Tempo by Hilton Hotel Project

Addendum to the
Initial Study/Mitigated Negative Declaration
Arcadia Hotel and Annex (Hotel Indigo) Project

Prepared for:

City of Arcadia
240 W. Huntington Drive
Arcadia, CA 91007

Prepared for:

3760 Kilroy Airport Way, Suite 270
Long Beach, CA 90806

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CHAPTER 1:
PURPOSE AND BACKGROUND

The City of Arcadia (City) has prepared this Addendum to the Initial Study/Mitigated Negative Declaration, Arcadia Hotel and Annex (Hotel Indigo[1]) Project (Indigo IS/MND) to address the potential site-specific environmental impacts associated with the addition of the proposed Tempo by Hilton Project (Tempo Project). This Addendum is prepared in accordance with the California Environmental Quality Act of 1970 (CEQA) (Cal. Public Resources Code [PRC] Section 21000, et seq., as amended) and its implementing guidelines (California Code of Regulations [CCR], Title 14, Section 15000 et seq., 2016).

In 2020, the City prepared the Indigo IS/MND for a redevelopment project located at 125 West Huntington Drive and 123 West Huntington Drive (Original Project Site). The Indigo IS/MND was adopted by the City of Arcadia Planning Commission on April 14, 2020. On February 5, 2013, the City previously approved the modification of an existing 60,811-square-foot, three-story office building (Parsons building) and the construction of two new medical office buildings, a new general office building, and a new parking structure on the Original Project Site. Of the four new buildings approved under the 2013 development project, only the parking structure and the two medical office buildings (now occupied by the Keck Medicine of University of Southern California [USC]) were constructed. The 2020 Indigo IS/MND analyzed (1) the redevelopment of the existing Parsons building on the Original Project Site to allow for 76,754 square feet of hotel and appurtenant uses, including 90 hotel rooms, amenities, and employee or guest shared spaces, and (2) the construction a new 61,538-square-foot, five-story hotel annex building containing 75 hotel rooms and additional amenities such as a hotel spa, café, and outdoor patios to the east of the Parson's building (Approved Project). No changes to the two existing Keck Medicine of USC medical office buildings and parking structure were proposed under the Approved Project. The Indigo IS/MND was adopted by the City of Arcadia Planning Commission on April 14, 2020 (Resolution No. 2050).

The Tempo Project is requesting a lot line adjustment (LLA) to join together the parcel identified as Assessor's Parcel Number (APN) 5775-015-011 and the Original Project Site (APNs 5775-015-024, 5775-015-027, 5775-015-028, and 5775-015-029) to construct a new four-story hotel building on APN 5775-015-011. The Tempo Project would not modify any of the existing medical office buildings, parking structure or the hotel buildings previously approved under the Approved Project. The Revised Project considered under this Addendum consists of the currently proposed Tempo Project and the Approved Project. This Addendum addresses the environmental impacts of the Revised Project when compared to the Approved Project in accordance with the requirements of CEQA and the CEQA Guidelines Section 15162 and Section 15164.

1.1 Applicability and Use of an Addendum

Per CEQA Guidelines Section 15164, an addendum to an adopted Negative Declaration or Mitigated Negative Declaration (MND) may be prepared if none of the following conditions

[1] Note that the original Hotel Indigo brand name was changed to the Hilton brand name after approval of the Indigo IS/MND.

described in CEQA Guidelines Section 15162 calling for the preparation of a subsequent EIR or negative declaration have occurred:

(1) Substantial changes are proposed in the project which will require major revisions of the previous EIR or negative declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects;

(2) Substantial changes occur with respect to the circumstances under which the project is undertaken which will require major revisions of the previous EIR or Negative Declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects; or

(3) New information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time the previous EIR was certified as complete or the Negative Declaration was adopted, shows any of the following:

   (A) The project will have one or more significant effects not discussed in the previous EIR or negative declaration;

   (B) Significant effects previously examined will be substantially more severe than shown in the previous EIR;

   (C) Mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the project, but the project proponents decline to adopt the mitigation measure or alternative; or

   (D) Mitigation measures or alternatives which are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponents decline to adopt the mitigation measure or alternative.

Pursuant to CEQA Guidelines Section 15164, the City, as the lead agency, has prepared this Addendum to confirm that none of the conditions identified in CEQA Guidelines Section 15162 and Public Resources Code Section 21166(c) have been triggered. This Addendum to the previously adopted Indigo IS/MND demonstrates that the environmental analysis, impacts, and mitigation requirements identified for the Hotel Indigo project remain substantively unchanged despite project additions described herein, and supports the finding that the Proposed Project does not raise any new issues and does not exceed the level of impacts identified in the previous MND.

1.2 Format of this Addendum

The previously adopted Indigo IS/MND serves as the primary environmental compliance document for the Proposed Project, and this Addendum provides minor changes and additions to the adopted Indigo IS/MND. This Addendum should be considered with the full text of the previously adopted Indigo IS/MND. All applicable mitigation measures from the Indigo IS/MND

would be applicable to the Proposed Project and, therefore, are incorporated by reference into this Addendum. This Addendum relies on the use of an Environmental Checklist Form (Checklist), as suggested in CEQA Guidelines Section 15063(d)(3). Per the CEQA Guidelines, an addendum does not need to be circulated for public review but can be included in or attached to the Indigo IS/MND prior to making a decision on the Proposed Project.

1.3 Summary of Findings

Based upon the Checklist prepared for the Proposed Project and supporting responses (see Chapter 3), adoption of the Proposed Project would not result in substantial changes requiring major revisions to the previously adopted Indigo IS/MND. Further, the Proposed Project would not result in any new significant environmental impacts that were not discussed in the Indigo IS/MND or a substantial increase in the severity of previously identified significant impacts. No new mitigation measures are required for the Proposed Project. Since only minor changes and additions are required to the Indigo IS/MND, and none of the conditions described in Public Resources Code Section 21166 or CEQA Guidelines Section 15162(a-b) or Section 15164 requiring preparation of a subsequent MND have occurred, the City finds that the preparation of an addendum to the Indigo IS/MND is the appropriate CEQA documentation for the Proposed Project and that the Proposed Project is within the scope of the Indigo IS/MND.

1.4 Lead Agency and Discretionary Approvals

This Addendum and the previously adopted Indigo IS/MND are intended to serve as the environmental documentation for the changes being requested under the Revised Project. The City of Arcadia is the lead agency under CEQA and maintains authority to approve this Addendum for the Revised Project. Discretionary approvals being sought as part of the Revised Project include the following:

- Acknowledgement of this Addendum to the Indigo IS/MND, which demonstrates that no subsequent CEQA document is required;
- Approval of a Conditional Use Permit for the development of a new hotel use in the C-G Zone with a Downtown Overlay; and
- Approval of an LLA to join together APN 5775-015-011 and the adjacent Hotel Indigo site (Original Project Site) in order to comply with the maximum FAR for the Project Site.

CHAPTER 2:
PROJECT DESCRIPTION

2.1 Project Location

The City of Arcadia is located in northeast Los Angeles County, generally north of the Interstate 10 Freeway (I-10), south of the Foothill Freeway (I-210), east of State Route 164, and west of I-605. The City is approximately 12 miles northeast of downtown Los Angeles; refer to **Figure 1, Regional Vicinity**. The City of Arcadia is surrounded by the City of Sierra Madre and the Verdugo Mountains to the north, the City of Azusa to the east, the City of El Monte to the south, and the City of Pasadena to the west.

The Revised Project is located within the northeastern portion of Arcadia at the southeast corner of Colorado Place and San Juan Drive, and is comprised of the Original Project Site (APNs 5775-015-024, 5775-015-027, 5775-015-028, and 5775-015-029) and one land parcel addressed as 181 Colorado Place (APN 5775-015-011) that is approximately 0.61 acre, or 26,493 square feet;[2] refer to **Figure 2, Revised Project Site**. Regional access to the Revised Project Site is provided via I-210. Local access to the Revised Project Site is provided via Colorado Place, San Juan Drive, and San Rafael Road.

2.2 Existing Conditions

The Revised Project Site, which includes the Original Project Site and APN 5775-015-011, is located in a highly developed and urbanized area of Arcadia. The Original Project Site is occupied by the two Keck Medicine of USC medical office buildings, a parking structure, and the Parsons building. The redevelopment of the Parsons building for hotel uses and the construction of the hotel annex building began in May 2023 and are anticipated to be completed in August 2025. APN 5775-015-011 is vacant lot currently fenced that was previously occupied by the Original Peppers Mexican and Cantina, surface parking, and landscaping. The restaurant building was demolished in 2023 but the surface parking and landscaping remain.

Surrounding uses adjacent to the Revised Project Site include residential, office, and commercial uses. The Revised Project Site is bordered by San Juan Drive, the California Thoroughbred Breeders Association, and single-family homes to the north; San Rafael Road and a small commercial plaza to the east; single-family homes to the east and northeast; Colorado Place, Huntington Drive and Le Meriden hotel to the south; and Colorado Place and the Santa Anita Park (a horseracing track) to the west.

[2] Los Angeles County Assessor, Property Search Tool: APN 5775-015-011, https://assessor.lacounty.gov/homeowners/property-search, accessed June 19, 2024.

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Regional Vicinity

Figure 1

Source: Google Earth Pro, July 2024

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Revised Project Site

Figure 2

2.3 General Plan Designation and Zoning

According to Arcadia General Plan, Chapter 2: Land Use and Community Design Element, the Revised Project Site is designated as Commercial (C). This Commercial designation is intended to encourage a strong pedestrian-oriented environment that provides a variety of retail and service uses, restaurants, and neighborhood-serving commercial uses that complement development in the Downtown Mixed-Use areas.[3] According to the City's Zoning Map, the Revised Project Site is zoned General Commercial (C-G) with a Downtown Overlay.[4] The C-G zone is intended to provide areas for the development of retail and service uses, offices, restaurants, public uses, and similar and compatible uses. The maximum Floor Area Ratio (FAR) permitted under the C-G zone and the Downtown Overlay zone is 1.0 for new development, and the maximum height permitted for new buildings is 48 feet. An additional 10 feet may be allowed for exterior stairways and other access features such as stairwells or elevators for access to the roof, and other rooftop appurtenances.

2.4 Project Characteristics

The Revised Project would consist of the improvements proposed by the Tempo Project, along with the previously Approved Project described in the Indigo IS/MND, which includes the redevelopment of the Parsons building for hotel uses and the construction of a new hotel annex building. The Tempo Project would develop a four-story hotel building with approximately 47,140 square feet of gross floor area on APN 5775-015-011; refer to **Figure 3, Site Plan** and **Figure 4, Conceptual Rendering**. The new hotel building would have a maximum height of 48 feet, excluding rooftop appurtenances, and would consist of a basement level and four above-ground levels containing a total of 93 rooms and ancillary hotel uses. The basement level would primarily contain back-of-house uses for hotel operations, including an electric room, a mechanical room, a laundry room, offices, storage rooms, an employee breakroom, restrooms, and a fitness room for guest use. Level 1 would contain 13 hotel rooms, a kitchen, café, bar, lobby, meeting area, office, restrooms, and an outdoor patio. Levels 2, 3, and 4 would each contain 26 hotel rooms, and the roof level would contain an outdoor paved patio, solar panels, and mechanical areas.

The Tempo Project would utilize the existing parking structure located on the Original Project Site to provide parking for hotel employees, guests, and visitors. As shown in **Figure 3**, the Tempo Project would also reconfigure the existing surface parking lot located to the east of the proposed hotel building on the Original Project Site to provide 18 surface parking spaces, including three electric vehicle charging spaces (reduced by 6 spaces from the existing 24 spaces), a trash enclosure, and a connection to the new surface parking area along the south side of the proposed hotel building. The new surface parking area would provide 6 parking spaces, including 4 accessible parking spaces. In addition, the Tempo Project would develop a drop-off area with

[3] City of Arcadia, Arcadia General Plan, Chapter 2: Land Use and Community Design Element, February 2024.

[4] City of Arcadia, City of Arcadia Zoning Map, Updated February 2024.

access via the existing driveway from Colorado Place. Access to the proposed hotel building would be provided from the two existing driveways along Colorado Place and San Juan Drive.

Source: DesignCell Architecture, June 2024

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Site Plan

Figure 3

Source: DesignCell Architecture, June 2024

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Conceptual Rendering

Figure 4

Landscaping improvements to the Revised Project Site would include the removal of 13 existing trees and the installation of 36 new trees as well as other drought tolerant plants within the Area of Proposed Improvements shown in **Figure 2**. Ancillary improvements to the Revised Project Site would include exterior lighting and accessible routes from the proposed hotel building to the new surface parking area, the existing the surface parking lot to the east, and the existing parking structure.

In order to comply with the maximum FAR of 1.0 for the C-G zone and Downtown Overlay, the Tempo Project would create one legal parcel with a total site area of 226,636 square feet by merging APN 5775-015-011 with the Original Project Site (APNs 5775-015-024, 5775-015-027, 5775-015-028, and 5775-015-029), which has a gross floor area of approximately 177,879 square feet. With the addition of the Tempo Project, the total gross floor area for the Revised Project Site would be approximately 225,019 square feet. This would result in a total site FAR of 0.99 for the Revised Project.

The Tempo Project would require discretionary approvals from the City for an LLA to create one legal parcel comprised of the Original Project Site and APN 5775-015-011, and to develop the proposed hotel building through a Conditional Use Permit in a C-G zone. The Project would also require a lot line adjustment to merge the Project Site with the adjacent Indigo site (APNs 5775-015-024, 5775-015-025, 5775-015-026, and 5775-015-0270) to comply with the maximum FAR for the Project Site.

2.5 Project Construction

Construction of the Tempo Project is anticipated to take approximately 16.5 months to complete. Construction activities would include excavation, grading, building construction, paving, and architectural coating. The excavation for the subterranean basement level of the proposed hotel building would be anticipated to extend to a depth of 12 to 15 feet below grade. Excavation activities for the Revised Project would require a total of approximately 4,800 cubic yards of exported soil. Construction equipment and materials staging would occur within the Revised Project Site. During construction, vehicular access to the Project Site would be provided via existing access points along Colorado Place, San Juan Drive, and San Rafael Road. Lane closures are not anticipated for the Revised Project.

CHAPTER 3:
EVALUATION OF ENVIRONMENTAL IMPACTS

This section includes an assessment, by issue area, of the Revised Project's potential effects on the environment in relation to the analysis provided in the Indigo IS/MND. Determinations are made as to whether the Revised Project would result in new significant impacts or substantially more severe effects, which would trigger the need for a Subsequent or Supplemental EIR.

For each threshold identified below, the following questions are addressed and discussed in the narrative for each issue area:

- What is the impact conclusion of the Revised Project and the Approved Project analyzed in the Indigo IS/MND?

  For each impact identified below, a level of significance of the impact is provided. While the criteria for determining significant impacts are unique to each issue area, the environmental analysis applies a uniform classification of the impacts based on the following definitions consistent with CEQA and its implementing CEQA Guidelines:

  - No Impact (NI) – A designation of no impact is given when no changes in the environment would occur.
  - Less-than-Significant Impact (LTS) – A less-than-significant impact would cause no substantial adverse change in the environment.
  - Less-than-Significant Impact with Mitigation (LTSM) – A less-than-significant impact with mitigation incorporated avoids substantial adverse impacts on the environment with adherence to identified mitigation measures. For those issue areas where the impact of the Revised Project would be less than significant with the incorporation of the same mitigation measure(s) identified in the adopted IS/MND for the Approved Project, the impact is identified as LTSM (AP).
  - Significant and Unavoidable Impact (SU) – A significant unavoidable impact would cause a substantial adverse effect on the environment, and no feasible mitigation measures would be available to reduce the impact to a less than significant level.

- Does the Project involve new significant impacts or substantially more severe impacts than those previously identified in the Indigo IS/MND resulting from a substantial change in the project, a substantial change in circumstances, or new information of substantial importance?

- Is there new information of substantial importance that shows that effective but previously infeasible mitigation measures are now feasible or that new or different mitigation measures would substantially reduce significant effects?

3.1 Aesthetics

ENVIRONMENTAL ISSUE	IMPACT CONCLUSION		ANY NEW SIGNIFICANT IMPACTS OR SUBSTANTIALLY MORE SEVERE IMPACTS RESULTING FROM:			FOR MITIGATION MEASURES (MM), NEW INFORMATION OF SUBSTANTIAL IMPORTANCE SHOWS THAT:	
	REVISED PROJECT	ADOPTED IS/MND	SUBSTANTIAL CHANGE IN THE PROJECT?	SUBSTANTIAL CHANGE IN CIRCUMSTANCE?	NEW INFORMATION OF SUBSTANTIAL IMPORTANCE?	EFFECTIVE BUT PREVIOUSLY INFEASIBLE MM ARE NOW FEASIBLE?	NEW OR DIFFERENT MM WOULD SUBSTANTIALLY REDUCE SIGNIFICANT EFFECT(S)?
Would the project:							
a) Have a substantial adverse effect on a scenic vista?	LTS	LTS	No	No	No	No	No
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	NI	NI	No	No	No	No	No
c) In non-urbanized area, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	LTS	LTS	No	No	No	No	No
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	LTS	LTS	No	No	No	No	No

3.1.1 Indigo IS/MND Findings

PRC Section 21099 states that "aesthetic and parking impacts of a residential, mixed-use residential, or employment center project on an infill site within a transit priority area shall not be considered significant impacts on the environment." The Indigo IS/MND concludes that because the Approved Project is located within a Transit Priority Area (TPA), aesthetic-related impacts would not be considered significant.[5]

[5] Note: According to *Southern California Association of Governments' (SCAG) 2045 Transit Priority Areas (TPAs) - SCAG Region* online mapping tool (https://hub.scag.ca.gov/datasets/c6b4717526c247528d868c2fc046894d/explore), the Original Project Site is mostly but not entirely within a SCAG recognized TPA. The Area of Proposed Improvements, while approximately 0.5 miles from the Los

According to the Indigo IS/MND, there are no officially designated scenic vistas in the City, though views of the San Gabriel Mountains to the north provide aesthetic views for the City. The Indigo IS/MND states views of the San Gabriel Mountains are available from the Approved Project area, including from roadways and Arcadia Community Regional Park, and the height of the Indigo Hotel may obstruct these views. However, existing views are limited due to urban development and views from passing motorists and pedestrians would be temporary. The Indigo IS/MND states the Original Project Site is not located within or adjacent to a scenic highway; the closest eligible state scenic highway is Interstate 210, located 0.5-mile north of the Original Project Site.

The Indigo IS/MND determined the Approved Project would be consistent with the City's General Plan policies, Development Code, and Municipal Code Sections related to the aesthetic character of the City. With approval of a Conditional Use Permit and a Height Variance, the Approved Project would be consistent with the surrounding land uses and the City's land use and zoning designations.

Regarding light and glare, implementation of the Approved Project would result in new sources of light and glare. However, the Approved Project area is urbanized with existing sources of light and glare, and the Approved Project would adhere to Arcadia Municipal Code (AMC) Section 9103.01.120, which establishes the standards for exterior lighting in the City and AMC Section 9103.10.070, which requires that any proposed land use or activity producing glare be shielded so that glare is not perceptible beyond the property line.

3.1.2 Project Analysis

The Tempo Project would develop a four-story hotel building that would be 48 feet tall with adjoining parking areas on a site that currently contains a vacant lot, surface parking, and minor landscaping. Views of the San Gabriel Mountains from the Revised Project Site are available to the north primarily from Colorado Place. The eastern most portion of Santa Anita Park is also directly south of the Area of Proposed Improvements (across Colorado Place) and may provide views; however, views from the parking lot of Santa Anita Park would be obscured by the existing trees and bushes that surround its perimeter.

Implementation of the Tempo Project would potentially obstruct these views of the San Gabriel Mountains to the north from Colorado Place. However, the Revised Project Site is currently occupied by the Keck Medicine of USC medical buildings, which are approximately 43 feet tall.[6] Additionally, the Approved Project buildings would be approximately 63 feet and 45 feet tall upon completion of construction. As such, views of the San Gabriel Mountains are already limited by existing and approved developments, and passing pedestrians and motorists would have fleeting views that would only be temporarily obstructed by the proposed Tempo hotel building. Further, although implementation of the Tempo Project would introduce a new building, it would be similar in height to existing buildings in its vicinity. Consistent with the determination in the Indigo IS/MND,

Angeles County Metropolitan Transportation Authority (Metro) Gold Line Arcadia Station, is just outside of SCAG's mapped TPA. Thus, for conservative analysis purposes, this Addendum does not take any analytical credit for being within a TPA.

[6] Height was derived from ground level view of the building and estimated elevation in Google Earth.

the introduction of a new structure on the Revised Project Site would not have a substantial adverse effect on a scenic vista of the San Gabriel Mountains.

According to the California Department of Transportation, California State Scenic Highway System Map, there are no eligible or designated scenic highways within the City of Arcadia.[7] As such, consistent with the determination in the Indigo IS/MND, the Tempo Project would result in no impact to a scenic highway.

Regarding conflicts with applicable zoning and other regulations governing scenic quality, **Table 3.1-1, Arcadia General Plan and Arcadia Municipal Code Consistency Analysis** Arcadia General Plan and Arcadia Municipal Code Consistency Analysis, shows the consistency of the proposed Tempo Project with the City's General Plan policies and AMC regulations related to the aesthetic character of the City.

Table 3.1-1
Arcadia General Plan and Arcadia Municipal Code Consistency Analysis

Applicable Policy/Regulation	Consistency Analysis
General Plan	
Policy LU-1.1: Promote new infill and redevelopment projects that are consistent with the City's land use and compatible with surrounding existing uses.	**Consistent.** The Tempo Project would be an infill development project, consistent with the designated C-G zone with City approval of a Conditional Use Permit (to allow for hotel uses is a commercial zone). The Revised Project would be under the allowable FAR of 1.0 for the Downtown Overlay C-G zone and would adhere to the minimum setbacks required under AMC Section 9102.03.030. As such, the Revised Project would be consistent with the City's land use and compatible with surrounding existing uses.
Policy LU-1.2: Promote new uses of land that provide diverse economic, social, and cultural opportunities, and that reinforce the characteristics that make Arcadia a desirable place to live.	**Consistent.** Implementation of the Tempo Project would provide hospitality amenities to the public, including a hotel, café, and bar. The Tempo Project would contribute to the economic diversity of the City by providing a commercial amenity that can support visitors to downtown Arcadia, as well as surrounding communities. The Tempo Project would be required to comply with the City's Commercial/Mixed Use Design Guidelines to ensure the proposed hotel building compliments the City's design aesthetics and community character.
Policy LU-1.4. Encourage the gradual redevelopment of incompatible, ineffective, and/or undesirable land uses.	**Consistent.** The Tempo Project would be developed on an existing, vacant parcel, thereby eliminating an ineffective land use in the downtown area, and would provide a desirable use that would support existing uses in the vicinity and throughout the City.
Policy LU-2.1: Ensure that trees planned in the public right-of-way continue to be well maintained where they exist, are planted in areas where they are currently lacking, and encourage replacement of undesirable tree species in public rights-of-way.	**Consistent.** The Tempo Project would remove a total of 13 trees and plant 36 trees as well as other drought tolerant plants. The Tempo Project would remove 13 trees, including one protected sycamore tree located in the proposed trash enclosure area. However, the sycamore tree would be replaced in-kind with a 60-inch box-size sycamore. As such, the removal and replacement of the protected tree would be consistent with the requirements under AMC Section 9110,01, Tree Preservation. The landscaping proposed by the Tempo Project would be subject to City review and approval.

[7] California Department of Transportation, *California State Scenic Highway System Map*, https://caltrans.maps.arcgis.com/apps/webappviewer/index.html?id=465dfd3d807c46cc8e8057116f1aacaa, accessed July 3, 2024.

Applicable Policy/Regulation	Consistency Analysis
Policy LU-2.2. Emphasize the use of public spaces and design that are oriented toward the pedestrian and use of transit throughout the community.	**Consistent.** The proposed hotel building would be located on a vacant parcel with surface parking and that is currently fenced off. Implementation of the Tempo Project would allow pedestrian and vehicular connectivity through the Revised Project Site between Colorado Place and San Juan Drive. The Revised Project Site is also located within 0.25 miles of the bus top located at Huntington Drive and Santa Clara Street and approximately 0.5 miles of Arcadia Train Station.
Policy LU-2.6: Ensure the aesthetic quality and pedestrian orientation of the City's commercial corridors by implementing the recommendations of this Community Design section, as well as the Architectural Design Guidelines for commercial and industrial properties.	**Consistent.** The Tempo Project would be required to comply with the City's Commercial/Mixed Use Design Guidelines. Project plans would be subject to the City's site plan and design review process.
Policy LU-6.1: Encourage all new commercial development, through the use of entitlement incentives and/or requirements, to provide public gathering spaces and pedestrian facilities and connections.	**Consistent.** The Tempo Project is a hotel development that would provide hospitality amenities to the general public, including hotel, café, and bar uses. Implementation of the Tempo Project would allow pedestrian and vehicular connectivity between Colorado Place and San Juan Drive. The Revised Project Site is also located within 0.25 miles of the bus stop located at Huntington Drive and Santa Clara Street and approximately 0.5 miles of Metro Gold Line Arcadia Station.
Policy LU-6.4: Encourage design approaches that create a cohesive, vibrant look and that minimize the appearance of expansive parking lots on major commercial corridors for new or redeveloped uses.	**Consistent.** The Tempo Project would redevelop an existing vacant parcel with a new hotel building, adjoining parking areas, and landscaping. Although the Tempo Project would repave the eastern portion of the Area of Proposed Improvements to provide surface parking with driveway access, the Tempo Project would not increase number of surface parking lots and would not develop any expansive parking lots. Direct views from Colorado Place of the surface parking area would also be minimized by the enhanced drop off area. The Tempo Project would install vibrant landscaping with 36 trees, various shrubs and plants, and granite and decorative rock.
Policy LU-6.6: Develop landscaping that is compatible with the City's water efficient landscape ordinance and facade standards for commercial properties, and require all new development to adhere to them. Encourage the improvement of rundown buildings by offering entitlement incentives.	**Consistent.** The proposed improvements would include vibrant landscaping with 36 trees, various drought-tolerant plants, and granite and decorative rock. The landscaping would primarily surround the perimeter of the Area of Proposed Improvements and the proposed hotel building perimeter. As discussed previously, The Tempo Project would remove a total of 13 trees and plant 36 trees as well as other drought tolerant plants. Although the Tempo Project would remove one protected sycamore tree, it would be replaced with a 60-inch box-size sycamore in accordance with the requirements of the City's Tree Preservation Ordinance. The proposed landscaping would be subject to City review and approval. There are no existing buildings within the Area of Proposed Improvements; as such, the policy regarding rundown buildings would not apply.
Policy LU-6.11: Provide mature street trees, continuous landscaping (that includes drought-tolerant plants), and pedestrian amenities along corridors and within districts to create a more visually pleasing and cohesive streetscape.	**Consistent.** The Tempo Project would remove a total of 13 trees, including one protected sycamore tree that would be replaced in-kind with a 60-inch box-size sycamore in accordance with the City's Tree Preservation Ordinance. A total of 36 new trees (including one 60-inch box size in-kind replacement tree and 35 trees ranging from 24-inch to 36-inch box sizes), various drought-tolerant plants, and granite and decorative rock would provide visually pleasing and cohesive landscaping in accordance with the City's Water Efficient Landscaping Ordinance.

Applicable Policy/Regulation	Consistency Analysis
Policy LU-6.12: Create pedestrian connections along corridors and districts that link surrounding neighborhoods and provide a more pedestrian-friendly atmosphere.	**Consistent.** The proposed hotel building would be developed on a vacant infill parcel with surface parking that is currently fenced off. Implementation of the Tempo Project would allow pedestrian connectivity through the Revised Project Site between Colorado Place and San Juan Drive.
Arcadia Development Code	
Section 9102.03.020, Land Use Regulations and Allowable Uses and Section 9102.03.030, Development Standards	**Consistent.** The Tempo Project would be consistent with the designated C-G zone with City approval of a Conditional Use Permit (to allow for hotel uses is a commercial zone). The Revised Project would be under the allowable FAR of 1.0 for the Downtown Overlay C-G zone and would adhere to the minimum setbacks required under AMC Section 9102.03.030.
Section 9103.01.120, Exterior Lighting	**Consistent.** The Tempo Project would be required to comply with the City's exterior lighting standards to balance safety and security needs for lighting that also avoids light trespass (spill light), light pollution, and glare onto surrounding properties.
Section 9103.11.070, Permanent Signs by Zone - Locations and Allowed Sign Area.	**Consistent.** The Tempo Project would be required to comply with City's regulations for signage within the C-G zone.
Section 9103.09.040.C, Landscape Requirements for Commercial, Mixed Use, and Industrial Zones	**Consistent.** The Tempo Project would include new landscaping, including various trees, plants, and groundcover. The proposed landscaping would be subject to City review and approval.
Section 9107.19, Site Plan and Design Review	**Consistent.** The Tempo Project would be required to comply with the City's Commercial/Mixed Use Design Guidelines to ensure the proposed structure and parking areas compliment the City's design aesthetics and community character. Project plans would be subject to the City's site plan and design review.
Section 9110.01, Tree Preservation	**Consistent.** The Tempo Project would remove 13 trees, including one protected sycamore tree, located in the proposed trash enclosure area. However, the sycamore tree would be replaced in-kind with a 60-inch-box-size sycamore. As such, the removal and replacement of the protected tree would be consistent with the requirements under AMC Section 9110,01, Tree Preservation.. Additionally, the proposed landscaping would be subject to City review and approval.

As demonstrated in **Table 3.1-1**, the Tempo Project would be consistent with the applicable General Plan policies and AMC regulations related to the aesthetic character of the City. Therefore, the Revised Project, which includes the Approved Project and the Tempo Project, would not conflict with applicable zoning or other regulations governing scenic quality.

Regarding light and glare, although implementation of the Tempo Project would construct a four-story hotel building introducing new sources of light and glare compared to existing conditions, the Revised Project area is already heavily developed with similar, existing sources of light and glare. Similar to the Indigo IS/MND, the Tempo Project would adhere to AMC Section 9103.01.120, which establishes the standards for exterior lighting in the City; and AMC Section 9103.10.070, which requires that any proposed land use or activity producing glare be shielded so that glare is not perceptible beyond the property line. Proposed nighttime lighting on-site for the outdoor areas would be limited to security, parking, and accent lighting. Therefore, the Revised Project would not create a new source of substantial light or glare that would adversely affect day or nighttime views.

3.1.3 Conclusion

Based on the above, no new significant impacts or substantially more severe impacts than those previously identified in the Indigo IS/MND would occur as a result of a substantial change proposed by the Revised Project, a substantial change in circumstances, or new information of substantial importance associated with the Revised Project. Likewise, there is no new information of substantial importance that shows that effective but previously infeasible mitigation measures are now feasible or that new or different mitigation measures would substantially reduce significant effects of the Revised Project. Therefore, no new or different mitigation measures are required.

3.1.4 Mitigation Measures

APPLICABLE INDIGO IS/MND MITIGATION MEASURES

No Indigo IS/MND mitigation measures apply.

NEW MITIGATION MEASURES

No new or different mitigation measures are required.

3.2 Agriculture and Forestry Resources

ENVIRONMENTAL ISSUE	IMPACT CONCLUSION		ANY NEW SIGNIFICANT IMPACTS OR SUBSTANTIALLY MORE SEVERE IMPACTS RESULTING FROM:			FOR MITIGATION MEASURES (MM), NEW INFORMATION OF SUBSTANTIAL IMPORTANCE SHOWS THAT:	
	REVISED PROJECT	ADOPTED IS/MND	SUBSTANTIAL CHANGE IN THE PROJECT?	SUBSTANTIAL CHANGE IN CIRCUMSTANCE?	NEW INFORMATION OF SUBSTANTIAL IMPORTANCE?	EFFECTIVE BUT PREVIOUSLY INFEASIBLE MM ARE NOW FEASIBLE?	NEW OR DIFFERENT MM WOULD SUBSTANTIALLY REDUCE SIGNIFICANT EFFECT(S)?
Would the project:							
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	NI	NI	No	No	No	No	No
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	NI	NI	No	No	No	No	No

ENVIRONMENTAL ISSUE	IMPACT CONCLUSION		ANY NEW SIGNIFICANT IMPACTS OR SUBSTANTIALLY MORE SEVERE IMPACTS RESULTING FROM:			FOR MITIGATION MEASURES (MM), NEW INFORMATION OF SUBSTANTIAL IMPORTANCE SHOWS THAT:	
	REVISED PROJECT	ADOPTED IS/MND	SUBSTANTIAL CHANGE IN THE PROJECT?	SUBSTANTIAL CHANGE IN CIRCUMSTANCE?	NEW INFORMATION OF SUBSTANTIAL IMPORTANCE?	EFFECTIVE BUT PREVIOUSLY INFEASIBLE MM ARE NOW FEASIBLE?	NEW OR DIFFERENT MM WOULD SUBSTANTIALLY REDUCE SIGNIFICANT EFFECT(S)?
Would the project:							
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?	NI	NI	No	No	No	No	No
d) Result in the loss of forest land or Conversion of forest land to non-forest use?	NI	NI	No	No	No	No	No
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forestland to non-forest use?	NI	NI	No	No	No	No	No

3.2.1 Indigo IS/MND Finding

As stated in the Indigo IS/MND, most of the City is suburbanized and developed. The City does not have any land designated or zoned for agricultural use, forestland, timberland, or timberland production. Additionally, the City does not have any land subject to a Williamson Act contract. Therefore, the Indigo IS/MND concluded that no impact to agricultural and forestry resources would occur.

3.2.2 Project Analysis

The Revised Project Site has a Commercial land use designation and is zoned as C-G. As discussed in the Indigo IS/MND, the City does not contain land designed or zoned for agricultural use, forestland, timberland, or timberland production. The Revised Project Site is not designated as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance.[8] Although Los Angeles County is participating in a Williamson Act contract as of 2023, the City of Arcadia does

[8] California Department of Conservation, California Important Farmland Finder, https://maps.conservation.ca.gov/DLRP/CIFF/, accessed June 13, 2024.

not contain land subject to the Williamson Act.[9] Therefore, consistent with the Indigo IS/MND, no impact to agricultural and forestry resources would occur as a result of the Revised Project.

3.2.3 Conclusion

Based on the above, no new significant impacts or substantially more severe impacts than those previously identified in the Indigo IS/MND would occur as a result of a substantial change proposed by the Revised Project, a substantial change in circumstances, or new information of substantial importance associated with the Revised Project. Likewise, there is no new information of substantial importance that shows that effective but previously infeasible mitigation measures are now feasible or that new or different mitigation measures would substantially reduce significant effects of the Revised Project. Therefore, and no new or different mitigation measures are required.

3.2.4 Mitigation Measures

APPLICABLE INDIGO IS/MND MITIGATION MEASURES

No Indigo IS/MND mitigation measures apply.

NEW MITIGATION MEASURES

No new or different mitigation measures are required.

3.3 Air Quality

ENVIRONMENTAL ISSUE	IMPACT CONCLUSION		ANY NEW SIGNIFICANT IMPACTS OR SUBSTANTIALLY MORE SEVERE IMPACTS RESULTING FROM:			FOR MITIGATION MEASURES (MM), NEW INFORMATION OF SUBSTANTIAL IMPORTANCE SHOWS THAT:	
	REVISED PROJECT	ADOPTED IS/MND	SUBSTANTIAL CHANGE IN THE PROJECT?	SUBSTANTIAL CHANGE IN CIRCUMSTANCE?	NEW INFORMATION OF SUBSTANTIAL IMPORTANCE?	EFFECTIVE BUT PREVIOUSLY INFEASIBLE MM ARE NOW FEASIBLE?	NEW OR DIFFERENT MM WOULD SUBSTANTIALLY REDUCE SIGNIFICANT EFFECT(S)?
Would the project:							
a) Conflict with or obstruct implementation of the applicable air quality plan?	LTS	LTS	No	No	No	No	No
b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard?	LTS	LTS	No	No	No	No	No
c) Expose sensitive receptors to substantial pollutant concentrations?	LTS	LTS	No	No	No	No	No

[9] California Department of Conservation, California Williamson Act Enrollment Finder, https://maps.conservation.ca.gov/dlrp/WilliamsonAct/App/index.html, accessed July 7, 2024

ENVIRONMENTAL ISSUE	IMPACT CONCLUSION		ANY NEW SIGNIFICANT IMPACTS OR SUBSTANTIALLY MORE SEVERE IMPACTS RESULTING FROM:			FOR MITIGATION MEASURES (MM), NEW INFORMATION OF SUBSTANTIAL IMPORTANCE SHOWS THAT:	
	REVISED PROJECT	ADOPTED IS/MND	SUBSTANTIAL CHANGE IN THE PROJECT?	SUBSTANTIAL CHANGE IN CIRCUMSTANCE?	NEW INFORMATION OF SUBSTANTIAL IMPORTANCE?	EFFECTIVE BUT PREVIOUSLY INFEASIBLE MM ARE NOW FEASIBLE?	NEW OR DIFFERENT MM WOULD SUBSTANTIALLY REDUCE SIGNIFICANT EFFECT(S)?
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	LTS	LTS	No	No	No	No	No

3.3.1 Indigo IS/MND Finding

The Indigo IS/MND concluded that overall impacts related to air quality would be less than significant. The Indigo IS/MND analyzed the Approved Project's consistency with South Coast Air Quality Management District's (SCAQMD) 2016 Air Quality Management Plan (AQMP), which was the latest AQMP when the Indigo IS/MND was prepared. The Indigo IS/MND determined that that construction and operation of the Approved Project would not generate criteria air pollutant emissions that exceed the SCAQMD's thresholds. Further, the Indigo IS/MND determined that the proposed uses for the Approved Project Site would be consistent with the existing land use designation for the Approved Project Site, and no amendments to the General Plan would be required. Therefore, the Indigo IS/MND concluded the Approved Project would be consistent with the 2016 AQMP.

The Indigo IS/MND analyzed the daily emissions of criteria pollutants resulting from the Approved Project during construction and operation for the following pollutants: carbon monoxide (CO), sulfur oxides (SO_X), coarse particulate matter (PM_{10}), fine particulate matter ($PM_{2.5}$), lead, volatile organic compounds (VOC), and oxides of nitrogen (NOx). Construction activities would result in pollutant emissions from on-site sources (e.g., off-road construction equipment, soil disturbance, VOC off-gassing from architectural coatings and asphalt pavement application) and off-site sources (e.g., vendor trucks, haul trucks, and worker vehicle trips). Operation of the Approved Project would produce pollutant emissions associated with vehicular traffic, area sources (e.g., consumer products, architectural coatings, landscaping equipment), energy sources (e.g., natural gas, appliances, and space and water heating), and stationary sources (e.g., emergency generator). The Indigo IS/MND concluded the net increase in all criteria pollutants would be below SCAQMD thresholds. Further, the Approved Project would be subject to SCAQMD Rule 403 for Fugitive Dust and Rule 1113 for Architectural Coatings.

Regarding sensitive receptors, the Indigo IS/MND performed a localized significance threshold (LST) analysis to evaluate impacts to nearest sensitive receptor (i.e., single family residential home adjacent to the north) for daily emissions of NO_x, CO, PM_{10}, and $PM_{2.5}$. The Indigo IS/MND also included analysis for potential CO hotspots, toxic air contaminants (TAC), and potential health effects of criteria air pollutant emissions. The Indigo IS/MND concluded the Indigo Project would not result in a potentially significant contribution to regional concentrations of non-

attainment pollutants, and thus, would not result in a significant contribution to the adverse health effects associated with those pollutants.

According to the Indigo IS/MND, although construction activities may produce odors, they would disperse rapidly and would not be substantial in magnitude. The Approved Project would involve hotel uses and would not include agricultural uses, wastewater treatment plants, food-processing plants, chemical plants, composting, refineries, landfills, dairies, and fiberglass molding. Impacts related to odors would be less than significant.

3.3.2 Project Analysis

The following section evaluates potential short- and long-term air quality impacts that would result from the construction and operation of the Revised Project. The analysis is primarily based upon **Attachment A, Air Quality Assessment**, which analyzed air quality impacts for a 91-room hotel. After completion of the air quality assessment, the total number of proposed rooms increased to 93. As such, **Attachment A.1, Revised Air Quality, Greenhouse Gas, Energy, and Noise Impact Analyses**, was prepared to evaluate the potential impacts of the additional two rooms, which concluded that the original impact determinations for the 91-room hotel would not change with the increase to 93 rooms.

CONSISTENCY WITH APPLICABLE AIR QUALITY PLAN

On December 2, 2022, the SCAQMD Governing Board adopted the 2022 AQMP. The 2022 AQMP incorporates the latest scientific and technical information and planning assumptions, including the latest applicable growth assumptions, updated emission inventory methodologies for various source categories. Additionally, the 2022 AQMP utilized information and data from the South Coast Association of Governments (SCAG) and its 2020-2045 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS). While SCAG has recently adopted Connect SoCal 2024 (i.e., the 2024-2050 RTP/SCS), SCAQMD has not released an updated AQMP based off the 2024-2050 RTP/SCS growth projections. As such, this consistency analysis is based off the 2016 AQMP that was analyzed in the Indigo IS/MND and the most recent 2022 AQMP.

According to the SCAQMD's CEQA Air Quality Handbook, projects must be analyzed for consistency with two main criteria, as discussed below.

Criterion 1:

With respect to the first criterion, SCAQMD methodologies require that an air quality analysis for a project include forecasts of project emissions in relation to contributing to air quality violations and delay of attainment.

a) *Would the project result in an increase in the frequency or severity of existing air quality violations?*

   Since the consistency criteria identified under the first criterion pertain to pollutant concentrations, rather than to total regional emissions, an analysis of a project's pollutant emissions relative to localized pollutant concentrations associated with the California Ambient Air Quality Standards (CAAQS) and National Ambient Air Quality Standards

(NAAQS) is used as the basis for evaluating project consistency. As detailed below under the Criteria Air Pollutants subsection, localized concentrations of CO, NO_X, PM_{10}, and $PM_{2.5}$ would be less than significant during Tempo Project and Approved Project construction and operations. Therefore, the Revised Project would not result in an increase in the frequency or severity of existing air quality violations.

b) Would the project cause or contribute to new air quality violations?

As discussed below under the Criteria Air Pollutants subsection, the Tempo Project in combination with the Approved Project would result in emissions that are below the SCAQMD thresholds. Therefore, the Revised Project would not have the potential to cause or affect a violation of the ambient air quality standards.

c) Would the project delay timely attainment of air quality standards or the interim emissions reductions specified in the AQMP?

The Revised Project would result in less than significant impacts regarding localized concentrations during Tempo Project and Approved Project construction and operations; refer to the Localized Pollutants and Sensitive Receptors subsection below. As such, the Revised Project would not delay the timely attainment of air quality standards or 2022 AQMP emissions reductions.

Criterion 2:

With respect to the second criterion for determining consistency with SCAQMD and SCAG air quality policies, it is important to recognize that air quality planning within the South Coast Air Basin (Basin) focuses on attainment of ambient air quality standards at the earliest feasible date. Projections for achieving air quality goals are based on assumptions regarding population, housing, and growth trends. Thus, the SCAQMD's second criterion for determining project consistency focuses on whether the Revised Project exceeds the assumptions utilized in preparing the forecasts presented in the 2016 AQMP and the 2022 AQMP. Determining whether a project exceeds the assumptions reflected in the AQMP involves the evaluation of the three criteria outlined below. The following discussion provides an analysis of each of these criteria.

a) Would the project be consistent with the population, housing, and employment growth projections utilized in the preparation of the AQMP?

A project is consistent with the AQMP, in part, if it is consistent with the population, housing, and employment assumptions that were used in the development of the AQMP. Three sources of data form the basis for the projections of air pollutant emissions: general plans, SCAG's regional growth forecast, and SCAG's RTP/SCS. The RTP/SCS also provides socioeconomic forecast projections of regional population growth. As previously discussed, the 2016 AQMP was based on the 2016-2040 RTP/SCS, which considered growth between 2012 and 2040, and the 2022 AQMP is based on the 2020-2045 RTP/SCS, which considered growth between 2016 and 2045.

The Revised Project Site, which is comprised of the Original Project Site and APN 5775-015-011, is designated Commercial and zoned C-G. The Commercial designation allows

a broad array of commercial enterprises, including restaurants, durable goods sales, food stores, lodging, professional offices, specialty shops, indoor and outdoor recreational facilities, and entertainment uses. The C-G zone is intended to provide areas for retail and service uses, offices, restaurants, public uses, and similar and compatible uses. The Tempo Project proposes the construction of a hotel, which is consistent with the land use and zoning designations for the Revised Project Site.

Furthermore, the Tempo Project is anticipated to generate approximately 32 new employees and the Approved Project would generate approximately 111 new employees, resulting in a total of 143 new employees for the Revised Project.[10] According to SCAG's 2016-2040 RTP/SCS, the City's employment would increase by 5,500 employees between 2012 and 2040. The Revised Project's employment increase of 150 new employees would constitute only 2.6 percent of the City's employment increase between 2012 and 2040. In addition, according to SCAG's 2020-2045 RTP/SCS, the City's employment would increase from 32,600 in 2016 to 36,100 in 2045, representing an increase of 3,500 employees between 2016 and 2045. The Revised Project's employment increase of 143 new employees would only constitute only 4.1 percent of the City's employment increase between 2016 and 2045. As such, the Revised Project is considered consistent with SCAG's forecast in its 2016-2040 RTP/SCS and 2020-2045 RTP/SCS, and is consistent with the types, intensity, and patterns of land use previously envisioned for the Original Project Site. The population, housing, and employment forecasts, which are adopted by SCAG's Regional Council, are based on the local plans and policies applicable to the City. As the SCAQMD has incorporated these same projections into the 2016 AQMP and 2022 AQMP, it can be concluded that the proposed Project would be consistent with both the 2016 AQMP and the 2022 AQMP.

b) Would the project implement all feasible air quality mitigation measures?

The Tempo Project in combination with the Approved Project would result in less than significant air quality impacts. The Revised Project would comply with the applicable emission reduction measures identified by the SCAQMD, including Rule 403 that requires control of excessive fugitive dust emissions by regular watering or other dust prevention measures, and Rule 1113 that regulates the reactive organic gas (ROG) content of paint. As such, the Revised Project meets this AQMP consistency criterion.

c) Would the project be consistent with the land use planning strategies set forth in the AQMP?

Land use planning strategies to develop infill sites, reduce vehicle miles traveled (VMT) and greenhouse gas emissions, and promote sustainable design set forth in the 2016 AQMP and 2022 AQMP are primarily based on the 2016-2040 RTP/SCS and the 2020-2045 RTP/SCS, respectively. Overall, it is anticipated that the Tempo Project would be consistent with SCAG's 2016-2040 RTP/SCS and 2020-2045 RTP/SCS in that it would be located on an infill site in a highly developed and urbanized area of Arcadia with multiple

[10] The number of employees for the Tempo Project was calculated using the same employee generation factor of 1,500 square feet/employee provided in the Indigo IS/MND.

bus stops within 0.5-mile and would provide and would provide electric vehicle charging stations, both of which would incentivize employees and visitors to take alternative modes of travel, thereby reducing criteria pollutant emissions.. Therefore, the Tempo Project would be consistent with the land use planning strategies and would be consistent with this criterion.

Impact Summary

In conclusion, the determination of the AQMP consistency is primarily concerned with the long-term influence of a project on air quality in the Basin. The Tempo Project would not result in a long-term impact on the region's ability to meet state and federal air quality standards. Further, the Tempo Project's long-term influence on air quality in the Basin would also be consistent with the SCAQMD and SCAG's goals and policies and is considered consistent with both the 2016 AQMP and the 2022 AQMP. As such, impacts resulting from the Tempo Project would be less than significant and consistent with the impacts disclosed in the Indigo IS/MND, which were determined to be less than significant. In addition, as both the Tempo Project and Approved Project are consistent with the AQMP, the Revised Project would also be less than significant. As such, no new project-specific mitigation measures are required.

CRITERIA AIR POLLUTANTS

Construction Impacts

The Tempo Project proposes to construct a new 47,140-square-foot hotel building and associated improvements described above in **Chapter 2**: **Project Description**. Construction would result in fugitive dust emissions, exhaust emissions from construction equipment and worker vehicles, emissions from the application of coatings (i.e., ROG emissions). Construction activities would comply with SCAQMD Rule 402, which prohibits fugitive dust from creating a nuisance off-site, Rule 403, which requires that excessive fugitive dust emissions be controlled by regular watering or other dust prevention measures, and Rule 1113, which provides specifications on painting practices as well as regulates the ROG content of paint. As proposed, this analysis assumes that construction of the Approved Project would be completed prior to the start of construction for the Tempo Project. Therefore, construction activities for the Approved Project and the Tempo Project would not overlap.

The analysis of construction criteria pollutant emissions has been prepared utilizing the California Emissions Estimator Model (CalEEMod) version 2022.1. **Table 3.3-1, Construction Criteria Pollutant Emissions**, summarizes the estimated maximum daily emissions of VOC (ROG), NO_x, CO, SO_2, PM_{10}, and $PM_{2.5}$ for the Tempo Project. As shown in **Table 3.3-1**, the daily total construction emissions would not exceed established SCAQMD thresholds. In addition, construction of the Tempo Project would generate less maximum daily emissions than construction of the Approved Project for all criteria pollutants. Therefore, the Tempo Project would result in less impact than the Approved Project, and the construction impacts of the Tempo Project would be less than significant.

Asbestos

Asbestos is a term used for several types of naturally occurring fibrous minerals that are a human health hazard when airborne. The most common type of asbestos is chrysotile, but other types such as tremolite and actinolite are also found in California. Asbestos is classified as a known human carcinogen by state, federal, and international agencies and was identified as a toxic air contaminant by CARB in 1986. Asbestos can be released from serpentinite and ultramafic rocks when the rock is broken or crushed. At the point of release, the asbestos fibers may become airborne, causing air quality and human health hazards. These rocks have been commonly used for unpaved gravel roads, landscaping, fill projects, and other improvement projects in some localities. Asbestos may be released to the atmosphere due to vehicular traffic on unpaved roads, during grading for development projects, and at quarry operations. All of these activities may have the effect of releasing potentially harmful asbestos into the air. Natural weathering and erosion processes can act on asbestos bearing rock and make it easier for asbestos fibers to become airborne if such rock is disturbed. According to the Department of Conservation Division of Mines and Geology, serpentinite and ultramafic rocks are not known to occur within the vicinity of the Revised Project Site. Thus, there would be no impact associated with asbestos during construction.

Table 3.3-1 Construction Criteria Pollutant Emissions

Construction Year	Pollutant (pounds/day)[1,2]					
	ROG	NO_X	CO	SO_2	PM_{10}	$PM_{2.5}$
Temp Project Emissions						
Year 1 Maximum Daily Emissions (2024)	1.23	11.9	11.5	0.02	2.09	1.20
Year 2 Maximum Daily Emissions (2025)	13.7	10.9	16.8	0.02	1.13	0.57
Maximum Daily Emissions[3]	**13.7**	**11.9**	**16.8**	**0.02**	**2.09**	**1.20**
SCAQMD Significance Thresholds	*75*	*100*	*550*	*150*	*150*	*55*
Threshold Exceeded?	***No***	***No***	***No***	***No***	***No***	***No***
Approved Project Maximum Daily Emissions[3]	**70.42**	**22.99**	**17.44**	**0.04**	**3.52**	**2.11**
Tempo Project Emissions Exceed Approved Project?	***No***	***No***	***No***	***No***	***No***	***No***

Notes:

1. Emissions were calculated using CalEEMod version 2022.1. Higher emissions between summer and winter are presented as a conservative analysis.
2. Modeling assumptions include compliance with SCAQMD Rule 403 which requires: properly maintain mobile and other construction equipment; replace ground cover in disturbed areas quickly; water exposed surfaces three times daily; cover stockpiles with tarps; water all haul roads twice daily; and limit speeds on unpaved roads to 15 miles per hour.
3. As proposed, this analysis assumes that the construction of the Approved Project will be completed prior to the start of construction for the Tempo Project. Therefore, construction of the Tempo Project would not overlap with the construction of the Approved Project.

Source: Michael Baker International, Tempo by Hilton Project – Air Quality Assessment Memorandum, July 22, 2024.

Cumulative Construction Impacts

With respect to the Tempo Project's construction-period air quality emissions and cumulative Basin-wide conditions, the SCAQMD has developed strategies to reduce criteria pollutant emissions outlined in the 2022 AQMP. The Tempo Project would comply with SCAQMD Rule 403 requirements and implement all feasible SCAQMD rules to reduce construction air emissions to the extent feasible. In addition, the Tempo Project would comply with adopted 2022 AQMP emissions control measures. Pursuant to SCAQMD rules and mandates, as well as the CEQA requirement that significant impacts be mitigated to the extent feasible, these same requirements (i.e., Rule 403 compliance, implementation of all feasible mitigation measures, and compliance with adopted AQMP emissions control measures) would also be imposed on construction projects throughout the Basin, which would include related projects.

The Tempo Project's construction emissions would be below the established thresholds and would result in less than significant air quality impacts. Thus, it can be reasonably inferred that the Tempo Project's construction emissions would not contribute to a cumulatively considerable air quality impact for nonattainment criteria pollutants in the Basin, and impacts would be less than significant.

Operational Impacts

Long-term air quality impacts typically consist of mobile source emissions generated from traffic associated with on-site uses (i.e., motor vehicle use by employees and guests), and emissions from area and energy sources. Operational emissions associated with the Tempo Project were estimated in CalEEMod. Based on the *Revised Parking Demand Analysis for the Tempo by Hilton Hotel Project, City of Arcadia, California Memorandum*[11] (Parking Analysis), implementation of the Tempo Project would generate 1,113 trips per day.

Area source emissions would be generated from consumer products, architectural coatings, and landscaping. Regarding energy emissions, the primary use of electricity and natural gas by the Project would be for space heating and cooling, water heating, ventilation, lighting, appliances, landscaping equipment, and electronics. Criteria air pollutant emissions from electricity use were not quantified since criteria pollutants emissions occur at the site of the power plant, which is off-site. Emissions associated with each of these sources were calculated and are shown in **Table 3.3-2, Operational Criteria Pollutant Emissions**. As shown in **Table 3.3-2**, the daily total operational emissions of the Tempo Project would not exceed established SCAQMD thresholds. In addition, total emissions of the Tempo Project and the Approved Project combined would not exceed SCAQMD thresholds. Therefore, impacts related to the total operational emissions of the Revised Project would be less than significant.

As discussed, the Tempo Project would not result in long-term operational air quality impacts. Further, the total emissions of the Tempo Project and the Approved Project combined would not exceed SCAQMD thresholds; thus, the Revised Project also would not result in long-term operational air quality impacts. Adherence to SCAQMD rules and regulations would alleviate

[11] Linscott, Law and Greenspan Engineers, Revised Parking Demand Analysis for the Tempo by Hilton Hotel Project, City of Arcadia, California Memorandum, March 12, 2024.

potential impacts related to cumulative conditions on a project-by-project basis. Moreover, emission reduction technology, strategies, and plans are constantly being developed. As a result, the Revised Project would not contribute a cumulatively considerable net increase of any nonattainment criteria pollutant. Therefore, no cumulative operational impacts associated with implementation of the Revised Project would result.

Air Quality Health Impacts

Adverse health effects induced by criteria pollutant emissions are highly dependent on a multitude of interconnected variables (e.g., cumulative concentrations, local meteorology and atmospheric conditions, and the number and character of exposed individual [e.g., age, gender]). In particular, ozone (O_3) precursors, VOCs and NO_x, affect air quality on a regional scale. Health effects related to $O_3$are therefore the product of emissions generated by numerous sources throughout a region. Existing models have limited sensitivity to small changes in criteria pollutant concentrations and, as such, translating project-generated criteria pollutants to specific health effects or additional days of nonattainment would produce meaningless results. In other words, the Project's less than significant increases in regional air pollution from criteria air pollutants during construction would have negligible impacts on human health.

Table 3.3-2
Operational Criteria Pollutant Emissions

Emissions Source	Pollutant (pounds/day)[1]					
	ROG	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Tempo Project Emissions						
Mobile	3.69	3.10	32.9	0.08	7.29	1.88
Area	1.72	0.02	2.51	<0.01	<0.01	<0.01
Energy	0.02	0.45	0.38	<0.01	0.03	0.03
Total Tempo Project Emissions[2]	***5.44***	***3.55***	***35.8***	***0.08***	***7.32***	***1.92***
SCAQMD Threshold	*55*	*55*	*550*	*150*	*150*	*55*
Threshold Exceeded?	***No***	***No***	***No***	***No***	***No***	***No***
Approved Project Total Net Change Emissions	**9.73**	**20.30**	**50.31**	**0.15**	**11.55**	**3.24**
Total Tempo Project and Approved Project Emissions	**15.17**	**23.85**	**86.11**	**0.23**	**18.87**	**5.16**
SCAQMD Threshold	*55*	*55*	*550*	*150*	*150*	*55*
Threshold Exceeded?	***No***	***No***	***No***	***No***	***No***	***No***

Notes:
1. Emissions calculated using CalEEMod Version 2022.1.
2. Totals may not add precisely due to rounding.
Source: Michael Baker International, Tempo by Hilton Project – Air Quality Assessment Memorandum, July 22, 2024.

As noted in the Brief of Amicus Curiae by the SCAQMD in *Sierra Club v. County of Fresno* (2015) 6 Cal. 5th 502, the SCAQMD acknowledged it would be extremely difficult, if not impossible to quantify health impacts of criteria pollutants for various reasons including modeling limitations as

well as where in the atmosphere air pollutants interact and form.[12] Further, as noted in the Brief of Amicus Curiae by the San Joaquin Valley Air Pollution Control District (SJVAPCD), SJVAPCD has acknowledged that currently available modeling tools are not equipped to provide a meaningful analysis of the correlation between an individual development project's air emissions and specific human health impacts.

The SCAQMD acknowledges that health effects quantification from O_3, as an example, is correlated with the increases in ambient level of O_3 in the air (concentration) that an individual person breathes. SCAQMD's Brief of Amicus Curiae states that it would take a large amount of additional emissions to cause a modeled increase in ambient O_3 levels over the entire region. The SCAQMD further states that based on their own modeling in the *2012 Air Quality Management Plan*, a reduction of 432 tons (864,000 pounds) per day of NO_X and a reduction of 187 tons (374,000 pounds) per day of VOCs would reduce O_3 levels at highest monitored site by only nine parts per billion. As such, the SCAQMD concludes that it is not currently possible to accurately quantify O_3-related health impacts caused by NO_x or VOC emissions from relatively small projects (defined as projects with regional scope) due to photochemistry and regional model limitations. Thus, as the Revised Project would not exceed SCAQMD thresholds for construction and operational air emissions, the Revised Project would have a less than significant impact for air quality health impacts.

Impact Summary

In conclusion, construction and operational impacts resulting from the Revised Project would not result in a cumulatively considerable net increase of any criteria pollutant for which the region is nonattainment. The impacts of the Tempo Project would be less than significant and consistent with the impacts disclosed in the Indigo IS/MND. In addition, construction impacts resulting from the Tempo Project would be less than the Approved Project, as the maximum daily emissions of all criteria pollutants would be lower. Operational impacts resulting from the Tempo Project and the Approved Project combined would be less than significant.

LOCALIZED POLLUTANTS AND SENSITIVE RECEPTORS

Sensitive receptors are defined as facilities or land uses that include members of the population that are particularly sensitive to the effects of air pollutants, such as children, the elderly, and people with illnesses. Examples of these sensitive receptors are residences, schools, hospitals, and daycare centers. The California Air Resources Board (CARB) has identified the following groups of individuals as the most likely to be affected by air pollution: the elderly over 65, children under 14, athletes, and persons with cardiovascular and chronic respiratory diseases such as asthma, emphysema, and bronchitis.

The nearest sensitive receptor to the Tempo Project is the single-family residence located adjacent to the east of the Area of Proposed Improvements.

[12] South Coast Air Quality Management District, Application of the South Coast Air Quality Management District for Leave to File Brief of Amicus Curiae in Support of Neither Party and Brief of Amicus Curiae. In the Supreme Court of California. *Sierra Club, Revive the San Joaquin, and League of Women Voters of Fresno v. County of Fresno*, April 3, 2015.

Localized Significance Thresholds

Localized air quality impacts would occur if pollutant concentrations at sensitive receptors exceeded applicable NAAQS or CAAQS. The SCAQMD developed the LST methodology to assist lead agencies in analyzing localized air quality impacts and the SCAQMD provides the LST screening lookup tables for one-, two-, and five-acre projects emitting CO, NO_X, $PM_{2.5}$, or PM_{10}. If a project's on-site emissions do not exceed the screening levels for any pollutant, it can be concluded that the project would not cause or contribute to an adverse localized air quality impact. The LST methodology and associated mass rates are not designed to evaluate localized impacts from mobile sources traveling over the roadways. The Project is located within Source Receptor Area (SRA) 9, East San Gabriel Valley.

Construction

The SCAQMD guidance on applying CalEEMod to LSTs specifies the number of acres a particular piece of equipment would likely disturb per day. SCAQMD provides LST screening thresholds for one-, two, and five-acre site disturbance areas; SCAQMD does not provide LST screening thresholds for projects over five acres. The Tempo Project would actively disturb approximately one acre per day during the grading phase of construction. Therefore, the construction LST screening threshold for one acre was utilized. As discussed, the nearest sensitive receptor to the Tempo Project is the single-family residence located adjacent to the east of the Area of Proposed Improvements, which may be potentially affected by air pollutant emissions generated during on-site construction activities, and the lowest available LST screening values for 25 meters (82 feet) were conservatively used in this analysis.

Table 3.3-3, Localized Significance of Construction Emissions, shows the localized construction- related emissions for NO_x, CO, PM_{10}, and $PM_{2.5}$ compared to the LST screening thresholds for SRA 9. It is noted that the localized emissions presented in **Table 3.3-3** are less than those in **Table 3.3-2** because localized emissions include only on-site emissions (i.e., from construction equipment and fugitive dust), and do not include off-site emissions (i.e., from hauling activities), per SCAQMD guidance. As shown in **Table 3.3-3**, localized construction emissions would not exceed the LST screening thresholds for SRA 9. Therefore, localized significance impacts from construction would be less than significant.

In addition, construction of the Tempo Project would generate less maximum on-site daily emissions of all four pollutants than construction of the Approved Project. It should be noted that construction of the Approved Project will be completed prior to the start of construction for the Tempo Project; therefore, construction of the Tempo Project and Approved Project would not overlap. As such, consistent with the determination of the Indigo IS/MND, impacts of the Revised Project would be less than significant.

Table 3.3-3
Localized Significance of Construction Emissions

Emissions Source	Emissions (pounds per day)			
	NO_X	CO	PM_{10}	$PM_{2.5}$
Tempo Project Emissions				
Maximum Daily Construction Emissions[1, 2]	11.39	13.39	1.91	1.16
LST Mass Rate Screening Criteria[3]	*89*	*623*	*5*	*3*
Criteria Exceeded?	***No***	***No***	***No***	***No***
Approved Project Maximum Daily On-Site Emissions[4]	**20.95**	**14.66**	**6.62**	**3.71**
Tempo Project Emissions Exceed Approved Project?	***No***	***No***	***No***	***No***

Notes:

1. The building construction, paving, and architectural coating phases would overlap during Year 2; maximum daily construction emissions from these three phases are combined to be presented as the worst-case scenario for CO emissions. The maximum NO_X, $PM_{10,}$ and $PM_{2.5}$ emissions would occur during the grading phase during Year 1.
2. Modeling assumptions include compliance with SCAQMD Rule 403 which requires the following: properly maintain mobile and other construction equipment; replace ground cover in disturbed areas quickly; water exposed surfaces three times daily; cover stockpiles with tarps; water all haul roads twice daily; and limit speeds on unpaved roads to 15 miles per hour.
3. The Localized Significance Threshold Mass Rate Screening Criteria was determined using Appendix C of the SCAQMD *Final Localized Significant Threshold Methodology* guidance document for pollutants NO_X, CO, PM_{10}, and $PM_{2.5}$. The Localized Significance Threshold was based on the anticipated daily acreage disturbance for construction (approximately one acre; therefore, the one-acre thresholds were used) and SRA 9, East San Gabriel Valley.

Source: Michael Baker International, Tempo by Hilton Project – Air Quality Assessment Memorandum, July 22, 2024.

Operations

According to SCAQMD LST methodology, LSTs would apply to the operational phase of a proposed project if the project includes stationary sources or attracts mobile sources that may spend extended periods queuing and idling at the site (e.g., warehouse or transfer facilities). The Tempo Project would not include such uses. Thus, due to the lack of such emissions, no long-term LST analysis is needed for the Tempo Project, and operational LST impacts would be less than significant. In addition, the Approved Project also does not include stationary sources or attracts mobile sources that may spend extended periods queuing and idling at the site. Therefore, the combined impacts of the Tempo Project and the Approved Project would be less than significant. As such, the impacts of the Revised Project would be less than significant and consistent with the determination of the Indigo IS/MND.

Carbon Monoxide Hotspots

CO emissions are a function of vehicle idling time, meteorological conditions, and traffic flow. Under certain extreme meteorological conditions, CO concentrations near a congested roadway or intersection may reach unhealthy levels (i.e., adversely affect residents, school children, hospital patients, the elderly, etc.). To identify CO hotspots, the SCAQMD requires a CO microscale hotspot analysis when a project increases the volume-to-capacity ratio (also called the intersection capacity utilization) by 0.02 (two percent) for any intersection with an existing level of service (LOS) D or worse. Because traffic congestion is highest at intersections where vehicles

queue and are subject to reduced speeds, these hot spots are typically produced at intersection locations.

The Basin is designated as an attainment area for state and federal CO standards. There has been a decline in CO emissions even though VMT on U.S. urban and rural roads have increased. On-road mobile source CO emissions have declined 24 percent between 1989 and 1998, despite a 23 percent rise in motor VMT over the same 10 years. California trends have been consistent with national trends; CO emissions declined 20 percent in California from 1985 through 1997, while VMT increased 18 percent in the 1990s. Three major control programs have contributed to the reduced per-vehicle CO emissions: exhaust standards, cleaner burning fuels, and motor vehicle inspection/maintenance programs.

A detailed CO analysis was conducted in the *Federal Attainment Plan for Carbon Monoxide* (CO Plan) for the SCAQMD's *2003 Air Quality Management Plan*. The locations selected for microscale modeling in the CO Plan are worst-case intersections in the Basin and would likely experience the highest CO concentrations. Of these locations, the Wilshire Boulevard/Veteran Avenue intersection experienced the highest CO concentration (4.6 ppm), which is well below the 35-ppm 1-hr CO federal standard. The Wilshire Boulevard/Veteran Avenue intersection, adjacent to the University of California, Los Angeles campus, is one of the most congested intersections in southern California with an average daily traffic (ADT) volume of approximately 100,000 vehicles per day. As the CO hotspots were not experienced at the Wilshire Boulevard/Veteran Avenue intersection (100,000 ADT), it can be reasonably inferred that CO hotspots would not be experienced at any locations near the Revised Project Site as the Tempo Project would only result in up to 1,113 daily trips and the Approved Project would only result in a net of 2,442 daily trips on the weekdays and 3,012 daily trips on Saturdays, for a combined maximum of 4,125 daily trips for the Revised Project, or about four percent of the volume of a heavily congested intersection in the air basin that still did not yield a significant CO hotspot. Therefore, impacts related to CO hotspots would be less than significant.

Impact Summary

In conclusion, both construction and operational localized air quality impacts resulting from the Revised Project would be less than significant, consistent with the impacts disclosed in the Indigo IS/MND. In addition, construction impacts resulting from the Tempo Project would be less than the Approved Project, as the maximum localized daily emissions would be lower. As with the Approved Project, the Tempo Project would not include stationary sources that would cause localized impacts, or generate significant traffic, and therefore, combined localized operational impacts resulting from the Tempo Project and the Approved Project would be less than significant.

OBJECTIONABLE ODORS

According to the SCAQMD CEQA Air Quality Handbook, land uses associated with odor complaints typically include agricultural uses, wastewater treatment plants, food processing plants, chemical plants, composting, refineries, landfills, dairies, and fiberglass molding. The Tempo Project proposes to develop hotel uses and would not involve any of the uses identified by SCAQMD as being associated with odor; therefore, operation of the Tempo Project would not result in objectionable odors. However, construction activities associated with the Tempo Project

may generate detectable odors from heavy-duty equipment exhaust and architectural coatings. These construction-related odors would be short-term in nature and cease upon project completion. In addition, the Tempo Project would be required to comply with the CCR, Title 13, Section 2449(d)(3) and Section 2485, which minimizes the idling time of construction equipment either by shutting it off when not in use or by reducing the time of idling to no more than five minutes. This would further reduce the detectable odors from heavy-duty equipment exhaust. The Tempo Project would also comply with the SCAQMD Rule 1113, which would minimize odor impacts from ROG emissions during architectural coating. Any impacts to existing adjacent land uses would be short-term.

In conclusion, construction and operational impacts of the Revised Project pertaining to other air emissions (such as those leading to odors) would be less than significant, consistent with the significance and type of impact disclosed in the Indigo IS/MND.

3.3.3 Conclusion

Based on the above, no new significant impacts or substantially more severe impacts than those previously identified in the Indigo IS/MND would occur as a result of a substantial change proposed by the Revised Project, a substantial change in circumstances, or new information of substantial importance associated with the Revised Project. Likewise, there is no new information of substantial importance that shows that effective but previously infeasible mitigation measures are now feasible or that new or different mitigation measures would substantially reduce significant effects of the Revised Project. Therefore, no new or different mitigation measures are required.

3.3.4 Mitigation Measures

APPLICABLE INDIGO IS/MND MITIGATION MEASURES

No Indigo IS/MND mitigation measures apply.

NEW MITIGATION MEASURES

No new or different mitigation measures are required.

3.4 Biological Resources

ENVIRONMENTAL ISSUE	IMPACT CONCLUSION		ANY NEW SIGNIFICANT IMPACTS OR SUBSTANTIALLY MORE SEVERE IMPACTS RESULTING FROM:			FOR MITIGATION MEASURES (MM), NEW INFORMATION OF SUBSTANTIAL IMPORTANCE SHOWS THAT:	
	REVISED PROJECT	ADOPTED IS/MND	SUBSTANTIAL CHANGE IN THE PROJECT?	SUBSTANTIAL CHANGE IN CIRCUMSTANCE?	NEW INFORMATION OF SUBSTANTIAL IMPORTANCE?	EFFECTIVE BUT PREVIOUSLY INFEASIBLE MM ARE NOW FEASIBLE?	NEW OR DIFFERENT MM WOULD SUBSTANTIALLY REDUCE SIGNIFICANT EFFECT(S)?
Would the project:							
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 Wildlife or U.S. Fish and Wildlife Service?	NI	NI	No	No	No	No	No
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	LTS	LTS	No	No	No	No	No
c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	NI	NI	No	No	No	No	No
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?	LTSM (AP)	LTSM	No	No	No	No	No

ENVIRONMENTAL ISSUE	IMPACT CONCLUSION		ANY NEW SIGNIFICANT IMPACTS OR SUBSTANTIALLY MORE SEVERE IMPACTS RESULTING FROM:			FOR MITIGATION MEASURES (MM), NEW INFORMATION OF SUBSTANTIAL IMPORTANCE SHOWS THAT:	
	REVISED PROJECT	ADOPTED IS/MND	SUBSTANTIAL CHANGE IN THE PROJECT?	SUBSTANTIAL CHANGE IN CIRCUMSTANCE?	NEW INFORMATION OF SUBSTANTIAL IMPORTANCE?	EFFECTIVE BUT PREVIOUSLY INFEASIBLE MM ARE NOW FEASIBLE?	NEW OR DIFFERENT MM WOULD SUBSTANTIALLY REDUCE SIGNIFICANT EFFECT(S)?
Would the project:							
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	LTS	LTS	No	No	No	No	No
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?	NI	NI	No	No	No	No	No

3.4.1 Indigo IS/MND Finding

According to the Indigo IS/MND, the Original Project Site is primarily paved with ornamental landscaping and surrounded by developed urban uses. The Original Project Site does not support any naturally vegetated areas or connectivity to any habitats for candidate, sensitive, or special status species, and does not contain wetlands. The City is not located within a Natural Community Conservation Plan/Habitat Conservation Plan area. As such, the Indigo IS/MND concluded there would be no impacts related to candidate, sensitive, or special status species; wetlands; or an adopted habitat conservation plan.

The Indigo IS/MND states no riparian habitat communities or other sensitive natural communities exist within the Original Project Site. However, the Arcadia Wash runs in the Approved Project vicinity and is considered an intermittent riverine system, although it is not classified as a riparian habitat or other sensitive natural community. With implementation of best management practices (BMP) to prevent soil erosion and water pollutants, the Approved Project would not adversely impact the Arcadia Wash and impacts would be less than significant.

According to the Indigo IS/MND, wildlife movement is greatly restricted within the City due to existing urban development and is confined to the San Gabriel Mountains, located 2.6 miles north of the Original Project Site, and the Santa Anita Wash, located 0.8 mile west of the Original Project Site. As such, wildlife movement is not expected to occur at the Original Project Site. However, the Approved Project would remove a total of 34 existing trees that may be utilized by migratory bird species for nesting during the breeding season. As such, the Approved Project would implement Indigo IS/MND mitigation measure **MM BIO-1**, which would avoid bird nesting season as feasible for construction activities or would otherwise require a bird nesting survey by a qualified biologist. With implementation of Indigo IS/MND mitigation measure **MM BIO-1**, impacts

related to migratory wildlife would be reduced to a less than significant level. Further, the Approved Project would remove 34 existing trees, four of which are public City trees. These public City trees would be protected in place in accordance with the City's tree preservation ordinance. The Indigo IS/MND concluded impacts related to local biological resource policies or ordinances would be less than significant.

3.4.2 Project Analysis

The following section evaluates potential impacts related to biological resources that would result from the construction and operation of the Revised Project. The analysis is based, in part, on the Protected Tree Report: Tree Survey, Encroachment, Protection and Mitigation (Protected Tree Report) prepared for the Tempo Project. The Protected Tree Report is provided as **Attachment B, Protected Tree Report**.

The Tempo Project would construct a hotel building and associated improvements on a vacant parcel (APN 5775-015-011) with surface parking and ornamental landscaping that is surrounded by commercial, institutional, and residential uses. The vacant parcel does not contain any critical habitat for threatened and endangered species as delineated by the U.S. Fish and Wildlife Service.[13] Similar to the Original Project Site, the Revised Project Site, which includes the Original Project Site and the vacant parcel, does not support any naturally vegetated areas; connectivity to any habitats for candidate, sensitive, or special status species; or wetlands. The limited ornamental landscaping within the vacant parcel would not be expected to be capable of supporting special status or sensitive plant species. Therefore, consistent with the Indigo IS/MND, the Revised Project would not result in any impacts related to candidate, sensitive, or special status species; wetlands; or an adopted habitat conservation plan.

The Arcadia Wash, which is identified as a riverine system by the National Wetlands Inventory, runs north-south approximately 130 feet west of the Area of Proposed Improvements.[14] In the Revised Project vicinity, Arcadia Wash is an underground engineered channel that does not support any riparian vegetation. As analyzed in **Section 4.10, Hydrology and Water Quality**, the Tempo Project would implement BMPs to prevent substantial erosion and runoff of sediments and pollutants into this waterway. With implementation of BMPs, the Revised Project would result in less than significant impacts related to riparian habitat communities or other sensitive natural communities, consistent with the impact determination the Indigo IS/MND.

A total of 13 trees would be removed to construct the Tempo Project. Although wildlife movement is not expected to occur within the Area of Proposed Improvements due to the intervening distance to the San Gabriel Mountains and Santa Anita Wash, tree removal may impact nesting habitat used by migratory birds. Therefore, the Tempo Project would implement Indigo IS/MND mitigation measure **MM BIO-1** to reduce potential impacts related to migratory birds to a less than significant level. Accordingly, the Revised Project's impacts related to migratory wildlife species

[13] U.S. Fish and Wildlife Service. *Critical Habitat for Threatened and Endangered Species Online Mapper*, https://fws.maps.arcgis.com/home/webmap/viewer.html?webmap=9d8de5e265ad4fe09893cf75b8dbfb77, accessed April 25, 2024.

[14] U.S. Fish and Wildlife Service. *National Wetlands Inventory Wetlands Mapper.* https://fwsprimary.wim.usgs.gov/wetlands/apps/wetlands-mapper/, accessed April 25, 2024.

would be less than significant with mitigation, consistent with the determination in the Indigo IS/MND. Further, the Tempo Project would remove 13 trees, including one protected sycamore tree located in the proposed trash enclosure area. However, the sycamore tree would be replaced in-kind with a 60-inch box-size sycamore. As such, the removal and replacement of the protected tree would be consistent with the requirements of the City's tree preservation ordinance codified in *AMC Article IX, Chapter 1, Division 10: Tree Preservation*. The Tempo Project would also comply with the requirements of *AMC Article IX, Chapter 8 – Comprehensive Tree Management Program*, which provides regulations for maintenance and removal of City trees, for the removal of all trees within the City's ROW. As such, the Revised Project would not conflict with the City's tree ordinances and impacts would be less than significant, consistent with the determination in the Indigo IS/MND.

3.4.3 Conclusion

Based on the above, with implementation of Indigo IS/MND mitigation measure **MM BIO-1**, no new significant impacts or substantially more severe impacts than those previously identified in the Indigo IS/MND would occur as a result of a substantial change proposed by the Revised Project, a substantial change in circumstances, or new information of substantial importance associated with the Revised Project. Likewise, there is no new information of substantial importance that shows that effective but previously infeasible mitigation measures are now feasible or that new or different mitigation measures would substantially reduce significant effects of the Revised Project. Therefore, no new or different mitigation measures are required.

3.4.4 Mitigation Measures

APPLICABLE INDIGO IS/MND MITIGATION MEASURES

MM BIO-1 Commencement of construction activities shall avoid the February 1 through August 31 bird nesting season to the greatest extent feasible. If construction activities begin within this nesting season, a survey for nesting birds shall be conducted by a qualified biologist within 7 days of the commencement of construction activities, but not prior to this 7-day window. The area surveyed shall include all clearing/construction areas, as well as areas within 100 feet of the boundaries of these areas, or as otherwise determined by the biologist. If no active bird nests are identified on, or within 100 feet of the limits of the proposed disturbance area, no further action is necessary and construction activities could commence. For any off-site areas that are inaccessible, the qualified biologists may survey the off-site area with binoculars to capture the full 100-foot survey area. If active nests are found during pre-construction surveys or at any time throughout the course of construction activities during the nesting bird season, all clearing/construction activities within a minimum of 100 feet of the nest shall be postponed until a wildlife biologist has identified the nesting species. If the bird species is not protected under the MBTA and/or the California Fish and Game Code, no further action is required and construction activities may proceed. If the avian species is protected under the MBTA and/or the California Fish and Game Code, a minimum buffer zone shall be established by the qualified biologist based on the type of bird/raptor species identified and the construction buffer shall be

established on site through the erection of cones/flagging/fencing to clearly delineate the protection zone.

All construction activities shall avoid this protection zone until a qualified biologist has confirmed that the nest(s) is no longer active and the nest is vacated, and there is no evidence of second nesting attempts. Upon completion of any site survey for nesting birds conducted by a qualified biologist, documentation of the survey activity, findings, and any resulting actions taken shall be prepared and submitted to the City.

NEW MITIGATION MEASURES

No new or different mitigation measures are required.

3.5 Cultural Resources

ENVIRONMENTAL ISSUE	IMPACT CONCLUSION		ANY NEW SIGNIFICANT IMPACTS OR SUBSTANTIALLY MORE SEVERE IMPACTS RESULTING FROM:			FOR MITIGATION MEASURES (MM), NEW INFORMATION OF SUBSTANTIAL IMPORTANCE SHOWS THAT:	
	REVISED PROJECT	ADOPTED IS/MND	SUBSTANTIAL CHANGE IN THE PROJECT?	SUBSTANTIAL CHANGE IN CIRCUMSTANCE?	NEW INFORMATION OF SUBSTANTIAL IMPORTANCE?	EFFECTIVE BUT PREVIOUSLY INFEASIBLE MM ARE NOW FEASIBLE?	NEW OR DIFFERENT MM WOULD SUBSTANTIALLY REDUCE SIGNIFICANT EFFECT(S)?
Would the project:							
a) Cause a substantial adverse change in the significance of a historical resource pursuant to CEQA Guidelines Section 15064.5?	NI	NI	No	No	No	No	No
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines Section 15064.5?	LTSM (AP)	LTSM	No	No	No	No	No
c) Disturb any human remains, including those interred outside of formal cemeteries?	LTS	LTS	No	No	No	No	No

3.5.1 Indigo IS/MND Finding

The Indigo IS/MND states a cultural resources study was prepared for the Approved Project, which included a search of the California Historical Resources Information System (CHRIS) at the South Central Coastal Information Center, located at the California State University Fullerton. This search included the Original Project Site with a one-mile buffer. The records search found 25 previous cultural resources technical investigations, of which two studies overlap a portion of the Original Project Site. The studies did not identify cultural resources within the Original Project Site. The records search also identified 167 cultural resources previously recorded within one

mile of the Original Project Site; none of these resources were found to intersect or be adjacent to the Original Project Site. Therefore, the Indigo IS/MND concluded impacts related to historical resources would be less than significant due to the absence of historical resources within the Original Site.

The Indigo IS/MND states the Sacred Lands File search of the Original Project Site conducted by the Native American Heritage Commission (NAHC) was positive and the NAHC recommended that the City contacted the following six tribes to request information on the resources in or near the Original Project Site:

- Gabrieleno Band of Mission Indians – Kizh Nation;
- Gabrieleno/Tongva San Gabriel Band of Mission Indians;
- Gabrieleno/Tongva Nation;
- Gabrieleno Tongva Indians of California Tribal Council; and
- Gabrieleno-Tongva Tribe
- San Fernando Band of Mission Indians.

According to the Indigo IS/MND, the records search did not identify any previously recorded archaeological resources within the Original Project Site. Although no archaeological resources were identified, the Indigo IS/MND concluded that there would be potential for the inadvertent discovery during ground disturbance that may result in potentially significant impacts to archaeological resources. Therefore, the Approved Project would be required to implement Indigo IS/MND mitigation measure **MM CUL-1** to ensure that potential impacts to archaeological resources would be less than significant.

As stated in the Indigo IS/MND, there is no indication that human remains are present within the Original Project Site. However, in the unlikely event of inadvertent discovery of human remains during ground disturbing activities, the Approved Project would adhere to the procedures in California Health and Safety Code Section 7050.5 and Public Resources Code Section 5097.98 regarding the potential discovery of human remains. The Indigo IS/MND concluded compliance with state laws would ensure that impacts to human remains would be less than significant.

3.5.2 Project Analysis

As there are no structures or manmade features greater than 50 years old onsite, the Revised Project Site does not contain any historical resources as defined by CEQA Guidelines Section 15064.5(a) Therefore, implementation of the Revised Project would not cause a substantial adverse change in the significance of a historical resource. Impacts to historical resources would not occur, consistent with the determination of the Indigo IS/MND.

There are no known cultural resources within the Area of Proposed Improvements. However, based on the results of the CHRIS records search conducted for the Indigo IS/MND, cultural resources have been discovered in the surrounding area. Thus, the Tempo Project would involve construction activities including excavation and grading that may potentially uncover

archaeological resources. Specifically, the basement level of the proposed hotel building is anticipated to require excavation to depths of 12 to 15 feet below grade. Therefore, the Tempo Project would be required to implement Indigo IS/MND mitigation measure **MM CUL-1** to reduce impacts related to archaeological resources to less-than-significant levels in the event of discovery. As such, the Revised Project would not result in a substantial adverse change in the significance of an archaeological resource and impacts would be less than significant with mitigation, consistent with the determination of the Indigo IS/MND.

The Revised Project Site is located in an urbanized area and most of the site has been previously graded and developed, and as such, the potential for uncovering human remains within the Area of Proposed Improvements is low. Therefore, consistent with the determination of the Indigo IS/MND, compliance with California Health and Safety Code Section 7050.5 and Public Resources Code Section 5097.98 would ensure that impacts to human remains would be less than significant under the Revised Project.

3.5.3 Conclusion

Based on the above, with implementation of Indigo IS/MND mitigation measure **MM CUL-1,** no new significant impacts or substantially more severe impacts than those previously identified in the Indigo IS/MND would occur as a result of a substantial change proposed by the Revised Project, a substantial change in circumstances, or new information of substantial importance associated with the Revised Project. Likewise, there is no new information of substantial importance that shows that effective but previously infeasible mitigation measures are now feasible or that new or different mitigation measures would substantially reduce significant effects of the Revised Project. Therefore, no new or different mitigation measures are required.

3.5.4 Mitigation Measures

APPLICABLE INDIGO IS/MND MITIGATION MEASURES

MM CUL-1 In the event that archaeological resources are unearthed during ground-disturbing activities, the construction contractor shall immediately cease all earth-disturbing activities within 100 feet of the discovery and shall retain a qualified archaeologist that meets the Secretary of the Interior's Professional Qualification Standards. Construction activities may continue in other areas outside of the designated protection zone, which shall be delineated with cones, flagging, or fencing. The archaeologist shall evaluate the significance of the find and determine whether the resource uncovered is a "Tribal Cultural Resources" pursuant to Section 21074 of the California Public Resources Code, or a "unique archaeological resource" pursuant to Section 21083.2(g) of the California Public Resources Code or a "historical resource" pursuant to Section 15064.5(a) of the State CEQA Guidelines.

NEW MITIGATION MEASURES

No new or different mitigation measures are required.

3.6 Energy

ENVIRONMENTAL ISSUE	IMPACT CONCLUSION		ANY NEW SIGNIFICANT IMPACTS OR SUBSTANTIALLY MORE SEVERE IMPACTS RESULTING FROM:			FOR MITIGATION MEASURES (MM), NEW INFORMATION OF SUBSTANTIAL IMPORTANCE SHOWS THAT:	
	REVISED PROJECT	ADOPTED IS/MND	SUBSTANTIAL CHANGE IN THE PROJECT?	SUBSTANTIAL CHANGE IN CIRCUMSTANCE?	NEW INFORMATION OF SUBSTANTIAL IMPORTANCE?	EFFECTIVE BUT PREVIOUSLY INFEASIBLE MM ARE NOW FEASIBLE?	NEW OR DIFFERENT MM WOULD SUBSTANTIALLY REDUCE SIGNIFICANT EFFECT(S)?
Would the project:							
a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources during project construction or operation?	LTS	LTS	No	No	No	No	No
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	LTS	LTS	No	No	No	No	No

3.6.1 Indigo IS/MND Finding

The Indigo IS/MND states construction and operation of the Approved Project would consume energy resources in the form of electricity, natural gas, and petroleum. Petroleum use during operation would increase as a result of hotel, retail, and restaurant uses; however, the use would be a fraction of the state- and countywide use and, due to efficiency increases, petroleum use would diminish over time. Further, operation of the Approved Project would require implementation of energy efficient measures, including Part 6 of the Title 24 Standards, which establishes energy efficiency standards for residential and non-residential buildings, and Part 11 of the Title 24 Standards (CALGreen), which institutes mandatory minimum environmental performance standards for certain types of new construction. Overall, the Indigo IS/MND concluded the energy use required by the Approved Project would not be considered inefficient or wasteful and would result in a less-than-significant impact.

The applicable energy plan to the Approved Project is the Arcadia General Plan, Chapter 6: Resource and Sustainability Element, which contains goals and policies related to energy conservation, building design, and LEED certification. The Approved Project would follow applicable energy standards and regulations during construction and would be built and operated in accordance with all existing, applicable regulations at the time of construction. As such, the Indigo IS/MND concluded the Approved Project would not conflict with applicable energy regulations, and impacts would be less than significant.

3.6.2 Project Analysis

The following section evaluates potential impacts on energy that would result from the construction and operation of the Revised Project. The analysis is primarily based upon

Attachment C, Energy Assessment, which analyzed energy impacts for a 91-room hotel. After completion of the energy assessment, the total number of proposed rooms increased to 93. As such, **Attachment A.1, Revised Air Quality, Greenhouse Gas, Energy, and Noise Impact Analyses**, was prepared to evaluate the potential impacts of the additional two rooms, which concluded that the original impact determinations for the 91-room hotel would not change with the increase to 93 rooms.

ENERGY CONSUMPTION

Construction of the Tempo Project would require temporary energy consumption primarily using fuel for construction equipment, construction worker vehicle trips to and from the Revised Project Site, and the import and export of earth materials to and from the Revised Project Site by heavy trucks. As discussed in **Section 4.2, Air Quality**, it should be noted that the construction of the Approved Project will be completed prior to the start of construction for the Tempo Project and construction activities would not overlap. As such, the construction analysis only includes the Tempo Project's energy consumption.

For operation, the Tempo Project would require energy use in the form of electricity, natural gas, and fuel consumption. For the purposes of this analysis, the energy consumption for the Tempo Project is also added to the energy consumption for the Approved Project to determine the total combined impact on energy resources. The combined annual electricity and natural gas consumption from both the Tempo Project and Approved Project is then compared to the total consumption in Los Angeles County in 2022, the latest year consumption data is available.

Based on the *Revised Parking Demand Analysis for the Tempo by Hilton Hotel Project, City of Arcadia, California Memorandum*[15] *(*Parking Analysis), the Tempo Project would result in an operational trip generation of 1,113 average daily trips (ADT). The analysis also considers the Approved Project's operational fuel consumption. The combined fuel consumption for operational trips from the Approved Project and the Tempo Project are compared to the projected fuel consumption in Los Angeles County in 2026, the operational year of the Tempo Project. **Table 3.6-1, Tempo Project and Approved Project Energy Consumption**, illustrates this combined fuel consumption.

Table 3.6-2, Combined Energy Consumption compares the combined annual energy consumption percentage increase of the Tempo Project and Approved Project over the County's energy consumption. As shown in **Table 3.6-2**, the combined operational electricity usage of the Tempo Project and the Approved Project would constitute an approximate 0.0032 increase over the County's typical annual electricity consumption. Additionally, the combined operational natural gas usage would constitute an approximately 0.0023 percent increase over the County's typical annual natural gas consumption. The Tempo Project's off-road construction equipment diesel fuel consumption and on-road construction fuel consumption would increase Los Angeles County's consumption by 0.0549 percent and 0.0005 percent, respectively.

[15] Linscott, Law and Greenspan Engineers, Revised Parking Demand Analysis for the Tempo by Hilton Hotel Project, City of Arcadia, California Memorandum, March 12, 2024.

Table 3.6-1
Tempo Project and Approved Project Energy Consumption

Energy Type	Tempo Project Annual Energy Consumption[1]	Approved Project Annual Energy Consumption[2]	Combined Annual Energy Consumption
Electricity Consumption	817 MWh	1,369 MWh	2,187 MWh
Natural Gas Consumption	16,685 therms	49,474 therms	66,159 therms
Fuel Consumption			
Construction Off-Road Fuel Consumption[3]	17,590 gallons	-	17,590 gallons
Construction On-Road Fuel Consumption[3]	20,733 gallons	-	20,733 gallons
Operational Fuel Consumption	195,888 gallons	303,077 gallons	498,953 gallons

Notes:
1. Tempo Project electricity and natural gas consumptions as modeled in California Emissions Estimator Model Version 2022.1 (CalEEMod) computer model. Tempo Project fuel consumption calculated based on CalEEMod results. Countywide operational fuel consumption, off-road construction equipment diesel fuel consumption, and on-road fuel consumption are from CARB EMFAC2021.
2. Approved Project electricity and natural gas consumption based on the Indigo IS/MND. Refer to Table 13 of the IS/MND for operational fuel consumption for the Approved Project.
3. Construction of the Approved Project will be completed prior to the start of construction for the Tempo Project. As such, the analysis does not analyze the combined construction energy impact from both projects.

Source: Michael Baker International, Tempo by Hilton Project – Energy Consumption Assessment Memorandum, July 22, 2024.

Table 3.6-2
Combined Energy Consumption

Energy Type	Combined Annual Energy Consumption[1]	Los Angeles County Annual Energy Consumption[2]	Percentage Increase Countywide
Electricity Consumption[3]	2,187 MWh	68,484,956 MWh	0.0032%
Natural Gas Consumption[4]	66,159 therms	2,821,285,935 therms	0.0023%
Fuel Consumption			
Construction Off-Road Fuel Consumption	17,590 gallons	32,013,161 gallons	0.0549%
Construction On-Road Fuel Consumption	20,733 gallons	4,160,462,341 gallons	0.0005%
Operational Fuel Consumption	498,953 gallons	3,981,438,709 gallons	0.0125%

Notes:
1. Combined annual energy consumption refers to the combined consumption from the Tempo Project and Approved Project. Refer to **Table 3.6-1**.
2. The combined annual increase in electricity and natural gas consumption is compared to the total consumption in Los Angeles County in 2022, the latest year with data available. The Tempo Project's increases in construction off-road and on-road fuel consumption are compared with the projected Los Angeles Countywide off-road fuel consumption and Los Angeles Countywide on-road fuel consumption in 2024, the first year of construction. The combined annual consumption of operational automotive fuel is compared with the projected Countywide on-road fuel consumption in 2026, the Tempo Project's operational year.
3. Los Angeles County electricity consumption data source: California Energy Commission, Electricity Consumption by County, http://www.ecdms.energy.ca.gov/elecbycounty.aspx, accessed June 12, 2024.
4. Los Angeles County gas consumption data source: California Energy Commission, Gas Consumption by County, https://ecdms.energy.ca.gov/gasbycounty.aspx, accessed June 12, 2024.

Source: Michael Baker International, Tempo by Hilton Project – Energy Consumption Assessment Memorandum, July 22, 2024.

Based on the Parking Analysis, the Tempo Project operations would generate approximately 1,113 ADT, which was utilized to estimate the proposed Project's fuel consumption. According to the Indigo IS/MND, the Approved Project would consume approximately 303,077 gallons of fuel per year. As such, the combined operational fuel consumption from the total Revised Project would be approximately 498,953 gallons of fuel per year, constituting an approximately 0.0125 percent increase over the County's projected annual fuel consumption in 2026. Therefore, the combined operational fuel consumption of the Revised Project would not substantially increase Los Angeles County's annual fuel consumption and the Revised Project's operational energy consumption would be nominal compared to the County's consumption. Further, the Revised Project comprises an infill development to meet local demand in an area already served by energy infrastructure, and according to current energy efficiency standards in Title 24. As such, the Revised Project's energy consumption would not be wasteful, inefficient, or unnecessary and impacts would be less than significant.

Construction

During construction, the Tempo Project would consume energy in two general forms: (1) the fuel energy consumed by construction vehicles and equipment; and (2) bound energy in construction materials, such as asphalt, steel, concrete, pipes, and manufactured or processed materials such as lumber and glass.

Fossil fuels for construction vehicles and other energy-consuming equipment would be used during grading, building construction, paving, and architectural coating. As shown in **Table 3.6-2**, the Tempo Project's off-road fuel consumption and on-road fuel consumption from construction would be approximately 17.590 gallons and 20,733 gallons, respectively. Consequently, the Tempo Project's off-road construction equipment diesel fuel consumption and on-road construction fuel consumption would increase Los Angeles County's consumption by 0.0549 percent and 0.0005 percent, respectively (when compared to the total consumption in 2022).

During construction, the Tempo Project would construct a temporary staging ground with mobile office trailers and equipment that may consume electricity. However, the electricity consumption during construction would be nominal and temporary. Additionally, natural gas would not be consumed during construction. As such, construction of the Tempo Project would have a minimal effect on the local and regional energy supplies (fuel and electricity) and would not require additional capacity.

Additionally, some incidental energy conservation would occur during construction through compliance with state requirements. State requirements include Title 13, California Code of Regulations Section 2485, which states that equipment not in use for more than five minutes be turned off, and Section 2449, which minimizes the idling of construction equipment. Construction equipment would also be required to comply with the latest U.S. Environmental Protection Agency (USEPA) and CARB engine emissions standards. These emissions standards require highly efficient combustion systems that maximize fuel efficiency and reduce unnecessary fuel consumption. Moreover, due to increasing transportation costs and fuel prices, contractors and owners have a strong financial incentive to avoid wasteful, inefficient, and unnecessary consumption of energy during construction.

Although it is beyond the scope of the CEQA analysis, further reductions in energy inputs for construction materials can be achieved by selecting green building materials composed of recycled materials that require less energy to produce than non-recycled materials. The project-related incremental increase in the use of energy bound in construction materials such as asphalt, steel, concrete, pipes and manufactured or processed materials (e.g., lumber and gas) for the Revised Project would not substantially increase demand for energy compared to overall local and regional demand for construction materials. Further, it is noted that construction fuel use is temporary and would cease upon completion of construction activities. There are no unusual project characteristics that would necessitate the use of construction equipment, or building materials, or methods that would be less energy efficient than at comparable construction sites in the region or State. Therefore, fuel energy and construction materials consumed during construction would not represent a significant demand on energy resources. Overall, consistent with the Indigo IS/MND, construction of the Revised Project would result in a less than significant impact related to wasteful, inefficient, and unnecessary consumption of energy.

Operation

Transportation Energy Demand

As discussed, based on the Parking Analysis, the Tempo Project operations would generate approximately up to 1,113 ADT, which would consume approximately 195,888 gallons of fuel per year. Additionally, according to the Indigo IS/MND, the Approved Project would consume approximately 303,077 gallons of fuel per year. As indicated in **Table 3.6-2**, the Tempo Project and Approved Project would result in a combined annual fuel consumption rate of approximately 498,953 gallons, which constitutes a 0.0125 percent increase over the County's projected on-road fuel consumption in 2026. Therefore, the Revised Project would not substantially increase the County's operational fuel consumption. Furthermore, the Revised Project does not propose any unusual features that would result in excessive long-term operational fuel consumption.

The key drivers of transportation-related fuel consumption for the Revised Project would come from individuals traveling to the Revised Project Site for short-term visits. The Revised Project would also consume fuel in the form of employees driving to and from the Revised Project Site. Employee commuting factors are outside of the scope of the design of the Revised Project. Notwithstanding, the Tempo Project would include three electric vehicle (EV) parking spaces with electrical charging stations installed and the Approved Project included EV charging stations in compliance with the CALGreen Code. This requirement would encourage and support alternative modes of travel and thus reduce the petroleum fuel consumption. Additionally, the Revised Project is also located on an infill development site, in an area already served by utilities, and within 0.25 miles of the bus stop located at Huntington Drive and Santa Clara Street and approximately 0.5 miles of Los Angeles County Metropolitan Transportation Authority (Metro) Gold Line Arcadia Station. The Revised Project Site's proximity to public transit would help reduce overall VMT as public transportation could transport employees or visitors in one vehicle, reducing solo car trips. Therefore, fuel consumption associated with vehicle trips generated by the Revised Project, as well as associated infrastructure, would not be considered inefficient, wasteful, or unnecessary in comparison to other similar developments in the region.

Overall, fuel and other energy consumption associated with vehicle trips generated by the Revised Project would not be considered inefficient, wasteful, or unnecessary in comparison to other similar developments in the region. Consistent with the Indigo IS/MND, impacts would be less than significant.

Building Energy Demand

The proposed buildings would be powered by electricity and natural gas. As shown in **Table 3.6-2**, the combined operational energy (electricity) consumption from the Tempo Project and the Approved Project would represent an approximately 0.0032 percent increase over the 2022 countywide electricity consumption and approximately 0.0023 percent increase over the 2022 countywide natural gas consumption, which would be significantly below California Energy Commission's (CEC) forecasts. Therefore, the Revised Project would be consistent with the CEC's energy consumption forecasts. Additionally, the Revised Project would consume energy during the same time periods as other commercial developments and would consume energy evenly throughout the day. Thus, the Revised Project would not result in unique or more intensive peak or base period electricity demand.

The Revised Project would comply the most current Title 24 Standards (i.e., 2022 Title 24), specifically by installing low flow water fixtures and water efficient irrigation. The Title 24 Building Energy Efficiency Standards are updated every 3 years and become more stringent between each update. As such, complying with the most current Title 24 standards would make the Revised Project more energy efficient than the existing buildings built under the earlier versions of the Title 24 standards.

The electricity provider for the City, Southern California Edison (SCE), is subject to California's Renewable Portfolio Standards (RPS), reflected in SB 100. The RPS requires investor-owned utilities, electric service providers, and community choice aggregators to increase procurement from eligible renewable energy resources to 44 percent by the end of 2024, 52 percent by the end of 2027, 60 percent of total procurement by 2030, and 100 percent of total procurement by 2045. Renewable energy is generally defined as energy that comes from resources which are naturally replenished within a human timescale such as sunlight, wind, tides, waves, and geothermal heat. The increase in reliance of such energy resources further ensures that new development projects will not result in the waste of the finite energy resources. As a result, the Revised Project would ensure that non-renewable energy consumption would be kept to a minimum through high efficiency lighting, energy efficient appliances, and on-site renewable energy production (i.e., solar-ready roofs).

Impact Summary

Based on the above, the Tempo Project would consume energy resources (i.e., electricity, natural gas, construction on-road/off-road, and operational fuel consumption) that would only represent a nominal increase in the existing and forecasted countywide consumption even after considering the Approved Project's energy consumption. As such, the Tempo Project's impact on energy resources would be less than significant and would be similar to the impacts disclosed in the 2020 IS/MND, which were determined to be less than significant. In addition, the combined impact from both the Tempo Project and the Approved Project would not result in a significant increase in

energy consumption in the County, would be constructed according to more recent and stringent energy efficiency standards. Therefore, consistent with the Indigo IS/MND, the Revised Project would not cause wasteful, inefficient, and unnecessary consumption of building energy during operation, or preempt future energy development or conservation, and impacts would be less than significant.

CONSISTENCY WITH APPLICABLE ENERGY PLANS

State and regional plans for renewable energy and energy efficiency include the CEC's Integrated Energy Policy Report (IEPR), Title 24 Standards and CALGreen Code, and the California's RPS. As discussed above, the combined operational energy (electricity and natural gas) consumption of the Tempo Project and Approved Project would represent a nominal increase over the current countywide consumption. The combined electricity consumption would represent an approximately 0.0032 percent increase, which would be significantly below the CEC's forecasted baseline electricity consumption, which grows at a rate of about 1.7 percent annually through 2040. The combined natural gas consumption would represent an approximately 0.0023 percent increase, which would be significantly below the CEC's forecasted baseline, which grows at a rate of about 0.2 percent annually through 2035. Therefore, the Revised Project would be consistent with the California Energy Commission's 2023 IEPR.

Further, the Revised Project would comply with the most current Title 24 Standards (2022 Title 24), adhering to the minimum efficiency standards related to various building features, including appliances, water and space heating and cooling equipment, building insulation and roofing, and lighting. The Revised Project would also comply with the CALGreen Code which requires that new buildings employ water efficiency and conservation, increase building system efficiencies (e.g., lighting, HVAC, and plumbing fixtures), divert construction waste from landfills, and incorporate electric vehicle charging infrastructure. Implementation of the most current Title 24 standards would substantially reduce energy usage. Additionally, per the RPS, the Revised Project would utilize electricity that would achieve 60 percent of total procurement by 2030, and 100 percent renewable energy by 2045. As such, the Revised Project would comply with state energy plans including the 2023 IEPR, the most current Title 24 Standards, the CALGreen Code, and California's RPS.

Additionally, the Revised Project would comply with the applicable goals and policies pertaining to energy and energy efficiency in the City's General Plan. **Table 3.6-3, Consistency with the Arcadia General Plan**, discusses the Revised Project's consistency with the General Plan's applicable goals and policies. As shown in **Table 3.6-3**, the Revised Project would be consistent with the applicable goals and policies of the City's General Plan. Therefore, consistent with the Indigo IS/MND, the Revised Project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency and impacts would be less than significant.

3.6.3 Conclusion

Based on the above, no new significant impacts or substantially more severe impacts than those previously identified in the Indigo IS/MND would occur as a result of a substantial change proposed by the Revised Project, a substantial change in circumstances, or new information of substantial importance associated with the Revised Project. Likewise, there is no new information

of substantial importance that shows that effective but previously infeasible mitigation measures are now feasible or that new or different mitigation measures would substantially reduce significant effects of the Revised Project. Therefore, no new or different mitigation measures are required.

Table 3.6-3
Consistency with the Arcadia General Plan

Applicable Goal/Policy	Consistency Analysis
Goal RS-5: Wise and creative energy use that incorporates new technologies for energy generation and new approaches to energy conservation.	
Policy RS-5.3: Require that all new developments meet or exceed the state and local energy conservation requirements.	**Consistent.** The Revised Project would comply the 2022 Title 24 Standards and the CALGreen Code. The 2022 Title 24 Standards provide minimum energy efficiency standards for new developments. The Revised Project would be consistent with this policy.
Policy RS-5.5: Support State legislative initiatives to revise utility rates in a manner that provides incentives for energy conservation and provides funding for research and development of alternative energy sources.	**Consistent.** The Revised Project would be supplied with electricity by SCE, which would comply with the RPS that requires the electricity providers to achieve 60 percent of total procurement by 2030, and 100 percent renewable energy by 2045. As such, the Revised Project would utilize electricity from SCE that would be required to meet these renewable energy procurement goals. Additionally, the Tempo Project would include a solar ready roof which would allow for the future installation of solar panels for on-site energy production. The Revised Project would utilize alternative energy sources and would be consistent with this policy.
Policy RS-5.9: Facilitate the provision of energy-efficient modes of transportation and fixed facilities which establish transit, bicycle, and pedestrian modes as viable alternatives.	**Consistent**. The Tempo Project would provide three EV charging stations and the Approved Project included 15 EV charging stations that would help promote the use of EVs, which typically achieve better fuel economy compared to traditional gasoline and diesel vehicles and thus, would reduce help reduce operational vehicle fuel consumption. Additionally, the proposed Project is approximately 0.5 miles from the Metro Gold Line Arcadia Station. Bus stops currently serviced by Foothill Transit are also located approximately 0.2 miles to the southeast along Huntington Drive. As such, the Revised Project would incorporate features that encourage alternative modes of transportation and is located near existing public transportation. The Revised Project would be consistent with this policy.
Source: Michael Baker International, Tempo by Hilton Project – Energy Consumption Assessment Memorandum, July 22, 2024.	

3.6.4 Mitigation Measures

APPLICABLE INDIGO IS/MND MITIGATION MEASURES

No Indigo IS/MND mitigation measures apply.

NEW MITIGATION MEASURES

No new or different mitigation measures are required.

3.7 Geology and Soils

ENVIRONMENTAL ISSUE	IMPACT CONCLUSION		ANY NEW SIGNIFICANT IMPACTS OR SUBSTANTIALLY MORE SEVERE IMPACTS RESULTING FROM:			FOR MITIGATION MEASURES (MM), NEW INFORMATION OF SUBSTANTIAL IMPORTANCE SHOWS THAT:	
	REVISED PROJECT	ADOPTED IS/MND	SUBSTANTIAL CHANGE IN THE PROJECT?	SUBSTANTIAL CHANGE IN CIRCUMSTANCE?	NEW INFORMATION OF SUBSTANTIAL IMPORTANCE?	EFFECTIVE BUT PREVIOUSLY INFEASIBLE MM ARE NOW FEASIBLE?	NEW OR DIFFERENT MM WOULD SUBSTANTIALLY REDUCE SIGNIFICANT EFFECT(S)?
Would the project:							
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:							
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?	LTS	LTS	No	No	No	No	No
ii. Strong seismic ground shaking?	LTS	LTS	No	No	No	No	No
iii. Seismic-related ground failure, including liquefaction?	LTS	LTS	No	No	No	No	No
iv. Landslides?	LTS	LTS	No	No	No	No	No
b) Result in substantial soil erosion or the loss of topsoil?	LTS	LTS	No	No	No	No	No
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?	LTS	LTS	No	No	No	No	No
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?	LTS	LTS	No	No	No	No	No

ENVIRONMENTAL ISSUE	IMPACT CONCLUSION		ANY NEW SIGNIFICANT IMPACTS OR SUBSTANTIALLY MORE SEVERE IMPACTS RESULTING FROM:			FOR MITIGATION MEASURES (MM), NEW INFORMATION OF SUBSTANTIAL IMPORTANCE SHOWS THAT:	
	REVISED PROJECT	ADOPTED IS/MND	SUBSTANTIAL CHANGE IN THE PROJECT?	SUBSTANTIAL CHANGE IN CIRCUMSTANCE?	NEW INFORMATION OF SUBSTANTIAL IMPORTANCE?	EFFECTIVE BUT PREVIOUSLY INFEASIBLE MM ARE NOW FEASIBLE?	NEW OR DIFFERENT MM WOULD SUBSTANTIALLY REDUCE SIGNIFICANT EFFECT(S)?
Would the project:							
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	NI	NI	No	No	No	No	No
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	LTSM (AP)	LTSM	No	No	No	No	No

3.7.1 Indigo IS/MND Finding

The Indigo IS/MND states that the Original Project Site is not located within an Alquist-Priolo Zone, in a liquefaction zone, or in a region susceptible to landslides. In addition, the groundwater levels within the City are approximately 100 feet below ground surface and the underlying soils would not be prone to liquefaction and associated lateral spreading. Furthermore, the City is not in an area of groundwater subsidence due to groundwater withdrawal. Although there are no known faults beneath the Original Project Site, the City is located in a seismically active area and the Approved Project would be required to comply with the California Building Code to ensure maximum protection of buildings and occupants during seismic events. Therefore, the Indigo IS/MND concluded that the Approved Project's impacts related to a known earthquake fault, seismic ground shaking, liquefaction, lateral spreading and landslides would be less than significant.

According to the Indigo IS/MND, the Original Project Site is fully developed and paved. Thus, there are minimal areas of exposed soil on the Original Project Site. During construction, the Approved Project would be required to prepare a Stormwater Pollution Prevention Plan (SWPPP), which would include erosion control BMPs to reduce construction-related soil erosion. As such, the Indigo IS/MND concluded that impacts related to soil erosion and loss of topsoil would be less than significant. Additionally, the soils underlying the Original Project Site contain very little clay material and are not usually subject to expansion. Therefore, the Approved Project's impacts related to expansive soils were also determined to be less than significant in the Indigo IS/MND.

The Approved Project would be served by existing sewer infrastructure and would not use septic tanks; there would be no impact related to alternative wastewater disposal systems.

According to the Indigo IS/MND, there are no fossils recorded within the Approved Project area, although they are documented nearby from similar sedimentary deposits as those underlying the Original Project Site. Therefore, the Approved Project area is considered to be potentially sensitive for paleontological resources and ground-disturbing activities associated with the construction of the Approved Project would have the potential to uncover paleontological resources. As such, the Approved Project would be required implement Indigo IS/MND mitigation measure **MM GEO-1** to ensure that potential impacts to paleontological resources would be reduced to less-than-significant levels.

3.7.2 Project Analysis

The following section evaluates potential impacts to geology and soils that would result from the construction and operation of the Revised Project. The analysis is primarily based upon the *Geotechnical Engineering Investigation, Proposed Hotel Development – Tempo Hotel by Hilton* (Geotechnical Report) prepared for the Tempo Project, which evaluated the geologic conditions of the Area of Proposed Improvements. The Geotechnical Report is included as **Attachment D, Geotechnical Engineering Investigation**.

The Revised Project Site is located in a seismically active area, as is most of southern California. However, the Revised Project Site is not located within a state-designated Alquist-Priolo Fault Hazard Zone and no active faults are known to cross the Revised Project Site. The closest fault is the Raymond Fault, located approximately 1,200 feet to the northwest of the Area of Proposed Improvements. According to the Indigo IS/MND and the Geotechnical Report, the potential for surface ground rupture at the Revised Project Site is considered low.

The Revised Project Site is not mapped as an area prone to liquefaction, and this is supported by the low groundwater levels present within the Area of Proposed Improvements. Groundwater was not encountered during soil borings that were excavated from the Area of Proposed Improvements to a depth of 60 feet below grade. In addition, the underlying soils of the Area of Proposed Improvements are characterized as medium dense to very dense. Based on these conditions, the potential for liquefaction occurring at the Revised Project Site is low. Liquefaction-related effects include lateral spreading. Thus, the potential for lateral spreading at the Revised Project Site is also low. In addition, according to the Geotechnical Report, the probability of landslides occurring in the Area of Proposed Improvements is considered to be low and the underlying soils have a very low expansion range.

The Tempo Project would implement the construction and design recommendations in the Geotechnical Report and would comply with the requirements of the California Building Code. With implementation of the recommendations in the Geotechnical Report and adherence to the California Building Code, the Revised Project's impacts related to rupture of a known earthquake fault, strong seismic ground shaking, seismic-related ground failure (including liquefaction), landslides, lateral spreading, subsidence, and collapse would be less than significant, consistent with the Indigo IS/MND.

Construction of the Tempo Project would involve ground-disturbing activities that could result in soil erosion. As further discussed in **Section 4.10, Hydrology and Water Quality**, the Tempo Project would implement BMPs and low impact development (LID) features during construction and operation, which would reduce the potential for erosion to occur. Compliance with existing regulations would ensure the Revised Project would not result in a significant impact related to soil erosion.

In addition, as with the Approved Project, the Tempo Project would connect to the City's sewer system. As such, consistent with the Indigo IS/MND, the Revised Project would have no impact related to the use of septic tanks or alternative wastewater disposal systems.

Regarding paleontological resources, the Revised Project area is considered to be potentially sensitive for paleontological resources. The Tempo Project would involve excavation to depths of 12 to 15 feet below grade for the construction of the subterranean level. As such, the Tempo Project would be required to implement Indigo IS/MND mitigation measure **MM GEO-1**. Consistent with the determination in the Indigo IS/MND, the Revised Project would result in less than significant impacts related to paleontological resources with the implementation of Indigo IS/MND mitigation measure **MM GEO-1**.

3.7.3 Conclusion

Based on the above, no new significant impacts or substantially more severe impacts than those previously identified in the Indigo IS/MND would occur as a result of a substantial change proposed by the Revised Project, a substantial change in circumstances, or new information of substantial importance associated with the Revised Project. Likewise, there is no new information of substantial importance that shows that effective but previously infeasible mitigation measures are now feasible or that new or different mitigation measures would substantially reduce significant effects of the Revised Project. Therefore, no new or different mitigation measures are required.

3.7.4 Mitigation Measures

APPLICABLE INDIGO IS/MND MITIGATION MEASURES

MM GEO-1 Prior to commencement of any grading activity on-site, the Applicant shall retain a qualified paleontologist per the Society of Vertebrate Paleontology (SVP) (2010) guidelines. The paleontologist shall prepare a Paleontological Resources Impact Mitigation Program (PRIMP) for the project. The PRIMP shall be consistent with the SVP (2010) guidelines and should outline requirements for preconstruction meeting attendance and worker environmental awareness training, where monitoring is required within the project area based on construction plans and/or geotechnical reports, procedures for adequate paleontological monitoring and discoveries treatment, and paleontological methods (including sediment sampling for microvertebrate fossils), reporting, and collections management. The qualified paleontologist shall attend the preconstruction meeting and a paleontological monitor shall be on-site during all rough grading and other significant ground-disturbing activities in previously undisturbed, fine-grained older Quaternary alluvial fan deposits. These deposits may be encountered at depths as shallow as

5-10 feet below ground surface. In the event that paleontological resources (e.g., fossils) are unearthed during grading, the paleontological monitor will temporarily halt and/or divert grading activity to allow recovery of paleontological resources. The area of discovery will be roped off with a 50-foot radius buffer. Once documentation and collection of the find is completed, the monitor will remove the rope and allow grading to recommence in the area of the find.

NEW MITIGATION MEASURES

No new or different mitigation measures are required.

3.8 Greenhouse Gas Emissions

ENVIRONMENTAL ISSUE	IMPACT CONCLUSION		ANY NEW SIGNIFICANT IMPACTS OR SUBSTANTIALLY MORE SEVERE IMPACTS RESULTING FROM:			FOR MITIGATION MEASURES (MM), NEW INFORMATION OF SUBSTANTIAL IMPORTANCE SHOWS THAT:	
	REVISED PROJECT	ADOPTED IS/MND	SUBSTANTIAL CHANGE IN THE PROJECT?	SUBSTANTIAL CHANGE IN CIRCUMSTANCE?	NEW INFORMATION OF SUBSTANTIAL IMPORTANCE?	EFFECTIVE BUT PREVIOUSLY INFEASIBLE MM ARE NOW FEASIBLE?	NEW OR DIFFERENT MM WOULD SUBSTANTIALLY REDUCE SIGNIFICANT EFFECT(S)?
Would the project:							
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	LTS	LTS	No	No	No	No	No
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	LTS	LTS	No	No	No	No	No

3.8.1 Indigo IS/MND Finding

According to the Indigo IS/MND, the Original Project Site is located within the jurisdictional boundaries of SCAQMD. As such, the Indigo IS/MND's impact analysis compared estimated operational emissions plus amortized construction emissions to the proposed SCAQMD screening threshold of 3,000 metric tons of CO_2 equivalent (MT CO_2e) per year. The Indigo IS/MND determined that the Approved Project's estimated annual generated operational emissions in 2022 (2,517 MT CO_2e per year) plus amortized construction emissions (23 MT CO2e per year) would be approximately 2,540 MT CO_2e per year, which would not exceed the recommended SCAQMD threshold. Therefore, the Indigo IS/MND concluded the Approved Project's impact would be less than significant related to GHG emissions.

Regarding conflicts with an applicable GHG plan, policy, or regulation, the Indigo IS/MND states the City of Arcadia does not have a comprehensive Climate Action Plan. As such, the Approved Project performed a consistency analysis with the City's applicable General Plan policies, SCAG 2016 RTP/SCS, CARB's Scoping Plan, and statewide GHG reduction goals for 2030 or 2050

identified in Executive Order S-3-05 and SB 32. Overall, the Indigo IS/MND concluded the Approved Project would be consistent with these applicable plans and regulations.

3.8.2 Project Analysis

The following section evaluates the potential GHG impacts that would result from implementation of the Revised Project. This analysis is primarily based upon **Attachment E, Greenhouse Gas Emissions Assessment**, which analyzed GHG impacts for a 91-room hotel. After the completion of the GHG assessment, the total number of proposed rooms increased to 93. As such, **Attachment A.1, Revised Air Quality, Greenhouse Gas, Energy, and Noise Impact Analyses**, was prepared to evaluate the potential impacts of the additional two rooms, which concluded that the original impact determinations for the 91-room hotel would not change with the increase to 93 rooms.

SIGNIFICANCE CRITERIA AND METHODOLOGY

The City of Arcadia has not adopted a numerical significance threshold for assessing impacts related to GHG emissions. Similarly, the SCAQMD, the Governor's Office of Planning and Research, CARB, California Air Pollution Control Officers Association, or any other state or applicable regional agency has yet to adopt a numerical significance threshold for assessing GHG emissions that is applicable to the Revised Project. Although the Indigo IS/MND discussed the SCAQMD's adopted 10,000 $MTCO_2e$ per year threshold for permitted stationary sources/industrial projects and acknowledged that the SCAQMD did not adopt a significance threshold for residential and general land use development projects, it nevertheless used the SCAQMD's 3,000 $MTCO_2e$ per year screening threshold for all land use types for any projects that are not exempt from CEQA or where there are no qualifying GHG reduction plans are applicable. As such, the Indigo IS/MND compared the Approved Project's GHG emissions to the screening threshold of 3,000 $MTCO_2e$ per year. However, the proposed threshold was not adopted and was based on the State's GHG emissions reduction goal identified in AB 32 for the year 2020, which is outdated.

Moreover, impacts of climate change are experienced on a global scale regardless of the location of GHG emission sources, and therefore, a numerical significance threshold for individual development projects is speculative. Throughout the State, air districts are moving from numerical significance thresholds to qualitative significance thresholds that focus on project features to reduce GHG emissions or consistency with GHG reduction plans. For example, the GHG thresholds of significance for the Bay Area Air Quality Management District (BAAQMD) are either whether land use projects include certain project design elements related to buildings and transportation or whether the project is consistent with a local GHG reduction strategy that meets the criteria under State CEQA Guidelines Section 15183.5(b). This is a major update to BAAQMD's 2017 CEQA Guidelines, where a numerical significance threshold was required. To reduce the impact of GHG emissions, it is more effective for development projects to include project features that directly or indirectly reduce GHG emissions, rather than relying on a numerical significance threshold, which is highly dependent on the type and size of the development.

Therefore, the significance of the Revised Project's potential impacts regarding GHG emissions and climate change is assessed solely on its consistency with plans and policies adopted for the purposes of reducing GHG emissions and mitigating the effects of climate change and the Revised Project's ability to incorporate sustainable features and strategies from such plans and policies in its design to reduce GHG emissions. The analysis has also quantified the Tempo Project's GHG emissions and calculated the Revised Project's GHG emissions by adding the GHG emissions from the Tempo Project to the GHG emission generated by the Approved Project for informational purposes.

It should be noted that individual projects do not generate sufficient GHG emissions to directly influence climate change. However, physical changes caused by a project can contribute incrementally to significant cumulative effects, even if individual changes resulting from a project are limited. As a result, the issue of climate change typically involves an analysis of whether a project's contribution towards an impact would be cumulatively considerable. According to CEQA Guidelines Section 15064(h)(1), "cumulatively considerable" means that the incremental effects of an individual project are significant when viewed in connection with the effects of past projects, other current projects, and probable future projects. Per CEQA Guidelines Section 15064(h)(3), a project's incremental contribution to a cumulative impact can be found not cumulatively considerable if the project would comply with an approved plan or mitigation program that provides specific requirements that would avoid or substantially lessen the cumulative problem in the geographic area of the project. To qualify, such plans or programs must be specified in law or adopted by the public agency with jurisdiction over the affected resources through a public review process to implement, interpret, or make specific the law enforced or administered by the public agency. Therefore, a lead agency can make a finding of less than significant for GHG emissions if a project complies with adopted programs, plans, policies, and/or other regulatory strategies to reduce GHG emissions.

PROJECT-RELATED GHG EMISSIONS

As discussed above, the Revised Project's GHG emissions are quantified for informational purposes only as neither the City, nor any other public agency, has an applicable numeric significance threshold for GHG emissions. Direct project-related GHG emissions include emissions from construction activities, area sources, mobile sources, and refrigerants, while indirect sources include emissions from energy consumption, water demand, and solid waste generation. CalEEMod was used to model the GHG emissions, including direct and indirect GHG emissions. Construction of the Tempo Project is anticipated to take approximately 16.5 months to complete. The construction activities would include grading, building construction, paving, and architectural coating. **Table 3.8-1, Estimated Greenhouse Gas Emissions**, presents the estimated GHG emissions associated with the Revised Project.

Direct sources of GHGs include construction emissions, mobile source emissions, area source emissions, and refrigerants. The Tempo Project would result in a total of 335.4 $MTCO_2e$ of emissions during construction. Construction GHG emissions are amortized over 30 years (i.e., total construction emissions divided by the lifetime of the Tempo Project, assumed to be 30 years), then added to the operational emissions, as recommended by SCAQMD. The amortization takes into consideration the temporary nature of construction activities. It should be noted that

construction of the Approved Project will be completed prior to the start of the construction for the Tempo Project; therefore, construction of the Tempo Project and Approved Project would not overlap. As shown in **Table 3.8-1**, construction of the Tempo Project would generate approximately 11.18 $MTCO_2e$ of emissions per year when amortized over 30 years. **Table 3.8-1** also shows that the Tempo Project would result in a total of 1,275 $MTCO_2e$ per year of GHG emissions from mobile sources; a total of 1.18 $MTCO_2e$ per year of GHG emissions from area sources emissions generated due to an increased demand for consumer products, architectural coating, and landscaping associated with the development of the Tempo Project; and 15.00 $MTCO_2e$ per year of GHG emissions from refrigerants.

Table 3.8-1
Estimated Greenhouse Gas Emissions

Source	CO_2	CH_4	N_2O	Refrigerants	CO_2e
	Metric Tons/year1				
Direct Emissions					
Construction (amortized over 30 years) [2]	11.08	<0.01	<0.01	<0.01	11.18
Mobile Source[3]	1,255	0.06	0.05	1.89	1,275
Area Source	1.17	<0.01	<0.01	-	1.18
Refrigerants	-	-	-	15.0	15.0
Total Direct Emissions	*1,267.25*	*0.06*	*0.05*	*16.89*	*1,302*
Indirect Emissions					
Energy	286	0.02	<0.01	-	287
Water	4.09	0.07	<0.01	-	6.22
Solid Waste	4.45	0.44	0.00	-	15.6
Total Indirect Emissions	*294.54*	*0.53*	*<0.01*	-	*308.82*
Total Tempo Project Emissions	***1,610.82***				
Approved Project Emissions	***2,539.59***				
Total Tempo Project and Approved Project Emissions	***4,150.41***				

Notes:

1. Emissions calculated using CalEEMod Version 2022.1; totals may be slightly off due to rounding.
2. Total Tempo Project construction GHG emissions equate to 335.4 MTCO2e. Value shown is amortized over the lifetime of the Tempo Project (assumed to be 30 years).
3. Based on the Revised Parking Demand Analysis for the Tempo by Hilton Hotel Project, City of Arcadia, California Memorandum prepared by Linscott, Law and Greenspan Engineers (dated March 12, 2024).

Source: Michael Baker International, Tempo by Hilton Project – Greenhouse Gas Emissions Assessment Memorandum, July 22, 2024.

Indirect sources of GHGs include emissions from energy consumption, emissions from water use, and emissions from solid waste. As shown in **Table 3.8-1**, the Tempo Project would result in 287.0 $MTCO_2e$ per year of GHG emissions due to energy consumption, 6.22 $MTCO_2e$ per year of GHG emissions from water use; and approximately 15.6 $MTCO_2e$ of emissions per year related to solid waste generation .

As shown in **Table 3.8-1**, the total amount of Tempo Project-related GHG emissions from direct and indirect sources would total approximately 1,610.82 $MTCO_2e$ per year. Total emissions of the Revised Project (Tempo Project and the Approved Project combined) would be approximately

4,150.41 $MTCO_2e$ per year, which exceeds the SCAQMD 3,000 $MTCO_2e$ per year screening threshold utilized in the Indigo IS/MND. However, as stated above, the 3,000 $MTCO_2e$ threshold was never adopted by SCAQMD and is based on the State's outdated GHG emissions reduction goal for 2020. As such, the discussion of this unadopted threshold in this analysis is provided for informational purposes. Moreover, as discussed above, the significance of the Approved Project's and Revised Project's potential impacts regarding GHG emissions and climate change is not determined by the SCAQMD bright-line screening thresholds, but by consistency with applicable plans, which is discussed in more detail below.

CONSISTENCY WITH APPLICABLE PLANS

The Indigo IS/MND's consistency analysis is based on the 2017 Scoping Plan and SCAG 2016-2040 RTP/SCS. However, these documents have since been updated, with the most recent approved iterations being the 2022 Scoping Plan and the 2020-2045 RTP/SCS. The updated documents include more stringent goals and policies to ensure that existing and future developments are on track to meet statewide GHG reduction goals. As such, the most recent and approved iterations are more stringent compared to the 2017 Scoping Plan and 2016-2040 RTP/SCS. Thus, the Revised Project's consistency analysis is based on consistency with the 2022 Scoping Plan, SCAG 2020-2045 RTP/SCS, and applicable goals and policies from the City's General Plan.

The 2022 Scoping Plan describes the approach the State will take to achieve carbon neutrality by 2045. The SCAG 2020-2045 RTP/SCS includes strategies for the region to reach the regional target of reducing GHG from transportation sector. The City's General Plan contains goals and policies that would help implement energy efficient measures and would subsequently reduce GHG emissions within the City.

Consistency with the 2022 Scoping Plan

The 2022 Scoping Plan identifies reduction measures necessary to achieve the goal of carbon neutrality by 2045 or earlier. Actions that reduce GHG emissions are identified for each AB 32 inventory sector. Provided in **Table 3.8-2, Consistency with the 2022 Scoping Plan: AB 32 Inventory Sectors**, is an evaluation of applicable reduction actions/strategies by emissions source category to determine how the Revised Project would be consistent with or exceed reduction actions/strategies outlined in the 2022 Scoping Plan. As shown therein, the Revised Project would be consistent with the applicable GHG emission reduction strategies contained in the 2022 Scoping Plan.

Consistency with the 2020-2045 RTP/SCS

On September 3, 2020, the Regional Council of SCAG formally adopted the 2020-2045 RTP/SCS. The 2020-2045 RTP/SCS includes performance goals that were adopted to help focus future investments on the best-performing projects, as well as different strategies to preserve, maintain, and optimize the performance of the existing transportation system. The 2020-2045 RTP/SCS is forecast to help California reach its GHG reduction goals by reducing GHG emissions from passenger cars by 8 percent below 2005 levels by 2020 and 19 percent by 2035 in accordance with the most recent CARB targets adopted in March 2018. Five key SCS strategies are included in the 2020-2045 RTP/SCS to help the region meet its regional VMT and GHG reduction goals, as required by the State.

Table 3.8-2
Consistency with the 2022 Scoping Plan: AB 32 Inventory Sectors

Actions and Strategies	Project Consistency Analysis
Smart Growth / Vehicles Miles Traveled (VMT)	
Reduce VMT per capita to 25% below 2019 levels by 2030, and 30% below 2019 levels by 2045	**Consistent**. The Revised Project is also located within 0.25 miles of the bus top located at Huntington Drive and Santa Clara Street and approximately 0.5 miles of the Metro Gold Line Arcadia Station. The Tempo Project would also include three EV charging stations and the Approved Project included 15 EV charging stations in accordance with Title 24 Standards. Thus, the Revised Project would include features that encourage alternative modes of transportation that would reduce VMT. In addition, as discussed in Section 3.17.2 below, the Tempo Project is a hotel intended to serve the local population of the City, and as such, is considered a "non-destination" hotel. Therefore, the proposed Tempo Project screens out of VMT analysis and the Tempo Project's VMT impact is presumed to be less than significant.
New Residential and Commercial Buildings	
All electric appliances beginning 2026 (residential) and 2029 (commercial), contributing to 6 million heat pumps installed statewide by 2030	**Not Applicable.** The City of Arcadia has not adopted an ordinance or program requiring all electric appliances. The Revised Project is anticipated to be operational before such an ordinance or program is adopted as the Revised Project would start operation before 2029. Regardless, if adopted, the Revised Project would be required to comply with the regulation.
Construction Equipment	
Achieve 25% of energy demand electrified by 2030 and 75% electrified by 2045	**Not Applicable.** The City of Arcadia has not adopted an ordinance or program requiring electricity-powered construction equipment. The Revised Project construction is anticipated to be completed before such an ordinance or program is adopted as construction of the Revised Project would be completed before 2030. Regardless, if adopted, the Revised Project would be required to comply with the regulation.
Non-combustion Methane Emissions	
Divert 75% of organic waste from landfills by 2025	**Consistent**. SB 1383 establishes targets to achieve a 50 percent reduction in the level of statewide organic waste disposal from 2014 levels by 2020 and a 75 percent reduction by 2025. The law establishes an additional target that at least 20 percent or more of currently disposed edible food is recovered for human consumption by 2025. SB 1383 provides specific requirements for businesses, such as participating in their jurisdiction's organics curbside collection service or self-hauling organic waste to a composting facility/program, properly sorting organic materials, and providing education to employees and customers regarding material sorting. The Revised Project would comply with local and regional regulations and recycle or compost 75 percent of waste by 2025 pursuant to SB 1383.
Source: Michael Baker International, Tempo by Hilton Project – Greenhouse Gas Emissions Assessment Memorandum, July 22, 2024.	

Table 3.8-3, Consistency with the 2020-2045 RTP/SCS, provides a consistency analysis of the Revised Project with these five 2020-2045 RTP/SCS strategies. As shown therein, the Revised Project would be consistent with the GHG emission reduction strategies contained in the 2020-2045 RTP/SCS. As mentioned above, the latest 2024-2050 RTP/SCS was adopted by the SCAG Board on April 4, 2024. However, CARB concluded that the technical methodology SCAG used to quantify the GHG emission reductions for the 2024-2050 RTP/SCS does not operate accurately. SCAG is currently working on updating the technical methodology and resubmitting for CARB's review. Until CARB approves the methodology, the 2024-2050 RTP/SCS is not a fully

adopted document, especially from the GHG reduction perspective of the proposed strategies. As such, the consistency analysis relies upon the 2020-2045 RTP/SCS.

Table 3.8-3
Consistency with the 2020-2045 RTP/SCS

Reduction Strategy	Applicable Land Use Tools	Project Consistency Analysis
Focus Growth Near Destinations and Mobility Options		
• Emphasize land use patterns that facilitate multimodal access to work, educational and other destinations • Focus on a regional jobs/housing balance to reduce commute times and distances and expand job opportunities near transit and along center-focused main streets • Plan for growth near transit investments and support implementation of first/last mile strategies • Promote the redevelopment of underperforming retail developments and other outmoded nonresidential uses • Prioritize infill and redevelopment of underutilized land to accommodate new growth, increase amenities and connectivity in existing neighborhoods • Encourage design and transportation options that reduce the reliance on and number of solo car trips (this could include mixed uses or locating and orienting close to existing destinations) • Identify ways to "right size" parking requirements and promote alternative parking strategies (e.g., shared parking or smart parking)	**Center Focused Placemaking, Priority Growth Areas (PGA), Job Centers, High Quality Transit Areas (HQTAs), Transit Priority Areas (TPA), Neighborhood Mobility Areas (NMAs), Livable Corridors, Spheres of Influence (SOIs), Green Region, Urban Greening.**	**Consistent.** Transit Priority Areas (TPA) are defined as the 0.5-mile radius around an existing or planned major transit stop or an existing stop along a High Quality Transit Area (HQTA). A HQTA is defined as a corridor with fixed route bus service frequency of 15 minutes (or less) during peak commute hours. As discussed in the 2020 IS/MND, the Approved Project Site is located in a TPA, Thus, the Revised Project Site is also located in a TPA. The Revised Project is located within 0.25 mile of the bus stop located at Huntington Drive and Santa Clara Street and approximately 0.5 miles from the Metro Gold Line Arcadia Station. The Revised Project Site is also an infill site and the Tempo Project would construct a new hotel on a parcel of land that has been underutilized and is currently vacant. Further, the Revised Project Site is located within an urbanized area and within walking and biking distance to existing commercial and neighborhood-serving retail uses, as well as attractions such as the Santa Anita Park. The Revised Project would also provide EV parking spaces in accordance with CALGreen Code. Therefore, the Revised Project would redevelop an infill site by constructing a hotel near commercial and retail uses and in an area with mobility options that would reduce trips.
Promote Diverse Housing Choices		
• Preserve and rehabilitate affordable housing and prevent displacement • Identify funding opportunities for new workforce and affordable housing development • Create incentives and reduce regulatory barriers for building context sensitive accessory dwelling units to increase housing supply • Provide support to local jurisdictions to streamline and lessen barriers to housing development that supports reduction of greenhouse gas emissions	**PGA, Job Centers, HQTAs, NMA, TPAs, Livable Corridors, Green Region, Urban Greening.**	**Not Applicable.** The Revised Project is not a housing development and therefore would not affect housing supplies.

Reduction Strategy	Applicable Land Use Tools	Project Consistency Analysis
Leverage Technology Innovations		
• Promote low emission technologies such as neighborhood electric vehicles, shared rides hailing, car sharing, bike sharing and scooters by providing supportive and safe infrastructure such as dedicated lanes, charging and parking/drop-off space • Improve access to services through technology—such as telework and telemedicine as well as other incentives such as a "mobility wallet," an app-based system for storing transit and other multi-modal payments • Identify ways to incorporate "micro-power grids" in communities, for example solar energy, hydrogen fuel cell power storage and power generation	**HQTA, TPAs, NMA, Livable Corridors.**	**Consistent.** The Revised Project would be required to comply with all applicable Title 24 Standards and CALGreen building codes at the time of construction. These building codes would require electric vehicle charging stations and designated parking, as well as bike parking. As detailed above, the Approved Project included 15 EV charging stations and the Tempo Project would include 3 EV charging stations and a solar-ready roof. Therefore, the Revised Project would leverage technology innovations and promote alternative modes of transportation to help the City, County, and State meet their GHG reduction goals.
Support Implementation of Sustainability Policies		
• Pursue funding opportunities to support local sustainable development implementation projects that reduce greenhouse gas emissions • Support statewide legislation that reduces barriers to new construction and that incentivizes development near transit corridors and stations • Support local jurisdictions in the establishment of Enhanced Infrastructure Financing Districts (EIFDs), Community Revitalization and Investment Authorities (CRIAs), or other tax increment or value capture tools to finance sustainable infrastructure and development projects, including parks and open space • Work with local jurisdictions/communities to identify opportunities and assess barriers to implement sustainability strategies • Enhance partnerships with other planning organizations to promote resources and best practices in the SCAG region • Continue to support long range planning efforts by local jurisdictions • Provide educational opportunities to local decisions makers and staff on new tools, best practices and policies related to implementing the Sustainable Communities Strategy	**Center Focused Placemaking, Priority Growth Areas (PGA), Job Centers, High Quality Transit Areas (HQTAs), Transit Priority Areas (TPA), Neighborhood Mobility Areas (NMAs), Livable Corridors, Spheres of Influence (SOIs), Green Region, Urban Greening.**	**Consistent.** As previously discussed, the Revised Project is located within a TPA and is near existing bus stops and approximately 0.5 miles of the existing Metro Gold Line Arcadia Station. The Revised Project would support sustainable development implementation that would reduce GHGs by installing electric vehicle charging stations and providing bicycle parking spaces to promote alternative modes of transportation. Further, the Revised Project would comply with sustainable practices included in the most current and applicable Title 24 Standards and CALGreen, including the installation of high efficiency lighting, water efficient landscaping, low-flow water fixtures, among others. Thus, the Revised Project would be consistent with this reduction strategy.

Reduction Strategy	Applicable Land Use Tools	Project Consistency Analysis
Promote a Green Region		
• Support development of local climate adaptation and hazard mitigation plans, as well as project implementation that improves community resiliency to climate change and natural hazards • Support local policies for renewable energy production, reduction of urban heat islands and carbon sequestration • Integrate local food production into the regional landscape • Promote more resource efficient development focused on conservation, recycling and reclamation • Preserve, enhance and restore regional wildlife connectivity • Reduce consumption of resource areas, including agricultural land • Identify ways to improve access to public park space	**Green Region, Urban Greening, Greenbelts and Community Separators.**	**Consistent.** The Revised Project is located in an urbanized area and would not interfere with regional wildlife connectivity or convert agricultural land. Additionally, the Tempo Project would include a solar-ready roof for the future installation of photovoltaic solar panels. Thus, the Revised Project would support resource efficient development that reduces energy consumption and GHG emissions.
Source: Michael Baker International, Tempo by Hilton Project – Greenhouse Gas Emissions Assessment Memorandum, July 22, 2024.		

Consistency with the City of Arcadia General Plan

The applicable goals of the Arcadia General Plan, Chapter 6: Resource Sustainability Element, are as follows:

- Goal RS-2: Reducing Arcadia's carbon footprint in compliance with SB 375 and AB 32
- Goal RS-3: Promoting and utilizing clean forms of transportation to reduce Arcadia's carbon footprint
- Goal RS-5: Wise and creative energy use that incorporates new technologies for energy generation and new approaches to energy conservation

The City's General Plan Goals RS-2 and RS-3 and related policies are mainly focused on City's municipal operations in achieving the statewide GHG reduction goals and policies. Regardless, as discussed, the Revised Project would provide on-site electric vehicle charging stations and would be located near several public transit options. Therefore, the Revised Project would support the City's goal of promoting and utilizing clean forms of transportation to reduce the City's carbon footprint. In addition, Tempo Project would have a solar ready roof and the Revised Project would comply with the CALGreen Code which requires that new buildings employ water efficiency and conservation, increase building system efficiencies (e.g., lighting, HVAC, and plumbing fixtures), divert construction waste from landfills, and incorporate electric vehicle charging infrastructure. Therefore, the Revised Project would also be consistent with the General Plan Goal RS-5. Overall, the Revised Project would be consistent with the City's General Plan goals.

SUMMARY OF IMPACTS

As shown in **Table 3.8-1**, the total emissions of the Revised Project would be approximately 4,150.41 $MTCO_2e$ per year, which would exceed the SCAQMD 3,000 $MTCO_2e$ per year screening threshold utilized in the Indigo IS/MND. However, the 3,000 $MTCO_2e$ threshold was never adopted by SCAQMD and is based on an outdated GHG emission reduction goal. As such, the significance determination for GHG emissions is based on consistency with applicable statewide, regional, and local climate change mandates, plans, policies, and regulations. As discussed above, the characteristics of the Revised Project render it consistent with statewide, regional, and local climate change mandates, plans, policies, and regulations. More specifically, the GHG plan consistency analysis provided above demonstrates that the Revised Project would comply with the regulations and GHG reduction goals, policies, actions, measures, and strategies outlined in the 2022 Scoping Plan, 2020-2045 RTP/SCS, and the City's General Plan. Consistency with these plans would reduce the impact of the Revised Project's incremental contribution to GHG emissions. Accordingly, the Revised Project would not conflict with any applicable plan, policy, regulation, or recommendation adopted for the purpose of reducing GHG emissions. As the Revised Project is consistent with statewide, regional, and local GHG reduction plans, the Revised Project would also be consistent with the State's long-term goal to achieve statewide carbon neutrality (zero-net emissions). Therefore, implementation of the Revised Project would not generate significant GHG emissions that would have a significant impact on the environment or conflict with an applicable GHG reduction plan, policy or regulation and impacts would be less than significant.

3.8.3 Conclusion

Based on the above, no new significant impacts or substantially more severe impacts than those previously identified in the Indigo IS/MND would occur as a result of a substantial change proposed by the Revised Project, a substantial change in circumstances, or new information of substantial importance associated with the Revised Project. Likewise, there is no new information of substantial importance that shows that effective but previously infeasible mitigation measures are now feasible or that new or different mitigation measures would substantially reduce significant effects of the Revised Project. Therefore, no new or different mitigation measures are required.

3.8.4 Mitigation Measures

APPLICABLE INDIGO IS/MND MITIGATION MEASURES

No Indigo IS/MND mitigation measures apply.

NEW MITIGATION MEASURES

No new or different mitigation measures are required.

3.9 Hazards and Hazardous Materials

ENVIRONMENTAL ISSUE	IMPACT CONCLUSION		ANY NEW SIGNIFICANT IMPACTS OR SUBSTANTIALLY MORE SEVERE IMPACTS RESULTING FROM:			FOR MITIGATION MEASURES (MM), NEW INFORMATION OF SUBSTANTIAL IMPORTANCE SHOWS THAT:	
	REVISED PROJECT	ADOPTED IS/MND	SUBSTANTIAL CHANGE IN THE PROJECT?	SUBSTANTIAL CHANGE IN CIRCUMSTANCE?	NEW INFORMATION OF SUBSTANTIAL IMPORTANCE?	EFFECTIVE BUT PREVIOUSLY INFEASIBLE MM ARE NOW FEASIBLE?	NEW OR DIFFERENT MM WOULD SUBSTANTIALLY REDUCE SIGNIFICANT EFFECT(S)?
Would the project:							
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	LTS	LTS	No	No	No	No	No
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?	LTS	LTS	No	No	No	No	No
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	LTS	LTS	No	No	No	No	No
d) Be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	NI	NI	No	No	No	No	No
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 excessive noise for people residing or working in the project area?	NI	NI	No	No	No	No	No

ENVIRONMENTAL ISSUE	IMPACT CONCLUSION		ANY NEW SIGNIFICANT IMPACTS OR SUBSTANTIALLY MORE SEVERE IMPACTS RESULTING FROM:			FOR MITIGATION MEASURES (MM), NEW INFORMATION OF SUBSTANTIAL IMPORTANCE SHOWS THAT:	
	REVISED PROJECT	ADOPTED IS/MND	SUBSTANTIAL CHANGE IN THE PROJECT?	SUBSTANTIAL CHANGE IN CIRCUMSTANCE?	NEW INFORMATION OF SUBSTANTIAL IMPORTANCE?	EFFECTIVE BUT PREVIOUSLY INFEASIBLE MM ARE NOW FEASIBLE?	NEW OR DIFFERENT MM WOULD SUBSTANTIALLY REDUCE SIGNIFICANT EFFECT(S)?
Would the project:							
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	NI	NI	No	No	No	No	No
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	NI	NI	No	No	No	No	No

3.9.1 Indigo IS/MND Finding

According to the Indigo IS/MND, construction and operation of the Approved Project would involve the use, handling, and storage of potentially hazardous materials commonly associated with hotel and restaurant uses. Further, the existing general office building to be redeveloped would potentially contain asbestos-containing materials, lead-based paint, and universal wastes. The Indigo IS/MND states there are three schools within 0.25-mile of the Indigo Project site, including Barnhart School, Excelsior School, and First Avenue Middle School. However, the Approved Project would comply with applicable federal, state, and local regulations, including the Toxic Substances Control Act, SCAQMD's Rule 1403, and the California Code of Regulations, Title 22 (Division 4.5, Environmental Health Standards for the Management of Hazardous Waste) during construction and operation of the Approved Project. As such, with adherence to applicable regulations, the Indigo IS/MND determined impacts related to the routine use, storage, transport, and disposal of hazardous materials; accidental release of hazardous materials; and hazardous emissions near schools would be less than significant.

The Original Project Site was not identified in the databases for hazardous materials sites and cleanup sites compiled pursuant to Government Code 65962.5; however, there are several such sites within 0.5 mile of the Original Project Site. The Indigo IS/MND determined that the Original Project Site would not be impacted by the nearby hazardous sites. The Original Project Site is not located within two miles of an airport or within or near a Very High Fire Hazard Severity Zone (VHFHSZ). According to the Indigo IS/MND, construction of the Approved Project would not require public road closures, and the Approved Project would undergo review and permit approval by the City of Arcadia Fire Department. Therefore, the Indigo ID/MND concluded no impact would occur related to the location of a site on a hazardous materials site; airport land use plans; emergency response or evacuation plans; and wildland fires.

3.9.2 Project Analysis

Construction of the Tempo Project would involve excavation, grading, and construction of new buildings. Construction activities would use limited amounts of hazardous materials in the form of paints, solvents, glues, and other common construction materials for the proposed building. Construction activities may include the use of machinery and other equipment that require fueling or maintenance/servicing. These types of materials are not acutely hazardous, and all storage, handling, use, transport, and disposal of these would be required to conform to existing laws and regulations, which would ensure that all potentially hazardous materials are used and handled in an appropriate manner and would minimize the potential for safety impacts to occur. Additionally, the storage, handling, use, transport, and disposal of hazardous materials would cease once construction is complete. During operation, there is potential for the use of commercially available hazardous materials related to hotel cleaning, maintenance, and landscaping activities. However, any future hazardous materials use, storage, transport, or disposal would also be required to comply with applicable regulations. Therefore, construction and operation of the Tempo Project would result in less than significant impacts related to the use, storage, transport, and disposal of hazardous wastes. As such, the Revised Project, which includes the Approved Project and the Tempo Project, would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials and impacts would be less than significant, consistent with the determination in the Indigo IS/MND.

Since APN 5775-015-011 is currently vacant and demolition is not required for the Tempo Project, hazards conditions related to asbestos-containing materials or lead-based paint in older buildings would not occur. Further, as discussed in **Section 4.3, Air Quality**, although asbestos may naturally occur in rocks, this is not a concern in the vicinity of the Revised Project Site. The Revised Project Site is not listed in the State Water Resources Control Board GeoTracker system which includes leaking underground fuel tank sites and spills, leaks, investigations, and cleanups sites; the Department of Toxic Substances Control EnviroStor Data Management System; or the US Environmental Protection Agency's database of regulated facilities. Further, no such sites exist within 1,000 feet of the Revised Project Site.[16, 17] Based on the above, the Revised Project would not create a significant hazard due to accidental release of hazardous materials during construction or operation and impacts would be less than significant.

As discussed above, there are several schools in the surrounding vicinity; the nearest being Barnhart School, located approximately 0.18-mile north of the Area of Proposed Improvements. Construction and operation of the Tempo Project would involve limited amounts of hazardous materials commonly used in construction sites and for the hotel operations. All storage, handling, use, transport, and disposal of these hazardous materials would be required to conform to existing laws and regulations. In addition, the Revised Project Site is not identified in the databases of hazardous materials sites and cleanup sites and there are no hazardous sites within 1,000 feet of the Revised Project Site. As such, Revised Project impacts related to hazardous emissions or

[16] California State Water Resources Control Board, GeoTracker, https://geotracker.waterboards.ca.gov/map/, accessed June 29, 2024.

[17] California Department of Toxic Substances Control, Envirostor, https://www.envirostor.dtsc.ca.gov/public/, accessed June 29, 2024.

the handling of hazardous or acutely hazardous materials, substances, or waste within 0.25-mile of a school would be less than significant, consistent with the determination in the Indigo IS/MND.

The Revised Project Site is not listed in the State Water Resources Control Board GeoTracker system; the Department of Toxic Substances Control EnviroStor Data Management System; or the US Environmental Protection Agency's database of regulated facilities. Therefore, the Revised Project is not located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and would not create a significant hazard to the public or environment. As such, no impacts would occur as a result of the Revised Project, consistent with the determination in the Indigo IS/MND.

The Revised Project Site is not located within two miles of an airport; the closest airport is the San Gabriel Valley Airport, located approximately 3.5 miles south of the Project Site. Further, the Revised Project Site is not located within or near a VHFHSZ; the closest zone is within the mountain range of Angeles National Forest, approximately 2.3 miles north of the Revised Project Site.[18] As such, the Revised Project would not result in a safety hazard or excessive noise for people residing and working in the Project area, or expose people or structures to significant wildfire hazards. No impact would occur, consistent with the determination in the Indigo IS/MND.

During construction of the Tempo Project, vehicular access would be provided via existing access points along Colorado Place and San Juan Drive; full road closures of adjacent roadways would not be required. Upon completion of the Tempo Project, access to the Revised Project Site would be provided via driveways along Colorado Place, San Juan Drive, and San Rafael Road. The Tempo Project would change the existing circulation within the western portion of the Revised Project Site to provide access to the existing parking structure and the new surface parking area. All driveway and internal circulation improvements proposed by the Tempo Project would be reviewed by the City's Engineering Division to ensure that they meet City standards and by the Arcadia Fire Department to ensure that adequate space for emergency vehicle access is provided. Thus, emergency access to the Revised Project Site and within the surrounding area would be maintained during construction and operation of the Revised Project. Based on the above, the Revised Project would not impair implementation of or interfere with an emergency response plan or emergency evacuation plan, and no impacts would occur, consistent with the determination of the Indigo IS/MND.

3.9.3 Conclusion

Based on the above, no new significant impacts or substantially more severe impacts than those previously identified in the Indigo IS/MND would occur as a result of a substantial change proposed by the Revised Project, a substantial change in circumstances, or new information of substantial importance associated with the Revised Project. Likewise, there is no new information of substantial importance that shows that effective but previously infeasible mitigation measures are now feasible or that new or different mitigation measures would substantially reduce

[18] California Department of Forestry and Fire Protection, Fire Hazard Severity Zones Mapper, https://calfire-forestry.maps.arcgis.com/apps/webappviewer/index.html?id=988d431a42b242b29d89597ab693d008, accessed June 29, 2024.

significant effects of the Revised Project. Therefore, no new or different mitigation measures are required.

3.9.4 Mitigation Measures

APPLICABLE INDIGO IS/MND MITIGATION MEASURES

No Indigo IS/MND mitigation measures apply.

NEW MITIGATION MEASURES

No new or different mitigation measures are required.

3.10 Hydrology and Water Quality

ENVIRONMENTAL ISSUE	IMPACT CONCLUSION		ANY NEW SIGNIFICANT IMPACTS OR SUBSTANTIALLY MORE SEVERE IMPACTS RESULTING FROM:			FOR MITIGATION MEASURES (MM), NEW INFORMATION OF SUBSTANTIAL IMPORTANCE SHOWS THAT:	
	REVISED PROJECT	ADOPTED IS/MND	SUBSTANTIAL CHANGE IN THE PROJECT?	SUBSTANTIAL CHANGE IN CIRCUMSTANCE?	NEW INFORMATION OF SUBSTANTIAL IMPORTANCE?	EFFECTIVE BUT PREVIOUSLY INFEASIBLE MM ARE NOW FEASIBLE?	NEW OR DIFFERENT MM WOULD SUBSTANTIALLY REDUCE SIGNIFICANT EFFECT(S)?
Would the project:							
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	LTS	LTS	No	No	No	No	No
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	LTS	LTS	No	No	No	No	No
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of stream or river, in a manner, which would:	LTS	LTS	No	No	No	No	No
i. Result in substantial erosion or siltation on- or off-site?	LTS	LTS	No	No	No	No	No
ii. Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?	LTS	LTS	No	No	No	No	No

ENVIRONMENTAL ISSUE	IMPACT CONCLUSION		ANY NEW SIGNIFICANT IMPACTS OR SUBSTANTIALLY MORE SEVERE IMPACTS RESULTING FROM:			FOR MITIGATION MEASURES (MM), NEW INFORMATION OF SUBSTANTIAL IMPORTANCE SHOWS THAT:	
	REVISED PROJECT	ADOPTED IS/MND	SUBSTANTIAL CHANGE IN THE PROJECT?	SUBSTANTIAL CHANGE IN CIRCUMSTANCE?	NEW INFORMATION OF SUBSTANTIAL IMPORTANCE?	EFFECTIVE BUT PREVIOUSLY INFEASIBLE MM ARE NOW FEASIBLE?	NEW OR DIFFERENT MM WOULD SUBSTANTIALLY REDUCE SIGNIFICANT EFFECT(S)?
Would the project:							
iii. Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	LTS	LTS	No	No	No	No	No
iv. Impede or redirect flood flows?	NI	NI	No	No	No	No	No
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	LTS	LTS	No	No	No	No	No
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	LTS	LTS	No	No	No	No	No

3.10.1 Indigo IS/MND Finding

The Indigo IS/MND concluded that compliance with local, state, and federal regulations would reduce impacts related to water quality, erosion, and runoff. Construction of the Approved Project would require coverage under the Construction General Permit (CGP) for the National Pollutant Discharge Elimination System General Permit for Storm Water Associated with Construction Activities (Order No 2009-009-DWQ as amended by 2010-0014-DWQ and 2012-0006-DWQ, NPDES No. CAS000002). As the Approved Project would disturb greater than one acre, the CGP would require preparation of a SWPPP and BMPs. The Approved Project would be required to comply with the AMC, Chapter 8, Part 2, Sections 7827 and 7828, which require that each operator of any construction activity submit evidence to the City that all applicable permits have been obtained, including but not limited to the State Water Resources Control Board's CGP and a LID plan.

According to the Indigo IS/MND, operation of the Approved Project would also require adherence to AMC Chapter 8 (Section 7800 et seq.), related to eliminating non-stormwater discharges, controlling the discharge from spills, and reducing pollutants in stormwater discharges. Further, to manage stormwater pollutants in the long term, the Approved Project would incorporate LID features, as all development and redevelopment projects within the County must comply with the latest County of Los Angeles Department of Public Works LID Standards Manual. The LID Standards Manual complies with the requirements of the NPDES Municipal Separate Storm

Sewer System (MS4) Permit for stormwater and non-stormwater discharges from the MS4, within the coastal watersheds of Los Angeles County (CAS004001, Order No. R4-2012-0175).

Regarding groundwater, the Indigo IS/MND states the Approved Project would be consistent with the City's growth projections, including the City's 2015 Urban Water Management Plan (UWMP), which was the latest UWMP when the Indigo IS/MND was prepared. The 2015 UWMP projects having adequate water supply through the planning year 2040. According to the Indigo IS/MND, the San Gabriel Valley Basin underlies the City of Arcadia. The San Gabriel Valley Basin was determined by the Department of Water Resources to be "Very Low" priority, and as such, is not subject to the requirements of a Groundwater Sustainability Agency or a Groundwater Sustainability Plan. The applicable water quality control plan for the City is the Basin Plan for the Coastal Watersheds of Los Angeles and Ventura Counties. The Indigo IS/MND states that, since the Original Project Site is currently fully developed with impervious paving and only negligible areas of pervious surfaces for ornamental landscaping, the addition of the new development would have a nominal impact on groundwater recharge; if anything, the Approved Project would result in a slight increase in groundwater recharge due to the anticipated 10 percent increase in pervious area. The Indigo IS/MND concluded impacts related to groundwater would be less than significant with compliance with the City's Stormwater Management requirements, CGP, and implementation of BMPs.

The Indigo IS/MND states there are no drainages, creeks, or streams on the Original Project Site. As such, no flows would be diverted, impeded, or redirected, and no impact would occur. According to the Indigo IS/MND, the City does not contain designated 100-year flood zones. The Original Project Site is also not located near a body of water or the coast. The Original Project Site is located within the Santa Anita Dam flood inundation zone, as is approximately half of the City. However, dam failure potential is low with the dam's adherence to the California Division of Safety of Dams seismic safety requirements. The Indigo IS/MND concluded that impacts related to flood hazards, tsunami, or seiche zones would be less than significant.

3.10.2 Project Analysis

The Tempo Project would construct a hotel building and adjoining parking areas in a portion of the Revised Project Site that currently contains an existing vacant parcel (former restaurant building pad on APN 5775-015-011), surface parking, and minor landscaping. Construction activities have the potential to degrade water quality through the exposure of surface runoff to exposed soils, dust, and other debris at the Revised Project Site as well as increase erosion and/or siltation. The proposed Tempo Project would be required to comply with various applicable regulatory requirements governing water quality, including the requirements to incorporate project-specific source control and treatment BMPs and the requirements to incorporate LID/site design. For construction, the Tempo Project would comply with the latest CGP (Order No. 2022-057-DWQ) and AMC, Chapter 8, Part 2, Sections 7827 and 7828 to ensure proper permitting.

As the Area of Proposed Improvements is currently impervious with the exception of minor areas of landscaping, implementation of the Tempo Project would not substantially increase impervious surfaces at the Revised Project Site. During operation, the Tempo Project would be required to comply with AMC Chapter 8 (Stormwater Management and Discharge Control) and the County

of Los Angeles Department of Public Works LID Standards Manual to control stormwater discharges and minimize the discharge of any stormwater pollutants. According to the Geotechnical Report for the Tempo Project, two types of shallow stormwater infiltration systems that were determined to be feasible for the Area of Proposed Improvements and would be implemented by the Tempo Project. The stormwater infiltration systems would consist of permeable paving and an infiltration trench gallery system, which would manage stormwater runoff, pollutants, erosion, and overall water quality. Implementation of these LID features would capture and retain stormwater flows onsite, thereby maintaining or reducing the volume of stormwater discharge from the site. Therefore, consistent with the Indigo IS/MND, compliance with local, state, and federal regulations, including implementation of BMPs and LID features, would ensure impacts related to water quality, erosion, and runoff would be less than significant.

Similar to the Original Project Site, the Revised Project Site does not contain drainages, creeks, or streams. As such, consistent with the Indigo IS/MND determination, the proposed Project would result in no impact related to the impedance or redirection of flood flows.

The City of Arcadia's latest update to the UWMP is the 2020 UWMP, which was finalized in June 2021. According to the 2020 UWMP, the City's sources of water supply consist of groundwater from the Main San Gabriel Basin and Raymond Basins, and treated imported water purchased from the Metropolitan Water District. The 2020 UWMP states the City is anticipated to be able to continue providing sufficient water supply and meet projected water demand, including during long-term droughts. In addition, the City would be able to continue relying on its groundwater supply, based on historical and on-going management practices.[19] Similar to the Approved Project, as the proposed Tempo Project is consistent with the City's General Plan land use designations and zoning ordinance, it would be consistent with the City's growth projections. Further, as discussed above, the San Gabriel Valley Basin is not subject to the requirements of a Groundwater Sustainability Agency or a Groundwater Sustainability Plan. The applicable water quality control plan for the City is the Basin Plan for the Coastal Watersheds of Los Angeles and Ventura Counties. Finally, similar to the Approved Project, the Tempo Project would not change the amount of impervious surface in the Area of Potential Improvements in a way that would result in a measurable reduction of groundwater recharge. Consistent with the determination of the Indigo IS/MND, with adherence to applicable regulations and implementation of the proposed LID features and BMPs, impacts related to groundwater would be less than significant.

As discussed above, the City does not contain designated 100-year flood zones and the Revised Project Site is within Zone X (Area of Minimal Flood Hazard).[20] As such, the Revised Project Site would not be susceptible to flood hazards. The Revised Project Site is located too far inland to be at risk of a tsunami and is not located near a body of water that could cause a seiche. The Revised Project Site is located at the western edge of the Santa Anita Dam flood inundation zone, and as such, would not be anticipated to experience substantial flooding in an unexpected breach of the Santa Anita Dam. Nonetheless, with ongoing compliance with dam safety regulations, management by the California Division of Safety of Dams, and ongoing seismic upgrades, the

[19] City of Arcadia, Final Urban Water Management Plan, June 2021.

[20] Federal Emergency Management Agency, Flood Map Service Center: Search By Address, https://msc.fema.gov/portal/search, accessed July 5, 2024.

potential of dam failure would be low. Specifically, the Los Angeles County Department of Public Works is conducting the Santa Anita Stormwater Flood Management and Seismic Strengthening Project, which would improve public safety by addressing seismic safety and other structural issues, as well as by preventing flood damage to downstream communities.[21] Therefore, implementation of the Revised Project would result in less than significant impacts related to flood hazards, tsunami, and seiche zones, consistent with the determination of the Indigo IS/MND.

