869659207	4.30961058
711055.16	3903293.24	0.00499	3.446858905	0.18487	0.880036661	4.326895566
711072.98	3903293.24	0.00497	3.43304384	0.18636	0.887129508	4.320173348

Receptor Coordinates X (m)	Receptor Coordinates Y (m)	Annual DPM Concentration $(ug/m^3)^{-1}$	Cancer Risk from DPM (Risk/million)	Annual TOG Concentration $(ug/m^3)^{-1}$	Cancer Risk from TOG (Risk/million)	Total Cancer Risk from All Sources (Risk/million)
711090.80	3903293.24	0.00491	3.391598642	0.18727	0.891461381	4.283060023
710983.88	3903301.44	0.00478	3.301800715	0.1723	0.82019969	4.122000405
711001.70	3903301.44	0.00487	3.363968511	0.17602	0.837908006	4.201876517
711019.52	3903301.44	0.00494	3.412321241	0.17942	0.854093026	4.266414267
711037.34	3903301.44	0.00498	3.439951373	0.18234	0.867993102	4.307944475
711055.16	3903301.44	0.005	3.453766438	0.18463	0.878894189	4.332660627
711072.98	3903301.44	0.00498	3.439951373	0.18626	0.886653478	4.326604851
710966.06	3903309.64	0.00468	3.232725386	0.16779	0.798730737	4.031456123
710983.88	3903309.64	0.00477	3.294893182	0.17171	0.817391113	4.112284295
711001.70	3903309.64	0.00486	3.357060978	0.17547	0.835289841	4.192350819
711019.52	3903309.64	0.00493	3.405413708	0.17894	0.851808082	4.25722179
711037.34	3903309.64	0.00498	3.439951373	0.18195	0.866136585	4.306087958
711055.16	3903309.64	0.005	3.453766438	0.18436	0.877608908	4.331375346
711072.98	3903309.64	0.00499	3.446858905	0.18611	0.885939433	4.332798338
710974.97	3903317.84	0.00471	3.253447985	0.16914	0.805157142	4.058605127
710992.79	3903317.84	0.0048	3.315615781	0.17302	0.823627106	4.139242887
711010.61	3903317.84	0.00488	3.370876044	0.17671	0.841192613	4.212068657
711028.43	3903317.84	0.00495	3.419228774	0.18006	0.857139618	4.276368392
711046.25	3903317.84	0.00499	3.446858905	0.18288	0.870563664	4.317422569
711064.07	3903317.84	0.00501	3.460673971	0.18508	0.881036324	4.341710295
710974.97	3903326.04	0.0047	3.246540452	0.16849	0.802062947	4.048603399
710992.79	3903326.04	0.00479	3.308708248	0.17241	0.820723323	4.129431571
711010.61	3903326.04	0.00487	3.363968511	0.17615	0.838526845	4.202495356
711028.43	3903326.04	0.00494	3.412321241	0.17957	0.854807071	4.267128312
711046.25	3903326.04	0.00499	3.446858905	0.18249	0.868707147	4.315566052
710983.88	3903334.24	0.00473	3.267263051	0.16981	0.808346543	4.075609594
711001.70	3903334.24	0.00482	3.329430847	0.17369	0.826816507	4.156247354
711019.52	3903334.24	0.0049	3.38469111	0.17735	0.844239205	4.228930315
711037.34	3903334.24	0.00496	3.426136307	0.18062	0.859805386	4.285941693
710983.88	3903342.44	0.00471	3.253447985	0.16914	0.805157142	4.058605127
711001.70	3903342.44	0.0048	3.315615781	0.17306	0.823817518	4.139433299
711019.52	3903342.44	0.00489	3.377783577	0.17677	0.841478231	4.219261808
710974.97	3903350.64	0.00465	3.212002788	0.16643	0.792256729	4.004259517
710992.79	3903350.64	0.00474	3.274170584	0.17043	0.811297929	4.085468513
711010.61	3903350.64	0.00483	3.336338379	0.17431	0.829767893	4.166106272
710992.79	3903358.84	0.00473	3.267263051	0.16973	0.807965759	4.07522877
710983.88	3903367.04	0.00466	3.218910321	0.16699	0.794922497	4.013832818
711046.25	3903293.24	0.00499	3.446858905	0.18386	0.875228758	4.322087663
711064.07	3903293.24	0.00499	3.446858905	0.1857	0.88398771	4.330846615
711081.89	3903293.24	0.00494	3.412321241	0.18688	0.889604864	4.301926105
711099.71	3903293.24	0.00487	3.363968511	0.1876	0.89303228	4.257000791
710992.79	3903301.44	0.00483	3.336338379	0.17419	0.829196657	4.165535036
711010.61	3903301.44	0.0049	3.38469111	0.17777	0.846238531	4.230929641
711028.43	3903301.44	0.00496	3.426136307	0.18095	0.861376285	4.287512592
711046.25	3903301.44	0.005	3.453766438	0.18357	0.873848271	4.327614709
711064.07	3903301.44	0.005	3.453766438	0.18553	0.883178459	4.336944897
711081.89	3903301.44	0.00496	3.426136307	0.18683	0.889366849	4.315503156
710974.97	3903309.64	0.00472	3.260355518	0.16977	0.808156131	4.068511649
710992.79	3903309.64	0.00481	3.322523314	0.17362	0.826483286	4.1490066
711010.61	3903309.64	0.00489	3.377783577	0.17725	0.843763175	4.221546752
711028.43	3903309.64	0.00496	3.426136307	0.18052	0.859329356	4.285465663
711046.25	3903309.64	0.005	3.453766438	0.18324	0.872277372	4.32604381
711064.07	3903309.64	0.005	3.453766438	0.18532	0.882178796	4.335945234
710966.06	3903317.84	0.00466	3.218910321	0.16714	0.795636542	4.014546863
710983.88	3903317.84	0.00476	3.287985649	0.1711	0.81448733	4.102472979
711001.70	3903317.84	0.00484	3.343245912	0.1749	0.83257647	4.175822382
711019.52	3903317.84	0.00492	3.398506175	0.17844	0.849427932	4.247934107
711037.34	3903317.84	0.00498	3.439951373	0.18154	0.864184862	4.304136235
711055.16	3903317.84	0.00501	3.460673971	0.18406	0.876180818	4.336854789
710966.06	3903326.04	0.00465	3.212002788	0.16648	0.792494744	4.004497532
710983.88	3903326.04	0.00474	3.274170584	0.17046	0.811440738	4.085611322
711001.70	3903326.04	0.00483	3.336338379	0.17431	0.829767893	4.166106272
711019.52	3903326.04	0.00491	3.391598642	0.17791	0.846904973	4.238503615
711037.34	3903326.04	0.00497	3.43304384	0.1811	0.86209033	4.29513417
710974.97	3903334.24	0.00468	3.232725386	0.16782	0.798873546	4.031598932
710992.79	3903334.24	0.00477	3.294893182	0.17177	0.817676731	4.112569913
711010.61	3903334.24	0.00486	3.357060978	0.17556	0.835718268	4.192779246
711028.43	3903334.24	0.00493	3.405413708	0.17905	0.852331715	4.257745423
710974.97	3903342.44	0.00466	3.218910321	0.16713	0.795588939	4.01449926
710992.79	3903342.44	0.00476	3.287985649	0.17111	0.814534933	4.102520582
711010.61	3903342.44	0.00485	3.350153445	0.17495	0.832814485	4.18296793
711028.43	3903342.44	0.00492	3.398506175	0.1785	0.84971355	4.248219725
710983.88	3903350.64	0.0047	3.246540452	0.16844	0.801824932	4.048365384
711001.70	3903350.64	0.00479	3.308708248	0.17239	0.820628117	4.129336365
710983.88	3903358.84	0.00468	3.232725386	0.16773	0.798445119	4.031170505
711001.70	3903358.84	0.00477	3.294893182	0.17171	0.817391113	4.112284295
710992.79	3903367.04	0.00471	3.253447985	0.16901	0.804538303	4.057986288
711105.92	3903211.30	0.0046	3.177465123	0.18955	0.902314865	4.079779988
711134.84	3903268.80	0.00464	3.205095255	0.19107	0.909550521	4.114645776
711121.73	3903242.72	0.00463	3.198187722	0.19048	0.906741944	4.104929666

Acoustic Study

For the

TownePlace Suites Hotel
San Luis Obispo, California

Prepared by:

David Dubbink Associates
864 Osos Street, Ste D
San Luis Obispo, CA 93401

May 7, 2014

Acoustic Study: TownPlace Suites Hotel

This study describes the acoustic impacts of the TownePlace Suites Hotel to be constructed on Calle Juaquin, San Luis Obispo. The hotel will be a four story structure; with 115 rooms and includes guest amenities such as a swimming pool but does not include a commercial kitchen. Figure 1 shows an aerial view of the site with the hotel site plan as an overlay.

The study concludes that, with recommended conditions, hotel construction and future operation will be consistent with the Noise Element of the City's General Plan and with the Municipal Code.

The Acoustic Setting

Calle Juaquin is a frontage road to Highway 101 and the freeway is the major source of noise at the site. There are four traffic lanes, two in either direction, separated by a grass median. The pavement edge is 200 feet from the hotel and at a slightly higher elevation than the frontage road.

There are several other sources of noise. The adjacent agricultural field was being disked at the time of one site visit providing background sound when road traffic was light. The San Luis Obispo Airport is two miles way. But the hotel is not under a defined flight path[1].

Figure 1: Site Location and Setting

Assessing the Noise Environment

Noise levels at the site were monitored on April 25, 2014 at the location represented by the red dot on Figure 1. This is 80 feet back from the sidewalk edge along Calle Juaquin and corresponds to the front-most corner of the hotel. The monitoring period started at 8 AM. Two sound level meters were used in order to determine if there are sound exposure differences between ground level and the elevation of upper floors[2]. One meter was mounted on a tripod with the meter at the 5 foot level as recommended by the Municipal Code. A second meter was rigged with its recording microphone placed at the top of a mast and raised to a 16 foot elevation. Two measurement periods of 15 minutes each

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[1] Airport Land Use Plan, San Luis Obispo County Regional Airport (2004) page 38-2

[2] The meters were a Brüel & Kjær Precision Integrating Sound Level Meter, Type 2230 (SN 1033493) and a Larson Davis 870 Environmental Monitor (SN 870A0177). The meters were checked before and after the readings and found to be accurate, using a B&K Calibrator Type 4231, (SN 2052124)

were made, with the two meters operating simultaneously. There was no noticeable wind during the monitoring period and traffic was traveling at normal freeway speed (65 mph). Some traffic was always present. During the monitoring period, several aircraft passed north of the site as they were on approach to the airport. The aircraft were clearly audible but not as loud as passing traffic.

Elevation	Session 1			Session 2		
	Leq	Lmax	Lmin	Leq	Lmax	Lmin
Ground Level (5 ft.)	61.9	66.9	53.3	62	66.9	54.4
Elevated 15 ft.	67.2	72.4	62.1	67.1	70.6	62.4

Table 1: Sound Level Readings for Two Fifteen Minute Periods

Table 1 shows decibel levels measured by the Leq metric along with the maximum and minimum sound levels[3]. From the readings it is apparent that there is a 5 to 7 decibel difference in sound exposure with changed elevation. The explanation is that, at ground level, there is a greater absorption of sound energy as the sound waves pass close to the topography than there is at more a more elevated level. Beyond the second story level, it would be expected that sound energy would decrease with the added distance from surface traffic.

The loudest sound events heard at the hotel site come from a few of the trucks and motorcycles passing the site. The loudest events are infrequent but heard at maximums of 70 to 72 decibels. At most times the "average" meter reading was in the 61 to 63 decibel range for the monitor at ground level and at 65 to 68 decibels for the elevated microphone.

Other Sound Level Estimates

There are several alternative ways for evaluating noise levels apart from noise measurement over a limited period. The Federal Highway Administration (FHWA) has developed a Traffic Noise Model (TNM). The FHWA Traffic Noise Model is the national standard for roadway noise evaluation. Also, noise level contours were computed and published as maps in the City's Noise Element.

The Federal highway noise forecasting system, the TNM, incorporates multiple components; the traffic volume, the mix of cars, medium and heavy trucks, the speed, the distance, and a representation of topographic conditions. The landscape between the road and the listener can be "soft" as in grass and vegetation, or "hard" and reflective as in pavement or water surface.

Caltrans publishes regular updates on traffic counts for state highways along with reports on the percentages of cars and trucks. The data on traffic flows on Highway 101, coupled with the FHWA model can produce estimates of noise exposure to corroborate the on-site monitoring.

[3] The Leq metric represents the energy average of the sound over the 15 minute measurement interval.

The environmental studies for the improvement of the Los Osos Valley Road interchange included traffic data and the same information is provided in regularly published Caltrans reports. The latest traffic count (2012) for the segment of road fronting the hotel property showed an annual daily traffic count of 58,700 vehicles, with 5,900 during the peak hour. The data on vehicle mix is similar; there is a difference between the interchange study and the Caltrans report. The numbers are important because a heavy truck produces the same quantity of noise as ten cars. The environmental report includes observer notes on truck traffic; recording 93% auto, 4% medium trucks and 3% heavy trucks[4]. Caltrans' published data on vehicle mix shows the segment with 91.8% cars, with more heavy trucks (4.7%) than medium trucks (3.5%). Our own vehicle count, conducted at the time of the monitoring, put the heavy truck count at 3.8%, in between the two other estimates. In our study, Caltrans' higher estimate of truck volume will be applied. Using this data on vehicle mix and assuming a 65 mph speed, with a surface that is equal parts "soft" and "hard", the Leq estimate is 70 decibels. This is three decibels above the 67 level that was measured at the upper microphone.

Still another estimate of the site's noise exposure is in the Noise Element of the City's General Plan. The maps in the plan depict sound contours for the year 1990 and for "build-out". The city's Noise Guidebook, gives the distance between roads and different noise level contours[5]. For the segment of roadway bordering the hotel property the distance to the contour lines at "Build-out" is as follows:

Contour	60 dB	65 dB	70 dB
Distance to centerline	1268 ft.	589 ft.	273 ft.

Table 2: Distance from the Center of the Roadway to Ldn Contours.

It is possible to reverse engineer these numbers to estimate the decibel level at façade of the hotel. At the location of the measuring point, 245 feet from the roadway centerline, using the City's estimating equation; the estimated sound exposure level is 71 decibels. This is one decibel higher than the value computed using the FHWA model.

There is a difference in the sound measurement metrics used by the FHWA model and ones used in the City's Noise Element. The FHWA model uses Leq and the City uses the metrics Ldn and CNEL. Ldn (or CNEL). This metric represents a 24 hour interval that gives 10 extra decibels of weighting to nighttime noise. (the CNEL metric is similar but adds a three hour evening period given an extra weighting of 5 decibels).

There is a rule of thumb stating that the numeric value for the peak hour traffic Leq is about the same as for Ldn. Caltrans could not provide hourly count data at this exact location but hourly counts were available for a monitoring station located north of the Highway 101 – Marsh Street interchange. At that location there was an exact

[4] EIR citation
[5] City of SLO, Noise Guidebook, (1996), page 12.

correspondence between Leq and DNL values (for soft site conditions as used in the City's noise contour mapping). In this study, it will be assumed that peak hour Leq is equivalent to the Ldn value.

There is a question of how to interpret the difference between the measured and the modeled noise exposure values. The Leq value of 62 measured at ground level is 8 decibels below the numbers estimated by the FHWA noise model or the values used in the City's Noise Element. Time of day and local topography could account for some of this. During the morning peak hour of travel, the majority of traffic is headed north. As noted, the freeway is at an elevation several feet above the hotel parcel. There is a low metal crash barrier separating the freeway lanes at this point and it would block some of the sounds of traffic in the farther lanes. The wheels of cars in the far lane were not visible from the hotel site and tire to road surface sound is a significant component of roadway noise.

The assumption will be made that the 67 Leq measurement made at the higher microphone is the most accurate descriptor of the present noise situation when northbound traffic is dominant. A several decibel increase would be expected when the major flow of traffic is toward the south and closer to the hotel. This approximates the TNM estimate of 70 decibels.

Future increases in traffic volume increases will not result in proportionate increases in noise. For example, because of the logarithmic nature of decibel addition, a doubling of traffic equates to a 3 decibel increase. Such an increase of traffic on Highway 101 is unlikely in the foreseeable future. It would seem reasonable to assume that future noise increases in the vicinity of the property measured by either Leq or Ldn will not increase by more than 2 decibels. For the analysis, it will be assumed that future noise levels at the measuring point which is at the closest corner of the hotel, will reach the Leq/Ldn level of 71 decibels.

Measured AM Peak	Adjustment PM Peak	Additional Traffic	Future Peak Hour Level
67	+2	+2	71

Table 3: Estimate of Future Traffic Noise Level

The Regulatory Framework

The City of San Luis Obispo's regulatory framework is set out in the Noise Element of the General Plan. The structure of the Noise Element is, in turn, based on guidelines developed by the California Office of Planning and Research. The City has additional noise guidelines in the Municipal Code but these are designed to deal with limitations on noise production and are not directly applicable to this project.

The city's noise regulations includes specific guidelines for the siting of projects exposed to transportation noise sources. This includes a diagram showing the compatibility of various land use activities with differing levels of noise exposure[6]. The guidelines indicate that hotels and motels that are exposed to noise levels in the range of 60 to 75 Ldn are compatible if the projects meet noise reduction standards and are supported by appropriate technical analysis (See Appendix A)

The City's noise exposure standards for hotels give separate standards for outdoor activity areas and indoor spaces[7]. Designated outdoor activity areas are not to be exposed to noise in excess of 60 Ldn. Indoors, the Ldn is not to exceed 45. There is an additional standard specifying that noise levels within indoor spaces are not to exceed 60 Lmax.

Analysis

The City's noise compatibility standards for hotels exposed to transportation noise consist of three tests.

- Noise levels in outdoor activity areas must not exceed 60 Ldn.
- Noise in occupied indoor spaces should not exceed 45 Ldn or 60 Lmax
- Noise levels in interior spaces should not exceed 60 Lmax

Figure 2 shows the estimated noise contours in the vicinity of the hotel at the second floor level under the future conditions described above. The building serves as a partial noise barrier, sheltering its sides from full exposure to noise from freeway traffic. The Leq metric is time based and, once a vehicle passes the front of the structure, the building blocks much of its sound. As a result, the noise exposure contours resemble the bow wave of a boat with the greatest blocking effect taking place close to the structure with the reduction effect tapering off with distance.

There are several outdoor areas for guest use that might be considered outdoor activity areas. One is the pool area (indicated in the graphic by the turquoise rectangle). This is exposed to sound levels of around 67 Leq, exceeding the 60 Leq

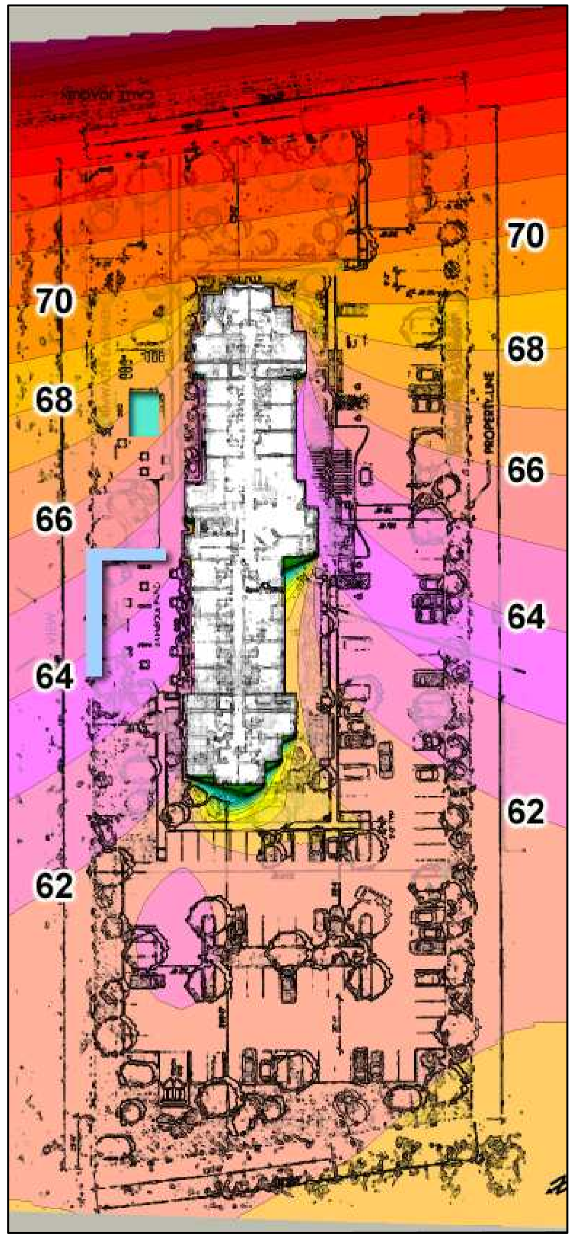


Figure 2: Future Noise Contours

[6] City of SLO, Noise Element, page 4.
[7] City of SLO Noise Element, page 4.

standard. There is an outdoor barbeque patio further back from the highway. The light blue “L” shape on the diagram frames this area. Without special treatment, sound levels on the patio will be in the range of 65 to 63 Leq. Both of these sound exposure estimates are conservative in that the levels depicted in the graphic relate to sound measured at the second floor elevation and the field measurements indicated that sound at ground level is less than at the second floor level; a reduction of 5 decibels. Plans for the hotel include an 80 foot landscaped setback so, even when some areas are paved, there will continue to be added “soft site” absorption. However, we did not rely on this in evaluating noise exposure for outdoor activity area.

Guest activity swimming pool will make its own contributions to raising the local acoustic environment. The spirit of the City’s regulation is that outdoor activity areas should be available that provide some level of tranquility; and this condition will not be present at poolside. It is not essential to enclose the pool area to meet the City’s purposes because the site design includes other outdoor activity areas that could more easily shelter hotel guests from direct exposure to freeway traffic.

The barbeque patio is a more appropriate place to be acoustically sheltered. It is recommended that a solid wall be erected following the general outline of the “L’ on the diagram. A wall eight feet high would lower sound levels by 2 decibels at the ear level of a standing person and another 2 decibels at a seated level. This would mean that areas close to the wall would not exceed the 60 Leq standard. Given what we know about the strong winds in this area, the site designers might consider extending the wall to enclose the entire patio.

The indoor standard for occupied spaces is a not to exceed level of 45 Ldn. Inspection of the noise contour diagram in Figure 2 shows the highest noise exposure levels are at the front portion of the hotel measured at the second floor elevation. The assumed future level at this elevation is 71 decibels. Estimates made of noise levels at the third and fourth floor levels increase at a decibel per floor. A noise level reduction of at least 26 to 28 decibels will be required to meet the City’s interior noise standard of 45 Ldn. Conventional construction reduces noise transmission by around 20 decibels and the needed additional reduction can be achieved by specifying appropriate construction materials and techniques. The City’s Noise Guidebook includes guidelines for making noise level reductions up to 30 decibels insuring consistency with the City’s standards (See Appendix B).

The City’s regulations also require that the maximum noise level in interior spaces not exceed a maximum of 60 decibels. During the monitoring session, the maximum noise level recorded at the upper microphone was at 72 Lmax. There ware no exceptional noise events during the monitoring period such as a passing emergency vehicle or a club of motorcyclists. If it assumed that the highest maximum level is at 75 Lmax, the required exterior to interior noise level reduction is 15 decibels. With the recommended 26 to 28 the City’s limit for maximum interior noise levels is not exceeded.

Conclusion and Recommended Project Conditions

There are several conditions that should be placed on the project to insure that the noise experiences of guests at the hotel will conform to City standards.

1. In order to insure that interior noise levels are below the 45 Ldn standard, the structure should be designed to produce a noise level reduction of at least 26 to 28 decibels. It is recommended that the designers consult the OITC performance of materials in addition to STC ratings.

2. It is recommended that the sides of the project's barbeque patio be partially enclosed by a noise blocking wall, eight feet high, on the sides exposed to the freeway.