3.10.3 Conclusion

Based on the above, no new significant impacts or substantially more severe impacts than those previously identified in the Indigo IS/MND would occur as a result of a substantial change proposed by the Revised Project, a substantial change in circumstances, or new information of substantial importance associated with the Revised Project. Likewise, there is no new information of substantial importance that shows that effective but previously infeasible mitigation measures are now feasible or that new or different mitigation measures would substantially reduce significant effects of the Revised Project. Therefore, no new or different mitigation measures are required.

3.10.4 Mitigation Measures

APPLICABLE INDIGO IS/MND MITIGATION MEASURES

No Indigo IS/MND mitigation measures apply.

NEW MITIGATION MEASURES

No new or different mitigation measures are required.

3.11 Land Use and Planning

ENVIRONMENTAL ISSUE	IMPACT CONCLUSION		ANY NEW SIGNIFICANT IMPACTS OR SUBSTANTIALLY MORE SEVERE IMPACTS RESULTING FROM:			FOR MITIGATION MEASURES (MM), NEW INFORMATION OF SUBSTANTIAL IMPORTANCE SHOWS THAT:	
	REVISED PROJECT	ADOPTED IS/MND	SUBSTANTIAL CHANGE IN THE PROJECT?	SUBSTANTIAL CHANGE IN CIRCUMSTANCE?	NEW INFORMATION OF SUBSTANTIAL IMPORTANCE?	EFFECTIVE BUT PREVIOUSLY INFEASIBLE MM ARE NOW FEASIBLE?	NEW OR DIFFERENT MM WOULD SUBSTANTIALLY REDUCE SIGNIFICANT EFFECT(S)?
Would the project:							
a) Physically divide an established community?	NI	NI	No	No	No	No	No

[21] California Department of Water Resources, Division of Safety of Dams, https://fmds.water.ca.gov/maps/damim/, accessed July 5, 2024.

b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	LTS	LTS	No	No	No	No	No

3.11.1 Indigo IS/MND Finding

The Indigo IS/MND states the Approved Project would redevelop a portion of an existing commercial site for hotel uses and would provide hospitality amenities to the City. The Approved Project would not include the construction of any buildings, roads, or other infrastructure that would physically divide an established community. Therefore, no impact would occur.

The applicable land use plan and policies for the Approved Project is the *Arcadia General Plan, Chapter 2: Land Use and Community Design Element* and the City's zoning ordinance. The Original Project Site has a Commercial land use designation and is zoned C-G with a Downtown Overlay. The Approved Project required approval of a height variance for the newly constructed hotel building and a Conditional Use Permit to develop hotel land uses in the C-G zone. The Indigo IS/MND concluded that with approval of the height variance, the Approval Project would be compatible with the land use and zoning designations for the Original Project Site and impacts related to conflicts with any land use plan, policy or regulation adopted for the purpose of mitigating an environmental effect would be less than significant.

3.11.2 Project Analysis

As described above, the Revised Project Site is comprised of the Original Project Site and APN 5775-015-011, a vacant parcel immediately adjacent to the Original Project Site. Similar to the Original Project Site, the Revised Project Site has a Commercial land use designation and is zoned C-G with a Downtown Overlay, which permits development of service uses such as the proposed hotel. The maximum FAR and building height allowed in the C-G zone and Downtown Overlay is 1.0 and 48 feet, respectively. The Tempo Project would construct a four-story hotel building and associated improvements on APN 5775-015-011. Implementation of the Revised Project, which consists of the Approved Project and the Tempo Project would not physically divide an established community. Rather, the Revised Project would create a campus of medical office and hotel uses with shared parking. Therefore, no impacts related to the division of an established community would occur as a result of the Revised Project, consistent with the determination of the Indigo IS/MND.

As with the Approved Project, the applicable land use plan and policies for the Revised Project is the *Arcadia General Plan, Chapter 2: Land Use and Community Design Element* and the City's zoning ordinance. Refer to **Table 3.1-1, Arcadia General Plan and Arcadia Municipal Code Consistency Analysis**, for the Tempo Project's consistency analysis with the Arcadia General Plan. As discussed therein, the Tempo Project would be consistent with the applicable Land Use and Community Design Element's policies, including policies for commercial development, design approaches, landscaping, trees, and pedestrian connections. In addition, the proposed hotel use

under the Tempo Project would be compatible with the permitted uses under the C-G Zone. In order to comply with the maximum FAR of 1.0 for the C-G zone and Downtown Overlay, the Tempo Project would create one legal parcel with a total site area of 226,636 square feet by merging APN 5775-015-011 with the Original Project Site, which has a gross floor area of approximately 177,879 square feet. With the addition of the Tempo Project, the total gross floor area for the Revised Project Site would be approximately 225,019 square feet. This would result in a total site FAR of 0.99 for the Revised Project. Additionally, the maximum height for the proposed hotel building would not exceed 48 feet. Similar to the Approved Project, the Tempo Project would require a Conditional Use Permit to allow hotel land uses within the C-G zone. With approval of the Conditional Use Permit for the Tempo Project, the Revised Project would comply with the land use and zoning designation for the Revised Project Site. As such, consistent with the determination of the Indigo IS/MND, impacts related to conflicts with any land use plan, policy or regulation adopted for the purpose of mitigating an environmental effect would be less than significant under the Revised Project.

3.11.3 Conclusion

Based on the above, no new significant impacts or substantially more severe impacts than those previously identified in the Indigo IS/MND would occur as a result of a substantial change proposed by the Revised Project, a substantial change in circumstances, or new information of substantial importance associated with the Revised Project. Likewise, there is no new information of substantial importance that shows that effective but previously infeasible mitigation measures are now feasible or that new or different mitigation measures would substantially reduce significant effects of the Revised Project. Therefore, no new or different mitigation measures are required.

3.11.4 Mitigation Measures

APPLICABLE INDIGO IS/MND MITIGATION MEASURES

No Indigo IS/MND mitigation measures apply.

NEW MITIGATION MEASURES

No new or different mitigation measures are required.

3.12 Mineral Resources

ENVIRONMENTAL ISSUE	IMPACT CONCLUSION		ANY NEW SIGNIFICANT IMPACTS OR SUBSTANTIALLY MORE SEVERE IMPACTS RESULTING FROM:			FOR MITIGATION MEASURES (MM), NEW INFORMATION OF SUBSTANTIAL IMPORTANCE SHOWS THAT:	
	REVISED PROJECT	ADOPTED IS/MND	SUBSTANTIAL CHANGE IN THE PROJECT?	SUBSTANTIAL CHANGE IN CIRCUMSTANCE?	NEW INFORMATION OF SUBSTANTIAL IMPORTANCE?	EFFECTIVE BUT PREVIOUSLY INFEASIBLE MM ARE NOW FEASIBLE?	NEW OR DIFFERENT MM WOULD SUBSTANTIALLY REDUCE SIGNIFICANT EFFECT(S)?
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?	NI	NI	No	No	No	No	No
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?	NI	NI	No	No	No	No	No

3.12.1 Indigo IS/MND Finding

The Indigo IS/MND states that according to the City's General Plan EIR, the City has historically mined aggregate mineral resources and is located within the San Gabriel Valley Production-Consumption region. However, no mining operations are currently ongoing in the City. The Original Project Site is classified as Mineral Resource Zone- (MRZ) 4, defined as areas of no known mineral occurrences where geologic information does not rule out either the presence or absence of significant mineral resources. The Original Project Site does not support mineral or oil or natural gas extraction activities. Further, the Indigo IS/MND states that according to the City's General Plan Resource Sustainability Element, no properties in the City would be subject to mining activities in the future. The City's focus is on the continued reclamation of prior quarries and the protection of properties in Arcadia from mining operations in adjacent communities. Thus, the Indigo IS/MND concluded no impact would occur related to mineral resources.

3.12.2 Project Analysis

As discussed above, the City does not have any current mining operations and does not plan for mining activities in the future. According to the Arcadia General Plan, the Revised Project Site is classified as MRZ-4 (no known mineral occurrence).[22] The Revised Project Site is not currently used for mineral extraction and the Tempo Project would not include any mineral extraction. Further, no known mineral resources have been documented on the Revised Project Site. Therefore, implementation of the Revised Project would not result in the loss of availability of a

[22] City of Arcadia, Arcadia General Plan, Chapter 6: Resource Sustainability Element, Figure RS-1, November 2010.

known mineral resource that would be of value to the region and the residents of the State or 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. Therefore, implementation of the Revised Project would not result in any impacts to mineral resources, consistent with the impacts identified in the Indigo IS/MND.

3.12.3 Conclusion

Based on the above, no new significant impacts or substantially more severe impacts than those previously identified in the Indigo IS/MND would occur as a result of a substantial change proposed by the Revised Project, a substantial change in circumstances, or new information of substantial importance associated with the Revised Project. Likewise, there is no new information of substantial importance that shows that effective but previously infeasible mitigation measures are now feasible or that new or different mitigation measures would substantially reduce significant effects of the Revised Project. Therefore, no new or different mitigation measures are required.

3.12.4 Mitigation Measures

APPLICABLE INDIGO IS/MND MITIGATION MEASURES

No Indigo IS/MND mitigation measures apply.

NEW MITIGATION MEASURES

No new or different mitigation measures are required.

3.13 Noise

ENVIRONMENTAL ISSUE	IMPACT CONCLUSION		ANY NEW SIGNIFICANT IMPACTS OR SUBSTANTIALLY MORE SEVERE IMPACTS RESULTING FROM:			FOR MITIGATION MEASURES (MM), NEW INFORMATION OF SUBSTANTIAL IMPORTANCE SHOWS THAT:	
	REVISED PROJECT	ADOPTED IS/MND	SUBSTANTIAL CHANGE IN THE PROJECT?	SUBSTANTIAL CHANGE IN CIRCUMSTANCE?	NEW INFORMATION OF SUBSTANTIAL IMPORTANCE?	EFFECTIVE BUT PREVIOUSLY INFEASIBLE MM ARE NOW FEASIBLE?	NEW OR DIFFERENT MM WOULD SUBSTANTIALLY REDUCE SIGNIFICANT EFFECT(S)?
Would the project result in:							
a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	LTSM (AP)	LTSM	No	No	No	No	No
b) Generation of excessive groundborne vibration or groundborne noise levels?	LTSM (AP)	LTSM	No	No	No	No	No

c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	NI	NI	No	No	No	No	No

3.13.1 Indigo IS/MND Finding

The Indigo IS/MND concluded that construction of the Approved Project would comply with applicable noise regulations and construction noise impacts would be less than significant. However, as construction noise levels would be higher than existing ambient daytime noise levels, which could cause temporary annoyance at nearby residential land uses, the Approved Project would implement MM-NOI-1, which includes a Construction Noise Control Plan (CNCP) and associated BMPs to reduce the potential for annoyance from construction activities. The Indigo IS/MND also analyzed long-term operational noise generated by the proposed hotel uses and associated traffic and concluded that operation of the Approved Project would have the potential to exceed the City's noise standards. Therefore, the Approved Project would be required to implement MM-NOI-2 to reduce noise impacts from HVAC equipment and the emergency generator to a less than significant level. The Indigo IS/MND also concluded operational traffic noise impacts would not result in an exceedance of the City's 65 dBA CNEL[23] noise threshold and traffic-related noise impacts would be less than significant. Overall, the Indigo IS/MND determined potentially significant impacts related to the generation of a substantial increase in ambient noise levels would be reduced to less-than-significant-levels with implementation of Mitigation Measures MM-NOI-1 and MM-NOI-2.

The Indigo IS/MND determined that construction activity would generate varying degrees of ground vibration that may affect nearby residents. The Approved Project would use heavier pieces of construction equipment such as excavators, graders, dump trucks, and vendor trucks; however, pile driving, blasting, or other special construction techniques would not be used for construction. The Indigo IS/MND concluded that vibration from the construction of the Approved Project would not result in building damage and implementation of MM-NOI-1, requiring a CNCP and associated BMPs, would ensure that potential vibration during construction would not result in human annoyance. With implementation of mitigation measure MM-NOI-1, construction vibration impacts would be less than significant. Ground-borne vibration would not be associated with the Approved Project during operation and no impacts would occur.

[23] dBA = decibel (dB) level as measured with a sound meter using the A weighting network CNEL = Community Noise Level Equivalent

The Indigo IS/MND determined that as the Approved Project site is not located within the vicinity of a private airstrip or two miles of a public airport, no impacts related to the exposure of people to excessive noise levels of airports would occur.

3.13.2 Project Analysis

The following section evaluates potential impacts related to noise and vibration that would result from the construction and operation of the Revised Project. The analysis is primarily based upon **Attachment F, Noise and Vibration Assessment**, which analyzed noise and vibration impacts for a 91-room hotel. After completion of the noise and vibration assessment, the total number of proposed rooms increased to 93. As such, **Attachment A.1, Revised Air Quality, Greenhouse Gas, Energy, and Noise Impact Analyses**, was prepared to evaluate the potential impacts of the additional two rooms, which concluded that the original impact determinations for the 91-room hotel would not change with the increase to 93 rooms.

EXISTING CONDITIONS

The Revised Project Site is surrounded by existing commercial, residential, office, and recreational uses. The primary sources of stationary noise in the Revised Project vicinity are from urban-related activities (i.e., mechanical equipment and crowds). Commercial operations in the Project vicinity can also generate varying degrees of ground vibration, depending on the operational procedures and equipment, which can range from no perceptible effects at the lowest vibration levels, to low rumbling sounds and perceptible vibrations at moderate levels, to slight structural damage at the highest levels. Such equipment-generated vibrations spread through the ground and diminish with distance from the source.

The existing noise in the Revised Project vicinity is generated predominately by traffic along surrounding roadways including Colorado Place. These roadways also have the potential to generate vibrations. However, according to the Federal Transit Administration (FTA), it is unusual for vibration from sources, such as buses and trucks, to be perceptible, even in locations close to major roads.[24]

Noise Sensitive Receptors

Noise-sensitive land uses are generally considered to include those uses where noise exposure could result in health-related risks to individuals, as well as places where quiet is an essential element of their intended purpose. Residential dwellings are of primary concern because of the potential for increased and prolonged exposure of individuals to both interior and exterior noise levels. Additional land uses such as parks, historic sites, cemeteries, and recreation areas are considered sensitive to increases in exterior noise levels. Schools, churches, hotels, libraries, and other places where low interior noise levels are essential are also considered noise-sensitive land uses. The nearest sensitive receptor to the Tempo Project is a single-family residence located adjacent to the east of the Area of Proposed Improvements.

[24] Federal Transit Administration, Noise and Vibration Impact Assessment Manual, Section 5.2, Sources of Transit Ground-borne Vibration and Noise, September 2018.

Existing Ambient Noise Levels

Three short-term noise measurements were taken in the vicinity of the Area of Proposed Improvements on May 15, 2024 to quantify existing ambient noise levels in the Revised Project area. The noise measurement locations are described in **Table 3.13-1, Noise Measurements** and are representative of typical existing noise exposure at the nearest sensitive receptors.

Table 3.13-1
Noise Measurements

Site No.	Location	L_{eq} (dBA)	L_{max} (dBA)	L_{min} (dBA)	Time
1	Near a multi-family building at northeast corner of Santa Rosa Road and San Juan Road intersection	54.2	73.4	42.3	10:58 a.m.
2	In front of a single-family residence at 143 Santa Cruz Road	62.0	84.1	40.5	11:10 a.m.
3	In front of a multi-family building at 225 Santa Rosa Road	51.3	68.3	41.0	11:24 a.m.

Notes:
dBA = A-weighted decibels, L_{eq} = Equivalent Sound Level; L_{min} = Minimum Sound Level; L_{max} = Maximum Sound Level, Peak = Highest Instantaneous Sound Level
Source: Michael Baker International, Tempo by Hilton Project – Noise and Vibration Assessment Memorandum, July 22, 2024.

SIGNIFICANCE CRITERIA AND METHODOLOGY

Construction and Operational Noise Standards

The City of Arcadia does not have a quantitative threshold that applies to noise levels at active construction sites. To evaluate whether the Tempo Project would generate potentially significant temporary construction noise levels at off-site sensitive receiver locations, a construction-related noise level threshold was utilized from the Occupational Noise Exposure prepared by the National Institute for Occupational Safety and Health (NIOSH).[25] For the purposes of this analysis, the lowest, most conservative construction noise level threshold of 85 dBA L_{eq} was used as an acceptable threshold for construction noise at the nearby sensitive receiver locations. Therefore, the noise level threshold of 85 dBA L_{eq} over a period of eight hours or more is used to evaluate the potential project-related construction noise level impacts at the nearby sensitive receiver locations.

A project would result in a significant impact if project-related operational noise levels generated by stationary sources exceed the daytime exterior 55 dBA L_{eq} and nighttime exterior 50 dBA L_{eq} noise level standard at nearby sensitive receiver locations based on the exterior noise level standards in AMC Section 4610.3.

[25] NIOSH, as part of the Centers for Disease Control and Prevention, is the federal institute responsible for making recommendations for the prevention of work-related injury and illness. NIOSH established a recommended exposure limit of 85 dBA averaged over an eight-hour workday. Workers who are exposed to noise at or above this limit are at risk of developing significant hearing loss over their working lifetime.

Construction and Operational Vibration Standards

Table 3.13-2, Structural Vibration Damage Criteria provides the criteria for acceptable levels of groundborne vibration for various types of buildings. As the nearest sensitive receptor structures to Area of Proposed Improvements are residential uses, the architectural damage criterion for continuous vibrations of 0.3 inch-per-second PPV for engineered concrete and masonry is applied for the Tempo Project.

Table 3.13-2
Structural Vibration Damage Criteria

Building Category	Peak Particle Velocity for Continuous Sources (PPV) (inches/second [in/sec])
I. Reinforced concrete, steel, or timber (no plaster)	0.5
II. Engineering concrete and masonry (no plaster)	0.3
III. Nonengineered timber and masonry buildings	0.2
IV. Buildings extremely susceptible to vibration damage	0.12
Source: FTA, Transit Noise and Vibration Impact Assessment Manual, 2018.	

Human annoyance occurs when construction vibration rises significantly above the threshold of human perception for extended periods of time. The vibration level at which human annoyance is perceived is 0.2 inch per second peak particle velocity (PPV).[26]

Mobile Noise Threshold

An off-site traffic noise impact typically occurs when there is a discernable increase in traffic and the resulting noise level exceeds an established noise standard. In community noise considerations, changes in noise levels greater than 3 dB are often identified as discernible, while changes less than 1 dB would not be discernible to local residents. A 5-dB change is generally recognized as a clearly discernable difference. Thus, the Revised Project would result in a significant noise impact if a permanent increase in ambient traffic noise levels of 3.0 dB occurs upon project implementation and the resulting noise level at the receiving sensitive receptor exceeds the applicable exterior standard at a noise sensitive use.

PROJECT-GENERATED NOISE IMPACTS

Short-Term Construction Impacts

Construction activities generally are temporary and have a short duration, resulting in periodic increases in the ambient noise environment. The Tempo Project involves construction activities associated with grading, building construction, paving, and architectural coating applications. The Project would be constructed over a duration of approximately 16.5 months. Groundborne noise and other types of construction-related noise impacts typically occur during the initial grading phase, which has the potential to create the highest levels of noise. Construction equipment produces maximum noise levels when equipment is operating under full power conditions (i.e.,

[26] California Department of Transportation, *Transportation Related Earthborne Vibrations*, 2002.

the equipment engine at maximum speed). However, equipment used on construction sites typically operates under less than full power conditions, at partial power.

Table 3.13-3, Noise Levels Generated During Construction Phases displays the estimated construction noise levels at the nearest sensitive receptor. To present a conservative impact analysis, the estimated noise levels were calculated for a scenario in which all heavy construction equipment were assumed to operate simultaneously. The noise modeling also assumes a clear line-of-sight and no other machinery or equipment noise that would mask project-related construction noise. The shielding of buildings and other barriers that interrupt line-of-sight conditions would help further reduce noise levels below what is shown in **Table 3.13-3**. Although, construction activities would occur across the entire Area of Proposed Improvements, according to FTA's noise assessment methodology, noise can be considered as concentrated at the center of the site. Therefore, the estimated noise levels were calculated from the geographic center of the Area of Proposed Improvements, which is approximately 140 feet from the closest sensitive receptor, a residential use to the east.

As shown in **Table 3.13-3**, the nearest sensitive receptor to the Area of Proposed Improvements could be exposed to temporary and intermittent construction noise levels ranging from approximately 64.7 to 74.2 dBA L_{eq} at the nearest residential use to the east. As such, construction noise would not have the potential to exceed the NIOSH significance threshold level of 85 dBA L_{eq}. In addition, according to AMC Section 4261, construction activities are restricted to the daytime hours of 7:00 a.m. to 6:00 p.m. Monday through Friday, and 8:00 a.m. to 5:00 p.m. on Saturday; construction activities are prohibited on Sunday and the following federal holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Veteran's Day, Thanksgiving Day, and Christmas Day.

Table 3.13-3
Noise Levels Generated During Construction Phases

Phase	Estimated Exterior Construction Noise Level at 140 feet (Center of Area of Proposed Improvements) (dBA L_{eq})[1]
Grading	74.2
Building Construction	69.8
Paving	73.9
Architectural Coating	64.7

Notes:

1. These noise levels conservatively assume the simultaneous operation of all heavy construction equipment at the same precise location. Modeled heavy construction equipment includes a grader, dozers, and backhoes during the grading phase; forklifts, crane, and backhoes during the building construction phase; a paver, cement mixers, roller, and backhoe during the paving phase; and an air compressor during the architectural coating phase.

Source: Michael Baker International, Tempo by Hilton Project – Noise and Vibration Assessment Memorandum, July 22, 2024.

Compliance with the noise regulations in the AMC would reduce impacts from construction noise, as construction noise would be limited to the permitted times. In addition, as the Area of Proposed Improvements is adjacent to residential uses, the Tempo Project would be required to implement Indigo IS/MND mitigation measure **MM NOI-1**, which requires a CNCP ad BMPs that would

reduce the potential for annoyance from the temporary construction activities. As stated above, construction of the Approved Project will be completed prior to the start of construction for the Tempo Project; therefore, no overlap of construction activities would occur. As such, the Revised Project, which includes the Approved Project and the Tempo Project, would result in the similar and no greater impacts than those disclosed in the Indigo IS/MND, which were determined to be less than significant with mitigation incorporated.

Long-term Operational Impacts

Mobile Noise

Operation of the Revised Project would generate vehicle trips on adjacent roadways, thereby potentially increasing vehicular noise in the vicinity of existing and proposed land uses. The most prominent source of mobile traffic noise in the Revised Project vicinity is along Colorado Place. According to the California Department of Transportation, a doubling of traffic (100 percent increase) on a roadway would result in a perceptible increase of 3 dBA in traffic noise levels. As discussed above, the Tempo Project would generate approximately 1,113 daily trips. The existing traffic volume along Colorado Place near the Revised Project Site is 13,559 trips per day. As the traffic volumes generated by the Tempo Project would not double the existing traffic volumes and traffic noise impacts from the Tempo Project would be less than significant. In addition, the Approved Project, which would generate 2,442 trips per day, and the Tempo Project would generate a total of up to 3,555 trips per day, which would not double the existing traffic volumes along Colorado Place. As such, the traffic noise impacts from the Revised Project, which is the Tempo Project and the Approved Project combined, would remain less than significant.

Stationary Noise

Operation of the Tempo Project would be typical of a hotel facility. Stationary noise sources associated with the Tempo Project would include noise generated from mechanical equipment and the outdoor patio. Although the nearest noise sensitive use is the residential use adjacent to the east of the Area of Proposed Improvements when measured from the property line, the distances to the nearest sensitive receptor would be greater when measured from the proposed on-site stationary sources.

The Tempo Project would install rooftop HVAC units on top of the proposed hotel building. Typically, mechanical equipment, such as HVAC units, generate noise levels of 60 dBA at 20 feet from the source. The closest HVAC units on the proposed building would be located approximately 95 feet away from the nearest sensitive receptor (i.e., residential use to the east) Noise levels generated by the HVAC units would be approximately 46.5 dBA at 95 feet. Therefore, noise from operation of the HVAC units would not exceed the City's daytime exterior standard of 55 dBA or nighttime exterior standard of 50 dBA at this sensitive receptor. In addition, as shown in **Table 3.13-1**, the existing ambient noise level near the residential use is approximately 62.0 dBA L_{eq}, which is higher than the projected noise levels from HVAC units at this sensitive receptor. As such, noise impacts from mechanical equipment for the Tempo Project would be less than significant.

Crowd noise is approximately 62 dBA at one meter (i.e., 3.28 feet) from the source and is dependent on several factors including vocal effort, impulsiveness, and the random orientation of

the crowd members. The Tempo Project proposes an outdoor patio area to the west of the proposed hotel building. The nearest sensitive use (i.e., residential use) is located approximately 240 feet from the proposed outdoor patio. At this distance, crowd noise would be approximately 24 dBA. In addition, the proposed building would block the line-of-sight between the nearest sensitive receptor and the outdoor patio area. Therefore, noise from the outdoor patio would not exceed the City's daytime exterior standard of 55 dBA or nighttime exterior standard of 50 dBA at this sensitive receptor. As stated above, the existing ambient noise level near the residential use is approximately 62.0 dBA L_{eq}, which is higher than the projected noise levels from the outdoor patio area. As such, noise impacts from the outdoor patio area for the Tempo Project would be less than significant.

Therefore, based on the above, operational impacts resulting from the Tempo Project would be less than significant. However, as the Approved Project would potentially result in significant impacts related to operational noise, the Tempo Project combined with the Approved Project would potentially result in a significant impact. Therefore, the Revised Project would implement Indigo IS/MND mitigation measure **MM NOI-2**, which would reduce noise impacts from mechanical equipment to a less-than-significant level. Implementation of Indigo IS/MND mitigation measure **MM NOI-2** would reduce potential operational noise-related impacts for the Revised Project to less-than-significant levels.

Summary of Project-Generated Noise Impacts

Based on the above, the Revised Project's construction and operational noise impacts would be less than significant with implementation of Indigo IS/MND mitigation measures **MM NOI-1** and **MM NOI-2**, consistent with the determinations of the Indigo IS/MND, which concluded that the Approved Project's construction and operational noise impacts would be less than significant with mitigation incorporated. Therefore, the Revised Project would not result in a new significant impact or a substantially more severe impact than identified in the Indigo IS/MND with respect to noise.

PROJECT-GENERATED VIBRATION IMPACTS

Short-Term Construction Vibration Impacts

Project construction activities have the potential to generate ground-borne vibration and result in construction vibration impacts that include human annoyance and building damage. Human annoyance occurs when construction vibration rises significantly above the threshold of human perception for extended periods of time. The vibration level at which human annoyance is perceived is 0.2 inch per second PPV. Building damage can be cosmetic or structural. Ordinary buildings that are not particularly fragile would not experience any cosmetic damage (e.g., plaster cracks) at distances beyond 25 feet from most construction vibration sources. This distance can vary substantially depending on the soil composition and underground geological layer between the vibration source and the receiver. In addition, not all buildings respond similarly to vibration generated by construction equipment. The FTA architectural damage criterion for continuous vibrations of 0.3 in/sec PPV for engineered concrete and masonry (refer to **Table 3.13-2**) is used because the closest structures to the Area of Proposed Improvements is a modern residential building. The nearest sensitive receptor building is located approximately 50 feet to the east of the Tempo Project construction activities. As such, vibration impacts are analyzed at 50 feet to

evaluate the architectural building damage criterion. Groundborne vibration decreases rapidly with distance. As a result, vibration velocities from the construction equipment would be barely perceptible at this distance. Typical vibration produced by construction equipment is illustrated in **Table 3.13-4, Typical Vibration Levels for Construction Equipment**.

Table 3.13-4
Typical Vibration Levels for Construction Equipment

Equipment	Approximate peak particle velocity at 25 feet (inch/sec)	Approximate peak particle velocity at 225 feet (inch/sec)[1]
Large bulldozer	0.089	0.0033
Loaded trucks	0.076	0.0028
Small bulldozer	0.003	0.0001
Vibratory roller	0.210	0.0742

Notes:
1. Calculated using the following formula:
$PPV_{equip} = PPV_{ref} \times (25/D)^{1.1}$
where: PPV_{equip} = the peak particle velocity in in/sec of the equipment adjusted for the distance
PPV_{ref} = the reference vibration level in in/sec from Table 7-4 of the FTA *Transit Noise and Vibration Impact Assessment Guidelines*
D = the distance from the equipment to the receiver

Source: Michael Baker International, Tempo by Hilton Project – Noise and Vibration Assessment Memorandum, July 22, 2024.

As shown in **Table 3.13-4**, vibration velocities from typical heavy construction equipment operation would range from 0.003 to 0.210 inch/second PPV at 25 feet from the source of activity. The nearest structure to the Tempo Project Site is the existing residential building located approximately 50 feet to the east of the Area of Proposed Improvements. **Table 3.13-4** shows that the vibration level during the operation of construction equipment would be approximately 0.0011 to 0.0742 inch/second PPV at 50 feet. As a result, construction groundborne vibration would not exceed the 0.2 inch per second PPV significance threshold for human annoyance or 0.3 inch/second PPV significance threshold for building damage at the nearest structure. Therefore, vibration impacts would be less than significant during construction of the Tempo Project.

Long-Term Operational Vibration Impacts

The proposed hotel use for the Tempo Project would not generate groundborne vibration that could be felt by the nearest sensitive receptors. The Tempo Project would also not involve heavy-duty truck trips. As such, it can be reasonably inferred that operation of the Tempo Project would not create perceptible vibration impacts to the nearest sensitive receptor. Therefore, vibration impacts related to human annoyance and building damage during operation of the Tempo Project would be less than significant.

Summary of Project-Generated Vibration Impacts

Based on the above, the Tempo Project's construction and operational vibration impacts would be less than significant. As discussed above, the construction of the Approved Project will be completed prior to the start of construction for the Tempo Project and no overlap of construction

activities would occur. However, as the Approved Project is required to implement Indigo IS/MND mitigation measure **MM NOI-1** to ensure that the potential vibration during Approved Project construction would not result in human annoyance, the Revised Project, which includes the Approved Project, would also be required to implement Indigo IS/MND mitigation measure **MM NOI-1** to ensure that construction vibration impacts would remain less than significant. Due to the lack of operational vibration sources for the Approved Project and Tempo Project, the Revised Project would not result in operational vibration impacts, consistent with the determination of the Indigo IS/MND.

EXCESSIVE NOISE NEAR AIRPORTS

The nearest airport to the Revised Project Site is the El Monte Airport located approximately 3.5 miles to the south. The Revised Project Site is not located within two miles of the airport. Additionally, the Revised Project Site is not located within the vicinity of a private airstrip or related facilities. Therefore, implementation of the Revised Project would not expose people residing or working in the Revised Project area to excessive noise levels associated with aircraft. As such, the Revised Project would not result in any impacts related to airport noise, consistent with the determination of the Indigo IS/MND.

3.13.3 Conclusion

Based on the above, with implementation if Indigo IS/MND mitigation measures **MM NOI-1** and **MM NOI-2**, no new significant impacts or substantially more severe impacts than those previously identified in the Indigo IS/MND would occur as a result of a substantial change proposed by the Revised Project, a substantial change in circumstances, or new information of substantial importance associated with the Revised Project. Likewise, there is no new information of substantial importance that shows that effective but previously infeasible mitigation measures are now feasible or that new or different mitigation measures would substantially reduce significant effects of the Revised Project. Therefore, no new or different mitigation measures are required.

3.13.4 Mitigation Measures

APPLICABLE INDIGO IS/MND MITIGATION MEASURES

MM-NOI-1: Prior to the issuance of a grading permit, the Project Applicant shall provide a Construction Noise Control Plan (CNCP) to the City for review and approval. The CNCP shall include best management practices to reduce short-term construction noise. Enforcement of the CNCP shall be accomplished by field inspections during construction activities and/or documentation of compliance, to the satisfaction of the City's Development Services Department. Recommended best management practices may include, but not be limited to, the following:

- All construction equipment, fixed or mobile, shall be equipped with properly operating and maintained mufflers consistent with the manufacturers' specifications and standards.

- Construction noise reduction methods such as shutting off idling equipment, maximizing the distance between construction equipment staging areas and

adjacent residences, and use of electric air compressors and similar power tools, rather than diesel equipment, should be used where feasible.

- Stationary equipment should be placed as far away from the adjacent residential property boundary as feasible and positioned such that emitted noise is directed away from or shielded from sensitive receptors. Acoustically attenuating shields, shrouds, or enclosures may be placed over stationary equipment.

- During all Project site construction, the construction contractor shall limit all construction-related activities, including maintenance of construction equipment and the staging of haul trucks, to between the hours of 7:00 a.m. to 6:00 p.m. Monday through Friday and 8:00 a.m. to 5:00 p.m. on Saturday.

- Construction hours, allowable workdays, and the phone number of the job superintendent should be clearly posted at all construction entrances to allow surrounding property owners to contact the job superintendent, if necessary. In the event the City receives a complaint, appropriate corrective actions should be implemented and a report of the action provided to the reporting party, the City's Development Services Department.

MM-NOI-2: The Project Applicant shall retain an acoustical specialist to review the Project's construction-level plans to ensure that the equipment specifications and plans for HVAC and emergency backup generator incorporate features to ensure that operational noise will not exceed relevant noise standards at nearby noise-sensitive land uses (e.g., residential). Such features could include, but not be limited to, the specification of quieter equipment, relocation of facilities to be of further distance from residential homes, and/or the provision of acoustical enclosures. The acoustical specialist shall certify in writing to the City that the equipment specifications and plans will achieve the City's relevant noise limits.

NEW MITIGATION MEASURES

No new or different mitigation measures are required.

3.14 Population and Housing

ENVIRONMENTAL ISSUE	IMPACT CONCLUSION		ANY NEW SIGNIFICANT IMPACTS OR SUBSTANTIALLY MORE SEVERE IMPACTS RESULTING FROM:			FOR MITIGATION MEASURES (MM), NEW INFORMATION OF SUBSTANTIAL IMPORTANCE SHOWS THAT:	
	REVISED PROJECT	ADOPTED IS/MND	SUBSTANTIAL CHANGE IN THE PROJECT?	SUBSTANTIAL CHANGE IN CIRCUMSTANCE?	NEW INFORMATION OF SUBSTANTIAL IMPORTANCE?	EFFECTIVE BUT PREVIOUSLY INFEASIBLE MM ARE NOW FEASIBLE?	NEW OR DIFFERENT MM WOULD SUBSTANTIALLY REDUCE SIGNIFICANT EFFECT(S)?
Would the project:							
a) Induce substantial unplanned 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)?	LTS	LTS	No	No	No	No	No
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	NI	NI	No	No	No	No	No

3.14.1 Indigo IS/MND Finding

The Indigo IS/MND concluded that as the Approved Project would not include the construction of housing or roads or other infrastructure, it would not result in unplanned population growth. Regarding employment, the Indigo IS/MND found that the Approved Project would reduce the overall number of employees at the Original Project Site when compared to the potential full occupancy of the existing Building C. This reduced employment would not be expected to substantially alter the SCAG projected 2040 population growth estimates for the City, as the new employees required for the Approved Project would likely be primarily filled by existing residents within the Los Angeles region. Therefore, impacts related to unplanned population growth would be less than significant. Further, as the Approved Project would redevelop an existing commercial property, it would not displace existing people or housing and no impact would occur.

3.14.2 Project Analysis

The Tempo Project proposes to construct a new four-story hotel building with 93 guestrooms, a café and bar, amenities, and a new surface parking area in the Area of Proposed Improvements. The Tempo Project would not include a residential component, or the extension of roads or other infrastructure. Using the same employment generation factors provided in the Indigo IS/MND, the Tempo Project is anticipated to generate 32 employees and the Approved Project would generate approximately 111 new employees, resulting in a total of 143 new employees for the Revised

Project.[27,28] According to SCAG's 2016-2040 RTP/SCS, the City's employment would increase from 28,900 in 2012 to 34,400 in 2045, representing an increase of 5,500 employees between 2012 and 2040.[29] The Revised Project's employment increase of 143 new employees would constitute only 2.6 percent of the City's employment increase between 2012 and 2040. In addition, according to SCAG's 2020-2045 RTP/SCS, the City's employment would increase from 32,600 in 2016 to 36,100 in 2045, representing an increase of 3,500 employees between 2016 and 2045.[30] The Revised Project's employment increase of 143 new employees would constitute only 4.1 percent of the City's employment increase between 2016 and 2045. As with the Approved Project, the Revised Project would provide additional jobs in the City and it is anticipated that employees required for the additional jobs would be drawn from the existing City and regional workforce, thus, not inducing population growth. Therefore, the Revised Project would not directly or indirectly result in substantial unplanned population growth, and impacts would be less than significant, consistent with the determination of the Indigo IS/MND.

Additionally, the Tempo Project would construct a proposed hotel building on APN 5775-015-011, which is currently vacant and does not contain any residential uses. As with the Approved Project, the Revised Project would not displace existing people or housing. Therefore, the Revised Project would not result in any impacts related to population and housing, consistent with the determination of the Indigo IS/MND.

3.14.3 Conclusion

Based on the above, no new significant impacts or substantially more severe impacts than those previously identified in the Indigo IS/MND would occur as a result of a substantial change proposed by the Revised Project, a substantial change in circumstances, or new information of substantial importance associated with the Revised Project. Likewise, there is no new information of substantial importance that shows that effective but previously infeasible mitigation measures are now feasible or that new or different mitigation measures would substantially reduce significant effects of the Revised Project. Therefore, no new or different mitigation measures are required.

[27] Using a generation factor of 1,500 square feet/employee, the proposed 47,140-square-foot hotel building would generate approximately 32 employees (47,140 / 1,500 = 32 employees).

[28] U.S. Green Building Council, LEED Reference Guide for Green Building Design and Construction, 2009, Core & Shell Appendix 1.

[29] Southern California Council of Governments, 2016-2040 Regional Transportation Plan/ Sustainable Communities Strategy, Demographics and Growth Forecast Appendix, April 7, 2016.

[30] Southern California Council of Governments, 2020-2045 Regional Transportation Plan/ Sustainable Communities Strategy – Connect SoCal 2020, Demographics and Growth Forecast Technical Report, September 3, 2020.

3.14.4 Mitigation Measures

APPLICABLE INDIGO IS/MND MITIGATION MEASURES

No Indigo IS/MND mitigation measures apply.

NEW MITIGATION MEASURES

No new or different mitigation measures are required.

3.15 Public Services

ENVIRONMENTAL ISSUE	IMPACT CONCLUSION		ANY NEW SIGNIFICANT IMPACTS OR SUBSTANTIALLY MORE SEVERE IMPACTS RESULTING FROM:			FOR MITIGATION MEASURES (MM), NEW INFORMATION OF SUBSTANTIAL IMPORTANCE SHOWS THAT:	
	REVISED PROJECT	ADOPTED IS/MND	SUBSTANTIAL CHANGE IN THE PROJECT?	SUBSTANTIAL CHANGE IN CIRCUMSTANCE?	NEW INFORMATION OF SUBSTANTIAL IMPORTANCE?	EFFECTIVE BUT PREVIOUSLY INFEASIBLE MM ARE NOW FEASIBLE?	NEW OR DIFFERENT MM WOULD SUBSTANTIALLY REDUCE SIGNIFICANT EFFECT(S)?
Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for 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?	LTS	LTS	No	No	No	No	No
b) Police protection?	LTS	LTS	No	No	No	No	No
c) Schools?	NI	NI	No	No	No	No	No
d) Parks?	NI	NI	No	No	No	No	No
e) Other public facilities?	NI	NI	No	No	No	No	No

3.15.1 Indigo IS/MND Finding

According to the Indigo IS/MND, the City is served by the Arcadia Fire Department and Arcadia Police Department. Fire Station 105 is located 0.6-mile southeast of the Original Project Site at 710 South Santa Anita Avenue, and the Arcadia Police Department is located 0.3-mile south of the Original Project Site at 250 West Huntington Drive. The Approved Project would involve redevelopment of an existing site into hotel uses and would not include permanent housing resulting in substantial population growth that would necessitate a need for new or altered fire or police facilities. Further, the Approved Project would adhere to the California Fire Code and the City of Arcadia's Fire Code (AMC Section 3122.7). The Indigo IS/MND concluded impacts related to fire protection and police protection would be less than significant.

The Indigo IS/MND states the Arcadia Unified School District provides schools services and the City of Arcadia Recreation and Community Services Department manages the City's parks and recreation facilities. Other public facilities within the Indigo Project vicinity include libraries. As discussed above, implementation of the Approved Project would not result in substantial population growth. Although the new hotel use would result in an increase of employment opportunities, any such population growth would be minor and would not require a need for new or altered school, park, or other public facilities. Further, per SB 50, the Approved Project Applicant would be required to pay a school mitigation fee, which would be deemed full and

complete mitigation for any indirect impacts to schools that may occur from Project implementation. The Indigo IS/MND concluded there would be no impact related to schools, parks, and other public facilities.

3.15.2 Project Analysis

The Tempo Project is does not include a residential component that would result in substantial population growth. Although the Tempo Project would generate approximately 32 new employees that may require fire and police services, the increase in demand for such services at the Revised Project Site would not be substantial. The Tempo Project would be required to comply with the most recent California Fire and Building Codes, which have been adopted by reference by the City pursuant to AMC Sections 3121 and 8110, respectively. The City's Fire Prevention Bureau requirements would also conduct site plan reviews and new construction inspections for fire protection systems and emergency access to ensure that the building and site design adheres to applicable fire regulations. Additionally, the Tempo Project would implement on-site security measures, such as security cameras, site lighting, and security personnel to minimize the demand for police services at the Revised Project Site. Further, as the Revised Project area is already served by the Arcadia Fire Department and the Arcadia Police Department, implementation of the Project would not require expansion of their service areas. Therefore, consistent with the Indigo IS/MND, the implementation of the Revised Project would not require the provision of new or physically altered fire or police facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios and response times and impacts related to fire and police protection services would be less than significant.

In addition, the estimated 32 employees generated by the Tempo Project would not measurably increase the demand for school, park, or library services. It is anticipated that the employees for the proposed hotel would be drawn from the existing City and regional workforce. Thus, the Tempo Project would not generate new students that would attend nearby schools. The Tempo Project's employees also would not be expected to utilize existing parks or other public facilities during work hours. Moreover, the Applicant would pay fees pursuant to SB 50 and property taxes, which would offset any nominal demand for school or library services created by the Tempo Project. Therefore, consistent with the Indigo IS/MND, the Revised Project would not result in any impacts related to schools, parks, or library services.

3.15.3 Conclusion

Based on the above, no new significant impacts or substantially more severe impacts than those previously identified in the Indigo IS/MND would occur as a result of a substantial change proposed by the Revised Project, a substantial change in circumstances, or new information of substantial importance associated with the Revised Project. Likewise, there is no new information of substantial importance that shows that effective but previously infeasible mitigation measures are now feasible or that new or different mitigation measures would substantially reduce significant effects of the Revised Project. Therefore, no new or different mitigation measures are required.

3.15.4 Mitigation Measures

APPLICABLE INDIGO IS/MND MITIGATION MEASURES

No Indigo IS/MND mitigation measures apply.

NEW MITIGATION MEASURES

No new or different mitigation measures are required.

3.16 Recreation

ENVIRONMENTAL ISSUE	IMPACT CONCLUSION		ANY NEW SIGNIFICANT IMPACTS OR SUBSTANTIALLY MORE SEVERE IMPACTS RESULTING FROM:			FOR MITIGATION MEASURES (MM), NEW INFORMATION OF SUBSTANTIAL IMPORTANCE SHOWS THAT:	
	REVISED PROJECT	ADOPTED IS/MND	SUBSTANTIAL CHANGE IN THE PROJECT?	SUBSTANTIAL CHANGE IN CIRCUMSTANCE?	NEW INFORMATION OF SUBSTANTIAL IMPORTANCE?	EFFECTIVE BUT PREVIOUSLY INFEASIBLE MM ARE NOW FEASIBLE?	NEW OR DIFFERENT MM WOULD SUBSTANTIALLY REDUCE SIGNIFICANT EFFECT(S)?
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated)?	NI	NI	No	No	No	No	No
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?	NI	NI	No	No	No	No	No

3.16.1 Indigo IS/MND Finding

The Indigo IS/MND states the City of Arcadia Recreation and Community Services Department manages the City's 15 public parks, with the closest park to the Original Project Site being Arcadia County Park. Implementation of the Approved Project would not result in substantial population growth such that physical deterioration of parks and recreational facilities would occur. Further, the Approved Project would not include the construction or expansion of recreational facilities. Therefore, the Indigo IS/MND concluded the Approved Project would not result in any impacts related to recreation.

3.16.2 Project Analysis

As discussed in **Section 4.14, Population and Housing**, the Tempo Project is not a residential project that would generate population growth. The Tempo Project would generate 32 employees

and it is anticipated that these employees would be drawn from the existing City or region workforce. The Tempo Project's employees would not be expected to utilize existing parks or recreational facilities during work hours. Although hotel guests may utilize nearby parks, the use is expected to be nominal. Moreover, the Tempo Project would provide amenities including a ground floor outdoor patio, rooftop outdoor patio, and fitness room, that employees and hotel guests may utilize. Lastly, the Tempo Project would not include a recreational facility component, beyond the amenities included in the proposed hotel. As such, the Revised Project would not cause or accelerate substantial physical deterioration of existing parks or other recreational facilities nor include or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment. Consistent with the determination of the Indigo IS/MND, no impacts related to recreational facilities would occur.

3.16.3 Conclusion

Based on the above, no new significant impacts or substantially more severe impacts than those previously identified in the Indigo IS/MND would occur as a result of a substantial change proposed by the Revised Project, a substantial change in circumstances, or new information of substantial importance associated with the Revised Project. Likewise, there is no new information of substantial importance that shows that effective but previously infeasible mitigation measures are now feasible or that new or different mitigation measures would substantially reduce significant effects of the Revised Project. Therefore, no new or different mitigation measures are required.

3.16.4 Mitigation Measures

APPLICABLE INDIGO IS/MND MITIGATION MEASURES

No Indigo IS/MND mitigation measures apply.

NEW MITIGATION MEASURES

No new or different mitigation measures are required.

3.17 Transportation

ENVIRONMENTAL ISSUE	IMPACT CONCLUSION		ANY NEW SIGNIFICANT IMPACTS OR SUBSTANTIALLY MORE SEVERE IMPACTS RESULTING FROM:			FOR MITIGATION MEASURES (MM), NEW INFORMATION OF SUBSTANTIAL IMPORTANCE SHOWS THAT:	
	REVISED PROJECT	ADOPTED IS/MND	SUBSTANTIAL CHANGE IN THE PROJECT?	SUBSTANTIAL CHANGE IN CIRCUMSTANCE?	NEW INFORMATION OF SUBSTANTIAL IMPORTANCE?	EFFECTIVE BUT PREVIOUSLY INFEASIBLE MM ARE NOW FEASIBLE?	NEW OR DIFFERENT MM WOULD SUBSTANTIALLY REDUCE SIGNIFICANT EFFECT(S)?
Would the project:							
a) Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadways, bicycle, and pedestrian facilities?	LTS	LTS	No	No	No	No	No
b) Conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)?	LTS	LTS	No	No	No	No	No
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	LTS	LTS	No	No	No	No	No
d) Result in inadequate emergency access?	NI	NI	No	No	No	No	No

3.17.1 Indigo IS/MND Finding

According to the Indigo IS/MND, the City does not have adopted street segment analysis threshold criteria; however, the *Arcadia General Plan, Chapter 2: Circulation and Infrastructure Element* indicates that roadway segments operating at Level of Service (LOS) D or better are considered to be at acceptable levels. As such, the Indigo IS/MND's traffic analysis was conducted in order to compare the overall roadway LOS without and with the Approved Project. The Indigo IS/MND concluded that implementation of the Approved Project would result in incremental, but not significant, impacts at the study intersections. All study intersections would remain at LOS D or better in both peak hours, and, as such, the Approved Project would be consistent with the City's standards, and impacts would be less than significant.

Regarding CEQA Guidelines Section 15064.3, the Indigo IS/MND determined that because the Approved Project is conveniently located in close proximity to public transit and would provide opportunities for increased pedestrian and bicycle activity, these factors would contribute to reducing the Approved Project's VMT. As such, the Approved Project would not conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b). Impacts would be less than significant.

According to the Indigo IS/MND, the Approved Project would not modify existing roadways or involve construction of structures that would cause transportation hazards. All access points would be designed in accordance with the City's Municipal Code, Development Code, and Design Standards. Further, the Approved Project would construct a hotel development in a commercial area that has been designated and planned for such uses. As such, the Approved Project determined less than significant impacts related to hazards or incompatible uses.

The Indigo IS/MND states construction of the Approved Project would not require road closures in public rights-of-way of Colorado Place or Huntington Drive. Also, prior to operation, the Approved Project would receive all required permits and certificates for occupancy and operation, including those issued by the City of Arcadia Fire Department. Therefore, the Indigo IS/MND concluded no interference or impairment of the emergency response or emergency evacuation plans would occur, and no impact would occur.

3.17.2 Project Analysis

The following section evaluates potential impacts related to transportation and traffic that would result from the construction and operation of the Revised Project. The analysis is based, in part, on the Transportation Impact Analysis (TIA) prepared for the Tempo Project in accordance with the *City of Arcadia Transportation Study Guidelines for Vehicle Miles Traveled and Level of Services Assessment* (Transportation Guidelines). The TIA is provided as **Attachment G, Transportation Impact Analysis**, which analyzed transportation impacts for a 91-room hotel. After the completion of the TIA, the total number of proposed rooms increased to 93. As such, **Attachment G.1, Transportation Evaluation (93 Rooms)**, was prepared to evaluate the potential impacts of the additional two rooms, which concluded that the original impact determinations for the 91-room hotel would not change with the increase to 93 rooms.

The TIA defines the transportation study area as the following five intersections and evaluates these intersections during the AM and PM peak hours in the vicinity of the Revised Project Site:

1. Colorado Place and San Juan Drive (One-Way Stop Control)
2. Project Driveway #1 & San Juan Drive (Planned One-Way Stop Control)
3. Project Driveway #2 & Colorado Place (Planned One-Way Stop Control)
4. Project Driveway #3 & Colorado Place (One-Way Stop Control)
5. Santa Anita Avenue and Huntington Drive (Signalized Intersection)

CONSISTENCY WITH APPLICABLE PROGRAM, PLAN, ORDINANCE, OR POLICY

Existing Roadways

The characteristics of the existing roadway system in the Revised Project area are described below:

- Colorado Place is a four-lane undivided roadway trending in the east-west direction with left turn lanes provided at roadways and driveways along the corridor. Colorado Place is classified as a Primary Arterial within the transportation study area per the City's General

Plan. Within the transportation study area, there are no bike lanes on either side of the road. Sidewalks are provided on the north side of the street. The posted speed limit is 40 MPH.

- San Juan Drive is a two-lane undivided roadway trending in the north-south direction. San Juan Drive is classified as a local road per the City's General Plan. Sidewalks are provided on both sides of the street with no bicycle facilities within the study area. The posted speed limit is 25 MPH.
- Huntington Drive is classified as a one-way Major Arterial with three lanes going both directions. Huntington Drive goes one-way in the northbound direction and one-way in the southbound direction. Sidewalks are provided intermittently on both sides of the street and on-street parking is not permitted. The posted speed limit is 55 MPH. There are existing bike lanes on both sides of the street.
- Santa Anita Avenue is a four-lane divided roadway trending in the north-south direction. Santa Anita Avenue is classified as a Primary Arterial within the study area per the City's General Plan. Within the transportation study area, there are no bike lanes on either side of the road. Sidewalks are provided on the north side of the street. The posted speed limit is 35 MPH.

Existing Public Transit Services

Public bus transit service in the Revised Project vicinity is currently provided by the Metropolitan Transportation Authority (Metro), Foothill Transit, and Arcadia Transit. Metro provides bus transit service near the Project Site along Huntington Drive and Santa Anita Avenue. Metro currently operates two local Metro bus transit routes in the vicinity of the Project Site. Foothill Transit provides bus transit service along major roadways near the Project study area along Huntington Drive and Santa Anita Avenue. Foothill Transit currently operates one transit route near the Project Site.

LOS Analysis Methodology and Performance Standards

LOS, ranging from LOS A (free-flow conditions) to LOS F (severely congested conditions), is commonly used as a qualitative description of intersection operation and is based on traffic control and experienced delay at the intersection. For signalized intersections, the Intersection Capacity Utilization (ICU) methodology was used. The ICU value translates to a LOS estimate, which is a relative measure of the intersection performance.

The City has identified LOS D as the threshold for acceptable operating conditions for intersections as established in the City's General Plan. LOS E is considered acceptable at intersections adjacent to freeway ramps or adjacent to Santa Anita Park during the racing season. Any intersection operating at an LOS grade worse than the acceptable condition is considered deficient. Signalized intersections will require improvements if one of the following conditions is met:

- LOS C – project results in a volume-to-capacity (V/C) increase of 0.04 or more
- LOS D – project results in V/C increase of 0.02 or more

- LOS E/F – project results in V/C increase of 0.01 or more

Unsignalized intersections will require improvements if the addition of project traffic to an intersection results in the degradation of overall intersection operations from acceptable operations to unacceptable operations, and the intersection meets peak hour signal warrants either caused by project volumes, or project volumes are added at an intersection that meets peak hour signal warrants in the baseline scenario(s).

Existing Level of Service

Table 3.17-1, Existing AM/PM Peak Hour Intersection LOS, summarizes the AM/PM peak hour LOS for all study intersections under existing conditions.

Table 3.17-1
Existing AM/PM Peak Hour Intersection LOS

Study Intersection		Traffic Control	Existing Conditions			
			AM		PM	
			Delay[1]	LOS	Delay[1]	LOS
1	Colorado Place & San Juan Drive	OWSC	26.7	D	12.6	B
2	Project Driveway #1 & San Juan Drive	OWSC	8.9	A	8.7	A
3	Project Driveway #2 & Colorado Place	OWSC	Does not exist without project			
4	Project Driveway #3 & Colorado Place	OWSC	21.8	C	13.1	B
5	Santa Anita Avenue and Huntington Drive[2]	Signal	0.818	C	0.736	C

1. Delay is expressed in seconds per vehicle.
2. Signalized intersections use ICU methodology and report V/C ratios.

LOS = level of service.
OWSC = One Way Stop Control

Source: Michael Baker International, Transportation Impact Analysis – Tempo by Hilton Project, September 24, 2024.

As shown in **Table 3.17-1**, all study intersections operate at an acceptable LOS D or better under existing conditions. At Santa Anita Avenue & Huntington Drive (Intersection No. 5), the ICU methodology is used for analysis and the V/C is reported since this study location is signalized in accordance with the City's *Traffic Impact Analysis Guidelines*.

Existing Plus Project

The Tempo Project would generate a total of 38 AM peak hour trips and 39 PM peak hour trips. The Tempo Project's traffic volumes were added to the existing traffic volumes to determine the Existing Plus Project traffic volumes. **Table 3.17-2, Existing and Existing Plus Project AM/PM Peak Hour Intersection LOS** compares the Existing AM/PM peak hour LOS to the Existing Plus Project AM/PM peak hour LOS for all study intersections. As shown in **Table 3.17-2**, all study intersections are forecast to operate at an acceptable LOS D or better during the AM and PM peak hours under Existing Plus Project conditions. Therefore, no physical improvements to the study intersections are required.

Table 3.17-2
Existing and Existing Plus Project AM/PM Peak Hour Intersection LOS

	Study Intersection	Existing				Existing Plus Project				Change in V/C		Fair Share Required?
		AM		PM		AM		PM				
		Delay[1]	LOS	Delay[1]	LOS	Delay[1]	LOS	Delay[1]	LOS	AM	PM	
1	Colorado Place & San Juan Drive	26.7	D	12.6	B	26.9	D	12.6	B	N/A	N/A	No
2	Project Driveway #1 & San Juan Drive	8.9	A	8.7	A	8.9	A	8.7	A	N/A	N/A	No
3	Project Driveway #2 & Colorado Place	Does not exist without project				14.9	B	10.5	B	N/A	N/A	No
4	Project Driveway #3 & Colorado Place	21.8	C	13.1	B	23.0	C	13.4	B	N/A	N/A	No
5	Santa Anita Avenue and Huntington Drive[2]	0.818	C	0.736	C	0.820	C	0.737	A	0.002	0.001	No

1. Delay is expressed in seconds per vehicle for unsignalized intersections.
2. Signalized intersections use ICU methodology and report V/C ratios.
LOS = level of service.

Source: Michael Baker International, Transportation Impact Analysis – Tempo by Hilton Project, September 24, 2024.

Opening Year 2026 Without Project

A forecast of on-street traffic conditions was prepared by incorporating the potential trips associated with other known development projects (cumulative projects) in the Revised Project area. Six cumulative projects, including the Approved Project, were identified that are expected to add traffic volumes to the study intersections. The cumulative projects are expected to generate a total of 772 AM peak hour and 612 PM peak hour trips. **Table 3.17-3, Opening Year 2026 Without Project AM/PM Peak Hour Intersection LOS**, summarizes the AM/PM peak hour LOS for all study intersections under Opening Year 2026 Without Project conditions. As shown in **Table 3.17-3**, all study intersections would operate at an acceptable LOS D or better under Opening Year 2026 Without Project conditions during the AM and PM peak hour except for the intersection of Santa Anita Avenue and Huntington Drive which is reported to operate at an LOS E during the AM peak hour.

Opening Year Plus Project

Traffic volumes for Opening Year 2026 Plus Project conditions were derived by adding Tempo Project traffic volumes to the Opening Year 2026 Without Project traffic volumes.

Table 3.17-4, Opening Year 2026 Plus Project AM/PM Peak Hour Intersection LOS compares the Opening Year 2026 Without Project AM/PM peak hour LOS to the Opening Year 2026 Plus Project AM/PM peak hour LOS for all study intersections. As shown in **Table 3.17-4**, all study intersections are forecast to operate at an acceptable LOS D or better during the AM and PM peak hours under Opening Year 2026 Plus Project conditions except for the intersection of Santa Anita Avenue and Huntington Drive, which is expected to operate at LOS E during the AM peak period. However, the change in V/C with the Tempo Project traffic does not exceed the City's change in V/C threshold of 0.01 for intersections operating at LOS E. Therefore, improvements are not required at the signalized intersection of Santa Anita Avenue and Huntington Drive.

Table 3.17-3
Opening Year 2026 Without Project AM/PM Peak Hour Intersection LOS

Study Intersection		Traffic Control	Opening Year 2026 Without Project			
			AM		PM	
			Delay[1]	LOS	Delay[1]	LOS
1	Colorado Place & San Juan Drive	OWSC	32.5	D	13.0	B
2	Project Driveway #1 & San Juan Drive	OWSC	9.1	A	8.8	A
3	Project Driveway #2 & Colonado Place	OWSC	Does not exist without project			
4	Project Driveway #3 & Colonado Place	OWSC	24.4	D	13.0	B
5	Santa Anita Avenue and Huntington Drive[2]	Signal	**0.849**	**E**	0.765	**D**

Note: Deficient intersection operation indicated in **bold**.
1. Delay is expressed in seconds per vehicle for unsignalized intersections.
2. Signalized intersections use ICU methodology and report V/C ratios.
LOS = level of service
OWSC = One Way Stop Control

Source: Michael Baker International, Transportation Impact Analysis – Tempo by Hilton Project, September 24, 2024.

Table 3.17-4
Opening Year 2026 Plus Project AM/PM Peak Hour Intersection LOS

Study Intersection		Opening Year 2026 Without Project Conditions				Opening Year 2026 Plus Project Conditions				Change in V/C		Fair Share Required?
		AM		PM		AM		PM				
		Delay[1]	LOS	Delay[1]	LOS	Delay[1]	LOS	Delay[1]	LOS	AM	PM	
1	Colorado Place & San Juan Drive	32.5	D	13.0	B	32.2	D	13.0	B	N/A	N/A	No
2	Project Driveway #1 & San Juan Drive	9.1	A	8.8	A	9.1	A	8.8	A	N/A	N/A	No
3	Project Driveway #2 & Colorado Place	Does not exist without project				15.6	C	10.7	B	N/A	N/A	No
4	Project Driveway #3 & Colorado Place	24.4	D	13.0	B	27.2	D	14.3	B	N/A	N/A	No
5	Santa Anita Avenue and Huntington Drive	0.849	E	0.765	D	0.850	E	0.767	D	0.001	0.002	No

Note: Deficient intersection operation indicated in **bold**.
1. Delay is expressed in seconds per vehicle for unsignalized intersections.
2. Signalized intersections use ICU methodology and report V/C ratios.
LOS = level of service.

Source: Michael Baker International, Transportation Impact Analysis – Tempo by Hilton Project, September 24, 2024.

Impact Summary

In conclusion, implementation of the Tempo Project and the resulting generation of additional traffic would result in LOS D or better for all study intersections, except for the intersection of Santa Anita Avenue and Huntington Drive, which would operate at LOS E in the AM peak hour with the addition of cumulative project traffic. However, the Tempo Project's change in V/C for the intersection of Santa Anita Avenue and Huntington Drive does not exceed the City's threshold for acceptable operating conditions for intersections. As noted above, the cumulative projects

considered for the Opening Year 2026 conditions included the Approved Project. Therefore, the traffic volumes generated by the Revised Project, which includes the Approved Project and the Tempo Project, would not degrade the LOS of any study intersections such that the City's threshold for acceptable operation conditions would be exceeded. Based on the above, implementation of the Revised Project would not conflict with a program, plan, ordinance, or policy addressing the circulation system. Impacts would be less than significant and consistent with the impacts disclosed in the Indigo IS/MND.

VMT ASSESSMENT

The Indigo IS/MND evaluated traffic impacts using LOS, rather than VMT; consequently, the conclusions of this addendum also are based on LOS. Notwithstanding that, the following VMT analysis is provided for informational purposes. According to the City's Transportation Guidelines, a project can be presumed to have a less-than-significant VMT impact if the project satisfies one of the following screening criteria:

- Transit Priority Area: Projects located within a TPA.
- Low VMT Area: Residential and office projects located within a low VMT-generating area.
- Project Type: Projects which serve the local community and have the potential to reduce VMT, such as neighborhood K-12 schools, local-serving retail less than 50,000 sf, and local-serving hotels (e.g., non-destination hotels).

The Tempo Project would develop a hotel to serve the local population of the City, and as such, is considered a "non-destination" hotel. Therefore, the Tempo Project would meet the screening criteria for Project Type and no VMT analysis would be required. Accordingly, the Tempo Project's VMT impact is presumed to be less than significant.

The Indigo IS/MND evaluated Approved Project's transportation impacts based on LOS because the City had not adopted the use of VMT at the time. However, the Indigo IS/MND included a qualitative analysis of the Approved Project's VMT in accordance with CEQA Guidelines Section 15064.3 and determined that the Approved Project characteristics would contribute to reducing VMT. Since the Approved Project's VMT impacts were qualitatively concluded to be less than significant and the Tempo Project's VMT impact is less than significant based on the City's screening criteria, the Revised Project, which includes the Approved Project and the Tempo Project, would also have a less-than-significant VMT impact. As such, the Revised Project would not conflict or be inconsistent with CEQA Guidelines Section 15064.3(b) and impacts would be les than significant, consistent with the determination of the Indigo IS/MND.

HAZARDS AND EMERGENCY ACCESS

The Tempo Project proposes to develop a new hotel use on the Revised Project Site, which is a permitted use within the Commercial land use designation and the C-G zone. As previously described, the Approved Project also includes hotel uses; thus, the Tempo Project's proposed hotel is a compatible use for the Revised Project Site. Development of the Tempo Project would not include modification of any adjacent roadways that could result in hazardous conditions. Therefore, the Tempo Project would not introduce incompatible uses or create roadways hazards.

Vehicle access to the Revised Project Site would continue to be provided via the two existing driveways along Colorado Place, a driveway along San Juan Drive, and a driveway along San Rafael Road. All driveway and internal circulation improvements would be reviewed by the City's Engineering Division to ensure that they meet City standards. Therefore, the Revised Project would not substantially increase hazards due to Tempo Project design features or incompatible uses and impacts would be less than significant, consistent with the determination in the Indigo IS/MND.

Additionally, the Tempo Project would not require any full road closures during project construction. Emergency access to the Revised Project Site and within the surrounding area would be maintained during construction and operation of the Revised Project. Therefore, no interference or impairment of the emergency response or emergency evacuation plans would occur, and consistent with the determination of the Indigo IS/MND, no impact would occur.

3.17.3 Conclusion

Based on the above, no new significant impacts or substantially more severe impacts than those previously identified in the Indigo IS/MND would occur as a result of a substantial change proposed by the Revised Project, a substantial change in circumstances, or new information of substantial importance associated with the Revised Project. Likewise, there is no new information of substantial importance that shows that effective but previously infeasible mitigation measures are now feasible or that new or different mitigation measures would substantially reduce significant effects of the Revised Project. Therefore, no new or different mitigation measures are required.

3.17.4 Mitigation Measures

APPLICABLE INDIGO IS/MND MITIGATION MEASURES

No Indigo IS/MND mitigation measures apply.

NEW MITIGATION MEASURES

No new or different mitigation measures are required.

3.18 Tribal Cultural Resources

ENVIRONMENTAL ISSUE	IMPACT CONCLUSION		ANY NEW SIGNIFICANT IMPACTS OR SUBSTANTIALLY MORE SEVERE IMPACTS RESULTING FROM:			FOR MITIGATION MEASURES (MM), NEW INFORMATION OF SUBSTANTIAL IMPORTANCE SHOWS THAT:	
	REVISED PROJECT	ADOPTED IS/MND	SUBSTANTIAL CHANGE IN THE PROJECT?	SUBSTANTIAL CHANGE IN CIRCUMSTANCE?	NEW INFORMATION OF SUBSTANTIAL IMPORTANCE?	EFFECTIVE BUT PREVIOUSLY INFEASIBLE MM ARE NOW FEASIBLE?	NEW OR DIFFERENT MM WOULD SUBSTANTIALLY REDUCE SIGNIFICANT EFFECT(S)?
Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place or object with cultural value to a California Native American tribe, and that is:							
e) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k)?	LTS	LTS	No	No	No	No	No
f) A resource determined by the lead agency, in its discretion and supported by substantial evidence to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1? In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe?	LTSM (AP)	LTSM	No	No	No	No	No

3.18.1 Indigo IS/MND Finding

According to the Indigo IS/MND, no previously recorded tribal cultural resources listed in the California Register of Historical Resources or a local register were identified within the Original Project Site.

As part of the AB 52 notification and consultation process, the City notified a total of six affiliated and interested tribes, of which two responded. Only the Gabrieleno Band of Mission Indians – Kizh Nation requested consultation, which was completed and did not result in the identification of a geographically defined tribal cultural resource within or near the Original Project Site. As such, the City determined no tribal cultural resources are present in the Original Project Site. However, there would still be potential for inadvertent discovery of tribal cultural resources during ground disturbance that may result in potentially significant impacts. To reduce potential impacts, the Approved Project would be required to implement Indigo IS/MND mitigation measure **MM TCR-1**, which includes protocols for the inadvertent discovery of tribal cultural resources. The

Indigo IS/MND concluded impacts related to tribal cultural resources would be reduced to less-than-significant levels with implementation of Indigo IS/MND mitigation measure **MM TCR-1**.

3.18.2 Project Analysis

Based on the CHRIS records search, although there are no known cultural resources within the Revised Project Site, cultural resources have been discovered in the surrounding area. Thus, there is potential for ground-disturbing construction activities to uncover tribal cultural resources within the Revised Project Site. The Tempo Project would require excavation to depths of 12 to 15 feet below grade to construct the subterranean basement level. Therefore, the Tempo Project would be required to implement Indigo IS/MND mitigation measures **MM TCR-1** to reduce potential impacts on tribal cultural resources to less-than-significant levels. With implementation of Indigo IS/MND mitigation measure **MM TCR-1**, the Revised Project would not result in a substantial adverse change in the significance of a tribal cultural resource. Impacts related to tribal cultural resources would be less than significant with mitigation, consistent with the determination of the Indigo IS/MND.

3.18.3 Conclusion

Based on the above, with implementation of Indigo IS/MND mitigation measure **MM TCR-1,** no new significant impacts or substantially more severe impacts than those previously identified in the Indigo IS/MND would occur as a result of a substantial change proposed by the Revised Project, a substantial change in circumstances, or new information of substantial importance associated with the Revised Project. Likewise, there is no new information of substantial importance that shows that effective but previously infeasible mitigation measures are now feasible or that new or different mitigation measures would substantially reduce significant effects of the Revised Project. Therefore, no new or different mitigation measures are required.

3.18.4 Mitigation Measures

APPLICABLE INDIGO IS/MND MITIGATION MEASURES

MM TCR-1 Should a possible TCR be encountered, construction activities within 50 feet of the discovery shall be temporarily halted and the City notified. The City will notify Native American tribes that have been identified by the NAHC to be traditionally and culturally affiliated with the geographic area of the Project. If the potential resource is archaeological in nature, appropriate management requirements shall be implemented as outlined in MM-CUL-1. If the City determines that the potential resource is a TCR (as defined by PRC, Section 21074), tribes consulting under AB 52 would be provided a reasonable period of time, typically 5 days from the date of a new discovery is made, to conduct a site visit and make recommendations regarding future ground disturbance activities as well as the treatment of any discovered TCRs. A qualified archaeologist shall implement a plan for the treatment and disposition of any discovered TCRs based on the nature of the resource and considering the recommendations of the tribe(s). Implementation of proposed recommendations will be made based on the determination of the City that the approach is reasonable and feasible.

NEW MITIGATION MEASURES

No new or different mitigation measures are required.

3.19 Utilities and Service Systems

ENVIRONMENTAL ISSUE	IMPACT CONCLUSION		ANY NEW SIGNIFICANT IMPACTS OR SUBSTANTIALLY MORE SEVERE IMPACTS RESULTING FROM:			FOR MITIGATION MEASURES (MM), NEW INFORMATION OF SUBSTANTIAL IMPORTANCE SHOWS THAT:	
	REVISED PROJECT	ADOPTED IS/MND	SUBSTANTIAL CHANGE IN THE PROJECT?	SUBSTANTIAL CHANGE IN CIRCUMSTANCE?	NEW INFORMATION OF SUBSTANTIAL IMPORTANCE?	EFFECTIVE BUT PREVIOUSLY INFEASIBLE MM ARE NOW FEASIBLE?	NEW OR DIFFERENT MM WOULD SUBSTANTIALLY REDUCE SIGNIFICANT EFFECT(S)?
Would the project:							
a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	LTS	LTS	No	No	No	No	No
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	LTS	LTS	No	No	No	No	No
c) 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?	LTS	LTS	No	No	No	No	No
d) Generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	LTS	LTS	No	No	No	No	No
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	NI	NI	No	No	No	No	No

3.19.1 Indigo IS/MND Finding

WATER

The Indigo IS/MND concluded that the Approved Project would connect to the existing water utility infrastructure and would not require water infrastructure improvements, on-site or off-site. Further, the Approved Project would pay development impact fees, which would serve as its fair share contribution to future water infrastructure improvements. According to the City's 2015 UWMP, the City does not experience water supply constraints or deficiencies and the 2015 UWMP anticipates adequate water supply through the planning year 2040 for the City. The 2015 UWMP was based on data obtained from SCAG, which incorporated demographic projections from the City's General Plan. Since the Approved Project is consistent with the Original Project Site's land use designation in the General Plan, the Indigo IS/MND concluded that the Approved Project is also consistent with the 2015 UWMP. Further, the Approved Project would adhere to the water conservation measures in AMC Article VII, Chapter 5, Part 5, Division 3 and 4, and Title 24 of the California Building Code. Based on the above, the Indigo IS/MND determined that the Approved Project would not result in significant effects caused by the relocation or construction of new or expanded water utility infrastructure and that the City has sufficient water supplies to serve the Approved Project. Therefore, impacts related to water infrastructure and supply would be less than significant.

WASTEWATER

According to the Indigo IS/MND, the Original Project Site is served by existing 8-inch, 10-inch and 12-inch sewer lines in Colorado Place, San Rafael Road, and San Juan Drive. The Approved Project would connect to the existing sewer lines and would not require wastewater infrastructure improvements. In addition, the Approved Project would pay development impact fees, which would serve as its fair share contribution to future sewer infrastructure improvements. Therefore, the Indigo IS/MND determined that the Approved Project would not result in significant effects caused by the relocation or construction of new or expanded wastewater infrastructure and impacts would be less than significant.

Wastewater from the Approved Project area is transported to the San Jose Creek Water Reclamation Plant, which is operated by the Los Angeles County Sanitation Districts. The San Jose Creek Water Reclamation Plant has a design capacity of 100 million gallons per day and the wastewater generated by the Approved Project would be less than 0.01 percent of its capacity. As such, the Approved Project would not exceed current capacities of the wastewater treatment system and impacts related to wastewater treatment would be less than significant.

STORMWATER

The Indigo IS/MND concluded that implementation of the Approved Project would not generate increased stormwater runoff as the existing drainage patterns at the Original Project Site would not substantially change compared to existing conditions. The Approved Project would comply with the *LID Standards Manual* and incorporate measures to reduce the peak volume of stormwater runoff discharged into the City's storm drain system and ensure that stormwater is retained on site, to the extent feasible. As such, the Indigo IS/MND determined the Approved Project would not result in significant effects caused by the relocation or construction of new or

expanded stormwater infrastructure and impacts related to stormwater drainage facilities would be less than significant.

SOLID WASTE

The Indigo IS/MND concluded that solid waste generated by the Approved Project would be nominal and existing landfills in the Los Angeles region would have sufficient capacity to accommodate solid waste increase from the Approved Project.

Additionally, the Approved Project would adhere to the California Solid Waste Reuse and Recycling Access Act of 1991, which requires cities and counties to divert 50 percent of all solid waste by 2000 and aims to reduce 75 percent of all solid waste by 2020. The Approved Project would also adhere to AMC Article V, which incorporates this act by reference. Overall, the Indigo IS/MND determined impacts related to solid waste generation would be less than significant, and there would be no impact related to compliance with solid waste regulations.

DRY UTILITIES

The Indigo IS/MND states electricity to the Original Project Site is provided by SCE via four 66-kilovolt transmission lines located on the Original Project Site's southern perimeter. Natural gas is provided by Sempra Utilities via an underground high-pressure gas line that crosses the City along Duarte Road, from Holly Avenue to Mountain Avenue in Monrovia. Both the electrical and natural gas lines would be protected during construction of the Approved Project, and no off-site improvements for electricity or natural gas would be anticipated. In addition, the Approved Project would not require new or expanded telecommunication facilities. Therefore, the Indigo IS/MND determined that the Approved Project would not result in significant effects caused by the relocation or construction of new or expanded electric power, natural gas, and telecommunications facilities and impacts would be less than significant.

3.19.2 Project Analysis

WATER

The Tempo Project would construct a four-story hotel building that would increase the Revised Project's water usage compared to existing conditions. Similar to the Approved Project, the Tempo Project would connect to the existing water distribution infrastructure on-site and would not require water infrastructure improvements. The Tempo Project also would pay development impact fees and would comply with the water conservation measures outlined in AMC Article VII, Chapter 5, Part 5, Division 3 and 4 , including the following restrictions specific to hotel uses:

- No restaurant, hotel, cafe, cafeteria, bar or other public place where food or beverage is served or offered for sale, shall serve drinking water to any customer unless expressly requested by the customer.
- No hotel or motel shall launder towels and linens of an occupied guestroom on a daily basis, unless expressly requested by the guest. The hotel or motel shall prominently display a notice in each guestroom of the guest's option not to have towels and linens laundered daily.

As noted above, the Indigo IS/MND determined that the City would have sufficient water supply to serve the Approved Project based on the 2015 UWMP. Since the adoption of the Indigo IS/MND, the City has prepared the 2020 UWMP.[31] According to the 2020 UWMP, the City would have sufficient water supply to meet projected water demand, including during long-term droughts, through 2045. Since the Revised Project is consistent with the General Plan land use designation and the demographic projections in the General Plan were used to develop the 2020 UWMP, the Revised Project is also consistent with the 2020 UWMP.

Therefore, based on the above, the Revised Project would not result in significant effects caused by the relocation or construction of new or expanded water distribution infrastructure and the City has sufficient water supplies to serve the Revised Project. Impacts related to water infrastructure and supply would be less than significant, consistent with the determination in the Indigo IS/MND.

WASTEWATER

Implementation of the Tempo Project would result in an increase in the Revised Project's wastewater generation compared to existing conditions. However, similar to the Approved Project, the Tempo Project would connect to the existing sewer line in Colorado Place.. The Tempo Project would also pay development impact fees that would contribute to future sewer infrastructure improvements and would adhere to AMC Article VII, which regulates the City's sewer line design, sewer system fees and permits. In addition, similar to the Approved Project, the wastewater generated by the Revised Project would be treated at the San Jose Creek Water Reclamation Plant. As discussed above, the San Jose Creek Water Reclamation Plant has a design capacity of 100 million gallons per day and the wastewater generated by the Approved Project would be less than 0.01 percent of its capacity. The amount of wastewater generated by the Tempo Project would be less than the amount generated by the Approved Project due to the smaller size of the hotel development. Thus, the total amount of wastewater generated by the Revised Project would not be substantially greater than the Approved Project's wastewater generation. As such, and given the available capacity of the San Jose Creek Water Reclamation Plant, the Revised Project would not exceed the treatment capacity of the Reclamation Plant. The Revised Project's impacts related to wastewater infrastructure and treatment would be less than significant and consistent with determination in the Indigo IS/MND.

STORMWATER

Implementation of the Tempo Project would not substantially increase imperviousness, as the Area of Proposed Improvements is fully paved except for minor areas of landscaping. In addition, the Tempo Project includes LID features to capture and infiltrate stormwater. Thus, the Tempo Project would not measurably increase stormwater runoff that would be discharged to the City's stormwater drainage system. In addition, as discussed in **Section 4.10, Hydrology and Water Quality**, the Tempo Project would comply with the requirements of the CGP and AMC, Chapter 8 (Stormwater Management and Discharge Control) to control stormwater discharges. The Tempo Project would incorporate BMPs and LID features including two types of shallow stormwater infiltration systems which would manage stormwater runoff and treatment at the Revised Project Site (i.e., permeable paving and an infiltration trench gallery system). As such,

[31] City of Arcadia, Final Urban Water Management Plan, June 2021.

the Revised Project would not result in significant effects caused by the relocation or construction of new or expanded stormwater infrastructure and impacts related to stormwater drainage facilities would be less than significant, consistent with the determination in the Indigo IS/MND.

SOLID WASTE

Implementation of the Tempo Project would generate approximately 273 pounds of solid waste per day, based on the CalEEMod solid waste generation rates (**Attachment A, Air Quality Assessment**). As with the Approved Project, this amount of solid waste is anticipated to be accommodated by existing landfills within the County.

During construction, the Tempo Project would minimize construction waste by complying with the CALGreen Code, which requires new development projects to submit and implement a construction waste management plan in order to reduce the amount of construction waste transported to landfills. As with the Approved Project, the Tempo Project operations would be required to comply with the California Solid Waste Reuse and Recycling Access Act of 1991 and AMC Article V, which incorporates this act by reference. Therefore, Revised Project's impacts related to solid waste generation would be less than significant, and there would be no impact related to compliance with solid waste regulations, consistent with the determination in the Indigo IS/MND.

DRY UTILITIES

Similar to the Approved Project, SCE and Sempra Utilities would provide electricity and natural gas services to the Revised Project. The Revised Project would connect to existing electricity, natural gas infrastructure and no off-site improvements are anticipated. As with the Approved Project, the Revised Project also would not require new or expanded telecommunication facilities. Therefore, consistent with the determination in the Indigo IS/MND, the Revised Project would not result in significant effects caused by the relocation or construction of new or expanded electric power, natural gas, and telecommunications facilities and impacts would be less than significant.

3.19.3 Conclusion

Based on the above, no new significant impacts or substantially more severe impacts than those previously identified in the Indigo IS/MND would occur as a result of a substantial change proposed by the Revised Project, a substantial change in circumstances, or new information of substantial importance associated with the Revised Project. Likewise, there is no new information of substantial importance that shows that effective but previously infeasible mitigation measures are now feasible or that new or different mitigation measures would substantially reduce significant effects of the Revised Project. Therefore, and no new or different mitigation measures are required.

3.19.4 Mitigation Measures

APPLICABLE INDIGO IS/MND MITIGATION MEASURES

No Indigo IS/MND mitigation measures apply.

NEW MITIGATION MEASURES

No new or different mitigation measures are required.

3.20 Wildfire

ENVIRONMENTAL ISSUE	IMPACT CONCLUSION		ANY NEW SIGNIFICANT IMPACTS OR SUBSTANTIALLY MORE SEVERE IMPACTS RESULTING FROM:			FOR MITIGATION MEASURES (MM), NEW INFORMATION OF SUBSTANTIAL IMPORTANCE SHOWS THAT:	
	REVISED PROJECT	ADOPTED IS/MND	SUBSTANTIAL CHANGE IN THE PROJECT?	SUBSTANTIAL CHANGE IN CIRCUMSTANCE?	NEW INFORMATION OF SUBSTANTIAL IMPORTANCE?	EFFECTIVE BUT PREVIOUSLY INFEASIBLE MM ARE NOW FEASIBLE?	NEW OR DIFFERENT MM WOULD SUBSTANTIALLY REDUCE SIGNIFICANT EFFECT(S)?
If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:							
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?	LTS	LTS	No	No	No	No	No
b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of wildfire?	LTS	LTS	No	No	No	No	No
c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	LTS	LTS	No	No	No	No	No
d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	NI	NI	No	No	No	No	No

3.20.1 Indigo IS/MND Finding

As stated in the Indigo IS/MND, the City is not located within a VHFHSZ. The nearest wildland areas are located at the southern part of the San Gabriel Mountains, approximately 2.6 miles north of the Original Project Site. The Approved Project would be constructed in adherence to the requirements of the California Fire Code and would not include any development that would exacerbate fire risks. Construction and operation of the Approved Project would adhere to the City's *Natural Hazard Mitigation Plan and Arcadians Caring Together Improves Our Neighborhoods Plan* and would not impair existing evacuation roadways (identified as Colorado Place and I-210). Thus, implementation of the Approved Project would not substantially impair an adopted emergency response plan or emergency evacuation plan, exacerbate wildfire risk due to slope or wind, or require installation of infrastructure that may exacerbate fire risk, and impacts would be less than significant. In addition, the Original Project Site is located within a fully developed, urban area and is located on relatively flat terrain. As such, implementation of the Approved Project would not expose people or structures to downslope flooding, landslides, or runoff risks and there would be no impact.

3.20.2 Project Analysis

As stated in the Indigo IS/MND, the City does not contain any VHFHSZs. Therefore, the Revised Project Site is not located within or near a state responsibility area or lands classified as VHFHSZs. Similar to the Indigo IS/MND, the Revised Project would adhere to the requirements of the City's *Natural Hazard Mitigation Plan and Arcadians Caring Together Improves Our Neighborhoods Plan*. Implementation of the Revised Project would not impair existing evacuation roadways, and any internal circulation improvements would maintain emergency access. The Revised Project would also comply with the requirements of the California Building Code and Fire Code to ensure fire safety such as the installation of fire sprinkler systems. Further, the Revised Project Site is relatively flat and would not be located on a slope or area of landslide potential and as such, would not expose people or structures to significant related wildfire risks and no impacts would occur. Therefore, wildfire impacts for the Revised Project would be consistent with the determination of the Indigo IS/MND.

3.20.3 Conclusion

Based on the above, no new significant impacts or substantially more severe impacts than those previously identified in the Indigo IS/MND would occur as a result of a substantial change proposed by the Revised Project, a substantial change in circumstances, or new information of substantial importance associated with the Revised Project. Likewise, there is no new information of substantial importance that shows that effective but previously infeasible mitigation measures are now feasible or that new or different mitigation measures would substantially reduce significant effects of the Revised Project. Therefore, no new or different mitigation measures are required.

3.20.4 Mitigation Measures

APPLICABLE INDIGO IS/MND MITIGATION MEASURES

No Indigo IS/MND mitigation measures apply.

NEW MITIGATION MEASURES

No new or different mitigation measures are required.

CHAPTER 4:
ENVIRONMENTAL DETERMINATION

Based upon the evidence in light of the whole record documented in the attached environmental checklist explanation, cited incorporations and attachments, the City finds that the Revised Project:

☐ **Has previously been analyzed** as part of an earlier CEQA document adopted/certified pursuant to CEQA and the State CEQA Guidelines. The proposed project is a component of the whole action analyzed in the previously adopted/certified CEQA document.

☒ **Has previously been analyzed** as part of an earlier CEQA document adopted/certified pursuant to CEQA and the State CEQA Guidelines. Changes and additions to the earlier CEQA document are needed to make the previous documentation adequate to cover the project which are documented in this addendum (CEQA Guidelines Section 15164). None of the conditions described in CEQA Guidelines Section 15162 that would require the preparation of a subsequent or supplemental EIR or negative declaration have occurred.

☐ **Has previously been analyzed** as part of an earlier CEQA document adopted/certified pursuant to CEQA and the State CEQA Guidelines. However, there is important new information and/or substantial changes have occurred requiring the preparation of subsequent CEQA documentation (subsequent or supplemental EIR or negative declaration) pursuant to CEQA Guidelines Sections 15162 through 15163

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ATTACHMENT A: AIR QUALITY ASSESSMENT

Michael Baker INTERNATIONAL

We Make a Difference

MEMORANDUM

To: Lisa Flores, City of Arcadia

From: Zhe Chen, Michael Baker International

Date: July 22, 2024

Subject: Tempo by Hilton Project – Air Quality Assessment

PURPOSE AND BACKGROUND

The purpose of this technical memorandum is to evaluate potential short- and long-term air quality impacts that would result from the construction and operation of a proposed hotel building and associated improvements in support of the Tempo by Hilton Project Addendum to the *Initial Study/Mitigated Negative Declaration, Arcadia Hotel and Annex (Hotel Indigo) Project* (2020 IS/MND).

The City prepared the 2020 IS/MND for a redevelopment project located at 125 West Huntington Drive and 123 West Huntington Drive (Original Project Site). On February 5, 2013, the City previously approved the modification of an existing 60,811-square-foot, three-story office building (Parsons building) and the construction of two new medical office buildings, a new general office building, and a new parking structure on the Original Project Site. Of the four new buildings approved under the 2013 development project, only the parking structure and the two medical office buildings (now occupied by the Keck Medicine of University of Southern California [USC]) were constructed. The 2020 IS/MND analyzed (1) the redevelopment of the existing Parsons building on the Original Project Site to allow for 76,754 square feet of hotel and appurtenant uses, including 90 hotel rooms, amenities, and employee or guest shared spaces, and (2) the construction a new 61,538-square-foot, five-story hotel annex building containing 75 hotel rooms and additional amenities such as a hotel spa, café, and outdoor patios to the east of the Parson's building. No changes to the two existing Keck Medicine of USC medical office buildings and parking structure were proposed under the Approved Project. The 2020 IS/MND was adopted by the City of Arcadia Planning Commission on April 14, 2020 (Resolution No. 2050).

The Tempo by Hiton Project Addendum (Tempo Addendum) analyzes the environmental effects of the Revised Project, which is comprised of the Approved Project described above, and the Tempo Project, which includes a lot line adjustment (LLA) to merge the parcel identified as Assessor's Parcel Number (APN) 2775-015-011 with the Original Project Site (APNs 5775-015-024, 5775-015-027, 5775-015-028, and 5775-015-029) in order to create one legal parcel (Revised Project Site) and to construct a new four-story hotel building on APN 2775-015-011. The Tempo Project would not modify any of the existing medical office buildings, parking structure or the hotel buildings previously approved under the Approved Project. A detailed description of the Tempo Project is provided below. This memorandum analyzes the combined impact of the Tempo Project and the Approved Project analyzed in the 2020 IS/MND.

PROJECT LOCATION

The City of Arcadia is located in northeast Los Angeles County, generally north of the Interstate 10 Freeway (I-10), south of the Foothill Freeway (I-210), east of State Route 164, and west of I-605. The City is approximately 12 miles northeast of downtown Los Angeles; refer to Exhibit 1, *Regional Vicinity*.

The Revised Project is located within the northeastern portion of Arcadia and is comprised of the Original Project Site (APNs 5775-015-024, 5775-015-027, 5775-015-028, and 5775-015-029) and one land parcel addressed as 181 Colorado Place (APN 5775-015-011) that is approximately 0.61 acre, or 26,493 square feet;[1] refer to Exhibit 2, *Revised Project Site*. Regional access to the Revised Project Site is provided via I-210. Local access to the Revised Project Site is provided via Colorado Place, San Juan Drive, and San Rafael Road.

EXISTING SITE CONDITIONS

The Revised Project Site, which includes the Original Project Site and APN 5775-015-011, is located in a highly developed and urbanized area of Arcadia. The Original Project Site is occupied by the two Keck Medicine of USC medical office buildings, a parking structure, and the Parsons building. The redevelopment of the Parsons building for hotel uses and the construction of the hotel annex building are currently underway. APN 5775-015-011 is vacant lot currently fenced that was previously occupied by the Original Peppers Mexican and Cantina, surface parking, and landscaping. The restaurant building was demolished in 2023 but the surface parking and landscaping remain.

According to the Arcadia General Plan, Chapter 2: Land Use and Community Design Element, the Revised Project Site is designated as Commercial WHICH. This Commercial designation is intended to encourage a strong pedestrian-oriented environment that provides a variety of retail and service uses, restaurants, and neighborhood-serving commercial uses that complement development in the Downtown Mixed-Use areas.[2] According to the City's Zoning Map, the Revised Project Site is zoned General Commercial (C-G) with a Downtown Overlay.[3] The C-G zone is intended to provide areas for the development of retail and service uses, offices, restaurants, public uses, and similar and compatible uses. The maximum Floor Area Ratio (FAR) permitted under the C-G zone and the Downtown Overlay zone is 1.0 for new development, and the maximum height permitted for new buildings is 48 feet.

Surrounding uses adjacent to the Revised Project Site include residential, office, and commercial uses. The Revised Project Site is bordered by San Juan Drive, the California Thoroughbred Breeders Association, and single-family homes to the north; San Rafael Road and a small commercial plaza to the east; single-family homes to the east and northeast; Colorado Place, Huntington Drive and Le Meriden hotel to the south; and Colorado Place and the Santa Anita Park (a horseracing track) to the west.

Parsons building for hotel uses and the construction of a new hotel annex building. The Tempo Project

[1] Los Angeles County Assessor, Property Search Tool: APN 5775-015-011, https://assessor.lacounty.gov/homeowners/property-search, accessed June 19, 2024.

[2] City of Arcadia, *Arcadia General Plan, Chapter 2: Land Use and Community Design Element*, February 2024.

[3] City of Arcadia, *City of Arcadia Zoning Map*, Updated February 6, 2024.

Michael Baker INTERNATIONAL

NOT TO SCALE

06/2024 • JN 201253

TEMPO BY HILTON

Regional Vicinity Map

Exhibit 1

Source: Google Earth Pro, July 2024

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TEMPO BY HILTON

Revised Project Site

Exhibit 2

PROJECT DESCRIPTION

The Revised Project would consist of the improvements proposed by the Tempo Project, along with the previously Approved Project described in the 2020 IS/MND, which includes the redevelopment of the would develop a four-story hotel building with approximately 47,140 square feet of gross floor area on APN 5775-015-011; refer to Exhibit 3, *Conceptual Site Plan*.

The new hotel building would have a maximum height of 48 feet, excluding rooftop appurtenances, and would consist of a basement level and four above-ground levels containing a total of 91 rooms and ancillary hotel uses. The basement level would primarily contain back-of-house uses for hotel operations, including an electric room, a mechanical room, a laundry room, offices, storage rooms, an employee breakroom, restrooms, and a fitness room for guest use. Level 1 would contain 13 hotel rooms, a kitchen, café, bar, lobby, meeting area, office, restrooms, and an outdoor patio. Levels 2, 3, and 4 would each contain 26 hotel rooms and the roof level would contain an outdoor paved patio, solar panels, and mechanical areas.

The Tempo Project would utilize the existing parking structure located on the Original Project Site to provide parking for hotel employees, guests, and visitors. As shown in Exhibit 3, the Tempo Project would also reconfigure the existing surface parking lot located to the east of the proposed hotel building on the Original Project Site to provide 18 surface parking spaces, including three electric vehicle charging spaces, a trash enclosure, and a connection to the new surface parking area along the south side of the proposed hotel building. The new surface parking area would provide 6 parking spaces, including 4 accessible parking spaces. In addition, the Tempo Project would develop a drop-off area with access via the existing driveway from Colorado Place. Access to the proposed hotel building would be provided from the two existing driveways along Colorado Place and San Juan Drive.

Landscaping improvements to the Revised Project Site would include the removal of 13 existing trees and the installation of 36 new trees as well as other drought tolerant plants within the Area of Proposed Improvements shown in Exhibit 2. Ancillary improvements to the Revised Project Site would include exterior lighting and accessible routes from the proposed hotel building to the new surface parking area, the existing the surface parking lot to the east, and the existing parking structure.

In order to comply with the maximum FAR of 1.0 for the C-G zone and Downtown Overlay, the Tempo Project would create one legal parcel with a total site area of 226,579 square feet by merging APN 5775-015-011 with the Original Project Site (APNs 5775-015-024, 5775-015-027, 5775-015-028, and 5775-015-029), which has a gross floor area of approximately 177,879 square feet. With the addition of the Tempo Project, the total gross floor area for the Revised Project Site would be approximately 225,019 square feet. This would result in a total site FAR of 0.99 for the Revised Project.

The Tempo Project would require discretionary approvals from the City for an LLA to merge APN 5775-015-011 with the Original Project Site and a Conditional Use Permit to develop the proposed hotel building in a C-G zone.

Source: DesignCell Architecture, June 2024

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TEMPO BY HILTON

Conceptual Site Plan

Exhibit 3

CRITERIA AIR POLLUTANTS

Air quality is a general description of how levels of air pollution and other atmospheric conditions can affect public health and the environment. Under the Federal Clean Air Act (FCAA), the U.S. Environmental Protection Agency (USEPA) has identified six air pollutants that are environmentally prevalent and produced by human activities that are of concern with respect to health, the environment, and welfare of the public. These specific pollutants, known as criteria air pollutants, are pollutants for which the federal and state governments have established ambient air quality standards—or criteria—for outdoor concentrations to protect public health. These pollutants are common byproducts of human activities and have been documented through scientific research to cause various adverse health effect outcomes. The federal ambient concentration criteria are known as the National Ambient Air Quality Standards (NAAQS), and the California ambient concentration criteria are referred to as the California Ambient Air Quality Standards (CAAQS). The criteria air pollutants regulated at the federal level include carbon monoxide (CO), ground-level ozone (O_3), nitrogen dioxide (NO_2), respirable particulate matter ten microns or less in diameter (PM_{10}), fine particulate matter 2.5 microns or less in diameter ($PM_{2.5}$), sulfur dioxide (SO_2), and lead (Pb).

Carbon Monoxide (CO)

Carbon monoxide is a colorless, odorless gas primarily emitted from combustion processes and motor vehicles due to incomplete combustion of carbon-containing fuels, such as gasoline or wood. CO is a localized pollutant that is found in high concentrations only near its source; therefore, elevated concentrations are usually only found near areas of high traffic volumes. Other sources of CO include the incomplete combustion of petroleum fuels at power plants and fuel combustion from wood stoves and fireplaces during the winter. CO causes several health problems, including the aggravation of some heart diseases, reduced tolerance for exercise, impaired mental function, and impaired fetal development. At high levels of exposure, CO reduces the amount of oxygen in the blood, which may be fatal.

Ozone (O_3)

Ozone is a gas that is formed when volatile organic compounds (VOCs) and nitrogen oxides (NO_X), both byproducts of internal combustion engine exhaust, undergo slow photochemical reactions in the presence of sunlight. As a highly reactive molecule, O_3 readily combines with many different components of the atmosphere. Consequently, high O_3 levels tend to occur only while high VOC and NO_X levels are present to sustain the formation process, and O_3 levels rapidly decline once the precursors have been depleted. O_3 is considered a regional pollutant because its reactions occur on a regional rather than local scale. In addition, because O_3 requires sunlight to form, significant concentrations occur between the months of April and October. O_3 is a pungent, colorless, toxic gas with direct health effects on humans, including changes in breathing patterns, reduction of breathing capacity, increased susceptibility to infections, inflammation of lung tissue, and some immunological changes. Groups most sensitive to O_3 include children, the elderly, people with respiratory disorders, and people who exercise strenuously outdoors.

Nitrogen Dioxide (NO_2)

Nitrogen dioxide is a nitrogen oxide compound produced by the combustion of fossil fuels, such as in both gasoline and diesel-powered internal combustion engines, and from point sources, such as power plants. NO_2 absorbs blue light, gives a reddish-brown cast to the atmosphere, and reduces visibility. The principal form of NO_X produced by combustion is nitric oxide, which reacts rapidly to form NO_2, creating the mixture

of nitric oxide and NO_2. NO_2 is an acute irritant that can aggravate respiratory illnesses and symptoms. NO_2 may have negative impacts on those with existing illnesses, such as chronic pulmonary fibrosis and an increase in bronchitis in young children.

Particulate Matter (PM_{10} and $PM_{2.5}$)

Particulate matter pollution consists of very small liquid and solid particles floating in the air (e.g., soot, dust, aerosols, fumes, and mists) that can form when gases emitted from industries and motor vehicles undergo chemical reactions in the atmosphere. PM_{10} and $PM_{2.5}$ consist of extremely small, suspended particles or droplets 10 microns and 2.5 microns or smaller in diameter, respectively. Man-made sources of PM_{10} are agricultural operations, industrial processes, combustion of fossil fuels, construction, demolition operations, and entrainment of road dust into the atmosphere. Natural sources of PM_{10} include windblown dust, wildfire smoke, and sea spray salt. Elevated levels of PM_{10} can cause respiratory irritation, reduced lung function, aggravation of cardiovascular disease, and cancer in individuals. $PM_{2.5}$ is generally associated with combustion processes, as well as formation in the atmosphere as a secondary pollutant through chemical reactions. $PM_{2.5}$ is more likely to penetrate deeply into the lungs and poses a health threat to all groups but particularly to the elderly, children, and those with respiratory problems. Elevated levels of $PM_{2.5}$ can cause respiratory stress, decreased lung function, and increased risk of long-term disease, such as chronic bronchitis, asthma, and lung cancer.

Sulfur Dioxide (SO_2)

Sulfur oxides (SO_X) are compounds of sulfur and oxygen molecules. SO_2 is classified in a group of highly reactive gases known as "oxides of sulfur." The largest sources of SO_2 emissions are from fossil fuel combustion at power plants and other industrial facilities. Other sources of SO_2 emissions include industrial processes, such as extracting metal from ore, and the burning of fuels with a high sulfur content by locomotives, large ships, and off-road equipment. SO_2 is linked to several adverse effects on the respiratory system, including aggravation of respiratory diseases, such as asthma and emphysema, and reduced lung function.

Volatile Organic Compounds (VOC)

Volatile Organic Compounds are hydrocarbon compounds (any compound containing various combinations of hydrogen and carbon atoms) that exist in the ambient air. VOCs contribute to the formation of smog through atmospheric photochemical reactions and/or may be toxic. Compounds of carbon (also known as organic compounds) have different levels of reactivity; that is, they do not react at the same speed or do not form O_3 to the same extent when exposed to photochemical processes. VOCs often have an odor, and some examples include gasoline, alcohol, and the solvents used in paints. Exceptions to the VOC designation include carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, and ammonium carbonate. The terms VOC and reactive organic gases (ROG) (see below) are often used interchangeably.

Reactive Organic Gases (ROG)

Similar to VOCs, Reactive Organic Gases (ROGs) are also precursors in forming O_3 and consist of compounds containing methane, ethane, propane, butane, and longer chain hydrocarbons, which are typically the result of some type of combustion/decomposition process. Smog is formed when ROG and nitrogen oxides react in the presence of sunlight. The terms ROG and VOC are often used interchangeably.

Lead (Pb)

Lead is a metal found naturally in the environment, as well as in manufactured products. Historically, the major sources of Pb emissions have been mobile and industrial sources. Since the 1970s, the USEPA has set national regulations to gradually reduce the Pb content in gasoline. As a result of phasing out leaded gasoline, metal processing is the current primary source of Pb emissions. The highest level of Pb in the air is generally found near Pb smelters. Other stationary sources include waste incinerators, utilities, and lead-acid battery manufacturers. The health impacts of Pb include behavioral and hearing disabilities in children and nervous system impairment.

Toxic Air Contaminants (TACs)

Toxic air contaminants are air pollutants that may cause or contribute to an increase in deaths or serious illness, or that may pose a present or potential hazard to human health. TACs are different than criteria pollutants because ambient air quality standards have not been established for TACs. One of the main sources of TACs in California is diesel engine exhaust that contains solid material known as diesel particulate matter (DPM). TACs include both organic and inorganic chemical substances that may be emitted from a variety of common sources, including gasoline stations, motor vehicles, dry cleaners, industrial operations, painting operations, and research and teaching facilities. Exposure to TACs may result in long-term health effects, such as cancer, birth defects, neurological damage, asthma, or genetic damage; or short-term acute effects, such as eye watering, respiratory irritation, runny nose, throat pain, and headaches. TACs are considered either carcinogenic or non-carcinogenic based on the nature of the health effects associated with exposure. For carcinogenic TACs, potential health impacts are evaluated in terms of overall relative risk expressed as excess cancer cases per one million exposed individuals. Non-carcinogenic TACs differ in that there is generally assumed to be a safe level of exposure below which no negative health impact is believed to occur. TAC impacts are described by carcinogenic risk and by chronic (i.e., long duration) and acute (i.e., severe but of short duration) adverse effects on human health.

ENVIRONMENTAL SETTING

Regional Topography

The California Air Resources Board (CARB) divides the State into 15 air basins that share similar meteorological and topographical features. The Revised Project Site lies within the South Coast Air Basin (Basin). The Basin is a 6,600 square mile area bounded by the Pacific Ocean to the west and the San Gabriel, San Bernardino, and San Jacinto Mountains to the north and east. The Basin includes all of Orange County and the non-desert portions of Los Angeles, Riverside, and San Bernardino Counties, in addition to the San Gorgonio Pass area in Riverside County. The Basin's terrain and geographical location (i.e., a coastal plain with connecting broad valleys and low hills) determine its distinctive climate.

The extent and severity of the air pollution problem in the Basin is a function of the area's natural physical characteristics (weather and topography), as well as man-made influences (development patterns and lifestyle). Factors such as wind, sunlight, temperature, humidity, rainfall, and topography all affect the accumulation and/or dispersion of pollutants throughout the Basin.

Climate

The general region lies in the semi-permanent high-pressure zone of the eastern Pacific Ocean. As a result, the climate is mild, tempered by cool sea breezes. The climate consists of a semi-arid environment with mild winters, warm summers, moderate temperatures, and comfortable humidity. The typical mild climatological pattern is interrupted infrequently by periods of extremely hot weather, winter storms, or Santa Ana winds. Precipitation is limited to a few winter storms.

The average annual temperature varies little throughout the Basin, averaging 75 degrees Fahrenheit (°F). However, with a less pronounced oceanic influence, the eastern inland portions of the Basin show greater variability in annual minimum and maximum temperatures. All portions of the Basin have had recorded temperatures over 100°F in recent years.

Although the Basin has a semi-arid climate, the air near the surface is moist due to the presence of a shallow marine layer. Except for infrequent periods when dry, continental air is brought into the Basin by offshore winds, the ocean effect is dominant. Periods with heavy fog are frequent, and low stratus clouds, occasionally referred to as "high fog," are a characteristic climate feature. Annual average relative humidity is 70 percent at the coast and 57 percent in the eastern part of the Basin. Precipitation in the Basin is typically nine to 14 inches annually and is rarely in the form of snow or hail due to typically warm weather. The frequency and amount of rainfall is greater in the coastal areas of the Basin.

The height of the inversion is important in determining pollutant concentration. When the inversion is approximately 2,500 feet above sea level, the sea breezes carry the pollutants inland to escape over the mountain slopes or through the passes. At a height of 1,200 feet, the terrain prevents the pollutants from entering the upper atmosphere, resulting in a settlement in the foothill communities. Below 1,200 feet, the inversion puts a tight lid on pollutants, concentrating them in a shallow layer over the entire coastal basin. Usually, inversions are lower before sunrise than during the day. Mixing heights for inversions are lower in the summer and more persistent, being partly responsible for the high levels of O_3 observed during summer months in the Basin. Smog in southern California is generally the result of these temperature inversions combining with coastal day winds and local mountains to contain the pollutants for long periods of time, allowing them to form secondary pollutants by reacting with sunlight. The Basin has a limited ability to disperse these pollutants due to typically low wind speeds.

The area in which the Revised Project Site is located offers clear skies and sunshine yet is still susceptible to air inversions. These inversions trap a layer of stagnant air near the ground, where it is then further loaded with pollutants. These inversions cause haziness, which is caused by moisture, suspended dust, and a variety of chemical aerosols emitted by trucks, automobiles, furnaces, and other sources.

The Revised Project Site is in the City of Arcadia which experiences a mild Southern California coastal climate with average high temperatures between 67°F and 89°F, and average low temperatures between 46°F to 67°F. The area also experiences an average of up to 3.1 inches of precipitation per month, with the most precipitation occurring in the month of February.[4]

[4] Weather Spark, *Climate and Average Weather Year Round in Arcadia, California, United States*, https://weatherspark.com/y/1680/Average-Weather-in-Arcadia-California-United-States-Year-Round, accessed on May 17, 2024.

Local Ambient Air Quality

CARB monitors ambient air quality at approximately 250 air monitoring stations across the State. Air quality monitoring stations usually measure pollutant concentrations ten feet above ground level; therefore, air quality is often referred to in terms of ground-level concentrations. The Revised Project Site is located within Source Receptor Area (SRA) 9, *East San Gabriel Valley*. The monitoring station representative of SRA 9 is the Pasadena-S Wilson Avenue station, located at 752 South Wilson Avenue, Pasadena, approximately 5.2 miles to the west of the Revised Project Site. This monitoring station measures O_3, CO, NO_2, and $PM_{2.5}$. The closest monitoring station that measures PM_{10} is the Azusa station, located at 803 North Loren Avenue, Azusa, approximately 6.6 miles to the east of the Revised Project Site. SO_2 and Pb are not monitored at these stations, and, since the area is designated unclassified/attainment for these pollutants, air quality data for these pollutants are not included in Table 1, *Ambient Air Quality at the Pasadena-S Wilson Avenue and Azusa Monitoring Stations by Year*, which reports ambient air quality measurements and indicates the number of days that each standard has been exceeded at the Pasadena-S Wilson Avenue and Azusa stations.

Sensitive Receptors

Sensitive receptors are defined as facilities or land uses that include members of the population that are particularly sensitive to the effects of air pollutants, such as children, the elderly, and people with illnesses. Examples of these sensitive receptors are residences, schools, hospitals, and daycare centers. CARB has identified the following groups of individuals as the most likely to be affected by air pollution: the elderly over 65, children under 14, athletes, and persons with cardiovascular and chronic respiratory diseases such as asthma, emphysema, and bronchitis.

The nearest sensitive receptor to the Revised Project Site is a single-family residence located adjacent to the east of the Area of Proposed Improvements shown in Exhibit 2.

REGULATORY SETTING

Federal

Federal Clean Air Act

The FCAA of 1970 and the FCAA Amendments of 1971 required the USEPA to establish NAAQS, which required the USEPA to adopt more stringent air quality standards or to include standards for other specific pollutants. The FCAA was amended in 1990 to address a large number of air pollutants that are known to cause or may reasonably be anticipated to cause adverse effects to human health or adverse environmental effects. A total of 188 specific pollutants and chemical groups were initially identified as hazardous air pollutants, and the list has been modified over time. The FCAA Amendments included new regulatory programs to control acid deposition and regulate the issuance of stationary source operating permits. These standards identify levels of air quality for "criteria" pollutants that are considered the maximum levels of ambient (background) air pollutants considered safe, with an adequate margin of safety, to protect the public health and welfare; refer to Table 2, *National and California Ambient Air Quality Standards*.

Table 1
Ambient Air Quality at the Pasadena-S Wilson Avenue and Azusa Monitoring Stations by Year

Pollutant	Primary Standard		Year	Maximum Concentration[1]	Number of Days State/Federal Std. Exceeded
	California	Federal			
Ozone (O_3)[2] (1-hour)	0.09 ppm for 1 hour	NA[6]	2020 2021 2022	0.163 ppm 0.104 ppm 0.143 ppm	41/9 12/0 12/1
Ozone (O_3)[2] (8-hour)	0.070 ppm for 8 hours	0.070 ppm for 8 hours	2020 2021 2022	0.116 ppm 0.087 ppm 0.103 ppm	61/60 32/25 23/22
Carbon Monoxide (CO)[2,4] (1-hour)	20 ppm for 1 hour	35 ppm for 1 hour	2020 2021 2022	1.338 ppm 1.917 ppm 1.562 ppm	0/0 0/0 0/0
Nitrogen Dioxide (NO_2)[2]	0.18 ppm for 1 hour	0.100 ppm for 1 hour	2020 2021 2022	0.061 ppm 0.077 ppm 0.066 ppm	0/0 0/0 0/0
Fine Particulate Matter ($PM_{2.5}$)[2, 4]	No Separate Standard	35 µg/m^3 for 24 hours	2020 2021 2022	67.7 µg/m^3 63.6 µg/m^3 22.1 µg/m^3	NA/2 NA/2 NA/0
Coarse Particulate Matter (PM_{10})[3, 4, 5]	50 µg/m^3 for 24 hours	150 µg/m^3 for 24 hours[7]	2020 2021 2022	152.3 µg/m^3 79.4 µg/m^3 98.2 µg/m^3	9/0 11/0 7/0

ppm = parts per million
µg/m^3 = micrograms per cubic meter
NA = Not Applicable
PM_{10} = particulate matter 10 microns in diameter or less
$PM_{2.5}$ = particulate matter 2.5 microns in diameter or less

Notes:
1. Maximum concentration is measured over the same period as the California Standards.
2. Data collected from the Pasadena-S Wilson Avenue Monitoring Station located at 752 South Wilson Avenue, Pasadena, CA 91106.
3. Data collected from the Azusa Monitoring Station located at 803 N Loren Ave, Azusa, CA 91702.
4. PM_{10} and $PM_{2.5}$ exceedances are derived from the number of samples exceeded, not days.
5. PM_{10} exceedances are based on state thresholds established prior to amendments adopted on June 20, 2002.
6. The federal standard for 1-hour ozone was revoked in June 2005. However, number of days the old federal standard exceeded are shown in the table.
7. The federal standard for average PM_{10} was revoked in December 2006.

Sources:
California Air Resources Board, *ADAM Air Quality Data Statistics*, http://www.arb.ca.gov/adam/, accessed May 17, 2024.
California Air Resources Board, *AQMIS2: Air Quality Data*, https://www.arb.ca.gov/aqmis2/aqdselect.php, accessed May 17, 2024.

State

State Implementation Plan

The FCAA Amendments require that states submit and implement a State Implementation Plan (SIP) for areas not meeting air quality standards. In California, the SIP is a collection of documents that set forth the State's strategies for achieving the NAAQS and CAAQS—a compilation of new and previously submitted plans, programs (such as monitoring, modeling, and permitting), district rules, state regulations, and federal controls. CARB is the lead agency for all purposes related to the SIP under state law. Local air districts are responsible for preparing and implementing air quality attainment plans for pollutants for which the local air district is in non-compliance, and the plans are incorporated into the SIP.

California Clean Air Act (CCAA) and the California Air Resources Board

Clean Air Act permitting in California is the shared responsibility of the CARB, its 35 air pollution control agencies (districts), and USEPA Region 9. Generally, CARB plays an oversight role for permitting and does not issue any pre-construction or operating permits. However, the state agency provides significant support to agencies that need permitting assistance.

CARB administers the air quality policy in California. The CAAQS were established in 1969 pursuant to the Mulford-Carrell Act. These standards, shown with the NAAQS in Table 2, are generally more stringent and apply to more pollutants than the NAAQS. In addition to the criteria pollutants, CAAQS have been established for visibility reducing particulates, hydrogen sulfide, and sulfates. The CCAA, which was approved in 1988, requires that each local air district prepare and maintain an Air Quality Management Plan (AQMP) to achieve compliance with the CAAQS. These AQMPs also serve as the basis for the preparation of the SIP for the State of California.

Like the USEPA, CARB also designates areas within California as either attainment or non-attainment for each criteria pollutant based on whether the CAAQS have been achieved. Under the CCAA, areas are designated as non-attainment for a pollutant if air quality data show that a state standard for the pollutant was violated at least once during the previous three calendar years. Exceedances that are affected by highly irregular or infrequent events are not considered violations of a state standard and are not used as a basis for designating areas as non-attainment.

Regional

South Coast Air Quality Management District

The SCAQMD is one of California's 35 air quality management districts that have prepared AQMPs to accomplish a five-percent annual reduction in air emissions. The SCAQMD is primarily responsible for planning, implementing, and enforcing air quality standards for the Basin, which is a subregion within the western portion of the SCAQMD. The SCAQMD also regulates portions of the Salton Sea Air Basin and Mojave Desert Air Basin within Riverside County. The Basin is designated nonattainment for O_3 8-hour NAAQS and $PM_{2.5}$ and Pb NAAQS. The Basin is also designated non-attainment for the O_3, PM_{10}, and $PM_{2.5}$ CAAQS. The Basin is designated unclassifiable or in attainment for all other federal and state standards.

Table 2
National and California Ambient Air Quality Standards

Pollutant	Averaging Time	California[1]		Federal[2]	
		Standard[3]	Attainment Status	Standards[3,4]	Attainment Status
Ozone (O_3)	1 Hour	0.09 ppm (180 μg/m³)	**Nonattainment**	N/A	N/A[5]
	8 Hours	0.070 ppm (137 μg/m³)	**Nonattainment**	0.070 ppm (137 μg/m³)	**Nonattainment**
Particulate Matter (PM_{10})	24 Hours	50 μg/m³	**Nonattainment**	150 μg/m³	Attainment/Maintenance
	Annual Arithmetic Mean	20 μg/m³	**Nonattainment**	N/A	N/A
Fine Particulate Matter ($PM_{2.5}$)	24 Hours	No Separate State Standard		35 μg/m³	**Nonattainment**
	Annual Arithmetic Mean	12 μg/m³	**Nonattainment**	12.0 μg/m³	**Nonattainment**
Carbon Monoxide (CO)	8 Hours	9.0 ppm (10 mg/m³)	Attainment	9 ppm (10 mg/m³)	Attainment/Maintenance
	1 Hour	20 ppm (23 mg/m³)	Attainment	35 ppm (40 mg/m³)	Attainment/Maintenance
Nitrogen Dioxide (NO_2)[5]	Annual Arithmetic Mean	0.030 ppm (57 μg/m³)	N/A	53 ppb (100 μg/m³)	Attainment/Maintenance
	1 Hour	0.18 ppm (339 μg/m³)	Attainment	100 ppb (188 μg/m³)	Attainment/Maintenance
Lead (Pb)[7,8]	30 days Average	1.5 μg/m³	Attainment	N/A	N/A
	Calendar Quarter	N/A	N/A	1.5 μg/m³	**Nonattainment**
	Rolling 3-Month Average	N/A	N/A	0.15 μg/m³	**Nonattainment**
Sulfur Dioxide (SO_2)[6]	24 Hours	0.04 ppm (105 μg/m³)	Attainment	0.14 ppm (for certain areas)	Unclassified/Attainment
	3 Hours	N/A	N/A	N/A	N/A
	1 Hour	0.25 ppm (655 μg/m³)	Attainment	75 ppb (196 μg/m³)	N/A
	Annual Arithmetic Mean	N/A	N/A	0.30 ppm (for certain areas)	Unclassified/Attainment
Visibility-Reducing Particles[9]	8 Hours (10 a.m. to 6 p.m., PST)	Extinction coefficient = 0.23 km@<70% RH	Unclassified	**No Federal Standards**	
Sulfates	24 Hour	25 μg/m³	Attainment		
Hydrogen Sulfide	1 Hour	0.03 ppm (42 μg/m³)	Unclassified		
Vinyl Chloride[7]	24 Hour	0.01 ppm (26 μg/m³)	N/A		

Notes: μg/m³ = micrograms per cubic meter; ppm = parts per million; ppb = parts per billion; km = kilometer(s); RH = relative humidity; PST = Pacific Standard Time; N/A = Not Applicable

1. California standards for ozone, carbon monoxide (except 8-hour Lake Tahoe), sulfur dioxide (1- and 24-hour), nitrogen dioxide, and particulate matter (PM_{10}, $PM_{2.5}$, and visibility reducing particles), are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.
2. National standards (other than ozone, particulate matter, and those based on annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over three years, is equal to or less than the standard. For PM_{10}, the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 μg/m³ is equal to or less than one. For $PM_{2.5}$, the 24-hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard.
3. Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25°C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.
4. National Primary Standards: The levels of air quality necessary, with an adequate margin of safety, to protect the public health.
5. To attain the 1-hour national standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 ppb. Note that the national 1-hour standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the national 1-hour standard to the California standards the units can be converted from ppb to ppm. In this case, the national standard of 100 ppb is identical to 0.100 ppm.
6. On June 2, 2010, a new 1-hour SO_2 standard was established, and the existing 24-hour and annual primary standards were revoked. To attain the 1-hour national standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971 SO_2 national standards (24-hour and annual) remain in effect until one year after an area is designated for the 2010 standard, except that in areas designated nonattainment for the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved. Note that the 1-hour national standard is in units of ppb. California standards are in units of parts per million (ppm). To directly compare the 1-hour national standard to the California standard the units can be converted to ppm. In this case, the national standard of 75 ppb is identical to 0.075 ppm.
7. CARB has identified lead and vinyl chloride as 'toxic air contaminants' with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.
8. The national standard for lead was revised on October 15, 2008, to a rolling 3-month average. The 1978 lead standard (1.5 μg/m³ as a quarterly average) remains in effect until one year after an area is designated for the 2008 standard, except that in areas designated nonattainment for the 1978 standard, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standard are approved.
9. In 1989, CARB converted both the general statewide 10-mile visibility standard and the Lake Tahoe 30-mile visibility standard to instrumental equivalents, which are "extinction of 0.23 per kilometer" and "extinction of 0.07 per kilometer" for the statewide and Lake Tahoe Air Basin standards, respectively.

Source: California Air Resources Board, *Ambient Air Quality Standards Chart,* http://www.arb.ca.gov/research/aaqs/aaqs2.pdf, May 4, 2016.

Air Quality Management Plan

The SCAQMD is required to monitor air pollutant levels to ensure that state and federal air quality standards are met and, if they are not met, to develop strategies to meet the standards. Under state law, the SCAQMD is required to prepare an AQMP for pollutants for which its jurisdiction is in noncompliance.

To meet the NAAQS and CAAQS, the SCAQMD has adopted a series of AQMPs that serve as a regional blueprint to develop and implement an emissions reduction strategy that will bring the Basin into attainment with the standards in a timely manner. The most significant air quality challenge in the Basin is to reduce NO_X emissions to meet the ozone standard deadline for the non-Coachella Valley portion of the Basin, as NO_X plays a critical role in the creation of O_3. The *2022 Air Quality Management Plan* (2022 AQMP), adopted by the SCAQMD's Governing Board on December 2, 2022, includes strategies to ensure the SCAQMD does its part to further its ability to reduce NO_X emissions as expeditiously as practicable, but no later than the statutory attainment deadline of August 3, 2038, for the Basin and August 3, 2033, for the Riverside County portion of the Salton Sea Air Basin to meet the 2015 federal O_3 standards.[5] The 2022 AQMP builds on the measures already in place from the previous AQMPs and includes a variety of additional strategies, such as regulation, accelerated deployment of available cleaner technology, best management practices, co-benefits from existing programs, incentives, and other CCAA measures to meet the 8-hour O_3 standard. Since NO_X emissions also lead to the formation of $PM_{2.5}$, the NO_X reductions needed to meet the O_3 standards will likewise lead to improvement of $PM_{2.5}$ levels and attainment of annual $PM_{2.5}$ standards.[6]

The SCAQMD's strategy to meet the NAAQS and CAAQS distributes the responsibility for emissions reductions across federal, state, and local levels and industries. Most of these emissions are from heavy-duty trucks, ships, and other state and federally regulated mobile source emissions, the majority of which are beyond SCAQMD's control. The SCAQMD has limited control over truck emissions with rules, such as Rule 1196. The 2022 AQMP is composed of stationary and mobile source emissions reductions, including traditional regulatory control measures, incentive-based programs, co-benefits from climate programs, mobile source strategies, and reductions from federal sources (e.g., aircraft, locomotives, and ocean-going vessels). These strategies are to be implemented in partnership with CARB and USEPA. The SCAQMD will not meet the standard without significant federal action. In addition to federal action, the 2022 AQMP relies on substantial future development of advanced technologies to meet the standards, including the transition to zero- and low-emission technologies. Of the needed NO_X emissions reductions, 46 percent will come from federal actions, 34 percent from CARB actions, and 20 percent will come directly from SCAQMD actions.[7]

The 2022 AQMP also incorporates the transportation strategy and transportation control measures from Southern California Association of Governments' (SCAG) *2020-2045 Regional Transportation Plan/Sustainable Communities Strategy* (2020-2045 RTP/SCS). A more detailed discussion of the 2020-2045 RTP/SCS is included below.

CEQA Air Quality Handbook

The SCAQMD published the *CEQA Air Quality Handbook*, which was approved by the SCAQMD Governing Board, in 1993. The *CEQA Air Quality Handbook* guides local government agencies and consultants in

5 South Coast Air Quality Management District, *2022 Air Quality Management Plan*, adopted December 2, 2022.
6 Ibid.
7 Ibid.

preparing air quality assessments for environmental documents required by CEQA. With the help of the *CEQA Air Quality Handbook*, local land use planners and other consultants can analyze and document how proposed and existing projects affect air quality and fulfill the requirements of the CEQA review process. The SCAQMD is in the process of developing an *Air Quality Analysis Guidance Handbook* to replace the current *CEQA Air Quality Handbook*.

Rules and Regulations

The SCAQMD has adopted several rules and regulations to regulate sources of air pollution in the Basin and help achieve air quality standards for land use development projects. The following rules apply to the project:

- Rule 402 – Nuisance: This rule states that a person shall not discharge from any source whatsoever such quantities of air contaminants or other material, which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property.
- Rule 403 – Fugitive Dust: This rule requires projects to prevent, reduce, or mitigate fugitive dust emissions from a site. Rule 403 restricts visible fugitive dust to a project property line, restricts the net PM_{10} emissions to less than 50 micrograms per cubic meter ($\mu g/m^3$), and restricts the tracking out of bulk materials onto public roads. Additionally, projects must utilize one or more of the best available control measures (identified in the tables within the rule). Best available control measures may include adding freeboard to haul vehicles, covering loose material on haul vehicles, watering, using chemical stabilizers, and/or ceasing all activities. Finally, a contingency plan may be required if so determined by the USEPA.
- Rule 445 – Wood-Burning Devices: This rule prohibits installation of wood-burning devices into any new development.
- Rule 1113 – Architectural Coatings: This rule requires manufacturers, distributors, and end users of architectural and industrial maintenance coatings to reduce volatile organic compounds (VOCs) emissions from the use of these coatings, primarily by placing limits on the VOC content of various coating categories.
- Rule 1138 – Control of Emissions from Restaurant Operations: This rule specifies PM and VOC emissions and odor control requirements for commercial cooking operations that use chain-driven charbroilers to cook meat.
- Rule 1146.2 – Emissions of Oxides of Nitrogen from Large Water Heaters and Small Boilers and Process Heaters: This rule requires manufacturers, distributors, retailers, refurbishers, installers, and operators of new and existing units to reduce NO_X emissions from natural gas-fired water heaters, boilers, and process heaters as defined in this rule.
- Rule 1186 – PM_{10} Emissions from Paved and Unpaved Roads, and Livestock Operations: This rule applies to owners and operators of paved and unpaved roads and livestock operations. The rule is intended to reduce PM_{10} emissions by requiring the cleanup of material deposited onto paved roads, use of certified street sweeping equipment, and treatment of high-use unpaved roads (see also Rule 403).
- Rule 1403 – Asbestos Emissions from Demolition/Renovation Activities: This rule requires owners and operators of any demolition or renovation activity and the associated disturbance of

asbestos-containing materials, any asbestos storage facility, or any active waste disposal site to implement work practice requirements to limit asbestos emissions from building demolition and renovation activities, including the removal and associated disturbance of asbestos-containing materials.

- Rule 1470 – Requirements for Stationary Diesel-Fueled Internal Combustion and Other Compression Ignition Engines: This rule applies to stationary compression ignition engines greater than 50 brake horsepower and sets limits on emissions and operating hours. In general, new stationary emergency standby diesel-fueled engines greater than 50 brake horsepower are not permitted to operate more than 50 hours per year for maintenance and testing.

Southern California Association of Governments

On September 3, 2020, the Regional Council of SCAG formally adopted the 2020-2045 RTP/SCS. The SCS portion of the 2020-2045 RTP/SCS highlights strategies for the region to reach the regional target of reducing greenhouse gases (GHGs) from autos and light-duty trucks by 8 percent per capita by 2020, and 19 percent by 2035 (compared to 2005 levels). Specially, these strategies are:

- Focus growth near destinations and mobility options;
- Promote diverse housing choices;
- Leverage technology innovations;
- Support implementation of sustainability policies; and
- Promote a green region.

Furthermore, the 2020-2045 RTP/SCS discusses a variety of land use tools to help achieve the state-mandated reductions in GHG emissions through reduced per capita vehicle miles traveled (VMT). Some of these tools include center-focused placemaking, focusing on priority growth areas, job centers, transit priority areas, as well as high quality transit areas and green regions.

The most recent RTP/SCS (*Connect SoCal 2024*) was approved by SCAG's Regional Council in April 2024. Connect SoCal 2024 outlines a vision for a more resilient and equitable future, with investment, policies, and strategies for achieving the region's shared goals through 2050. Connect SoCal 2024 sets forth a forecasted regional development pattern which, when integrated with the transportation network, measures, and policies, will reduce GHG emissions from automobiles and light-duty trucks and achieve the GHG emissions reduction target for the region set by the CARB. In addition, Connect SoCal is supported by a combination of transportation and land use strategies that outline how the region can achieve California's GHG-emission-reduction goals and FCAA requirements. These are articulated in a set of Regional Strategic Investments, Regional Planning Policies, and Implementation Strategies. The Regional Planning Policies are a resource for County Transportation Commissions (CTCs) and local jurisdictions, who can refer to specific policies to demonstrate alignment with the RTP/SCS when seeking resources from state or federal programs. The Implementation Strategies articulate priorities for SCAG efforts in fulfilling or going beyond the Regional Planning Policies. Outlined in Chapter 3, *The Plan*, of Connect SoCal 2024 are the Implementation Strategies organized within the pillars of Mobility, Communities, Environment, and Economy.

Local

City of Arcadia General Plan

The Arcadia General Plan was adopted in November 2010 and includes the following goals and policies related to air quality that would be applicable to the Revised Project:[8]

Chapter 6: Resource Sustainability Element

- **Goal RS-1**: Continued improvement in local and regional air quality.
  - **Policy RS-1.1**: Reduce local contributions of airborne pollutants to the air basin.
  - **Policy RS-1.2**: Limit, when feasible, locating sensitive receptors near pollutant emitting sources.
  - **Policy RS-1.4**: Lower the emissions caused by motor vehicles through Transportation Demand Management strategies and land use patterns that reduce vehicle miles traveled.
  - **Policy RS-1.5**: Promote the reduction of vehicular traffic and improved efficiency of the City's circulation system (i.e., roadways) as a means to improving air quality.
  - **Policy RS-1.6**: Require projects that generate potentially significant levels of air pollutants to incorporate the most effective air quality mitigation into project design, as appropriate.
  - **Policy CN-1.12 Sustainable Infrastructure**: Encourage the use of low or zero emission vehicles, bicycles, nonmotorized vehicles, and car-sharing programs by supporting new and existing development that includes sustainable infrastructure and strategies such as vehicle charging stations, drop-off areas for ride-sharing services, secure bicycle parking, and transportation demand management programs.
  - **Policy RS-1.7**: Promote energy-efficient building construction and operation practices that reduce emissions and improve air quality.
- **Goal RS-3**: Promoting and utilizing clean forms of transportation to reduce Arcadia's carbon footprint.
  - **Policy RS-3.4**: Promote residents' and business owners' awareness and education of traffic congestion's effect on air pollution and help create voluntary programs that reduce traffic throughout the City.

CALIFORNIA ENVIRONMENTAL QUALITY ACT THRESHOLDS

In accordance with the *California Environmental Quality Act Guidelines* (CEQA Guidelines), project impacts are evaluated to determine whether significant adverse environmental impacts would occur. This analysis will focus on the Revised Project's potential impacts (combined impacts of the Tempo Project and Approved Project) and provide mitigation measures, if required, to reduce or avoid any potentially significant impacts that are identified. According to Appendix G of the CEQA Guidelines, the Revised Project would have a significant impact related to air quality if it would:

- Conflict with or obstruct implementation of the applicable air quality plan (refer to Impact Statement AQ-1);
- Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable Federal or State ambient air quality standard (refer to Impact Statement AQ-2);

[8] City of Arcadia, *Arcadia General Plan,* November 2010.

- Expose sensitive receptors to substantial pollutant concentrations (refer to Impact Statement AQ-3); and/or
- Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people (refer to Impact Statement AQ-4).

To assist in answering the Appendix G threshold questions, the City utilizes the thresholds of significance established by the SCAQMD.

Regional Thresholds

The SCAQMD's numeric significance thresholds for impacts to regional air quality are presented in Table 3, *South Coast Air Quality Management District Emissions Thresholds*. There are separate thresholds for short-term construction and long-term operational emissions. A project with daily emissions below these thresholds is considered to have a less-than-significant effect on regional air quality from both a direct and cumulative impact standpoint.

Table 3
South Coast Air Quality Management District Emissions Thresholds

Phase	Pollutant (pounds per day)					
	ROG	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Construction	75	100	550	150	150	55
Operational	55	55	550	150	150	55
Notes: ROG = reactive organic gases; NO_X = nitrous oxides; CO = carbon monoxide; SO_X = sulfur oxides; PM_{10} = particulate matter 10 microns in diameter or less; $PM_{2.5}$ = particulate matter 2.5 microns in diameter or less						
Source: South Coast Air Quality Management District, *South Coast AQMD Air Quality Significance Thresholds*, March 2023.						

Localized Significance Thresholds

The SCAQMD has also developed localized significance thresholds (LST) as a tool to assist lead agencies in analyzing localized air quality impacts to sensitive receptors in the vicinity of a project. The SCAQMD's LST Methodology outlines how to analyze localized impacts from common pollutants of concern, including NO_2, CO, PM_{10}, and $PM_{2.5}$. Localized air quality impacts would occur if pollutant concentrations at sensitive receptors exceeded applicable NAAQS or CAAQS.

To minimize efforts, the SCAQMD developed mass rate lookup tables as a simple screening procedure. If a project's on-site emissions do not exceed the screening levels for any pollutant, it can be concluded that the project would not cause or contribute to an adverse localized air quality impact. Screening levels are provided for various distances (i.e., 82 feet [25 meters], 164 feet [50 meters], 328 feet [100 meters], 656 feet [200 meters], and 1,640 feet [500 meters]) between the project boundary and the nearest sensitive receptor and various project site acreages (i.e., 1, 2, and 5 acres).

Cumulative Impacts

Based on SCAQMD guidance, individual construction projects that exceed the SCAQMD's recommended daily thresholds for project-specific impacts would also cause a cumulatively considerable increase in emissions for those pollutants for which Basin is in non-attainment. As discussed in the SCAQMD's White Paper on Potential Control Strategies to Address Cumulative Impacts from Air Pollution:

> *As Lead Agency, the AQMD uses the same significance thresholds for project specific and cumulative impacts for all environmental topics analyzed in an Environmental Assessment or EIR… projects that exceed the project-specific significance thresholds are considered by the SCAQMD to be cumulatively considerable. This is the reason project-specific and cumulative significance thresholds are the same. Conversely, projects that do not exceed the project-specific thresholds are generally not considered to be cumulatively significant.*

The cumulative analysis of air quality impacts in this memorandum follows the SCAQMD's guidance such that construction or operational project emissions will be considered cumulatively considerable if project-specific emissions exceed an applicable recommended significance threshold established by the SCAQMD.

SIGNIFICANCE CRITERIA AND METHODOLOGY

Criteria pollutants for project construction and operation were calculated using the California Emissions Estimator Model (CalEEMod) version 2022.1.

Construction

Construction of the proposed hotel building and associated improvements would primarily generate temporary criteria pollutants from construction equipment operation on-site and construction worker vehicle trips to and from the project site, and from construction material deliveries to and from the project site. Construction input data for CalEEMod include, but are not limited to, (1) the anticipated start and finish dates of construction activity; (2) inventories of construction equipment to be used; and (3) areas to be excavated and graded. Construction emissions were quantified by estimating the types and quantity of equipment that would be used on-site during each construction phase, as provided by the model defaults. CalEEMod also estimates off-site emissions from worker, vendor, and hauling truck trips.

Construction of the Tempo Project is anticipated to take approximately 16.5 months to complete. The construction activities would include grading, building construction, paving, and architectural coating. The number of worker and vendor trips were based on CalEEMod defaults, and the hauling truck trips were generally based on the soil export volumes provided by the Applicant; approximately 4,800 cubic yards of soil export is required for the Tempo Project. The default trip lengths were used for worker and vendor trips. According to the Applicant, the trip length for hauling trips would be approximately seven miles one-way.

According to the Applicant, the completion of the Approved Project would be completed prior to the start of the construction for the Tempo Project. This analysis assumes that there is no overlap between the Approved Project construction activities and the Tempo Project construction activities.

Operation

Operational sources of criteria pollutant emissions include area, energy, and mobile sources, which are further discussed below. CalEEMod modeling was conducted for the Tempo Project condition.

Area Sources

Emissions associated with area sources include consumer products, landscape maintenance, and architectural coating. Area source emissions were calculated using standard emission rates from CARB, USEPA, SCAQMD, and CalEEMod model defaults.

Energy Sources

The Tempo Project would be served by Southern California Edison (SCE). The primary use of electricity by the Tempo Project would be for space heating and cooling, water heating, ventilation, lighting, appliances, landscaping equipment, and electronics. Emissions from energy sources are primarily generated by natural gas use. The emissions factors for natural gas combustion are based on USEPA's AP-42 (Compilation of Air Pollutant Emissions Factors). Emissions from electricity use are not included in the air quality analysis as they only apply to greenhouse gas emissions since electricity generation is an indirect emission generated off-site and, therefore, not relevant for local and regional air quality conditions.

Mobile Sources

Mobile source emissions are estimated by multiplying the Tempo Project's total VMT by the vehicle emission factors. The vehicle emission factors were CalEEMod default values for the County. The project-specific VMT for the Tempo Project were calculated from Tempo Project trip generation rates and CalEEMod default trip lengths. The Tempo Project trip generation rates are discussed in detail in the *Revised Parking Demand Analysis for the Tempo by Hilton Hotel Project, City of Arcadia, California Memorandum* (Parking Analysis) prepared by Linscott, Law and Greenspan Engineers (dated March 12, 2024). The Tempo Project would result in 1,113 daily trips during weekdays and 915 trips on Saturdays. As a conservative analysis, daily trips on Sundays are assumed to be the same as weekdays.

IMPACT ANALYSIS

AQ-1 WOULD THE PROJECT CONFLICT WITH OR OBSTRUCT IMPLEMENTATION OF THE APPLICABLE AIR QUALITY PLAN?

Level of Significance: Less Than Significant Impact.

The 2020 IS/MND Section 3.3 a) analyzed the Approved Project's consistency with SCAQMD's 2016 AQMP, which was the latest AQMP when the 2020 IS/MND was prepared. The 2016 AQMP incorporated scientific and technological information and planning assumptions, including the SCAG 2016-2040 RTP/SCS and updated emission inventory methodologies for various source categories. The 2016-2040 RTP/SCS included transportation programs, measures, and strategies generally designed to reduce VMT and related air pollutant emissions from vehicles.

The 2020 IS/MND concluded that the Approved Project would result in less than significant impact relating to the Approved Project's potential to conflict with or obstruct implementation of the applicable AQMP, as the Approved Project would not result in an increase in the frequency or severity of existing air quality violations, cause or contribute to new violations, or delay timely attainment of the ambient air quality standards or interim emission reductions in the AQMP. The Approved Project also would not exceed the assumptions in the AQMP, or increments based on the buildout year and phase.

On December 2, 2022, the SCAQMD Governing Board adopted the 2022 AQMP. The 2022 AQMP incorporates the latest scientific and technical information and planning assumptions, including the latest applicable growth assumptions, updated emission inventory methodologies for various source categories. Additionally, the 2022 AQMP utilized information and data from SCAG and its 2020-2045 RTP/SCS. While SCAG has recently adopted Connect SoCal 2024, SCAQMD has not released an updated AQMP. As such, this consistency analysis is based off the 2016 AQMP that was analyzed in the 2020 IS/MND and the most recent 2022 AQMP.

According to the SCAQMD's *CEQA Air Quality Handbook*, projects must be analyzed for consistency with two main criteria, as discussed below.

Criterion 1:

With respect to the first criterion, SCAQMD methodologies require that an air quality analysis for a project include forecasts of project emissions in relation to contributing to air quality violations and delay of attainment.

a) *Would the project result in an increase in the frequency or severity of existing air quality violations?*

Since the consistency criteria identified under the first criterion pertain to pollutant concentrations, rather than to total regional emissions, an analysis of a project's pollutant emissions relative to localized pollutant concentrations associated with the CAAQS and NAAQS is used as the basis for evaluating project consistency. As detailed below under Impact AQ-3, localized concentrations of CO, NO_X, PM_{10}, and $PM_{2.5}$ would be less than significant during Tempo Project and Approved Project construction and operations. Therefore, the Revised Project would not result in an increase in the frequency or severity of existing air quality violations.

b) *Would the project cause or contribute to new air quality violations?*

As discussed under Impact AQ-2, the Tempo Project in combination with the Approved Project would result in emissions that are below the SCAQMD thresholds. Therefore, the Revised Project would not have the potential to cause or affect a violation of the ambient air quality standards.

c) *Would the project delay timely attainment of air quality standards or the interim emissions reductions specified in the AQMP?*

The Revised Project would result in less than significant impacts regarding localized concentrations during Tempo Project and Approved Project construction and operations; refer to Impact AQ-3. As such, the Revised Project would not delay the timely attainment of air quality standards or 2022 AQMP emissions reductions.

Criterion 2:

With respect to the second criterion for determining consistency with SCAQMD and SCAG air quality policies, it is important to recognize that air quality planning within the Basin focuses on attainment of ambient air quality standards at the earliest feasible date. Projections for achieving air quality goals are based on assumptions regarding population, housing, and growth trends. Thus, the SCAQMD's second criterion for determining project consistency focuses on whether the Revised Project exceeds the

assumptions utilized in preparing the forecasts presented in the 2016 AQMP and the 2022 AQMP. Determining whether a project exceeds the assumptions reflected in the AQMP involves the evaluation of the three criteria outlined below. The following discussion provides an analysis of each of these criteria.

A) *Would the project be consistent with the population, housing, and employment growth projections utilized in the preparation of the AQMP?*

A project is consistent with the AQMP in part if it is consistent with the population, housing, and employment assumptions that were used in the development of the AQMP. Three sources of data form the basis for the projections of air pollutant emissions: general plans, SCAG's regional growth forecast, and SCAG's RTP/SCS. The RTP/SCS also provides socioeconomic forecast projections of regional population growth. As previously discussed, the 2016 AQMP was based on the 2016-2040 RTP/SCS, which considered growth between 2012 and 2040, and the 2022 AQMP is based on the 2020-2045 RTP/SCS, which considered growth between 2016 and 2045.

As discussed under "Existing Site Conditions" above, the Revised Project Site, which is comprised of the Original Project Site and APN 5775-015-011, is designated Commercial (50 dwelling units per acre and 0.5 floor-area ratio) and zoned General Commercial (C-G). The Commercial designation allows a broad array of commercial enterprises, including restaurants, durable goods sales, food stores, lodging, professional offices, specialty shops, indoor and outdoor recreational facilities, and entertainment uses. The C-G zone is intended to provide areas for retail and service uses, offices, restaurants, public uses, and similar and compatible uses. The Tempo Project proposes the construction of a hotel, which would be consistent with the land use and zoning designations for the Revised Project Site. Furthermore, the Tempo Project is anticipated to generate approximately 32 new employees[9] and the Approved Project would generate approximately 111 new employees, resulting in a total of 143 new employees for the Revised Project. According to SCAG's 2016-2040 RTP/SCS, the City's employment would increase from 28,900 in 2012 to 34,400 in 2045, representing an increase of 5,500 employees between 2012 and 2040.[10] The Revised Project's employment increase of 143 new employees would constitute only 2.6 percent of the City's employment increase between 2012 and 2040. In addition, according to SCAG's 2020-2045 RTP/SCS, the City's employment would increase from 32,600 in 2016 to 36,100 in 2045, representing an increase of 3,500 employees between 2016 and 2045.[11] The Revised Project's employment increase of 143 new employees would constitute only 4.1 percent of the City's employment increase between 2016 and 2045. As such, the Revised Project is considered consistent with the SCAG's forecast in its 2016-2040 RTP/SCS and 2020-2045 RTP/SCS, and is consistent with the types, intensity, and patterns of land use previously envisioned for the Original Project Site. The population, housing, and employment forecasts, which are adopted by SCAG's Regional Council, are based on the local plans and policies applicable to the City. As the SCAQMD has incorporated these same projections into the 2016 AQMP and 2022 AQMP, it can be concluded that the proposed project would be consistent with both the 2016 AQMP and the 2022 AQMP.

[9] The number of employees for the Tempo Project was calculated using the same employee generation factor of 1,500 square feet/employee provided in the 2020 IS/MND.

[10] Southern California Council of Governments, *2016-2040 Regional Transportation Plan/ Sustainable Communities Strategy, Demographics and Growth Forecast Appendix*, April 7, 2016.

[11] Southern California Council of Governments, *2020-2045 Regional Transportation Plan/ Sustainable Communities Strategy – Connect SoCal 2020, Demographics and Growth Forecast Technical Report*, September 3, 2020.

b) *Would the project implement all feasible air quality mitigation measures?*

The Tempo Project in combination with the Approved Project would result in less than significant air quality impacts. Compliance with all feasible emission reduction rules and measures identified by the SCAQMD, including Rule 403 to reduce fugitive dust emissions and Rule 1113 to reduce ROG emissions during architectural coating, would be required as discussed in Impact AQ-2 and Impact AQ-3. As such, the Revised Project meets this AQMP consistency criterion and no mitigation measures are required.

c) *Would the project be consistent with the land use planning strategies set forth in the AQMP?*

Land use planning strategies to develop infill sites, reduce VMT and greenhouse gas emissions, and promote sustainable design set forth in the 2016 AQMP and 2022 AQMP are primarily based on the 2016-2040 RTP/SCS and the 2020-2045 RTP/SCS, respectively. Overall, it is anticipated that the Tempo Project would be consistent with SCAG's 2016-2040 RTP/SCS and 2020-2045 RTP/SCS in that it would be an infill development in a highly developed and urbanized area of Arcadia near multiple bus stops and approximately 0.5 mile from the Metro Gold Line Arcadia Station and would provide electric vehicle charging stations, all of which would incentivize employees and visitors to take alternative modes of travel, thereby reducing criteria pollutant emissions. Therefore, the Tempo Project would be consistent with the land use planning strategies, and would be consistent with this criterion.

In conclusion, the determination of AQMP consistency is primarily concerned with the long-term influence of a project on air quality in the Basin. The Tempo Project would not result in a long-term impact on the region's ability to meet state and federal air quality standards. Further, the Tempo Project's long-term influence on air quality in the Basin would also be consistent with the SCAQMD and SCAG's goals and policies and is considered consistent with both the 2016 AQMP and the 2022 AQMP. As such, impacts resulting from the Tempo Project would be less than significant and similar to the impacts disclosed in the 2020 IS/MND for the Approved Project, which were determined to be less than significant. In addition, as the Tempo Project and Approved Project are both consistent with the AQMP, the Revised Project would also be less than significant.

Based on the above, the Revised Project would not result in new significant impacts and no substantial increase in the severity of previously identified impacts disclosed in the 2020 IS/MND would occur. Likewise, there are no changed circumstances involving new or more severe impacts and no new information of substantial importance requiring new analysis or project-specific mitigation measures.

Mitigation Measures: Impacts related to Impact AQ-1 would be less than significant, and no project-specific mitigation measures are required.

AQ-2 WOULD THE PROJECT 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?

Level of Significance: Less Than Significant Impact.

The 2020 IS/MND Section 3.3 b) quantified the Approved Project's construction and operational emissions and compared them to the SCAQMD regional significance thresholds. The 2020 IS/MND concluded that emissions during construction and operation of the Approved Project would not exceed SCAQMD thresholds for VOC, NO_X, CO, SO_2, PM_{10}, or $PM_{2.5}$. Therefore, the Approved Project would not result in a

cumulatively considerable increase in emissions of nonattainment pollutants, and impacts would be less than significant during construction and operation.

Construction

Refer to Appendix A, *Air Quality Emissions Data* for the detailed CalEEMod output. Table 4, *Construction Criteria Pollutant Emissions* summarizes the estimated maximum daily emissions of VOC (ROG), NO_x, CO, SO_2, PM_{10}, and $PM_{2.5}$ for the Tempo Project.

Table 4
Construction Criteria Pollutant Emissions

Construction Year	Pollutant (pounds/day) [1, 2]					
	ROG	NO_X	CO	SO_2	PM_{10}	$PM_{2.5}$
Tempo Project Emissions						
Year 1 Maximum Daily Emissions (2024)	1.23	11.9	11.5	0.02	2.09	1.20
Year 2 Maximum Daily Emissions (2025)	13.7	10.9	16.8	0.02	1.13	0.57
Maximum Daily Emissions	**13.7**	**11.9**	**16.8**	**0.02**	**2.09**	**1.20**
SCAQMD Significance Thresholds	*75*	*100*	*550*	*150*	*150*	*55*
Threshold Exceeded?	***No***	***No***	***No***	***No***	***No***	***No***
Approved Project Maximum Daily Emissions[3]	**70.42**	**22.99**	**17.44**	**0.04**	**3.52**	**2.11**
Tempo Project Emissions Exceed Approved Project?	***No***	***No***	***No***	***No***	***No***	***No***

Notes:
1. Emissions were calculated using CalEEMod version 2022.1. Higher emissions between summer and winter are presented as a conservative analysis.
2. Modeling assumptions include compliance with SCAQMD Rule 403 which requires: properly maintain mobile and other construction equipment; replace ground cover in disturbed areas quickly; water exposed surfaces three times daily; cover stockpiles with tarps; water all haul roads twice daily; and limit speeds on unpaved roads to 15 miles per hour.
3. Refer to Table 6, Initial Study/Mitigated Negative Declaration – Arcadia Hotel and Annex (Hotel Indigo) Project, February 2020.

Source: Refer to Appendix A, *Air Quality Emissions Data*, for assumptions used in this analysis.

Fugitive Dust Emissions

Construction activities are a source of fugitive dust emissions that may have a substantial, temporary impact on local air quality. In addition, fugitive dust may be a nuisance to those living and working in the project area. Fugitive dust emissions are associated with land clearing, ground excavation, cut-and-fill, and truck travel on unpaved roadways. Fugitive dust emissions vary substantially from day to day, depending on the level of activity, specific operations, and weather conditions. Fugitive dust from grading and construction is expected to be short-term and would cease upon project completion. It should be noted that most of this material is inert silicates, rather than the complex organic particulates released from combustion sources, which are more harmful to health.

Dust (larger than 10 microns) generated by such activities usually becomes more of a local nuisance than a serious health problem. Of particular health concern is the amount of PM_{10} generated as a part of fugitive dust emissions. PM_{10} poses a serious health hazard alone or in combination with other pollutants. $PM_{2.5}$ is mostly produced by mechanical processes. These include automobile tire wear, industrial processes such as cutting and grinding, and re-suspension of particles from the ground or road surfaces by wind and human activities such as construction or agriculture. $PM_{2.5}$ is mostly derived from combustion

sources, such as automobiles, trucks, and other vehicle exhaust, as well as from stationary sources. These particles are either directly emitted or are formed in the atmosphere from the combustion of gases such as NO_X and sulfur oxides (SO_X) combining with ammonia. $PM_{2.5}$ components from material in the earth's crust, such as dust, are also present, with the amount varying in different locations.

Construction activities would comply with SCAQMD Rule 402, which prohibits fugitive dust from creating a nuisance off-site, and Rule 403, which requires that excessive fugitive dust emissions be controlled by regular watering or other dust prevention measures. Adherence to SCAQMD Rule 403 would greatly reduce PM_{10} and $PM_{2.5}$ concentrations. It should be noted that these estimated reductions were applied in CalEEMod. As depicted in Table 4, total PM_{10} and $PM_{2.5}$ emissions would not exceed the SCAQMD thresholds during construction. Thus, construction-related air quality impacts would be less than significant.

Construction Equipment and Worker Vehicle Exhaust

Exhaust emissions (e.g., NO_x and CO) from construction activities include emissions associated with the transport of machinery and supplies to and from the Revised Project Site, emissions produced on-site as the equipment is used, and emissions from trucks transporting materials to/from the site. As depicted in Table 4, exhaust emissions would be below the established SCAQMD thresholds. Therefore, air quality impacts from equipment and vehicle exhaust emission would be less than significant.

ROG Emissions

In addition to gaseous and particulate emissions, the application of asphalt and surface coatings creates ROG emissions, which are O_3 precursors. As required, all architectural coatings for the Tempo Project structures would comply with SCAQMD Rule 1113. Rule 1113 provides specifications on painting practices as well as regulates the ROG content of paint. It should be noted that these estimated reductions were applied in CalEEMod. ROG emissions associated with the Tempo Project would be less than significant; refer to Table 4.

Total Construction Emissions

As shown in Table 4, the daily total construction emissions of the Tempo Project would not exceed established SCAQMD thresholds. In addition, construction of the Tempo Project would generate less maximum daily emissions than construction of the Approved Project for all criteria pollutants. It should be noted that this analysis assumes that construction of the Approved Project is complete and that construction of the Tempo Project and Approved Project would not overlap. As such, the Tempo Project would result in less impact than the Approved Project, and construction impacts of the Tempo Project would be less than significant.

Naturally Occurring Asbestos

Asbestos is a term used for several types of naturally occurring fibrous minerals that are human health hazards when airborne. The most common type of asbestos is chrysotile, but other types such as tremolite and actinolite are also found in California. Asbestos is classified as a known human carcinogen by state, federal, and international agencies and was identified as a toxic air contaminant by CARB in 1986.

Asbestos can be released from serpentinite and ultramafic rocks when the rock is broken or crushed. At the point of release, the asbestos fibers may become airborne, causing air quality and human health hazards. These rocks have been commonly used for unpaved gravel roads, landscaping, fill projects, and other improvement projects in some localities. Asbestos may be released to the atmosphere due to vehicular traffic on unpaved roads, during grading for development projects, and at quarry operations. All of these activities may have the effect of releasing potentially harmful asbestos into the air. Natural weathering and erosion processes can act on asbestos bearing rock and make it easier for asbestos fibers to become airborne if such rock is disturbed. According to the California Department of Conservation Division of Mines and Geology, *A General Location Guide for Ultramafic Rocks in California – Areas More Likely to Contain Naturally Occurring Asbestos Report* (August 2000), serpentinite and ultramafic rocks are not known to occur within the vicinity of the Revised Project Site.[12] Thus, there would be no impact in this regard.

Cumulative Short-Term Construction Impacts

With respect to the Tempo Project's construction-period air quality emissions and cumulative Basin-wide conditions, the SCAQMD has developed strategies to reduce criteria pollutant emissions outlined in the 2022 AQMP pursuant to FCAA mandates. As such, the Tempo Project would comply with SCAQMD Rule 403 requirements and implement all feasible SCAQMD rules to reduce construction air emissions to the extent feasible. Rule 403 requires that fugitive dust be controlled with the best available control measures to reduce dust so that it does not remain visible in the atmosphere beyond the property line of the Tempo Project. In addition, the Tempo Project would comply with adopted 2022 AQMP emissions control measures. Pursuant to SCAQMD rules and mandates, as well as the CEQA requirement that significant impacts be mitigated to the extent feasible, these same requirements (i.e., Rule 403 compliance, implementation of all feasible mitigation measures, and compliance with adopted AQMP emissions control measures) would also be imposed on construction projects throughout the Basin, which would include related projects.

As detailed above, the Tempo Project's construction emissions would be below the established thresholds and would result in less than significant air quality impacts. Thus, it can be reasonably inferred that the Tempo Project's construction emissions would not contribute to a cumulatively considerable air quality impact for nonattainment criteria pollutants (i.e., O_3) in the Basin. A less than significant impact would occur in this regard.

Operations

Long-term air quality impacts typically consist of mobile source emissions generated from project-related traffic (i.e., motor vehicle use by employees and guests), and emissions from area and energy sources. Emissions associated with each of these sources were calculated and are discussed below in Table 5, *Operational Criteria Pollutant Emissions*.

Mobile Source

Mobile sources are emissions from motor vehicles, including tailpipe and evaporative emissions. Depending upon the pollutant being discussed, the potential air quality impact may be of either regional

[12] California Department of Conservation Division of Mines and Geology, *A General Location Guide for Ultramafic Rocks in California – Areas More Likely to Contain Naturally Occurring Asbestos Report*, August 2000.

or local concern. For example, ROG, NO_X, SO_X, PM_{10}, and $PM_{2.5}$ are all pollutants of regional concern (NO_X and ROG react with sunlight to form O_3 [photochemical smog], and wind currents readily transport SO_X, PM_{10}, and $PM_{2.5}$). However, CO tends to be a localized pollutant, dispersing rapidly at the source.

Vehicle emissions generated by the Tempo Project have been estimated using CalEEMod. According to the Parking Analysis, the Tempo Project would generate 1,113 trips per day on weekdays, and 915 trips per day on Saturdays. As a conservative analysis, daily trips on Sundays are assumed to be the same as weekdays. As shown in Table 5, emissions generated by vehicle traffic associated with the Tempo Project would not exceed established SCAQMD thresholds. Impacts would be less than significant in this regard.

Table 5
Operational Criteria Pollutant Emissions

Emissions Source	Pollutant (pounds/day)[1]					
	ROG	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Tempo Project Emissions						
Mobile[2]	3.69	3.10	32.9	0.08	7.29	1.88
Area	1.72	0.02	2.51	<0.01	<0.01	<0.01
Energy[3]	0.02	0.45	0.38	<0.01	0.03	0.03
Total Tempo Project Emissions[2]	***5.44***	***3.55***	***35.8***	***0.08***	***7.32***	***1.92***
SCAQMD Threshold	*55*	*55*	*550*	*150*	*150*	*55*
Threshold Exceeded?	***No***	***No***	***No***	***No***	***No***	***No***
Approved Project Total Net Change Emissions[3]	**9.73**	**20.30**	**50.31**	**0.15**	**11.55**	**3.24**
Total Tempo Project and Approved Project Emissions	**15.17**	**23.85**	**86.11**	**0.23**	**18.87**	**5.16**
SCAQMD Threshold	*55*	*55*	*550*	*150*	*150*	*55*
Threshold Exceeded?	***No***	***No***	***No***	***No***	***No***	***No***

Notes:
1. Emissions calculated using California Emissions Estimator Model Version 2022.1 (CalEEMod) computer model. Higher emissions between summer and winter are presented as a conservative analysis.
2. The numbers may be slightly off due to rounding.
3. Refer to Table 7, Initial Study/Mitigated Negative Declaration – Arcadia Hotel and Annex (Hotel Indigo) Project, February 2020.

Source: Refer to Appendix A, *Air Quality Emissions Data*, for assumptions used in this analysis.

Area Source Emissions

Area source emissions would be generated from consumer products, architectural coatings, and landscaping. The Tempo Project's criteria pollutant emissions from area sources would not exceed the established thresholds; refer to Table 5.

Energy Source Emissions

The primary use of electricity and natural gas by the Tempo Project would be for space heating and cooling, water heating, ventilation, lighting, appliances, landscaping equipment, and electronics. Criteria air pollutant emissions from electricity use were not quantified since criteria pollutants emissions occur at the site of the power plant, which is off-site. Energy source emissions would not exceed established SCAQMD thresholds; refer to Table 5. Impacts in this regard would be less than significant.

Total Operational Emissions

As shown in Table 5, the daily total operational emissions of the Tempo Project would not exceed established SCAQMD thresholds. In addition, total emissions of the Tempo Project and the Approved Project combined would not exceed SCAQMD thresholds. Therefore, impacts related to the total operational emissions of the Revised Project would be less than significant.

Cumulative Long-Term Operational Impacts

As discussed, the Tempo Project would not result in long-term operational air quality impacts. Additionally, adherence to SCAQMD rules and regulations would alleviate potential impacts related to cumulative conditions on a project-by-project basis. Emission reduction technology, strategies, and plans are constantly being developed. Moreover, the combined operational emissions of the Tempo Project and the Approved Project would not result in long-term operational air quality impacts. As a result, the Revised Project would not contribute a cumulatively considerable net increase of any nonattainment criteria pollutant. Therefore, no cumulative operational impacts associated with implementation of the Revised Project would result.

Air Quality Health Impacts

Adverse health effects induced by criteria pollutant emissions are highly dependent on a multitude of interconnected variables (e.g., cumulative concentrations, local meteorology and atmospheric conditions, and the number and character of exposed individual [e.g., age, gender]). In particular, O_3 precursors, VOCs and NO_x, affect air quality on a regional scale. Health effects related to O_3 are therefore the product of emissions generated by numerous sources throughout a region. Existing models have limited sensitivity to small changes in criteria pollutant concentrations and, as such, translating project-generated criteria pollutants to specific health effects or additional days of nonattainment would produce meaningless results. In other words, the project's less than significant increases in regional air pollution from criteria air pollutants during construction would have negligible impacts on human health.

As noted in the Brief of Amicus Curiae by the SCAQMD, the SCAQMD acknowledged it would be extremely difficult, if not impossible to quantify health impacts of criteria pollutants for various reasons including modeling limitations as well as where in the atmosphere air pollutants interact and form.[13] Further, as noted in the Brief of Amicus Curiae by the San Joaquin Valley Air Pollution Control District (SJVAPCD), SJVAPCD has acknowledged that currently available modeling tools are not equipped to provide a meaningful analysis of the correlation between an individual development project's air emissions and specific human health impacts.[14]

The SCAQMD acknowledges that health effects quantification from O_3, as an example, is correlated with the increases in ambient level of O_3 in the air (concentration) that an individual person breathes. SCAQMD's Brief of Amicus Curiae states that it would take a large amount of additional emissions to cause

[13] South Coast Air Quality Management District, *Application of the South Coast Air Quality Management District for Leave to File Brief of Amicus Curiae in Support of Neither Party and Brief of Amicus Curiae. In the Supreme Court of California. Sierra Club, Revive the San Joaquin, and League of Women Voters of Fresno v. County of Fresno,* April 3, 2015.

[14] San Joaquin Valley Air Pollution Control District, *Application for Leave to File Brief of Amicus Curiae Brief of San Joaquin Valley Unified Air Pollution Control District in Support of Defendant and Respondent, County of Fresno and Real Party In Interest and Respondent, Friant Ranch, L.P. In the Supreme Court of California. Sierra Club, Revive the San Joaquin, and League of Women Voters of Fresno v. County of Fresno*, April 13, 2015.

a modeled increase in ambient O_3 levels over the entire region. The SCAQMD further states that based on their own modeling in the SCAQMD's *2012 Air Quality Management Plan*, a reduction of 432 tons (864,000 pounds) per day of NO_x and a reduction of 187 tons (374,000 pounds) per day of VOCs would reduce O_3 levels at highest monitored site by only nine parts per billion. As such, the SCAQMD concludes that it is not currently possible to accurately quantify O_3-related health impacts caused by NO_x or VOC emissions from relatively small projects (defined as projects with regional scope) due to photochemistry and regional model limitations. Thus, as the Revised Project would not exceed SCAQMD thresholds for construction and operational air emissions, the Revised Project would have a less than significant impact for air quality health impacts.

Conclusion

In conclusion, construction and operational impacts resulting from the Revised Project would not result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment. The impacts of the Tempo Project would be less than significant and similar to the impacts disclosed in the 2020 IS/MND, which were determined to be less than significant. In addition, construction impacts resulting from the Tempo Project would be less than the Approved Project, as the maximum daily emissions of all criteria pollutants would be lower. Operational impacts resulting from the Tempo Project and the Approved Project combined would be less than significant.

The Revised Project would not result in new significant impacts and no substantial increase in the severity of previously identified impacts disclosed in the 2020 IS/MND would occur. Likewise, there are no changed circumstances involving new or more severe impacts and no new information of substantial importance requiring new analysis or project-specific mitigation measures.

Mitigation Measures: Impacts related to Impact AQ-2 would be less than significant, and no project-specific mitigation measures are required.

AQ-3 WOULD THE PROJECT EXPOSE SENSITIVE RECEPTORS TO SUBSTANTIAL POLLUTANT CONCENTRATIONS?

Level of Significance: Less Than Significant Impact.