3. Construction should be limited to the hours of 7 AM and 7 PM on weekdays as specified in the Municipal Code.

CEQA Determinations

The CEQA Guidelines include several questions related to the noise impact of projects. In all cases the impacts will be less than significant[8].

1) The project will not result in significant exposure of persons to or generation of noise levels in excess of standards established in the City's general plan, or Municipal Code. Exposure levels are below limits suggested by state and federal agencies.

2) A second CEQA concern involves ground born vibrations. Apart from the possibility of brief periods of ground vibration during construction hotel activities will not produce vibrations that would be felt beyond the property line.

3) The project will not create a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project. There will be a change in the nature of sound experienced at the nearest properties but the level of change is not significant either as measured by local standards or the standards of other agencies.

4) During the construction phase of the project, there will be a temporary increase in ambient noise levels in the project vicinity above levels existing without the project. However the city allows construction activities that temporarily exceed standards if the work conforms to guidelines for construction activities. Project conditions should reflect the city's policies regarding the timing and nature of construction work.

[8] The CEQA Checklist questions are in Appendix A

5) The fifth question has to do with whether proximity of the airport will expose people in the project to excessive noise. The project is located beyond the outermost noise contour limits for the San Luis Obispo County Airport and guests will not be exposed to excessive noise from airport activity.

Our design recommendations are of a general nature and some features could be altered and still achieve the required 30 decibels of noise reduction. Specific design and structural proposals should be developed by the project architect and contractor.

Please contact us should you have any questions regarding the analysis or require additional detail.

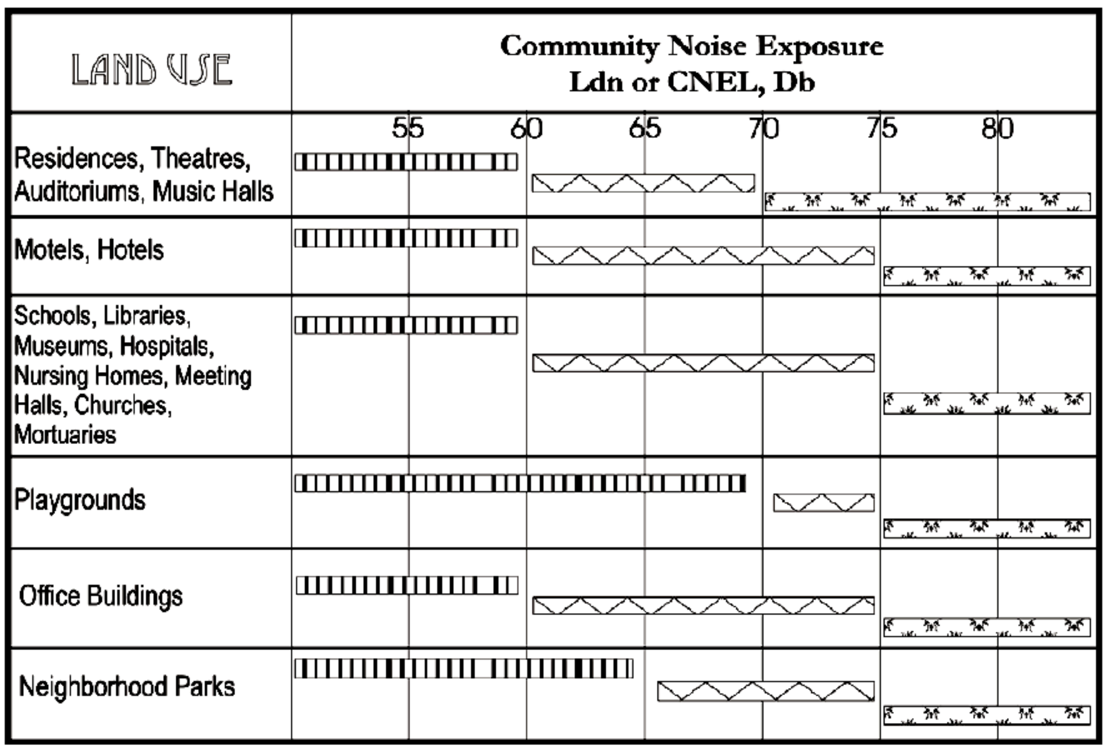
Sincerely,

David Dubbink, Ph.D., AICP

Appendix A
Compatibility Tables from City Noise Element
and from the State of California Guidelines

Below:
City of San Luis Obispo compatibility guidelines from the Noise Element, page 2.

Figure 1 ACCEPTABILITY OF NEW NOISE-SENSITIVE USES EXPOSED TO TRANSPORTATION NOISE SOURCES



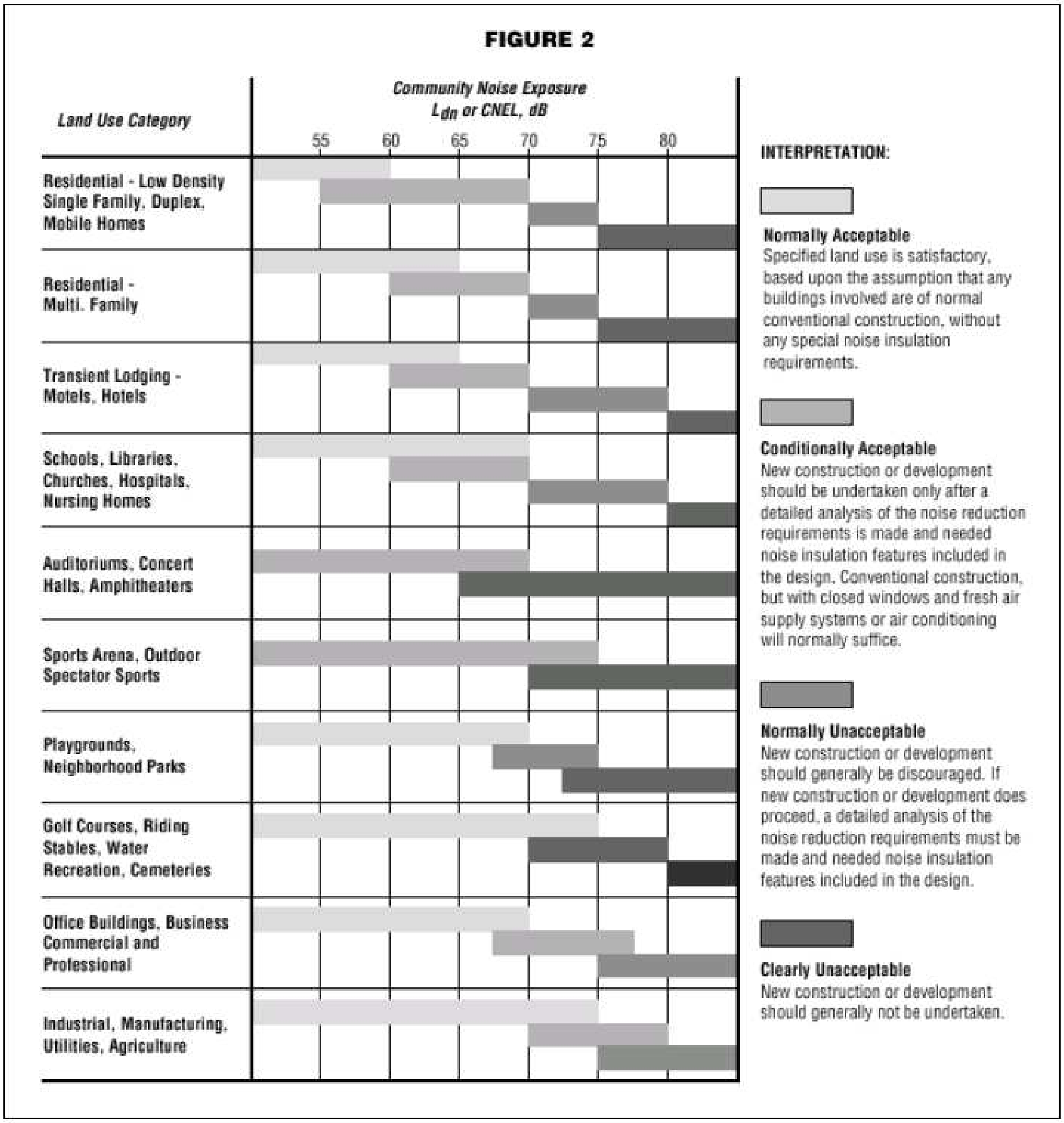
Key

Acceptable, Development may be permitted without specific noise studies or mitigation.

Conditionally Acceptable, Development may be permitted if designed to meet noise exposure standards; a specific noise studyt is usually required.

Unacceptable, Development with acceptable noise exposure generally is not possible.

Below:
The Compatibility Table from the California General Plan Guidelines



Appendix B
Excerpts from the City of San Luis Obispo Noise Guidebook

Recommendations for reducing exterior to interior noise transmission by 30 decibels.

NLR of 30 dB Follow normal construction practices, the Uniform Building Code, and:

1) Provide air conditioning or a mechanical ventilation system, so windows and doors may remain closed.

2) Mount windows and sliding glass doors in low air infiltration rate frames (0.5 cfm or less, per ANSI specifications).

3) Provide solid-core exterior doors with perimeter weather stripping and threshold seals.

4) Cover exterior walls with stucco or brick veneer.

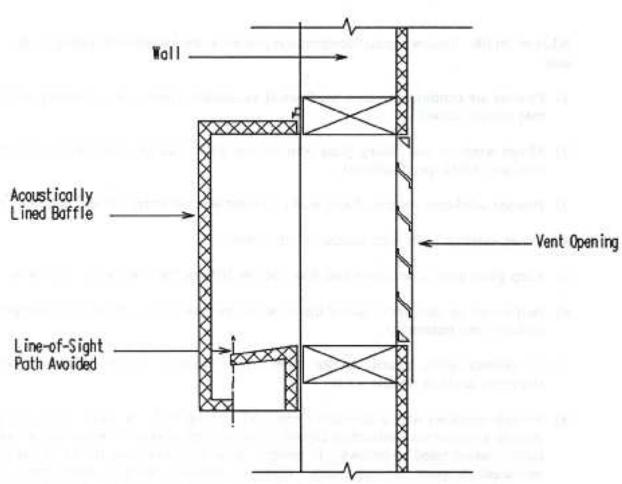
5) Keep glass area in windows and doors below 20% of the floor area in a room.

6) Baffle roof or attic vents facing the noise source (see Figure 11 for an example of a suitable vent treatment).

7) At exterior walls, attach interior sheetrock to studs by resilient channels, or use staggered studs or double walls.

8) Provide windows with a laboratory-tested STC rating of 30 or more. (Windows that provide superior noise reduction capability and that are laboratory-tested are sometimes called "sound-rated" windows. In general, these windows have thicker glass and/or increased air space between panes. However, standard energy-conservation double-pane glazing with an 1/8" or 1/4" air space may be less effective in reducing noise from some noise sources than single-pane glazing).

FIGURE 11
EXAMPLE OF ATTIC VENT BAFFLE



Note that the baffle must allow any minimum effective ventilation area required by the building code.

Guidebook recommendations for floor plans

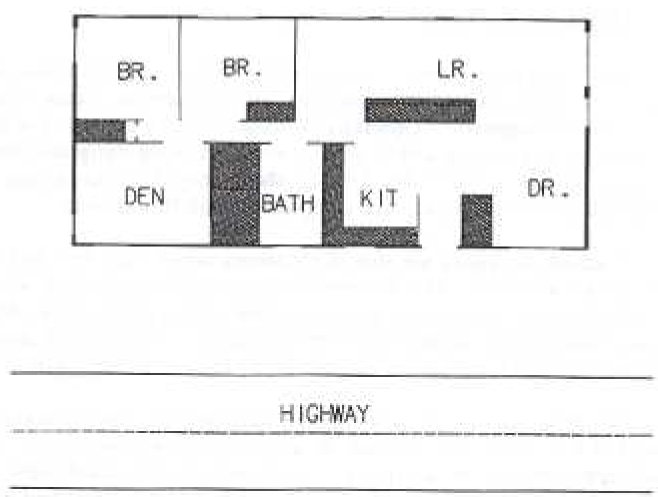
Building Components

When buildings have been located to avoid most noise exposure, noise reduction measures still may be required to achieve acceptable interior noise levels. The cost of such measures may be reduced by the thoughtful placement of rooms. For example, bedrooms, living rooms, family rooms, and other more noise-sensitive parts of a dwelling can be located on the side farthest from the noise source, as shown in Figure 9.

Bathrooms, closets, stairwells, and food preparation areas are relatively insensitive to exterior noise sources, and can be placed on the noisy side. With such techniques, noise reduction requirements for the building facade can be reduced, although the designer must take care to isolate the noise impacted areas by the use of partitions or doors.

When buildings containing noise-sensitive uses are to be located in a noisy environment, interior noise exposure may be reduced through the acoustical design of building facades. Standard noise mitigation packages are recommended below.

FIGURE 9
FLOOR PLAN TO REDUCE NOISE IN MOST SENSITIVE ROOMS



1413 Calle Joaquin Development

Transportation Impact

Analysis Report

Prepared for:

City of San Luis Obispo

Prepared by:

omni · means
ENGINEERING SOLUTIONS

1413 CALLE JOAQUIN TRANSPORTATION IMPACT ANALYSIS REPORT

Prepared For:

CITY OF SAN LUIS OBISPO

1413 CALLE JOAQUIN

SAN LUIS OBISPO, CA 93401

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AUGUST 2014

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APPENDIX

Introduction

The City of San Luis Obispo (SLO) has retained OMNI-MEANS to provide a comprehensive Transportation Impact Analysis Report (TIAR) for the proposed 1413 Calle Joaquin development project in the City of SLO, in SLO County. The term "project" as used in this report refers to the proposed "1413 Calle Joaquin development" project. Figure 1 shows the study area and project vicinity.

The City of SLO covers an area of approximately 13 square miles in SLO County, California. Per Census 2013, the population in SLO is approximately 46,400. The project will be located in the southern portion of the City, north of Los Osos Valley Road (LOVR) on Calle Joaquin. The project consist of four parcels along Calle Joaquin, west of US 101. The Towneplace Suites (hotel) is proposed on Lot 3 (APN 053-152-003). The remaining three parcels are proposed as a rezoning only. The project applicant has applied for a rezone from Commercial Service to Commercial Retail. The Corresponding General Plan Amendment would be a change from Services and Manufacturing to General Retail.

The background data and assumptions used in this analysis include the following:

- Peak hour turning movement counts at study intersections provided by the City
- LOVR at U.S. 101 interchange improvements are included for the 2035 scenarios, which includes widening EB LOVR to two lanes, change the existing signals, and in conjunction with the Prado Road interchange
- Trip generation rates and trip distribution patterns for the Calle Joaquin development project
- Projected build out peak hour volumes from the LOVR/US 101 Interchange Improvements Project draft EIR prepared by Caltrans

Consistent with the City of SLO and Caltrans standards and typical CEQA guidelines, the following traffic scenarios are discussed as a part of this TIAR:

- *Existing* Conditions
- Year 2016 "*No Project*" Conditions
- Year 2016 "*Plus Project*" Conditions
- Year 2035 "*Cumulative No Project* "Conditions
- Year 2035 "*Cumulative Plus Project*" Conditions

Existing conditions quantify the current traffic operations at the study locations. Traffic counts were taken February 11, 2014 in order to simulate typical weekday conditions during the AM and PM peak hours.

The Year 2016 *No Project* conditions consider build out of approved/pending land development within the City. The volumes were projected using a one percent growth rate. This growth rate was determined using U.S. Census historical population data. Short Term “Year 2016 *Plus Project*” conditions build upon Short Term “*No Project*” conditions when project-generated trips are distributed to the network with build out of approved/pending land development.

The Year 2016 *Plus Project* condition is an analysis scenario in which traffic impacts with the proposed project are investigated in comparison to the Year 2016 *No Project* conditions scenario. The project-generated peak hour volumes have been added to the Year 2016 *No Project* condition volumes to obtain the *Year 2016 Plus Project* traffic volumes.

The Year 2035 *Cumulative No Project* conditions refer to analysis scenario that would exist following approximately twenty years of development in the City of SLO, without project development. *Cumulative No Project* conditions project traffic operations upon build out of the current City General Plan. The *Cumulative No Project* condition scenarios were simulated by weekday peak hour volumes developed from the LOVR/U.S. 101 Interchange Improvement Project Draft EIR.

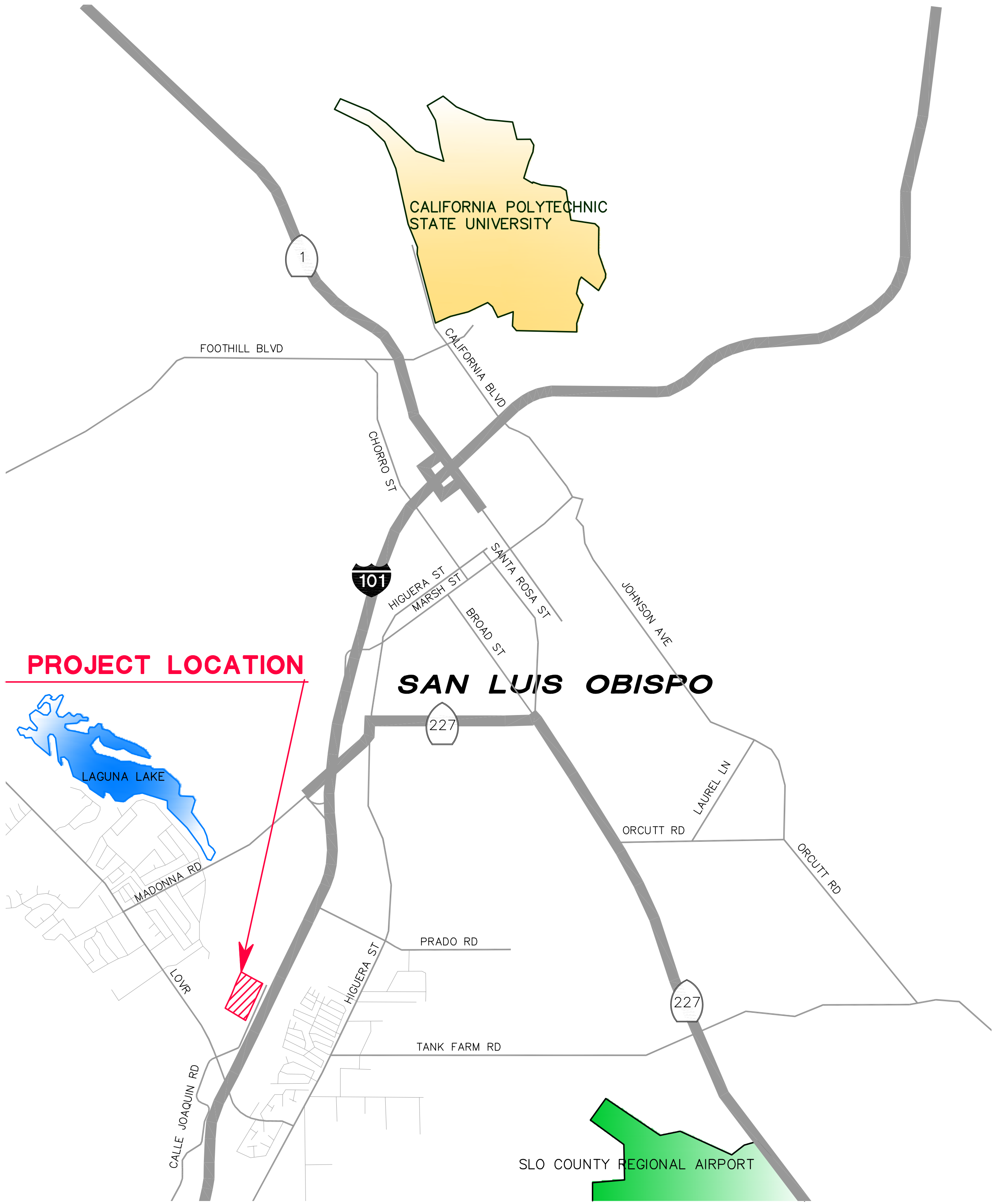
The Year 2035 *Cumulative Plus Project* conditions is an analysis scenario in which the traffic impacts associated with the project are investigated in comparison to the Year 2035 *No Project* condition scenario.

Study intersections

The following project study intersections were selected in coordination with the City of SLO for analysis:

1. LOVR/Calle Joaquin
2. LOVR/US 101 Southbound Ramps
3. LOVR/ US 101 Northbound Ramps

Project related impacts and improvements to mitigate project impacts have been detailed in the final section of this report. These discussions are based on quantitative analysis, and the corresponding level-of-service worksheets can be found in the Appendix.



1413 Calle Joaquin Develpement

Figure 1

Study Area and Vicinity Map

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Existing Conditions

Existing conditions analysis establishes the baseline traffic conditions under current conditions. The *Existing* conditions is the analysis scenario in which current operations at study locations, assuming no project development, are analyzed.

Transportation System

Roadways that provide primary circulation in the vicinity of the project site are as follows:

U.S. Route 101 (US 101) is a major north-south highway facility that transverse along coastal California. Within SLO County, US 101 provides major connection between and through several cities.

Los Osos Valley Road (LOVR) is a two lane to four lane, east-west arterial that runs between Pecho Road and Higuera Street.

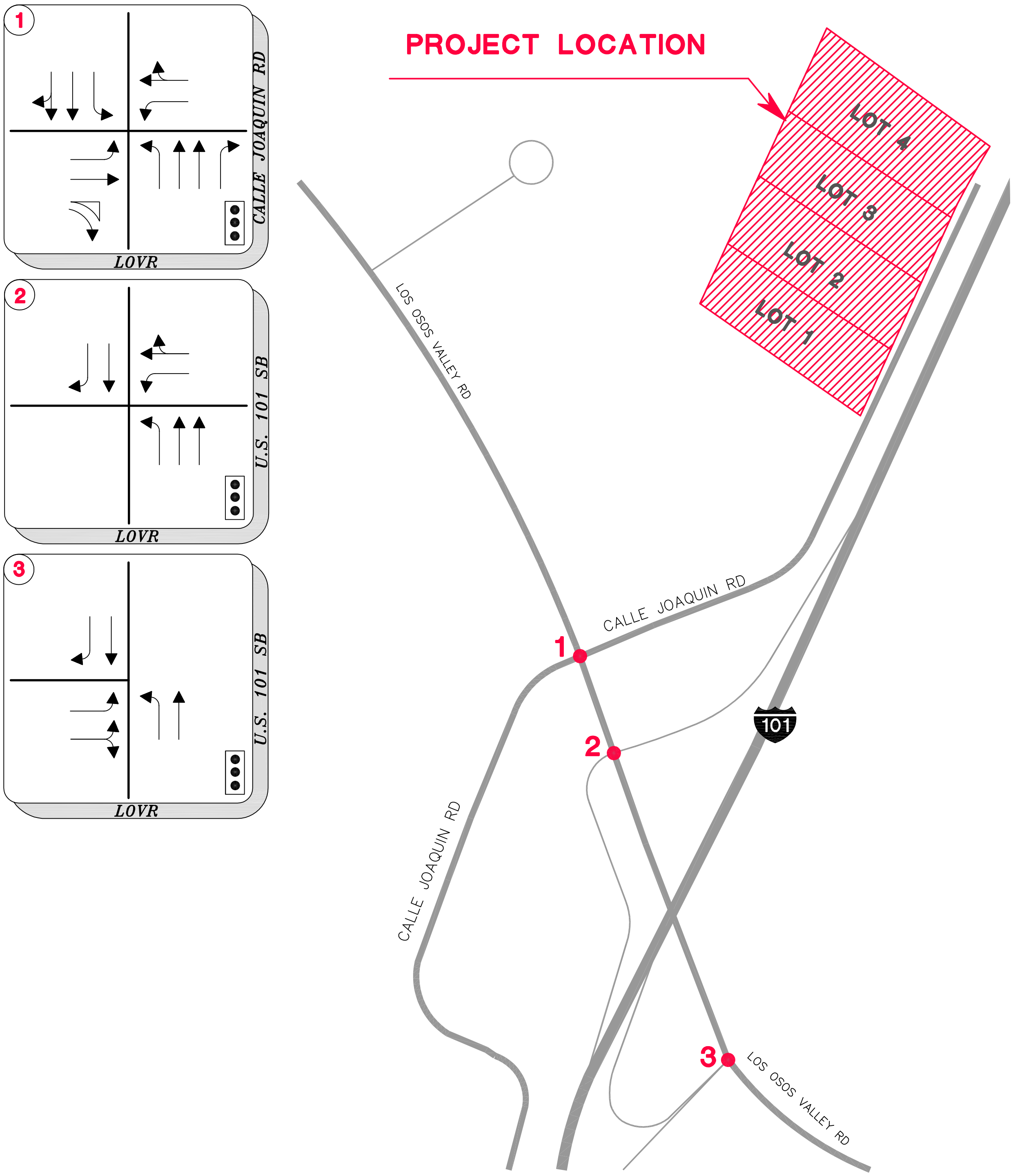
Calle Joaquin is a two lane, north-south arterial between south of Los Osos Valley Road to a cul-de-sac north, near the proposed project.