The 2020 IS/MND Section 3.3 c) analyzed localized construction impact of the Approved Project by comparing on-site emissions with SCAQMD's LSTs and concluded less than significant impact. The 2020 IS/MND also concluded less than significant CO hotspot impact as the Approved Project would not generate traffic that would contribute to potential adverse traffic impacts that may result in the formation of CO hotspots. Lastly, the 2020 IS/MND concluded that the Approved Project would result in less than significant health impacts due to the short period of construction and lack of toxic air contaminants sources on-site during operation.

The nearest sensitive receptor to the Tempo Project is an existing single-family residence located adjacent to the east of the Area of Proposed Improvements. To identify impacts to sensitive receptors, the SCAQMD recommends addressing LSTs for construction and operations impacts (area sources only). The CO hotspot analysis following the LST analysis addresses localized mobile source impacts.

Localized Significance Thresholds

LSTs were developed in response to SCAQMD Governing Boards' Environmental Justice Enhancement Initiative (I-4). The SCAQMD provided the *Final Localized Significance Threshold Methodology* (dated June 2003 [revised 2008]) for guidance. The LST methodology assists lead agencies in analyzing localized air quality impacts. The SCAQMD provides the LST screening lookup tables for one-, two-, and five-acre projects emitting CO, NO_X, $PM_{2.5}$, or PM_{10}. The LST methodology and associated mass rates are not designed to evaluate localized impacts from mobile sources traveling over the roadways. The project is located within SRA 9, *East San Gabriel Valley*.

Construction

The SCAQMD guidance on applying CalEEMod to LSTs specifies the number of acres a particular piece of equipment would likely disturb per day.[15] SCAQMD provides LST thresholds for one-, two-, and five-acre site disturbance areas; SCAQMD does not provide LST thresholds for projects over five acres. The Tempo Project would actively disturb approximately one acre per day during the grading phase of construction. Therefore, the construction LSTs for one acre were utilized. The nearest sensitive receptor to the Tempo Project is an existing single-family residence located adjacent to the east of the Area of Proposed Improvements. These sensitive land uses may be potentially affected by air pollutant emissions generated during on-site construction activities. LST thresholds are provided for distances to sensitive receptors of 25, 50, 100, 200, and 500 meters. As the nearest sensitive use is adjacent the Area of Proposed Improvements, the lowest LST values for 25 meters (82 feet) were conservatively used.

Table 6, *Localized Significance of Construction Emissions*, shows the localized construction-related emissions for NO_X, CO, PM_{10}, and $PM_{2.5}$ compared to the LSTs for SRA 9. It is noted that the localized emissions presented in Table 6 are less than those in Table 4 because localized emissions include only on-site emissions (i.e., from construction equipment and fugitive dust), and do not include off-site emissions (i.e., from hauling activities). As shown in Table 6, localized construction emissions would not exceed the LSTs for SRA 9. Therefore, localized significance impacts from construction would be less than significant. In addition, construction of the Tempo Project would generate less maximum on-site daily emissions of all four pollutants than construction of the Approved Project. It should be noted that construction of the Approved Project will be completed by the time construction of the Tempo Project begins, and therefore construction of the Tempo Project and Approved Project would not overlap. As such, the Tempo Project would result in less impact than the Approved Project, and construction impacts of the Revised Project would be less than significant.

[15] The number of acres represent the total acres traversed by grading equipment. To properly grade a piece of land, multiple passes with equipment may be required. The disturbance acreage is based on the equipment list and days of the grading phase according to the anticipated maximum number of acres a given piece of equipment can pass over in an 8-hour workday.

Table 6
Localized Significance of Construction Emissions

Emissions Source	Emissions (pounds per day)			
	NO_X	CO	PM_{10}	$PM_{2.5}$
Tempo Project Emissions				
Maximum Daily Construction Emissions[1, 2]	11.39	13.39	1.91	1.16
LST Mass Rate Screening Criteria[3]	*89*	*623*	*5*	*3*
Criteria Exceeded?	***No***	***No***	***No***	***No***
Approved Project Maximum Daily On-Site Emissions[4]	**20.95**	**14.66**	**6.62**	**3.71**
Tempo Project Emissions Exceed Approved Project?	***No***	***No***	***No***	***No***

Notes:
1. The building construction, paving, and architectural coating phases would overlap during Year 2; maximum daily construction emissions from these three phases are combined to be presented as the worst-case scenario for CO emissions. The maximum NOx, $PM_{10,}$ and $PM_{2.5}$ emissions would occur during the grading phase during Year 1.
2. Modeling assumptions include compliance with SCAQMD Rule 403 which requires the following: properly maintain mobile and other construction equipment; replace ground cover in disturbed areas quickly; water exposed surfaces three times daily; cover stockpiles with tarps; water all haul roads twice daily; and limit speeds on unpaved roads to 15 miles per hour.
3. The Localized Significance Threshold Mass Rate Screening Criteria was determined using Appendix C of the SCAQMD *Final Localized Significant Threshold Methodology* guidance document for pollutants NO_X, CO, PM_{10}, and $PM_{2.5}$. The Localized Significance Threshold was based on the anticipated daily acreage disturbance for construction (approximately one acre; therefore, the one-acre thresholds were used) and Source Receptor Area 9, *East San Gabriel Valley*.
4. Refer to Table 8, Initial Study/Mitigated Negative Declaration – Arcadia Hotel and Annex (Hotel Indigo) Project, February 2020.

Source: Refer to Appendix A, *Air Quality Emissions Data*, for assumptions used in this analysis.

Operation

According to SCAQMD LST methodology, LSTs would apply to operational activities if the project includes stationary sources or attracts mobile sources that may spend extended periods queuing and idling at the site (i.e., warehouse or transfer facilities). The proposed hotel development does not include such uses. Thus, due to the lack of such emissions, no long-term LST analysis is needed. Operational LST impacts would be less than significant in this regard. In addition, the Approved Project also does not include stationary sources or attracts mobile sources that may spend extended periods queuing and idling at the site. Therefore, the combined impacts of the Tempo Project and the Approved Project in this regard would be less than significant.

Carbon Monoxide Hotspots

CO emissions are a function of vehicle idling time, meteorological conditions and traffic flow. Under certain extreme meteorological conditions, CO concentrations near a congested roadway or intersection may reach unhealthy levels (i.e., adversely affect residents, school children, hospital patients, the elderly, etc.). To identify CO hotspots, the SCAQMD requires a CO microscale hotspot analysis when a project increases the volume-to-capacity ratio (also called the intersection capacity utilization) by 0.02 (two percent) for any intersection with an existing level of service (LOS) D or worse. Because traffic congestion is highest at intersections where vehicles queue and are subject to reduced speeds, these hot spots are typically produced at intersection locations.

The Basin is designated as an attainment area for state and federal CO standards. There has been a decline in CO emissions even though VMT on U.S. urban and rural roads have increased. On-road mobile source CO emissions have declined 24 percent between 1989 and 1998, despite a 23 percent rise in motor VMT

over the same 10 years. California trends have been consistent with national trends; CO emissions declined 20 percent in California from 1985 through 1997, while VMT increased 18 percent in the 1990s. Three major control programs have contributed to the reduced per-vehicle CO emissions: exhaust standards, cleaner burning fuels, and motor vehicle inspection/maintenance programs.

A detailed CO analysis was conducted in the *Federal Attainment Plan for Carbon Monoxide* (CO Plan) for the SCAQMD's *2003 Air Quality Management Plan*. The locations selected for microscale modeling in the CO Plan are worst-case intersections in the Basin and would likely experience the highest CO concentrations. Of these locations, the Wilshire Boulevard/Veteran Avenue intersection experienced the highest CO concentration (4.6 ppm), which is well below the 35-ppm 1-hr CO federal standard. The Wilshire Boulevard/Veteran Avenue intersection is one of the most congested intersections in southern California with an average daily traffic (ADT) volume of approximately 100,000 vehicles per day. As the CO hotspots were not experienced at the Wilshire Boulevard/Veteran Avenue intersection (100,000 ADT), it can be reasonably inferred that CO hotspots would not be experienced at any locations near the Revised Project Site as the Tempo Project would only result in up to 1,113 daily trips and the Approved Project would only result in a net of 2,442 daily trips, for a combined maximum of 3,555 daily trips for the Revised Project. Therefore, impacts related to CO hotspots would be less than significant.

Conclusion

In conclusion, both construction and operational localized air quality impacts resulting from the Revised Project would be less than significant and would be the same as the impacts disclosed in the 2020 IS/MND, which were determined to be less than significant. In addition, construction impacts resulting from the Tempo Project would be less than the Approved Project, as the maximum localized daily emissions would be lower. As with the Approved Project, the Tempo Project would not include stationary sources that would cause localized impacts, or generate significant traffic, and therefore localized operational impacts resulting from the Tempo Project and the Approved Project combined would be less than significant.

The Revised Project would not result in new significant impacts and no substantial increase in the severity of previously identified impacts disclosed in the 2020 IS/MND would occur. Likewise, there are no changed circumstances involving new or more severe impacts and no new information of substantial importance requiring new analysis or project-specific mitigation measures.

Mitigation Measures: Impacts related to Impact AQ-3 would be less than significant, and no project-specific mitigation measures are required.

AQ-4 WOULD THE PROJECT RESULT IN OTHER EMISSIONS (SUCH AS THOSE LEADING TO ODORS) ADVERSELY AFFECTING A SUBSTANTIAL NUMBER OF PEOPLE?

Level of Significance: Less Than Significant Impact.

According to the SCAQMD *CEQA Air Quality Handbook*, land uses associated with odor complaints typically include agricultural uses, wastewater treatment plants, food processing plants, chemical plants, composting, refineries, landfills, dairies, and fiberglass molding. As stated in the 2020 IS/MND, the Approved Project includes operation of hotel facilities, and restaurant spaces, which are not anticipated to generate odors and does not result in operation of the types of land uses listed by SCAQMD. Thus, the 2020 IS/MND Section 3.3 d) concluded that the Approved Project would result in less than significant odor impact during construction and operation.

The Tempo Project proposes to develop hotel uses on and does not include any uses identified by the SCAQMD as being associated with odors. However, certain odors may emanate from construction operations if diesel-powered construction equipment during the construction period for the Tempo Project. These odors would be limited to the construction period and would disperse quickly; therefore, these odors would not be considered a significant impact. Construction activities associated with the Tempo Project may generate detectable odors from heavy-duty equipment exhaust and architectural coatings. However, construction-related odors would be short-term in nature and cease upon project completion. In addition, the Tempo Project would be required to comply with the California Code of Regulations, Title 13, Sections 2449(d)(3) and 2485, which minimizes the idling time of construction equipment either by shutting it off when not in use or by reducing the time of idling to no more than five minutes. This would further reduce the detectable odors from heavy-duty equipment exhaust. The Tempo Project would also comply with the SCAQMD Rule 1113, which would minimize odor impacts from ROG emissions during architectural coating. As such, the Tempo Project would not generate significant amount of other emissions (such as those leading to odors), and impacts would be less than significant in this regard.

In conclusion, construction and operational impacts as a result of the Revised Project pertaining to other air emissions (such as those leading to odors) would be less than significant, and would be the same as impacts disclosed in the 2020 IS/MND, which were also determined to be less than significant. In addition, as with the Approved Project, the Tempo Project would not include land uses that would generate odors, and therefore operational odor impacts resulting from the Tempo project and the Approved Project combined would be less than significant.

The Revised Project would not result in new significant impacts and no substantial increase in the severity of previously identified impacts disclosed in the 2020 IS/MND would occur. Likewise, there are no changed circumstances involving new or more severe impacts and no new information of substantial importance requiring new analysis or project-specific mitigation measures.

Mitigation Measures: Impacts related to Impact AQ-4 would be less than significant, and no project-specific mitigation measures are required.

REFERENCES

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Appendix A
Air Quality Emissions Data

Tempo by Hilton Detailed Report

Table of Contents

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Tempo by Hilton
Construction Start Date	8/1/2024
Operational Year	2026
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	0.50
Precipitation (days)	24.4
Location	34.141583262590174, -118.03818989813819
County	Los Angeles-South Coast
City	Arcadia
Air District	South Coast AQMD
Air Basin	South Coast
TAZ	4922
EDFZ	7
Electric Utility	Southern California Edison
Gas Utility	Southern California Gas
App Version	2022.1.1.23

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description

Hotel	91.0	Room	0.73	57,790	5,318	—	—	—
Parking Lot	25.0	Space	0.22	0.00	0.00	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

Sector	#	Measure Title
Construction	C-10-A	Water Exposed Surfaces
Construction	C-11	Limit Vehicle Speeds on Unpaved Roads
Water	W-4	Require Low-Flow Water Fixtures

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.63	13.7	11.9	16.8	0.02	0.54	5.48	6.02	0.49	2.61	3.11	—	3,207	3,207	0.13	0.08	3.18	3,238
Mit.	1.63	13.7	11.9	16.8	0.02	0.54	1.55	2.09	0.49	0.71	1.20	—	3,207	3,207	0.13	0.08	3.18	3,238
% Reduced	—	—	—	—	—	—	72%	65%	—	73%	61%	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.48	1.23	11.9	11.4	0.02	0.54	5.48	6.02	0.49	2.61	3.11	—	2,090	2,090	0.09	0.06	0.06	2,111
Mit.	1.48	1.23	11.9	11.4	0.02	0.54	1.55	2.09	0.49	0.71	1.20	—	2,090	2,090	0.09	0.06	0.06	2,111
% Reduced	—	—	—	—	—	—	72%	65%	—	73%	61%	—	—	—	—	—	—	—

Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.59	1.24	4.34	6.62	0.01	0.17	0.89	1.00	0.16	0.41	0.52	—	1,453	1,453	0.06	0.05	0.66	1,469
Mit.	0.59	1.24	4.34	6.62	0.01	0.17	0.30	0.47	0.16	0.12	0.23	—	1,453	1,453	0.06	0.05	0.66	1,469
% Reduced	—	—	—	—	—	—	66%	53%	—	71%	56%	—	—	—	—	—	—	—
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.11	0.23	0.79	1.21	< 0.005	0.03	0.16	0.18	0.03	0.08	0.09	—	241	241	0.01	0.01	0.11	243
Mit.	0.11	0.23	0.79	1.21	< 0.005	0.03	0.05	0.09	0.03	0.02	0.04	—	241	241	0.01	0.01	0.11	243
% Reduced	—	—	—	—	—	—	66%	53%	—	71%	56%	—	—	—	—	—	—	—

2.2. Construction Emissions by Year, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	1.48	1.23	11.9	11.5	0.02	0.54	5.48	6.02	0.49	2.61	3.11	—	2,095	2,095	0.09	0.06	1.03	2,117
2025	1.63	13.7	10.9	16.8	0.02	0.44	0.69	1.13	0.41	0.17	0.57	—	3,207	3,207	0.13	0.08	3.18	3,238
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	1.48	1.23	11.9	11.4	0.02	0.54	5.48	6.02	0.49	2.61	3.11	—	2,090	2,090	0.09	0.06	0.06	2,111
2025	0.76	0.63	5.61	8.54	0.01	0.22	0.40	0.62	0.20	0.10	0.30	—	1,923	1,923	0.08	0.06	0.05	1,945
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	0.32	0.27	2.55	2.80	< 0.005	0.11	0.89	1.00	0.10	0.41	0.52	—	552	552	0.02	0.02	0.18	558
2025	0.59	1.24	4.34	6.62	0.01	0.17	0.30	0.47	0.16	0.07	0.23	—	1,453	1,453	0.06	0.05	0.66	1,469

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	0.06	0.05	0.47	0.51	< 0.005	0.02	0.16	0.18	0.02	0.08	0.09	—	91.5	91.5	< 0.005	< 0.005	0.03	92.4
2025	0.11	0.23	0.79	1.21	< 0.005	0.03	0.05	0.09	0.03	0.01	0.04	—	241	241	0.01	0.01	0.11	243

2.3. Construction Emissions by Year, Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	1.48	1.23	11.9	11.5	0.02	0.54	1.55	2.09	0.49	0.71	1.20	—	2,095	2,095	0.09	0.06	1.03	2,117
2025	1.63	13.7	10.9	16.8	0.02	0.44	0.69	1.13	0.41	0.17	0.57	—	3,207	3,207	0.13	0.08	3.18	3,238
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	1.48	1.23	11.9	11.4	0.02	0.54	1.55	2.09	0.49	0.71	1.20	—	2,090	2,090	0.09	0.06	0.06	2,111
2025	0.76	0.63	5.61	8.54	0.01	0.22	0.40	0.62	0.20	0.10	0.30	—	1,923	1,923	0.08	0.06	0.05	1,945
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	0.32	0.27	2.55	2.80	< 0.005	0.11	0.28	0.40	0.10	0.12	0.22	—	552	552	0.02	0.02	0.18	558
2025	0.59	1.24	4.34	6.62	0.01	0.17	0.30	0.47	0.16	0.07	0.23	—	1,453	1,453	0.06	0.05	0.66	1,469
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	0.06	0.05	0.47	0.51	< 0.005	0.02	0.05	0.07	0.02	0.02	0.04	—	91.5	91.5	< 0.005	< 0.005	0.03	92.4
2025	0.11	0.23	0.79	1.21	< 0.005	0.03	0.05	0.09	0.03	0.01	0.04	—	241	241	0.01	0.01	0.11	243

2.4. Operations Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	4.57	5.44	3.30	35.8	0.08	0.09	7.24	7.32	0.08	1.84	1.92	31.3	9,785	9,816	3.64	0.33	117	10,123
Mit.	4.57	5.44	3.30	35.8	0.08	0.09	7.24	7.32	0.08	1.84	1.92	30.8	9,782	9,813	3.58	0.33	117	10,119
% Reduced	—	—	—	—	—	—	—	—	—	—	—	2%	< 0.5%	< 0.5%	1%	< 0.5%	—	< 0.5%
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	4.08	4.98	3.55	30.5	0.08	0.08	7.24	7.32	0.08	1.84	1.92	31.3	9,439	9,470	3.65	0.35	91.0	9,756
Mit.	4.08	4.98	3.55	30.5	0.08	0.08	7.24	7.32	0.08	1.84	1.92	30.8	9,436	9,467	3.60	0.35	91.0	9,751
% Reduced	—	—	—	—	—	—	—	—	—	—	—	2%	< 0.5%	< 0.5%	1%	< 0.5%	—	< 0.5%
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	4.26	5.14	3.52	32.3	0.08	0.09	6.94	7.03	0.08	1.76	1.85	31.3	9,339	9,370	3.64	0.34	102	9,664
Mit.	4.26	5.14	3.52	32.3	0.08	0.09	6.94	7.03	0.08	1.76	1.85	30.8	9,336	9,367	3.58	0.34	102	9,659
% Reduced	—	—	—	—	—	—	—	—	—	—	—	2%	< 0.5%	< 0.5%	1%	< 0.5%	—	< 0.5%
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.78	0.94	0.64	5.89	0.01	0.02	1.27	1.28	0.01	0.32	0.34	5.18	1,546	1,551	0.60	0.06	16.8	1,600
Mit.	0.78	0.94	0.64	5.89	0.01	0.02	1.27	1.28	0.01	0.32	0.34	5.09	1,546	1,551	0.59	0.06	16.8	1,599
% Reduced	—	—	—	—	—	—	—	—	—	—	—	2%	< 0.5%	< 0.5%	1%	< 0.5%	—	< 0.5%

2.5. Operations Emissions by Sector, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Sector	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	4.08	3.69	2.83	32.9	0.08	0.05	7.24	7.29	0.05	1.84	1.88	—	8,025	8,025	0.38	0.31	27.1	8,154
Area	0.45	1.72	0.02	2.51	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	10.3	10.3	< 0.005	< 0.005	—	10.4
Energy	0.05	0.02	0.45	0.38	< 0.005	0.03	—	0.03	0.03	—	0.03	—	1,726	1,726	0.12	0.01	—	1,732
Water	—	—	—	—	—	—	—	—	—	—	—	4.42	23.5	27.9	0.46	0.01	—	42.5
Waste	—	—	—	—	—	—	—	—	—	—	—	26.9	0.00	26.9	2.68	0.00	—	93.9
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	90.3	90.3
Total	4.57	5.44	3.30	35.8	0.08	0.09	7.24	7.32	0.08	1.84	1.92	31.3	9,785	9,816	3.64	0.33	117	10,123
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	4.03	3.64	3.10	30.2	0.08	0.05	7.24	7.29	0.05	1.84	1.88	—	7,690	7,690	0.39	0.33	0.70	7,797
Area	—	1.31	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Energy	0.05	0.02	0.45	0.38	< 0.005	0.03	—	0.03	0.03	—	0.03	—	1,726	1,726	0.12	0.01	—	1,732
Water	—	—	—	—	—	—	—	—	—	—	—	4.42	23.5	27.9	0.46	0.01	—	42.5
Waste	—	—	—	—	—	—	—	—	—	—	—	26.9	0.00	26.9	2.68	0.00	—	93.9
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	90.3	90.3
Total	4.08	4.98	3.55	30.5	0.08	0.08	7.24	7.32	0.08	1.84	1.92	31.3	9,439	9,470	3.65	0.35	91.0	9,756
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	3.91	3.53	3.06	30.2	0.07	0.05	6.94	6.99	0.05	1.76	1.81	—	7,582	7,582	0.38	0.32	11.4	7,698
Area	0.31	1.59	0.01	1.72	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	7.08	7.08	< 0.005	< 0.005	—	7.10
Energy	0.05	0.02	0.45	0.38	< 0.005	0.03	—	0.03	0.03	—	0.03	—	1,726	1,726	0.12	0.01	—	1,732
Water	—	—	—	—	—	—	—	—	—	—	—	4.42	23.5	27.9	0.46	0.01	—	42.5
Waste	—	—	—	—	—	—	—	—	—	—	—	26.9	0.00	26.9	2.68	0.00	—	93.9
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	90.3	90.3
Total	4.26	5.14	3.52	32.3	0.08	0.09	6.94	7.03	0.08	1.76	1.85	31.3	9,339	9,370	3.64	0.34	102	9,664

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.71	0.64	0.56	5.51	0.01	0.01	1.27	1.28	0.01	0.32	0.33	—	1,255	1,255	0.06	0.05	1.89	1,275
Area	0.06	0.29	< 0.005	0.31	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.17	1.17	< 0.005	< 0.005	—	1.18
Energy	0.01	< 0.005	0.08	0.07	< 0.005	0.01	—	0.01	0.01	—	0.01	—	286	286	0.02	< 0.005	—	287
Water	—	—	—	—	—	—	—	—	—	—	—	0.73	3.89	4.62	0.08	< 0.005	—	7.04
Waste	—	—	—	—	—	—	—	—	—	—	—	4.45	0.00	4.45	0.44	0.00	—	15.6
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	15.0	15.0
Total	0.78	0.94	0.64	5.89	0.01	0.02	1.27	1.28	0.01	0.32	0.34	5.18	1,546	1,551	0.60	0.06	16.8	1,600

2.6. Operations Emissions by Sector, Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Sector	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	4.08	3.69	2.83	32.9	0.08	0.05	7.24	7.29	0.05	1.84	1.88	—	8,025	8,025	0.38	0.31	27.1	8,154
Area	0.45	1.72	0.02	2.51	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	10.3	10.3	< 0.005	< 0.005	—	10.4
Energy	0.05	0.02	0.45	0.38	< 0.005	0.03	—	0.03	0.03	—	0.03	—	1,726	1,726	0.12	0.01	—	1,732
Water	—	—	—	—	—	—	—	—	—	—	—	3.90	20.8	24.7	0.40	0.01	—	37.6
Waste	—	—	—	—	—	—	—	—	—	—	—	26.9	0.00	26.9	2.68	0.00	—	93.9
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	90.3	90.3
Total	4.57	5.44	3.30	35.8	0.08	0.09	7.24	7.32	0.08	1.84	1.92	30.8	9,782	9,813	3.58	0.33	117	10,119
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	4.03	3.64	3.10	30.2	0.08	0.05	7.24	7.29	0.05	1.84	1.88	—	7,690	7,690	0.39	0.33	0.70	7,797
Area	—	1.31	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Energy	0.05	0.02	0.45	0.38	< 0.005	0.03	—	0.03	0.03	—	0.03	—	1,726	1,726	0.12	0.01	—	1,732
Water	—	—	—	—	—	—	—	—	—	—	—	3.90	20.8	24.7	0.40	0.01	—	37.6

Waste	—	—	—	—	—	—	—	—	—	—	—	26.9	0.00	26.9	2.68	0.00	—	93.9
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	90.3	90.3
Total	4.08	4.98	3.55	30.5	0.08	0.08	7.24	7.32	0.08	1.84	1.92	30.8	9,436	9,467	3.60	0.35	91.0	9,751
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	3.91	3.53	3.06	30.2	0.07	0.05	6.94	6.99	0.05	1.76	1.81	—	7,582	7,582	0.38	0.32	11.4	7,698
Area	0.31	1.59	0.01	1.72	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	7.08	7.08	< 0.005	< 0.005	—	7.10
Energy	0.05	0.02	0.45	0.38	< 0.005	0.03	—	0.03	0.03	—	0.03	—	1,726	1,726	0.12	0.01	—	1,732
Water	—	—	—	—	—	—	—	—	—	—	—	3.90	20.8	24.7	0.40	0.01	—	37.6
Waste	—	—	—	—	—	—	—	—	—	—	—	26.9	0.00	26.9	2.68	0.00	—	93.9
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	90.3	90.3
Total	4.26	5.14	3.52	32.3	0.08	0.09	6.94	7.03	0.08	1.76	1.85	30.8	9,336	9,367	3.58	0.34	102	9,659
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.71	0.64	0.56	5.51	0.01	0.01	1.27	1.28	0.01	0.32	0.33	—	1,255	1,255	0.06	0.05	1.89	1,275
Area	0.06	0.29	< 0.005	0.31	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.17	1.17	< 0.005	< 0.005	—	1.18
Energy	0.01	< 0.005	0.08	0.07	< 0.005	0.01	—	0.01	0.01	—	0.01	—	286	286	0.02	< 0.005	—	287
Water	—	—	—	—	—	—	—	—	—	—	—	0.65	3.44	4.09	0.07	< 0.005	—	6.22
Waste	—	—	—	—	—	—	—	—	—	—	—	4.45	0.00	4.45	0.44	0.00	—	15.6
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	15.0	15.0
Total	0.78	0.94	0.64	5.89	0.01	0.02	1.27	1.28	0.01	0.32	0.34	5.09	1,546	1,551	0.59	0.06	16.8	1,599

3. Construction Emissions Details

3.1. Grading (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.41	1.19	11.4	10.7	0.02	0.53	—	0.53	0.49	—	0.49	—	1,713	1,713	0.07	0.01	—	1,719
Dust From Material Movement	—	—	—	—	—	—	5.31	5.31	—	2.57	2.57	—	—	—	—	—	—	—
Onsite truck	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	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.41	1.19	11.4	10.7	0.02	0.53	—	0.53	0.49	—	0.49	—	1,713	1,713	0.07	0.01	—	1,719
Dust From Material Movement	—	—	—	—	—	—	5.31	5.31	—	2.57	2.57	—	—	—	—	—	—	—
Onsite truck	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	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.22	0.18	1.75	1.65	< 0.005	0.08	—	0.08	0.08	—	0.08	—	263	263	0.01	< 0.005	—	264
Dust From Material Movement	—	—	—	—	—	—	0.82	0.82	—	0.39	0.39	—	—	—	—	—	—	—
Onsite truck	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	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.03	0.32	0.30	< 0.005	0.01	—	0.01	0.01	—	0.01	—	43.5	43.5	< 0.005	< 0.005	—	43.7

Dust From Material Movement	—	—	—	—	—	—	0.15	0.15	—	0.07	0.07	—	—	—	—	—	—	—
Onsite truck	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	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.03	0.04	0.57	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	106	106	< 0.005	< 0.005	0.42	107
Vendor	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	0.00	0.00
Hauling	0.03	0.01	0.43	0.20	< 0.005	< 0.005	0.07	0.07	< 0.005	0.02	0.02	—	276	276	0.02	0.04	0.61	291
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.03	0.04	0.48	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	100	100	< 0.005	< 0.005	0.01	102
Vendor	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	0.00	0.00
Hauling	0.03	0.01	0.45	0.20	< 0.005	< 0.005	0.07	0.07	< 0.005	0.02	0.02	—	277	277	0.02	0.04	0.02	290
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.08	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	15.6	15.6	< 0.005	< 0.005	0.03	15.8
Vendor	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	0.00	0.00
Hauling	< 0.005	< 0.005	0.07	0.03	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	42.4	42.4	< 0.005	0.01	0.04	44.6
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.59	2.59	< 0.005	< 0.005	< 0.005	2.62
Vendor	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	0.00	0.00
Hauling	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	7.02	7.02	< 0.005	< 0.005	0.01	7.38

3.2. Grading (2024) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.41	1.19	11.4	10.7	0.02	0.53	—	0.53	0.49	—	0.49	—	1,713	1,713	0.07	0.01	—	1,719
Dust From Material Movement	—	—	—	—	—	—	1.38	1.38	—	0.67	0.67	—	—	—	—	—	—	—
Onsite truck	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	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.41	1.19	11.4	10.7	0.02	0.53	—	0.53	0.49	—	0.49	—	1,713	1,713	0.07	0.01	—	1,719
Dust From Material Movement	—	—	—	—	—	—	1.38	1.38	—	0.67	0.67	—	—	—	—	—	—	—
Onsite truck	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	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.22	0.18	1.75	1.65	< 0.005	0.08	—	0.08	0.08	—	0.08	—	263	263	0.01	< 0.005	—	264
Dust From Material Movement	—	—	—	—	—	—	0.21	0.21	—	0.10	0.10	—	—	—	—	—	—	—
Onsite truck	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	0.00	0.00

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.03	0.32	0.30	< 0.005	0.01	—	0.01	0.01	—	0.01	—	43.5	43.5	< 0.005	< 0.005	—	43.7
Dust From Material Movement	—	—	—	—	—	—	0.04	0.04	—	0.02	0.02	—	—	—	—	—	—	—
Onsite truck	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	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.03	0.04	0.57	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	106	106	< 0.005	< 0.005	0.42	107
Vendor	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	0.00	0.00
Hauling	0.03	0.01	0.43	0.20	< 0.005	< 0.005	0.07	0.07	< 0.005	0.02	0.02	—	276	276	0.02	0.04	0.61	291
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.03	0.04	0.48	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	100	100	< 0.005	< 0.005	0.01	102
Vendor	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	0.00	0.00
Hauling	0.03	0.01	0.45	0.20	< 0.005	< 0.005	0.07	0.07	< 0.005	0.02	0.02	—	277	277	0.02	0.04	0.02	290
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.08	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	15.6	15.6	< 0.005	< 0.005	0.03	15.8
Vendor	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	0.00	0.00
Hauling	< 0.005	< 0.005	0.07	0.03	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	42.4	42.4	< 0.005	0.01	0.04	44.6
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.59	2.59	< 0.005	< 0.005	< 0.005	2.62
Vendor	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	0.00	0.00
Hauling	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	7.02	7.02	< 0.005	< 0.005	0.01	7.38

3.3. Building Construction (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.67	0.56	5.60	6.98	0.01	0.26	—	0.26	0.23	—	0.23	—	1,305	1,305	0.05	0.01	—	1,309
Onsite truck	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	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.08	0.07	0.67	0.83	< 0.005	0.03	—	0.03	0.03	—	0.03	—	156	156	0.01	< 0.005	—	156
Onsite truck	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	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.12	0.15	< 0.005	0.01	—	0.01	0.01	—	0.01	—	25.8	25.8	< 0.005	< 0.005	—	25.9
Onsite truck	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	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.12	0.11	0.14	1.55	0.00	0.00	0.32	0.32	0.00	0.07	0.07	—	325	325	0.01	0.01	0.04	329
Vendor	0.02	0.01	0.37	0.18	< 0.005	< 0.005	0.08	0.09	< 0.005	0.02	0.03	—	306	306	0.01	0.04	0.02	319
Hauling	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	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.02	0.19	0.00	0.00	0.04	0.04	0.00	0.01	0.01	—	39.3	39.3	< 0.005	< 0.005	0.07	39.9
Vendor	< 0.005	< 0.005	0.05	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	36.5	36.5	< 0.005	0.01	0.04	38.1
Hauling	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	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	6.51	6.51	< 0.005	< 0.005	0.01	6.60
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	6.04	6.04	< 0.005	< 0.005	0.01	6.30
Hauling	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	0.00	0.00

3.4. Building Construction (2024) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.67	0.56	5.60	6.98	0.01	0.26	—	0.26	0.23	—	0.23	—	1,305	1,305	0.05	0.01	—	1,309
Onsite truck	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	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.08	0.07	0.67	0.83	< 0.005	0.03	—	0.03	0.03	—	0.03	—	156	156	0.01	< 0.005	—	156
Onsite truck	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	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.12	0.15	< 0.005	0.01	—	0.01	0.01	—	0.01	—	25.8	25.8	< 0.005	< 0.005	—	25.9
Onsite truck	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	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.12	0.11	0.14	1.55	0.00	0.00	0.32	0.32	0.00	0.07	0.07	—	325	325	0.01	0.01	0.04	329
Vendor	0.02	0.01	0.37	0.18	< 0.005	< 0.005	0.08	0.09	< 0.005	0.02	0.03	—	306	306	0.01	0.04	0.02	319
Hauling	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	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.02	0.19	0.00	0.00	0.04	0.04	0.00	0.01	0.01	—	39.3	39.3	< 0.005	< 0.005	0.07	39.9
Vendor	< 0.005	< 0.005	0.05	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	36.5	36.5	< 0.005	0.01	0.04	38.1
Hauling	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	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	6.51	6.51	< 0.005	< 0.005	0.01	6.60
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	6.04	6.04	< 0.005	< 0.005	0.01	6.30
Hauling	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	0.00	0.00

3.5. Building Construction (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.62	0.52	5.14	6.94	0.01	0.22	—	0.22	0.20	—	0.20	—	1,305	1,305	0.05	0.01	—	1,309
Onsite truck	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	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.62	0.52	5.14	6.94	0.01	0.22	—	0.22	0.20	—	0.20	—	1,305	1,305	0.05	0.01	—	1,309
Onsite truck	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	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.44	0.37	3.67	4.96	0.01	0.16	—	0.16	0.14	—	0.14	—	932	932	0.04	0.01	—	935
Onsite truck	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	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.08	0.07	0.67	0.90	< 0.005	0.03	—	0.03	0.03	—	0.03	—	154	154	0.01	< 0.005	—	155
Onsite truck	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	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.12	0.10	0.11	1.69	0.00	0.00	0.32	0.32	0.00	0.07	0.07	—	336	336	0.01	0.01	1.23	341

Vendor	0.02	0.01	0.34	0.17	< 0.005	< 0.005	0.08	0.09	< 0.005	0.02	0.02	—	301	301	0.01	0.04	0.82	314
Hauling	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	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.12	0.10	0.12	1.43	0.00	0.00	0.32	0.32	0.00	0.07	0.07	—	318	318	0.01	0.01	0.03	322
Vendor	0.02	0.01	0.36	0.17	< 0.005	< 0.005	0.08	0.09	< 0.005	0.02	0.02	—	301	301	0.01	0.04	0.02	314
Hauling	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	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.07	0.09	1.07	0.00	0.00	0.22	0.22	0.00	0.05	0.05	—	231	231	0.01	0.01	0.38	234
Vendor	0.02	0.01	0.26	0.12	< 0.005	< 0.005	0.06	0.06	< 0.005	0.02	0.02	—	215	215	0.01	0.03	0.25	224
Hauling	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	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.02	0.20	0.00	0.00	0.04	0.04	0.00	0.01	0.01	—	38.2	38.2	< 0.005	< 0.005	0.06	38.7
Vendor	< 0.005	< 0.005	0.05	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	35.5	35.5	< 0.005	< 0.005	0.04	37.1
Hauling	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	0.00	0.00

3.6. Building Construction (2025) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.62	0.52	5.14	6.94	0.01	0.22	—	0.22	0.20	—	0.20	—	1,305	1,305	0.05	0.01	—	1,309
Onsite truck	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	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.62	0.52	5.14	6.94	0.01	0.22	—	0.22	0.20	—	0.20	—	1,305	1,305	0.05	0.01	—	1,309
Onsite truck	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	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.44	0.37	3.67	4.96	0.01	0.16	—	0.16	0.14	—	0.14	—	932	932	0.04	0.01	—	935
Onsite truck	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	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.08	0.07	0.67	0.90	< 0.005	0.03	—	0.03	0.03	—	0.03	—	154	154	0.01	< 0.005	—	155
Onsite truck	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	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.12	0.10	0.11	1.69	0.00	0.00	0.32	0.32	0.00	0.07	0.07	—	336	336	0.01	0.01	1.23	341
Vendor	0.02	0.01	0.34	0.17	< 0.005	< 0.005	0.08	0.09	< 0.005	0.02	0.02	—	301	301	0.01	0.04	0.82	314
Hauling	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	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.12	0.10	0.12	1.43	0.00	0.00	0.32	0.32	0.00	0.07	0.07	—	318	318	0.01	0.01	0.03	322
Vendor	0.02	0.01	0.36	0.17	< 0.005	< 0.005	0.08	0.09	< 0.005	0.02	0.02	—	301	301	0.01	0.04	0.02	314
Hauling	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	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.08	0.07	0.09	1.07	0.00	0.00	0.22	0.22	0.00	0.05	0.05	—	231	231	0.01	0.01	0.38	234
Vendor	0.02	0.01	0.26	0.12	< 0.005	< 0.005	0.06	0.06	< 0.005	0.02	0.02	—	215	215	0.01	0.03	0.25	224
Hauling	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	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.02	0.20	0.00	0.00	0.04	0.04	0.00	0.01	0.01	—	38.2	38.2	< 0.005	< 0.005	0.06	38.7
Vendor	< 0.005	< 0.005	0.05	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	35.5	35.5	< 0.005	< 0.005	0.04	37.1
Hauling	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	0.00	0.00

3.7. Paving (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.61	0.51	4.37	5.31	0.01	0.19	—	0.19	0.18	—	0.18	—	823	823	0.03	0.01	—	826
Paving	—	0.03	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.03	0.26	0.32	< 0.005	0.01	—	0.01	0.01	—	0.01	—	49.6	49.6	< 0.005	< 0.005	—	49.8
Paving	—	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.00	0.00

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.05	0.06	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	8.22	8.22	< 0.005	< 0.005	—	8.25
Paving	—	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.08	0.08	1.22	0.00	0.00	0.23	0.23	0.00	0.05	0.05	—	242	242	0.01	0.01	0.89	246
Vendor	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	0.00	0.00
Hauling	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	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.07	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	14.0	14.0	< 0.005	< 0.005	0.02	14.2
Vendor	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	0.00	0.00
Hauling	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	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.32	2.32	< 0.005	< 0.005	< 0.005	2.35
Vendor	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	0.00	0.00
Hauling	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	0.00	0.00

3.8. Paving (2025) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.61	0.51	4.37	5.31	0.01	0.19	—	0.19	0.18	—	0.18	—	823	823	0.03	0.01	—	826
Paving	—	0.03	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.03	0.26	0.32	< 0.005	0.01	—	0.01	0.01	—	0.01	—	49.6	49.6	< 0.005	< 0.005	—	49.8
Paving	—	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.05	0.06	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	8.22	8.22	< 0.005	< 0.005	—	8.25
Paving	—	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.08	0.08	1.22	0.00	0.00	0.23	0.23	0.00	0.05	0.05	—	242	242	0.01	0.01	0.89	246
Vendor	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	0.00	0.00
Hauling	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	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.07	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	14.0	14.0	< 0.005	< 0.005	0.02	14.2
Vendor	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	0.00	0.00
Hauling	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	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.32	2.32	< 0.005	< 0.005	< 0.005	2.35
Vendor	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	0.00	0.00
Hauling	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	0.00	0.00

3.9. Architectural Coating (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.15	0.13	0.88	1.14	< 0.005	0.03	—	0.03	0.03	—	0.03	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	—	12.3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.01	0.01	0.05	0.07	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	8.05	8.05	< 0.005	< 0.005	—	8.08
Architectural Coatings	—	0.74	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.33	1.33	< 0.005	< 0.005	—	1.34
Architectural Coatings	—	0.14	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.02	0.34	0.00	0.00	0.06	0.06	0.00	0.01	0.01	—	67.1	67.1	< 0.005	< 0.005	0.25	68.1
Vendor	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	0.00	0.00
Hauling	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	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	3.89	3.89	< 0.005	< 0.005	0.01	3.94
Vendor	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	0.00	0.00
Hauling	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	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.64	0.64	< 0.005	< 0.005	< 0.005	0.65

Vendor	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	0.00	0.00
Hauling	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	0.00	0.00

3.10. Architectural Coating (2025) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.15	0.13	0.88	1.14	< 0.005	0.03	—	0.03	0.03	—	0.03	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	—	12.3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.05	0.07	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	8.05	8.05	< 0.005	< 0.005	—	8.08
Architectural Coatings	—	0.74	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.33	1.33	< 0.005	< 0.005	—	1.34

Architect Coatings	—	0.14	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.02	0.34	0.00	0.00	0.06	0.06	0.00	0.01	0.01	—	67.1	67.1	< 0.005	< 0.005	0.25	68.1
Vendor	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	0.00	0.00
Hauling	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	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	3.89	3.89	< 0.005	< 0.005	0.01	3.94
Vendor	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	0.00	0.00
Hauling	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	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.64	0.64	< 0.005	< 0.005	< 0.005	0.65
Vendor	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	0.00	0.00
Hauling	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	0.00	0.00

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hotel	4.08	3.69	2.83	32.9	0.08	0.05	7.24	7.29	0.05	1.84	1.88	—	8,025	8,025	0.38	0.31	27.1	8,154
Parking Lot	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	0.00	0.00
Total	4.08	3.69	2.83	32.9	0.08	0.05	7.24	7.29	0.05	1.84	1.88	—	8,025	8,025	0.38	0.31	27.1	8,154
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hotel	4.03	3.64	3.10	30.2	0.08	0.05	7.24	7.29	0.05	1.84	1.88	—	7,690	7,690	0.39	0.33	0.70	7,797
Parking Lot	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	0.00	0.00
Total	4.03	3.64	3.10	30.2	0.08	0.05	7.24	7.29	0.05	1.84	1.88	—	7,690	7,690	0.39	0.33	0.70	7,797
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hotel	0.71	0.64	0.56	5.51	0.01	0.01	1.27	1.28	0.01	0.32	0.33	—	1,255	1,255	0.06	0.05	1.89	1,275
Parking Lot	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	0.00	0.00
Total	0.71	0.64	0.56	5.51	0.01	0.01	1.27	1.28	0.01	0.32	0.33	—	1,255	1,255	0.06	0.05	1.89	1,275

4.1.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hotel	4.08	3.69	2.83	32.9	0.08	0.05	7.24	7.29	0.05	1.84	1.88	—	8,025	8,025	0.38	0.31	27.1	8,154
Parking Lot	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	0.00	0.00

Total	4.08	3.69	2.83	32.9	0.08	0.05	7.24	7.29	0.05	1.84	1.88	—	8,025	8,025	0.38	0.31	27.1	8,154
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hotel	4.03	3.64	3.10	30.2	0.08	0.05	7.24	7.29	0.05	1.84	1.88	—	7,690	7,690	0.39	0.33	0.70	7,797
Parking Lot	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	0.00	0.00
Total	4.03	3.64	3.10	30.2	0.08	0.05	7.24	7.29	0.05	1.84	1.88	—	7,690	7,690	0.39	0.33	0.70	7,797
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hotel	0.71	0.64	0.56	5.51	0.01	0.01	1.27	1.28	0.01	0.32	0.33	—	1,255	1,255	0.06	0.05	1.89	1,275
Parking Lot	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	0.00	0.00
Total	0.71	0.64	0.56	5.51	0.01	0.01	1.27	1.28	0.01	0.32	0.33	—	1,255	1,255	0.06	0.05	1.89	1,275

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hotel	—	—	—	—	—	—	—	—	—	—	—	—	1,179	1,179	0.07	0.01	—	1,183
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	12.5	12.5	< 0.005	< 0.005	—	12.6
Total	—	—	—	—	—	—	—	—	—	—	—	—	1,191	1,191	0.07	0.01	—	1,196
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hotel	—	—	—	—	—	—	—	—	—	—	—	—	1,179	1,179	0.07	0.01	—	1,183

Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	12.5	12.5	< 0.005	< 0.005	—	12.6
Total	—	—	—	—	—	—	—	—	—	—	—	—	1,191	1,191	0.07	0.01	—	1,196
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hotel	—	—	—	—	—	—	—	—	—	—	—	—	195	195	0.01	< 0.005	—	196
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	2.07	2.07	< 0.005	< 0.005	—	2.08
Total	—	—	—	—	—	—	—	—	—	—	—	—	197	197	0.01	< 0.005	—	198

4.2.2. Electricity Emissions By Land Use - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hotel	—	—	—	—	—	—	—	—	—	—	—	—	1,179	1,179	0.07	0.01	—	1,183
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	12.5	12.5	< 0.005	< 0.005	—	12.6
Total	—	—	—	—	—	—	—	—	—	—	—	—	1,191	1,191	0.07	0.01	—	1,196
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hotel	—	—	—	—	—	—	—	—	—	—	—	—	1,179	1,179	0.07	0.01	—	1,183
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	12.5	12.5	< 0.005	< 0.005	—	12.6
Total	—	—	—	—	—	—	—	—	—	—	—	—	1,191	1,191	0.07	0.01	—	1,196
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hotel	—	—	—	—	—	—	—	—	—	—	—	—	195	195	0.01	< 0.005	—	196
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	2.07	2.07	< 0.005	< 0.005	—	2.08

Total	—	—	—	—	—	—	—	—	—	—	—	—	197	197	0.01	< 0.005	—	198

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hotel	0.05	0.02	0.45	0.38	< 0.005	0.03	—	0.03	0.03	—	0.03	—	535	535	0.05	< 0.005	—	536
Parking Lot	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
Total	0.05	0.02	0.45	0.38	< 0.005	0.03	—	0.03	0.03	—	0.03	—	535	535	0.05	< 0.005	—	536
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hotel	0.05	0.02	0.45	0.38	< 0.005	0.03	—	0.03	0.03	—	0.03	—	535	535	0.05	< 0.005	—	536
Parking Lot	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
Total	0.05	0.02	0.45	0.38	< 0.005	0.03	—	0.03	0.03	—	0.03	—	535	535	0.05	< 0.005	—	536
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hotel	0.01	< 0.005	0.08	0.07	< 0.005	0.01	—	0.01	0.01	—	0.01	—	88.5	88.5	0.01	< 0.005	—	88.8
Parking Lot	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
Total	0.01	< 0.005	0.08	0.07	< 0.005	0.01	—	0.01	0.01	—	0.01	—	88.5	88.5	0.01	< 0.005	—	88.8

4.2.4. Natural Gas Emissions By Land Use - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hotel	0.05	0.02	0.45	0.38	< 0.005	0.03	—	0.03	0.03	—	0.03	—	535	535	0.05	< 0.005	—	536
Parking Lot	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
Total	0.05	0.02	0.45	0.38	< 0.005	0.03	—	0.03	0.03	—	0.03	—	535	535	0.05	< 0.005	—	536
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hotel	0.05	0.02	0.45	0.38	< 0.005	0.03	—	0.03	0.03	—	0.03	—	535	535	0.05	< 0.005	—	536
Parking Lot	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
Total	0.05	0.02	0.45	0.38	< 0.005	0.03	—	0.03	0.03	—	0.03	—	535	535	0.05	< 0.005	—	536
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hotel	0.01	< 0.005	0.08	0.07	< 0.005	0.01	—	0.01	0.01	—	0.01	—	88.5	88.5	0.01	< 0.005	—	88.8
Parking Lot	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
Total	0.01	< 0.005	0.08	0.07	< 0.005	0.01	—	0.01	0.01	—	0.01	—	88.5	88.5	0.01	< 0.005	—	88.8

4.3. Area Emissions by Source

4.3.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Source	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	1.24	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Architectural	—	0.07	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.45	0.41	0.02	2.51	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	10.3	10.3	< 0.005	< 0.005	—	10.4
Total	0.45	1.72	0.02	2.51	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	10.3	10.3	< 0.005	< 0.005	—	10.4
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	1.24	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.07	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	1.31	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	0.23	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.06	0.05	< 0.005	0.31	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.17	1.17	< 0.005	< 0.005	—	1.18
Total	0.06	0.29	< 0.005	0.31	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.17	1.17	< 0.005	< 0.005	—	1.18

4.3.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Source	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	1.24	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.07	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.45	0.41	0.02	2.51	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	10.3	10.3	< 0.005	< 0.005	—	10.4
Total	0.45	1.72	0.02	2.51	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	10.3	10.3	< 0.005	< 0.005	—	10.4
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	1.24	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.07	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	1.31	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	0.23	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.06	0.05	< 0.005	0.31	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.17	1.17	< 0.005	< 0.005	—	1.18
Total	0.06	0.29	< 0.005	0.31	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.17	1.17	< 0.005	< 0.005	—	1.18

4.4. Water Emissions by Land Use

4.4.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hotel	—	—	—	—	—	—	—	—	—	—	—	4.42	23.5	27.9	0.46	0.01	—	42.5
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	4.42	23.5	27.9	0.46	0.01	—	42.5
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hotel	—	—	—	—	—	—	—	—	—	—	—	4.42	23.5	27.9	0.46	0.01	—	42.5
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	4.42	23.5	27.9	0.46	0.01	—	42.5
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hotel	—	—	—	—	—	—	—	—	—	—	—	0.73	3.89	4.62	0.08	< 0.005	—	7.04
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	0.73	3.89	4.62	0.08	< 0.005	—	7.04

4.4.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hotel	—	—	—	—	—	—	—	—	—	—	—	3.90	20.8	24.7	0.40	0.01	—	37.6
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	3.90	20.8	24.7	0.40	0.01	—	37.6
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hotel	—	—	—	—	—	—	—	—	—	—	—	3.90	20.8	24.7	0.40	0.01	—	37.6
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	3.90	20.8	24.7	0.40	0.01	—	37.6
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hotel	—	—	—	—	—	—	—	—	—	—	—	0.65	3.44	4.09	0.07	< 0.005	—	6.22
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	0.65	3.44	4.09	0.07	< 0.005	—	6.22

4.5. Waste Emissions by Land Use

4.5.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hotel	—	—	—	—	—	—	—	—	—	—	—	26.9	0.00	26.9	2.68	0.00	—	93.9
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00

Total	—	—	—	—	—	—	—	—	—	—	—	26.9	0.00	26.9	2.68	0.00	—	93.9
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hotel	—	—	—	—	—	—	—	—	—	—	—	26.9	0.00	26.9	2.68	0.00	—	93.9
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	26.9	0.00	26.9	2.68	0.00	—	93.9
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hotel	—	—	—	—	—	—	—	—	—	—	—	4.45	0.00	4.45	0.44	0.00	—	15.6
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	4.45	0.00	4.45	0.44	0.00	—	15.6

4.5.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hotel	—	—	—	—	—	—	—	—	—	—	—	26.9	0.00	26.9	2.68	0.00	—	93.9
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	26.9	0.00	26.9	2.68	0.00	—	93.9
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hotel	—	—	—	—	—	—	—	—	—	—	—	26.9	0.00	26.9	2.68	0.00	—	93.9
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00

Total	—	—	—	—	—	—	—	—	—	—	—	26.9	0.00	26.9	2.68	0.00	—	93.9
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hotel	—	—	—	—	—	—	—	—	—	—	—	4.45	0.00	4.45	0.44	0.00	—	15.6
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	4.45	0.00	4.45	0.44	0.00	—	15.6

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hotel	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	90.3	90.3
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	90.3	90.3
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hotel	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	90.3	90.3
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	90.3	90.3
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hotel	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	15.0	15.0
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	15.0	15.0

4.6.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hotel	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	90.3	90.3
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	90.3	90.3
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hotel	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	90.3	90.3
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	90.3	90.3
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hotel	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	15.0	15.0
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	15.0	15.0

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.7.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.8.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.9.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.4. Soil Carbon Accumulation By Vegetation Type - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.5. Above and Belowground Carbon Accumulation by Land Use Type - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.6. Avoided and Sequestered Emissions by Species - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Grading	Grading	8/15/2024	10/31/2024	5.00	56.0	—
Building Construction	Building Construction	11/1/2024	12/31/2025	5.00	304	—
Paving	Paving	9/1/2025	9/30/2025	5.00	22.0	—
Architectural Coating	Architectural Coating	9/1/2025	9/30/2025	5.00	22.0	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Grading	Graders	Diesel	Average	1.00	6.00	148	0.41
Grading	Rubber Tired Dozers	Diesel	Average	1.00	6.00	367	0.40

Grading	Tractors/Loaders/Backh	Diesel	Average	1.00	7.00	84.0	0.37
Building Construction	Cranes	Diesel	Average	1.00	4.00	367	0.29
Building Construction	Forklifts	Diesel	Average	2.00	6.00	82.0	0.20
Building Construction	Tractors/Loaders/Backh oes	Diesel	Average	2.00	8.00	84.0	0.37
Paving	Cement and Mortar Mixers	Diesel	Average	4.00	6.00	10.0	0.56
Paving	Pavers	Diesel	Average	1.00	7.00	81.0	0.42
Paving	Rollers	Diesel	Average	1.00	7.00	36.0	0.38
Paving	Tractors/Loaders/Backh oes	Diesel	Average	1.00	7.00	84.0	0.37
Architectural Coating	Air Compressors	Diesel	Average	1.00	6.00	37.0	0.48

5.2.2. Mitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Grading	Graders	Diesel	Average	1.00	6.00	148	0.41
Grading	Rubber Tired Dozers	Diesel	Average	1.00	6.00	367	0.40
Grading	Tractors/Loaders/Backh oes	Diesel	Average	1.00	7.00	84.0	0.37
Building Construction	Cranes	Diesel	Average	1.00	4.00	367	0.29
Building Construction	Forklifts	Diesel	Average	2.00	6.00	82.0	0.20
Building Construction	Tractors/Loaders/Backh oes	Diesel	Average	2.00	8.00	84.0	0.37
Paving	Cement and Mortar Mixers	Diesel	Average	4.00	6.00	10.0	0.56
Paving	Pavers	Diesel	Average	1.00	7.00	81.0	0.42
Paving	Rollers	Diesel	Average	1.00	7.00	36.0	0.38
Paving	Tractors/Loaders/Backh oes	Diesel	Average	1.00	7.00	84.0	0.37
Architectural Coating	Air Compressors	Diesel	Average	1.00	6.00	37.0	0.48

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Grading	—	—	—	—
Grading	Worker	7.50	18.5	LDA,LDT1,LDT2
Grading	Vendor	—	10.2	HHDT,MHDT
Grading	Hauling	10.7	7.00	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	24.3	18.5	LDA,LDT1,LDT2
Building Construction	Vendor	9.47	10.2	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	17.5	18.5	LDA,LDT1,LDT2
Paving	Vendor	—	10.2	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	4.85	18.5	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	10.2	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	—	—	HHDT

5.3.2. Mitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix

Grading	—	—	—	—
Grading	Worker	7.50	18.5	LDA,LDT1,LDT2
Grading	Vendor	—	10.2	HHDT,MHDT
Grading	Hauling	10.7	7.00	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	24.3	18.5	LDA,LDT1,LDT2
Building Construction	Vendor	9.47	10.2	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	17.5	18.5	LDA,LDT1,LDT2
Paving	Vendor	—	10.2	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	4.85	18.5	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	10.2	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
Architectural Coating	0.00	0.00	86,685	28,895	588

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (Cubic Yards)	Material Exported (Cubic Yards)	Acres Graded (acres)	Material Demolished (sq. ft.)	Acres Paved (acres)
Grading	—	4,800	42.0	0.00	—
Paving	0.00	0.00	0.00	0.00	0.22

5.6.2. Construction Earthmoving Control Strategies

Non-applicable. No control strategies activated by user.

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
Hotel	0.00	0%
Parking Lot	0.22	100%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2024	0.00	532	0.03	< 0.005
2025	0.00	532	0.03	< 0.005

5.9. Operational Mobile Sources

5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Hotel	1,113	915	1,113	395,928	10,205	8,389	10,205	3,630,024
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

5.9.2. Mitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Hotel	1,113	915	1,113	395,928	10,205	8,389	10,205	3,630,024
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

5.10.1.2. Mitigated

5.10.2. Architectural Coatings

Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
0	0.00	86,685	28,895	588

5.10.3. Landscape Equipment

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	250

5.10.4. Landscape Equipment - Mitigated

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	250

5.11. Operational Energy Consumption

5.11.1. Unmitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Hotel	808,696	532	0.0330	0.0040	1,668,496
Parking Lot	8,586	532	0.0330	0.0040	0.00

5.11.2. Mitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Hotel	808,696	532	0.0330	0.0040	1,668,496
Parking Lot	8,586	532	0.0330	0.0040	0.00

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Hotel	2,308,376	74,583
Parking Lot	0.00	0.00

5.12.2. Mitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Hotel	2,035,757	74,583
Parking Lot	0.00	0.00

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Hotel	49.8	—
Parking Lot	0.00	—

5.13.2. Mitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Hotel	49.8	—
Parking Lot	0.00	—

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
Hotel	Household refrigerators and/or freezers	R-134a	1,430	0.00	0.60	0.00	1.00
Hotel	Other commercial A/C and heat pumps	R-410A	2,088	1.80	4.00	4.00	18.0
Hotel	Walk-in refrigerators and freezers	R-404A	3,922	< 0.005	7.50	7.50	20.0

5.14.2. Mitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
Hotel	Household refrigerators and/or freezers	R-134a	1,430	0.00	0.60	0.00	1.00
Hotel	Other commercial A/C and heat pumps	R-410A	2,088	1.80	4.00	4.00	18.0
Hotel	Walk-in refrigerators and freezers	R-404A	3,922	< 0.005	7.50	7.50	20.0

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor

5.15.2. Mitigated

Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

Equipment Type	Fuel Type	Number per Day	Hours per Day	Hours per Year	Horsepower	Load Factor

5.16.2. Process Boilers

Equipment Type	Fuel Type	Number	Boiler Rating (MMBtu/hr)	Daily Heat Input (MMBtu/day)	Annual Heat Input (MMBtu/yr)

5.17. User Defined

Equipment Type	Fuel Type

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1.2. Mitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.1.2. Mitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

5.18.2.2. Mitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

Cal-Adapt midcentury 2040–2059 average projections for four hazards are reported below for your project location. These are under Representation Concentration Pathway (RCP) 8.5 which assumes GHG emissions will continue to rise strongly through 2050 and then plateau around 2100.

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	25.9	annual days of extreme heat
Extreme Precipitation	9.15	annual days with precipitation above 20 mm
Sea Level Rise	—	meters of inundation depth
Wildfire	16.9	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about ¾ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (Radke et al., 2017, CEC-500-2017-008), and consider inundation location and depth for the San Francisco Bay, the Sacramento-San Joaquin River Delta and California coast resulting different increments of sea level rise coupled with extreme storm events. Users may select from four scenarios to view the range in potential inundation depth for the grid cell. The four scenarios are: No rise, 0.5 meter, 1.0 meter, 1.41 meters
Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	N/A	N/A	N/A	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	N/A	N/A	N/A	N/A

Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	N/A	N/A	N/A	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	N/A	N/A	N/A	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	N/A	N/A	N/A	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction measures.

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	84.6
AQ-PM	70.7
AQ-DPM	57.7
Drinking Water	73.7
Lead Risk Housing	54.4
Pesticides	0.00
Toxic Releases	70.1
Traffic	80.3
Effect Indicators	—
CleanUp Sites	74.9
Groundwater	0.00
Haz Waste Facilities/Generators	59.8
Impaired Water Bodies	0.00
Solid Waste	70.4
Sensitive Population	—
Asthma	6.04
Cardio-vascular	7.47
Low Birth Weights	7.29
Socioeconomic Factor Indicators	—
Education	42.7
Housing	10.2
Linguistic	80.2
Poverty	27.9
Unemployment	45.8

7.2. Healthy Places Index Scores

The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Economic	—
Above Poverty	84.3320929
Employed	68.92082638
Median HI	57.88528166
Education	—
Bachelor's or higher	80.67496471
High school enrollment	100
Preschool enrollment	84.88387014
Transportation	—
Auto Access	70.20402926
Active commuting	5.915565251
Social	—
2-parent households	35.26241499
Voting	21.00603105
Neighborhood	—
Alcohol availability	87.47593995
Park access	34.12036443
Retail density	39.49698447
Supermarket access	46.73424868
Tree canopy	66.75221352
Housing	—
Homeownership	46.75991274
Housing habitability	43.07712049
Low-inc homeowner severe housing cost burden	33.1707943

Low-inc renter severe housing cost burden	70.48633389
Uncrowded housing	63.4800462
Health Outcomes	—
Insured adults	52.11086873
Arthritis	0.0
Asthma ER Admissions	94.2
High Blood Pressure	0.0
Cancer (excluding skin)	0.0
Asthma	0.0
Coronary Heart Disease	0.0
Chronic Obstructive Pulmonary Disease	0.0
Diagnosed Diabetes	0.0
Life Expectancy at Birth	97.0
Cognitively Disabled	87.2
Physically Disabled	80.2
Heart Attack ER Admissions	84.0
Mental Health Not Good	0.0
Chronic Kidney Disease	0.0
Obesity	0.0
Pedestrian Injuries	97.1
Physical Health Not Good	0.0
Stroke	0.0
Health Risk Behaviors	—
Binge Drinking	0.0
Current Smoker	0.0
No Leisure Time for Physical Activity	0.0
Climate Change Exposures	—

Wildfire Risk	0.0
SLR Inundation Area	0.0
Children	84.9
Elderly	16.5
English Speaking	18.2
Foreign-born	95.7
Outdoor Workers	60.7
Climate Change Adaptive Capacity	—
Impervious Surface Cover	34.1
Traffic Density	80.4
Traffic Access	23.0
Other Indices	—
Hardship	23.2
Other Decision Support	—
2016 Voting	20.4

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	30.0
Healthy Places Index Score for Project Location (b)	65.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No
Project Located in a Low-Income Community (Assembly Bill 1550)	No
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

a: The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.
b: The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

Screen	Justification
Land Use	Per site plan
Construction: Construction Phases	Per questionnaire
Construction: Trips and VMT	Per questionnaire
Construction: Architectural Coatings	SCAQMD Rule 1113
Operations: Vehicle Data	Per traffic study, assume weekday trip rates for Sunday as a conservative analysis
Operations: Architectural Coatings	SCAQMD Rule 1113

ATTACHMENT A-1: REVISED AIR QUALITY, GREENHOUSE GAS, ENERGY, AND NOISE IMPACT ANALYSES

Michael Baker INTERNATIONAL

We Make a Difference

MEMORANDUM

To: Lisa Flores, City of Arcadia

From: Tina Yuan, Michael Baker International
Zhe Chen, Michael Baker International

Date: October 8, 2024

Subject: Revised Tempo by Hilton Project – Air Quality, Greenhouse Gas, Energy, and Noise Impact Analyses

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PURPOSE AND BACKGROUND

The purpose of this technical memorandum is to evaluate potential impacts that would result from the addition of two rooms (Proposed Addition) to the proposed Tempo by Hilton hotel building and associated improvements (project), in support of the *Tempo by Hilton Project Addendum to the 2020 Initial Study/Mitigated Negative Declaration, Arcadia Hotel and Annex (Hotel Indigo) Project*, which analyzed the environmental effects of the existing medical office buildings, parking structure, and the hotel buildings previously approved, and the proposed four-story Tempo by Hilton hotel building containing a total of 91 rooms and ancillary hotel uses. As the Applicant proposes to add two additional rooms to the project and increase the total number of rooms to 93, this memorandum analyzes the potential air quality, energy, greenhouse gas (GHG) emissions, and noise impacts resulting from the two additional rooms.

AIR QUALITY IMPACT ANALYSIS

The Proposed Addition would increase criteria air pollutants emissions by approximately 2.2 percent (two rooms/91 rooms = 2.2 percent increase) during construction and operation. As the emissions of the previously analyzed 91-room hotel would be well below the short-term construction and long-term operational air quality thresholds established by the South Coast Air Quality Management (SCAMQD), the Proposed Addition would not cause exceedance of SCAQMD thresholds. Furthermore, the Proposed Addition would not involve a change of land use that would increase the frequency or severity of existing air quality violations, cause or contribute to new violations, or delay the attainment of air quality or the interim emissions reductions specified in SCAQMD's 2022 Air Quality Management Plan (2022 AQMP). Therefore, the project would be consistent with the 2022 AQMP, and impact would be less than significant.

Furthermore, the Proposed Addition would not change the distance from the nearest sensitive receptors to the project site. As the Proposed Addition would not affect the construction activities, and localized construction emissions of the previously analyzed 91-room hotel would be well below the SCAQMD Localized Significance Thresholds (LST), localized construction emissions impacts of the project would be

less than significant. Furthermore, the Proposed Addition would not introduce any stationary sources or attract mobile sources that may spend extended periods queuing and idling at the site. Operational LST impacts would remain to be less than significant in this regard. The nominal 2.2-percent emissions increase would not add significant Carbon Monoxide (CO) emissions or odor emissions to the project location. Therefore, impacts related to CO hotspots and odor would be less than significant. As such, the project's impacts from the localized construction and operational emissions, CO hotspots, and odor would remain less than significant.

In conclusion, the project's air quality impacts with the Proposed Addition remain to be less than significant and would be the same impacts as disclosed in the Temp by Hilton Project Addendum, which were also determined to be less than significant. The Proposed Addition would not result in new significant impacts and no substantial increase in the severity of previously identified impacts disclosed in the Temp by Hilton Project Addendum would occur. Likewise, there are no changed circumstances involving new or more severe impacts and no new information of substantial importance requiring new analysis or mitigation measures.

Mitigation Measures: Impacts related to Air Quality would be less than significant, and no mitigation measures are required.

GREENHOUSE GASES IMPACT ANALYSIS

The Proposed Addition would increase GHG emissions from both direct and indirect sources by approximately 2.2 percent, which is nominal. Moreover, the significance of the potential impacts regarding GHG emissions and climate change is not determined by bright-line thresholds, but by the consistency with applicable GHG reduction plans. As the Proposed Addition would not change the land use, project location, and project sustainability features, the project would be consistent with the applicable plans including the Southern California Association of Governments (SCAG) *2020–2045 Regional Transportation Plan/Sustainable Communities Strategy* (2020-2045 RTP/SCS), California Air Resource Board (CARB)'s *2022 Scoping Plan*, and *Arcadia General Plan* (General Plan).

In conclusion, the project's GHG impacts with the Proposed Addition remain to be less than significant and would be the same impacts as disclosed in the Temp by Hilton Project Addendum, which was also determined to be less than significant. The Proposed Addition would not result in new significant impacts and no substantial increase in the severity of previously identified impacts disclosed in the Temp by Hilton Project Addendum would occur. Likewise, there are no changed circumstances involving new or more severe impacts and no new information of substantial importance requiring new analysis or mitigation measures.

Mitigation Measures: Impacts related to GHG would be less than significant, and no mitigation measures are required.

ENERGY IMPACT ANALYSIS

The Proposed Addition would increase consumption of energy resources (i.e., electricity, natural gas, construction on-road/off-road, and operational fuel consumption) by approximately 2.2 percent, which is nominal. As such, the project's impact on energy resources would remain less than significant. Furthermore, as the Proposed Addition would not change the land use, project location, and project sustainability features, the project would comply with state and local plans for renewable energy and

energy efficiency, which include the California Energy Commission's Integrated Energy Policy Report (IEPR), 2022 Title 24 standards and CALGreen Code, the State Renewable Portfolio Standards (RPS), and the City's General Plan. The Proposed Addition would not change design features that promote energy efficiency and would comply with existing regulations and plans that address energy efficiency, and as such, impacts would be less than significant.

In conclusion, the project's energy impacts with the Proposed Addition remain to be less than significant and would be the same impacts as disclosed in the Temp by Hilton Project Addendum, which was also determined to be less than significant. The Proposed Addition would not result in new significant impacts and no substantial increase in the severity of previously identified impacts disclosed in the Temp by Hilton Project Addendum would occur. Likewise, there are no changed circumstances involving new or more severe impacts and no new information of substantial importance requiring new analysis or mitigation measures.

Mitigation Measures: Impacts related to Energy would be less than significant, and no mitigation measures are required.

NOISE IMPACT ANALYSIS

The Proposed Addition would not change the site boundary, the distance to the nearest sensitive receptors, nor the construction equipment list during each construction phase; as such, construction noise impacts would remain the same as what was analyzed in the Tempo by Hilton Project Addendum. The daily trip would increase by 22 trips per day (approximately 3.9 percent) due to the Proposed Addition, which is nominal and would not cause significant increase of mobile source noise level. As such, project-related traffic noise impacts would be less than significant. On-site operational noise activities would include noise generated from mechanical equipment and outdoor gathering areas. The Proposed Addition would not change the location and specification of the mechanical equipment or the outdoor gathering area. As such, on-site operational noise levels would remain the same. Therefore, the Proposed Addition would not result in new significant impacts to construction and operational noise levels.

Furthermore, the Proposed Addition would not require any new equipment that causes excessive vibration during construction, and therefore the vibration impacts would remain less than significant. Due to the lack of operational vibration sources, the project would not result in operational vibration impacts. As such, the project's construction and operational vibration impacts would be less than significant. As the Proposed Addition would not change the project location, the project would not expose people to excessive noise level from airports.

In conclusion, the project's noise and vibration impacts with the Proposed Addition remain to be less than significant and would be the same impacts as disclosed in the Temp by Hilton Project Addendum, which was also determined to be less than significant. The Proposed Addition would not result in new significant impacts and no substantial increase in the severity of previously identified impacts disclosed in the Temp by Hilton Project Addendum would occur. Likewise, there are no changed circumstances involving new or more severe impacts and no new information of substantial importance requiring new analysis or mitigation measures.

Mitigation Measures: Impacts related to Noise would be less than significant, and no mitigation measures are required.

ATTACHMENT B: PROTECTED TREE REPORT

Protected Tree Report:
Tree Survey, Encroachment, Protection and Mitigation

181 Colorado Place
Arcadia, CA 91006

Prepared For: 181 Colorado LLC
25 E Huntington Drive
Arcadia CA 91006
Tel: (626) 821-8777
Email: lchuang@asiaspec.com

Prepared By: Michael Crane
Arbor Care, Inc.
1660 E. Mountain St.
Pasadena, CA 91104
Tel: (626) 737-4007
Email: info@arborcareinc.net

April 2024

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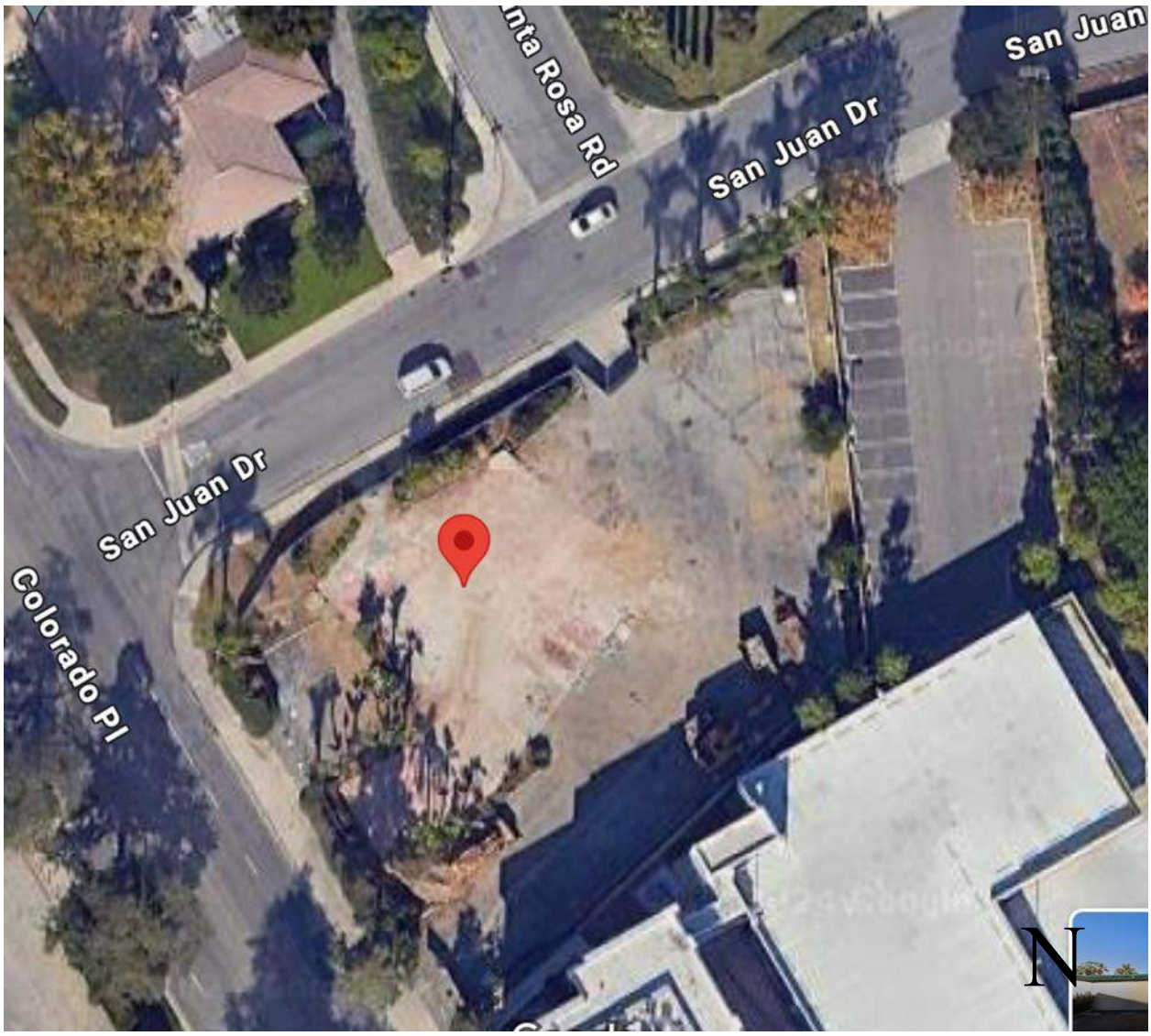
SUMMARY OF DATA

BACKGROUND & PURPOSE

I was retained by Lillian Chuang of 181 Colorado LLC, to be the consulting arborist for the planned redevelopment of the property located at 181 Colorado Place. There are Protected Trees located on the property; in the right-of-way area connected to the property; and off-site with portions of their driplines extending over the property. The proposed construction will encroach these trees and this report will serve to both notify the City of Arcadia Planning Division of the extent of the anticipated impacts as well as to inform the builder of the proper protection measures which must be taken in order to preserve the trees. As part of my preparation for this report I made a site visit to the property on April 19, 2024. I was provided with a full-scale Site Plan for my analysis.

PROJECT DESCRIPTION & TREE ORDINANCE



This aerial view (courtesy of Apple Maps) has been illustrated to show the approximate boundary lines (orange).

The property is the longtime location of Pepper's restaurant. The property will be redeveloped into a hotel.

The landscape consists of a haphazard arrangement of palms, small shrubs, citrus trees, and woody perennials that decorated the former restaurant's patios and perimeter. None of these plants are Protected, and all will be removed. Protected Trees are located along the street and in the east parking lot area that is shared with the medical offices that neighbor on the south. The designs have been made to accommodate as many of these trees as possible.

City of Arcadia Tree Ordinance

Oaks, Sycamore, and many other tree species are Protected under the various tree ordinances. Here is a summary of the tree protection laws.

On January 21, 1992 the City Council adopted Ordinance No. 1962 recognizing oak trees as significant aesthetic and ecological resources and establishing criteria for the preservation of oak trees. The regulations (Chapter 7 of the Arcadia Municipal Code) provide that the following oak trees shall not be removed, relocated, damaged, or have their protected zones encroached upon unless an Oak Tree Permit is granted:

- Engelmann Oaks (*Quercus engelmannii)* or Coast Live Oak, California Live Oak (*Quercus agrifolia*) which have a trunk diameter larger than four (4) inches measured at a point four and one half (4 ½) feet above the crown root, or, two (2) or more trunks measuring three (3) inches each or greater in diameter, measured at a point four and one half (4 ½) feet above the crown root.

- Any other living oak tree with a trunk diameter larger than twelve (12) inches measured at a point four and one half (4 ½) feet above the crown root, or, two (2) or more trunks measuring ten (10) inches each or greater in diameter measured at a point four and one half (4 ½) feet above the crown root.

On March 3, 2015, the City Council adopted Ordinance No. 2323 amending the code to add Sycamore trees to the list of City's Tree Preservation Regulations. The protected trees are Oak and Sycamore trees. Protected Sycamore trees are defined as:

- Plantanus racemosa (Sycamore) with a trunk diameter larger than six (6) inches measured at a point four and one-half (4½) feet above the root crown, or two (2) or more trunks measuring four (4) inches each or greater in diameter, measured at a point four and one-half (4½) feet above the root crown.

On August 2, 2016, The City Council adopted Ordinance No. 2338 to add additional protected trees and unprotected trees to the City's tree preservation regulations. In September, the City began protecting mature trees that are located within a required front, side, street-side, or rear yard setback area that are either larger than 12 inches in diameter or two or more trunks larger than 10 inches in diameter if there are multiple trunks.

Below is a list of the unprotected trees:

1. Fruit trees
2. Fraxinus uhdei (Shamel Ash)
3. Ficuses – Exception: Ficus macrophylla (Moreton Bay Fig)
4. Eucalyptus
5. Ailanthus altissima (Tree of Heaven)
6. Arecaceae (Palm Tree)
7. Schinus terebinthifolius (Brazilian Pepper)
8. Ceratonia siliqua (Carob)
9. Betula pendula (European White Birch)
10. Grevillea robusta (Silk Oak)
11. Morus (Mulberry)
12. Acer saccharinum (Silver Maple)
13. Cupressus sempervirens (Italian cypress)
14. Populus Fremontii (Western Cottonwood)
15. Alnus rhombifolia (White Alder)
16. Populus trichocarpa (Black Cottonwood)
17. Populus 'Highland' hybrid
18. Salix lasiolepis (Arroyo Willow)
19. Liquidambars (Sweet Gum)

TREE SURVEY

This table lists all trees with trunk diameters measuring four inches or greater located on the property, as well as all other trees with trunk diameters measuring six inches or greater located on or encroaching onto the property. Off-site trees are indicated with an "os" next to their tree numbers. Multi-trunked specimens are indicated next to the trunk diameter with an "m" and the diameters of the two largest trunks are listed. A determination is then provided for the protected status of each tree based on criteria of species, size and location. All street trees or trees in public areas are Protected regardless of species or size and these trees are marked with an asterisk in the Location column. Tree numbers correspond to the tree locations plotted on the Site Plan included in this report and to all references to each tree in this report. Only Protected Trees non-street trees have numbered tags affixed to their trunks.

Tree Survey for 181 Colorado Place, Arcadia

Tree Identification				Protected Status			
Tree #	Botanical Name	Common Name	Trunk Diameter	Protected Species	Minimum Required Size	Located in Protected Area	**PROTECTED TREE**
1	Quercus agrifolia	Coast Live Oak	24"	Yes	Yes	Yes	Yes
2	Platanus racemosa	Sycamore	7"	Yes	Yes	Yes	Yes
3	Platanus racemosa	Sycamore	12"	Yes	Yes	Yes	Yes
4	Syagrus romanzoffiana	Queen Palm	n/a	No	n/a	Yes	No
5	Syagrus romanzoffiana	Queen Palm	n/a	No	n/a	Yes	No
6	Syagrus romanzoffiana	Queen Palm	n/a	No	n/a	Yes	No
7	Syagrus romanzoffiana	Queen Palm	n/a	No	n/a	Yes	No
8	Syagrus romanzoffiana	Queen Palm	n/a	No	n/a	Yes	No
9	Syagrus romanzoffiana	Queen Palm	n/a	No	n/a	Yes	No
10	Lagerstroemia indica	Crepe Myrtle	M3 2, 2, 1	Yes	No	Yes	No
11	Syagrus romanzoffiana	Queen Palm	n/a	No	n/a	Yes	No
12	Lagerstroemia indica	Crepe Myrtle	M5 2, 2, 2, 2	Yes	No	Yes	No
13	Lagerstroemia indica	Crepe Myrtle	M8 2, 2, 2, 2	Yes	No	Yes	No

Tree Survey for 181 Colorado Place, Arcadia

Tree Identification				Protected Status			
Tree #	Botanical Name	Common Name	Trunk Diameter	Protected Species	Minimum Required Size	Located in Protected Area	**PROTECTED TREE**
14	Lagerstroemia indica	Crepe Myrtle	M10 1,1,1,1	Yes	No	Yes	No
15	Lagerstroemia indica	Crepe Myrtle	M12 1,1,1,1	Yes	No	Yes	No
16	Syagrus romanzoffiana	Queen Palm	n/a	No	n/a	Yes	No
17	Ficus microcarpus	Indian Laurel	M2 5, 4	No	No	Yes	No
18	Cedrus deodara	Deodar Cedar	25”	Yes	Yes	Yes	Yes
19	Citrus aurantilfolia	Mexican Lime	8”	No	No	Yes	No
20	Citrus aurantilfolia	Mexican Lime	6”	No	No	Yes	No
21	Pinus canariensis	Canary Island Pine	9”	Yes	No	Yes	No
22	Pinus canariensis	Canary Island Pine	10”	Yes	No	Yes	No
23	Pinus canariensis	Canary Island Pine	12”	Yes	Yes	Yes	Yes
24	Syagrus romanzoffiana	Queen Palm	n/a	No	n/a	Yes	No
25	Podocarpus macrophyllus	Yew Pine	4”	Yes	No	Yes	No
26	Phoenix roebelenii	Pygmy Date Palm	n/a	No	n/a	Yes	No
27	Ficus benjamina	Weeping Fig	5”	No	No	Yes	No
28	Ficus benjamina	Weeping Fig	8”	No	No	Yes	No
29	Pinus canariensis	Canary Island Pine	8”	Yes	No	Yes	No
30	Brachychiton sp.	Flame bottle	4”	Yes	No	Yes	No
31	Brachychiton sp.	Flame bottle	4”	Yes	No	Yes	No
32os	Quercus agrifolia	Coast Live Oak	12”	Yes	Yes	Yes	Yes

This chart includes all Protected Trees that are either located or encroaching on the property. It provides physical data collected from field observations. The trees have been surveyed and numbers correspond to the Schematic Landscape Plan included in this report. Tree numbers with an "os" indicate that the specimen is located off-site and a portion of the canopy extends over the subject property. Trunk diameters of multi-trunked specimens are listed with their two largest trunk diameters.

PROTECTED TREE CHARACTERISTICS & HEALTH MATRIX

CHARACTERISTICS													HEALTH											
		SIZE			FORM		CROWN CLASS			AGE CLASS			FOLIAGE DENSITY			SHOOT GROWTH			WOUND DEFENSE			VIGOR CLASS		
TREE NUMBER	SPECIES	TRUNK DIAMETER (INCHES)	APPROXIMATE HEIGHT (FEET)	AVERAGE SPREAD (FEET)	SYMMETRIC	ASYMMETRIC	DOMINANT	CO-DOMINANT	SUPPRESED	YOUNG	MATURE	OVERMATURE	NORMAL	SPARSE	DISEASE / INSECT	AVERAGE	POOR	TWIG DIEBACK	NORMAL	POOR	WOOD DECAY	GOOD	POOR	DISEASED/HAZARDOUS
1	Quercus agrifolia	24	30	40	X		X				X		X			X			X			X		
2	Platanus racemosa	7	25	20	X		X			X			X			X			X			X		
3	Platanus racemosa	12	40	30	X		X			X			X			X			X			X		
18	Cedrus deodara	25	60	20	X		X					X		X			X		X				X	
23	Pinus canariensis	12	30	15	X		X			X			X			X			X			X		
32os	Quercus agrifolia	12	20	20	X			X		X			X			X			X			X		

This chart includes all Protected Trees that are located on the property and any off-site Protected Trees extending over the property. It provides data collected from the analysis of construction plans. The tree has been surveyed and numbers correspond to the Schematic Landscape Plan included in this report. Tree numbers with an "os" indicate that the specimen is located off-site and a portion of the canopy extends over the subject property. For rootzone impacts, the required excavation is considered only for unbuffered areas. Areas that excavation will occur where existing similar infrastructure exists, e.g. overexcavation and compaction in the footprint of existing home foundation, grading for driveway in the footprint of existing driveway, are considered non-significant encroachments.

CONSTRUCTION IMPACTS MATRIX

	TREE SPECIES	SIZE & CONDITION		ROOTZONE IMPACTS								REQUIRED PRUNING OF LIVE CROWN				
TREE NUMBER	Protected Trees: • Quercus agrifolia, engelmannii, and any other species of Quercus genus larger than 12" • Platanus racemosa • Any tree located in the public right-of-way • All other species 12" or larger that are not on the exemption list	TRUNK DIAMETER (DBH)	CONDITION	Sides of tree where excavation (six inches or deeper) will occur	Sides where excavation impacts are buffered by existing infrastructure	**Excavation will remain a distance of at least 10 X DBH from trunk**	**Excavation will remain a distance of at least 5 X DBH from trunk**	**Excavation will remain a distance of at least 3 X DBH from the trunk**	**Removal or Relocation**	Additional light grading less than 6" deep to occur within dripline	Estimated % of total root mass to be removed or severed	**No Pruning Required**	**Pruning not to exceed 10%**	**Pruning not to exceed 30%**	Number of cuts larger than 3" in diameter required	Diameter of cuts for branch removals
1	Quercus agrifolia	24	Good	None	-					Yes	<10				0	N/A
2	Platanus racemosa	7	Good	All	-					-	-	-	-	-	-	-
3	Platanus racemosa	12	Good	None	-					Yes	<10				0	N/A
18	Cedrus deodara	25	Poor	None	-					Yes	<10				0	N/A
23	Pinus canarienis	12	Good	None	-					Yes	<10				0	N/A
32os	Quercus agrifolia	12	Good	None	-					Yes	<10				0	N/A

DESIGN ANALYSIS OF PROTECTED TREE ENCROACHMENTS

Refer to Site Plan / Schematic Landscape Plan located in pocket at back of this report, and Photos in Appendix A, page 16.

Analysis regarding rootzone impacts are based on the type of impact, e.g, soil compaction, grading, and excavation; as well as the distance from the trunk that the impacts will occur. It is commonly accepted among professional arborists that a distance equal to three times a trunks diameter contains the structural roots responsible for keeping the tree upright. This critical rootzone area is defined as the root plate. Beyond the root plate the roots typically taper off into smaller, less significant sizes. These smaller roots are usually two inches in diameter or smaller and make up the rootmass responsible for water and nutrient uptake. Although roots of these sizes can be cut without significantly impacting health and stability it is advised that no more than 30 percent of the rootmass within the dripline is severed. The bulk of the rootmass is located within the top three feet of soil and root growth slows or halts when soil bulk density exceeds 1.60 g/cm^3 for most soils. More information regarding rootzone impacts is provided in the Excavation and Root Pruning section of the Construction Impact Guidelines, Appendix D.

Tree #1– Coast Live Oak: Located in a planter area at the northeast corner of the property. The existing parking lot entry located in the west portion of the dripline will be replaced in the same footprint. No extensive excavation or grading will be required to accomplish the work; only demolition of the existing hardscape. The planter will be renovated with the proper cultural requirement for the native oak and the tree will likely be pruned for crown shaping.

Tree #2– Western Sycamore Located in a planter at the existing entrance to the parking lot off of San Juan Dr. The trash enclosure will be constructed where the tree is located. It is planned for removal and replacement.

Tree #3– Western Sycamore: Located in a planter at the existing entrance to the parking lot off of San Juan Dr. The parking lot will be modified within the dripline to add electric vehicle charging stations. The work will be done within the paved surface of the existing parking lot and trenching for the conduit will remain clear of the critical rootzone area. The planter will remain and will be unaltered.

Tree #18 - Deodar Cedar: Located in a tree well within the sidewalk along Colorado Pl. The tree well is at the north edge of the existing parking lot entry. The entry will remain, and the pavement will be replaced. No modifications to the dimensions or layout of the entry will occur within the dripline.

The tree is overmature and has a live crown ratio of approximately 30% (amount of live branches and foliage relative to the overall height). A 30% live crown ration is at the threshold where a conifer begins to lack vigor and decline becomes irreversible.

Tree #23 – Canary Island Pine: Well isolated in a planter along the south property line between the block wall that defines the parking lot and the exterior wall of the existing parking structure. No significant excavation or grading will encroach and no pruning is required to complete the project.

Tree #32 – Coast Live Oak: Located off-site on the property to the east, and beyond the block wall that defines the parking lot. The wall will remain, and the parking lot will be resurfaced. No significant excavation or grading will encroach and no pruning is required to complete the project.

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FINDINGS

- Tree #2, a Western Sycamore, located in the east parking lot, will be removed to accommodate the trash enclosure.
- The other two trees located in the east parking lot (Tree's #1 and #3) will not be significantly encroached by construction. The dimensions of their existing planters will not be altered, and the parking lot will be resurfaced.
- The one street tree (Tree #18), a Deodar Cedar, will be preserved in place. The nearby parking lot entry will be resurfaced but not widened. The tree well will remain, and the sidewalk will also likely remain unchanged.
- Tree #23, a Canary Island Pine, will not be impacted by construction. Its location behind a concrete block wall restricts access and minimizes and root zone encroachment.
- Some pruning of Tree #1, a Coast Live Oak, for crown raising and shaping may be done to improve the aesthetic appearance, but pruning is not required to complete the project.

MITIGATION

Tree #2, a Western Sycamore with a seven-inchtrunk diameter will be removed. It can be replaced to parity with a 60" nursery box size tree, which typically have trunk diameters measuring five to seven inches in diameter.

RECOMMENDATIONS

As with many construction projects, soil compaction is the most preventable impact that will need to be monitored in order to provide reliable protection and long-term preservation of the trees. To prevent unnecessary soil compaction a Tree Protection Zones must be established around the Protected Trees before any demolition occurs. The goal is to enclose the largest possible amount of space underneath the tree so that the heavy equipment required for demolition and construction can be routed away from root zones. The recommended Protection Zones are drawn in dashed lines on the Site Plan of this report.

- Prior to demolition the contractor and consulting arborist shall meet on site to make sure Tree Protection Zones are established and to review the goals for the tree protection plan. **The locations and areas of the Protection Zones are drawn with an orange line on the Site Plan included in this report.** Protection zones will not need to be established for Tree #18, 23 or the off-site Tree #31. The workzone fence and existing property line walls function well for that purpose.

- Tree Protection Zone fences shall be at least four feet tall and constructed of chain link fencing secured on metal posts. Where fences are not feasible, e.g., in haul routes or areas where workers will need frequent access, soil and root protection material can be installed. Examples of these are provided in Appendix B.

- Maintain the fences and/or soil protection material throughout the completion of the project. No staging of materials or equipment or washing-out is to occur within the fenced protected zones.

- Refer to the Construction Impact Guidelines in Appendix C for important general preservation measures concerning the different elements of this project.

- Tree #1, the Coast Live Oak, will not need any supplemental watering. The other trees should be irrigated throughout the year. A deep watering that provides good soil moisture to a depth of 16 inches is optimal. The trees should be deeply watered once every 21-28 days during the summer and fall seasons when rain is unlikely.

- The arborist shall monitor a few critical phases of the project: Pre-demolition to direct the installation of the protective fences and soil protection materials; Grading and excavation; any utility or drainage trenching that is required within a Tree Protection Zone; and a final evaluation during the landscape installation phase.

APPENDIX A – Photos

1

ABOVE: Looking south at Tree #1 from San Juan Dr. The parking lot entry will be resurfaced but the dimensions of the planter will be unchanged.
BELOW: Looking north at Tree #2. The trash enclosure will be built where the tree is located and it is planned for removal.

2

ABOVE: Looking south at Tree #3 from San Juan Dr. The parking lot entry will be resurfaced but the dimensions of the plater will remain unchanged. BELOW: Looking East at Tree #18 from Colorado Pl. The entry on the right (south) side of the tree will be resurfaced. The sidewalk around the tree well will likely be unaltered.

ABOVE: Looking south at Tree #23. This and the other two Pine trees will remain in place and will not be impacted by construction. BELOW: Looking east at the off-site Tree #32. The wall will remain and the tree will not be impacted by construction.

APPENDIX B - Soil and Root Protection Within the Tree Protection Zone

If traffic cannot be kept outside of the Tree Protection Zone for the entire duration of construction, actions can be taken to disperse the vehicular load and protect the roots, minimizing soil compaction and mechanical root damage. These include:

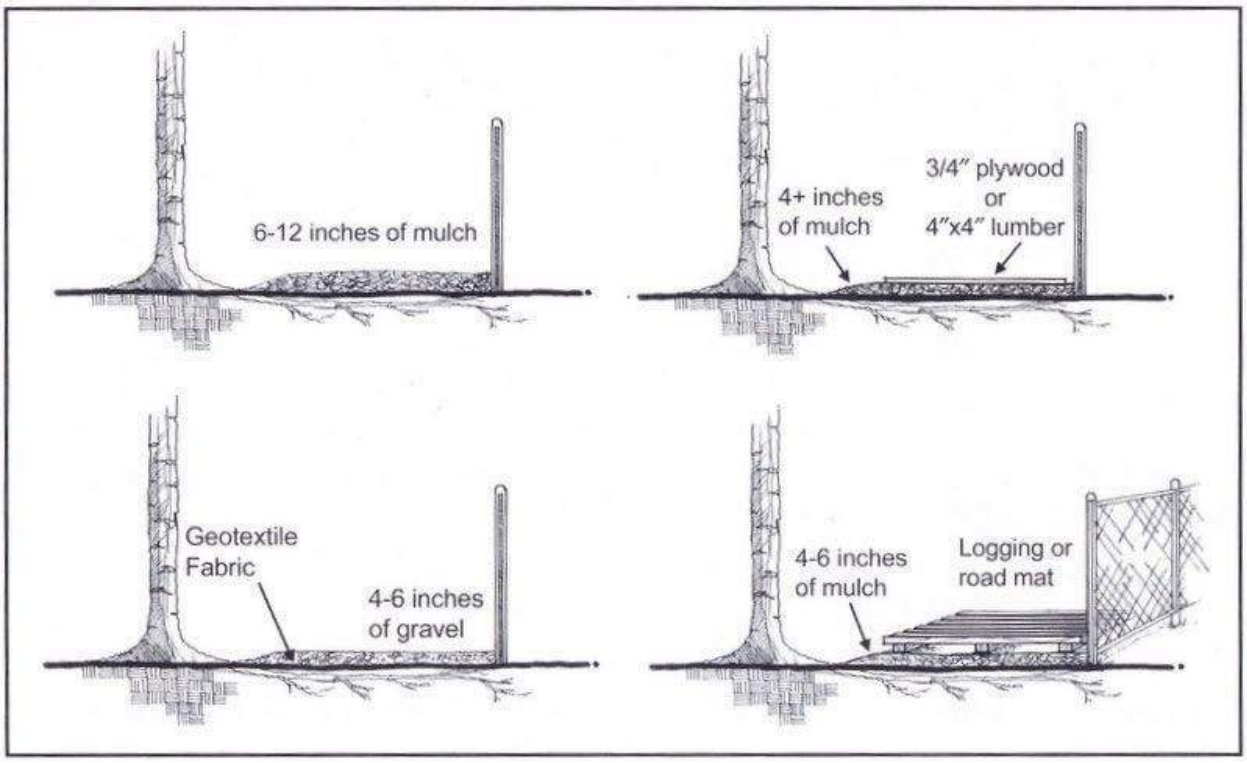
1) Applying 6 to 12 inches of wood chip mulch to the area.

2) Laying ¾-inch thick plywood or 4x4 inch wood beams over a 4+ inch thick layer of wood chip mulch.

2) Applying 4 to 6 inches of gravel over a taut, staked geotextile fabric.

4) Placing commercial logging or road mats on top of a mulch layer.

Stone, geotextile, and mulch exceeding 4 inches thick will need to be removed from the TPZ once the threat of soil or root damage has passed.



APPENDIX C - Protected Tree Construction Impact Guidelines

Size and Distribution of Tree Roots – Taken from Arboriculture, Integrated Management of Landscape Trees Shrubs and Vines. Harris, R.W., Clark, J.W., Matheny N.P. Prentice Hall 2004.

Roots of most plants, including large trees, grow primarily in the top meter (3 ft) of soil (see figure below). Most plants concentrate the majority of their small absorbing roots in the upper 150 mm (6 in.) of soil if the surface is protected by a mulch or forest litter. In the absence of a protective mulch, exposed bare soil can become so hot near the surface that roots do not grow in the upper 200 to 250 mm (8 to 10 in.). Under forest and many landscape situations, however, soil near the surface is most favorable for root growth. In addition, roots tend to grow at about the same soil depth regardless of the slope of the soil surface.

Although root growth is greatly influenced by soil conditions, individual roots seem to have an inherent guidance mechanism. Large roots with vigorous tips usually grow horizontally. Similar roots lateral to the large roots grow at many angles to the vertical, and some grow up into the surface soil. However, few roots in a root system actually grow down.

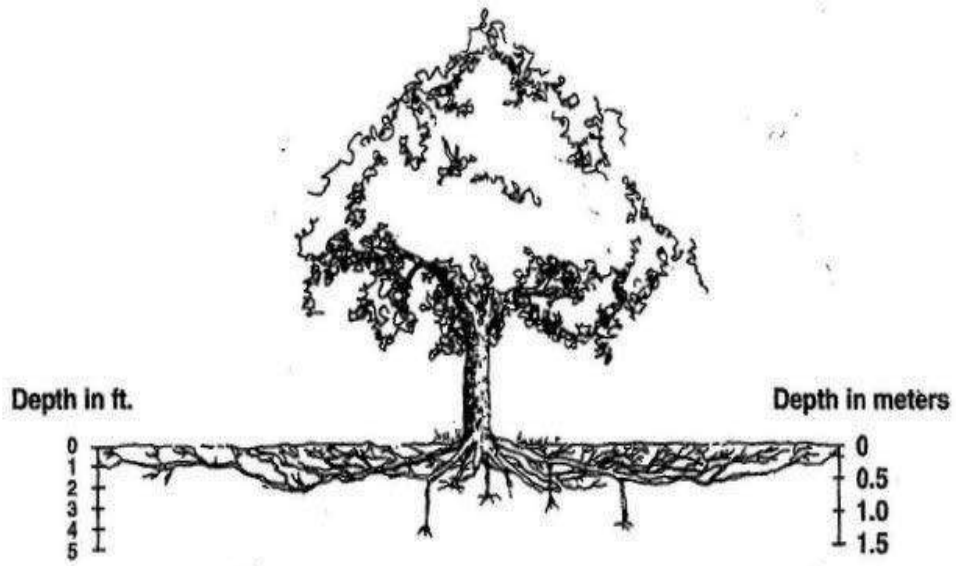


FIGURE In mature trees, the taproot is either lost or reduced in size. The vast majority of the root system is composed of horizontally oriented lateral roots.

The importance of soil

Soil supports and anchors tree roots and provides water, minerals and oxygen. Furthermore, soil is a habitat for soil microorganisms that enhance root function. A soil's ability to sustain tree growth is largely determined by its texture, structure (bulk density), organic matter, water and mineral content, salinity, aeration, and soil-microbe abundance and diversity.

Soil physical properties

Soil texture – the relative proportion of sand, silt and clay, is important because it affects water – and nutrient-holding capacity, drainage and aeration (gaseous diffusion). Soil structure is the arrangement of individual soil particles into clumps (aggregates). The net result is the formulation of larger voids between the aggregates which serve as channels for gaseous diffusion, movement of water and root penetration. Unfortunately, soil aggregates are readily destroyed by activities that compact the soil (increase bulk density). When this occurs, gaseous exchange, permeability, drainage and root growth are restricted.

The influence of the organic matter content of soil properties is quiet significant. Its decomposition by soil organisms releases substances that bind soil particles into larger granules, which improves both soil aeration, and drainage. In essence, the breakdown of organic matter improves water – and nutrient-holding capacity and reduces bulk density. Furthermore, it is the primary source of nitrogen and a major source of nitrogen and a major source of phosphorus and sulfur. Without organic matter soil organisms could not survive and most biochemical processes in the soil would cease.

Soil aeration, the movement and the availability of oxygen, is determined by both soil texture and structure. In general, compacted and finer soils, due to a higher proportion of small pore spaces (micropores), tend to drain slowly and hold less air than coarser, sandy, or well-structured find soils. Water retained in the small pores displaces oxygen and inhibits gaseous diffusion.

The availability of soil water is largely determined by the size of the pore spaces between the soil particles and the larger aggregates in which water is held. Most of the water in the larger pore spaces drains readily due to gravitational forces. A relatively thin film of water, which is readily available to plant roots, remains following drainage. Much of water held within the smaller pore spaces resists uptake by plant roots because it is held tightly on the soil surfaces.

Plant roots require an adequate supply of oxygen for development. Injury or dysfunction results when oxygen availability drops below a critical level. Root respiration is the first process to be restricted, followed by disruptions in growth, metabolism, nutrient and water uptake, and photosynthesis. Furthermore, the accumulation of high levels of

carbon dioxide, produced by the roots during respiration can also impair root function. Reduced soil aeration resulting from soil compaction, flooding, excess irrigation, or

impervious pavement favors the development of crown rot (Phytophthora root disease). It also inhibits mycorrhizal fungi that enhance water and nutrient uptake and resist root pathogens.

The forest floor under a canopy in most undeveloped forests and woodland settings is typically covered by a layer of fallen leaves and other woody debris. It is usually cool, shady, well-aerated, and relatively moist – conditions that favor normal root growth. When the natural leaf litter is removed and when a tree's lower canopy is pruned up to provide clearance, the absorbing roots in the upper few inches of the soil experience higher soil temperatures and increased desiccation due to direct exposure to sunlight.

Minimizing the Effects of Construction and Development on Tree Root Systems

Activities that injure roots or adversely affect the root zone should be avoided or kept as far from the trunk as possible. Design changes or alternative building practices that avoid or minimize construction-related impacts should be considered and proposed when applicable.

Soil Compaction

Soils are intentionally compacted under structures, sidewalks, reads, parking areas, and load-bearing fill to prevent subsidence, and to prevent soil movement on slopes. Although unintentional, soil within the root zone of trees is often compacted by unrestricted foot traffic, parking of vehicles, operation of heavy equipment, and during installation of fill. Compaction destroys the soil's natural porosity by eliminating much of the air space contained within it. It leaves the soil hard and impenetrable and largely unfavorable for root growth. The soil's natural porosity, which allows for water movement and storage, gaseous exchange, and root penetration, is greatly reduced. Consequently, root growth and tree health suffer. Soil compaction is best managed by preventing it.

Bulk density is used to describe a soil's porosity, or the amount of space between soil particles and aggregates. High bulk densities indicate a low percentage of total pore space.

Pavement

Paving over the root systems of trees is another serious problem because it reduces the gaseous diffusion and soil moisture. Most paving materials are relatively impervious to water penetration and typically divert water away from a tree's root zone. Cracks and expansion joints do, though, allow for some water infiltration into the soil below. Of greater concern, is the loss of roots from excavation to achieve the required grade, and the necessary compaction to prevent subsidence. Once the soil surface is compacted, a

base material is then added and compacted as well. With that done, the surface can then be paved. Thus, pavement within the root zones of trees can damage roots and create

unfavorable soil conditions. One alternative to minimize pavement impacts is to consider placing the pavement on the natural grade over a layer of minimally compacted base material. To reduce sub-grade compaction, consider using reinforced concrete or asphalt over a goetextile blanket to help stabilize the soil. On-grade patios or paving that covers more than one-third of the tree protection zone (TPZ) should be constructed using permeable materials that allow aeration and water penetration. Soil under permeable surfaces should not be compacted to more than 80 percent.

Excavation and root pruning

Excavation within the root zones of trees should be avoided as much as possible. The extent of root pruning (selective) or cutting (non-selective) should be based on the species growth characteristics and adaptive traits, environmental conditions, age, health, crown size, density, live crown ration and structural condition of the tree. The timing of the root pruning or cutting is another important consideration. Moderate to severe root loss during droughts or particularly hot periods can cause serious water-deficit injury or death.

When root pruning/ cutting is unavoidable, roots should be pruned or cut as far from the trunk as possible. Cutting roots on more than one side of a tree should also be avoided. Root cutting extending more than half-way around a tree should generally be no closer than about 10 times the trunk diameter. Recommended distances range from as little as 6 times trunk diameter (DBH) for young trees to 12 times trunk diameter for mature trees. The size of the TPZ should, however, be increased for over mature and declining trees and species that are sensitive to root loss.

The minimum distance from the trunk that roots can be cut on one side of the tree without destabilizing it, is a distance equal to about three times the diameter (DBH) of the trunk. Roots severed within that distance provide little or no structural support. Root pruning or cutting distances from the trunk should be greater for trees that lean and/ or those growing on shallow or wet soil.

In cases where the proposed grading will adversely affect trees designated for retention, special attention should be given to proper root pruning and post-construction care for injured trees. Where structural footings are required for foundations, retaining walls, etc., and roots larger than 2 inches in diameter will be impacted, consider design changes or alternative building methods.

When excavation within 5 times trunk diameter is unavoidable, roots greater than 1 ½ inches in diameter should be located prior to excavation and then pruned to avoid unnecessary damage. Hand-digging or use of a hydraulic or pneumatic soil excavation tool is the least disruptive way to locate roots for pruning. Although mechanical root pruners make clean cuts, they are non-selective. A backhoe bucket, dozer blade or

trencher will typically pull, rip or shatter the larger root, causing additional damage toward the tree. Once the roots that interfere with the structure being built, e.g.,

foundations, footings, retaining wall, curbs, etc., are exposed, they should then be cut perpendicular to their long axis using a hand-saw, 'carbide-tipped chainsaw' or sharp ax, depending on size. Roots that are pruned in this manner typically regenerate new roots from near the cut. Roots exposed by excavation should be protected from exposure to sun and desiccation. Exposed roots that can not be covered with soil by the end of the day should be covered with moistened burlap or similar material.

Roots can generally be cut in a non-selective manner when excavating near of beyond the dripline. Ripped, splintered or fractured portions of roots however, should be re-cut. The damaged portion should be removed using sharp tools. The cut should be flat across the root with the adjacent bark intact. Wound dressings should not be applied to pruned or damaged roots except when recommended for disease, insect or sprout control.

The best approach to avoid water-deficit injury following root loss during the growing season is to provide ample irrigation. Irrigation should be considered prior to, during, and after root pruning. Watering schedules should also consider local soil conditions, climate, topography, time of year, species adaptability, extent of root pruning and tree health. If possible, irrigate the tree 7 to 10 days prior to excavation so that there is an adequate reservoir of soil water. Water can be delivered to large construction sites via water-tank trucks and applied directly to affected trees or stored nearby in plastic tanks. On relatively flat terrain, a 6 to 8 inch soil berm at the tree's dripline should be constructed to act as a watering basin. On steep terrain, soaker hoses should be used. They can be placed across the slope or spirally around the trunk, from about six feet away to the dripline. In addition, a two to four inch layer of wood chip mulch should be applied to as much of the root zone as possible to retard soil water loss.

Pruning foliage to compensate for root loss is not supported by scientific research and likely to result in slower recovery. Fertilization to stimulate root growth is generally unwarranted and may be counterproductive.

Trenching within the Tree Protection Zone

Trenching for underground utilities should be routed around the TPZ. When this is unavoidable, trenching within the TPZ should be done by 'hand' or using a pneumatic or hydraulic soil excavation tool, carefully working around larger roots. Roots larger than 1 ½ inches in diameter should not be cut. Dig below these roots to route utilities or install drains. A combination of tools can also produce satisfactory results, for example, a skillful backhoe operator under the arborist's supervision can dig down several inches at a time and detect larger roots by 'feel' (resistance). At that point, as assistant can expose the root and dig around it. In this manner, the backhoe can then continue extending the trench though the TPZ. Tunneling (boring) through the TPZ is the preferable alternative. For most large trees, tunneling depth should be at least 36 inches. Tunneling should begin at the edge of the TPZ, but no closer than a distance equal to one

foot of clearance for each inch of tree DBH. Tunnels should also be offset to either side of the trunk. For trenching that extends only part way into TPZ, consider trenching radially to the tree trunk, as this is less harmful than tangential trenching. All trenches made within the TPZ should be backfilled as quickly as possible to prevent root and soil desiccation.

Managing Root Injured Trees

Root-pruned trees should be monitored for symptoms of water-deficit injury for a specified period following root pruning. Irrigation should be considered prior to, during, and after root pruning. Irrigation schedules should consider local soil conditions, climate, topography, time of year, species tolerance, extent of root pruning and tree health.

Grade Change: Fill Soil

Fill soil placed within the root zones of trees can have an adverse effect, particularly if the soil is compacted to support a structure or pavement. Soil compaction reduces aeration and water infiltration. Fill soil, die to textural changes, can also prevent water from penetrating the original soil layer below where the roots are. Furthermore, soil placed against the root crown and lower trunk can lead to root disease problems, especially if the soil near the trunk remains moist during the summer from irrigation. Alternatives to placing fills over roots zones shall be considered and proposed as appropriate.

AUTHOR'S CREDENTIALS

CERTIFICATION OF PERFORMANCE

I, Michael Crane, certify that:

- I have personally inspected the tree(s) and the property referred to in this report and have stated my findings accurately.
- I have no current or prospective interest in the vegetation or the property that is the subject of this report and have no personal interest or bias with respect to the parties involved.
- The analysis, opinions, and conclusions stated herein are my own and are based on current scientific procedures and facts.
- My analysis, opinions, and conclusions were developed and this report has been prepared according to commonly accepted arboricultural practices.
- No one provided significant professional assistance to me, except as indicated within the report.
- My compensation is not contingent upon the reporting of a predetermined conclusion that favors the cause of the client or any other party not upon the results of the assessment, the attainment of stipulated results, or the occurrence of any subsequent events.

I further certify that I am a member in good standing of the American Society of Consulting Arborists and the International Society of Arboriculture. I have been involved in the field of Horticulture in a full-time capacity for a period of more than 25 years.

Signed: _____

Registered Consulting Arborist #440; American Society of Consulting Arborist
Board Certified Master Arborist #WE 6643B; International Society of Arboriculture
Licensed California Agricultural Pest Control Adviser #AA08269

Date: April 30, 2024

SITE PLAN

1" = 20'-0"

SITE SUMMARY

DESCRIPTION	INFORMATION / REQUIREMENT	COMPLIANCE
APN	5775-015-011	
ADDRESS	181 COLORADO PLACE	
JURISDICTION	CITY OF ARCADIA, CA	
PLANNED LAND USE	C-G	
ZONING CLASSIFICATION	C-G (GENERAL COMMERCIAL)	
HOTEL USE ALLOWED	WITH CUP	Y
MAX BUILDING HEIGHT	48 FT. PERMITTED / 48 FT. PROVIDED	Y
FIRE ACCESS REQUIRED		Y
FRONT SETBACK	0 FT. REQUIRED / 17.5 FT. PROVIDED	Y
SIDE SETBACK	5 FT. REQUIRED / 6 FT. PROVIDED	Y
REAR SETBACK	20 FT. REQUIRED / 72 FT. PROVIDED	Y
FAR	1	

PARKING REQUIREMENTS

REFERENCE HOTEL PROJECT PARKING DEMAND ANALYSIS

GROSS BUILDING AREA: TEMPO ONLY

LEVEL 1:	11,030 SF
LEVEL 2:	11,990 SF
LEVEL 3:	12,060 SF
LEVEL 4:	12,060 SF
STAIRS:	2,187 SF
FIRE RISER:	51 SF
ELECTRICAL/DATA ROOMS:	315 SF
ELEVATORS:	1,424 SF
SHAFTS:	64 SF
TOTAL GBA ABOVE GRADE:	47,140 SF
BASEMENT LEVEL:	10,650 SF

TOTAL FAR GBA ALL BUILDING ON SITE CALCULATION:

BUILDING A (MEDICAL OFFICE) + BUILDING B (MEDICAL OFFICE) + BUILDING C (HILTON HOTEL) + BUILDING D (HILTON HOTEL) + TEMPO HOTEL = **19,845 + 19,231 + 69,447 + 69,356 + 47,140 = 225,019 SF**

TOTAL FAR GBA ALL BUILDING ON SITE: 225,019 SF
TOTAL SITE SF: 226,379 SF

TOTAL SITE FAR: 0.993

VICINITY MAP

TEMPO BY HILTON

SAN JUAN DRIVE & COLORADO PLACE, ARCADIA, CA 91007

designcell

DR-1.1

3/8/2024

ATTACHMENT C: ENERGY ASSESSMENT

Michael Baker INTERNATIONAL

We Make a Difference

MEMORANDUM

To: Lisa Flores, City of Arcadia

From: Dennis Dinh, Michael Baker International

Date: July 22, 2024

Subject: Tempo by Hilton Project – Energy Assessment

PURPOSE AND BACKGROUND

The purpose of this technical memorandum is to evaluate potential short-term construction and long-term operational energy consumption impacts that would result from the construction and operation of a proposed hotel building and associated improvements in support of the Tempo by Hilton Project Addendum to the *Initial Study/Mitigated Negative Declaration, Arcadia Hotel and Annex (Hotel Indigo) Project* (2020 IS/MND).

The City prepared the 2020 IS/MND for a redevelopment project located at 125 West Huntington Drive and 123 West Huntington Drive (Original Project Site). On February 5, 2013, the City previously approved the modification of an existing 60,811-square-foot, three-story office building (Parsons building) and the construction of two new medical office buildings, a new general office building, and a new parking structure on the Original Project Site. Of the four new buildings approved under the 2013 development project, only the parking structure and the two medical office buildings (now occupied by the Keck Medicine of University of Southern California [USC]) were constructed. The 2020 IS/MND analyzed (1) the redevelopment of the existing Parsons building on the Original Project Site to allow for 76,754 square feet of hotel and appurtenant uses, including 90 hotel rooms, amenities, and employee or guest shared spaces, and (2) the construction a new 61,538-square-foot, five-story hotel annex building containing 75 hotel rooms and additional amenities such as a hotel spa, café, and outdoor patios to the east of the Parson's building. No changes to the two existing Keck Medicine of USC medical office buildings and parking structure were proposed under the Approved Project. The 2020 IS/MND was adopted by the City of Arcadia Planning Commission on April 14, 2020 (Resolution No. 2050).

The Tempo by Hiton Project Addendum (Tempo Addendum) analyzes the environmental effects of the Revised Project, which is comprised of the Approved Project described above, and the Tempo Project, which includes a lot line adjustment (LLA) to merge the parcel identified as Assessor's Parcel Number (APN) 2775-015-011 with the Original Project Site (APNs 5775-015-024, 5775-015-027, 5775-015-028, and 5775-015-029) in order to create one legal parcel (Revised Project Site) and to construct a new four-story hotel building on APN 2775-015-011. The Tempo Project would not modify any of the existing medical office buildings, parking structure or the hotel buildings previously approved under the Approved Project. A detailed description of the Tempo Project is provided below. This memorandum analyzes the combined impact of the Tempo Project and the Approved Project analyzed in the 2020 IS/MND.

PROJECT LOCATION

The City of Arcadia is located in northeast Los Angeles County, generally north of the Interstate 10 Freeway (I-10), south of the Foothill Freeway (I-210), east of State Route 164, and west of I-605. The City is approximately 12 miles northeast of downtown Los Angeles; refer to Exhibit 1, *Regional Vicinity*.

The Revised Project is located within the northeastern portion of Arcadia and is comprised of the Original Project Site (APNs 5775-015-024, 5775-015-027, 5775-015-028, and 5775-015-029) and one land parcel addressed as 181 Colorado Place (APN 5775-015-011) that is approximately 0.61 acre, or 26,493 square feet;[1] refer to Exhibit 2, *Revised Project Site*. Regional access to the Revised Project Site is provided via I-210. Local access to the Revised Project Site is provided via Colorado Place, San Juan Drive, and San Rafael Road.

EXISTING SITE CONDITIONS

The Revised Project Site, which includes the Original Project Site and APN 5775-015-011, is located in a highly developed and urbanized area of Arcadia. The Original Project Site is occupied by the two Keck Medicine of USC medical office buildings, a parking structure, and the Parsons building. The redevelopment of the Parsons building for hotel uses and the construction of the hotel annex building are currently underway. APN 5775-015-011 is vacant lot currently fenced that was previously occupied by the Original Peppers Mexican and Cantina, surface parking, and landscaping. The restaurant building was demolished in 2023 but the surface parking and landscaping remain.

According to the Arcadia General Plan, Chapter 2: Land Use and Community Design Element, the Revised Project Site is designated as Commercial WHICH. This Commercial designation is intended to encourage a strong pedestrian-oriented environment that provides a variety of retail and service uses, restaurants, and neighborhood-serving commercial uses that complement development in the Downtown Mixed-Use areas.[2] According to the City's Zoning Map, the Revised Project Site is zoned General Commercial (C-G) with a Downtown Overlay.[3] The C-G zone is intended to provide areas for the development of retail and service uses, offices, restaurants, public uses, and similar and compatible uses. The maximum Floor Area Ratio (FAR) permitted under the C-G zone and the Downtown Overlay zone is 1.0 for new development, and the maximum height permitted for new buildings is 48 feet.

Surrounding uses adjacent to the Revised Project Site include residential, office, and commercial uses. The Revised Project Site is bordered by San Juan Drive, the California Thoroughbred Breeders Association, and single-family homes to the north; San Rafael Road and a small commercial plaza to the east; single-family homes to the east and northeast; Colorado Place, Huntington Drive and Le Meriden hotel to the south; and Colorado Place and the Santa Anita Park (a horseracing track) to the west.

[1] Los Angeles County Assessor, Property Search Tool: APN 5775-015-011, https://assessor.lacounty.gov/homeowners/property-search, accessed June 19, 2024.

[2] City of Arcadia, *Arcadia General Plan, Chapter 2: Land Use and Community Design Element*, February 2024.

[3] City of Arcadia, *City of Arcadia Zoning Map*, Updated February 6, 2024.

Michael Baker INTERNATIONAL

NOT TO SCALE

06/2024 • JN 201253

TEMPO BY HILTON

Regional Vicinity Map

Exhibit 1

Source: Google Earth Pro, July 2024

Michael Baker INTERNATIONAL

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TEMPO BY HILTON

Revised Project Site

Exhibit 2

PROJECT DESCRIPTION

The Revised Project would consist of the improvements proposed by the Tempo Project, along with the previously Approved Project described in the 2020 IS/MND, which includes the redevelopment of the Parsons building for hotel uses and the construction of a new hotel annex building. The Tempo Project would develop a four-story hotel building with approximately 47,140 square feet of gross floor area on APN 5775-015-011; refer to Exhibit 3, *Conceptual Site Plan*.

The new hotel building would have a maximum height of 48 feet, excluding rooftop appurtenances, and would consist of a basement level and four above-ground levels containing a total of 91 rooms and ancillary hotel uses. The basement level would primarily contain back-of-house uses for hotel operations, including an electric room, a mechanical room, a laundry room, offices, storage rooms, an employee breakroom, restrooms, and a fitness room for guest use. Level 1 would contain 13 hotel rooms, a kitchen, café, bar, lobby, meeting area, office, restrooms, and an outdoor patio. Levels 2, 3, and 4 would each contain 26 hotel rooms and the roof level would contain an outdoor paved patio, solar panels, and mechanical areas.

The Tempo Project would utilize the existing parking structure located on the Original Project Site to provide parking for hotel employees, guests, and visitors. As shown in Exhibit 3, the Tempo Project would also reconfigure the existing surface parking lot located to the east of the proposed hotel building on the Original Project Site to provide 18 surface parking spaces, including three electric vehicle charging spaces, a trash enclosure, and a connection to the new surface parking area along the south side of the proposed hotel building. The new surface parking area would provide 6 parking spaces, including 4 accessible parking spaces. In addition, the Tempo Project would develop a drop-off area with access via the existing driveway from Colorado Place. Access to the proposed hotel building would be provided from the two existing driveways along Colorado Place and San Juan Drive.

Landscaping improvements to the Revised Project Site would include the removal of 13 existing trees and the installation of 36 new trees as well as other drought tolerant plants within the Area of Proposed Improvements shown in Exhibit 2. Ancillary improvements to the Revised Project Site would include exterior lighting and accessible routes from the proposed hotel building to the new surface parking area, the existing the surface parking lot to the east, and the existing parking structure.

In order to comply with the maximum FAR of 1.0 for the C-G zone and Downtown Overlay, the Tempo Project would create one legal parcel with a total site area of 226,579 square feet by merging APN 5775-015-011 with the Original Project Site (APNs 5775-015-024, 5775-015-027, 5775-015-028, and 5775-015-029), which has a gross floor area of approximately 177,879 square feet. With the addition of the Tempo Project, the total gross floor area for the Revised Project Site would be approximately 225,019 square feet. This would result in a total site FAR of 0.99 for the Revised Project.

The Tempo Project would require discretionary approvals from the City for an LLA to merge APN 5775-015-011 with the Original Project Site and a Conditional Use Permit to develop the proposed hotel building in a C-G zone.

Source: DesignCell Architecture, June 2024

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TEMPO BY HILTON

Conceptual Site Plan

Exhibit 3

ENVIRONMENTAL SETTING

Electricity

Southern California Edison (SCE) provides electricity services, billing, customer service and power line maintenance and repair in the City of Arcadia. Over the past 15 years, electricity generation in California has undergone a transition. Historically, California has relied heavily on oil- and gas-fired plants to generate electricity. Spurred by regulatory measures and tax incentives, California's electrical system has become more reliant on renewable energy sources, including cogeneration, wind energy, solar energy, geothermal energy, biomass conversion, transformation plants, and small hydroelectric plants. Unlike petroleum production, electricity generation is usually not tied to the location of the fuel source and can be delivered great distances via the electrical grid. The generating capacity of a unit of electricity is expressed in megawatts (MW). Net generation refers to the gross amount of energy produced by a unit, minus the amount of energy the unit consumes. Generation is typically measured in kilowatt-hours (kWh), megawatt-hours (MWh), or gigawatt-hours (GWh).

Natural Gas

Southern California Gas (SoCalGas) provides natural gas service to the City. SoCalGas provides natural gas to approximately 21.8 million customers across a 24,000-square-mile territory, including parts of the following counties: Riverside, Orange, San Bernardino, Los Angeles, Ventura, Santa Barbara, Kern, Inyo, Tulare, and Mono. Natural gas generation is expressed in therms, where one therm is equivalent to 100,000 British Thermal Units (BTU). In 2022, the total natural gas consumption in the SoCalGas service area was 5,026 million therms, with the greatest consumption occurring in the residential and industrial sectors, which consumed 2,230 million therms and 1,606 million therms, respectively.[4]

Automotive Fuel

In California, gasoline consumed primarily by light-duty cars, pickup trucks, and sport utility vehicles is the most-used transportation fuel. Diesel, the second most-used transportation fuel, is primarily consumed by heavy-duty trucks, delivery vehicles, buses, trains, ships, boats and barges, farm equipment, and heavy-duty construction and military vehicles. Both gasoline and diesel are primarily petroleum-based, and their consumption releases greenhouse gas (GHG) emissions. The transportation sector is the single largest source of GHG emissions in California and accounts for the largest share of California's energy consumption. Approximately 40 percent of all inventoried GHG emissions in California in 2019 was generated by the transportation sector. California's transportation sector accounts for one-third of California's total energy consumption in 2020. To reduce statewide vehicle emissions, California requires that all motorists use California Reformulated Gasoline, which is sourced almost exclusively from California refineries.

Energy Usage

Total energy usage in California was 6,882 trillion BTU in 2022, which equates to an average of 189 million BTU per capita.[5] Of California's total energy usage, the breakdown by sector is approximately 42 percent

[4] California Energy Commission, *Gas Consumption by Entity*, http://www.ecdms.energy.ca.gov/, accessed June 11, 2024.

[5] U.S. Energy Information Administration, *California State Energy Profile*, April 20, 2023, https://www.eia.gov/state/print.php?sid=CA, accessed July 2, 2024.

transportation, 22 percent industrial, 17 percent commercial, and 17 percent residential.[6] Electricity in California are generally consumed by stationary users such as residences and commercial and industrial facilities, whereas petroleum consumption is generally accounted for by transportation-related energy use. In 2023, taxable gasoline sales (including aviation gasoline) in California accounted for 13,584,697,639 gallons of gasoline.[7]

The electricity and natural gas consumption attributable to County of Los Angeles (County) from 2012 to 2022 is shown in Table 1, *Electricity and Natural Gas Consumption in Los Angeles County 2012-2022*. The year 2022 is the most recent year for which data is available.

Table 1
Electricity and Natural Gas Consumption in Los Angeles County 2012-2022

Year	Electricity Consumption (in millions of kilowatt hours)	Natural Gas Consumption (in millions of therms)
2012	69,167.61	2,985.15
2013	68,280.24	3,065.44
2014	69,859.79	2,793.87
2015	69,460.62	2,791.05
2016	69,364.52	2,877.86
2017	68,591.44	2,956.04
2018	67,834.13	2,921.51
2019	66,741.98	3,048.32
2020	65,566.25	2,936.69
2021	66,003.29	2,882.77
2022	68,484.96	2,820.29

Source:
California Energy Commission, *Electricity Consumption by County*, http://www.ecdms.energy.ca.gov/, accessed June 21, 2024.
California Energy Commission, *Gas Consumption by County*, http://www.ecdms.energy.ca.gov/, accessed June 21, 2024.

Automotive fuel consumption in Los Angeles County from 2012 to 2024 is shown in Table 2, *Automotive Fuel Consumption in Los Angeles County 2012-2024*.

[6] Ibid.

[7] California Department of Tax and Fee Administration, *Net Taxable Gasoline Gallons*, available at: https://www.cdtfa.ca.gov/taxes-and-fees/spftrpts.htm, accessed June 11, 2024.

Table 2
Automotive Fuel Consumption in Los Angeles County 2012-2024

Year	On-Road Automotive Fuel Consumption (gallons)	Heavy-Duty Vehicle/Diesel Fuel Consumption (Construction Equipment) (gallons)
2012	4,145,221,612	30,386,041
2013	4,173,407,883	31,412,517
2014	4,211,469,581	32,380,286
2015	4,326,848,476	33,324,823
2016	4,480,187,933	34,221,807
2017	4,468,352,951	35,091,687
2018	4,409,152,566	35,918,628
2019	4,337,453,104	36,717,728
2020	3,873,168,111	30,373,898
2021	4,323,377,195	30,359,249
2022	4,291,007,510	30,353,204
2023	4,238,500,098	29,661,665
2024(Projected)	4,160,462,341	30,219,621

Source:
California Air Resources Board, *EMFAC2021, https://arb.ca.gov/emfac/emissions-inventory/*, accessed June 21, 2024.
California Air Resources Board, *EMFAC2021 Off-Road Web Platform, https://arb.ca.gov/emfac/offroad/emissions-inventory/*, accessed June 21, 2024.

REGULATORY SETTING

State

Senate Bill 100

Senate Bill (SB) 100 (Chapter 312, Statutes of 2018) requires that retail sellers and local publicly owned electric utilities procure a minimum quantity of electricity products from eligible renewable energy resources so that the total kilowatt-hours (kWh) of those products sold to their retail end-use customers achieve 44 percent of retail sales by December 31, 2024; 52 percent by December 31, 2027; 60 percent by December 31, 2030; and 100 percent by December 31, 2045. SB 100 requires the California Public Utilities Commission (CPUC), California Energy Commission (CEC), state board, and all other state agencies incorporate this policy into all relevant planning. In addition, SB 100 requires the CPUC, CEC, and state board to utilize programs authorized under existing statutes to achieve such renewable energy goals.

California Building Energy Efficiency Standards (Title 24)

The 2022 California Building Energy Efficiency Standards for Residential and Nonresidential Buildings (California Code of Regulations, Title 24, Part 6), commonly referred to as "Title 24," became effective on January 1, 2023. In general, Title 24 requires the design of building shells and building components to conserve energy. The standards are updated periodically to allow consideration and possible incorporation of new energy efficiency technologies and methods. The 2022 Title 24 standards encourage efficient electric heat pumps, establish electric-ready requirements for new homes, expand solar photovoltaic and battery storage standards, strengthen ventilation standards, and more. Buildings whose permit applications are applied for on or after January 1, 2023, must comply with the 2022 Title 24 standards.

California Green Building Standards (CALGreen)

The 2022 California Green Building Standards Code (California Code of Regulations, Title 24, Part 11), commonly referred to as CALGreen, went into effect on January 1, 2023. CALGreen is the first-in-the-nation mandatory green buildings standards code. The California Building Standards Commission developed the green building standards to meet the goals of California's landmark initiative Assembly Bill (AB) 32, which established a comprehensive program of cost-effective reductions of GHGs to 1990 levels by 2020. CALGreen was developed to (1) reduce GHGs from buildings; (2) promote environmentally responsible, cost-effective, healthier places to live and work; (3) reduce energy and water consumption; and (4) respond to the environmental directives of the administration. CALGreen requires that new buildings employ water efficiency and conservation, increase building system efficiencies (e.g., lighting, heating/ventilation and air conditioning [HVAC], and plumbing fixtures), divert construction waste from landfills, and incorporate electric vehicles charging infrastructure. There is growing recognition among developers and retailers that sustainable construction is not prohibitively expensive, and that there is a significant cost-savings potential in green building practices and materials.[8]

California Public Utilities Commission Energy Efficiency Strategic Plan

The CPUC prepared an *Energy Efficiency Strategic Plan* (Strategic Plan) in September 2008 with the goal of promoting energy efficiency and GHG reductions. In January 2011, a lighting chapter was adopted and added to the Strategic Plan. The Strategic Plan is California's single roadmap to achieving maximum energy savings in the State from 2009 to 2020 and beyond. The Strategic Plan contains the practical strategies and actions to attain significant statewide energy savings, because of a year-long collaboration by energy experts, utilities, businesses, consumer groups, and governmental organizations in California, throughout the West, nationally and internationally. The plan includes the following four strategies:

1. All new residential construction in California will be zero net energy by 2020;
2. All new commercial construction in California will be zero net energy by 2030;
3. HVAC will be transformed to ensure that its energy performance is optimal for California's climate; and
4. All eligible low-income customers will be given the opportunity to participate in the low-income energy efficiency program by 2020.

California Public Utilities Commission Community Choice Aggregation

Community Choice Aggregation (CCA) was enacted by Assembly Bill 117 (AB 117) in 2002. Under AB 117, "all electrical corporations must cooperate fully with community choice aggregators investigating, pursuing, or implementing community choice aggregator programs."

The investor-owned utility (IOU) continues to provide transmission and distribution, metering, billing, collection, and customer service to retail customers participating in CCAs. AB 117 also provided guidance on how communities may create a CCA program. AB 117 requires that the city or county pass an ordinance to implement a CCA program within its jurisdiction. Two or more cities or counties may participate in a CCA program as a group through a Joint Powers agency. Potential customers within a community's service area are automatically enrolled in a CCA program unless they opt out, if they are notified in writing of

[8] U.S. Green Building Council, *Green Building Costs and Savings*, https://www.usgbc.org/articles/green-building-costs-and-savings, accessed June 24, 2024.

their right to opt out. If a customer opts out of CCA service, the IOU will continue to serve them as bundled customers.

CCAs are responsible to meet regulatory compliance requirements established in Resource Adequacy (RA), Integrated Resource Planning (IRP), and Renewable Portfolio Standards (RPS). CCAs are responsible for tracking and compliance with CPUC regulations.

California Energy Commission Integrated Energy Policy Report

In 2002, the California State legislature adopted Senate Bill (SB) 1389, which requires the CEC to develop an Integrated Energy Policy Report (IEPR) every two years. SB 1389 requires the CEC to conduct assessments and forecasts of all aspects of energy industry supply, production, transportation, delivery and distribution, demand, and prices, and use these assessments and forecasts to develop energy policies that conserve resources, protect the environment, ensure energy reliability, enhance the State's economy, and protect public health and safety.

The CEC adopted the 2023 Integrated Energy Policy Report (2023 IEPR) on February 14, 2024. The 2023 IEPR provides the results of the CEC's assessments of a variety of energy issues facing California, many of which will require action if the State is to meet its climate, energy, air quality, and other environmental goals while maintaining reliability and controlling costs. The 2023 IEPR discusses speeding connection of clean resources to the electricity grid, the potential use of clean and renewable hydrogen, and the California Energy Demand Forecast to 2040.

Executive Order N-79-20

Executive Order N-79-20, issued September 23, 2020, directs the State to require all new cars and passenger trucks sold in the State to be zero-emission vehicles by 2035. Executive Order N-79-20 further states that all medium- and heavy-duty vehicles sold in the State will be zero-emission by 2045.

Local

City of Arcadia General Plan

The Arcadia General Plan, Chapter 6: Resource Sustainability Element includes the following goals and policies related to energy consumption that would be applicable to the Revised Project:[9]

Chapter 6: Resource Sustainability Element

- **Goal RS-5:** Wise and creative energy use that incorporates new technologies for energy generation and new approaches to energy conservation.
    - **Policy RS-5.3:** Require that all new developments meet or exceed the state and local energy conservation requirements.
    - **Policy RS-5.5:** Support State legislative initiatives to revise utility rates in a manner that provides incentives for energy conservation and provides funding for research and development of alternative energy sources.

[9] City of Arcadia, *Arcadia General Plan Resource Sustainability Element*, November 16, 2010.

- **Policy RS-5.9:** Facilitate the provision of energy-efficient modes of transportation and fixed facilities which establish transit, bicycle, and pedestrian modes as viable alternatives.

Arcadia Municipal Code

Arcadia Municipal Code, Article VIII, Chapter 1 – Building Code, incorporates the California Green Building Standards Code by reference.

CALIFORNIA ENVIRONMENTAL QUALITY ACT THRESHOLDS

In accordance with the *California Environmental Quality Act Guidelines* (CEQA Guidelines), project impacts are evaluated to determine whether significant adverse environmental impacts would occur. This analysis will focus on the project's potential impacts and provide mitigation measures, if required, to reduce or avoid any potentially significant impacts that are identified. According to Appendix G of the CEQA Guidelines, the proposed project would have a significant impact related to energy if it would:

- Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation (refer to Impact Statement EN-1); and/or
- Conflict with or obstruct a state or local plan for renewable energy or energy efficiency (refer to Impact Statement EN-2).

SIGNIFICANCE CRITERIA AND METHODOLOGY

Appendix F of the CEQA Guidelines is an advisory document that assists environmental document preparers in determining whether a project will result in the inefficient, wasteful, and unnecessary consumption of energy. The analysis for Impact Statement EN-1 and EN-2 rely upon Appendix F of the CEQA Guidelines, which recommends the following topics that a lead agency may consider to determine whether the project would result in inefficient, wasteful, and unnecessary consumption of energy and whether the project would conflict with adopted energy conservation plans:

- **Topic 1**: The project's energy requirements and its energy use efficiencies by amount and fuel type for each stage of the project including construction, operation, maintenance and/or removal. If appropriate, the energy intensiveness of materials may be discussed.
- **Topic 2**: The effects of the project on local and regional energy supplies and on requirements for additional capacity.
- **Topic 3**: The effects of the project on peak and base period demands for electricity and other forms of energy.
- **Topic 4**: The degree to which the project complies with existing energy standards.
- **Topic 5**: The effects of the project on energy resources.
- **Topic 6**: The project's projected transportation energy use requirements and its overall use of efficient transportation alternatives.

Quantification of energy usage is presented and addresses **Topic 1**. The discussion on construction-related energy use focuses on **Topics 2, 4,** and **5**. The discussion on operational energy use is divided into

transportation energy demand and building energy demand. The transportation energy demand analysis discusses **Topics 2, 4, 5,** and **6**, and the building energy demand analysis discusses **Topics 2, 3, 4,** and **5**.

Construction Methodology

Construction of the Tempo Project would require temporary energy consumption primarily using fuel for construction equipment, construction worker vehicle trips to and from the Revised Project Site, and the import and export of earth materials to and from the Revised Project Site by heavy trucks. It should be noted that the construction of the Approved Project will be completed prior to the start of, and would not overlap with, the construction of the Tempo Project. As such, the combined impact of construction energy resources from the Tempo Project and the Approved Project would not be analyzed; only the consumption of energy resources the construction of the Tempo Project would be analyzed.

The estimated construction fuel consumption is based on the Tempo Project's construction equipment list, timing/phasing, and hours of duration for construction equipment, as well as vendor, hauling, and construction worker trips. The Tempo Project would be constructed in one phase/duration over a period of approximately 16.5 months. Construction is anticipated to begin during the third quarter of 2024 and conclude by the end of 2025. Energy consumption during construction, including gasoline and diesel fuel consumption from construction equipment, hauling trips, vendor trips, and worker trips, was estimated using the assumptions and factors from California Emissions Estimator Model (CalEEMod) version 2022.1. The results of the CalEEMod modeling for construction estimates are included in Appendix A, *Energy Data*.

Operations Methodology

The Tempo Project would require energy use in the form of electricity, natural gas, and fuel consumption. The CalEEMod modeling included energy consumption data for the Tempo Project. The energy consumption of the Tempo Project would also be added to the energy consumption of the Approved Project to determine the total combined impact on energy resources. The combined annual electricity and natural gas consumption from both the Tempo Project and Approved Project would then be compared to the total consumption in Los Angeles County in 2022, the latest year consumption data is available.

Based on the *Revised Parking Demand Analysis for the Tempo by Hilton Hotel Project, City of Arcadia, California Memorandum* (Parking Analysis) prepared by Linscott, Law and Greenspan Engineers (March 12, 2024), the Tempo Project results in an operational trip generation of approximately 1,113 average daily trips (ADT) on weekdays and 915 ADT Saturdays. Additionally, the impact analysis would take into account the Approved Project's operational fuel consumption. The combined fuel consumption for operational trips from the Tempo Project and the Approved Project would be compared to the projected fuel consumption in Los Angeles County for the year 2026 (operational year of the Tempo Project). The results of the CalEEMod modeling for operational energy consumption estimates are included in Appendix A, *Energy Data*.

IMPACT ANALYSIS

EN-1 WOULD THE PROJECT RESULT IN POTENTIALLY SIGNIFICANT ENVIRONMENTAL IMPACT DUE TO WASTEFUL, INEFFICIENT, OR UNNECESSARY CONSUMPTION OF ENERGY RESOURCES, DURING PROJECT CONSTRUCTION OR OPERATION?

Level of Significance: Less Than Significant Impact.

The 2020 IS/MND Section 3.6 a) concluded that the Approved Project would not result in the wasteful, inefficient, or unnecessary consumption of energy resources during construction and operation of the development. As such, the Approved Project's impacts on energy resources would be less than significant.

The following impact analysis focuses on the three sources of energy that are relevant to the Tempo Project: electricity, natural gas, and transportation fuel for vehicle trips associated with operations as well as the fuel necessary for construction. The following analysis also considers the Approved Project's annual operational energy consumption. As stated above, the construction of the Approved Project will be completed prior to the start of the construction of the Tempo Project. As such, energy consumption from construction (construction off-road and on-road fuel) of the Approved Project would not be combined with the Tempo Project. The estimated energy consumption for the Tempo Project and Approved Project is summarized in Table 3, *Tempo Project and Approved Project Energy Consumption*.

Table 3
Tempo Project and Approved Project Energy Consumption

Energy Type	Tempo Project Annual Energy Consumption[1]	Approved Project Annual Energy Consumption[2]	Combined Annual Energy Consumption
Electricity Consumption	817 MWh	1,369 MWh	2,187 MWh
Natural Gas Consumption	16,685 therms	49,474 therms	66,159 therms
Fuel Consumption			
Construction Off-Road Fuel Consumption[3]	17,590 gallons	-	17,590 gallons
Construction On-Road Fuel Consumption[3]	20,733 gallons	-	20,733 gallons
Operational Fuel Consumption	195,888 gallons	303,077 gallons	498,953 gallons

Notes:
1. Tempo Project electricity and natural gas consumptions as modeled in California Emissions Estimator Model Version 2022.1 (CalEEMod) computer model. Tempo Project fuel consumption calculated based on CalEEMod results. Countywide operational fuel consumption, off-road construction equipment diesel fuel consumption, and on-road fuel consumption are from CARB EMFAC2021.
2. Approved project electricity and natural gas consumption based on Appendix A, Initial Study/Mitigated Negative Declaration – Arcadia Hotel and Annex (Hotel Indigo) Project, February 2020. Refer to Table 13, Initial Study/Mitigated Negative Declaration – Arcadia Hotel and Annex (Hotel Indigo) Project, February 2020 for operational fuel consumption for the Approved Project.
3. Construction of the Approved Project will be completed prior to the start of the construction of the Tempo Projoect. As such, the analysis does not analyze the combined construction energy impact from both projects.

Source: Refer to Appendix A, *Energy Data* for CalEEMod outputs and assumptions used in this analysis.

The combined annual energy consumption from Table 3 is compared to the Los Angeles County's annual energy consumption. Table 4, *Tempo Project and Approved Project Combined Energy Consumption Increase*, displays the combined annual energy consumption percentage increase of the Tempo Project and Approved Project over the County's energy consumption.

Table 4
Proposed Project and Approved Project Combined Energy Consumption Increase

Energy Type	Combined Annual Energy Consumption[1]	Los Angeles County Annual Energy Consumption[2]	Percentage Increase Countywide
Electricity Consumption[3]	2,187 MWh	68,484,956 MWh	0.0032%
Natural Gas Consumption[4]	66,159 therms	2,821,285,935 therms	0.0023%
Fuel Consumption			
Construction Off-Road Fuel Consumption	17,590 gallons	32,013,161 gallons	0.0549%
Construction On-Road Fuel Consumption	20,733 gallons	4,160,462,341 gallons	0.0005%
Operational Fuel Consumption	498,953 gallons	3,981,438,709 gallons	0.0125%

Notes:
1. Combined annual energy consumption refers to the combined consumption from the Tempo Project and Approved Project. Refer to Table 3.
2. The combined annual increase in electricity and natural gas consumption is compared to the total consumption in Los Angeles County in 2022, the latest year with data available. The Tempo Project's increases in construction off-road and on-road fuel consumption are compared with the projected Los Angeles Countywide off-road fuel consumption and Los Angeles Countywide on-road fuel consumption in 2024, the first year of construction. The combined annual consumption of operational automotive fuel is compared with the projected Countywide on-road fuel consumption in 2026, the Tempo Project's operational year.
3. Los Angeles County electricity consumption data source: California Energy Commission, *Electricity Consumption by County*, http://www.ecdms.energy.ca.gov/elecbycounty.aspx, accessed June 12, 2024.
4. Los Angeles County gas consumption data source: California Energy Commission, *Gas Consumption by County*, https://ecdms.energy.ca.gov/gasbycounty.aspx, accessed June 12, 2024.

Source: Refer to Appendix A, *Energy Data* for CalEEMod outputs and assumptions used in this analysis.

As shown in Table 4, the combined operational electricity usage would constitute an approximate 0.0032 percent increase over the County's typical annual electricity consumption. Additionally, the combined operational natural gas usage would constitute an approximately 0.0023 percent increase over the County's typical annual natural gas consumption. The Tempo Project's off-road construction equipment diesel fuel consumption and on-road construction fuel consumption would increase Los Angeles County's consumption by 0.0549 percent and 0.0005 percent, respectively. Based on the Parking Analysis, the Tempo Project operations would generate approximately 1,113 ADT on weekdays and Sundays, and approximately 915 ADT on Saturdays. As a conservative analysis, the 1,113 ADT was utilized to estimate the Tempo Project's fuel consumption; refer to Appendix A. Based on Table 13 of the 2020 IS/MND, the Approved Project would consume approximately 303,077 gallons of fuel per year. As such, the combined operational fuel consumption from both projects would be approximately 498,953 gallons of fuel per year, constituting an approximately 0.0125 percent increase over the County's projected annual fuel consumption in 2026. As such, the Revised Project's construction and operational energy consumption would be nominal compared to the County's consumption (**Topic 1**).

Construction Energy Consumption

During construction, the Tempo Project would consume energy in two general forms: (1) the fuel energy consumed by construction vehicles and equipment; and (2) bound energy in construction materials, such as asphalt, steel, concrete, pipes, and manufactured or processed materials such as lumber and glass.

Fossil fuels for construction vehicles and other energy-consuming equipment would be used during grading, building construction, paving, and architectural coating. As indicated in Table 4, the Tempo Project's off-road fuel consumption and on-road fuel consumption from construction would be approximately 17,590 gallons and 20,733 gallons, respectively. Consequently, the Tempo Project's off-road construction equipment diesel fuel consumption and on-road construction fuel consumption would increase Los Angeles County's consumption by 0.0549 percent and 0.0005 percent, respectively.

During construction, the Tempo Project may construct a temporary staging ground. The temporary staging ground may include mobile office trailers and equipment that may consume electricity. However, the electricity consumption during construction would be nominal and temporary. Additionally, natural gas would not be consumed during construction. As such, construction of the Tempo Project would have a nominal effect on the local and regional energy supplies (fuel or electricity) and would not require additional capacity (**Topic 2**).

Some incidental energy conservation would occur during construction through compliance with state requirements that equipment not in use for more than five minutes be turned off (i.e., Title 13, California Code of Regulations Section 2485). Construction equipment would also be required to comply with the latest U.S. Environmental Protection Agency (EPA) and CARB engine emissions standards. These emissions standards require highly efficient combustion systems that maximize fuel efficiency and reduce unnecessary fuel consumption. Section 2449 of 13 CCR Article 4.8, Chapter 9 would minimize the idling of construction equipment used for the construction of the Revised Project. In addition, because the cost of fuel and transportation is a significant aspect of construction budgets, contractors and owners have a strong financial incentive to avoid wasteful, inefficient, and unnecessary consumption of energy during construction (**Topic 4**).

Substantial reductions in energy inputs for construction materials can be achieved by selecting building materials composed of recycled materials that require substantially less energy to produce than nonrecycled materials.[10] The integration of green building materials can help reduce environmental impacts associated with the extraction, transport, processing, fabrication, installation, reuse, recycling, and disposal of these building industry source material. The project-related incremental increase in the use of energy bound in construction materials such as asphalt, steel, concrete, pipes and manufactured or processed materials (e.g., lumber and gas) for the Revised Project would not substantially increase demand for energy compared to overall local and regional demand for construction materials. Further, it is noted that construction fuel use is temporary and would cease upon completion of construction activities. There are no unusual project characteristics that would necessitate the use of construction equipment, or building materials, or methods that would be less energy efficient than at comparable construction sites in the region or State. Therefore, fuel energy and construction materials consumed during construction would not represent a significant demand on energy resources (**Topic 5**) and a less than significant impact would occur in this regard.

Operational Energy Consumption

Transportation Energy Demand

Pursuant to the Federal Energy Policy and Conservation Act of 1975, the National Highway Traffic and Safety Administration is responsible for establishing additional vehicle standards and for revising existing standards. Compliance with federal fuel economy standards is not determined for each individual vehicle model. Rather, compliance is determined based on each manufacturer's average fuel economy for the portion of their vehicles produced for sale in the United States. As discussed above, the Tempo Project would generate up to 1,113 ADT, which would consume approximately 195,888 gallons of fuel per year. Additionally, based on Table 13 of the 2020 IS/MND, the Approved Project would consume approximately 303,077 gallons of fuel per year. As such, the Tempo Project and Approved Project combined would result

[10] California Department of Resources Recycling and Recovery, *Construction and Demolition Debris Recycling*, https://calrecycle.ca.gov/condemo/, accessed June 24, 2024.

in an annual fuel consumption rate of approximately 498,953 gallons, which constitutes a 0.0125 percent increase over the County's projected on-road fuel consumption in 2026; refer to Table 4. Therefore, the Revised Project would not substantially increase the County's operational fuel consumption, and the Revised Project does not propose any unusual features that would result in excessive long-term operational fuel consumption (**Topic 2**).

The main source of operational fuel consumption for the Revised Project would come from individuals traveling to the Revised Project Site for short-term visits. The Revised Project would also consume fuel in the form of employees driving to and from the Revised Project Site. However, visitor traveling and employee commuting factors are outside of the scope of the design of the Revised Project. Notwithstanding, the Tempo Project would include three electric vehicle (EV) parking spaces with electrical charging station installed and the Approved Project included 15 EV charging stations in compliance with CALGreen standards. This requirement would encourage and support alternative modes of travel and thus reduce the petroleum fuel consumption (**Topic 4, Topic 5,** and **Topic 6**). Additionally, the Revised Project is located approximately 0.5 miles west from the Arcadia Station. Bus stops currently serviced by Foothill Transit are also located approximately 0.25 miles to the southeast along Huntington Drive. Bus stops would help reduce overall vehicle miles traveled (VMT) as public transportation could transport a large group of people in one vehicle, reducing solo car trips. Therefore, fuel consumption associated with vehicle trips generated by the Revised Project would not be considered inefficient, wasteful, or unnecessary in comparison to other similar developments in the region. A less than significant impact would occur in this regard.

Building Energy Demand

The CEC developed 2024 to 2040 forecasts for energy consumption and peak demand in support of the 2023 IEPR for each of the major electricity and natural gas planning areas and the State based on the economic and demographic growth projections. CEC forecasted baseline electricity consumption grows at a rate of about 1.7 percent annually through 2040.[11] The natural gas consumption grows at a rate of about 0.2 percent annually through 2035.[12]

As shown in Table 4, the combined operational energy consumption from the Tempo Project and the Approved Project would represent approximately 0.0032 percent increase over the 2022 Countywide electricity consumption and approximately 0.0023 percent increase over the 2022 Countywide natural gas consumption. This percent increase in energy consumption would be significantly below CEC's forecast. Therefore, the Revised Project would be consistent with the CEC's energy consumption forecasts. Thus, the Revised Project would not require additional energy capacity or supplies (**Topic 2**). Additionally, the Revised Project would consume energy during the same time periods as other commercial developments and would consume energy evenly throughout the day. As a result, the Revised Project would not result in unique or more intensive peak or base period electricity demand (**Topic 3**).

The Revised Project would be required to comply with the most current Title 24 standards (i.e., 2022 Title 24). The 2022 Title 24 provides minimum efficiency standards related to various building features, including appliances, water and space heating and cooling equipment, building insulation and roofing, and lighting. Specifically, the Tempo Project would install low flow water fixtures and water efficient irrigation.

[11] California Energy Commission, *2023 Integrated Energy Policy Report, page 130*, February 14, 2024.

[12] Based on *2023 Integrated Energy Policy Report*, the gas forecast is updated every two years, in odd years. As such, the natural gas consumption shown here is based on the California Energy Commission, *Final 2022 Integrated Energy Policy Report Update, Figure 18*, May 10, 2023.

These features were included in the CalEEMod modeling. Title 24 Building Energy Efficiency Standards are updated every 3-year and become more stringent between each update, as such, complying with the most current Title 24 standards would make the Revised Project more energy efficient than existing buildings built under the earlier versions of the Title 24 standards (**Topic 4**).

The electricity provider for the City, SCE, is subject to California's RPS reflected in SB 100. The RPS requires investor-owned utilities, electric service providers, and community choice aggregators to increase procurement from eligible renewable energy resources to 44 percent by the end of 2024, 52 percent by the end of 2027, 60 percent of total procurement by 2030, and 100 percent of total procurement by 2045. Renewable energy is generally defined as energy that comes from resources which are naturally replenished within a human timescale such as sunlight, wind, tides, waves, and geothermal heat. The increase in reliance of such energy resources further ensures that new development projects will not result in the waste of the finite energy resources (**Topic 5**).

In conclusion, the combined energy consumption from the Tempo Project and the Approved Project would not result in wasteful, inefficient, or unnecessary consumption of energy resources. As such, impacts for the Revised Project would be less than significant.

Conclusion

In conclusion, the Tempo Project would consume energy resources (i.e., electricity, natural gas, construction on-road/off-road, and operational fuel consumption) that would only represent a nominal increase in the existing and forecasted Countywide consumption even after considering the Approved Project's energy consumption. As such, the Tempo Project's impact on energy resources would be less than significant and would be similar to the impacts disclosed in the 2020 IS/MND, which were determined to be less than significant. In addition, the combined impact from both the Tempo Project and the Approved Project would not result in a significant increase in energy consumption in the County.

Based on the above, the Revised Project would not result in new significant impacts and no substantial increase in the severity of previously identified impacts disclosed in the 2020 IS/MND would occur. Likewise, there are no changed circumstances involving new or more severe impacts and no new information of substantial importance requiring new analysis or project-specific mitigation measures.

Mitigation Measures: Impacts related to Impact EN-1 would be less than significant. Therefore, no mitigation measures are required.

EN-2 WOULD THE PROJECT CONFLICT WITH OR OBSTRUCT A STATE OR LOCAL PLAN FOR RENEWABLE ENERGY OR ENERGY EFFICIENCY?

Level of Significance: Less Than Significant Impact.

The 2020 IS/MND Section 3.6 b) concluded that the Approved Project would not conflict with existing energy standards and regulations. As such, it was concluded that impacts relating to energy consumption during the construction and operation of the Approved Project would be less than significant.

The Revised Project would comply with state and local plans for renewable energy and energy efficiency, which include the CEC's IEPR, Title 24 standards and CalGreen Code, and the California's RPS. As discussed above, the combined operational energy (electricity and natural gas) consumption of the Tempo Project

and Approved Project would represent a nominal increase over the current Countywide consumption. Specifically, the combined electricity consumption would represent an approximately 0.0032 percent increase in electricity consumption over the current Countywide usage, which would be significantly below CEC's forecasts in the 2023 IEPR (i.e., forecasted baseline electricity consumption grows at a rate of about 1.7 percent annually through 2040); refer to Table 4. Additionally, the combined natural gas consumption would represent an approximately 0.0023 percent increase in natural gas consumption over the current Countywide usage, which would be significantly below CEC's forecasts in the 2023 IEPR (i.e., forecasted baseline natural gas consumption grows at a rate of about 0.2 percent annually through 2035); refer to Table 4. Therefore, the Revised Project would be consistent with the CEC's 2023 IEPR.

Further, the Revised Project would comply the most current Title 24 (2022 Title 24), which provides minimum efficiency standards related to various building features, including appliances, water and space heating and cooling equipment, building insulation and roofing, and lighting. The Revised Project would also comply with the CALGreen Code which requires that new buildings employ water efficiency and conservation, increase building system efficiencies (e.g., lighting, HVAC, and plumbing fixtures), divert construction waste from landfills, and incorporate electric vehicles charging infrastructure. Specifically, the Tempo Project would install EV charging stations and water efficient features (i.e., low flow fixtures and water efficient irrigation). The Approved Project also included EV charging stations and water efficient features. Implementation of the most current and applicable Title 24 standards significantly reduces energy usage. Additionally, per the RPS, the Revised Project would utilize electricity that would achieve 60 percent of total procurement by 2030, and 100 percent renewable energy by 2045. As such, the Revised Project would comply with state energy plans including the 2023 IEPR, the most current Title 24 as well as CalGreen standards, and California's RPS.

Additionally, the Revised Project would comply with applicable goals and policies pertaining to energy and energy efficiency in the General Plan. Table 5, *Consistency with the Arcadia General Plan*, discusses the Revised Project's consistency with applicable goals and policies.

In conclusion, based on the above, the Revised Project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency and impacts would be less than significant.

Table 5
Consistency with the Arcadia General Plan

Goals and Policies	Project Consistency
Goal RS-5: Wise and creative energy use that incorporates new technologies for energy generation and new approaches to energy conservation.	
Policy RS-5.3: Require that all new developments meet or exceed the state and local energy conservation requirements.	**Consistent.** The Revised Project would comply the 2022 Title 24 standards and the CALGreen Code. The 2022 Title 24 standards provides minimum energy efficiency standards for new developments. The Revised Project would be consistent with this policy.
Policy RS-5.5: Support State legislative initiatives to revise utility rates in a manner that provides incentives for energy conservation and provides funding for research and development of alternative energy sources.	**Consistent.** The Revised Project would be supplied with electricity by SCE which would comply with the RPS that requires the electricity providers to achieve 60 percent of total procurement by 2030, and 100 percent renewable energy by 2045. As such, the Revised Project would utilize electricity from SCE that would be required to meet these renewable energy procurement goals. Additionally, the Tempo Project would include a solar ready roof which would allow for the future installation of solar panels for on-site energy production. The Revised Project would utilize alternative energy sources and would be consistent with this policy.
Policy RS-5.9: Facilitate the provision of energy-efficient modes of transportation and fixed facilities which establish transit, bicycle, and pedestrian modes as viable alternatives.	**Consistent.** The Tempo Project would provide three EV charging stations and the Approved Project included 14 EV charging stations that would help promote the use of electric vehicles. Electric vehicles typically achieve better fuel economy compared to traditional gasoline and diesel vehicles and thus, would reduce help reduce operational vehicle fuel consumption.[1] Additionally, the Revised Project Site is located approximately 0.5 miles west from the Metro Gold Line Arcadia Station. Bus stops currently serviced by Foothill Transit are also located approximately 0.25 miles to the southeast along Huntington Drive. As such, the Revised Project would incorporate features that encourage alternative modes of transportation and is located near existing public transportation. The Revised Project would be consistent with this policy.
1. United States Department of Energy, *Electric Vehicle Benefits and Considerations*, https://afdc.energy.gov/fuels/electricity-benefits#:~:text=Depending%20on%20how%20they%20are,costs%20than%20similar%20conventional%20vehicles, accessed July 1, 2024.	
Source: City of Arcadia, *Arcadia General Plan Resource Sustainability Element*, November 16, 2010.	

Conclusion

In conclusion, the Tempo Project would comply with existing regulation and plans that address energy efficiency and as such, impacts would be less than significant. Additionally, the Tempo Project's impact would be similar to the impacts disclosed in the 2020 IS/MND, which were determined to be less than significant.

As such the Revised Project would not result in new significant impacts and no substantial increase in the severity of previously identified impacts disclosed in the 2020 IS/MND would occur. Likewise, there are no changed circumstances involving new or more severe impacts and no new information of substantial importance requiring new analysis or project-specific mitigation measures.

Mitigation Measures: Impacts related to Impact EN-2 would be less than significant. Therefore, no mitigation measures are required.

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Documents

1. California Air Resources Board, *EMFAC2021, https://arb.ca.gov/emfac/emissions-inventory/*, accessed June 21, 2024.

2. California Air Resources Board, *EMFAC2021 Off-Road Web Platform, https://arb.ca.gov/emfac/offroad/emissions-inventory/*, accessed June 21, 2024.

3. California Air Resources Board, *EMFAC2021 Off-Road Web Platform, https://arb.ca.gov/emfac/offroad/emissions-inventory/*, accessed March 1, 2024.

4. California Department of Resources Recycling and Recovery, *Green Building*, https://calrecycle.ca.gov/greenbuilding/, accessed June 24, 2024.

5. California Department of Tax and Fee Administration, *Net Taxable Gasoline Gallons*, available at: https://www.cdtfa.ca.gov/taxes-and-fees/spftrpts.htm, accessed June 11, 2024.

6. California Energy Commission, *2023 Integrated Energy Policy Report, Figure 18*, February 14, 2024.

7. California Energy Commission, *Electricity Consumption by County*, http://www.ecdms.energy.ca.gov/, accessed June 21, 2024.

8. California Energy Commission, *Gas Consumption by County*, http://www.ecdms.energy.ca.gov/, accessed June 21, 2024.

9. City of Arcadia, *Arcadia General Plan Resource Sustainability Element*, November 16, 2010.

10. Linscott, Law, and Greenspan Engineers, *Revised Parking Demand Analysis for the Tempo by Hilton Hotel Project, City of Arcadia, California Memorandum*, March 12, 2024.