Existing Traffic Volumes

The City of SLO provided AM and PM intersection turning movement traffic counts along with Synchro files for each of the study intersections. To provide a further database of existing and future conditions, available relevant transportation related data was collected from the City and State. This data included existing development, planned development proposals, and improvement plans.

Figure 2 shows the existing lane geometrics and control.

Figure 3 shows the existing peak hour volumes for the project study intersections.



1413 Calle Joaquin Develpement

Figure 2

Existing Lane Geometrics and Control

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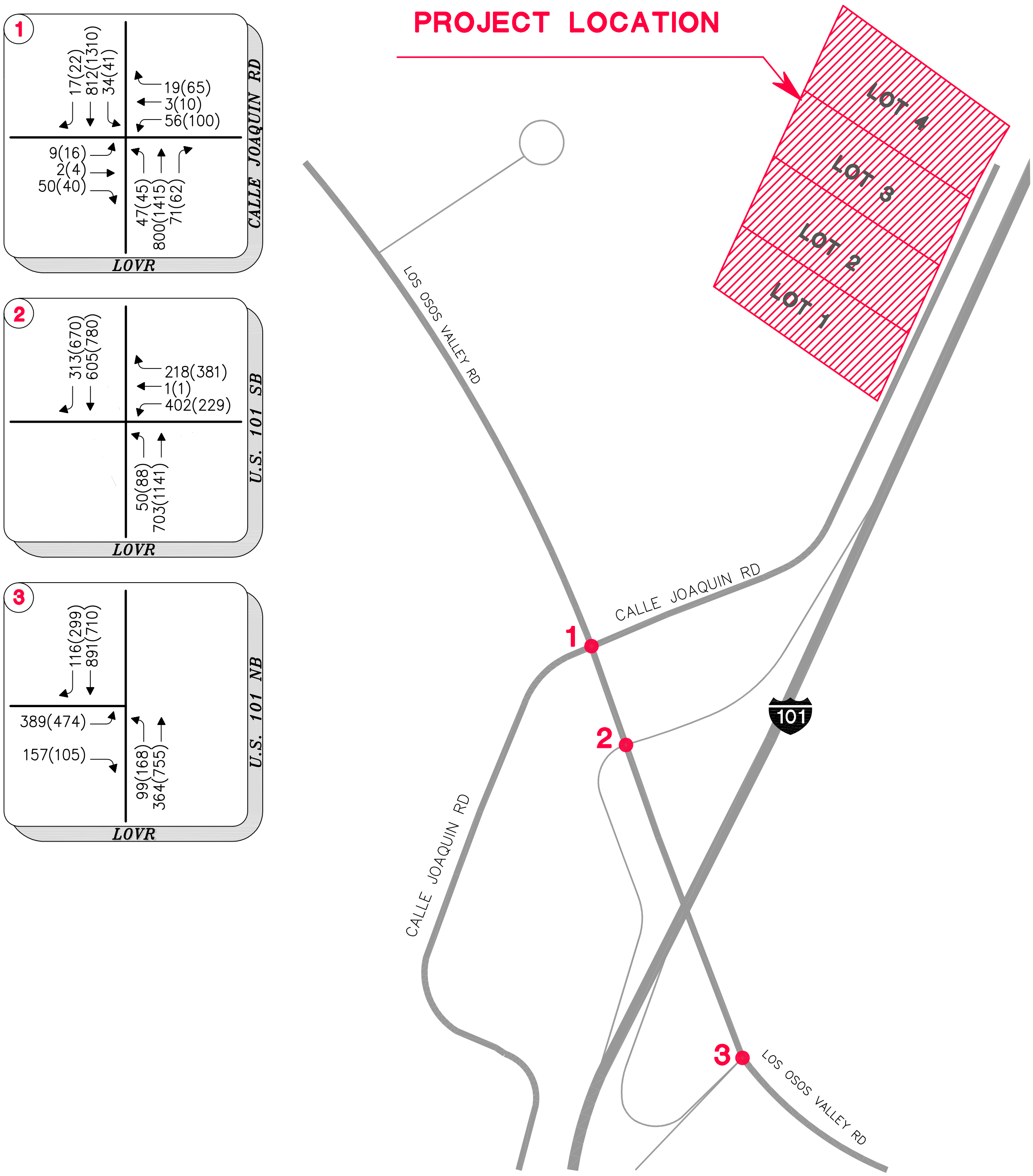


LEGEND:
XX – AM PEAK HOUR TRAFFIC VOLUMES
(XX) – PM PEAK HOUR TRAFFIC VOLUMES

1413 Calle Joaquin Develpement

Figure 3

Existing Peak Hour Traffic Volumes

Existing Pedrestrian and Bicycles Facilities

In the immediate project vicinity, the City roadway LOVR only has a sidewalk facility on the north side of the arterial. From the Calle Joaquin and LOVR intersection, the sidewalk extends to the east end of the LOVR overpass. Calle Joaquin has a sidewalk that stretches from the its intersection with LOVR up to the end of the cul-de-sac along the west side of Calle Joaquin.

Bike lanes are striped throughout the study intersections along both sides of LOVR. West of the LOVR and the US 101 SB intersection, the bike lanes are approximately 5 feet in width. East of the LOVR and the US 101 SB intersection, the bike lane tapers to approximately 3 foot in width and expands back to an a approximately 5 feet width at the east end of the LOVR/US 101 overpass along the north side of LOVR. There is also another bike lane on each side of Calle Joaquin that is an approximately 5 feet in width. Striping begins at the south end of Lot 1 and ends at the cul-de-sac.

Level of Service Methodologies & Guidelines

Intersection level-of-service (LOS) has been calculated for all control types using the methods documented in the Transportation Research Board publication *Highway Capacity Manual (HCM) 2010*. LOS determinations are presented on a letter grade scale from “A” to “F”, whereby LOS A represents free-flow operating conditions and LOS “F” represents over-capacity conditions. LOS definitions for different types of intersection controls are presented in Table 1. Intersection LOS will be calculated for all control types using the *Synchro 8* software by Trafficware, implementing the methods documented in HCM 2010.

The City of SLO currently maintains its General Plan Circulation Element that is accessible via the City's website[1]. Within the General Plan, the City of SLO has designated LOS "D' as the minimum acceptable LOS standard on arterial streets and parkway arterials.

In addition, Caltrans published *Guide for the Preparation of Traffic Impact Studies* (dated December 2002) states the following:

> *“Caltrans endeavors to maintain a target LOS at the transition between LOS “C” and LOS “D” on State highway facilities, however, Caltrans acknowledges that this may not be always feasible and recommends that the lead agency consult with Caltrans to determine the appropriate target LOS.”*

Based on the City General Plan policies and Caltrans guidelines, acceptable LOS for both Caltrans jurisdictions (ramps) and SLO City facilities will be determined at LOS D or better.

[1] *http://www.slocity.org/communitydevelopment/download/unifiedgeneralplan/Chapter2-Circulation%20(Web).pdf*

TABLE 1
LEVEL OF SERVICE (LOS) CRITERIA FOR INTERSECTIONS

Level of Service	Type of Flow	Delay	Maneuverability	Stopped Delay/Vehicle		
				Signalized	Un signalized	All-Way Stop
A	Stable Flow	Very slight delay. Progression is very favorable, with most vehicles arriving during the green phase not stopping at all.	Turning movements are easily made, and nearly all drivers find freedom of operation.	< 10.0	< 10.0	< 10.0
B	Stable Flow	Good progression and/or short cycle lengths. More vehicles stop than for LOS A, causing higher levels of average delay.	Vehicle platoons are formed. Many drivers begin to feel somewhat restricted within groups of vehicles.	>10.0 and < 20.0	>10.0 and < 15.0	>10.0 and < 15.0
C	Stable Flow	Higher delays resulting from fair progression and/or longer cycle lengths. Individual cycle failures may begin to appear at this level. The number of vehicles stopping is significant, although many still pass through the intersection without stopping.	Back-ups may develop behind turning vehicles. Most drivers feel somewhat restricted	>20.0 and < 35.0	>15.0 and < 25.0	>15.0 and < 25.0
D	Approaching Unstable Flow	The influence of congestion becomes more noticeable. Longer delays may result from some combination of unfavorable progression, long cycle lengths, or high volume-to-capacity ratios. Many vehicles stop, and the proportion of vehicles not stopping declines. Individual cycle failures are noticeable.	Maneuverability is severely limited during short periods due to temporary back-ups.	>35.0 and < 55.0	>25.0 and < 35.0	>25.0 and < 35.0
E	Unstable Flow	Generally considered to be the limit of acceptable delay. Indicative of poor progression, long cycle lengths, and high volume-to-capacity ratios. Individual cycle failures are frequent occurrences.	There are typically long queues of vehicles waiting upstream of the intersection.	>55.0 and < 80.0	>35.0 and < 50.0	>35.0 and < 50.0
F	Forced Flow	Generally considered to be unacceptable to most drivers. Often occurs with over saturation. May also occur at high volume-to-capacity ratios. There are many individual cycle failures. Poor progression and long cycle lengths may also be major contributing factors.	Jammed conditions. Back-ups from other locations restrict or prevent move-ment. Volumes may vary widely, depending prin-cipally on the downstream back-up conditions.	> 80.0	> 50.0	> 50.0

References: 2010 and 2000 Highway Capacity Manual

Significance and Mitigation Thresholds

In accordance with the June 2000 City of SLO *Traffic Impact Study Preparation Guidelines*, A project is considered to have a significant traffic impact for signalized and unsignalized intersections when:

- The addition of project traffic to a signalized intersection exceeds the thresholds provided in the Table 2.
- The project's access to a major street requires an access that would create an unsafe situation or a new traffic signal, and/or major revisions to an existing traffic signal.
- The project adds traffic to a street with design features (e.g., narrow width, roadside ditches, sharp curves, poor sight distance, and inadequate pavement structure) that may cause potential safety problems with the addition of project traffic.

TABLE 2
SIGNALIZED INTERSECTION THRESHOLDS OF SIGNIFICANCE
FOR TRAFFIC IMPACT STUDIES

	THRESHOLD CRITERIA	GUIDELINES BASED ON PROJECTED TRIPS GENERATED FROM PROJECT	
Pre-Project LEVEL OF SERVICE (LOS)	PER LANE PEAK HOUR TRIPS ADDED TO CRITICAL MOVEMENTS	TOTAL PROJECT PEAK HOUR TRIP GENERATION	PROJECT PEAK HOURS TRIPS ENTERING A CRITICAL INTERSECTION
C	>45	150-540	90-180
D	>15	50-180	30-60
E	>10	30-120	20-40
F	>5	15-60	10-20

- The addition of project plus cumulative traffic to a signalized intersection increases the volume to capacity (V/C) ratio by the V/C threshold in Table 2
- If the above thresholds are exceeded, the Developer may be required to construct improvements or implement other methods to reduce the level of impact to insignificance. The thresholds of significance identified above assume full contribution to the Traffic Mitigation Fee Fund.
- The addition of project, or project plus cumulative, traffic to an unsignalized intersection increases the level of service to an unacceptable level. The Highway Capacity Manual shall determine Level of Service at unsignalized intersections.

Existing Intersection Operations

Existing AM and PM peak hour intersection traffic operations were quantified utilizing the existing traffic volumes (Figure 3) and the existing intersection lane geometrics and control (Figure 2). Table 3 contains a summary of the *Existing* study intersection LOS conditions.

TABLE 3
EXISTING INTERSECTION LEVEL OF SERVICE

#	Intersection	Control Type[1,2]	Target LOS	Hour		Hour	
				Delay	LOS	Delay	LOS
1	Los Osos Valley Road/Calle Joaquin Road	Signal	D	3.9	A	6.0	A
2	Los Osos Valley Road/US 101	Signal	D	22.7	C	30.8	C
3	Los Osos Valley Road/US 101	Signal	D	20.9	C	17.4	B

Notes:
1. AWSC = All Way Stop Control; TWSC = Two Way Stop Control; RNDBT = Roundabout
2. LOS = Delay based on worst minor street approach for TWSC intersections, average of all
3. Warrant = Based on California MUTCD Warrant 3

As shown in Table 3, all study intersections operate at an acceptable LOS.

Project Description

The project will be located in the southern portion of the City, north of Los Osos Valley Road (LOVR) on Calle Joaquin, just west of US 101. The term “project”, as used in this report, refers to the 1413 Calle Joaquin development which is 4 parcels totaling to a 11.29 acre site. The build out year for this project is 2016. The Towneplace Suites (hotel) is proposed on Lot 3 (APN 053-152-003). The remaining three parcels are proposed as a rezoning only. The project applicant has applied for a rezone from Commercial Service to Commercial Retail. The Corresponding General Plan Amendment would be a change from Services and Manufacturing to General Retail. The site plan for Lots 1, 2, and 4 are not yet determined, but their general site plan is depicted in Figure 4A. The site plan for Towneplace Suites in Lot 3 is shown in Figure 4B.

Project Trip Generation

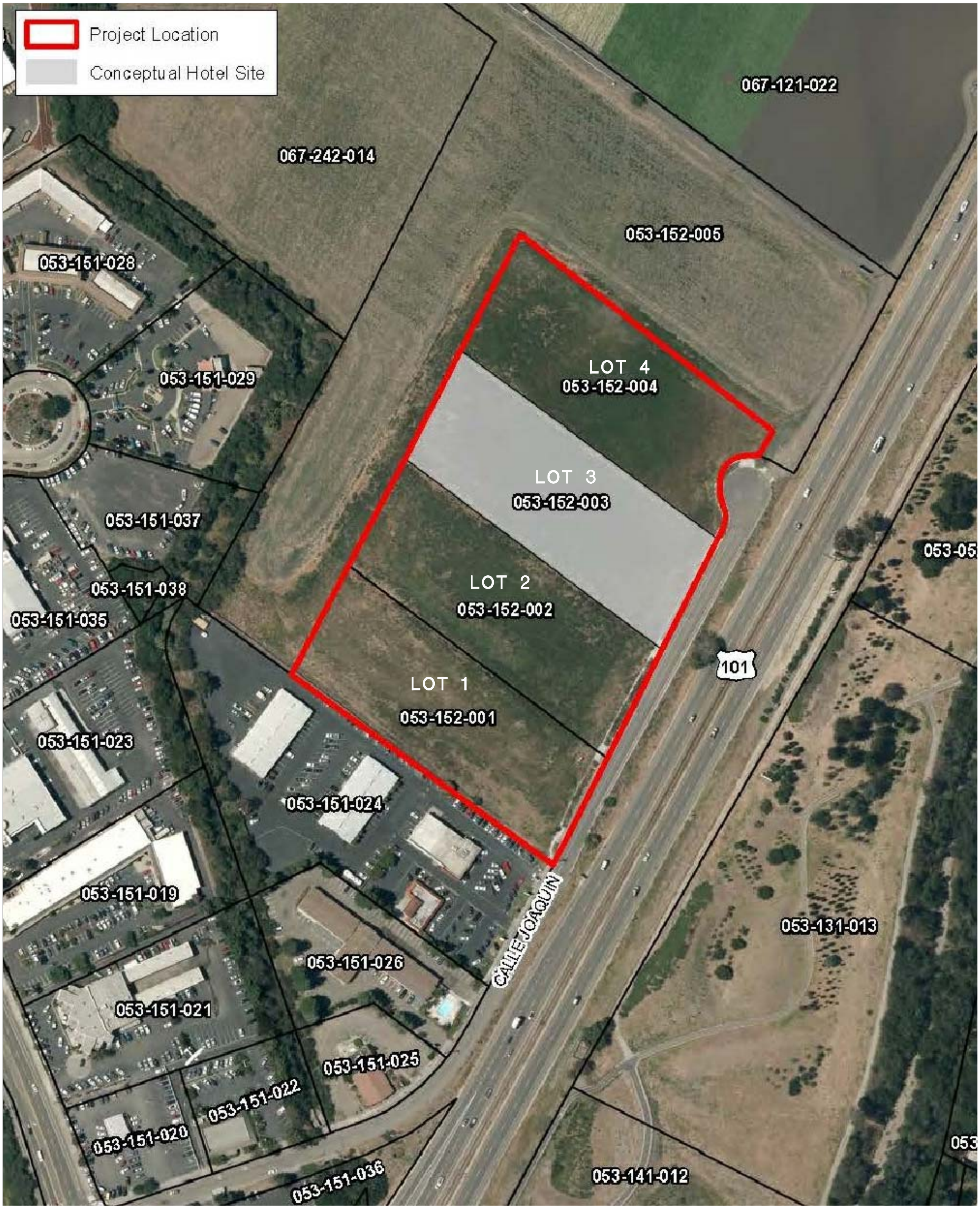
Trip generation estimate was provided for weekday AM and PM peak hour conditions during normal operating months. The trip generation rates were determined using Institute of Transportation Engineers' (ITE) *Trip Generation Manual (9th Ed).* Trip generation estimates for the proposed project have been first divided by individual parcel, and then aggregated to provide an estimate of total project trip generation potential.

Lot 1, 2 & 4 - Individual Parcel Trip Generation Estimates

The project trip generation for the three Commercial Retail parcels were calculated based on the shopping center land use (820) in the ITE *Trip Generation Manual (9th Ed)*. Using the criteria contained in the City's *General Plan Land Use section 3.1.2* and the City's zoning requirements *(Table 9: Uses Allowed by Zone of San Luis Obispo Municipal Code)*, the "Shopping Center" land use represents the "reasonable worst-case scenario" land-use from a trip generation perspective. The combined lot acreage for the three parcels is 8.46 acres. Each of the three parcels are approximately 2.82 acres in size. The City permits a maximum 0.33 floor to site area ratio to building size. Using the maximum ratio, the maximum building size for each parcel would be approximately, 39,800 sq. ft. The trip generation estimates associated with each parcel during AM and PM peak hour conditions are presented in Table 4.

Lot 3 - Towneplace Suites Trip Generation Estimates

To determine trip generation for the proposed Towneplace Suites Project, the Hotel land use (310) in the ITE *Trip Generation Manual (9th Ed)* was utilized. The trip generation rates are based on the applicant's estimate of a maximum of 115 guest rooms. Trip generation estimate for Lot 3 is also in Table 4.



1413 Calle Joaquin Develpement

Figure 4A

Project Site Plan

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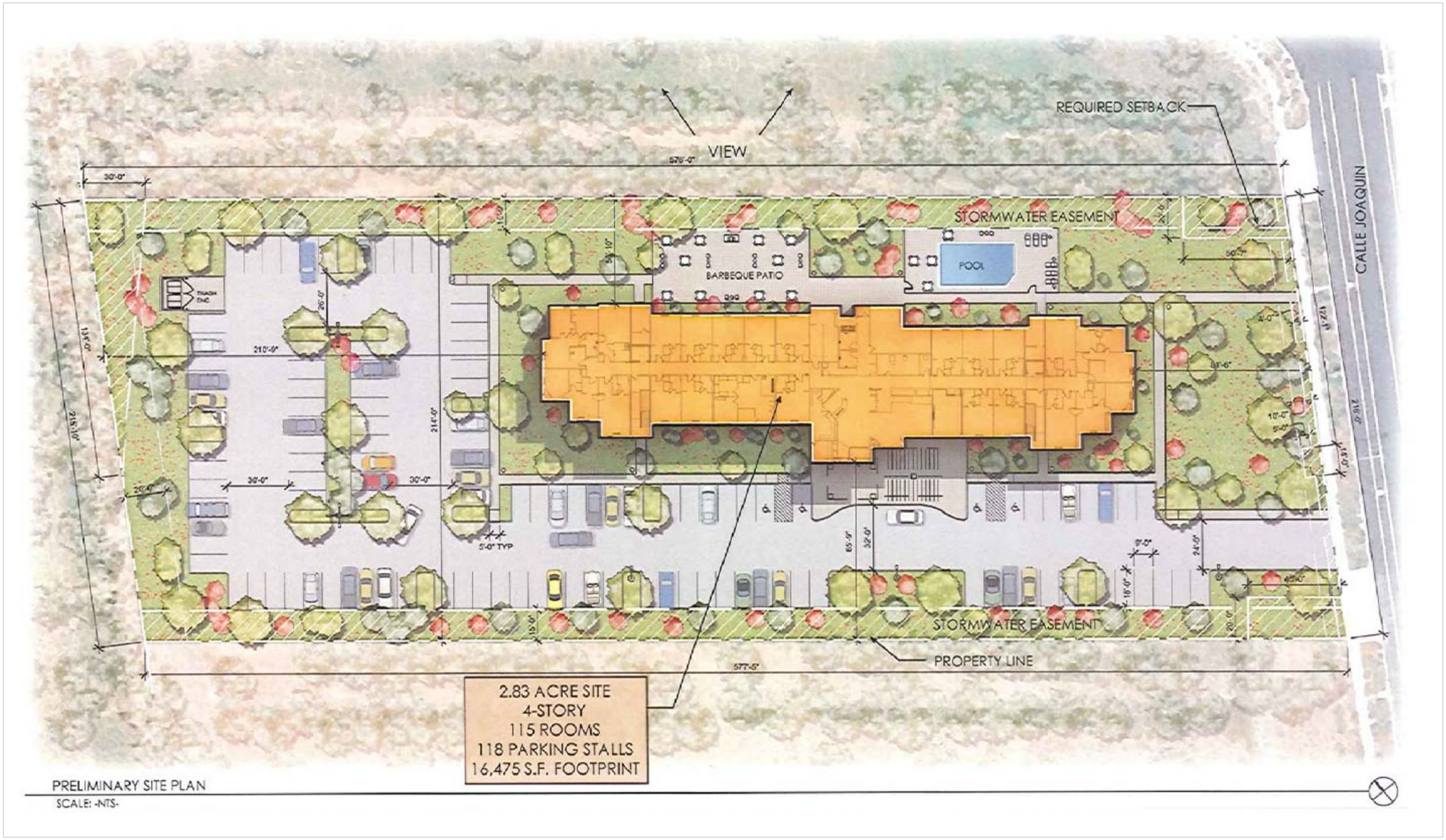

1413 Calle Joaquin Development

Figure 4B

Lot 3 Project Site Plan

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Job No:

TABLE 4
PROJECT TRIP GENERATION

Land Use Category (ITE Code)	**Unit[1]**	**AM Peak Hour Trip Rate/Unit**			**PM Peak Hour Trip Rate/Unit**		
		Total	**In %**	**Out %**	**Total**	**In %**	**Out %**
Shopping Center (820)	ksf	2.24	62%	38%	8.12	48%	52%
Hotel (310)	Rooms	0.53	59%	41%	0.60	51%	49%
Project Name	**Quantity**	**AM Peak Hour Trips**			**PM Peak Hour Trips**		
	(Units)	**Total**	**In**	**Out**	**Total**	**In**	**Out**
Lot 1 - Shopping Center Use (Ksf)	39.80	89	55	34	323	155	168
Lot 2 - Shopping Center Use (Ksf)	39.80	89	55	34	323	155	168
Lot 3 -Towneplace Suites Hotel (Rooms)	115	61	36	25	69	35	34
Lot 4 - Shopping Center Use (Ksf)	39.80	89	55	34	323	155	168
Total Project Trips		**328**	**201**	**127**	**1,038**	**501**	**538**

Notes:
1. 1 ksf = 1,000 square feet
2. Trip rates based on ITE Trip Generation Manual 9th edition

As shown in Table 4, all 4 parcels are estimated to generate 328 AM peak hour trips and 1,038 PM peak hour trips.