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Appendix A
Energy Data

Tempo by Hilton Detailed Report

Table of Contents

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Tempo by Hilton
Construction Start Date	8/1/2024
Operational Year	2026
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	0.50
Precipitation (days)	24.4
Location	34.141583262590174, -118.03818989813819
County	Los Angeles-South Coast
City	Arcadia
Air District	South Coast AQMD
Air Basin	South Coast
TAZ	4922
EDFZ	7
Electric Utility	Southern California Edison
Gas Utility	Southern California Gas
App Version	2022.1.1.23

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description

Hotel	91.0	Room	0.73	57,790	5,318	—	—	—
Parking Lot	25.0	Space	0.22	0.00	0.00	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

Sector	#	Measure Title
Construction	C-10-A	Water Exposed Surfaces
Construction	C-11	Limit Vehicle Speeds on Unpaved Roads
Water	W-4	Require Low-Flow Water Fixtures

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.63	13.7	11.9	16.8	0.02	0.54	5.48	6.02	0.49	2.61	3.11	—	3,207	3,207	0.13	0.08	3.18	3,238
Mit.	1.63	13.7	11.9	16.8	0.02	0.54	1.55	2.09	0.49	0.71	1.20	—	3,207	3,207	0.13	0.08	3.18	3,238
% Reduced	—	—	—	—	—	—	72%	65%	—	73%	61%	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.48	1.23	11.9	11.4	0.02	0.54	5.48	6.02	0.49	2.61	3.11	—	2,090	2,090	0.09	0.06	0.06	2,111
Mit.	1.48	1.23	11.9	11.4	0.02	0.54	1.55	2.09	0.49	0.71	1.20	—	2,090	2,090	0.09	0.06	0.06	2,111
% Reduced	—	—	—	—	—	—	72%	65%	—	73%	61%	—	—	—	—	—	—	—

Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.59	1.24	4.34	6.62	0.01	0.17	0.89	1.00	0.16	0.41	0.52	—	1,453	1,453	0.06	0.05	0.66	1,469
Mit.	0.59	1.24	4.34	6.62	0.01	0.17	0.30	0.47	0.16	0.12	0.23	—	1,453	1,453	0.06	0.05	0.66	1,469
% Reduced	—	—	—	—	—	—	66%	53%	—	71%	56%	—	—	—	—	—	—	—
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.11	0.23	0.79	1.21	< 0.005	0.03	0.16	0.18	0.03	0.08	0.09	—	241	241	0.01	0.01	0.11	243
Mit.	0.11	0.23	0.79	1.21	< 0.005	0.03	0.05	0.09	0.03	0.02	0.04	—	241	241	0.01	0.01	0.11	243
% Reduced	—	—	—	—	—	—	66%	53%	—	71%	56%	—	—	—	—	—	—	—

2.2. Construction Emissions by Year, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	1.48	1.23	11.9	11.5	0.02	0.54	5.48	6.02	0.49	2.61	3.11	—	2,095	2,095	0.09	0.06	1.03	2,117
2025	1.63	13.7	10.9	16.8	0.02	0.44	0.69	1.13	0.41	0.17	0.57	—	3,207	3,207	0.13	0.08	3.18	3,238
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	1.48	1.23	11.9	11.4	0.02	0.54	5.48	6.02	0.49	2.61	3.11	—	2,090	2,090	0.09	0.06	0.06	2,111
2025	0.76	0.63	5.61	8.54	0.01	0.22	0.40	0.62	0.20	0.10	0.30	—	1,923	1,923	0.08	0.06	0.05	1,945
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	0.32	0.27	2.55	2.80	< 0.005	0.11	0.89	1.00	0.10	0.41	0.52	—	552	552	0.02	0.02	0.18	558
2025	0.59	1.24	4.34	6.62	0.01	0.17	0.30	0.47	0.16	0.07	0.23	—	1,453	1,453	0.06	0.05	0.66	1,469

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	0.06	0.05	0.47	0.51	< 0.005	0.02	0.16	0.18	0.02	0.08	0.09	—	91.5	91.5	< 0.005	< 0.005	0.03	92.4
2025	0.11	0.23	0.79	1.21	< 0.005	0.03	0.05	0.09	0.03	0.01	0.04	—	241	241	0.01	0.01	0.11	243

2.3. Construction Emissions by Year, Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	1.48	1.23	11.9	11.5	0.02	0.54	1.55	2.09	0.49	0.71	1.20	—	2,095	2,095	0.09	0.06	1.03	2,117
2025	1.63	13.7	10.9	16.8	0.02	0.44	0.69	1.13	0.41	0.17	0.57	—	3,207	3,207	0.13	0.08	3.18	3,238
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	1.48	1.23	11.9	11.4	0.02	0.54	1.55	2.09	0.49	0.71	1.20	—	2,090	2,090	0.09	0.06	0.06	2,111
2025	0.76	0.63	5.61	8.54	0.01	0.22	0.40	0.62	0.20	0.10	0.30	—	1,923	1,923	0.08	0.06	0.05	1,945
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	0.32	0.27	2.55	2.80	< 0.005	0.11	0.28	0.40	0.10	0.12	0.22	—	552	552	0.02	0.02	0.18	558
2025	0.59	1.24	4.34	6.62	0.01	0.17	0.30	0.47	0.16	0.07	0.23	—	1,453	1,453	0.06	0.05	0.66	1,469
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	0.06	0.05	0.47	0.51	< 0.005	0.02	0.05	0.07	0.02	0.02	0.04	—	91.5	91.5	< 0.005	< 0.005	0.03	92.4
2025	0.11	0.23	0.79	1.21	< 0.005	0.03	0.05	0.09	0.03	0.01	0.04	—	241	241	0.01	0.01	0.11	243

2.4. Operations Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	4.57	5.44	3.30	35.8	0.08	0.09	7.24	7.32	0.08	1.84	1.92	31.3	9,785	9,816	3.64	0.33	117	10,123
Mit.	4.57	5.44	3.30	35.8	0.08	0.09	7.24	7.32	0.08	1.84	1.92	30.8	9,782	9,813	3.58	0.33	117	10,119
% Reduced	—	—	—	—	—	—	—	—	—	—	—	2%	< 0.5%	< 0.5%	1%	< 0.5%	—	< 0.5%
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	4.08	4.98	3.55	30.5	0.08	0.08	7.24	7.32	0.08	1.84	1.92	31.3	9,439	9,470	3.65	0.35	91.0	9,756
Mit.	4.08	4.98	3.55	30.5	0.08	0.08	7.24	7.32	0.08	1.84	1.92	30.8	9,436	9,467	3.60	0.35	91.0	9,751
% Reduced	—	—	—	—	—	—	—	—	—	—	—	2%	< 0.5%	< 0.5%	1%	< 0.5%	—	< 0.5%
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	4.26	5.14	3.52	32.3	0.08	0.09	6.94	7.03	0.08	1.76	1.85	31.3	9,339	9,370	3.64	0.34	102	9,664
Mit.	4.26	5.14	3.52	32.3	0.08	0.09	6.94	7.03	0.08	1.76	1.85	30.8	9,336	9,367	3.58	0.34	102	9,659
% Reduced	—	—	—	—	—	—	—	—	—	—	—	2%	< 0.5%	< 0.5%	1%	< 0.5%	—	< 0.5%
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.78	0.94	0.64	5.89	0.01	0.02	1.27	1.28	0.01	0.32	0.34	5.18	1,546	1,551	0.60	0.06	16.8	1,600
Mit.	0.78	0.94	0.64	5.89	0.01	0.02	1.27	1.28	0.01	0.32	0.34	5.09	1,546	1,551	0.59	0.06	16.8	1,599
% Reduced	—	—	—	—	—	—	—	—	—	—	—	2%	< 0.5%	< 0.5%	1%	< 0.5%	—	< 0.5%

2.5. Operations Emissions by Sector, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Sector	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	4.08	3.69	2.83	32.9	0.08	0.05	7.24	7.29	0.05	1.84	1.88	—	8,025	8,025	0.38	0.31	27.1	8,154
Area	0.45	1.72	0.02	2.51	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	10.3	10.3	< 0.005	< 0.005	—	10.4
Energy	0.05	0.02	0.45	0.38	< 0.005	0.03	—	0.03	0.03	—	0.03	—	1,726	1,726	0.12	0.01	—	1,732
Water	—	—	—	—	—	—	—	—	—	—	—	4.42	23.5	27.9	0.46	0.01	—	42.5
Waste	—	—	—	—	—	—	—	—	—	—	—	26.9	0.00	26.9	2.68	0.00	—	93.9
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	90.3	90.3
Total	4.57	5.44	3.30	35.8	0.08	0.09	7.24	7.32	0.08	1.84	1.92	31.3	9,785	9,816	3.64	0.33	117	10,123
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	4.03	3.64	3.10	30.2	0.08	0.05	7.24	7.29	0.05	1.84	1.88	—	7,690	7,690	0.39	0.33	0.70	7,797
Area	—	1.31	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Energy	0.05	0.02	0.45	0.38	< 0.005	0.03	—	0.03	0.03	—	0.03	—	1,726	1,726	0.12	0.01	—	1,732
Water	—	—	—	—	—	—	—	—	—	—	—	4.42	23.5	27.9	0.46	0.01	—	42.5
Waste	—	—	—	—	—	—	—	—	—	—	—	26.9	0.00	26.9	2.68	0.00	—	93.9
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	90.3	90.3
Total	4.08	4.98	3.55	30.5	0.08	0.08	7.24	7.32	0.08	1.84	1.92	31.3	9,439	9,470	3.65	0.35	91.0	9,756
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	3.91	3.53	3.06	30.2	0.07	0.05	6.94	6.99	0.05	1.76	1.81	—	7,582	7,582	0.38	0.32	11.4	7,698
Area	0.31	1.59	0.01	1.72	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	7.08	7.08	< 0.005	< 0.005	—	7.10
Energy	0.05	0.02	0.45	0.38	< 0.005	0.03	—	0.03	0.03	—	0.03	—	1,726	1,726	0.12	0.01	—	1,732
Water	—	—	—	—	—	—	—	—	—	—	—	4.42	23.5	27.9	0.46	0.01	—	42.5
Waste	—	—	—	—	—	—	—	—	—	—	—	26.9	0.00	26.9	2.68	0.00	—	93.9
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	90.3	90.3
Total	4.26	5.14	3.52	32.3	0.08	0.09	6.94	7.03	0.08	1.76	1.85	31.3	9,339	9,370	3.64	0.34	102	9,664

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.71	0.64	0.56	5.51	0.01	0.01	1.27	1.28	0.01	0.32	0.33	—	1,255	1,255	0.06	0.05	1.89	1,275
Area	0.06	0.29	< 0.005	0.31	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.17	1.17	< 0.005	< 0.005	—	1.18
Energy	0.01	< 0.005	0.08	0.07	< 0.005	0.01	—	0.01	0.01	—	0.01	—	286	286	0.02	< 0.005	—	287
Water	—	—	—	—	—	—	—	—	—	—	—	0.73	3.89	4.62	0.08	< 0.005	—	7.04
Waste	—	—	—	—	—	—	—	—	—	—	—	4.45	0.00	4.45	0.44	0.00	—	15.6
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	15.0	15.0
Total	0.78	0.94	0.64	5.89	0.01	0.02	1.27	1.28	0.01	0.32	0.34	5.18	1,546	1,551	0.60	0.06	16.8	1,600

2.6. Operations Emissions by Sector, Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Sector	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	4.08	3.69	2.83	32.9	0.08	0.05	7.24	7.29	0.05	1.84	1.88	—	8,025	8,025	0.38	0.31	27.1	8,154
Area	0.45	1.72	0.02	2.51	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	10.3	10.3	< 0.005	< 0.005	—	10.4
Energy	0.05	0.02	0.45	0.38	< 0.005	0.03	—	0.03	0.03	—	0.03	—	1,726	1,726	0.12	0.01	—	1,732
Water	—	—	—	—	—	—	—	—	—	—	—	3.90	20.8	24.7	0.40	0.01	—	37.6
Waste	—	—	—	—	—	—	—	—	—	—	—	26.9	0.00	26.9	2.68	0.00	—	93.9
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	90.3	90.3
Total	4.57	5.44	3.30	35.8	0.08	0.09	7.24	7.32	0.08	1.84	1.92	30.8	9,782	9,813	3.58	0.33	117	10,119
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	4.03	3.64	3.10	30.2	0.08	0.05	7.24	7.29	0.05	1.84	1.88	—	7,690	7,690	0.39	0.33	0.70	7,797
Area	—	1.31	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Energy	0.05	0.02	0.45	0.38	< 0.005	0.03	—	0.03	0.03	—	0.03	—	1,726	1,726	0.12	0.01	—	1,732
Water	—	—	—	—	—	—	—	—	—	—	—	3.90	20.8	24.7	0.40	0.01	—	37.6

Waste	—	—	—	—	—	—	—	—	—	—	—	26.9	0.00	26.9	2.68	0.00	—	93.9
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	90.3	90.3
Total	4.08	4.98	3.55	30.5	0.08	0.08	7.24	7.32	0.08	1.84	1.92	30.8	9,436	9,467	3.60	0.35	91.0	9,751
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	3.91	3.53	3.06	30.2	0.07	0.05	6.94	6.99	0.05	1.76	1.81	—	7,582	7,582	0.38	0.32	11.4	7,698
Area	0.31	1.59	0.01	1.72	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	7.08	7.08	< 0.005	< 0.005	—	7.10
Energy	0.05	0.02	0.45	0.38	< 0.005	0.03	—	0.03	0.03	—	0.03	—	1,726	1,726	0.12	0.01	—	1,732
Water	—	—	—	—	—	—	—	—	—	—	—	3.90	20.8	24.7	0.40	0.01	—	37.6
Waste	—	—	—	—	—	—	—	—	—	—	—	26.9	0.00	26.9	2.68	0.00	—	93.9
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	90.3	90.3
Total	4.26	5.14	3.52	32.3	0.08	0.09	6.94	7.03	0.08	1.76	1.85	30.8	9,336	9,367	3.58	0.34	102	9,659
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.71	0.64	0.56	5.51	0.01	0.01	1.27	1.28	0.01	0.32	0.33	—	1,255	1,255	0.06	0.05	1.89	1,275
Area	0.06	0.29	< 0.005	0.31	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.17	1.17	< 0.005	< 0.005	—	1.18
Energy	0.01	< 0.005	0.08	0.07	< 0.005	0.01	—	0.01	0.01	—	0.01	—	286	286	0.02	< 0.005	—	287
Water	—	—	—	—	—	—	—	—	—	—	—	0.65	3.44	4.09	0.07	< 0.005	—	6.22
Waste	—	—	—	—	—	—	—	—	—	—	—	4.45	0.00	4.45	0.44	0.00	—	15.6
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	15.0	15.0
Total	0.78	0.94	0.64	5.89	0.01	0.02	1.27	1.28	0.01	0.32	0.34	5.09	1,546	1,551	0.59	0.06	16.8	1,599

3. Construction Emissions Details

3.1. Grading (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.41	1.19	11.4	10.7	0.02	0.53	—	0.53	0.49	—	0.49	—	1,713	1,713	0.07	0.01	—	1,719
Dust From Material Movement	—	—	—	—	—	—	5.31	5.31	—	2.57	2.57	—	—	—	—	—	—	—
Onsite truck	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	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.41	1.19	11.4	10.7	0.02	0.53	—	0.53	0.49	—	0.49	—	1,713	1,713	0.07	0.01	—	1,719
Dust From Material Movement	—	—	—	—	—	—	5.31	5.31	—	2.57	2.57	—	—	—	—	—	—	—
Onsite truck	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	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.22	0.18	1.75	1.65	< 0.005	0.08	—	0.08	0.08	—	0.08	—	263	263	0.01	< 0.005	—	264
Dust From Material Movement	—	—	—	—	—	—	0.82	0.82	—	0.39	0.39	—	—	—	—	—	—	—
Onsite truck	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	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.03	0.32	0.30	< 0.005	0.01	—	0.01	0.01	—	0.01	—	43.5	43.5	< 0.005	< 0.005	—	43.7

Dust From Material Movement	—	—	—	—	—	—	0.15	0.15	—	0.07	0.07	—	—	—	—	—	—	—
Onsite truck	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	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.03	0.04	0.57	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	106	106	< 0.005	< 0.005	0.42	107
Vendor	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	0.00	0.00
Hauling	0.03	0.01	0.43	0.20	< 0.005	< 0.005	0.07	0.07	< 0.005	0.02	0.02	—	276	276	0.02	0.04	0.61	291
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.03	0.04	0.48	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	100	100	< 0.005	< 0.005	0.01	102
Vendor	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	0.00	0.00
Hauling	0.03	0.01	0.45	0.20	< 0.005	< 0.005	0.07	0.07	< 0.005	0.02	0.02	—	277	277	0.02	0.04	0.02	290
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.08	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	15.6	15.6	< 0.005	< 0.005	0.03	15.8
Vendor	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	0.00	0.00
Hauling	< 0.005	< 0.005	0.07	0.03	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	42.4	42.4	< 0.005	0.01	0.04	44.6
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.59	2.59	< 0.005	< 0.005	< 0.005	2.62
Vendor	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	0.00	0.00
Hauling	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	7.02	7.02	< 0.005	< 0.005	0.01	7.38

3.2. Grading (2024) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.41	1.19	11.4	10.7	0.02	0.53	—	0.53	0.49	—	0.49	—	1,713	1,713	0.07	0.01	—	1,719
Dust From Material Movement	—	—	—	—	—	—	1.38	1.38	—	0.67	0.67	—	—	—	—	—	—	—
Onsite truck	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	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.41	1.19	11.4	10.7	0.02	0.53	—	0.53	0.49	—	0.49	—	1,713	1,713	0.07	0.01	—	1,719
Dust From Material Movement	—	—	—	—	—	—	1.38	1.38	—	0.67	0.67	—	—	—	—	—	—	—
Onsite truck	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	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.22	0.18	1.75	1.65	< 0.005	0.08	—	0.08	0.08	—	0.08	—	263	263	0.01	< 0.005	—	264
Dust From Material Movement	—	—	—	—	—	—	0.21	0.21	—	0.10	0.10	—	—	—	—	—	—	—
Onsite truck	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	0.00	0.00

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.03	0.32	0.30	< 0.005	0.01	—	0.01	0.01	—	0.01	—	43.5	43.5	< 0.005	< 0.005	—	43.7
Dust From Material Movement	—	—	—	—	—	—	0.04	0.04	—	0.02	0.02	—	—	—	—	—	—	—
Onsite truck	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	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.03	0.04	0.57	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	106	106	< 0.005	< 0.005	0.42	107
Vendor	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	0.00	0.00
Hauling	0.03	0.01	0.43	0.20	< 0.005	< 0.005	0.07	0.07	< 0.005	0.02	0.02	—	276	276	0.02	0.04	0.61	291
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.03	0.04	0.48	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	100	100	< 0.005	< 0.005	0.01	102
Vendor	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	0.00	0.00
Hauling	0.03	0.01	0.45	0.20	< 0.005	< 0.005	0.07	0.07	< 0.005	0.02	0.02	—	277	277	0.02	0.04	0.02	290
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.08	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	15.6	15.6	< 0.005	< 0.005	0.03	15.8
Vendor	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	0.00	0.00
Hauling	< 0.005	< 0.005	0.07	0.03	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	42.4	42.4	< 0.005	0.01	0.04	44.6
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.59	2.59	< 0.005	< 0.005	< 0.005	2.62
Vendor	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	0.00	0.00
Hauling	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	7.02	7.02	< 0.005	< 0.005	0.01	7.38

3.3. Building Construction (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.67	0.56	5.60	6.98	0.01	0.26	—	0.26	0.23	—	0.23	—	1,305	1,305	0.05	0.01	—	1,309
Onsite truck	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	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.08	0.07	0.67	0.83	< 0.005	0.03	—	0.03	0.03	—	0.03	—	156	156	0.01	< 0.005	—	156
Onsite truck	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	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.12	0.15	< 0.005	0.01	—	0.01	0.01	—	0.01	—	25.8	25.8	< 0.005	< 0.005	—	25.9
Onsite truck	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	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.12	0.11	0.14	1.55	0.00	0.00	0.32	0.32	0.00	0.07	0.07	—	325	325	0.01	0.01	0.04	329
Vendor	0.02	0.01	0.37	0.18	< 0.005	< 0.005	0.08	0.09	< 0.005	0.02	0.03	—	306	306	0.01	0.04	0.02	319
Hauling	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	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.02	0.19	0.00	0.00	0.04	0.04	0.00	0.01	0.01	—	39.3	39.3	< 0.005	< 0.005	0.07	39.9
Vendor	< 0.005	< 0.005	0.05	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	36.5	36.5	< 0.005	0.01	0.04	38.1
Hauling	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	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	6.51	6.51	< 0.005	< 0.005	0.01	6.60
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	6.04	6.04	< 0.005	< 0.005	0.01	6.30
Hauling	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	0.00	0.00

3.4. Building Construction (2024) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.67	0.56	5.60	6.98	0.01	0.26	—	0.26	0.23	—	0.23	—	1,305	1,305	0.05	0.01	—	1,309
Onsite truck	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	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.08	0.07	0.67	0.83	< 0.005	0.03	—	0.03	0.03	—	0.03	—	156	156	0.01	< 0.005	—	156
Onsite truck	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	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.12	0.15	< 0.005	0.01	—	0.01	0.01	—	0.01	—	25.8	25.8	< 0.005	< 0.005	—	25.9
Onsite truck	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	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.12	0.11	0.14	1.55	0.00	0.00	0.32	0.32	0.00	0.07	0.07	—	325	325	0.01	0.01	0.04	329
Vendor	0.02	0.01	0.37	0.18	< 0.005	< 0.005	0.08	0.09	< 0.005	0.02	0.03	—	306	306	0.01	0.04	0.02	319
Hauling	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	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.02	0.19	0.00	0.00	0.04	0.04	0.00	0.01	0.01	—	39.3	39.3	< 0.005	< 0.005	0.07	39.9
Vendor	< 0.005	< 0.005	0.05	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	36.5	36.5	< 0.005	0.01	0.04	38.1
Hauling	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	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	6.51	6.51	< 0.005	< 0.005	0.01	6.60
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	6.04	6.04	< 0.005	< 0.005	0.01	6.30
Hauling	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	0.00	0.00

3.5. Building Construction (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.62	0.52	5.14	6.94	0.01	0.22	—	0.22	0.20	—	0.20	—	1,305	1,305	0.05	0.01	—	1,309
Onsite truck	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	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.62	0.52	5.14	6.94	0.01	0.22	—	0.22	0.20	—	0.20	—	1,305	1,305	0.05	0.01	—	1,309
Onsite truck	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	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.44	0.37	3.67	4.96	0.01	0.16	—	0.16	0.14	—	0.14	—	932	932	0.04	0.01	—	935
Onsite truck	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	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.08	0.07	0.67	0.90	< 0.005	0.03	—	0.03	0.03	—	0.03	—	154	154	0.01	< 0.005	—	155
Onsite truck	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	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.12	0.10	0.11	1.69	0.00	0.00	0.32	0.32	0.00	0.07	0.07	—	336	336	0.01	0.01	1.23	341

Vendor	0.02	0.01	0.34	0.17	< 0.005	< 0.005	0.08	0.09	< 0.005	0.02	0.02	—	301	301	0.01	0.04	0.82	314
Hauling	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	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.12	0.10	0.12	1.43	0.00	0.00	0.32	0.32	0.00	0.07	0.07	—	318	318	0.01	0.01	0.03	322
Vendor	0.02	0.01	0.36	0.17	< 0.005	< 0.005	0.08	0.09	< 0.005	0.02	0.02	—	301	301	0.01	0.04	0.02	314
Hauling	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	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.07	0.09	1.07	0.00	0.00	0.22	0.22	0.00	0.05	0.05	—	231	231	0.01	0.01	0.38	234
Vendor	0.02	0.01	0.26	0.12	< 0.005	< 0.005	0.06	0.06	< 0.005	0.02	0.02	—	215	215	0.01	0.03	0.25	224
Hauling	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	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.02	0.20	0.00	0.00	0.04	0.04	0.00	0.01	0.01	—	38.2	38.2	< 0.005	< 0.005	0.06	38.7
Vendor	< 0.005	< 0.005	0.05	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	35.5	35.5	< 0.005	< 0.005	0.04	37.1
Hauling	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	0.00	0.00

3.6. Building Construction (2025) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.62	0.52	5.14	6.94	0.01	0.22	—	0.22	0.20	—	0.20	—	1,305	1,305	0.05	0.01	—	1,309
Onsite truck	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	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.62	0.52	5.14	6.94	0.01	0.22	—	0.22	0.20	—	0.20	—	1,305	1,305	0.05	0.01	—	1,309
Onsite truck	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	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.44	0.37	3.67	4.96	0.01	0.16	—	0.16	0.14	—	0.14	—	932	932	0.04	0.01	—	935
Onsite truck	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	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.08	0.07	0.67	0.90	< 0.005	0.03	—	0.03	0.03	—	0.03	—	154	154	0.01	< 0.005	—	155
Onsite truck	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	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.12	0.10	0.11	1.69	0.00	0.00	0.32	0.32	0.00	0.07	0.07	—	336	336	0.01	0.01	1.23	341
Vendor	0.02	0.01	0.34	0.17	< 0.005	< 0.005	0.08	0.09	< 0.005	0.02	0.02	—	301	301	0.01	0.04	0.82	314
Hauling	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	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.12	0.10	0.12	1.43	0.00	0.00	0.32	0.32	0.00	0.07	0.07	—	318	318	0.01	0.01	0.03	322
Vendor	0.02	0.01	0.36	0.17	< 0.005	< 0.005	0.08	0.09	< 0.005	0.02	0.02	—	301	301	0.01	0.04	0.02	314
Hauling	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	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.08	0.07	0.09	1.07	0.00	0.00	0.22	0.22	0.00	0.05	0.05	—	231	231	0.01	0.01	0.38	234
Vendor	0.02	0.01	0.26	0.12	< 0.005	< 0.005	0.06	0.06	< 0.005	0.02	0.02	—	215	215	0.01	0.03	0.25	224
Hauling	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	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.02	0.20	0.00	0.00	0.04	0.04	0.00	0.01	0.01	—	38.2	38.2	< 0.005	< 0.005	0.06	38.7
Vendor	< 0.005	< 0.005	0.05	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	35.5	35.5	< 0.005	< 0.005	0.04	37.1
Hauling	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	0.00	0.00

3.7. Paving (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.61	0.51	4.37	5.31	0.01	0.19	—	0.19	0.18	—	0.18	—	823	823	0.03	0.01	—	826
Paving	—	0.03	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.03	0.26	0.32	< 0.005	0.01	—	0.01	0.01	—	0.01	—	49.6	49.6	< 0.005	< 0.005	—	49.8
Paving	—	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.00	0.00

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.05	0.06	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	8.22	8.22	< 0.005	< 0.005	—	8.25
Paving	—	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.08	0.08	1.22	0.00	0.00	0.23	0.23	0.00	0.05	0.05	—	242	242	0.01	0.01	0.89	246
Vendor	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	0.00	0.00
Hauling	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	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.07	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	14.0	14.0	< 0.005	< 0.005	0.02	14.2
Vendor	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	0.00	0.00
Hauling	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	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.32	2.32	< 0.005	< 0.005	< 0.005	2.35
Vendor	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	0.00	0.00
Hauling	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	0.00	0.00

3.8. Paving (2025) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.61	0.51	4.37	5.31	0.01	0.19	—	0.19	0.18	—	0.18	—	823	823	0.03	0.01	—	826
Paving	—	0.03	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.03	0.26	0.32	< 0.005	0.01	—	0.01	0.01	—	0.01	—	49.6	49.6	< 0.005	< 0.005	—	49.8
Paving	—	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.05	0.06	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	8.22	8.22	< 0.005	< 0.005	—	8.25
Paving	—	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.08	0.08	1.22	0.00	0.00	0.23	0.23	0.00	0.05	0.05	—	242	242	0.01	0.01	0.89	246
Vendor	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	0.00	0.00
Hauling	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	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.07	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	14.0	14.0	< 0.005	< 0.005	0.02	14.2
Vendor	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	0.00	0.00
Hauling	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	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.32	2.32	< 0.005	< 0.005	< 0.005	2.35
Vendor	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	0.00	0.00
Hauling	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	0.00	0.00

3.9. Architectural Coating (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.15	0.13	0.88	1.14	< 0.005	0.03	—	0.03	0.03	—	0.03	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	—	12.3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.01	0.01	0.05	0.07	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	8.05	8.05	< 0.005	< 0.005	—	8.08
Architectural Coatings	—	0.74	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.33	1.33	< 0.005	< 0.005	—	1.34
Architectural Coatings	—	0.14	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.02	0.34	0.00	0.00	0.06	0.06	0.00	0.01	0.01	—	67.1	67.1	< 0.005	< 0.005	0.25	68.1
Vendor	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	0.00	0.00
Hauling	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	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	3.89	3.89	< 0.005	< 0.005	0.01	3.94
Vendor	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	0.00	0.00
Hauling	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	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.64	0.64	< 0.005	< 0.005	< 0.005	0.65

Vendor	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	0.00	0.00
Hauling	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	0.00	0.00

3.10. Architectural Coating (2025) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.15	0.13	0.88	1.14	< 0.005	0.03	—	0.03	0.03	—	0.03	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	—	12.3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.05	0.07	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	8.05	8.05	< 0.005	< 0.005	—	8.08
Architectural Coatings	—	0.74	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.33	1.33	< 0.005	< 0.005	—	1.34

Architect Coatings	—	0.14	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.02	0.34	0.00	0.00	0.06	0.06	0.00	0.01	0.01	—	67.1	67.1	< 0.005	< 0.005	0.25	68.1
Vendor	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	0.00	0.00
Hauling	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	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	3.89	3.89	< 0.005	< 0.005	0.01	3.94
Vendor	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	0.00	0.00
Hauling	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	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.64	0.64	< 0.005	< 0.005	< 0.005	0.65
Vendor	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	0.00	0.00
Hauling	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	0.00	0.00

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hotel	4.08	3.69	2.83	32.9	0.08	0.05	7.24	7.29	0.05	1.84	1.88	—	8,025	8,025	0.38	0.31	27.1	8,154
Parking Lot	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	0.00	0.00
Total	4.08	3.69	2.83	32.9	0.08	0.05	7.24	7.29	0.05	1.84	1.88	—	8,025	8,025	0.38	0.31	27.1	8,154
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hotel	4.03	3.64	3.10	30.2	0.08	0.05	7.24	7.29	0.05	1.84	1.88	—	7,690	7,690	0.39	0.33	0.70	7,797
Parking Lot	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	0.00	0.00
Total	4.03	3.64	3.10	30.2	0.08	0.05	7.24	7.29	0.05	1.84	1.88	—	7,690	7,690	0.39	0.33	0.70	7,797
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hotel	0.71	0.64	0.56	5.51	0.01	0.01	1.27	1.28	0.01	0.32	0.33	—	1,255	1,255	0.06	0.05	1.89	1,275
Parking Lot	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	0.00	0.00
Total	0.71	0.64	0.56	5.51	0.01	0.01	1.27	1.28	0.01	0.32	0.33	—	1,255	1,255	0.06	0.05	1.89	1,275

4.1.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hotel	4.08	3.69	2.83	32.9	0.08	0.05	7.24	7.29	0.05	1.84	1.88	—	8,025	8,025	0.38	0.31	27.1	8,154
Parking Lot	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	0.00	0.00

Total	4.08	3.69	2.83	32.9	0.08	0.05	7.24	7.29	0.05	1.84	1.88	—	8,025	8,025	0.38	0.31	27.1	8,154
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hotel	4.03	3.64	3.10	30.2	0.08	0.05	7.24	7.29	0.05	1.84	1.88	—	7,690	7,690	0.39	0.33	0.70	7,797
Parking Lot	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	0.00	0.00
Total	4.03	3.64	3.10	30.2	0.08	0.05	7.24	7.29	0.05	1.84	1.88	—	7,690	7,690	0.39	0.33	0.70	7,797
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hotel	0.71	0.64	0.56	5.51	0.01	0.01	1.27	1.28	0.01	0.32	0.33	—	1,255	1,255	0.06	0.05	1.89	1,275
Parking Lot	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	0.00	0.00
Total	0.71	0.64	0.56	5.51	0.01	0.01	1.27	1.28	0.01	0.32	0.33	—	1,255	1,255	0.06	0.05	1.89	1,275

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hotel	—	—	—	—	—	—	—	—	—	—	—	—	1,179	1,179	0.07	0.01	—	1,183
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	12.5	12.5	< 0.005	< 0.005	—	12.6
Total	—	—	—	—	—	—	—	—	—	—	—	—	1,191	1,191	0.07	0.01	—	1,196
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hotel	—	—	—	—	—	—	—	—	—	—	—	—	1,179	1,179	0.07	0.01	—	1,183

Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	12.5	12.5	< 0.005	< 0.005	—	12.6
Total	—	—	—	—	—	—	—	—	—	—	—	—	1,191	1,191	0.07	0.01	—	1,196
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hotel	—	—	—	—	—	—	—	—	—	—	—	—	195	195	0.01	< 0.005	—	196
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	2.07	2.07	< 0.005	< 0.005	—	2.08
Total	—	—	—	—	—	—	—	—	—	—	—	—	197	197	0.01	< 0.005	—	198

4.2.2. Electricity Emissions By Land Use - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hotel	—	—	—	—	—	—	—	—	—	—	—	—	1,179	1,179	0.07	0.01	—	1,183
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	12.5	12.5	< 0.005	< 0.005	—	12.6
Total	—	—	—	—	—	—	—	—	—	—	—	—	1,191	1,191	0.07	0.01	—	1,196
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hotel	—	—	—	—	—	—	—	—	—	—	—	—	1,179	1,179	0.07	0.01	—	1,183
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	12.5	12.5	< 0.005	< 0.005	—	12.6
Total	—	—	—	—	—	—	—	—	—	—	—	—	1,191	1,191	0.07	0.01	—	1,196
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hotel	—	—	—	—	—	—	—	—	—	—	—	—	195	195	0.01	< 0.005	—	196
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	2.07	2.07	< 0.005	< 0.005	—	2.08

Total	—	—	—	—	—	—	—	—	—	—	—	—	197	197	0.01	< 0.005	—	198

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hotel	0.05	0.02	0.45	0.38	< 0.005	0.03	—	0.03	0.03	—	0.03	—	535	535	0.05	< 0.005	—	536
Parking Lot	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
Total	0.05	0.02	0.45	0.38	< 0.005	0.03	—	0.03	0.03	—	0.03	—	535	535	0.05	< 0.005	—	536
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hotel	0.05	0.02	0.45	0.38	< 0.005	0.03	—	0.03	0.03	—	0.03	—	535	535	0.05	< 0.005	—	536
Parking Lot	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
Total	0.05	0.02	0.45	0.38	< 0.005	0.03	—	0.03	0.03	—	0.03	—	535	535	0.05	< 0.005	—	536
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hotel	0.01	< 0.005	0.08	0.07	< 0.005	0.01	—	0.01	0.01	—	0.01	—	88.5	88.5	0.01	< 0.005	—	88.8
Parking Lot	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
Total	0.01	< 0.005	0.08	0.07	< 0.005	0.01	—	0.01	0.01	—	0.01	—	88.5	88.5	0.01	< 0.005	—	88.8

4.2.4. Natural Gas Emissions By Land Use - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hotel	0.05	0.02	0.45	0.38	< 0.005	0.03	—	0.03	0.03	—	0.03	—	535	535	0.05	< 0.005	—	536
Parking Lot	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
Total	0.05	0.02	0.45	0.38	< 0.005	0.03	—	0.03	0.03	—	0.03	—	535	535	0.05	< 0.005	—	536
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hotel	0.05	0.02	0.45	0.38	< 0.005	0.03	—	0.03	0.03	—	0.03	—	535	535	0.05	< 0.005	—	536
Parking Lot	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
Total	0.05	0.02	0.45	0.38	< 0.005	0.03	—	0.03	0.03	—	0.03	—	535	535	0.05	< 0.005	—	536
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hotel	0.01	< 0.005	0.08	0.07	< 0.005	0.01	—	0.01	0.01	—	0.01	—	88.5	88.5	0.01	< 0.005	—	88.8
Parking Lot	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
Total	0.01	< 0.005	0.08	0.07	< 0.005	0.01	—	0.01	0.01	—	0.01	—	88.5	88.5	0.01	< 0.005	—	88.8

4.3. Area Emissions by Source

4.3.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Source	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	1.24	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Architectural	—	0.07	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.45	0.41	0.02	2.51	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	10.3	10.3	< 0.005	< 0.005	—	10.4
Total	0.45	1.72	0.02	2.51	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	10.3	10.3	< 0.005	< 0.005	—	10.4
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	1.24	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.07	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	1.31	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	0.23	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.06	0.05	< 0.005	0.31	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.17	1.17	< 0.005	< 0.005	—	1.18
Total	0.06	0.29	< 0.005	0.31	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.17	1.17	< 0.005	< 0.005	—	1.18

4.3.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Source	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	1.24	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.07	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.45	0.41	0.02	2.51	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	10.3	10.3	< 0.005	< 0.005	—	10.4
Total	0.45	1.72	0.02	2.51	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	10.3	10.3	< 0.005	< 0.005	—	10.4
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	1.24	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.07	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	1.31	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	0.23	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.06	0.05	< 0.005	0.31	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.17	1.17	< 0.005	< 0.005	—	1.18
Total	0.06	0.29	< 0.005	0.31	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.17	1.17	< 0.005	< 0.005	—	1.18

4.4. Water Emissions by Land Use

4.4.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hotel	—	—	—	—	—	—	—	—	—	—	—	4.42	23.5	27.9	0.46	0.01	—	42.5
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	4.42	23.5	27.9	0.46	0.01	—	42.5
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hotel	—	—	—	—	—	—	—	—	—	—	—	4.42	23.5	27.9	0.46	0.01	—	42.5
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	4.42	23.5	27.9	0.46	0.01	—	42.5
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hotel	—	—	—	—	—	—	—	—	—	—	—	0.73	3.89	4.62	0.08	< 0.005	—	7.04
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	0.73	3.89	4.62	0.08	< 0.005	—	7.04

4.4.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hotel	—	—	—	—	—	—	—	—	—	—	—	3.90	20.8	24.7	0.40	0.01	—	37.6
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	3.90	20.8	24.7	0.40	0.01	—	37.6
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hotel	—	—	—	—	—	—	—	—	—	—	—	3.90	20.8	24.7	0.40	0.01	—	37.6
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	3.90	20.8	24.7	0.40	0.01	—	37.6
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hotel	—	—	—	—	—	—	—	—	—	—	—	0.65	3.44	4.09	0.07	< 0.005	—	6.22
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	0.65	3.44	4.09	0.07	< 0.005	—	6.22

4.5. Waste Emissions by Land Use

4.5.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hotel	—	—	—	—	—	—	—	—	—	—	—	26.9	0.00	26.9	2.68	0.00	—	93.9
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00

Total	—	—	—	—	—	—	—	—	—	—	—	26.9	0.00	26.9	2.68	0.00	—	93.9
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hotel	—	—	—	—	—	—	—	—	—	—	—	26.9	0.00	26.9	2.68	0.00	—	93.9
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	26.9	0.00	26.9	2.68	0.00	—	93.9
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hotel	—	—	—	—	—	—	—	—	—	—	—	4.45	0.00	4.45	0.44	0.00	—	15.6
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	4.45	0.00	4.45	0.44	0.00	—	15.6

4.5.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hotel	—	—	—	—	—	—	—	—	—	—	—	26.9	0.00	26.9	2.68	0.00	—	93.9
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	26.9	0.00	26.9	2.68	0.00	—	93.9
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hotel	—	—	—	—	—	—	—	—	—	—	—	26.9	0.00	26.9	2.68	0.00	—	93.9
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00

Total	—	—	—	—	—	—	—	—	—	—	—	26.9	0.00	26.9	2.68	0.00	—	93.9
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hotel	—	—	—	—	—	—	—	—	—	—	—	4.45	0.00	4.45	0.44	0.00	—	15.6
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	4.45	0.00	4.45	0.44	0.00	—	15.6

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hotel	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	90.3	90.3
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	90.3	90.3
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hotel	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	90.3	90.3
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	90.3	90.3
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hotel	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	15.0	15.0
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	15.0	15.0

4.6.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hotel	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	90.3	90.3
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	90.3	90.3
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hotel	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	90.3	90.3
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	90.3	90.3
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hotel	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	15.0	15.0
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	15.0	15.0

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.7.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.8.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.9.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.4. Soil Carbon Accumulation By Vegetation Type - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.5. Above and Belowground Carbon Accumulation by Land Use Type - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.6. Avoided and Sequestered Emissions by Species - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Grading	Grading	8/15/2024	10/31/2024	5.00	56.0	—
Building Construction	Building Construction	11/1/2024	12/31/2025	5.00	304	—
Paving	Paving	9/1/2025	9/30/2025	5.00	22.0	—
Architectural Coating	Architectural Coating	9/1/2025	9/30/2025	5.00	22.0	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Grading	Graders	Diesel	Average	1.00	6.00	148	0.41
Grading	Rubber Tired Dozers	Diesel	Average	1.00	6.00	367	0.40

Grading	Tractors/Loaders/Backh	Diesel	Average	1.00	7.00	84.0	0.37
Building Construction	Cranes	Diesel	Average	1.00	4.00	367	0.29
Building Construction	Forklifts	Diesel	Average	2.00	6.00	82.0	0.20
Building Construction	Tractors/Loaders/Backh oes	Diesel	Average	2.00	8.00	84.0	0.37
Paving	Cement and Mortar Mixers	Diesel	Average	4.00	6.00	10.0	0.56
Paving	Pavers	Diesel	Average	1.00	7.00	81.0	0.42
Paving	Rollers	Diesel	Average	1.00	7.00	36.0	0.38
Paving	Tractors/Loaders/Backh oes	Diesel	Average	1.00	7.00	84.0	0.37
Architectural Coating	Air Compressors	Diesel	Average	1.00	6.00	37.0	0.48

5.2.2. Mitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Grading	Graders	Diesel	Average	1.00	6.00	148	0.41
Grading	Rubber Tired Dozers	Diesel	Average	1.00	6.00	367	0.40
Grading	Tractors/Loaders/Backh oes	Diesel	Average	1.00	7.00	84.0	0.37
Building Construction	Cranes	Diesel	Average	1.00	4.00	367	0.29
Building Construction	Forklifts	Diesel	Average	2.00	6.00	82.0	0.20
Building Construction	Tractors/Loaders/Backh oes	Diesel	Average	2.00	8.00	84.0	0.37
Paving	Cement and Mortar Mixers	Diesel	Average	4.00	6.00	10.0	0.56
Paving	Pavers	Diesel	Average	1.00	7.00	81.0	0.42
Paving	Rollers	Diesel	Average	1.00	7.00	36.0	0.38
Paving	Tractors/Loaders/Backh oes	Diesel	Average	1.00	7.00	84.0	0.37
Architectural Coating	Air Compressors	Diesel	Average	1.00	6.00	37.0	0.48

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Grading	—	—	—	—
Grading	Worker	7.50	18.5	LDA,LDT1,LDT2
Grading	Vendor	—	10.2	HHDT,MHDT
Grading	Hauling	10.7	7.00	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	24.3	18.5	LDA,LDT1,LDT2
Building Construction	Vendor	9.47	10.2	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	17.5	18.5	LDA,LDT1,LDT2
Paving	Vendor	—	10.2	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	4.85	18.5	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	10.2	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	—	—	HHDT

5.3.2. Mitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix

Grading	—	—	—	—
Grading	Worker	7.50	18.5	LDA,LDT1,LDT2
Grading	Vendor	—	10.2	HHDT,MHDT
Grading	Hauling	10.7	7.00	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	24.3	18.5	LDA,LDT1,LDT2
Building Construction	Vendor	9.47	10.2	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	17.5	18.5	LDA,LDT1,LDT2
Paving	Vendor	—	10.2	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	4.85	18.5	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	10.2	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
Architectural Coating	0.00	0.00	86,685	28,895	588

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (Cubic Yards)	Material Exported (Cubic Yards)	Acres Graded (acres)	Material Demolished (sq. ft.)	Acres Paved (acres)
Grading	—	4,800	42.0	0.00	—
Paving	0.00	0.00	0.00	0.00	0.22

5.6.2. Construction Earthmoving Control Strategies

Non-applicable. No control strategies activated by user.

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
Hotel	0.00	0%
Parking Lot	0.22	100%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2024	0.00	532	0.03	< 0.005
2025	0.00	532	0.03	< 0.005

5.9. Operational Mobile Sources

5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Hotel	1,113	915	1,113	395,928	10,205	8,389	10,205	3,630,024
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

5.9.2. Mitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Hotel	1,113	915	1,113	395,928	10,205	8,389	10,205	3,630,024
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

5.10.1.2. Mitigated

5.10.2. Architectural Coatings

Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
0	0.00	86,685	28,895	588

5.10.3. Landscape Equipment

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	250

5.10.4. Landscape Equipment - Mitigated

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	250

5.11. Operational Energy Consumption

5.11.1. Unmitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Hotel	808,696	532	0.0330	0.0040	1,668,496
Parking Lot	8,586	532	0.0330	0.0040	0.00

5.11.2. Mitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Hotel	808,696	532	0.0330	0.0040	1,668,496
Parking Lot	8,586	532	0.0330	0.0040	0.00

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Hotel	2,308,376	74,583
Parking Lot	0.00	0.00

5.12.2. Mitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Hotel	2,035,757	74,583
Parking Lot	0.00	0.00

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Hotel	49.8	—
Parking Lot	0.00	—

5.13.2. Mitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Hotel	49.8	—
Parking Lot	0.00	—

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
Hotel	Household refrigerators and/or freezers	R-134a	1,430	0.00	0.60	0.00	1.00
Hotel	Other commercial A/C and heat pumps	R-410A	2,088	1.80	4.00	4.00	18.0
Hotel	Walk-in refrigerators and freezers	R-404A	3,922	< 0.005	7.50	7.50	20.0

5.14.2. Mitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
Hotel	Household refrigerators and/or freezers	R-134a	1,430	0.00	0.60	0.00	1.00
Hotel	Other commercial A/C and heat pumps	R-410A	2,088	1.80	4.00	4.00	18.0
Hotel	Walk-in refrigerators and freezers	R-404A	3,922	< 0.005	7.50	7.50	20.0

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor

5.15.2. Mitigated

Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

Equipment Type	Fuel Type	Number per Day	Hours per Day	Hours per Year	Horsepower	Load Factor

5.16.2. Process Boilers

Equipment Type	Fuel Type	Number	Boiler Rating (MMBtu/hr)	Daily Heat Input (MMBtu/day)	Annual Heat Input (MMBtu/yr)

5.17. User Defined

Equipment Type	Fuel Type

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1.2. Mitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.1.2. Mitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

5.18.2.2. Mitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

Cal-Adapt midcentury 2040–2059 average projections for four hazards are reported below for your project location. These are under Representation Concentration Pathway (RCP) 8.5 which assumes GHG emissions will continue to rise strongly through 2050 and then plateau around 2100.

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	25.9	annual days of extreme heat
Extreme Precipitation	9.15	annual days with precipitation above 20 mm
Sea Level Rise	—	meters of inundation depth
Wildfire	16.9	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about ¾ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (Radke et al., 2017, CEC-500-2017-008), and consider inundation location and depth for the San Francisco Bay, the Sacramento-San Joaquin River Delta and California coast resulting different increments of sea level rise coupled with extreme storm events. Users may select from four scenarios to view the range in potential inundation depth for the grid cell. The four scenarios are: No rise, 0.5 meter, 1.0 meter, 1.41 meters
Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	N/A	N/A	N/A	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	N/A	N/A	N/A	N/A

Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	N/A	N/A	N/A	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	N/A	N/A	N/A	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	N/A	N/A	N/A	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction measures.

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	84.6
AQ-PM	70.7
AQ-DPM	57.7
Drinking Water	73.7
Lead Risk Housing	54.4
Pesticides	0.00
Toxic Releases	70.1
Traffic	80.3
Effect Indicators	—
CleanUp Sites	74.9
Groundwater	0.00
Haz Waste Facilities/Generators	59.8
Impaired Water Bodies	0.00
Solid Waste	70.4
Sensitive Population	—
Asthma	6.04
Cardio-vascular	7.47
Low Birth Weights	7.29
Socioeconomic Factor Indicators	—
Education	42.7
Housing	10.2
Linguistic	80.2
Poverty	27.9
Unemployment	45.8

7.2. Healthy Places Index Scores

The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Economic	—
Above Poverty	84.3320929
Employed	68.92082638
Median HI	57.88528166
Education	—
Bachelor's or higher	80.67496471
High school enrollment	100
Preschool enrollment	84.88387014
Transportation	—
Auto Access	70.20402926
Active commuting	5.915565251
Social	—
2-parent households	35.26241499
Voting	21.00603105
Neighborhood	—
Alcohol availability	87.47593995
Park access	34.12036443
Retail density	39.49698447
Supermarket access	46.73424868
Tree canopy	66.75221352
Housing	—
Homeownership	46.75991274
Housing habitability	43.07712049
Low-inc homeowner severe housing cost burden	33.1707943

Low-inc renter severe housing cost burden	70.48633389
Uncrowded housing	63.4800462
Health Outcomes	—
Insured adults	52.11086873
Arthritis	0.0
Asthma ER Admissions	94.2
High Blood Pressure	0.0
Cancer (excluding skin)	0.0
Asthma	0.0
Coronary Heart Disease	0.0
Chronic Obstructive Pulmonary Disease	0.0
Diagnosed Diabetes	0.0
Life Expectancy at Birth	97.0
Cognitively Disabled	87.2
Physically Disabled	80.2
Heart Attack ER Admissions	84.0
Mental Health Not Good	0.0
Chronic Kidney Disease	0.0
Obesity	0.0
Pedestrian Injuries	97.1
Physical Health Not Good	0.0
Stroke	0.0
Health Risk Behaviors	—
Binge Drinking	0.0
Current Smoker	0.0
No Leisure Time for Physical Activity	0.0
Climate Change Exposures	—

Wildfire Risk	0.0
SLR Inundation Area	0.0
Children	84.9
Elderly	16.5
English Speaking	18.2
Foreign-born	95.7
Outdoor Workers	60.7
Climate Change Adaptive Capacity	—
Impervious Surface Cover	34.1
Traffic Density	80.4
Traffic Access	23.0
Other Indices	—
Hardship	23.2
Other Decision Support	—
2016 Voting	20.4

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	30.0
Healthy Places Index Score for Project Location (b)	65.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No
Project Located in a Low-Income Community (Assembly Bill 1550)	No
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

a: The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.
b: The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

Screen	Justification
Land Use	Per site plan
Construction: Construction Phases	Per questionnaire
Construction: Trips and VMT	Per questionnaire
Construction: Architectural Coatings	SCAQMD Rule 1113
Operations: Vehicle Data	Per traffic study, assume weekday trip rates for Sunday as a conservative analysis
Operations: Architectural Coatings	SCAQMD Rule 1113

Tempo By Hilton Project
Energy Calculations

Land Use	Natural Gas Use		Electricity Use	
	(kBTU/yr)	(Therms)	(kWh/yr)	(MWh/yr)
Fast Food Resturaunt w/o Drive Thru	237,683	2376.83	44,167	44.1672
Fast Food Resturaunt w/o Drive Thru	361,832	3618.32	67,237	67.2371
Health Club	135,135	1351.35	79,170	79.1695
High Turnover Sit Down Resturaunt	896,503	8965.03	166,592	166.592
Hotel	3,316,240	33162.4	1,000,900	1000.9
Parking Lot	0	0	11,172	11.172
Recreational Swimming Pool	0	0	0	0
Hotel	1,668,496	16684.96	808,696	808.696
Parking Lot	0	0	8,586	8.586
Totals	**6,615,889**	**66,159**	**2,186,520**	**2,187**

Legend:

Proposed = Yellow
Approved = Green

1 kBTU = 0.01 therms

Energy Type	Project Annual Energy Consumption	Los Angeles County Annual Energy Consumption (2022)	Percentage Increase Countywide
Electricity (MWh)	2,187	5,558,913	0.0393%
Natural Gas (Therms)	66,159	171,045,020	0.0387%

Individual Energy Consumption	Natural Gas Use (therms)	Electricity Use (MWh)
Approved Project	49,474	1,369
Proposed Project	16,685	817
Total	**66,159**	**2,187**
Los Angeles County Energy Consumption (2022)	2,820,285,935	68,484,956
Percent Increase	0.0023%	0.0032%

Legend:
Proposed = Yellow
Approved = Green

Tempo By Hilton Project
Energy Calculations

Vehicle Type	Percent of Vehicle Trips[1]	Daily Trips[2]	Annual Vehicle Miles Traveled	Average Fuel Economy (miles per gallon)[3]	Total Annual Fuel Consumption (gallons)[4]
Passenger Cars	0.51	563	1,834,977	22	83,408
Light/Medium Trucks	0.47	523	1,706,474	17.3	98,640
Heavy Trucks/Other	0.02	27	88,573	6.4	13,839
TOTAL [6]	***1.00***	**1,113**	***3,630,024***	**--**	***195,888***

Notes:

1. Percent of Vehicle Trip distribution based on trip characteristics within the CalEEMod model.
2. Daily Trips taken from ITE manual.
3. Average fuel economy derived from the Department of Transportation.
4. Total Daily Fuel Consumption calculated by dividing the daily VMT by the average fuel economy (i.e., VMT/Average Fuel Economy).
5. Values may be slightly off due to rounding.

Source: Refer to CalEEMod outputs for assumptions used in this analysis.

Countywide operational fuel consumption, off-road construction equipment diesel fuel consumption, and on-road fuel consumption are from CARB EMFAC2021.

County Operational	
2029	
255,450,567	
0.0767%	

Combined Operational Mobile Fuel Consumption

	Total Fuel Consumption
Proposed Project	195,888
Approved Project	303,077
Total	498,965
Los Angeles County Fuel Consumption (2022)	3981438709
Percent Increase	0.0125%

Tempo By Hilton Project
Energy Calculations

WORKER TRIPS						
Phase	**Phase Length (# days)**	**# Worker Trips**	**Worker Trip Length**	**Total VMT**	**Fuel Consumption Factor (Miles/Gallon/Day)**	**Total Fuel Consumption**
Grading	56	16	18.5	16,576	**24.90284233**	665.63
Building Construction	304	48	18.5	269,952		10,840.21
Paving	22	36	18.5	14,652		588.37
Architectural Coating	22	10	18.5	4,070		163.44
						12,257.64

VENDOR TRIPS						
Phase	**Phase Length (# days)**	**# Vendor Trips**	**Vendor Trip Length**	**Total VMT**	**Fuel Consumption Factor (Miles/Gallon/Day)**	**Total Fuel Consumption**
Grading	56	0	10.2	0	**8.343886151**	0.00
Building Construction	304	20	10.2	62,016		7,432.51
Paving	22	0	10.2	0		0.00
Architectural Coating	22	0	10.2	0		0.00
						7,432.51

HAULING TRIPS						
Phase	**Phase Length (# days)**	**# Hauling Trips**	**Hauling Trip Length**	**Total VMT**	**Fuel Consumption Factor (Miles/Gallon/Day)[1]**	**Total Fuel Consumption**
Grading	56	22	7	8,624	**8.343886151**	1,033.57
						1,033.57

Countywide operational fuel consumption, off-road construction equipment diesel fuel consumption, and on-road fuel consumption are from CARB EMFAC2021.

TOTAL OFF-SITE MOBILE GALLONS CONSUMED DURING CONSTRUCTION	**20,723.72**
County On-road Gallons	4160462341
2024	0.0005%

Tempo By Hilton Project
Energy Calculations

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor	Fuel Consumption Rate (gallons per hour)	Duration (total hours/day)	# days	Total Fuel Consumption (gallons)
Grading	Graders	1	6	148	0.41	2.4272	6	56	815.54
Grading	Rubber Tired Dozers	1	6	367	0.40	5.872	6	56	1972.99
Grading	Tractor/Loaders/Backhoes	1	7	84	0.37	1.2432	7	56	487.33
Building Construction	Cranes	1	4	367	0.29	4.2572	4	304	5176.76
Building Construction	Forklift	2	6	82	0.20	0.656	12	304	2393.09
Building Construction	Tractor/Loaders/Backhoes	2	8	84	0.37	1.2432	16	304	6046.92
Paving	Cement and Mortar Mixers	4	6	10	0.56	0.224	24	22	118.27
Paving	Pavers	1	7	81	0.42	1.3608	7	22	209.56
Paving	Rollers	1	7	36	0.38	0.5472	7	22	84.27
Paving	Tractor/Loaders/Backhoes	1	7	84	0.37	1.2432	7	22	191.45
Architectural Coating	Air Compressors	1	6	37	0.48	0.7104	6	22	93.77
								Total:	**17,589.96**

Notes:

Fuel Consumption Rate = Horsepower x Load Factor x Fuel Consumption Factor

Where:

Fuel Consumption Factor for a diesel engine is 0.04 gallons per horsepower per hour (gal/hp/hr) and a gasoline engine is 0.06 gal/hp/hr.

Countywide operational fuel consumption, off-road construction equipment diesel fuel consumption, and on-road fuel consumption are from CARB EMFAC2021.

Source: Refer to CalEEMod outputs for assumptions used in this analysis.

ATTACHMENT D: GEOTECHNICAL ENGINEERING INVESTIGATION

Geotechnologies, Inc.
Consulting Geotechnical Engineers
439 Western Avenue
Glendale, California 91201-2837
818.240.9600 • Fax 818.240.9675

January 2, 2024
File Number 22449

181 Colorado LLC
25 East Huntington Drive
Arcadia, California 91006

Attention: Mike Soo

Subject: Geotechnical Engineering Investigation
Proposed Hotel Development – Tempo Hotel by Hilton
181 Colorado Place, Arcadia, California

Dear Mr. Soo:

This letter transmits the Geotechnical Engineering Investigation for the subject site prepared by Geotechnologies, Inc. This report provides geotechnical recommendations for the development of the site, including earthwork, seismic design, retaining walls, excavations, shoring and foundation design. Engineering for the proposed project should not begin until approval of the geotechnical investigation is granted by the local building official. Significant changes in the geotechnical recommendations may result due to the building department review process.

The validity of the recommendations presented herein is dependent upon review of the geotechnical aspects of the project during construction by this firm. The subsurface conditions described herein have been projected from limited subsurface exploration and laboratory testing. The exploration and testing presented in this report should in no way be construed to reflect any variations which may occur between the exploration locations, or which may result from changes in subsurface conditions.

Should you have any questions please contact this office.

Respectfully submitted,
GEOTECHNOLOGIES, INC.

ELAHE NEZHAD
Staff Engineer
R.C.E. 95112

GREGORIO VARELA
Principal Engineer
R.C.E. 81201

EN/GV:km

Email to: [msoo@asiaaspec.com]

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GEOTECHNICAL ENGINEERING INVESTIGATION
PROPOSED HOTEL DEVELOPMENT – TEMPO HOTEL BY HILTON
181 COLORADO PLACE
ARCADIA, CALIFORNIA

INTRODUCTION

This report presents the results of the geotechnical engineering investigation performed on the subject site. The purpose of this investigation was to identify the distribution and engineering properties of the geologic materials underlying the site, and to provide geotechnical recommendations for the design of the proposed development.

This investigation included five exploratory borings, collection of representative samples, laboratory testing, engineering analysis, review of published geologic data, review of available geotechnical engineering information and the preparation of this report. The exploratory boring locations are shown on the enclosed Plot Plan. The results of the exploration and the laboratory testing are presented in the Appendix of this report.

PROPOSED DEVELOPMENT

Information concerning the proposed development was furnished by the client. In addition, the plans prepared by Designcell Architecture, dated July 14, 2023, were reviewed for the preparation of this report. The site is proposed to be developed with a four-story hotel structure and adjoining paved parking areas. The footprint of the proposed hotel structure will be approximately 11,206 square feet. The majority of the proposed hotel structure will be built over a subterranean level. A portion of the proposed structure, located to the southwest, will be built at-grade. The enclosed Plot Plan illustrates the portion of the structure to be underlain by a subterranean level, and the portion of the structure to be built at-grade. The exact depth of the proposed subterranean level is unknown at this time. But based on the experience of this firm, it is anticipated that the finished

grade of the subterranean level will extend to a depth ranging between 10 and 12 feet below the ground level.

Structural information is not available at this time. Column loads are estimated to be between 300 and 700 kips. Wall loads are estimated to be between 5 and 20 kips per lineal foot. These loads reflect dead and live loads. Grading is expected to consist of excavations in the order of 12 to 15 feet below grade for construction of the proposed subterranean level, as well as the removal and recompaction of the existing unsuitable soils for support of the at-grade portion of the structure.

Any changes in the design of the project or location of any structure, as outlined in this report, should be reviewed by this office. The recommendations contained in this report should not be considered valid until reviewed and modified or reaffirmed, in writing, subsequent to such review.

SITE CONDITIONS

The Project Site is located at 181 Colorado Place, in the City of Arcadia, California. The Project Site is bounded by San Juan Drive to the northwest, existing residential structures to the northeast, existing medical office buildings to the southeast and Colorado Place to the to the southwest.

The site grade is relatively level. The site is currently occupied with a one-story commercial structure with associated paved parking lot. It is anticipated that the existing one-story building will be demolished to allow for the construction of the proposed building.

The vegetation on the site consists of grass lawns, trees and shrubs contained in planter areas. Drainage across the site is by sheetflow to the city streets.

GEOTECHNICAL EXPLORATION

FIELD EXPLORATION

The site was explored on November 1, 2023 by drilling three borings and excavating two test pits. The borings were drilled to depths varying between 30 and 60 feet below the existing grade with the aid of a truck-mounted drilling rig using 8-inch diameter hollowstem augers. The test pits were excavated with the aid of hand tools and hand labor to a depth of 3 and 6 feet below existing grade. The exploration locations are shown on the Plot Plan and the geologic materials encountered are logged on Plates A-1 through A-5.

The location of the exploratory excavations was determined from hardscaped features shown in the enclosed Plot Plan. The location of the exploratory excavations should be considered accurate only to the degree implied by the method used.

Geologic Materials

Fill materials were encountered in all exploratory excavations, at depths of approximately 1 to 3 feet below the existing site grade. The fill consists of silty sands and sandy silts, which are dark brown and dark yellowish brown in color, moist, medium dense, or stiff, and fine grained.

The fill is in turn underlain by native alluvial soils, consisting of silty sands and sands. The native alluvial soils range from dark brown to dark and yellowish brown in color, and are moist, medium dense to very dense, and fine to medium grained.

More detailed descriptions of the earth materials encountered may be obtained from individual logs of the subsurface excavations.

Groundwater

Groundwater was not encountered during exploration, which was conducted to a maximum depth of 60 feet below the existing grade. The historically highest groundwater level was established by review of the Mount Wilson 7½ Minute Quadrangle Seismic Hazard Zone Report, 030 Plate 1.2 entitled "Historically Highest Ground Water Contours". Review of this plate indicates that the historically highest groundwater level is over 100 feet below the existing site grade.

Fluctuations in the level of groundwater may occur due to variations in rainfall, temperature, and other factors not evident at the time of the measurements reported herein. Fluctuations also may occur across the site. High groundwater levels can result in changed conditions.

Caving

Caving could not be directly observed during exploration due to the continuously-case design of the hollowstem augers. Based on the experience of this firm, large diameter excavations that encounter granular, cohesionless soils will most likely experience caving.

SEISMIC EVALUATION

REGIONAL GEOLOGIC SETTING

The subject property is located in the northern portion of the Peninsular Ranges Geomorphic Province. The Peninsular Ranges are characterized by northwest-trending blocks of mountain ridges and sediment-floored valleys. The dominant geologic structural features are northwest trending fault zones that either die out to the northwest or terminate at east-trending reverse faults that form the southern margin of the Transverse Ranges.

REGIONAL FAULTING

Based on criteria established by the California Division of Mines and Geology (CDMG) now called California Geologic Survey (CGS), Faults may be categorized as Holocene-active, Pre-Holocene faults, and Age-undetermined faults. Holocene-active faults are those which show evidence of surface displacement within the last 11,700 years. Pre-Holocene faults are those that have not moved in the past 11,700 years. Age-undetermined faults are faults where the recency of fault movement has not been determined.

Buried thrust faults are faults without a surface expression but are a significant source of seismic activity. They are typically broadly defined based on the analysis of seismic wave recordings of hundreds of small and large earthquakes in the southern California area. Due to the buried nature of these thrust faults, their existence is usually not known until they produce an earthquake. The risk for surface rupture potential of these buried thrust faults is inferred to be low (Leighton, 1990). However, the seismic risk of these buried structures in terms of recurrence and maximum potential magnitude is not well established. Therefore, the potential for surface rupture on these surface-verging splays at magnitudes higher than 6.0 cannot be precluded.

SEISMIC HAZARDS AND DESIGN CONSIDERATIONS

The primary geologic hazard at the site is moderate to strong ground motion (acceleration) caused by an earthquake on any of the local or regional faults. The potential for other earthquake-induced hazards was also evaluated including surface rupture, liquefaction, dynamic settlement, inundation and landsliding.

Surface Rupture

In 1972, the Alquist-Priolo Special Studies Zones Act (now known as the Alquist-Priolo Earthquake Fault Zoning Act) was passed into law. As revised in 2018, The Act defines

"Holocene-active" Faults utilizing the same aging criteria as that used by California Geological Survey (CGS). However, established state policy has been to zone only those faults which have direct evidence of movement within the last 11,700 years. It is this recency of fault movement that the CGS considers as a characteristic for faults that have a relatively high potential for ground rupture in the future.

CGS policy is to delineate a boundary from 200 to 500 feet wide on each side of the Holocene-Active fault trace based on the location precision, the complexity, or the regional significance of the fault. If a site lies within an Earthquake Fault Zone, a geologic fault rupture investigation must be performed that demonstrates that the proposed building site is not threatened by surface displacement from the fault before development permits may be issued.

Ground rupture is defined as surface displacement which occurs along the surface trace of the causative fault during an earthquake. Based on research of available literature and results of site reconnaissance, no known Holocene-active or Pre-Holocene faults underlie the subject site.

Based on review of the enclosed Earthquake Zone of Required Investigation Map, the closest fault to the site which could cause surface rupture is the Raymond Fault. The Earthquake Fault Zone delineated for the Raymond Fault is located approximately 1,200feet to the northwest of the Project Site. Based on these considerations, the potential for surface ground rupture at the subject site is considered low.

Liquefaction

Liquefaction is a phenomenon in which saturated silty to cohesionless soils below the groundwater table are subject to a temporary loss of strength due to the buildup of excess pore pressure during cyclic loading conditions such as those induced by an earthquake. Liquefaction-related effects include loss of bearing strength, amplified ground oscillations, lateral spreading, and flow failures.

The Seismic Hazards Maps of the State of California (CDMG, 1999), do not classify the site as part of the potentially "Liquefiable" area. This determination is based on groundwater depth records, soil type and distance to a fault capable of producing a substantial earthquake.

Groundwater was not encountered during exploration, which was excavated to a maximum depth of 60 feet below the existing grade. The historically highest groundwater level was established by review of the Mount Wilson 7½ Minute Quadrangle Seismic Hazard Zone Report, 030 Plate 1.2 entitled "Historically Highest Ground Water Contours". Review of this plate indicates that the historically highest groundwater level is on the order of 100 feet below grade.

Based on the medium dense to very dense nature of the underlying soils, and the depth to the historically highest groundwater level, the potential for liquefaction occurring at the site is considered to be remote.

Dynamic Dry Settlement

Seismically-induced settlement or compaction of dry or moist, cohesionless soils can be an effect related to earthquake ground motion. Such settlements are typically most damaging when the settlements are differential in nature across the length of structures.

A site-specific seismic dry sand settlement analysis was performed utilizing Tokimatsu and Seed's procedure for the soils encountered in Boring B2 (Tokimatsu and Seed, 1987). The enclosed dynamic dry settlement analysis is based on a peak ground acceleration (PGA_M) of 0.953g, and a mean magnitude (M_W) of 7.04. These values were obtained from the SEAOC/OSHPD U.S. Seismic Design Maps tool and the USGS Probabilistic Seismic Hazard Deaggregation program (USGS, 2014).

The site-specific seismic dry sand settlement analysis was performed to a depth of 60 feet. Based on the parameters provided above, the enclosed seismically-induced dry sand settlement calculation resulted in a total dynamic dry settlement of 0.34 inches. Differential dynamic dry settlement would not be expected to exceed two-thirds of the total dynamic settlement, or 0.23 inches, and would be expected to occur over a distance of 30 feet.

Tsunamis, Seiches and Flooding

Tsunamis are large ocean waves generated by sudden water displacement caused by a submarine earthquake, landslide, or volcanic eruption. Review of the County of Los Angeles Flood and Inundation Hazards Map, Leighton (1990), indicates the site does not lie within the mapped tsunami inundation boundaries.

Seiches are oscillations generated in enclosed bodies of water which can be caused by ground shaking associated with an earthquake. No major water-retaining structures are located immediately up gradient from the project site. Therefore, the risk of flooding from a seismically-induced seiche is considered to be remote.

Review of the County of Los Angeles Flood and Inundation Hazards Map, Leighton (1990), indicates the site lies within the inundation boundaries of the Big Santa Anita Dam. A determination of whether a higher site elevation would remove the site from the potential inundation zones is beyond the scope of this investigation.

Landsliding

The probability of seismically-induced landslides occurring on the site is considered to be low due to the general lack of elevation difference across or adjacent to the site.

CONCLUSIONS AND RECOMMENDATIONS

Based upon the exploration, laboratory testing, and research, it is the finding of Geotechnologies, Inc. that construction of the proposed hotel is considered feasible from a geotechnical engineering standpoint provided the advice and recommendations presented herein are followed and implemented during construction.

Groundwater was not encountered during exploration, conducted to a maximum depth of 60 feet below the existing grade. Approximately 1 to 3 feet of existing fill materials were encountered during exploration at the site. The existing fill materials are considered to be unsuitable for support of the proposed foundations, floor slabs, or additional fill. However, the existing fill materials are expected to be removed during excavation of the proposed subterranean level, exposing native soils at the subterranean subgrade. Within the at-grade portion of the structure, the existing fill may be reused for the preparation of a compacted fill pad.

It is recommended that the proposed structure be supported by conventional foundations. Conventional foundations to support the subterranean portion of the structure may bear in the native soils expected at the subterranean subgrade. Conventional foundations to support the at-grade portion of the structure should bear in a newly built compacted fill pad. For the creation of a compacted fill pad, all existing fill materials and upper native soils should be removed and recompacted to a minimum depth of 5 feet below the proposed subgrade, or 3 feet below the bottom of the proposed foundations, whichever is greater. In addition, the proposed fill pad shall be over excavated a minimum of 3 feet horizontally beyond the edge of foundations or for a distance equal to the depth of fill below the foundations, whichever is greater.

It is anticipated that excavation of the proposed subterranean level will require shoring measures to provide a stable working area due to the proposed depth, the granular nature of the onsite soils, and the proximity of adjacent properties and public right of ways.

Foundations for small outlying structures, such as property line walls, planters, trach enclosures, and canopies, which are not to be tied-in to the proposed buildings, may be supported on conventional foundations bearing in native soils, and/or properly placed compacted fill.

The validity of the conclusions and design recommendations presented herein is dependent upon review of the geotechnical aspects of the proposed construction by this firm. The subsurface conditions described herein have been projected from borings on the site as indicated and should in no way be construed to reflect any variations which may occur between these borings or which may result from changes in subsurface conditions. Any changes in the design or location of any structure, as outlined in this report, should be reviewed by this office. The recommendations contained herein should not be considered valid until reviewed and modified or reaffirmed subsequent to such review.

SEISMIC DESIGN CONSIDERATIONS

California Building Code Seismic Parameters

Based on information derived from the subsurface investigation, the subject site is classified as Site Class D, which corresponds to a "Stiff Soil" Profile, according to Table 20.3-1 of ASCE 7-16. This information and the site coordinates were input into the OSHPD seismic utility program in order to calculate ground motion parameters for the site.

CALIFORNIA BUILDING CODE SEISMIC PARAMETERS	
California Building Code	2022
ASCE Design Standard	7-16
Risk Category	II
Site Class	D
Mapped Spectral Acceleration at Short Periods (S_S)	1.991g
Site Coefficient (F_a)	1.0
Maximum Considered Earthquake Spectral Response for Short Periods (S_{MS})	1.991g
Five-Percent Damped Design Spectral Response Acceleration at Short Periods (S_{DS})	1.327g
Mapped Spectral Acceleration at One-Second Period (S_1)	0.730g
Site Coefficient (F_v)	1.7*
Maximum Considered Earthquake Spectral Response for One-Second Period (S_{M1})	1.241g*
Five-Percent Damped Design Spectral Response Acceleration for One-Second Period (S_{D1})	0.827g*

* *According to ASCE 7-16, a Long Period Site Coefficient (F_v) of 1.7 may be utilized provided that the value of the Seismic Response Coefficient (C_s) is determined by Equation 12.8-2 for values of $T \leq 1.5T_s$ and taken as equal to 1.5 times the value computed in accordance with either Equation 12.8-3 for $T_L \geq T > 1.5T_s$ or equation 12.8-4 for $T > T_L$. Alternatively, a site-specific ground motion hazard analysis may be performed in accordance with ASCE 7-16 Section 21.1 and/or a ground motion hazard analysis in accordance with ASCE 7-16 Section 21.2 to determine ground motions for any structure.*

EXPANSIVE SOILS

The upper onsite geologic materials are in the very low expansion range. The Expansion Index was found to be between 10 and 17 for bulk samples remolded to 90 percent of the laboratory maximum dry density. Recommended reinforcing is noted in the "Foundation Design" and "Slabs on Grade" sections of this report.

WATER-SOLUBLE SULFATES

The Portland cement portion of concrete is subject to attack when exposed to water-soluble sulfates. Usually the two most common sources of exposure are from soil and marine environments.

The sources of natural sulfate minerals in soils include the sulfates of calcium, magnesium, sodium, and potassium. When these minerals interact and dissolve in subsurface water, a sulfate concentration is created, which will react with exposed concrete. Over time sulfate attack will destroy improperly proportioned concrete well before the end of its intended service life.

The water-soluble sulfate content of the onsite geologic materials was tested by California Test 417. The water-soluble sulfate content was determined to be less than 0.1% percentage by weight for the soils tested. Based on the most recent revision to American Concrete Institute (ACI) Standard 318, the sulfate exposure is considered to be negligible for geologic materials with less than 0.1% and Type I cement may be utilized for concrete foundations in contact with the site soils.

GRADING GUIDELINES

Site Preparation

- A thorough search should be made for possible underground utilities and/or structures. Any existing or abandoned utilities or structures located within the footprint of the proposed grading should be removed or relocated as appropriate.

- All vegetation, existing fill, and soft or disturbed geologic materials should be removed from the areas to receive controlled fill. All existing fill materials and any disturbed geologic materials resulting from grading operations shall be completely removed and properly recompacted prior to foundation excavation.

- Any vegetation or associated root system located within the footprint of the proposed structures should be removed during grading.

- Subsequent to the indicated removals, the exposed grade shall be scarified to a depth of six inches, moistened to optimum moisture content, and recompacted in excess of the minimum required comparative density.

- The excavated areas shall be observed by the geotechnical engineer prior to placing compacted fill.

Recommended Over-excavation for Proposed At-Grade Portion of the Structure

Within the proposed at-grade portion of the structure, all existing fill and upper native soils shall be excavated to a minimum depth of 5 feet below the bottom of the proposed subgrade, or 3 feet below the bottom of the proposed foundations, whichever is greater. In addition, the excavation shall extend horizontally at least 3 feet beyond the edge of foundations, or for a distance equal to the depth of fill below the foundations, whichever is greater. An over-excavation is not required for the subterranean portion of the structure.

Compaction

All fill should be mechanically compacted in layers not more than 8 inches thick. The materials placed should be moisture conditions to within 3 percent of the optimum moisture content of the particular material placed. All fill shall be compacted to at least 90 percent of the maximum laboratory dry density for the materials used. The maximum density shall be determined by the laboratory operated by Geotechnologies, Inc. in general accordance with the most recent revision of ASTM D 1557.

Field observation and testing shall be performed by a representative of the geotechnical engineer during grading to assist the contractor in obtaining the required degree of compaction and the proper moisture content. Where compaction is less than required, additional compactive effort

shall be made with adjustment of the moisture content, as necessary, until a minimum of 90 percent compaction is obtained.

Acceptable Materials

The excavated onsite materials are considered satisfactory for reuse in the controlled fills as long as any debris and/or organic matter is removed. Materials larger than 6 inches should not be used for the fill.

Any imported materials shall be observed and tested by the representative of the geotechnical engineer prior to use in fill areas. Imported materials should contain sufficient fines so as to be relatively impermeable and result in a stable subgrade when compacted. Any required import materials should consist of geologic materials with an expansion index of less than 40. The water-soluble sulfate content of the import materials should be less than 0.1% percentage by weight.

Imported materials should be free from chemical or organic substances which could affect the proposed development. A competent professional should be retained in order to test imported materials and address environmental issues and organic substances which might affect the proposed development.

Utility Trench Backfill

Utility trenches should be backfilled with controlled fill. The utility should be bedded with clean sands at least one foot over the crown. The remainder of the backfill may be onsite soil compacted to 90 percent of the laboratory maximum dry density. Utility trench backfill should be tested by representatives of this firm in general accordance with the most recent revision of ASTM D 1557.

Shrinkage

Shrinkage results when a volume of soil removed at one density is compacted to a higher density. A shrinkage factor between 5 and 15 percent should be anticipated when excavating and recompacting the existing fill and underlying native geologic materials on the site to an average comparative compaction of 92 percent.

Weather Related Grading Considerations

When rain is forecast all fill that has been spread and awaits compaction shall be properly compacted prior to stopping work for the day or prior to stopping due to inclement weather. These fills, once compacted, shall have the surface sloped to drain to an area where water can be removed.

Temporary drainage devices should be installed to collect and transfer excess water to the street in non-erosive drainage devices. Drainage should not be allowed to pond anywhere on the site, and especially not against any foundation or retaining wall. Drainage should not be allowed to flow uncontrolled over any descending slope.

Work may start again, after a period of rainfall, once the site has been reviewed by a representative of this office. Any soils saturated by the rain shall be removed and aerated so that the moisture content will fall within three percent of the optimum moisture content.

Surface materials previously compacted before the rain shall be scarified, brought to the proper moisture content and recompacted prior to placing additional fill, if considered necessary by a representative of this firm.

Geotechnical Observations and Testing During Grading

Geotechnical observations and testing during grading are considered to be a continuation of the geotechnical investigation. It is critical that the geotechnical aspects of the project be reviewed by representatives of Geotechnologies, Inc. during the construction process. Compliance with the design concepts, specifications or recommendations during construction requires review by this firm during the course of construction. Any fill which is placed should be observed, tested, and verified if used for engineered purposes. Please advise this office at least twenty-four hours prior to any required site visit.

Proper compaction is necessary to reduce settlement of overlying improvements. Some settlement of compacted fill should be anticipated. Any utilities supported therein should be designed to accept differential settlement. Differential settlement should also be considered at the points of entry to the structure.

FOUNDATION DESIGN

Conventional Foundations

The proposed hotel structure may be supported by a conventional foundation system. Conventional foundations to support the subterranean portion of the structure may bear in the native soils expected at the subterranean subgrade. Conventional foundations to support the at-grade portion of the structure should bear in a newly built compacted fill pad.

Continuous foundations may be designed for a bearing capacity of 3,000 pounds per square foot and should be a minimum of 12 inches in width, 18 inches in depth below the lowest adjacent grade and 18 inches into the recommended bearing material.

Column foundations may be designed for a bearing capacity of 3,500 pounds per square foot and should be a minimum of 24 inches in width, 18 inches in depth below the lowest adjacent grade and 18 inches into the recommended bearing material.

The bearing capacity increase for each additional foot of width is 250 pounds per square foot. The bearing capacity increase for each additional foot of depth is 700 pounds per square foot. The maximum recommended bearing capacity is 5,000 pounds per square foot.

The bearing capacities indicated above are for the total of dead and frequently applied live loads, and may be increased by one third for short duration loading, which includes the effects of wind or seismic forces.

Miscellaneous Foundations

Conventional foundations for structures such as privacy walls or trash enclosures which will not be rigidly connected to the proposed structure may bear in native soils. Continuous footings may be designed for a bearing capacity of 1,500 pounds per square foot, and should be a minimum of 12 inches in width, 18 inches in depth below the lowest adjacent grade and 18 inches into the recommended bearing material. No bearing capacity increases are recommended.

Since the recommended bearing capacity is a net value, the weight of concrete in the foundations may be taken as 50 pounds per cubic foot and the weight of the soil backfill may be neglected when determining the downward load on the foundations.

Foundation Reinforcement

All continuous foundations should be reinforced with a minimum of four #4 steel bars. Two should be placed near the top of the foundation, and two should be placed near the bottom.

Lateral Design

Resistance to lateral loading may be provided by friction acting at the base of foundations and by passive earth pressure. An allowable coefficient of friction of 0.38 may be used with the dead load forces.

Passive geologic pressure for the sides of foundations poured against undisturbed or recompacted soil may be computed as an equivalent fluid having a density of 250 pounds per cubic foot with a maximum earth pressure of 1,500 pounds per square foot. The passive and friction components may be combined for lateral resistance without reduction. A one-third increase in the passive value may be used for short duration loading such as wind or seismic forces.

Foundation Settlement

Settlement of the foundation system is expected to occur on initial application of loading. The maximum static settlement is not expected to exceed ⅔-inch. Differential static settlement between new foundations is not expected to exceed ¼-inch.

In addition to static settlement, the existing and proposed foundations should be able to withstand seismically induced settlement. The static and seismic settlements are additive. Seismic dry settlement of up to 0.34 inches could potentially occur during the design-based seismic event. The differential seismically induced settlement is expected to be in the order of 0.23 inches.

Based on the above considerations, it is recommended that the foundation system is able to tolerate a total settlement (static plus seismic) of up to 1 inch, and a differential settlement (static plus seismic) of up to ½-inch. The differential settlement would be expected to occur over a distance of 30 feet.

Foundation Observations

It is critical that all foundation excavations are observed by a representative of this firm to verify penetration into the recommended bearing materials. The observation should be performed prior to the placement of reinforcement. Foundations should be deepened to extend into satisfactory geologic materials, if necessary. Foundation excavations should be cleaned of all loose soils prior to placing steel and concrete. Any required foundation backfill should be mechanically compacted, flooding is not permitted.

RETAINING WALL DESIGN

It is anticipated that retaining walls ranging between 10 and 12 feet in height will be required for the proposed subterranean level. As a precautionary measure, recommendations for the design of underground retaining walls up to a height of 15 feet have been provided herein. Retaining walls may be designed as indicated below, depending on whether the walls will be restrained or cantilevered. Retaining wall foundations may be designed in accordance with the provisions of the "Foundation Design" section of this report.

Additional pressure should be added for a surcharge condition due to vehicular traffic or adjacent structures. It is anticipated that the proposed retaining walls will be surcharged by the at-grade portion of the structure. Information regarding the loading of these at-grade foundations will be necessary to analyze the anticipated lateral surcharge.

Vehicular traffic is expected in the vicinity of the retaining walls. For traffic surcharge, the upper 10 feet of any retaining wall adjacent to streets, driveways or parking areas should be designed to resist a uniform lateral pressure of 100 pounds per square foot, acting as a result of an assumed 300 pounds per square foot traffic surcharge. If the traffic is more than 10 feet from the retaining walls, the traffic surcharge may be neglected.

Restrained Retaining Walls

Restrained subterranean retaining walls supporting a level back slope may be designed to resist a triangular distribution of earth pressure, as recommended in the table below. It is recommended the walls be designed to resist the greater of the at-rest pressure, or the active pressure plus the seismic pressure, as discussed in the "Dynamic (Seismic) Earth Pressure" section below.

RESTRAINED SUBTERRANEAN WALLS		
	AT-REST EARTH PRESSURE	**ACTIVE EARTH PRESSURE *(To be Combined with Dynamic Seismic Earth Pressure)**
Height of Wall (Feet)	Triangular Distribution of Pressure (Pounds per Cubic Foot)	Triangular Distribution of Pressure (Pounds per Cubic Foot)
Up to 15	56	31*

The lateral earth pressure recommended above for retaining walls assumes that a permanent drainage system will be installed so that external water pressure will not be developed against the walls. Also, where necessary, the retaining walls should be designed to accommodate any surcharge pressures that may be imposed by adjacent traffic and existing structures.

Dynamic (Seismic) Earth Pressure

Retaining walls exceeding 6 feet in height shall be designed to resist the additional earth pressure caused by seismic ground shaking. A triangular pressure distribution should be utilized for the additional seismic loads, with an equivalent fluid pressure of 25 pounds per cubic foot. The seismic earth pressure should be combined with the lateral active earth pressure for analyses of restrained basement walls under seismic loading condition.

Miscellaneous Cantilever Retaining Walls

Cantilever retaining walls up to 15 feet in height supporting a level back slope may be designed utilizing a triangular distribution of pressure. Cantilever retaining walls may be designed for 31 pounds per cubic foot for walls retaining up to 15 feet of earth. This pressure assumes a subdrain system will be installed behind the wall. In addition, cantilever walls greater than 6 feet in height shall be designed to resist seismic earth pressure indicated in the "Dynamic (Seismic) Earth Pressure" section above.

For this equivalent fluid pressure to be valid, walls which are to be restrained at the top should be backfilled prior to the upper connection being made. Additional active pressure should be added for a surcharge condition due to sloping ground, vehicular traffic or adjacent structures.

Retaining Wall Drainage

All retaining walls shall be provided with a subdrain system in order to minimize the potential for future hydrostatic pressure buildup behind the proposed retaining walls. Subdrains may consist of four-inch diameter perforated pipes, placed with perforations facing down. The pipe shall be encased in at least one-foot of gravel around the pipe. The gravel shall be wrapped in filter fabric. The gravel may consist of three-quarter inch to one-inch crushed rocks.

As an alternative to the standard perforated subdrain pipe and gravel drainage system, the use of gravel pockets and weepholes is an acceptable drainage method. Weepholes shall be a minimum of 4 inches in diameter, placed at 8 feet on center along the base of the wall. Gravel pockets shall be a minimum of 1 cubic foot in dimension and may consist of three-quarter inch to one-inch crushed rocks, wrapped in filter fabric. A collector pipe shall be installed to direct collected waters to a sump

Certain types of subdrain pipe are not acceptable to the various municipal agencies, it is recommended that prior to purchasing subdrainage pipe, the type and brand is cleared with the proper municipal agencies. Subdrainage pipes should outlet to an acceptable location. Some municipalities do not allow the use of flat-drainage products, such as Miradrain, as a primary drainage system. The use of such a product should be researched with the building official.

The lateral earth pressures recommended above for retaining walls assume that a permanent drainage system will be installed so that external water pressure will not be developed against the walls. If a drainage system is not provided, the walls should be designed to resist an external hydrostatic pressure due to water in addition to the lateral earth pressure. In any event, it is recommended that retaining walls be waterproofed.

Sump Pump Design

The purpose of the recommended retaining wall backdrainage system is to relieve hydrostatic pressure. Groundwater was not encountered during exploration to a depth of 60 feet. Therefore, the only water which could affect the proposed retaining walls would be irrigation water and precipitation. Additionally, the proposed site grading is such that all drainage is directed to the street and the structure has been designed with adequate non-erosive drainage devices.

Based on these considerations the retaining wall backdrainage system is not expected to experience an appreciable flow of water, and in particular, no groundwater will affect it. However, for the purposes of design, a flow of 5 gallons per minute may be assumed.

Waterproofing

Moisture effecting retaining walls is one of the most common post construction complaints. Poorly applied or omitted waterproofing can lead to efflorescence or standing water inside the building. Efflorescence is a process in which a powdery substance is produced on the surface of the concrete

by the evaporation of water. The white powder usually consists of soluble salts such as gypsum, calcite, or common salt. Efflorescence is common to retaining walls and does not affect their strength or integrity.

It is recommended that retaining walls be waterproofed. Waterproofing design and inspection of its installation is not the responsibility of the geotechnical engineer. A qualified waterproofing consultant should be retained in order to recommend a product or method which would provide protection to below grade walls.

Retaining Wall Backfill

Any required backfill should be mechanically compacted in layers not more than 8 inches thick, to at least 90 percent of the maximum density obtainable by the latest revision of ASTM D 1557 method of compaction. Flooding should not be permitted. Proper compaction of the backfill will be necessary to reduce settlement of overlying walks and paving. Some settlement of required backfill should be anticipated, and any utilities supported therein should be designed to accept differential settlement, particularly at the points of entry to the structure.

Proper compaction of the backfill will be necessary to reduce settlement of overlying walks and paving. Some settlement of required backfill should be anticipated, and any utilities supported therein should be designed to accept differential settlement, particularly at the points of entry to the structure.

TEMPORARY EXCAVATIONS

It is anticipated that excavations on the order of 15 feet in vertical height will be required for the proposed subterranean level and foundation elements. The excavations are expected to expose fill and dense native soils, which are suitable for vertical excavations up to 5 feet where not surcharged by adjacent traffic or structures. Excavations which will be surcharged by adjacent traffic, public way, properties, or structures should be shored.

Where sufficient space is available, temporary unsurcharged embankments could be sloped back without shoring. Excavations over 5 feet in height should be excavated at a uniform 1:1 (h:v) slope gradient in its entirety to a maximum height of 15 feet. A uniform sloped excavation does not have a vertical component.

Where sloped embankments are utilized, the tops of the slopes should be barricaded to prevent vehicles and storage loads within seven feet of the tops of the slopes. If the temporary construction embankments are to be maintained during the rainy season, berms are suggested along the tops of the slopes where necessary to prevent runoff water from entering the excavation and eroding the slope faces. The soils exposed in the cut slopes should be inspected during excavation by personnel from this office so that modifications of the slopes can be made if variations in the soil conditions occur.

It is critical that the soils exposed in the cut slopes are observed by a representative of this office during excavation so that modifications of the slopes can be made if variations in the earth material conditions occur. All excavations should be stabilized within 30 days of initial excavation. Water should not be allowed to pond on top of the excavation nor to flow towards it.

Excavation Observations

It is critical that the soils exposed in the cut slopes are observed by a representative of Geotechnologies, Inc. during excavation so that modifications of the slopes can be made if variations in the geologic material conditions occur. Many building officials require that temporary excavations should be made during the continuous observations of the geotechnical engineer. All excavations should be stabilized within 30 days of initial excavation.

SHORING DESIGN

The following information on the design and installation of the shoring is as complete as possible at this time. It is suggested that a review of the final shoring plans and specifications be made by this office prior to bidding or negotiating with a shoring contractor be made.

One method of shoring would consist of steel soldier piles, placed in drilled holes and backfilled with concrete. The soldier piles may be designed as cantilevers or laterally braced utilizing drilled tie-back anchors or raker braces.

Soldier Piles

Drilled cast-in-place soldier piles should be placed no closer than 2 diameters on center. The minimum diameter of the piles is 18 inches. Structural concrete should be used for the soldier piles below the excavation; lean-mix concrete may be employed above that level. As an alternative, lean-mix concrete may be used throughout the pile where the reinforcing consists of a wideflange section. The slurry must be of sufficient strength to impart the lateral bearing pressure developed by the wideflange section to the earth materials. For design purposes, an allowable passive value for the earth materials below the bottom plane of excavation may be assumed to be 600 pounds per square foot per foot. To develop the full lateral value, provisions should be implemented to assure firm contact between the soldier piles and the undisturbed earth materials.

The frictional resistance between the soldier piles and retained earth material may be used to resist the vertical component of the anchor load. The coefficient of friction may be taken as 0.38 based on uniform contact between the steel beam and lean-mix concrete and retained earth. The portion of soldier piles below the plane of excavation may also be employed to resist the downward loads. The downward capacity may be determined using a frictional resistance of 600 pounds per square foot. The minimum depth of embedment for shoring piles is 5 feet below the bottom of the footing excavation, or 7 feet below the bottom of excavated plane, whichever is deeper.

Caving should be expected during drilling of the soldier piles. Casing may be required should caving be experienced. If casing is used, extreme care should be employed so that the pile is not pulled apart as the casing is withdrawn. At no time should the distance between the surface of the concrete and the bottom of the casing be less than 5 feet.

Lagging

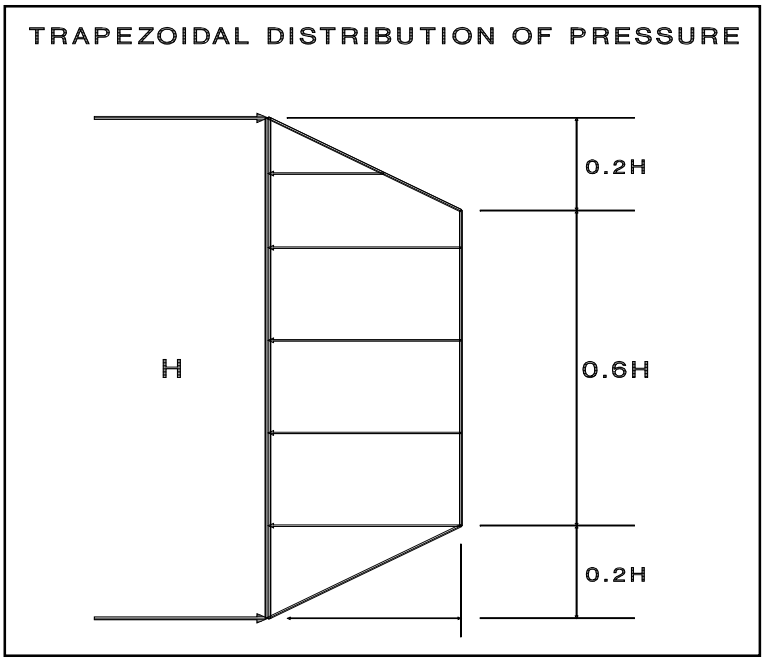
Soldier piles and anchors should be designed for the full anticipated pressures. Due to the cohesionless nature of the underlying earth materials, lagging will be required throughout the entire depth of the excavation. Due to arching in the geologic materials, the pressure on the lagging will be less. It is recommended that the lagging should be designed for the full design pressure but be limited to a maximum of 400 pounds per square foot. It is recommended that a representative of this firm observe the installation of lagging to insure uniform support of the excavated embankment.

Lateral Pressures

A triangular distribution of lateral earth pressure should be utilized for the design of cantilevered shoring system. A trapezoidal distribution of lateral earth pressure would be appropriate where shoring is to be restrained at the top by bracing or tie backs. The design of trapezoidal distribution of pressure is shown in the diagram below. Equivalent fluid pressures for the design of cantilevered and restrained shoring are presented in the following table:

Height of Shoring (feet)	Cantilever Shoring System Equivalent Fluid Pressure (pcf) Triangular Distribution of Pressure	Restrained Shoring System Lateral Earth Pressure (psf)* Trapezoidal Distribution of Pressure
Up to 18	28 pcf	18H psf

*Where H is the height of the shoring in feet.



Where a combination of sloped embankment and shoring is utilized, the pressure will be greater and must be determined for each combination. Additional active pressures should be applied where the shoring will be surcharged by adjacent traffic or structures.

The upper ten feet of the temporary shoring wall adjacent to streets, driveways or parking areas should be designed to resist a uniform lateral pressure of 100 pounds per square foot, acting as a result of an assumed 300 pounds per square foot surcharge behind the walls due to normal street traffic. If the traffic is kept back at least ten feet from the retaining walls, the traffic surcharge may be neglected.

Tied-Back Anchors

Tied-back anchors may be used to resist lateral loads. Friction anchors are recommended. For design purposes, it may be assumed that the active wedge adjacent to the shoring is defined by a plane drawn 35 degrees with the vertical through the bottom plane of the excavation. Friction anchors should extend a minimum of 20 feet beyond the potentially active wedge.

Drilled friction anchors may be designed for a skin friction of 500 pounds per square foot. Pressure grouted anchor may be designed for a skin friction of 2,500 pounds per square foot. Where belled anchors are utilized, the capacity of belled anchors may be designed by assuming the diameter of the bonded zone is equivalent to the diameter of the bell. Only the frictional resistance developed beyond the active wedge would be effective in resisting lateral loads.

It is recommended that at least 3 of the initial anchors have their capacities tested to 200 percent of their design capacities for a 24-hour period to verify their design capacity. The total deflection during this test should not exceed 12 inches. The anchor deflection should not exceed 0.75 inches during the 24-hour period, measured after the 200 percent load has been applied.

All anchors should be tested to at least 150 percent of design load. The total deflection during this test should not exceed 12 inches. The rate of creep under the 150 percent test load should not exceed 0.1 inch over a 15-minute period in order for the anchor to be approved for the design loading.

After a satisfactory test, each anchor should be locked-off at the design load. This should be verified by rechecking the load in the anchor. The load should be within 10 percent of the design load. Where satisfactory tests are not attained, the anchor diameter and/or length should be increased or additional anchors installed until satisfactory test results are obtained. The installation and testing of the anchors should be observed by the geotechnical engineer. Minor caving during drilling of the anchors should be anticipated.

Anchor Installation

Tied-back anchors may be installed between 20 and 45 degrees below the horizontal. Caving of the anchor shafts, particularly within sand deposits, should be anticipated and the following provisions should be implemented in order to minimize such caving. The anchor shafts should be filled with concrete by pumping from the tip out, and the concrete should extend from the tip of

the anchor to the active wedge. In order to minimize the chances of caving, it is recommended that the portion of the anchor shaft within the active wedge be backfilled with sand before testing the anchor. This portion of the shaft should be filled tightly and flush with the face of the excavation. The sand backfill should be placed by pumping; the sand may contain a small amount of cement to facilitate pumping.

Deflection

It is difficult to accurately predict the amount of deflection of a shored embankment. It should be realized that some deflection will occur. It is estimated that the deflection could be on the order of one inch at the top of the shored embankment. If greater deflection occurs during construction, additional bracing may be necessary to minimize settlement of adjacent buildings and utilities in adjacent street and alleys. If desired to reduce the deflection, a greater active pressure could be used in the shoring design. Where internal bracing is used, the rakers should be tightly wedged to minimize deflection. The proper installation of the raker braces and the wedging will be critical to the performance of the shoring.

Shoring deflection shall be limited to ½ inch at the top of the shored embankment where a structure is within a 1:1 (h:v) plane projected up from the base of the excavation. A maximum deflection of 1 inch is allowed provided there are no structures within a 1:1 (h:v) plane drawn upward from the base of the excavation.

Monitoring

Because of the depth of the excavation, some mean of monitoring the performance of the shoring system is suggested. The monitoring should consist of periodic surveying of the lateral and vertical locations of the tops of all soldier piles and the lateral movement along the entire lengths of selected soldier piles. Also, some means of periodically checking the load on selected anchors will be necessary, where applicable.

Some movement of the shored embankments should be anticipated as a result of the relatively deep excavation. It is recommended that photographs of the existing buildings on the adjacent properties be made during construction to record any movements for use in the event of a dispute.

Shoring Observations

It is critical that the installation of shoring is observed by a representative of Geotechnologies, Inc. Many building officials require that shoring installation should be performed during continuous observation of a representative of the geotechnical engineer. The observations insure that the recommendations of the geotechnical report are implemented and so that modifications of the recommendations can be made if variations in the geologic material or groundwater conditions warrant. The observations will allow for a report to be prepared on the installation of shoring for the use of the local building official, where necessary.

Raker Brace Foundations

An allowable bearing pressure of 4,000 pounds per square foot may be used for the design a raker foundations. This bearing pressure is based on a raker foundation a minimum of 4 feet in width and length as well as 3 feet in depth. The base of the raker foundations should be horizontal. Care should be employed in the positioning of raker foundations so that they do not interfere with the foundations for the proposed structure.

SLABS ON GRADE

Concrete Slabs-on Grade

Interior concrete floor slabs should be a minimum of 4 inches in thickness, and should be reinforced with a minimum of #3 steel bars on 18-inch centers each way. Outdoor concrete flatwork should be a minimum of 4 inches in thickness, and should be reinforced with a minimum of #3 steel bars on 24-inch centers each way.

Interior slabs-on-grade and outdoor concrete flatwork should be cast over undisturbed native soils, or properly controlled fill materials. Any geologic materials loosened or over-excavated should be wasted from the site or properly compacted to 90 percent of the maximum dry density.

Design of Slabs That Receive Moisture-Sensitive Floor Coverings

Geotechnologies, Inc. does not practice in the field of moisture vapor transmission evaluation and mitigation. Therefore, where necessary, it is recommended that a qualified consultant should be engaged to evaluate the general and specific moisture vapor transmission paths and any impact on the proposed construction. The qualified consultant should provide recommendations for mitigation of potential adverse impacts of moisture vapor on various components of the structure.

Where any dampness would be objectionable or where the slab will be cast below the historic high groundwater level, it is recommended that floor slabs should be waterproofed. A qualified waterproofing consultant should be engaged in order to recommend a product and/or method which would provide protection from unwanted moisture.

All concrete slabs-on-grade should be supported on vapor retarder/barrier. The design of the slab and the installation of the vapor retarder/barrier should comply with the most recent revisions of ASTM E 1643 and ASTM E 1745. The vapor retarder/barrier should comply with ASTM E 1745 Class A requirements. The necessity of a vapor retarder/barrier is not a geotechnical issue and should be confirmed by qualified members of the design team.

Where a vapor retarder/barrier is used, it should be placed on a level and compact subgrade. Precautions should be taken to protect the vapor retarder/barrier from damage during installation of reinforcing, utilities and concrete. The use of stakes driven thought the vapor retarder/barrier should be avoided. Repair any damaged areas of the vapor retarder/barrier prior to concrete placement.

Concrete Crack Control

The recommendations presented in this report are intended to reduce the potential for cracking of concrete slabs-on-grade due to settlement. However even where these recommendations have been implemented, foundations, stucco walls and concrete slabs-on-grade may display some cracking due to minor soil movement and/or concrete shrinkage. The occurrence of concrete cracking may be reduced and/or controlled by limiting the slump of the concrete used, proper concrete placement and curing, and by placement of crack control joints at reasonable intervals, in particular, where re-entrant slab corners occur.

For standard control of concrete cracking, a maximum crack control joint spacing of 15 feet should not be exceeded. Lesser spacings would provide greater crack control. Joints at curves and angle points are recommended. The crack control joints should be installed as soon as practical following concrete placement. Crack control joints should extend a minimum depth of one-fourth the slab thickness. Construction joints should be designed by a structural engineer.

Complete removal of the existing fill soils beneath outdoor flatwork such as walkways or patio areas, is not required, however, due to the rigid nature of concrete, some cracking, a shorter design life and increased maintenance costs should be anticipated. In order to provide uniform support beneath the flatwork it is recommended that a minimum of 12 inches of the exposed subgrade beneath the flatwork be scarified and recompacted to 90 percent relative compaction.

PAVEMENTS

Prior to placing paving, the existing grade should be scarified to a depth of 12 inches, moistened as required to obtain optimum moisture content, and recompacted to 95 percent of the maximum dry density as determined by the most recent revision of ASTM D 1557. The design team should be aware that removal of all existing fill in the area of new paving is not required, however,

pavement constructed in this manner will most likely have a shorter design life and increased maintenance costs. The following pavement sections are recommended:

Service	Asphalt Pavement Thickness Inches	Base Course Inches
Passenger Cars	3	4
Moderate Truck	4	6
Heavy Truck	5	8

Service	Concrete Pavement Thickness Inches	Base Course Inches
Passenger Car and Moderate Truck	6	4
Heavy Truck	7 ½	4

For standard crack control maximum expansion joint spacing of 15 feet should not be exceeded. Lesser spacings would provide greater crack control. Joints at curves and angle points are recommended. Concrete paving should be reinforced with a minimum of #3 steel bars on 24-inch centers each way.

Aggregate base should be compacted to a minimum of 95 percent of the most recent revision of ASTM D 1557 laboratory maximum dry density. Base materials should conform to Sections 200-2.2 or 200-2.4 of the "Standard Specifications for Public Works Construction", (Green Book), latest edition.

The performance of pavement is highly dependent upon providing positive surface drainage away from the edges. Ponding of water on or adjacent to pavement can result in saturation of the subgrade materials and subsequent pavement distress.

SITE DRAINAGE

Proper surface drainage is critical to the future performance of the project. Saturation of a soil can cause it to lose internal shear strength and increase its compressibility, resulting in a change in the designed engineering properties. Proper site drainage should be maintained at all times.

All site drainage, with the exception of any required to disposed of onsite by stormwater regulations, should be collected and transferred to the street in non-erosive drainage devices. The proposed structure should be provided with roof drainage. Discharge from downspouts, roof drains and scuppers should not be permitted on unprotected soils within five feet of the building perimeter. Drainage should not be allowed to pond anywhere on the site, and especially not against any foundation or retaining wall. Drainage should not be allowed to flow uncontrolled over any descending slope. Planters which are located within a distance equal to the depth of a retaining wall should be sealed to prevent moisture adversely affecting the wall. Planters which are located within five feet of a foundation should be sealed to prevent moisture affecting the earth materials supporting the foundation.

STORMWATER DISPOSAL

Regulatory agencies have been requiring the disposal of a certain amount of stormwater generated on a site by infiltration into the site soils. Increasing the moisture content of a soil can cause it to lose internal shear strength and increase its compressibility, resulting in a change in the designed engineering properties. This means that any overlying structure, including buildings, pavements and concrete flatwork, could sustain damage due to saturation of the subgrade soils. Proper site drainage is critical to the performance of any structure in the built environment.

The Proposed Systems

It is the understanding of this firm that two types of shallow stormwater infiltration systems are proposed for the project. The shallow stormwater infiltration systems are expected to consist of permeable paving, and an infiltration trench gallery system.

It is the opinion of this firm that the proposed shallow stormwater infiltration systems are suitable for the site. The final location and design of the proposed infiltration system shall be reviewed and approved by this office prior to construction to evaluate whether the intent of the recommendations provided by this firm are satisfied.

Percolation Testing

Shallow percolation testing was conducted following the procedure for shallow percolation test, provided in the Guidelines for Design, Investigation and Reporting Low Impact Development Stormwater Infiltration (GS200.1), dated June 30, 2021, presented in the Administrative Manual for the County of Los Angeles, Department of Public Works, Geotechnical and Material Engineering Division. Individual tests were performed for each proposed stormwater infiltration system. These tests are summarized individually below:

Percolation Testing for Permeable Paving

Shallow percolation testing was conducted in TP1. The test pit was initially excavated to a depth of 2 feet, then a one cubic foot excavation was conducted at the bottom for the purpose of conducting the testing.

After the test pit was excavated, its bottom was presoaked for a minimum of 2 hours prior to the test. After the presoak, the test pit was refilled with water and the absorption of the soils was measured. The table below summarizes the results of the infiltration rates derived from the testing.

These rates include correction factors (RF_t, RF_v, and RF_s), as required by the County of Los Angeles procedure. Field readings and calculations have been enclosed in the Appendix.

Test Pit No.	Depth of Test Pit Below Existing Ground Surface (ft.)	Percolation Testing Conducted Between Depths:	Infiltration Rate (in./hr.)
TP1	3	2' and 3'	2.12

Percolation Testing for Infiltration Trench Gallery

Shallow percolation testing was conducted in TP2. The test pit was initially excavated to a depth of 5 feet, then a one cubic foot excavation was conducted at the bottom for the purpose of conducting the testing.

After the test pit was excavated, its bottom was presoaked for a minimum of 2 hours prior to the test. After the presoak, the test pit was refilled with water and the absorption of the soil was measured. The table below summarizes the results of the infiltration rates derived from the testing. These rates include correction factors (RF_t, RF_v, and RF_s), as required by the County of Los Angeles procedure. Field readings and calculations have been enclosed in the Appendix.

Percolation Testing Boring No.	Depth of Boring Below Existing Ground Surface (ft.)	Percolation Testing Conducted Between Depths (ft.):	Infiltration Rate (in./hr.)
TP2	6	5 and 6	4.48

Recommendations

Based on the results of the exploration, testing and research, it is the finding of this firm that on-site stormwater infiltration is feasible for the site. Based on the subsurface conditions, it is the opinion of this firm that proposed permeable pavers and trench gallery system are suitable for on-site stormwater infiltration.

The edge of the proposed stormwater infiltration trench system shall maintain a minimum horizontal setback distance of 15 feet from any structure, and 10 feet away from any private property line. The edge of the proposed permeable paving system should maintain a minimum horizontal setback distance of 5 feet from any structure and any private property line, provided that this system will only be exposed to incidental stormwater.

Based to the granular nature of the underlying native soils, the stormwater should percolate in a generally vertical manner. The potential for creating a perched water condition is considered to be remote. The proposed stormwater infiltration system should not cause any damage, settlement, or adversely affect any neighboring buildings. The soils are in the very low expansion range, and are not susceptible to significant hydroconsolidation.

The subject site is not located in an area considered susceptible to liquefaction. The proposed stormwater infiltration system will not be located in hillside area, and no slopes are nearby. The onsite soils are in the very low expansion range, and are not susceptible to significant hydroconsolidation.

The proposed infiltration device is, however, situated within a parking area. The client must be aware that repeated saturation of the soils may cause settlement to occur. The settlement may manifest itself as cracking in any overlying pavement, flatwork or other improvements. These improvements may require increased maintenance and have a shorter design life.

It is recommended that the design team, including the structural engineer, waterproofing consultant, plumbing engineer, environmental engineer and landscape architect be consulted in regard to the design and construction of infiltration systems. The design and construction of stormwater infiltration systems is not the responsibility of the geotechnical engineer. However, based on the experience of this firm, it is recommended that several aspects of the use of such facilities should be considered by the design and construction team:

- Open infiltration basins have many negative associated issues. Such a design must consider attractive nuisance, impacts to growing vegetation, impacts to air quality and vector control.

- All infiltration devices should be provided with overflow protection. Once the device is full of water, additional water flowing to the device should be diverted to another acceptable disposal area, or disposed offsite in an acceptable manner.

- All connections associated with stormwater infiltration devices should be sealed and water-tight. Water leaking into the subgrade soils can lead to loss of strength, piping, erosion, settlement and/or expansion of the effected earth materials.

- Excavations proposed for the installation of stormwater facilities should comply with the "Temporary Excavations" sections of the referenced reports well as CalOSHA Regulations where applicable.

DESIGN REVIEW

Engineering of the proposed project should not begin until approval of the geotechnical report by the Building Official is obtained in writing. Significant changes in the geotechnical recommendations may result during the building department review process.

It is recommended that the geotechnical aspects of the project be reviewed by this firm during the design process. This review provides assistance to the design team by providing specific recommendations for particular cases, as well as review of the proposed construction to evaluate whether the intent of the recommendations presented herein are satisfied.

CONSTRUCTION MONITORING

Geotechnical observations and testing during construction are considered to be a continuation of the geotechnical investigation. It is critical that this firm review the geotechnical aspects of the project during the construction process. Compliance with the design concepts, specifications or recommendations during construction requires review by this firm during the course of construction. All foundations should be observed by a representative of this firm prior to placing

concrete or steel. Any fill which is placed should be observed, tested, and verified if used for engineered purposes. Please advise Geotechnologies, Inc. at least twenty-four hours prior to any required site visit.

If conditions encountered during construction appear to differ from those disclosed herein, notify Geotechnologies, Inc. immediately so the need for modifications may be considered in a timely manner.

It is the responsibility of the contractor to ensure that all excavations and trenches are properly sloped or shored. All temporary excavations should be cut and maintained in accordance with applicable OSHA rules and regulations.

EXCAVATION CHARACTERISTICS

The exploration performed for this investigation is limited to the geotechnical excavations described. Direct exploration of the entire site would not be economically feasible. The owner, design team and contractor must understand that differing excavation and drilling conditions may be encountered based on boulders, gravel, oversize materials, groundwater and many other conditions. Fill materials, especially when they were placed without benefit of modern grading codes, regularly contain materials which could impede efficient grading and drilling. Southern California sedimentary bedrock is known to contain variable layers which reflect differences in depositional environment. Such layers may include abundant gravel, cobbles and boulders. Similarly, bedrock can contain concretions. Concretions are typically lenticular and follow the bedding. They are formed by mineral deposits. Concretions can be very hard. Excavation and drilling in these areas may require full size equipment and coring capability. The contractor should be familiar with the site and the geologic materials in the vicinity.

CLOSURE AND LIMITATIONS

The purpose of this report is to aid in the design and completion of the described project. Implementation of the advice presented in this report is intended to reduce certain risks associated with construction projects. The professional opinions and geotechnical advice contained in this report are sought because of special skill in engineering and geology and were prepared in accordance with generally accepted geotechnical engineering practice. Geotechnologies, Inc. has a duty to exercise the ordinary skill and competence of members of the engineering profession. Those who hire Geotechnologies, Inc. are not justified in expecting infallibility, but can expect reasonable professional care and competence.

The recommendations of this report pertain only to the site investigated and are based upon the assumption that the geologic conditions do not deviate from those disclosed in the investigation. If any variations are encountered during construction, or if the proposed construction will differ from that anticipated herein, Geotechnologies, Inc. should be notified so that supplemental recommendations can be prepared.

This report is issued with the understanding that it is the responsibility of the owner, or the owner's representatives, to ensure that the information and recommendations contained herein are brought to the attention of the project architect and engineer and are incorporated into the plans. The owner is also responsible to see that the contractor and subcontractors carry out the geotechnical recommendations during construction.

The findings of this report are valid as of the date of this report. However, changes in the conditions of a property can occur with the passage of time, whether they are due to natural processes or the works of man on this or adjacent properties. In addition, changes in applicable or appropriate standards may occur, whether they result from legislation or the broadening of knowledge. Accordingly, the findings of this report may be invalidated wholly or partially by changes outside

control of this firm. Therefore, this report is subject to review and should not be relied upon after a period of three years.

Geotechnical observations and testing during construction is considered to be a continuation of the geotechnical investigation. It is, therefore, most prudent to employ the consultant performing the initial investigative work to provide observation and testing services during construction. This practice enables the project to flow smoothly from the planning stages through to completion.

Should another geotechnical firm be selected to provide the testing and observation services during construction, that firm should prepare a letter indicating their assumption of the responsibilities of geotechnical engineer of record. A copy of the letter should be provided to the regulatory agency for review. The letter should acknowledge the concurrence of the new geotechnical engineer with the recommendations presented in this report.

EXCLUSIONS

Geotechnologies, Inc. does not practice in the fields of methane gas, radon gas, environmental engineering, waterproofing, dewatering organic substances or the presence of corrosive soils or wetlands which could affect the proposed development including mold and toxic mold. Nothing in this report is intended to address these issues and/or their potential effect on the proposed development. A competent professional consultant should be retained in order to address environmental issues, waterproofing, organic substances and wetlands which might affect the proposed development.

GEOTECHNICAL TESTING

Classification and Sampling

The soil is continuously logged by a representative of this firm and classified by visual examination in accordance with the Unified Soil Classification system. The field classification is verified in the

laboratory, also in accordance with the Unified Soil Classification System. Laboratory classification may include visual examination, Atterberg Limit Tests and grain size distribution. The final classification is shown on the excavation logs.

Samples of the geologic materials encountered in the exploratory borings were collected and transported to the laboratory. Undisturbed samples of soil are obtained at frequent intervals. Unless noted on the excavation logs as an SPT sample, samples acquired while utilizing a hollow-stem auger drill rig are obtained by driving a thin-walled, California Modified Sampler with successive 30-inch drops of a 140-pound hammer. The soil is retained in brass rings of 2.50 inches outside diameter and 1.00 inch in height. The central portion of the samples are stored in close fitting, waterproof containers for transportation to the laboratory. Samples noted on the excavation logs as SPT samples are obtained in general accordance with the most recent revision of ASTM D 1586. Samples are retained for 30 days after the date of the geotechnical report.

Moisture and Density Relationships

The field moisture content and dry unit weight are determined for each of the undisturbed soil samples, and the moisture content is determined for SPT samples in general accordance with the most recent revision of ASTM D 4959 or ASTM D 4643. This information is useful in providing a gross picture of the soil consistency between exploration locations and any local variations. The dry unit weight is determined in pounds per cubic foot and shown on the "Excavation Logs", A-Plates. The field moisture content is determined as a percentage of the dry unit weight.

Direct Shear Testing

Shear tests are performed in general accordance with the most recent revision of ASTM D 3080 with a strain controlled, direct shear machine manufactured by Soil Test, Inc. or a Direct Shear Apparatus manufactured by GeoMatic, Inc. The rate of deformation is approximately 0.025 inches per minute. Each sample is sheared under varying confining pressures in order to determine the

Mohr-Coulomb shear strength parameters of the cohesion intercept and the angle of internal friction. Samples are generally tested in an artificially saturated condition. Depending upon the sample location and future site conditions, samples may be tested at field moisture content. The results are plotted on the "Shear Test Diagram," B-Plates.

The most recent revision of ASTM 3080 limits the particle size to 10 percent of the diameter of the direct shear test specimen. The sheared sample is inspected by the laboratory technician running the test. The inspection is performed by splitting the sample along the sheared plane and observing the soils exposed on both sides. Where oversize particles are observed in the shear plane, the results are discarded and the test run again with a fresh sample.

Consolidation Testing

Settlement predictions of the soil's behavior under load are made on the basis of the consolidation tests in general accordance with the most recent revision of ASTM D 2435. The consolidation apparatus is designed to receive a single one-inch high ring. Loads are applied in several increments in a geometric progression, and the resulting deformations are recorded at selected time intervals. Porous stones are placed in contact with the top and bottom of each specimen to permit addition and release of pore fluid. Samples are generally tested at increased moisture content to determine the effects of water on the bearing soil. The normal pressure at which the water is added is noted on the drawing. Results are plotted on the "Consolidation Test," C-Plates.

Expansion Index Testing

The expansion tests performed on the remolded samples are in accordance with the Expansion Index testing procedures, as described in the most recent revision of ASTM D 4829. The soil sample is compacted into a metal ring at a saturation degree of 50 percent. The ring sample is then placed in a consolidometer, under a vertical confining pressure of 1 lbf/square inch and inundated with distilled water. The deformation of the specimen is recorded for a period of 24 hour or until

the rate of deformation becomes less than 0.0002 inches/hour, whichever occurs first. The expansion index, EI, is determined by dividing the difference between final and initial height of the ring sample by the initial height, and multiplied by 1,000.

Laboratory Compaction Characteristics

The maximum dry unit weight and optimum moisture content of a soil are determined in general accordance with the most recent revision of ASTM D 1557. A soil at a selected moisture content is placed in five layers into a mold of given dimensions, with each layer compacted by 25 blows of a 10 pound hammer dropped from a distance of 18 inches subjecting the soil to a total compactive effort of about 56,000 pounds per cubic foot. The resulting dry unit weight is determined. The procedure is repeated for a sufficient number of moisture contents to establish a relationship between the dry unit weight and the water content of the soil. The data when plotted represent a curvilinear relationship known as the compaction curve. The values of optimum moisture content and modified maximum dry unit weight are determined from the compaction curve.

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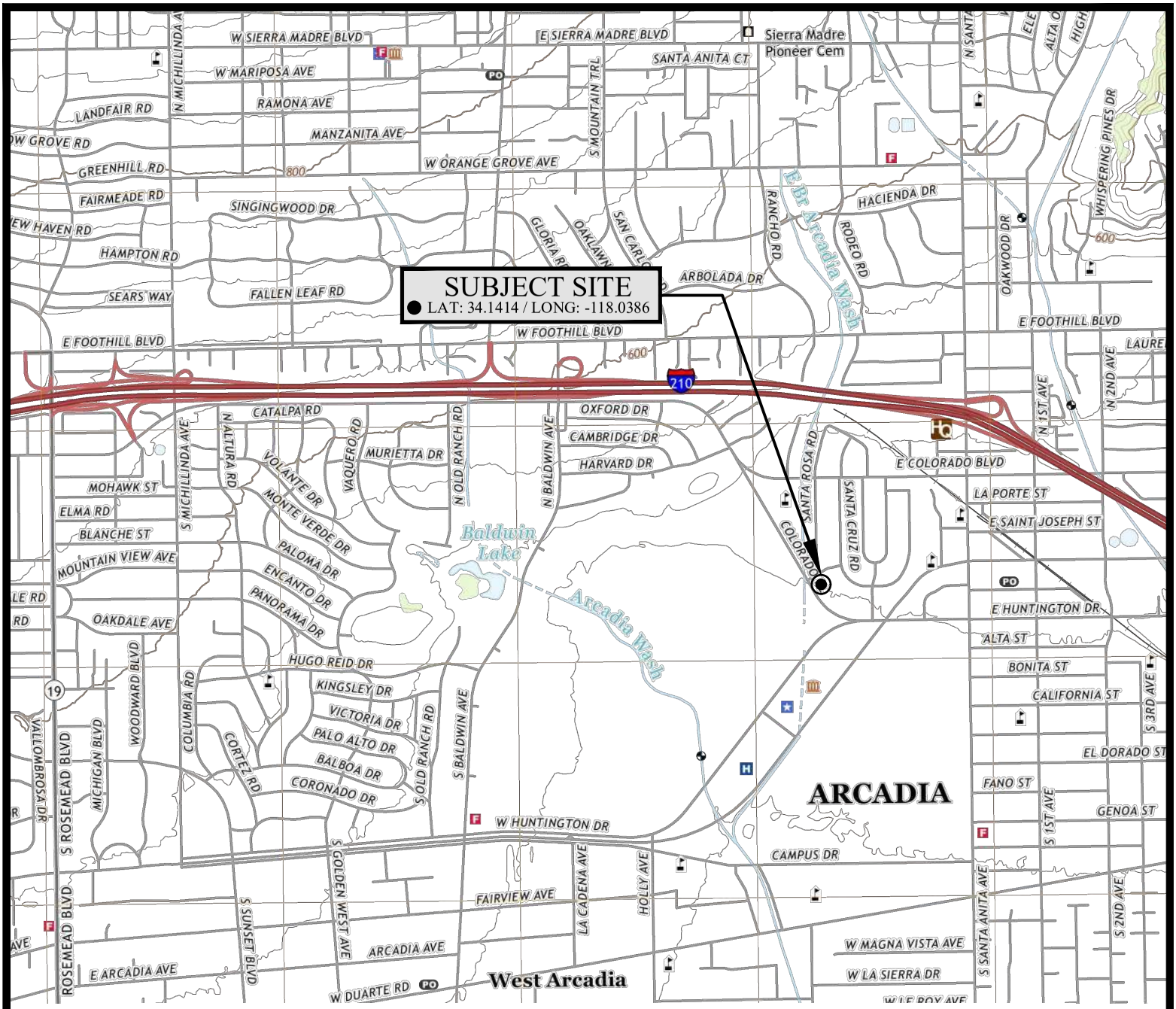


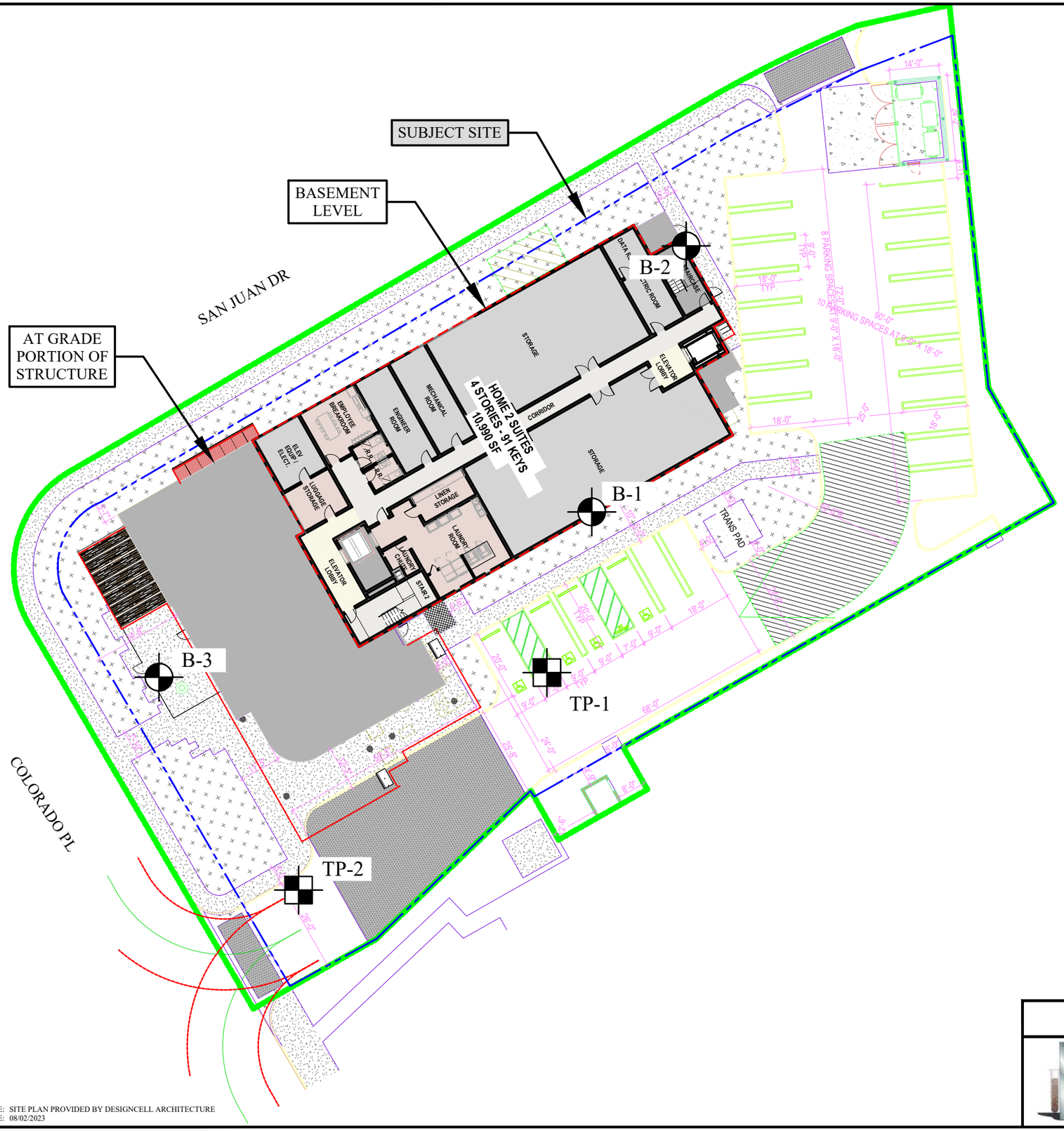
REFERENCE: USGS TOPOGRAPHIC MAPS, 7.5 MINUTE SERIES, MOUNT. WILSON, CA QUADRANGLE 2022

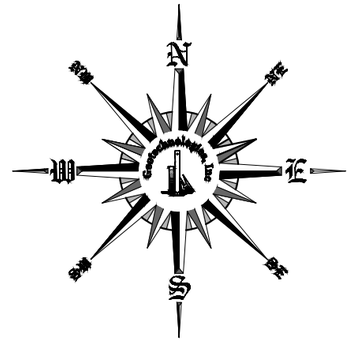
VICINITY MAP

Geotechnologies, Inc.
Consulting Geotechnical Engineers

181 COLORADO, LLC

FILE NO: 22449





SCALE IN FEET

0 30 60

LEGEND

B-3 — LOCATION AND NUMBER OF BORING (THIS INVESTIGATION)

TP-2 — LOCATION AND NUMBER OF TEST PIT (THIS INVESTIGATION)

REFERENCE: SITE PLAN PROVIDED BY DESIGNCELL ARCHITECTURE
DATE: 08/02/2023

PLOT PLAN

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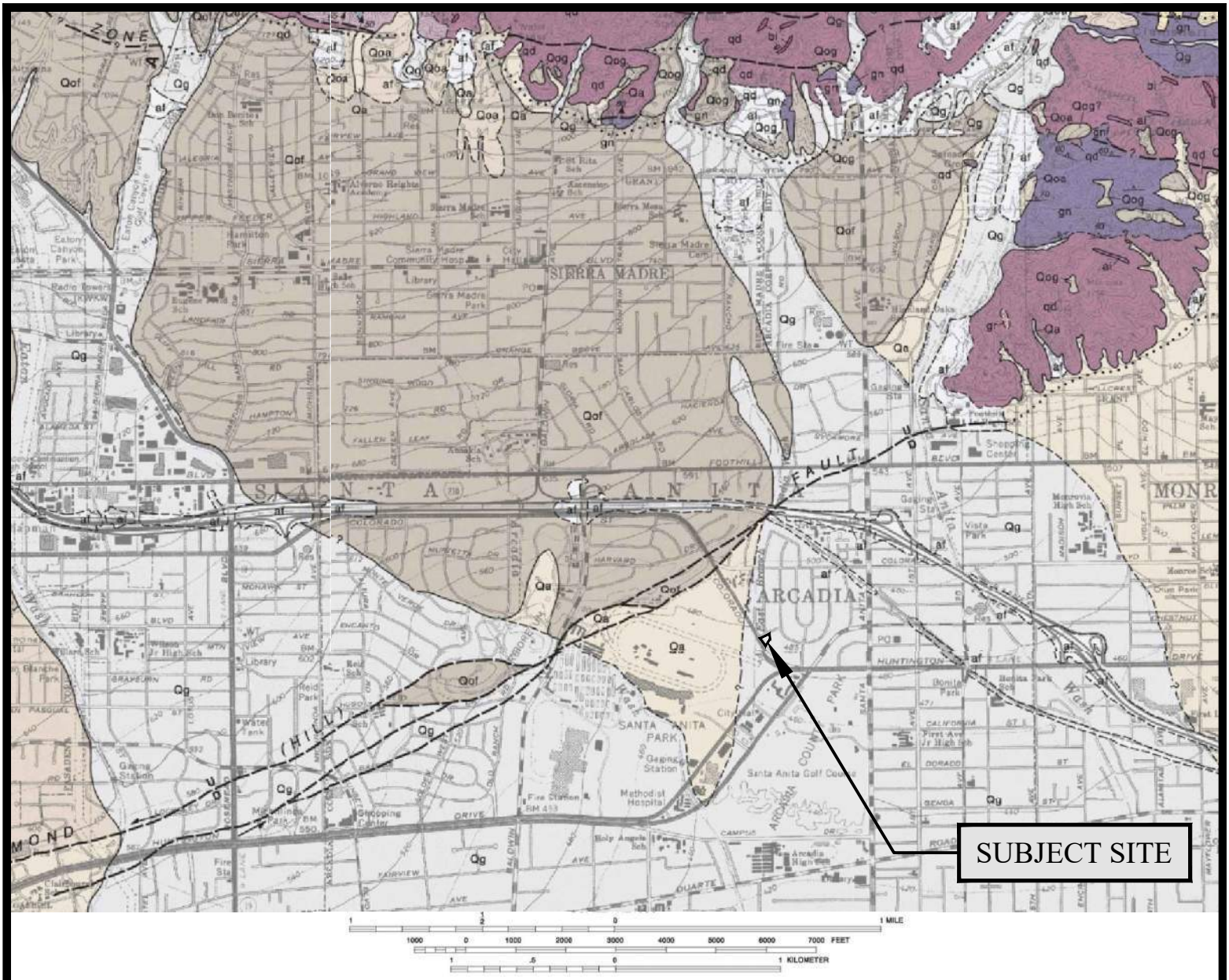
Drawn by: JD | File No.: 22449

Date: December 2023



LEGEND

af: SURFICIAL SEDIMENTS - Artificial fill; not all areas shown

Qg: Gravel and sand of major stream channels and alluvial fan outwash from major canyons; grades southward into alluvium

Qa: Alluvial gravel, sand and silt of valley areas

Qof: OLDER DISSECTED SURFICIAL SEDIMENTS - Alluvial fan gravel and sand derived from San Gabriel Mountains

Qog: Old alluvial fan gravel and sand derived from San Gabriel Mountains

gr: GRANITIC ROCKS - Gray-white, medium to fine grained massive granitic rocks ranging from granite through quartz monzonite to granodiorite, composed essentially of quartz, potassic feldspar, sodic plagioclase feldspar and few scattered flakes of biotite mica; rock complexly intrusive as pods and dikes, some as aplite and pegmatite dikes, into older basement rocks

qd: QUARTZ DIORITE - Gray quartz diorite, medium grained, somewhat incoherent where weathered, composed of plagioclase feldspar, biotite mica, potassic feldspar, quartz, hornblende, in that order of decreasing abundance; rock massive to gneissoid and includes small lenses of gneiss; in many places rock complexly intruded by dikes, sills and pods of leucogranitic rocks of only larger masses are shown

REFERENCE: T.W. DIBBLEE (1998) (EDITED 2010) GEOLOGIC MAP OF THE MOUNT WILSON & AZUSA QUADRANGLES (#DF-67)

GEOLOGIC MAP (DIBBLEE)

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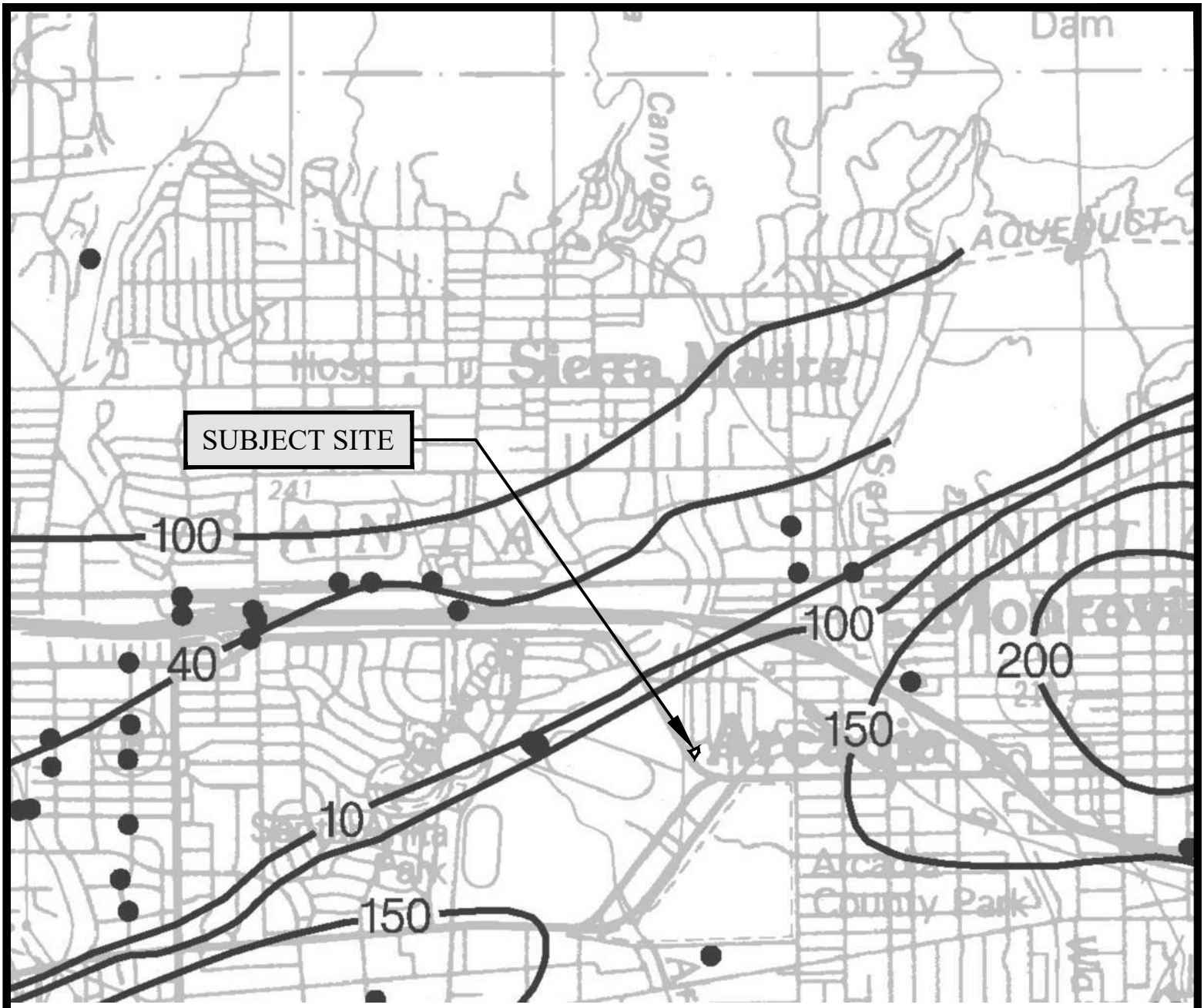

LEGEND

- Borehole Site
- 30 — Depth to ground water in feet

REFERENCE: CDMG, SEISMIC HAZARD ZONE REPORT, 030 MOUNT WILSON, 7.5 - MINUTE QUADRANGLE, LOS ANGELES COUNTY, CALIFORNIA 1998

HISTORICALLY HIGHEST GROUNDWATER LEVELS

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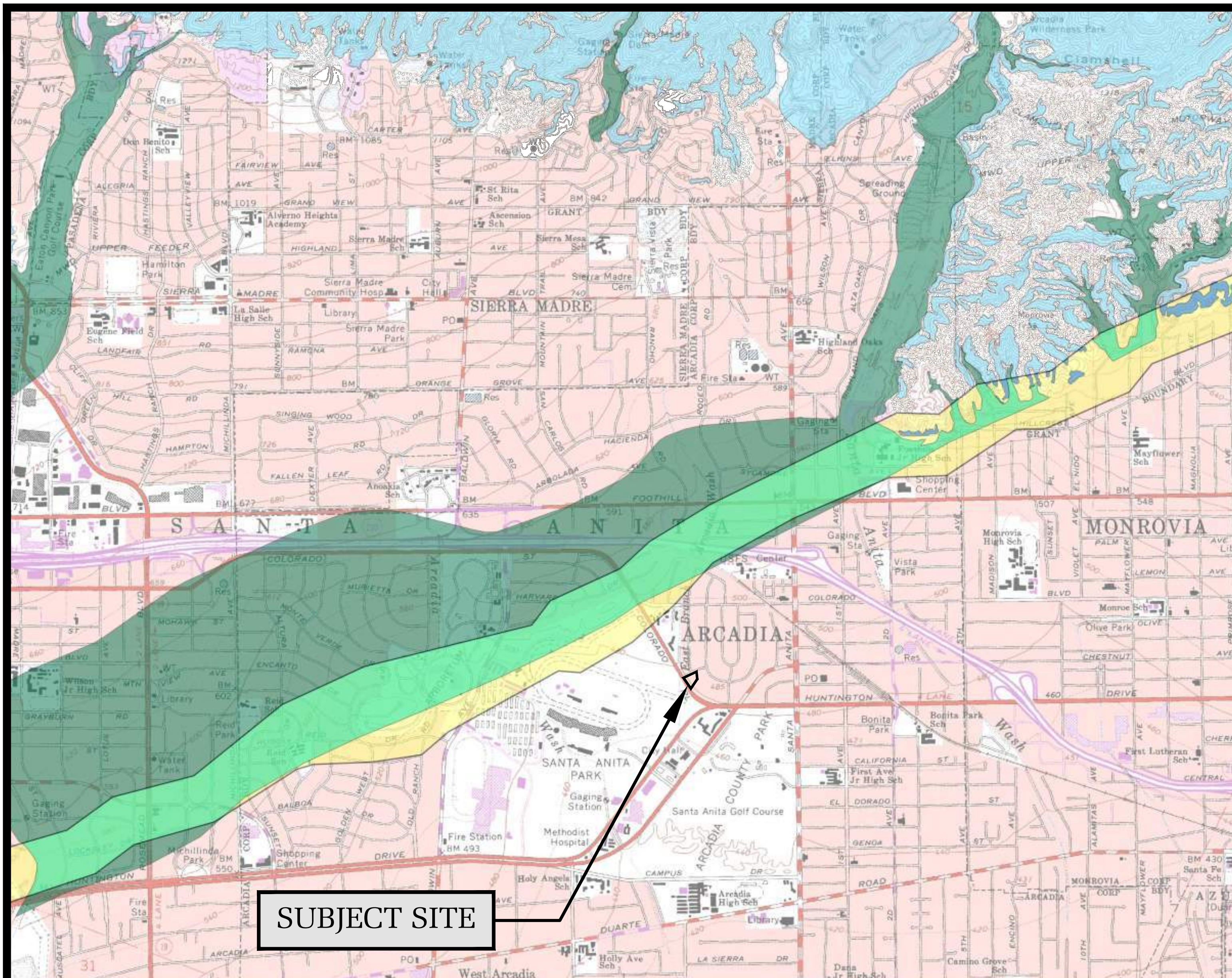

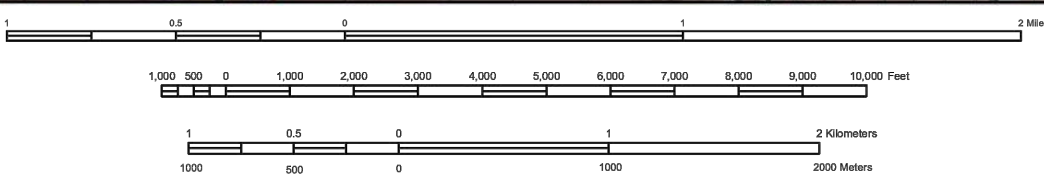

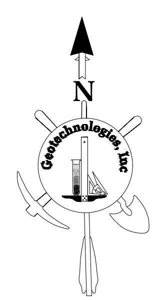

LEGEND

LIQUEFACTION ZONES

EARTHQUAKE-INDUCED LANDSLIDE ZONES

ACTIVE FAULT TRACES

EARTHQUAKE FAULT ZONES

REFERENCE: EARTHQUAKE ZONES OF REQUIRED INVESTIGATION, MOUNT WILSON QUADRANGLE (CGS, 1999)

EARTHQUAKE ZONES OF REQUIRED INVESTIGATION

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Consulting Geotechnical Engineers

181 COLORADO, LLC

FILE NO: 22449

BORING LOG NUMBER 1

181 Colorado, LLC **Date: 11/01/23**

File No. 22449 **Method: 8-inch diameter Hollow Stem Auger**

kk/km

Sample Depth ft.	Blows per ft.	Moisture content %	Dry Density p.c.f.	Depth in feet	USCS Class.	Description Surface Conditions: Asphalt for Parking
				0 --		3-inch Asphalt, No Base
				-		
				1 --		FILL: Silty Sand, dark brown, moist, medium dense, fine grained
				-		
				2 --		
2.5	9	12.2	95.5	-		
				3 --		
				-	SM	NATIVE SOILS: Silty Sand, dark brown, moist, medium dense, fine grained
				4 --		
				-		
5	26	12.0	110.3	5 --		
				-		
				6 --		
				-		
				7 --		
				-		
				8 --		
				-		
				9 --		
				-		
10	39	2.5	105.7	10 --	SP	Sand, dark and yellowish brown, moist, medium dense, fine to medium grained
				-		
				11 --		
				-		
				12 --		
				-		
				13 --		
				-		
				14 --		
				-		
15	60 50/5"	2.4	122.2	15 --		very dense
				-		
				16 --		
				-		
				17 --		
				-		
				18 --		
				-		
				19 --		
				-		
20	55	5.9	102.3	20 --	SM/SP	Silty Sand to Sand, dark and yellowish brown, moist, medium dense, fine to medium grained
				-		
				21 --		
				-		
				22 --		
				-		
				23 --		
				-		
				24 --		
				-		
25	44	11.5	123.4	25 --		
				-	SM	Silty Sand, dark brown, moist, medium dense, fine grained

BORING LOG NUMBER 1

181 Colorado, LLC

File No. 22449

kk/km

Sample Depth ft.	Blows per ft.	Moisture content %	Dry Density p.c.f.	Depth in feet	USCS Class.	Description
				26 --		
				27 --		
				28 --		
				29 --		
30	48	10.1	124.6	30 --		Total Depth 30 feet No Water Fill to 3 feet
				31 --		
				32 --		
				33 --		NOTE: The stratification lines represent the approximate boundary between earth types; the transition may be gradual.
				34 --		
				35 --		Used 8-inch diameter Hollow-Stem Auger 140-lb. Automatic Hammer, 30-inch drop Modified California Sampler used unless otherwise noted
				36 --		
				37 --		
				38 --		
				39 --		
				40 --		
				41 --		
				42 --		
				43 --		
				44 --		
				45 --		
				46 --		
				47 --		
				48 --		
				49 --		
				50 --		

BORING LOG NUMBER 2

181 Colorado, LLC **Date: 11/01/23**

File No. 22449 **Method: 8-inch diameter Hollow Stem Auger**

kk/km

Sample Depth ft.	Blows per ft.	Moisture content %	Dry Density p.c.f.	Depth in feet	USCS Class.	Description Surface Conditions: Asphalt for Parking
				0 --		3½-inch Asphalt, No Base
				-		
				1 --		FILL: Sandy Silt to Silty Sand, dark brown, moist, medium dense, stiff, fine grained
				-		
				2 --		
2.5	13	17.0	105.1	-		
				3 --		
				-	SM	NATIVE SOILS: Silty Sand, dark brown, moist, medium dense, fine grained
				4 --		
				-		
5	11	14.8	SPT	5 --		
				-		
				6 --		
				-		
				7 --		
7.5	34	3.0	108.5	-		
				8 --	SP	Sand, yellowish brown, moist, medium dense, fine to medium grained
				-		
				9 --		
				-		
10	16	3.2	SPT	10 --		
				-	SM/SP	Silty Sand to Sand, dark and yellowish brown, moist, medium dense, fine to medium grained
				11 --		
				-		
				12 --		
12.5	78	4.2	106.0	-		
				13 --	SP	Sand, yellowish brown, moist, very dense, fine to medium grained
				-		
				14 --		
				-		
15	17	3.5	SPT	15 --		
				-		medium dense
				16 --		
				-		
				17 --		
17.5	72	3.4	110.2	-		
				18 --		dense to very dense
				-		
				19 --		
				-		
20	34	3.2	SPT	20 --		
				-		
				21 --		
				-		
				22 --		
22.5	68	8.6	112.7	-		
				23 --	SM/SP	Silty Sand to Sand, dark brown, moist, dense, fine to medium grained
				-		
				24 --		
				-		
25	23	16.1	SPT	25 --		
				-	SM	Silty Sand, dark brown, moist, medium dense, fine grained

BORING LOG NUMBER 2

181 Colorado, LLC

File No. 22449

kk/km

Sample Depth ft.	Blows per ft.	Moisture content %	Dry Density p.c.f.	Depth in feet	USCS Class.	Description
				26		
				27		
27.5	68	4.5	118.5	28	SP	Sand, dark brown, moist, dense, fine to medium grained
				29		
30	35	8.9	SPT	30	SM	Silty Sand, dark brown, moist, medium dense, fine grained
				31		
				32		
32.5	65 50/5"	3.4	122.4	33	SP	Sand, dark brown, moist, very dense, fine to medium grained
				34		
35	34	5.9	SPT	35	SP/SM	Sand to Silty Sand, dark and grayish brown, moist medium dense, fine grained
				36		
				37		
37.5	40 50/5"	3.4	116.4	38	SP	Sand, dark and yellowish brown, moist, very dense, fine to medium grained
				39		
40	37	4.1	SPT	40		
				41		
				42		
42.5	82	13.8	119.2	43	SM	Silty Sand, dark brown, moist, very dense, fine grained
				44		
45	35	11.5	SPT	45		
				46		
				47		
47.5	45 50/5"	3.9	106.2	48	SP	Sand, yellowish brown, moist, very dense, fine to medium grained
				49		
50	63	2.1	SPT	50		

BORING LOG NUMBER 2

181 Colorado, LLC

File No. 22449

kk/km

Sample Depth ft.	Blows per ft.	Moisture content %	Dry Density p.c.f.	Depth in feet	USCS Class.	Description
				51 --		
				52 --		
52.5	45 50/4"	2.4	117.2	53 --		
				54 --		
55	50/6"	3.5	SPT	55 --		
				56 --		
				57 --		
57.5	46 50/5"	2.2	112.8	58 --		
				59 --		
60	38 50/3"	2.5	SPT	60 --		Total Depth 60 feet No Water Fill to 3 feet
				61 --		
				62 --		
				63 --		NOTE: The stratification lines represent the approximate boundary between earth types; the transition may be gradual.
				64 --		Used 8-inch diameter Hollow-Stem Auger
				65 --		140-lb. Automatic Hammer, 30-inch drop
				66 --		Modified California Sampler used unless otherwise noted
				67 --		SPT=Standard Penetration Test
				68 --		
				69 --		
				70 --		
				71 --		
				72 --		
				73 --		
				74 --		
				75 --		

BORING LOG NUMBER 3

181 Colorado, LLC **Date: 11/01/23**

File No. 22449 **Method: 8-inch diameter Hollow Stem Auger**

kk/km

Sample Depth ft.	Blows per ft.	Moisture content %	Dry Density p.c.f.	Depth in feet	USCS Class.	Description Surface Conditions: Asphalt for Parking
				0 --		3-inch Asphalt, No Base
				-		
				1 --		FILL: Silty Sand, dark brown, moist, medium dense, fine grained
				-		
				2 --		
2.5	14	2.6	110.0	-		
				3 --		
				-	SM/SP	NATIVE SOILS: Silty Sand to Sand, dark brown, moist, medium dense, fine to medium grained
				4 --		
				-		
5	28	5.2	106.2	5 --		
				-		
				6 --		
				-		
				7 --		
				-		
				8 --		
				-		
				9 --		
				-		
10	27	1.9	106.7	10 --		
				-		
				11 --		
				-		
				12 --		
				-		
				13 --		
				-		
				14 --		
				-		
15	77	5.4	114.3	15 --		
				-	SM	Silty Sand, dark brown, moist, dense, fine to medium grained
				16 --		
				-		
				17 --		
				-		
				18 --		
				-		
				19 --		
				-		
20	72	10.2	119.4	20 --		
				-		fine grained
				21 --		
				-		
				22 --		
				-		
				23 --		
				-		
				24 --		
				-		
25	83	12.0	122.0	25 --		
				-		

BORING LOG NUMBER 3

181 Colorado, LLC

File No. 22449

kk/km

Sample Depth ft.	Blows per ft.	Moisture content %	Dry Density p.c.f.	Depth in feet	USCS Class.	Description
				26 --		
				27 --		
				28 --		
				29 --		Sand, yellowish brown, moist, very dense, fine to medium
30	89	2.6	107.4	30 --	SP	grained
				31 --		Total Depth 30 feet No Water Fill to 3 feet
				32 --		
				33 --		NOTE: The stratification lines represent the approximate boundary between earth types; the transition may be gradual.
				34 --		Used 8-inch diameter Hollow-Stem Auger
				35 --		140-lb. Automatic Hammer, 30-inch drop
				36 --		Modified California Sampler used unless otherwise noted
				37 --		
				38 --		
				39 --		
				40 --		
				41 --		
				42 --		
				43 --		
				44 --		
				45 --		
				46 --		
				47 --		
				48 --		
				49 --		
				50 --		

LOG OF TEST PIT NUMBER 1

181 Colorado, LLC **Drilling Date: 11/01/23**

File No. 22449 **Method: Hand Dig**

kk/km

Sample Depth ft.	Moisture Content %	Dry Density p.c.f.	Depth in feet	USCS Class.	Description Surface Conditions: Asphalt for Parking
			0 --		3-inch Asphalt, No Base
			-		FILL: Silty Sand, dark and yellowish brown, moist, medium dense, fine
1	12.5	118.2	1 --		grained
			-	SM	Silty Sand, dark brown, moist, medium dense, fine grained
			2 --		
			-	SM/SP	Silty Sand to Sand, dark brown, moist, medium dense, fine grained
3	12.3	101.1	3 --		
			-		Total Depth 3 feet
			4 --		No Water
			-		Fill to 1 foot
			5 --		
			-		
			6 --		NOTE: The stratification lines represent the approximate
			-		boundary between earth types; the transition may be gradual.
			7 --		
			-		Used 4-inch diameter Hand-Augering Equipment; Hand Sampler
			8 --		
			-		
			9 --		
			-		
			10 --		
			-		
			11 --		
			-		
			12 --		
			-		
			13 --		
			-		
			14 --		
			-		
			15 --		
			-		
			16 --		
			-		
			17 --		
			-		
			18 --		
			-		
			19 --		
			-		
			20 --		
			-		
			21 --		
			-		
			22 --		
			-		
			23 --		
			-		
			24 --		
			-		
			25 --		
			-		

LOG OF TEST PIT NUMBER 2

181 Colorado, LLC **Drilling Date: 11/01/23**

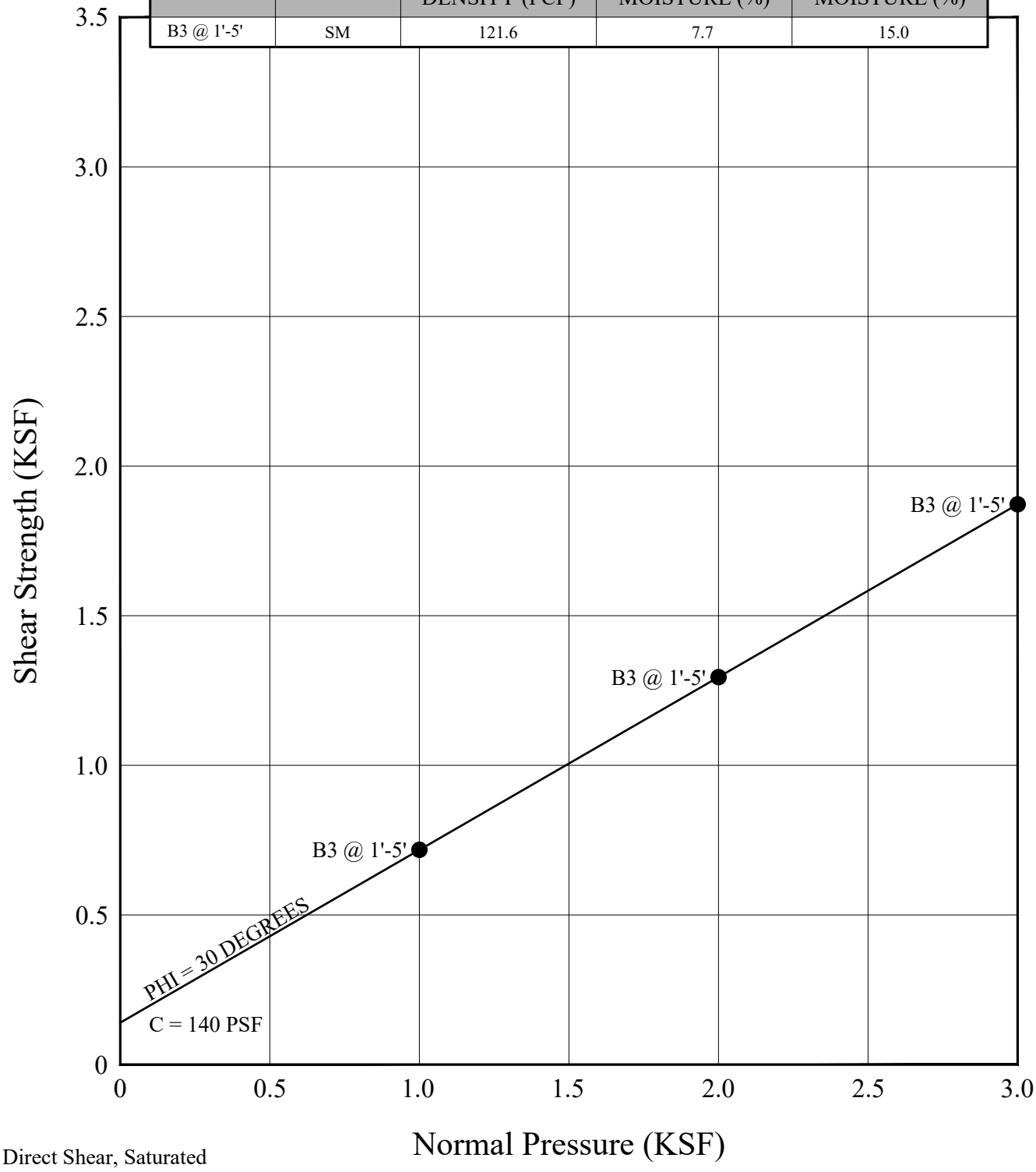
File No. 22449 **Method: Hand Dig**

kk/km

Sample Depth ft.	Moisture Content %	Dry Density p.c.f.	Depth in feet	USCS Class.	Description Surface Conditions: Asphalt for Parking
			0 --		2½-inch Asphalt, No Base
			-		
1	2.0	115.8	1 --		FILL: Silty Sand, dark brown, moist, medium dense, fine grained,
			-	SM	
			2 --		NATIVE SOILS: Silty Sand, dark brown, moist, medium dense, fine grained
			-		
3	2.8	110.3	3 --		
			-		
			4 --	SP	Sand, yellowish brown, moist, medium dense, fine to medium grained
			-		
5	6.0	120.7	5 --		
			-	SM/SP	Silty Sand to Sand, dark brown, moist, medium dense, fine grained
			6 --		
			-		Total Depth 6 feet
			7 --		No Water
			-		Fill to 1 foot
			8 --		
			-		
			9 --		NOTE: The stratification lines represent the approximate boundary between earth types; the transition may be gradual.
			-		
			10 --		
			-		Used 4-inch diameter Hand-Augering Equipment; Hand Sampler
			11 --		
			-		
			12 --		
			-		
			13 --		
			-		
			14 --		
			-		
			15 --		
			-		
			16 --		
			-		
			17 --		
			-		
			18 --		
			-		
			19 --		
			-		
			20 --		
			-		
			21 --		
			-		
			22 --		
			-		
			23 --		
			-		
			24 --		
			-		
			25 --		
			-		

BULK SAMPLE REMOLDED TO 90 PERCENT OF THE MAXIMUM LABORATORY DENSITY

SAMPLE	SOIL TYPE	DRY DENSITY (PCF)	INITIAL MOISTURE (%)	FINAL MOISTURE (%)
B3 @ 1'-5'	SM	121.6	7.7	15.0



● Direct Shear, Saturated

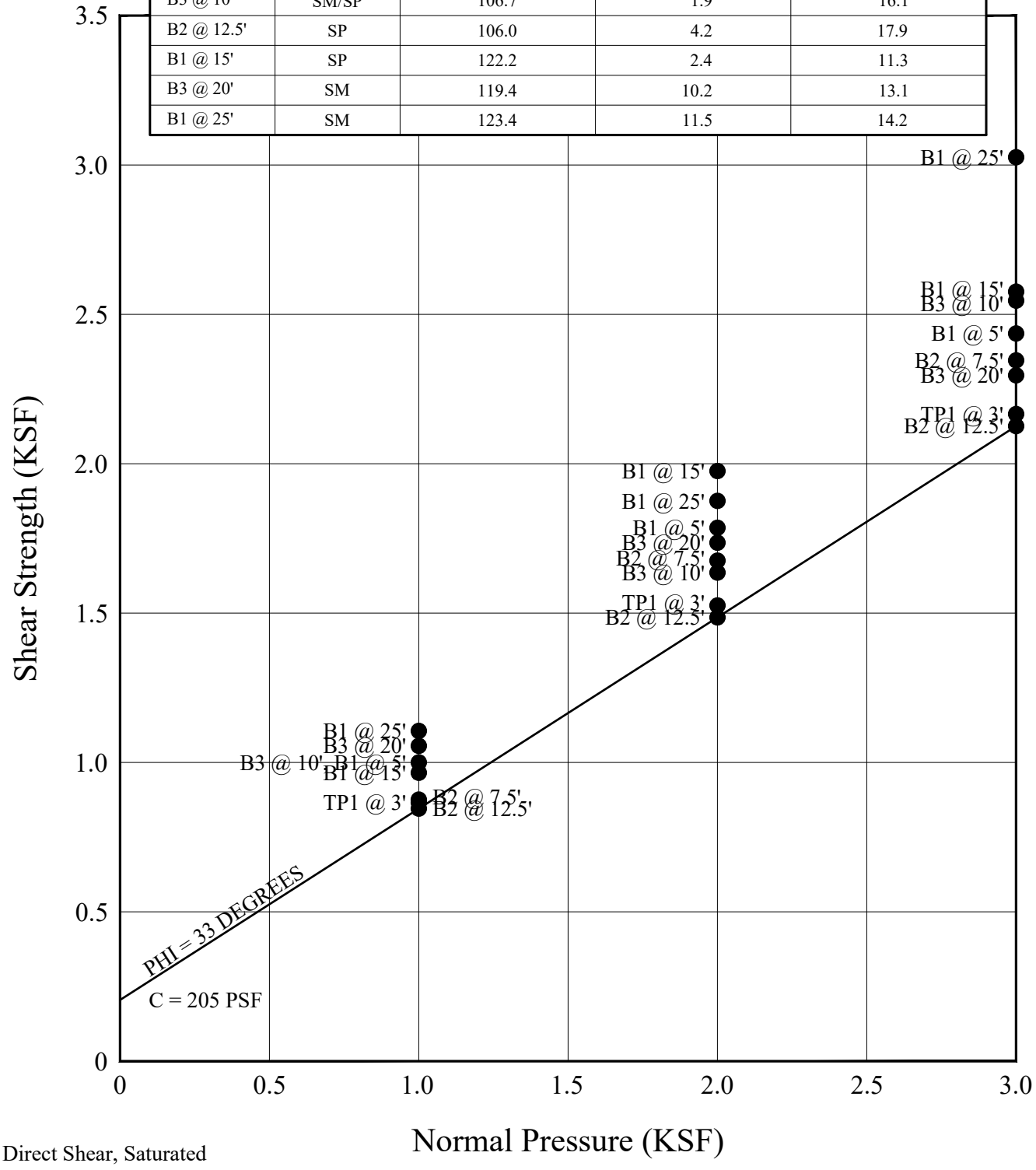
SHEAR TEST DIAGRAM (ASTM D3080)

Geotechnologies, Inc.
Consulting Geotechnical Engineers

181 COLORADO, LLC

FILE NO: 22449 | PLATE: B-1

SAMPLE	SOIL TYPE	DRY DENSITY (PCF)	INITIAL MOISTURE (%)	FINAL MOISTURE (%)
TP1 @ 3'	SM/SP	101.1	12.3	15.8
B1 @ 5'	SM	110.3	12.0	17.5
B2 @ 7.5'	SP	108.5	3.0	15.3
B3 @ 10'	SM/SP	106.7	1.9	16.1
B2 @ 12.5'	SP	106.0	4.2	17.9
B1 @ 15'	SP	122.2	2.4	11.3
B3 @ 20'	SM	119.4	10.2	13.1
B1 @ 25'	SM	123.4	11.5	14.2



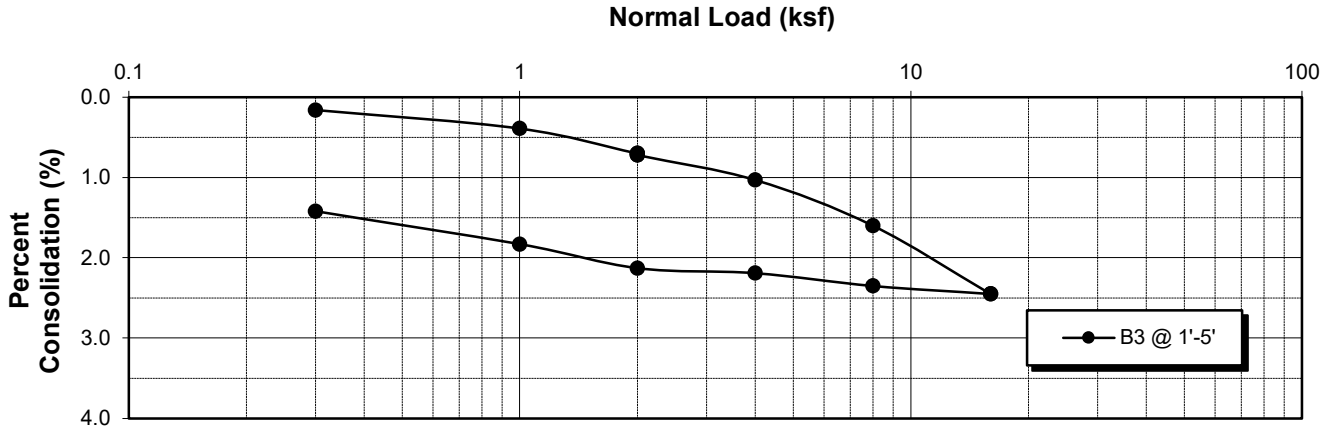
● Direct Shear, Saturated

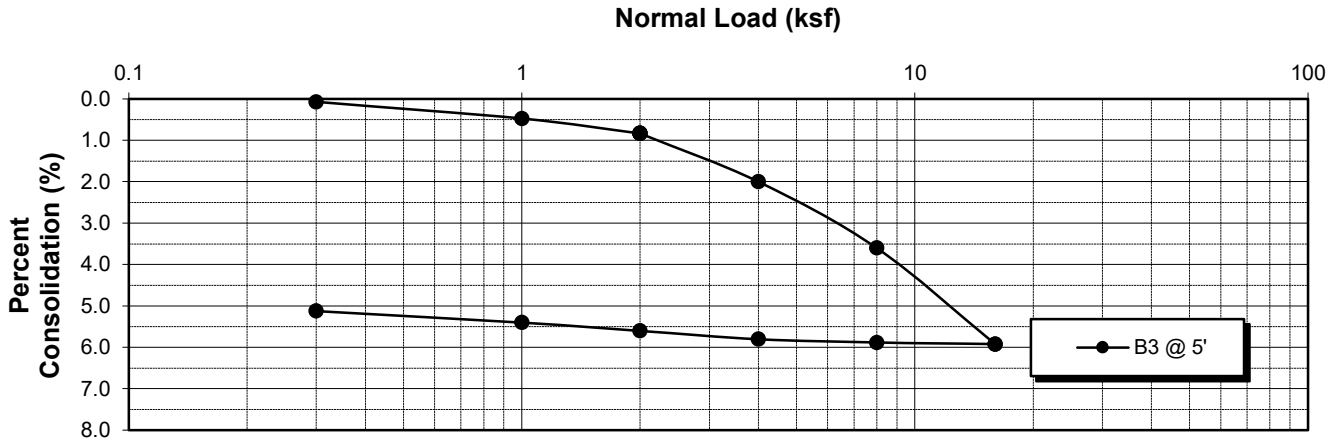
SHEAR TEST DIAGRAM (ASTM D3080)

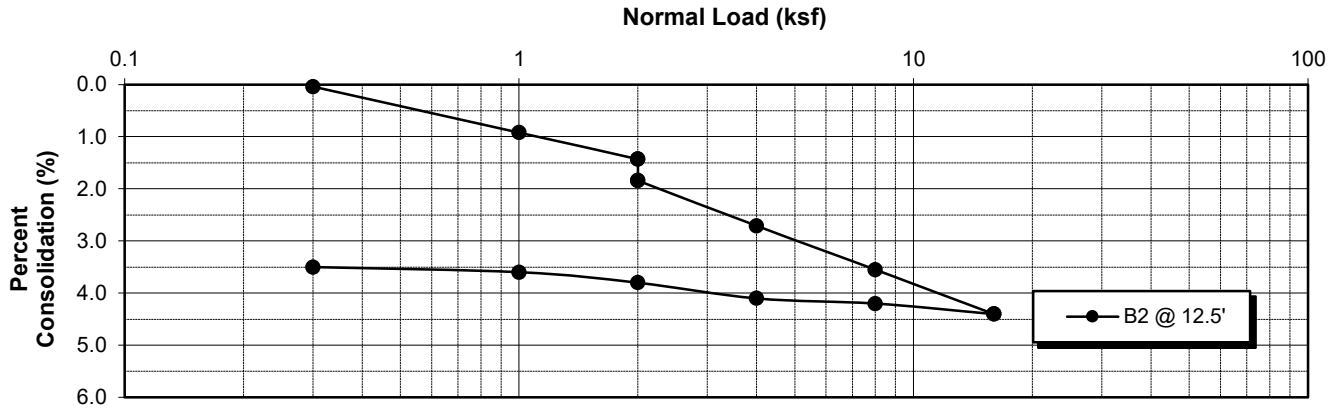
Geotechnologies, Inc.
Consulting Geotechnical Engineers

181 COLORADO, LLC

FILE NO: 22449 | PLATE: B-2







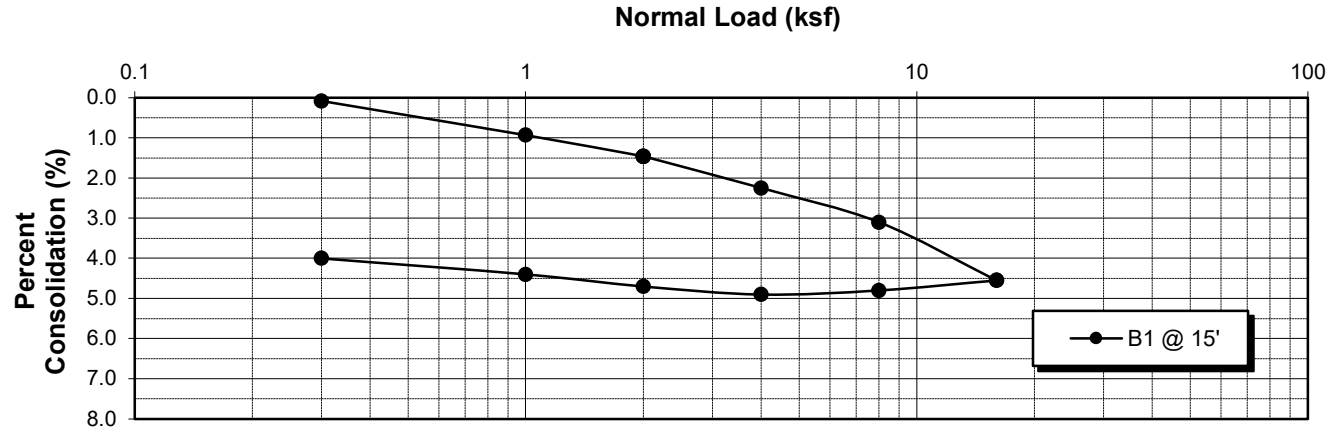
Water added at 2 KSF

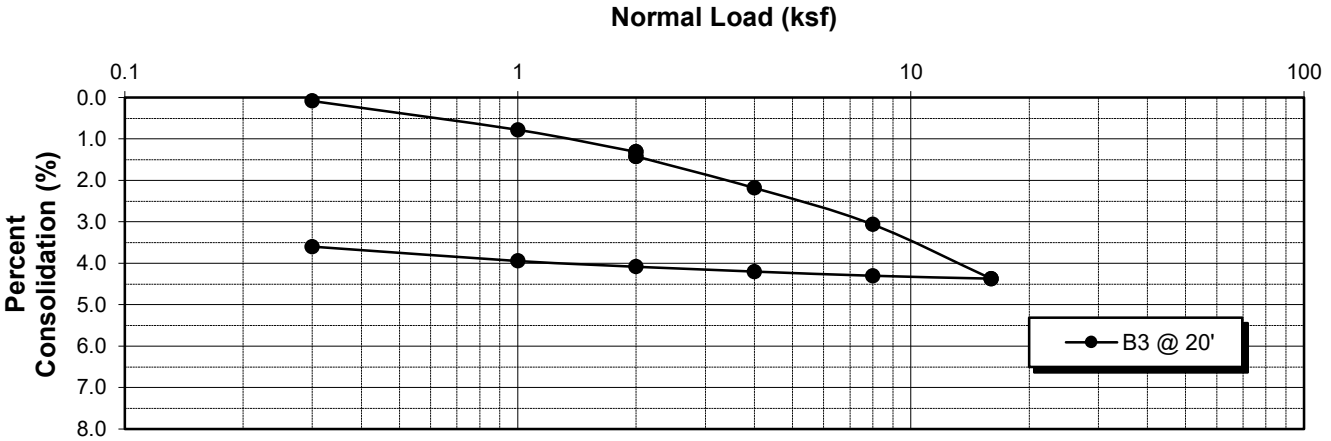
CONSOLIDATION (ASTM D2435)

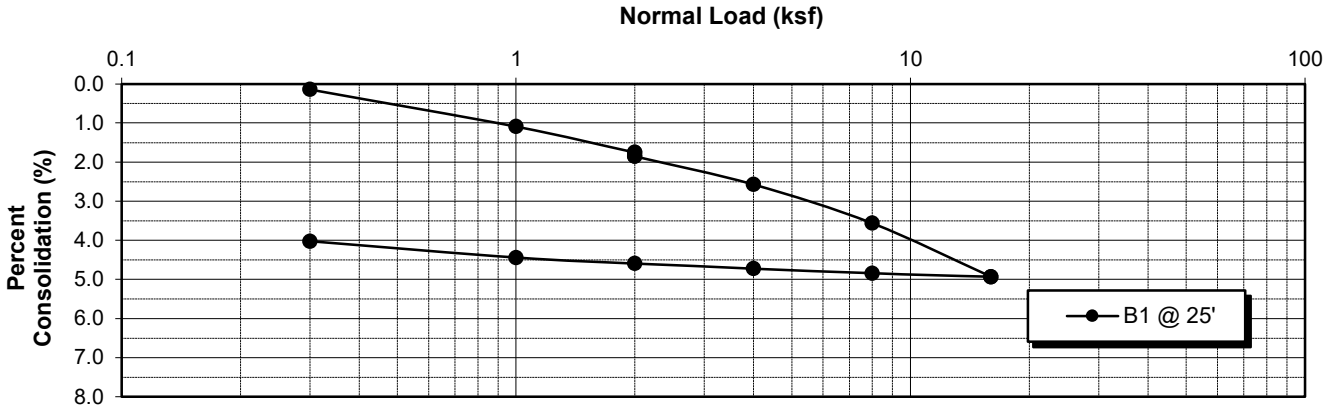
Geotechnologies, Inc.
Consulting Geotechnical Engineers

PROJECT: 181 COLORADO, LLC

FILE NO.: 22449 | PLATE: C-1







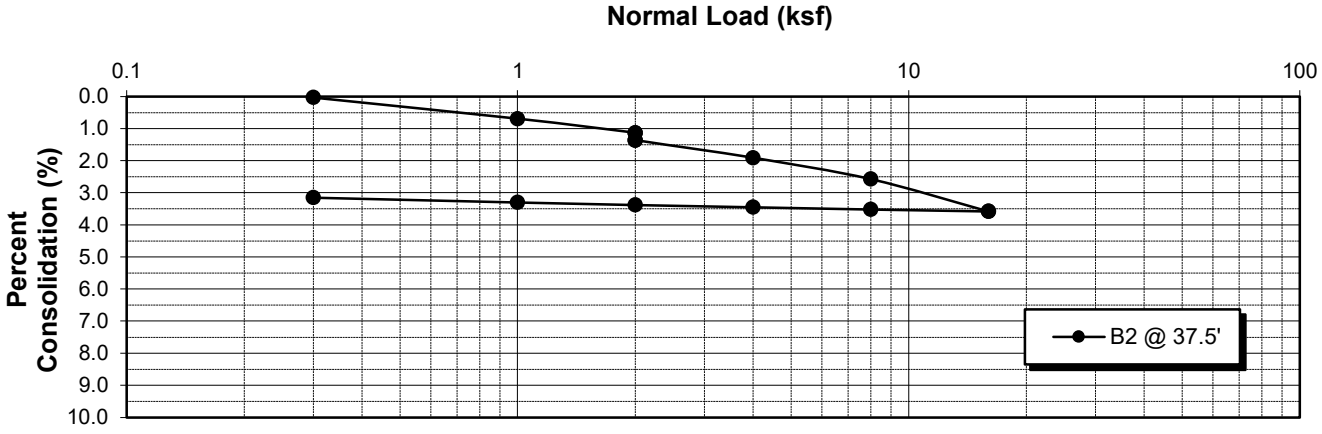
Water added at 2 KSF

CONSOLIDATION(ASTM D2435)

Geotechnologies, Inc.
Consulting Geotechnical Engineers

PROJECT: 181 COLORADO, LLC

FILE NO.: 22449 | PLATE: C-2



Water added at 2 KSF

CONSOLIDATION(ASTM D2435)

Geotechnologies, Inc.
Consulting Geotechnical Engineers

PROJECT: 181 COLORADO, LLC

FILE NO.: 22449 | PLATE: C-3

LABORATORY COMPACTION CHARACTERISTICS
(ASTM D1557)

SAMPLE	B1 @ 1'-5'	B3 @ 1'-5'
SOIL TYPE	SM	SM
MAXIMUM DRY DENSITY (PCF)	132.5	135.1
OPTIMUM MOISTURE %	8.5	7.7

EXPANSION INDEX
(ASTM D4829)

SAMPLE	B1 @ 1'-5'	B3 @ 1'-5'
SOIL TYPE	SM	SM
EXPANSION INDEX UBC STANDARD 18-2	17	10
EXPANSION CHARACTER	VERY LOW	VERY LOW

SULFATE CONTENT
(CALIFORNIA TEST 417)

SAMPLE	B1 @ 1'-5'	B3 @ 1'-5'
SULFATE CONTENT: (Percentage by Weight)	<0.1%	<0.1%

COMPACTION/EXPANSION/SULFATE DATA SHEET

Geotechnologies, Inc.
Consulting Geotechnical Engineers

181 COLORADO, LLC

FILE NO: 22449 | PLATE: D

GEOTECHNOLOGIES, INC.

FILE NO.: 22449
PROJECT: 181 Colorado Pl, Arcadia
BORING 2

EVALUATION OF EARTHQUAKE-INDUCED SETTLEMENTS IN DRY SANDY SOILS

INPUT:

EARTHQUAKE INFORMATION:

Earthquake Magnitude:	7.0
Peak Horiz. Acceleration (g):	0.95

Depth of Base of Strata (ft)	Thickness of Layer (ft)	USCS Soil Type	Depth of Mid-point of Layer (ft)	Soil Unit Weight (pcf)	Overburden Pressure at Mid-point (tsf)	Mean Effective Pressure at Mid-point (tsf)	Average Cyclic Shear Stress [Tav]	Field SPT [N]	Correction Factor [Cer]	Relative Density [Dr] (%)	Correction Factor [Cn]	Corrected [N1]60	ΔN for Fines Content	Fines Corrected [N1]60	Maximum Shear Mod. [Gmax] (tsf)	[geff]*[Geff] [Gmax]	[geff]	[geff]*100%	Volumetric Strain [E15] (%)	Number of Strain Cycles [Nc]	Corrected Vol. Strains [Ec]	Settlement [S] (inches)
5.0	5.0	SM	2.5	122.0	0.15	0.10	0.094	11	1.3	70.0	1.60	22.88	5.5	28.4	435.830	2.06E-04	6.00E-03	6.00E-01	3.80E-01	11.1644	0.3327	0.00
10.0	5.0	SM/SP	7.5	111.0	0.44	0.30	0.273	16	1.3	79.0	1.35	28.1	5.5	33.6	786.335	3.02E-04	1.60E-03	1.60E-01	8.50E-02	11.1644	0.0744	0.09
15.0	5.0	SP	12.5	114.0	0.73	0.49	0.442	17	1.3	75.0	1.11	24.5	0.0	24.5	905.216	3.92E-04	2.40E-03	2.40E-01	2.00E-01	11.1644	0.1751	0.04
25.0	10.0	SP	20.0	122.0	1.17	0.79	0.698	34	1.3	99.0	1.00	44.2	0.0	44.2	1400.798	3.60E-04	1.00E-03	1.00E-01	2.10E-02	11.1644	0.0184	0.04
45.0	20.0	SM	35.0	123.8	2.10	1.40	1.157	35	1.3	60.0	0.90	41.0	5.5	46.5	1904.383	3.74E-04	8.00E-03	8.00E-01	3.00E-02	11.1644	0.0263	0.13
60.0	15.0	SP/SM	52.5	120.4	3.17	2.12	1.538	63	1.3	75.0	0.80	65.5	5.5	71.0	2696.392	3.13E-04	5.50E-03	5.50E-01	3.00E-02	11.1644	0.0263	0.04

Total Calculated Dynamic Dry Settlement (inches) 0.34

Geotechnologies, Inc.

Project: 181 Colorado, LLC
File No.: 22449

Soil Weight	γ	115	pcf
Internal Friction Angle	ϕ	31	degrees
Height of Retaining Wall	H	15	feet

NON-HYDROSTATIC (DRAINED) DESIGN
Restrained Retaining Wall Design based on At Rest Earth Pressure

$\sigma'_h = K_o\sigma'_v$

$K_o = 1 - \sin\phi$	0.485	
$\sigma'_v = \gamma H$	1725.0	psf

σ'_h =	836.6	psf	
EFP =	55.8	pcf	
P_o =	6274.2	lbs/ft	(based on a triangular distribution of pressure)

Design wall for an EFP of 56 pcf

Geotechnologies, Inc.

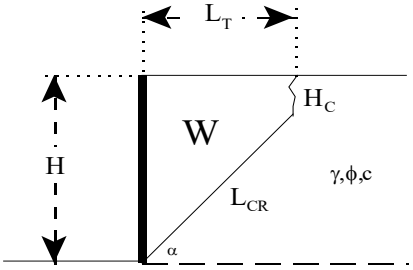
Project: 181 Colorado LLC
File No.: 22449
Description:

Retaining Wall Design with Level Backfill (Vector Analysis)

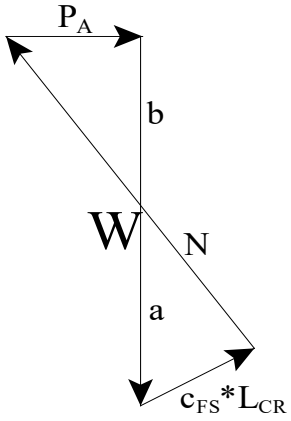
Input:

Retaining Wall Height	(H)	15.00	feet
Unit Weight of Retained Soils	(γ)	115.0	pcf
Friction Angle of Retained Soils	(ϕ)	31.0	degrees
Cohesion of Retained Soils	(c)	205.0	psf
Factor of Safety	(FS)	1.50	
Factored Parameters:	(ϕ_{FS})	21.8	degrees
	(c_{FS})	136.7	psf

28



Failure Angle (α) degrees	Height of Tension Crack (H_C) feet	Area of Wedge (A) $feet^2$	Weight of Wedge (W) lbs/lineal foot	Length of Failure Plane (L_{CR}) feet	a lbs/lineal foot	b lbs/lineal foot	Active Pressure (P_A) lbs/lineal foot
45	4.0	105	12033.5	15.6	5031.8	7001.7	2996.6
46	3.9	101	11658.3	15.5	4790.4	6867.9	3082.3
47	3.8	98	11288.8	15.3	4566.7	6722.1	3158.9
48	3.7	95	10925.5	15.2	4359.2	6566.3	3226.8
49	3.7	92	10568.6	15.0	4166.3	6402.3	3286.1
50	3.6	89	10218.2	14.8	3986.8	6231.4	3337.1
51	3.6	86	9874.3	14.7	3819.4	6054.9	3379.9
52	3.6	83	9536.8	14.5	3663.0	5873.8	3414.5
53	3.5	80	9205.6	14.3	3516.7	5688.9	3441.3
54	3.5	77	8880.5	14.2	3379.7	5500.9	3460.1
55	3.5	74	8561.4	14.0	3251.0	5310.4	3471.1
56	3.5	72	8247.9	13.9	3129.9	5118.0	3474.3
57	3.5	69	7940.0	13.7	3015.8	4924.2	3469.8
58	3.5	66	7637.2	13.5	2908.0	4729.2	3457.4
59	3.5	64	7339.4	13.4	2806.1	4533.3	3437.3
60	3.6	61	7046.3	13.2	2709.4	4337.0	3409.2
61	3.6	59	6757.7	13.0	2617.4	4140.3	3373.2
62	3.6	56	6473.3	12.9	2529.8	3943.5	3329.0
63	3.7	54	6192.8	12.7	2446.0	3746.8	3276.6
64	3.7	51	5916.0	12.5	2365.7	3550.3	3215.8
65	3.8	49	5642.5	12.3	2288.4	3354.1	3146.5
66	3.9	47	5372.2	12.2	2213.8	3158.5	3068.3
67	4.0	44	5104.8	12.0	2141.4	2963.5	2981.1
68	4.1	42	4839.9	11.8	2070.8	2769.1	2884.6
69	4.2	40	4577.3	11.6	2001.7	2575.7	2778.6
70	4.3	38	4316.7	11.4	1933.5	2383.2	2662.7



Design Equations (Vector Analysis):

$a = c_{FS}*L_{CR}*\sin(90+\phi_{FS})/\sin(\alpha-\phi_{FS})$

$b = W-a$

$P_A = b*\tan(\alpha-\phi_{FS})$

$EFP = 2*P_A/H^2$

Maximum Active Pressure Resultant

$P_{A,\,max}$ 3474.3 lbs/lineal foot

Equivalent Fluid Pressure (per lineal foot of wall)

$EFP = 2*P_A/H^2$

EFP 30.9 pcf

Design Wall for an Equivalent Fluid Pressure: 31 pcf

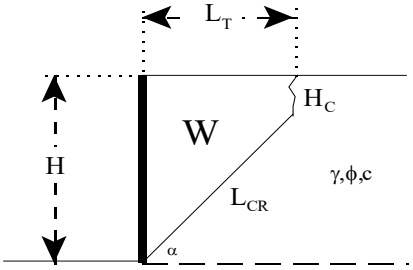
Geotechnologies, Inc.

Project: 181 Colorado LLC
File No.: 22449
Description:

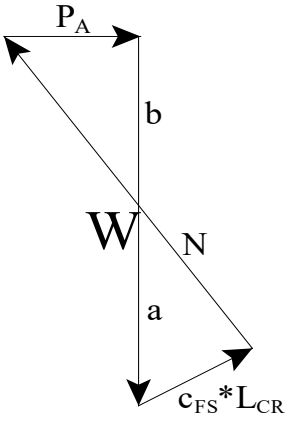
Shoring Design with Level Backfill
(Vector Analysis)

Input:

Shoring Height	(H)	18.00	feet
Unit Weight of Retained Soils	(γ)	115.0	pcf
Friction Angle of Retained Soils	(ϕ)	31.0	degrees
Cohesion of Retained Soils	(c)	205.0	psf
Factor of Safety	(FS)	1.25	
		28	
Factored Parameters:	(ϕ_{FS})	25.7	degrees
	(c_{FS})	164.0	psf



Failure Angle (α) degrees	Height of Tension Crack (H_C) feet	Area of Wedge (A) $feet^2$	Weight of Wedge (W) lbs/lineal foot	Length of Failure Plane (L_{CR}) feet	a lbs/lineal foot	b lbs/lineal foot	Active Pressure (P_A) lbs/lineal foot
45	5.5	147	16895.5	17.7	7900.0	8995.6	3154.9
46	5.3	143	16415.4	17.6	7496.7	8918.8	3303.9
47	5.2	139	15932.9	17.5	7123.1	8809.8	3439.6
48	5.1	134	15450.9	17.4	6776.9	8674.0	3562.2
49	4.9	130	14971.3	17.3	6455.7	8515.6	3672.1
50	4.9	126	14495.6	17.2	6157.5	8338.1	3769.5
51	4.8	122	14024.9	17.0	5880.3	8144.7	3854.7
52	4.7	118	13559.9	16.9	5622.1	7937.8	3927.7
53	4.7	114	13100.9	16.7	5381.3	7719.6	3989.0
54	4.6	110	12648.3	16.6	5156.3	7491.9	4038.5
55	4.6	106	12202.1	16.4	4945.8	7256.3	4076.5
56	4.6	102	11762.4	16.2	4748.4	7014.0	4103.1
57	4.5	99	11329.1	16.1	4563.0	6766.1	4118.2
58	4.5	95	10902.1	15.9	4388.5	6513.6	4122.0
59	4.5	91	10481.2	15.7	4223.9	6257.3	4114.5
60	4.6	88	10066.2	15.5	4068.2	5997.9	4095.7
61	4.6	84	9656.8	15.3	3920.8	5736.0	4065.4
62	4.6	80	9252.7	15.2	3780.6	5472.1	4023.6
63	4.7	77	8853.8	15.0	3647.1	5206.6	3970.3
64	4.7	74	8459.6	14.8	3519.6	4940.0	3905.2
65	4.8	70	8069.8	14.6	3397.2	4672.6	3828.2
66	4.9	67	7684.2	14.4	3279.5	4404.7	3739.0
67	5.0	63	7302.3	14.1	3165.7	4136.7	3637.6
68	5.1	60	6923.8	13.9	3055.2	3868.7	3523.6
69	5.2	57	6548.3	13.7	2947.3	3601.1	3396.7
70	5.4	54	6175.4	13.4	2841.3	3334.1	3256.7



Design Equations (Vector Analysis):

$a = c_{FS}*L_{CR}*\sin(90+\phi_{FS})/\sin(\alpha-\phi_{FS})$

$b = W-a$

$P_A = b*\tan(\alpha-\phi_{FS})$

$EFP = 2*P_A/H^2$

Maximum Active Pressure Resultant

$P_{A,\,max}$ 4122.0 lbs/lineal foot

Equivalent Fluid Pressure (per lineal foot of shoring)

$EFP = 2*P_A/H^2$

EFP 25.4 pcf

Design Shoring for an Equivalent Fluid Pressure: 28 pcf

Date: 1-Nov-23
File No. 22449
File Name : 181 Colorado PL

Percolation Rate Calculation for Test Pit

Testing Pit Number	1	
Total Depth of Test Pit (Including Test Hole)	36	inches
Volume of Test Hole Excavated at Bottom	1	cubic foot
Ground surface elevation	N.A.	feet
Pre-soak Time	2	hours
Measured By	H.C.	

Terms

Initial water depth (d1) =dc-di
Water level drop (Δd) = di-df

di and df are taken from ground surface

Reading Number	Clock Time	Elapsed Time	Water Measurement (d_i) and (d_f)	Percolation Rate	Preadjusted Percolation Rate		Initial Water depth (d1)	Water level Drop (Δd)
							d1 = dc-di	Δd = di-df
1		Min	in	in/min	in/hour		in	in
	10:50		24.00				24.00	
	11:20	30	30.70	0.22	13.40			6.70
2								
	11:20		24.00				24.00	
	11:54	30	30.30	0.21	12.60			6.30
3								
	11:57		24.00				24.00	
	12:27	30	29.80	0.19	11.60			5.80
4								
	12:30		24.00				24.00	
	13:00	30	29.50	0.18	11.00			5.50
5								
	1:02		24.00				24.00	
	1:32	30	29.40	0.18	10.80			5.40
6								
	1:35		24.00				24.00	
	2:05	30	29.30	0.18	10.60			5.30
7								
8								

Preadjusted Stabilized Rate	Reduction Factor (RF_t)	RFv=	RFs=
in/hr	Unitless	Unitless	Unitless
10.60	2.000	1.00	2.00

Infiltration Rate = 2.12 in/hr
(Includes Reduction Factors)

Note: Calculation based on County of Los Angeles, Administrative Manual, Low Impact Development Best Management Practice Guideline for Design, Investigation, and Reporting, dated 06/30/21.
LA County Minimum Corrected Infiltration Rate is 0.3 Inches per hour

Date: 1-Nov-23
File No. 22449
File Name : 181 Colorado PL

Percolation Rate Calculation for Test Pit

Testing Pit Number	2	
Total Depth of Test Pit (Including Test Hole)	72	inches
Volume of Test Hole Excavated at Bottom	1	cubic foot
Ground surface elevation	N.A.	feet
Pre-soak Time	2	hours
Measured By	H.C.	

Terms

Initial water depth (d1) =dc-di
Water level drop (Δd) = di-df

di and df are taken from ground surface

Reading Number	Clock Time	Elapsed Time	Water Measurement (d_i) and (d_f)	Percolation Rate	Preadjusted Percolation Rate		Initial Water depth (d1)	Water level Drop (Δd)
							d1 = dc-di	Δd = di-df
1		Min	in	in/min	in/hour		in	in
	10:50		60.00				60.00	
	11:20	30	71.90	0.40	23.80			11.90
2								
	11:20		60.00				60.00	
	11:50	30	71.70	0.39	23.40			11.70
3								
	11:57		60.00				60.00	
	12:27	30	71.50	0.38	23.00			11.50
4								
	12:30		60.00				60.00	
	13:00	30	71.40	0.38	22.80			11.40
5								
	1:02		60.00				60.00	
	1:32	30	71.25	0.38	22.50			11.25
6								
	1:35		60.00				60.00	
	2:05	30	71.20	0.37	22.40			11.20
7								
8								

Preadjusted Stabilized Rate	Reduction Factor (RF_t)	RFv=	RFs=
in/hr	Unitless	Unitless	Unitless
22.40	2.000	1.00	2.00

Infiltration Rate = **4.48** in/hr
(Includes Reduction Factors)

Note: Calculation based on County of Los Angeles, Administrative Manual, Low Impact Development Best Management Practice Guideline for Design, Investigation, and Reporting, dated 06/30/21.
LA County Minimum Corrected Infiltration Rate is 0.3 Inches per hour

ATTACHMENT E: GREENHOUSE GAS EMISSIONS ASSESSMENT

Michael Baker INTERNATIONAL

We Make a Difference

MEMORANDUM

To: Lisa Flores, City of Arcadia

From: Darshan Shivaiah, Michael Baker International

Date: July 22, 2024

Subject: Tempo by Hilton Project – Greenhouse Gas Emissions Assessment

PURPOSE AND BACKGROUND

The purpose of this technical memorandum is to evaluate potential short- and long-term greenhouse gas emissions (GHG) impacts that would result from the construction and operation of a proposed hotel building and associated improvements in support of the Tempo by Hilton Project Addendum to the *Initial Study/Mitigated Negative Declaration, Arcadia Hotel and Annex (Hotel Indigo) Project* (2020 IS/MND).

The City prepared the 2020 IS/MND for a redevelopment project located at 125 West Huntington Drive and 123 West Huntington Drive (Original Project Site). On February 5, 2013, the City previously approved the modification of an existing 60,811-square-foot, three-story office building (Parsons building) and the construction of two new medical office buildings, a new general office building, and a new parking structure on the Original Project Site. Of the four new buildings approved under the 2013 development project, only the parking structure and the two medical office buildings (now occupied by the Keck Medicine of University of Southern California [USC]) were constructed. The 2020 IS/MND analyzed (1) the redevelopment of the existing Parsons building on the Original Project Site to allow for 76,754 square feet of hotel and appurtenant uses, including 90 hotel rooms, amenities, and employee or guest shared spaces, and (2) the construction a new 61,538-square-foot, five-story hotel annex building containing 75 hotel rooms and additional amenities such as a hotel spa, café, and outdoor patios to the east of the Parson's building. No changes to the two existing Keck Medicine of USC medical office buildings and parking structure were proposed under the Approved Project. The 2020 IS/MND was adopted by the City of Arcadia Planning Commission on April 14, 2020 (Resolution No. 2050).

The Tempo by Hiton Project Addendum (Tempo Addendum) analyzes the environmental effects of the Revised Project, which is comprised of the Approved Project described above, and the Tempo Project, which includes a lot line adjustment (LLA) to merge the parcel identified as Assessor's Parcel Number (APN) 2775-015-011 with the Original Project Site (APNs 5775-015-024, 5775-015-027, 5775-015-028, and 5775-015-029) in order to create one legal parcel (Revised Project Site) and to construct a new four-story hotel building on APN 2775-015-011. The Tempo Project would not modify any of the existing medical office buildings, parking structure or the hotel buildings previously approved under the Approved Project. A detailed description of the Tempo Project is provided below. This memorandum analyzes the combined impact of the Tempo Project and the Approved Project analyzed in the 2020 IS/MND.

PROJECT LOCATION

The City of Arcadia is located in northeast Los Angeles County, generally north of the Interstate 10 Freeway (I-10), south of the Foothill Freeway (I-210), east of State Route 164, and west of I-605. The City is approximately 12 miles northeast of downtown Los Angeles; refer to Exhibit 1, *Regional Vicinity*.

The Revised Project is located within the northeastern portion of Arcadia and is comprised of the Original Project Site (APNs 5775-015-024, 5775-015-027, 5775-015-028, and 5775-015-029) and one land parcel addressed as 181 Colorado Place (APN 5775-015-011) that is approximately 0.61 acre, or 26,493 square feet;[1] refer to Exhibit 2, *Revised Project Site*. Regional access to the Revised Project Site is provided via I-210. Local access to the Revised Project Site is provided via Colorado Place, San Juan Drive, and San Rafael Road.

EXISTING SITE CONDITIONS

The Revised Project Site, which includes the Original Project Site and APN 5775-015-011, is located in a highly developed and urbanized area of Arcadia. The Original Project Site is occupied by the two Keck Medicine of USC medical office buildings, a parking structure, and the Parsons building. The redevelopment of the Parsons building for hotel uses and the construction of the hotel annex building are currently underway. APN 5775-015-011 is vacant lot currently fenced that was previously occupied by the Original Peppers Mexican and Cantina, surface parking, and landscaping. The restaurant building was demolished in 2023 but the surface parking and landscaping remain.

According to the Arcadia General Plan, Chapter 2: Land Use and Community Design Element, the Revised Project Site is designated as Commercial WHICH. This Commercial designation is intended to encourage a strong pedestrian-oriented environment that provides a variety of retail and service uses, restaurants, and neighborhood-serving commercial uses that complement development in the Downtown Mixed-Use areas.[2] According to the City's Zoning Map, the Revised Project Site is zoned General Commercial (C-G) with a Downtown Overlay.[3] The C-G zone is intended to provide areas for the development of retail and service uses, offices, restaurants, public uses, and similar and compatible uses. The maximum Floor Area Ratio (FAR) permitted under the C-G zone and the Downtown Overlay zone is 1.0 for new development, and the maximum height permitted for new buildings is 48 feet.

Surrounding uses adjacent to the Revised Project Site include residential, office, and commercial uses. The Revised Project Site is bordered by San Juan Drive, the California Thoroughbred Breeders Association, and single-family homes to the north; San Rafael Road and a small commercial plaza to the east; single-family homes to the east and northeast; Colorado Place, Huntington Drive and Le Meriden hotel to the south; and Colorado Place and the Santa Anita Park (a horseracing track) to the west.

[1] Los Angeles County Assessor, Property Search Tool: APN 5775-015-011, https://assessor.lacounty.gov/homeowners/property-search, accessed June 19, 2024.

[2] City of Arcadia, *Arcadia General Plan, Chapter 2: Land Use and Community Design Element*, February 2024.

[3] City of Arcadia, *City of Arcadia Zoning Map*, Updated February 6, 2024.

Michael Baker INTERNATIONAL

NOT TO SCALE

06/2024 • JN 201253

TEMPO BY HILTON

Regional Vicinity Map

Exhibit 1

Source: Google Earth Pro, July 2024

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07/2024 • JN 201253

TEMPO BY HILTON

Revised Project Site

Exhibit 2

PROJECT DESCRIPTION

The Revised Project would consist of the improvements proposed by the Tempo Project, along with the previously Approved Project described in the 2020 IS/MND, which includes the redevelopment of the Parsons building for hotel uses and the construction of a new hotel annex building. The Tempo Project would develop a four-story hotel building with approximately 47,140 square feet of gross floor area on APN 5775-015-011; refer to Exhibit 3, *Conceptual Site Plan*.

The new hotel building would have a maximum height of 48 feet, excluding rooftop appurtenances, and would consist of a basement level and four above-ground levels containing a total of 91 rooms and ancillary hotel uses. The basement level would primarily contain back-of-house uses for hotel operations, including an electric room, a mechanical room, a laundry room, offices, storage rooms, an employee breakroom, restrooms, and a fitness room for guest use. Level 1 would contain 13 hotel rooms, a kitchen, café, bar, lobby, meeting area, office, restrooms, and an outdoor patio. Levels 2, 3, and 4 would each contain 26 hotel rooms and the roof level would contain an outdoor paved patio, solar panels, and mechanical areas.

The Tempo Project would utilize the existing parking structure located on the Original Project Site to provide parking for hotel employees, guests, and visitors. As shown in Exhibit 3, the Tempo Project would also reconfigure the existing surface parking lot located to the east of the proposed hotel building on the Original Project Site to provide 18 surface parking spaces, including three electric vehicle charging spaces, a trash enclosure, and a connection to the new surface parking area along the south side of the proposed hotel building. The new surface parking area would provide 6 parking spaces, including 4 accessible parking spaces. In addition, the Tempo Project would develop a drop-off area with access via the existing driveway from Colorado Place. Access to the proposed hotel building would be provided from the two existing driveways along Colorado Place and San Juan Drive.

Landscaping improvements to the Revised Project Site would include the removal of 13 existing trees and the installation of 36 new trees as well as other drought tolerant plants within the Area of Proposed Improvements shown in Exhibit 2. Ancillary improvements to the Revised Project Site would include exterior lighting and accessible routes from the proposed hotel building to the new surface parking area, the existing the surface parking lot to the east, and the existing parking structure.

In order to comply with the maximum FAR of 1.0 for the C-G zone and Downtown Overlay, the Tempo Project would create one legal parcel with a total site area of 226,579 square feet by merging APN 5775-015-011 with the Original Project Site (APNs 5775-015-024, 5775-015-027, 5775-015-028, and 5775-015-029), which has a gross floor area of approximately 177,879 square feet. With the addition of the Tempo Project, the total gross floor area for the Revised Project Site would be approximately 225,019 square feet. This would result in a total site FAR of 0.99 for the Revised Project.

The Tempo Project would require discretionary approvals from the City for an LLA to merge APN 5775-015-011 with the Original Project Site and a Conditional Use Permit to develop the proposed hotel building in a C-G zone.

Source: DesignCell Architecture, June 2024

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TEMPO BY HILTON

Conceptual Site Plan

Exhibit 3

GLOBAL CLIMATE CHANGE

The natural process through which heat is retained in the troposphere is called the "greenhouse effect."[4] The greenhouse effect traps heat in the troposphere through a threefold process as follows: short wave radiation emitted by the sun is absorbed by the Earth; the Earth emits a portion of this energy in the form of long wave radiation; and GHGs in the upper atmosphere absorb this long wave radiation and emit this long wave radiation into space and toward the Earth. This "trapping" of the long wave (thermal) radiation emitted back toward the Earth is the underlying process of the greenhouse effect.

California is a substantial contributor of global GHGs, emitting approximately 381.3 million metric tons of carbon dioxide equivalents ($MMTCO_2e$) in 2021, which is 12.6 $MMTCO_2e$ higher than 2020 levels.[5] A carbon dioxide equivalent (CO_2e)[6] is defined as the number of metric tons of carbon dioxide (CO_2) emissions with the same global warming potential as one metric ton of another GHG. Methane (CH_4) is also an important GHG that potentially contributes to global climate change. GHGs are global in their effect, which is to increase the earth's ability to absorb heat in the atmosphere. As primary GHGs have a long lifetime in the atmosphere, accumulate over time, and are generally well-mixed, their impact on the atmosphere is mostly independent of the point of emission. Every nation emits GHGs and as a result makes an incremental cumulative contribution to global climate change; therefore, global cooperation will be required to reduce the rate of GHG emissions enough to slow or stop the human-caused increase in average global temperatures and associated changes in climatic conditions.

The impact of human activities on global climate change is apparent in the observational record. Air trapped by ice has been extracted from core samples taken from polar ice sheets to determine the global atmospheric variation of CO_2, CH_4, and nitrous oxide (N_2O) from before the start of industrialization (approximately 1750), to over 650,000 years ago. For that period, it was found that CO_2 concentrations ranged from 180 to 300 parts per million (ppm). For the period from approximately 1750 to the present, global CO_2 concentrations increased from a pre-industrialization period concentration of 280 to 379 ppm in 2005, with the 2005 value far exceeding the upper end of the pre-industrial period range. As of June 2024, the highest monthly average concentration of CO_2 in the atmosphere was recorded at 426.49 ppm.[7]

The Intergovernmental Panel on Climate Change (IPCC) constructed several emission trajectories of GHGs needed to stabilize global temperatures and climate change impacts. It concluded that a stabilization of GHGs at 400 to 450 ppm CO_2e concentration is required to keep global mean warming below 2 degrees Celsius (°C) (3.8 degrees Fahrenheit), which in turn is assumed to be necessary to avoid dangerous climate change.

SCOPE OF ANALYSIS FOR CLIMATE CHANGE

The study area for climate change and the analysis of GHG emissions is broad as climate change is influenced by worldwide emissions and their global effects. However, the study area is also limited by the *California Environmental Quality Act Guidelines* [Section 15064(d)] (CEQA Guidelines), which directs lead

[4] The troposphere is the bottom layer of the atmosphere, which varies in height from the Earth's surface to 10 to 12 kilometers.

[5] California Air Resource Board, *California Greenhouse Gas Emissions from 2001 to 2021: Trends of Emissions and Other Indicators*, December 14, 2023.

[6] Carbon Dioxide Equivalent (CO_2e) – A metric measure used to compare the emissions from various greenhouse gases based upon their global warming potential.

[7] Scripps Institution of Oceanography, *The Keeling Curve, Carbon Dioxide Concentration at Mauna Loa Observatory*, https://keelingcurve.ucsd.edu/, accessed June 27, 2024.

agencies to consider an "indirect physical change" only if that change is a reasonably foreseeable impact which may be caused by the Revised Project.

The baseline against which to compare potential impacts of the Revised Project includes the natural and anthropogenic drivers of global climate change, including worldwide GHG emissions from human activities that have grown more than 70 percent between 1970 and 2004. The State of California is leading the nation in managing GHG emissions. Accordingly, the impact analysis for the Revised Project relies on guidelines, analyses, policy, and plans for reducing GHG emissions established by the California Air Resources Board (CARB).

ENVIRONMENTAL SETTING

Regional Topography

CARB divides the State into 15 air basins that share similar meteorological and topographical features. The Revised Project Site lies within the South Coast Air Basin (Basin). The Basin is a 6,600 square mile area bounded by the Pacific Ocean to the west and the San Gabriel, San Bernardino, and San Jacinto Mountains to the north and east. The Basin includes all of Orange County and the non-desert portions of Los Angeles, Riverside, and San Bernardino Counties, in addition to the San Gorgonio Pass area in Riverside County. The Basin's terrain and geographical location (i.e., a coastal plain with connecting broad valleys and low hills) determine its distinctive climate.

Climate

The general region lies in the semi-permanent high-pressure zone of the eastern Pacific Ocean. As a result, the climate is mild, tempered by cool sea breezes. The climate consists of a semi-arid environment with mild winters, warm summers, moderate temperatures, and comfortable humidity. The typical mild climatological pattern is interrupted infrequently by periods of extremely hot weather, winter storms, or Santa Ana winds. Precipitation is limited to a few winter storms.

The average annual temperature varies little throughout the Basin, averaging 75 degrees Fahrenheit (°F). However, with a less pronounced oceanic influence, the eastern inland portions of the Basin show greater variability in annual minimum and maximum temperatures. All portions of the Basin have had recorded temperatures over 100°F in recent years.

Although the Basin has a semi-arid climate, the air near the surface is moist due to the presence of a shallow marine layer. Except for infrequent periods when dry, continental air is brought into the Basin by offshore winds, the ocean effect is dominant. Periods with heavy fog are frequent, and low stratus clouds, occasionally referred to as "high fog," are a characteristic climate feature. Annual average relative humidity is 70 percent at the coast and 57 percent in the eastern part of the Basin. Precipitation in the Basin is typically nine to 14 inches annually and is rarely in the form of snow or hail due to typically warm weather. The frequency and amount of rainfall is greater in the coastal areas of the Basin.

The Revised Project is in the City of Arcadia. The City experiences a mild Southern California coastal climate with average high temperatures between 67°F and 89°F, and average low temperatures between 46°F to

67°F. The area also experiences an average of up to 3.1 inches of precipitation per month, with the most precipitation occurring in the month of February.[8]

REGULATORY SETTING

Federal

GHG Endangerment Ruling

The U.S. Supreme Court in *Massachusetts et al. v. Environmental Protection Agency et al*. (549 U.S. 05-1120 [2007]) held that the U.S. Environmental Protection Agency (USEPA) has the authority to regulate motor vehicle GHG emissions under the federal Clean Air Act (CAA) and make a determination whether or not GHG emissions from new motor vehicles cause or contribute to air pollution that may reasonably endanger public health or welfare. In December 2009, the USEPA issued an endangerment finding for GHG emissions under the CAA, which set the stage for future regulations as the finding did not impose any emission reduction requirements. Accordingly, in response to the endangerment finding, the USEPA issued a Final Rule for mandatory reporting of GHG emissions in October 2009. This Final Rule applies to fossil fuel suppliers, industrial gas suppliers, direct GHG emitters, and manufacturers of heavy-duty and off-road vehicles and vehicle engines and requires facilities that emit 25,000 metric tons of CO_2e or more per year to submit an annual report.

Corporate Average Fuel Economy (CAFE) Standards

Established by the US Congress in 1975, the Corporate Average Fuel Economy (CAFE) Standards (49 Code of Federal Regulations [CFR] Parts 531 and 533) set fuel economy standards for all new passenger cars and light trucks sold in the United States. The NHTSA and the USEPA jointly administer the CAFE standards, which become more stringent each year.

In August 2016, the USEPA and NHTSA announced the adoption of phase two programs related to the fuel economy and GHG emissions standards for medium- and heavy-duty trucks. The phase two program applied to vehicles with model year 2018 through 2027 for certain trailers, and model years 2021 through 2027 for semi-trucks, large pickup trucks, vans, and all types and sizes of buses and work trucks. The final standards were expected to lower CO_2 emissions by approximately 1.1 billion metric tons of CO_2 and reduce oil consumption by up to two billion barrels over the lifetime of the vehicles sold under the program. The NHTSA and the USEPA jointly published the "Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule Part One: One National Program" (SAFE I Rule) in September 2019 and issued the Final SAFE Rule (i.e., SAFE Vehicles Rule for Model Years 2021-2026 Passenger Cars and Light Trucks) in April 2020. The SAFE I Rule relaxed federal CAFE vehicle standards and revoked California's authority to set its own vehicle standards. On December 29, 2021, the NHTSA issued the final rule to repeal the SAFE I Rule, effective January 28, 2022, which removes the improper restrictions placed on states and local governments from developing innovative policies to address their specific environmental and public health challenges.[9] The USEPA also issued a decision on March 14, 2022, that rescinded its 2019 withdrawal of California's authority to set its own vehicle standards. State

[8] Weather Spark, *Climate and Average Weather Year Round in Arcadia, California, United States*, https://weatherspark.com/y/1680/Average-Weather-in-Arcadia-California-United-States-Year-Round, accessed on June 21, 2024.

[9] Federal Register, Vol. 86, No. 247, December 29, 2021.

Executive Order S-03-05

Executive Order S-03-05, signed by Governor Schwarzenegger in June 2005, set the following GHG reduction targets for the State:

- 2000 levels by 2010
- 1990 levels by 2020
- 80 percent below 1990 levels by 2050

Assembly Bill 1493

Assembly Bill (AB) 1493, also known as the Pavley Bill, requires that the CARB develop and adopt by January 1, 2005, regulations that achieve "the maximum feasible and cost-effective reduction of GHG emissions from motor vehicles." On June 30, 2009, the USEPA granted the waiver of CAA preemption to California for its GHG emissions standards for motor vehicles beginning with the 2009 model year. Pavley I regulated model years from 2009 to 2016, and Pavley II, which is now referred to as "LEV (Low Emission Vehicle) III GHG," regulates model years from 2017 to 2025. The Advanced Clean Cars program coordinates the goals of the LEV, Zero Emissions Vehicles (ZEV), and Clean Fuels Outlet programs, which should provide major reductions in GHG emissions. By 2025, when the rules will be fully implemented, new automobiles will emit 34 percent fewer GHGs and 75 percent fewer smog-forming emissions from their model year 2016 levels.

Assembly Bill 32 - California Global Warming Solutions Act of 2006, Senate Bill 32 - California Global Warming Solutions Act of 2016, and Climate Change Scoping Plans

California's major initiative for reducing GHG emissions is outlined in AB 32, the California Global Warming Solutions Act of 2006, which was signed into law in 2006. AB 32 codifies the statewide goal of reducing GHG emissions to 1990 levels by 2020 and required CARB to prepare a Scoping Plan that outlines the main State strategies for reducing GHGs to meet the 2020 deadline. In addition, AB 32 required CARB to adopt regulations to require reporting and verification of statewide GHG emissions. Based on this guidance, CARB approved a 1990 statewide GHG level and 2020 limit of 427 $MMTCO_2e$. To implement AB 32, the first Climate Change Scoping Plan (2008 Scoping Plan) was approved by CARB on December 11, 2008, and included measures to address GHG emissions reduction strategies related to energy efficiency, water use, and recycling and solid waste, among other measures. Many of the GHG emissions reduction measures included in the Scoping Plan (e.g., Low Carbon Fuel Standard [LCFS], Advanced Clean Car [ACC] standards, and Cap-and-Trade Program) have been adopted since approval of the Scoping Plan.

In May 2014, CARB approved the first update to the 2008 Scoping Plan, the 2013 Scoping Plan, which defined CARB's climate change priorities for the next five years and set the groundwork to reach post-2020 statewide goals. The update highlighted California's progress toward meeting the "near-term" 2020 GHG emission reduction goals defined in the original Scoping Plan and evaluated how to align the State's longer-term GHG emissions reduction strategies with other state policy priorities, including those for water, waste, natural resources, clean energy, transportation, and land use.

Senate Bill (SB) 32, signed into law on September 8, 2016, extended AB 32 by requiring the State to further reduce GHGs to 40 percent below 1990 levels by 2030 (the other provisions of AB 32 remained unchanged). In December 2017, CARB adopted the 2017 Scoping Plan (an update to the 2013 Scoping Plan), which provided a framework for achieving the 2030 target. The 2017 Scoping Plan relied on the continuation and expansion of existing policies and regulations, such as the Cap-and-Trade Program, as well as implementation of then recently adopted policies, such as SB 350 and SB 1383. The 2017 Scoping

Plan also put an increased emphasis on innovation, adoption of existing technology, and strategic investment to support its strategies. As with the 2013 Scoping Plan, the 2017 Scoping Plan did not provide project-level thresholds for land use development. Instead, it recommended that local governments adopt policies and locally appropriate quantitative thresholds consistent with statewide per capita goals of no more than 6 $MTCO_2e$ by 2030 and 2 $MTCO_2e$ by 2050.

In response to the passage of AB 1279 and the identification of the 2045 GHG emissions reduction target, CARB adopted the 2022 Climate Change Scoping Plan (2022 Scoping Plan) in December 2022. The 2022 Scoping Plan builds upon the framework established by the 2008 Climate Change Scoping Plan and previous updates while identifying a new, technologically feasible, cost-effective, and equity-focused path to achieve California's climate target. The 2022 Scoping Plan includes policies to achieve a significant reduction in fossil fuel combustion, further reductions in short-lived climate pollutants, support for sustainable development, increased action on natural and working lands to reduce emissions and sequester carbon, and the capture and storage of carbon.

The 2022 Scoping Plan assesses the progress California is making toward reducing its GHG emissions by at least 40 percent below 1990 levels by 2030, as called for in SB 32 and laid out in the 2017 Scoping Plan; addresses recent legislation and direction from Governor Newsom; extends and expands upon these earlier plans; and implements a target of reducing anthropogenic emissions to 85 percent below 1990 levels by 2045, as well as taking an additional step of adding carbon neutrality as a science-based guide for California's climate work. As stated in the 2022 Scoping Plan, "the plan outlines how carbon neutrality can be achieved by taking bold steps to reduce GHGs to meet the anthropogenic emissions target and by expanding actions to capture and store carbon through the State's natural and working lands and using a variety of mechanical approaches." Specifically, the 2022 Scoping Plan achieves the following:

- Identifies a path to keep California on track to meet its SB 32 GHG reduction target of at least 40 percent below 1990 emissions by 2030.
- Identifies a technologically feasible, cost-effective path to achieve carbon neutrality by 2045 and a reduction in anthropogenic emissions by 85 percent below 1990 levels.
- Focuses on strategies for reducing California's dependency on petroleum to provide consumers with clean energy options that address climate change, improve air quality, and support economic growth and clean sector jobs.
- Integrates equity and protecting California's most impacted communities as driving principles throughout the document.
- Incorporates the contribution of natural and working lands to the State's GHG emissions, as well as their role in achieving carbon neutrality.
- Relies on the most up-to-date science, including the need to deploy all viable tools to address the existential threat that climate change presents, including carbon capture and sequestration, as well as direct air capture.
- Evaluates the substantial health and economic benefits of taking action.
- Identifies key implementation actions to ensure success.

In addition to reducing emissions from transportation, energy, and industrial sectors, the 2022 Scoping Plan includes emissions and carbon sequestration in natural and working lands and explores how they

contribute to long-term climate goals. Under the Scoping Plan Scenario, California's 2030 emissions are anticipated to be 48 percent below 1990 levels, representing an acceleration of the current SB 32 target. The Cap-and-Trade Program continues to play a large factor in the reduction of near-term emissions for meeting the accelerated 2030 reduction target. Every sector of the economy will need to begin to transition in this decade to meet these GHG emissions reduction goals and achieve carbon neutrality no later than 2045. The 2022 Scoping Plan approaches decarbonization from two perspectives, managing a phasedown of existing energy sources and technologies, as well as increasing, developing, and deploying alternative clean energy sources and technology.

Senate Bill 375 - 2008 Sustainable Communities and Climate Protection Act

SB 375, signed in August 2008, enhances the State's ability to reach AB 32 goals by directing CARB to develop regional GHG emission reduction targets to be achieved from passenger vehicles by 2020 and 2035. In addition, SB 375 directs each of the State's 18 major metropolitan planning organizations to prepare a "sustainable communities strategy" (SCS) that contains a growth strategy to meet these emission targets for inclusion in the Regional Transportation Plan (RTP). On March 22, 2018, CARB adopted updated regional targets for reducing GHG emissions from 2005 levels by 2020 and 2035. The Southern California Association of Governments (SCAG) was assigned targets of an 8-percent reduction in GHGs from transportation sources by 2020 and a 19-percent reduction in GHGs from transportation sources by 2035. In the SCAG region, SB 375 also provides the option for the coordinated development of subregional plans by the subregional councils of governments and the county transportation commissions to meet SB 375 requirements.

Senate Bill 100 - California Renewables Portfolio Standard Program

Adopted on September 10, 2018, SB 100 supports the reduction of GHG emissions from the electricity sector by accelerating the State's Renewables Portfolio Standard (RPS) Program, which had been last updated by SB 350 in 2015. SB 100 requires electricity providers to increase procurement from eligible renewable energy resources to 33 percent of total retail sales by 2020, 60 percent by 2030, and 100 percent by 2045.

Executive Order B-55-18 to Achieve Carbon Neutrality

On September 10, 2018, Governor Brown issued Executive Order B-55-18, which established a new Statewide goal of achieving carbon neutrality by 2045 and maintaining net negative emissions thereafter. This goal is in addition to the existing statewide GHG emissions reduction targets established by SB 375, SB 32, SB 1383, and SB 100.

California Building Standards Code

California Code of Regulations Title 24 is referred to as the California Building Standards Code. It consists of a compilation of several distinct standards and codes related to building construction, including plumbing, electrical, interior acoustics, energy efficiency, and accessibility for persons with physical and sensory disabilities. These standards are updated every three years. The most recent update, the 2022 California Building Standards, went into effect on January 1, 2023.

Part 6 – Building Energy Efficiency Standards/Energy Code

California Code of Regulations Title 24, Part 6, is the Building Energy Efficiency Standards, also referred to as the California Energy Code. This code, originally enacted in 1978, establishes energy-efficiency standards for residential and nonresidential buildings to reduce California's energy demand. New construction and major renovations must demonstrate their compliance with the current Energy Code through submittal and approval of a Title 24 Compliance Report to the local building permit review authority and the California Energy Commission. The 2022 Energy Code continues to improve upon the previous 2019 Title 24 standards for new construction of, and additions and alterations to, residential and nonresidential buildings. The 2022 Energy Code is anticipated to reduce GHG emissions by 10 $MMTCO_2e$ over the next 30 years and result in approximately $1.5 billion in consumer savings. Compliance with Title 24 is enforced through the building permit process.

Part 11 – California Green Building Standards

Title 24, Part 11, is referred to as the California Green Building Standards (CALGreen) Code and was developed to help the State achieve its GHG emissions reduction goals under AB 32 by codifying standards for reducing building-related energy, water, and resource demand, which in turn reduces GHG emissions from energy, water, and resource demand. The CALGreen Code establishes mandatory measures, which include energy efficiency, water conservation, material conservation, planning and design, and overall environmental quality, for new residential and nonresidential buildings.

Regional

Southern California Association of Governments (SCAG) Regional Transportation Plan/Sustainable Communities Strategy

SCAG formally adopted the 2020-2045 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) on September 3, 2020, to provide a roadmap for sensible ways to expand transportation options, improve air quality, and bolster Southern California's long-term economic viability. The 2020-2045 RTP/SCS builds upon the progress made through implementation of the 2016-2040 RTP/SCS and includes ten goals focused on promoting economic prosperity, improving mobility, protecting the environment, and supporting healthy/complete communities. These performance goals were adopted to help focus future investments on the best-performing projects, as well as different strategies to preserve, maintain, and optimize the performance of the existing transportation system. The 2020-2045 RTP/SCS is forecast to help California reach its GHG reduction goals by reducing GHG emissions from passenger cars by 8 percent below 2005 levels by 2020 and 19 percent by 2035 in accordance with the most recent CARB targets adopted in March 2018. The SCS implementation strategies include focusing growth near destinations and mobility options, promoting diverse housing choices, leveraging technology innovations, and supporting implementation of sustainability policies. The SCS establishes a land use vision of center-focused placemaking, concentrating growth in and near Priority Growth Areas, transferring of development rights, urban greening, creating greenbelts and community separators, and implementing regional advance mitigation to help the region meet its regional vehicle miles traveled (VMT) and GHG reduction goals, as required by the State.

The most recent 2024-2050 RTP/SCS was adopted by SCAG's Regional Council in April 2024. The 2024-2050 RTP/SCS outlines a vision for a more resilient and equitable future, with investment, policies, and strategies for achieving the region's shared goals through 2050. The 2024-2050 RTP/SCS sets forth a

forecasted regional development pattern which, when integrated with the transportation network, measures, and policies, will reduce GHG emissions from automobiles and light-duty trucks and achieve the GHG emissions reduction target for the region set by the CARB. In addition, the 2024-2050 RTP/SCS is supported by a combination of transportation and land use strategies that outline how the region can achieve California's GHG-emission-reduction goals and federal Clean Air Act requirements. These are articulated in a set of Regional Strategic Investments, Regional Planning Policies, and Implementation Strategies. The Regional Planning Policies are a resource for County Transportation Commissions (CTCs) and local jurisdictions, who can refer to specific policies to demonstrate alignment with the 2024-2050 RTP/SCS when seeking resources from state or federal programs. The Implementation Strategies articulate priorities for SCAG efforts in fulfilling or going beyond the Regional Planning Policies.[10] While SCAG has adopted the 2024-2050 RTP/SCS, CARB has not yet certified it or approved SCAG's GHG emissions reduction calculations.

Local

City of Arcadia General Plan

The Arcadia General Plan (General Plan)[11], Chapter 6: Resource Sustainability Element, addresses GHG-reducing goals and policies as follows.

- **Goal RS-2.** Reducing Arcadia's carbon footprint in compliance with SB 375 and AB 32.
    - **Policy RS-2.1.** Cooperate with the state to implement AB 32, which calls for reducing greenhouse gas emissions to 1990 levels by 2020, and Executive Order S-3-05, which calls for 1990 levels by 2020 and 80% below 1990 levels by 2050.
    - **Policy RS-2.2.** Reduce per capita greenhouse gas emissions to 15% below 2005 levels by 2020, and total municipal greenhouse gas emissions to 15% below 2005 levels by 2020.
    - **Policy RS-2.3.** Participate in regional strategies and plan to implement SB 375, and in particular, use the legislatively authorized incentives, such as grants and transportation funding and waivers to environmental assessments, to encourage infill and transit-oriented development.
    - **Policy RS-2.4.** Pursue the strategies in the Land Use and Community Design Element to encourage transit-oriented development in established focused areas.
    - **Policy RS-2.5.** Pursue the enhancement of bicycle and pedestrian infrastructure set forth in the Circulation and Infrastructure Element to help decrease vehicle miles traveled and vehicle trips.
    - **Policy-RS-2.6.** Coordinate land use, circulation, and infrastructure improvement efforts with the West San Gabriel Valley Planning Council, regional planning agencies, and surrounding municipalities.

[10] Southern California Association of Governments, *Connect SoCal: A Plan for Navigating to a Brighter Future (2024-2050 Regional Transportation Plan/Sustainable Communities Strategy)*, adopted April 4, 2024.

[11] City of Arcadia, *Arcadia General Plan,* November 2010.

- **Goal RS-3.** Promoting and utilizing clean forms of transportation to reduce Arcadia's carbon footprint.

    - **Policy RS-3.3.** Educate residents on methods of sustainable driving techniques such as: reducing excessive speeding, preventing car idling, regular car maintenance for maximizing fuel efficiency, and carpooling.

    - **Policy RS-3.4.** Promote residents' and business owners' awareness and education of traffic congestion's affect on air pollution and help create voluntary programs that reduce traffic throughout the City.

- **Goal RS-5:** Wise and creative energy use that incorporates new technologies for energy generation and new approaches to energy conservation.

    - **Policy RS-5.3:** Require that all new developments meet or exceed the state and local energy conservation requirements.

    - **Policy RS-5.5:** Support State legislative initiatives to revise utility rates in a manner that provides incentives for energy conservation and provides funding for research and development of alternative energy sources.

    - **Policy RS-5.9:** Facilitate the provision of energy-efficient modes of transportation and fixed facilities which establish transit, bicycle, and pedestrian modes as viable alternatives.

CALIFORNIA ENVIRONMENTAL QUALITY ACT THRESHOLDS

In accordance with the CEQA Guidelines, project impacts are evaluated to determine whether significant adverse environmental impacts would occur. According to Appendix G of the CEQA Guidelines, the proposed project would have a significant impact related to GHGs if it would:

- Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment (refer to Impact Statement GHG-1); and/or

- Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases (refer to Impact Statement GHG-2).

The baseline against which to compare potential impacts of a project includes the natural and anthropogenic drivers of global climate change, including worldwide GHG emissions from increased fossil fuel consumption and industrial emissions.[12] As a result, the study area for climate change and the analysis of GHG emissions is broad. However, the study area is also limited by CEQA Guidelines Section 15064.4(b), which directs lead agencies to consider an "indirect physical change" only if that change is a reasonably foreseeable impact, which may be caused by the project.

[12] USEPA, Global *Greenhouse Gas Emissions Data*, https://www.epa.gov/ghgemissions/global-greenhouse-gas-emissions-data, accessed June 18, 2024.

SIGNIFICANCE CRITERIA AND METHODOLOGY

CEQA Guidelines Section 15064.4 recommends that lead agencies quantify GHG emissions of projects and consider several other factors that may be used in the determination of significance of GHG emissions from a project, including the extent to which the project may increase or reduce GHG emissions, whether a project's emissions exceeds an applicable significance threshold, and the extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions.

However, CEQA Guidelines Section 15064.4 does not establish a threshold of significance. CEQA Guidelines Section 15064.7 provides lead agencies the discretion to establish significance thresholds for their respective jurisdictions, and in establishing those thresholds, a lead agency may appropriately look to thresholds developed by other public agencies or suggested by other experts, if any threshold chosen is supported by substantial evidence. The City of Arcadia has not adopted a numerical significance threshold for assessing impacts related to GHG emissions. Similarly, the SCAQMD, the Governor's Office of Planning and Research (OPR), CARB, California Air Pollution Control Officers Association (CAPCOA), or any other state or applicable regional agency has yet to adopt a numerical significance threshold for assessing GHG emissions that is applicable to the Revised Project.

It should be noted that the 2020 IS/MND discussed that the SCAQMD adopted a 10,000 $MTCO_2e$ per year threshold for permitted stationary sources/industrial projects. Although the 2020 IS/MND acknowledged that the SCAQMD did not adopt a significance threshold for residential and general land use development projects, it used the SCAQMD's 3,000 $MTCO_2e$ per year screening threshold for all land use types for any projects that are not exempt from CEQA or where there are no qualifying GHG reduction plans are applicable. As such, the 2020 IS/MND compared the Approved Project's GHG emissions to the screening threshold of 3,000 $MTCO_2e$ per year. However, the proposed threshold was based on the State's GHG emissions reduction goal identified in AB 32 for the year 2020, which is outdated, and SCAQMD never adopted the threshold.

Further, impacts of climate change are experienced on a global scale regardless of the location of GHG emission sources, and therefore, a numerical significance threshold for individual development projects is speculative. Throughout the State, air districts are moving from numerical significance thresholds to qualitative significance thresholds that focus on project features to reduce GHG emissions or consistency with GHG reduction plans. For example, in the Bay Area Air Quality Management District (BAAQMD) 2022 CEQA Guidelines, the GHG thresholds of significance are either whether land use projects include certain project design elements related to buildings and transportation or whether the project is consistent with a local GHG reduction strategy that meets the criteria under State CEQA Guidelines Section 15183.5(b). This is a major update to BAAQMD's 2017 CEQA Guidelines, where a numerical significance threshold was required. To reduce GHG emissions impact, it is more effective for development projects to include project features that directly or indirectly reduce GHG emissions rather than relying on a numerical significance threshold, which is highly dependent on the type and size of the development.

Therefore, the significance of the Revised Project's potential impacts regarding GHG emissions and climate change will be assessed solely on its consistency with plans and policies adopted for the purposes of reducing GHG emissions and mitigating the effects of climate change and the Revised Project's ability to incorporate sustainable features and strategies from such plans and policies in its design to reduce GHG emissions. The analysis has also quantified the Tempo Project's GHG emissions and calculated the Revised Project's GHG emissions by adding the GHG emissions from the Tempo Project to the GHG emission generated by the Approved Project for informational purposes.

It should be noted that individual projects do not generate sufficient GHG emissions to directly influence climate change. However, physical changes caused by a project can contribute incrementally to significant cumulative effects, even if individual changes resulting from a project are limited. As a result, the issue of climate change typically involves an analysis of whether a project's contribution towards an impact would be cumulatively considerable. According to CEQA Guidelines Section 15064(h)(1), "cumulatively considerable" means that the incremental effects of an individual project are significant when viewed in connection with the effects of past projects, other current projects, and probable future projects. Per CEQA Guidelines Section 15064(h)(3), a project's incremental contribution to a cumulative impact can be found not cumulatively considerable if the project would comply with an approved plan or mitigation program that provides specific requirements that would avoid or substantially lessen the cumulative problem in the geographic area of the project. To qualify, such plans or programs must be specified in law or adopted by the public agency with jurisdiction over the affected resources through a public review process to implement, interpret, or make specific the law enforced or administered by the public agency. Examples of such programs include a water quality control plan, air quality attainment or maintenance plan, integrated waste management plan, habitat conservation plan, natural community conservation plans, and plans or regulations for the reduction of GHG emissions. Therefore, a lead agency can make a finding of less than significant for GHG emissions if a project complies with adopted programs, plans, policies, and/or other regulatory strategies to reduce GHG emissions.

IMPACT ANALYSIS

GHG-1 WOULD THE PROJECT GENERATE GREENHOUSE GAS EMISSIONS, EITHER DIRECTLY OR INDIRECTLY, THAT MAY HAVE A SIGNIFICANT IMPACT ON THE ENVIRONMENT?

GHG-2 WOULD THE PROJECT CONFLICT WITH AN APPLICABLE PLAN, POLICY OR REGULATION ADOPTED FOR THE PURPOSE OF REDUCING THE EMISSIONS OF GREENHOUSE GASES

Level of Significance: Less Than Significant Impact.

The 2020 IS/MND Section 3.8 a) quantified the Approved Project's construction and operational GHG emissions and compared to the SCAQMD "bright-line" screening threshold. The 2020 IS/MND concluded that emissions during construction and operation of the Approved Project would be approximately 2,539.59 $MTCO_2e$ per year and would not exceed SCAQMD screening threshold. Therefore, the Approved Project would not generate GHG emissions that would have a significant impact on environment.

The 2020 IS/MND Section 3.8 b) acknowledged that the General Plan includes goals and policies that were adopted for the purpose of reducing GHG emissions and provided an analysis of the Approved Project's consistency with the applicable General Plan goals and policies. Further, the 2020 IS/MND concluded that the Approved Project would not obstruct implementation of the CARB 2017 Scoping Plan, SCAG 2016-2040 RTP/SCS, the City's General Plan goals and policies, and, as such, impacts would be less than significant.

Project-Related Greenhouse Gas Emissions

Direct project-related GHG emissions include emissions from construction activities, area sources, mobile sources, and refrigerants, while indirect sources include emissions from energy consumption, water demand, and solid waste generation. The California Emissions Estimator Model (CalEEMod) version 2022.1 was used to calculate project-related GHG emissions, including direct and indirect GHG emissions.

Construction of the Tempo Project is anticipated to take approximately 16.5 months to complete. The construction activities would include grading, building construction, paving, and architectural coating. CalEEMod outputs are contained within Appendix A, *Greenhouse Gas Emissions Data*. Table 1, *Estimated Greenhouse Gas Emissions*, presents the estimated GHG emissions associated with the Revised Project.

Table 1
Estimated Greenhouse Gas Emissions

Source	CO_2	CH_4	N_2O	Refrigerants	CO_2e
	Metric Tons/year[1]				
Direct Emissions					
Construction (amortized over 30 years)[2]	11.08	<0.01	<0.01	<0.01	11.18
Mobile Source[3]	1,255	0.06	0.05	1.89	1,275
Area Source	1.17	<0.01	<0.01	-	1.18
Refrigerants	-	-	-	15.0	15.0
Total Direct Emissions	*1,267.25*	*0.06*	*0.05*	*16.89*	*1,302*
Indirect Emissions					
Energy	286	0.02	<0.01	-	287
Water	4.09	0.07	<0.01	-	6.22
Solid Waste	4.45	0.44	0.00	-	15.6
Total Indirect Emissions	*294.54*	*0.53*	*<0.01*	-	*308.82*
Total Tempo Project Emissions	***1,610.82***				
Approved Project Emissions[4]	***2,539.59***				
Total Tempo Project and Approved Project Emissions	***4,150.41***				

Notes:
1. Emissions calculated using California Emissions Estimator Model Version 2022.1 (CalEEMod) computer model; totals may be slightly off due to rounding.
2. Total Tempo Project construction GHG emissions equate to 335.4 $MTCO_2e$. Value shown is amortized over the lifetime of the Tempo Project (assumed to be 30 years).
3. Based on the *Revised Parking Demand Analysis for the Tempo by Hilton Hotel Project, City of Arcadia, California Memorandum (Parking Analysis)* prepared by Linscott, Law and Greenspan Engineers (dated March 12, 2024).
4. Refer to Table 15, *Initial Study/Mitigated Negative Declaration – Arcadia Hotel and Annex (Hotel Indigo) Project*, February 2020.

Source: Refer to Appendix A, *Greenhouse Gas Emissions Data* for assumptions used in this analysis.

Direct Project-Related Source of Greenhouse Gases

Construction Emissions. Based on CalEEMod, the Tempo Project would result in a total of 335.4 $MTCO_2e$ of emissions during construction. Construction GHG emissions are amortized over 30 years (i.e., total construction emissions divided by the lifetime of the Tempo Project, assumed to be 30 years), then added to the operational emissions, as recommended by SCAQMD.[13] The amortization takes into consideration the temporary nature of construction activities. It should be noted that construction of the Approved Project will be completed prior to the start of the construction for the Tempo Project; therefore, construction of the Tempo Project and Approved Project would not overlap. As shown in Table 1, construction of the Tempo Project would generate approximately 11.18 $MTCO_2e$ of emissions per year when amortized over 30 years.

Mobile Source Emissions. According to the *Revised Parking Demand Analysis for the Tempo by Hilton Hotel Project, City of Arcadia, California Memorandum* (Parking Analysis) prepared by Linscott, Law and Greenspan Engineers (dated March 12, 2024), the Tempo Project would result in 1,113 daily trips during

[13] The project lifetime is based on the standard 30-year assumption of the South Coast Air Quality Management District (South Coast Air Quality Management District, *Draft Guidance Document – Interim CEQA Greenhouse Gas (GHG) Significance Threshold*, October 2008).

weekdays and 915 trips on Saturdays. As a conservative analysis, daily trips on Sundays are assumed to be the same as weekdays.; refer to Appendix A. The Tempo Project would result in a total of 1,275 $MTCO_2e$ per year of GHG emissions from mobile source; refer to Table 1.

Area Source. Area source emissions would be generated due to an increased demand for consumer products, architectural coating, and landscaping associated with the development of the Tempo Project. The Tempo Project would result in a total of 1.18 $MTCO_2e$ per year of GHG emissions from area source; refer to Table 1.

Refrigerants. Refrigerants are substances used in equipment for air conditioning and refrigeration. Most of the refrigerants used today are HFCs or blends thereof, which can have high global warming potential values. All equipment that uses refrigerants has a charge size (i.e., quantity of refrigerant the equipment contains), and an operational refrigerant leak rate, and each refrigerant has a global warming potential that is specific to that refrigerant. CalEEMod quantifies refrigerant emissions from leaks during regular operation and routine servicing over the equipment lifetime, and then derives average annual emissions from the lifetime estimate. As noted in Table 1, the Tempo Project would result in 15.00 $MTCO_2e$ per year of GHG emissions from refrigerants.

Indirect Project-Related Source of Greenhouse Gases

Energy Consumption. Energy consumption emissions were calculated using the CalEEMod model and project-specific land use data. The Tempo Project would be required to comply with the most current Title 24 (i.e., 2022 Title 24). The 2022 Title 24 provides minimum efficiency standards related to various building features, including appliances, water and space heating and cooling equipment, building insulation and roofing, and lighting. Additionally, the Tempo Project would also include solar-ready roofs. Overall, the Tempo Project would indirectly result in 287.0 $MTCO_2e$ per year of GHG emissions due to energy consumption; refer to Table 1.

Water Demand. According to CalEEMod, the Tempo Project would consume approximately 2,308,376 gallons of indoor water per year, and 74,583 gallons of outdoor water per year (i.e., for landscaping). Emissions from indirect impacts from water use would result in 6.22 $MTCO_2e$ per year of GHG emissions; refer to Table 1.

Solid Waste. Solid waste associated with operations of the proposed project would result in 15.6 $MTCO_2e$ per year of GHG emissions; refer to Table 1.

Total Project-Related Sources of Greenhouse Gases

As shown in Table 1, the total amount of Tempo Project related GHG emissions from direct and indirect sources combined would total approximately 1,610.82 $MTCO_2e$ per year. Total emissions of the Revised Project (the Tempo Project and the Approved Project combined) would be approximately 4,150.41 $MTCO_2e$ per year, which exceeds the SCAQMD 3,000 $MTCO_2e$ per year screening threshold utilized in the 2020 IS/MND. However, the 3,000 $MTCO_2e$ threshold was never adopted by SCAQMD and is based on the State's outdated GHG emissions reduction goal for 2020. As such, this threshold is discussed in this analysis for informational purposes. Moreover, as discussed above, the significance of the Revised Project's potential impacts regarding GHG emissions and climate change is not determined by the SCAQMD bright-line screening thresholds, but by the Revised Project's consistency with applicable plans, which is discussed in more detail below.

Consistency With Applicable Plans

The consistency analysis within the 2020 IS/MND is based on the 2017 Scoping Plan and SCAG 2016-2040 RTP/SCS. However, these documents have since been updated, with the most recent approved iterations being the 2022 Scoping Plan and the 2020-2045 RTP/SCS. These documents have been updated to include more stringent goals and policies to ensure that existing and future developments are on track to meet Statewide GHG reduction goals. As such, the most recent and approved iterations are more stringent compared to the 2017 Scoping Plan and 2016-2040 RTP/SCS. Thus, the GHG plan consistency for the Revised Project is based on consistency with the 2022 Scoping Plan, SCAG 2020-2045 RTP/SCS, and applicable goals and policies from the City's General Plan. It should be noted that although the latest 2024-2050 RTP/SCS was adopted on April 4, 2024, CARB concluded that the technical methodology SCAG used to quantify the GHG emission reductions for the 2024-2050 RTP/SCS does not operate accurately.[14] SCAG is currently working on updating the technical methodology and resubmitting for CARB's review. Until CARB approves the methodology, the 2024-2050 RTP/SCS is not a fully adopted document, especially from the GHG reduction perspective of the proposed strategies. As such, the consistency analysis relies upon the 2020-2045 RTP/SCS. The 2022 Scoping Plan describes the approach the State will take to achieve carbon neutrality by 2045. The SCAG 2020-2045 RTP/SCS includes strategies for the region to reach the regional target of reducing GHG from transportation sector. The City's General Plan contains goals and policies that would help implement energy efficient measures and would subsequently reduce GHG emissions within the City.

Consistency With 2022 Scoping Plan

The 2022 Scoping Plan identifies reduction measures necessary to achieve the goal of carbon neutrality by 2045 or earlier. Actions that reduce GHG emissions are identified for each AB 32 inventory sector. Provided in Table 2, *Consistency with the 2022 Scoping Plan: AB 32 Inventory Sectors*, is an evaluation of applicable reduction actions/strategies by emissions source category to determine how the Revised Project would be consistent with or exceed reduction actions/strategies outlined in the 2022 Scoping Plan. As shown therein, the Revised Project would be consistent with the GHG emission reduction strategies contained in the 2022 Scoping Plan.

[14] California Air Resources Board, RE: CARB Review of Southern California Association of Governments' 2024 SCS Senate Bill 375 Greenhouse Gas Emissions Draft Technical Methodology, March 29, 2024. https://ww2.arb.ca.gov/sites/default/files/2024-04/SCAG%20memo%20final.pdf, accessed, June 27, 2024.

Table 2
Consistency with the 2022 Scoping Plan: AB 32 Inventory Sectors

Actions and Strategies	Project Consistency Analysis
Smart Growth / Vehicles Miles Traveled (VMT)	
Reduce VMT per capita to 25 percent below 2019 levels by 2030, and 30 percent below 2019 levels by 2045	**Consistent**. The Revised Project Site is located within 0.25 miles from an existing bus top located at Huntington Drive and Santa Clara Street to the east. The Tempo Project would also include three electric vehicle (EV) charging stations and the Approved Project included 15 EV charging stations in accordance with Title 24 standards. Thus, the Revised Project would include features that encourage alternative modes of transportation that would reduce VMT. As such, the Revised Project would be consistent with this action.
New Residential and Commercial Buildings	
All electric appliances beginning 2026 (residential) and 2029 (commercial), contributing to 6 million heat pumps installed Statewide by 2030	**Not Applicable.** The City of Arcadia has not adopted an ordinance or program requiring all electric appliances. The Revised Project is anticipated to be operational before such ordinance or program is adopted as the Revised Project would begin operation before 2029. However, if adopted, the Revised Project would be required to comply with such regulation. As such, the Revised Project would be consistent with this action.
Construction Equipment	
Achieve 25 percent of energy demand electrified by 2030 and 75 percent electrified by 2045	**Applicable.** The City of Arcadia has not adopted an ordinance or program requiring electricity-powered construction equipment. The Revised Project construction is anticipated to be completed before such ordinance or program is adopted as construction of the Revised Project would be completed before 2030. However, if adopted, the Revised Project would be required to comply with such regulation. As such, the Revised Project would be consistent with this action.
Non-Combustion Methane Emissions	
Divert 75 percent of organic waste from landfills by 2025	**Consistent**. SB 1383 establishes targets to achieve a 50 percent reduction in the level of statewide organic waste disposal from 2014 levels by 2020 and a 75 percent reduction by 2025. The law establishes an additional target that not less than 20 percent of currently disposed edible food is recovered for human consumption by 2025. The Revised Project would comply with local and regional regulations and recycle or compost 75 percent of waste by 2025 pursuant to SB 1383. As such, the Revised Project would be consistent with this action.
Source: California Air Resources Board, *2022 Scoping Plan*, November 16, 2022.	

Consistency with the 2020-2045 RTP/SCS

On September 3, 2020, the Regional Council of SCAG formally adopted the 2020-2045 RTP/SCS. Five key SCS strategies are included in the 2020-2045 RTP/SCS to help the region meet its regional VMT and GHG reduction goals, as required by the State. Table 3, *Consistency With 2020-2045 RTP/SCS*, provides a consistency analysis of the Revised Project with these five 2020-2045 RTP/SCS strategies. As shown therein, the Revised Project would be consistent with the GHG emission reduction strategies contained in the 2020-2045 RTP/SCS.

Table 3
Consistency With 2020-2045 RTP/SCS

Reduction Strategy	Applicable Land Use Tools	Project Consistency Analysis
Focus Growth Near Destinations and Mobility Options		
• Emphasize land use patterns that facilitate multimodal access to work, educational and other destinations • Focus on a regional jobs/housing balance to reduce commute times and distances and expand job opportunities near transit and along center-focused main streets • Plan for growth near transit investments and support implementation of first/last mile strategies • Promote the redevelopment of underperforming retail developments and other outmoded nonresidential uses • Prioritize infill and redevelopment of underutilized land to accommodate new growth, increase amenities and connectivity in existing neighborhoods • Encourage design and transportation options that reduce the reliance on and number of solo car trips (this could include mixed uses or locating and orienting close to existing destinations) • Identify ways to "right size" parking requirements and promote alternative parking strategies (e.g., shared parking or smart parking)	**Center Focused Placemaking, Priority Growth Areas (PGA), Job Centers, High Quality Transit Areas (HQTAs), Transit Priority Areas (TPA), Neighborhood Mobility Areas (NMAs), Livable Corridors, Spheres of Influence (SOIs), Green Region, Urban Greening.**	**Consistent.** Transit Priority Areas (TPAs) are defined in the 0.5-mile radius around an existing or planned major transit stop or an existing stop along a HQTA. A High Quality Transit Area (HQTA) is defined as a corridor with fixed route bus service frequency of 15 minutes (or less) during peak commute hours. Although the Tempo Project is not located in a TPA or High Quality Transit Corridor (HQTC), it is located near bus stops (existing bus top located at Huntington Drive and Santa Clara Street) and is approximately 0.5 mile from the Metro Gold Line Arcadia Station. The Revised Project Site is an infill site and the Tempo Project would construct a new hotel on a parcel of land that has been underutilized and is currently vacant. Further, the Revised Project Site is located within an urbanized area and within walking and biking distance to existing commercial and neighborhood-serving retail uses, as well as destinations such as the Santa Anita Park. The Revised Project would also provide EV parking spaces in accordance with CALGreen Code. Therefore, the Revised Project would redevelop an infill site by constructing a hotel near destinations, in an area with mobility options that would reduce trips.
Promote Diverse Housing Choices		
• Preserve and rehabilitate affordable housing and prevent displacement • Identify funding opportunities for new workforce and affordable housing development • Create incentives and reduce regulatory barriers for building context sensitive accessory dwelling units to increase housing supply • Provide support to local jurisdictions to streamline and lessen barriers to housing development that supports reduction of greenhouse gas emissions	**PGA, Job Centers, HQTAs, NMA, TPAs, Livable Corridors, Green Region, Urban Greening.**	**Not Applicable.** The Revised Project is not a housing development and therefore would not affect housing supplies.
Leverage Technology Innovations		
• Promote low emission technologies such as neighborhood electric vehicles, shared rides hailing, car sharing, bike sharing and scooters by providing supportive and safe infrastructure such as dedicated lanes, charging and parking/drop-off space • Improve access to services through technology—such as	**HQTA, TPAs, NMA, Livable Corridors.**	**Consistent.** The Revised Project would be required to comply with all applicable Title 24 and CALGreen building codes at the time of construction. These building codes would require EV charging stations, designated EV parking, as well as bike parking. As detailed above, the Approved

Reduction Strategy	Applicable Land Use Tools	Project Consistency Analysis
telework and telemedicine as well as other incentives such as a "mobility wallet," an app-based system for storing transit and other multi-modal payments • Identify ways to incorporate "micro-power grids" in communities, for example solar energy, hydrogen fuel cell power storage and power generation		Project included 15 EV charging stations and the Tempo Project would include 3 EV charging stations and a solar-ready roof. Therefore, the Revised Project would leverage technology innovations and promote alternative modes of transportation to help the City, County, and State meet their GHG reduction goals. The Revised Project would be consistent with this reduction strategy.
Support Implementation of Sustainability Policies		
• Pursue funding opportunities to support local sustainable development implementation projects that reduce greenhouse gas emissions • Support statewide legislation that reduces barriers to new construction and that incentivizes development near transit corridors and stations • Support local jurisdictions in the establishment of Enhanced Infrastructure Financing Districts (EIFDs), Community Revitalization and Investment Authorities (CRIAs), or other tax increment or value capture tools to finance sustainable infrastructure and development projects, including parks and open space • Work with local jurisdictions/communities to identify opportunities and assess barriers to implement sustainability strategies • Enhance partnerships with other planning organizations to promote resources and best practices in the SCAG region • Continue to support long range planning efforts by local jurisdictions • Provide educational opportunities to local decisions makers and staff on new tools, best practices and policies related to implementing the Sustainable Communities Strategy	**Center Focused Placemaking, Priority Growth Areas (PGA), Job Centers, High Quality Transit Areas (HQTAs), Transit Priority Areas (TPA), Neighborhood Mobility Areas (NMAs), Livable Corridors, Spheres of Influence (SOIs), Green Region, Urban Greening.**	**Consistent.** As previously discussed, the Revised Project is located near existing bus stops and approximately 0.5 mile from the existing Metro Gold Line Arcadia Station. The Revised Project would support sustainable development implementation that would reduce GHG emissions by installing EV charging stations to promote alternative modes of transportation. Further, the Revised Project would comply with sustainable practices included in the most current and applicable Title 24 standards and CALGreen, including the installation of high efficiency lighting, water efficient landscaping, low-flow water fixtures, among others. Thus, the Revised Project would be consistent with this reduction strategy.
Promote a Green Region		
• Support development of local climate adaptation and hazard mitigation plans, as well as project implementation that improves community resiliency to climate change and natural hazards • Support local policies for renewable energy production, reduction of urban heat islands and carbon sequestration • Integrate local food production into the regional landscape • Promote more resource efficient development focused on conservation, recycling and reclamation • Preserve, enhance and restore regional wildlife connectivity • Reduce consumption of resource areas, including agricultural land • Identify ways to improve access to public park space	**Green Region, Urban Greening, Greenbelts and Community Separators.**	**Consistent.** The Revised Project is in an urbanized area and would not interfere with regional wildlife connectivity or convert agricultural land. Additionally, the Tempo Project would also include a solar-ready roof for the future installation of photovoltaic solar panels. Thus, the Revised Project would support resource efficient development that reduces energy consumption and GHG emissions. The Revised Project would be consistent with this reduction strategy.

Source: Southern California Association of Governments, *2020-2045 Regional Transportation Plan/Sustainable Communities Strategy – Connect SoCal*, September 3, 2020.

Consistency with the City General Plan

The City's General Plan Goals RS-2 and RS-3 and related policies are mainly focused on City's municipal operations in achieving the statewide GHG reduction goals and policies. However, the Revised Project would provide on-site EV charging stations and would be located within 0.25 miles of existing bus stops and approximately 0.5 mile from the Metro Gold Line Arcadia Station. Therefore, the Revised Project would support the City's goal of promoting and utilizing clean forms of transportation to reduce the City's carbon footprint. In addition, Tempo Project would have a solar ready roof and the Revised Project would comply with the CALGreen Code which requires that new buildings employ water efficiency and conservation, increase building system efficiencies (e.g., lighting, HVAC, and plumbing fixtures), divert construction waste from landfills, and incorporate EV charging infrastructure Thus, the Revised Project would support General Plan Goal RS-5 to incorporate new technology for energy generation and promote energy conservation. Based on the above, the Revised Project would be consistent with the General Plan goals and policies.

Conclusion

As shown in Table 1, the total emissions of the Revised Project would be approximately 4,150.41 $MTCO_2e$ per year, which exceeds the SCAQMD 3,000 $MTCO_2e$ per year screening threshold utilized in the 2020 IS/MND. However, the 3,000 $MTCO_2e$ threshold was never adopted by SCAQMD and is based on an outdated GHG emission reductions goal. As such, the significance determination for GHG emissions is based on consistency with applicable statewide, regional, and local climate change mandates, plans, policies, and regulations. As discussed above, the characteristics of the Revised Project render it consistent with statewide, regional, and local climate change mandates, plans, policies, and regulations. More specifically, the GHG plan consistency analysis provided above demonstrates that the Revised Project would comply with the regulations and GHG reduction goals, policies, actions, measures, and strategies outlined in the 2022 Scoping Plan, 2020-2045 RTP/SCS, and the City's General Plan. Consistency with these plans would reduce the impact of the Revised Project's incremental contribution to GHG emissions. Accordingly, the Revised Project would not conflict with any applicable plan, policy, regulation, or recommendation adopted for the purpose of reducing GHG emissions. As the Revised Project is consistent with statewide, regional, and local GHG reduction plans, the Revised Project would also be consistent with the State's long-term goal to achieve statewide carbon neutrality (zero-net emissions). Therefore, implementation of the Revised Project would not generate significant GHG emissions that would have a significant impact on the environment or conflict with an applicable GHG reduction plan, policy or regulation and impacts would be less than significant.

Based on the above, the Revised Project would not result in new significant impacts and no substantial increase in the severity of previously identified impacts disclosed in the 2020 IS/MND would occur. Likewise, there are no changed circumstances involving new or more severe impacts and no new information of substantial importance requiring new analysis or project-specific mitigation measures.

Mitigation Measures: Impacts related to Impact GHG-1 and Impact GHG-2 would be less than significant, and no project-specific mitigation measures are required.

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Appendix A
Greenhouse Gas Emissions Data

Tempo by Hilton Detailed Report

Table of Contents

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Tempo by Hilton
Construction Start Date	8/1/2024
Operational Year	2026
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	0.50
Precipitation (days)	24.4
Location	34.141583262590174, -118.03818989813819
County	Los Angeles-South Coast
City	Arcadia
Air District	South Coast AQMD
Air Basin	South Coast
TAZ	4922
EDFZ	7
Electric Utility	Southern California Edison
Gas Utility	Southern California Gas
App Version	2022.1.1.23

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description

Hotel	91.0	Room	0.73	57,790	5,318	—	—	—
Parking Lot	25.0	Space	0.22	0.00	0.00	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

Sector	#	Measure Title
Construction	C-10-A	Water Exposed Surfaces
Construction	C-11	Limit Vehicle Speeds on Unpaved Roads
Water	W-4	Require Low-Flow Water Fixtures

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.63	13.7	11.9	16.8	0.02	0.54	5.48	6.02	0.49	2.61	3.11	—	3,207	3,207	0.13	0.08	3.18	3,238
Mit.	1.63	13.7	11.9	16.8	0.02	0.54	1.55	2.09	0.49	0.71	1.20	—	3,207	3,207	0.13	0.08	3.18	3,238
% Reduced	—	—	—	—	—	—	72%	65%	—	73%	61%	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.48	1.23	11.9	11.4	0.02	0.54	5.48	6.02	0.49	2.61	3.11	—	2,090	2,090	0.09	0.06	0.06	2,111
Mit.	1.48	1.23	11.9	11.4	0.02	0.54	1.55	2.09	0.49	0.71	1.20	—	2,090	2,090	0.09	0.06	0.06	2,111
% Reduced	—	—	—	—	—	—	72%	65%	—	73%	61%	—	—	—	—	—	—	—

Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.59	1.24	4.34	6.62	0.01	0.17	0.89	1.00	0.16	0.41	0.52	—	1,453	1,453	0.06	0.05	0.66	1,469
Mit.	0.59	1.24	4.34	6.62	0.01	0.17	0.30	0.47	0.16	0.12	0.23	—	1,453	1,453	0.06	0.05	0.66	1,469
% Reduced	—	—	—	—	—	—	66%	53%	—	71%	56%	—	—	—	—	—	—	—
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.11	0.23	0.79	1.21	< 0.005	0.03	0.16	0.18	0.03	0.08	0.09	—	241	241	0.01	0.01	0.11	243
Mit.	0.11	0.23	0.79	1.21	< 0.005	0.03	0.05	0.09	0.03	0.02	0.04	—	241	241	0.01	0.01	0.11	243
% Reduced	—	—	—	—	—	—	66%	53%	—	71%	56%	—	—	—	—	—	—	—

2.2. Construction Emissions by Year, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	1.48	1.23	11.9	11.5	0.02	0.54	5.48	6.02	0.49	2.61	3.11	—	2,095	2,095	0.09	0.06	1.03	2,117
2025	1.63	13.7	10.9	16.8	0.02	0.44	0.69	1.13	0.41	0.17	0.57	—	3,207	3,207	0.13	0.08	3.18	3,238
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	1.48	1.23	11.9	11.4	0.02	0.54	5.48	6.02	0.49	2.61	3.11	—	2,090	2,090	0.09	0.06	0.06	2,111
2025	0.76	0.63	5.61	8.54	0.01	0.22	0.40	0.62	0.20	0.10	0.30	—	1,923	1,923	0.08	0.06	0.05	1,945
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	0.32	0.27	2.55	2.80	< 0.005	0.11	0.89	1.00	0.10	0.41	0.52	—	552	552	0.02	0.02	0.18	558
2025	0.59	1.24	4.34	6.62	0.01	0.17	0.30	0.47	0.16	0.07	0.23	—	1,453	1,453	0.06	0.05	0.66	1,469

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	0.06	0.05	0.47	0.51	< 0.005	0.02	0.16	0.18	0.02	0.08	0.09	—	91.5	91.5	< 0.005	< 0.005	0.03	92.4
2025	0.11	0.23	0.79	1.21	< 0.005	0.03	0.05	0.09	0.03	0.01	0.04	—	241	241	0.01	0.01	0.11	243

2.3. Construction Emissions by Year, Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	1.48	1.23	11.9	11.5	0.02	0.54	1.55	2.09	0.49	0.71	1.20	—	2,095	2,095	0.09	0.06	1.03	2,117
2025	1.63	13.7	10.9	16.8	0.02	0.44	0.69	1.13	0.41	0.17	0.57	—	3,207	3,207	0.13	0.08	3.18	3,238
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	1.48	1.23	11.9	11.4	0.02	0.54	1.55	2.09	0.49	0.71	1.20	—	2,090	2,090	0.09	0.06	0.06	2,111
2025	0.76	0.63	5.61	8.54	0.01	0.22	0.40	0.62	0.20	0.10	0.30	—	1,923	1,923	0.08	0.06	0.05	1,945
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	0.32	0.27	2.55	2.80	< 0.005	0.11	0.28	0.40	0.10	0.12	0.22	—	552	552	0.02	0.02	0.18	558
2025	0.59	1.24	4.34	6.62	0.01	0.17	0.30	0.47	0.16	0.07	0.23	—	1,453	1,453	0.06	0.05	0.66	1,469
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	0.06	0.05	0.47	0.51	< 0.005	0.02	0.05	0.07	0.02	0.02	0.04	—	91.5	91.5	< 0.005	< 0.005	0.03	92.4
2025	0.11	0.23	0.79	1.21	< 0.005	0.03	0.05	0.09	0.03	0.01	0.04	—	241	241	0.01	0.01	0.11	243

2.4. Operations Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	4.57	5.44	3.30	35.8	0.08	0.09	7.24	7.32	0.08	1.84	1.92	31.3	9,785	9,816	3.64	0.33	117	10,123
Mit.	4.57	5.44	3.30	35.8	0.08	0.09	7.24	7.32	0.08	1.84	1.92	30.8	9,782	9,813	3.58	0.33	117	10,119
% Reduced	—	—	—	—	—	—	—	—	—	—	—	2%	< 0.5%	< 0.5%	1%	< 0.5%	—	< 0.5%
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	4.08	4.98	3.55	30.5	0.08	0.08	7.24	7.32	0.08	1.84	1.92	31.3	9,439	9,470	3.65	0.35	91.0	9,756
Mit.	4.08	4.98	3.55	30.5	0.08	0.08	7.24	7.32	0.08	1.84	1.92	30.8	9,436	9,467	3.60	0.35	91.0	9,751
% Reduced	—	—	—	—	—	—	—	—	—	—	—	2%	< 0.5%	< 0.5%	1%	< 0.5%	—	< 0.5%
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	4.26	5.14	3.52	32.3	0.08	0.09	6.94	7.03	0.08	1.76	1.85	31.3	9,339	9,370	3.64	0.34	102	9,664
Mit.	4.26	5.14	3.52	32.3	0.08	0.09	6.94	7.03	0.08	1.76	1.85	30.8	9,336	9,367	3.58	0.34	102	9,659
% Reduced	—	—	—	—	—	—	—	—	—	—	—	2%	< 0.5%	< 0.5%	1%	< 0.5%	—	< 0.5%
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.78	0.94	0.64	5.89	0.01	0.02	1.27	1.28	0.01	0.32	0.34	5.18	1,546	1,551	0.60	0.06	16.8	1,600
Mit.	0.78	0.94	0.64	5.89	0.01	0.02	1.27	1.28	0.01	0.32	0.34	5.09	1,546	1,551	0.59	0.06	16.8	1,599
% Reduced	—	—	—	—	—	—	—	—	—	—	—	2%	< 0.5%	< 0.5%	1%	< 0.5%	—	< 0.5%

2.5. Operations Emissions by Sector, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Sector	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	4.08	3.69	2.83	32.9	0.08	0.05	7.24	7.29	0.05	1.84	1.88	—	8,025	8,025	0.38	0.31	27.1	8,154
Area	0.45	1.72	0.02	2.51	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	10.3	10.3	< 0.005	< 0.005	—	10.4
Energy	0.05	0.02	0.45	0.38	< 0.005	0.03	—	0.03	0.03	—	0.03	—	1,726	1,726	0.12	0.01	—	1,732
Water	—	—	—	—	—	—	—	—	—	—	—	4.42	23.5	27.9	0.46	0.01	—	42.5
Waste	—	—	—	—	—	—	—	—	—	—	—	26.9	0.00	26.9	2.68	0.00	—	93.9
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	90.3	90.3
Total	4.57	5.44	3.30	35.8	0.08	0.09	7.24	7.32	0.08	1.84	1.92	31.3	9,785	9,816	3.64	0.33	117	10,123
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	4.03	3.64	3.10	30.2	0.08	0.05	7.24	7.29	0.05	1.84	1.88	—	7,690	7,690	0.39	0.33	0.70	7,797
Area	—	1.31	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Energy	0.05	0.02	0.45	0.38	< 0.005	0.03	—	0.03	0.03	—	0.03	—	1,726	1,726	0.12	0.01	—	1,732
Water	—	—	—	—	—	—	—	—	—	—	—	4.42	23.5	27.9	0.46	0.01	—	42.5
Waste	—	—	—	—	—	—	—	—	—	—	—	26.9	0.00	26.9	2.68	0.00	—	93.9
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	90.3	90.3
Total	4.08	4.98	3.55	30.5	0.08	0.08	7.24	7.32	0.08	1.84	1.92	31.3	9,439	9,470	3.65	0.35	91.0	9,756
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	3.91	3.53	3.06	30.2	0.07	0.05	6.94	6.99	0.05	1.76	1.81	—	7,582	7,582	0.38	0.32	11.4	7,698
Area	0.31	1.59	0.01	1.72	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	7.08	7.08	< 0.005	< 0.005	—	7.10
Energy	0.05	0.02	0.45	0.38	< 0.005	0.03	—	0.03	0.03	—	0.03	—	1,726	1,726	0.12	0.01	—	1,732
Water	—	—	—	—	—	—	—	—	—	—	—	4.42	23.5	27.9	0.46	0.01	—	42.5
Waste	—	—	—	—	—	—	—	—	—	—	—	26.9	0.00	26.9	2.68	0.00	—	93.9
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	90.3	90.3
Total	4.26	5.14	3.52	32.3	0.08	0.09	6.94	7.03	0.08	1.76	1.85	31.3	9,339	9,370	3.64	0.34	102	9,664

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.71	0.64	0.56	5.51	0.01	0.01	1.27	1.28	0.01	0.32	0.33	—	1,255	1,255	0.06	0.05	1.89	1,275
Area	0.06	0.29	< 0.005	0.31	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.17	1.17	< 0.005	< 0.005	—	1.18
Energy	0.01	< 0.005	0.08	0.07	< 0.005	0.01	—	0.01	0.01	—	0.01	—	286	286	0.02	< 0.005	—	287
Water	—	—	—	—	—	—	—	—	—	—	—	0.73	3.89	4.62	0.08	< 0.005	—	7.04
Waste	—	—	—	—	—	—	—	—	—	—	—	4.45	0.00	4.45	0.44	0.00	—	15.6
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	15.0	15.0
Total	0.78	0.94	0.64	5.89	0.01	0.02	1.27	1.28	0.01	0.32	0.34	5.18	1,546	1,551	0.60	0.06	16.8	1,600

2.6. Operations Emissions by Sector, Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Sector	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	4.08	3.69	2.83	32.9	0.08	0.05	7.24	7.29	0.05	1.84	1.88	—	8,025	8,025	0.38	0.31	27.1	8,154
Area	0.45	1.72	0.02	2.51	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	10.3	10.3	< 0.005	< 0.005	—	10.4
Energy	0.05	0.02	0.45	0.38	< 0.005	0.03	—	0.03	0.03	—	0.03	—	1,726	1,726	0.12	0.01	—	1,732
Water	—	—	—	—	—	—	—	—	—	—	—	3.90	20.8	24.7	0.40	0.01	—	37.6
Waste	—	—	—	—	—	—	—	—	—	—	—	26.9	0.00	26.9	2.68	0.00	—	93.9
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	90.3	90.3
Total	4.57	5.44	3.30	35.8	0.08	0.09	7.24	7.32	0.08	1.84	1.92	30.8	9,782	9,813	3.58	0.33	117	10,119
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	4.03	3.64	3.10	30.2	0.08	0.05	7.24	7.29	0.05	1.84	1.88	—	7,690	7,690	0.39	0.33	0.70	7,797
Area	—	1.31	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Energy	0.05	0.02	0.45	0.38	< 0.005	0.03	—	0.03	0.03	—	0.03	—	1,726	1,726	0.12	0.01	—	1,732
Water	—	—	—	—	—	—	—	—	—	—	—	3.90	20.8	24.7	0.40	0.01	—	37.6

Waste	—	—	—	—	—	—	—	—	—	—	—	26.9	0.00	26.9	2.68	0.00	—	93.9
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	90.3	90.3
Total	4.08	4.98	3.55	30.5	0.08	0.08	7.24	7.32	0.08	1.84	1.92	30.8	9,436	9,467	3.60	0.35	91.0	9,751
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	3.91	3.53	3.06	30.2	0.07	0.05	6.94	6.99	0.05	1.76	1.81	—	7,582	7,582	0.38	0.32	11.4	7,698
Area	0.31	1.59	0.01	1.72	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	7.08	7.08	< 0.005	< 0.005	—	7.10
Energy	0.05	0.02	0.45	0.38	< 0.005	0.03	—	0.03	0.03	—	0.03	—	1,726	1,726	0.12	0.01	—	1,732
Water	—	—	—	—	—	—	—	—	—	—	—	3.90	20.8	24.7	0.40	0.01	—	37.6
Waste	—	—	—	—	—	—	—	—	—	—	—	26.9	0.00	26.9	2.68	0.00	—	93.9
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	90.3	90.3
Total	4.26	5.14	3.52	32.3	0.08	0.09	6.94	7.03	0.08	1.76	1.85	30.8	9,336	9,367	3.58	0.34	102	9,659
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.71	0.64	0.56	5.51	0.01	0.01	1.27	1.28	0.01	0.32	0.33	—	1,255	1,255	0.06	0.05	1.89	1,275
Area	0.06	0.29	< 0.005	0.31	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.17	1.17	< 0.005	< 0.005	—	1.18
Energy	0.01	< 0.005	0.08	0.07	< 0.005	0.01	—	0.01	0.01	—	0.01	—	286	286	0.02	< 0.005	—	287
Water	—	—	—	—	—	—	—	—	—	—	—	0.65	3.44	4.09	0.07	< 0.005	—	6.22
Waste	—	—	—	—	—	—	—	—	—	—	—	4.45	0.00	4.45	0.44	0.00	—	15.6
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	15.0	15.0
Total	0.78	0.94	0.64	5.89	0.01	0.02	1.27	1.28	0.01	0.32	0.34	5.09	1,546	1,551	0.59	0.06	16.8	1,599

3. Construction Emissions Details

3.1. Grading (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.41	1.19	11.4	10.7	0.02	0.53	—	0.53	0.49	—	0.49	—	1,713	1,713	0.07	0.01	—	1,719
Dust From Material Movement	—	—	—	—	—	—	5.31	5.31	—	2.57	2.57	—	—	—	—	—	—	—
Onsite truck	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	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.41	1.19	11.4	10.7	0.02	0.53	—	0.53	0.49	—	0.49	—	1,713	1,713	0.07	0.01	—	1,719
Dust From Material Movement	—	—	—	—	—	—	5.31	5.31	—	2.57	2.57	—	—	—	—	—	—	—
Onsite truck	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	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.22	0.18	1.75	1.65	< 0.005	0.08	—	0.08	0.08	—	0.08	—	263	263	0.01	< 0.005	—	264
Dust From Material Movement	—	—	—	—	—	—	0.82	0.82	—	0.39	0.39	—	—	—	—	—	—	—
Onsite truck	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	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.03	0.32	0.30	< 0.005	0.01	—	0.01	0.01	—	0.01	—	43.5	43.5	< 0.005	< 0.005	—	43.7

Dust From Material Movement	—	—	—	—	—	—	0.15	0.15	—	0.07	0.07	—	—	—	—	—	—	—
Onsite truck	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	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.03	0.04	0.57	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	106	106	< 0.005	< 0.005	0.42	107
Vendor	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	0.00	0.00
Hauling	0.03	0.01	0.43	0.20	< 0.005	< 0.005	0.07	0.07	< 0.005	0.02	0.02	—	276	276	0.02	0.04	0.61	291
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.03	0.04	0.48	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	100	100	< 0.005	< 0.005	0.01	102
Vendor	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	0.00	0.00
Hauling	0.03	0.01	0.45	0.20	< 0.005	< 0.005	0.07	0.07	< 0.005	0.02	0.02	—	277	277	0.02	0.04	0.02	290
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.08	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	15.6	15.6	< 0.005	< 0.005	0.03	15.8
Vendor	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	0.00	0.00
Hauling	< 0.005	< 0.005	0.07	0.03	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	42.4	42.4	< 0.005	0.01	0.04	44.6
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.59	2.59	< 0.005	< 0.005	< 0.005	2.62
Vendor	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	0.00	0.00
Hauling	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	7.02	7.02	< 0.005	< 0.005	0.01	7.38

3.2. Grading (2024) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.41	1.19	11.4	10.7	0.02	0.53	—	0.53	0.49	—	0.49	—	1,713	1,713	0.07	0.01	—	1,719
Dust From Material Movement	—	—	—	—	—	—	1.38	1.38	—	0.67	0.67	—	—	—	—	—	—	—
Onsite truck	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	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.41	1.19	11.4	10.7	0.02	0.53	—	0.53	0.49	—	0.49	—	1,713	1,713	0.07	0.01	—	1,719
Dust From Material Movement	—	—	—	—	—	—	1.38	1.38	—	0.67	0.67	—	—	—	—	—	—	—
Onsite truck	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	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.22	0.18	1.75	1.65	< 0.005	0.08	—	0.08	0.08	—	0.08	—	263	263	0.01	< 0.005	—	264
Dust From Material Movement	—	—	—	—	—	—	0.21	0.21	—	0.10	0.10	—	—	—	—	—	—	—
Onsite truck	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	0.00	0.00

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.03	0.32	0.30	< 0.005	0.01	—	0.01	0.01	—	0.01	—	43.5	43.5	< 0.005	< 0.005	—	43.7
Dust From Material Movement	—	—	—	—	—	—	0.04	0.04	—	0.02	0.02	—	—	—	—	—	—	—
Onsite truck	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	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.03	0.04	0.57	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	106	106	< 0.005	< 0.005	0.42	107
Vendor	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	0.00	0.00
Hauling	0.03	0.01	0.43	0.20	< 0.005	< 0.005	0.07	0.07	< 0.005	0.02	0.02	—	276	276	0.02	0.04	0.61	291
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.03	0.04	0.48	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	100	100	< 0.005	< 0.005	0.01	102
Vendor	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	0.00	0.00
Hauling	0.03	0.01	0.45	0.20	< 0.005	< 0.005	0.07	0.07	< 0.005	0.02	0.02	—	277	277	0.02	0.04	0.02	290
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.08	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	15.6	15.6	< 0.005	< 0.005	0.03	15.8
Vendor	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	0.00	0.00
Hauling	< 0.005	< 0.005	0.07	0.03	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	42.4	42.4	< 0.005	0.01	0.04	44.6
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.59	2.59	< 0.005	< 0.005	< 0.005	2.62
Vendor	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	0.00	0.00
Hauling	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	7.02	7.02	< 0.005	< 0.005	0.01	7.38

3.3. Building Construction (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.67	0.56	5.60	6.98	0.01	0.26	—	0.26	0.23	—	0.23	—	1,305	1,305	0.05	0.01	—	1,309
Onsite truck	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	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.08	0.07	0.67	0.83	< 0.005	0.03	—	0.03	0.03	—	0.03	—	156	156	0.01	< 0.005	—	156
Onsite truck	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	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.12	0.15	< 0.005	0.01	—	0.01	0.01	—	0.01	—	25.8	25.8	< 0.005	< 0.005	—	25.9
Onsite truck	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	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.12	0.11	0.14	1.55	0.00	0.00	0.32	0.32	0.00	0.07	0.07	—	325	325	0.01	0.01	0.04	329
Vendor	0.02	0.01	0.37	0.18	< 0.005	< 0.005	0.08	0.09	< 0.005	0.02	0.03	—	306	306	0.01	0.04	0.02	319
Hauling	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	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.02	0.19	0.00	0.00	0.04	0.04	0.00	0.01	0.01	—	39.3	39.3	< 0.005	< 0.005	0.07	39.9
Vendor	< 0.005	< 0.005	0.05	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	36.5	36.5	< 0.005	0.01	0.04	38.1
Hauling	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	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	6.51	6.51	< 0.005	< 0.005	0.01	6.60
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	6.04	6.04	< 0.005	< 0.005	0.01	6.30
Hauling	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	0.00	0.00

3.4. Building Construction (2024) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.67	0.56	5.60	6.98	0.01	0.26	—	0.26	0.23	—	0.23	—	1,305	1,305	0.05	0.01	—	1,309
Onsite truck	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	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.08	0.07	0.67	0.83	< 0.005	0.03	—	0.03	0.03	—	0.03	—	156	156	0.01	< 0.005	—	156
Onsite truck	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	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.12	0.15	< 0.005	0.01	—	0.01	0.01	—	0.01	—	25.8	25.8	< 0.005	< 0.005	—	25.9
Onsite truck	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	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.12	0.11	0.14	1.55	0.00	0.00	0.32	0.32	0.00	0.07	0.07	—	325	325	0.01	0.01	0.04	329
Vendor	0.02	0.01	0.37	0.18	< 0.005	< 0.005	0.08	0.09	< 0.005	0.02	0.03	—	306	306	0.01	0.04	0.02	319
Hauling	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	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.02	0.19	0.00	0.00	0.04	0.04	0.00	0.01	0.01	—	39.3	39.3	< 0.005	< 0.005	0.07	39.9
Vendor	< 0.005	< 0.005	0.05	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	36.5	36.5	< 0.005	0.01	0.04	38.1
Hauling	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	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	6.51	6.51	< 0.005	< 0.005	0.01	6.60
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	6.04	6.04	< 0.005	< 0.005	0.01	6.30
Hauling	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	0.00	0.00

3.5. Building Construction (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.62	0.52	5.14	6.94	0.01	0.22	—	0.22	0.20	—	0.20	—	1,305	1,305	0.05	0.01	—	1,309
Onsite truck	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	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.62	0.52	5.14	6.94	0.01	0.22	—	0.22	0.20	—	0.20	—	1,305	1,305	0.05	0.01	—	1,309
Onsite truck	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	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.44	0.37	3.67	4.96	0.01	0.16	—	0.16	0.14	—	0.14	—	932	932	0.04	0.01	—	935
Onsite truck	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	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.08	0.07	0.67	0.90	< 0.005	0.03	—	0.03	0.03	—	0.03	—	154	154	0.01	< 0.005	—	155
Onsite truck	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	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.12	0.10	0.11	1.69	0.00	0.00	0.32	0.32	0.00	0.07	0.07	—	336	336	0.01	0.01	1.23	341

Vendor	0.02	0.01	0.34	0.17	< 0.005	< 0.005	0.08	0.09	< 0.005	0.02	0.02	—	301	301	0.01	0.04	0.82	314
Hauling	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	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.12	0.10	0.12	1.43	0.00	0.00	0.32	0.32	0.00	0.07	0.07	—	318	318	0.01	0.01	0.03	322
Vendor	0.02	0.01	0.36	0.17	< 0.005	< 0.005	0.08	0.09	< 0.005	0.02	0.02	—	301	301	0.01	0.04	0.02	314
Hauling	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	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.07	0.09	1.07	0.00	0.00	0.22	0.22	0.00	0.05	0.05	—	231	231	0.01	0.01	0.38	234
Vendor	0.02	0.01	0.26	0.12	< 0.005	< 0.005	0.06	0.06	< 0.005	0.02	0.02	—	215	215	0.01	0.03	0.25	224
Hauling	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	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.02	0.20	0.00	0.00	0.04	0.04	0.00	0.01	0.01	—	38.2	38.2	< 0.005	< 0.005	0.06	38.7
Vendor	< 0.005	< 0.005	0.05	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	35.5	35.5	< 0.005	< 0.005	0.04	37.1
Hauling	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	0.00	0.00

3.6. Building Construction (2025) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.62	0.52	5.14	6.94	0.01	0.22	—	0.22	0.20	—	0.20	—	1,305	1,305	0.05	0.01	—	1,309
Onsite truck	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	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.62	0.52	5.14	6.94	0.01	0.22	—	0.22	0.20	—	0.20	—	1,305	1,305	0.05	0.01	—	1,309
Onsite truck	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	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.44	0.37	3.67	4.96	0.01	0.16	—	0.16	0.14	—	0.14	—	932	932	0.04	0.01	—	935
Onsite truck	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	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.08	0.07	0.67	0.90	< 0.005	0.03	—	0.03	0.03	—	0.03	—	154	154	0.01	< 0.005	—	155
Onsite truck	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	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.12	0.10	0.11	1.69	0.00	0.00	0.32	0.32	0.00	0.07	0.07	—	336	336	0.01	0.01	1.23	341
Vendor	0.02	0.01	0.34	0.17	< 0.005	< 0.005	0.08	0.09	< 0.005	0.02	0.02	—	301	301	0.01	0.04	0.82	314
Hauling	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	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.12	0.10	0.12	1.43	0.00	0.00	0.32	0.32	0.00	0.07	0.07	—	318	318	0.01	0.01	0.03	322
Vendor	0.02	0.01	0.36	0.17	< 0.005	< 0.005	0.08	0.09	< 0.005	0.02	0.02	—	301	301	0.01	0.04	0.02	314
Hauling	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	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.08	0.07	0.09	1.07	0.00	0.00	0.22	0.22	0.00	0.05	0.05	—	231	231	0.01	0.01	0.38	234
Vendor	0.02	0.01	0.26	0.12	< 0.005	< 0.005	0.06	0.06	< 0.005	0.02	0.02	—	215	215	0.01	0.03	0.25	224
Hauling	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	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.02	0.20	0.00	0.00	0.04	0.04	0.00	0.01	0.01	—	38.2	38.2	< 0.005	< 0.005	0.06	38.7
Vendor	< 0.005	< 0.005	0.05	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	35.5	35.5	< 0.005	< 0.005	0.04	37.1
Hauling	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	0.00	0.00

3.7. Paving (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.61	0.51	4.37	5.31	0.01	0.19	—	0.19	0.18	—	0.18	—	823	823	0.03	0.01	—	826
Paving	—	0.03	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.03	0.26	0.32	< 0.005	0.01	—	0.01	0.01	—	0.01	—	49.6	49.6	< 0.005	< 0.005	—	49.8
Paving	—	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.00	0.00

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.05	0.06	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	8.22	8.22	< 0.005	< 0.005	—	8.25
Paving	—	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.08	0.08	1.22	0.00	0.00	0.23	0.23	0.00	0.05	0.05	—	242	242	0.01	0.01	0.89	246
Vendor	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	0.00	0.00
Hauling	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	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.07	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	14.0	14.0	< 0.005	< 0.005	0.02	14.2
Vendor	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	0.00	0.00
Hauling	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	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.32	2.32	< 0.005	< 0.005	< 0.005	2.35
Vendor	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	0.00	0.00
Hauling	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	0.00	0.00

3.8. Paving (2025) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.61	0.51	4.37	5.31	0.01	0.19	—	0.19	0.18	—	0.18	—	823	823	0.03	0.01	—	826
Paving	—	0.03	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.03	0.26	0.32	< 0.005	0.01	—	0.01	0.01	—	0.01	—	49.6	49.6	< 0.005	< 0.005	—	49.8
Paving	—	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.05	0.06	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	8.22	8.22	< 0.005	< 0.005	—	8.25
Paving	—	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.08	0.08	1.22	0.00	0.00	0.23	0.23	0.00	0.05	0.05	—	242	242	0.01	0.01	0.89	246
Vendor	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	0.00	0.00
Hauling	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	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.07	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	14.0	14.0	< 0.005	< 0.005	0.02	14.2
Vendor	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	0.00	0.00
Hauling	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	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.32	2.32	< 0.005	< 0.005	< 0.005	2.35
Vendor	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	0.00	0.00
Hauling	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	0.00	0.00

3.9. Architectural Coating (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.15	0.13	0.88	1.14	< 0.005	0.03	—	0.03	0.03	—	0.03	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	—	12.3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.01	0.01	0.05	0.07	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	8.05	8.05	< 0.005	< 0.005	—	8.08
Architectural Coatings	—	0.74	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.33	1.33	< 0.005	< 0.005	—	1.34
Architectural Coatings	—	0.14	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.02	0.34	0.00	0.00	0.06	0.06	0.00	0.01	0.01	—	67.1	67.1	< 0.005	< 0.005	0.25	68.1
Vendor	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	0.00	0.00
Hauling	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	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	3.89	3.89	< 0.005	< 0.005	0.01	3.94
Vendor	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	0.00	0.00
Hauling	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	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.64	0.64	< 0.005	< 0.005	< 0.005	0.65

Vendor	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	0.00	0.00
Hauling	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	0.00	0.00

3.10. Architectural Coating (2025) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.15	0.13	0.88	1.14	< 0.005	0.03	—	0.03	0.03	—	0.03	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	—	12.3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.05	0.07	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	8.05	8.05	< 0.005	< 0.005	—	8.08
Architectural Coatings	—	0.74	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.33	1.33	< 0.005	< 0.005	—	1.34

Architect Coatings	—	0.14	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.02	0.34	0.00	0.00	0.06	0.06	0.00	0.01	0.01	—	67.1	67.1	< 0.005	< 0.005	0.25	68.1
Vendor	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	0.00	0.00
Hauling	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	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	3.89	3.89	< 0.005	< 0.005	0.01	3.94
Vendor	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	0.00	0.00
Hauling	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	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.64	0.64	< 0.005	< 0.005	< 0.005	0.65
Vendor	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	0.00	0.00
Hauling	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	0.00	0.00

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hotel	4.08	3.69	2.83	32.9	0.08	0.05	7.24	7.29	0.05	1.84	1.88	—	8,025	8,025	0.38	0.31	27.1	8,154
Parking Lot	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	0.00	0.00
Total	4.08	3.69	2.83	32.9	0.08	0.05	7.24	7.29	0.05	1.84	1.88	—	8,025	8,025	0.38	0.31	27.1	8,154
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hotel	4.03	3.64	3.10	30.2	0.08	0.05	7.24	7.29	0.05	1.84	1.88	—	7,690	7,690	0.39	0.33	0.70	7,797
Parking Lot	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	0.00	0.00
Total	4.03	3.64	3.10	30.2	0.08	0.05	7.24	7.29	0.05	1.84	1.88	—	7,690	7,690	0.39	0.33	0.70	7,797
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hotel	0.71	0.64	0.56	5.51	0.01	0.01	1.27	1.28	0.01	0.32	0.33	—	1,255	1,255	0.06	0.05	1.89	1,275
Parking Lot	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	0.00	0.00
Total	0.71	0.64	0.56	5.51	0.01	0.01	1.27	1.28	0.01	0.32	0.33	—	1,255	1,255	0.06	0.05	1.89	1,275

4.1.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hotel	4.08	3.69	2.83	32.9	0.08	0.05	7.24	7.29	0.05	1.84	1.88	—	8,025	8,025	0.38	0.31	27.1	8,154
Parking Lot	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	0.00	0.00

Total	4.08	3.69	2.83	32.9	0.08	0.05	7.24	7.29	0.05	1.84	1.88	—	8,025	8,025	0.38	0.31	27.1	8,154
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hotel	4.03	3.64	3.10	30.2	0.08	0.05	7.24	7.29	0.05	1.84	1.88	—	7,690	7,690	0.39	0.33	0.70	7,797
Parking Lot	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	0.00	0.00
Total	4.03	3.64	3.10	30.2	0.08	0.05	7.24	7.29	0.05	1.84	1.88	—	7,690	7,690	0.39	0.33	0.70	7,797
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hotel	0.71	0.64	0.56	5.51	0.01	0.01	1.27	1.28	0.01	0.32	0.33	—	1,255	1,255	0.06	0.05	1.89	1,275
Parking Lot	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	0.00	0.00
Total	0.71	0.64	0.56	5.51	0.01	0.01	1.27	1.28	0.01	0.32	0.33	—	1,255	1,255	0.06	0.05	1.89	1,275

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hotel	—	—	—	—	—	—	—	—	—	—	—	—	1,179	1,179	0.07	0.01	—	1,183
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	12.5	12.5	< 0.005	< 0.005	—	12.6
Total	—	—	—	—	—	—	—	—	—	—	—	—	1,191	1,191	0.07	0.01	—	1,196
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hotel	—	—	—	—	—	—	—	—	—	—	—	—	1,179	1,179	0.07	0.01	—	1,183

Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	12.5	12.5	< 0.005	< 0.005	—	12.6
Total	—	—	—	—	—	—	—	—	—	—	—	—	1,191	1,191	0.07	0.01	—	1,196
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hotel	—	—	—	—	—	—	—	—	—	—	—	—	195	195	0.01	< 0.005	—	196
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	2.07	2.07	< 0.005	< 0.005	—	2.08
Total	—	—	—	—	—	—	—	—	—	—	—	—	197	197	0.01	< 0.005	—	198

4.2.2. Electricity Emissions By Land Use - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hotel	—	—	—	—	—	—	—	—	—	—	—	—	1,179	1,179	0.07	0.01	—	1,183
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	12.5	12.5	< 0.005	< 0.005	—	12.6
Total	—	—	—	—	—	—	—	—	—	—	—	—	1,191	1,191	0.07	0.01	—	1,196
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hotel	—	—	—	—	—	—	—	—	—	—	—	—	1,179	1,179	0.07	0.01	—	1,183
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	12.5	12.5	< 0.005	< 0.005	—	12.6
Total	—	—	—	—	—	—	—	—	—	—	—	—	1,191	1,191	0.07	0.01	—	1,196
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hotel	—	—	—	—	—	—	—	—	—	—	—	—	195	195	0.01	< 0.005	—	196
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	2.07	2.07	< 0.005	< 0.005	—	2.08

Total	—	—	—	—	—	—	—	—	—	—	—	—	197	197	0.01	< 0.005	—	198

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hotel	0.05	0.02	0.45	0.38	< 0.005	0.03	—	0.03	0.03	—	0.03	—	535	535	0.05	< 0.005	—	536
Parking Lot	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
Total	0.05	0.02	0.45	0.38	< 0.005	0.03	—	0.03	0.03	—	0.03	—	535	535	0.05	< 0.005	—	536
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hotel	0.05	0.02	0.45	0.38	< 0.005	0.03	—	0.03	0.03	—	0.03	—	535	535	0.05	< 0.005	—	536
Parking Lot	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
Total	0.05	0.02	0.45	0.38	< 0.005	0.03	—	0.03	0.03	—	0.03	—	535	535	0.05	< 0.005	—	536
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hotel	0.01	< 0.005	0.08	0.07	< 0.005	0.01	—	0.01	0.01	—	0.01	—	88.5	88.5	0.01	< 0.005	—	88.8
Parking Lot	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
Total	0.01	< 0.005	0.08	0.07	< 0.005	0.01	—	0.01	0.01	—	0.01	—	88.5	88.5	0.01	< 0.005	—	88.8

4.2.4. Natural Gas Emissions By Land Use - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hotel	0.05	0.02	0.45	0.38	< 0.005	0.03	—	0.03	0.03	—	0.03	—	535	535	0.05	< 0.005	—	536
Parking Lot	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
Total	0.05	0.02	0.45	0.38	< 0.005	0.03	—	0.03	0.03	—	0.03	—	535	535	0.05	< 0.005	—	536
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hotel	0.05	0.02	0.45	0.38	< 0.005	0.03	—	0.03	0.03	—	0.03	—	535	535	0.05	< 0.005	—	536
Parking Lot	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
Total	0.05	0.02	0.45	0.38	< 0.005	0.03	—	0.03	0.03	—	0.03	—	535	535	0.05	< 0.005	—	536
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hotel	0.01	< 0.005	0.08	0.07	< 0.005	0.01	—	0.01	0.01	—	0.01	—	88.5	88.5	0.01	< 0.005	—	88.8
Parking Lot	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
Total	0.01	< 0.005	0.08	0.07	< 0.005	0.01	—	0.01	0.01	—	0.01	—	88.5	88.5	0.01	< 0.005	—	88.8

4.3. Area Emissions by Source

4.3.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Source	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	1.24	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Architectural	—	0.07	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.45	0.41	0.02	2.51	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	10.3	10.3	< 0.005	< 0.005	—	10.4
Total	0.45	1.72	0.02	2.51	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	10.3	10.3	< 0.005	< 0.005	—	10.4
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	1.24	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.07	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	1.31	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	0.23	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.06	0.05	< 0.005	0.31	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.17	1.17	< 0.005	< 0.005	—	1.18
Total	0.06	0.29	< 0.005	0.31	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.17	1.17	< 0.005	< 0.005	—	1.18

4.3.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Source	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	1.24	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.07	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.45	0.41	0.02	2.51	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	10.3	10.3	< 0.005	< 0.005	—	10.4
Total	0.45	1.72	0.02	2.51	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	10.3	10.3	< 0.005	< 0.005	—	10.4
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	1.24	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.07	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	1.31	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	0.23	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.06	0.05	< 0.005	0.31	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.17	1.17	< 0.005	< 0.005	—	1.18
Total	0.06	0.29	< 0.005	0.31	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.17	1.17	< 0.005	< 0.005	—	1.18

4.4. Water Emissions by Land Use

4.4.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hotel	—	—	—	—	—	—	—	—	—	—	—	4.42	23.5	27.9	0.46	0.01	—	42.5
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	4.42	23.5	27.9	0.46	0.01	—	42.5
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hotel	—	—	—	—	—	—	—	—	—	—	—	4.42	23.5	27.9	0.46	0.01	—	42.5
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	4.42	23.5	27.9	0.46	0.01	—	42.5
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hotel	—	—	—	—	—	—	—	—	—	—	—	0.73	3.89	4.62	0.08	< 0.005	—	7.04
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	0.73	3.89	4.62	0.08	< 0.005	—	7.04

4.4.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hotel	—	—	—	—	—	—	—	—	—	—	—	3.90	20.8	24.7	0.40	0.01	—	37.6
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	3.90	20.8	24.7	0.40	0.01	—	37.6
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hotel	—	—	—	—	—	—	—	—	—	—	—	3.90	20.8	24.7	0.40	0.01	—	37.6
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	3.90	20.8	24.7	0.40	0.01	—	37.6
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hotel	—	—	—	—	—	—	—	—	—	—	—	0.65	3.44	4.09	0.07	< 0.005	—	6.22
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	0.65	3.44	4.09	0.07	< 0.005	—	6.22

4.5. Waste Emissions by Land Use

4.5.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hotel	—	—	—	—	—	—	—	—	—	—	—	26.9	0.00	26.9	2.68	0.00	—	93.9
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00

Total	—	—	—	—	—	—	—	—	—	—	—	26.9	0.00	26.9	2.68	0.00	—	93.9
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hotel	—	—	—	—	—	—	—	—	—	—	—	26.9	0.00	26.9	2.68	0.00	—	93.9
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	26.9	0.00	26.9	2.68	0.00	—	93.9
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hotel	—	—	—	—	—	—	—	—	—	—	—	4.45	0.00	4.45	0.44	0.00	—	15.6
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	4.45	0.00	4.45	0.44	0.00	—	15.6

4.5.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hotel	—	—	—	—	—	—	—	—	—	—	—	26.9	0.00	26.9	2.68	0.00	—	93.9
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	26.9	0.00	26.9	2.68	0.00	—	93.9
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hotel	—	—	—	—	—	—	—	—	—	—	—	26.9	0.00	26.9	2.68	0.00	—	93.9
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00

Total	—	—	—	—	—	—	—	—	—	—	—	26.9	0.00	26.9	2.68	0.00	—	93.9
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hotel	—	—	—	—	—	—	—	—	—	—	—	4.45	0.00	4.45	0.44	0.00	—	15.6
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	4.45	0.00	4.45	0.44	0.00	—	15.6

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hotel	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	90.3	90.3
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	90.3	90.3
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hotel	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	90.3	90.3
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	90.3	90.3
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hotel	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	15.0	15.0
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	15.0	15.0

4.6.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hotel	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	90.3	90.3
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	90.3	90.3
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hotel	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	90.3	90.3
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	90.3	90.3
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hotel	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	15.0	15.0
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	15.0	15.0

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.7.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.8.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.9.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.4. Soil Carbon Accumulation By Vegetation Type - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.5. Above and Belowground Carbon Accumulation by Land Use Type - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.6. Avoided and Sequestered Emissions by Species - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Grading	Grading	8/15/2024	10/31/2024	5.00	56.0	—
Building Construction	Building Construction	11/1/2024	12/31/2025	5.00	304	—
Paving	Paving	9/1/2025	9/30/2025	5.00	22.0	—
Architectural Coating	Architectural Coating	9/1/2025	9/30/2025	5.00	22.0	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Grading	Graders	Diesel	Average	1.00	6.00	148	0.41
Grading	Rubber Tired Dozers	Diesel	Average	1.00	6.00	367	0.40

Grading	Tractors/Loaders/Backh	Diesel	Average	1.00	7.00	84.0	0.37
Building Construction	Cranes	Diesel	Average	1.00	4.00	367	0.29
Building Construction	Forklifts	Diesel	Average	2.00	6.00	82.0	0.20
Building Construction	Tractors/Loaders/Backh oes	Diesel	Average	2.00	8.00	84.0	0.37
Paving	Cement and Mortar Mixers	Diesel	Average	4.00	6.00	10.0	0.56
Paving	Pavers	Diesel	Average	1.00	7.00	81.0	0.42
Paving	Rollers	Diesel	Average	1.00	7.00	36.0	0.38
Paving	Tractors/Loaders/Backh oes	Diesel	Average	1.00	7.00	84.0	0.37
Architectural Coating	Air Compressors	Diesel	Average	1.00	6.00	37.0	0.48

5.2.2. Mitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Grading	Graders	Diesel	Average	1.00	6.00	148	0.41
Grading	Rubber Tired Dozers	Diesel	Average	1.00	6.00	367	0.40
Grading	Tractors/Loaders/Backh oes	Diesel	Average	1.00	7.00	84.0	0.37
Building Construction	Cranes	Diesel	Average	1.00	4.00	367	0.29
Building Construction	Forklifts	Diesel	Average	2.00	6.00	82.0	0.20
Building Construction	Tractors/Loaders/Backh oes	Diesel	Average	2.00	8.00	84.0	0.37
Paving	Cement and Mortar Mixers	Diesel	Average	4.00	6.00	10.0	0.56
Paving	Pavers	Diesel	Average	1.00	7.00	81.0	0.42
Paving	Rollers	Diesel	Average	1.00	7.00	36.0	0.38
Paving	Tractors/Loaders/Backh oes	Diesel	Average	1.00	7.00	84.0	0.37
Architectural Coating	Air Compressors	Diesel	Average	1.00	6.00	37.0	0.48

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Grading	—	—	—	—
Grading	Worker	7.50	18.5	LDA,LDT1,LDT2
Grading	Vendor	—	10.2	HHDT,MHDT
Grading	Hauling	10.7	7.00	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	24.3	18.5	LDA,LDT1,LDT2
Building Construction	Vendor	9.47	10.2	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	17.5	18.5	LDA,LDT1,LDT2
Paving	Vendor	—	10.2	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	4.85	18.5	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	10.2	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	—	—	HHDT

5.3.2. Mitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix

Grading	—	—	—	—
Grading	Worker	7.50	18.5	LDA,LDT1,LDT2
Grading	Vendor	—	10.2	HHDT,MHDT
Grading	Hauling	10.7	7.00	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	24.3	18.5	LDA,LDT1,LDT2
Building Construction	Vendor	9.47	10.2	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	17.5	18.5	LDA,LDT1,LDT2
Paving	Vendor	—	10.2	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	4.85	18.5	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	10.2	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
Architectural Coating	0.00	0.00	86,685	28,895	588

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (Cubic Yards)	Material Exported (Cubic Yards)	Acres Graded (acres)	Material Demolished (sq. ft.)	Acres Paved (acres)
Grading	—	4,800	42.0	0.00	—
Paving	0.00	0.00	0.00	0.00	0.22

5.6.2. Construction Earthmoving Control Strategies

Non-applicable. No control strategies activated by user.

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
Hotel	0.00	0%
Parking Lot	0.22	100%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2024	0.00	532	0.03	< 0.005
2025	0.00	532	0.03	< 0.005

5.9. Operational Mobile Sources

5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Hotel	1,113	915	1,113	395,928	10,205	8,389	10,205	3,630,024
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

5.9.2. Mitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Hotel	1,113	915	1,113	395,928	10,205	8,389	10,205	3,630,024
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

5.10.1.2. Mitigated

5.10.2. Architectural Coatings

Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
0	0.00	86,685	28,895	588

5.10.3. Landscape Equipment

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	250

5.10.4. Landscape Equipment - Mitigated

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	250

5.11. Operational Energy Consumption

5.11.1. Unmitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Hotel	808,696	532	0.0330	0.0040	1,668,496
Parking Lot	8,586	532	0.0330	0.0040	0.00

5.11.2. Mitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Hotel	808,696	532	0.0330	0.0040	1,668,496
Parking Lot	8,586	532	0.0330	0.0040	0.00

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Hotel	2,308,376	74,583
Parking Lot	0.00	0.00

5.12.2. Mitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Hotel	2,035,757	74,583
Parking Lot	0.00	0.00

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Hotel	49.8	—
Parking Lot	0.00	—

5.13.2. Mitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Hotel	49.8	—
Parking Lot	0.00	—

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
Hotel	Household refrigerators and/or freezers	R-134a	1,430	0.00	0.60	0.00	1.00
Hotel	Other commercial A/C and heat pumps	R-410A	2,088	1.80	4.00	4.00	18.0
Hotel	Walk-in refrigerators and freezers	R-404A	3,922	< 0.005	7.50	7.50	20.0

5.14.2. Mitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
Hotel	Household refrigerators and/or freezers	R-134a	1,430	0.00	0.60	0.00	1.00
Hotel	Other commercial A/C and heat pumps	R-410A	2,088	1.80	4.00	4.00	18.0
Hotel	Walk-in refrigerators and freezers	R-404A	3,922	< 0.005	7.50	7.50	20.0

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor

5.15.2. Mitigated

Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

Equipment Type	Fuel Type	Number per Day	Hours per Day	Hours per Year	Horsepower	Load Factor

5.16.2. Process Boilers

Equipment Type	Fuel Type	Number	Boiler Rating (MMBtu/hr)	Daily Heat Input (MMBtu/day)	Annual Heat Input (MMBtu/yr)

5.17. User Defined

Equipment Type	Fuel Type

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1.2. Mitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.1.2. Mitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

5.18.2.2. Mitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

Cal-Adapt midcentury 2040–2059 average projections for four hazards are reported below for your project location. These are under Representation Concentration Pathway (RCP) 8.5 which assumes GHG emissions will continue to rise strongly through 2050 and then plateau around 2100.

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	25.9	annual days of extreme heat
Extreme Precipitation	9.15	annual days with precipitation above 20 mm
Sea Level Rise	—	meters of inundation depth
Wildfire	16.9	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about ¾ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (Radke et al., 2017, CEC-500-2017-008), and consider inundation location and depth for the San Francisco Bay, the Sacramento-San Joaquin River Delta and California coast resulting different increments of sea level rise coupled with extreme storm events. Users may select from four scenarios to view the range in potential inundation depth for the grid cell. The four scenarios are: No rise, 0.5 meter, 1.0 meter, 1.41 meters
Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	N/A	N/A	N/A	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	N/A	N/A	N/A	N/A

Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	N/A	N/A	N/A	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	N/A	N/A	N/A	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	N/A	N/A	N/A	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction measures.

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	84.6
AQ-PM	70.7
AQ-DPM	57.7
Drinking Water	73.7
Lead Risk Housing	54.4
Pesticides	0.00
Toxic Releases	70.1
Traffic	80.3
Effect Indicators	—
CleanUp Sites	74.9
Groundwater	0.00
Haz Waste Facilities/Generators	59.8
Impaired Water Bodies	0.00
Solid Waste	70.4
Sensitive Population	—
Asthma	6.04
Cardio-vascular	7.47
Low Birth Weights	7.29
Socioeconomic Factor Indicators	—
Education	42.7
Housing	10.2
Linguistic	80.2
Poverty	27.9
Unemployment	45.8

7.2. Healthy Places Index Scores

The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Economic	—
Above Poverty	84.3320929
Employed	68.92082638
Median HI	57.88528166
Education	—
Bachelor's or higher	80.67496471
High school enrollment	100
Preschool enrollment	84.88387014
Transportation	—
Auto Access	70.20402926
Active commuting	5.915565251
Social	—
2-parent households	35.26241499
Voting	21.00603105
Neighborhood	—
Alcohol availability	87.47593995
Park access	34.12036443
Retail density	39.49698447
Supermarket access	46.73424868
Tree canopy	66.75221352
Housing	—
Homeownership	46.75991274
Housing habitability	43.07712049
Low-inc homeowner severe housing cost burden	33.1707943

Low-inc renter severe housing cost burden	70.48633389
Uncrowded housing	63.4800462
Health Outcomes	—
Insured adults	52.11086873
Arthritis	0.0
Asthma ER Admissions	94.2
High Blood Pressure	0.0
Cancer (excluding skin)	0.0
Asthma	0.0
Coronary Heart Disease	0.0
Chronic Obstructive Pulmonary Disease	0.0
Diagnosed Diabetes	0.0
Life Expectancy at Birth	97.0
Cognitively Disabled	87.2
Physically Disabled	80.2
Heart Attack ER Admissions	84.0
Mental Health Not Good	0.0
Chronic Kidney Disease	0.0
Obesity	0.0
Pedestrian Injuries	97.1
Physical Health Not Good	0.0
Stroke	0.0
Health Risk Behaviors	—
Binge Drinking	0.0
Current Smoker	0.0
No Leisure Time for Physical Activity	0.0
Climate Change Exposures	—

Wildfire Risk	0.0
SLR Inundation Area	0.0
Children	84.9
Elderly	16.5
English Speaking	18.2
Foreign-born	95.7
Outdoor Workers	60.7
Climate Change Adaptive Capacity	—
Impervious Surface Cover	34.1
Traffic Density	80.4
Traffic Access	23.0
Other Indices	—
Hardship	23.2
Other Decision Support	—
2016 Voting	20.4

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	30.0
Healthy Places Index Score for Project Location (b)	65.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No
Project Located in a Low-Income Community (Assembly Bill 1550)	No
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

a: The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.
b: The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

Screen	Justification
Land Use	Per site plan
Construction: Construction Phases	Per questionnaire
Construction: Trips and VMT	Per questionnaire
Construction: Architectural Coatings	SCAQMD Rule 1113
Operations: Vehicle Data	Per traffic study, assume weekday trip rates for Sunday as a conservative analysis
Operations: Architectural Coatings	SCAQMD Rule 1113

ATTACHMENT F: NOISE AND VIBRATION ASSESSMENT

Michael Baker INTERNATIONAL

We Make a Difference

MEMORANDUM

To: Lisa Flores, City of Arcadia

From: Zhe Chen, Michael Baker International

Date: July 22, 2024

Subject: Tempo by Hilton Project – Noise and Vibration Assessment

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PURPOSE AND BACKGROUND

The purpose of this memorandum is to evaluate potential short- and long-term noise and vibration related impacts to surrounding land uses as a result of the construction and operation of a proposed hotel building and associated improvements in support of the Tempo by Hilton Project Addendum to the Initial Study/Mitigated Negative Declaration, Arcadia Hotel and Annex (Hotel Indigo) Project (2020 IS/MND).

The City prepared the 2020 IS/MND for a redevelopment project located at 125 West Huntington Drive and 123 West Huntington Drive (Original Project Site). On February 5, 2013, the City previously approved the modification of an existing 60,811-square-foot, three-story office building (Parsons building) and the construction of two new medical office buildings, a new general office building, and a new parking structure on the Original Project Site. Of the four new buildings approved under the 2013 development project, only the parking structure and the two medical office buildings (now occupied by the Keck Medicine of University of Southern California [USC]) were constructed. The 2020 IS/MND analyzed (1) the redevelopment of the existing Parsons building on the Original Project Site to allow for 76,754 square feet of hotel and appurtenant uses, including 90 hotel rooms, amenities, and employee or guest shared spaces, and (2) the construction a new 61,538-square-foot, five-story hotel annex building containing 75 hotel rooms and additional amenities such as a hotel spa, café, and outdoor patios to the east of the Parson's building. No changes to the two existing Keck Medicine of USC medical office buildings and parking structure were proposed under the Approved Project. The 2020 IS/MND was adopted by the City of Arcadia Planning Commission on April 14, 2020 (Resolution No. 2050).

The Tempo by Hiton Project Addendum (Tempo Addendum) analyzes the environmental effects of the Revised Project, which is comprised of the Approved Project described above, and the Tempo Project, which includes a lot line adjustment (LLA) to merge the parcel identified as Assessor's Parcel Number (APN) 2775-015-011 with the Original Project Site (APNs 5775-015-024, 5775-015-027, 5775-015-028, and 5775-015-029) in order to create one legal parcel (Revised Project Site) and to construct a new four-story hotel building on APN 2775-015-011. The Tempo Project would not modify any of the existing medical office buildings, parking structure or the hotel buildings previously approved under the Approved Project. A detailed description of the Tempo Project is provided below. This memorandum analyzes the combined impact of the Tempo Project and the Approved Project analyzed in the 2020 IS/MND.

PROJECT LOCATION

The City of Arcadia is located in northeast Los Angeles County, generally north of the Interstate 10 Freeway (I-10), south of the Foothill Freeway (I-210), east of State Route 164, and west of I-605. The City is approximately 12 miles northeast of downtown Los Angeles; refer to Exhibit 1, *Regional Vicinity*.

The Revised Project is located within the northeastern portion of Arcadia and is comprised of the Original Project Site (APNs 5775-015-024, 5775-015-027, 5775-015-028, and 5775-015-029) and one land parcel addressed as 181 Colorado Place (APN 5775-015-011) that is approximately 0.61 acre, or 26,493 square feet;[1] refer to Exhibit 2, *Revised Project Site*. Regional access to the Revised Project Site is provided via I-210. Local access to the Revised Project Site is provided via Colorado Place, San Juan Drive, and San Rafael Road.

EXISTING SITE CONDITIONS

The Revised Project Site, which includes the Original Project Site and APN 5775-015-011, is located in a highly developed and urbanized area of Arcadia. The Original Project Site is occupied by the two Keck Medicine of USC medical office buildings, a parking structure, and the Parsons building. The redevelopment of the Parsons building for hotel uses and the construction of the hotel annex building are currently underway. APN 5775-015-011 is vacant lot currently fenced that was previously occupied by the Original Peppers Mexican and Cantina, surface parking, and landscaping. The restaurant building was demolished in 2023 but the surface parking and landscaping remain.

According to the Arcadia General Plan, Chapter 2: Land Use and Community Design Element, the Revised Project Site is designated as Commercial WHICH. This Commercial designation is intended to encourage a strong pedestrian-oriented environment that provides a variety of retail and service uses, restaurants, and neighborhood-serving commercial uses that complement development in the Downtown Mixed-Use areas.[2] According to the City's Zoning Map, the Revised Project Site is zoned General Commercial (C-G) with a Downtown Overlay.[3] The C-G zone is intended to provide areas for the development of retail and service uses, offices, restaurants, public uses, and similar and compatible uses. The maximum Floor Area Ratio (FAR) permitted under the C-G zone and the Downtown Overlay zone is 1.0 for new development, and the maximum height permitted for new buildings is 48 feet.

Surrounding uses adjacent to the Revised Project Site include residential, office, and commercial uses. The Revised Project Site is bordered by San Juan Drive, the California Thoroughbred Breeders Association, and single-family homes to the north; San Rafael Road and a small commercial plaza to the east; single-family homes to the east and northeast; Colorado Place, Huntington Drive and Le Meriden hotel to the south; and Colorado Place and the Santa Anita Park (a horseracing track) to the west.

[1] Los Angeles County Assessor, Property Search Tool: APN 5775-015-011, https://assessor.lacounty.gov/homeowners/property-search, accessed June 19, 2024.

[2] City of Arcadia, *Arcadia General Plan, Chapter 2: Land Use and Community Design Element*, February 2024.

[3] City of Arcadia, *City of Arcadia Zoning Map*, Updated February 6, 2024.

Michael Baker INTERNATIONAL

NOT TO SCALE

06/2024 • JN 201253

TEMPO BY HILTON

Regional Vicinity Map

Exhibit 1

Source: Google Earth Pro, July 2024

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TEMPO BY HILTON

Revised Project Site

Exhibit 2

PROJECT DESCRIPTION

The Revised Project would consist of the improvements proposed by the Tempo Project, along with the previously Approved Project described in the 2020 IS/MND, which includes the redevelopment of the Parsons building for hotel uses and the construction of a new hotel annex building. The Tempo Project would develop a four-story hotel building with approximately 47,140 square feet of gross floor area on APN 5775-015-011; refer to Exhibit 3, *Conceptual Site Plan*.

The new hotel building would have a maximum height of 48 feet, excluding rooftop appurtenances, and would consist of a basement level and four above-ground levels containing a total of 91 rooms and ancillary hotel uses. The basement level would primarily contain back-of-house uses for hotel operations, including an electric room, a mechanical room, a laundry room, offices, storage rooms, an employee breakroom, restrooms, and a fitness room for guest use. Level 1 would contain 13 hotel rooms, a kitchen, café, bar, lobby, meeting area, office, restrooms, and an outdoor patio. Levels 2, 3, and 4 would each contain 26 hotel rooms and the roof level would contain an outdoor paved patio, solar panels, and mechanical areas.

The Tempo Project would utilize the existing parking structure located on the Original Project Site to provide parking for hotel employees, guests, and visitors. As shown in Exhibit 3, the Tempo Project would also reconfigure the existing surface parking lot located to the east of the proposed hotel building on the Original Project Site to provide 18 surface parking spaces, including three electric vehicle charging spaces, a trash enclosure, and a connection to the new surface parking area along the south side of the proposed hotel building. The new surface parking area would provide 6 parking spaces, including 4 accessible parking spaces. In addition, the Tempo Project would develop a drop-off area with access via the existing driveway from Colorado Place. Access to the proposed hotel building would be provided from the two existing driveways along Colorado Place and San Juan Drive.

Landscaping improvements to the Revised Project Site would include the removal of 13 existing trees and the installation of 36 new trees as well as other drought tolerant plants within the Area of Proposed Improvements shown in Exhibit 2. Ancillary improvements to the Revised Project Site would include exterior lighting and accessible routes from the proposed hotel building to the new surface parking area, the existing the surface parking lot to the east, and the existing parking structure.

In order to comply with the maximum FAR of 1.0 for the C-G zone and Downtown Overlay, the Tempo Project would create one legal parcel with a total site area of 226,579 square feet by merging APN 5775-015-011 with the Original Project Site (APNs 5775-015-024, 5775-015-027, 5775-015-028, and 5775-015-029), which has a gross floor area of approximately 177,879 square feet. With the addition of the Tempo Project, the total gross floor area for the Revised Project Site would be approximately 225,019 square feet. This would result in a total site FAR of 0.99 for the Revised Project.

The Tempo Project would require discretionary approvals from the City for an LLA to merge APN 5775-015-011 with the Original Project Site and a Conditional Use Permit to develop the proposed hotel building in a C-G zone.

Source: DesignCell Architecture, June 2024

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Conceptual Site Plan

Exhibit 3

FUNDAMENTALS OF SOUND AND ENVIRONMENTAL NOISE

Sound is mechanical energy transmitted by pressure waves in a compressible medium such as air and is characterized by both its amplitude and frequency (or pitch). The human ear does not hear all frequencies equally. In particular, the ear deemphasizes low and very high frequencies. To better approximate the sensitivity of human hearing, the A-weighted decibel scale (dBA) has been developed. Decibels are based on the logarithmic scale. The logarithmic scale compresses the wide range in sound pressure levels to a more usable range of numbers in a manner like the Richter scale used to measure earthquakes. In terms of human response to noise, a sound 10 dBA higher than another is perceived to be twice as loud and 20 dBA higher is perceived to be four times as loud, and so forth. Everyday sounds normally range from 30 dBA (very quiet) to 100 dBA (very loud). On this scale, the human range of hearing extends from approximately 3 dBA to around 140 dBA.

Noise is generally defined as unwanted or excessive sound, which can vary in intensity by over one million times within the range of human hearing; therefore, a logarithmic scale, known as the decibel scale (dB), is used to quantify sound intensity. Noise can be generated by several sources, including mobile sources such as automobiles, trucks, and airplanes, and stationary sources such as construction sites, machinery, and industrial operations. Noise generated by mobile sources typically attenuates (is reduced) at a rate between 3 dBA and 4.5 dBA per doubling of distance. The rate depends on the ground surface and the number or type of objects between the noise source and the receiver. Hard and flat surfaces, such as concrete or asphalt, have an attenuation rate of 3 dBA per doubling of distance. Soft surfaces, such as uneven or vegetated terrain, have an attenuation rate of about 4.5 dBA per doubling of distance. Noise generated by stationary sources typically attenuates at a rate between 6 dBA and about 7.5 dBA per doubling of distance.

There are several metrics used to characterize community noise exposure, which fluctuate constantly over time. One such metric, the equivalent sound level (L_{eq}), represents a constant sound that, over the specified period, has the same sound energy as the time-varying sound. This is commonly used to describe the "average" noise levels within the environment. Noise exposure over a longer period is often evaluated based on the Day-Night Sound Level (L_{dn}). This is a measure of 24-hour noise levels that incorporates a 10-dBA penalty (or an additional 10 dBA) for sounds occurring between 10:00 p.m. and 7:00 a.m. when sounds seem to be louder. The penalty is intended to reflect the increased human sensitivity to noises occurring during nighttime hours, particularly at times when people are sleeping and there are lower ambient (background) noise conditions. Typical L_{dn} noise levels for light- and medium-density residential areas range from 55 dBA to 65 dBA. Similarly, Community Noise Equivalent Level (CNEL) is a measure of 24-hour noise levels, not an actual sound level heard at any time, that incorporates a 5-dBA penalty for sounds occurring between 7:00 p.m. and 10:00 p.m. and a 10-dBA penalty for sounds occurring between 10:00 p.m. and 7:00 a.m. to account for noise sensitivity in the evening and nighttime, respectively.[4]

FUNDAMENTALS OF ENVIRONMENTAL GROUNDBORNE VIBRATION

Ground vibration consists of oscillatory (i.e., rapidly fluctuating) motions or waves with an average motion of zero (i.e., no net movement of the vibration element). Sources of earth-borne vibrations include natural phenomena (earthquakes, volcanic eruptions, sea waves, landslides, etc.) or man-made causes (explosions, machinery, traffic, trains, construction equipment, etc.). Vibration sources may be continuous (e.g., factory machinery) or transient (e.g., explosions).

[4] Federal Transit Administration, *Transit Noise and Vibration Impact Assessment Manual*, September 2018.

Several different methods are typically used to quantify vibration amplitude. One is the peak particle velocity (PPV); another is the root mean square (RMS) velocity. The PPV is defined as the maximum instantaneous positive or negative peak of the vibration wave. The RMS velocity is defined as the average of the squared amplitude of the signal. Vibration decibels (VdB) is commonly used to measure the RMS vibration velocity level. The PPV and RMS vibration velocity amplitudes are used to evaluate human response to vibration.[5]

Table 1, *Human Reaction and Damage to Buildings for Continuous or Frequent Intermittent Vibration Levels*, displays the reactions of people and the effects on buildings produced by continuous vibration levels. The annoyance levels shown in the table should be interpreted with care since vibration may be found to be annoying at much lower levels than those listed, depending on the level of activity or the sensitivity of the individual. To sensitive individuals, vibrations approaching the threshold of perception can be annoying. Low-level vibrations frequently cause irritating secondary vibration, such as a slight rattling of windows, doors, or stacked dishes. The rattling sound can give rise to exaggerated vibration complaints, even though there is very little risk of actual structural damage.

Ground vibration can be a concern in instances where buildings shake, and substantial rumblings occur. However, it is unusual for vibration from typical urban sources such as buses and heavy trucks to be perceptible. Common sources for groundborne vibration are planes, trains, and construction activities such as pile driving and vibratory compacting activities which require the use of heavy-duty earth moving equipment. For the purposes of this analysis, a PPV descriptor with units of inches per section (in/sec) is used to evaluate construction-generated vibration for building damage and human complaints.

Table 1
Human Reaction and Damage to Buildings for Continuous or Frequent Intermittent Vibration Levels

Peak Particle Velocity (inches/second)	Approximate Vibration Velocity Level (VdB)	Human Reaction	Effect on Buildings
0.006–0.019	64–74	Range of threshold of perception.	Vibrations unlikely to cause damage of any type.
0.08	87	Vibrations readily perceptible.	Recommended upper level to which ruins and ancient monuments should be subjected.
0.1	92	Level at which continuous vibrations may begin to annoy people, particularly those involved in vibration sensitive activities.	Virtually no risk of architectural damage to normal buildings.
0.2	94	Vibrations may begin to annoy people in buildings.	Threshold at which there is a risk of architectural damage to normal dwellings.
0.4–0.6	98–104	Vibrations considered unpleasant by people subjected to continuous vibrations and unacceptable to some people walking on bridges.	Architectural damage and possibly minor structural damage.

Source: California Department of Transportation, *Transportation Related Earthborne Vibrations*, 2002.

[5] Ibid.

ENVIRONMENTAL SETTING

Noise Sensitive Receptors

Noise-sensitive land uses are generally considered to include those uses where noise exposure could result in health-related risks to individuals, as well as places where quiet is an essential element of their intended purpose. Residential dwellings are of primary concern because of the potential for increased and prolonged exposure of individuals to both interior and exterior noise levels. Additional land uses such as parks, historic sites, cemeteries, and recreation areas are considered sensitive to increases in exterior noise levels. Schools, churches, hotels, libraries, and other places where low interior noise levels are essential are also considered noise-sensitive land uses.

The nearest sensitive receptor to the Tempo Project is a single-family residence located adjacent to the east of the Area of Proposed Improvements.

Stationary Sources

Land uses in the Revised Project area are mostly residential, commercial, and recreational uses. The primary sources of stationary noise in the vicinity of the Revised Project Site are urban-related activities (i.e., mechanical equipment and crowd). The noise associated with these sources may represent a single-event noise occurrence, short-term, or long-term/continuous noise.

Mobile Sources

Most of the existing noise in the Revised Project area is generated from traffic along surrounding roadways including Colorado Place.

Existing Ambient Noise Levels

To quantify existing ambient noise levels in the Revised Project area, Michael Baker International conducted three short-term noise measurements in the vicinity of the Area of Proposed Improvements on May 15, 2024. The noise measurement locations are shown in Exhibit 4, *Noise Measurement Locations*, and are representative of typical existing noise exposure at the nearest sensitive receptors. The 10-minute measurements were taken between 10:30 a.m. and 11:30 a.m. Short-term (L_{eq}) measurements are considered representative of the noise levels throughout the day. The noise measurements were taken during "off-peak" (9:00 a.m. through 3:00 p.m.) traffic noise hours as this provides a more conservative baseline. During rush hour traffic, vehicle speeds and heavy truck volumes are often low. Free-flowing traffic conditions just before or after rush hour often yield higher noise levels.[6] The noise levels measured near the Area of Proposed Improvements are identified in Table 2, *Noise Measurements*.

[6] California Department of Transportation, *Technical Noise Supplement to the Traffic Noise Analysis Protocol*, September 2013.

Table 2
Noise Measurements

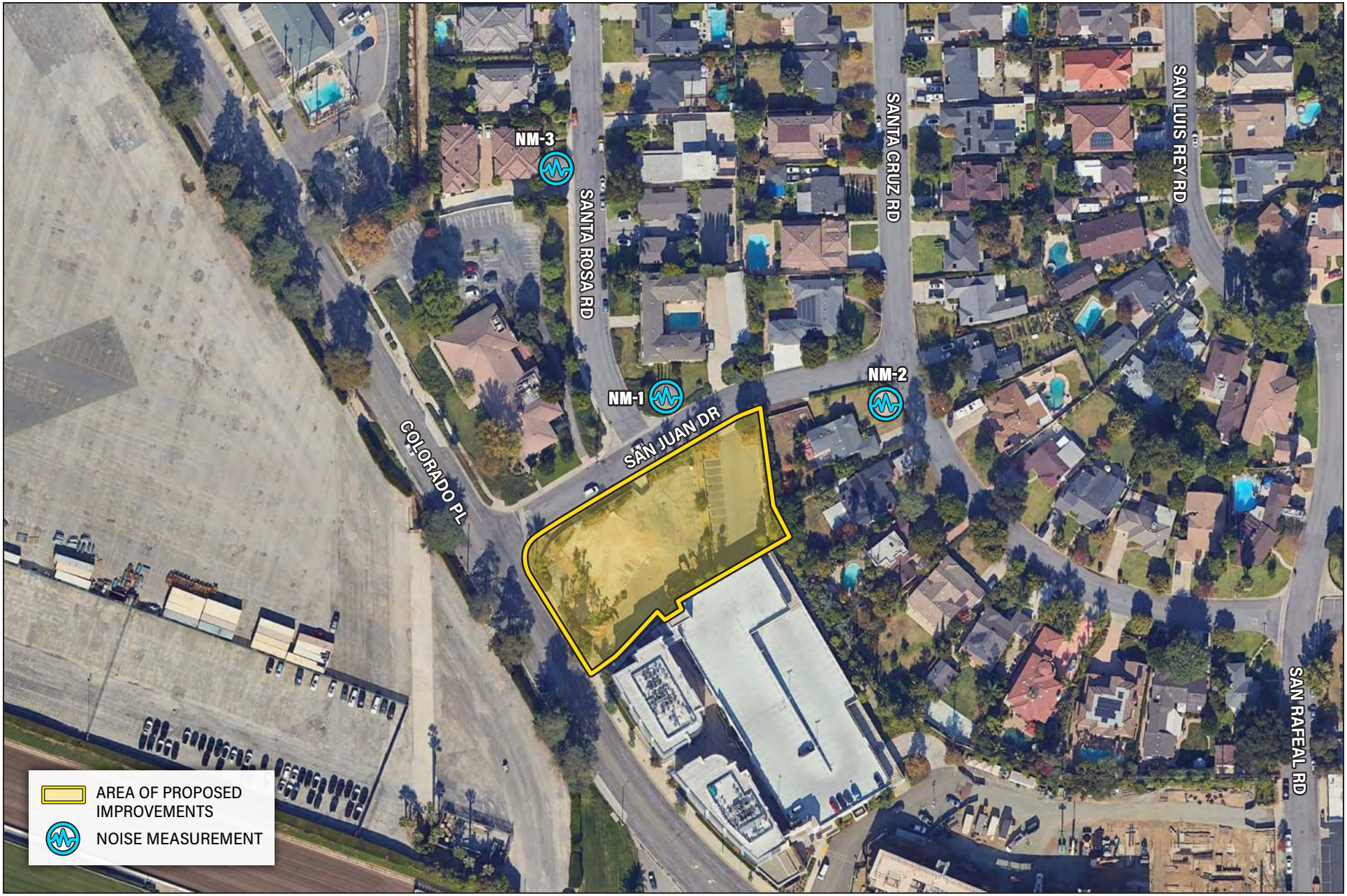
Site No.	Location	L_{eq} (dBA)	L_{max} (dBA)	L_{min} (dBA)	Start Time
1	Near a multi-family building at northeast corner of Santa Rosa Road and San Juan Road intersection	54.2	73.4	42.3	10:58 a.m.
2	In front of a single-family residence at 143 Santa Cruz Road	62.0	84.1	40.5	11:10 a.m.
3	In front of a multi-family building at 225 Santa Rosa Road	51.3	68.3	41.0	11:24 a.m.
Refer to Appendix A, *Noise Data*, for the results of the field measurements.					