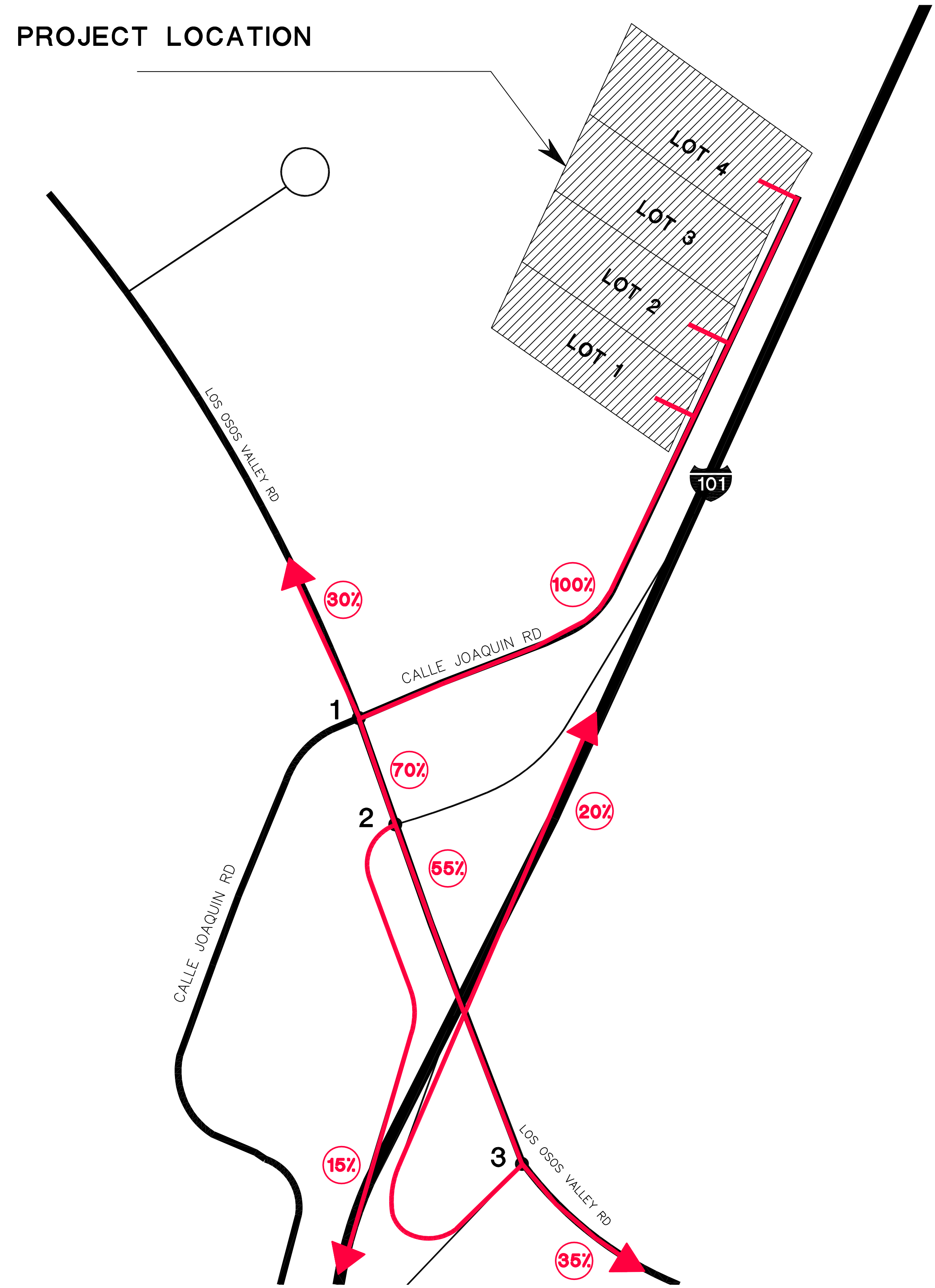
Project Trip Distribution

Based on an analysis of the trip making characteristics of the proposed project along with area demographics, the trip distribution of project-generated traffic is estimated. Traffic will be assigned to the existing street system based on logical travel patterns associated with this directional distribution.

Figure 5A depicts the trip distribution based on the commercial retail for Lots 1,2,4

Figure 5B depicts the trip distribution based on the Towneplace Suites (Hotel) for Lot 3.

Figure 6 depicts the total project only peak hour traffic volumes for all the lots.



1413 Calle Joaquin Develpement

Figure 5A

Proposed Trip Distribution - Lot 1,2,4 (Commercial Retail)

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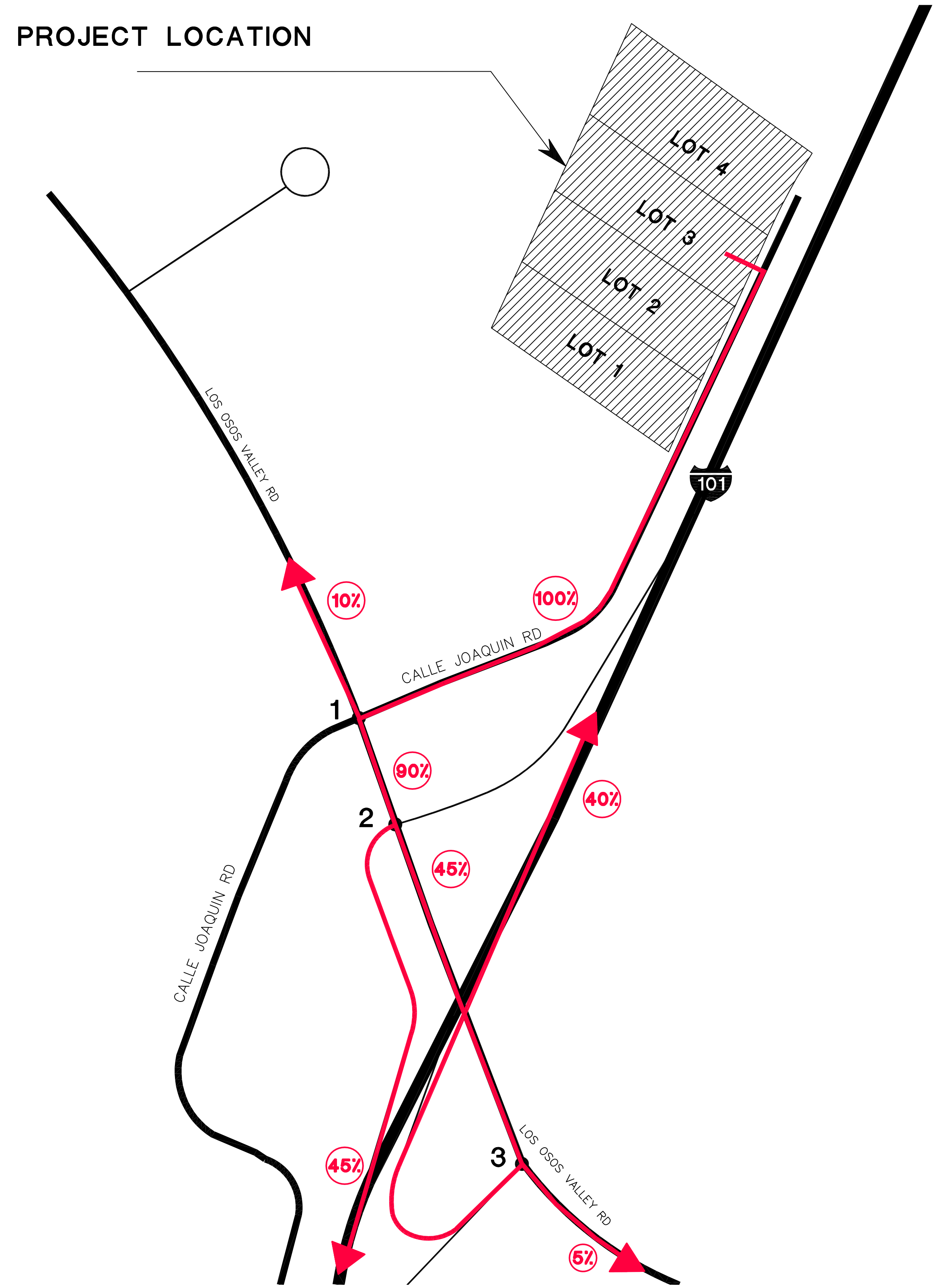
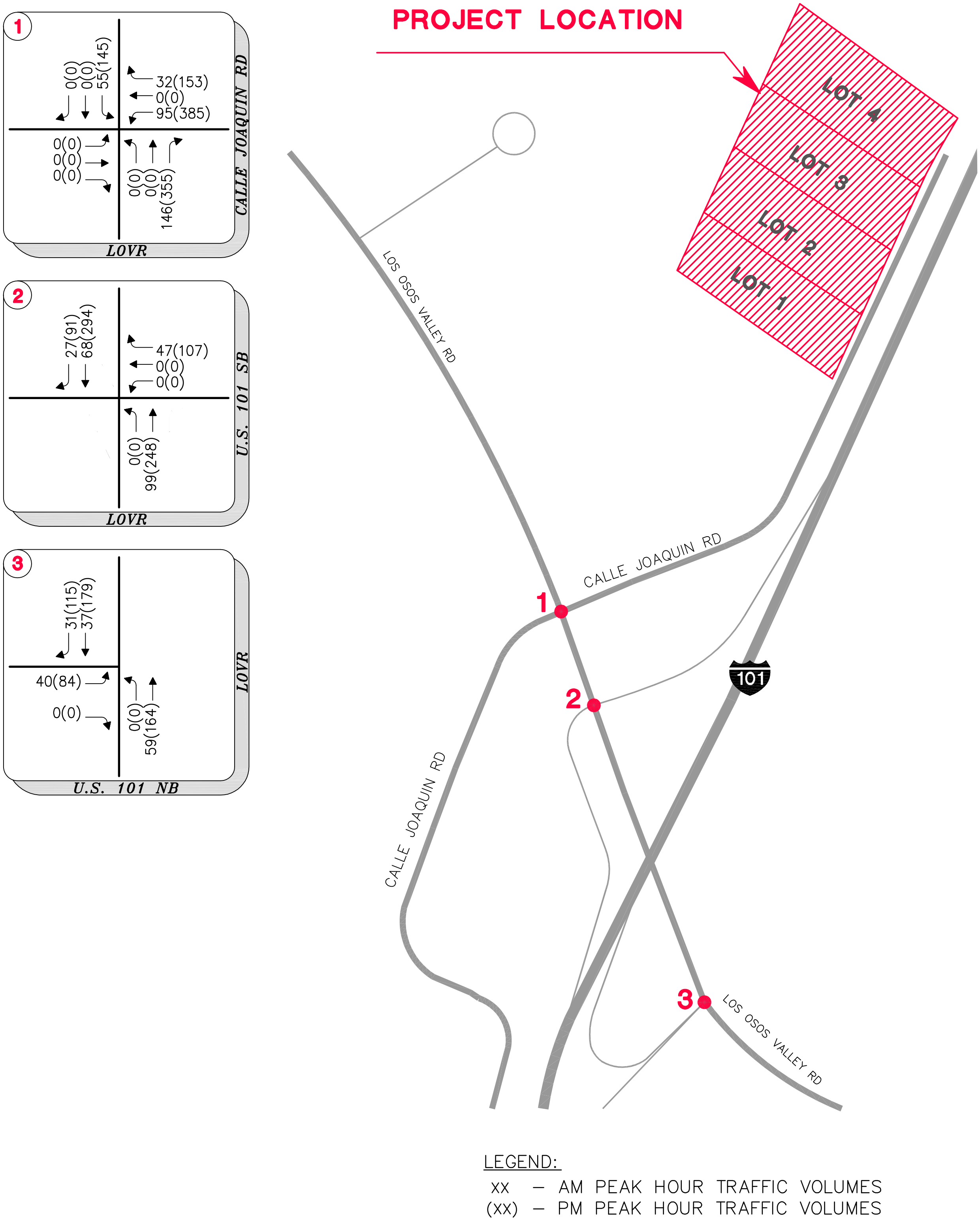


1413 Calle Joaquin Develpement

Figure 5B

Proposed Trip Distribution - Lot 3 (Hotel)



1413 Calle Joaquin Develpement

Figure 6

2016 Project Only Peak Hour Traffic Volumes

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Year 2016 No Project Conditions

The Year 2016 *No Project* condition is the build out of approved/pending land development within the City. The volumes were projected using a one percent growth rate determined by the U.S. Census historical population data.

Short Term No Project Intersection Operations

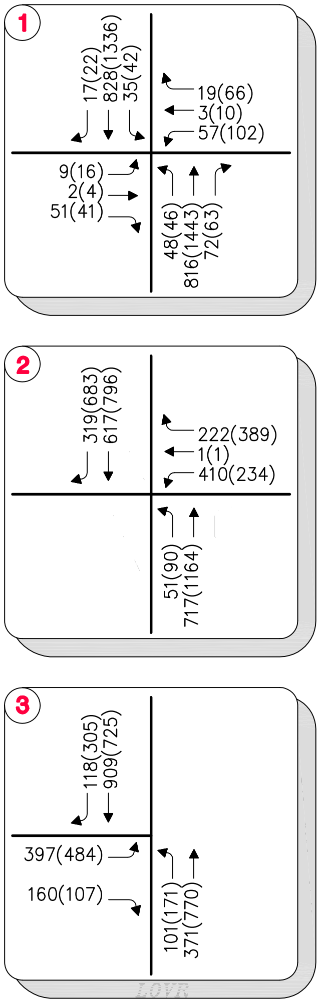
When comparing the Existing Conditions to the Year 2016 *No Project* conditions, the Year 2016 *No Project* conditions show an increase in trips anywhere from one vehicle up to 16 vehicles for the project study intersections. There was no impact on the LOS at the project study intersections. Table 5 contains a summary of the short term 2016 *No* Project study intersection LOS conditions.

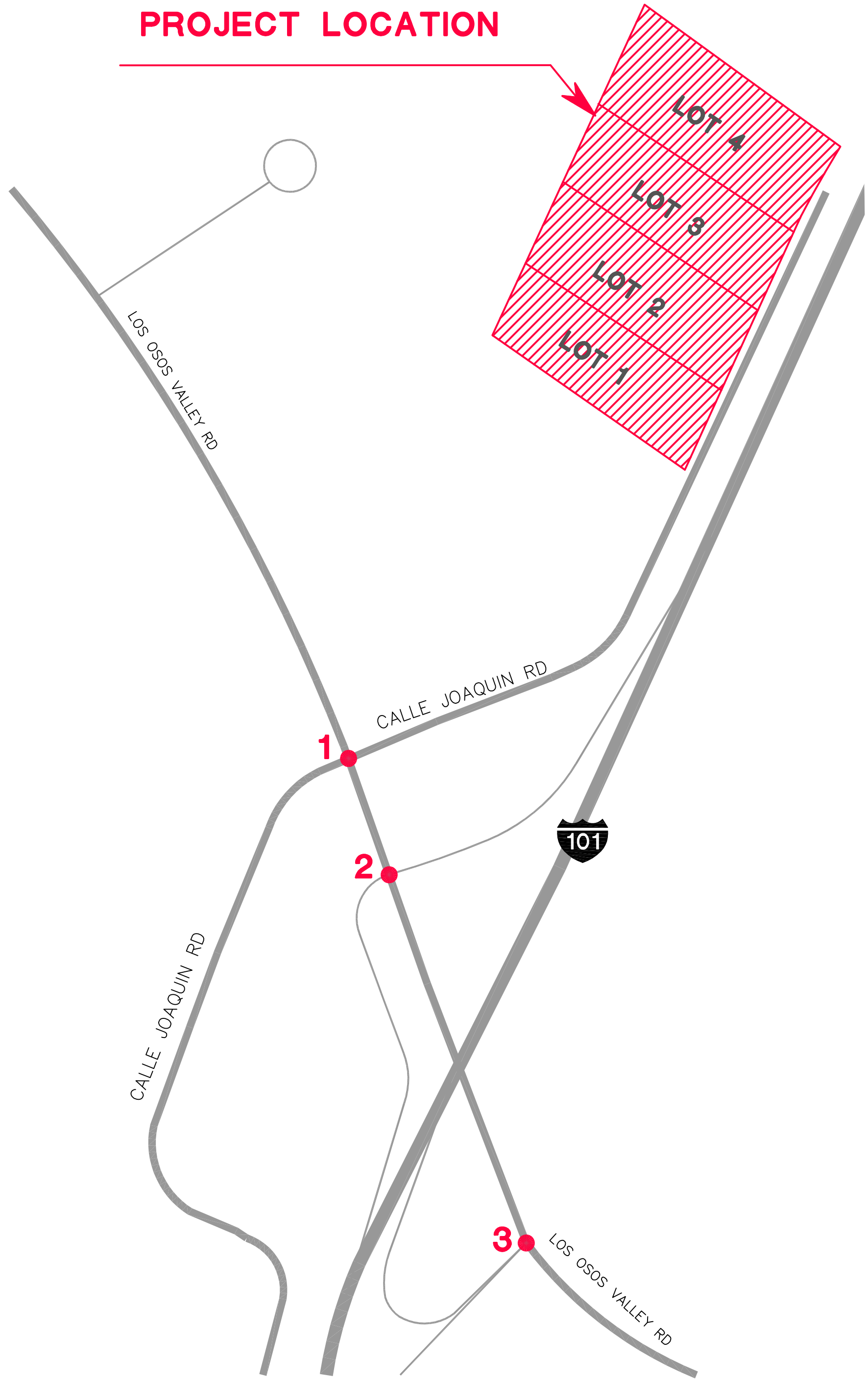
TABLE 5
2016 *NO PROJECT* INTERSECTION LEVEL OF SERVICE

#	Intersection	Control Type[1,2]	Target LOS	Hour		Hour	
				Delay	LOS	Delay	LOS
1	Los Osos Valley Road/Calle Joaquin Road	Signal	D	3.9	A	5.7	A
2	Los Osos Valley Road/US 101	Signal	D	24.2	C	29.1	C
3	Los Osos Valley Road/US 101	Signal	D	21.1	C	12.3	B

Notes:
1. AWSC = All Way Stop Control; TWSC = Two Way Stop Control; RNDBT = Roundabout
2. LOS = Delay based on worst minor street approach for TWSC intersections, average of all approaches
3. Warrant = Based on California MUTCD Warrant 3

As shown in Table 5, all study intersections operate at an acceptable LOS. Figure 7 shows the intersection traffic volumes for Year 2016 *No Project* conditions.





LEGEND:
XX – AM PEAK HOUR TRAFFIC VOLUMES
(XX) – PM PEAK HOUR TRAFFIC VOLUMES

1413 Calle Joaquin Develpement Figure 7

2016 No Project Peak Hour Traffic Volumes

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Year 2016 Plus Project Conditions

The Year 2016 *Plus Project* condition is the analysis scenario in which traffic impacts associated with the proposed project are investigated in comparison to the Year 2016 *No Project* conditions scenario.

Year 2016 Plus Project Intersection Operations

The Year 2016 *Plus Project* AM and PM peak hour intersection traffic operations were quantified adding Year 2016 *Project Only* peak hour traffic volumes (Figure 7) to the Year 2016 *No Project* traffic volumes using the existing lane geometrics and control (Figure 2). Figure 8 shows the Year 2016 *Plus Project* traffic volumes. Table 6 contains a summary of the Year 2016 *Plus Project* study intersections LOS conditions.

TABLE 6
YEAR 2016 *PLUS PROJECT* INTERSECTION LEVEL OF SERVICE

#	Intersection	Control Type[1,2]	Target LOS	AM Peak Hour		PM Peak Hour	
				Delay	LOS	Delay	LOS
1	Los Osos Valley Road/Calle Joaquin Road	Signal	D	7.4	A	31.4	C
2	Los Osos Valley Road/US 101 Southbound	Signal	D	25.5	C	52.9	D
3	Los Osos Valley Road/US 101 Northbound	Signal	D	22.7	C	28.0	C

As shown in Table 6, all study intersections are projected to operate at an acceptable LOS.

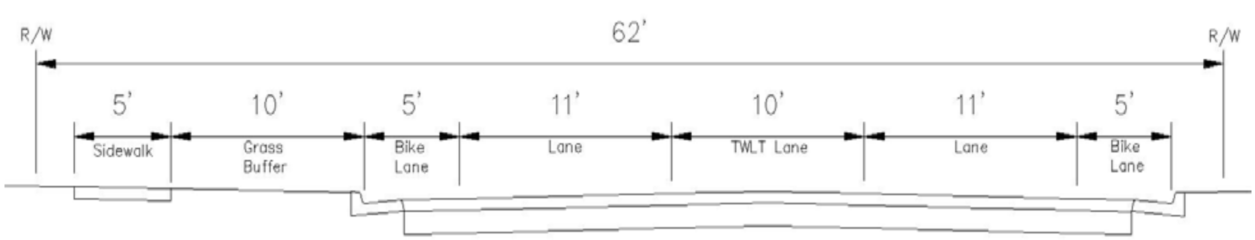
On-Site Circulation

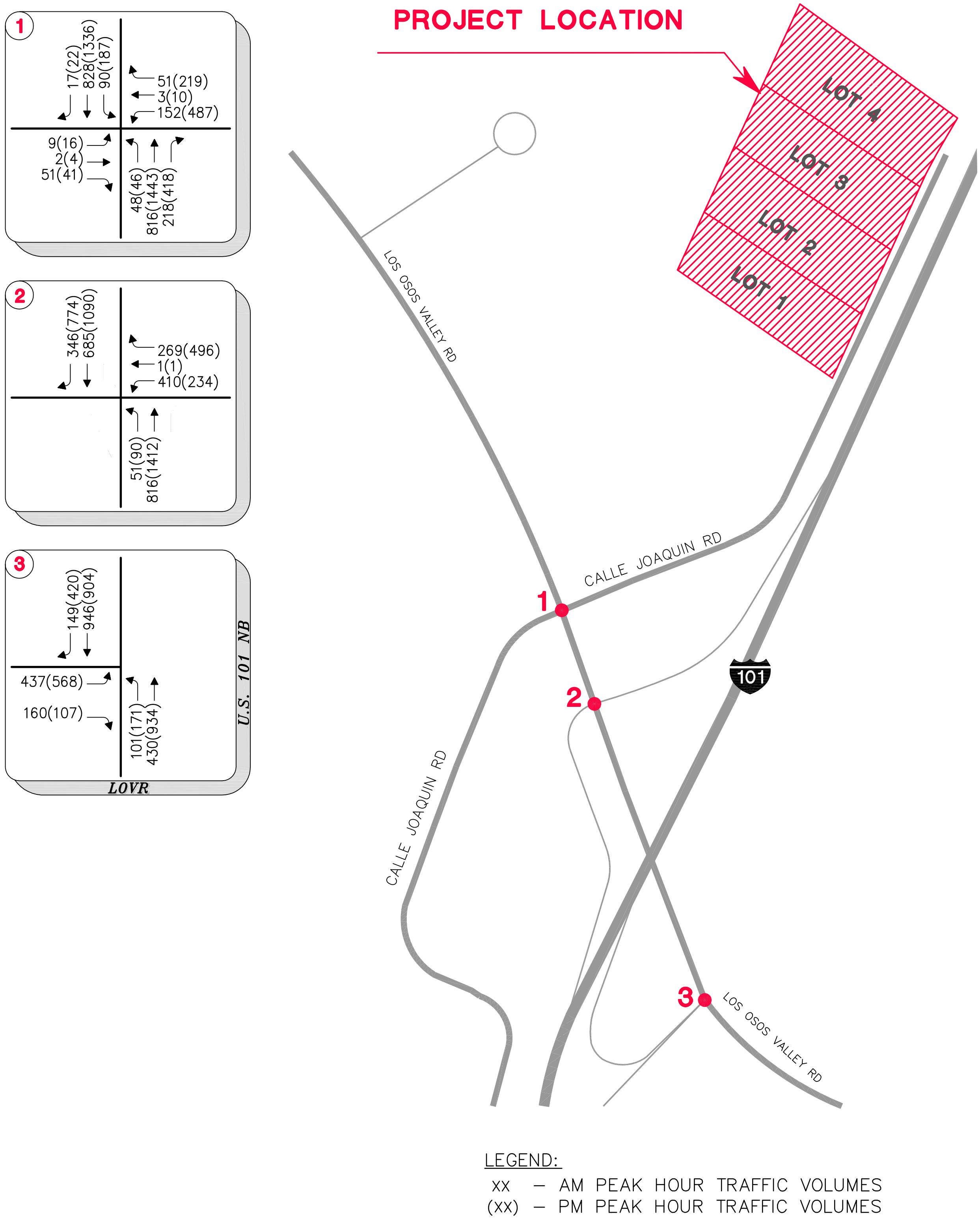
Each parcel will have their own driveway access. Along Calle Joaquin and at its intersection with LOVR, the following recommendations have been made to alleviate traffic generated from the project and provide a safer transportation environment:

- From its intersection at LOVR, stripe Calle Joaquin with 650 feet of storage for the southbound left turn, with a 90 foot taper transitioning to a two-way-left-turn lane (TWLTL) to the end of the project frontage; providing a safer environment for all transportation modes
- 5 foot bicycle lane in both directions
- 5 foot sidewalk on the west side of Calle Joaquin
- 10 foot grass buffer between the sidewalk and curb

Insert 1 shows a cross section of the recommendations for Calle Joaquin.

Insert 1: Calle Joaquin Cross-Section





1413 Calle Joaquin Develpement

Figure 8

2016 Plus Project Peak Hour Traffic Volumes

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Cumulative (Year 2035) Conditions

The long-term future year traffic forecast for this study have been developed using the LOVR/US 101 Interchange Improvement Project Draft EIR.

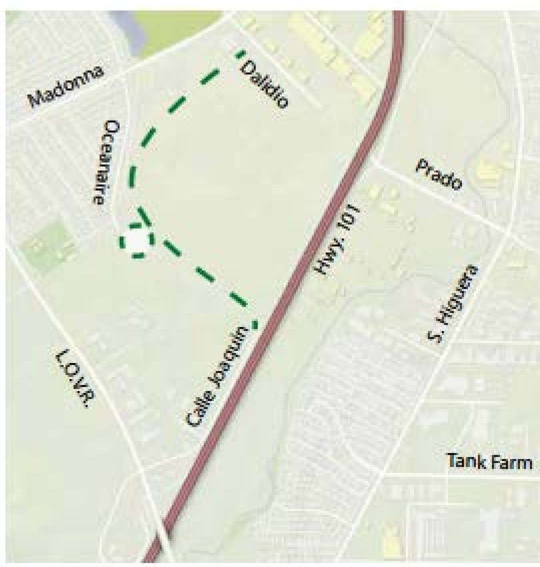
Programmed Improvements

The following roadway improvements are identified in the LOVR Traffic Relief Project and included in the 2035 conditions. Figure 9 shows the lane geometrics and control for the Year 2035.

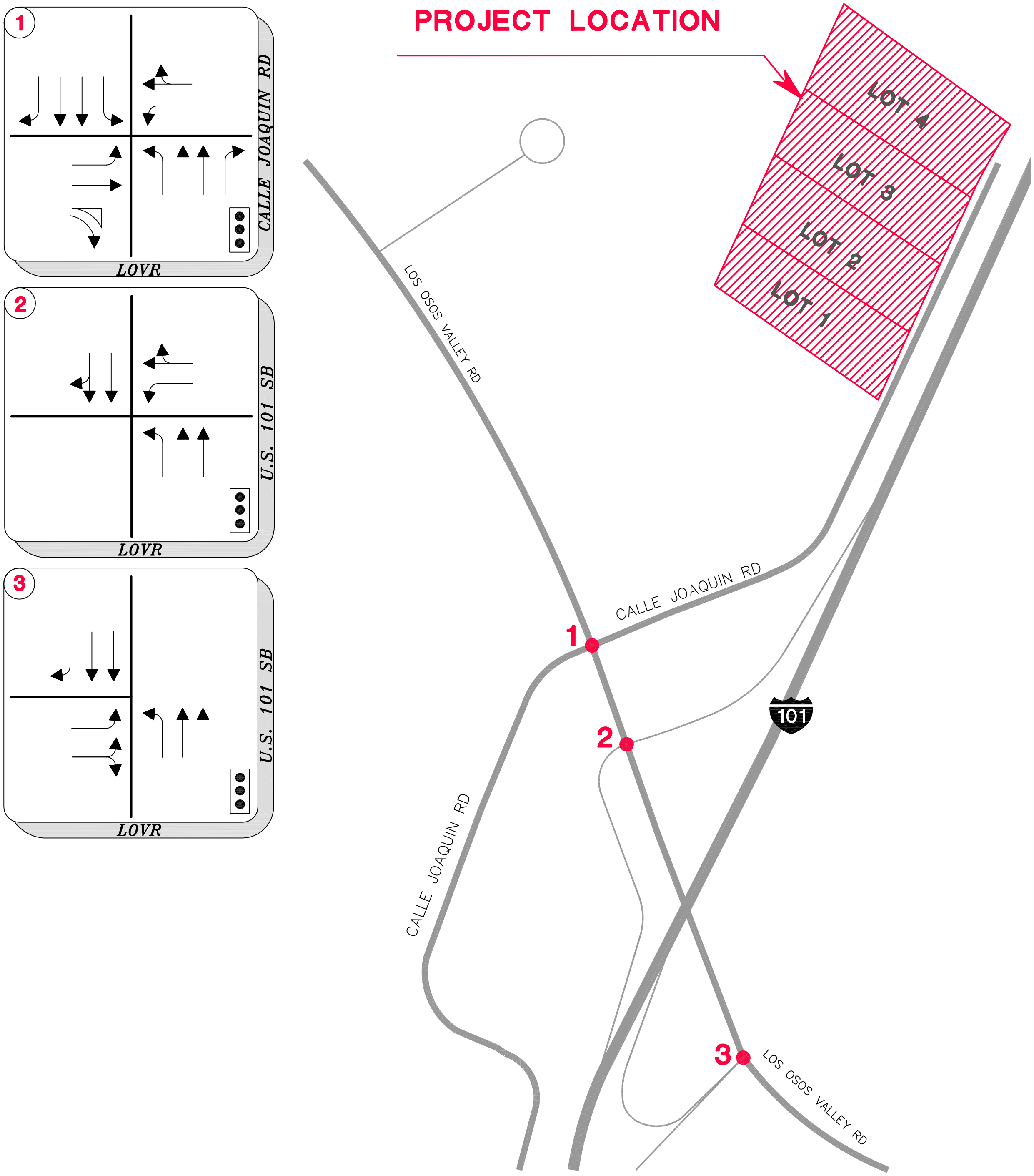
- Construction of a separate bridge on LOVR over US 101 to provide an additional eastbound lane
- Widening of the bridge crossing over SLO Creek
- Improvements for pedestrian and bicycle access along both sides of LOVR
- Widening of the north and south bound ramps

In addition, the City of SLO Bicycle Transportation Plan, November 5, 2013, provides the location of bicycle routes proposed in the vicinity of the project. A Class I Bike Path from Prado Road, east side of drainage swale, south of Prefumo Creek and east of Calle Joaquin is proposed, as shown in Insert 2 below.

Insert 2:
Class I Bike Path



Source: City of San Luis Obispo Bicycle Transportation Plan



LEGEND:
XX — AM PEAK HOUR TRAFFIC VOLUMES
(XX) — PM PEAK HOUR TRAFFIC VOLUMES

1413 Calle Joaquin Develpement

Figure 9

2035 Lane Geometrics and Control

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As shown in Insert 2, the proposed Class I bike path would need to be located along the creek adjacent to Lot 4. From the creek, the path is connecting to the end of Calle Joaquin.

Year 2035 No Project Conditions

Year 2035 *No Project* conditions analysis establishes the baseline traffic conditions observed in Year *2035*. The Year 2035 *No Project* condition is the analysis scenario in which future operations at study locations, assuming no project development, are analyzed. Year 2035 *No Project* conditions refers to a cumulative *No Project* condition where the proposed development remains undeveloped through year 2035 and year 2035 model land uses are assumed elsewhere. Year 2035 *Plus Project* conditions were assumed to be included in the Draft EIR based on the volume difference. The 2035 *No Project* conditions were derived by subtracting out the proposed project-generated traffic from the 2035 *Plus Project* conditions. Figure 10 shows the Year 2035 *No Project* intersection traffic volumes.

Year 2035 No Project Intersection Operations

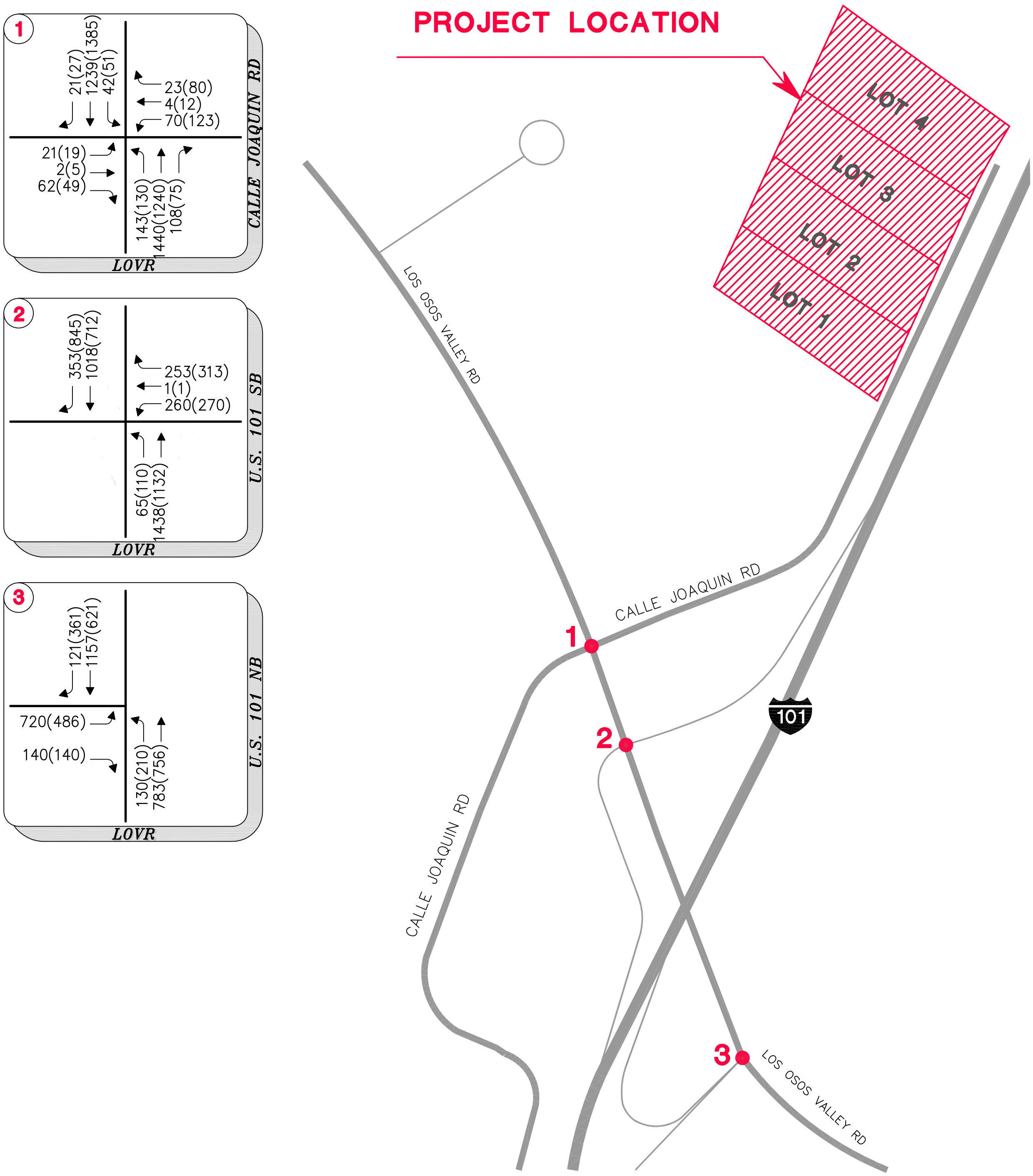
Table 7 contains a summary of the *Year 2035 No Project* study intersection LOS conditions.

TABLE 7
YEAR 2035 *NO PROJECT* INTERSECTION LEVEL OF SERVICE

#	Intersection	Control Type[1,2]	Target LOS	Hour		Hour	
				Delay	LOS	Delay	LOS
1	Los Osos Valley Road/Calle Joaquin Road	Signal	D	4.6	A	7.9	A
2	Los Osos Valley Road/US 101	Signal	D	19.4	B	32.8	C
3	Los Osos Valley Road/US 101	Signal	D	21.2	C	15.5	B

Notes:
1. AWSC = All Way Stop Control; TWSC = Two Way Stop Control; RNDBT = Roundabout
2. LOS = Delay based on worst minor street approach for TWSC intersections, average of all approaches
3. Warrant = Based on California MUTCD Warrant 3

As shown in Table 7, all study intersections are projected to operate at an acceptable LOS.



LEGEND:

XX – AM PEAK HOUR TRAFFIC VOLUMES

(XX) – PM PEAK HOUR TRAFFIC VOLUMES

1413 Calle Joaquin Develpement Figure 10

2035 No Project Peak Hour Traffic Volumes

Year 2035 Plus Project Conditions

Year 2035 Plus Project conditions retrieved from the Draft EIR of the LOVR/US101 Interchange Improvement Project prepared by Caltrans. Year 2035 *Plus Project* conditions were assumed to be included in the Draft EIR. For the 2035 cumulative conditions, the intersection of Calle Joaquin and LOVR was assumed to be upgraded and the lane usage was changed based on the deficiencies without changing the lane use. Figure 11 shows the Year 2035 *Plus Project* intersection traffic volumes.

Year 2035 Plus Project Conditions Intersection Operations

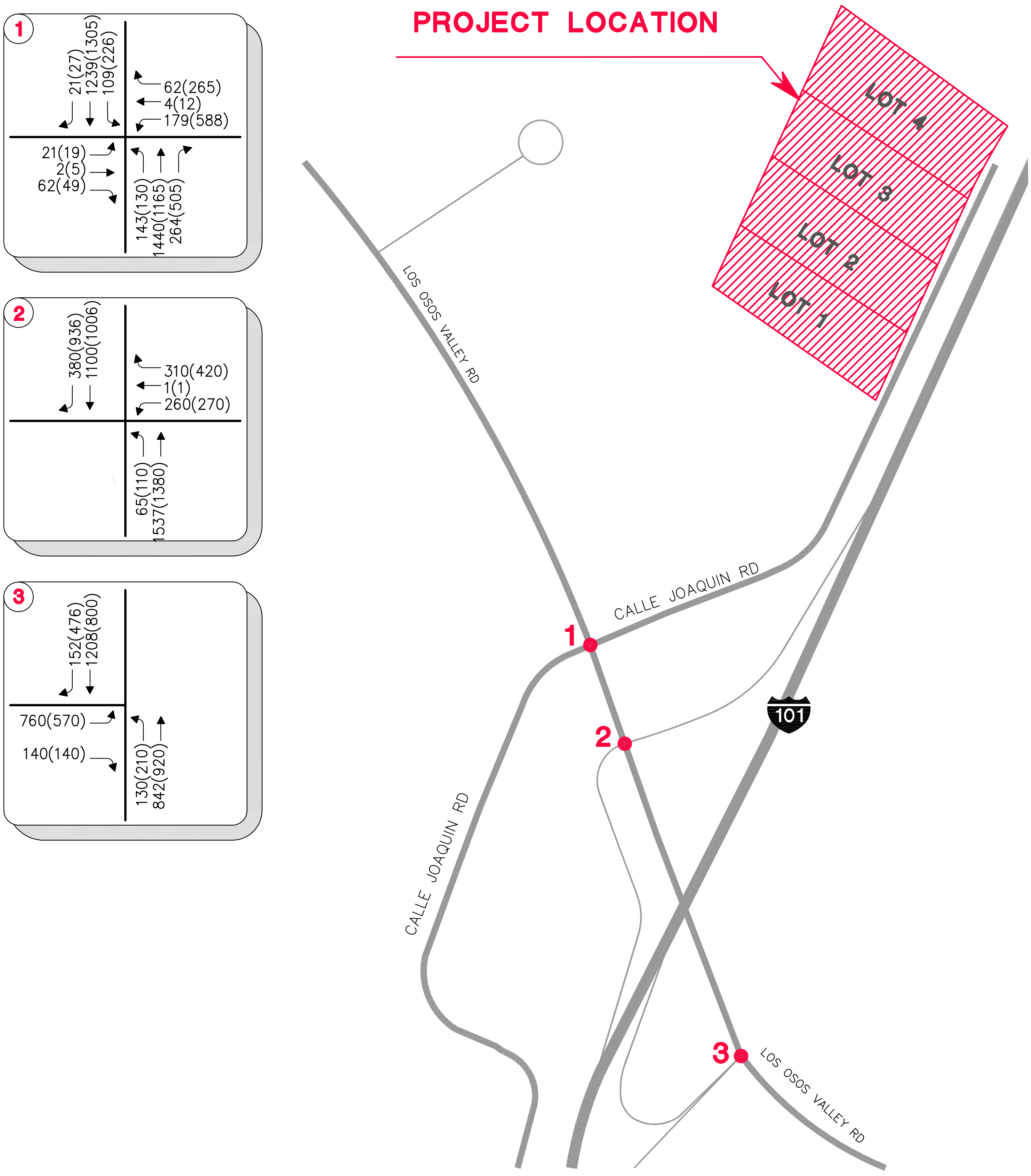
Table 8 contains a summary of the Year 2035 *Plus Project* study intersection LOS conditions.

TABLE 8
YEAR 2035 *PLUS PROJECT* INTERSECTION LEVEL OF SERVICE

#	Intersection	Control Type[1,2]	Target LOS	Hour		Hour	
				Delay	LOS	Delay	LOS
1	Los Osos Valley Road/Calle Joaquin Road	Signal	D	12.2	B	52.9	D
2	Los Osos Valley Road/US 101	Signal	D	26.6	C	48.4	D
3	Los Osos Valley Road/US 101	Signal	D	26.0	C	21.1	C

Notes:
1. AWSC = All Way Stop Control; TWSC = Two Way Stop Control; RNDBT = Roundabout
2. LOS = Delay based on worst minor street approach for TWSC intersections, average of all approaches
3. Warrant = Based on California MUTCD Warrant 3

As shown in Table 8, all study intersections are projected to operate at an acceptable LOS. Mitigation measures that address the LOS deficiencies are discussed in a subsequent section of this report.



LEGEND:

XX – AM PEAK HOUR TRAFFIC VOLUMES

(XX) – PM PEAK HOUR TRAFFIC VOLUMES

1413 Calle Joaquin Develpement

Figure 11

2035 Plus Project Peak Hour Traffic Volumes

Project Impacts & Mitigations Measures

This section summarizes significant project impacts to the adjacent roadways and presents recommended project-related mitigation measures at the study intersections, developed based on the finding from the analyses presented in the prior sections of this report. The impacts and mitigation measures are provided for both Year 2016 *Plus Project* conditions and Year 2035 conditions separately, so it might be possible that same mitigation measures at one location be applicable in both conditions.

Impact Significance Criteria

In accordance with the June 2000 City of SLO *Traffic Impact Study Preparation Guidelines*, A project is considered to have a significant traffic impact for signalized and unsignalized intersections when:

- The addition of project traffic to a signalized intersection exceeds the thresholds provided in the Table 2.
- The project's access to a major street requires an access that would create an unsafe situation or a new traffic signal, and/or major revisions to an existing traffic signal.
- The project adds traffic to a street with design features (e.g., narrow width, roadside ditches, sharp curves, poor sight distance, and inadequate pavement structure) that may cause potential safety problems with the addition of project traffic.

TABLE 2

Signalized Intersection Thresholds of Significance for Traffic Impact Studies

	THRESHOLD CRITERIA	GUIDELINES BASED ON PROJECTED TRIPS GENERATED FROM PROJECT	
Pre-Project LEVEL OF SERVICE (LOS)	PER LANE PEAK HOUR TRIPS ADDED TO CRITICAL MOVEMENTS	TOTAL PROJECT PEAK HOUR TRIP GENERATION	PROJECT PEAK HOURS TRIPS ENTERING A CRITICAL INTERSECTION
C	>45	150-540	90-180
D	>15	50-180	30-60
E	>10	30-120	20-40
F	>5	15-60	10-20

- The addition of project plus cumulative traffic to a signalized intersection increases the volume to capacity (V/C) ratio by the V/C threshold in Table 2
- If the above thresholds are exceeded, the Developer may be required to construct improvements or implement other methods to reduce the level of impact to insignificance. The thresholds of significance identified above assume full contribution to the Traffic Mitigation Fee Fund.
- The addition of project, or project plus cumulative, traffic to an unsignalized intersection increases the level of service to an unacceptable level. The Highway Capacity Manual shall determine Level of Service at unsignalized intersections.

Year 2016 No Project Impacts

The projected volumes for Year 2016 without the project development do not present a deficiency at any of the study intersections. No mitigations are recommended.

Year 2016 Plus Project Impacts

The implementation of the proposed project is projected to degrade the LOS at the study intersections only during the PM peak hour, but still maintain an acceptable level of service. The LOS at the intersection of LOVR and US 101 SB Ramps degrades to LOS D in the PM peak hour. No mitigations are necessary to alleviate peak hour traffic congestion. However, the roadway striping improvements as contained in the on-site circulation section of this report should be completed prior to occupancy of any project parcel.

Year 2035 No Project Impacts

The projected volumes for Year 2035 do not present a deficiency at any of the study intersections. No mitigations are recommended.

Year 2035 Plus Project Impacts

As summarized in Table 9 below, development of the proposed project would have a significant impact to the intersection of LOVR and Calle Joaquin, specifically in the PM peak hour. The LOS at LOVR and Calle Joaquin is unacceptable with significant delay; with the existing lane geometries and signal control.

TABLE 9 CUMULATIVE *PLUS PROJECT* CONDITIONS WITHOUT MITIGATION

#	Intersection	Control Type[1,2]	Target LOS	Hour		Hour	
				Delay	LOS	Delay	LOS
1	**Los Osos Valley Road/Calle Joaquin Road**	**Signal**	**D**	**12.1**	**B**	**71.4**	**E**
2	Los Osos Valley Road/US 101 Southbound ramps	Signal	D	24.4	C	48.4	D
3	Los Osos Valley Road/US 101 Northbound ramps	Signal	D	24.7	C	21.1	C

As shown in Table 9, all study intersections are projected to operate at an acceptable LOS.

Year 2035 Plus Project: Mitigation

It is recommended to upgrade the traffic signal at the intersection of LOVR and Calle Joaquin, and to modify the lane usage on the westbound approach of Calle Joaquin where the project is located. To mitigate the impacts of the project, it is recommended that a second left turn lane be added in some manner on the Calle Joaquin approach. With these mitigation measures in place, the LOS satisfies the City of San Luis Obispo's standards.