Meteorological conditions were cloudy with cool temperatures (60 degrees Fahrenheit [°F]), and wind speeds of approximately four miles per hour. Measured noise levels ranged from 51.3 to 62.0 dBA L_{eq}. The sources of peak noise include traffic along nearby roadways. Noise monitoring equipment used for the ambient noise survey consisted of a Brüel & Kjær Hand-held Analyzer Type 2250 equipped with a Type 4189 pre-polarized microphone. The monitoring equipment complies with applicable requirements of the American National Standards Institute (ANSI) for Type I (precision) sound level meters. Refer to Appendix A, *Noise Data*, for the results of the field measurements.

Existing Vibration Sources

Commercial and industrial operations in the City can generate varying degrees of ground vibration, depending on the operational procedures and equipment. Such equipment-generated vibrations spread through the ground and diminish with distance from the source. The result from vibration can range from no perceptible effects at the lowest vibration levels, to low rumbling sounds and perceptible vibrations at moderate levels, to slight structural damage at the highest levels. The Revised Project area is adjacent to existing commercial uses to the south. Additionally, roadways have the potential to generate vibrations. As previously discussed, most of the existing noise in the Revised Project area is generated from traffic along Colorado Place. However, according to the FTA, it is unusual for vibration from sources, such as buses and trucks, to be perceptible, even in locations close to major roads.[7]

[7] Federal Transit Administration, *Noise and Vibration Impact Assessment Manual, Section 5.2, Sources of Transit Ground-borne Vibration and Noise*, September 2018.



Source: Google Earth Pro, July 2024

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Noise Measurement Locations

Exhibit 4

REGULATORY SETTING

Environmental noise and vibration are controlled and regulated by federal, state, and local agencies. Federal agencies like the U.S. Environmental Protection Agency (EPA) are responsible for managing major noise sources in commerce including transportation vehicles and equipment, machinery, and appliances under the Noise Control Act of 1972.[8] However, the primary responsibility of addressing noise issues is with the state and local governments.[9]

Federal

Federal Highway Administration

The *2006 Federal Highway Administration Highway Construction Noise Handbook* (Handbook) prepared by the Federal Highway Administration (FHWA) identifies noise levels generated by various construction equipment. The Handbook was prepared to recognize the potential for construction noise impact, determine the extent and type of analysis appropriate for addressing construction noise impact, and evaluating and implementing techniques to mitigate construction noise.

Federal Transit Administration

The Federal Transit Administration (FTA) *Transit Noise and Vibration Impact Assessment Manual* provides criteria for acceptable levels of groundborne vibration for various types of buildings, which are shown in Table 3, *Structural Vibration Damage Criteria*.

Table 3
Structural Vibration Damage Criteria

Building Category	Peak Particle Velocity for Continuous Sources (PPV) (inches/second [in/sec])
I. Reinforced concrete, steel, or timber (no plaster)	0.5
II. Engineering concrete and masonry (no plaster)	0.3
III. Nonengineered timber and masonry buildings	0.2
IV. Buildings extremely susceptible to vibration damage	0.12
Source: FTA, *Transit Noise and Vibration Impact Assessment Manual*, 2018.	

State

State Office of Planning and Research

The State Office of Planning and Research's (OPR) *Noise Element Guidelines* include recommended exterior and interior noise level standards for local jurisdictions to identify and prevent the creation of incompatible land uses due to noise. The *Noise Element Guidelines* contain a land use compatibility table that describes the compatibility of various land uses with a range of environmental noise levels in terms

[8] U.S. Environmental Protection Agency, *Summary of the Noise Control Act: 42 USC Section 4901 et seq.,* 1972, https://www.epa.gov/laws-regulations/summary-noise-control-act, accessed June 13, 2024.

[9] U.S. Environmental Protection Agency, *Clean Air Act Title IV – Noise Pollution*, https://www.epa.gov/clean-air-act-overview/clean-air-act-title-iv-noise-pollution, accessed June 13, 2024.

of the CNEL. The guidelines also present adjustment factors that may be used to arrive at noise acceptability standards that reflect the noise control goals of the community, the particular community's sensitivity to noise, and the community's assessment of the relative importance of noise pollution.

Table 4, *Land Use Compatibility for Community Noise Environments* depicts the range of noise exposure levels overlap between the normally acceptable, conditionally acceptable, normally unacceptable, and clearly unacceptable categories. OPR's *State General Plan Guidelines* note that noise planning policy needs to be rather flexible and dynamic to reflect not only technological advances in noise control, but also economic constraints governing application of noise-control technology and anticipated regional growth and demands of the community. In project specific analyses, each community must decide the level of noise exposure its residents are willing to tolerate within a limited range of values below the known levels of health impairment. Therefore, the City may use their discretion to determine which noise levels are considered acceptable or unacceptable, based on land use, project location, and other project factors.

Table 4
Land Use Compatibility for Community Noise Environments

Land Use Category	Community Noise Exposure (L_{dn} or CNEL, dBA)			
	Normally Acceptable	Conditionally Acceptable	Normally Unacceptable	Clearly Unacceptable
Residential – Low Density, Single-Family, Duplex, Mobile Homes	50 – 60	55 – 70	70 – 75	75 – 85
Residential – Multiple Family	50 – 65	60 – 70	70 – 75	70 – 85
Transient Lodging – Motel, Hotels	50 – 65	60 – 70	70 – 80	80 – 85
Schools, Libraries, Churches, Hospitals, Nursing Homes	50 – 70	60 – 70	70 – 80	80 – 85
Auditoriums, Concert Halls, Amphitheaters	NA	50 – 70	NA	65 – 85
Sports Arenas, Outdoor Spectator Sports	NA	50 – 75	NA	70 – 85
Playgrounds, Neighborhood Parks	50 – 70	NA	67.5 – 75	72.5 – 85
Golf Courses, Riding Stables, Water Recreation, Cemeteries	50 – 70	NA	70 – 80	80 – 85
Office Buildings, Business Commercial and Professional	50 – 70	67.5 – 77.5	75 – 85	NA
Industrial, Manufacturing, Utilities, Agriculture	50 – 75	70 – 80	75 – 85	NA

Notes: NA = not applicable; L_{dn} = day/night average; CNEL = community noise equivalent level; dBA = A-weighted decibels
Normally Acceptable – Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements.
Conditionally Acceptable – New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning, will normally suffice.
Normally Unacceptable – New construction or development should be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design.
Clearly Unacceptable – New construction or development should generally not be undertaken.

Source: Office of Planning and Research, *General Plan Guidelines*, 2003.

Local

City of Arcadia General Plan

The Arcadia General Plan (General Plan), Chapter 9: Noise Element provides a framework to limit noise exposure within the City of Arcadia. Existing and future noise environments and the compatibility of land uses are considered in the Noise Element, as well as sensitive receptors and generators of stationary noise. The General Plan includes interior and exterior noise standards as summarized in Table 5, *Arcadia Interior/Exterior Noise Standards*. Table 5 shows standards and criteria that specify acceptable limits of

noise for various land uses throughout the City. The City uses the standards identified in Table 5 as the primary tools to ensure compatibility between land uses and outdoor ambient noise.

Table 5
Arcadia Interior/Exterior Noise Standards

Land Use	Maximum Exterior Noise Level	Maximum Interior Noise Level
Residential: Rural, Single-Family, and Multifamily	65 dBA CNEL	45 dBA CNEL
Schools		
Classroom	70 dBA CNEL	45 dBA L_{eq}
Playground	70 dBA CNEL	-
Libraries	-	45 dBA
Hospitals/Convalescent Facilities		
Sleeping Areas	65 dBA CNEL	45 dBA CNEL
Living Areas	-	50 dBA CNEL
Reception, Office	-	50 dBA L_{eq}
Hotels/Motels		
Sleeping Areas	-	45 dBA CNEL
Reception, Office	-	50 dBA L_{eq}
Places of Worship	65 dBA CNEL	45 dBA L_{eq}
Open Space/Recreation		
Wildlife Habitat	60 dBA CNEL	-
Passive Recreation Areas	65 dBA CNEL	-
Active Recreation Areas	70 dBA CNEL	-
Commercial and Business Park		
Office	-	55 dBA L_{eq}
Restaurant, Retail, Service	-	65 dBA L_{eq}
Warehousing/Industrial	-	70 dBA L_{eq}

Source: City of Arcadia General Plan.

The Noise Element includes the following goals and policies that are applicable to the Revised Project:

- **Goal N-1**: Effective incorporation of noise considerations into land use planning decisions

    - **Policy N-1.2**: Ensure that acceptable noise levels are maintained near schools, hospitals, and other sensitive areas in accordance with the Noise/Land Use Compatibility Guidelines in Figure N-4, Table N-2 Interior/Exterior Noise Standards (Table 5), and the City's noise ordinance.

    - **Policy N-1.4**: Discourage new development of residential or other noise-sensitive uses in noise-impacted areas unless effective mitigation measures are incorporated into the project design to reduce noise levels that comply with Noise/Land Use Compatibility Guidelines in Figure N-4 and Table N-2 Interior/Exterior Noise Standards (Table 5).

    - **Policy N-1.5**: Require that proposed projects that have the potential to result in noise impacts include an acoustical analysis and appropriate mitigation to achieve the interior and exterior noise standards indicated in Table N-2 Interior/Exterior Noise Standards (Table 5).

- **Goal N-3**: Limited intrusion of point-source noise within residential neighborhoods and on noise sensitive uses

- **Policy N-1.2**: Ensure that acceptable noise levels are maintained near schools, hospitals, and other sensitive areas in accordance with the Noise/Land Use Compatibility Guidelines in Figure N-4, Table N-2 Interior/Exterior Noise Standards (Table 5), and the City's noise ordinance.

- **Policy N-3-5**: Require noise created by new non-transportation noise sources to be mitigated so as not to exceed acceptable interior and 9-16 | Noise Arcadia General Plan – November 2010 exterior noise level standards identified in this Noise Element.

City of Arcadia Municipal Code

Article IV, Chapter 6 of the City of Arcadia Municipal Code (Municipal Code) sets limits on exterior noise levels. Arcadia's exterior noise standard puts restrictions on the duration of noises of various magnitudes. The following sections of the Municipal Code are applicable to the Revised Project.

Chapter 6. – Noise Regulations

4610.3 – Noise Limits

a) It shall be unlawful for any person within the City of Arcadia to produce or cause or allow to be produced sound or noise which is amplified by the use of sound amplifying equipment and which amplified noise or sound is received on property occupied by another person within the designated region, in excess of the following levels, except as expressly provided otherwise or exempted hereinafter (Table 6, *Arcadia Exterior Noise Limits*)*:*

Table 6
Arcadia Exterior Noise Limits

Region	Day 7:00 a.m. to 10:00 p.m.	Night 10:00 p.m. to 7:00 a.m.
Residential Zone	55 dBA	50 dBA
Commercial Zone	65 dBA	60 dBA
Industrial Zone	70 dBA	70 dBA
Source: City of Arcadia Municipal Code.		

At the boundary line between two of the above zones the noise level of the quieter zone shall be used.

b) Corrections to Noise Limits. The numerical limits given in Section 4610.3(a) shall be adjusted by the following corrections, where appropriate (Table 7, *Corrections to Noise Limits*)*:*

Table 7
Corrections to Noise Limits

Noise Condition	Correction (in dB)
1. Impulsive sounds, pure tone or sounds with a cyclically varying amplitude	-5
2. Noise occurring more than 5 but less than 15 minutes per hour[1]	+5
3. Noise occurring more than 1 but less than 5 minutes per hour[1]	+10
4. Noise occurring less than 1 minute per hour[1]	+15
Notes: 1. The correction applies to daytime hours only (i.e. 7:00 a.m. to 10:00 p.m.).	
Source: City of Arcadia Municipal Code.	

c) *It shall be unlawful for any person to produce or cause or allow to be produced sound or noise from air-conditioning equipment, pumps, fans or similar machinery which is received on residentially zoned property occupied by another person in excess of 55 dBA, provided, however, that if such machinery was installed prior to December 1, 1970, the noise level shall not be in excess of 60 dBA.*

d) *Exemption: Noise caused by "Emergency Work" as herein defined and from mechanical devices, apparatus, or equipment used, related to, or connected with such Emergency Work is exempt from the limits prescribed by this Chapter* (i.e. Municipal Code Chapter 6).

Chapter 2. – Disorderly Conduct, Nuisances, Etc.

4261. – Prohibited Hours Defined

The term "prohibited hours" as used in this Part shall mean any time after the hour of 6:00 p.m. of any weekday; any time before the hour of 7:00 a.m. of any weekday; any time after the hour of 5:00 p.m. of any Saturday; any time before the hour of 8:00 a.m. of any Saturday; any time on any Sunday; and any time on any of the following holidays: New Year's Day; Memorial Day; Independence Day; Labor Day; Veteran's Day; Thanksgiving Day; and Christmas Day, provided that if in any calendar year any such holiday falls on a Sunday, the following Monday shall constitute the holiday.

4262. – Construction Limited

Unless a permit so to do shall first have been obtained as provided in Section 4263, no person shall during prohibited hours engage in any earth excavation, land fill or earth moving operation or in the construction of any portion of a building or structure, nor shall any person during prohibited hours use or operate any truck, tractor, crane, rig or any mechanical equipment of any kind in connection with, in the performance of or in furtherance of any of the foregoing.

Chapter 1. – Development Code

9103.01.080 - Mechanical and Electrical Equipment Screening.

A. Screening Required.

1. Mechanical equipment, including but not limited to heating and air conditioning devices, shall be located within the building or if mounted elsewhere, shall be screened from public view. Mechanical equipment on the ground or on the roof shall be screened from view from adjacent properties and the public right-of-way by an enclosure designed as part of the building or by appropriate landscaping.

CALIFORNIA ENVIRONMENTAL QUALITY ACT THRESHOLDS

In accordance with the *California Environmental Quality Act* (CEQA Guidelines), project impacts are evaluated to determine whether significant adverse environmental impacts would occur. This analysis will focus on the Revised Project's potential impacts and provide mitigation measures, if required, to reduce or avoid any potentially significant impacts that are identified. According to Appendix G of the CEQA Guidelines, the Revised Project would have a significant impact related to noise and vibration if it would:

- Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies (refer to Impact Statement NOI-1);

- Generation of excessive groundborne vibration or groundborne noise levels (refer to Impact Statement NOI-2); and/or

- For a project located within the vicinity of a private airstrip or 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 (refer to Impact Statement NOI-3).

SIGNIFICANCE CRITERIA AND METHODOLOGY

Construction Noise Standards

The City of Arcadia does not have a quantitative threshold that applies to noise levels at active construction sites. To evaluate whether the Tempo Project would generate potentially significant temporary construction noise levels at off-site sensitive receiver locations, a construction-related noise level threshold was utilized from the Occupational Noise Exposure prepared by the National Institute for Occupational Safety and Health (NIOSH). As a division of the U.S. Department of Health and Human Services, NIOSH identifies a noise level threshold based on the duration of exposure to the source. The construction-related noise level threshold starts at 85 dBA for more than eight hours per day, and for every 3-dBA increase, the exposure time is cut in half. For the purposes of this analysis, the lowest, most conservative construction noise level threshold of 85 dBA L_{eq} was used as an acceptable threshold for construction noise at the nearby sensitive receiver locations. Since this construction-related noise level threshold represents the energy average of the noise source over a given time, they are expressed as L_{eq} noise levels. Therefore, the noise level threshold of 85 dBA L_{eq} over a period of eight hours or more is used to evaluate the potential project-related construction noise level impacts at the nearby sensitive receiver locations. Noise levels from construction equipment and activities were modeled using the Federal Highway Administration's Roadway Construction Noise Model (RCNM).

Construction and Operational Vibration Standards

The FTA *Transit Noise and Vibration Impact Assessment Manual* identifies various vibration damage criteria for different building classes, as shown in Table 3. As the nearest sensitive receptor structure to Area of Proposed Improvements is a residential use, the architectural damage criterion for continuous vibrations at residential structures of 0.3 inch-per-second PPV for engineered concrete and masonry is applied in the analysis.

Stationary Noise Sources

The nearest sensitive use is the existing residential use to the east of the Area of Proposed Improvements, and therefore the City's residential exterior noise standards have been applied. A project would result in a significant impact if project-related operational (stationary-source) noise levels exceed the daytime exterior 55 dBA L_{eq} and nighttime exterior 50 dBA L_{eq} noise level standard at nearby sensitive receiver locations (based on the exterior noise level standards in Section 4610.3 of the Municipal Code; refer to Table 6 above).

Mobile Noise Sources

The mobile source noise associated with the operation of the Revised Project would be from vehicular trips. An off-site traffic noise impact typically occurs when there is a discernable increase in traffic and the resulting noise level exceeds an established noise standard. In community noise considerations, changes in noise levels greater than 3 dB are often identified as discernible, while changes less than 1 dB would not be discernible to local residents. A 5-dB change is generally recognized as a clearly discernable difference. Thus, the Revised Project would result in a significant noise impact if a permanent increase in ambient traffic noise levels of 3.0 dB occurs upon project implementation and the resulting noise level at the receiving sensitive receptor exceeds the applicable exterior standard at a noise sensitive use.

IMPACT ANALYSIS

NOI-1 WOULD THE PROJECT RESULT IN GENERATION OF A SUBSTANTIAL TEMPORARY OR PERMANENT INCREASE IN AMBIENT NOISE LEVELS IN THE VICINITY OF THE PROJECT IN EXCESS OF STANDARDS ESTABLISHED IN THE LOCAL GENERAL PLAN OR NOISE ORDINANCE, OR APPLICABLE STANDARDS OF OTHER AGENCIES?

Level of Significance: Less Than Significant Impact With Mitigation Incorporated.

The 2020 IS/MND Section 3.13 a) analyzed the Approved Project's construction noise impact. The 2020 IS/MND concluded that the Approved Project construction would comply with applicable noise regulations, and therefore construction noise impact would be less than significant. However, construction noise levels would be higher than existing ambient daytime noise levels, which could cause temporary annoyance at nearby residential land uses. Therefore, implementation of mitigation measure MM-NOI-1 is required, which includes best practices that would reduce the potential for annoyance from the temporary construction activities.

The 2020 IS/MND Section 3.13 a) also analyzed the Approved Project's noise impact during operation. Noise levels from operation of the Approved Project's stationary on-site sources would have the potential to exceed the City's noise standards, and therefore implementation of mitigation measure MM-NOI-2 would be required, which would reduce noise impacts from HVAC equipment and the emergency generator to a less than significant level. Therefore, noise impacts from on-site stationary noise sources during operation are considered less than significant with mitigation incorporated. In addition, traffic related to the Approved Project would not substantially increase the existing noise levels in the Approved Project vicinity, and operational traffic-related noise impacts would be less than significant.

Construction

Construction activities generally are temporary and have a short duration, resulting in periodic increases in the ambient noise environment. The Tempo Project involves construction activities associated with grading, building construction, paving, and architectural coating applications. The Tempo project would be constructed over a duration of approximately 16.5 months. Ground-borne noise and other types of construction-related noise impacts typically occur during the initial grading phase, which has the potential to create the highest levels of noise. Construction equipment produce maximum noise levels when equipment is operating under full power conditions (i.e., the equipment engine at maximum speed). However, equipment used on construction sites typically operates under less than full power conditions, or partial power. To more accurately characterize construction-period noise levels, the average (L_{eq}) noise level associated with each construction stage is calculated based on the quantity, type, and usage factors

for each type of equipment that would be used during each construction stage. These noise levels are typically associated with multiple pieces of equipment simultaneously operating on part power.

The estimated construction noise levels at the nearest noise-sensitive receptors are presented in Table 8, *Noise Levels Generated during Construction Phases*. Construction equipment was based on the *Tempo by Hilton Project – Air Quality Assessment Memorandum*, prepared by Michael Baker International, dated July 22, 2024. To present a conservative impact analysis, the estimated noise levels were calculated for a scenario in which all heavy construction equipment were assumed to operate simultaneously (refer to Appendix A). Results from RCNM also assume a clear line-of-sight and no other machinery or equipment noise that would mask project construction noise. The shielding of buildings and other barriers that interrupt line-of-sight conditions would help further reduce noise levels below what is shown in Table 8. According to the General Noise Assessment methodology prescribed in the FTA *Transit Noise and Vibration Impact Assessment Manual*, noise can be considered as concentrated at the center of the site. In addition, construction activities would occur across the entire Area of Proposed Improvements and therefore the estimated noise levels were calculated from the geographic center of the Area of Proposed Improvements, which is approximately 140 feet from the closest sensitive receptor (residential use) to the east.

Table 8
Noise Levels Generated during Construction Phases

Phase	Estimated Exterior Construction Noise Level at 140 feet (Center of Area of Proposed Improvements) (dBA L_{eq})[1]
Grading	74.2
Building Construction	69.8
Paving	73.9
Architectural Coating	64.7

Notes:
1. These noise levels conservatively assume the simultaneous operation of all heavy construction equipment at the same precise location. Modeled heavy construction equipment includes grader, dozers, and backhoes during the grading phase, forklifts, crane, and backhoes during the building construction phase, paver, cement mixers, roller, and backhoe during the paving phase, and air compressor during the architectural coating phase.

Source: Federal Highway Administration, *Roadway Construction Noise Model (RCNM)*, 2006 (see Appendix A).

As shown in Table 8, the nearest receptors to the Area of Proposed Improvements could be exposed to temporary and intermittent construction noise levels ranging from approximately 64.7 to 74.2 dBA L_{eq} at the nearest residential use to the east. As such, construction noise would not have the potential to exceed the NIOSH significance of threshold of 85 dBA L_{eq}. In addition, according to Section 4261 of Article IV, Chapter 2 of the Municipal Code, construction activities are restricted to the daytime hours of 7:00 a.m. to 6:00 p.m. Monday through Friday, and 8:00 a.m. to 5:00 p.m. on Saturday; construction activities are prohibited on Sunday and the following federal holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Veteran's Day, Thanksgiving Day, and Christmas Day.

Compliance with the Municipal Code would reduce impacts from construction noise, as construction would be limited to the permitted times. In addition, as the Area of Proposed Improvements is adjacent to residential uses, the Tempo Project is required to implement the 2020 IS/MND mitigation measure MM-NOI-1, which includes best practices that would reduce the potential for annoyance from the temporary construction activities.

It should be noted that construction of the Approved Project will be completed prior to the start of construction for the Tempo Project; therefore construction of the Tempo Project and Approved Project would not overlap. As such, the Revised Project, which includes the Approved Project and the Tempo Project, would result in similar and no greater impacts than those disclosed in the 2020 IS/MND, which were determined to be less than significant with mitigation incorporated.

Based on the above, the Revised Project would not result in new significant impacts and no substantial increase in the severity of previously identified impacts disclosed in the 2020 IS/MND would occur. Likewise, there are no changed circumstances involving new or more severe impacts and no new information of substantial importance requiring new analysis or project-specific mitigation measures.

Operation

OFF-SITE MOBILE NOISE

The operation of the Revised Project would result in some additional traffic on adjacent roadways, thereby potentially increasing vehicular noise in the vicinity of existing and proposed land uses. The most prominent source of mobile traffic noise in the vicinity of the Revised Project is along Colorado Place. According to the California Department of Transportation (Caltrans), a doubling of traffic (100 percent increase) on a roadway would result in a perceptible increase in traffic noise levels (3 dBA).[10] According to the *Revised Parking Demand Analysis for the Tempo by Hilton Hotel Project, City of Arcadia, California Memorandum* (Transportation Analysis) prepared by Linscott, Law and Greenspan Engineers (dated March 12, 2024), the Tempo Project would result in 1,113 daily trips on weekdays, and 915 daily trips on Saturdays. The existing traffic volume along Colorado Place near the Revised Project Site is 13,559 trips per day.[11] As such, the traffic volumes generated by the Tempo Project would not double the existing traffic volumes, and the project-related traffic noise impacts would be less than significant.

In addition, according to Section 3.17, Transportation of the 2020 IS/MND, the Approved Project would generate 2,442 trips per day. The Approved Project and Tempo Project in total would generate up to 3,555 trips per day, which would not double the existing traffic volumes along Colorado Place. As such, the traffic noise impacts from Revised Project, which is the Approved Project and Tempo Project combined, would be less than significant.

ON-SITE OPERATIONAL NOISE

On-site operational noise activities would include noise generated from mechanical equipment and outdoor gathering area. Although the nearest noise sensitive use (i.e., the residential use) is adjacent to the east of the Area of Proposed Improvements when measured from the property line, the distances to the nearest sensitive receptors would be greater when measured from the on-site stationary sources.

[10] California Department of Transportation, *Technical Noise Supplement to the Traffic Noise Analysis Protocol*, September 2013.

[11] City of Arcadia, *Traffic Volume Map, Counts Taken February 2019*, https://cms9files.revize.com/arcadia/Shape%20Arcadia/Development%20Services/traffic%20and%20engineering/Traffic%20Volume%20Map%202019.pdf, accessed June 13, 2024.

Mechanical Equipment

HVAC units would be installed on the roof of the proposed building for the Tempo Project. Typically, mechanical equipment, such as HVAC units, generate noise levels of 60 dBA at 20 feet from the source.[12] Noise generated by stationary sources typically attenuates at a rate of 6 dBA per doubling of distance from the source. As previously discussed, the closest sensitive receptor is the existing residential use adjacent to the east of the Area of Proposed Improvements boundary. However, the closest HVAC units on the proposed hotel building would be located approximately 95 feet away from this sensitive receptor. At 95 feet, noise levels from HVAC units would be approximately 46.5 dBA. Therefore, noise from operation of the HVAC units would not exceed the City's daytime exterior (55 dBA) and nighttime exterior (50 dBA) noise standards at this sensitive receptor. Further, as shown in Table 2, existing ambient noise level near the residential use is approximately 62.0 dBA L_{eq}, which is higher than the projected noise levels from HVAC units at this sensitive receptor. As such, noise impacts from mechanical equipment for the Tempo Project would be less than significant.

Outdoor Gathering Area

Noise generated by groups of people (i.e., crowds) is dependent on several factors including vocal effort, impulsiveness, and the random orientation of the crowd members. According to Prediction of Crowd Noise, crowd noise is approximately 62 dBA at one meter (i.e., 3.28 feet) from the source. The Tempo Project proposes an outdoor patio area to the west of the proposed building. The nearest sensitive use (i.e., residential use) is located approximately 240 feet from the proposed outdoor patio. At this distance, crowd noise would be approximately 24 dBA. In addition, the proposed building would block the line-of-sight between the nearest sensitive receptor and the outdoor patio area. Therefore, noise from the outdoor patio would not exceed the City's daytime exterior (55 dBA) and nighttime exterior (50 dBA) noise standards at this sensitive receptor. Further, as shown in Table 2, existing ambient noise level near the residential use is approximately 62.0 dBA L_{eq}, which is higher than the projected noise levels from the outdoor patio area at this sensitive receptor. As such, noise impacts from the outdoor patio area for the Tempo Project would be less than significant.

Therefore, based on the above, operational impacts resulting from the Tempo Project would be less than significant. The Approved Project would potentially result in significant impact from HVAC units and emergency generator, and therefore requires implementation of mitigation measure MM-NOI-2 to reduce the impact to less than significant level. The Tempo Project combined with the Approved Project would potentially result in a significant operational noise impact, and therefore implementation of mitigation measure MM-NOI-2 would be required. With implementation of mitigation measure MM-NOI-2, the Revised Project, which is the Tempo Project and the Approved Project combined, would result in less than significant operational noise impacts.

Conclusion

In conclusion, the Revised Project's construction and operational noise impacts would be less than significant with mitigation incorporated. The Revised Project would not result in new significant impacts and no substantial increase in the severity of previously identified impacts disclosed in the 2020 IS/MND would occur. Likewise, there are no changed circumstances involving new or more severe impacts and no new information of substantial importance requiring new analysis or project specific mitigation measures.

[12] Elliot H. Berger, Rick Neitzel, and Cynthia A. Kladden, *Noise Navigator Sound Level Database with Over 1700 Measurement Values*, July 26, 2015.

The following 2020 IS/MND mitigation measures apply to the Revised Project:

MM-NOI-1: Prior to the issuance of a grading permit, the Project Applicant shall provide a Construction Noise Control Plan (CNCP) to the City for review and approval. The CNCP shall include best management practices to reduce short-term construction noise. Enforcement of the CNCP shall be accomplished by field inspections during construction activities and/or documentation of compliance, to the satisfaction of the City's Development Services Department. Recommended best management practices may include, but not be limited to, the following:

- All construction equipment, fixed or mobile, shall be equipped with properly operating and maintained mufflers consistent with the manufacturers' specifications and standards.

- Construction noise reduction methods such as shutting off idling equipment, maximizing the distance between construction equipment staging areas and adjacent residences, and use of electric air compressors and similar power tools, rather than diesel equipment, should be used where feasible.

- Stationary equipment should be placed as far away from the adjacent residential property boundary as feasible and positioned such that emitted noise is directed away from or shielded from sensitive receptors. Acoustically attenuating shields, shrouds, or enclosures may be placed over stationary equipment.

- During all Project site construction, the construction contractor shall limit all construction-related activities, including maintenance of construction equipment and the staging of haul trucks, to between the hours of 7:00 a.m. to 6:00 p.m. Monday through Friday and 8:00 a.m. to 5:00 p.m. on Saturday.

- Construction hours, allowable workdays, and the phone number of the job superintendent should be clearly posted at all construction entrances to allow surrounding property owners to contact the job superintendent, if necessary. In the event the City receives a complaint, appropriate corrective actions should be implemented and a report of the action provided to the reporting party, the City's Development Services Department.

MM-NOI-2: The Project Applicant shall retain an acoustical specialist to review the Project's construction-level plans to ensure that the equipment specifications and plans for HVAC and emergency backup generator incorporate features to ensure that operational noise will not exceed relevant noise standards at nearby noise-sensitive land uses (e.g., residential). Such features could include, but not be limited to, the specification of quieter equipment, relocation of facilities to be of further distance from residential homes, and/or the provision of acoustical enclosures. The acoustical specialist shall certify in writing to the City that the equipment specifications and plans will achieve the City's relevant noise limits.

Mitigation Measures: Impacts related to Impact NOI-1 would be less than significant with implementation of 2020 IS/MND MM-NOI-1 and MM-NOI-2. Therefore, no new project-specific mitigation measures are required.

Level of Significance After Mitigation: Impacts related to Impact NOI-1 would be less than significant with implementation of 2020 IS/MND MM-NOI-1 and MM-NOI-2. Therefore, no new project-specific mitigation measures are required or included, and the impact level would remain less than significant.

NOI-2 WOULD THE PROJECT RESULT IN EXPOSURE OF PERSONS TO OR GENERATION OF EXCESSIVE GROUNDBORNE VIBRATION OR GROUNDBORNE NOISE LEVELS?

Level of Significance: Less Than Significant Impact.

The 2020 IS/MND Section 3.13 b) analyzed the Approved Project's vibration impact during construction and operation. The 2020 IS/MND concluded that construction vibration from the Approved Project would not result in structural building damage, and implementation of mitigation measure MM-NOI-1 would ensure that construction of the Approved Project would not result in human annoyance. In addition, ground-borne vibration would not be associated with the Approved Project during operation. Therefore, the 2020 IS/MND concluded that impacts related to ground-borne vibration are considered less than significant with mitigation incorporated.

Short-Term Construction Vibration Impacts

Project construction can generate varying degrees of groundborne vibration, depending on the construction procedure and the construction equipment used. Operation of construction equipment generates vibrations that spread through the ground and diminish in amplitude with distance from the source. The effect on buildings located in the vicinity of the construction site often varies depending on soil type, ground strata, and construction characteristics of the receiver building(s). The results from vibration can range from no perceptible effects at the lowest vibration levels, to low rumbling sounds and perceptible vibration at moderate levels, to slight damage at the highest levels.

Construction vibration impacts include human annoyance and building damage. Human annoyance occurs when construction vibration rises significantly above the threshold of human perception for extended periods of time. The vibration level at which human annoyance is perceived is 0.2 inch per second PPV; refer to Table 1. Building damage can be cosmetic or structural. Ordinary buildings that are not particularly fragile would not experience any cosmetic damage (e.g., plaster cracks) at distances beyond 25 feet from most construction vibration sources. This distance can vary substantially depending on the soil composition and underground geological layer between the vibration source and the receiver. In addition, not all buildings respond similarly to vibration generated by construction equipment. Construction activities that may result under the Tempo Project have the potential to generate ground-borne vibration. This evaluation uses the FTA architectural damage criterion for continuous vibrations of 0.3 in/sec PPV for engineered concrete and masonry (refer to Table 3) because the closest structure to the Area of Proposed Improvements is a modern residential building. The nearest building with a sensitive receptor is located at approximately 50 feet to the east of the Tempo Project construction activities. As such, vibration impacts are analyzed at 50 feet to evaluate the architectural building damage criterion. Groundborne vibration decreases rapidly with distance. As a result, vibration velocities from the construction equipment would be barely perceptible at this distance. Typical vibration produced by construction equipment is illustrated in Table 9, *Typical Vibration Levels for Construction Equipment*.

Table 9
Typical Vibration Levels for Construction Equipment

Equipment	Approximate peak particle velocity at 25 feet (inch/sec)	Approximate peak particle velocity at 50 feet (inch/sec)[1]
Large bulldozer	0.089	0.0315
Loaded trucks	0.076	0.0269
Small bulldozer	0.003	0.0011
Vibratory roller	0.210	0.0742

Notes:
1. Calculated using the following formula:
$PPV_{equip} = PPV_{ref} \times (25/D)^{1.1}$
where: PPV_{equip} = the peak particle velocity in in/sec of the equipment adjusted for the distance
PPV_{ref} = the reference vibration level in in/sec from Table 7-4 of the FTA *Transit Noise and Vibration Impact Assessment Guidelines*
D = the distance from the equipment to the receiver

Source: Federal Transit Administration, *Transit Noise and Vibration Impact Assessment Guidelines*, September 2018.

As shown in Table 9, vibration velocities from typical heavy construction equipment operation would range from 0.003 to 0.210 inch/second PPV at 25 feet from the source of activity. The nearest structure to the Tempo Project is the existing residential building located approximately 50 feet to the east of the Area of Proposed Improvements. Vibration level during the operation of construction equipment would be approximately 0.0011 inch/second PPV to 0.0742 inch/second PPV at 50 feet; refer to Table 9. As a result, construction groundborne vibration would not exceed the 0.2 inch per second PPV significance threshold for human annoyance or the 0.3 inch/second PPV significance threshold for building damage at the nearest structure. Therefore, vibration impacts would be less than significant impact during construction of the Tempo Project.

Long-Term Operational Vibration Impacts

The Tempo project would involve operation of a hotel that does not include uses that would generate groundborne vibration that could be felt by the nearest sensitive receptors. The Tempo Project would also not involve heavy-duty truck trips. As such, it can be reasonably inferred that operation of the Tempo Project would not create perceptible vibration impacts to the nearest sensitive receptors. Therefore, vibration impacts related to human annoyance and building damage during operation of the Tempo Project would be less than significant.

Conclusion

In conclusion, the Tempo Project's construction and operational vibration impacts would be less than significant. It should be noted that construction of the Approved Project will be completed prior to the start of construction for the Tempo Project, and therefore construction of the Tempo Project and Approved Project would not overlap. However, as the Approved Project is required to implement 2020 IS/MND mitigation measure MM-NOI-1 to ensure that the potential vibration during Approved Project construction would not result in human annoyance, the Revised Project, which includes the Approved Project, would also be required to implement 2020 IS/MND mitigation measure MM-NOI-1 to ensure that construction vibration impacts would remain less than significant. Due to the lack of operational vibration sources, the Revised Project, which is the Approved Project and Tempo Project combined, would not result in operational vibration impacts. As such, the Revised Project would not result in new significant impacts, and no substantial increase in the severity of previously identified impacts disclosed in the 2020

IS/MND would occur. Likewise, there are no changed circumstances involving new or more severe impacts and no new information of substantial importance requiring new analysis, or project-specific mitigation measures.

Mitigation Measures: Impacts related to Impact NOI-2 would be less than significant. Therefore, no new project-specific mitigation measures are required.

Level of Significance After Mitigation: Impacts related to Impact NOI-2 would be less than significant. Therefore, no new project-specific mitigation measures are required or included, and the impact level would remain less than significant.

NOI-3 FOR A PROJECT LOCATED WITHIN THE VICINITY OF A PRIVATE AIRSTRIP OR 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?

Level of Significance: No Impact.

The 2020 IS/MND Section 3.13 c) analyzed the Approved Project's airport noise impact. The 2020 IS/MND concluded that the Approved Project is not located within the planning area for the nearest public airport located approximately 3.7 miles away, nor is it located within two miles of this airport or any other airport, and therefore no impact would occur.

As with the Approved Project, the Revised Project is not located within the vicinity of a private airstrip, and the nearest airport (El Monte Airport) is located approximately 3.5 miles south of the Revised Project Site. The Revised Project Site is not located within the planning area for the El Monte Airport.[13] Additionally, the Revised Project Site is not located within the vicinity of a private airstrip or related facilities. Therefore, implementation of the Revised Project would not expose people residing or working in the Revised Project area to excessive noise levels associated with aircraft. As such, no impact would occur.

Conclusion

In conclusion, impacts resulting from the airport noise would not occur and would be the same level of impacts disclosed in the 2020 IS/MND, which were determined to have no impact. Therefore, the Revised Project would not result in new significant impacts and no substantial increase in the severity of previously identified impacts disclosed in the 2020 IS/MND would occur. Likewise, there are no changed circumstances involving new or more severe impacts and no new information of substantial importance requiring new analysis, verification, or project-specific mitigation measures.

Mitigation Measures: No impacts would occur related to Impact NOI-3. Therefore, no mitigation measures are required.

Level of Significance After Mitigation: No impacts would occur related to Impact NOI-3. Therefore, no mitigation measures are required or included, and the impact level would remain no impact.

[13] Los Angeles County Airport Land Use Commission, *Los Angeles County Airport Land Use Plan*, https://planning.lacounty.gov/wp-content/uploads/2022/10/Los-Angeles-County-Airport-Land-Use-Plan.pdf, accessed Juen 13, 2024.

REFERENCES

Documents

1. California Department of Transportation, *Technical Noise Supplement to the Traffic Noise Analysis Protocol*, 2013.

2. City of Arcadia, *Arcadia General Plan Noise Element,* November 2010.

3. City of Arcadia, *Traffic Volume Map, Counts Taken February 2019*, https://cms9files.revize.com/arcadia/Shape%20Arcadia/Development%20Services/traffic%20and%20engineering/Traffic%20Volume%20Map%202019.pdf, accessed June 13, 2024.

4. Elliott H. Berger, Rick Neitzel, and Cynthia A. Kladden, *Noise Navigator Sound Level Database with Over 1700 Measurement Values*, July 6, 2010.

5. Environmental Health Perspectives, *Vehicle Motion Alarms: Necessity, Noise Pollution, or Both?* https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3018517/, accessed June 13, 2024.

6. Federal Transit Administration, *Transit Noise and Vibration Impact Assessment Manual*, September 2018.

7. Federal Transit Administration, *Noise and Vibration Impact Assessment Manual, Section 5.2, Sources of Transit Ground-borne Vibration and Noise*, September 2018.

8. Harris, Cyril, *Handbook of Noise Control,* 1979.

9. Linscott, Law, and Greenspan Engineers, *Revised Parking Demand Analysis for the Tempo by Hilton Hotel Project, City of Arcadia, California Memorandum*, March 12, 2024.

10. Los Angeles County Airport Land Use Commission, *Los Angeles County Airport Land Use Plan*, https://planning.lacounty.gov/wp-content/uploads/2022/10/Los-Angeles-County-Airport-Land-Use-Plan.pdf, accessed June 13, 2024.

11. Office of Planning and Research, *State of California General Plan Guidelines*, *Appendix D*, October 2017.

12. State Office of Planning and Research, *State of California General Plan Guidelines*, October 2017.

13. U.S. Environmental Protection Agency, *Noise Effects Handbook – A Desk Reference to Health and Welfare Effects of Noise*, October 1979 (revised July 1981).

14. U.S. EPA, *Summary of the Noise Control Act: 42 USC Section 4901 et seq.(1972)*, https://www.epa.gov/laws-regulations/summary-noise-control-act, accessed June 13, 2024.

15. U.S. EPA, *Clean Air Act Title IV – Noise Pollution*, https://www.epa.gov/clean-air-act-overview/clean-air-act-title-iv-noise-pollution, accessed June 13, 2024.

Websites / Programs

1. Google Earth, 2024.

2. Federal Highway Administration, Roadway Construction Noise Model, Version 1.0, 2006.

Appendix A
Noise Data

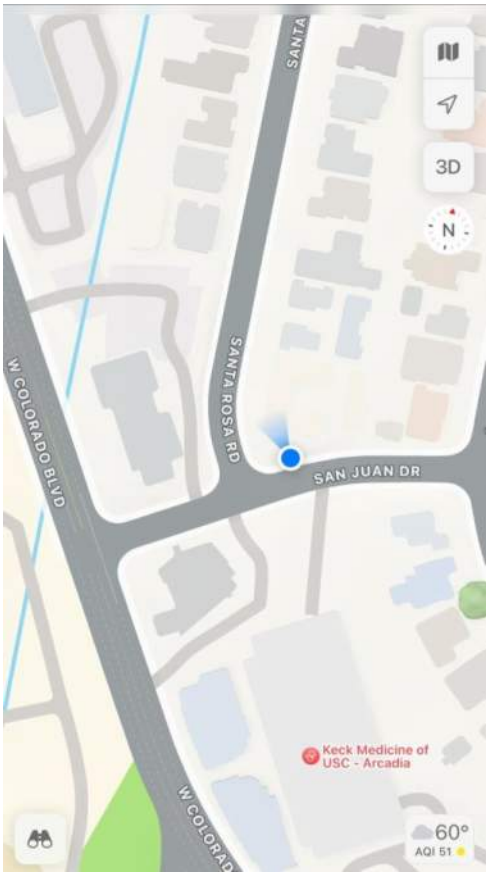
Site Number: NM-1	
Recorded By: Dennis Dinh, Darshan Shivaiah	
Job Number: 201253	
Date: 5/15/2024	
Time: 10:58 a.m.	
Location: Northeast corner of Santa Rosa Road and San Juan Road intersection	
Source of Ambient Noise: Traffic along Santa Rosa Road and San Juan Road	

Noise Data		
L_{eq} (dB)	**L_{max}(dB)**	**L_{min} (dB)**
54.2	73.4	42.3

Equipment						
Category	**Type**	**Vendor**	**Model**	**Serial No.**	**Cert. Date**	**Note**
Sound	Sound Level Meter	**Brüel & Kjær**	**2250**	**3011133**	**06/04/2023**	
	Microphone	**Brüel & Kjær**	**4189**	**3086765**	**06/04/2023**	
	Preamp	**Brüel & Kjær**	**ZC 0032**	**25380**	**06/04/2023**	
	Calibrator	**Brüel & Kjær**	**4231**	**2545667**	**06/04/2023**	

Weather Data			
Est.	**Duration:** 10 minutes		**Sky:** Cloudy
	Note: dBA Offset = 0.05		**Sensor Height (ft):** 5 ft
	Wind Ave Speed (mph / m/s)	**Temperature (degrees Fahrenheit)**	**Barometer Pressure (inches)**
	4 mph	60	29.89

Photo of Measurement Location



2250

Instrument:		2250
Application:		BZ7225 Version 4.7.6
Start Time:		05/15/2024 10:58:33
End Time:		05/15/2024 11:08:33
Elapsed Time:		00:10:00
Bandwidth:		1/3-octave
Max Input Level:		142.20

	Time	Frequency
Broadband (excl. Peak):	FSI	AC
Broadband Peak:		C
Spectrum:	FS	Z

Instrument Serial Number:		3011133
Microphone Serial Number:		3086765
Input:		Top Socket
Windscreen Correction:		UA-1650
Sound Field Correction:		Free-field

Calibration Time:		05/15/2024 10:56:12
Calibration Type:		External reference
Sensitivity:		43.2036072015762 mV/Pa

HILTON_001

	Start time	End time	Elapsed time	Overload [%]	LAeq [dB]	LAFmax [dB]	LAFmin [dB]
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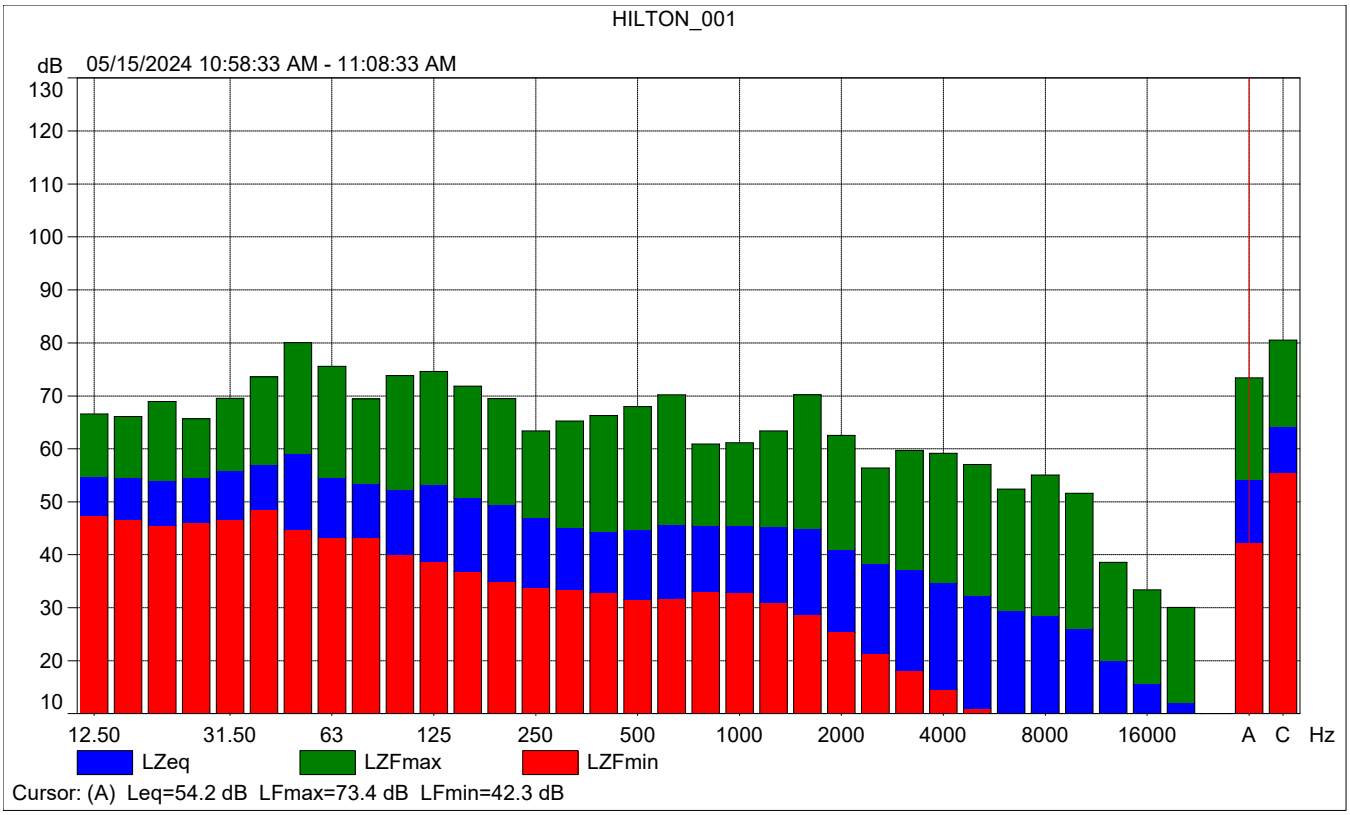
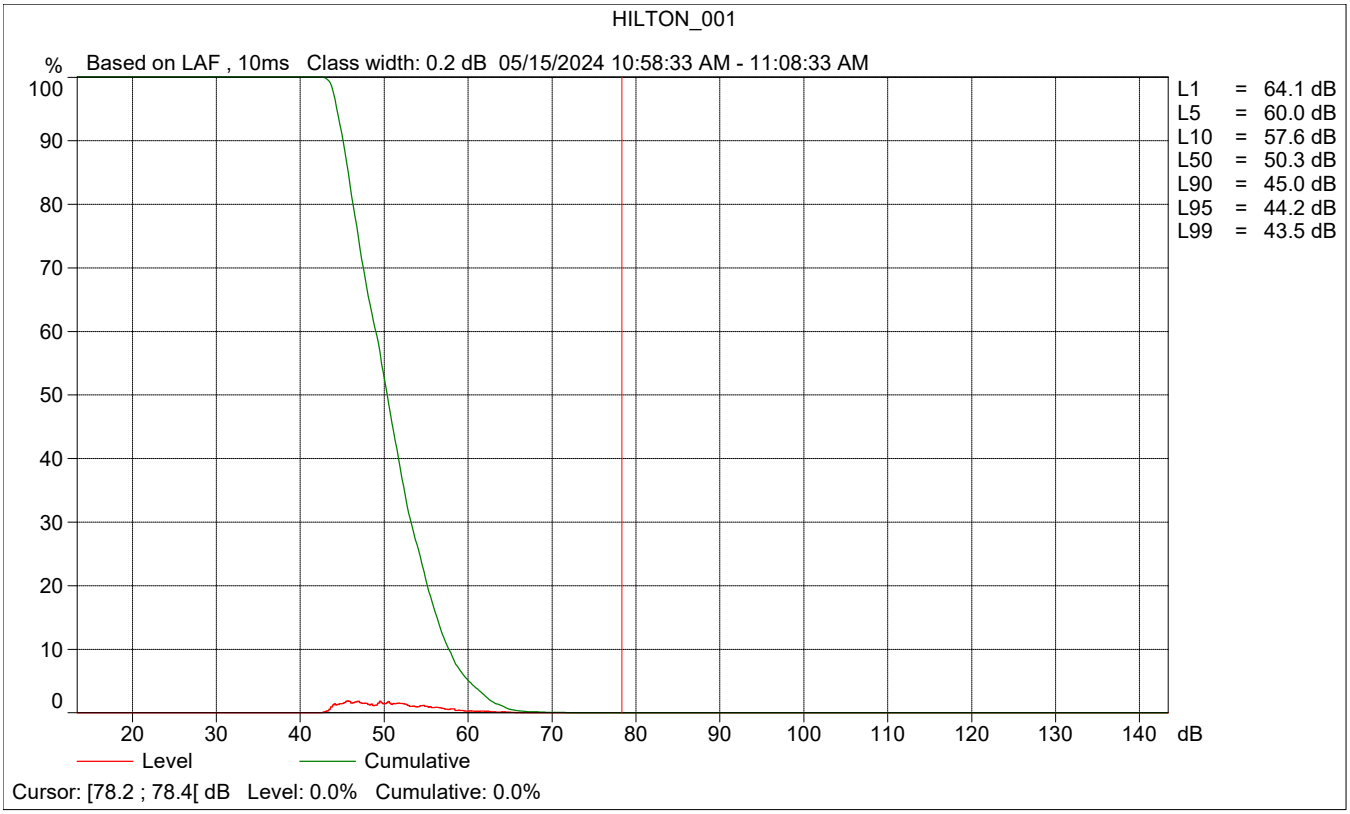
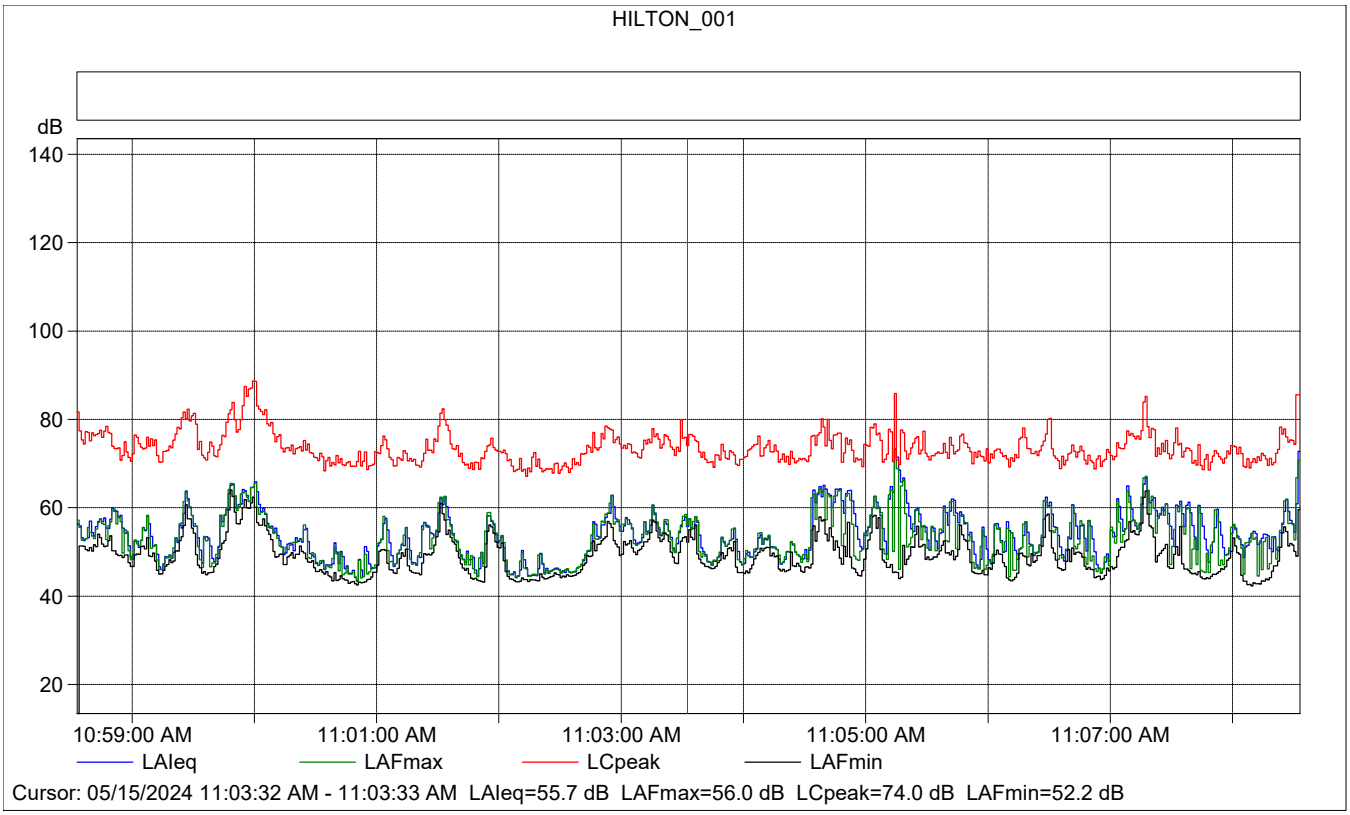
Date	05/15/2024	05/15/2024					


HILTON_001
dB
05/15/2024 10:58:33 AM - 11:08:33 AM
130
120
110
100
90
80
70
60
50
40
30
20
10
12.50
31.50
63
125
250
500
1000
2000
4000
8000
16000
A
C
Hz
LZeq
LZFmax
LZFmin
Cursor: (A) Leq=54.2 dB LFmax=73.4 dB LFmin=42.3 dB


HILTON_001
%
Based on LAF , 10ms Class width: 0.2 dB 05/15/2024 10:58:33 AM - 11:08:33 AM
100
90
80
70
60
50
40
30
20
10
0
20
30
40
50
60
70
80
90
100
110
120
130
140
dB
L1 = 64.1 dB
L5 = 60.0 dB
L10 = 57.6 dB
L50 = 50.3 dB
L90 = 45.0 dB
L95 = 44.2 dB
L99 = 43.5 dB
Level
Cumulative
Cursor: [78.2 ; 78.4[dB Level: 0.0% Cumulative: 0.0%



HILTON_001

	Start time	Elapsed time	Overload [%]	LAIeq [dB]	LAFmax [dB]	LAFmin [dB]
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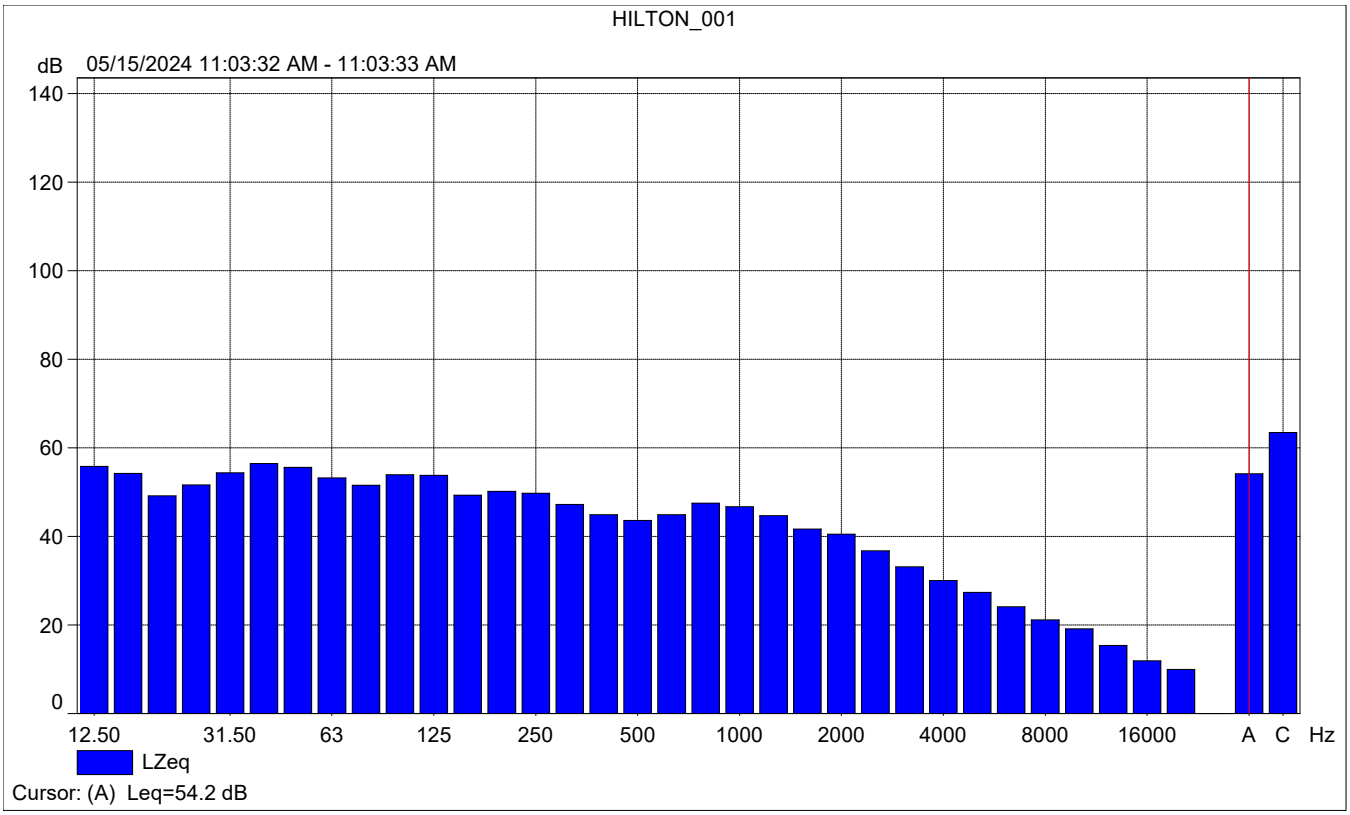
Date	05/15/2024					


HILTON_001
dB
05/15/2024 11:03:32 AM - 11:03:33 AM
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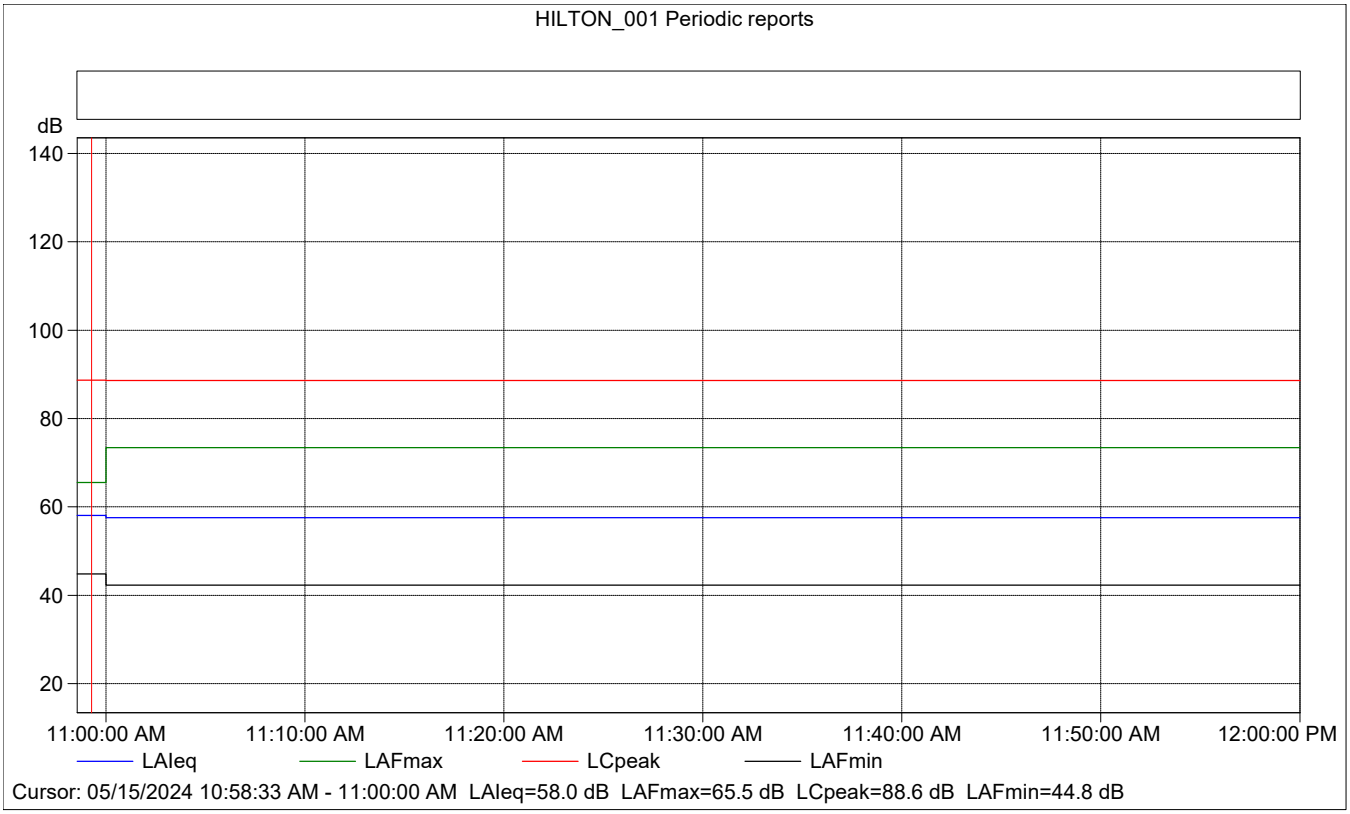
120
100
80
60
40
20
0
12.50
31.50
63
125
250
500
1000
2000
4000
8000
16000
A
C
Hz
LZeq
Cursor: (A) Leq=54.2 dB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100
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60
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11:10:00 AM
11:20:00 AM
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11:40:00 AM
11:50:00 AM
12:00:00 PM
LAIeq
LAFmax
LCpeak
LAFmin
Cursor: 05/15/2024 10:58:33 AM - 11:00:00 AM LAIeq=58.0 dB LAFmax=65.5 dB LCpeak=88.6 dB LAFmin=44.8 dB

HILTON_001 Periodic reports

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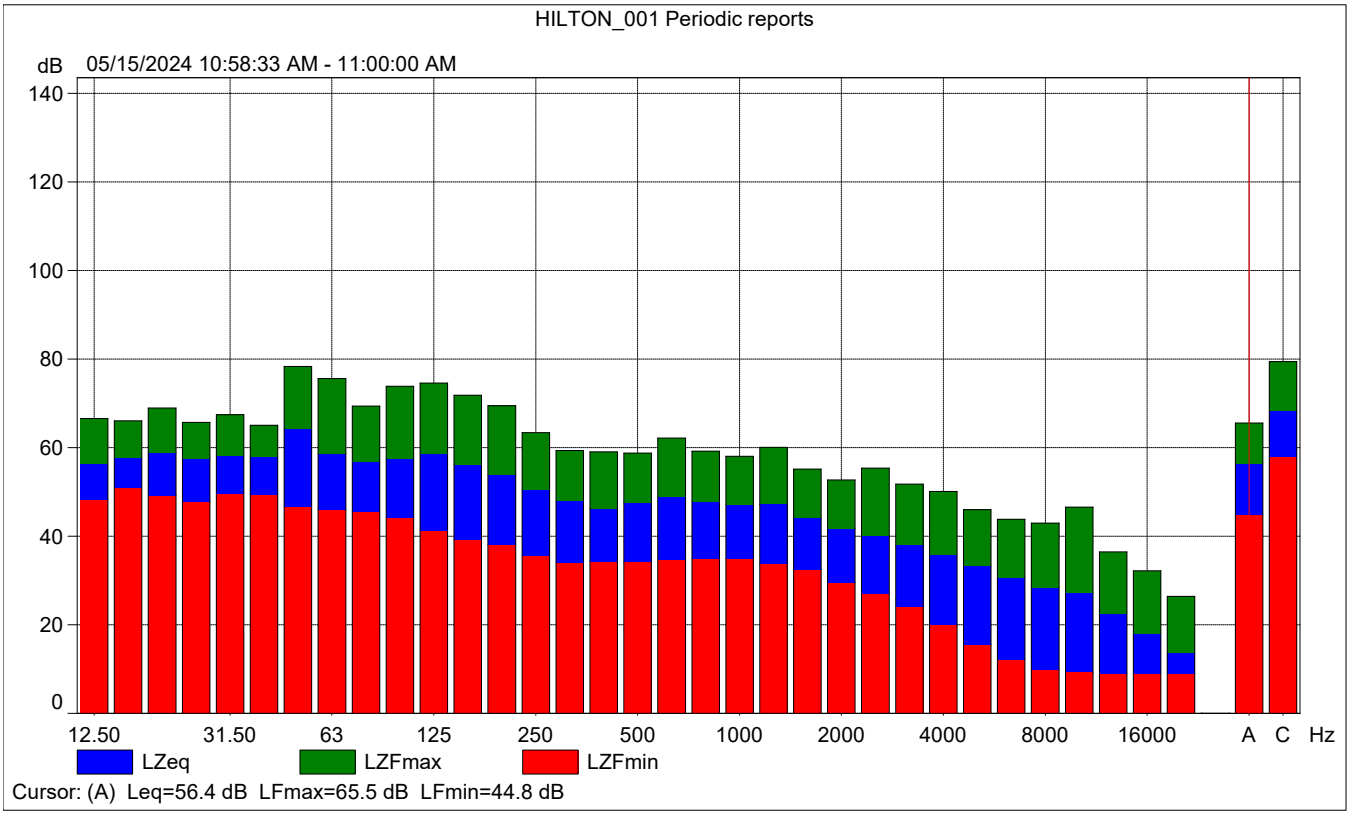
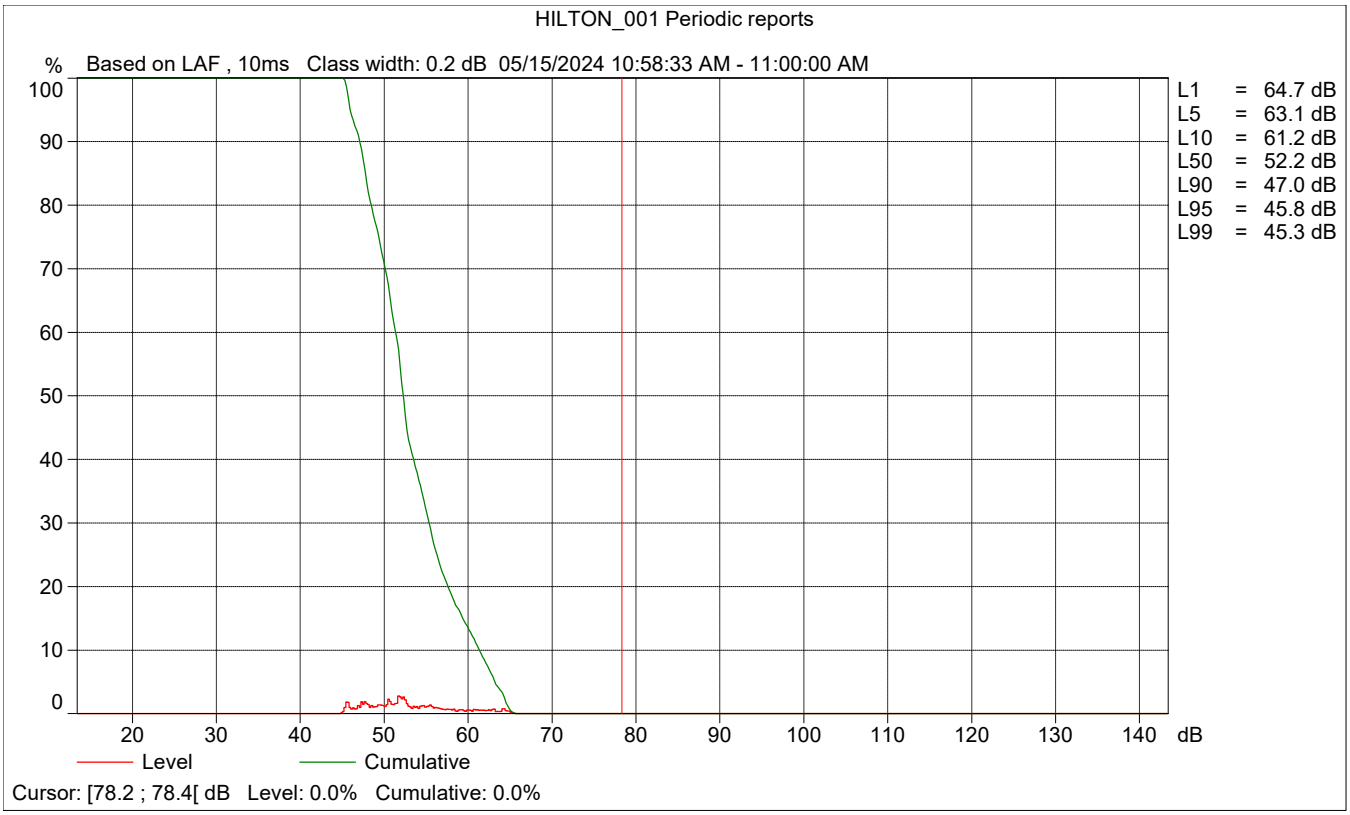
Value			0.00	58.0	65.5	44.8
Time	10:58:33 AM	0:01:27				
Date	05/15/2024					



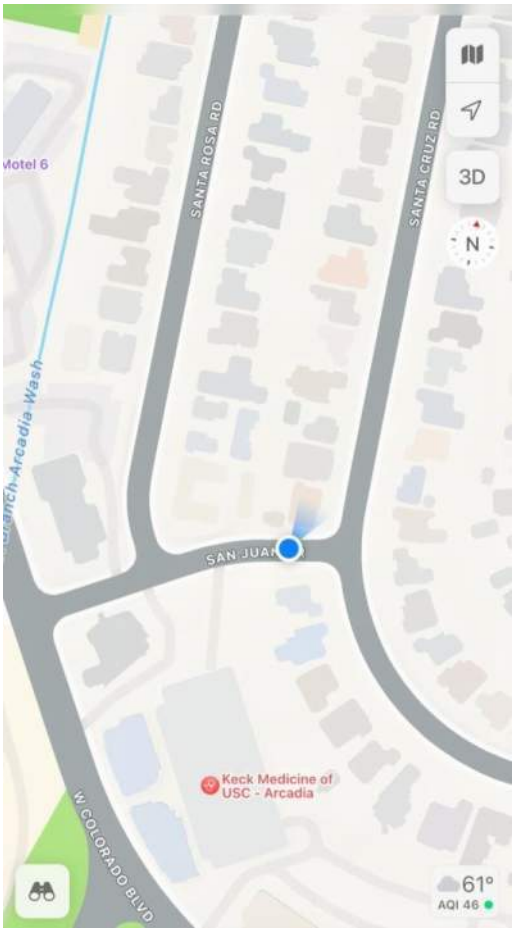

HILTON_001 Periodic reports
% Based on LAF , 10ms Class width: 0.2 dB 05/15/2024 10:58:33 AM - 11:00:00 AM
100
90
80
70
60
50
40
30
20
10
0
20 30 40 50 60 70 80 90 100 110 120 130 140 dB
L1 = 64.7 dB
L5 = 63.1 dB
L10 = 61.2 dB
L50 = 52.2 dB
L90 = 47.0 dB
L95 = 45.8 dB
L99 = 45.3 dB
Level
Cumulative
Cursor: [78.2 ; 78.4[dB Level: 0.0% Cumulative: 0.0%

Site Number: NM-2		
Recorded By: Dennis Dinh, Darshan Shivaiah		
Job Number: 201253		
Date: 5/15/2024		
Time: 11:10 a.m.		
Location: In front of 143 Santa Cruz Road		
Source of Ambient Noise: Traffic along Santa Cruz Road; Peacock		
Noise Data		
L_{eq} (dB)	L_{max}(dB)	L_{min} (dB)
62.0	84.1	40.5

Equipment						
Category	**Type**	**Vendor**	**Model**	**Serial No.**	**Cert. Date**	**Note**
Sound	Sound Level Meter	**Brüel & Kjær**	**2250**	**3011133**	**06/04/2023**	
	Microphone	**Brüel & Kjær**	**4189**	**3086765**	**06/04/2023**	
	Preamp	**Brüel & Kjær**	**ZC 0032**	**25380**	**06/04/2023**	
	Calibrator	**Brüel & Kjær**	**4231**	**2545667**	**06/04/2023**	

Weather Data			
Est.	**Duration:** 10 minutes		**Sky:** Cloudy
	Note: dBA Offset = 0.05		**Sensor Height (ft):** 5 ft
	Wind Ave Speed (mph / m/s)	**Temperature (degrees Fahrenheit)**	**Barometer Pressure (inches)**
	4 mph	60	29.89

Photo of Measurement Location



2250

Instrument:		2250
Application:		BZ7225 Version 4.7.6
Start Time:		05/15/2024 11:10:53
End Time:		05/15/2024 11:20:53
Elapsed Time:		00:10:00
Bandwidth:		1/3-octave
Max Input Level:		142.20

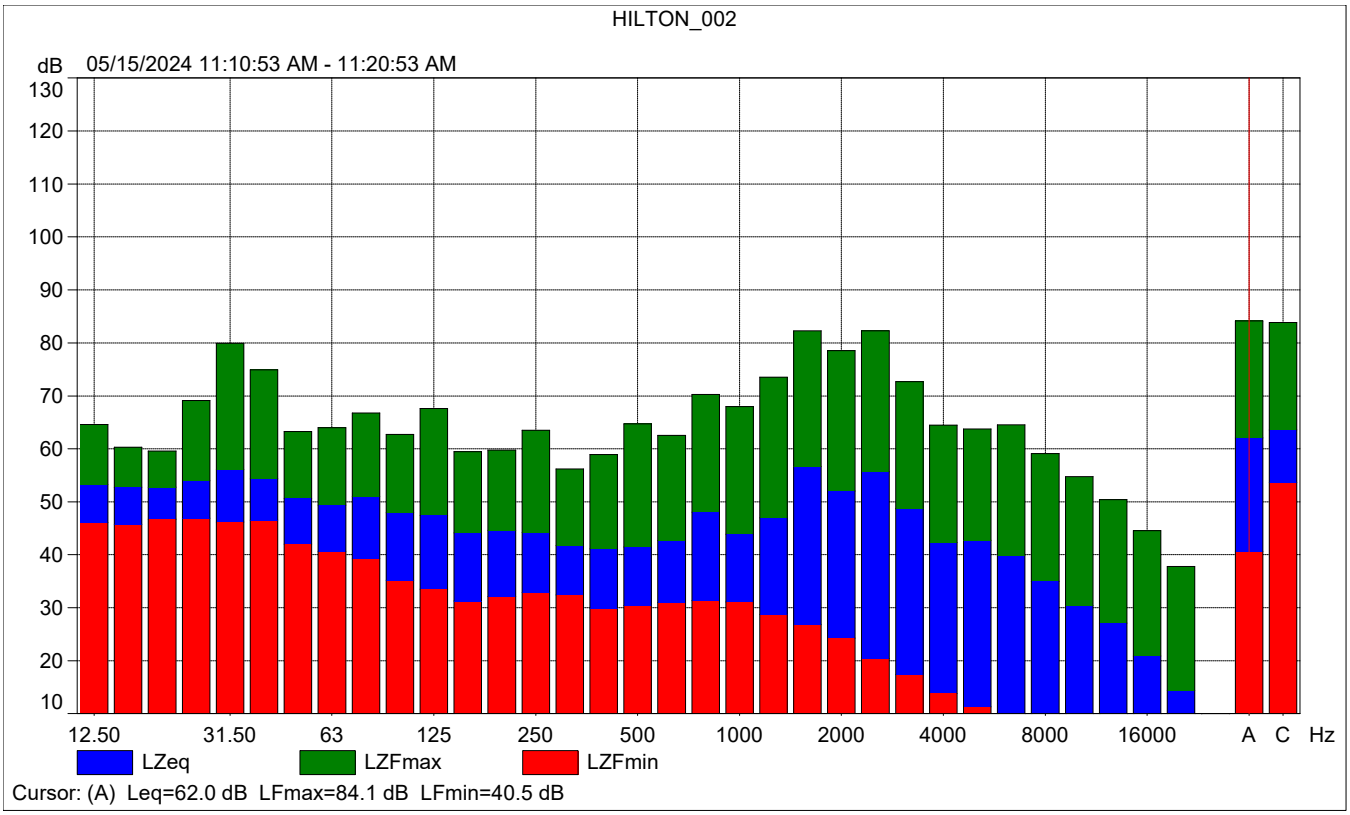
	Time	Frequency
Broadband (excl. Peak):	FSI	AC
Broadband Peak:		C
Spectrum:	FS	Z

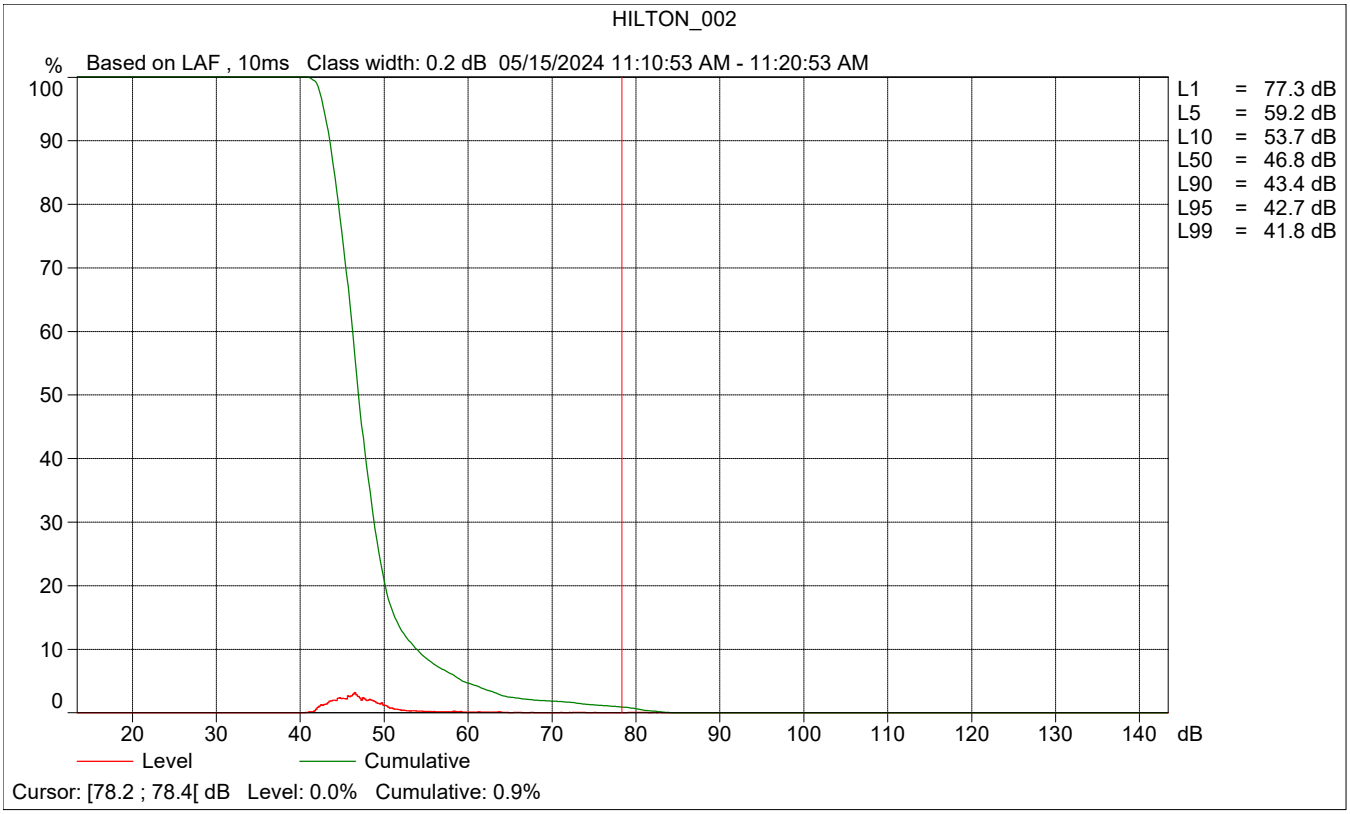
Instrument Serial Number:		3011133
Microphone Serial Number:		3086765
Input:		Top Socket
Windscreen Correction:		UA-1650
Sound Field Correction:		Free-field

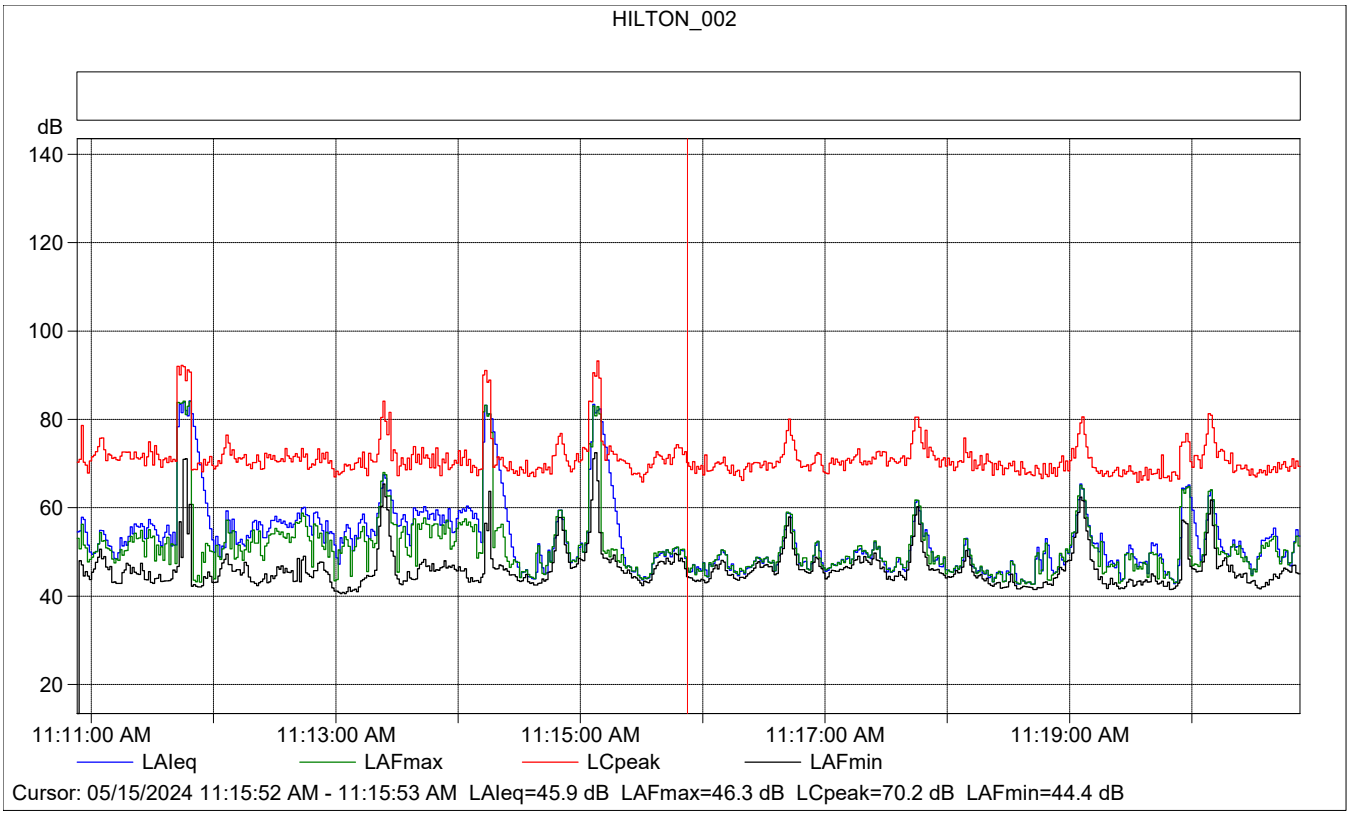
Calibration Time:		05/15/2024 10:56:12
Calibration Type:		External reference
Sensitivity:		43.2036072015762 mV/Pa

HILTON_002

	Start time	End time	Elapsed time	Overload [%]	LAeq [dB]	LAFmax [dB]	LAFmin [dB]
Value				0.00	62.0	84.1	40.5
Time	11:10:53 AM	11:20:53 AM	0:10:00				
Date	05/15/2024	05/15/2024					

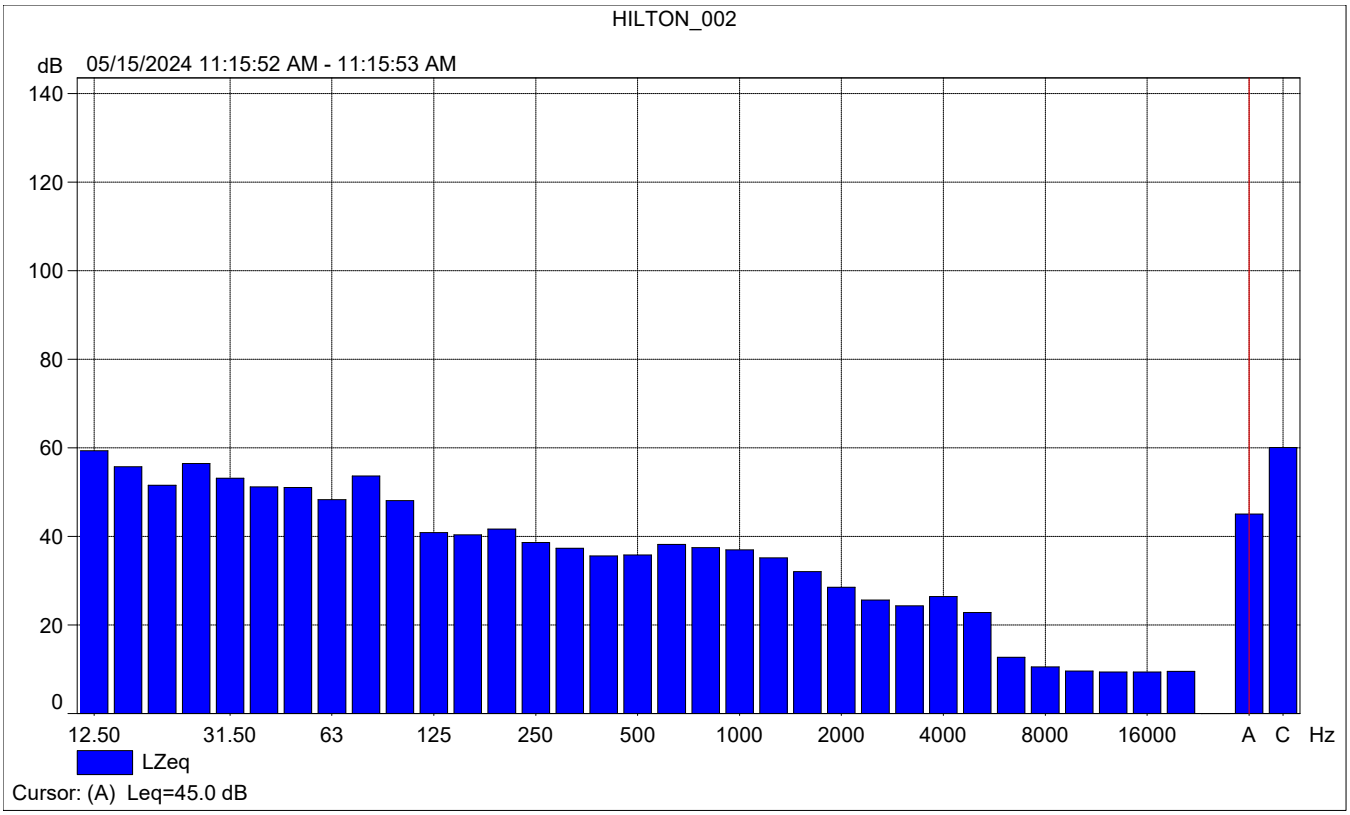

HILTON_002
dB
05/15/2024 11:10:53 AM - 11:20:53 AM
130
120
110
100
90
80
70
60
50
40
30
20
10
12.50
31.50
63
125
250
500
1000
2000
4000
8000
16000
A
C
Hz
LZeq
LZFmax
LZFmin
Cursor: (A) Leq=62.0 dB LFmax=84.1 dB LFmin=40.5 dB

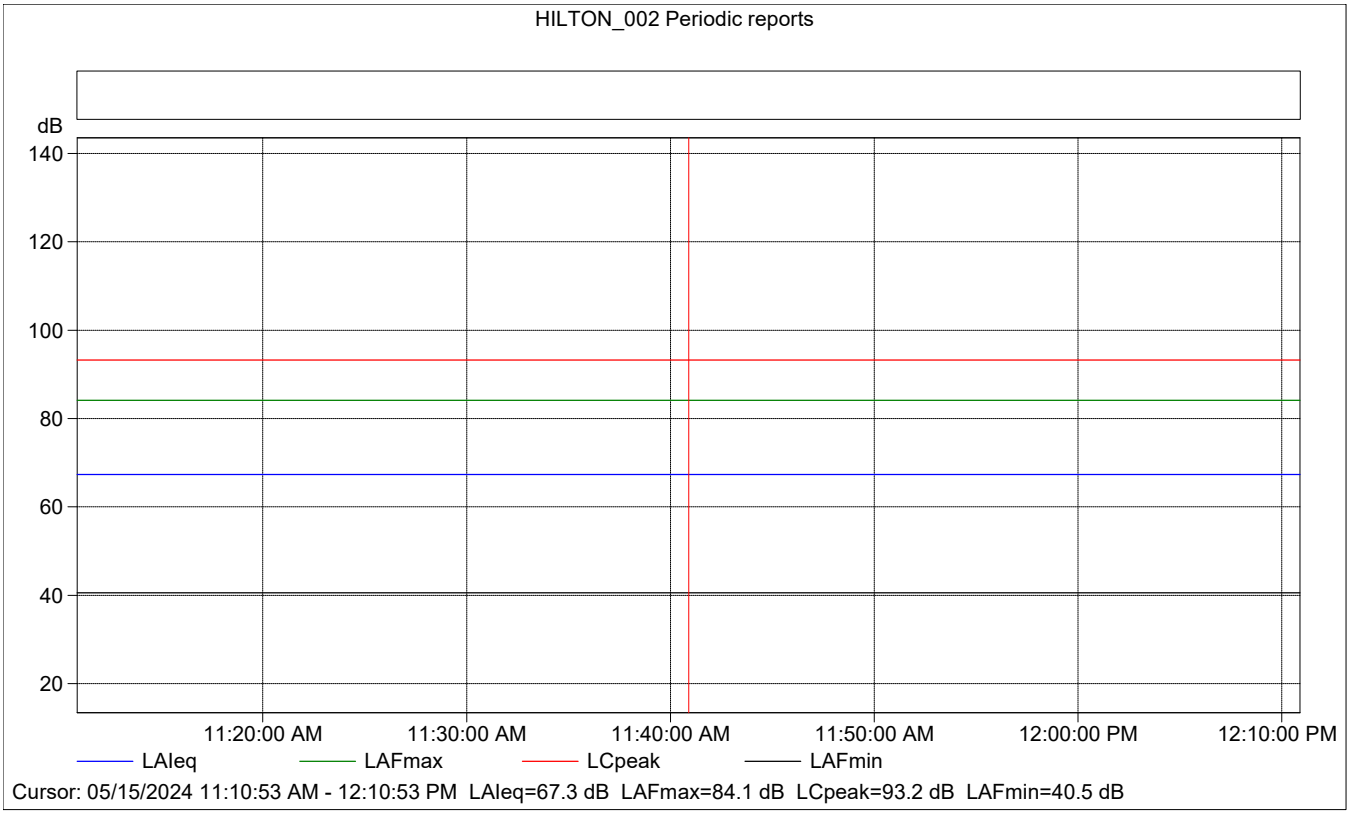

HILTON_002
%
Based on LAF , 10ms Class width: 0.2 dB 05/15/2024 11:10:53 AM - 11:20:53 AM
100
90
80
70
60
50
40
30
20
10
0
20
30
40
50
60
70
80
90
100
110
120
130
140
dB
L1 = 77.3 dB
L5 = 59.2 dB
L10 = 53.7 dB
L50 = 46.8 dB
L90 = 43.4 dB
L95 = 42.7 dB
L99 = 41.8 dB
Level
Cumulative
Cursor: [78.2 ; 78.4[dB Level: 0.0% Cumulative: 0.9%



HILTON_002

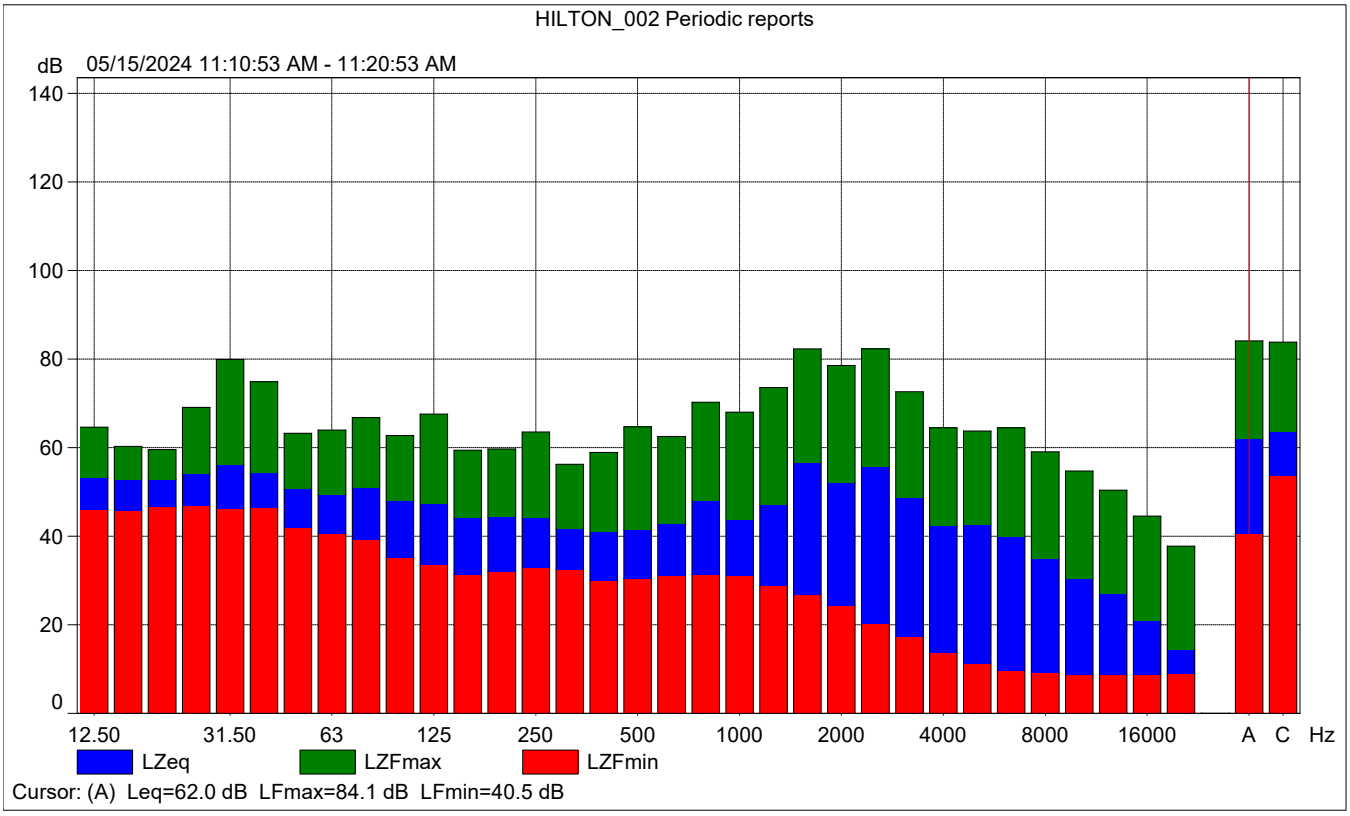
	Start time	Elapsed time	Overload [%]	LAIeq [dB]	LAFmax [dB]	LAFmin [dB]
Value			0.00	45.9	46.3	44.4
Time	11:15:52 AM	0:00:01				
Date	05/15/2024					

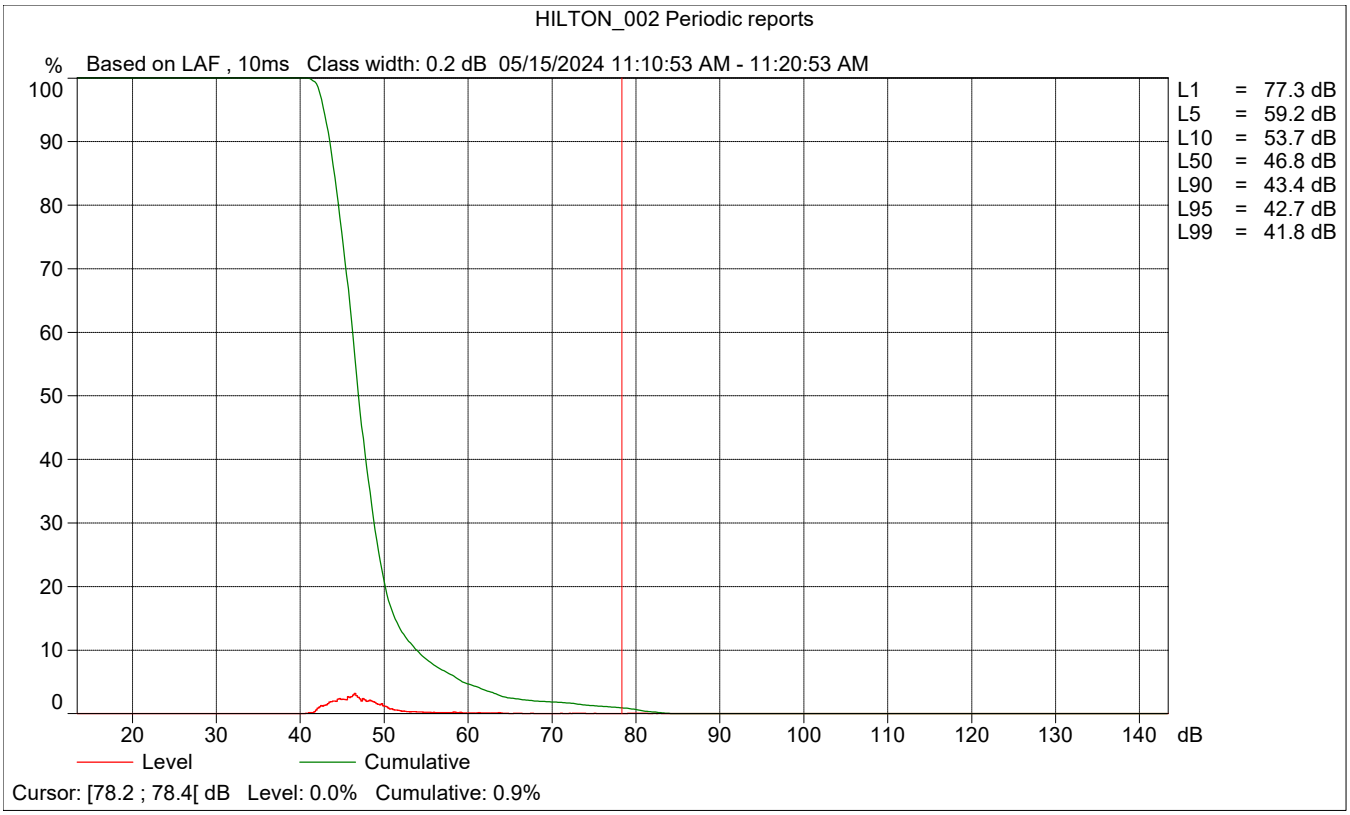

HILTON_002
dB
05/15/2024 11:15:52 AM - 11:15:53 AM
140
120
100
80
60
40
20
0
12.50
31.50
63
125
250
500
1000
2000
4000
8000
16000
A
C
Hz
LZeq
Cursor: (A) Leq=45.0 dB


HILTON_002 Periodic reports
dB
140
120
100
80
60
40
20
11:20:00 AM
11:30:00 AM
11:40:00 AM
11:50:00 AM
12:00:00 PM
12:10:00 PM
LAIeq
LAFmax
LCpeak
LAFmin
Cursor: 05/15/2024 11:10:53 AM - 12:10:53 PM LAIeq=67.3 dB LAFmax=84.1 dB LCpeak=93.2 dB LAFmin=40.5 dB

HILTON_002 Periodic reports

	Start time	Elapsed time	Overload [%]	LAleq [dB]	LAFmax [dB]	LAFmin [dB]
Value			0.00	67.3	84.1	40.5
Time	11:10:53 AM	0:10:00				
Date	05/15/2024					



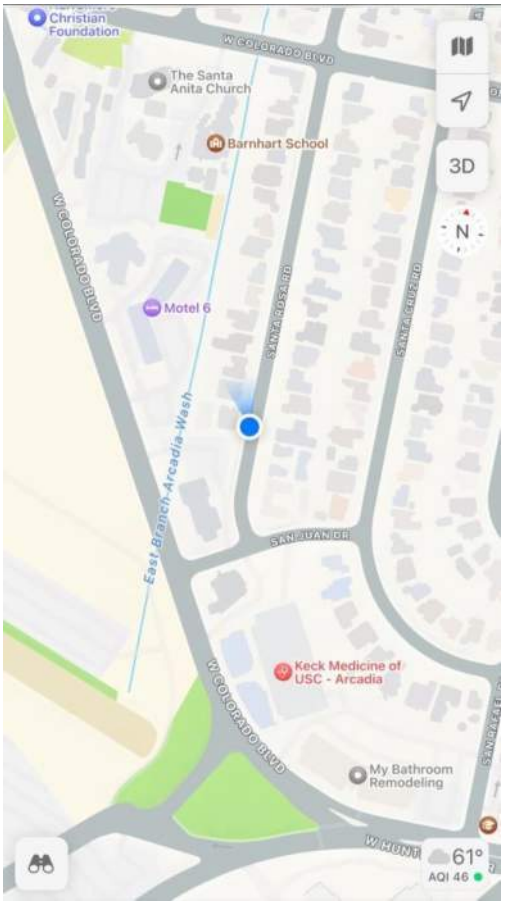

HILTON_002 Periodic reports
% Based on LAF , 10ms Class width: 0.2 dB 05/15/2024 11:10:53 AM - 11:20:53 AM
100
90
80
70
60
50
40
30
20
10
0
20 30 40 50 60 70 80 90 100 110 120 130 140 dB
L1 = 77.3 dB
L5 = 59.2 dB
L10 = 53.7 dB
L50 = 46.8 dB
L90 = 43.4 dB
L95 = 42.7 dB
L99 = 41.8 dB
Level
Cumulative
Cursor: [78.2 ; 78.4[dB Level: 0.0% Cumulative: 0.9%

Site Number: NM-3		
Recorded By: Dennis Dinh, Darshan Shivaiah		
Job Number: 201253		
Date: 5/15/2024		
Time: 11:24 a.m.		
Location: Corner of 225 Santa Rosa Road		
Source of Ambient Noise: Traffic along Santa Rosa Road		
Noise Data		
L_{eq} (dB)	**L_{max}(dB)**	**L_{min} (dB)**
51.3	68.3	41.0

Equipment						
Category	**Type**	**Vendor**	**Model**	**Serial No.**	**Cert. Date**	**Note**
Sound	Sound Level Meter	**Brüel & Kjær**	**2250**	**3011133**	**06/04/2023**	
	Microphone	**Brüel & Kjær**	**4189**	**3086765**	**06/04/2023**	
	Preamp	**Brüel & Kjær**	**ZC 0032**	**25380**	**06/04/2023**	
	Calibrator	**Brüel & Kjær**	**4231**	**2545667**	**06/04/2023**	

Weather Data			
Est.	**Duration:** 10 minutes		**Sky:** Cloudy
	Note: dBA Offset = 0.05		**Sensor Height (ft):** 5 ft
	Wind Ave Speed (mph / m/s)	**Temperature (degrees Fahrenheit)**	**Barometer Pressure (inches)**
	4 mph	61	29.89

Photo of Measurement Location



2250

Instrument:		2250
Application:		BZ7225 Version 4.7.6
Start Time:		05/15/2024 11:24:20
End Time:		05/15/2024 11:34:20
Elapsed Time:		00:10:00
Bandwidth:		1/3-octave
Max Input Level:		142.20

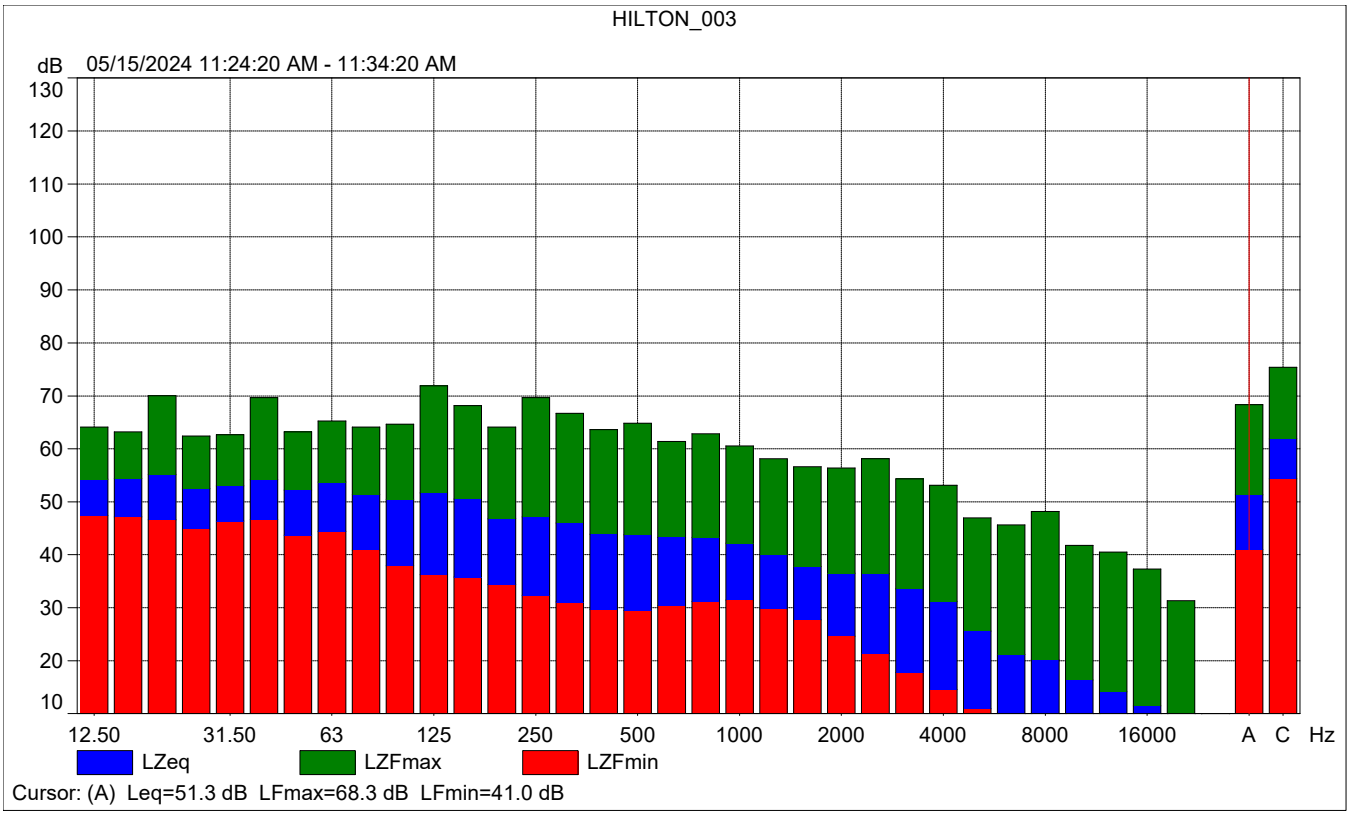
	Time	Frequency
Broadband (excl. Peak):	FSI	AC
Broadband Peak:		C
Spectrum:	FS	Z

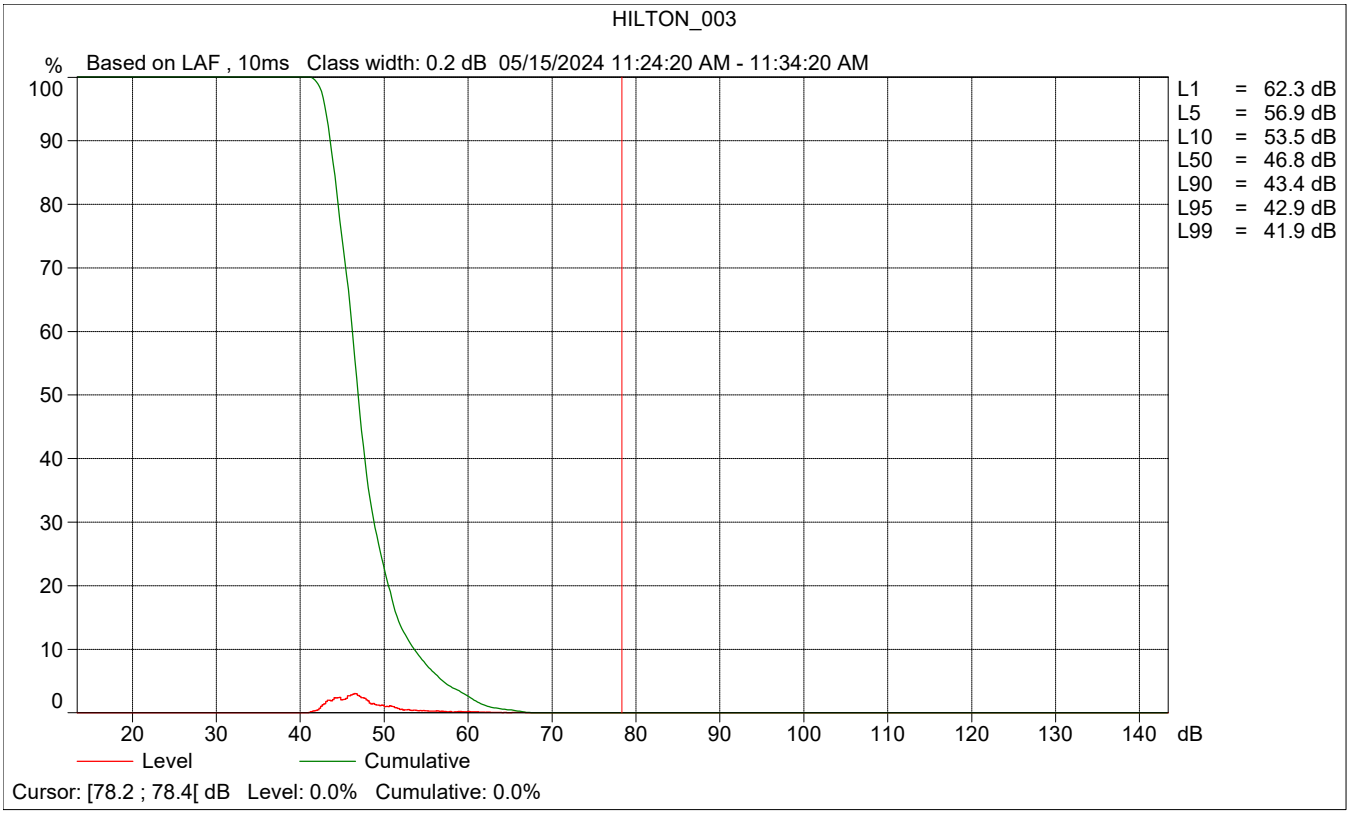
Instrument Serial Number:		3011133
Microphone Serial Number:		3086765
Input:		Top Socket
Windscreen Correction:		UA-1650
Sound Field Correction:		Free-field

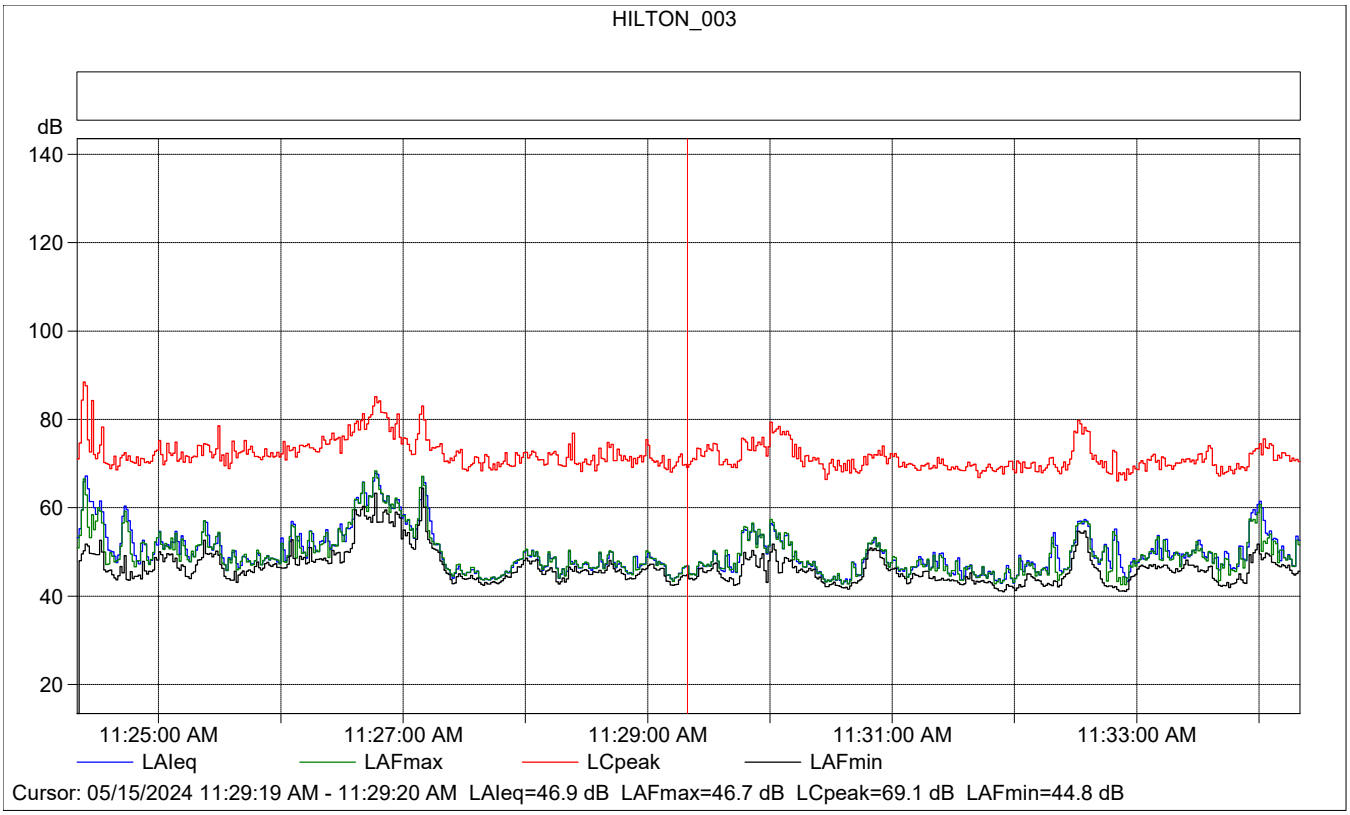
Calibration Time:		05/15/2024 10:56:12
Calibration Type:		External reference
Sensitivity:		43.2036072015762 mV/Pa

HILTON_003

	Start time	End time	Elapsed time	Overload [%]	LAeq [dB]	LAFmax [dB]	LAFmin [dB]
Value				0.00	51.3	68.3	41.0
Time	11:24:20 AM	11:34:20 AM	0:10:00				
Date	05/15/2024	05/15/2024					

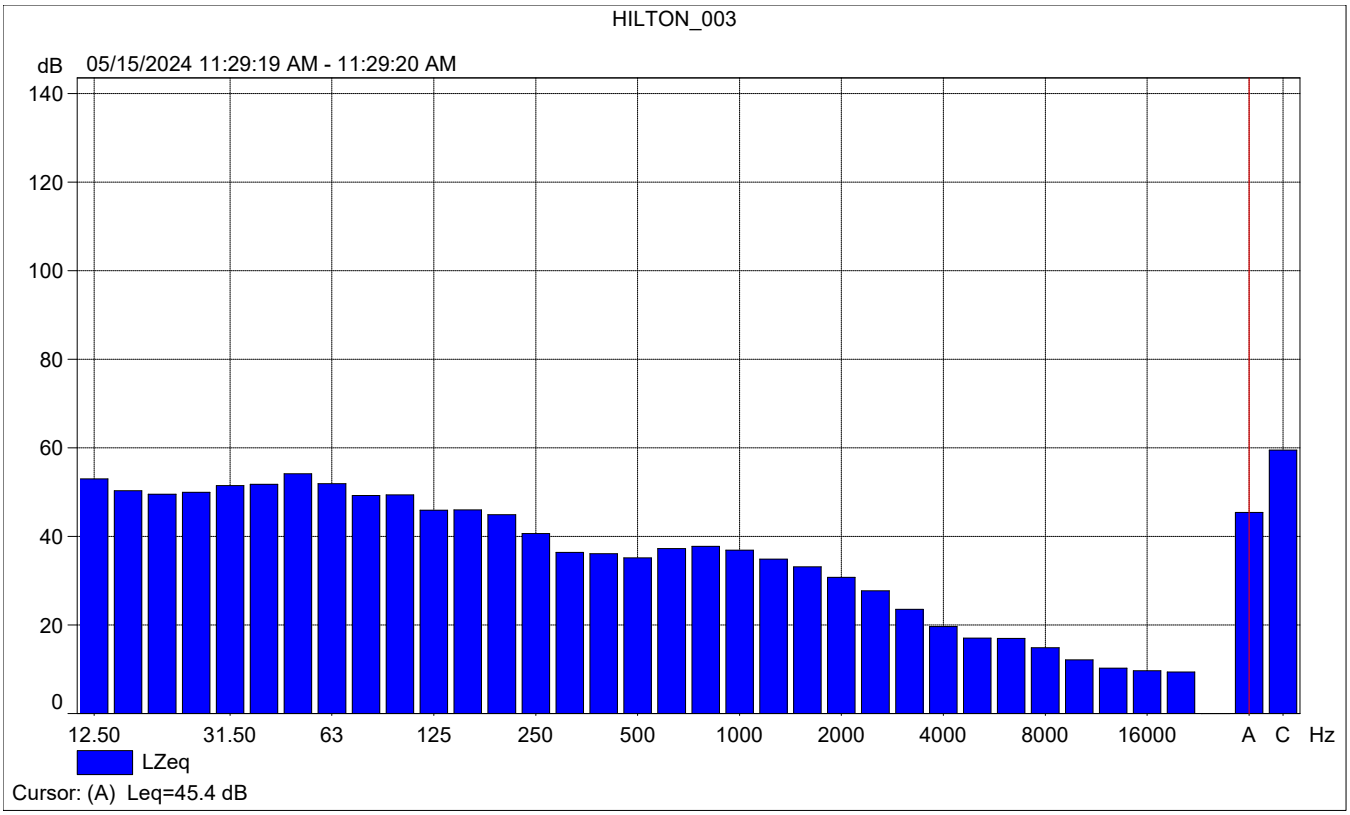

HILTON_003
dB
05/15/2024 11:24:20 AM - 11:34:20 AM
130
120
110
100
90
80
70
60
50
40
30
20
10
12.50
31.50
63
125
250
500
1000
2000
4000
8000
16000
A
C
Hz
LZeq
LZFmax
LZFmin
Cursor: (A) Leq=51.3 dB LFmax=68.3 dB LFmin=41.0 dB

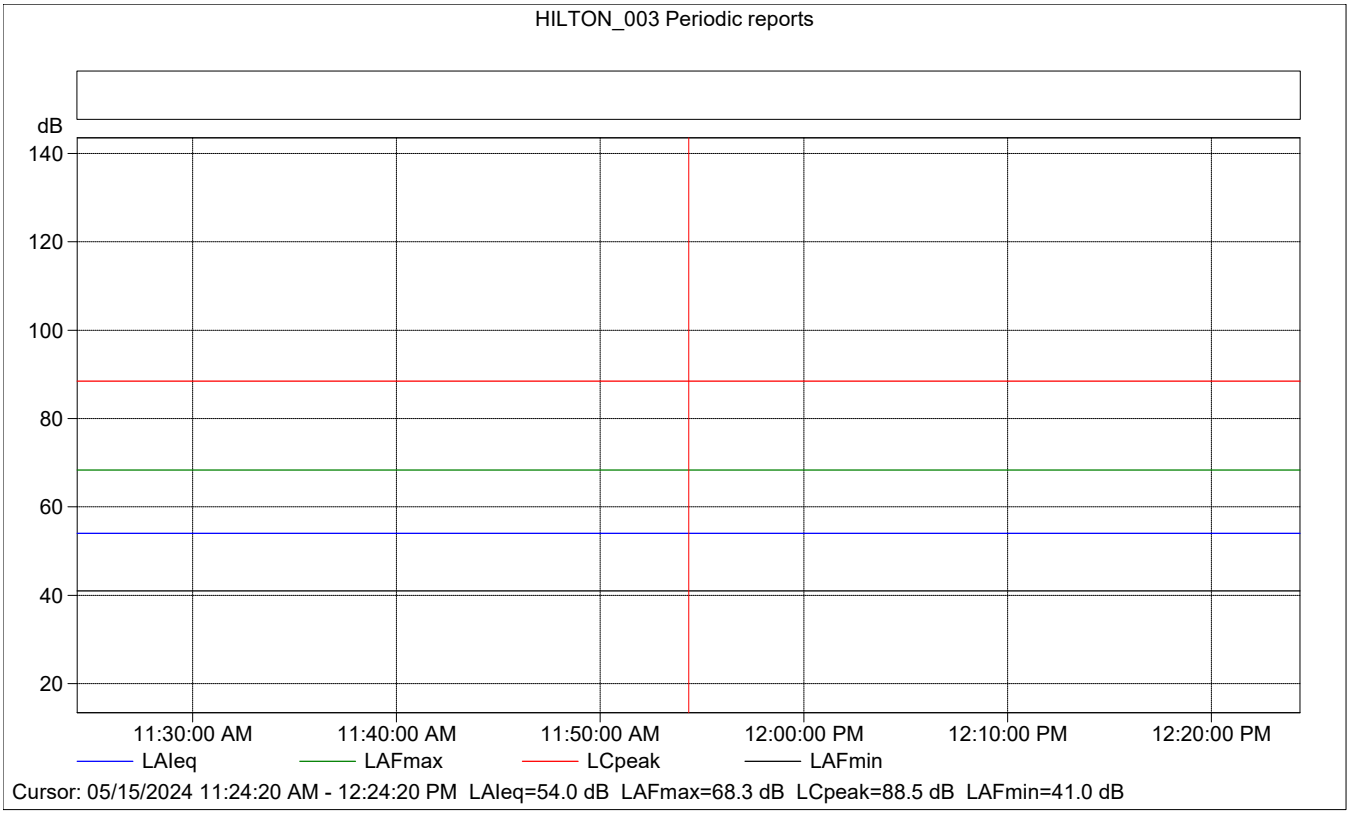

HILTON_003
%
Based on LAF , 10ms Class width: 0.2 dB 05/15/2024 11:24:20 AM - 11:34:20 AM
100
90
80
70
60
50
40
30
20
10
0
20
30
40
50
60
70
80
90
100
110
120
130
140
dB
L1 = 62.3 dB
L5 = 56.9 dB
L10 = 53.5 dB
L50 = 46.8 dB
L90 = 43.4 dB
L95 = 42.9 dB
L99 = 41.9 dB
Level
Cumulative
Cursor: [78.2 ; 78.4[dB Level: 0.0% Cumulative: 0.0%



HILTON_003

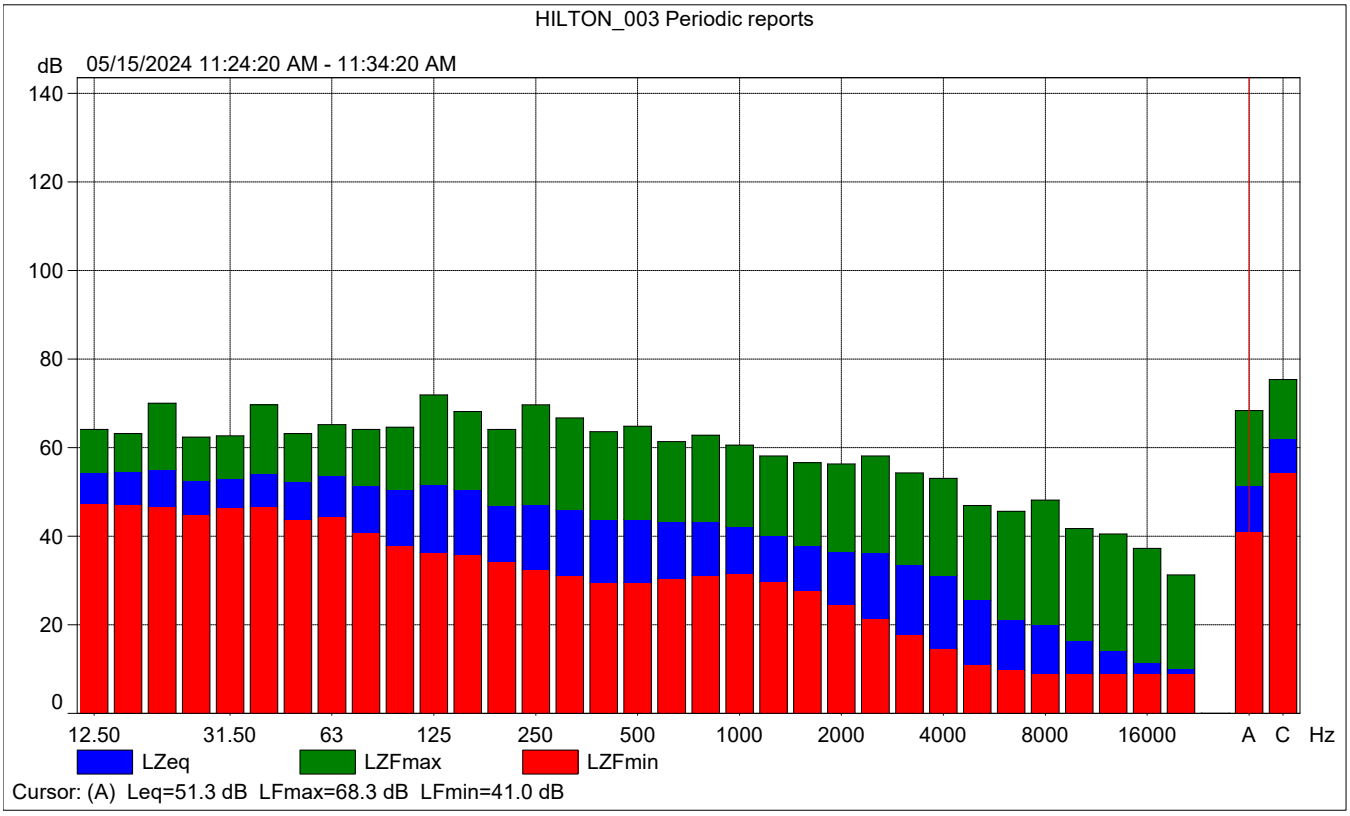
	Start time	Elapsed time	Overload [%]	LAIeq [dB]	LAFmax [dB]	LAFmin [dB]
Value			0.00	46.9	46.7	44.8
Time	11:29:19 AM	0:00:01				
Date	05/15/2024					

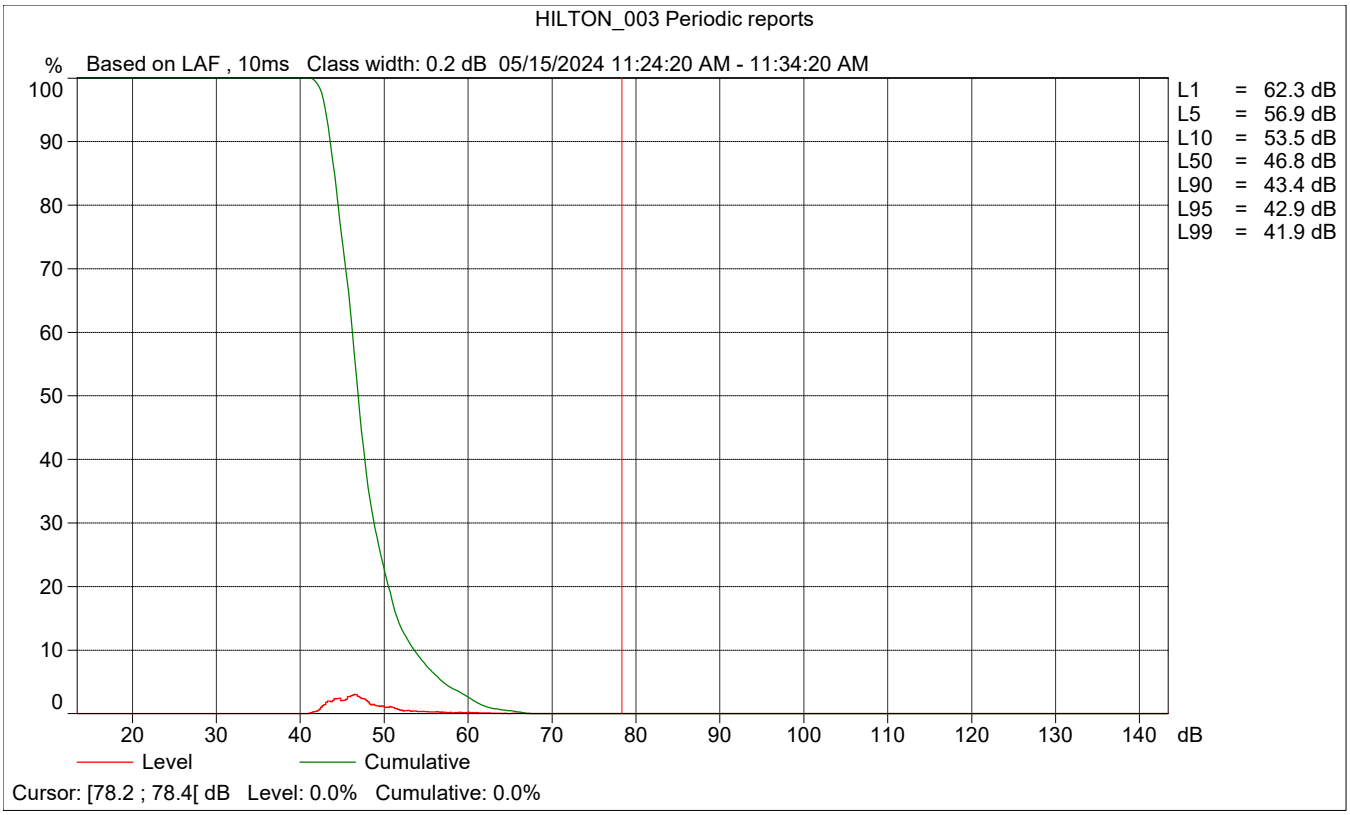

HILTON_003
dB
05/15/2024 11:29:19 AM - 11:29:20 AM
140
120
100
80
60
40
20
0
12.50
31.50
63
125
250
500
1000
2000
4000
8000
16000
A
C
Hz
LZeq
Cursor: (A) Leq=45.4 dB


HILTON_003 Periodic reports
dB
140
120
100
80
60
40
20
11:30:00 AM
11:40:00 AM
11:50:00 AM
12:00:00 PM
12:10:00 PM
12:20:00 PM
LAIeq
LAFmax
LCpeak
LAFmin
Cursor: 05/15/2024 11:24:20 AM - 12:24:20 PM LAIeq=54.0 dB LAFmax=68.3 dB LCpeak=88.5 dB LAFmin=41.0 dB

HILTON_003 Periodic reports

	Start time	Elapsed time	Overload [%]	LAleq [dB]	LAFmax [dB]	LAFmin [dB]
Value			0.00	54.0	68.3	41.0
Time	11:24:20 AM	0:10:00				
Date	05/15/2024					




HILTON_003 Periodic reports
% Based on LAF , 10ms Class width: 0.2 dB 05/15/2024 11:24:20 AM - 11:34:20 AM
100
90
80
70
60
50
40
30
20
10
0
20 30 40 50 60 70 80 90 100 110 120 130 140 dB
L1 = 62.3 dB
L5 = 56.9 dB
L10 = 53.5 dB
L50 = 46.8 dB
L90 = 43.4 dB
L95 = 42.9 dB
L99 = 41.9 dB
Level
Cumulative
Cursor: [78.2 ; 78.4[dB Level: 0.0% Cumulative: 0.0%

Roadway Construction Noise Model (RCNM),Version 1.1

Report date 6/6/2024
Case Desc Tempo by Hilton_Grading

		Baselines (dBA)		---- Receptor #1 ----
Description	Land Use	Daytime	Evening	Night
Residential	Residential	62	62	62

			Equipment			
			Spec	Actual	Receptor	Estimated
	Impact		Lmax	Lmax	Distance	Shielding
Description	Device	Usage(%)	(dBA)	(dBA)	(feet)	(dBA)
Grader	No	40	85		140	0
Dozer	No	40		81.7	140	0
Backhoe	No	40		77.6	140	0

			Results											
	Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
			Day		Evening		Night		Day		Evening		Night	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Grader	76.1	72.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dozer	72.7	68.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Backhoe	68.6	64.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	76.1	74.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report date 6/6/2024
Case Desc Tempo by Hilton_Building Construction

		Baselines (dBA)			---- Receptor #1 ----
Description	Land Use	Daytime	Evening	Night	
Residential	Residential	62	62	62	

			Equipment			
			Spec	Actual	Receptor	Estimated
	Impact		Lmax	Lmax	Distance	Shielding
Description	Device	Usage(%)	(dBA)	(dBA)	(feet)	(dBA)
Crane	No	16		80.6	140	0
Man Lift	No	20		74.7	140	0
Man Lift	No	20		74.7	140	0
Backhoe	No	40		77.6	140	0
Backhoe	No	40		77.6	140	0

			Results											
	Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
			Day		Evening		Night		Day		Evening		Night	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Crane	71.6	63.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Man Lift	65.8	58.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Man Lift	65.8	58.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Backhoe	68.6	64.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Backhoe	68.6	64.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	71.6	69.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report date 6/6/2024
Case Desc Tempo by Hilton_Paving

		Baselines (dBA)		---- Receptor #1 ----
Description	Land Use	Daytime	Evening	Night
Residential	Residential	62	62	62

			Equipment			
	Impact		Spec Lmax	Actual Lmax	Receptor Distance	Estimated Shielding
Description	Device	Usage(%)	(dBA)	(dBA)	(feet)	(dBA)
Concrete Mixer Truck	No	40		78.8	140	0
Concrete Mixer Truck	No	40		78.8	140	0
Concrete Mixer Truck	No	40		78.8	140	0
Concrete Mixer Truck	No	40		78.8	140	0
Paver	No	50		77.2	140	0
Roller	No	20		80	140	0
Backhoe	No	40		77.6	140	0

			Results											
	Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
			Day		Evening		Night		Day		Evening		Night	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Concrete Mixer Truck	69.9	65.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Concrete Mixer Truck	69.9	65.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Concrete Mixer Truck	69.9	65.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Concrete Mixer Truck	69.9	65.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Paver	68.3	65.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Roller	71.1	64.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Backhoe	68.6	64.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	71.1	73.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report date 6/6/2024
Case Description:

		---- Receptor #1 ----		
		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
Residential	Residential	62	62	62

			Equipment			
			Spec	Actual	Receptor	Estimated
	Impact		Lmax	Lmax	Distance	Shielding
Description	Device	Usage(%)	(dBA)	(dBA)	(feet)	(dBA)
Compressor (air)	No	40		77.7	140	0

			Results											
	Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
			Day		Evening		Night		Day		Evening		Night	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Compressor (air)	68.7	64.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	68.7	64.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

ATTACHMENT G: TRANSPORTATION IMPACT ANALYSIS

Michael Baker
INTERNATIONAL

TRANSPORTATION IMPACT ANALYSIS

Tempo by Hilton

PREPARED FOR:

City of Arcadia
240 W. Huntington Drive
P.O. Box 60021
Arcadia, CA 91066

September 24, 2024

5050 Avenida Encinas, Suite 260, Carlsbad, CA 92008
Office: 760.476-9193 | Fax: 760.476.9198
Contact: jacob.swim@mbakerintl.com
JN 201253

Michael Baker
INTERNATIONAL

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1 EXECUTIVE SUMMARY

This study analyzes the forecast traffic conditions associated with the proposed development of the Tempo by Hilton (Project) located on the northeast corner of Colorado Place and San Juan Drive in the City of Arcadia. The Project proposes to construct a hotel comprised of 91 rooms on approximately 5-acre site. Vehicular access to the site will be provided via Colorado Place and San Juan Drive. The Project is anticipated to be completed in Year 2026. The Project is forecast to generate approximately 563 new daily trips with 38 new trips during the AM peak hour (21 inbound and 17 outbound) and 39 new trips during the PM peak hour (20 inbound and 19 outbound).

1.1 LEVEL OF SERVICE ANALYSIS RESULTS

This study evaluates traffic conditions that include AM and PM peak hour intersections level of service (LOS) analysis. According to the *City of Arcadia Transportation Study Guidelines for Vehicle Miles Traveled and Level of Services Assessment,* dated August 2020, the City has identified LOS D as the threshold for acceptable operating conditions for intersections and roadway segments.

Existing Conditions - The results of the Existing conditions analysis show that all study intersections currently operate at acceptable LOS D or better.

Existing Plus Project Conditions – The results of the Existing Plus Project conditions analysis shows that all study intersections operate at acceptable LOS D or better.

Opening Year 2026 Without Project Conditions – The results of the Opening Year 2028 Without Project conditions analysis shows that all study intersections currently operate at acceptable LOS D or better with the exception of the following intersection:

- Santa Anita Avenue & Huntington Drive (Int. 5) LOS E in AM Peak Hour

Opening Year 2026 Plus Project Conditions - With the addition of project-related traffic, all study intersections continue to operate at acceptable LOS D or better for the Opening Year 2026 Plus Project conditions the exception of the following intersections:

- Santa Anita Avenue & Huntington Drive (Int. 5) LOS E in AM Peak Hour

Santa Anita Avenue and Huntington Drive continues to operate at LOS E during the AM peak hour with the addition of project-related traffic. However, the change in V/C ratio with Project traffic does not exceed the City's threshold. Therefore, improvements are **not** required at the signalized intersection of Santa Anita Avenue & Huntington Drive.

1.2 VEHICLE MILES TRAVELED

To satisfy California Environmental Quality Act (CEQA), a Vehicle Miles Traveled (VMT) screening assessment and analysis was prepared for the Project, refer to Chapter 7 in this report. Based on the City's guidelines, land use projects that meet certain vehicle miles traveled (VMT) screening threshold criteria based on size, location, proximity to transit or trip-making potential may be presumed to have a less than significant transportation impact under CEQA and does not require a full detailed VMT analysis. It was determined that the Project meets the "Project Type" screening criteria. Therefore, the Project is considered to have a less than significant VMT impact on the environment.

2 INTRODUCTION

This study analyzes the forecast traffic conditions associated with the proposed Project located on northeast corner of Colorado Place and San Juan Drive in the City of Arcadia, refer to **Exhibit 1**, *Regional Vicinity Map*. Surrounding cities include Sierra Madre to the north, Pasadena to the west, Monrovia to the east, and El Monte to the south.

The project site is bound by Colorado Place to the south, San Juan Drive to the west, and Santa Clara Street to the east; refer to **Exhibit 2** showing the Project Location Map. Regional access to the site is provided via Interstate 210. Local access is provided via Santa Anita Avenue and Huntington Drive. The Project plans to construct a four-story hotel project comprised of 91 rooms on approximately 5 acres. The Project is anticipated to be fully constructed in Year 2026. According to the Institute of Transportation Engineers (ITE) Trip Generation Manual (11th Edition), the proposed Project is forecast to generate approximately 563 new daily trips with 38 new trips during the AM peak hour (21 inbound and 17 outbound) and 39 new trips during the PM peak hour (20 inbound and 19 outbound).

2.1 STUDY AREA

The study evaluates the following five (5) intersections during the AM and PM peak hours in the vicinity of the project site:

1. Colorado Place and San Juan Drive (One-Way Stop Control)
2. Project Driveway #1 & San Juan Drive (Planned One-Way Stop Control)
3. Project Driveway #2 & Colorado Place (Planned One-Way Stop Control)
4. Colorado Place & Project Driveway #3 (One-Way Stop Control)
5. Santa Anita Avenue and Huntington Drive (Signlaized Intersection)

Exhibit 3 shows the study locations. These five (5) study intersections have been identified in coordination with City staff as potential locations impacted by the proposed Project. These study locations are analyzed for the following conditions:

- Existing Conditions
- Existing Plus Project Conditions
- Opening Year 2026 Without Project Conditions
- Opening Year 2026 Plus Project Condition

Michael Baker reviewed the study area, trip generation estimates, trip distribution, and other assumptions with City staff per the TIA Scoping Agreement contained in **Appendix A**.

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Not to Scale

Regional Vicinity

Exhibit 1

June 2024

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Not to Scale

Project Location Map

Exhibit 2

June 2024

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Not to Scale

Study Area

Exhibit 7

Sept. 2024

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3 PROJECT DESCRIPTION AND LOCATION

This study analyzes the forecast traffic conditions associated with the Project located on the northeast corner of Colorado Place and San Juan Drive in the City of Arcadia. The Project proposes to construct a hotel comprised of 91 rooms on approximately 5-acre site. Vehicular access to the site will be provided via a full access driveway on Colorado Place and a full access driveway on San Juan Drive. The majority of parking for the Project will be provided in the existing parking structure east of the site. The proposed hotel will share the existing driveway on San Juan Drive with the medical buildings, and will permanently close the diveway that was used for the previous restaurant use. The Project is anticipated to be completed in Year 2026. **Exhibit 4** shows the proposed site plan.

3.1 SURROUNDING ROADWAY NETWORK

The characteristics of the roadway system in the vicinity of the project site are described below:

Colorado Place is a four-lane undivided roadway trending in the east-west direction with left turn lanes provided at roadways and driveways along the corridor. Colorado Place is classified as a Primary Arterial within the study area per the City's General Plan. Within the study area, there are no bike lanes on either side of the road. Sidewalks are provided on the north side of the street. The posted speed limit is 40 MPH.

San Juan Drive is a two-lane undivided roadway trending in the north-south direction. San Juan Drive is classified as a local road per the City's General Plan. Sidewalks are provided on both sides of the street with no bicycle facilities within the study area. The posted speed limit is 25 MPH.

Huntington Drive: is classified as a one-way Major Arterial with three lanes going both directions. Huntington Drive goes one-way in the northbound direction and one-way in the southbound direction. Sidewalks are provided intermittently on both sides of the street and on-street parking is not permitted. The posted speed limit is 55 MPH. There are existing bike lanes on both sides of the street.

Santa Anita Avenue: is a four-lane divided roadway trending in the north-south direction. Santa Anita Avenue is classified as a Primary Arterial within the study area per the City's General Plan. Within the study area, there are no bike lanes on either side of the road. Sidewalks are provided on the north side of the street. The posted speed limit is 35 MPH.

Exhibit 5 shows the City's Roadway Network per the adopted General Plan.

Source: DesignCell Architecture 03/08/24

Not to Scale

Proposed Site Plan

Exhibit 4

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June 2024

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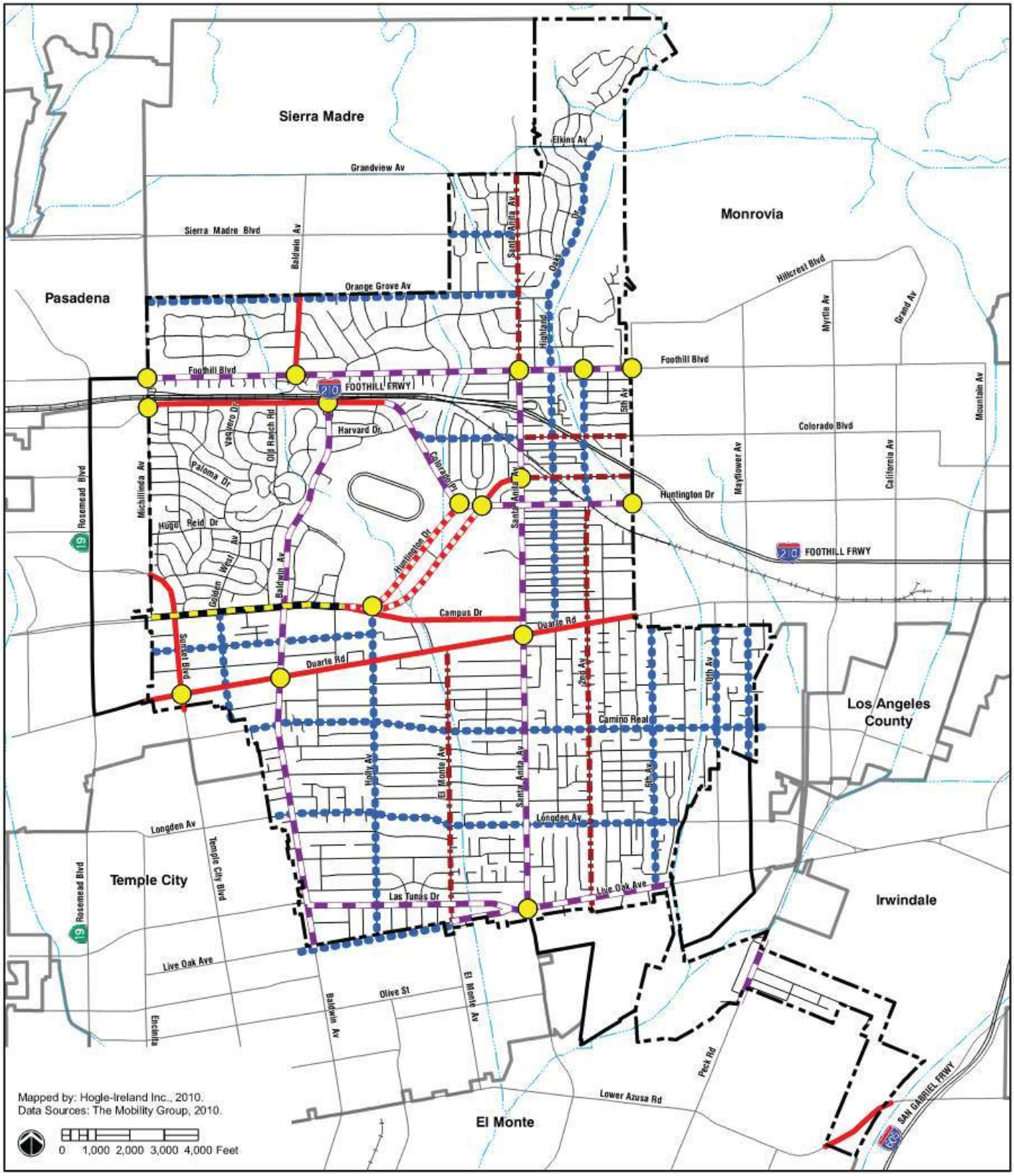

Roadway Plan

- Major Arterial
- Major Arterial 1-Way
- Primary Arterial
- Secondary Arterial
- Enhanced Collector
- Collector
- Enhanced Intersection Location

Base Map Features

- City Boundary
- Sphere of influence
- Freeway
- Local Road
- Railroad
- Water Feature

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Not to Scale

Circulation Element

June 2023

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Exhibit 5

4 METHODOLOGY AND THRESHOLDS

As required by the City of Arcadia, this Transportation Impact Analysis (TIA) has been prepared in accordance with the *City of Arcadia's Transportation Study Guidelines for Vehicle Miles Traveled and Level of Service Assessment Guidelines revised August 2020* (City Guidelines).

4.1 INTERSECTION ANALYSIS METHODOLOGY

Level of Service (LOS) is commonly used as a qualitative description of intersection operation and is based on traffic control and experienced delay at the intersection. The intersection analysis conforms to the operational analysis methodology outlined the *Highway Capacity Manual (HCM 6th Edition)* and performed utilizing *Synchro 11* traffic analysis software.

The *HCM* analysis methodology describes the operation of an intersection using a range of level of service from LOS A (free-flow conditions) to LOS F (severely congested conditions), based on the corresponding stopped delay experienced per vehicle for study intersections as shown in **Table 1**.

For signalized intersections, the Intersection Capacity Utilization (ICU) methodology was used. The ICU technique is intended for signalized intersection analysis and estimates the volume to capacity (V/C) relationship for an intersection based on the individual V/C ratios for key conflicting traffic movements. The ICU value translates to a LOS estimate, which is a relative measure of the intersection performance. The ICU value is the sum of the critical V/C ratios at an intersection. Table 1 includes the ICU value range.

Unsignalized intersection LOS for all-way stops and roundabouts is based on the average vehicle delay for all approaches. Average vehicle delay for one-way or two-way stop-controlled intersections is influenced by available gaps in traffic flow on the non-controlled approaches and LOS is based on the approach with the worst delay.

TABLE 1 - LEVEL OF SERVICE, ICU & DELAY RANGE

Level of Service	ICU (v/c ratio)	Delay (sec/veh)	Description
	Signalized Intersections	Unsignalized Intersections	
A	≤0.600	≤10.0	EXCELLENT. Operations with very low delay and most vehicles do not stop.
B	>0.600 and ≤0.700	>10.0 and ≤15.0	VERY GOOD. Operations with good progression but with some restricted movements.
C	>0.700 and ≤0.800	>15.0 and ≤25.0	GOOD. Operations where a significant number ofvehicles are stopping with some backup and lightcongestion.
D	>0.800 and ≤0.900	>25.0 and ≤35.0	FAIR. Operations where congestion is noticeable,longer delays occur, and many vehicles stop. The proportion of vehicles not stopping declines.
E	>0.900 and ≤1.000	>35.0 and ≤50.0	POOR. Operations where there is high delay, extensive queueing, and poor progression
F	>1.000	>50.0	FAILURE. Operations that are unacceptable to mostdrivers, when the arrival rates exceed the capacityof the intersection.

Source: HCM 2000

4.2 LEVEL OF SERVICE ANALYSIS PERFORMANCE STANDARDS

The City of Arcadia has identified LOS "D" as the threshold for acceptable operating conditions for intersections as established in the City's General Plan. LOS E is considered acceptable at intersections adjacent to freeway ramps; adjacent to Santa Anita Park during the racing season. Any intersection operating at an LOS grade worse than the acceptable condition is considered deficient. Signalized intersections will require improvements if one of the following conditions is met:

- LOS C - Project V/C increase 0.04 or more
- LOS D - Project V/C increase 0.02 or more
- LOS E/F - Project V/C increase 0.01 or more

Unsignalized intersections will require improvements if both of the following conditions is met:

- The addition of project traffic to an intersection results in the degradation of overall intersection operations from acceptable operations to unacceptable operations, and

- The intersection meets peak hour signal warrants either caused by project volumes, or project volumes are added at an intersection that meets peak hour signal warrants in the baseline scenario(s). Peak hour signal warrants should be determined based on the latest California Manual on Uniform Traffic Control Devices (CA MUTCD).

The fair share cost for the proposed improvements in the cumulative condition should also be calculated.

Fees paid through the City of Arcadia Transportation Impact Fee Program (TIFP) will be considered sufficient if the intersection improvement is identified as a planned project in the General Plan.

5 LOS ANALYSIS

This chapter of the report documents the vehicle trips estimated to be generated by the Project and results of the intersection analysis under Existing, Existing Plus Project, Opening Year 2026 Without Project and Opening Year 2026 Plus Project conditions.

5.1 PROJECT FORECAST TRIP GENERATION

In order to calculate vehicle trips forecast to be generated by the proposed Project, the *Institute of Transportation Engineers (ITE) Trip Generation Manual (11th Edition)* was used to calculate the trip generation rates as summarized in **Table 2** utilizing the fitted curve equations which are based on the proposed land use quantity. ITE's hotel trip generation rates align were used to estimate the Project's daily and peak hour trips during a typical weekday.

Table 3 summarizes the vehicular trip generation forecast to be generated by the Project using the rates shown in **Table 2**. The site is currently vacant and undeveloped, therefore, a trip generation credit has not been applied. As shown, the proposed Project is forecast to generate approximately 563 daily vehicle trips with 38 AM peak hour trips (21 in / 17 out) and 39 PM peak hour trips (20 in / 19 out).

TABLE 2- ITE TRIP GENERATION RATES

Land Use	ITE Code [1]	Daily Trip Rate	AM Peak Hour Rate		PM Peak Hour Rate	
			Total	In : Out	Total	In : Out
Hotel	310	T = 10.84(X) - 423.51	T = 0.50(X) - 7.45	56% : 44%	T = 0.74(X) - 27.89	51% : 49%

[1] Source: ITE Trip Generation Manual, 11th Edition. Rates shown are based on fitted curve equation.

TABLE 3 - PROPOSED PROJECT TRIP GENERATION

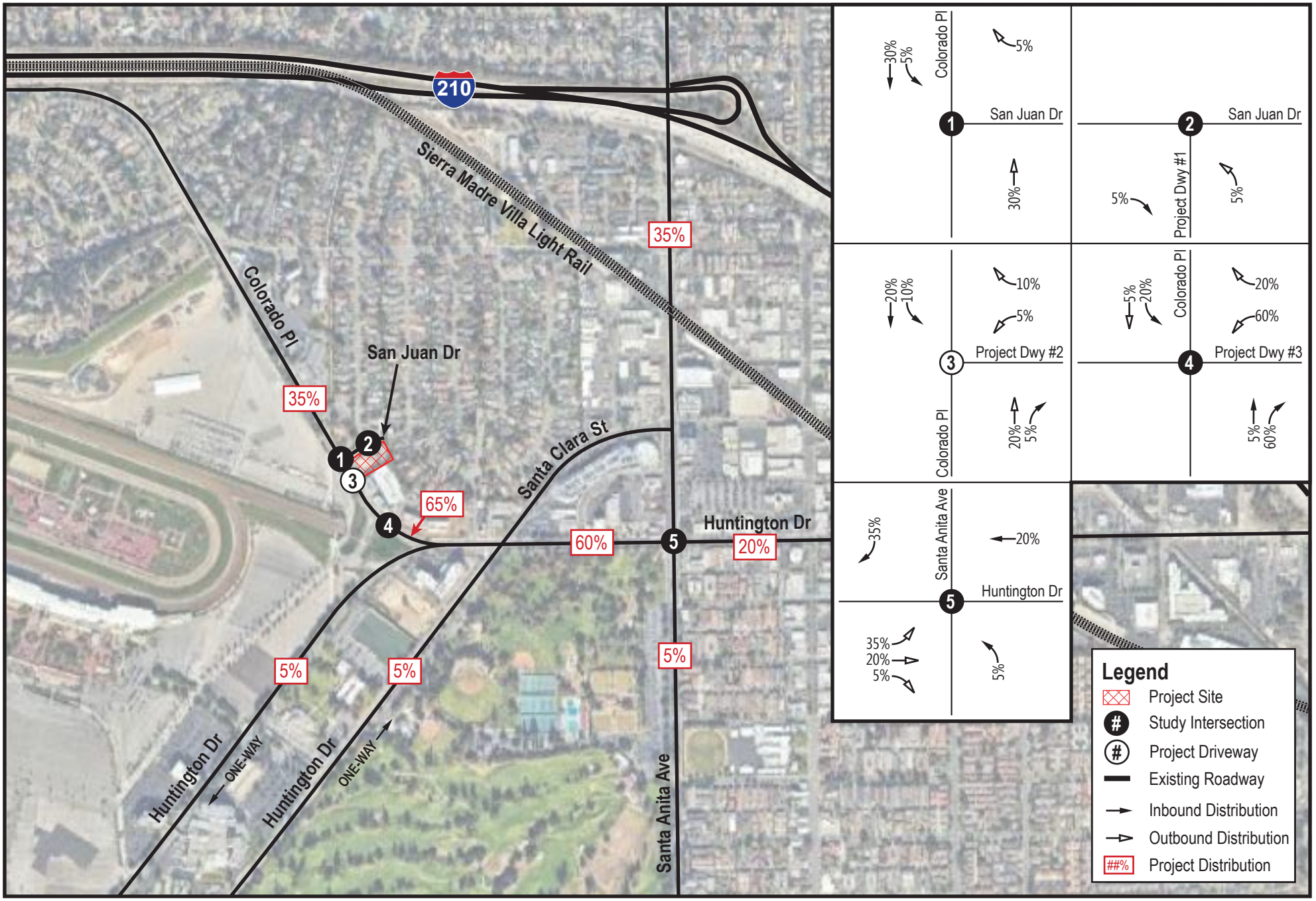
Land Use	Intensity		Daily Trips	AM Peak Hour Trips		PM Peak Hour Trips	
				Total	In : Out	Total	In : Out
Proposed Project							
Hotel	91	Rooms	563	38	21 : 17	39	20 : 19

5.2 TRIP DISTRIBUTION AND TRIP ASSIGNMENT OF PROPOSED PROJECT

Project trips were assigned onto the surrounding roadway network based on the location of the Project relative to the area transportation network such as access to freeway interchange and primary arterials.

Exhibit 6 shows the forecast trip percent distribution of the proposed Project within the study area. As shown, 65% of project-related traffic is expected to travel east via Colorado Place, 35% to the west via Colorado Place, 35% to the north via Santa Anita Avenue towards the I-210 interchange.

Exhibit 7 shows the corresponding forecast assignment of AM and PM peak hour project-generated trips assuming the trip percent distribution shown in Exhibit 8.



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Not to Scale

Project Trip Distribution

Exhibit 6

Sept. 2024

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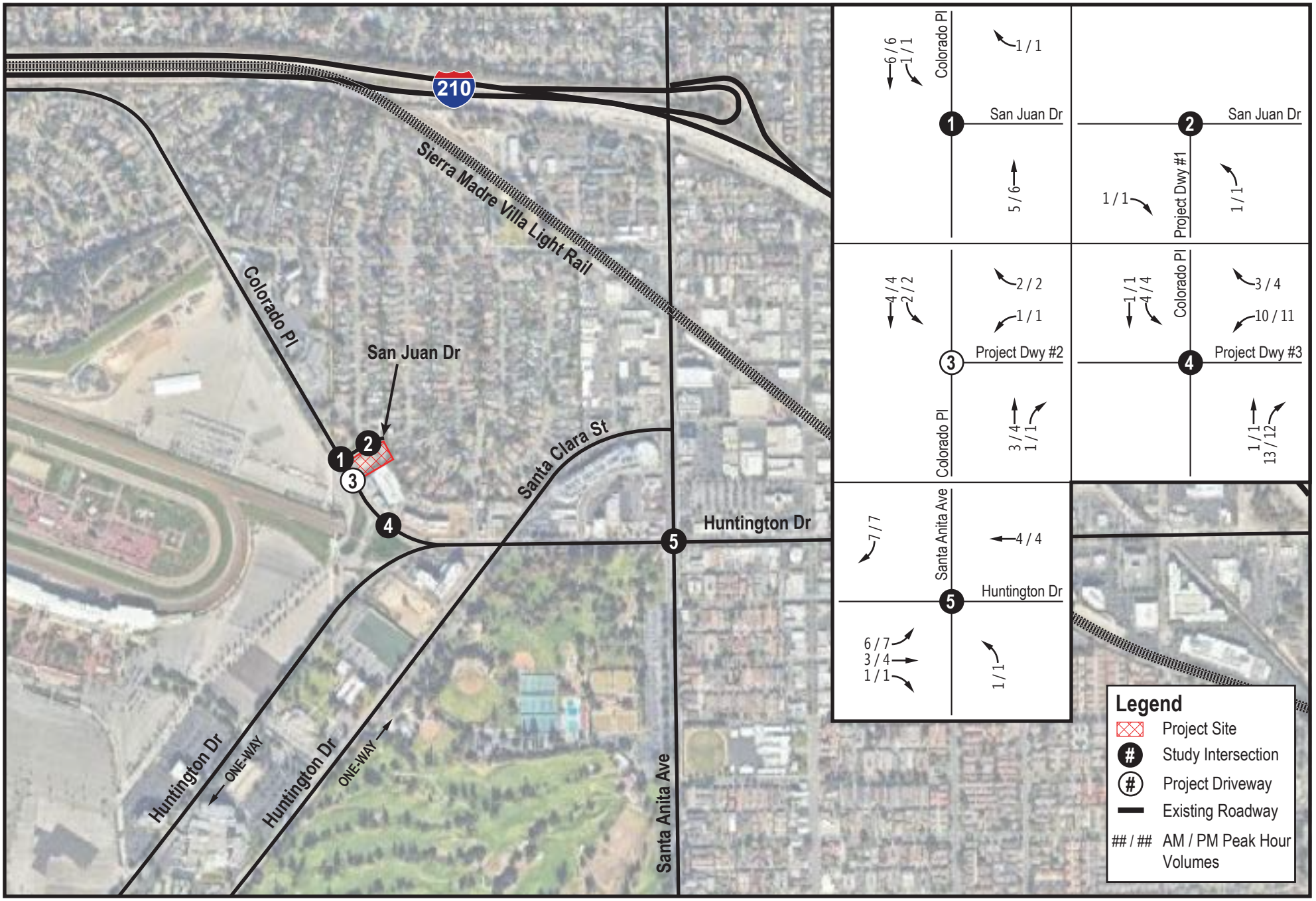

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Not to Scale

Project Trip Assignment

Exhibit 7

Sept. 2024

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5.3 EXISTING CONDITIONS

5.3.1 Existing Public Transit Services

Public bus transit service in the project vicinity Is currently provided by the Metropolitan Transportation Authority (Metro), Foothill Transit, and Arcadia Transit.

Metro provides bus transit service near the project site along Hunitington Drive and Santa Anita Avenue. Metro currently operates two local Metro bus transit routes in the vicinity of the project site. Foothill Transit provides bus transit service along major roadways near the project study area along Huntington Drive and Santa Anita Avenue. Foothill Transit currently operates one transit route near the project site.

5.3.2 Existing Traffic Volumes

To determine the existing operations of the study intersections, peak hour intersection movement counts were collected onTuesday May 21st, 2024. Morning (AM) peak period counts were collected between 7:00 AM to 9:00 AM and evening (PM) peak period counts were collected from 4:00 PM – 6:00 PM. The counts used in this analysis represent the highest hour within the peak periods counted for each intersection. Detailed count data is contained in **Appendix B**.

Exhibit 8 shows the Existing study intersection lane geometry. **Exhibit 9** shows the Existing daily and AM/PM peak hour volumes at the study intersections.

5.3.3 Existing Peak Hour Study Intersection LOS

Table 3 summarizes Existing conditions AM/PM peak hour level of service for all study intersections. Detailed analysis sheets are contained in **Appendix C**.

TABLE 3 – EXISTING AM/PM PEAK HOUR INTERSECTION LOS

Study Intersection	Traffic Control	Existing Conditions	
		AM	PM
		Delay[1] - LOS	Delay[1] - LOS
1 - Colorado Place & San Juan Drive	OWSC	26.7 - D	12.6 - B
2 - Project Driveway #1 & San Juan Drive	OWSC	8.9 - A	8.7 - A
3 - Project Driveway #2 & Colorado Place	OWSC	*Does not existing without project*	
4 - Colorado Place & Project Driveway #3	OWSC	21.8 - C	13.1 - B
5 - Santa Anita Avenue and Huntington Drive[2]	Signal	0.818 - C	0.736 - C

Note: Deficient intersection operation indicated in **bold**.

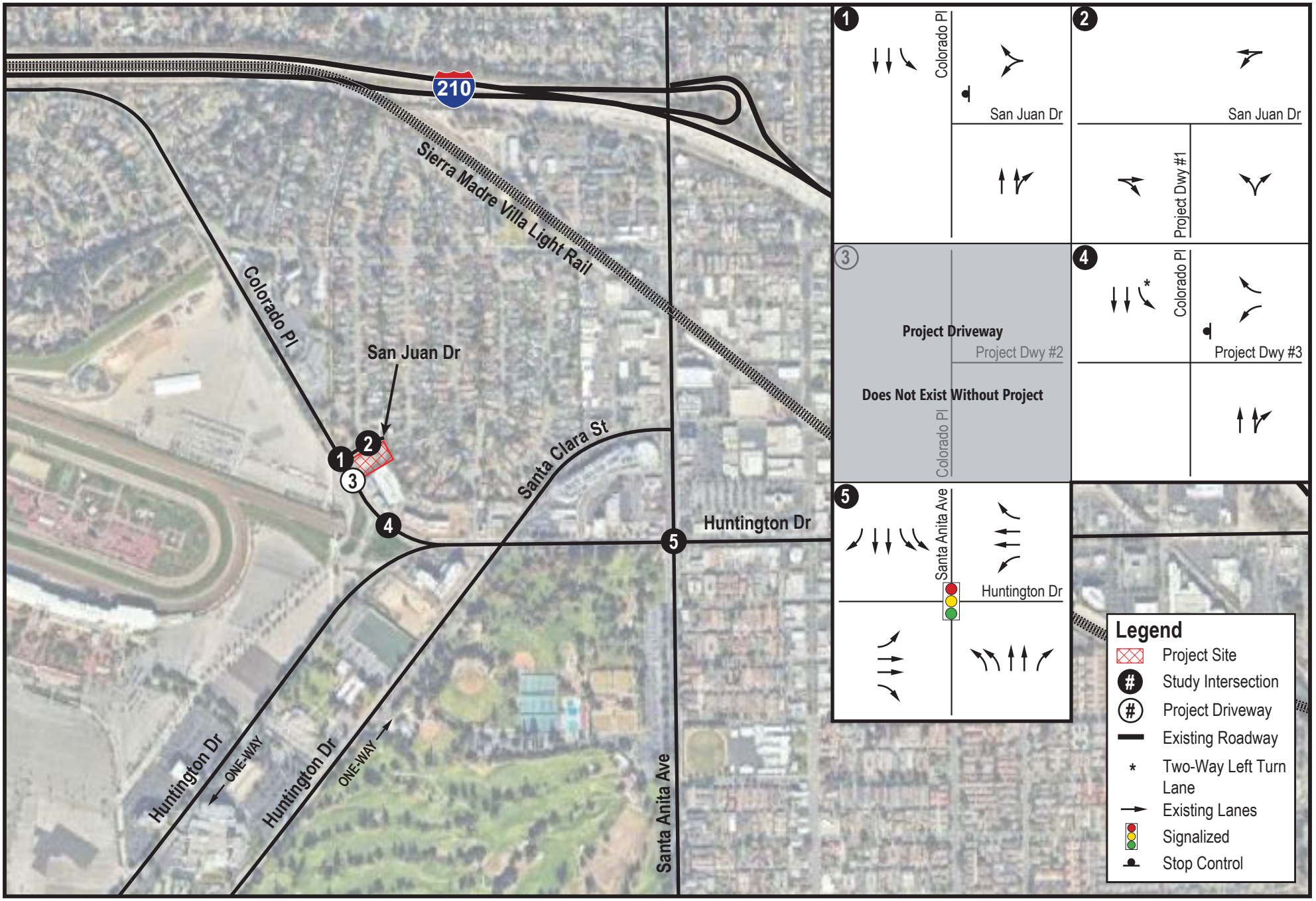
[1] Delay is expressed in seconds per vehicle.

[2] Signalized intersections use ICU methodology and report volume-to-capacity ratios.

LOS = level of service.

OWSC = One Way Stop Control

As shown in **Table 3**, all study intersections are currently operating at an acceptable level of service (D or better under Existing conditions. At Santa Anita Avenue & Huntington Drive (Int. #5), the Intersection Capacity Utilization (ICU) methodology is used for analysis and the volume-to-capacity ratio is reported since this study location is signalized in accordance with the City's TIA Guidelines.



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Existing Lane Configuration

Exhibit 8

Sept. 2024

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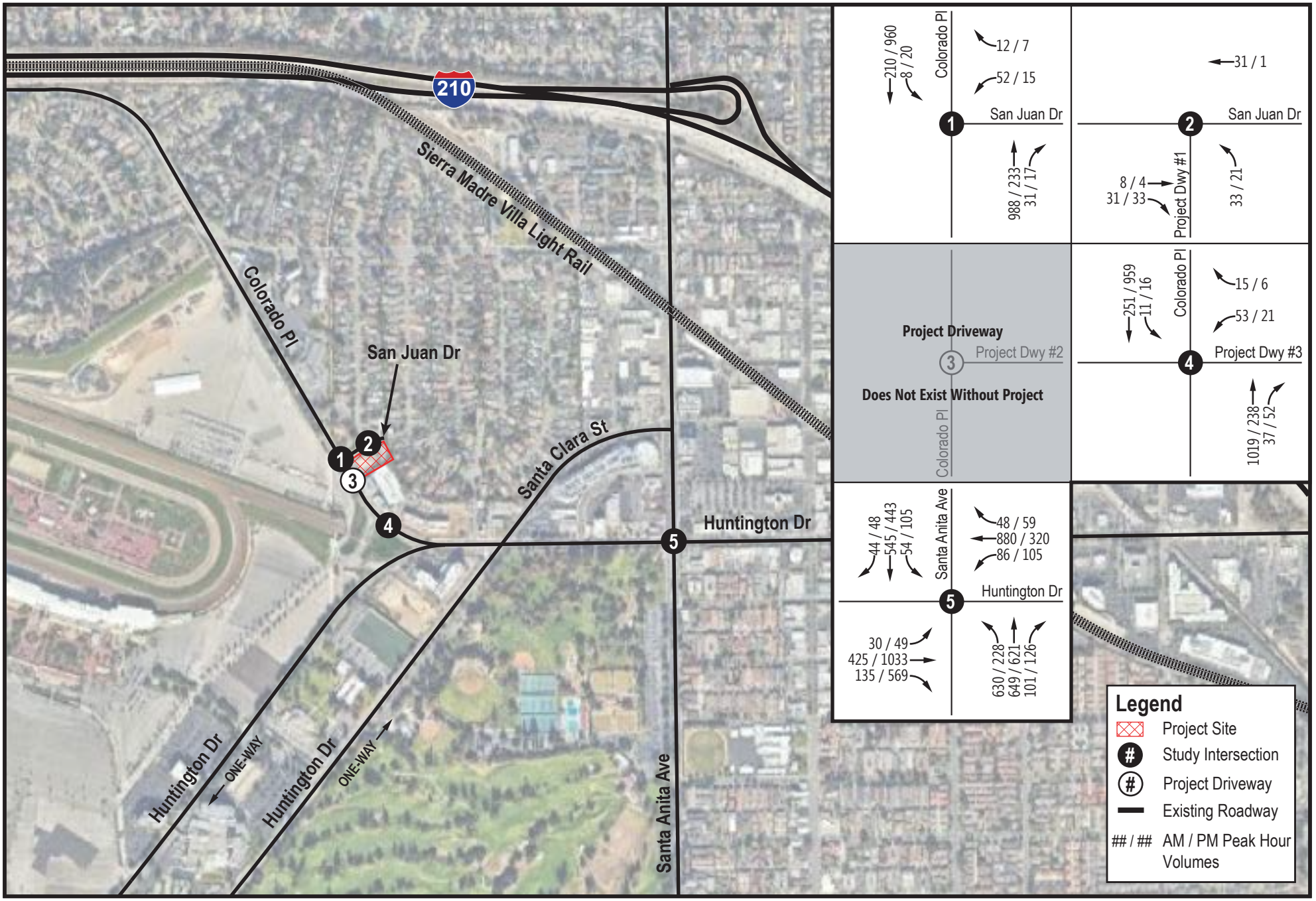

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Not to Scale

Existing AM/PM Peak Hour Volumes

Exhibit 9

Sept. 2024

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5.3.4 Existing Plus Project Conditions

This chapter of the report evaluates the Existing Plus Project conditions for the study intersections. Existing Plus Project traffic volumes were derived by adding Project only daily, AM and PM peak hour traffic volumes to Existing daily, AM and PM peak hour traffic volumes. **Exhibit 10** shows the Existing Plus Project lane configuration and **Exhibit 11** shows the Existing Plus Project daily and AM/PM peak hour volumes at the study intersections.

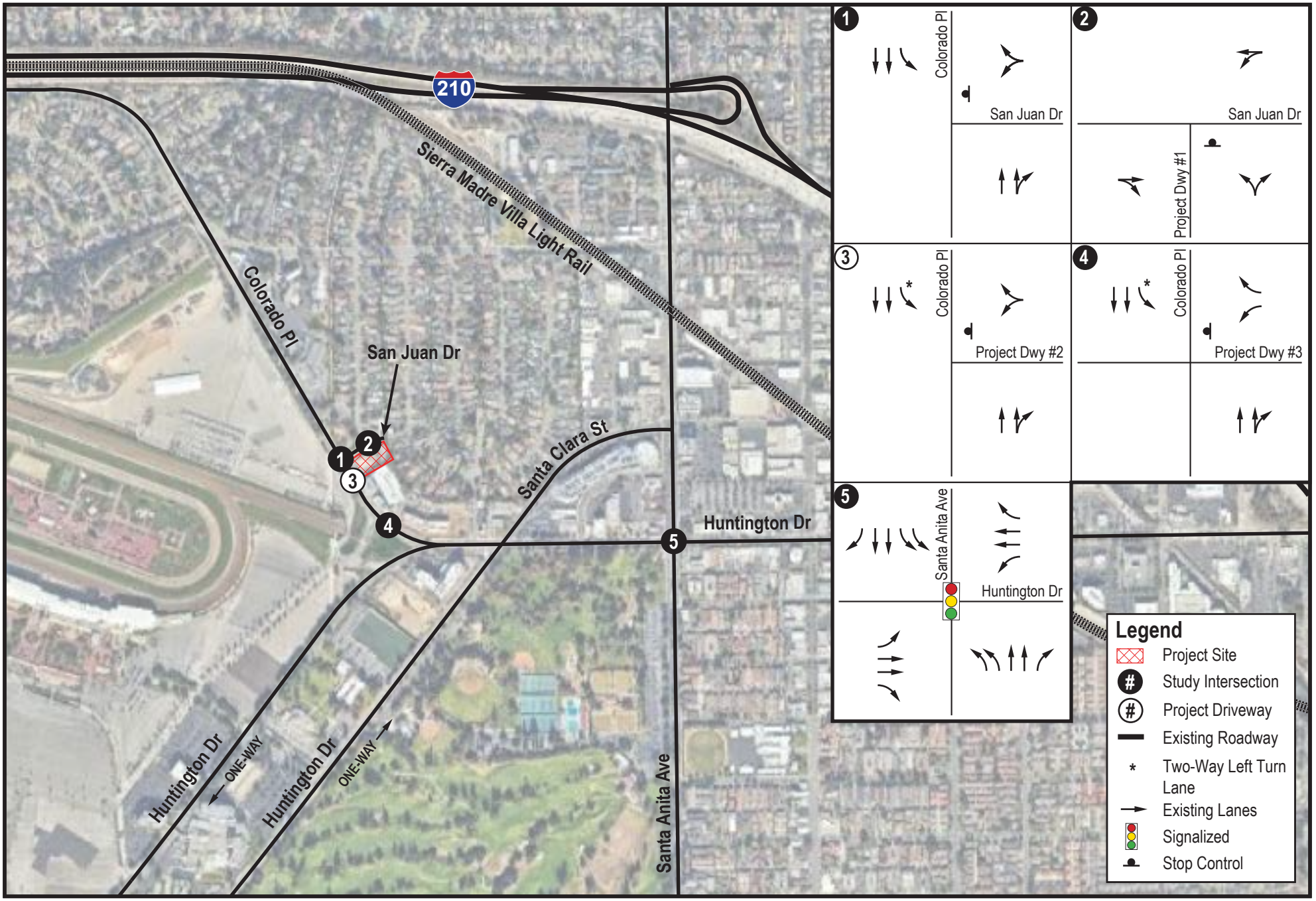
Table 4 compares the Existing Conditions AM/PM peak hour LOS to the Existing Plus Project AM/PM peak hour LOS for all study intersections. Detailed analysis sheets are contained in **Appendix D**.

TABLE 4 - EXISTING & EXISTING PLUS PROJECT AM/PM PEAK HOUR INTERSECTION LOS

Study Intersection	Existing Conditions		Existing Plus Project Conditions		Change in V/C		Fair Share Required?
	AM	PM	AM	PM			
	Delay[1] - LOS	Delay[1] - LOS	Delay[1] - LOS	Delay[1] - LOS	AM	PM	
1 - Colorado Place & San Juan Drive	26.7 - D	12.6 - B	26.9 - D	12.6 - B	N/A	N/A	No
2 - Project Driveway #1 & San Juan	8.9 - A	8.7 - A	8.9 - A	8.7 - A	N/A	N/A	No
3 - Project Driveway #2 & Colorado Place	*Does not existing without project*		14.9 - B	10.5 - B	N/A	N/A	No
4 - Colorado Place & Project Driveway #3	21.8 - C	13.1 - B	23.0 - C	13.4 - B	N/A	N/A	No
5 - Santa Anita Avenue and Huntington Drive	.818 - C	.736 - C	.820 - C	.737 - A	.002	.001	No

Deficient intersection operation indicated in **bold**.
At Santa Anita Ave & Huntington Dr, the ICU Methology showing V/C ratio is presented.
[1] Delay is expressed in seconds per vehicle for unsignalized intersections.
LOS = level of service.

As shown in **Table 4**, all study intersections are forecast to operate at an acceptable level of service (D or better) under Existing Plus Project Conditions during the AM and PM peak hour. Therefore, no physical improvements to the study intersections are required.



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Not to Scale

Existing with Project Lane Configuration

Exhibit 10

Sept. 2024

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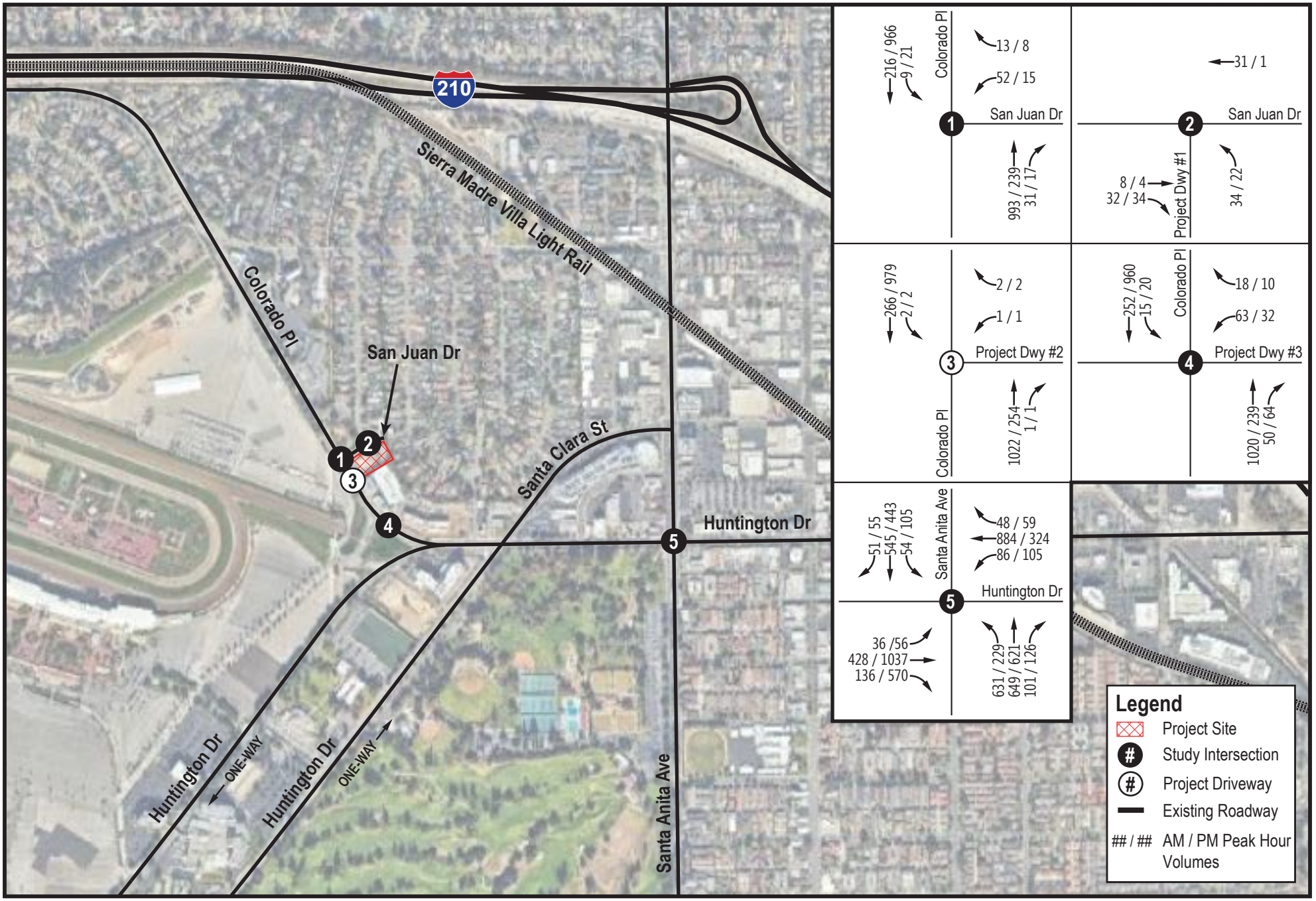

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Not to Scale

Existing with Project AM/PM Peak Hour Volumes

Sept. 2024

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Exhibit 11

5.4 OPENING YEAR 2026 WITHOUT PROJECT CONDITIONS

5.4.1 Cumulative Projects

A forecast of on-street traffic conditions prior to the occupancy of the proposed Project was prepared by incorporating the potential trips associaterd with other known development projects (cumulative projects) in the area. With this information, the potential impact of the proposed Project can be evaluated within the context of the cumulative impact of all ongoing development.

Based on consultation with City staff and review of the *Transportation Impact Analysis for 125 W. Huntington Drive, Buildings C & D* dated December 2019, Michael Baker found six cumulative projects that are expected to add project-related traffic to the study intersections.

Table 5 presents the trip generation for the six cumulative projects using ITE's Trip Generation. As shown, the cumulative projects are expected to generate a total of 7,540 daily vehicle trips with 772 AM peak hour and 612 PM peak hour trips.

Traffic from these six cumulative projects were distributed onto the roadway network and the study intersections.

TABLE 5 - CUMULATIVE PROJECTS TRIP GENERATION SUMMARY

	Project	Status	Jurisdiction	Land Use	Intensity		ADT	AM Peak Hour			PM Peak Hour		
								Total	In	Out	Total	In	Out
1	323-325 N. 1st Avenue	Approved	Arcadia	Medical Office	5,420	SF	196	13	10	3	19	5	14
				Retail	1,806	SF	77	2	1	1	7	3	4
						Total:	273	15	11	4	26	8	18
2	117-129 E. Huntington Drive/124, 126 & 134 E. Wheeler Avenue	Approved	Arcadia	Apartment	139	DU	924	71	14	57	86	56	30
				Retail	11,150	SF	476	11	7	4	41	20	21
						Total:	1,400	82	21	61	127	76	51
3	405 S. 1st Avenue	Approved	Arcadia	Condominium	4	DU	23	2	0	2	2	1	1
				Retail	585	SF	25	1	1	0	2	1	1
						Total:	48	3	1	2	4	2	2
4	Derby Mixed Use Project 233 & 301 E. Huntington Drive	Pending	Arcadia	Restaruant (932)	3300	SF	354	32	17	15	30	18	12
				Dwelling Units (Multifamily 221)	214	DU	974	83	19	64	84	51	33
				Café (936)	1400	SF	374	130	66	64	45	23	22
						Total:	1,702	245	102	143	159	92	67
5	Alexan Mixed Use Project 150 N. Santa Anita Avenue	Pending	Arcadia	Multifamily residential (221)	319	DU	1,475	129	30	99	125	76	49
				Café (936)	750	SF	200	70	36	34	24	12	12
						Total:	1,675	199	66	133	149	88	61
6	125 Huntington Drive, Buildings C & D	Under Construction	Arcadia	(Trip Gen via LLG TIA)	-	-	2,442	178	73	105	147	104	43
Total Cumulative Project Trips							**7,540**	**722**	**274**	**448**	**612**	**370**	**242**

Note: All volumes are in passenger car equivalents (PCE's)

SF = Square Feet; DU=Dwelling Unit

ADT's for Café (ITE Tripgen Code:936) uses 1/2 of the ADT's from ITETrip Gen Code 937.

5.4.2 Opening Year 2026 Without Project Peak Hour Intersection LOS

Traffic volumes for the Opening Year 2026 Without Project scenario were derived by adding cumulative project traffic to existing plus ambient growth traffic. A 1.0% annual ambient growth rate to account for population, household and employment growth within the City of Arcadia was applied to the existing daily, AM and PM peak hour traffic volumes. Therefore, a total of 2% (2024 to 2026) was applied to existing traffic volumes.

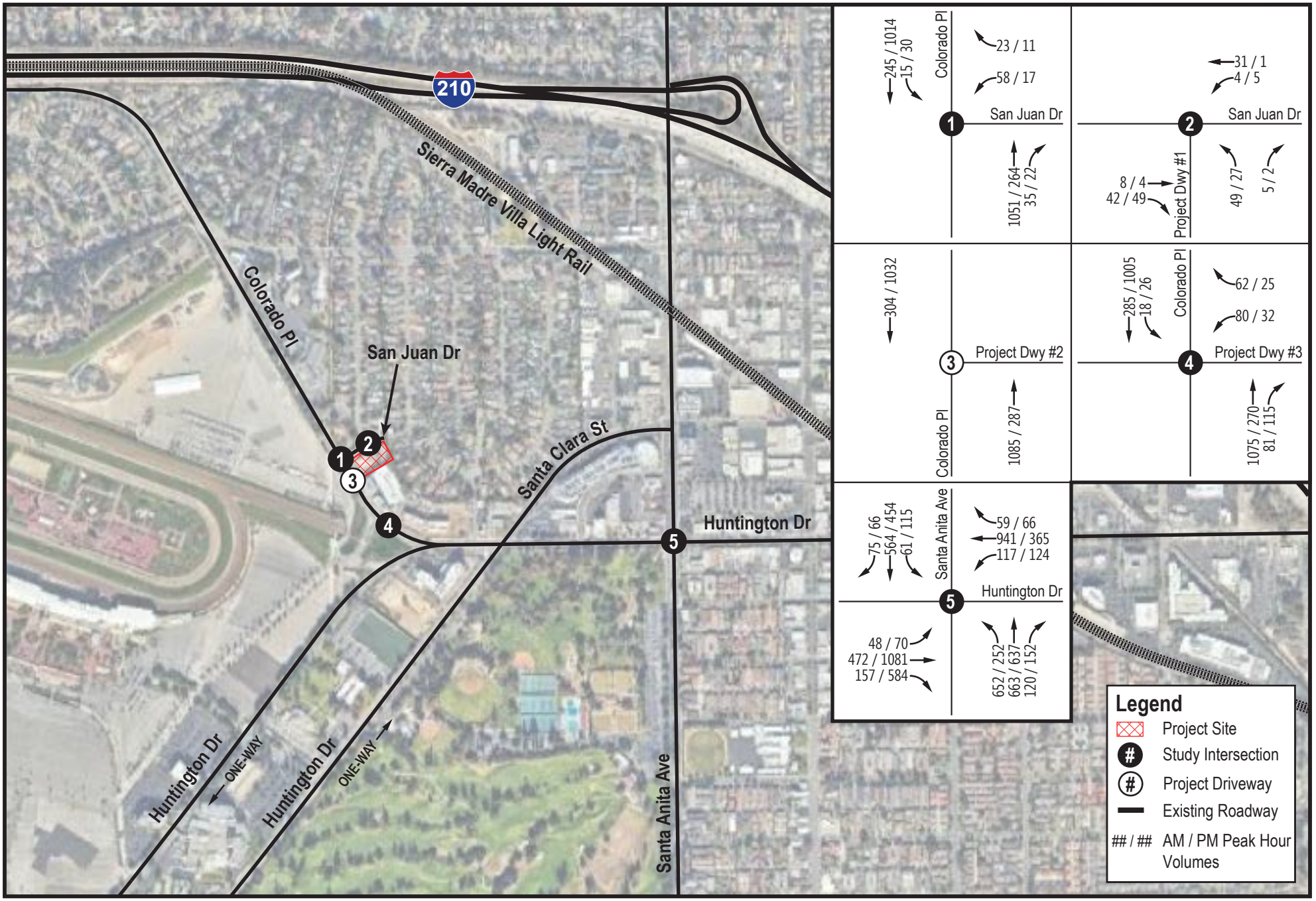
Exhibit 12 shows the Opening Year 2026 Without Project AM/PM peak hour traffic volumes at the study intersections. **Table 6** summarizes the Opening Year 2026 Without Project AM and PM peak hour levels of service for all study intersections. Detailed analysis sheets are contained in **Appendix E**.

TABLE 6 - OPENING YEAR 2026 WITHOUT PROJECT AM/PM PEAK HOUR INTERSECTION LOS

Study Intersection	Traffic Control	Opening Year 2026 Without Project	
		AM	PM
		Delay[1] - LOS	Delay[1] - LOS
1 - Colorado Place & San Juan Drive	OWSC	32.5 - D	13.5 - B
2 - Project Driveway #1 & San Juan Drive	OWSC	9.1 - A	8.8 - A
3 - Project Driveway #2 & Colorado Place	OWSC	*Does not exist without project*	
4 - Colorado Place & Project Driveway #3	OWSC	24.4 - D	13.0 - B
5 - Santa Anita Avenue & Huntington Drive	Signal	**0.849 - E**	0.765 - D

Note: Deficient intersection operation indicated in **bold**.
[1] Average seconds of delay per vehicle
LOS = level of servicel; OWSC = Owo Way Stop Control

According to **Table 6**, all study intersections are shown to operate at an acceptable level of service (D or better) under Opening Year 2026 Without Project conditions during the AM and PM peak hour except for the intersection of Santa Anita Avenue & Huntington Drive which is reported to operate at an LOS E during the AM peak hour.



Michael Baker INTERNATIONAL

Not to Scale

Opening Year 2026 AM/PM Peak Hour Volumes

Exhibit 12

Sept. 2024

H:\PDATA\201253_Home2Suites Hotel Arcadia\Traffic\Exhibits

5.5 OPENING YEAR 2026 PLUS PROJECT CONDITIONS

5.5.1 Opening Year 2026 Plus Project Intersection Analysis

Traffic volumes for the Opening Year 2026 Plus Project scenario were derived by adding Project traffic to Opening Year 2026 Without Project traffic. **Exhibit 13** shows the Opening Year 2026 Plus Project AM/PM peak hour traffic volumes at the study intersections.

The City of Arcadia adopted a Citywide Transportation Impact Fee Program to implement the improvements needed to address the cumulative impacts of the development currently proposed. The proposed Project, like other new development projects are subject to the payment of the Transportation Impact Fee as part of the Transportation Impact Fee Program. The fees collected by the City will be used to implement specific roadway improvement measures and are intented to fund on a fair-share basis the improvements to maintain LOS D conditions.

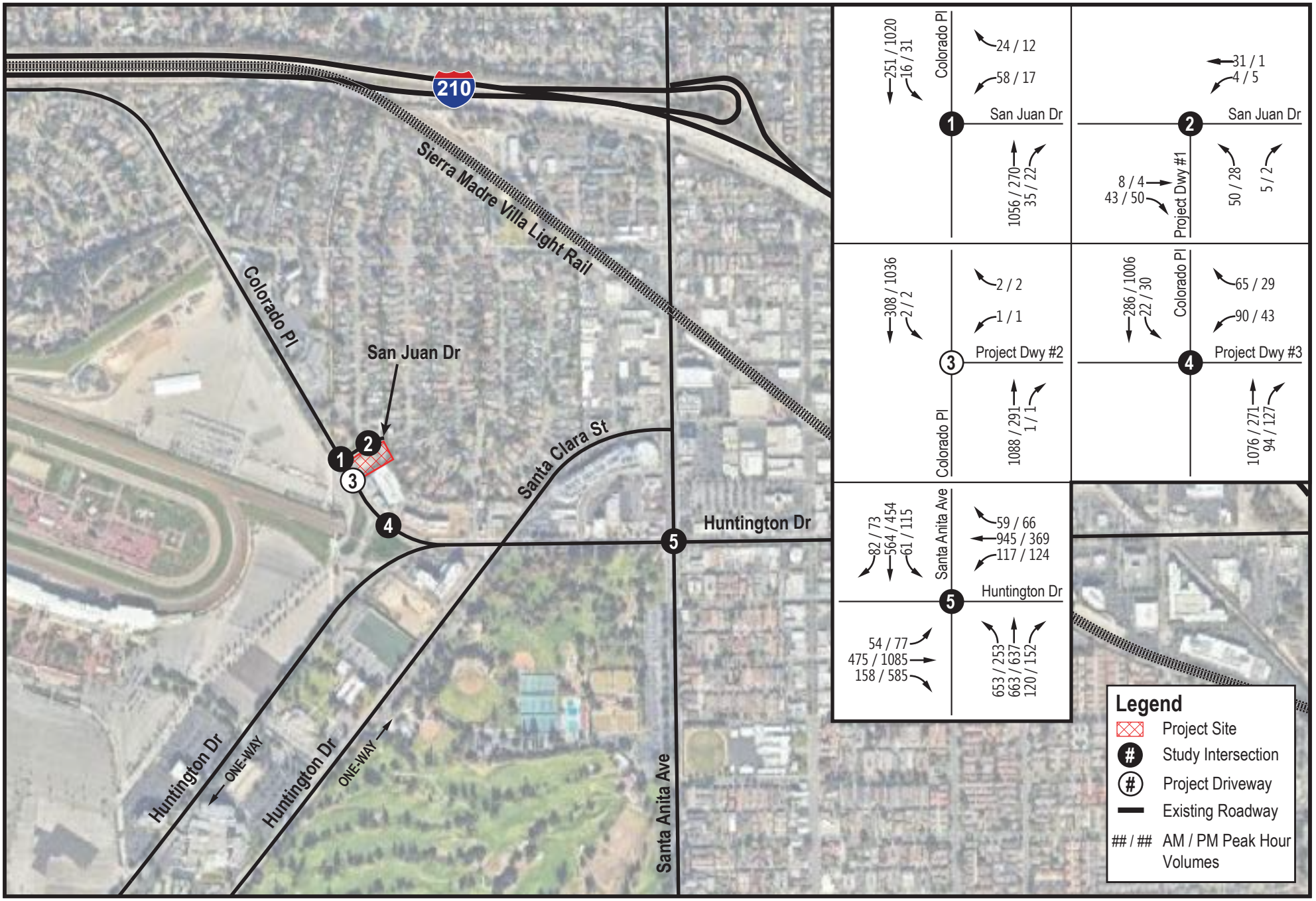
Table 7 compares the Opening Year 2026 Without Project LOS to the Opening Year 2026 Plus Project AM and PM peak hour LOS for all study intersections. Detailed analysis sheets are contained in **Appendix F**.

TABLE 7 - OPENING YEAR 2026 WITHOUT & PLUS PROJECT AM/PM PEAK HOUR INT LOS

Study Intersection	Opening Year 2026 Without Project Conditions		Opening Year 2026 Plus Project Conditions		Change in V/C		Fair Share Required?
	AM	PM	AM	PM			
	Delay[1] - LOS	Delay[1] - LOS	Delay[1] - LOS	Delay[1] - LOS	AM	PM	
1 - Colorado Place & San Juan Drive	32.5 - D	13.0 - B	32.2 - D	13.0 - B	N/A	N/A	No
2 - Project Driveway #1 & San Juan Drive	9.1 - A	8.8 - A	9.1 - A	8.8 - A	N/A	N/A	No
3 - Project Driveway #2 & Colorado Place	*Does not exist without project*		15.6 - C	10.7 - B	N/A	N/A	No
4 - Colorado Place & Project Driveway #3	24.4 - D	13.0 - B	27.2 - D	14.3 - B	N/A	N/A	No
5 - Santa Anita Avenue and Huntington Driveway	**0.849 - E**	0.765 - D	**0.850 - E**	0.767 - D	0.001	0.002	No

Note: Deficient intersection operation indicated in **bold**.
At Santa Anita Ave & Huntington Dr, the ICU Methology showing V/C ratio is presented.
[1] Average Seconds of Delay per Vehicle LOS = level of service.

As shown in **Table 7**, all study intersections are forecast to operate at an acceptable level of service (D or better) under Opening Year 2026 With Project conditions under the AM and PM peak hour except for the intersection of Santa Anita Avenue & Huntington Drive which is expected to operate at LOS E during the AM peak period. However, the change in V/C ratio with Project traffic does not exceed the City's change in v/c threshold of 0.01 for intersections operating at LOS E. Therefore, improvements are **not** required at the signalized intersection of Santa Anita Avenue & Huntington Drive.



Michael Baker INTERNATIONAL

Not to Scale

Opening Year 2026 with Project AM/PM Peak Hour Volumes

Sept. 2024

H:\PDATA\201253_Home2Suites Hotel Arcadia\Traffic\Exhibits

Exhibit 13

6 ON-SITE PARKING, ACCESS, AND CIRCULATION ANALYSIS

6.1 ON-SITE PARKING

The project site is situated on the northeast side of Colorado Place and is adjacent to two existing medical office buildings and their associated surface parking lot and parking structure. According to the City of Arcadia Municipal Code off-street parking requirements (Section 9103.07.060 Off-Street Parking for Non-Residential Uses), 1.2 parking spaces per guest room are required of the project. This calculates to a total of 110 spaces (91 guest rooms x 1.2 spaces/guest room).The parking structure, located adjacent to the project site comprised of four levels. The parking structure provides a total of 392 parking spaces. Additionally, the project site currently provides 40 surface parking spaces (38 standard and 2 accessible spaces) east and south of the footprint of the former building.

It is expected that parking for the proposed Project will be primarily shared with the adjacent medical office and hotel uses and will be located in the adjacent parking structure and surface parking lots. Based on the *Revised Parking Demand Analysis for the Tempo by Hilton Hotel Project* conducted by Linscott, Law and Greenspan dated March 12, 2024, the calculated forecast peak parking demand, assuming full occupancy of all of the uses combined, is expected to total 398 spaces during the weekend peak condition. When compared to the adjusted parking supply (i.e., at 90%) of 418 spaces, this results in a surplus of 20 parking spaces with greater surpluses throughout other time periods of a typical weekend day. The calculated future peak weekday parking demand, also assuming full occupancy of all uses, is only slightly less than the weekend period, and totals 396 spaces. When compared to the total parking adjusted parking supply of 418 spaces, a parking surplus of 22 spaces could be expected during the weekday peak hour, with even greater surpluses expected during other weekday morning and afternoon evening periods. Given the forecast peak weekday and weekend parking demands, the proposed parking supply is expected to be adequate to meet the weekday and weekend parking demands associated with the proposed Tempo by Hilton Hotel Project along with the existing parking demands of the adjacent USC Keck Medicine medical office buildings and future occupancy of the Hilton Hotel.

As part of the proposed hotel development, six new surface parking spaces are planned along the south side of the proposed hotel building east of the hotel drop off area with access via the Colorado Place driveway. The existing surface parking lot with 24 spaces north of the parking structure will be reconfigured to provide space for trash enclosures and to provide a connection down to the new surface parking along the south side of the hotel building, which would reduce the surface parking spaces from 72 spaces to 66 spaces. Altogether, the future planned parking supply is expected to total 464 spaces (6 new surface parking spaces, 66 surface parking spaces, and 392 parking structure spaces).

6.2 EXISTING SITE ACCESS

Vehicular access to the existing project site is currently provided via one driveway on Colorado Place. A two-way left turn lane is available on Colorado Place along the project frontage to allow vehicles to make a left-turn movement in the eastbound approach. The existing driveway currently accommodates full access (i.e., left-turn and right-turn ingress and egress movements).

6.3 PROJECT SITE ACCESS

Vehicle access to the project site will continue to be provided via the two existing driveway along Colorado Place and one driveway along San Juan Drive. Descriptions of the project site access points are provided in the following paragraphs.

- *Project Driveway #1 & San Juan Drive*
  The San Juan Drive project driveway will be located on the south side of San Juan Drive at the northeast quadrant of the project site. This project driveway will provide direct vehicular access to the existing parking structure as well as the on-site surface parking area located to the north of the parking structure. The San Juan Drive project driveway will continue to accommodate full access (i.e.; left turn and right turn ingress and egress movements).

- *Project Driveway #2 & Colorado Place*
  The proposed project driveway will be located to the east side of Colorado Place closer to San Juan Drive. The driveway will be accessibile using the existing two way left turn lane along Colorado Place.

- *Colorado Place & Project Driveway #3*
  The existing Colorado Place project driveway is located on the east side of Colorado Place approximately mid-way between San Juan Drive and San Rafael Road. This project driveway will continue providing vehicular access to the existing parking structure. The driveway will provide outbound left turn lane and right turn lane along with one inbound lane.

7 ACTIVE TRANSPORTATION AND PUBLIC TRANSIT ANALYSIS

7.1 BICYCLE AND PEDESTRIAN ANALYSIS

Sidewalks are provided along the north side of Colorado Place and sidewalks on both side of the street along San Juan Drive; however, the Project will provide a curb, gutter, and sidewalk along the Project frontage.

Existing bike lanes are not currently provided on either side of Colorado Place and San Juan Drive. An existing bike lane is provided along Santa Clara Street.

7.2 PUBLIC TRANSIT ANALYSIS

Public bus transit service in the Project vicinity Is currently provided by the Metropolitan Transportation Authority (Metro), Foothill Transit, and Arcadia Transit.

Metro provides bus transit service near the project site along Hunitington Drive and Santa Anita Avenue. Metro currently operates two local Metro bus transit routes in the vicinity of the project site.

Foothill Transit provides bus transit service along major roadways near the Project study area along Huntington Drive and Santa Anita Avenue. Foothill Transit currently operates one transit route near the project site.

8 VEHICLE MILES TRAVELED ANALYSIS

8.1 VEHICLE MILES TRAVELED (VMT) SCREENING CRITERIA

Based on the City's guidelines, land use projects that meet certain vehicle miles traveled (VMT) screening threshold criteria based on size, location, proximity to transit or trip-making potential may be presumed to have a less than significant transportation impact under CEQA and do not require a full detailed VMT analysis. The City of Arcadia utilizes three screening criteria as summarized in **Table 8**.

TABLE 8: VMT SCREENING CRITERIA FOR PROPOSED PROJECT

Screening Criteria	Screening Criteria Description	Project Evaluation	Result
TRANSIT PRIORITY AREA (TPA)[1]	Projects located within a TPA may be presumed to have a less than significant impact absent substantial evidence to the contrary. This presumption may NOT be appropriate if the project: • Has a Floor Area Ratio of less than 0.75; • Includes more parking for use by residents, customers, or employees of the project than required by the City. • Is inconsistent with the applicable Sustainable Communities Strategy (as determined by the lead agency, with input from the Southern California Association of Governments [SCAG]); or • Replaces affordable residential units with a smaller number of moderate- or high-income residential units.	According to the SGVCOG VMT screening tool found in the City's Guidelines, the Project is not located within a Transit Priority Area	**Does Not Meet Criteria**
LOW VMT AREA	Residential and office projects located within a low VMT-generating area may be presumed to have a less than significant impact absent substantial evidence to the contrary. In addition, other employment-related and mixed-use land use projects may qualify for the use of screening if the project can reasonably be expected to generate VMT per resident, per worker, or per service population that is similar to the existing land uses in the low VMT area.	A review of the WRCOG screening tool shows the Project is not located in a low VMT Area. According to the screening tool, the Total VMT per Service Population baseline is 34.94, and the Project Generated VMT is 52.2, which is approximately 66.9% above the baseline. Therefore, the project cannot be screened out of a full VMT	**Does Not Meet Criteria**

[1] Transit Priority Areas (TPA) is defined as a half mile area around a well-serviced transit stop or a transit corridor with 15-minute or less service frequency during peak commute hours. TPA's are identified on SCAG's GIS-based High Quality Transit Area (HQTA) 2045 Maps.

Screening Criteria	Screening Criteria Description	Project Evaluation	Result
		analysis based Low VMT Area screening criterionown VMT screening analysis.	

PROJECT TYPE	Some project types have been identified as having the presumption of a less than significant impact. The following uses can be presumed to have a less than significant impact absent substantial evidence to the contrary as their uses are local serving in nature:
	• Local-serving K-12 schools
	• Local parks
	• Day care centers
	• Local-serving retail uses less than 50,000 square feet, including:
	  ○ Gas stations
	  ○ Banks
	  ○ Restaurants
	  ○ Shopping Center
	• Local-serving hotels (e.g. non-destination hotels)
	• Local-serving assembly uses (places of worship, community organizations)
	• Community institutions (public libraries, fire stations, local government)
	• Affordable, supportive, or transitional housing
	• Assisted living facilities
	• Senior housing (as defined by HUD)
	• Local serving community colleges that are consistent with the assumptions noted in the RTP/SCS
	• Student housing projects on or adjacent to a college campus
	• Other local-serving uses as approved by the City Traffic Engineer
	• Projects generating less than a net total of 110 daily vehicle trips
		The Tempo By Hilton is considered a "non-destination" hotel; therefore, the Project can be screened out under Criteria 3: Project Type Screening.	**Meets Criteria**

Since the Project is considered to have a less than significant impact based on Project Type screening criteria, a full VMT analysis is **not** required.

9 FINDING AND RECOMMENDATIONS

This study analyzes the forecast traffic conditions associated with the proposed development of a hotel with 91 rooms located on the northeast corner of Colorado Place and San Juan Drive in the City of Arcadia.

9.1 LEVEL OF SERVICE ANALYSIS RESULTS

This study evaluates traffic conditions that include AM and PM peak hour intersections level of service (LOS) analysis. According to the *City's LOS Transportation Study Guidelines* revised August 2020, the City has identified LOS D as the threshold for acceptable operating conditions for intersections and roadway segments, except at constrained located in close proximity to Interstate 210 (I-210), where LOS E is accepted during peak hours. The results of the LOS analysis is as follows:

Existing Conditions - The results of the Existing conditions analysis show that all study intersections currently operate at acceptable LOS D or better.

Existing Plus Project Conditions – The results of the Existing Plus Project conditions analysis shows that all study intersections operate at acceptable LOS D or better.

Opening Year 2026 Without Project Conditions – The results of the Opening Year 2028 Without Project conditions analysis shows that all study intersections currently operate at acceptable LOS D or better with the exception of the following intersection:

- Santa Anita Avenue & Huntington Drive (Int. 5) LOS E in AM Peak Hour

Opening Year 2026 Plus Project Conditions - With the addition of project-related traffic, all study intersections continue to operate at acceptable LOS D or better for the Opening Year 2026 Plus Project conditions the exception of the following intersections:

- Santa Anita Avenue & Huntington Drive (Int. 5) LOS E in AM Peak Hour

Santa Anita Avenue and Huntington Drive continues to operate at LOS E during the AM peak hour with the addition of project-related traffic. However, the change in V/C ratio with Project traffic does not exceed the City's threshold. Therefore, improvements are **not** required at the signalized intersection of Santa Anita Avenue & Huntington Drive.

9.2 VEHICLE MILES TRAVELED

To satisfy California Environmental Quality Act (CEQA), a Vehicle Miles Traveled (VMT) screening assessment and analysis was prepared for the Project under a separate memorandum.

Based on the City's guidelines, land use projects that meet certain vehicle miles traveled (VMT) screening threshold criteria based on size, location, proximity to transit or trip-making potential may be presumed to have a less than significant transportation impact under CEQA and does not require a full detailed VMT analysis. It was determined that the Project meets the "Project Type" screening criteria. Therefore, the Project is considered to have a less than significant VMT impact on the environment.

Michael Baker
INTERNATIONAL

Appendix A:
TIA Scoping Agreement

Michael Baker
INTERNATIONAL

Traffic Study Scope of Work

June 11, 2024

To: Transportation Staff, City of Arcadia

From: Jacob Swim TE, Michael Baker International

Subject: Tempo By Hilton Project – Traffic Study Scoping Memorandum

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Introduction

Michael Baker International (Michael Baker) is pleased to submit this transportation study scope of work for the proposed Tempo By Hilton (Project) located at 181 Colorado Place in the City of Arcadia.

Attached to this letter are the following documents:

- *Attachment A - Project Site Plan*
- *Attachment B – Project Study Area*
- *Attachment C – Related Projects and Trip Generation*
- *Attachment D – VMT Evaluation Report*

Project Description

The Project includes the construction of a 4-story hotel with 91 rooms and parking on the north and east sides of the building. The site is currently vacant and undeveloped. **Attachment A** includes the Project Site Plan.

There will be two (2) main entrances to the Project site and both will be unsignalized full access driveways. One is located on the north-west side of the project site on San Juan Drive. The second entrance is located on the south side of the project site on Colorado Place (shown on Attachment A).

Trip Generation

The most recent version of the *Institute of Transportation Engineers (ITE) Trip Generation Manual (11th Edition)* was used to estimate the number of vehicle trips generated by the Project. As shown in **Table 1**, the 91 rooms are expected to generate 563 new daily trips with 38 new trips during the AM peak hour (21 inbound and 17 outbound) and 39 new trips during the PM peak hour (20 inbound and 19 outbound).

TABLE 1 – TRIP GENERATION SUMMARY

ITE Land Use Code 310: Hotel Intensity: 91 Rooms	Daily Trips	AM Peak Hour		PM Peak Hour	
		Total	In : Out	Total	In : Out
Trip Generation Rates[1]	7.99 /Room	0.42 /Room	56% : 44%	0.43 /Room	51% : 49%
Trip Generation	**563**	**38**	**21 : 17**	**39**	**20 : 19**

Existing Conditions

Michael Baker reviewed the existing driveways providing access to/from the Project site. Based on our assessment, the traffic study should analyze two off-site intersections as shown in **Attachment B**. Daily, AM (7:00 to 9:00) peak hour and PM (4:00 to 6:00) peak hour traffic volumes will be collected at each of the study locations identified on the study area map by the City's consultant, LLG Engineers. Pedestrian and bicycle counts will also be collected during the AM and PM peak hour at each of the study locations. Using the traffic counts collected, Michael Baker will analyze each of the study intersections using a computer program Synchro, Version 11 to determine the delay and level of service (LOS) at each location during the peak hours.

Opening Year 2026 Without Project and Opening Year 2026 Plus Project

The Opening Year 2026 Without Project and Opening Year 2026 Plus Project Conditions will be analyzed at the study intersections. Opening Year 2026 Plus Project conditions refers to the timeframe when the Project is expected to be fully constructed and includes traffic growth in the area. For analysis purposes, Opening Year is assumed to be Year 2026. Michael Baker anticipates using a growth rate of 1% due to the 2015 to 2016 population growth in the City of Arcadia. Population rates from 2016 to 2020 has shown to have a negative growth rate per the U.S. Census Bureau. Opening Year 2026 Without Project traffic volumes will include approved and pending projects that add traffic to the study locations. Michael Baker requests the City provide a list of cumulative projects to be considered for the Opening Year 2026 Without Project scenario. Opening Year 2026 Plus Project traffic volumes will be derived by adding Project Only traffic volumes to Opening Year 2026 Without Project traffic volumes.

Vehicle Miles Traveled (VMT) Screening Criteria

Based on the City's guidelines, land use projects that meet certain vehicle miles traveled (VMT) screening threshold criteria based on size, location, proximity to transit or trip-making potential may be presumed to have a less than significant transportation impact under CEQA and do not require a full detailed VMT analysis. The City of Arcadia utilizes three screening criteria as summarized in **Table 2**.

Table 2 – Screening Criteria Summary

Screening Criteria	Criteria Met by Project?
1 Transit Priority Area (TPA) Screening	No
2 Low VMT Area Screening	No
3 Project Type Screening	**YES**

Criteria 1: Transit Priority Area (TPA) Screening

Projects located within a TPA may be presumed to have a less than significant impact absent substantial evidence to the contrary. This presumption may NOT be appropriate if the project:

1. *Has a Floor Area Ratio of less than 0.75;*
2. *Includes more parking for use by residents, customers, or employees of the project than required by the City.*
3. *Is inconsistent with the applicable Sustainable Communities Strategy (as determined by the lead agency, with input from the Southern California Association of Governments [SCAG]); or*
4. *Replaces affordable residential units with a smaller number of moderate- or high-income residential units.*

Project Assessment:

According to the SGVCOG VMT screening tool found in the City's Guidelines, the Project is not located within a Transit Priority Area. Therefore, the Project does NOT meet this criterion.

Criteria 2: Low VMT Area Screening

Residential and office projects located within a low VMT-generating area may be presumed to have a less than significant impact absent substantial evidence to the contrary. In addition, other employment-related and mixed-use land use projects may qualify for the use of screening if the project can reasonably be expected to generate VMT per resident, per worker, or per service population that is similar to the existing land uses in the low VMT area.

Project Assessment:

A review of the WRCOG screening tool shows the Project is not located in a low VMT Area. According to the screening tool, the Total VMT per Service Population baseline is 34.94, and the Project Generated VMT is 52.2, which is approximately 66.9% above the baseline. Therefore, the project cannot be screened out of a full VMT analysis based Low VMT Area screening criterion. See **Attachment D**.

Criteria 3: Project Type Screening

Some project types have been identified as having the presumption of a less than significant impact. The following uses can be presumed to have a less than significant impact absent substantial evidence to the contrary as their uses are local serving in nature:

- *Local-serving K-12 schools*
- *Local parks*
- *Day care centers*
- *Local-serving retail uses less than 50,000 square feet, including:*
    - *Gas stations*
    - *Banks*
    - *Restaurants*
    - *Shopping Center*

- *Local-serving hotels (e.g. non-destination hotels)*
- *Local-serving assembly uses (places of worship, community organizations)*
- *Community institutions (public libraries, fire stations, local government)*
- *Affordable, supportive, or transitional housing*
- *Assisted living facilities*
- *Senior housing (as defined by HUD)*
- *Local serving community colleges that are consistent with the assumptions noted in the RTP/SCS*
- *Student housing projects on or adjacent to a college campus*
- *Other local-serving uses as approved by the City Traffic Engineer*
- *Projects generating less than a net total of 110 daily vehicle trips*

Project Assessment:

The Tempo By Hilton is considered a "non-destination" hotel; therefore, the Project can be screened out under Criteria 3: Project Type Screening.

Project Level VMT Assessment

Since the Project is considered to have a less than significant impact based on Project Type screening criteria, a full VMT analysis is not required. Michael Baker will document the VMT screening criteria in the traffic report.

Cumulative Projects

Approved & Pending Projects: Michael Baker will work closely with the City of Arcadia in establishing the list of approved and pending projects in the study area. The study will identify the number of daily and peak hour trips forecast to be generated by all cumulative projects using trip generation rates contained in the ITE Trip Generation manual or other sources as directed by City staff. Michael Baker has reviewed a traffic study from LLG Engineers dated 2019 with a list of related projects and trip generation (**Attachment C**). Please notify Michael Baker of any edits to be made on the list of related projects. Approved and pending project trips will be assigned to the study intersections based on information provided in traffic studies (if available) for these projects. If traffic study data is not available, Michael Baker will manually distribute up to five approved/pending project trips on the roadway network using industry acceptable engineering principles.

Documentation

Michael Baker will prepare a comprehensive and concise report that discusses the results of the analysis with tables and figures. An electronic copy of the report will be submitted to the City for review comments. Michael Baker will address the City's comments and provide a final draft of the report for City staff.

Attachment A
Project Site Plan


North/west main entrance/exit
SAN JUAN DRIVE
COLORADO PL
South main entrance/exit

SITE PLAN

Attachment B
Project Study Area Map

Michael Baker INTERNATIONAL

Not to Scale

June 2024

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Study Area

Exhibit #

Attachment C
Related Projects List and Trip Generation

MAP NO.	PROJECT STATUS	PROJECT NAME/NUMBER ADDRESS/LOCATION	LAND USE DATA		PROJECT DATA SOURCE	DAILY TRIP ENDS [2]	AM PEAK HOUR VOLUMES [2]			PM PEAK HOUR VOLUMES [2]			SAT. DAILY TRIP ENDS [2]	SAT. PM PEAK HOUR VOLUMES [2]		
			LAND-USE	SIZE		VOLUMES	IN	OUT	TOTAL	IN	OUT	TOTAL	VOLUMES	IN	OUT	TOTAL
City of Arcadia																
A1	Proposed	323-325 N. 1st Avenue	Medical Office	5,420 GSF	[3]	196	10	3	13	5	14	19	49	11	9	20
			Retail	1,806 GLSF	[4]	77	1	1	2	3	4	7	90	5	4	9
A2	Pending	117-129 E. Huntington Drive 124, 126 & 134 E. Wheeler Avenue	Apartment	139 DU	[5]	924	14	57	71	56	30	86	788	35	30	65
			Retail	11,150 GLSF	[4]	476	7	4	11	20	21	41	557	28	26	54
A3	Under Construction	56 E. Duarte Road	Condominium	37 DU	[6]	215	3	13	16	13	6	19	210	9	8	17
			Retail	19,360 GLSF	[4]	827	12	7	19	35	37	72	967	48	45	93
A4	Under Construction	57 Wheeler Avenue	Apartment	38 DU	[7]	252	4	15	19	16	8	24	243	10	10	20
			Retail	10,730 GLSF	[7]	308	4	3	7	13	14	27	362	18	16	34
			Office	7,120 GSF	[7]	58	7	1	8	1	7	8	14	1	1	2
A5	Under Construction	501 N. Santa Anita Avenue	Condominium	20 DU	[6]	116	2	7	9	7	3	10	113	5	4	9
A6	Proposed	415 California Street	Condominium	20 DU	[6]	116	2	7	9	7	3	10	113	5	4	9
A7	Pending	Santa Anita Inn Redevelopment Project 130 W. Huntington Drive	Hotel	227 Rooms	[8]	2,774	65	64	129	114	109	223	2,792	141	120	261
			Condominium	96 DU												
			Retail	38,196 GLSF												
A8	Under Construction	22-26 E. Colorado Boulevard	Condominium	8 DU	[6]	46	1	3	4	3	1	4	45	2	2	4
A9	Proposed	288 N. Santa Anita Avenue	Medical Office	23,300 GSF	[3]	842	44	12	56	23	60	83	209	48	37	85
			Retail	7,050 GLSF	[4]	301	4	3	7	12	14	26	352	18	16	34
A10	Proposed	141-145 Alice Street	Condominium	8 DU	[6]	46	1	3	4	3	1	4	45	2	2	4
A11	Pending	230 California Street	Condominium	5 DU	[6]	29	0	2	2	2	1	3	28	1	1	2
A12	Pending	414 Fairview Avenue	Condominium	6 DU	[6]	35	1	2	3	2	1	3	34	2	1	3
A13	Pending	405 S. 1st Avenue	Condominium	4 DU	[6]	23	0	2	2	1	1	2	23	1	1	2
			Retail	585 GLSF	[4]	25	1	0	1	1	1	2	29	2	1	3
A14	Proposed	Santa Anita Park North Barn Project 285 W. Huntington Drive	Barn/Stables Expansion	816 Stalls	[9]	1,469	62	20	82	18	96	114	1,616	43	39	82
			Dormitories	104 Units	[9]	210	0	0	0	21	21	42	210	0	21	21
			Canteen	3,391 GSF	[9]	50	2	2	4	2	2	4	50	0	1	1
A15	Existing	125 W. Huntington Drive	Office	67,213 GSF	[10]	655	67	11	78	12	65	77	149	19	17	36
City of Monrovia																
M1	Under Construction	530 Fano Street	Condominium	12 DU	[6]	70	1	4	5	4	2	6	68	3	3	6
M2	In Planning	717-721 W. Duarte Road	Condominium	8 DU	[6]	46	1	3	4	3	1	4	45	2	2	4
TOTAL						**10,186**	**316**	**249**	**565**	**397**	**523**	**920**	**9,201**	**459**	**421**	**880**

Attachment D
VMT Evaluation Report

SGVCOG VMT Evaluation Tool Report

Project Details

Timestamp of Analysis: June 05, 2024, 04:45:30 PM

Project Name: Home2Suites

Project Description: Tempo By Hilton

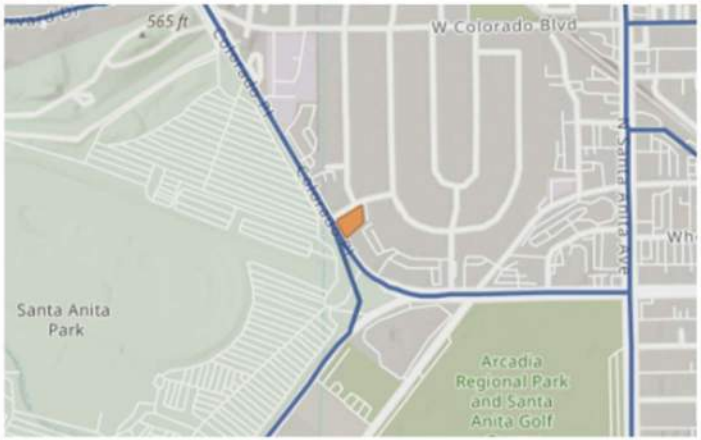
Project Location

jurisdiction: Arcadia

apn	TAZ
5775-015-011	22220100

Inside a TPA?

No (Fail)



Analysis Details

Data Version: SCAG Regional Travel Demand Model 2016 RTP Base Year 2012

Analysis Methodology: TAZ

Baseline Year: 2024

Project Land Use

Residential:

Single Family DU:

Multifamily DU:

Total DUs: 0

Non-Residential:

Office KSF:

Local Serving Retail KSF:

Industrial KSF:

Residential Affordability (percent of all units):

Extremely Low Income: 0 %

Very Low Income: 0 %

Low Income: 0 %

Parking:

Motor Vehicle Parking:

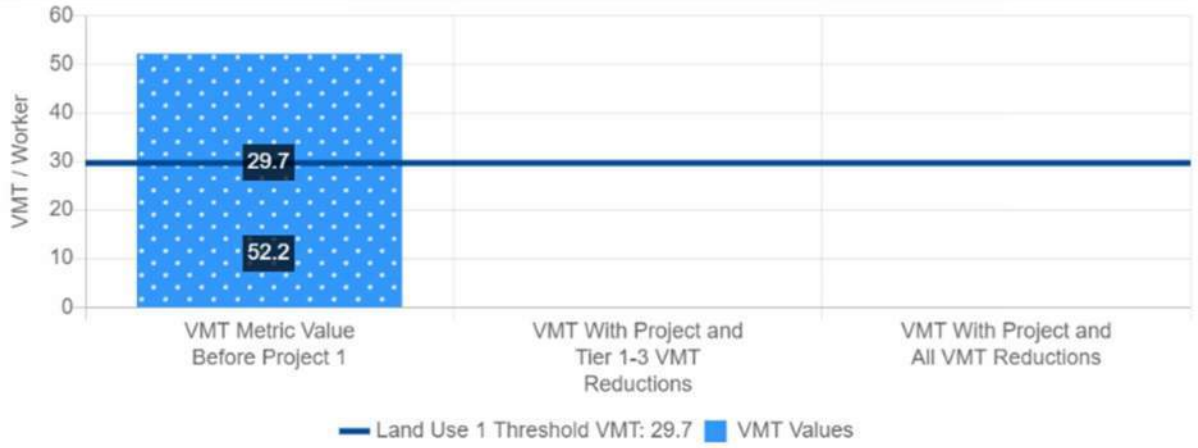
Bicycle Parking:

SGVCOG VMT Evaluation Tool Report

Commercial Vehicle Miles Traveled (VMT) Screening Results

Land Use Type 1:	Commercial
VMT Without Project 1:	Total VMT per Service Population
VMT Baseline Description 1:	Subarea
VMT Baseline Value 1:	34.94
VMT Threshold Description 1:	-15%
Land Use 1 has been Pre-Screened by the Local Jurisdiction:	N/A

	Without Project	With Project & Tier 1-3 VMT Reductions	With Project & All VMT Reductions
Project Generated Vehicle Miles Traveled (VMT) Rate	52.2	null	null
Low VMT Screening Analysis	No (Fail)	null	null



Michael Baker
INTERNATIONAL

Appendix B: Traffic Count Data & Signal Timing

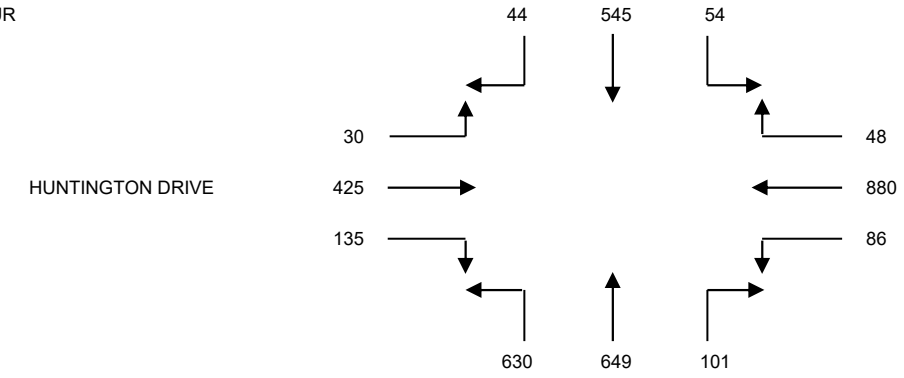
INTERSECTION TURNING MOVEMENT COUNT SUMMARY

CLIENT: LLG - PASADENA
PROJECT: CITY OF ARCADIA
DATE: TUESDAY, MAY 21, 2024
PERIOD: 07:00 AM TO 09:00 AM
INTERSECTION: N/S SANTA ANITA AVENUE
E/W HUNTINGTON DRIVE
FILE NUMBER: 1_AM

15 MINUTE TOTALS	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT
0700-0715	5	55	3	11	176	17	14	128	173	6	32	2
0715-0730	12	81	7	11	224	12	22	132	170	12	48	3
0730-0745	6	94	15	6	246	12	19	189	188	23	60	3
0745-0800	10	122	11	8	218	20	13	124	156	33	119	6
0800-0815	9	168	9	9	250	25	20	182	158	36	92	6
0815-0830	11	128	15	16	200	21	29	159	155	37	113	6
0830-0845	14	127	19	15	212	20	39	184	161	29	101	12
0845-0900	16	95	12	10	161	16	28	118	123	27	111	10

1 HOUR TOTALS	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT	TOTALS
0700-0800	33	352	36	36	864	61	68	573	687	74	259	14	3057
0715-0815	37	465	42	34	938	69	74	627	672	104	319	18	3399
0730-0830	36	512	50	39	914	78	81	654	657	129	384	21	3555
0745-0845	44	545	54	48	880	86	101	649	630	135	425	30	3627
0800-0900	50	518	55	50	823	82	116	643	597	129	417	34	3514
PHF	0.786	0.811	0.711	0.750	0.880	0.860	0.647	0.882	0.978	0.912	0.893	0.625	

A.M. PEAK HOUR
0745-0845



DATA PROVIDED BY:

THE TRAFFIC SOLUTION
329 DIAMOND STREET
ARCADIA, CALIFORNIA 91005
PH: 626-446-7978
FAX: 626-446-2877
.

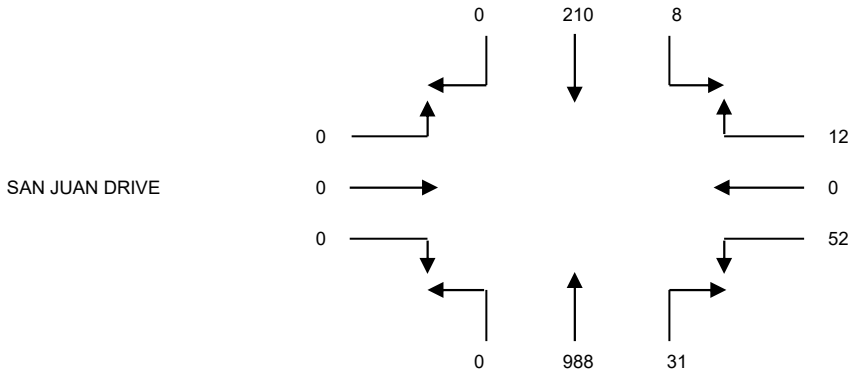
INTERSECTION TURNING MOVEMENT COUNT SUMMARY

CLIENT: LLG - PASADENA
PROJECT: CITY OF ARCADIA
DATE: TUESDAY, MAY 21, 2024
PERIOD: 07:00 AM TO 09:00 AM
INTERSECTION: N/S COLORADO PLACE
E/W SAN JUAN DRIVE
FILE NUMBER: 2_AM

15 MINUTE TOTALS	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT
0700-0715	0	18	0	4	0	3	5	160	0	0	0	0
0715-0730	0	29	1	2	0	8	5	268	0	0	0	0
0730-0745	0	43	2	3	0	11	10	244	0	0	0	0
0745-0800	0	76	3	5	0	13	10	264	0	0	0	0
0800-0815	0	62	2	2	0	20	6	212	0	0	0	0
0815-0830	0	63	4	5	0	19	8	204	0	0	0	0
0830-0845	0	55	1	3	0	10	5	143	0	0	0	0
0845-0900	0	37	1	2	0	17	3	166	0	0	0	0

1 HOUR TOTALS	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT	TOTALS
0700-0800	0	166	6	14	0	35	30	936	0	0	0	0	1187
0715-0815	0	210	8	12	0	52	31	988	0	0	0	0	1301
0730-0830	0	244	11	15	0	63	34	924	0	0	0	0	1291
0745-0845	0	256	10	15	0	62	29	823	0	0	0	0	1195
0800-0900	0	217	8	12	0	66	22	725	0	0	0	0	1050
PHF	0.000	0.691	0.667	0.600	0.000	0.650	0.775	0.922	0.000	0.000	0.000	0.000	

A.M. PEAK HOUR
0715-0815



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PH: 626-446-7978
FAX: 626-446-2877
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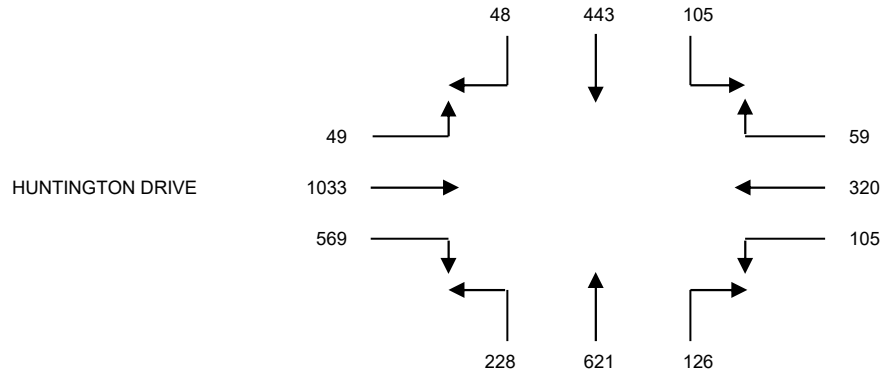
INTERSECTION TURNING MOVEMENT COUNT SUMMARY

CLIENT: LLG - PASADENA
PROJECT: CITY OF ARCADIA
DATE: TUESDAY, MAY 21, 2024
PERIOD: 04:00 PM TO 06:00 PM
INTERSECTION: N/S SANTA ANITA AVENUE
E/W HUNTINGTON DRIVE
FILE NUMBER: 1_PM

15 MINUTE	1	2	3	4	5	6	7	8	9	10	11	12
TOTALS	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT
0400-0415	9	116	24	15	91	31	44	119	39	93	217	11
0415-0430	11	110	21	15	75	26	42	135	63	139	252	9
0430-0445	14	100	31	16	79	29	31	131	42	134	226	9
0445-0500	11	122	21	10	80	25	33	159	61	146	276	17
0500-0515	12	111	32	18	86	25	20	196	62	150	279	14
0515-0530	10	117	23	16	91	17	35	101	52	141	227	18
0530-0545	8	103	23	10	99	28	32	134	58	106	232	10
0545-0600	12	82	21	9	83	21	41	157	57	117	276	8

1 HOUR	1	2	3	4	5	6	7	8	9	10	11	12	
TOTALS	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT	TOTALS
0400-0500	45	448	97	56	325	111	150	544	205	512	971	46	3510
0415-0515	48	443	105	59	320	105	126	621	228	569	1033	49	3706
0430-0530	47	450	107	60	336	96	119	587	217	571	1008	58	3656
0445-0545	41	453	99	54	356	95	120	590	233	543	1014	59	3657
0500-0600	42	413	99	53	359	91	128	588	229	514	1014	50	3580
PHF	0.857	0.908	0.820	0.819	0.930	0.905	0.750	0.792	0.905	0.948	0.926	0.721	

P.M. PEAK HOUR
0415-0515



DATA PROVIDED BY:

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ARCADIA, CALIFORNIA 91005
PH: 626-446-7978
FAX: 626-446-2877
.

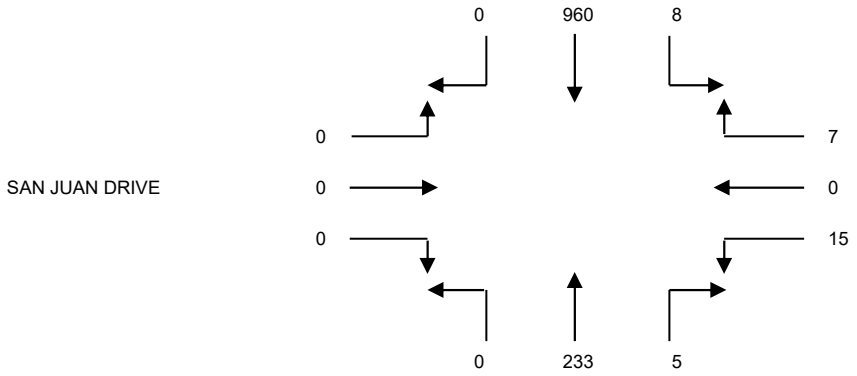
INTERSECTION TURNING MOVEMENT COUNT SUMMARY

CLIENT: LLG - PASADENA
PROJECT: CITY OF ARCADIA
DATE: TUESDAY, MAY 21, 2024
PERIOD: 04:00 PM TO 06:00 PM
INTERSECTION: N/S COLORADO PLACE
E/W SAN JUAN DRIVE
FILE NUMBER: 2_PM

15 MINUTE TOTALS	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT
0400-0415	0	198	2	4	0	2	3	59	0	0	0	0
0415-0430	0	190	2	2	0	4	1	54	0	0	0	0
0430-0445	0	215	0	1	0	9	1	59	0	0	0	0
0445-0500	0	267	1	3	0	6	0	52	0	0	0	0
0500-0515	0	220	3	3	0	3	0	60	0	0	0	0
0515-0530	0	245	1	1	0	2	3	62	0	0	0	0
0530-0545	0	228	3	0	0	4	2	59	0	0	0	0
0545-0600	0	249	2	2	0	3	1	48	0	0	0	0

1 HOUR TOTALS	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT	TOTALS
0400-0500	0	870	5	10	0	21	5	224	0	0	0	0	1135
0415-0515	0	892	6	9	0	22	2	225	0	0	0	0	1156
0430-0530	0	947	5	8	0	20	4	233	0	0	0	0	1217
0445-0545	0	960	8	7	0	15	5	233	0	0	0	0	1228
0500-0600	0	942	9	6	0	12	6	229	0	0	0	0	1204
PHF	0.000	0.899	0.667	0.583	0.000	0.625	0.417	0.940	0.000	0.000	0.000	0.000	

P.M. PEAK HOUR
0445-0545



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PH: 626-446-7978
FAX: 626-446-2877
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PEDESTRIAN - BICYCLE COUNT SUMMARY

CLIENT: LLG - PASADENA
PROJECT: CITY OF ARCADIA
DATE: TUESDAY, MAY 21, 2024
PERIOD: 07:00 AM TO 09:00 AM
INTERSECTION: SANTA ANITA AVENUE / HUNTINGTON DRIVE

FILE: 1AMPED-BIKE

	PEDESTRIAN MOVEMENTS			
15-MINUTE PERIOD	NORTH LEG A	EAST LEG B	SOUTH LEG C	WEST LEG D
0700-0715	4	0	9	2
0715-0730	0	2	3	2
0730-0745	0	1	1	0
0745-0800	0	1	2	2
0800-0815	1	2	5	2
0815-0830	1	3	2	4
0830-0845	1	1	3	0
0845-0900	0	1	6	2

	BICYCLIST MOVEMENTS			
15-MINUTE PERIOD	NORTH LEG A	EAST LEG B	SOUTH LEG C	WEST LEG D
0700-0715	0	1	1	0
0715-0730	0	0	0	0
0730-0745	0	1	1	0
0745-0800	0	0	0	1
0800-0815	4	0	1	4
0815-0830	0	0	1	3
0830-0845	0	0	1	1
0845-0900	1	0	0	1

	PEDESTRIAN MOVEMENTS				
1-HOUR PERIOD	NORTH LEG A	EAST LEG B	SOUTH LEG C	WEST LEG D	TOTALS
0700-0800	4	4	15	6	29
0715-0815	1	6	11	6	24
0730-0830	2	7	10	8	27
0745-0845	3	7	12	8	30
0800-0900	3	7	16	8	34

	BICYCLIST MOVEMENTS				
1-HOUR PERIOD	NORTH LEG A	EAST LEG B	SOUTH LEG C	WEST LEG D	TOTALS
0700-0800	0	2	2	1	5
0715-0815	4	1	2	5	12
0730-0830	4	1	3	8	16
0745-0845	4	0	3	9	16
0800-0900	5	0	3	9	17

THE TRAFFIC SOLUTION
9 ALTA STREET UNIT E
ARCADIA, CALIFORNIA 91006
626.485.8048 PHONE
trafsolutn@aol.com

PEDESTRIAN - BICYCLE COUNT SUMMARY

CLIENT: LLG - PASADENA
PROJECT: CITY OF ARCADIA
DATE: TUESDAY, MAY 21, 2024
PERIOD: 07:00 AM TO 09:00 AM
INTERSECTION: SANTA ANITA AVENUE / HUNTINGTON DRIVE

FILE: 1PMPED-BIKE

	PEDESTRIAN MOVEMENTS			
15-MINUTE PERIOD	NORTH LEG A	EAST LEG B	SOUTH LEG C	WEST LEG D
0400-0415	2	3	6	2
0415-0430	1	1	7	0
0430-0445	0	2	2	1
0445-0500	0	2	6	0
0500-0515	1	2	4	1
0515-0530	3	2	2	3
0530-0545	0	1	9	2
0545-0600	2	2	11	5

	BICYCLIST MOVEMENTS			
15-MINUTE PERIOD	NORTH LEG A	EAST LEG B	SOUTH LEG C	WEST LEG D
0400-0415	1	0	1	1
0415-0430	0	0	0	1
0430-0445	0	0	1	0
0445-0500	0	0	2	0
0500-0515	0	3	2	0
0515-0530	1	0	1	1
0530-0545	1	2	1	0
0545-0600	0	0	1	1

	PEDESTRIAN MOVEMENTS				
1-HOUR PERIOD	NORTH LEG A	EAST LEG B	SOUTH LEG C	WEST LEG D	TOTALS
0400-0500	3	8	21	3	35
0415-0515	2	7	19	2	30
0430-0530	4	8	14	5	31
0445-0545	4	7	21	6	38
0500-0600	6	7	26	11	50

	BICYCLIST MOVEMENTS				
1-HOUR PERIOD	NORTH LEG A	EAST LEG B	SOUTH LEG C	WEST LEG D	TOTALS
0400-0500	1	0	4	2	7
0415-0515	0	3	5	1	9
0430-0530	1	3	6	1	11
0445-0545	2	5	6	1	14
0500-0600	2	5	5	2	14

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9 ALTA STREET UNIT E
ARCADIA, CALIFORNIA 91006
626.485.8048 PHONE
trafsolutn@aol.com

PEDESTRIAN - BICYCLE COUNT SUMMARY

CLIENT: LLG - PASADENA
PROJECT: CITY OF ARCADIA
DATE: TUESDAY, MAY 21, 2024
PERIOD: 07:00 AM TO 09:00 AM
INTERSECTION: COLORADO PLACE / SAN JUAN DRIVE

FILE: 2AMPED-BIKE

	PEDESTRIAN MOVEMENTS			
15-MINUTE PERIOD	NORTH LEG A	EAST LEG B	SOUTH LEG C	WEST LEG D
0700-0715	0	1	0	0
0715-0730	0	0	0	0
0730-0745	0	0	0	0
0745-0800	0	0	0	0
0800-0815	0	2	0	0
0815-0830	0	1	0	0
0830-0845	0	3	0	0
0845-0900	0	0	0	0

	BICYCLIST MOVEMENTS			
15-MINUTE PERIOD	NORTH LEG A	EAST LEG B	SOUTH LEG C	WEST LEG D
0700-0715	0	0	0	0
0715-0730	0	0	0	0
0730-0745	0	0	0	0
0745-0800	0	0	0	0
0800-0815	0	1	0	0
0815-0830	0	0	0	0
0830-0845	0	0	0	0
0845-0900	0	0	0	0

	PEDESTRIAN MOVEMENTS				
1-HOUR PERIOD	NORTH LEG A	EAST LEG B	SOUTH LEG C	WEST LEG D	TOTALS
0700-0800	0	1	0	0	1
0715-0815	0	2	0	0	2
0730-0830	0	3	0	0	3
0745-0845	0	6	0	0	6
0800-0900	0	6	0	0	6

	BICYCLIST MOVEMENTS				
1-HOUR PERIOD	NORTH LEG A	EAST LEG B	SOUTH LEG C	WEST LEG D	TOTALS
0700-0800	0	0	0	0	0
0715-0815	0	1	0	0	1
0730-0830	0	1	0	0	1
0745-0845	0	1	0	0	1
0800-0900	0	1	0	0	1

THE TRAFFIC SOLUTION
9 ALTA STREET UNIT E
ARCADIA, CALIFORNIA 91006
626.485.8048 PHONE
trafsolutn@aol.com

PEDESTRIAN - BICYCLE COUNT SUMMARY

CLIENT: LLG - PASADENA
PROJECT: CITY OF ARCADIA
DATE: TUESDAY, MAY 21, 2024
PERIOD: 07:00 AM TO 09:00 AM
INTERSECTION: COLORADO PLACE / SAN JUAN DRIVE

FILE: 2PMPED-BIKE

	PEDESTRIAN MOVEMENTS			
15-MINUTE PERIOD	NORTH LEG A	EAST LEG B	SOUTH LEG C	WEST LEG D
0400-0415	0	1	0	0
0415-0430	0	1	0	0
0430-0445	0	0	0	0
0445-0500	0	0	0	0
0500-0515	0	0	0	0
0515-0530	0	0	0	0
0530-0545	0	0	0	0
0545-0600	0	3	0	0

	BICYCLIST MOVEMENTS			
15-MINUTE PERIOD	NORTH LEG A	EAST LEG B	SOUTH LEG C	WEST LEG D
0400-0415	0	0	0	0
0415-0430	0	1	0	0
0430-0445	0	0	0	0
0445-0500	0	0	0	0
0500-0515	0	0	0	0
0515-0530	0	0	0	0
0530-0545	0	0	0	0
0545-0600	0	1	0	0

	PEDESTRIAN MOVEMENTS				
1-HOUR PERIOD	NORTH LEG A	EAST LEG B	SOUTH LEG C	WEST LEG D	TOTALS
0400-0500	0	2	0	0	2
0415-0515	0	1	0	0	1
0430-0530	0	0	0	0	0
0445-0545	0	0	0	0	0
0500-0600	0	3	0	0	3

	BICYCLIST MOVEMENTS				
1-HOUR PERIOD	NORTH LEG A	EAST LEG B	SOUTH LEG C	WEST LEG D	TOTALS
0400-0500	0	1	0	0	1
0415-0515	0	1	0	0	1
0430-0530	0	0	0	0	0
0445-0545	0	0	0	0	0
0500-0600	0	1	0	0	1

THE TRAFFIC SOLUTION
9 ALTA STREET UNIT E
ARCADIA, CALIFORNIA 91006
626.485.8048 PHONE
trafsolutn@aol.com

Michael Baker
INTERNATIONAL

Appendix C: Existing Synchro Worksheets

Intersection	
Int Delay, s/veh	1.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	52	12	988	31	8	210
Future Vol, veh/h	52	12	988	31	8	210
Conflicting Peds, #/hr	0	0	0	2	2	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	65	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	65	60	92	78	67	69
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	80	20	1074	40	12	304

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1272	559	0	0	1116	0
Stage 1	1096	-	-	-	-	-
Stage 2	176	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	159	472	-	-	622	-
Stage 1	282	-	-	-	-	-
Stage 2	837	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	156	471	-	-	621	-
Mov Cap-2 Maneuver	238	-	-	-	-	-
Stage 1	281	-	-	-	-	-
Stage 2	821	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	26.7	0	0.4
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	264	621	-
HCM Lane V/C Ratio	-	-	0.379	0.019	-
HCM Control Delay (s)	-	-	26.7	10.9	-
HCM Lane LOS	-	-	D	B	-
HCM 95th %tile Q(veh)	-	-	1.7	0.1	-

Intersection	
Int Delay, s/veh	2.9

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	8	31	0	31	33	0
Future Vol, veh/h	8	31	0	31	33	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	8	33	0	33	35	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	41	0	58	25
Stage 1	-	-	-	-	25	-
Stage 2	-	-	-	-	33	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1568	-	949	1051
Stage 1	-	-	-	-	998	-
Stage 2	-	-	-	-	989	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1568	-	949	1051
Mov Cap-2 Maneuver	-	-	-	-	949	-
Stage 1	-	-	-	-	998	-
Stage 2	-	-	-	-	989	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	8.9
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	949	-	-	1568	-
HCM Lane V/C Ratio	0.037	-	-	-	-
HCM Control Delay (s)	8.9	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0	-

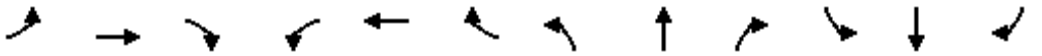
Intersection	
Int Delay, s/veh	1.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	53	15	1019	37	11	251
Future Vol, veh/h	53	15	1019	37	11	251
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	65	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	56	16	1073	39	12	264

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1249	556	0	0	1112	0
Stage 1	1093	-	-	-	-	-
Stage 2	156	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	165	475	-	-	624	-
Stage 1	283	-	-	-	-	-
Stage 2	856	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	161	475	-	-	624	-
Mov Cap-2 Maneuver	241	-	-	-	-	-
Stage 1	283	-	-	-	-	-
Stage 2	836	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	21.8	0	0.5
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	241	475	624	-
HCM Lane V/C Ratio	-	-	0.231	0.033	0.019	-
HCM Control Delay (s)	-	-	24.4	12.8	10.9	-
HCM Lane LOS	-	-	C	B	B	-
HCM 95th %tile Q(veh)	-	-	0.9	0.1	0.1	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	30	425	135	86	880	48	630	649	101	54	545	44
Pedestrians			20			10			19			11
Ped Button		Yes			Yes			Yes			Yes	
Pedestrian Timing (s)		18.0			18.0			18.0			18.0	
Free Right			No			No			No			No
Ideal Flow	1800	1800	1800	1800	1800	1800	1620	1800	1800	1620	1800	1800
Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Minimum Green (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	30	425	135	86	880	48	630	649	101	54	545	44
Lane Utilization Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.97	0.95	1.00	0.97	0.95	1.00
Turning Factor (vph)	0.95	1.00	0.85	0.95	1.00	0.85	0.95	1.00	0.85	0.95	1.00	0.85
Saturated Flow (vph)	1710	3427	1530	1710	3427	1530	2989	3427	1530	2989	3427	1530
Ped Intf Time (s)	0.0	0.0	2.3	0.0	0.0	1.2	0.0	0.0	2.2	0.0	0.0	1.4
Pedestrian Frequency (%)		0.49			0.28			0.47			0.31	
Protected Option Allowed		Yes			Yes			Yes			Yes	
Reference Time (s)	2.1	14.9	12.9	6.0	30.8	5.0	25.3	22.7	10.1	2.2	19.1	4.8
Adj Reference Time (s)	9.5	20.9	17.4	10.5	35.3	13.2	29.8	27.2	14.6	9.5	23.6	9.5
Permitted Option												
Adj Saturation A (vph)	114	1714		114	1714		100	1714		100	1714	
Reference Time A (s)	31.6	14.9		90.5	30.8		379.4	22.7		32.5	19.1	
Adj Saturation B (vph	NA	NA		NA	NA		NA	NA		NA	NA	
Reference Time B (s)	NA	NA		NA	NA		NA	NA		NA	NA	
Reference Time (s)		31.6			90.5			379.4			32.5	
Adj Reference Time (s)		36.1			95.0			383.9			37.0	
Split Option												
Ref Time Combined (s)	2.1	14.9		6.0	30.8		25.3	22.7		2.2	19.1	
Ref Time Seperate (s)	2.1	14.9		6.0	30.8		25.3	22.7		2.2	19.1	
Reference Time (s)	14.9	14.9		30.8	30.8		25.3	25.3		19.1	19.1	
Adj Reference Time (s)	20.9	20.9		35.3	35.3		29.8	29.8		23.6	23.6	

Summary	EB WB	NB SB	Combined
Protected Option (s)	44.8	53.4	
Permitted Option (s)	95.0	383.9	
Split Option (s)	56.2	53.4	
Minimum (s)	44.8	53.4	98.2

Right Turns	EBR	WBR	NBR	SBR
Adj Reference Time (s)	17.4	13.2	14.6	9.5
Cross Thru Ref Time (s)	23.6	27.2	20.9	35.3
Oncoming Left Ref Time (s)	10.5	9.5	9.5	29.8
Combined (s)	51.5	49.9	45.0	74.6

Intersection Summary			
Intersection Capacity Utilization	81.8%	ICU Level of Service	D

Reference Times and Phasing Options do not represent an optimized timing plan.

Intersection	
Int Delay, s/veh	0.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	15	7	233	17	20	960
Future Vol, veh/h	15	7	233	17	20	960
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	65	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	63	58	94	42	67	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	24	12	248	40	30	1067

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	862	144	0	0	288	0
Stage 1	268	-	-	-	-	-
Stage 2	594	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	294	877	-	-	1271	-
Stage 1	753	-	-	-	-	-
Stage 2	514	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	287	877	-	-	1271	-
Mov Cap-2 Maneuver	396	-	-	-	-	-
Stage 1	753	-	-	-	-	-
Stage 2	502	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	13	0	0.2
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	486	1271	-
HCM Lane V/C Ratio	-	-	0.074	0.023	-
HCM Control Delay (s)	-	-	13	7.9	-
HCM Lane LOS	-	-	B	A	-
HCM 95th %tile Q(veh)	-	-	0.2	0.1	-

Intersection	
Int Delay, s/veh	3.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	4	33	0	1	21	0
Future Vol, veh/h	4	33	0	1	21	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	4	35	0	1	22	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	39	0	23	22
Stage 1	-	-	-	-	22	-
Stage 2	-	-	-	-	1	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1571	-	993	1055
Stage 1	-	-	-	-	1001	-
Stage 2	-	-	-	-	1022	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1571	-	993	1055
Mov Cap-2 Maneuver	-	-	-	-	993	-
Stage 1	-	-	-	-	1001	-
Stage 2	-	-	-	-	1022	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	8.7
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	993	-	-	1571	-
HCM Lane V/C Ratio	0.022	-	-	-	-
HCM Control Delay (s)	8.7	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0	-

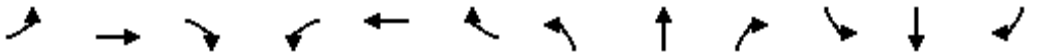
Intersection	
Int Delay, s/veh	0.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	21	6	238	52	16	959
Future Vol, veh/h	21	6	238	52	16	959
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	65	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	22	6	251	55	17	1009

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	818	153	0	0	306	0
Stage 1	279	-	-	-	-	-
Stage 2	539	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	314	866	-	-	1252	-
Stage 1	743	-	-	-	-	-
Stage 2	549	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	304	866	-	-	1252	-
Mov Cap-2 Maneuver	414	-	-	-	-	-
Stage 1	743	-	-	-	-	-
Stage 2	532	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	13.1	0	0.1
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	414	866	1252	-
HCM Lane V/C Ratio	-	-	0.053	0.007	0.013	-
HCM Control Delay (s)	-	-	14.2	9.2	7.9	-
HCM Lane LOS	-	-	B	A	A	-
HCM 95th %tile Q(veh)	-	-	0.2	0	0	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	49	1033	569	105	320	59	228	621	126	105	443	48
Pedestrians			21			9			26			4
Ped Button		Yes			Yes			Yes			Yes	
Pedestrian Timing (s)		18.0			18.0			18.0			18.0	
Free Right			No			No			No			No
Ideal Flow	1800	1800	1800	1800	1800	1800	1620	1800	1800	1620	1800	1800
Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Minimum Green (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	49	1033	569	105	320	59	228	621	126	105	443	48
Lane Utilization Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.97	0.95	1.00	0.97	0.95	1.00
Turning Factor (vph)	0.95	1.00	0.85	0.95	1.00	0.85	0.95	1.00	0.85	0.95	1.00	0.85
Saturated Flow (vph)	1710	3427	1530	1710	3427	1530	2989	3427	1530	2989	3427	1530
Ped Intf Time (s)	0.0	0.0	2.4	0.0	0.0	1.1	0.0	0.0	2.9	0.0	0.0	0.5
Pedestrian Frequency (%)		0.50			0.26			0.58			0.12	
Protected Option Allowed		Yes			Yes			Yes			Yes	
Reference Time (s)	3.4	36.2	47.0	7.4	11.2	5.8	9.2	21.7	12.8	4.2	15.5	4.3
Adj Reference Time (s)	9.5	40.7	51.5	11.9	17.5	13.4	13.7	26.2	17.3	9.5	20.3	9.5
Permitted Option												
Adj Saturation A (vph)	114	1714		114	1714		100	1714		100	1714	
Reference Time A (s)	51.6	36.2		110.5	11.2		137.3	21.7		63.2	15.5	
Adj Saturation B (vph	NA	NA		NA	NA		NA	NA		NA	NA	
Reference Time B (s)	NA	NA		NA	NA		NA	NA		NA	NA	
Reference Time (s)		51.6			110.5			137.3			63.2	
Adj Reference Time (s)		56.1			115.0			141.8			67.7	
Split Option												
Ref Time Combined (s)	3.4	36.2		7.4	11.2		9.2	21.7		4.2	15.5	
Ref Time Seperate (s)	3.4	36.2		7.4	11.2		9.2	21.7		4.2	15.5	
Reference Time (s)	36.2	36.2		11.2	11.2		21.7	21.7		15.5	15.5	
Adj Reference Time (s)	40.7	40.7		17.5	17.5		26.2	26.2		20.3	20.3	

Summary	EB WB	NB SB	Combined
Protected Option (s)	52.5	35.7	
Permitted Option (s)	115.0	141.8	
Split Option (s)	58.1	46.6	
Minimum (s)	52.5	35.7	88.3

Right Turns	EBR	WBR	NBR	SBR
Adj Reference Time (s)	51.5	13.4	17.3	9.5
Cross Thru Ref Time (s)	20.3	26.2	40.7	17.5
Oncoming Left Ref Time (s)	11.9	9.5	9.5	13.7
Combined (s)	83.7	49.2	67.4	40.6

Intersection Summary			
Intersection Capacity Utilization	73.6%	ICU Level of Service	D

Reference Times and Phasing Options do not represent an optimized timing plan.

Michael Baker
INTERNATIONAL

Appendix D: Existing Plus Project Synchro Worksheets

Intersection	
Int Delay, s/veh	1.9

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	52	13	993	31	9	216
Future Vol, veh/h	52	13	993	31	9	216
Conflicting Peds, #/hr	0	0	0	2	2	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	65	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	65	60	92	78	67	69
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	80	22	1079	40	13	313

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1284	562	0	0	1121	0
Stage 1	1101	-	-	-	-	-
Stage 2	183	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	157	470	-	-	619	-
Stage 1	280	-	-	-	-	-
Stage 2	830	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	153	469	-	-	618	-
Mov Cap-2 Maneuver	236	-	-	-	-	-
Stage 1	279	-	-	-	-	-
Stage 2	813	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	26.9	0	0.5
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	264	618	-
HCM Lane V/C Ratio	-	-	0.385	0.022	-
HCM Control Delay (s)	-	-	26.9	11	-
HCM Lane LOS	-	-	D	B	-
HCM 95th %tile Q(veh)	-	-	1.7	0.1	-

Intersection	
Int Delay, s/veh	2.9

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	8	32	0	31	34	0
Future Vol, veh/h	8	32	0	31	34	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	8	34	0	33	36	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	42	0	58	25
Stage 1	-	-	-	-	25	-
Stage 2	-	-	-	-	33	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1567	-	949	1051
Stage 1	-	-	-	-	998	-
Stage 2	-	-	-	-	989	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1567	-	949	1051
Mov Cap-2 Maneuver	-	-	-	-	949	-
Stage 1	-	-	-	-	998	-
Stage 2	-	-	-	-	989	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	8.9
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	949	-	-	1567	-
HCM Lane V/C Ratio	0.038	-	-	-	-
HCM Control Delay (s)	8.9	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0	-

Intersection	
Int Delay, s/veh	0.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	1	2	1022	1	2	266
Future Vol, veh/h	1	2	1022	1	2	266
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	2	1076	1	2	280

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1221	539	0	0	1077	0
Stage 1	1077	-	-	-	-	-
Stage 2	144	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	172	487	-	-	643	-
Stage 1	288	-	-	-	-	-
Stage 2	868	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	171	487	-	-	643	-
Mov Cap-2 Maneuver	247	-	-	-	-	-
Stage 1	288	-	-	-	-	-
Stage 2	865	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	14.9	0	0.1
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	368	643	-
HCM Lane V/C Ratio	-	-	0.009	0.003	-
HCM Control Delay (s)	-	-	14.9	10.6	-
HCM Lane LOS	-	-	B	B	-
HCM 95th %tile Q(veh)	-	-	0	0	-

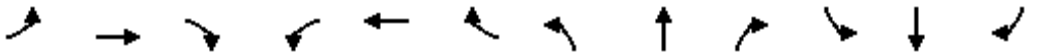
Intersection	
Int Delay, s/veh	1.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	63	18	1020	50	15	252
Future Vol, veh/h	63	18	1020	50	15	252
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	65	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	66	19	1074	53	16	265

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1266	564	0	0	1127	0
Stage 1	1101	-	-	-	-	-
Stage 2	165	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	161	469	-	-	616	-
Stage 1	280	-	-	-	-	-
Stage 2	847	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	156	469	-	-	616	-
Mov Cap-2 Maneuver	238	-	-	-	-	-
Stage 1	280	-	-	-	-	-
Stage 2	822	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	23	0	0.6
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	238	469	616	-
HCM Lane V/C Ratio	-	-	0.279	0.04	0.026	-
HCM Control Delay (s)	-	-	25.9	13	11	-
HCM Lane LOS	-	-	D	B	B	-
HCM 95th %tile Q(veh)	-	-	1.1	0.1	0.1	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	36	428	136	86	884	48	631	649	101	54	545	51
Pedestrians			20			10			19			11
Ped Button		Yes			Yes			Yes			Yes	
Pedestrian Timing (s)		18.0			18.0			18.0			18.0	
Free Right			No			No			No			No
Ideal Flow	1800	1800	1800	1800	1800	1800	1620	1800	1800	1620	1800	1800
Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Minimum Green (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	36	428	136	86	884	48	631	649	101	54	545	51
Lane Utilization Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.97	0.95	1.00	0.97	0.95	1.00
Turning Factor (vph)	0.95	1.00	0.85	0.95	1.00	0.85	0.95	1.00	0.85	0.95	1.00	0.85
Saturated Flow (vph)	1710	3427	1530	1710	3427	1530	2989	3427	1530	2989	3427	1530
Ped Intf Time (s)	0.0	0.0	2.3	0.0	0.0	1.2	0.0	0.0	2.2	0.0	0.0	1.4
Pedestrian Frequency (%)		0.49			0.28			0.47			0.31	
Protected Option Allowed		Yes			Yes			Yes			Yes	
Reference Time (s)	2.5	15.0	13.0	6.0	31.0	5.0	25.3	22.7	10.1	2.2	19.1	5.4
Adj Reference Time (s)	9.5	21.0	17.5	10.5	35.5	13.2	29.8	27.2	14.6	9.5	23.6	9.9
Permitted Option												
Adj Saturation A (vph)	114	1714		114	1714		100	1714		100	1714	
Reference Time A (s)	37.9	15.0		90.5	31.0		380.0	22.7		32.5	19.1	
Adj Saturation B (vph	NA	NA		NA	NA		NA	NA		NA	NA	
Reference Time B (s)	NA	NA		NA	NA		NA	NA		NA	NA	
Reference Time (s)		37.9			90.5			380.0			32.5	
Adj Reference Time (s)		42.4			95.0			384.5			37.0	
Split Option												
Ref Time Combined (s)	2.5	15.0		6.0	31.0		25.3	22.7		2.2	19.1	
Ref Time Seperate (s)	2.5	15.0		6.0	31.0		25.3	22.7		2.2	19.1	
Reference Time (s)	15.0	15.0		31.0	31.0		25.3	25.3		19.1	19.1	
Adj Reference Time (s)	21.0	21.0		35.5	35.5		29.8	29.8		23.6	23.6	

Summary	EB WB	NB SB	Combined
Protected Option (s)	45.0	53.4	
Permitted Option (s)	95.0	384.5	
Split Option (s)	56.4	53.4	
Minimum (s)	45.0	53.4	98.4

Right Turns	EBR	WBR	NBR	SBR
Adj Reference Time (s)	17.5	13.2	14.6	9.9
Cross Thru Ref Time (s)	23.6	27.2	21.0	35.5
Oncoming Left Ref Time (s)	10.5	9.5	9.5	29.8
Combined (s)	51.6	49.9	45.1	75.1

Intersection Summary			
Intersection Capacity Utilization	82.0%	ICU Level of Service	D

Reference Times and Phasing Options do not represent an optimized timing plan.

Intersection	
Int Delay, s/veh	0.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	15	8	239	17	21	966
Future Vol, veh/h	15	8	239	17	21	966
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	65	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	63	58	94	42	67	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	24	14	254	40	31	1073

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	873	147	0	0	294	0
Stage 1	274	-	-	-	-	-
Stage 2	599	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	289	873	-	-	1264	-
Stage 1	747	-	-	-	-	-
Stage 2	511	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	282	873	-	-	1264	-
Mov Cap-2 Maneuver	392	-	-	-	-	-
Stage 1	747	-	-	-	-	-
Stage 2	498	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	12.9	0	0.2
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	491	1264	-
HCM Lane V/C Ratio	-	-	0.077	0.025	-
HCM Control Delay (s)	-	-	12.9	7.9	-
HCM Lane LOS	-	-	B	A	-
HCM 95th %tile Q(veh)	-	-	0.2	0.1	-

Intersection	
Int Delay, s/veh	3.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	4	34	0	1	22	0
Future Vol, veh/h	4	34	0	1	22	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	4	36	0	1	23	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	40	0	23	22
Stage 1	-	-	-	-	22	-
Stage 2	-	-	-	-	1	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1570	-	993	1055
Stage 1	-	-	-	-	1001	-
Stage 2	-	-	-	-	1022	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1570	-	993	1055
Mov Cap-2 Maneuver	-	-	-	-	993	-
Stage 1	-	-	-	-	1001	-
Stage 2	-	-	-	-	1022	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	8.7
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	993	-	-	1570	-
HCM Lane V/C Ratio	0.023	-	-	-	-
HCM Control Delay (s)	8.7	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0	-

Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	1	2	254	1	2	979
Future Vol, veh/h	1	2	254	1	2	979
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	2	267	1	2	1031

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	788	134	0	0	268	0
Stage 1	268	-	-	-	-	-
Stage 2	520	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	328	890	-	-	1293	-
Stage 1	753	-	-	-	-	-
Stage 2	561	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	327	890	-	-	1293	-
Mov Cap-2 Maneuver	436	-	-	-	-	-
Stage 1	753	-	-	-	-	-
Stage 2	559	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.5	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	661	1293	-
HCM Lane V/C Ratio	-	-	0.005	0.002	-
HCM Control Delay (s)	-	-	10.5	7.8	-
HCM Lane LOS	-	-	B	A	-
HCM 95th %tile Q(veh)	-	-	0	0	-

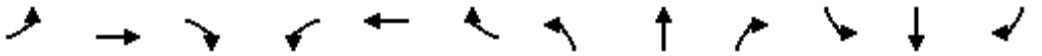
Intersection	
Int Delay, s/veh	0.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	32	10	239	64	20	960
Future Vol, veh/h	32	10	239	64	20	960
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	65	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	34	11	252	67	21	1011

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	834	160	0	0	319	0
Stage 1	286	-	-	-	-	-
Stage 2	548	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	307	857	-	-	1238	-
Stage 1	737	-	-	-	-	-
Stage 2	543	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	295	857	-	-	1238	-
Mov Cap-2 Maneuver	406	-	-	-	-	-
Stage 1	737	-	-	-	-	-
Stage 2	522	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	13.4	0	0.2
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	406	857	1238	-
HCM Lane V/C Ratio	-	-	0.083	0.012	0.017	-
HCM Control Delay (s)	-	-	14.7	9.3	8	-
HCM Lane LOS	-	-	B	A	A	-
HCM 95th %tile Q(veh)	-	-	0.3	0	0.1	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	56	1037	570	105	324	59	229	621	126	105	443	55
Pedestrians			21			9			26			4
Ped Button		Yes			Yes			Yes			Yes	
Pedestrian Timing (s)		18.0			18.0			18.0			18.0	
Free Right			No			No			No			No
Ideal Flow	1800	1800	1800	1800	1800	1800	1620	1800	1800	1620	1800	1800
Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Minimum Green (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	56	1037	570	105	324	59	229	621	126	105	443	55
Lane Utilization Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.97	0.95	1.00	0.97	0.95	1.00
Turning Factor (vph)	0.95	1.00	0.85	0.95	1.00	0.85	0.95	1.00	0.85	0.95	1.00	0.85
Saturated Flow (vph)	1710	3427	1530	1710	3427	1530	2989	3427	1530	2989	3427	1530
Ped Intf Time (s)	0.0	0.0	2.4	0.0	0.0	1.1	0.0	0.0	2.9	0.0	0.0	0.5
Pedestrian Frequency (%)		0.50			0.26			0.58			0.12	
Protected Option Allowed		Yes			Yes			Yes			Yes	
Reference Time (s)	3.9	36.3	47.1	7.4	11.3	5.8	9.2	21.7	12.8	4.2	15.5	4.8
Adj Reference Time (s)	9.5	40.8	51.6	11.9	17.6	13.4	13.7	26.2	17.3	9.5	20.3	9.5
Permitted Option												
Adj Saturation A (vph)	114	1714		114	1714		100	1714		100	1714	
Reference Time A (s)	58.9	36.3		110.5	11.3		137.9	21.7		63.2	15.5	
Adj Saturation B (vph	NA	NA		NA	NA		NA	NA		NA	NA	
Reference Time B (s)	NA	NA		NA	NA		NA	NA		NA	NA	
Reference Time (s)		58.9			110.5			137.9			63.2	
Adj Reference Time (s)		63.4			115.0			142.4			67.7	
Split Option												
Ref Time Combined (s)	3.9	36.3		7.4	11.3		9.2	21.7		4.2	15.5	
Ref Time Seperate (s)	3.9	36.3		7.4	11.3		9.2	21.7		4.2	15.5	
Reference Time (s)	36.3	36.3		11.3	11.3		21.7	21.7		15.5	15.5	
Adj Reference Time (s)	40.8	40.8		17.6	17.6		26.2	26.2		20.3	20.3	

Summary	EB WB	NB SB	Combined
Protected Option (s)	52.7	35.7	
Permitted Option (s)	115.0	142.4	
Split Option (s)	58.4	46.6	
Minimum (s)	52.7	35.7	88.4

Right Turns	EBR	WBR	NBR	SBR
Adj Reference Time (s)	51.6	13.4	17.3	9.5
Cross Thru Ref Time (s)	20.3	26.2	40.8	17.6
Oncoming Left Ref Time (s)	11.9	9.5	9.5	13.7
Combined (s)	83.8	49.2	67.6	40.8

Intersection Summary			
Intersection Capacity Utilization	73.7%	ICU Level of Service	D

Reference Times and Phasing Options do not represent an optimized timing plan.

Michael Baker
INTERNATIONAL

Appendix E: Opening Year 2026 Without Project Synchro Worksheets

Intersection	
Int Delay, s/veh	2.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	58	23	1051	35	15	245
Future Vol, veh/h	58	23	1051	35	15	245
Conflicting Peds, #/hr	0	0	0	2	2	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	65	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	65	60	92	78	67	69
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	89	38	1142	45	22	355

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1389	596	0	0	1189	0
Stage 1	1167	-	-	-	-	-
Stage 2	222	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	134	447	-	-	583	-
Stage 1	258	-	-	-	-	-
Stage 2	794	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	129	446	-	-	582	-
Mov Cap-2 Maneuver	215	-	-	-	-	-
Stage 1	257	-	-	-	-	-
Stage 2	764	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	32.5	0	0.7
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	255	582	-
HCM Lane V/C Ratio	-	-	0.5	0.038	-
HCM Control Delay (s)	-	-	32.5	11.4	-
HCM Lane LOS	-	-	D	B	-
HCM 95th %tile Q(veh)	-	-	2.6	0.1	-

Intersection	
Int Delay, s/veh	3.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	8	42	4	31	49	5
Future Vol, veh/h	8	42	4	31	49	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	8	44	4	33	52	5

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	52	0	71	30
Stage 1	-	-	-	-	30	-
Stage 2	-	-	-	-	41	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1554	-	933	1044
Stage 1	-	-	-	-	993	-
Stage 2	-	-	-	-	981	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1554	-	930	1044
Mov Cap-2 Maneuver	-	-	-	-	930	-
Stage 1	-	-	-	-	993	-
Stage 2	-	-	-	-	978	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.8	9.1
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	939	-	-	1554	-
HCM Lane V/C Ratio	0.061	-	-	0.003	-
HCM Control Delay (s)	9.1	-	-	7.3	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.2	-	-	0	-

Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	1085	0	0	304
Future Vol, veh/h	0	0	1085	0	0	304
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	1142	0	0	320

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1302	571	0	0	-	-
Stage 1	1142	-	-	-	-	-
Stage 2	160	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	-	-
Pot Cap-1 Maneuver	152	464	-	-	0	-
Stage 1	266	-	-	-	0	-
Stage 2	852	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	152	464	-	-	-	-
Mov Cap-2 Maneuver	228	-	-	-	-	-
Stage 1	266	-	-	-	-	-
Stage 2	852	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-
HCM Control Delay (s)	-	-	0	-
HCM Lane LOS	-	-	A	-
HCM 95th %tile Q(veh)	-	-	-	-

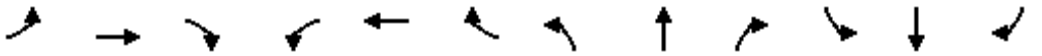
Intersection	
Int Delay, s/veh	2.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	80	62	1075	81	18	285
Future Vol, veh/h	80	62	1075	81	18	285
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	65	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	84	65	1132	85	19	300

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1363	609	0	0	1217	0
Stage 1	1175	-	-	-	-	-
Stage 2	188	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	139	438	-	-	569	-
Stage 1	256	-	-	-	-	-
Stage 2	825	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	133	438	-	-	569	-
Mov Cap-2 Maneuver	216	-	-	-	-	-
Stage 1	256	-	-	-	-	-
Stage 2	792	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	24.4	0	0.7
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	216	438	569	-
HCM Lane V/C Ratio	-	-	0.39	0.149	0.033	-
HCM Control Delay (s)	-	-	31.9	14.7	11.5	-
HCM Lane LOS	-	-	D	B	B	-
HCM 95th %tile Q(veh)	-	-	1.7	0.5	0.1	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	48	472	157	117	941	59	652	663	120	61	564	75
Pedestrians			20			10			19			11
Ped Button		Yes			Yes			Yes			Yes	
Pedestrian Timing (s)		18.0			18.0			18.0			18.0	
Free Right			No			No			No			No
Ideal Flow	1800	1800	1800	1800	1800	1800	1620	1800	1800	1620	1800	1800
Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Minimum Green (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	48	472	157	117	941	59	652	663	120	61	564	75
Lane Utilization Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.97	0.95	1.00	0.97	0.95	1.00
Turning Factor (vph)	0.95	1.00	0.85	0.95	1.00	0.85	0.95	1.00	0.85	0.95	1.00	0.85
Saturated Flow (vph)	1710	3427	1530	1710	3427	1530	2989	3427	1530	2989	3427	1530
Ped Intf Time (s)	0.0	0.0	2.3	0.0	0.0	1.2	0.0	0.0	2.2	0.0	0.0	1.4
Pedestrian Frequency (%)		0.49			0.28			0.47			0.31	
Protected Option Allowed		Yes			Yes			Yes			Yes	
Reference Time (s)	3.4	16.5	14.6	8.2	32.9	5.9	26.2	23.2	11.6	2.4	19.7	7.2
Adj Reference Time (s)	9.5	21.7	19.1	12.7	37.4	13.8	30.7	27.7	16.1	9.5	24.2	11.7
Permitted Option												
Adj Saturation A (vph)	114	1714		114	1714		100	1714		100	1714	
Reference Time A (s)	50.5	16.5		123.2	32.9		392.7	23.2		36.7	19.7	
Adj Saturation B (vph	NA	NA		NA	NA		NA	NA		NA	NA	
Reference Time B (s)	NA	NA		NA	NA		NA	NA		NA	NA	
Reference Time (s)		50.5			123.2			392.7			36.7	
Adj Reference Time (s)		55.0			127.7			397.2			41.2	
Split Option												
Ref Time Combined (s)	3.4	16.5		8.2	32.9		26.2	23.2		2.4	19.7	
Ref Time Seperate (s)	3.4	16.5		8.2	32.9		26.2	23.2		2.4	19.7	
Reference Time (s)	16.5	16.5		32.9	32.9		26.2	26.2		19.7	19.7	
Adj Reference Time (s)	21.7	21.7		37.4	37.4		30.7	30.7		24.2	24.2	

Summary	EB WB	NB SB	Combined
Protected Option (s)	46.9	54.9	
Permitted Option (s)	127.7	397.2	
Split Option (s)	59.2	54.9	
Minimum (s)	46.9	54.9	101.9

Right Turns	EBR	WBR	NBR	SBR
Adj Reference Time (s)	19.1	13.8	16.1	11.7
Cross Thru Ref Time (s)	24.2	27.7	21.7	37.4
Oncoming Left Ref Time (s)	12.7	9.5	9.5	30.7
Combined (s)	56.1	51.0	47.4	79.9

Intersection Summary			
Intersection Capacity Utilization	84.9%	ICU Level of Service	E

Reference Times and Phasing Options do not represent an optimized timing plan.

Intersection	
Int Delay, s/veh	0.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	17	11	264	22	30	1014
Future Vol, veh/h	17	11	264	22	30	1014
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	65	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	63	58	94	42	67	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	27	19	281	52	45	1127

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	961	167	0	0	333	0
Stage 1	307	-	-	-	-	-
Stage 2	654	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	254	848	-	-	1223	-
Stage 1	719	-	-	-	-	-
Stage 2	479	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	245	848	-	-	1223	-
Mov Cap-2 Maneuver	359	-	-	-	-	-
Stage 1	719	-	-	-	-	-
Stage 2	461	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	13.5	0	0.3
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	471	1223	-
HCM Lane V/C Ratio	-	-	0.098	0.037	-
HCM Control Delay (s)	-	-	13.5	8.1	-
HCM Lane LOS	-	-	B	A	-
HCM 95th %tile Q(veh)	-	-	0.3	0.1	-

Intersection	
Int Delay, s/veh	3.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	4	49	5	1	27	2
Future Vol, veh/h	4	49	5	1	27	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	4	52	5	1	28	2

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	56	0	41	30
Stage 1	-	-	-	-	30	-
Stage 2	-	-	-	-	11	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1549	-	970	1044
Stage 1	-	-	-	-	993	-
Stage 2	-	-	-	-	1012	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1549	-	967	1044
Mov Cap-2 Maneuver	-	-	-	-	967	-
Stage 1	-	-	-	-	993	-
Stage 2	-	-	-	-	1009	-

Approach	EB	WB	NB
HCM Control Delay, s	0	6.1	8.8
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	972	-	-	1549	-
HCM Lane V/C Ratio	0.031	-	-	0.003	-
HCM Control Delay (s)	8.8	-	-	7.3	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-

Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	287	0	0	1032
Future Vol, veh/h	0	0	287	0	0	1032
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	302	0	0	1086

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	845	151	0	0	-	-
Stage 1	302	-	-	-	-	-
Stage 2	543	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	-	-
Pot Cap-1 Maneuver	302	868	-	-	0	-
Stage 1	724	-	-	-	0	-
Stage 2	546	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	302	868	-	-	-	-
Mov Cap-2 Maneuver	417	-	-	-	-	-
Stage 1	724	-	-	-	-	-
Stage 2	546	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-
HCM Control Delay (s)	-	-	0	-
HCM Lane LOS	-	-	A	-
HCM 95th %tile Q(veh)	-	-	-	-

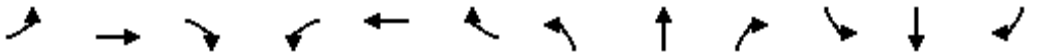
Intersection	
Int Delay, s/veh	0.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	32	25	270	115	26	1005
Future Vol, veh/h	32	25	270	115	26	1005
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	65	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	34	26	284	121	27	1058

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	928	203	0	0	405	0
Stage 1	345	-	-	-	-	-
Stage 2	583	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	267	804	-	-	1150	-
Stage 1	688	-	-	-	-	-
Stage 2	521	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	252	804	-	-	1150	-
Mov Cap-2 Maneuver	371	-	-	-	-	-
Stage 1	688	-	-	-	-	-
Stage 2	491	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	13	0	0.2
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	371	804	1150	-
HCM Lane V/C Ratio	-	-	0.091	0.033	0.024	-
HCM Control Delay (s)	-	-	15.7	9.6	8.2	-
HCM Lane LOS	-	-	C	A	A	-
HCM 95th %tile Q(veh)	-	-	0.3	0.1	0.1	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	70	1081	584	124	365	66	252	637	152	115	454	66
Pedestrians			21			9			26			4
Ped Button		Yes			Yes			Yes			Yes	
Pedestrian Timing (s)		18.0			18.0			18.0			18.0	
Free Right			No			No			No			No
Ideal Flow	1800	1800	1800	1800	1800	1800	1620	1800	1800	1620	1800	1800
Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Minimum Green (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	70	1081	584	124	365	66	252	637	152	115	454	66
Lane Utilization Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.97	0.95	1.00	0.97	0.95	1.00
Turning Factor (vph)	0.95	1.00	0.85	0.95	1.00	0.85	0.95	1.00	0.85	0.95	1.00	0.85
Saturated Flow (vph)	1710	3427	1530	1710	3427	1530	2989	3427	1530	2989	3427	1530
Ped Intf Time (s)	0.0	0.0	2.4	0.0	0.0	1.1	0.0	0.0	2.9	0.0	0.0	0.5
Pedestrian Frequency (%)		0.50			0.26			0.58			0.12	
Protected Option Allowed		Yes			Yes			Yes			Yes	
Reference Time (s)	4.9	37.9	48.2	8.7	12.8	6.3	10.1	22.3	14.8	4.6	15.9	5.7
Adj Reference Time (s)	9.5	42.4	52.7	13.2	18.6	13.8	14.6	26.8	19.3	9.5	20.7	10.2
Permitted Option												
Adj Saturation A (vph)	114	1714		114	1714		100	1714		100	1714	
Reference Time A (s)	73.7	37.9		130.5	12.8		151.8	22.3		69.3	15.9	
Adj Saturation B (vph	NA	NA		NA	NA		NA	NA		NA	NA	
Reference Time B (s)	NA	NA		NA	NA		NA	NA		NA	NA	
Reference Time (s)		73.7			130.5			151.8			69.3	
Adj Reference Time (s)		78.2			135.0			156.3			73.8	
Split Option												
Ref Time Combined (s)	4.9	37.9		8.7	12.8		10.1	22.3		4.6	15.9	
Ref Time Seperate (s)	4.9	37.9		8.7	12.8		10.1	22.3		4.6	15.9	
Reference Time (s)	37.9	37.9		12.8	12.8		22.3	22.3		15.9	15.9	
Adj Reference Time (s)	42.4	42.4		18.6	18.6		26.8	26.8		20.7	20.7	

Summary	EB WB	NB SB	Combined
Protected Option (s)	55.6	36.3	
Permitted Option (s)	135.0	156.3	
Split Option (s)	61.0	47.5	
Minimum (s)	55.6	36.3	91.9

Right Turns	EBR	WBR	NBR	SBR
Adj Reference Time (s)	52.7	13.8	19.3	10.2
Cross Thru Ref Time (s)	20.7	26.8	42.4	18.6
Oncoming Left Ref Time (s)	13.2	9.5	9.5	14.6
Combined (s)	86.6	50.1	71.2	43.4

Intersection Summary			
Intersection Capacity Utilization	76.5%	ICU Level of Service	D

Reference Times and Phasing Options do not represent an optimized timing plan.

Michael Baker
INTERNATIONAL

Appendix F:
Opening Year 2026
Plus Project
Synchro Worksheets

Intersection	
Int Delay, s/veh	2.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	58	24	1056	35	16	251
Future Vol, veh/h	58	24	1056	35	16	251
Conflicting Peds, #/hr	0	0	0	2	2	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	65	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	65	60	92	78	67	69
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	89	40	1148	45	24	364

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1403	599	0	0	1195	0
Stage 1	1173	-	-	-	-	-
Stage 2	230	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	131	445	-	-	580	-
Stage 1	256	-	-	-	-	-
Stage 2	786	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	125	444	-	-	579	-
Mov Cap-2 Maneuver	212	-	-	-	-	-
Stage 1	255	-	-	-	-	-
Stage 2	754	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	33.2	0	0.7
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	253	579	-
HCM Lane V/C Ratio	-	-	0.511	0.041	-
HCM Control Delay (s)	-	-	33.2	11.5	-
HCM Lane LOS	-	-	D	B	-
HCM 95th %tile Q(veh)	-	-	2.7	0.1	-

Intersection	
Int Delay, s/veh	3.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	8	43	4	31	50	5
Future Vol, veh/h	8	43	4	31	50	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	8	45	4	33	53	5

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	53	0	72	31
Stage 1	-	-	-	-	31	-
Stage 2	-	-	-	-	41	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1553	-	932	1043
Stage 1	-	-	-	-	992	-
Stage 2	-	-	-	-	981	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1553	-	929	1043
Mov Cap-2 Maneuver	-	-	-	-	929	-
Stage 1	-	-	-	-	992	-
Stage 2	-	-	-	-	978	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.8	9.1
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	938	-	-	1553	-
HCM Lane V/C Ratio	0.062	-	-	0.003	-
HCM Control Delay (s)	9.1	-	-	7.3	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.2	-	-	0	-

Intersection	
Int Delay, s/veh	0.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	1	2	1088	1	2	308
Future Vol, veh/h	1	2	1088	1	2	308
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	2	1145	1	2	324

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1312	573	0	0	1146	0
Stage 1	1146	-	-	-	-	-
Stage 2	166	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	150	463	-	-	605	-
Stage 1	265	-	-	-	-	-
Stage 2	846	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	149	463	-	-	605	-
Mov Cap-2 Maneuver	227	-	-	-	-	-
Stage 1	265	-	-	-	-	-
Stage 2	843	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	15.6	0	0.1
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	344	605	-
HCM Lane V/C Ratio	-	-	0.009	0.003	-
HCM Control Delay (s)	-	-	15.6	11	-
HCM Lane LOS	-	-	C	B	-
HCM 95th %tile Q(veh)	-	-	0	0	-

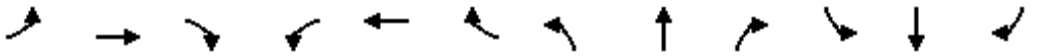
Intersection	
Int Delay, s/veh	2.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	90	65	1076	94	22	286
Future Vol, veh/h	90	65	1076	94	22	286
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	65	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	95	68	1133	99	23	301

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1380	616	0	0	1232	0
Stage 1	1183	-	-	-	-	-
Stage 2	197	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	135	433	-	-	561	-
Stage 1	253	-	-	-	-	-
Stage 2	817	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	128	433	-	-	561	-
Mov Cap-2 Maneuver	213	-	-	-	-	-
Stage 1	253	-	-	-	-	-
Stage 2	777	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	26.5	0	0.8
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	213	433	561	-
HCM Lane V/C Ratio	-	-	0.445	0.158	0.041	-
HCM Control Delay (s)	-	-	34.8	14.9	11.7	-
HCM Lane LOS	-	-	D	B	B	-
HCM 95th %tile Q(veh)	-	-	2.1	0.6	0.1	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	54	475	158	117	945	59	653	663	120	61	564	82
Pedestrians			20			10			19			11
Ped Button		Yes			Yes			Yes			Yes	
Pedestrian Timing (s)		18.0			18.0			18.0			18.0	
Free Right			No			No			No			No
Ideal Flow	1800	1800	1800	1800	1800	1800	1620	1800	1800	1620	1800	1800
Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Minimum Green (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	54	475	158	117	945	59	653	663	120	61	564	82
Lane Utilization Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.97	0.95	1.00	0.97	0.95	1.00
Turning Factor (vph)	0.95	1.00	0.85	0.95	1.00	0.85	0.95	1.00	0.85	0.95	1.00	0.85
Saturated Flow (vph)	1710	3427	1530	1710	3427	1530	2989	3427	1530	2989	3427	1530
Ped Intf Time (s)	0.0	0.0	2.3	0.0	0.0	1.2	0.0	0.0	2.2	0.0	0.0	1.4
Pedestrian Frequency (%)		0.49			0.28			0.47			0.31	
Protected Option Allowed		Yes			Yes			Yes			Yes	
Reference Time (s)	3.8	16.6	14.7	8.2	33.1	5.9	26.2	23.2	11.6	2.4	19.7	7.8
Adj Reference Time (s)	9.5	21.8	19.2	12.7	37.6	13.8	30.7	27.7	16.1	9.5	24.2	12.3
Permitted Option												
Adj Saturation A (vph)	114	1714		114	1714		100	1714		100	1714	
Reference Time A (s)	56.8	16.6		123.2	33.1		393.3	23.2		36.7	19.7	
Adj Saturation B (vph	NA	NA		NA	NA		NA	NA		NA	NA	
Reference Time B (s)	NA	NA		NA	NA		NA	NA		NA	NA	
Reference Time (s)		56.8			123.2			393.3			36.7	
Adj Reference Time (s)		61.3			127.7			397.8			41.2	
Split Option												
Ref Time Combined (s)	3.8	16.6		8.2	33.1		26.2	23.2		2.4	19.7	
Ref Time Seperate (s)	3.8	16.6		8.2	33.1		26.2	23.2		2.4	19.7	
Reference Time (s)	16.6	16.6		33.1	33.1		26.2	26.2		19.7	19.7	
Adj Reference Time (s)	21.8	21.8		37.6	37.6		30.7	30.7		24.2	24.2	

Summary	EB WB	NB SB	Combined
Protected Option (s)	47.1	55.0	
Permitted Option (s)	127.7	397.8	
Split Option (s)	59.4	55.0	
Minimum (s)	47.1	55.0	102.1

Right Turns	EBR	WBR	NBR	SBR
Adj Reference Time (s)	19.2	13.8	16.1	12.3
Cross Thru Ref Time (s)	24.2	27.7	21.8	37.6
Oncoming Left Ref Time (s)	12.7	9.5	9.5	30.7
Combined (s)	56.2	51.0	47.4	80.6

Intersection Summary			
Intersection Capacity Utilization	85.0%	ICU Level of Service	E

Reference Times and Phasing Options do not represent an optimized timing plan.

Intersection	
Int Delay, s/veh	0.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	17	12	270	22	31	1020
Future Vol, veh/h	17	12	270	22	31	1020
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	65	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	63	58	94	42	67	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	27	21	287	52	46	1133

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	972	170	0	0	339	0
Stage 1	313	-	-	-	-	-
Stage 2	659	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	250	844	-	-	1217	-
Stage 1	715	-	-	-	-	-
Stage 2	476	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	241	844	-	-	1217	-
Mov Cap-2 Maneuver	356	-	-	-	-	-
Stage 1	715	-	-	-	-	-
Stage 2	458	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	13.4	0	0.3
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	475	1217	-
HCM Lane V/C Ratio	-	-	0.1	0.038	-
HCM Control Delay (s)	-	-	13.4	8.1	-
HCM Lane LOS	-	-	B	A	-
HCM 95th %tile Q(veh)	-	-	0.3	0.1	-

Intersection	
Int Delay, s/veh	3.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	4	50	5	1	28	2
Future Vol, veh/h	4	50	5	1	28	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	4	53	5	1	29	2

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	57	0	42	31
Stage 1	-	-	-	-	31	-
Stage 2	-	-	-	-	11	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1547	-	969	1043
Stage 1	-	-	-	-	992	-
Stage 2	-	-	-	-	1012	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1547	-	966	1043
Mov Cap-2 Maneuver	-	-	-	-	966	-
Stage 1	-	-	-	-	992	-
Stage 2	-	-	-	-	1009	-

Approach	EB	WB	NB
HCM Control Delay, s	0	6.1	8.8
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	971	-	-	1547	-
HCM Lane V/C Ratio	0.033	-	-	0.003	-
HCM Control Delay (s)	8.8	-	-	7.3	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-

Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	1	2	291	1	2	1036
Future Vol, veh/h	1	2	291	1	2	1036
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	2	306	1	2	1091

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	857	154	0	0	307	0
Stage 1	307	-	-	-	-	-
Stage 2	550	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	296	864	-	-	1250	-
Stage 1	719	-	-	-	-	-
Stage 2	542	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	295	864	-	-	1250	-
Mov Cap-2 Maneuver	411	-	-	-	-	-
Stage 1	719	-	-	-	-	-
Stage 2	540	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.7	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	632	1250	-
HCM Lane V/C Ratio	-	-	0.005	0.002	-
HCM Control Delay (s)	-	-	10.7	7.9	-
HCM Lane LOS	-	-	B	A	-
HCM 95th %tile Q(veh)	-	-	0	0	-

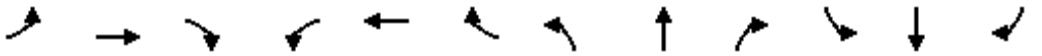
Intersection	
Int Delay, s/veh	0.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	43	29	271	127	30	1006
Future Vol, veh/h	43	29	271	127	30	1006
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	65	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	45	31	285	134	32	1059

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	946	210	0	0	419	0
Stage 1	352	-	-	-	-	-
Stage 2	594	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	260	796	-	-	1137	-
Stage 1	683	-	-	-	-	-
Stage 2	514	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	242	796	-	-	1137	-
Mov Cap-2 Maneuver	362	-	-	-	-	-
Stage 1	683	-	-	-	-	-
Stage 2	479	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	13.7	0	0.2
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	362	796	1137	-
HCM Lane V/C Ratio	-	-	0.125	0.038	0.028	-
HCM Control Delay (s)	-	-	16.4	9.7	8.3	-
HCM Lane LOS	-	-	C	A	A	-
HCM 95th %tile Q(veh)	-	-	0.4	0.1	0.1	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	77	1085	585	124	369	66	253	637	152	115	454	73
Pedestrians			21			9			26			4
Ped Button		Yes			Yes			Yes			Yes	
Pedestrian Timing (s)		18.0			18.0			18.0			18.0	
Free Right			No			No			No			No
Ideal Flow	1800	1800	1800	1800	1800	1800	1620	1800	1800	1620	1800	1800
Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Minimum Green (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	77	1085	585	124	369	66	253	637	152	115	454	73
Lane Utilization Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.97	0.95	1.00	0.97	0.95	1.00
Turning Factor (vph)	0.95	1.00	0.85	0.95	1.00	0.85	0.95	1.00	0.85	0.95	1.00	0.85
Saturated Flow (vph)	1710	3427	1530	1710	3427	1530	2989	3427	1530	2989	3427	1530
Ped Intf Time (s)	0.0	0.0	2.4	0.0	0.0	1.1	0.0	0.0	2.9	0.0	0.0	0.5
Pedestrian Frequency (%)		0.50			0.26			0.58			0.12	
Protected Option Allowed		Yes			Yes			Yes			Yes	
Reference Time (s)	5.4	38.0	48.3	8.7	12.9	6.3	10.2	22.3	14.8	4.6	15.9	6.2
Adj Reference Time (s)	9.9	42.5	52.8	13.2	18.7	13.8	14.7	26.8	19.3	9.5	20.7	10.7
Permitted Option												
Adj Saturation A (vph)	114	1714		114	1714		100	1714		100	1714	
Reference Time A (s)	81.1	38.0		130.5	12.9		152.4	22.3		69.3	15.9	
Adj Saturation B (vph	NA	NA		NA	NA		NA	NA		NA	NA	
Reference Time B (s)	NA	NA		NA	NA		NA	NA		NA	NA	
Reference Time (s)		81.1			130.5			152.4			69.3	
Adj Reference Time (s)		85.6			135.0			156.9			73.8	
Split Option												
Ref Time Combined (s)	5.4	38.0		8.7	12.9		10.2	22.3		4.6	15.9	
Ref Time Seperate (s)	5.4	38.0		8.7	12.9		10.2	22.3		4.6	15.9	
Reference Time (s)	38.0	38.0		12.9	12.9		22.3	22.3		15.9	15.9	
Adj Reference Time (s)	42.5	42.5		18.7	18.7		26.8	26.8		20.7	20.7	

Summary	EB WB	NB SB	Combined
Protected Option (s)	55.7	36.3	
Permitted Option (s)	135.0	156.9	
Split Option (s)	61.2	47.5	
Minimum (s)	55.7	36.3	92.0

Right Turns	EBR	WBR	NBR	SBR
Adj Reference Time (s)	52.8	13.8	19.3	10.7
Cross Thru Ref Time (s)	20.7	26.8	42.5	18.7
Oncoming Left Ref Time (s)	13.2	9.9	9.5	14.7
Combined (s)	86.7	50.5	71.3	44.1

Intersection Summary			
Intersection Capacity Utilization	76.7%	ICU Level of Service	D

Reference Times and Phasing Options do not represent an optimized timing plan.

ATTACHMENT G-1: TRANSPORTATION EVALUATION (93 ROOMS)

Michael Baker INTERNATIONAL

We Make a Difference

Technical Memorandum

Date: October 11, 2024

To: City of Arcadia

From: Jacob Swim, TE, Michael Baker International

CC: Pei-Ming Chou, Michael Baker International
John Bellas, Michael Baker International

Subject: Tempo By Hilton – Transportation Evaluation (93 Rooms)

Michael Baker International (Michael Baker) evaluated the potential impacts associated with the increase of two hotel rooms (from 91 rooms to 93 rooms) at the proposed Tempo by Hilton (Project). The purpose of this technical memorandum is to determine if the two additional hotel rooms would require additional improvements beyond what has been identified in the Transportation Impact Analysis (TIA) dated September 24, 2024.

A trip generation comparison table was prepared to show the increase in vehicular daily and peak hour trips associated with the increase in two hotel rooms. The *Institute of Transportation Engineers (ITE) Trip Generation Manual (11th Edition)* was used to calculate the trip generation rates as summarized in **Table 1** utilizing the fitted curve equations which are based on the proposed land use quantity. **Table 2** summarizes the vehicular trip generation forecast comparison which shows the two additional rooms generate 22 more daily trips with one more AM peak hour trip and two more PM peak hour trips.

TABLE 1- ITE TRIP GENERATION RATES

Land Use	ITE Code [1]	Daily Trip Rate	AM Peak Hour Rate		PM Peak Hour Rate	
			Total	In : Out	Total	In : Out
Hotel	310	T = 10.84(X) - 423.51	T = 0.50(X) - 7.45	56% : 44%	T = 0.74(X) - 27.89	51% : 49%

[1] Source: ITE Trip Generation Manual, 11th Edition. Rates shown are based on fitted curve equation.

TABLE 2 - PROJECT TRIP GENERATION COMPARISON

Land Use	Intensity		Daily Trips	AM Peak Hour Trips				PM Peak Hour Trips			
				Total	In	:	Out	Total	In	:	Out
Proposed Project											
Hotel	91	Rooms	563	38	21	:	17	39	20	:	19
	93	Rooms	585	39	22	:	17	41	21	:	20
Difference in Trips			22	1	1	:	0	2	1	:	1

Table 3 compares the Existing Plus Project Conditions AM/PM peak hour LOS for all study intersections assuming 91 rooms and 93 rooms. Detailed analysis sheets are contained in **Appendix A**.

As shown in **Table 3**, all study intersections are forecast to operate at an acceptable level of service (D or better) under Existing Plus Project Conditions during the AM and PM peak hour with 91 rooms and 93 rooms. At Colorado Place and San Juan Drive, the change in delay increased from 12.6 seconds (LOS B) with 91 rooms to 12.9 seconds (LOS B) with 93 rooms. However, the LOS remains "B" which is considered acceptable operating conditions. The increase in two hotel rooms did not change the delay or LOS at the other study intersections. Therefore, no physical improvements to the study intersections are required under Existing Plus Project conditions.

TABLE 3 - EXISTING PLUS PROJECT AM/PM PEAK HOUR INTERSECTION LOS COMPARISON

Study Intersection	Existing Plus Project (91 Rooms)		Existing Plus Project (93 Rooms)		Change in V/C		Fair Share Required?
	AM	PM	AM	PM			
	Delay[1] - LOS	Delay[1] - LOS	Delay[1] - LOS	Delay[1] - LOS	AM	PM	
1 - Colorado Place & San Juan Drive	26.9 - D	12.6 - B	26.9 - D	12.9 - B	0.0	0.3	No
2 - Project Driveway #1 & San Juan Drive	8.9 - A	8.7 - A	8.9 - A	8.7 - A	0.0	0.0	No
3 - Project Driveway #2 & Colorado Place	14.9 - B	10.5 - B	14.9 - B	10.5 - B	0.0	0.0	No
4 - Colorado Place & Project Driveway #3	23.0 - C	13.4 - B	23.0 - C	13.4 - B	0.0	0.0	No
5 - Santa Anita Avenue and Huntington Drive	.820 - D	.737 - C	.820 - D	.737 - C	0.0	0.0	No

Deficient intersection operation indicated in **bold**.
At Santa Anita Ave & Huntington Dr, the ICU Methodology showing V/C ratio is presented.
[1] Delay is expressed in seconds per vehicle for unsignalized intersections.
LOS = level of service.

Table 4 compares the Opening Year 2026 Plus Project AM and PM peak hour LOS for all study intersections assuming 91 rooms and 93 rooms. Detailed analysis sheets are contained in **Appendix A**. As shown in **Table 4**, all study intersections are forecast to operate at an acceptable level of service (D or better) under Opening Year 2026 Plus Project conditions under the AM and PM peak hour except for the intersection of Santa Anita Avenue & Huntington Drive which is expected to operate at LOS E during the AM peak period. However, as analyzed in the *Transportation Impact Analysis for Tempo by Hilton* (TIA) prepared by Michael Baker, dated September 24, 2024, the change in V/C ratio with Project traffic (assuming 91 rooms) does not exceed the City's change in v/c threshold of 0.01 for intersections operating at LOS E. As shown in **Table 4**, the change in V/C ratio with the addition of 2 rooms to a total of 93 rooms would not increase. Therefore, improvements are **not** required at the signalized intersection of Santa Anita Avenue & Huntington Drive.

TABLE 4 - OPENING YEAR 2026 PLUS PROJECT AM/PM PEAK HOUR INTERSECTION LOS COMPARISON

Study Intersection	Opening Year 2026 Plus Project Conditions (91 Rooms)		Opening Year 2026 Plus Project Conditions (93 Rooms)		Change in V/C		Fair Share Required?
	AM	PM	AM	PM			
	Delay[1] - LOS	Delay[1] - LOS	Delay[1] - LOS	Delay[1] - LOS	AM	PM	
1 - Colorado Place & San Juan Drive	32.2 - D	13.0 - B	32.2 - D	13.4 - B	0.0	0.4	No
2 - Project Driveway #1 & San Juan Drive	9.1 - A	8.8 - A	9.1 - A	8.8 - A	0.0	0.0	No
3 - Project Driveway #2 & Colorado Place	15.6 - C	10.7 - B	15.6 - C	10.7 - B	0.0	0.0	No
4 - Colorado Place & Project Driveway #3	27.2 - D	14.3 - B	27.2 - D	14.3 - B	0.0	0.0	No
5 - Santa Anita Avenue and Huntington Driveway	**0.850 - E**	0.767 - D	**0.850 - E**	0.767 - D	0.000	0.000	No

Note: Deficient intersection operation indicated in **bold**.
At Santa Anita Ave & Huntington Dr, the ICU Methodology showing V/C ratio is presented.
[1] Average Seconds of Delay per Vehicle
LOS = level of service.

The results of this analysis assuming 93 hotel rooms show that a fair share contribution at any of the study intersections is NOT required. Further, the analysis shows that adding two additional rooms to the hotel does not change the results or conclusions found in the TIA dated September 24, 2024.

Appendix A
Existing Plus Project & Opening Year 2026 Plus Project HCM Worksheets (Assuming 93 Rooms)

Intersection	
Int Delay, s/veh	1.9

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	52	13	993	31	9	217
Future Vol, veh/h	52	13	993	31	9	217
Conflicting Peds, #/hr	0	0	0	2	2	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	65	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	65	60	92	78	67	69
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	80	22	1079	40	13	314

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1284	562	0	0	1121	0
Stage 1	1101	-	-	-	-	-
Stage 2	183	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	157	470	-	-	619	-
Stage 1	280	-	-	-	-	-
Stage 2	830	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	153	469	-	-	618	-
Mov Cap-2 Maneuver	236	-	-	-	-	-
Stage 1	279	-	-	-	-	-
Stage 2	813	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	26.9	0	0.4
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	264	618	-
HCM Lane V/C Ratio	-	-	0.385	0.022	-
HCM Control Delay (s)	-	-	26.9	11	-
HCM Lane LOS	-	-	D	B	-
HCM 95th %tile Q(veh)	-	-	1.7	0.1	-

Intersection	
Int Delay, s/veh	2.9

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	8	32	0	31	34	0
Future Vol, veh/h	8	32	0	31	34	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	8	34	0	33	36	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	42	0	58	25
Stage 1	-	-	-	-	25	-
Stage 2	-	-	-	-	33	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1567	-	949	1051
Stage 1	-	-	-	-	998	-
Stage 2	-	-	-	-	989	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1567	-	949	1051
Mov Cap-2 Maneuver	-	-	-	-	949	-
Stage 1	-	-	-	-	998	-
Stage 2	-	-	-	-	989	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	8.9
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	949	-	-	1567	-
HCM Lane V/C Ratio	0.038	-	-	-	-
HCM Control Delay (s)	8.9	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0	-

Intersection	
Int Delay, s/veh	0.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	1	2	1022	1	2	266
Future Vol, veh/h	1	2	1022	1	2	266
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	2	1076	1	2	280

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1221	539	0	0	1077	0
Stage 1	1077	-	-	-	-	-
Stage 2	144	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	172	487	-	-	643	-
Stage 1	288	-	-	-	-	-
Stage 2	868	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	171	487	-	-	643	-
Mov Cap-2 Maneuver	247	-	-	-	-	-
Stage 1	288	-	-	-	-	-
Stage 2	865	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	14.9	0	0.1
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	368	643	-
HCM Lane V/C Ratio	-	-	0.009	0.003	-
HCM Control Delay (s)	-	-	14.9	10.6	-
HCM Lane LOS	-	-	B	B	-
HCM 95th %tile Q(veh)	-	-	0	0	-

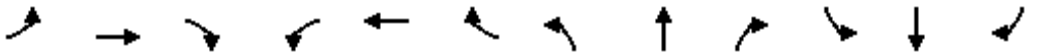
Intersection	
Int Delay, s/veh	1.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	63	18	1020	50	15	252
Future Vol, veh/h	63	18	1020	50	15	252
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	65	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	66	19	1074	53	16	265

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1266	564	0	0	1127	0
Stage 1	1101	-	-	-	-	-
Stage 2	165	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	161	469	-	-	616	-
Stage 1	280	-	-	-	-	-
Stage 2	847	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	156	469	-	-	616	-
Mov Cap-2 Maneuver	238	-	-	-	-	-
Stage 1	280	-	-	-	-	-
Stage 2	822	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	23	0	0.6
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	238	469	616	-
HCM Lane V/C Ratio	-	-	0.279	0.04	0.026	-
HCM Control Delay (s)	-	-	25.9	13	11	-
HCM Lane LOS	-	-	D	B	B	-
HCM 95th %tile Q(veh)	-	-	1.1	0.1	0.1	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	36	428	136	86	884	48	631	649	101	54	545	52
Future Volume (vph)	36	428	136	86	884	48	631	649	101	54	545	52
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1620	1800	1800	1620	1800	1800
Total Lost time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.97	0.95	1.00	0.97	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.97	1.00	1.00	0.97	1.00	1.00	0.96	1.00	1.00	0.97
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1676	3353	1462	1676	3353	1460	2927	3353	1447	2927	3353	1461
Flt Permitted	0.16	1.00	1.00	0.34	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	276	3353	1462	597	3353	1460	2927	3353	1447	2927	3353	1461
Peak-hour factor, PHF	0.63	0.89	0.91	0.86	0.88	0.75	0.98	0.88	0.65	0.71	0.81	0.79
Adj. Flow (vph)	57	481	149	100	1005	64	644	738	155	76	673	66
RTOR Reduction (vph)	0	0	58	0	0	44	0	0	62	0	0	48
Lane Group Flow (vph)	57	481	91	100	1005	20	644	738	93	76	673	18
Confl. Peds. (#/hr)			20			10			19			11
Confl. Bikes (#/hr)			9						3			4
Turn Type	pm+pt	NA	pm+ov	pm+pt	NA	Perm	Prot	NA	pm+ov	Prot	NA	pm+ov
Protected Phases	7	4	5	3	8		5	2	3	1	6	7
Permitted Phases	4		4	8		8			2			6
Actuated Green, G (s)	29.5	25.6	46.1	33.5	27.6	27.6	20.5	36.6	42.5	3.9	20.0	23.9
Effective Green, g (s)	29.5	25.6	46.1	33.5	27.6	27.6	20.5	36.6	42.5	3.9	20.0	23.9
Actuated g/C Ratio	0.33	0.28	0.51	0.37	0.31	0.31	0.23	0.41	0.47	0.04	0.22	0.27
Clearance Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	151	953	821	292	1028	447	666	1363	755	126	745	461
v/s Ratio Prot	0.02	0.14	0.03	c0.02	c0.30		c0.22	0.22	0.01	0.03	c0.20	0.00
v/s Ratio Perm	0.11		0.04	0.10		0.01			0.06			0.01
v/c Ratio	0.38	0.50	0.11	0.34	0.98	0.04	0.97	0.54	0.12	0.60	0.90	0.04
Uniform Delay, d1	23.3	26.9	11.4	19.3	30.9	21.9	34.4	20.3	13.3	42.3	34.1	24.5
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.6	0.4	0.1	0.7	22.5	0.0	26.6	0.4	0.1	7.9	14.3	0.0
Delay (s)	24.8	27.3	11.4	20.0	53.4	22.0	61.0	20.8	13.4	50.2	48.3	24.6
Level of Service	C	C	B	B	D	C	E	C	B	D	D	C
Approach Delay (s)		23.7			48.8			36.9			46.6	
Approach LOS		C			D			D			D	

Intersection Summary			
HCM 2000 Control Delay	39.9	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.93		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	82.0%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Intersection	
Int Delay, s/veh	0.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	15	8	239	17	21	966
Future Vol, veh/h	15	8	239	17	21	966
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	65	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	63	58	94	42	67	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	24	14	254	40	31	1073

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	873	147	0	0	294	0
Stage 1	274	-	-	-	-	-
Stage 2	599	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	289	873	-	-	1264	-
Stage 1	747	-	-	-	-	-
Stage 2	511	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	282	873	-	-	1264	-
Mov Cap-2 Maneuver	392	-	-	-	-	-
Stage 1	747	-	-	-	-	-
Stage 2	498	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	12.9	0	0.2
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	491	1264	-
HCM Lane V/C Ratio	-	-	0.077	0.025	-
HCM Control Delay (s)	-	-	12.9	7.9	-
HCM Lane LOS	-	-	B	A	-
HCM 95th %tile Q(veh)	-	-	0.2	0.1	-

Intersection	
Int Delay, s/veh	3.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	4	34	0	1	22	0
Future Vol, veh/h	4	34	0	1	22	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	4	36	0	1	23	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	40	0	23	22
Stage 1	-	-	-	-	22	-
Stage 2	-	-	-	-	1	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1570	-	993	1055
Stage 1	-	-	-	-	1001	-
Stage 2	-	-	-	-	1022	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1570	-	993	1055
Mov Cap-2 Maneuver	-	-	-	-	993	-
Stage 1	-	-	-	-	1001	-
Stage 2	-	-	-	-	1022	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	8.7
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	993	-	-	1570	-
HCM Lane V/C Ratio	0.023	-	-	-	-
HCM Control Delay (s)	8.7	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0	-

Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	1	2	254	1	2	979
Future Vol, veh/h	1	2	254	1	2	979
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	2	267	1	2	1031

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	788	134	0	0	268	0
Stage 1	268	-	-	-	-	-
Stage 2	520	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	328	890	-	-	1293	-
Stage 1	753	-	-	-	-	-
Stage 2	561	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	327	890	-	-	1293	-
Mov Cap-2 Maneuver	436	-	-	-	-	-
Stage 1	753	-	-	-	-	-
Stage 2	559	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.5	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	661	1293	-
HCM Lane V/C Ratio	-	-	0.005	0.002	-
HCM Control Delay (s)	-	-	10.5	7.8	-
HCM Lane LOS	-	-	B	A	-
HCM 95th %tile Q(veh)	-	-	0	0	-

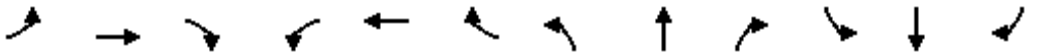
Intersection	
Int Delay, s/veh	0.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	33	10	239	65	20	960
Future Vol, veh/h	33	10	239	65	20	960
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	65	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	35	11	252	68	21	1011

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	834	160	0	0	320	0
Stage 1	286	-	-	-	-	-
Stage 2	548	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	307	857	-	-	1237	-
Stage 1	737	-	-	-	-	-
Stage 2	543	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	295	857	-	-	1237	-
Mov Cap-2 Maneuver	406	-	-	-	-	-
Stage 1	737	-	-	-	-	-
Stage 2	522	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	13.4	0	0.2
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	406	857	1237	-
HCM Lane V/C Ratio	-	-	0.086	0.012	0.017	-
HCM Control Delay (s)	-	-	14.7	9.3	8	-
HCM Lane LOS	-	-	B	A	A	-
HCM 95th %tile Q(veh)	-	-	0.3	0	0.1	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	56	1037	570	105	324	59	229	621	126	105	443	55
Future Volume (vph)	56	1037	570	105	324	59	229	621	126	105	443	55
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1620	1800	1800	1620	1800	1800
Total Lost time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.97	0.95	1.00	0.97	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.97	1.00	1.00	0.97	1.00	1.00	0.96	1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1676	3353	1459	1676	3353	1461	2927	3353	1439	2927	3353	1479
Flt Permitted	0.54	1.00	1.00	0.13	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	958	3353	1459	238	3353	1461	2927	3353	1439	2927	3353	1479
Peak-hour factor, PHF	0.72	0.93	0.95	0.91	0.93	0.82	0.91	0.79	0.75	0.82	0.91	0.86
Adj. Flow (vph)	78	1115	600	115	348	72	252	786	168	128	487	64
RTOR Reduction (vph)	0	0	47	0	0	46	0	0	45	0	0	48
Lane Group Flow (vph)	78	1115	553	115	348	26	252	786	123	128	487	16
Confl. Peds. (#/hr)			21			9			26			4
Confl. Bikes (#/hr)			1			3			5			
Turn Type	pm+pt	NA	pm+ov	pm+pt	NA	Perm	Prot	NA	pm+ov	Prot	NA	pm+ov
Protected Phases	7	4	5	3	8		5	2	3	1	6	7
Permitted Phases	4		4	8		8			2			6
Actuated Green, G (s)	31.6	27.7	41.4	35.6	29.7	29.7	13.7	26.1	32.0	5.0	17.4	21.3
Effective Green, g (s)	31.6	27.7	41.4	35.6	29.7	29.7	13.7	26.1	32.0	5.0	17.4	21.3
Actuated g/C Ratio	0.38	0.33	0.50	0.43	0.36	0.36	0.17	0.32	0.39	0.06	0.21	0.26
Clearance Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	399	1123	809	205	1204	524	484	1058	635	176	705	461
v/s Ratio Prot	0.01	c0.33	c0.11	c0.04	0.10		0.09	c0.23	0.01	0.04	0.15	0.00
v/s Ratio Perm	0.07		0.27	0.20		0.02			0.07			0.01
v/c Ratio	0.20	0.99	0.68	0.56	0.29	0.05	0.52	0.74	0.19	0.73	0.69	0.04
Uniform Delay, d1	16.6	27.4	15.7	18.3	19.0	17.3	31.5	25.3	16.8	38.2	30.2	23.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.2	25.0	2.4	3.5	0.1	0.0	1.0	2.9	0.2	13.9	2.9	0.0
Delay (s)	16.8	52.4	18.1	21.7	19.1	17.3	32.5	28.2	17.0	52.1	33.1	23.0
Level of Service	B	D	B	C	B	B	C	C	B	D	C	C
Approach Delay (s)		39.4			19.4			27.5			35.7	
Approach LOS		D			B			C			D	

Intersection Summary			
HCM 2000 Control Delay	32.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	82.7	Sum of lost time (s)	18.0
Intersection Capacity Utilization	73.7%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Intersection	
Int Delay, s/veh	2.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	58	24	1056	35	16	252
Future Vol, veh/h	58	24	1056	35	16	252
Conflicting Peds, #/hr	0	0	0	2	2	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	65	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	65	60	92	78	67	69
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	89	40	1148	45	24	365

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1404	599	0	0	1195	0
Stage 1	1173	-	-	-	-	-
Stage 2	231	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	131	445	-	-	580	-
Stage 1	256	-	-	-	-	-
Stage 2	785	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	125	444	-	-	579	-
Mov Cap-2 Maneuver	212	-	-	-	-	-
Stage 1	255	-	-	-	-	-
Stage 2	753	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	32.2	0	0.7
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	253	579	-
HCM Lane V/C Ratio	-	-	0.511	0.041	-
HCM Control Delay (s)	-	-	33.2	11.5	-
HCM Lane LOS	-	-	D	B	-
HCM 95th %tile Q(veh)	-	-	2.7	0.1	-

Intersection	
Int Delay, s/veh	3.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	8	43	4	31	50	5
Future Vol, veh/h	8	43	4	31	50	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	8	45	4	33	53	5

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	53	0	72	31
Stage 1	-	-	-	-	31	-
Stage 2	-	-	-	-	41	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1553	-	932	1043
Stage 1	-	-	-	-	992	-
Stage 2	-	-	-	-	981	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1553	-	929	1043
Mov Cap-2 Maneuver	-	-	-	-	929	-
Stage 1	-	-	-	-	992	-
Stage 2	-	-	-	-	978	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.8	9.1
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	938	-	-	1553	-
HCM Lane V/C Ratio	0.062	-	-	0.003	-
HCM Control Delay (s)	9.1	-	-	7.3	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.2	-	-	0	-

Intersection	
Int Delay, s/veh	0.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	1	2	1088	1	2	308
Future Vol, veh/h	1	2	1088	1	2	308
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	2	1145	1	2	324

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1312	573	0	0	1146	0
Stage 1	1146	-	-	-	-	-
Stage 2	166	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	150	463	-	-	605	-
Stage 1	265	-	-	-	-	-
Stage 2	846	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	149	463	-	-	605	-
Mov Cap-2 Maneuver	227	-	-	-	-	-
Stage 1	265	-	-	-	-	-
Stage 2	843	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	15.6	0	0.1
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	344	605	-
HCM Lane V/C Ratio	-	-	0.009	0.003	-
HCM Control Delay (s)	-	-	15.6	11	-
HCM Lane LOS	-	-	C	B	-
HCM 95th %tile Q(veh)	-	-	0	0	-

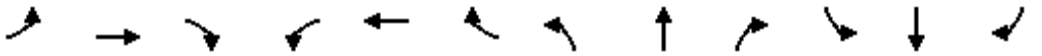
Intersection	
Int Delay, s/veh	2.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	90	65	1076	94	22	286
Future Vol, veh/h	90	65	1076	94	22	286
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	65	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	95	68	1133	99	23	301

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1380	616	0	0	1232	0
Stage 1	1183	-	-	-	-	-
Stage 2	197	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	135	433	-	-	561	-
Stage 1	253	-	-	-	-	-
Stage 2	817	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	128	433	-	-	561	-
Mov Cap-2 Maneuver	213	-	-	-	-	-
Stage 1	253	-	-	-	-	-
Stage 2	777	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	27.2	22.0	0.8
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	213	433	561	-
HCM Lane V/C Ratio	-	-	0.445	0.158	0.041	-
HCM Control Delay (s)	-	-	34.8	14.9	11.7	-
HCM Lane LOS	-	-	D	B	B	-
HCM 95th %tile Q(veh)	-	-	2.1	0.6	0.1	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	54	475	158	117	945	59	653	663	120	61	564	83
Future Volume (vph)	54	475	158	117	945	59	653	663	120	61	564	83
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1620	1800	1800	1620	1800	1800
Total Lost time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.97	0.95	1.00	0.97	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.97	1.00	1.00	0.97	1.00	1.00	0.96	1.00	1.00	0.97
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1676	3353	1462	1676	3353	1460	2927	3353	1446	2927	3353	1462
Flt Permitted	0.15	1.00	1.00	0.32	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	265	3353	1462	559	3353	1460	2927	3353	1446	2927	3353	1462
Peak-hour factor, PHF	0.63	0.89	0.91	0.86	0.88	0.75	0.98	0.88	0.65	0.71	0.81	0.79
Adj. Flow (vph)	86	534	174	136	1074	79	666	753	185	86	696	105
RTOR Reduction (vph)	0	0	42	0	0	55	0	0	49	0	0	76
Lane Group Flow (vph)	86	534	132	136	1074	24	666	753	136	86	696	29
Confl. Peds. (#/hr)			20			10			19			11
Confl. Bikes (#/hr)			9						3			4
Turn Type	pm+pt	NA	pm+ov	pm+pt	NA	Perm	Prot	NA	pm+ov	Prot	NA	pm+ov
Protected Phases	7	4	5	3	8		5	2	3	1	6	7
Permitted Phases	4		4	8		8			2			6
Actuated Green, G (s)	31.6	26.6	47.1	33.4	27.5	27.5	20.5	36.4	42.3	4.0	19.9	24.9
Effective Green, g (s)	31.6	26.6	47.1	33.4	27.5	27.5	20.5	36.4	42.3	4.0	19.9	24.9
Actuated g/C Ratio	0.35	0.29	0.52	0.37	0.30	0.30	0.23	0.40	0.47	0.04	0.22	0.27
Clearance Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	169	981	829	277	1014	441	660	1342	744	128	734	472
v/s Ratio Prot	0.03	0.16	0.04	c0.03	c0.32		c0.23	0.22	0.01	0.03	c0.21	0.00
v/s Ratio Perm	0.15		0.05	0.15		0.02			0.08			0.02
v/c Ratio	0.51	0.54	0.16	0.49	1.06	0.05	1.01	0.56	0.18	0.67	0.95	0.06
Uniform Delay, d1	23.3	27.1	11.5	20.2	31.7	22.5	35.2	21.1	14.2	42.8	35.0	24.4
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	2.4	0.6	0.1	1.4	45.3	0.1	37.3	0.5	0.1	13.0	21.2	0.1
Delay (s)	25.7	27.7	11.6	21.6	77.0	22.5	72.5	21.6	14.3	55.8	56.2	24.4
Level of Service	C	C	B	C	E	C	E	C	B	E	E	C
Approach Delay (s)		23.9			67.8			41.9			52.4	
Approach LOS		C			E			D			D	

Intersection Summary			
HCM 2000 Control Delay	48.1	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.98		
Actuated Cycle Length (s)	90.9	Sum of lost time (s)	18.0
Intersection Capacity Utilization	85.0%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Intersection	
Int Delay, s/veh	0.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	17	12	270	22	31	1020
Future Vol, veh/h	17	12	270	22	31	1020
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	65	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	63	58	94	42	67	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	27	21	287	52	46	1133

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	972	170	0	0	339	0
Stage 1	313	-	-	-	-	-
Stage 2	659	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	250	844	-	-	1217	-
Stage 1	715	-	-	-	-	-
Stage 2	476	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	241	844	-	-	1217	-
Mov Cap-2 Maneuver	356	-	-	-	-	-
Stage 1	715	-	-	-	-	-
Stage 2	458	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	13.4	0	0.3
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	475	1217	-
HCM Lane V/C Ratio	-	-	0.1	0.038	-
HCM Control Delay (s)	-	-	13.4	8.1	-
HCM Lane LOS	-	-	B	A	-
HCM 95th %tile Q(veh)	-	-	0.3	0.1	-

Intersection	
Int Delay, s/veh	3.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	4	50	5	1	28	2
Future Vol, veh/h	4	50	5	1	28	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	4	53	5	1	29	2

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	57	0	42	31
Stage 1	-	-	-	-	31	-
Stage 2	-	-	-	-	11	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1547	-	969	1043
Stage 1	-	-	-	-	992	-
Stage 2	-	-	-	-	1012	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1547	-	966	1043
Mov Cap-2 Maneuver	-	-	-	-	966	-
Stage 1	-	-	-	-	992	-
Stage 2	-	-	-	-	1009	-

Approach	EB	WB	NB
HCM Control Delay, s	0	6.1	8.8
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	971	-	-	1547	-
HCM Lane V/C Ratio	0.033	-	-	0.003	-
HCM Control Delay (s)	8.8	-	-	7.3	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-

Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	1	2	291	1	2	1036
Future Vol, veh/h	1	2	291	1	2	1036
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	2	306	1	2	1091

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	857	154	0	0	307	0
Stage 1	307	-	-	-	-	-
Stage 2	550	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	296	864	-	-	1250	-
Stage 1	719	-	-	-	-	-
Stage 2	542	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	295	864	-	-	1250	-
Mov Cap-2 Maneuver	411	-	-	-	-	-
Stage 1	719	-	-	-	-	-
Stage 2	540	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.7	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	632	1250	-
HCM Lane V/C Ratio	-	-	0.005	0.002	-
HCM Control Delay (s)	-	-	10.7	7.9	-
HCM Lane LOS	-	-	B	A	-
HCM 95th %tile Q(veh)	-	-	0	0	-

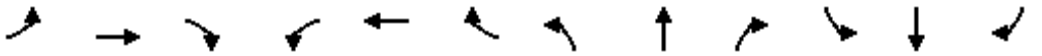
Intersection	
Int Delay, s/veh	0.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	44	29	271	128	30	1006
Future Vol, veh/h	44	29	271	128	30	1006
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	65	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	46	31	285	135	32	1059

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	947	210	0	0	420	0
Stage 1	353	-	-	-	-	-
Stage 2	594	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	259	796	-	-	1136	-
Stage 1	682	-	-	-	-	-
Stage 2	514	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	241	796	-	-	1136	-
Mov Cap-2 Maneuver	361	-	-	-	-	-
Stage 1	682	-	-	-	-	-
Stage 2	479	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	14.3	0	0.2
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	361	796	1136	-
HCM Lane V/C Ratio	-	-	0.128	0.038	0.028	-
HCM Control Delay (s)	-	-	16.4	9.7	8.3	-
HCM Lane LOS	-	-	C	A	A	-
HCM 95th %tile Q(veh)	-	-	0.4	0.1	0.1	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	77	1085	585	124	369	66	253	637	152	115	454	73
Future Volume (vph)	77	1085	585	124	369	66	253	637	152	115	454	73
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1620	1800	1800	1620	1800	1800
Total Lost time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.97	0.95	1.00	0.97	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.97	1.00	1.00	0.97	1.00	1.00	0.96	1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1676	3353	1460	1676	3353	1461	2927	3353	1438	2927	3353	1479
Flt Permitted	0.51	1.00	1.00	0.13	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	896	3353	1460	237	3353	1461	2927	3353	1438	2927	3353	1479
Peak-hour factor, PHF	0.72	0.93	0.95	0.91	0.93	0.82	0.91	0.79	0.75	0.82	0.91	0.86
Adj. Flow (vph)	107	1167	616	136	397	80	278	806	203	140	499	85
RTOR Reduction (vph)	0	0	38	0	0	51	0	0	44	0	0	63
Lane Group Flow (vph)	107	1167	578	136	397	29	278	806	159	140	499	22
Confl. Peds. (#/hr)			21			9			26			4
Confl. Bikes (#/hr)			1			3			5			
Turn Type	pm+pt	NA	pm+ov	pm+pt	NA	Perm	Prot	NA	pm+ov	Prot	NA	pm+ov
Protected Phases	7	4	5	3	8		5	2	3	1	6	7
Permitted Phases	4		4	8		8			2			6
Actuated Green, G (s)	31.7	27.8	42.3	35.7	29.8	29.8	14.5	26.8	32.7	5.0	17.3	21.2
Effective Green, g (s)	31.7	27.8	42.3	35.7	29.8	29.8	14.5	26.8	32.7	5.0	17.3	21.2
Actuated g/C Ratio	0.38	0.33	0.51	0.43	0.36	0.36	0.17	0.32	0.39	0.06	0.21	0.25
Clearance Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	376	1116	818	203	1196	521	508	1076	640	175	694	455
v/s Ratio Prot	0.01	c0.35	c0.12	c0.05	0.12		0.09	c0.24	0.02	0.05	0.15	0.00
v/s Ratio Perm	0.09		0.27	0.24		0.02			0.09			0.01
v/c Ratio	0.28	1.05	0.71	0.67	0.33	0.05	0.55	0.75	0.25	0.80	0.72	0.05
Uniform Delay, d1	17.2	27.9	15.8	19.2	19.6	17.6	31.5	25.3	17.1	38.8	30.8	23.5
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.4	39.7	2.8	8.1	0.2	0.0	1.2	2.9	0.2	22.4	3.6	0.0
Delay (s)	17.6	67.5	18.6	27.3	19.8	17.7	32.7	28.2	17.3	61.2	34.4	23.6
Level of Service	B	E	B	C	B	B	C	C	B	E	C	C
Approach Delay (s)		48.8			21.2			27.5			38.3	
Approach LOS		D			C			C			D	

Intersection Summary			
HCM 2000 Control Delay	37.3	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.91		
Actuated Cycle Length (s)	83.5	Sum of lost time (s)	18.0
Intersection Capacity Utilization	76.7%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Initial Study/Mitigated Negative Declaration
Arcadia Hotel and Annex
(Hotel Indigo) Project

Prepared for:

City of Arcadia
240 W. Huntington Drive
Arcadia, California 91007

Prepared by:

DUDEK
38 N. Marengo Avenue
Pasadena, California 91101

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APPENDICES

FIGURES

TABLES

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Acronyms and Abbreviations

Acronym/Abbreviation	Definition
ACM	asbestos-containing material
AIN	Assessor Identification Number
APD	Arcadia Police Department
AQMP	Air Quality Management Plan
BMP	best management practice
CAAQS	California Ambient Air Quality Standards
CalEEMod	California Emissions Estimator Model
CALGreen	California Green Building Standards Code
Cal/OSHA	California Division of Occupational Safety and Health
CalRecycle	California Department of Resources, Recycling, and Recovery
Caltrans	California Department of Transportation
CARB	California Air Resources Board
CHRIS	California Historical Resources Information System
CEQA	California Environmental Quality Act
City	City of Arcadia
CMP	Congestion Management Plan
CNEL	Community Noise Equivalent Level
County	County of Los Angeles
CUP	Conditional Use Permit
dB	Decibel
dBA	A-weighted decibel
DOC	California Department of Conservation
DOGGR	California Division of Oil, Gas, and Geothermal Resource
DTSC	Department of Toxic Substances Control
DWR	California Department of Water Resources
EB	eastbound
EIR	Environmental Impact Report
EPA	U.S. Environmental Protection Agency
IS/MND	Initial Study/Mitigated Negative Declaration
FAR	Floor Area Ratio
FHWA	Federal Highway Administration
GHG	greenhouse gas
gpm	gallons per minute
GWP	global warming potential
HVAC	heating, ventilation, and air conditioning
kW	kilowatt
LACSD	Sanitation District of Los Angeles County
LACM	Natural History Museum of Los Angeles County
LARWQCB	Los Angeles Regional Water Quality Control Board
L_{eq}	time-averaged equivalent noise level
LID	Low Impact Development
LOS	level of service
LST	Localized Significance Threshold
LUST	Leaking Underground Storage Tank

Acronym/Abbreviation	Definition
MBTA	Migratory Bird Treaty Act
mgd	million gallons per day
MM	mitigation measure
MRZ	Mineral Resource Zone
MS4	Municipal Separate Storm Sewer System
MT	metric ton
MWD	Metropolitan Water District of Southern California
NAAQS	National Ambient Air Quality Standards
NAHC	Native American Heritage Commission
NPDES	National Pollutant Discharge Elimination System
PRIMP	Paleontological Resources Impact Mitigation Program
RCNM	Roadway Construction Noise Model
ROW	right-of-way
RTP/SCS	Regional Transportation Plan/Sustainable Communities Strategy
SB	Senate Bill
SCAB	South Coast Air Basin
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SCCIC	South Central Coastal Information Center
SCE	Southern California Edison
sf	square feet
SVP	Society of Vertebrate Paleontology
SWPPP	Stormwater Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TAC	toxic air contaminant
TCR	tribal cultural resource
UWMP	Urban Water Management Plan
V/C	Volume-to-capacity
VHFHSZ	Very High Fire Hazard Severity Zone
VMT	vehicle miles traveled
VOC	volatile organic gas
WB	westbound
WRP	Water Reclamation Plant

1 Introduction

1.1 Project Overview

The City of Arcadia (City) has prepared an Initial Study/Mitigated Negative Declaration (IS/MND) for the Arcadia Hotel and Annex Project (Hotel Indigo or proposed Project), located in downtown Arcadia in northeast Los Angeles County (County). The proposed Project site is located at two addresses: 125 West Huntington Drive and 175 Colorado Place. The Project site is located on one legal parcel with the following four Assessor Parcel Numbers (APN) for tax purposes: 5775-015-024, 5775-015-025, 5775-015-026, and 5775-015-027. As part of the Project, the hotel will receive a new address (123 W. Huntington Drive), which will replace the 175 Colorado Place address.