Appendix

Level of Service Worksheets

Level of Service Worksheets

2014 EXISTING CONDITIONS

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	9	2	50	56	3	19	47	800	71	34	812	17
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	10	2	0	71	4	24	55	930	83	37	873	18
Adj No. of Lanes	1	1	1	1	1	0	1	2	1	1	2	0
Peak Hour Factor	0.90	0.90	0.90	0.79	0.79	0.79	0.86	0.86	0.86	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	172	135	115	195	17	100	561	2625	1175	552	2604	54
Arrive On Green	0.07	0.07	0.00	0.07	0.07	0.07	0.07	1.00	1.00	0.03	0.73	0.73
Sat Flow, veh/h	1377	1863	1583	1409	231	1387	1774	3539	1583	1774	3546	73
Grp Volume(v), veh/h	10	2	0	71	0	28	55	930	83	37	436	455
Grp Sat Flow(s),veh/h/ln	1377	1863	1583	1409	0	1618	1774	1770	1583	1774	1770	1850
Q Serve(g_s), s	0.5	0.1	0.0	3.8	0.0	1.2	0.6	0.0	0.0	0.4	6.6	6.6
Cycle Q Clear(g_c), s	1.8	0.1	0.0	3.8	0.0	1.2	0.6	0.0	0.0	0.4	6.6	6.6
Prop In Lane	1.00		1.00	1.00		0.86	1.00		1.00	1.00		0.04
Lane Grp Cap(c), veh/h	172	135	115	195	0	117	561	2625	1175	552	1299	1358
V/C Ratio(X)	0.06	0.01	0.00	0.36	0.00	0.24	0.10	0.35	0.07	0.07	0.34	0.34
Avail Cap(c_a), veh/h	361	391	332	389	0	339	636	2625	1175	734	1299	1358
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	0.00	1.00	0.93	0.93	0.93	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.2	32.9	0.0	34.6	0.0	33.4	2.3	0.0	0.0	2.2	3.6	3.6
Incr Delay (d2), s/veh	0.1	0.0	0.0	1.1	0.0	1.0	0.1	0.4	0.1	0.1	0.7	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	0.0	1.5	0.0	0.6	0.3	0.1	0.0	0.2	3.4	3.5
LnGrp Delay(d),s/veh	34.4	32.9	0.0	35.8	0.0	34.4	2.4	0.4	0.1	2.2	4.3	4.2
LnGrp LOS	C	C		D		C	A	A	A	A	A	A
Approach Vol, veh/h		12			99			1068			928	
Approach Delay, s/veh		34.1			35.4			0.4			4.2	
Approach LOS		C			D			A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	6.8	73.7		9.5	6.2	74.3		9.5
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	6.0	56.0		16.0	10.0	52.0		16.0
Max Q Clear Time (g_c+I1), s	2.6	8.6		5.8	2.4	2.0		3.8
Green Ext Time (p_c), s	0.0	20.3		0.3	0.0	20.7		0.3

Intersection Summary	
HCM 2010 Ctrl Delay	3.9
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	402	1	218	50	703	0	0	605	313
Number				3	8	18	1	6	16	5	2	12
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1863	1863	1900	1863	1863	0	0	1863	1863
Adj Flow Rate, veh/h				437	1	237	54	764	0	0	658	340
Adj No. of Lanes				1	1	0	1	2	0	0	1	1
Peak Hour Factor				0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %				2	2	2	2	2	0	0	2	2
Cap, veh/h				520	2	462	372	2142	0	0	838	712
Arrive On Green				0.29	0.29	0.29	0.11	0.61	0.00	0.00	0.45	0.45
Sat Flow, veh/h				1774	7	1578	1774	3632	0	0	1863	1583
Grp Volume(v), veh/h				437	0	238	54	764	0	0	658	340
Grp Sat Flow(s),veh/h/ln				1774	0	1584	1774	1770	0	0	1863	1583
Q Serve(g_s), s				19.3	0.0	10.5	1.1	9.1	0.0	0.0	25.1	12.6
Cycle Q Clear(g_c), s				19.3	0.0	10.5	1.1	9.1	0.0	0.0	25.1	12.6
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				520	0	464	372	2142	0	0	838	712
V/C Ratio(X)				0.84	0.00	0.51	0.15	0.36	0.00	0.00	0.79	0.48
Avail Cap(c_a), veh/h				520	0	464	372	2413	0	0	980	833
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	1.00	1.00	0.00	0.00	0.95	0.95
Uniform Delay (d), s/veh				27.7	0.0	24.6	12.2	8.3	0.0	0.0	19.6	16.1
Incr Delay (d2), s/veh				15.1	0.0	4.0	0.8	0.5	0.0	0.0	6.9	2.2
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				11.6	0.0	5.1	0.6	4.5	0.0	0.0	14.4	5.9
LnGrp Delay(d),s/veh				42.8	0.0	28.6	13.0	8.8	0.0	0.0	26.5	18.3
LnGrp LOS				D		C	B	A			C	B
Approach Vol, veh/h					675			818			998	
Approach Delay, s/veh					37.8			9.1			23.7	
Approach LOS					D			A			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	13.0	49.0				62.0		28.0
Change Period (Y+Rc), s	3.5	5.0				5.0		3.5
Max Green Setting (Gmax), s	9.5	44.0				57.0		24.5
Max Q Clear Time (g_c+I1), s	3.1	27.1				11.1		21.3
Green Ext Time (p_c), s	0.1	10.5				17.5		1.0

Intersection Summary			
HCM 2010 Ctrl Delay			22.7
HCM 2010 LOS			C

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	389	157	99	364	891	116
Number	3	18	1	6	2	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	432	174	115	423	979	127
Adj No. of Lanes	2	1	1	1	1	1
Peak Hour Factor	0.90	0.90	0.86	0.86	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	627	288	249	1263	1073	912
Arrive On Green	0.18	0.18	0.05	0.68	0.58	0.58
Sat Flow, veh/h	3442	1583	1774	1863	1863	1583
Grp Volume(v), veh/h	432	174	115	423	979	127
Grp Sat Flow(s),veh/h/ln	1721	1583	1774	1863	1863	1583
Q Serve(g_s), s	8.0	6.9	1.6	6.4	31.9	2.5
Cycle Q Clear(g_c), s	8.0	6.9	1.6	6.4	31.9	2.5
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	627	288	249	1263	1073	912
V/C Ratio(X)	0.69	0.60	0.46	0.33	0.91	0.14
Avail Cap(c_a), veh/h	1141	525	513	1592	1126	957
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.0	25.5	15.0	4.6	12.9	6.6
Incr Delay (d2), s/veh	1.4	2.0	1.3	0.7	13.1	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.9	3.1	1.4	3.5	19.9	1.2
LnGrp Delay(d),s/veh	27.3	27.5	16.4	5.3	26.0	6.9
LnGrp LOS	C	C	B	A	C	A
Approach Vol, veh/h	606			538	1106	
Approach Delay, s/veh	27.4			7.6	23.8	
Approach LOS	C			A	C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	6.9	67.2				74.1		15.9
Change Period (Y+Rc), s	3.5	6.0				6.0		3.5
Max Green Setting (Gmax), s	13.5	41.0				58.0		22.5
Max Q Clear Time (g_c+I1), s	3.6	33.9				8.4		10.0
Green Ext Time (p_c), s	0.2	5.2				17.1		2.4

Intersection Summary			
HCM 2010 Ctrl Delay			20.9
HCM 2010 LOS			C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	16	4	40	100	10	65	45	1415	62	41	1310	22
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	17	4	0	109	11	71	49	1538	67	45	1424	24
Adj No. of Lanes	1	1	1	1	1	0	1	2	1	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	171	202	172	241	24	152	337	2507	1121	370	2517	42
Arrive On Green	0.11	0.11	0.00	0.11	0.11	0.11	0.07	1.00	1.00	0.03	0.71	0.71
Sat Flow, veh/h	1311	1863	1583	1407	217	1399	1774	3539	1583	1774	3562	60
Grp Volume(v), veh/h	17	4	0	109	0	82	49	1538	67	45	707	741
Grp Sat Flow(s),veh/h/ln	1311	1863	1583	1407	0	1616	1774	1770	1583	1774	1770	1852
Q Serve(g_s), s	1.0	0.2	0.0	5.9	0.0	3.8	0.6	0.0	0.0	0.5	15.5	15.5
Cycle Q Clear(g_c), s	4.8	0.2	0.0	6.1	0.0	3.8	0.6	0.0	0.0	0.5	15.5	15.5
Prop In Lane	1.00		1.00	1.00		0.87	1.00		1.00	1.00		0.03
Lane Grp Cap(c), veh/h	171	202	172	241	0	175	337	2507	1121	370	1251	1309
V/C Ratio(X)	0.10	0.02	0.00	0.45	0.00	0.47	0.15	0.61	0.06	0.12	0.57	0.57
Avail Cap(c_a), veh/h	293	376	320	372	0	326	412	2507	1121	537	1251	1309
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	0.00	1.00	0.81	0.81	0.81	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.4	31.6	0.0	34.3	0.0	33.2	4.3	0.0	0.0	2.8	5.7	5.7
Incr Delay (d2), s/veh	0.3	0.0	0.0	1.3	0.0	1.9	0.2	0.9	0.1	0.1	1.9	1.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.1	0.0	2.4	0.0	1.8	0.3	0.3	0.0	0.3	8.1	8.5
LnGrp Delay(d),s/veh	35.7	31.6	0.0	35.6	0.0	35.1	4.5	0.9	0.1	2.9	7.5	7.5
LnGrp LOS	D	C		D		D	A	A	A	A	A	A
Approach Vol, veh/h		21			191			1654			1493	
Approach Delay, s/veh		34.9			35.4			1.0			7.4	
Approach LOS		C			D			A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	6.6	70.8		12.6	6.5	70.9		12.6
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	6.0	56.0		16.0	10.0	52.0		16.0
Max Q Clear Time (g_c+I1), s	2.6	17.5		8.1	2.5	2.0		6.8
Green Ext Time (p_c), s	0.0	32.5		0.6	0.0	40.4		0.6

Intersection Summary	
HCM 2010 Ctrl Delay	6.0
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	229	1	381	88	1141	0	0	780	670
Number				3	8	18	1	6	16	5	2	12
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1863	1863	1900	1863	1863	0	0	1863	1863
Adj Flow Rate, veh/h				249	1	414	96	1240	0	0	848	728
Adj No. of Lanes				1	1	0	1	2	0	0	1	1
Peak Hour Factor				0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %				2	2	2	2	2	0	0	2	2
Cap, veh/h				484	1	431	287	2240	0	0	909	773
Arrive On Green				0.27	0.27	0.27	0.11	0.63	0.00	0.00	0.49	0.49
Sat Flow, veh/h				1774	4	1580	1774	3632	0	0	1863	1583
Grp Volume(v), veh/h				249	0	415	96	1240	0	0	848	728
Grp Sat Flow(s),veh/h/ln				1774	0	1584	1774	1770	0	0	1863	1583
Q Serve(g_s), s				10.7	0.0	23.2	2.0	17.8	0.0	0.0	38.4	39.2
Cycle Q Clear(g_c), s				10.7	0.0	23.2	2.0	17.8	0.0	0.0	38.4	39.2
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				484	0	432	287	2240	0	0	909	773
V/C Ratio(X)				0.51	0.00	0.96	0.33	0.55	0.00	0.00	0.93	0.94
Avail Cap(c_a), veh/h				484	0	432	287	2244	0	0	912	775
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	1.00	1.00	0.00	0.00	0.80	0.80
Uniform Delay (d), s/veh				27.7	0.0	32.2	18.2	9.3	0.0	0.0	21.6	21.8
Incr Delay (d2), s/veh				3.9	0.0	34.6	3.1	1.0	0.0	0.0	14.8	17.9
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				5.7	0.0	14.3	1.4	8.9	0.0	0.0	23.3	20.8
LnGrp Delay(d),s/veh				31.5	0.0	66.8	21.3	10.3	0.0	0.0	36.4	39.7
LnGrp LOS				C		E	C	B			D	D
Approach Vol, veh/h					664			1336			1576	
Approach Delay, s/veh					53.6			11.1			37.9	
Approach LOS					D			B			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	13.0	49.0				62.0		28.0
Change Period (Y+Rc), s	3.5	5.0				5.0		3.5
Max Green Setting (Gmax), s	9.5	44.0				57.0		24.5
Max Q Clear Time (g_c+I1), s	4.0	41.2				19.8		25.2
Green Ext Time (p_c), s	0.1	2.7				28.9		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	30.8
HCM 2010 LOS	C

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	474	105	168	755	710	299
Number	3	18	1	6	2	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	527	117	195	878	780	329
Adj No. of Lanes	2	1	1	1	1	1
Peak Hour Factor	0.90	0.90	0.86	0.86	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	709	326	338	1226	988	840
Arrive On Green	0.21	0.21	0.08	0.66	0.53	0.53
Sat Flow, veh/h	3442	1583	1774	1863	1863	1583
Grp Volume(v), veh/h	527	117	195	878	780	329
Grp Sat Flow(s),veh/h/ln	1721	1583	1774	1863	1863	1583
Q Serve(g_s), s	10.0	4.4	3.1	21.3	23.7	8.6
Cycle Q Clear(g_c), s	10.0	4.4	3.1	21.3	23.7	8.6
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	709	326	338	1226	988	840
V/C Ratio(X)	0.74	0.36	0.58	0.72	0.79	0.39
Avail Cap(c_a), veh/h	1107	509	543	1545	1092	928
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.0	23.8	12.8	7.7	13.3	9.7
Incr Delay (d2), s/veh	1.6	0.7	1.6	3.6	6.4	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.9	2.0	2.3	12.0	13.7	4.1
LnGrp Delay(d),s/veh	27.6	24.5	14.3	11.3	19.7	11.1
LnGrp LOS	C	C	B	B	B	B
Approach Vol, veh/h	644			1073	1109	
Approach Delay, s/veh	27.0			11.9	17.1	
Approach LOS	C			B	B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	8.9	63.2				72.1		17.9
Change Period (Y+Rc), s	3.5	6.0				6.0		3.5
Max Green Setting (Gmax), s	13.5	41.0				58.0		22.5
Max Q Clear Time (g_c+I1), s	5.1	25.7				23.3		12.0
Green Ext Time (p_c), s	0.4	11.4				20.2		2.4

Intersection Summary			
HCM 2010 Ctrl Delay			17.4
HCM 2010 LOS			B

Level of Service Worksheets

2016 NO PROJECT CONDITIONS

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	9	2	51	57	3	19	48	816	72	35	828	17
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3
Lanes	1	1	1	1	1	0	1	2	1	1	2	0
Cap, veh/h	181	139	118	204	17	103	550	2576	1152	545	2554	52
Arrive On Green	0.07	0.07	0.00	0.07	0.07	0.07	0.08	1.00	1.00	0.03	0.72	0.72
Sat Flow, veh/h	1377	1863	1583	1409	231	1387	1774	3539	1583	1774	3548	72
Grp Volume(v), veh/h	10	2	0	72	0	28	56	949	84	38	444	464
Grp Sat Flow(s),veh/h/ln	1377	1863	1583	1409	0	1618	1774	1770	1583	1774	1770	1850
Q Serve(g_s), s	0.5	0.1	0.0	3.6	0.0	1.2	0.5	0.0	0.0	0.4	6.7	6.7
Cycle Q Clear(g_c), s	1.7	0.1	0.0	3.6	0.0	1.2	0.5	0.0	0.0	0.4	6.7	6.7
Prop In Lane	1.00		1.00	1.00		0.86	1.00		1.00	1.00		0.04
Lane Grp Cap(c), veh/h	181	139	118	204	0	121	550	2576	1152	545	1274	1332
V/C Ratio(X)	0.06	0.01	0.00	0.35	0.00	0.23	0.10	0.37	0.07	0.07	0.35	0.35
Avail Cap(c_a), veh/h	464	521	443	494	0	453	707	2576	1152	641	1274	1332
HCM Platoon Ratio	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	0.00	1.00	0.90	0.90	0.90	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.9	30.6	0.0	32.3	0.0	31.1	2.3	0.0	0.0	2.3	3.7	3.7
Incr Delay (d2), s/veh	0.1	0.0	0.0	1.0	0.0	1.0	0.1	0.4	0.1	0.1	0.8	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	0.2	0.0	0.0	1.3	0.0	0.5	0.1	0.1	0.0	0.1	2.2	2.3
Lane Grp Delay (d), s/veh	32.0	30.7	0.0	33.3	0.0	32.1	2.4	0.4	0.1	2.3	4.5	4.5
Lane Grp LOS	C	C		C		C	A	A	A	A	A	A
Approach Vol, veh/h		12			100			1089			946	
Approach Delay, s/veh		31.8			33.0			0.5			4.4	
Approach LOS		C			C			A			A	
Timer												
Assigned Phs		8			4		1	6		5	2	
Phs Duration (G+Y+Rc), s		9.3			9.3		6.7	56.0		6.1	55.4	
Change Period (Y+Rc), s		4.0			4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s		20.0			20.0		9.0	52.0		6.0	49.0	
Max Q Clear Time (g_c+I1), s		3.7			5.6		2.5	2.0		2.4	8.7	
Green Ext Time (p_c), s		0.4			0.3		0.1	21.4		0.0	19.6	
Intersection Summary												
HCM 2010 Ctrl Delay			3.9									
HCM 2010 LOS			A									
Notes												

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	410	1	222	51	717	0	0	617	319
Number				3	8	18	1	6	16	5	2	12
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln				186.3	186.3	186.3	186.3	186.3	0.0	0.0	186.3	186.3
Lanes				1	1	0	1	2	0	0	1	1
Cap, veh/h				692	3	615	236	1819	0	0	768	652
Arrive On Green				0.39	0.39	0.39	0.06	0.51	0.00	0.00	0.41	0.41
Sat Flow, veh/h				1774	7	1578	1774	3632	0	0	1863	1583
Grp Volume(v), veh/h				446	0	242	55	779	0	0	671	347
Grp Sat Flow(s),veh/h/ln				1774	0	1584	1774	1770	0	0	1863	1583
Q Serve(g_s), s				18.1	0.0	9.7	1.4	12.1	0.0	0.0	29.3	14.6
Cycle Q Clear(g_c), s				18.1	0.0	9.7	1.4	12.1	0.0	0.0	29.3	14.6
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				692	0	618	236	1819	0	0	768	652
V/C Ratio(X)				0.64	0.00	0.39	0.23	0.43	0.00	0.00	0.87	0.53
Avail Cap(c_a), veh/h				692	0	618	236	1881	0	0	800	680
HCM Platoon Ratio				0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Upstream Filter(I)				1.00	0.00	1.00	1.00	1.00	0.00	0.00	0.95	0.95
Uniform Delay (d), s/veh				22.0	0.0	19.4	17.7	13.4	0.0	0.0	23.9	19.6
Incr Delay (d2), s/veh				4.6	0.0	1.9	2.3	0.7	0.0	0.0	12.6	2.9
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln				8.6	0.0	4.0	0.7	4.8	0.0	0.0	15.2	5.8
Lane Grp Delay (d), s/veh				26.6	0.0	21.3	20.0	14.1	0.0	0.0	36.5	22.5
Lane Grp LOS				C		C	B	B			D	C
Approach Vol, veh/h					688			834			1018	
Approach Delay, s/veh					24.7			14.5			31.7	
Approach LOS					C			B			C	

Timer												
Assigned Phs					8		1	6			2	
Phs Duration (G+Y+Rc), s					38.0		9.0	50.5			41.5	
Change Period (Y+Rc), s					3.5		3.5	5.0			5.0	
Max Green Setting (Gmax), s					34.5		5.5	47.0			38.0	
Max Q Clear Time (g_c+I1), s					20.1		3.4	14.1			31.3	
Green Ext Time (p_c), s					3.2		0.0	15.8			5.2	

Intersection Summary			
HCM 2010 Ctrl Delay			24.2
HCM 2010 LOS			C

Notes

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	397	160	101	371	909	118
Number	3	18	1	6	2	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	186.3	186.3	186.3	186.3	186.3	186.3
Lanes	2	1	1	1	1	1
Cap, veh/h	621	286	244	1283	1104	939
Arrive On Green	0.18	0.18	0.05	0.69	0.59	0.59
Sat Flow, veh/h	3442	1583	1774	1863	1863	1583
Grp Volume(v), veh/h	441	178	117	431	999	130
Grp Sat Flow(s),veh/h/ln	1721	1583	1774	1863	1863	1583
Q Serve(g_s), s	8.8	7.6	1.7	6.8	34.3	2.6
Cycle Q Clear(g_c), s	8.8	7.6	1.7	6.8	34.3	2.6
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	621	286	244	1283	1104	939
V/C Ratio(X)	0.71	0.62	0.48	0.34	0.90	0.14
Avail Cap(c_a), veh/h	1064	490	367	1485	1178	1001
HCM Platoon Ratio	0.00	0.00	0.00	0.00	0.00	0.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.0	27.5	16.0	4.6	13.0	6.6
Incr Delay (d2), s/veh	1.5	2.2	1.5	0.7	12.1	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	3.8	3.0	1.3	2.4	16.2	0.9
Lane Grp Delay (d), s/veh	29.5	29.7	17.4	5.3	25.1	6.9
Lane Grp LOS	C	C	B	A	C	A
Approach Vol, veh/h	619			548	1129	
Approach Delay, s/veh	29.6			7.9	23.0	
Approach LOS	C			A	C	
Timer						
Assigned Phs			1	6	2	
Phs Duration (G+Y+Rc), s			7.0	56.1	49.1	
Change Period (Y+Rc), s			3.5	6.0	6.0	
Max Green Setting (Gmax), s			8.5	58.0	46.0	
Max Q Clear Time (g_c+I1), s			3.7	8.8	36.3	
Green Ext Time (p_c), s			0.1	17.8	6.9	
Intersection Summary						
HCM 2010 Ctrl Delay			21.1			
HCM 2010 LOS			C			
Notes						

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	16	4	41	102	10	66	46	1443	63	42	1336	22
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	17	4	0	111	11	72	50	1568	68	46	1452	24
Adj No. of Lanes	1	1	1	1	1	0	1	2	1	1	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	170	204	173	241	23	153	329	2511	1123	362	2506	1121
Arrive On Green	0.11	0.11	0.00	0.11	0.11	0.11	0.07	1.00	1.00	0.03	0.71	0.71
Sat Flow, veh/h	1310	1863	1583	1407	214	1401	1774	3539	1583	1774	3539	1583
Grp Volume(v), veh/h	17	4	0	111	0	83	50	1568	68	46	1452	24
Grp Sat Flow(s),veh/h/ln	1310	1863	1583	1407	0	1615	1774	1770	1583	1774	1770	1583
Q Serve(g_s), s	1.0	0.2	0.0	6.2	0.0	3.9	0.6	0.0	0.0	0.6	16.4	0.4
Cycle Q Clear(g_c), s	4.9	0.2	0.0	6.3	0.0	3.9	0.6	0.0	0.0	0.6	16.4	0.4
Prop In Lane	1.00		1.00	1.00		0.87	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	170	204	173	241	0	177	329	2511	1123	362	2506	1121
V/C Ratio(X)	0.10	0.02	0.00	0.46	0.00	0.47	0.15	0.62	0.06	0.13	0.58	0.02
Avail Cap(c_a), veh/h	287	370	315	366	0	321	380	2511	1123	416	2506	1121
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	0.00	1.00	0.76	0.76	0.76	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.9	32.0	0.0	34.8	0.0	33.7	4.5	0.0	0.0	2.8	5.8	3.5
Incr Delay (d2), s/veh	0.3	0.0	0.0	1.4	0.0	1.9	0.2	0.9	0.1	0.2	1.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.1	0.0	2.5	0.0	1.8	0.3	0.3	0.0	0.3	8.2	0.2
LnGrp Delay(d),s/veh	36.2	32.0	0.0	36.2	0.0	35.6	4.7	0.9	0.1	3.0	6.8	3.5
LnGrp LOS	D	C		D		D	A	A	A	A	A	A
Approach Vol, veh/h		21			194			1686			1522	
Approach Delay, s/veh		35.4			35.9			1.0			6.6	
Approach LOS		D			D			A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	6.7	70.5		12.8	6.6	70.6		12.8
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	5.0	57.0		16.0	5.0	57.0		16.0
Max Q Clear Time (g_c+I1), s	2.6	18.4		8.3	2.6	2.0		6.9
Green Ext Time (p_c), s	0.0	33.5		0.6	0.0	45.2		0.6

Intersection Summary	
HCM 2010 Ctrl Delay	5.7
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	234	1	389	90	1164	0	0	796	683
Number				3	8	18	1	6	16	5	2	12
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1863	1863	1900	1863	1863	0	0	1863	1900
Adj Flow Rate, veh/h				254	1	423	98	1265	0	0	865	742
Adj No. of Lanes				1	1	0	1	2	0	0	2	0
Peak Hour Factor				0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %				2	2	2	2	2	0	0	2	2
Cap, veh/h				542	1	483	180	2123	0	0	951	769
Arrive On Green				0.31	0.31	0.31	0.05	0.60	0.00	0.00	0.51	0.51
Sat Flow, veh/h				1774	4	1580	1774	3632	0	0	1955	1505
Grp Volume(v), veh/h				254	0	424	98	1265	0	0	820	787
Grp Sat Flow(s),veh/h/ln				1774	0	1584	1774	1770	0	0	1770	1597
Q Serve(g_s), s				10.4	0.0	22.8	2.2	20.0	0.0	0.0	38.0	42.8
Cycle Q Clear(g_c), s				10.4	0.0	22.8	2.2	20.0	0.0	0.0	38.0	42.8
Prop In Lane				1.00		1.00	1.00		0.00	0.00		0.94
Lane Grp Cap(c), veh/h				542	0	484	180	2123	0	0	904	816
V/C Ratio(X)				0.47	0.00	0.88	0.54	0.60	0.00	0.00	0.91	0.96
Avail Cap(c_a), veh/h				542	0	484	180	2124	0	0	905	817
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	1.00	1.00	0.00	0.00	0.80	0.80
Uniform Delay (d), s/veh				25.3	0.0	29.6	20.9	11.2	0.0	0.0	20.0	21.2
Incr Delay (d2), s/veh				2.9	0.0	19.5	11.3	1.2	0.0	0.0	12.0	20.9
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				5.5	0.0	12.5	1.9	10.0	0.0	0.0	21.5	23.3
LnGrp Delay(d),s/veh				28.2	0.0	49.1	32.2	12.4	0.0	0.0	32.1	42.1
LnGrp LOS				C		D	C	B			C	D
Approach Vol, veh/h					678			1363			1607	
Approach Delay, s/veh					41.3			13.9			37.0	
Approach LOS					D			B			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	8.0	51.0				59.0		31.0
Change Period (Y+Rc), s	3.5	5.0				5.0		3.5
Max Green Setting (Gmax), s	4.5	46.0				54.0		27.5
Max Q Clear Time (g_c+I1), s	4.2	44.8				22.0		24.8
Green Ext Time (p_c), s	0.0	1.2				27.2		0.9

Intersection Summary			
HCM 2010 Ctrl Delay			29.1
HCM 2010 LOS			C

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	484	107	171	770	725	305
Number	3	18	1	6	2	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	538	119	199	895	797	335
Adj No. of Lanes	2	1	1	2	2	1
Peak Hour Factor	0.90	0.90	0.86	0.86	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	770	354	435	2183	1660	743
Arrive On Green	0.22	0.22	0.09	0.62	0.47	0.47
Sat Flow, veh/h	3442	1583	1774	3632	3632	1583
Grp Volume(v), veh/h	538	119	199	895	797	335
Grp Sat Flow(s),veh/h/ln	1721	1583	1774	1770	1770	1583
Q Serve(g_s), s	8.6	3.8	3.1	7.7	9.2	8.5
Cycle Q Clear(g_c), s	8.6	3.8	3.1	7.7	9.2	8.5
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	770	354	435	2183	1660	743
V/C Ratio(X)	0.70	0.34	0.46	0.41	0.48	0.45
Avail Cap(c_a), veh/h	1414	651	678	3324	2315	1036
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	21.3	19.4	7.4	5.9	10.8	10.7
Incr Delay (d2), s/veh	1.2	0.6	0.8	0.6	1.0	2.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.2	1.7	1.5	3.9	4.7	4.1
LnGrp Delay(d),s/veh	22.4	20.0	8.1	6.4	11.8	12.6
LnGrp LOS	C	B	A	A	B	B
Approach Vol, veh/h	657			1094	1132	
Approach Delay, s/veh	22.0			6.7	12.1	
Approach LOS	C			A	B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	8.8	64.3				73.2		16.8
Change Period (Y+Rc), s	3.5	6.0				6.0		3.5
Max Green Setting (Gmax), s	13.5	39.0				56.0		24.5
Max Q Clear Time (g_c+I1), s	5.1	11.2				9.7		10.6
Green Ext Time (p_c), s	0.4	16.8				21.9		2.8

Intersection Summary			
HCM 2010 Ctrl Delay			12.3
HCM 2010 LOS			B

Level of Service Worksheets

2016 PLUS PROJECT CONDITIONS

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	9	2	51	152	3	51	48	816	218	90	828	17
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	10	2	0	192	4	65	56	949	253	97	890	18
Adj No. of Lanes	1	1	1	1	1	0	1	2	1	1	2	0
Peak Hour Factor	0.90	0.90	0.90	0.79	0.79	0.79	0.86	0.86	0.86	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	245	309	263	308	15	250	480	2373	1062	454	2401	49
Arrive On Green	0.17	0.17	0.00	0.17	0.17	0.17	0.06	1.00	1.00	0.04	0.68	0.68
Sat Flow, veh/h	1326	1863	1583	1409	93	1505	1774	3539	1583	1774	3548	72
Grp Volume(v), veh/h	10	2	0	192	0	69	56	949	253	97	444	464
Grp Sat Flow(s),veh/h/ln	1326	1863	1583	1409	0	1597	1774	1770	1583	1774	1770	1850
Q Serve(g_s), s	0.6	0.1	0.0	12.6	0.0	3.6	0.9	0.0	0.0	1.6	10.4	10.4
Cycle Q Clear(g_c), s	4.3	0.1	0.0	12.7	0.0	3.6	0.9	0.0	0.0	1.6	10.4	10.4
Prop In Lane	1.00		1.00	1.00		0.94	1.00		1.00	1.00		0.04
Lane Grp Cap(c), veh/h	245	309	263	308	0	265	480	2373	1062	454	1198	1252
V/C Ratio(X)	0.04	0.01	0.00	0.62	0.00	0.26	0.12	0.40	0.24	0.21	0.37	0.37
Avail Cap(c_a), veh/h	522	698	593	602	0	599	552	2373	1062	570	1198	1252
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	0.00	1.00	0.88	0.88	0.88	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.8	33.4	0.0	38.8	0.0	34.9	4.8	0.0	0.0	4.3	6.7	6.7
Incr Delay (d2), s/veh	0.1	0.0	0.0	2.1	0.0	0.5	0.1	0.4	0.5	0.2	0.9	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	0.0	5.1	0.0	1.6	0.4	0.1	0.1	0.8	5.3	5.6
LnGrp Delay(d),s/veh	36.8	33.4	0.0	40.8	0.0	35.4	4.9	0.4	0.5	4.5	7.6	7.5
LnGrp LOS	D	C		D		D	A	A	A	A	A	A
Approach Vol, veh/h		12			261			1258			1005	
Approach Delay, s/veh		36.3			39.4			0.6			7.3	
Approach LOS		D			D			A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	7.1	92.9		19.9	7.7	92.4		19.9
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	7.0	65.0		36.0	10.0	62.0		36.0
Max Q Clear Time (g_c+I1), s	2.9	12.4		14.7	3.6	2.0		6.3
Green Ext Time (p_c), s	0.0	23.9		1.2	0.1	25.1		1.3

Intersection Summary	
HCM 2010 Ctrl Delay	7.4
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	410	1	269	51	816	0	0	685	346
Number				3	8	18	1	6	16	5	2	12
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1863	1863	1900	1863	1863	0	0	1863	1863
Adj Flow Rate, veh/h				446	1	292	55	887	0	0	745	376
Adj No. of Lanes				1	1	0	1	2	0	0	1	1
Peak Hour Factor				0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %				2	2	2	2	2	0	0	2	2
Cap, veh/h				643	2	572	211	1988	0	0	913	776
Arrive On Green				0.36	0.36	0.36	0.04	0.56	0.00	0.00	0.49	0.49
Sat Flow, veh/h				1774	5	1579	1774	3632	0	0	1863	1583
Grp Volume(v), veh/h				446	0	293	55	887	0	0	745	376
Grp Sat Flow(s),veh/h/ln				1774	0	1584	1774	1770	0	0	1863	1583
Q Serve(g_s), s				23.9	0.0	16.2	1.6	16.4	0.0	0.0	38.0	17.8
Cycle Q Clear(g_c), s				23.9	0.0	16.2	1.6	16.4	0.0	0.0	38.0	17.8
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				643	0	574	211	1988	0	0	913	776
V/C Ratio(X)				0.69	0.00	0.51	0.26	0.45	0.00	0.00	0.82	0.48
Avail Cap(c_a), veh/h				643	0	574	211	2248	0	0	1050	892
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	1.00	1.00	0.00	0.00	0.90	0.90
Uniform Delay (d), s/veh				30.4	0.0	27.9	19.8	14.3	0.0	0.0	24.2	19.1
Incr Delay (d2), s/veh				6.1	0.0	3.2	3.0	0.7	0.0	0.0	7.3	2.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				12.7	0.0	7.6	1.0	8.2	0.0	0.0	21.3	8.2
LnGrp Delay(d),s/veh				36.4	0.0	31.1	22.8	15.1	0.0	0.0	31.5	21.0
LnGrp LOS				D		C	C	B			C	C
Approach Vol, veh/h					739			942			1121	
Approach Delay, s/veh					34.3			15.5			28.0	
Approach LOS					C			B			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	8.0	68.0				76.0		44.0
Change Period (Y+Rc), s	3.5	5.0				5.0		3.5
Max Green Setting (Gmax), s	4.5	63.0				71.0		40.5
Max Q Clear Time (g_c+I1), s	3.6	40.0				18.4		25.9
Green Ext Time (p_c), s	0.0	14.8				22.9		3.0

Intersection Summary	
HCM 2010 Ctrl Delay	25.5
HCM 2010 LOS	C

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	437	160	101	430	946	149
Number	3	18	1	6	2	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	486	178	117	500	1040	164
Adj No. of Lanes	2	1	1	1	1	1
Peak Hour Factor	0.90	0.90	0.86	0.86	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	604	278	241	1351	1208	1027
Arrive On Green	0.18	0.18	0.04	0.73	0.65	0.65
Sat Flow, veh/h	3442	1583	1774	1863	1863	1583
Grp Volume(v), veh/h	486	178	117	500	1040	164
Grp Sat Flow(s),veh/h/ln	1721	1583	1774	1863	1863	1583
Q Serve(g_s), s	13.0	10.0	2.0	9.7	42.6	3.9
Cycle Q Clear(g_c), s	13.0	10.0	2.0	9.7	42.6	3.9
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	604	278	241	1351	1208	1027
V/C Ratio(X)	0.80	0.64	0.49	0.37	0.86	0.16
Avail Cap(c_a), veh/h	772	355	290	1731	1536	1306
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.9	36.7	18.2	4.9	13.4	6.6
Incr Delay (d2), s/veh	4.9	2.5	1.5	0.8	8.2	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.6	4.5	2.0	5.2	24.4	1.8
LnGrp Delay(d),s/veh	42.8	39.2	19.7	5.7	21.6	6.9
LnGrp LOS	D	D	B	A	C	A
Approach Vol, veh/h	664			617	1204	
Approach Delay, s/veh	41.8			8.4	19.6	
Approach LOS	D			A	B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	7.4	92.3				99.7		20.3
Change Period (Y+Rc), s	3.5	6.0				6.0		3.5
Max Green Setting (Gmax), s	6.5	79.0				89.0		21.5
Max Q Clear Time (g_c+I1), s	4.0	44.6				11.7		15.0
Green Ext Time (p_c), s	0.1	17.6				23.2		1.8

Intersection Summary	
HCM 2010 Ctrl Delay	22.7
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	16	4	41	487	10	219	46	1443	418	187	1336	22
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	17	4	0	529	11	238	50	1568	454	203	1452	24
Adj No. of Lanes	1	1	1	1	1	0	1	2	1	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	352	699	594	586	26	571	162	1593	712	206	1774	29
Arrive On Green	0.38	0.38	0.00	0.38	0.38	0.38	0.05	0.90	0.90	0.08	0.50	0.50
Sat Flow, veh/h	1126	1863	1583	1407	70	1523	1774	3539	1583	1774	3563	59
Grp Volume(v), veh/h	17	4	0	529	0	249	50	1568	454	203	721	755
Grp Sat Flow(s),veh/h/ln	1126	1863	1583	1407	0	1594	1774	1770	1583	1774	1770	1852
Q Serve(g_s), s	1.4	0.2	0.0	44.8	0.0	13.9	1.8	46.7	8.1	8.8	41.4	41.5
Cycle Q Clear(g_c), s	15.2	0.2	0.0	45.0	0.0	13.9	1.8	46.7	8.1	8.8	41.4	41.5
Prop In Lane	1.00		1.00	1.00		0.96	1.00		1.00	1.00		0.03
Lane Grp Cap(c), veh/h	352	699	594	586	0	598	162	1593	712	206	881	922
V/C Ratio(X)	0.05	0.01	0.00	0.90	0.00	0.42	0.31	0.98	0.64	0.99	0.82	0.82
Avail Cap(c_a), veh/h	352	699	594	586	0	598	173	1593	712	206	881	922
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	0.00	1.00	0.70	0.70	0.70	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.4	23.5	0.0	37.7	0.0	27.8	22.4	5.6	3.7	33.9	25.5	25.5
Incr Delay (d2), s/veh	0.1	0.0	0.0	17.4	0.0	0.5	0.7	15.6	3.1	58.5	8.3	8.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.1	0.0	20.3	0.0	6.2	0.9	22.6	3.6	10.1	22.3	23.3
LnGrp Delay(d),s/veh	33.5	23.5	0.0	55.1	0.0	28.2	23.2	21.2	6.8	92.4	33.8	33.6
LnGrp LOS	C	C		E		C	C	C	A	F	C	C
Approach Vol, veh/h		21			778			2072			1679	
Approach Delay, s/veh		31.6			46.5			18.1			40.8	
Approach LOS		C			D			B			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	7.2	63.8		49.0	13.0	58.0		49.0
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	4.0	59.0		45.0	9.0	54.0		45.0
Max Q Clear Time (g_c+I1), s	3.8	43.5		47.0	10.8	48.7		17.2
Green Ext Time (p_c), s	0.0	14.8		0.0	0.0	5.2		4.8

Intersection Summary		
HCM 2010 Ctrl Delay		31.4
HCM 2010 LOS		C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	234	1	496	90	1412	0	0	1090	774
Number				3	8	18	1	6	16	5	2	12
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1863	1863	1900	1863	1863	0	0	1863	1863
Adj Flow Rate, veh/h				254	1	539	98	1535	0	0	1185	841
Adj No. of Lanes				1	1	0	1	2	0	0	1	1
Peak Hour Factor				0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %				2	2	2	2	2	0	0	2	2
Cap, veh/h				480	1	428	127	2330	0	0	1102	937
Arrive On Green				0.27	0.27	0.27	0.04	0.66	0.00	0.00	0.59	0.59
Sat Flow, veh/h				1774	3	1581	1774	3632	0	0	1863	1583
Grp Volume(v), veh/h				254	0	540	98	1535	0	0	1185	841
Grp Sat Flow(s),veh/h/ln				1774	0	1584	1774	1770	0	0	1863	1583
Q Serve(g_s), s				14.6	0.0	32.5	2.5	31.4	0.0	0.0	71.0	55.5
Cycle Q Clear(g_c), s				14.6	0.0	32.5	2.5	31.4	0.0	0.0	71.0	55.5
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				480	0	429	127	2330	0	0	1102	937
V/C Ratio(X)				0.53	0.00	1.26	0.77	0.66	0.00	0.00	1.08	0.90
Avail Cap(c_a), veh/h				480	0	429	127	2330	0	0	1102	937
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	1.00	1.00	0.00	0.00	0.40	0.40
Uniform Delay (d), s/veh				37.2	0.0	43.8	30.2	12.4	0.0	0.0	24.5	21.3
Incr Delay (d2), s/veh				4.1	0.0	134.2	36.1	1.5	0.0	0.0	41.5	6.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				7.7	0.0	30.2	3.3	15.6	0.0	0.0	48.8	25.6
LnGrp Delay(d),s/veh				41.4	0.0	178.0	66.2	13.8	0.0	0.0	66.0	27.3
LnGrp LOS				D		F	E	B			F	C
Approach Vol, veh/h					794			1633			2026	
Approach Delay, s/veh					134.3			17.0			49.9	
Approach LOS					F			B			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	8.0	76.0				84.0		36.0
Change Period (Y+Rc), s	3.5	5.0				5.0		3.5
Max Green Setting (Gmax), s	4.5	71.0				79.0		32.5
Max Q Clear Time (g_c+I1), s	4.5	73.0				33.4		34.5
Green Ext Time (p_c), s	0.0	0.0				41.8		0.0

Intersection Summary			
HCM 2010 Ctrl Delay			52.9
HCM 2010 LOS			D

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	568	107	171	934	904	420
Number	3	18	1	6	2	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	631	119	199	1086	993	462
Adj No. of Lanes	2	1	1	1	1	1
Peak Hour Factor	0.90	0.90	0.86	0.86	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	718	330	234	1314	1145	973
Arrive On Green	0.21	0.21	0.06	0.71	0.61	0.61
Sat Flow, veh/h	3442	1583	1774	1863	1863	1583
Grp Volume(v), veh/h	631	119	199	1086	993	462
Grp Sat Flow(s),veh/h/ln	1721	1583	1774	1863	1863	1583
Q Serve(g_s), s	19.7	7.1	4.3	45.5	48.7	17.6
Cycle Q Clear(g_c), s	19.7	7.1	4.3	45.5	48.7	17.6
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	718	330	234	1314	1145	973
V/C Ratio(X)	0.88	0.36	0.85	0.83	0.87	0.47
Avail Cap(c_a), veh/h	793	365	297	1431	1195	1016
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	42.4	37.5	25.0	11.5	17.6	11.6
Incr Delay (d2), s/veh	10.4	0.7	17.0	6.0	8.9	1.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.4	3.2	5.0	25.1	27.7	8.1
LnGrp Delay(d),s/veh	52.9	38.1	41.9	17.5	26.5	13.3
LnGrp LOS	D	D	D	B	C	B
Approach Vol, veh/h	750			1285	1455	
Approach Delay, s/veh	50.5			21.3	22.3	
Approach LOS	D			C	C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	10.1	83.4				93.4		26.6
Change Period (Y+Rc), s	3.5	6.0				6.0		3.5
Max Green Setting (Gmax), s	10.5	71.0				85.0		25.5
Max Q Clear Time (g_c+I1), s	6.3	50.7				47.5		21.7
Green Ext Time (p_c), s	0.3	17.4				28.8		1.4

Intersection Summary	
HCM 2010 Ctrl Delay	28.0
HCM 2010 LOS	C

Level of Service Worksheets

2035 CUMULATIVE NO PROJECT CONDITIONS

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	21	2	62	70	4	23	143	1440	108	42	1239	21
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	23	2	0	89	5	29	166	1674	126	45	1332	23
Adj No. of Lanes	1	1	1	1	1	0	1	2	1	1	2	1
Peak Hour Factor	0.90	0.90	0.90	0.79	0.79	0.79	0.86	0.86	0.86	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	187	166	141	216	21	123	397	2571	1150	332	2495	1116
Arrive On Green	0.09	0.09	0.00	0.09	0.09	0.09	0.11	1.00	1.00	0.03	0.71	0.71
Sat Flow, veh/h	1369	1863	1583	1409	238	1381	1774	3539	1583	1774	3539	1583
Grp Volume(v), veh/h	23	2	0	89	0	34	166	1674	126	45	1332	23
Grp Sat Flow(s),veh/h/ln	1369	1863	1583	1409	0	1619	1774	1770	1583	1774	1770	1583
Q Serve(g_s), s	1.2	0.1	0.0	4.8	0.0	1.5	2.1	0.0	0.0	0.5	14.0	0.3
Cycle Q Clear(g_c), s	2.8	0.1	0.0	4.9	0.0	1.5	2.1	0.0	0.0	0.5	14.0	0.3
Prop In Lane	1.00		1.00	1.00		0.85	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	187	166	141	216	0	144	397	2571	1150	332	2495	1116
V/C Ratio(X)	0.12	0.01	0.00	0.41	0.00	0.24	0.42	0.65	0.11	0.14	0.53	0.02
Avail Cap(c_a), veh/h	344	380	323	378	0	330	506	2571	1150	389	2495	1116
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	0.00	1.00	0.62	0.62	0.62	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.6	32.6	0.0	34.8	0.0	33.3	4.3	0.0	0.0	2.8	5.5	3.5
Incr Delay (d2), s/veh	0.3	0.0	0.0	1.3	0.0	0.8	0.4	0.8	0.1	0.2	0.8	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.0	0.0	2.0	0.0	0.7	1.0	0.3	0.0	0.3	6.9	0.2
LnGrp Delay(d),s/veh	34.9	32.6	0.0	36.1	0.0	34.1	4.8	0.8	0.1	3.0	6.3	3.5
LnGrp LOS	C	C		D		C	A	A	A	A	A	A
Approach Vol, veh/h		25			123			1966			1400	
Approach Delay, s/veh		34.7			35.6			1.1			6.1	
Approach LOS		C			D			A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	8.2	70.9		11.0	6.5	72.5		11.0
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	9.0	53.0		16.0	5.0	57.0		16.0
Max Q Clear Time (g_c+I1), s	4.1	16.0		6.9	2.5	2.0		4.8
Green Ext Time (p_c), s	0.2	32.4		0.4	0.0	45.5		0.4

Intersection Summary	
HCM 2010 Ctrl Delay	4.6
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	260	1	253	65	1438	0	0	1018	353
Number				3	8	18	1	6	16	5	2	12
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1863	1863	1900	1863	1863	0	0	1863	1900
Adj Flow Rate, veh/h				283	1	275	71	1563	0	0	1107	384
Adj No. of Lanes				1	1	0	1	2	0	0	2	0
Peak Hour Factor				0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %				2	2	2	2	2	0	0	2	2
Cap, veh/h				470	2	418	243	2262	0	0	1423	486
Arrive On Green				0.26	0.26	0.26	0.05	0.64	0.00	0.00	0.55	0.55
Sat Flow, veh/h				1774	6	1578	1774	3632	0	0	2685	884
Grp Volume(v), veh/h				283	0	276	71	1563	0	0	750	741
Grp Sat Flow(s),veh/h/ln				1774	0	1584	1774	1770	0	0	1770	1707
Q Serve(g_s), s				12.4	0.0	13.8	1.4	25.3	0.0	0.0	29.4	30.7
Cycle Q Clear(g_c), s				12.4	0.0	13.8	1.4	25.3	0.0	0.0	29.4	30.7
Prop In Lane				1.00		1.00	1.00		0.00	0.00		0.52
Lane Grp Cap(c), veh/h				470	0	420	243	2262	0	0	972	937
V/C Ratio(X)				0.60	0.00	0.66	0.29	0.69	0.00	0.00	0.77	0.79
Avail Cap(c_a), veh/h				470	0	420	243	2314	0	0	997	962
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	1.00	1.00	0.00	0.00	0.83	0.83
Uniform Delay (d), s/veh				28.5	0.0	29.0	14.1	10.3	0.0	0.0	15.7	15.9
Incr Delay (d2), s/veh				5.6	0.0	7.8	3.0	1.8	0.0	0.0	5.0	5.7
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				6.8	0.0	6.9	1.0	12.7	0.0	0.0	15.5	15.7
LnGrp Delay(d),s/veh				34.1	0.0	36.9	17.2	12.1	0.0	0.0	20.6	21.6
LnGrp LOS				C		D	B	B			C	C
Approach Vol, veh/h					559			1634			1491	
Approach Delay, s/veh					35.5			12.3			21.1	
Approach LOS					D			B			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	8.0	55.0				63.0		27.0
Change Period (Y+Rc), s	3.5	5.0				5.0		3.5
Max Green Setting (Gmax), s	4.5	50.0				58.0		23.5
Max Q Clear Time (g_c+I1), s	3.4	32.7				27.3		15.8
Green Ext Time (p_c), s	0.0	16.0				27.0		1.6

Intersection Summary	
HCM 2010 Ctrl Delay	19.4
HCM 2010 LOS	B

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	720	140	130	783	1157	121
Number	3	18	1	6	2	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1900	1863	1863	1863	1863
Adj Flow Rate, veh/h	946	0	151	910	1271	133
Adj No. of Lanes	2	1	1	2	2	1
Peak Hour Factor	0.90	0.90	0.86	0.86	0.91	0.91
Percent Heavy Veh, %	2	0	2	2	2	2
Cap, veh/h	1091	497	268	2040	1660	743
Arrive On Green	0.31	0.00	0.06	0.58	0.47	0.47
Sat Flow, veh/h	3548	1615	1774	3632	3632	1583
Grp Volume(v), veh/h	946	0	151	910	1271	133
Grp Sat Flow(s),veh/h/ln	1774	1615	1774	1770	1770	1583
Q Serve(g_s), s	20.6	0.0	3.4	12.0	24.3	4.0
Cycle Q Clear(g_c), s	20.6	0.0	3.4	12.0	24.3	4.0
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	1091	497	268	2040	1660	743
V/C Ratio(X)	0.87	0.00	0.56	0.45	0.77	0.18
Avail Cap(c_a), veh/h	1236	563	316	2250	1774	794
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.7	0.0	15.6	9.9	18.0	12.6
Incr Delay (d2), s/veh	6.2	0.0	1.9	0.7	3.4	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.9	0.0	1.8	6.0	12.6	1.8
LnGrp Delay(d),s/veh	32.9	0.0	17.5	10.6	21.4	13.1
LnGrp LOS	C		B	B	C	B
Approach Vol, veh/h	946			1061	1404	
Approach Delay, s/veh	32.9			11.6	20.6	
Approach LOS	C			B	C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	8.8	52.6				61.4		28.6
Change Period (Y+Rc), s	3.5	6.0				6.0		3.5
Max Green Setting (Gmax), s	7.5	41.0				52.0		28.5
Max Q Clear Time (g_c+I1), s	5.4	26.3				14.0		22.6
Green Ext Time (p_c), s	0.1	12.0				24.9		2.6

Intersection Summary		
HCM 2010 Ctrl Delay		21.2
HCM 2010 LOS		C

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	19	5	49	123	12	80	130	1240	75	51	1385	27
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	21	6	0	156	15	101	151	1442	87	55	1489	29
Adj No. of Lanes	1	1	1	1	1	0	1	2	1	1	2	1
Peak Hour Factor	0.90	0.90	0.90	0.79	0.79	0.79	0.86	0.86	0.86	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	188	269	229	287	30	203	322	2384	1066	372	2316	1036
Arrive On Green	0.14	0.14	0.00	0.14	0.14	0.14	0.11	1.00	1.00	0.03	0.65	0.65
Sat Flow, veh/h	1271	1863	1583	1404	209	1406	1774	3539	1583	1774	3539	1583
Grp Volume(v), veh/h	21	6	0	156	0	116	151	1442	87	55	1489	29
Grp Sat Flow(s),veh/h/ln	1271	1863	1583	1404	0	1615	1774	1770	1583	1774	1770	1583
Q Serve(g_s), s	1.3	0.2	0.0	8.8	0.0	5.4	2.3	0.0	0.0	0.8	20.5	0.5
Cycle Q Clear(g_c), s	6.7	0.2	0.0	9.0	0.0	5.4	2.3	0.0	0.0	0.8	20.5	0.5
Prop In Lane	1.00		1.00	1.00		0.87	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	188	269	229	287	0	233	322	2384	1066	372	2316	1036
V/C Ratio(X)	0.11	0.02	0.00	0.54	0.00	0.50	0.47	0.60	0.08	0.15	0.64	0.03
Avail Cap(c_a), veh/h	284	411	349	394	0	356	465	2384	1066	419	2316	1036
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	0.00	1.00	0.82	0.82	0.82	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.3	30.0	0.0	33.8	0.0	32.2	7.7	0.0	0.0	4.1	8.4	5.0
Incr Delay (d2), s/veh	0.3	0.0	0.0	1.6	0.0	1.6	0.9	0.9	0.1	0.2	1.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.1	0.0	3.5	0.0	2.5	1.4	0.3	0.0	0.4	10.4	0.2
LnGrp Delay(d),s/veh	35.5	30.0	0.0	35.4	0.0	33.8	8.6	0.9	0.1	4.2	9.8	5.0
LnGrp LOS	D	C		D		C	A	A	A	A	A	A
Approach Vol, veh/h		27			272			1680			1573	
Approach Delay, s/veh		34.3			34.7			1.6			9.5	
Approach LOS		C			C			A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	8.4	65.8		15.8	6.9	67.3		15.8
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	11.0	49.0		18.0	5.0	55.0		18.0
Max Q Clear Time (g_c+I1), s	4.3	22.5		11.0	2.8	2.0		8.7
Green Ext Time (p_c), s	0.3	23.6		0.8	0.0	42.8		1.0

Intersection Summary			
HCM 2010 Ctrl Delay			7.9
HCM 2010 LOS			A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	270	1	313	110	1132	0	0	712	845
Number				3	8	18	1	6	16	5	2	12
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1863	1863	1900	1863	1863	0	0	1863	1900
Adj Flow Rate, veh/h				293	1	340	120	1230	0	0	774	918
Adj No. of Lanes				1	1	0	1	2	0	0	2	0
Peak Hour Factor				0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %				2	2	2	2	2	0	0	2	2
Cap, veh/h				444	1	395	208	2320	0	0	963	862
Arrive On Green				0.25	0.25	0.25	0.07	0.66	0.00	0.00	0.54	0.54
Sat Flow, veh/h				1774	5	1579	1774	3632	0	0	1863	1583
Grp Volume(v), veh/h				293	0	341	120	1230	0	0	774	918
Grp Sat Flow(s),veh/h/ln				1774	0	1584	1774	1770	0	0	1770	1583
Q Serve(g_s), s				13.4	0.0	18.5	2.4	16.5	0.0	0.0	31.9	49.0
Cycle Q Clear(g_c), s				13.4	0.0	18.5	2.4	16.5	0.0	0.0	31.9	49.0
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				444	0	396	208	2320	0	0	963	862
V/C Ratio(X)				0.66	0.00	0.86	0.58	0.53	0.00	0.00	0.80	1.06
Avail Cap(c_a), veh/h				444	0	396	208	2320	0	0	963	862
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	1.00	1.00	0.00	0.00	0.69	0.69
Uniform Delay (d), s/veh				30.3	0.0	32.3	20.7	8.2	0.0	0.0	16.6	20.5
Incr Delay (d2), s/veh				7.5	0.0	21.1	11.1	0.9	0.0	0.0	5.0	44.6
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				7.4	0.0	10.4	2.3	8.1	0.0	0.0	16.8	31.8
LnGrp Delay(d),s/veh				37.8	0.0	53.3	31.9	9.1	0.0	0.0	21.6	65.1
LnGrp LOS				D		D	C	A			C	F
Approach Vol, veh/h					634			1350			1692	
Approach Delay, s/veh					46.2			11.1			45.2	
Approach LOS					D			B			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	10.0	54.0				64.0		26.0
Change Period (Y+Rc), s	3.5	5.0				5.0		3.5
Max Green Setting (Gmax), s	6.5	49.0				59.0		22.5
Max Q Clear Time (g_c+I1), s	4.4	51.0				18.5		20.5
Green Ext Time (p_c), s	0.1	0.0				33.9		0.6

Intersection Summary	
HCM 2010 Ctrl Delay	32.8
HCM 2010 LOS	C

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	486	140	210	756	621	361
Number	3	18	1	6	2	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1900	1863	1863	1863	1863
Adj Flow Rate, veh/h	348	362	244	879	682	397
Adj No. of Lanes	1	1	1	2	2	1
Peak Hour Factor	0.90	0.90	0.86	0.86	0.91	0.91
Percent Heavy Veh, %	2	0	2	2	2	2
Cap, veh/h	499	454	446	2026	1443	645
Arrive On Green	0.28	0.28	0.11	0.57	0.41	0.41
Sat Flow, veh/h	1774	1615	1774	3632	3632	1583
Grp Volume(v), veh/h	348	362	244	879	682	397
Grp Sat Flow(s),veh/h/ln	1774	1615	1774	1770	1770	1583
Q Serve(g_s), s	11.4	13.5	4.7	9.2	9.2	12.9
Cycle Q Clear(g_c), s	11.4	13.5	4.7	9.2	9.2	12.9
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	499	454	446	2026	1443	645
V/C Ratio(X)	0.70	0.80	0.55	0.43	0.47	0.62
Avail Cap(c_a), veh/h	779	709	700	2834	1744	780
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.9	21.6	9.5	7.9	14.1	15.2
Incr Delay (d2), s/veh	1.8	3.5	1.0	0.7	1.1	4.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.8	6.4	2.4	4.6	4.7	6.3
LnGrp Delay(d),s/veh	22.6	25.1	10.5	8.6	15.2	19.6
LnGrp LOS	C	C	B	A	B	B
Approach Vol, veh/h	710			1123	1079	
Approach Delay, s/veh	23.9			9.0	16.8	
Approach LOS	C			A	B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	10.7	57.5				68.2		21.8
Change Period (Y+Rc), s	3.5	6.0				6.0		3.5
Max Green Setting (Gmax), s	16.5	32.0				52.0		28.5
Max Q Clear Time (g_c+I1), s	6.7	14.9				11.2		15.5
Green Ext Time (p_c), s	0.6	11.6				19.4		2.8

Intersection Summary	
HCM 2010 Ctrl Delay	15.5
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Level of Service Worksheets

2035 CUMULATIVE PLUS PROJECT CONDITIONS

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	21	2	62	179	4	62	143	1440	264	109	1239	21
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	23	2	0	227	5	78	166	1674	307	117	1332	23
Adj No. of Lanes	1	1	1	1	1	0	1	2	1	1	2	1
Peak Hour Factor	0.90	0.90	0.90	0.79	0.79	0.79	0.86	0.86	0.86	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	322	448	381	399	23	361	351	2134	955	263	1959	877
Arrive On Green	0.24	0.24	0.00	0.24	0.24	0.24	0.20	1.00	1.00	0.05	0.55	0.55
Sat Flow, veh/h	1310	1863	1583	1409	96	1502	1774	3539	1583	1774	3539	1583
Grp Volume(v), veh/h	23	2	0	227	0	83	166	1674	307	117	1332	23
Grp Sat Flow(s),veh/h/ln	1310	1863	1583	1409	0	1598	1774	1770	1583	1774	1770	1583
Q Serve(g_s), s	1.7	0.1	0.0	17.0	0.0	4.8	3.9	0.0	0.0	3.3	31.4	0.8
Cycle Q Clear(g_c), s	6.5	0.1	0.0	17.1	0.0	4.8	3.9	0.0	0.0	3.3	31.4	0.8
Prop In Lane	1.00		1.00	1.00		0.94	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	322	448	381	399	0	384	351	2134	955	263	1959	877
V/C Ratio(X)	0.07	0.00	0.00	0.57	0.00	0.22	0.47	0.78	0.32	0.45	0.68	0.03
Avail Cap(c_a), veh/h	322	448	381	399	0	384	351	2157	965	305	2066	924
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	0.00	1.00	0.60	0.60	0.60	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.1	33.7	0.0	40.2	0.0	35.5	13.0	0.0	0.0	10.0	18.6	11.8
Incr Delay (d2), s/veh	0.4	0.0	0.0	1.9	0.0	0.3	2.7	1.8	0.5	1.2	1.9	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.1	0.0	6.8	0.0	2.2	2.4	0.5	0.1	1.7	15.7	0.3
LnGrp Delay(d),s/veh	38.5	33.7	0.0	42.1	0.0	35.7	15.7	1.8	0.5	11.2	20.5	11.8
LnGrp LOS	D	C		D		D	B	A	A	B	C	B
Approach Vol, veh/h		25			310			2147			1472	
Approach Delay, s/veh		38.1			40.4			2.7			19.7	
Approach LOS		D			D			A			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	15.0	73.0		32.0	9.3	78.7		32.0
Change Period (Y+Rc), s	3.5	5.0		4.0	4.0	5.0		* 4
Max Green Setting (Gmax), s	11.5	68.0		28.0	8.0	71.0		* 28
Max Q Clear Time (g_c+I1), s	5.9	33.4		19.1	5.3	2.0		8.5
Green Ext Time (p_c), s	0.3	31.1		1.0	0.1	56.5		1.5

Intersection Summary	
HCM 2010 Ctrl Delay	12.2
HCM 2010 LOS	B

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	260	1	310	65	1537	0	0	1100	380
Number				3	8	18	1	6	16	5	2	12
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1863	1863	1900	1863	1863	0	0	1863	1900
Adj Flow Rate, veh/h				283	1	337	71	1671	0	0	1196	413
Adj No. of Lanes				1	1	0	1	2	0	0	2	0
Peak Hour Factor				0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %				2	2	2	2	2	0	0	2	2
Cap, veh/h				550	1	489	149	2172	0	0	1409	475
Arrive On Green				0.31	0.31	0.31	0.03	0.61	0.00	0.00	0.54	0.54
Sat Flow, veh/h				1774	5	1579	1774	3632	0	0	2694	877
Grp Volume(v), veh/h				283	0	338	71	1671	0	0	804	805
Grp Sat Flow(s),veh/h/ln				1774	0	1584	1774	1770	0	0	1770	1708
Q Serve(g_s), s				14.6	0.0	20.8	0.0	38.5	0.0	0.0	42.5	45.4
Cycle Q Clear(g_c), s				14.6	0.0	20.8	0.0	38.5	0.0	0.0	42.5	45.4
Prop In Lane				1.00		1.00	1.00		0.00	0.00		0.51
Lane Grp Cap(c), veh/h				550	0	491	149	2172	0	0	959	926
V/C Ratio(X)				0.51	0.00	0.69	0.48	0.77	0.00	0.00	0.84	0.87
Avail Cap(c_a), veh/h				550	0	491	149	2448	0	0	1097	1059
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	1.00	1.00	0.00	0.00	0.71	0.71
Uniform Delay (d), s/veh				31.5	0.0	33.7	49.4	15.7	0.0	0.0	21.4	22.1
Incr Delay (d2), s/veh				3.4	0.0	7.7	10.6	2.7	0.0	0.0	6.3	8.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				7.7	0.0	10.2	2.6	19.4	0.0	0.0	22.2	23.3
LnGrp Delay(d),s/veh				35.0	0.0	41.4	60.0	18.4	0.0	0.0	27.7	30.1
LnGrp LOS				C		D	E	B			C	C
Approach Vol, veh/h					621			1742			1609	
Approach Delay, s/veh					38.5			20.1			28.9	
Approach LOS					D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	16.7	65.3				82.0		38.0
Change Period (Y+Rc), s	5.0	* 5				5.0		3.5
Max Green Setting (Gmax), s	3.0	* 69				77.0		34.5
Max Q Clear Time (g_c+I1), s	2.0	47.4				40.5		22.8
Green Ext Time (p_c), s	0.9	12.9				19.3		2.3

Intersection Summary		
HCM 2010 Ctrl Delay		26.6
HCM 2010 LOS		C

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	760	140	130	842	1208	152
Number	3	18	1	6	2	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1900	1863	1863	1863	1863
Adj Flow Rate, veh/h	990	0	151	979	1327	167
Adj No. of Lanes	2	1	1	2	2	1
Peak Hour Factor	0.90	0.90	0.86	0.86	0.91	0.91
Percent Heavy Veh, %	2	0	2	2	2	2
Cap, veh/h	1150	524	224	2056	1621	725
Arrive On Green	0.32	0.00	0.06	0.58	0.46	0.46
Sat Flow, veh/h	3548	1615	1774	3632	3632	1583
Grp Volume(v), veh/h	990	0	151	979	1327	167
Grp Sat Flow(s),veh/h/ln	1774	1615	1774	1770	1770	1583
Q Serve(g_s), s	26.2	0.0	1.9	16.1	32.6	1.5
Cycle Q Clear(g_c), s	26.2	0.0	1.9	16.1	32.6	1.5
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	1150	524	224	2056	1621	725
V/C Ratio(X)	0.86	0.00	0.68	0.48	0.82	0.23
Avail Cap(c_a), veh/h	1433	652	253	2470	1976	884
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.8	0.0	42.7	12.2	23.6	0.8
Incr Delay (d2), s/veh	4.6	0.0	5.9	0.8	4.7	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	13.5	0.0	4.4	8.0	16.9	2.6
LnGrp Delay(d),s/veh	36.4	0.0	48.6	13.0	28.3	1.6
LnGrp LOS	D		D	B	C	A
Approach Vol, veh/h	990			1130	1494	
Approach Delay, s/veh	36.4			17.7	25.3	
Approach LOS	D			B	C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	32.0	51.9				84.0		36.0
Change Period (Y+Rc), s	6.0	* 6				6.0		3.5
Max Green Setting (Gmax), s	8.0	* 56				70.0		40.5
Max Q Clear Time (g_c+I1), s	3.9	34.6				18.1		28.2
Green Ext Time (p_c), s	2.6	11.3				10.0		4.3

Intersection Summary	
HCM 2010 Ctrl Delay	26.0
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	19	5	49	588	12	265	130	1165	505	226	1305	27
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	21	6	0	547	291	335	151	1355	587	243	1403	29
Adj No. of Lanes	1	1	1	1	1	0	1	2	1	1	2	1
Peak Hour Factor	0.90	0.90	0.90	0.79	0.79	0.79	0.86	0.86	0.86	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	37	39	33	601	268	309	180	1400	626	240	1566	701
Arrive On Green	0.02	0.02	0.00	0.34	0.34	0.34	0.05	0.40	0.40	0.09	0.44	0.44
Sat Flow, veh/h	1774	1863	1583	1774	791	911	1774	3539	1583	1774	3539	1583
Grp Volume(v), veh/h	21	6	0	547	0	626	151	1355	587	243	1403	29
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1774	0	1702	1774	1770	1583	1774	1770	1583
Q Serve(g_s), s	1.2	0.3	0.0	31.3	0.0	36.0	5.0	39.8	37.8	10.0	38.9	1.1
Cycle Q Clear(g_c), s	1.2	0.3	0.0	31.3	0.0	36.0	5.0	39.8	37.8	10.0	38.9	1.1
Prop In Lane	1.00		1.00	1.00		0.54	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	37	39	33	601	0	577	180	1400	626	240	1566	701
V/C Ratio(X)	0.57	0.16	0.00	0.91	0.00	1.08	0.84	0.97	0.94	1.01	0.90	0.04
Avail Cap(c_a), veh/h	267	281	239	601	0	577	180	1400	626	240	1566	701
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	0.00	1.00	0.73	0.73	0.73	1.00	1.00	1.00
Uniform Delay (d), s/veh	51.5	51.1	0.0	33.5	0.0	35.1	27.7	31.4	30.8	30.8	27.3	16.8
Incr Delay (d2), s/veh	13.3	1.9	0.0	17.9	0.0	62.6	22.0	14.3	18.8	62.0	8.4	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	0.2	0.0	18.3	0.0	26.9	3.1	22.2	19.7	11.1	20.7	0.5
LnGrp Delay(d),s/veh	64.8	52.9	0.0	51.5	0.0	97.7	49.7	45.7	49.7	92.8	35.7	16.9
LnGrp LOS	E	D		D		F	D	D	D	F	D	B
Approach Vol, veh/h		27			1173			2093			1675	
Approach Delay, s/veh		62.2			76.1			47.1			43.7	
Approach LOS		E			E			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	9.0	64.8		40.0	14.0	59.8		6.2
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	5.0	47.0		36.0	10.0	42.0		16.0
Max Q Clear Time (g_c+I1), s	7.0	40.9		38.0	12.0	41.8		3.2
Green Ext Time (p_c), s	0.0	5.9		0.0	0.0	0.2		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	52.9
HCM 2010 LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	270	1	420	110	1380	0	0	1006	936
Number				3	8	18	1	6	16	5	2	12
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1863	1863	1900	1863	1863	0	0	1863	1900
Adj Flow Rate, veh/h				293	1	457	120	1500	0	0	1093	1017
Adj No. of Lanes				1	1	0	1	2	0	0	2	0
Peak Hour Factor				0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %				2	2	2	2	2	0	0	2	2
Cap, veh/h				466	1	415	127	2359	0	0	1119	901
Arrive On Green				0.26	0.26	0.26	0.04	0.67	0.00	0.00	0.60	0.60
Sat Flow, veh/h				1774	3	1580	1774	3632	0	0	1959	1502
Grp Volume(v), veh/h				293	0	458	120	1500	0	0	1028	1082
Grp Sat Flow(s),veh/h/ln				1774	0	1584	1774	1770	0	0	1770	1598
Q Serve(g_s), s				17.5	0.0	31.5	4.0	29.4	0.0	0.0	66.5	72.0
Cycle Q Clear(g_c), s				17.5	0.0	31.5	4.0	29.4	0.0	0.0	66.5	72.0
Prop In Lane				1.00		1.00	1.00		0.00	0.00		0.94
Lane Grp Cap(c), veh/h				466	0	416	127	2359	0	0	1062	959
V/C Ratio(X)				0.63	0.00	1.10	0.95	0.64	0.00	0.00	0.97	1.13
Avail Cap(c_a), veh/h				466	0	416	127	2359	0	0	1062	959
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	1.00	1.00	0.00	0.00	0.09	0.09
Uniform Delay (d), s/veh				39.1	0.0	44.3	35.8	11.6	0.0	0.0	22.9	24.0
Incr Delay (d2), s/veh				6.3	0.0	74.5	67.2	1.3	0.0	0.0	3.7	59.4
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				9.4	0.0	22.3	6.3	14.6	0.0	0.0	33.4	47.2
LnGrp Delay(d),s/veh				45.4	0.0	118.8	102.9	12.9	0.0	0.0	26.6	83.4
LnGrp LOS				D		F	F	B			C	F
Approach Vol, veh/h					751			1620			2110	
Approach Delay, s/veh					90.1			19.6			55.7	
Approach LOS					F			B			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	8.0	77.0				85.0		35.0
Change Period (Y+Rc), s	3.5	5.0				5.0		3.5
Max Green Setting (Gmax), s	4.5	72.0				80.0		31.5
Max Q Clear Time (g_c+I1), s	6.0	74.0				31.4		33.5
Green Ext Time (p_c), s	0.0	0.0				45.6		0.0

Intersection Summary		
HCM 2010 Ctrl Delay		48.4
HCM 2010 LOS		D

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	570	140	210	920	800	476
Number	3	18	1	6	2	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1900	1863	1863	1863	1863
Adj Flow Rate, veh/h	394	412	244	1070	879	523
Adj No. of Lanes	1	1	1	2	2	1
Peak Hour Factor	0.90	0.90	0.86	0.86	0.91	0.91
Percent Heavy Veh, %	2	0	2	2	2	2
Cap, veh/h	530	483	358	2119	1647	737
Arrive On Green	0.30	0.30	0.10	0.60	0.47	0.47
Sat Flow, veh/h	1774	1615	1774	3632	3632	1583
Grp Volume(v), veh/h	394	412	244	1070	879	523
Grp Sat Flow(s),veh/h/ln	1774	1615	1774	1770	1770	1583
Q Serve(g_s), s	18.5	22.2	6.2	16.1	16.4	24.4
Cycle Q Clear(g_c), s	18.5	22.2	6.2	16.1	16.4	24.4
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	530	483	358	2119	1647	737
V/C Ratio(X)	0.74	0.85	0.68	0.51	0.53	0.71
Avail Cap(c_a), veh/h	756	689	562	2712	1834	820
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.3	30.6	14.3	10.7	17.6	19.8
Incr Delay (d2), s/veh	2.4	7.3	2.3	0.9	1.2	5.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.4	10.8	3.3	8.0	8.2	11.7
LnGrp Delay(d),s/veh	31.7	37.8	16.6	11.6	18.9	25.5
LnGrp LOS	C	D	B	B	B	C
Approach Vol, veh/h	806			1314	1402	
Approach Delay, s/veh	34.8			12.5	21.3	
Approach LOS	C			B	C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	12.3	76.5				88.8		31.2
Change Period (Y+Rc), s	3.5	6.0				6.0		3.5
Max Green Setting (Gmax), s	19.5	48.0				71.0		39.5
Max Q Clear Time (g_c+I1), s	8.2	26.4				18.1		24.2
Green Ext Time (p_c), s	0.7	16.7				31.0		3.4

Intersection Summary		
HCM 2010 Ctrl Delay		21.1
HCM 2010 LOS		C

Notes

User approved volume balancing among the lanes for turning movement.