1.1.1 Previously Approved Development Project

The approximately 4.59-acre Project site is the location of a previously approved development project. On January 22, 2013, the Arcadia Planning Commission approved the construction of four new buildings on the Project site, and on February 5, 2013, the City Council affirmed the Planning Commission's approval to construct the new buildings, as follows:

- Building 1: A 163,468 square-foot (sf), four-level parking structure
- Building 2: A 19,995 sf, three-story medical office building
- Building 3: A 19,441 sf, three-story medical office building with 3,000 sf of ground floor restaurant
- Building 4: A 24,819 sf, three-story general office building with 1,600 sf of ground floor restaurant

The existing 60,811 sf, three-story office building (formerly occupied by Parsons Engineering) would remain. Four modifications, which included concessions to allow new windows facing residential properties, designated loading spaces in lieu of required parking, special front yard setbacks, and to allow trash enclosures to be located within the 20-foot rear yard setback were approved with the previously approved project.

Additionally, the 2013 project included a City right-of-way dedication of 3,192 sf, thereby reducing the lot area to 200,085 sf. The Lot Line Adjustment No. LLA 12-03, Conditional Use Permit (CUP) No. CUP 11-18, Modification NO. MP 12-10, and Architectural Design Review No. ADR 11-29 including additional conditions, were approved by the City. Subsequently, portions of the previously approved 2013 project were constructed, including the parking structure (Building 1) and the two medical office buildings (Buildings 2 and 3).

1.1.2 Proposed Project

The current development proposal is to build a new hotel. This Project would include the conversion of the existing general office use (formerly occupied by Parsons Engineering) and the construction of a new five-story tower that is located near the corner of Huntington Drive and San Rafael Avenue. The proposed Project site includes the same property boundary as the 2013 submittal but would only involve changes to the eastern portion of the site. The two recently constructed medical office buildings (hereafter referred to as Building A and B) and the new parking structure are proposed to remain as-is. Under the proposed Project, the existing 60,811 sf, three-story office building (former Worley Parsons Building, hereafter referred to as Building C) would continue to remain on the Project site but would be redeveloped from the existing office use into a hotel.

In summary, the proposed Project includes a hotel (renovated Building C) and a hotel annex (new Building D) on the Project site. Building C would be remodeled to allow for 76,754 sf of hotel and appurtenant uses. The first floor includes a lobby/lounge, restaurant, kitchen, fitness room, management offices, meeting rooms, and banquet hall space. The second and third floors would accommodate 90 hotel rooms. Building D would be constructed as a 61,538 sf, five-story hotel building on the southeastern portion of the Project site that includes the hotel spa, café, outdoor patios and an additional 75 hotel rooms. In total, 165 new hotel rooms would be constructed on the Project site. Building A, Building B, and the existing parking structure would be left as is and protected in place during construction of the proposed Project.

1.2 Document Contents and Format

Because of the substantive differences between the proposed Project and the originally proposed and approved project and 2013 IS/MND, the City has determined that it is appropriate to prepare a new IS/MND to evaluate the environmental impacts of the proposed Project. As such, if approved, this IS/MND would become the primary environmental compliance documentation pursuant to the California Environmental Quality Act (CEQA) for the proposed Project. Relevant information from the 2013 IS/MND may be incorporated into this IS/MND, where appropriate, and is referenced accordingly.

The CEQA applies to proposed projects initiated by, funded by, or requiring discretionary approvals from state or local government agencies. The proposed Project constitutes a project as defined by CEQA (California Public Resources Code, Section 21065). The City of Arcadia is the CEQA lead agency for the proposed Project. Pursuant to CEQA Guidelines Section 15063(d), an Initial Study must contain the following:

1) A description of the project including the location of the project;
2) An identification of the environmental setting;
3) An identification of environmental effects by use of a checklist, matrix, or other method, provided that entries on a checklist or other form are briefly explained to indicate that there is some evidence to support the entries. The brief explanation may be either through a narrative or a reference to another information source such as an attached map, photographs, or an earlier EIR or negative declaration. A reference to another document should include, where appropriate, a citation to the page or pages where the information is found.
4) A discussion of the ways to mitigate the significant effects identified, if any;
5) An examination of whether the project would be consistent with existing zoning, plans, and other applicable land use controls; and,
6) The name of the person or persons who prepared or participated in the Initial Study.

An Initial Study (IS) has been prepared by the City, as the lead agency, in accordance with CEQA Guidelines to evaluate potential environmental effects and to determine whether an Environmental Impact Report, a Negative Declaration, or a Mitigated Negative Declaration (MND) should be prepared for the proposed Project. The Initial Study has also been prepared to satisfy CEQA requirements of other agencies that may provide approvals, permits, and/or funding for the proposed Project.

In accordance with CEQA Guidelines Section 15369.5, an MND is "prepared for a project when an initial study has identified potentially significant effects on the environment, but (1) revisions in the project plans or proposals made by, or agreed to by, the Applicant before the proposed negative declaration and initial study are released for public

review would avoid the effects or mitigate the effects to a point where clearly no significant effect on the environment would occur, and (2) there is no substantial evidence in light of the whole record before the lead agency that the project, as revised, may have a significant effect on the environment." The IS for the proposed Project determined that the Project could cause some potentially significant impacts on the environment, but as shown in the environmental analysis contained herein, those potentially significant impacts would be reduced to less than significant levels through the implementation of mitigation measures. Consequently, an MND has been be prepared for the proposed Project.

The City's decision makers must review and consider the MND in its discretion to approve, revise, or deny the Project, as appropriate. The MND will serve as the primary environmental document pursuant to CEQA for implementation of the Project, including all required discretionary approvals.

This IS/MND is composed of four sections. Section 1 provides a general overview of the proposed Project, CEQA requirements related to the Project, the public review process, and a summary of the mitigation measures required. Section 2 provides a description of the environmental setting and the proposed Project components, anticipated construction schedule, and operational characteristics. Section 3 includes the CEQA Initial Study checklist, which provides an assessment of potential environmental impacts and identifies mitigation measures to reduce potentially significant impacts to less than significant. Section 4 provides a list of staff and consultants involved in preparing the IS/MND. The IS/MND also includes appendices that contain technical memoranda and/or data files related to air quality and greenhouse gas (GHG) emissions (see Appendix A), biological resources (see Appendix B), cultural resources (see Appendix C), low impact development (Appendix D), noise (see Appendix E), traffic (see Appendix F), and an architectural design review and variance application (See Appendix G).

1.3 Public Review Process

In accordance with CEQA and the CEQA Guidelines, a public review period for this IS/MND commenced on Thursday, February 13th, 2020 and will conclude on Thursday, March 5th, 2020. The IS/MND has been distributed for review to interested and involved public agencies, responsible/trustee agencies, organizations, and private individuals that have requested in writing to be informed of the proposed Project. A hardcopy of the IS/MND is also available for public review during regular business hours at:

City of Arcadia Planning Services Division
240 West Huntington Drive
Arcadia, California 91007

and

City of Arcadia Library (Circulation Desk)
20 W. Duarte Road
Arcadia, California 91007

An electronic copy of the IS/MND can be viewed at: https://www.arcadiaca.gov/government/city-departments/development-services/planning/current-significant-projects

In accordance with CEQA Guidelines Section 15073, the IS/MND will be available for public review for not less than 20 days. Because this proposed Project does not require review by any state agencies, a minimum 20-day public

review period is appropriate. During the public review period, the public will have the opportunity to provide written comments on the information contained within this IS/MND. The City's discretionary approval/refusal of the proposed Project will also be based on the information contained in this document.

In reviewing the IS/MND, interested members of the public should focus on the sufficiency of the document in identifying and analyzing potential Project impacts on the environment, as well as the sufficiency of any mitigation measures proposed to reduce potential impacts to a less-than-significant level. Comments on the IS/MND should be submitted by the end of the public review period and must be postmarked by Thursday, March 5th, 2020. Please submit written comments by mail or via email with the subject line "Hotel Indigo Project" to the following address:

Luis Torrico, Senior Planner
City of Arcadia Development Services Department
240 West Huntington Drive
Arcadia, California 91007
ltorrico@arcadiaca.gov

1.4 Mitigation Measures

Prior to mitigation, Project implementation would result in potentially significant impacts to Biological Resources, Cultural Resources, Noise, and Tribal Cultural Resources. However, mitigation measures (MMs) have been developed to avoid or reduce these impacts to levels considered less than significant. These MMs would be included in the Contractor Specifications and bid documents, as appropriate, and verified as part of the Mitigation Monitoring and Reporting Program. These MMs must be implemented to the satisfaction of the City and are listed below in Table 1, Mitigation Measures.

Table 1. Mitigation Measures

Potential Impact	Mitigation Measure
Biological Resources	
Project construction has the potential to disrupt nesting birds protected under the Migratory Bird Treaty Act (MBTA).	**MM BIO-1.** Commencement of construction activities shall avoid the February 1 through August 31 bird nesting season to the greatest extent feasible. If construction activities begin within this nesting season, a survey for nesting birds shall be conducted by a qualified biologist within 7 days of the commencement of construction activities, but not prior to this 7-day window. The area surveyed shall include all clearing/construction areas, as well as areas within 100 feet of the boundaries of these areas, or as otherwise determined by the biologist. If no active bird nests are identified on, or within 100 feet of the limits of the proposed disturbance area, no further action is necessary and construction activities could commence. For any off-site areas that are inaccessible, the qualified biologists may survey the off-site area with binoculars to capture the full 100-foot survey area. If active nests are found during pre-construction surveys or at any time throughout the course of construction activities during the nesting bird season, all clearing/construction activities within a minimum of 100 feet of the nest shall be postponed until a wildlife biologist has identified the nesting species. If the bird species is not protected under the MBTA and/or the California Fish and Game Code, no further action is required and construction activities may proceed. If the avian species is protected under the MBTA and/or the California Fish and Game Code, a minimum buffer zone shall be established by the qualified biologist based on the type

Table 1. Mitigation Measures

Potential Impact	Mitigation Measure
	of bird/raptor species identified and the construction buffer shall be established on site through the erection of cones/flagging/fencing to clearly delineate the protection zone. All construction activities shall avoid this protection zone until a qualified biologist has confirmed that the nest(s) is no longer active and the nest is vacated, and there is no evidence of second nesting attempts. Upon completion of any site survey for nesting birds conducted by a qualified biologist, documentation of the survey activity, findings, and any resulting actions taken shall be prepared and submitted to the City.
Cultural Resources	
Archaeological resources could potentially be discovered/unearthed during Project construction.	**MM-CUL-1.** In the event that archaeological resources are unearthed during ground-disturbing activities, the construction contractor shall immediately cease all earth-disturbing activities within 100 feet of the discovery and shall retain a qualified archaeologist that meets the Secretary of the Interior's Professional Qualification Standards. Construction activities may continue in other areas outside of the designated protection zone, which shall be delineated with cones, flagging, or fencing. The archaeologist shall evaluate the significance of the find and determine whether the resource uncovered is a "Tribal Cultural Resources" pursuant to Section 21074 of the California Public Resources Code, or a "unique archaeological resource" pursuant to Section 21083.2(g) of the California Public Resources Code or a "historical resource" pursuant to Section 15064.5(a) of the State CEQA Guidelines. If the archaeological find is determined to be a resource, the archaeologist shall formulate a Mitigation Plan in consultation with the City of Arcadia that satisfies the requirements of the above-listed Code Sections. Upon approval of the Mitigation Plan by the City, the Project shall be implemented in compliance with the Plan. If the Archaeologist determines that the resource is not significant, s/he shall record the evaluation and submit the recordation form to the California Historical Resources Information System (CHRIS) at the South Central Coastal Information Center (SCCIC). The archaeologist shall prepare a report of the results of any study prepared as part of a testing or Mitigation Plan, following accepted professional practice. The report shall follow guidelines of the California Office of Historic Preservation although format will be dependent on the nature of the archaeological investigation required. Copies of the report shall be submitted to the City and to the CHRIS at the SCCIC.
Geology and Soils	
Paleontological resources could potentially be discovered/unearthed during Project construction.	**MM-GEO-1.** Prior to commencement of any grading activity on-site, the Applicant shall retain a qualified paleontologist per the Society of Vertebrate Paleontology (SVP) (2010) guidelines. The paleontologist shall prepare a Paleontological Resources Impact Mitigation Program (PRIMP) for the project. The PRIMP shall be consistent with the SVP (2010) guidelines and should outline requirements for preconstruction meeting attendance and worker environmental awareness training, where monitoring is required within the project area based on construction plans and/or geotechnical reports, procedures for adequate paleontological monitoring and discoveries treatment, and paleontological methods (including sediment sampling for microvertebrate fossils), reporting, and collections management. The qualified paleontologist shall attend the preconstruction meeting and a paleontological monitor shall be on-site during all rough grading and other significant ground-disturbing activities in previously undisturbed, fine-grained older Quaternary alluvial fan deposits. These deposits may be encountered at depths as shallow as 5-10 feet below ground surface. In the event that paleontological resources (e.g., fossils) are unearthed during grading, the paleontological monitor will temporarily halt and/or

Table 1. Mitigation Measures

Potential Impact	Mitigation Measure
	divert grading activity to allow recovery of paleontological resources. The area of discovery will be roped off with a 50-foot radius buffer. Once documentation and collection of the find is completed, the monitor will remove the rope and allow grading to recommence in the area of the find.
Noise	
The Project would not exceed any construction-related noise standards in the City's General Plan or Municipal Code. However, to be conservatively protective of adjacent residences during construction activities, MM-NOI-1 includes best practices that would reduce construction noise levels at the adjacent residential property line.	**MM-NOI-1.** Prior to the issuance of a grading permit, the Project Applicant shall provide a Construction Noise Control Plan (CNCP) to the City for review and approval. The CNCP shall include best management practices to reduce short-term construction noise. Enforcement of the CNCP shall be accomplished by field inspections during construction activities and/or documentation of compliance, to the satisfaction of the City's Development Services Department. Recommended best management practices may include, but not be limited to, the following: • All construction equipment, fixed or mobile, shall be equipped with properly operating and maintained mufflers consistent with the manufacturers' specifications and standards. • Construction noise reduction methods such as shutting off idling equipment, maximizing the distance between construction equipment staging areas and adjacent residences, and use of electric air compressors and similar power tools, rather than diesel equipment, should be used where feasible. • Stationary equipment should be placed as far away from the adjacent residential property boundary as feasible and positioned such that emitted noise is directed away from or shielded from sensitive receptors. Acoustically attenuating shields, shrouds, or enclosures may be placed over stationary equipment. • During all Project site construction, the construction contractor shall limit all construction-related activities, including maintenance of construction equipment and the staging of haul trucks, to between the hours of 7:00 a.m. to 6:00 p.m. Monday through Friday and 8:00 a.m. to 5:00 p.m. on Saturday. • Construction hours, allowable workdays, and the phone number of the job superintendent should be clearly posted at all construction entrances to allow surrounding property owners to contact the job superintendent, if necessary. In the event the City receives a complaint, appropriate corrective actions should be implemented and a report of the action provided to the reporting party City's Development Services Department.
Operation of the HVAC system and/or emergency generator has the potential to generate noise in excess of City standards, which could adversely affect sensitive noise receptors.	**MM-NOI-2** The Project Applicant shall retain an acoustical specialist to review the Project's construction-level plans to ensure that the equipment specifications and plans for HVAC and emergency backup generator incorporate features to ensure that operational noise will not exceed relevant noise standards at nearby noise-sensitive land uses (e.g., residential). Such features could include, but not be limited to, the specification of quieter equipment, relocation of facilities to be of further distance from residential homes, and/or the provision of acoustical enclosures. The acoustical specialist shall certify in writing to the City that the equipment specifications and plans will achieve the City's relevant noise limits.
Tribal Cultural Resources	
Tribal Cultural Resources could potentially be discovered/unearthed during Project construction.	**MM-TCR-1.** Should a possible TCR be encountered, construction activities within 50 feet of the discovery shall be temporarily halted and the City notified. The City will notify Native American tribes that have been identified by the NAHC to be traditionally and culturally affiliated with the geographic area of the Project. If the potential resource is archaeological in nature, appropriate management requirements shall be

Table 1. Mitigation Measures

Potential Impact	Mitigation Measure
	implemented as outlined in MM-CUL-1. If the City determines that the potential resource is a TCR (as defined by PRC, Section 21074), tribes consulting under AB 52 would be provided a reasonable period of time, typically 5 days from the date of a new discovery is made, to conduct a site visit and make recommendations regarding future ground disturbance activities as well as the treatment of any discovered TCRs. A qualified archaeologist shall implement a plan for the treatment and disposition of any discovered TCRs based on the nature of the resource and considering the recommendations of the tribe(s). Implementation of proposed recommendations will be made based on the determination of the City that the approach is reasonable and feasible.

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Environmental Checklist Form

1. Project Title:	Arcadia Hotel and Annex (Hotel Indigo) Project
2. Lead agency name and address:	City of Arcadia Development Services Department 240 West Huntington Drive Arcadia, California 91007
3. Contact person and phone number:	Luis Torrico, Senior Planner (626) 574-5442
4. Project location:	125 West Huntington Drive and 175 Colorado Place, Arcadia
5. Project sponsor's name and address:	Pacific Design Group C/O Donnie Jurgensen 150 El Camino Real, Suite 112 Tustin, CA 92780
6. General plan designation:	(C) Commercial
7. Zoning:	(C-G) General Commercial Zone with a Downtown Overlay
8. Description of project:	The proposed Project includes the construction of the Hotel Indigo to be located in the existing Worley Parsons Building (Building C), which would be remodeled to allow for 76,754 sf of hotel and appurtenant uses. Building C would be remodeled, as follows: the first floor would be renovated to include a lobby/ lounge, restaurant, kitchen, fitness room, management offices, meeting rooms, and banquet hall space; the second and third floors would be remodeled to accommodate 90 hotel rooms. Also, a new, 61,538-square-foot, five-story building (Building D) would be constructed on the site and would include a hotel spa, café, outdoor patios and an additional 75 hotel rooms, for a Project-wide total of 165 hotel rooms. See Section 2, Project Setting and Description, for details.
9. Surrounding land uses and setting:	The proposed Project site is surrounded by single-family residential land uses to the north, commercial land uses to the east, recreational, and hotel to the south, and commercial land uses and the Santa Anita Race Track to the west.
10. Other public agencies whose approval is required:	There are no public agencies, other than the City of Arcadia, whose approval is required for the proposed Project
11. Have California Native American tribes traditionally and culturally affiliated with the project area requested consultation pursuant to Public Resources Code section 21080.3.1?	See Section 3.18, Tribal Cultural Resources.

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.

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

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.

☐ 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" or "potentially significant unless mitigated" impact 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 (a) have been analyzed adequately in an earlier ENVIRONMENTAL IMPACT REPORT or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier ENVIRONMENTAL IMPACT REPORT or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Signature

February 6, 2020
Date

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 Environmental Impact Report (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 "Earlier Analyses," as described in (5) below, may be cross-referenced).
5. Earlier analyses 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 address 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. This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project's environmental effects in whatever format is selected.
9. 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.

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2 Project Setting and Description

2.1 Project Location

As shown in Figure 1, Project Location, the proposed Project site is located in downtown Arcadia in northeast Los Angeles County. The proposed Project site is located at two addresses: 125 West Huntington Drive and 175 Colorado Place. The Project site is located on one legal parcel with APN: 5775-015-024. The Project site is bound by Colorado Place to the south, San Juan Drive to the west, San Rafael Road to the east, and residential homes on Santa Cruz Road to the north. Regional access to the Project site is via Interstate (I) 210, exiting Santa Anita Avenue to Colorado Place.

2.2 Existing Conditions and Setting

2.2.1 On-Site Land Uses

The proposed Project site is designated in the City's General Plan as "Commercial" with a Downtown Overlay and the zoning for the Project site is General Commercial (C-G) with a Downtown Overlay. Figure 2, Zoning, provides an overview of the land designation and zoning of the Project site and surrounding areas. The C-G Zone is intended to provide areas for the development of retail and service uses, offices, restaurants, public uses, and similar and compatible uses and it implements the General Plan Commercial designation (City of Arcadia 2016a). The maximum Floor Area Ratio (FAR) permitted under the C-G Zone and under the Downtown Overlay Zone is 1.0 for new development and the maximum height permitted for new buildings is 48 feet. The proposed Project would have a FAR of 0.85 and thus would be compatible with the C-G Zone and Downtown Overlay Zone's FAR. However, the proposed Project would include a five-story building (Building D), which would be 63 feet 10 inches (63'10") in height above average grade. Given the 48-foot height restriction, the Project would be subject to a height variance, which will be processed concurrently with Project approvals. Additionally, Project approval would be subject to a CUP, which is required in order to develop hotel land uses in the C-G Zone, and Site Plan and Design Review.

As shown on Figure 1, the Project site includes Building A, Building B, Building C, a three-story parking structure and two surface parking lots; one small surface parking lot on the northwestern corner of the Project site and one large surface parking lot that wraps around the building's northeastern corner and extends to Colorado Place. Buildings A and B, the northwestern surface parking lot and the three-level parking structure would remain as-is under the proposed Project. Building C (the former Worley Parsons Building) is vacant under existing conditions and would be redeveloped into the proposed hotel. The existing surface parking lot that wraps around the Project site's northeastern corner would be partially demolished to accommodate the construction of Building D, the hotel annex building. Existing landscaping on the Project site includes 38 intermittent ornamental trees, four of which are protected City trees within the public sidewalk between the Project site and San Rafael Road. Additionally, planter beds containing shrubbery, trees, and groundcover surround the Project site and are dispersed throughout the existing surface parking lots. Access to the Project site is provided via three driveways, as follows:

- Ingress/egress off San Rafael Road to the east, which provides access to the northeastern surface parking lot.
- A primary two-lane driveway located in the center of the Project site off Colorado Place, which provides access to both the three-level parking structure and the northeastern surface parking lot.
- Ingress/egress west of the Project site off San Juan Drive, which provides access to the small northwestern surface parking lot and to the three-level parking structure.

2.2.2 Transit Priority Area

Senate Bill (SB) 743 [Public Resources Code (PRC) §21099(d)] sets forth new guidelines for evaluating project transportation impacts under CEQA, as follows: "Aesthetic and parking impacts of a residential, mixed-use residential, or employment center project on an infill site within a transit priority area (TPA) shall not be considered significant impacts on the environment." PRC Section 21099 defines a "transit priority area" as an area within 0.5-mile of a major transit stop that is "existing or planned, if the planned stop is scheduled to be completed within the planning horizon included in a Transportation Improvement Program adopted pursuant to Section 450.216 or 450.322 of Title 23 of the Code of Federal Regulations." PRC Section 21064.3 defines "major transit stop" as "a site containing an existing rail transit station, a ferry terminal served by either a bus or rail transit service, or the intersection of two or more major bus routes with a frequency of service interval of 15 minutes or less during the morning and afternoon peak commute periods." PRC Section 21099 defines an "employment center project" as "a project located on property zoned for commercial uses with a floor area ratio of no less than 0.75 and that is located within a transit priority area. PRC Section 21099 defines an "infill site" as a lot located within an urban area that has been previously developed, or on a vacant site where at least 75% of the perimeter of the site adjoins, or is separated only by an improved public right-of-way from, parcels that are developed with qualified urban uses. This state law supersedes the aesthetic impact thresholds in the 2019 CEQA Guidelines, including those established for aesthetics, obstruction of views, shading, and nighttime illumination.

All development on the Project site is within a TPA due to its proximity to the Metro Gold Line Stop (0.5-mile northeast), as well as the intersection of the Metro and Foothill Transit bus routes, which have a frequency service interval of 15 minutes or less during the morning and afternoon peak commute periods (0.25-mile east). The proposed Project refers specifically to the hotel development (i.e., the remodel of the existing Building C and the construction of Building D) and associated surface parking/pedestrian improvements, which are within 0.5-mile of a major transit stop and thus, within the boundaries of the TPA (SCAG 2019). As explained in Section 2.2.1, On-Site Land Uses, the Project site is zoned General Commercial (C-G) with a Downtown Overlay and, as such, meets the definition of an 'employment center' per PRC Section 21099. Additionally, the proposed Project site meets the definition of an 'infill site' per PRC Section 21099.

Given the above, the proposed Project's impacts on aesthetic and parking impacts would not be considered significant impacts pursuant to PRC Section 21099(d).

2.2.3 Surrounding Land Uses

As shown on Figure 3, Surrounding Land Uses, the proposed Project site is surrounded by low density residential to the north; commercial land uses to the east, recreational, commercial, and hotel uses to the south, and horse racing land uses to the south and west. Nearby land uses to the south of the Project site include surface parking associated with the Santa Anita Race Track, a new Le Méridien Hotel at the former Santa Anita Inn site (currently under construction) with a new mixed-use project, and the Arcadia Community Regional Park. Further south is the Civic Center Athletic Field Recreation Area, City of Arcadia City Hall, the Police Department and the Santa Anita Golf Course. The Methodist Hospital, which is a not-for-profit regional institution, is located 0.3-mile south of the Project site. Nearby land uses to the west include the Peppers Mexican Grill and Cantina located on the corner of San Juan Drive and Colorado Place, and Santa Anita Race Track surface parking. Nearby land uses to the north consist entirely of single-family residential uses. Nearby land uses to the east, along Huntington Drive, include Citizens Business Bank and strip mall commercial with surface parking, Rusnak/Arcadia Mercedes-Benz Dealership, and other commercial buildings, including Rod's Restaurant and the Elk's Lodge.

There are three schools within the general vicinity of the Project site: Barnhart School, located approximately 0.15-mile north of the Project site; Excelsior School, located approximately 0.16-mile east of the Project site; and First Avenue Middle School, located approximately 0.37-mile southeast of the Project site. The closest parks to the Project site are the Arcadia Community Regional Park, located directly southeast of the Project site, and Newcastle Park, located 0.34-mile north of the Project site. The Los Angeles Arboretum and Botanical Gardens are located approximately 0.8-mile west of the Project site, on the other side of the Santa Anita Racetrack.

Regional access to the Project site is provided via the I-210, which travels in an east-west direction and lies approximately 0.5-mile north of the Project site. The California Department of Transportation (Caltrans) classifies the I-210 as an Eligible State Scenic Highway (not officially designated) where it traverses the City (Caltrans 2011). Local access to the Project site is provided via Huntington Drive and Colorado Place, which intersect at the Project site. Colorado Place in the vicinity of the Project site is Historic Route 66. There are no existing bicycle lanes on Huntington Drive or Colorado Place near the Project site; however, public sidewalks abutting the Project site on Colorado Place, San Rafael Road and San Juan Drive provide pedestrian access to the Project site and surrounding land uses. Metro bus line no. 79 and Foothill Transit Line no. 187 have bus stops located along Huntington Boulevard in the vicinity of the Project site.

2.3 Project Description

2.3.1 Hotel Indigo

As previously described, the approximately 4.59-acre Project site is currently located at 125 West Huntington Drive and 175 Colorado Place. As part of the Project, the hotel will receive a new address (123 W. Huntington Drive), which will replace the 175 Colorado Place address. The Project site includes two recently constructed medical office buildings and parking garage, one general office building, and surface parking. As shown on Figure 4a, Site Plan, Building A, Building B, the northwestern surface parking lot, and the existing parking structure would be left as is and protected in place during construction of the proposed Project. The proposed Project would only redevelop the eastern portion of the site with the proposed Hotel Indigo (Buildings C and D), as well as surface parking and sidewalk/pedestrian improvements. Figure 4b, Enlarged Site Plan, identifies the portion of the Project site that would remain and the portion of the Project site that would be redeveloped. Figure 4c, Building Perspectives, provides various depictions of the proposed structures and architectural details.

Building C is the existing Worley Parsons office building, which would be remodeled to allow for 76,754 sf of hotel and appurtenant uses. Building C would be remodeled, as follows: the first floor would be renovated to include a lobby/ lounge, restaurant, kitchen, fitness room, management offices, meeting rooms, and banquet hall space; the second and third floors would be remodeled to accommodate 90 hotel rooms. Details of the proposed interior changes to Building C are described in Table 2, Hotel Building Components, below. The façade of Building C would be comprised primarily of aluminum and glass with stucco in neutral colors (e.g., grey, tan, olive green). As shown on Figure 5a, Building C Elevations, Building C would include a centrally located exterior, architectural projection, and would be approximately 44 feet and 8 inches (44’ 8”) above average grade at its tallest point.

Building D is a new, 61,538 sf, five-story building on the southeastern portion of the Project site. Building D would serve as the hotel annex building and includes the hotel spa, café, outdoor patios and an additional 75 hotel rooms. Details of the proposed interior of Building D are described in Table 2, under Project Details below. The façade of Building D would be comprised of white stucco with neutral-colored (e.g., grey, tan, olive green) accents. Building D would include aluminum and glass design features with large windows fronting each side of the building. As shown on Figure 5b, Building D Elevations, Building D would include architectural projections of various heights, and would be 63’10” in height above average grade at its tallest point.

Given that Building A and Building B would not be altered, for the purpose of this document, the "Project" refers specifically to the hotel development (i.e., the remodel of the existing Building C and the construction of Building D) and associated surface parking/pedestrian improvements. The proposed Project includes outdoor garden amenities, including a swimming pool, bike lockers, and approximately 12,212 sf of landscaping, encompassing 13.5% of the Project's site area. Table 2 shows the proposed floor-by-floor uses for Building C and Building D.

Table 2. Hotel Building Components

Building/Floor	Project Details	Total Size (Square feet)
Building C		***76,754***
Basement	Maintenance area, electrical room, laundry room and employee break room	2,726
1st Floor	Lobby, lounge, banquet and meeting rooms, gym, restaurant, dining room and 11 guest rooms	24,664
2nd Floor	39 guest rooms and waiting area	24,870
3rd Floor	40 guest rooms, waiting area, executive lounge and balcony	24,494
Building D		***61,538***
1st Floor	Hotel spa, banquet rooms. Kitchen, and lobby	14,414
2nd Floor	Patio, café, waiting area and 20 guest rooms	13,124
3rd Floor	20 guest rooms and waiting area	12,836
4th Floor	20 guest rooms and waiting area	12,849
5th Floor	15 guest rooms and waiting area	8,315

Source: Project Site Plans

2.3.2 Parking and Pedestrian Improvements

Under the City's Development Code section 9103.07.060, the proposed Project would be required to provide 471 parking spaces. On-site parking provided by the Project would include 482 stalls; four loading parking zones, 95 surface parking spaces and 387 spaces within the three-level parking garage. The Project would also include 30 bike racks and 24 bike lockers, 38 fuel-efficient vehicle parking spaces and 15 electric vehicle parking spaces. Details of the proposed parking are shown, in part, in Figure 4b and are as follows:

- The existing parking structure, which comprises 387 parking spaces, including 52 fuel efficient spaces and 23 Americans with Disabilities Act (ADA) spaces would be left as is.
- The 95 surface parking spaces would be dispersed throughout the Project site as follows:
  - 24 parking spaces would remain on the northwestern corner of the Project site
  - 71 parking spaces, including 15 electric vehicle parking spaces, four loading spaces and eight (six regular and two van accessible) ADA compliant parking spaces would be dispersed throughout the remaining portion of the northeastern surface lot.
- The proposed bike racks would be located adjacent to the circular arrival/drop off zone and in the northeastern parking lot, adjacent to San Rafael Road.
- The proposed bike lockers would be placed immediately north of Building C, adjacent to the new circular arrival/drop-off zone.

2.3.3 Landscape Improvements

As shown in Figure 6, Preliminary Landscape Plan, the proposed Project would include approximately 12,212 sf of landscaping improvements, including 690 sf of planting on the second floor deck and 175 sf of planting on the sixth floor deck. Seven existing trees (four within the public sidewalk fronting San Rafael Road and three abutting Building C's western boundary) would be protected in place during construction (see Appendix B). The remaining 29 existing trees would be removed. Per City's Development Code, Section 9702.01, no protected tree shall be removed or have its protected zone encroached upon without the approval of a Tree Permit.

Landscaping proposed under the Project would include groundcover, shrubbery, trees and turf/lawn areas, as well as colored concrete paving with sandblast finish in neutral colors (e.g., mesa bluff, beige and grey). The proposed swimming pool would be located between Building C and Building D and would be landscaped with five 24-inch diameter Marina Strawberry Trees and paved with colored concrete with sandblasted finish in mesa bluff. The northeastern surface parking lot would be landscaped with 36-inch diameter London Plane trees. Additionally, seven vegetated bioswales would be constructed around the Project site in order to reduce pollution in any potential surface water runoff. The southern perimeter of the Project site, fronting Huntington Drive, would be landscaped with 36-inch diameter London Plane Trees, 36-inch diameter Naked Coral Trees, and 24-inch diameter Marina Strawberry Trees.

2.3.4 Off-Site Improvements

The proposed Project would not include any off-site improvements.

2.3.5 Short-Term Construction Activities

As shown on Figure 4b, demolition would include the removal of the existing vegetation, including removal of 34 trees on site (the four City street trees in the sidewalk between the Project site and San Rafael Road would be protected in place). Additionally, demolition would include the removal of the surface parking, two light poles, and two enclosed trash enclosures dispersed throughout the northeastern parking lot to accommodate the new Building D and associated parking and landscaping. Project demolition activities would begin in approximately the first quarter of 2020, and construction activities would last approximately 20 months. Construction activities would occur in one phase, with the occupancy of Building C expected in the first quarter of 2021 and the occupancy of Building D occurring in the fourth quarter of 2021. Construction activities could take place Monday to Friday from 7:00 a.m. to 6:00 p.m. and Saturday from 8:00 a.m. to 5:00 p.m.

2.4 Discretionary Actions

This IS/MND is intended to serve as the primary environmental document pursuant to CEQA for actions associated with the Hotel Indigo, including discretionary approvals required to implement the Project. In addition, this IS/MND is the primary reference document for the formulation and implementation of the Mitigation Monitoring and Reporting Program for the Project, in accordance with Section 15097 of the State CEQA Guidelines. The City of Arcadia may approve the IS/MND if it finds, on the basis of the whole Project record, that there is no substantial evidence that the Project would have a significant effect on the environment. Discretionary actions subject to City's review and approval include, but are not limited to:

1. Adoption of the IS/MND
2. Approval of a Height Variance within the Downtown Overlay Zone.
3. Approval of a CUP for the construction of a hotel in a Commercial Zone.
4. Approval of a Protected Tree Permit (If any protected trees are proposed for removal or have their protection zone encroached into).
5. Site Plan and Design Review
6. Architectural Design Review

3 Environmental Impact Analysis

3.1 Aesthetics

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
Except as provided in Public Resources Code Section 21099, would the project:				
a) Have a substantial adverse effect on a scenic vista?	☐	☐	☒	☐
b) Substantially damage scenic resources including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☐	☒
c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	☐	☐	☒	☐
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	☒	☐

a) Would the project have a substantial adverse effect on a scenic vista?

Less Than Significant Impact. Scenic vistas generally refer to views of expansive open space areas or other natural features, such as mountains, undeveloped hillsides, large natural water bodies, or coastlines. Less commonly, certain urban settings or features, such as a striking or renowned skyline, may also represent a scenic vista. Scenic vistas generally refer to views that are accessible from public vantage points, such as public roadways and parks. According to the City's General Plan EIR, there are no officially designated scenic vistas in the City. However, views of the San Gabriel Mountains to the north are readily available and provide an aesthetic backdrop for the City (City of Arcadia 2010a). Views of the San Gabriel Mountains are generally limited to the City's north–south roadway corridors, which are often obscured by distance, street trees, freeway/light rail overpasses, and other urban features, such as utility lines, buildings, and signage. Potential effects of the proposed Project on public views of the San Gabriel Mountains are characterized below.

- Colorado Place: Colorado Place is a generally east-west running arterial that borders the southern perimeter of the Project site. Views of the San Gabriel Mountains to the north from Colorado Place adjacent to the Project site are limited and generally obstructed by existing building massing and streetscaping, including trees and utility poles. Building C would require interior renovations only and would not alter the existing public views of the mountains. The proposed Project includes the construction of a new, 61,538 sf hotel annex building (Building D). With approval of a height variance, Building D would be 63'10" in height above average grade, which would be approximately one story

taller than surrounding multistory buildings, including Building C, which is approximately 44' 8" in height above average grade at its tallest point. Given this, existing views of the San Gabriel Mountains to the north would be further obstructed by the proposed Building D.

- San Juan Drive: San Juan Drive is a small, local connector street that runs in a southwest-northeast direction and connects Colorado Place to Santa Cruz Road. Existing views of the San Gabriel Mountains from the San Juan Drive right-of-way (ROW) are partially obscured by single-story residential development and streetscaping, including trees and utility poles. The proposed Project would not include any construction in the San Juan Drive ROW and upon operation, would not result in any changes to the existing views of the San Gabriel Mountains from San Juan Drive.
- San Rafael Road: San Rafael Road is a small, local connector street that runs in a north-south direction and connects Huntington Drive to San Antonio Road and San Luis Rey Road. Existing views of the San Gabriel Mountains from the San Rafael Road ROW are predominantly clear with only partial obstructions from existing single-story residential development and streetscaping, including trees and utility poles to the north. The proposed Project would not include any construction in the San Rafael Road ROW and upon operation, would not result in any changes to the existing views of the San Gabriel Mountains.
- Arcadia Community Regional Park: The Arcadia Community Regional Park is a large public park that is maintained by the Los Angeles County Department of Parks and Recreation. The park is located southeast of the proposed Project site, across Huntington Drive. Existing views of the San Gabriel Mountains from the Arcadia Community Regional Park are predominantly clear with only partial obstructions from the existing two- and three-story buildings on the Project site. In general, the visual quality of views of the San Gabriel Mountains from the Arcadia Community Regional Park is moderate due to the presence of interceding streetscaping, including trees and utility poles to the north. The proposed Project includes the construction of a new, 61,538 sf hotel annex building (Building D). With approval of a height variance, Building D would be 63'10"in height above average grade, which would be approximately one story taller than surrounding multistory buildings, including Building C, which is approximately 44' 8" in height above average grade at its tallest point. Given this, existing views of the San Gabriel Mountains to the north would be further obstructed by the proposed Project.

In summary, views of the San Gabriel Mountains are available from one or more public viewpoints, including roadways and the Arcadia Community Regional Park, surrounding the Project site. However, these existing views are limited due to obstructions typical of urban development, such as utility poles, street trees, and commercial and residential development. The proposed Project would introduce new development to the Project site, which would reach a height of 63'10" above average grade. The new Building D would have the potential to further obstruct existing views of the San Gabriel Mountains beyond the existing conditions from motorists and pedestrians along Colorado Place.

However, motorists and pedestrians are transient, and their views of the mountains are fleeting and would only briefly be affected by Building D as they pass the site. Colorado Place is not a north-south corridor in the vicinity of the Project site; therefore, longer-term views of the mountains for pedestrians and motorists would not be affected. Additionally, views of the mountains from recreational visitors to the Arcadia Community Regional Park would not be affected by the proposed Project because existing views are already limited by existing development. Partial obstructions of these views of the San Gabriel Mountains are prevalent throughout the City and the region and are part of the existing condition of the visual environment. As such, the introduction of a new structure on the Project site would not have a substantial adverse effect on a scenic vista of the San Gabriel Mountains. Additionally, as stated in Section 2.2.2, the proposed Project is within a TPA and, as such, the proposed Project's impacts on aesthetic and parking impacts would not

be considered significant impacts pursuant to PRC Section 21099(d). The proposed Project would have a less than significant impact on scenic vistas. No mitigation is required.

b) Would the project substantially damage scenic resources including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

No Impact. The proposed Project is not within the immediate vicinity of a state designated scenic highway). The California Department of Transportation (Caltrans) classifies the I-210 as an Eligible State Scenic Highway (not officially designated) where it traverses the City (Caltrans 2011). However, the Project site is located 0.5-mile south of the I-210 and would not be visible from the highway. Additionally, as stated in Section 2.2.2, the proposed Project is within a TPA and, as such, the proposed Project's impacts on aesthetic and parking impacts would not be considered significant impacts pursuant to PRC Section 21099(d). As such, the proposed Project would have no impact on any scenic resources within a state scenic highway. No mitigation is required.

c) In non-urbanized areas, would the project substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?

Less Than Significant Impact. The City has undertaken an update to the Design Guidelines for various development types, which was made available for public review and comment in June 2019. The Draft Commercial/Mixed Use Design Guidelines provide direction to project applicants about site planning and building placement; public and private open spaces; pedestrian and vehicular access; and massing and scale. Other topics addressed include guidelines related to architectural style, awnings, rooflines, articulation, windows/doors, colors/materials, landscaping, equipment and service areas, site furnishing, lighting, and public art. The guidelines are intended as a reference point for a common understanding of the minimum qualitative design expectations within the City.

The General Plan policies specific to the aesthetic character and quality of development within the City, as well as the applicable City Municipal Code requirements that affect aesthetic character are listed and analyzed in Table 3, General Plan, Development Code, and Municipal Code Consistency Analysis.

Table 3. General Plan, Development Code, and Municipal Code Consistency Analysis

Applicable Policy/Regulation	Consistency Analysis
General Plan	
Policy LU-1.1: Promote new infill and redevelopment projects that are consistent with the City's land use and compatible with surrounding existing uses.	Consistent. The proposed Project would be an infill development project. The proposed Project would be consistent with the designated C-G zone with City approval of a CUP (to allow for hotel uses is a commercial zone) and approval of a height variance (to allow for the construction of the hotel annex building, which would exceed the 40-foot height requirement for the C-G zone). The proposed Project would be under the allowable FAR (of 1.0) for the Downtown Overlay C-G zone and would adhere to the minimum setbacks required under Section 9102.03.030. As such, the proposed Project would be consistent with the City's land use and compatible with surrounding existing uses.

Table 3. General Plan, Development Code, and Municipal Code Consistency Analysis

Applicable Policy/Regulation	Consistency Analysis
Policy LU-1.2: Promote new uses of land that provide diverse economic, social, and cultural opportunities, and that reinforce the characteristics that make Arcadia a desirable place to live.	**Consistent.** The proposed Project is a hotel development project, which, upon completion would provide hospitality amenities to the general public, including hotel, restaurant, and venue amenities. The proposed Project would contribute to the economic diversity of the City by providing a commercial amenity that can support visitors to the downtown areas of Arcadia, as well as surrounding communities. The Project would be required to comply with the City's Commercial/Mixed Use Design Guidelines to ensure the structures compliment the City's design aesthetics and community character.
Policy LU-1.4. Encourage the gradual redevelopment of incompatible, ineffective, and/or undesirable land uses.	**Consistent.** The proposed Project would redevelop an existing structure that has been underutilized and/or vacant for years, thereby eliminating an ineffective land use in the downtown area.
Policy LU-2.1: Ensure that trees planned in the public right-of-way continue to be well maintained where they exist, are planted in areas where they are currently lacking, and encourage replacement of undesirable tree species in public right-of-ways.	**Consistent.** The proposed Project would include approximately 12,212 sf of new landscaping, which would include trees throughout the Project site. The Project would adhere to the requirements of Chapter 7, Tree Preservation of the City's Municipal Code, which recognizes oaks, sycamores, and mature trees as significant aesthetic and ecological resources that benefit current and future residents of the City. The proposed Project would require the removal of 34 ornamental trees, but would protect the four City trees located in the sidewalk between the Project site and San Rafael Road in place during construction. The proposed Landscape Plan, illustrated in Figure 6, would be subject to City review and approval.
Policy LU-2.2. Emphasize the use of public spaces and design that are oriented toward the pedestrian and use of transit throughout the community.	**Consistent.** Huntington Drive is identified in the General Plan as a major corridor with large mature trees, and a secondary gateway opportunity is identified near the Project site. The proposed Project has frontage on Huntington Drive, which encourage pedestrian connectivity to the Gold Line Station, which is within 0.5-mile of the Project site.
Policy LU-2.6: Ensure the aesthetic quality and pedestrian orientation of the City's commercial corridors by implementing the recommendations of this Community Design section, as well as the Architectural Design Guidelines for commercial and industrial properties.	**Consistent.** The proposed Project would be required to comply with the City's Commercial/Mixed Use Design Guidelines. Project plans would be subject to the City's site plan and design review.
Policy LU-6.1: Encourage all new commercial development, through the use of entitlement incentives and/or requirements, to provide public gathering spaces and pedestrian facilities and connections.	**Consistent.** The proposed Project is a hotel development project, which, upon completion would provide hospitality amenities to the general public, including hotel, restaurant, and venue amenities. The proposed Project has frontage on Huntington Drive, which encourage pedestrian connectivity to the Gold Line Station, which is within 0.5-mile of the Project site. Additionally, the proposed Project includes a Landscaping Plan (see Figure 6) that includes paved, well lit, and landscaped on-site pedestrian amenities that front onto Huntington Drive.
Policy LU-6.4: Encourage design approaches that create a cohesive, vibrant look and that minimize the appearance of expansive parking lots on major commercial corridors for new or redeveloped uses.	**Consistent.** The proposed Project would redevelop the existing expansive surface parking lot with a new hotel annex building, landscaping, and upgraded parking (including parking for fuel-efficient vehicles). The proposed parking would remain to the rear of the property and would not front the primary pedestrian corridor of Huntington Drive. As such, views of the proposed parking would be minimized.

Table 3. General Plan, Development Code, and Municipal Code Consistency Analysis

Applicable Policy/Regulation	Consistency Analysis
Policy LU-6.6: Develop landscaping that is compatible with the City's water efficient landscape ordinance and façade standards for commercial properties, and require all new development to adhere to them. Encourage the improvement of rundown buildings by offering entitlement incentives.	**Consistent.** The proposed Project would include approximately 12,212 sf of new landscaping, which would include trees throughout the Project site. The Project would adhere to the requirements of Chapter 7, Tree Preservation of the City's Municipal Code, which recognizes oaks, sycamores, and mature trees as significant aesthetic and ecological resources that benefit current and future residents of the City. The proposed Project would require the removal of 34 ornamental trees, but would protect the four City trees located in the sidewalk between the Project site and San Rafael Road in place during construction. Additionally, the proposed Landscape Plan, illustrated in Figure 6, would be subject to City review and approval. The proposed Project would re-design the interior of an existing underutilized building, thereby resulting in improvements to the current condition.
Policy LU-6.11: Provide mature street trees, continuous landscaping (that includes drought-tolerant plants), and pedestrian amenities along corridors and within districts to create a more visually pleasing and cohesive streetscape.	**Consistent.** The proposed Project does not require the removal of any street trees. New trees and landscaping would be planted in accordance with the City's Water Efficient Landscaping Ordinance.
Policy LU-6.12: Create pedestrian connections along corridors and districts that link surrounding neighborhoods and provide a more pedestrian-friendly atmosphere.	**Consistent.** The proposed Project would redevelop the existing expansive surface parking lot with a new hotel annex building, landscaping, and upgraded parking. The proposed parking would remain to the rear of the property and would not front the primary pedestrian corridor of Huntington Drive. The proposed Project has frontage on Huntington Drive, which encourage pedestrian connectivity to the Gold Line Station, which is within 0.5-mile of the Project site.
Municipal Code	
Section 9701, Tree Preservation	**Consistent.** The Project would adhere to the requirements of Chapter 7, Tree Preservation of the City's Municipal Code, which recognizes oaks, sycamores, and mature trees as significant aesthetic and ecological resources that benefit current and future residents of the City. The proposed Project would require the removal of 34 ornamental trees, but would protect the four City trees located in the sidewalk between the Project site and San Rafael Road in place during construction. Additionally, the proposed Landscape Plan, illustrated in Figure 6, would be subject to City review and approval.
Development Code	
Section 9102.03.020, Land Use Regulations and Allowable Uses	**Consistent.** The proposed Project would be consistent with the designated C-G zone with City approval of a CUP (to allow for hotel uses is a commercial zone) and approval of a height variance (to allow for the construction of the hotel annex building, which would exceed the 40-foot height requirement for the C-G zone). The proposed Project would be under the allowable FAR (of 1.0) for the Downtown Overlay C-G zone and would adhere to the minimum setbacks required under Section 9102.03.030.

Table 3. General Plan, Development Code, and Municipal Code Consistency Analysis

Applicable Policy/Regulation	Consistency Analysis
Section 9103.01.120, Exterior Lighting	**Consistent.** The proposed Project would be required to comply with the City's exterior lighting standards to balance safety and security needs for lighting that also avoids light trespass (spill light), light pollution, and glare onto surrounding properties.
Section 9103.11.070, Permanent Signs by Zone – Locations and Allowed Sign Area.	**Consistent.** The proposed Project would be required to comply with City's regulations for signage within the C-G zone. The Project would be also required to comply with the City's Commercial/Mixed Use Design Guidelines to ensure the structures compliment the City's design aesthetics and community character.
Section 9103.09.040 (C), Landscape Requirements for Commercial, Mixed Use, and Industrial Zones	**Consistent.** The proposed Project would include approximately 12,212 sf of new landscaping, which would include shrubs, groundcover, trees, and turf throughout setbacks, parkways, open areas, plazas, paseos, and non-work areas that are visible from a public street/alley or from a parking lot available to the general public. The proposed Landscape Plan, illustrated in Figure 6, would be subject to City review and approval.
Section 9107.19, Site Plan and Design Review	**Consistent.** The Project would be also required to comply with the City's Commercial/Mixed Use Design Guidelines to ensure the structures compliment the City's design aesthetics and community character. Project plans would be subject to the City's site plan and design review.

As described above in Table 3, the proposed Project would be consistent with the City's General Plan policies, Development Code, and Municipal Code Sections that pertain to the preservation of the aesthetic character of the City. With approval of a CUP and a Height Variance, the proposed Project would be in visual agreement with the land uses of the surrounding area and consistent with the City's land use and zoning designations. Furthermore, proposed Project design would add architectural and landscape features that would improve the visual quality of the Project site and the Project area as a whole compared to existing conditions. Additionally, as stated in Section 2.2.2, the proposed Project is within a TPA and, as such, the proposed Project's impacts on aesthetic and parking impacts would not be considered significant impacts pursuant to PRC Section 21099(d). For these reasons, the proposed Project would not conflict with applicable zoning and/or other regulations governing scenic quality, and impacts would be less than significant. No mitigation is required.

d) Would the project create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

Less Than Significant Impact. Lighting is of most concern when it may spill over or trespass from a Project site onto sensitive surrounding land uses, such as residential properties, resulting in a potential nuisance. The proposed Project is located within the Downtown Overlay Zone and is surrounded by low density residential to the north; commercial land uses to the east, recreational, commercial, and hotel land uses to the south, and horse racing land uses to the south and west. Existing sources of daytime and nighttime light include streetlights, business identification signs and lit windows. Any lighting that would be implemented as part of the proposed Project would adhere to the City's Development Code, Section 9103.01.120, which establishes the standards for exterior lighting in the City.[1] In summary, the standards

[1] City of Arcadia Development Code. Article IX: Division and Use of Land, Chapter 1, Section 9103.01.120 - Exterior Lighting.

require: lighting be shielded or recessed so that glare is contained within the property boundaries; lighting be directed downward away from adjoining properties; lighting cannot illuminate more than 1.0 foot-candle on any property within a residential zone; lighting must be appropriate in scale, intensity, and height; lighting cannot be blinking/flashing or have high-intensity brightness; and fixtures must be full-cutoff fixtures to avoid glare and up-light.

Similarly, extraneous glare associated with the use of highly reflective building materials (glass, steel etc.) could result in nuisance to surrounding land uses. The proposed Project would include some reflective building materials such as glass and steel; however, these materials would be utilized in a manner consistent with Development Code, Section 9103.10.070, which requires that any proposed land use or activity producing glare be shielded so that glare is not perceptible beyond the property line.[2] Additionally, as stated in Section 2.2.2, the proposed Project is within a TPA and, as such, the proposed Project's impacts on aesthetic and parking impacts would not be considered significant impacts pursuant to PRC Section 21099(d). As such, and with compliance with City regulations, the proposed Project would have a less than significant impact regarding the creation of a new source of substantial light or glare, which would adversely affect day or nighttime views in the area. No mitigation is required.

3.2 Agriculture and Forestry Resources

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. **Would the project:**				
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	☒
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	☐	☐	☐	☒

[2] City of Arcadia Development Code. Article IX: Division and Use of Land, Chapter 1, Section 9103.13.070 - Light and Glare.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
d) Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	☐	☐	☐	☒

a) Would the project convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?

No Impact. The California Department of Conservation's (DOC), Division of Land Resource Protection (DLRP) works with landowners, local governments, and researchers to conserve California's farmlands and open spaces (DOC 2018). The Agricultural Land Mitigation Program, California Farmland Conservancy Program, Williamson Act Contracts, and Farmland Mapping and Monitoring Program are all farmland conservations programs currently in effect and administered by the DLRP (DOC DLRP 2018). The City of Arcadia does not contain any Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program. As such, there are no designated farmlands in or near the Project site (DOC DLRP 2016). Also, there are no existing or ongoing agricultural activities on or near the Project site. The City is fully developed with urban land uses and there are no existing forestlands, or timberland production zones within the City (City of Arcadia 2010a). As such, the Project would not result in the conversion of any farmland to non-agricultural use.

b) Would the project conflict with existing zoning for agricultural use, or a Williamson Act contract?

No Impact. The Project site is located in an urban area on a site that is fully developed with buildings and asphalt paving. The Project site is designated Commercial (C) and zoned General Commercial (C-G) with a Downtown Overlay. The C-G Zone is intended to provide areas for the development of retail and service uses, offices, restaurants, public uses, and similar and compatible uses (City of Arcadia 2016a). There are no agricultural land use zones or lands under Williamson Act contracts on or near the Project site under existing conditions (DOC DLRP 2017). Given this, the proposed Project would not conflict with existing zoning for agricultural use or with a Williamson Act contract.

c) Would the project conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?

No Impact. As discussed in Section 3.2(b) above, the C-G Zone applicable to the Project site provides for the development of retail and service uses, offices, restaurants, public uses, and similar and compatible uses (City of Arcadia 2016a). The Project site is located approximately 2.6 miles south of the Angeles National Forest and, as such, would not conflict with existing zoning for, or cause rezoning of, forest land, timberland, or timberland zoned Timberland Production.

d) Would the project result in the loss of forest land or conversion of forest land to non-forest use?

No Impact. As stated above in Section 3.2(b), the Project site is an urban developed land and there is no forest land in the immediate vicinity of the Project site. The Project site is located approximately 2.6 miles south of the Angeles National Forest and, as such, would not result in the loss of forest land or the conversion of forest land to non-forest use.

e) Would the project involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?

No Impact. As stated above in Section 3.2(c) and (d), the Project site is located in an urban area, and is surrounded by developed land uses and there is no farmland or forest land on or near the Project site. The proposed Project would include the conversion of an existing building into a hotel and the construction of a hotel annex building, neither of which entail land uses that involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use.

3.3 Air Quality

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
Where available, the significance criteria established by the applicable air quality management district 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?	☐	☐	☒	☐
b) 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?	☐	☐	☒	☐
c) Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☒	☐
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	☐	☐	☒	☐

a) Would the project conflict with or obstruct implementation of the applicable air quality plan?

Less Than Significant Impact. The proposed Project site is located in the City of Arcadia within the South Coast Air Basin (SCAB), which includes the non-desert portions of Los Angeles, Riverside, and San Bernardino Counties, and all of Orange County, and is within the jurisdictional boundaries of the South Coast Air Quality Management District (SCAQMD). The SCAQMD administers the SCAB's Air Quality Management Plan (AQMP), which is a comprehensive document outlining an air pollution control program for attaining the California Ambient Air Quality Standards (CAAQS) and National Ambient Air Quality

Standards (NAAQS). The most recently adopted AQMP for the SCAB is the 2016 AQMP (SCAQMD 2017). The 2016 AQMP focuses on available, proven, and cost-effective alternatives to traditional air quality strategies while seeking to achieve multiple goals in partnership with other entities seeking to promote reductions in greenhouse gases (GHGs) and toxic risk, as well as efficiencies in energy use, transportation, and goods movement (SCAQMD 2017).

The purpose of a consistency finding with regard to the AQMP is to determine if a project is consistent with the assumptions and objectives of the regional air quality plans, and if it would interfere with the region's ability to comply with federal and state air quality standards. The SCAQMD has established criteria for determining consistency with the currently applicable AQMP in Chapter 12, Sections 12.2 and 12.3 of the SCAQMD CEQA Air Quality Handbook. These criteria are as follows (SCAQMD 1993):

Consistency Criterion No. 1: Whether the project would result in an increase in the frequency or severity of existing air quality violations, cause or contribute to new violations, or delay timely attainment of the ambient air quality standards or interim emission reductions in the AQMP.

Consistency Criterion No. 2: Whether the project would exceed the assumptions in the AQMP or increments based on the year of project buildout and phase.

To address the first criterion, Project-generated criteria air pollutant emissions have been estimated and analyzed for significance and are addressed under Section 3.3(b) below. Detailed results of this analysis are included in Appendix A, Air Quality and Greenhouse Gas Calculations, of this IS/MND. As presented in Section 3.3(b), construction and operation of the proposed Project would not generate criteria air pollutant emissions that exceed the SCAQMD's thresholds, and the Project would therefore be consistent with Criterion No. 1.

The second criterion regarding the potential of the proposed Project to exceed the assumptions in the AQMP or increments based on the year of Project buildout and phase is primarily assessed by determining consistency between the proposed Project's land use designations and its potential to generate population growth. In general, projects are considered consistent with, and not in conflict with or obstructing implementation of, the AQMP if the growth they produce in socioeconomic factors is consistent with the underlying regional plans used to develop the AQMP (SCAQMD 1993). The SCAQMD primarily uses demographic growth forecasts for various socioeconomic categories (e.g., population, housing, and employment by industry) developed by the Southern California Association of Governments (SCAG) for its 2016–2040 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) (SCAG 2016). SCAQMD uses this document, which is based in large part on general plans for cities and counties in the SCAB, to develop the AQMP emissions inventory (SCAQMD 2017).[3] The SCAG RTP/SCS, and associated Regional Growth Forecast, are generally consistent with the local plans; therefore, the 2016 AQMP is generally consistent with the Arcadia General Plan.

[3] Information necessary to produce the emissions inventory for the SCAB is obtained from the SCAQMD and other governmental agencies, including the California Air Resources Board, Caltrans, and SCAG. Each of these agencies is responsible for collecting data (e.g., industry growth factors, socioeconomic projections, travel activity levels, emission factors, emission speciation profile, and emissions) and developing methodologies (e.g., model and demographic forecast improvements) required to generate a comprehensive emissions inventory. SCAG incorporates these data into its Travel Demand Model for estimating/projecting vehicle miles traveled and driving speeds. SCAG's socioeconomic and transportation activities projections in their *2016–2040 Regional Transportation Plan/Sustainable Communities Strategy* are integrated in the 2016 AQMP (SCAQMD 2017).

As discussed in Section 2.2, Existing Conditions and Setting, of this IS/MND, the proposed Project site is designated in the City's General Plan as "Commercial" and the zoning for the Project site is General Commercial (C-G) with a Downtown Overlay. The proposed Project would be compatible with the C-G Zone and Downtown Overlay Zone's FAR. The proposed Project would be subject to a height variance, submitted to the City prior to Project approval. Additionally, Project approval would be subject to a CUP, which is required in order to develop hotel land uses in the C-G Zone, and Site Plan and Design Review. The proposed uses for the Project site are consistent with the existing land use designation for the Project site, and no amendments to the General Plan would be required.

The Project site is well-located to encourage the use of public transit and active transportation modes, as it is located within 0.5-mile of Arcadia's Gold Line Station, which provides light rail service into Downtown Los Angeles and throughout Los Angeles County. The site is in close proximity to restaurants, recreational centers, public/civic, and other businesses along Huntington Drive, which facilitates pedestrian and bicycle trips along these corridors. Local public transit is provided along Huntington Drive. Additionally, the Foothill Transit bus line No. 187 is directly in front of the Project site, and the Metro bus lines Nos. 78/79/378 are located at the intersection of Huntington Drive and Santa Anita Avenue approximately 0.25-mile east of the Project site. Therefore, the proposed Project's proximity to the Gold Line Station could result in a reduction of miles traveled and associated air emissions from the visitor trips to local and regional destinations. Accordingly, the proposed Project is consistent with the SCAG RTP/SCS forecasts used in the SCAQMD AQMP development.

In summary, based on the considerations presented for the two criteria, impacts relating to the proposed Project's potential to conflict with or obstruct implementation of the applicable AQMP would be less than significant. No mitigation is required.

b) Would the project 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?

Less Than Significant Impact. Air pollution is largely a cumulative impact. The nonattainment status of regional pollutants is a result of past and present development, and the SCAQMD develops and implements plans for future attainment of ambient air quality standards. Based on these considerations, project-level thresholds of significance for criteria pollutants are used in the determination of whether a project's individual emissions would have a cumulatively considerable contribution on air quality. If a project's emissions would exceed the SCAQMD significance thresholds, it would be considered to have a cumulatively considerable contribution. Conversely, projects that do not exceed the project-specific thresholds are generally not considered to be cumulatively significant (SCAQMD 2003).

A quantitative analysis was conducted to determine whether proposed construction activities would result in a cumulatively considerable net increase in emissions of criteria air pollutants for which the SCAB is designated as nonattainment under the NAAQS or CAAQS. Criteria air pollutants include ozone (O_3), nitrogen dioxide (NO_2), carbon monoxide (CO), sulfur dioxide (SO_2), particulate matter with an aerodynamic diameter less than or equal to 10 microns (PM_{10}), particulate matter with an aerodynamic diameter less than or equal to 2.5 microns ($PM_{2.5}$), and lead. Pollutants that are evaluated herein include volatile organic compounds (VOCs) and oxides of nitrogen (NO_x), which are important because they are precursors to O_3, as well as CO, sulfur oxides (SO_x), PM_{10}, and $PM_{2.5}$.

Regarding NAAQS and CAAQS attainment status,[4] the SCAB is designated as a nonattainment area for national and California O_3 and $PM_{2.5}$ standards (CARB 2018; EPA 2018). The SCAB is designated as a nonattainment area for California PM_{10} standards; however, it is designated as an attainment area for national PM_{10} standards. The SCAB nonattainment status of O_3, PM_{10}, and $PM_{2.5}$ standards is the result of cumulative emissions from various sources of air pollutants and their precursors within the SCAB, including motor vehicles, off-road equipment, and commercial and industrial facilities. The SCAB is designated as an attainment area for national and California NO_2, CO, and SO_2 standards. Although the SCAB has been designated as partial nonattainment (Los Angeles County) for the federal rolling 3-month average lead standard, it is designated attainment for the state lead standard.[5]

The proposed Project would result in emissions of criteria air pollutants for which the California Air Resources Board (CARB) and U.S. Environmental Protection Agency (EPA) have adopted ambient air quality standards (i.e., the NAAQS and CAAQS). Projects that emit these pollutants have the potential to cause, or contribute to, violations of these standards. The SCAQMD CEQA Air Quality Significance Thresholds, as revised in March 2015, set forth quantitative emission significance thresholds for criteria air pollutants, which, if exceeded, would indicate the potential for a project to contribute to violations of the NAAQS or CAAQS. Table 4 lists the SCAQMD Air Quality Significance Thresholds (SCAQMD 2015).

Table 4. SCAQMD Air Quality Significance Thresholds

Criteria Pollutants Mass Daily Thresholds		
Pollutant	***Construction (Pounds per Day)***	***Operations (Pounds per Day)***
VOC	75	55
NO_x	100	55
CO	550	550
SO_x	150	150
PM_{10}	150	150
$PM_{2.5}$	55	55
Lead[a]	3	3
Toxic Air Contaminants (TACs) and Odor Thresholds		
TACs[b] (including carcinogens and noncarcinogens)	Maximum incremental cancer risk ≥ 10 in 1 million Cancer Burden > 0.5 excess cancer cases (in areas ≥ 1 in 1 million) Chronic and Acute Hazard index ≥ 1.0 (project increment)	
Odor	Project creates an odor nuisance pursuant to SCAQMD Rule 402	

Source: SCAQMD 2015.

Notes: SCAQMD = South Coast Air Quality Management District; VOC = volatile organic compound; NO_x = oxides of nitrogen; CO = carbon monoxide; SO_x = sulfur oxides; PM_{10} = coarse particulate matter; $PM_{2.5}$ = fine particulate matter; TAC = toxic air contaminant; NO_2 = nitrogen dioxide; ppm = parts per million; $\mu g/m^3$ = micrograms per cubic meter

a The phase-out of leaded gasoline started in 1976. Since gasoline no longer contains lead, the proposed Project is not anticipated to result in impacts related to lead; therefore, it is not discussed in this analysis.

b TACs include carcinogens and non-carcinogens.

4 An area is designated as in attainment when it is in compliance with the NAAQS and/or the CAAQS. The NAAQS and CAAQS are set by the Environmental Protection Agency (EPA) and California Air Resources Board (CARB), respectively, for the maximum level of a given air pollutant that can exist in the outdoor air without unacceptable effects on human health or the public welfare. Attainment = meets the standards; attainment/maintenance = achieve the standards after a nonattainment designation; nonattainment = does not meet the standards.

5 Re-designation of the lead NAAQS designation to attainment for the Los Angeles County portion of the SCAB is expected based on current monitoring data. The phase out of leaded gasoline started in 1976. Since gasoline no longer contains lead, the project is not anticipated to result in impacts related to lead; therefore, it is not discussed in this analysis.

A project would result in a substantial contribution to an existing air quality violation of the NAAQS or CAAQS for O_3, which is a nonattainment pollutant, if the project's construction or operational emissions would exceed the SCAQMD VOC or NO_x thresholds shown in Table 4. These emission-based thresholds for O_3 precursors are intended to serve as a surrogate for an "ozone significance threshold" (i.e., the potential for adverse O_3 impacts to occur) because O_3 itself is not emitted directly, and the effects of an individual project's emissions of O_3 precursors (VOCs and NO_x) on O_3 levels in ambient air cannot be determined through air quality models or other quantitative methods.

The following discussion quantitatively evaluates project-generated emissions and impacts that would result from implementation of the proposed Project.

Construction Emissions. Construction of the proposed Project would result in the temporary addition of pollutants to the local airshed caused by on-site sources (e.g., off-road construction equipment, soil disturbance, VOC off-gassing from architectural coatings and asphalt pavement application) and off-site sources (e.g., vendor trucks, haul trucks, and worker vehicle trips). Specifically, entrained dust results from the exposure of earth surfaces to wind from the direct disturbance and movement of soil, resulting in PM_{10} and $PM_{2.5}$ emissions. Internal combustion engines used by construction equipment, haul trucks, vendor trucks (i.e., delivery trucks), and worker vehicles would result in emissions of VOC, NO_x, CO, PM_{10}, and $PM_{2.5}$. Construction emissions can vary substantially from day to day depending on the level of activity; the specific type of operation; and, for dust, the prevailing weather conditions.

Application of architectural coatings, such as exterior paint and other finishes, and application of asphalt pavement would also produce VOC emissions. VOC off-gassing emissions result from evaporation of solvents contained in surface coatings such as in paints and primers used during construction of the facility. CalEEMod calculates the VOC evaporative emissions from application of surface coatings based on the VOC emissions factor, the building square footage, and the assumed fraction of surface area.

The proposed Project would be required to comply with SCAQMD Rule 403 (SCAQMD 2015) to control dust emissions generated during any dust-generating activities. Standard construction practices that would be employed to reduce fugitive dust emissions include watering of the active dust areas up to two times per day, depending on weather conditions.

Emissions from the construction phase of the proposed Project were estimated using the California Emissions Estimator Model (CalEEMod) version 2016.3.2. For a conservative emission estimation, construction is assumed to begin in May 1, 2020 and conclude in October of 2021. In the event actual construction proceeds longer into year 2021, this analysis provides a conservative approach resulting in slightly higher daily emissions and annual emissions. A detailed depiction of expected construction schedules—including information regarding phasing, equipment used during each phase, trucks, and worker vehicles—is provided in Appendix A of this IS/MND.

General construction equipment modeling assumptions are provided in Table 5, Construction Assumptions for Air Quality Modeling. Default values for equipment mix, horsepower, and load factor provided in CalEEMod were used for all construction equipment. It is anticipated that approximately 1,360 cubic yards of fill material would be imported and no soils would be exported during construction. For the analysis, it was generally assumed that heavy-duty construction equipment would be operating at the site 6 days per week, including Saturday.

Table 5. Construction Assumptions for Air Quality Modeling

Construction Phase	One-Way Vehicle Trips			Equipment			Schedule	
	Average Daily Trips		*Total Haul Truck Trips*					
	Workers	*Vendor Trucks*		*Types*	*Quantity*	*Usage Hours*	*Start Date*	*Finish Date*
Demolition	14	0	185	Concrete/Industrial Saw	1	8	5/1/2020	6/1/2020
				Rubber-Tired Dozers	1	8		
				Tractors/Loaders/ Backhoes	3	8		
Site Prep	8	0	0	Graders	1	8	6/2/2020	6/12/2020
				Rubber-Tired Dozers	1	7		
				Tractors/Loaders/ Backhoes	1	8		
Grading	8	0	170	Graders	1	6	6/13/2020	6/25/2020
				Rubber-Tired Dozers	1	6		
				Tractors/Loaders/ Backhoes	1	7		
Building Construction	78	30	0	Cranes	1	6	6/26/2020	8/16/2021
				Forklifts	1	6		
				Generator Sets	1	8		
				Tractors/Loaders/ Backhoes	1	6		
				Welders	3	8		
Paving	8	0	0	Cement and Mortar Mixers	1	6	8/17/2021	9/8/2021
				Tractors/Loaders/ Backhoes	1	8		
				Pavers	1	6		
				Paving Equipment	1	8		
				Rollers	1	7		
Architectural Coating	16	0	0	Air Compressors	1	6	9/9/2021	10/1/2021

Source: Appendix A

Table 6, Estimated Maximum Daily Construction Criteria Air Pollutant Emissions – Unmitigated, shows the estimated maximum daily construction emissions associated with the construction phase of the proposed Project. As shown in Table 6, daily construction emissions would not exceed the SCAQMD significance thresholds for VOC, NO_x, CO, SO_x, PM_{10}, or $PM_{2.5}$ during Project construction. Therefore, construction impacts of the proposed Project would be less than significant, and no mitigation measure is required.

Table 6. Estimated Maximum Daily Construction Criteria Air Pollutant Emissions - Unmitigated

Year	VOC	NO_x	CO	SO_x	PM_{10}[a]	$PM_{2.5}$[a]
	(pounds per day)					
2020	2.54	22.99	17.44	0.04	3.52	2.11
2021	70.42	16.80	16.80	0.04	1.76	0.96
Maximum Daily Emissions	**70.42**	**22.99**	**17.44**	**0.04**	**3.52**	**2.11**
SCAQMD Threshold	*75*	*100*	*550*	*150*	*150*	*55*
Threshold exceeded?	**No**	**No**	**No**	**No**	**No**	**No**

Source: Appendix A; SCAQMD 2015.
Notes: VOC = volatile organic compound; NOx = oxides of nitrogen; CO = carbon monoxide; SOx = sulfur oxides; PM10 = coarse particulate matter; PM2.5 = fine particulate matter; SCAQMD = South Coast Air Quality Management District.
[a] These estimates reflect control of fugitive dust required by SCAQMD Rule 403, specifically, watering of active site areas two times per day (SCAQMD 2005).

Operational Emissions. As described in Section 2.2, under the proposed Project, the existing 60,811 sf, three-story office building (former Worley Parsons Building, referred to as Building C) would continue to remain on the Project site, but would be redeveloped from the existing office use into a hotel. The previously approved new Building 4, which proposed to be constructed as a general office building, has been redesigned and is proposed for development as a hotel annex (Building D). To develop a net change in air operation emissions, Building C has been modeled as an existing condition in CalEEMod and the resulting emissions are subtracted from the emissions estimated for the proposed Project, which includes remodeled Building C and new Building D and associated features.

Operation of the proposed Project would produce VOC, NO_x, CO, SO_x, PM_{10}, and $PM_{2.5}$ emissions associated with vehicular traffic, area sources (consumer products, architectural coatings, landscaping equipment), energy sources (natural gas, appliances, and space and water heating), and stationary sources (emergency generator). CalEEMod was used to estimate daily emissions from these operational sources including modelling the emissions of an estimated 250 kilowatt (kW) (374 horsepower (hp)) natural gas-fired emergency generator based on 1 hour per day and 50 hours per year of operation per SCAQMD Rule 1470, which limits emergency generators to 50 hours of use per year for maintenance and testing. CalEEMod default emission factors were used for the proposed generator, corresponding with the install dates.

On-road vehicular emissions associated with the proposed Project operation and existing Building C were modeled using trip generation rates for the existing office and proposed hotel, coffee shop, spa, restaurant, and bar estimated by Linscott, Law, & Greenspan, Engineers (LLG), included as Appendix F, Traffic Study, of this IS/MND. Emissions from energy sources include natural gas combustion for appliances and space and water heating. CalEEMod defaults were also used for area sources (landscape maintenance equipment, consumer products, and architectural coatings for maintenance of buildings).

Table 7, Estimated Maximum Daily Operational Criteria Air Pollutant Emissions – Unmitigated, summarizes the maximum daily area, energy, mobile, and stationary (emergency generator) emissions of criteria pollutants that would be generated by the proposed Project and how the net change in emissions (proposed Project minus existing emissions) compare to the SCAQMD thresholds of significance. As shown, the net increase in all criteria pollutants are below SCAQMD thresholds. The values shown are the maximum summer or winter daily emissions (i.e., foreseeable worst case) results from CalEEMod. Details of the emission calculations are provided in Appendix A of this IS/MND. As shown in Table 7, the increase in emissions associated with the operation of the proposed Project would not exceed the SCAQMD thresholds

for VOC, NO_x, CO, SO_x, PM_{10}, or $PM_{2.5}$. Even without consideration of the existing conditions related to operations in Building C, operational impacts from the proposed Project would still be less than significant, and no mitigation is required.

Table 7. Estimated Maximum Daily Operational Criteria Air Pollutant Emissions – Unmitigated

Emission Source	VOC	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$
	(pounds per day)					
Proposed Project						
Area	3.41	0.00	0.03	0.00	0.00	0.00
Energy	0.15	1.33	1.12	0.01	0.10	0.10
Mobile	5.50	24.51	56.43	0.19	14.98	4.12
Stationary	3.29	0.32	8.57	0.001	0.02	0.02
Total	**12.35**	**26.15**	**66.15**	**0.20**	**15.10**	**4.23**
Existing Operation (Building C)						
Area	1.36	0.00	0.01	0.00	0.00	0.00
Energy	0.02	0.17	0.14	0.00	0.01	0.01
Mobile	1.24	5.69	15.69	0.05	3.54	0.98
Total	**2.62**	**5.86**	**15.84**	**0.05**	**3.55**	**0.99**
Net Change in Emissions (Project – Existing)						
Area	2.06	0.00	0.02	0.00	0.00	0.00
Energy	0.13	1.16	0.97	0.01	0.09	0.09
Mobile	4.26	18.82	40.75	0.14	11.44	3.13
Stationary	3.29	0.32	8.57	0.00	0.02	0.02
Total Net Change (Project – Existing)	**9.73**	**20.30**	**50.31**	**0.15**	**11.55**	**3.24**
SCAQMD Threshold	*55*	*55*	*550*	*150*	*150*	*55*
Threshold Exceeded?	**No**	**No**	**No**	**No**	**No**	**No**

Source: SCAQMD 2015.
Notes: VOC = volatile organic compound; NOx = oxides of nitrogen; CO = carbon monoxide; SOx = sulfur oxides; PM10 = coarse particulate matter; PM2.5 = fine particulate matter. Area sources = consumer product use, architectural coatings, and landscape maintenance equipment. Energy sources = natural gas. Mobile sources = motor vehicles. Stationary sources = emergency generator.

The values shown are the maximum summer or winter daily emissions results from CalEEMod. Mobile source modeling for the proposed Project and existing operation includes proximity to nearby Gold Line station, and pedestrian access encouragement features and traffic calming features.

As previously discussed, the SCAB has been designated as a federal nonattainment area for O_3 and $PM_{2.5}$, and a state nonattainment area for O_3, PM_{10}, and $PM_{2.5}$. Construction and operational activities of the proposed Project would generate VOC and NOx emissions (precursors to O_3) and emissions of PM_{10} and $PM_{2.5}$. However, as indicated in Tables 6 and 7, Project-generated emissions would not exceed the SCAQMD emission-based significance thresholds for VOCs, NO_x, PM_{10}, or $PM_{2.5}$, and therefore the proposed Project would not cause a cumulatively significant impact.

Cumulative localized impacts could potentially occur if a project were to occur concurrently with another off-site project. With the exception of the projects that were approved under Seabiscuit Pacifica Specific Plan (i.e., Le Méridien Hotel and a Mixed Use project) at 130 Huntington Drive, schedules for potential future projects near the Project area are unknown; therefore, potential impacts associated with other simultaneous projects would be considered speculative.[6]

At the time of the preparation of this IS/MND, the Seabiscuit Pacifica Specific Plan and Le Méridien Hotel project sites have been graded and construction is underway. It is expected that construction will occur on these sites for approximately 18 months. Therefore, there is a potential for some construction activities to overlap with the construction of the proposed Project. However, all projects that are not exempt from CEQA would be required to conduct an air quality analysis and, where necessary, implement mitigation measures to reduce impacts. Criteria air pollutant emissions associated with construction activity of future projects would also be reduced through implementation of control measures required by the SCAQMD. Cumulative PM10 and $PM_{2.5}$ emissions would be reduced because all future projects would be subject to SCAQMD Rule 403 (Fugitive Dust), which sets forth general and specific requirements for all sites in the SCAQMD. In addition, cumulative VOC emissions would be subject to SCAQMD Rule 1113 (Architectural Coatings).

Therefore, the proposed Project would not result in a cumulatively considerable increase in emissions of nonattainment pollutants, and impacts would be less than significant during construction and operation. No mitigation is required.

c) Would the project expose sensitive receptors to substantial pollutant concentrations?

Less Than Significant Impact. Localized project impacts associated with construction criteria air pollutants emissions are assessed below and were determined to be less than significant.

Sensitive Receptors. Sensitive receptors are those individuals more susceptible to the effects of air pollution than the population at large. People most likely to be affected by air pollution include children, the elderly, and people with cardiovascular and chronic respiratory diseases. According to the SCAQMD, sensitive receptors include residences, schools, playgrounds, childcare centers, long-term healthcare facilities, rehabilitation centers, convalescent centers, and retirement homes (SCAQMD 1993). Sensitive receptors near the proposed Project site include single-family residential adjacent and to the north of the proposed Project site. At its nearest, Project construction would take place within approximately 80 feet of the adjacent single family residential dwellings north of the proposed Project site.

Localized Significance Thresholds. A localized significance threshold (LST) analysis was performed to evaluate localized air quality impacts to sensitive receptors in the immediate vicinity of the proposed Project site as a result of proposed Project activities. The impacts were analyzed using methods consistent with those in the SCAQMD's Final Localized Significance Threshold Methodology (2008). The proposed Project is located within Source-Receptor Area 9 (East San Gabriel Valley).

The greatest on-site daily emissions of NO_x, CO, PM_{10}, and $PM_{2.5}$ generated during construction occurred during the demolition period of the proposed Project construction, it was assumed that one rubber-tired dozer and three crawler tractors (CalEEMod category: tractor/loader/backhoes) would be used based on CalEEMod defaults. CalEEMod default values assume that during an 8-hour day, rubber-tired dozers and

[6] The CEQA Guidelines state that if a particular impact is too speculative for evaluation, the agency should note its conclusion and terminate discussion of the impact (14 CCR 15145).

crawler tractors can each disturb a maximum of 0.5 acres. This results in two acres disturbed per day from one rubber-tired dozer and three crawler tractors. The SCAQMD LST values for two acres within Source–Receptor Area 9 with a receptor distance of 25 meters (82 feet), which are representative of the closest sensitive receptor, were compared to emissions from the proposed Project.

Project construction activities would result in temporary sources of on-site criteria air pollutant emissions associated with construction equipment exhaust and dust-generating activities. According to the Final Localized Significance Threshold Methodology, "off-site mobile emissions from the project should not be included in the emissions compared to the LSTs" (SCAQMD 2008). Trucks and worker trips associated with the proposed Project are not expected to cause substantial air quality impacts to sensitive receptors along off-site roadways since emissions would be relatively brief in nature and would cease once the vehicles pass through the main streets. Therefore, off-site emissions from trucks and worker vehicle trips are not included in the LST analysis. The maximum daily on-site construction emissions generated during construction of the proposed Project is presented in Table 8, Construction Localized Significance Threshold Analysis, and compared to the SCAQMD localized significance criteria for Source–Receptor Area 9 to determine whether Project-generated on-site construction emissions would result in potential LST impacts. As shown in Table 8, proposed construction activities would not generate emissions in excess of site-specific LSTs; therefore, localized project construction impacts would be less than significant. No mitigation is required.

Table 8. Construction Localized Significance Threshold Analysis

Year	NO_2	CO	PM_{10}	$PM_{2.5}$
	pounds per day (On-site Emissions)			
2020	20.95	14.66	6.62	3.71
2021	13.64	12.90	0.68	0.66
Maximum Daily On-site Emissions	**20.95**	**14.66**	**6.62**	**3.71**
SCAQMD LST Criteria	*128*	*953*	*7*	*5*
Threshold Exceeded?	**No**	**No**	**No**	**No**

Source: SCAQMD 2009.
Notes: NO_2 = nitrogen dioxide; CO = carbon monoxide; PM_{10} = particulate matter; $PM_{2.5}$ = fine particulate matter; SCAQMD = South Coast Air Quality Management District; LST = localized significance threshold.
Localized significance thresholds are shown for a 2-acre site and a distance of 25 meters (82 feet) to the nearest sensitive receptor.

CO Hotspots. Traffic-congested roadways and intersections have the potential to generate localized high levels of CO. Localized areas where ambient concentrations exceed federal and/or state standards for CO are termed CO "hotspots." CO transport is extremely limited and disperses rapidly with distance from the source. Under certain extreme meteorological conditions, however, CO concentrations near a congested roadway or intersection may reach unhealthy levels, affecting sensitive receptors. Typically, high CO concentrations are associated with severely congested intersections operating at an unacceptable level of service (LOS) (LOS E or worse is unacceptable). Projects contributing to adverse traffic impacts may result in the formation of a CO hotspot. Additional analysis of CO hotspot impacts would be conducted if a project would result in a significant impact or contribute to an adverse traffic impact at a signalized intersection that would potentially subject sensitive receptors to CO hotspots.

The Code of Federal Regulations (CFR) Procedures for Determining Localized CO, PM_{10}, and $PM_{2.5}$ Concentrations (hot-spot analysis), states that "CO, PM_{10}, and $PM_{2.5}$ hot-spot analyses are not required to consider construction-related activities, which cause temporary increases in emissions. Each site which is affected by construction-related activities shall be considered separately, using established 'Guideline' methods. Temporary increases are defined as those which occur only during the construction phase and last five years or less at any individual site" (40 CFR 93.123(c)(5)). While Project construction would involve on-road vehicle trips from trucks and workers during construction, construction activities are considered temporary. As a result, the proposed construction activities would not require a Project-level construction hotspot analysis.

Projects contributing to adverse traffic impacts may result in the formation of CO hotspots. To verify that the proposed Project would not cause or contribute to a violation of the CO standard, a screening evaluation of the potential for CO hotspots was conducted. The Traffic Study for the proposed Project, which is included in this IS/MND as Appendix F, evaluated whether there would be a decrease in the level of service (LOS) (i.e., increased congestion) at the intersections affected by the proposed Project. The potential for CO hotspots was evaluated based on the results of the traffic impact study. The California Department of Transportation Institute of Transportation Studies Transportation Project-Level Carbon Monoxide Protocol (CO Protocol; Caltrans 2010) was followed for this analysis. CO hotspots are typically evaluated when (1) the LOS of an intersection decreases to LOS E or worse; (2) signalization and/or channelization is added to an intersection; and (3) sensitive receptors such as residences, schools, and hospitals are located in the vicinity of the affected intersection or roadway segment.

The proposed Project's traffic impact study evaluated 6 roadway segments under AM and PM peak hours. As determined by the traffic impact study, LOS at these roadway segments would not decrease to LOS E or worse as a result of the Project; therefore, further analysis is not required. Accordingly, the proposed Project would not generate traffic that would contribute to potential adverse traffic impacts that may result in the formation of CO hotspots. In addition, due to continued improvement in vehicular emissions at a rate faster than the rate of vehicle growth and/or congestion, the potential for CO hotspots in the SCAB is steadily decreasing. Based on these considerations, the proposed Project would result in a less than significant impact to air quality with regard to potential CO hotspots. No mitigation is required.

Toxic Air Contaminants. Toxic air contaminants (TACs) are defined as substances that may cause or contribute to an increase in deaths or in serious illness, or that may pose a present or potential hazard to human health. As discussed under the LST analysis, the nearest sensitive receptors are single family residential dwellings north of the proposed Project site.

Health effects from carcinogenic air toxics are usually described in terms of cancer risk. The SCAQMD recommends an incremental cancer risk threshold of 10 in 1 million. "Incremental cancer risk" is the net increased likelihood that a person continuously exposed to concentrations of TACs resulting from a project over a 9-, 30-, and 70-year exposure period will contract cancer based on the use of standard Office of Environmental Health Hazard Assessment risk-assessment methodology (OEHHA 2015). In addition, some TACs have non-carcinogenic effects. The SCAQMD recommends a Hazard Index of 1 or more for acute (short-term) and chronic (long-term) non-carcinogenic effects.[7] TACs that would potentially be emitted during construction activities associated with development of the proposed Project would be diesel particulate matter.

[7] Non-cancer adverse health risks are measured against a hazard index, which is defined as the ratio of the predicted incremental exposure concentrations of the various non-carcinogens from the project to published reference exposure levels that can cause adverse health effects.

Diesel particulate matter emissions would be emitted from heavy equipment operations and heavy-duty trucks. Heavy-duty construction equipment is subject to a CARB Airborne Toxics Control Measure for in-use diesel construction equipment to reduce diesel particulate emissions. As described for the LST analysis, PM_{10} (representative of diesel particulate matter) exposure would be minimal. According to the Office of Environmental Health Hazard Assessment, health risk assessments (which determine the exposure of sensitive receptors to toxic emissions) should be based on a 30-year exposure period for the maximally exposed individual resident. However, such assessments should also be limited to the period/duration of activities associated with the project. The duration of the proposed construction activities would constitute a small percentage of the total 30-year exposure period. The construction period for the proposed Project would be approximately 20 months, after which construction-related TAC emissions would cease. Due to this relatively short period of exposure and minimal particulate emissions on site, TACs generated during construction would not be expected to result in concentrations causing significant health risks.

Following completion of on-site construction activities, the proposed Project would not involve routine operational activities that would generate TAC emissions other than intermittent maintenance and testing of the natural gas-fired emergency generator, which would be limited to 50 hours per year. (SCAQMD Rule 1470 limits operation of emergency generators to 50 hours per year for maintenance and testing). Due to this relatively short period of exposure, small engine size of the emergency generator (250 kW), and minimal on-site particulate emissions from other sources, TACs generated during operation would not result in concentrations causing significant health risks as demonstrated through SCAQMD' Risk Assessment Tool for Rule 1401 and 212, (Version 8.1). The Risk Assessment Tool, a spreadsheet program, was used to perform a screening level evaluation of the cancer and non-cancer health effects of the emergency generator emissions pursuant to Rule 1401, see Appendix A for program results. As shown in Appendix A, the emergency generator passes both the Tier I Cancer/Chronic Application Screening Index (ASI) and Acute ASI and Tier II Maximum Individual Cancer Risk (MICR).

For the reasons described above, the Project would not result in substantial TAC exposure to sensitive receptors in the vicinity of the Project site, and impacts would be less than significant. No mitigation is required.

Health Effects of Criteria Air Pollutants. Construction of the proposed Project would generate criteria air pollutant emissions; however, the project would not exceed the SCAQMD mass-emission thresholds. Health effects associated with O_3 include respiratory symptoms, worsening of lung disease leading to premature death, and damage to lung tissue (CARB 2019). VOCs and NO_x are precursors to O_3, for which the SCAB is designated as nonattainment with respect to the NAAQS and CAAQS. Thus, existing O_3 levels in the SCAB are at unhealthy levels during certain periods. Because the proposed Project would not involve construction or operational activities that would result in O_3 precursor emissions (VOC or NO_x) in excess of the SCAQMD thresholds, the project is not anticipated to substantially contribute to regional O_3 concentrations and the associated health impacts.

Exposure to NO_2 and NO_x can irritate the lungs, cause bronchitis and pneumonia, lower resistance to respiratory infections, and enhance allergic responses (CARB 2019). Project construction and operation would not exceed the SCAQMD NO_x threshold, and existing ambient NO_2 concentrations are below the NAAQS and CAAQS. Thus, implementation of the proposed Project is not expected to exceed the NO_2 standards or contribute to associated health effects.

Health effects associated with CO include chest pain in patients with heart disease, headache, light-headedness, and reduced mental alertness (CARB 2019). CO tends to be a localized impact associated with congested intersections. CO hotspots were discussed previously as a less than significant impact. Thus, the proposed Project's CO emissions would not contribute to the health effects associated with this pollutant.

Particulate matter exposure has been linked to a variety of problems, including premature death in people with heart or lung disease, nonfatal heart attacks, irregular heartbeat, aggravated asthma, decreased lung function, and increased respiratory symptoms such as irritation of the airways, coughing, or difficulty breathing (EPA 2016). The SCAB is designated as nonattainment for PM_{10} under the CAAQS and nonattainment for $PM_{2.5}$ under the NAAQS and CAAQS. Implementation of the proposed Project would not generate emissions of PM_{10} or $PM_{2.5}$ that would exceed the SCAQMD's thresholds. Accordingly, the proposed Project's PM_{10} and $PM_{2.5}$ emissions are not expected to cause any increase in related regional health effects for these pollutants. Impacts would be less than significant. No mitigation is required.

In summary, the proposed Project would not result in a potentially significant contribution to regional concentrations of non-attainment pollutants and would not result in a significant contribution to the adverse health effects associated with those pollutants. Impacts would be less than significant. No mitigation is required.

d) Would the project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

Less Than Significant Impact. The occurrence and severity of potential odor impacts depend on numerous factors. The nature, frequency, and intensity of the source; wind speed and direction; and the sensitivity of receiving location each contribute to the intensity of the impact. Although offensive odors seldom cause physical harm, they can be annoying, cause distress among the public, and generate citizen complaints.

During Project construction, exhaust from equipment may produce discernible odors typical of most construction sites. Potential odors produced during construction would be attributable to concentrations of unburned hydrocarbons from tailpipes of construction equipment. However, such odors would disperse rapidly from the Project site and generally occur at magnitudes that would not affect substantial numbers of people. Accordingly, impacts associated with odors during construction would be less than significant.

SCAQMD provides a list of land uses associated with odor concerns, which include agricultural uses, wastewater treatment plants, food-processing plants, chemical plants, composting, refineries, landfills, dairies, and fiberglass molding (SCAQMD 1993). The proposed Project includes operation of hotel facilities, and restaurant spaces, which are not anticipated to generate odors and does not result in operation of the types of land uses listed in SCAQMD's screening criteria. For the reasons described above, Project operation would result in an odor impact that would be less than significant. No mitigation is required.

3.4 Biological Resources

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
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?	☐	☐	☐	☒
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☐	☒	☐
c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☐	☐	☒
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?	☐	☒	☐	☐
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☒	☐
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?	☐	☐	☐	☒

a) Would the project 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?

No Impact. The Project site is located approximately 2.6 miles south of the foothills of the San Gabriel Mountains and the Angeles National Forest. As shown on Figure 3, the Project site is almost entirely paved and the surrounding urban uses include recreational/park and commercial to the south, surface parking, horse racing track, and commercial to the west, single-family residential to the north, and commercial to the east. Vegetation on the Project site includes 38 trees; four of which are within the public right-of-way in the sidewalk between the Project site and San Raphael Road and would be protected in place (see Figure 6). The remaining 34 trees and several landscaped planter beds are dispersed throughout the existing on-

site surface parking lots and would be removed under the proposed Project. The Project site does not support any naturally vegetated areas or connectivity to any habitats for candidate, sensitive, or special status species under existing conditions. The nearest protected open space is the Santa Anita Habitat Mitigation Project site, which lies approximately 1.23 miles northeast of the Project site (LADPW 2018a). For these reasons, no special-status species are expected to occur in the Project area, and development of the proposed Project would not either directly or through habitat modifications, result in a substantial adverse effect 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, and no mitigation is required.

b) Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?

Less Than Significant Impact. There are no riparian habitat communities or other sensitive natural communities located on the Project site, which is fully developed with urban uses and ornamental landscaping. According to the U.S. Fish and Wildlife Service's National Wetlands Inventory, the Arcadia Wash runs in a north-south running subterranean channel approximately 100 feet west of the Project site (USFWS and NWI 2019). The Arcadia Wash is not classified as a riparian habitat or other sensitive natural community; however, it is considered an intermittent Riverine System, which only contains flowing water for a part of the year. According to the National Wetlands Inventory, surface water is present for brief periods (a few days to a few weeks) of the year, but the water table usually lies well below ground surface level for the rest of the year (USFWS and NWI 2019). Demolition and construction activities at the Project site have the potential to release small amounts of construction debris or sediment into the storm drain system. However, given that the Arcadia Wash is subterranean for 0.8-mile where it traverses near the Project site, any fugitive sediments would not flow into the Arcadia Wash with implementation of the construction Best Management Practices (BMPs) described in Section 3.10, Hydrology and Water Quality. Given this, the proposed Project would have a less than significant impact on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service, and no mitigation is required.

c) Would the project have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

No Impact. The State Water Resources Control Board and the Regional Water Quality Control Boards (Water Boards) define an area as a wetland if it has the following characteristics: (1) the area has continuous or recurrent saturation of the upper substrate caused by groundwater, or shallow surface water, or both; (2) the duration of such saturation is sufficient to cause anaerobic conditions in the upper substrate; and (3) the area's vegetation is dominated by hydrophytes or the area lacks vegetation (SWRCB 2019). There are no wetlands on the Project site, which is fully developed. Given this, the proposed Project would have a no impact on state and federally protected wetlands. No mitigation is required.

d) Would the project 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?

Less Than Significant with Mitigation Incorporated. As stated in Section 3.4(a), the Project site is located in a fully developed, urban area surrounded by urban land uses. The existing ornamental landscaping on the Project site does not provide substantial habitat for wildlife, nor could it serve as a native wildlife nursery site. As stated in the General Plan EIR, wildlife movement is already greatly restricted within the City due to existing urban development and is confined to the undeveloped areas of the San Gabriel Mountains and to the Santa Anita Wash (City of Arcadia 2010a). The Project site lies approximately 2.6 miles south of the San Gabriel Mountain foothills and approximately 0.8-mile east of the Santa Anita Wash. The Project site is separated from both of these undeveloped areas by dense urban development, the presence of which precludes native wildlife movement in the direction of the Project site. As such, the proposed Project would not interfere substantially with the movement of any native resident or migratory wildlife species or with established native resident or migratory wildlife corridors or impede the use of native wildlife nursery sites.

However, the existing ornamental trees on the Project site could be utilized by migratory bird species for nesting during the breeding season. Migratory birds are protected under the MBTA (USFWS 2017). Construction-related activities could disturb nesting birds protected under the MBTA. This would be considered a potentially significant impact. However, with implementation of Mitigation Measure (MM) BIO-1, potential impacts to nesting birds would be reduced to a less-than-significant level.

MM BIO-1: Commencement of construction activities shall avoid the February 1 through August 31 bird nesting season to the greatest extent feasible. If construction activities begin within this nesting season, a survey for nesting birds shall be conducted by a qualified biologist within 7 days of the commencement of construction activities, but not prior to this 7-day window. The area surveyed shall include all clearing/construction areas, as well as areas within 100 feet of the boundaries of these areas, or as otherwise determined by the biologist. If no active bird nests are identified on, or within 100 feet of the limits of the proposed disturbance area, no further action is necessary and construction activities could commence. For any off-site areas that are inaccessible, the qualified biologists may survey the off-site area with binoculars to capture the full 100-foot survey area.

If active nests are found during pre-construction surveys or at any time throughout the course of construction activities during the nesting bird season, all clearing/construction activities within a minimum of 100 feet of the nest shall be postponed until a wildlife biologist has identified the nesting species. If the bird species is not protected under the MBTA and/or the California Fish and Game Code, no further action is required and construction activities may proceed. If the avian species is protected under the MBTA and/or the California Fish and Game Code, a minimum buffer zone shall be established by the qualified biologist based on the type of bird/raptor species identified and the construction buffer shall be established on site through the erection of cones/flagging/fencing to clearly delineate the protection zone.

All construction activities shall avoid this protection zone until a qualified biologist has confirmed that the nest(s) is no longer active and the nest is vacated, and there is no evidence of second nesting attempts. Upon completion of any site survey for nesting birds conducted by a qualified biologist, documentation of the survey activity, findings, and any resulting actions taken shall be prepared and submitted to the City.

With implementation of MM BIO-1, the proposed Project would have less than significant impact with mitigation incorporated on the movement of native resident or migratory fish or wildlife species and established native resident or migratory wildlife corridors, and would not impede the use of native wildlife nursery sites.

e) Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

Less Than Significant Impact. Vegetation on the Project site includes 38 trees; four of which are within the public sidewalk between the Project site and San Rafael Road and which would be protected in place during Project construction, per Title IX, Chapter 8 of the Municipal Code, which sets forth the provisions of the City's Comprehensive Tree Management Program. The proposed Project would not impact any trees in the adjacent public ROW and would therefore not impact any trees subject to this chapter of the Municipal Code.

On-site trees along the property line with the adjacent single-family homes would not be removed or otherwise impacted by proposed Project activities. The 34 on-site trees are dispersed throughout the existing surface parking lot would be removed under the proposed Project. The Project would be subject to the City's Municipal Code, Article IX, Chapter 7, Section 9701, Tree Preservation, which recognizes oaks, sycamores, and certain mature trees as significant aesthetic and ecological resources. Per the Tree Survey Report prepared for the Project, and included as Appendix B, the four public City trees would be protected in place under the proposed Project, per Section 9701, Tree Preservation, of the City's Municipal Code. As such, with compliance with the City's Municipal Code, Section 9701, Tree Preservation, the Project would have a less than significant impact to local policies or ordinances protecting biological resources, including the City's tree preservation policy. No mitigation is required.

f) Would the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

No Impact. According to the General Plan EIR, there are no adopted, approved, or proposed Habitat Conservation Plans, or other approved local, regional, or state habitat conservation plans that cover habitats located within the City (City of Arcadia 2010a). Given this, the proposed Project would not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. No impact would occur and no mitigation is required.

3.5 Cultural Resources

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?	☐	☐	☐	☒
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	☐	☒	☐	☐
c) Disturb any human remains, including those interred outside of dedicated cemeteries?	☐	☐	☒	☐

a) Would the project cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?

No Impact. On May 7, 2019, Dudek completed a search of the California Historical Resources Information System (CHRIS) at the South Central Coastal Information Center (SCCIC), located on the campus of California State University, Fullerton of the proposed Project site and a 1.0-mile records search buffer. This search included previously documented prehistoric and historic archaeological resources and historic built-environment resources; Department of Parks and Recreation (DPR) site records; technical reports; archival resources; and ethnographic references. Additional consulted sources included historical maps of the proposed Project site, the NRHP, the CRHR, the California Historic Property Data File, the lists of California State Historical Landmarks, California Points of Historical Interest, and the Archaeological Determinations of Eligibility.

The SCCIC records indicate that 25 previous cultural resources technical investigations have been conducted within 1.0-mile of proposed Project site between 1984 and 2015. Of these, two studies overlap a portion of the proposed Project site. These two studies were both conducted to support the City's General Plan Environmental Impact Report analysis (i.e., Report No. 6859 [LA-06859] in 1996 and Report No. 12497 [LA-1244797] in 2010).

LA-06859. Arcadia General Plan (LSA Associates Inc. 1996) reports an update to Arcadia's General Plan, which was originally adopted in 1972. The General Plan included historical research and a records search. The records search identified seven historical sites and one archaeological site within the City of Arcadia. The General Plan also defined a significant cultural value in the City of Arcadia. No resources were identified to be intersecting or overlapping the current proposed Project site.

LA-1244797. Draft Program Environmental Impact Report, City of Arcadia, 2010 General Plan Update Project (BonTerra Psomas 2010) reports the results of a records search for the City of Arcadia and a 1.0-mile buffer, Native American consultation, and background research. The records search found 70 addresses listed on the Historic Property Data File and five cultural resources mapped on the SCCIC's maps,

including one historic refuse deposit and four built-environment resources. No resources from the 2010 study were identified within the current proposed Project site. The General Plan update proposed two goals. The first, Goal PR-8, is "Continued recognition and support of the diverse historic and cultural organization that celebrate and enrich the community" and the second, Goal PR-9, is the "Retention and proper stewardship of historical and cultural resources." To achieve these goals, several policies to protect cultural resources were proposed. In addition, five Implementation Actions were proposed to reduce impacts on cultural resources including:

- Implementation Action 6-11: Cultural Resource Protection
- Implementation Action 6-12: Discovery of Archaeological Resources or Human Remains
- Implementation Action 7-12: Sponsorship and Support of Cultural Events
- Implementation Action 7-13: Provision of Places for Cultural Events
- Implementation Action 7-14: Inventory of Local Historic Resources
- Implementation Action 7-15: Support Private Efforts to Promote Appreciation of Arcadia's History

Additionally, this General Plan update included three mitigation measures that should be implemented in order to avoid impacts to cultural resources. The three measures are as follows: 1.) requires architectural historians to assess any structure that is over 50 years old that may be demolished, 2.) undertaking a Phase I archaeological study for projects that are located on or near cultural resources, and 3.) conducting a paleontological study for any project that would include excavation in to Older Quaternary Alluvium.

The CHRIS records search did not identify any previously recorded historical resources within the proposed Project site. The record search identified 167 cultural resources that have been recorded within 1.0-mile of the proposed Project site; none of these resources intersect or are adjacent to the proposed Project site. The resources include 166 historic buildings and one historic refuse scatter. According to the County Assessor's portal, the existing Building C within the Project site was originally built between 1978 and 1979; as such, the existing structure would not qualify as a historical resource. Due to the fact that no historical resources are present within the proposed Project site, the proposed Project would have a less than significant impact on historical resources and no resource specific mitigation is proposed.

b) Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?

Less Than Significant With Mitigation Incorporated. The CHRIS records search did not identify any previously recorded archaeological resources within the proposed Project site. The record search identified one resource (a historic refuse scatter) within the 1.0-mile buffer, or study area, of the proposed Project site. Historic aerials indicate that the proposed Project site was first developed in the 1950s and then was redeveloped with the existing structure between 1978 and 1979. Site development activities, including trenching for utilities and excavations for footings and basements, could have significantly impacted surficial deposits within the proposed Project site, and in some areas, subsurface deposits may have also been adversely affected. For example, beneath Building C, which contains a small basement, buried cultural deposits may have been more severely impacted. However, there still may be intact deposits that are covered ("mantelled") by the existing site paving and buildings.

Sacred Lands File Search

As part of the records review process, Dudek also requested that the Native American Heritage Commission (NAHC) conduct a search of its Sacred Lands File (SLF) to determine if cultural resources important to Native Americans have been recorded in the project area. In addition, Dudek requested a list of Native American individuals and/or tribal organizations who may have knowledge of cultural resources in or near the proposed Project site. The NAHC emailed a response to this letter on April 5, 2019, stating that the result of the SLF search was positive. Because the SLF search does not include an exhaustive list of Native American cultural resources, the NAHC recommended contacting six (6) tribal representatives who may have direct knowledge of cultural resources in or near the proposed Project. These included the Gabrieleno Band of Mission Indians – Kizh Nation, the Gabrieleno/Tongva San Gabriel Band of Mission Indians, the Gabrieleno/Tongva Nation, the Gabrieleno Tongva Indians of California Tribal Council, the Gabrieleno-Tongva Tribe, and the San Fernando Band of Mission Indians. No additional tribal outreach was conducted by Dudek; however, in compliance with Assembly Bill (AB) 52, the City has contacted all NAHC-listed traditionally geographically affiliated tribal representatives that have requested Project notification, which is addressed in Section 3.18, Tribal Cultural Resources.

No newly or previously recorded archaeological resources were identified within the proposed Project site as a result of the cultural resources study. Although no archaeological resources were identified within the proposed Project site, there is the potential to encounter unanticipated cultural resources during the course of construction. Within areas of the Project site proposed for new development, specifically the construction of Building D and associated swimming pool, the chance of discovering archaeological deposits is greater than in areas with no soil disturbance (Building C) or superficial redesign of the surface parking lot. As such, **MM CUL-1** is required to ensure that potential impacts would be reduced if archaeological resources were discovered on site. Implementation of MM CUL-1 would ensure that potential impacts to archaeological resources due to Project implementation would be less than significant.

MM-CUL-1. In the event that archaeological resources are unearthed during ground-disturbing activities, the construction contractor shall immediately cease all earth-disturbing activities within 100 feet of the discovery and shall retain a qualified archaeologist that meets the Secretary of the Interior's Professional Qualification Standards. Construction activities may continue in other areas outside of the designated protection zone, which shall be delineated with cones, flagging, or fencing. The archaeologist shall evaluate the significance of the find and determine whether the resource uncovered is a "Tribal Cultural Resources" pursuant to Section 21074 of the California Public Resources Code, or a "unique archaeological resource" pursuant to Section 21083.2(g) of the California Public Resources Code or a "historical resource" pursuant to Section 15064.5(a) of the State CEQA Guidelines.

If an unanticipated archaeological discovery is determined to be a resource, the archaeologist shall formulate a Mitigation Plan in consultation with the City of Arcadia that satisfies the requirements of the above-listed Code Sections. Upon approval of the Mitigation Plan by the City, the Project shall be implemented in compliance with the Plan. If the Archaeologist determines that the resource is not significant, s/he shall record the evaluation and submit the recordation form to the CHRIS at the SCCIC. The archaeologist shall prepare a report of the results of any study prepared as part of a testing or Mitigation Plan, following accepted professional practice. Copies of the report shall be submitted to the City and to the CHRIS at the SCCIC.

c) Would the project disturb any human remains, including those interred outside of dedicated cemeteries?

Less Than Significant Impact. There is no indication that human remains are present within the proposed Project site. However, in the unlikely event that excavation activities inadvertently discover buried human remains, recovery activities must be conducted in accordance with Section 7050.5 of the California Health and Safety Code regarding the potential discovery of human remains. In accordance with Section 7050.5 of the California Health and Safety Code, if human remains are found, the Los Angeles County Coroner must be notified within 24 hours of the discovery. No further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains may occur until the County Coroner has determined, within two working days of notification of the discovery, the appropriate treatment and disposition of the human remains. If the County Coroner determines that the remains are, or are believed to be, Native American, s/he must notify the NAHC in Sacramento within 48 hours. In accordance with California Public Resources Code, Section 5097.98, the NAHC must immediately notify those persons it believes to be the Most Likely Descendant of the deceased Native American. The Most Likely Descendant must complete their inspection within 48 hours of being granted access to the site. The designated Native American representative would then determine, in consultation with the property owner, the proper treatment of the human remains. Therefore, compliance with state law (California Public Resources Code and Health and Safety Code) would ensure that potential impacts related to the disturbance of any human remains would be less than significant, and no mitigation is required.

3.6 Energy

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	☐	☐	☒	☐
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	☐	☐	☒	☐

a) Would the project result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?

Less Than Significant Impact. The short-term construction and long-term operation of the proposed Project would require the consumption of energy resources in several forms. Construction energy consumption includes: (1) temporary direct electrical service provided by Southern California Edison (SCE), which includes construction site lighting; computer equipment; and temporary construction trailer operation; and (2) fossil fuels (diesel and gasoline), which includes off-road construction equipment, diesel-fired electric generators, and worker vehicles, vender trucks, and haul trucks. Operational Energy Consumption includes: (1) direct electrical service provided by SCE, which includes, Building heating, ventilation, and air-conditioning (HVAC), lighting: interior and exterior facilities, computer, audio and video equipment; and, appliances; (2) indirect

energy consumption, which includes supply, distribution, and treatment of water, wastewater; and solid waste; and (3) fossil fuels (diesel and gasoline) transportation, which includes hotel guests and visitors; employees, delivery, and customers; and restaurant employees, delivery, and customers.

Construction Energy Use

Electricity. Temporary electric power for as-necessary lighting and electronic equipment (such as computers inside temporary construction trailers) would be provided by SCE. The electricity used for such activities would be temporary and would be substantially less than that required for Project operation and would have a negligible contribution to the proposed Project's overall energy consumption.

Natural Gas. Natural gas is not anticipated to be required during construction of the proposed Project. Fuels used for construction would primarily consist of diesel and gasoline, which are discussed below under the "petroleum" subsection. Any minor amounts of natural gas that may be consumed as a result of proposed Project construction would be substantially less than that required for operation and would have a negligible contribution to the proposed Project's overall energy consumption.

Petroleum. Heavy-duty construction equipment associated with demolition and construction activities would rely on diesel fuel, as would vendor trucks involved in delivery of materials to the proposed Project site. Construction workers would travel to and from the Project site throughout the duration of construction. It is assumed in this analysis that construction workers would travel in gasoline-powered light-duty vehicles. Heavy-duty construction equipment of various types would be used during each phase of Project construction. Appendix A lists the assumed equipment usage for each phase of construction. The proposed Project's construction equipment is estimated to operate a total combined 13,809 hours.

Fuel consumption from construction equipment was estimated by converting the total carbon dioxide (CO_2) emissions from each construction phase to gallons using the conversion factors for CO_2 to gallons of gasoline or diesel. Construction is estimated to occur in 2020 through 2021 based on the construction phasing schedule. The analysis assumes a construction start date of May 2020, which represents the earliest date construction would initiate. In the event construction is started later than May 2020, the analysis performed represents the worst-case scenario for energy consumption, because equipment and vehicle efficiencies for later years would be slightly greater due to more stringent standards for in-use off-road equipment and heavy-duty trucks, as well as fleet turnover replacing older equipment and vehicles in later years. The conversion factor for gasoline is 8.78 kilograms per metric ton CO_2 per gallon, and the conversion factor for diesel is 10.21 kilograms per metric ton CO_2 per gallon (The Climate Registry 2018). The estimated diesel fuel usage from construction equipment is shown in Table 9, Construction Equipment Diesel Demand for Off-Road Equipment.

Table 9. Construction Equipment Diesel Demand for Off-Road Equipment

Phase	Pieces of Equipment	Equipment CO_2 (MT)	kg/CO_2/Gallon	Gallons
Demolition	5	28.62	10.21	2,803.54
Site Prep	3	7.62	10.21	746.76
Grading	3	6.87	10.21	672.81

Table 9. Construction Equipment Diesel Demand for Off-Road Equipment

Phase	Pieces of Equipment	Equipment CO_2 (MT)	kg/CO_2/Gallon	Gallons
Building Construction	7	325.53	10.21	31,883.51
Paving	3	11.86	10.21	1,161.43
Architectural Coating	1	2.56	10.21	250.50
			Total	37,518.54

Sources: Pieces of equipment and equipment CO_2 (Appendix A); kg/CO_2/Gallon (The Climate Registry 2018).
Notes: CO_2 = carbon dioxide; MT = metric ton; kg = kilogram.

Fuel consumption from worker, vendor, and haul truck trips are estimated by converting the total CO_2 emissions from each construction phase to gallons using the conversion factors for CO_2 to gallons of gasoline or diesel. Worker vehicles are assumed to be gasoline and vendor/hauling vehicles are assumed to be diesel. Calculations for total worker, vendor, and haul truck fuel consumption are provided in Tables 10, 11, and 12.

Table 10. Construction Worker Gasoline Demand

Phase	Trips	Vehicle MT CO_2	kg/CO_2/Gallon	Gallons
Demolition	378	1.93	8.78	220.03
Site Prep	80	0.41	8.78	46.57
Grading	88	0.45	8.78	51.23
Building Construction	27,846	139.84	8.78	15,927.37
Paving	280	1.39	8.78	157.80
Architectural Coating	320	1.58	8.78	180.34
			Total	16,583.35

Sources: Trips and vehicle CO_2 (Appendix A); kg/CO_2/Gallon (The Climate Registry 2018).
Notes: MT = metric ton; CO_2 = carbon dioxide; kg = kilogram.

Table 11. Construction Vendor Diesel Demand

Phase	Trips	Vehicle MT CO_2	kg/CO_2/Gallon	Gallons
Demolition	0	0	10.21	0
Site Prep and Grading	0	0	10.21	0
Trenching	0	0	10.21	0
Building Construction	10,710	132.67	10.21	12,994.54
Paving	0	0	10.21	0
Architectural Coating	0	0	10.21	0
			Total	12,994.54

Sources: Trips and vehicle CO_2 (Appendix A); kg/CO_2/Gallon (The Climate Registry 2018).
Notes: MT = metric ton; CO_2 = carbon dioxide; kg = kilogram.

Table 12. Construction Haul Truck Diesel Demand

Phase	Trips	Vehicle MT CO_2	kg/CO_2/Gallon	Gallons
Demolition	185	7.14	10.21	699.5
Site Prep and Grading	0	0	10.21	0
Trenching	170	6.56	10.21	642.8
Building Construction	0	0	10.21	0
Paving	0	0	10.21	0
Architectural Coating	0	0	10.21	0
			Total	1,342.34

Sources: Trips and vehicle CO_2 (Appendix A); kg/CO_2/Gallon (The Climate Registry 2018).
Notes: MT = metric ton; CO_2 = carbon dioxide; kg = kilogram.

In summary, construction of the proposed Project is conservatively anticipated to consume 16,583 gallons of gasoline and 51,855 gallons of diesel over the construction period. By comparison, California's consumption of petroleum is approximately 74.8 million gallons per day. (EIA 2017). Building C would be renovated in accordance with current building code requirements, which are more stringent and energy efficient than those that were in effect in 1978-79 when the building was constructed. All construction activities must be conducted in accordance with applicable regulations related to the recycling of construction and demolition debris. Therefore, the Project's short-term construction activities would not result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during Project construction, and no mitigation is required.

Operation Energy Use

Electricity. Operation of the proposed Project upon buildout would require electricity for multiple purposes, including cooling, lighting, appliances, and various equipment. Additionally, the supply, conveyance, treatment, and distribution of water and wastewater would indirectly result in electricity usage. Electricity consumption associated with proposed Project operation is based on CalEEMod outputs presented in Appendix A of this IS/MND.

CalEEMod default values for energy consumption for each land use were applied for the Project analysis. The energy use from non-residential land uses is calculated in CalEEMod based on the California Commercial End-Use Survey database. For parking lots, CalEEMod includes calculation of energy use from lighting, ventilation and elevators in parking lots and structures and is based on the type of parking lot selected by the user. Energy use in buildings (both natural gas and electricity) is divided by the program into end use categories subject to California Building Standards Code (Title 24) requirements (end uses associated with the building envelope, such as the HVAC system, water heating system, and integrated lighting) and those not subject to California Building Standards Code requirements (such as appliances, electronics, and miscellaneous "plug-in" uses).

Title 24 of the California Code of Regulations serves to enhance and regulate California's building standards. The most recent amendments to Title 24, Part 6, referred to as the 2016 standards, became effective on January 1, 2017. Although not accounted for in the modeling, energy consumption of the proposed Project would also be reduced through installation of high-efficiency lighting, per Title 24, Part 6 of the California Code of Regulations. According to these estimations, the proposed Project would consume

approximately 1,369,238 kilowatt-hours per year during operation. For comparison, in 2017 the total residential and non-residential electricity demand in Los Angeles County was 67,569,242,472 kilowatt-hours (CEC 2018). For these reasons, the electricity consumption of the propose Project would not be considered inefficient or wasteful, and impacts would be less than significant.

Natural Gas. Project operation would require natural gas for various purposes, including water heating and natural gas appliances. Natural gas consumption associated with operation is based on the CalEEMod outputs. According to these estimations, the proposed Project would consume approximately 5,104,001 kilo-British Thermal Units per year. For comparison, in 2017 the non-residential natural gas use within Los Angeles County was 295,601,223,219 kilo-British Thermal Units (CEC 2018). Since the proposed Project would comply with applicable Title 24 requirements the proposed Project would not be considered inefficient or wasteful, and impacts would be less than significant.

Petroleum. During operations, the majority of fuel consumption resulting from the proposed Project would involve the use of motor vehicles traveling to and from the Project site including hotel guests, retail and restaurant customers, deliveries, and employees. Petroleum fuel consumption associated with motor vehicles traveling to and from the Project site is a function of the vehicle miles traveled (VMT) as a result of proposed Project operation. The annual VMT attributable to the proposed Project is expected to be 6,047,824 VMT. Similar to the construction worker and vendor trips, fuel consumption from operational trips are estimated by converting the total CO_2 emissions from operation of the proposed Project to gallons using the conversion factors for CO_2 to gallons of gasoline or diesel. Based on the annual fleet mix provided in CalEEMod, 92.2% of the fleet range from light-duty to medium-duty vehicles and motorcycles are assumed to run on gasoline. The remaining 7.8% of vehicles represent medium-heavy duty to heavy-duty vehicles and buses and are assumed to run on diesel. Calculations for annual mobile fuel consumption are provided in Table 13.

Table 13. Annual Mobile Source Demand (Gasoline and Diesel)

	Vehicle MT CO_2	kg/CO_2/Gallon	Gallons
Gasoline: Operations	2,480.21	8.78	282,484.28
Diesel: Operations	210.25	10.21	20,593.03

Sources: Trips and vehicle CO_2 (Appendix A; kg/CO_2/Gallon (The Climate Registry 2018).
Notes: MT = metric ton; CO_2 = carbon dioxide; kg = kilogram

Over the lifetime of the proposed Project, the fuel efficiency of on-road vehicles of hotel guests, retail and restaurant customers, deliveries, and employees, commuting to the site is expected to increase. As such, the amount of petroleum consumed as a result of vehicular trips to and from the Project site during operation would decrease over time. There are numerous regulations in place that require and encourage increased fuel efficiency. For example, the CARB has adopted an approach to passenger vehicles by combining the control of smog-causing pollutants and greenhouse gas (GHG) emissions into a single, coordinated package of standards. The approach also includes efforts to support and accelerate the number of plug-in hybrids and zero-emissions vehicles in California (CARB 2013). Additionally, in response to Senate Bill 375, CARB adopted the goal of reducing per-capita GHG emissions from 2005 levels by 8% by 2020, and 18% by 2035 for light-duty passenger vehicles in the planning area for the SCAG. As such, operation of the proposed Project is expected to use decreasing amounts of petroleum over time due to advances in fuel economy.

In summary, although the proposed Project would increase petroleum use during operation as a result of hotel guests, retail and restaurant customers, deliveries, and employees commuting to the site, the use would be a fraction of the state- and County-wide use and, due to efficiency increases, would diminish over time. Given these considerations, petroleum consumption associated with the proposed Project would not be considered inefficient or wasteful and would result in a less-than-significant impact. No mitigation is required.

b) Would the project conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

Less Than Significant Impact. Part 6 of Title 24 of the California Code of Regulations was established in 1978 and serves to enhance and regulate California's building standards. Part 6 establishes energy efficiency standards for residential and non-residential buildings constructed in California to reduce energy demand and consumption. Part 6 is updated periodically (every 3 years) to incorporate and consider new energy efficiency technologies and methodologies. Title 24 also includes Part 11, the California Green Building Standards Code (CALGreen). CALGreen institutes mandatory minimum environmental performance standards for all ground-up, new construction of commercial, low-rise residential, and state-owned buildings, as well as schools and hospitals. The 2016 CALGreen standards became effective on January 1, 2017. The proposed Project would meet Title 24 and CALGreen standards to reduce energy demand and increase energy efficiency.

In 2012, 27 of the 31 San Gabriel Valley Council of Governments member agencies, including the City of Arcadia, participated in the Energy Action Plan project, which is funded by California utility ratepayers and administered by SCE. The funding was awarded to the San Gabriel Valley Council of Governments to implement activities to achieve statewide energy efficiency goals. The City of Arcadia developed resource protection and sustainability goals and policies within the Natural Resource and Sustainability Element of the City's General Plan. Energy Use is addressed in Goal RS-5. Relevant RS-5 policy are summarized as follows:

> "**Goal RS-5:** Wise and creative energy use that incorporates new technologies for energy generation and new approaches to energy conservation
>
> **Policy RS-5.3:** Require that all new development meets or exceeds the state and local energy conservation requirements.
>
> **Policy RS-5.8:** Promote innovative building, site design, and orientation techniques which minimize energy use.
>
> **Policy RS-5.17:** Investigate providing incentives for LEED certifiable or equivalent for new and/or retrofitted private commercial and industrial buildings."

The proposed Project would follow applicable energy standards and regulations during construction. In addition, the proposed Project would be built and operated in accordance with all existing, applicable regulations at the time of construction. As such, the proposed Project would not conflict with existing energy standards and regulations; therefore, impacts during construction and operation of the proposed Project would be less than significant. No mitigation is required.

3.7 Geology and Soils

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:				
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.	☐	☐	☒	☐
ii) Strong seismic ground shaking?	☐	☐	☒	☐
iii) Seismic-related ground failure, including liquefaction?	☐	☐	☒	☐
iv) Landslides?	☐	☐	☒	☐
b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐
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?	☐	☐	☒	☐
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?	☐	☐	☒	☐
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?	☐	☐	☐	☒
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☒	☐	☐

a) Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:

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.

Less Than Significant Impact. The City of Arcadia is located at the base of the east-west trending San Gabriel Mountains, which are part of the Transverse Ranges. The Project site is located in the northwest portion of the San Gabriel Valley, which is bound on the north by the San Gabriel Mountains, on the west by the Repetto and Merced Hills, on the south by the Puente Hills, and on

the east by the San Jose Hills (City of Arcadia 2010a). The Project site is located on a gentle, southern sloping gradient and is underlain by Quaternary gravel and sand deposited from major stream channels and alluvium. Like all of Southern California, the Project site is subject to potential moderate to strong seismic ground shaking as a result of movement along major regional faults. The closest fault to the Project site is the Raymond Fault, located approximately 2,000 feet to the northwest (CGS 2010). The Alquist-Priolo Fault Zone associated with this fault is located approximately 1,200 feet from the Project site, at the closest point (CGS 2017).

The Project site is not located within an Alquist-Priolo Earthquake Fault Zone and there are no known faults beneath the site. Therefore, the risk of fault rupture in the immediate vicinity of the Project site is low. The proposed Project would not directly or indirectly cause or exacerbate existing fault rupture risks that could directly or indirectly cause loss, injury, or death involving rupture of a known earthquake as a result of construction of the new buildings on the site. Therefore, impacts would be less than significant and no mitigation is required.

ii) Strong seismic ground shaking?

Less Than Significant Impact. The City of Arcadia is located in a seismically active area. Movement along major faults in proximity to the City, as well as along buried blind thrust faults, can occur across the greater Los Angeles Area. These faults, as well as numerous other regional faults, are capable of producing moderate to large earthquakes that could affect the City. However, the proposed Project would be constructed in accordance with state and City building standards. As with all development within the City, the proposed Project is required to comply with the California Building Code. Proper engineering and compliance with Title 24 of the California Building Code would ensure the maximum feasible protection of the buildings and occupants. The Building Code includes requirements to ensure that new development does not cause or exacerbate geological and soil hazards, including seismic ground shaking. In addition, measures to minimize the risk of loss, injury, and death from the construction of new buildings are included in the Arcadia General Plan, Safety Element, with specific provisions for seismic design. The proposed Project would not directly or indirectly cause or exacerbate adverse effects involving seismic ground shaking. As a result, impacts would be less than significant and no mitigation is required.

iii) Seismic-related ground failure, including liquefaction?

Less Than Significant Impact. Included within Arcadia's 2010 General Plan's Safety Element (City of Arcadia 2010b) is a map of liquefaction zones and regional groundwater levels for the City. Based on historical highest groundwater levels, the City is generally underlain by groundwater levels approximately 100 feet below ground surface (City of Arcadia 2010c). These underlying soils would not be prone to liquefaction and associated lateral spreading during the ground motion expected during a major seismic event. As a result, both the California Geological Survey and the City of Arcadia has determined that the Project site is not located in a zone of liquefaction (CGS 2017). Furthermore, as with all development within the City, the proposed Project is required to comply with the California Building Code. The California Building Code includes requirements to ensure that new development does not cause or exacerbate geological and soil hazards, including seismic ground shaking and seismically related ground failure. Measures to minimize the risk of loss, injury, and death from the construction of new buildings are included in the California Building Code, with specific provisions for seismic design. The proposed Project would not directly or

indirectly cause or exacerbate adverse effects involving seismic-related ground failure, such as liquefaction. As a result, impacts would be less than significant and no mitigation is required.

iv) Landslides?

Less Than Significant Impact. The proposed Project is located on a gently sloping, relatively flat region in central Arcadia. Both the California Geological Survey (CGS 2017) as well as the City of Arcadia's General Plan's Safety Element (City of Arcadia 2010b) have determined that the Project's location is not within a region susceptible to landslides. The closest earthquake-induced landslide zone is located approximately 1.5 miles to the northeast of the Project site (CGS 2017). As such, impacts would be less than significant and no mitigation is required.

b) Would the project result in substantial soil erosion or the loss of topsoil?

Less Than Significant Impact. The Project site is not located in a hillside development area or agricultural zone that could be susceptible to eroding soils or the loss of topsoil due to site development. The Project site is fully developed and paved, with negligible amounts of soil exposed in areas of ornamental landscaping. Development of the Project site would not require the export of soils. During construction, erosion-control measures would be implemented as part of the Stormwater Pollution Prevention Plan (SWPPP) for the Project. Prior to the start of construction activities, the Contractor is required to file a Permit Registration Document with the State Water Resources Control Board (SWRCB) in order to obtain coverage under the National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges Associated with the Construction and Land Disturbance Activities (Order No 2009-009-DWQ as amended by 2010-0014-DWQ and 2012-0006-DWQ, NPDES No. CAS000002) or the latest approved general permit. This permit is required for earthwork that result in the disturbance of one acre or more of total land area. The required SWPPP will mandate the implementation of BMPs to reduce or eliminate construction-related pollutants in the runoff, including sediment. Implementation of the erosion control BMPs in the SWPPP would reduce construction-related soil erosion and there would be no loss of topsoil associated with Project implementation. Impacts would be less than significant and no mitigation is required.

c) Would the project 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?

Less Than Significant Impact. According to the State of California Seismic Hazard Zones map for the Mount Wilson Quadrangle (CGS 2017) and City of Arcadia's General Plan's Safety Element (City of Arcadia 2010b), the site is not located in an area potentially susceptible to earthquake induced landslides, lateral spreading, or liquefaction. Based on the relatively flat topography, Project construction would not initiate a landslide or increase the potential for landslides to occur. Additionally, liquefaction is unlikely due to historic groundwater depths at the Project site exceeding 100 feet. The San Gabriel Valley is not an area of historic or recent groundwater subsidence due to groundwater withdrawal (Luhdorff & Scalmanini 2014). Therefore, potential impacts associated with landslides, lateral spreading, liquefaction, collapse and subsidence would be less than significant, and no mitigation is required.

d) Would the project be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?

Less Than Significant Impact. Expansive soils are clay-rich soils that shrink when dry and swell when wet. This change in volume can exert substantial pressure on foundations, resulting in structural distress and/or damage. The Project's underlining soil consists of gravel, sand, and alluvium (USDA 2019). These soils typically contain very little clay material and are usually not subject to expansion. Project construction would not increase or exacerbate the potential for expansive soils to create substantial direct or indirect risks to life or property. Additionally, the proposed Project would be constructed according to the mandatory seismic and structural design guidelines established in the California Building Code, Chapter 16, Section 1601 et seq.[8] As such, impacts would be less than significant.

e) Would the project 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?

No Impact. The proposed Project is currently served by sewer infrastructure. No septic tanks or alternative wastewater disposal is proposed; therefore, the proposed Project would have no impacts related to soils supporting the use of septic tanks or alternative wastewater disposal systems.

f) Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Less Than Significant with Mitigation Incorporated. The Project area is located in the City of Arcadia, within the San Gabriel Valley of Los Angeles County, southwest of the San Bernardino Mountains (Dibblee and Ehrenspeck 1998). The Project area is underlain by Quaternary gravel and sand (map unit Qg; <11,700 years old), derived as alluvial fans and major stream channels (Dibblee and Ehrenspeck 1998). Quaternary older alluvial fan deposits (map unit Qof; ~2.58 million to 11,700 years old) are mapped nearby, and are comprised of sand and gravel (Dibblee and Ehrenspeck 1998). The alluvial fan deposits in this area are derived from the San Gabriel Mountains to the north. Pleistocene (or "Ice Age"), older alluvial fan deposits may be encountered at an unknown depth beneath surficial Holocene age deposits (Dibblee and Ehrenspeck 1998).

Although no fossils are recorded from within the Project area itself, they are documented nearby from similar sedimentary deposits as those underlying the Project area. According to the records search results received from the Natural History Museum of Los Angeles County (LACM), a fossil specimen of mastodon (*Mammut*) was recovered approximately 4.7 miles northwest of the Project site, south of the intersection between Washington Boulevard and Allen Avenue in Pasadena, near the western end of Brigden Road from an unknown depth below the ground surface (McLeod 2019). Another fossil locality, located southeast of the Project area, south of Arrow Highway and east of Irwindale Boulevard, and north of Dalton Wash, included a fossil specimen of mastodon (*Mammut americanum*) recovered from a gravel pit between 115 and 120 feet below the original ground surface at LACM 1807 (McLeod 2019). In Eagle Rock, east of I-110 (Pasadena Freeway) and Eagle Rock Boulevard, south of York Boulevard, locality LACM (CIT) 342 yielded fossil specimens of turkey (*Parapavo californicus*) and mammoth (*Mammuthus*) at a depth of 14 feet below the ground surface (McLeod 2019). Both specimens were documented in scientific publications (Miller 1942; Roth 1984). The LACM recommended paleontological monitoring of substantial excavations into

[8] California Building Code, Chapter 16, Section 1601 et seq. – Structural Design.

Quaternary older alluvial fan deposits at depth within the Project area and sediment sample collection to determine the presence of microvertebrate specimens.

No paleontological resources were identified within the Project area as a result of the institutional records search or desktop geological review. As such, the Project site is not anticipated to be underlain by unique geologic features. If intact paleontological resources are located on site, ground-disturbing activities associated with construction of the Project, such as grading during site preparation and excavations for the swimming pool, have the potential to destroy a unique paleontological resource or site. As such, the Project area is considered to be potentially sensitive for paleontological resources. Given the proximity of past fossil discoveries in the surrounding area and potential for underlying, Pleistocene-age older alluvial fan deposits, the sedimentary deposits within the Project area are considered to be highly sensitive for supporting paleontological resources. Younger, Holocene age alluvial fan deposits within the Project area have low potential to yield paleontological resources, and thus, requires no mitigation during excavation. Implementation of MM-GEO-1 would ensure that potential impacts would be reduced to less than significant levels.

MM-GEO-1 Prior to commencement of any grading activity on-site, the Applicant shall retain a qualified paleontologist per the Society of Vertebrate Paleontology (SVP) (2010) guidelines. The paleontologist shall prepare a Paleontological Resources Impact Mitigation Program (PRIMP) for the project. The PRIMP shall be consistent with the SVP (2010) guidelines and should outline requirements for preconstruction meeting attendance and worker environmental awareness training, where monitoring is required within the project area based on construction plans and/or geotechnical reports, procedures for adequate paleontological monitoring and discoveries treatment, and paleontological methods (including sediment sampling for microvertebrate fossils), reporting, and collections management. The qualified paleontologist shall attend the preconstruction meeting and a paleontological monitor shall be on-site during all rough grading and other significant ground-disturbing activities in previously undisturbed, fine-grained older Quaternary alluvial fan deposits. These deposits may be encountered at depths as shallow as 5-10 feet below ground surface. In the event that paleontological resources (e.g., fossils) are unearthed during grading, the paleontological monitor will temporarily halt and/or divert grading activity to allow recovery of paleontological resources. The area of discovery will be roped off with a 50-foot radius buffer. Once documentation and collection of the find is completed, the monitor will remove the rope and allow grading to recommence in the area of the find.

3.8 Greenhouse Gas Emissions

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	☒	☐

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☒	☐

a) Would the project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

Less Than Significant Impact. Climate change refers to any significant change in measures of climate, such as temperature, precipitation, or wind patterns, lasting for an extended period of time (decades or longer). The Earth's temperature depends on the balance between energy entering and leaving the planet's system, and many factors (natural and human) can cause changes in Earth's energy balance. The greenhouse effect is the trapping and build-up of heat in the atmosphere near the Earth's surface (the troposphere). The greenhouse effect is a natural process that contributes to regulating the Earth's temperature, and it creates a livable environment on Earth. Human activities that emit additional GHGs to the atmosphere increase the amount of infrared radiation that gets absorbed before escaping into space, thus enhancing the greenhouse effect and causing the Earth's surface temperature to rise. Global climate change is a cumulative impact; a project contributes to this impact through its incremental contribution combined with the cumulative increase of all other sources of GHGs. Thus, GHG impacts are recognized exclusively as cumulative impacts (CAPCOA 2008).

A GHG is any gas that absorbs infrared radiation in the atmosphere; in other words, GHGs trap heat in the atmosphere. As defined in California Health and Safety Code Section 38505(g) for purposes of administering many of the state's primary GHG emissions reduction programs, GHGs include carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons, perfluorocarbons, sulfur hexafluoride, and nitrogen trifluoride (see also CEQA Guidelines Section 15364.5). The three GHGs evaluated herein are CO_2, CH_4, and N_2O because these are the only GHG gases would be emitted during project construction and/or operations.

The Intergovernmental Panel on Climate Change developed the global warming potential (GWP) concept to compare the ability of each GHG to trap heat in the atmosphere relative to another gas. The reference gas used is CO_2; therefore, GWP-weighted emissions are measured in metric tons (MT) of CO_2 equivalent (CO_2e). Consistent with CalEEMod Version 2016.3.2, this GHG emissions analysis assumed the GWP for CH_4 is 25 (i.e., emissions of 1 MT of CH4 are equivalent to emissions of 25 MT of CO_2), and the GWP for N_2O is 298, based on the Intergovernmental Panel on Climate Change Assessment Report (IPCC 2007).

As discussed in Section 3.3, Air Quality, of this IS/MND, the proposed Project is located within the jurisdictional boundaries of the SCAQMD. In October 2008, the SCAQMD proposed recommended numeric CEQA significance thresholds for GHG emissions for lead agencies to use in assessing GHG impacts of residential and commercial development projects as presented in its *Draft Guidance Document – Interim CEQA Greenhouse Gas (GHG) Significance Threshold* (SCAQMD 2008). This document, which builds on the previous guidance prepared by the California Air Pollution Control Officers Association, explored various approaches for establishing a significance threshold for GHG emissions. The draft interim CEQA thresholds guidance

document was not adopted or approved by the Governing Board. However, in December 2008, the SCAQMD adopted an interim 10,000 MT CO_2e per-year screening level threshold for stationary source/industrial projects for which the SCAQMD is the lead agency (see SCAQMD Resolution No. 08-35, December 5, 2008). The 10,000 MT CO_2e per-year threshold, which was derived from GHG reduction targets established in Executive Order (EO) S-3-05, was based on the conclusion that the threshold was consistent with achieving an emissions capture rate of 90% of all new or modified stationary source projects.

The SCAQMD formed a GHG CEQA Significance Threshold Working Group to work with SCAQMD staff on developing GHG CEQA significance thresholds until statewide significance thresholds or guidelines are established. From December 2008 to September 2010, the SCAQMD hosted working group meetings and revised the draft threshold proposal several times, although it did not officially provide these proposals in a subsequent document. The SCAQMD has continued to consider adoption of significance thresholds for residential and general land use development projects. The most recent proposal issued by SCAQMD, issued in September 2010, uses the following tiered approach to evaluate potential GHG impacts from various uses (SCAQMD 2010):

Tier 1. Determine if CEQA categorical exemptions are applicable. If not, move to Tier 2.

Tier 2. Consider whether or not the proposed project is consistent with a locally adopted GHG reduction plan that has gone through public hearing and CEQA review, that has an approved inventory, includes monitoring, etc. If not, move to Tier 3.

Tier 3. Consider whether the project generates GHG emissions in excess of screening thresholds for individual land uses. The 10,000 MT CO_2e per-year threshold for industrial uses would be recommended for use by all lead agencies. Under option 1, separate screening thresholds are proposed for residential projects (3,500 MT CO_2e per year), commercial projects (1,400 MT CO_2e per year), and mixed-use projects (3,000 MT CO_2e per year). Under option 2, a single numerical screening threshold of 3,000 MT CO_2e per year would be used for all non-industrial projects. If the project generates emissions in excess of the applicable screening threshold, move to Tier 4.

Tier 4. Consider whether the project generates GHG emissions in excess of applicable performance standards for the project service population (population plus employment). The efficiency targets were established based on the goal of Assembly Bill (AB) 32 to reduce statewide GHG emissions to 1990 levels by 2020. The 2020 efficiency targets are 4.8 MT CO_2e per-service population for project-level analyses and 6.6 MT CO_2e per-service population for plan-level analyses. If the project generates emissions in excess of the applicable efficiency targets, move to Tier 5.

Tier 5. Consider the implementation of CEQA mitigation (including the purchase of GHG offsets) to reduce the project efficiency target to Tier 4 levels.

To determine the proposed Project's potential to generate GHG emissions that would have a significant impact on the environment, the proposed Project's GHG emissions were compared to the mixed-use land use type quantitative threshold of 3,000 MT CO_2e per year. Per the SCAQMD guidance, construction emissions should be amortized over the operational life of the proposed Project, which is assumed to be 30 years (SCAQMD 2008). Thus, this impact analysis compares estimated operational emissions plus amortized construction emissions to the proposed SCAQMD threshold of 3,000 MT CO_2e per year.

Construction Emissions. Construction of the proposed Project would result in GHG emissions primarily associated with the use of off-road construction equipment, on-road trucks, and worker vehicles. A

depiction of expected construction schedules (including information regarding phasing, equipment used during each phase, truck trips, and worker vehicle trips) assumed for the purposes of emissions estimation is provided in Appendix A of this IS/MND. On-site sources of GHG emissions include off-road equipment; off-site sources include trucks and worker vehicles. Table 14 presents construction GHG emissions for the proposed Project from on-site and off-site emissions sources.

Table 14. Estimated Annual Construction GHG Emissions

Year	CO_2	CH_4	N_2O	CO_2e
	Metric Tons per Year			
2020	331.23	0.05	0	332.39
2021	341.60	0.04	0	342.66
			Total	**675.05**
			Amortized Over 30 Years	*22.50*

Source: See Appendix A for complete results.
Notes: GHG = greenhouse gas; CO_2 = carbon dioxide; CH_4 = methane; N_2O = nitrous oxide; CO_2e = carbon dioxide equivalent.

As shown in Table 14, the estimated total GHG emissions in 2020 through 2021 would be approximately 675 MT CO_2e. Amortized over 30 years, construction GHG emissions would be approximately 23 MT CO_2e per year. In addition, as with Project-generated construction criteria air pollutant emissions, GHG emissions generated during proposed construction activities would be short-term, lasting only for the duration of the construction period, and would not represent a long-term source of GHG emissions. Because there is no separate GHG threshold for construction, the evaluation of significance is discussed in the operational emissions analysis in the following text.

Operational Emissions. Operation of the proposed Project would generate GHG emissions through motor vehicle trips to and from the project site; landscape maintenance equipment operation; energy use (natural gas and generation of electricity consumed by the project); solid waste disposal; and generation of electricity associated with water supply, treatment, and distribution; wastewater treatment; and natural gas consumed by the emergency generator. GHG emissions would also be generated through intermittent maintenance and testing of the diesel emergency generator, limited to 50 hours per year. CalEEMod was used to calculate the annual GHG emissions. GHG emission estimates were based on the mobile source, area source, and energy (natural gas) operational assumptions described in Section 3.3(b), within the air quality analysis. CalEEMod default values were used to estimate GHG emissions associated with energy (electricity) consumption, solid waste, and water and wastewater.

The estimated operational (2022) Project-generated GHG emissions from area sources, energy usage, motor vehicles, solid waste generation, water usage and wastewater generation, and stationary sources are shown in Table 15, Estimated Annual Operational GHG Emissions. As discussed in Section 3.3, an emission netting analysis has been performed to account for existing emissions associated with the existing operation of Building C.

Table 15. Estimated Annual Operational GHG Emissions

Emission Source	CO_2	CH_4	N_2O	CO_2e
	Metric Tons Per Year			
Proposed Project				
Area	0.01	0.00	0.00	0.01
Energy	659.62	0.02	0.01	662.75
Mobile	2,686.73	0.15	0.00	2,690.47
Stationary	4.77	0.01	0.00	5.02
Solid waste	22.04	1.32	0.00	55.14
Water supply and wastewater	22.96	0.01	0.00	26.34
Total	**3,396.11**	**1.51**	**0.01**	**3,439.73**
Existing Operation (Building C)				
Area	0.00	0.00	0.00	0.00
Energy	262.01	0.01	0.00	263.11
Mobile	575.64	0.03	0.00	575.51
Solid waste	5.74	0.34	0.00	14.22
Water supply and wastewater	65.75	0.02	0.01	68.80
Total	**909.14**	**0.40**	**0.01**	**922.64**
Net Change in Emissions				
Area	0.01	0.00	0.00	0.01
Energy	397.61	0.01	0.01	399.64
Mobile	2,111.08	0.012	0.00	2,113.96
Stationary	4.77	0.01	0.00	5.02
Solid waste	16.30	0.98	0.00	40.92
Water supply and wastewater	(42.79)	(0.01)	0.00	(42.46)
Total	**2,486.98**	**1.11**	**0.01**	**2,517.09**
			Amortized Construction Emissions	*22.50*
			Operation + Amortized Construction Total	**2,539.59**

Notes: CO_2 = carbon dioxide; CH_4 = methane; N_2O = nitrous oxide; CO_2e = carbon dioxide equivalent
See Appendix A for detailed results.
These emissions reflect operational year 2022.

As shown in Table 15, estimated annual net Project -generated GHG emissions would be approximately 2,517 MT CO_2e per year as a result of proposed Project operations only. Estimated annual Project -generated operational emissions in 2022 (2,517 MT CO_2e per year) plus amortized Project construction emissions (23 MT CO_2e per year) would be approximately 2,540 MT CO_2e per year, which would not exceed the recommended SCAQMD threshold of 3,000 MT CO_2e per year. Therefore, in relation to the generation of GHGs, the proposed Project's impact would be less than significant. No mitigation is required.

b) Would the project generate conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

Less Than Significant Impact. The City addresses GHG-reducing goals in the General Plan. The City has not adopted a comprehensive climate action plan, and there is currently no local guidance that would be

applicable to the proposed Project other than the General Plan. At this time, no mandatory GHG plans, policies, regulations, or finalized agency guidelines would apply to the proposed Project. Nonetheless, Project consistency with the SCAG 2016 RTP/SCS, CARB's Scoping Plan, and statewide GHG reduction goals for 2030 or 2050 identified in EO S-3-05 and Senate Bill (SB) 32, is discussed below.

City of Arcadia General Plan Policies

The City of Arcadia's General Plan, Chapter 6, Resource Sustainability Element, addresses GHG-reducing goals and policies as follows:

> **Goal RS-2:** Reducing Arcadia's carbon footprint in compliance with SB 375 and AB 32
>
> **Policy RS-2.1:** Cooperate with the state to implement AB 32, which calls for reducing greenhouse gas emissions to 1990 levels by 2020, and Executive Order S-3-05, which calls for 1990 levels by 2020 and 80% below 1990 levels by 2050.
>
> **Policy RS-2.2:** Reduce per capita greenhouse gas emissions to 15% below 2005 levels by 2020, and total municipal greenhouse gas emissions to 15% below 2005 levels by 2020.
>
> **Policy RS-2.3:** Participate in regional strategies and plan to implement SB 375, and in particular, use the legislatively authorized incentives, such as grants and transportation funding and waivers to environmental assessments, to encourage infill and transit-oriented development.
>
> **Policy RS-2.4:** Pursue the strategies in the Land Use and Community Design Element to encourage transit-oriented development in established focused areas.
>
> **Policy RS-2.5:** Pursue the enhancement of bicycle and pedestrian infrastructure set forth in the Circulation and Infrastructure Element to help decrease vehicle miles traveled and vehicle trips.
>
> **Policy RS-2.6:** Coordinate land use, circulation, and infrastructure improvement efforts with the West San Gabriel Valley Planning Council, regional planning agencies, and surrounding municipalities.
>
> **Goal RS-3:** Promoting and utilizing clean forms of transportation to reduce Arcadia's carbon footprint
>
> **Policy RS-3.1:** Develop a City fleet that to the extent feasible uses clean, alternative fuel and consists of energy-efficient vehicles.
>
> **Policy RS-3.2:** Incorporate energy-efficient vehicles into the City's transit system.
>
> **Policy RS-3.3:** Educate residents on methods of sustainable driving techniques such as: reducing excessive speeding, preventing car idling, regular car maintenance for maximizing fuel efficiency, and carpooling.

> **Policy RS-3.4:** Promote residents' and business owners' awareness and education of traffic congestion's effect on air pollution and help create voluntary programs that reduce traffic throughout the City.

The proposed Project would be consistent with the City's General Plan Goals RS-2 and RS-3. The proposed Project would not interfere with implementation of the City's General Plan Goals because it would not exceed the SCAQMD's recommended threshold of 3,000 MT CO_2e per year. In addition, the proposed Project does not prevent the City from promoting and utilizing clean forms of transportation to reduce the City's carbon footprint. In fact, the proposed Project's location within 0.5-mile from the Gold Line Station would facilitate the use of public transportation given its close proximity and pedestrian connectivity.

Southern California Association of Governments 2016 RTP/SCS

The SCAG 2016 RTP/SCS is a regional growth-management strategy that targets per capita GHG reduction from passenger vehicles and light-duty trucks in the Southern California region pursuant to Senate Bill 375. In addition to demonstrating the region's ability to attain and exceed the GHG emission-reduction targets set forth by CARB, the 2016 RTP/SCS outlines a series of actions and strategies for integrating the transportation network with an overall land use pattern that responds to projected growth, housing needs, changing demographics, and transportation demands. Thus, successful implementation of the 2016 RTP/SCS would result in more complete communities with a variety of transportation and housing choices, while reducing automobile use. With regard to individual developments, such as the proposed Project, the strategies and policies set forth in the 2016 RTP/SCS can be grouped into the following three categories: (1) reduction of vehicle trips and VMT; (2) increased use of alternative fuel vehicles; and (3) improved energy efficiency. The Project's consistency with these three strategy categories is presented below.

Consistency with VMT Reduction Strategies and Policies. The proposed Project's consistency with this aspect of the 2016 RTP/SCS is demonstrated via the Project's land use characteristics and consistency with the regional growth forecast assumed in the 2016 RTP/SCS for the City. As discussed in Section 2.2 of this IS/MND, the proposed Project site is designated in the City's General Plan as "Commercial" and the zoning for the Project site is General Commercial (C-G) with a Downtown Overlay. The proposed Project would be compatible with the C-G Zone and Downtown Overlay Zone's FAR. Vehicle trip generation as a result of the proposed Project are concluded to have been anticipated in the SCAG 2016 RTP/SCS growth projections because the proposed Project site would be accommodated by the City's predicted projections.

Increased Use of Alternative Fueled Vehicles Policy Initiative. This 2016 RTP/SCS policy initiative focuses on accelerating fleet conversion to electric or other near zero-emission technologies. The proposed Project would comply with the applicable 2016 CALGreen standards and would provide 37 preferred parking spaces for fuel-efficient vehicles and 15 parking spaces for electric vehicle parking.

Energy Efficiency Strategies and Policies. The 2016 RTP/SCS goal is to actively encourage and create incentives for energy efficiency, where possible. The proposed Project would comply with the applicable 2016 CALGreen standards.

Based on the analysis above, the proposed Project would be consistent with the SCAG 2016 RTP/SCS.

California Air Resources Board Scoping Plan and Reduction Goals

The Climate Change Scoping Plan, approved by CARB in 2008 and updated in 2014 and 2017, provides a framework for actions to reduce California's GHG emissions and requires CARB and other state agencies to adopt regulations and other initiatives to reduce GHGs. The Scoping Plan is not directly applicable to specific projects, and it is not intended to be used for project-level evaluations.[9] Under the Scoping Plan, however, there are several state regulatory measures aimed at identifying and reducing GHG emissions. CARB and other state agencies have adopted many of the measures identified in the Scoping Plan. Most of these measures focus on area source emissions (e.g., energy usage, and high-GWP GHGs in consumer products) and changes to the vehicle fleet (e.g., hybrid, electric, and more fuel-efficient vehicles) and associated fuels, among others.

Regarding consistency with Senate Bill 32 (goal of reducing GHG emissions to 40% below 1990 levels by 2030) and Executive Order S-3-05 (goal of reducing GHG emissions to 80% below 1990 levels by 2050), there are no established protocols or thresholds of significance for that future-year analysis. However, CARB has expressed optimism with regard to both the 2030 and 2050 goals. It states in the First Update to the Climate Change Scoping Plan: Building on the Framework that "California is on track to meet the near-term 2020 GHG emissions limit and is well positioned to maintain and continue reductions beyond 2020 as required by AB 32" (CARB 2014). With regard to the 2050 target for reducing GHG emissions to 80% below 1990 levels, CARB (2014) states the following:

This level of reduction is achievable in California. In fact, if California realizes the expected benefits of existing policy goals (such as 12,000 megawatts of renewable distributed generation by 2020, net zero energy homes after 2020, existing building retrofits under Assembly Bill 758, and others) it could reduce emissions by 2030 to levels squarely in line with those needed in the developed world and to stay on track to reduce emissions to 80% below 1990 levels by 2050.

In other words, CARB believes that the state is on a trajectory to meet the 2030 and 2050 GHG reduction targets set forth in AB 32, Senate Bill 32, and Executive Order S-3-05. This is confirmed in the 2017 Climate Change Scoping Plan Update, which states (CARB 2017):

The Proposed Plan builds upon the successful framework established by the Initial Scoping Plan and First Update, while also identifying new, technologically feasibility and cost-effective strategies to ensure that California meets its GHG reduction targets in a way that promotes and rewards innovation, continues to foster economic growth, and delivers improvements to the environment and public health, including in disadvantaged communities. The Proposed Plan is developed to be consistent with requirements set forth in AB 32, SB 32, and AB 197.

The proposed Project would not interfere with implementation of GHG reduction goals for 2030 or 2050 because it would not exceed the SCAQMD's recommended threshold of 3,000 MT CO_2e per year. In addition, the proposed Project would not conflict with the SCAG RTP/SCS or with the state's trajectory toward future GHG reductions. Therefore, the proposed Project would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs; therefore, impact would be less than significant and no mitigation is required.

[9] The Final Statement of Reasons for the amendments to the CEQA Guidelines reiterates the statement in the Initial Statement of Reasons that "[t]he Scoping Plan may not be appropriate for use in determining the significance of individual projects because it is conceptual at this stage and relies on the future development of regulations to implement the strategies identified in the Scoping Plan" (California Natural Resources Agency 2009).

3.9 Hazards and Hazardous Materials

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☒	☐
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?	☐	☐	☒	☐
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☒	☐
d) Be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 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 or excessive noise for people residing or working in the project area?	☐	☐	☐	☒
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☒
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	☐	☐	☐	☒

a) Would the project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

Less Than Significant Impact. Construction would include removal and grading of existing paved surfaces, remodeling of the existing three-story Building C, construction of a new five-story Building D, repaving parking areas and driveways, and installation of new landscaped areas and concrete sidewalks. Construction would require the use of heavy machinery and equipment. Potentially hazardous materials used during construction may include gasoline, diesel fuel, lubricating oil, grease, adhesive materials, solvents, paints, architectural coatings, and other materials that potentially contain hazardous substances. The materials used would not be in such quantities or stored in such a manner as to pose a significant safety or environmental hazard. Proper use, handling, and storage of materials must be conducted in accordance with the manufacture's specifications. Activities at the Project site, including those conducted

by a contractor, must comply with existing federal, state, and local regulations regarding hazardous material use, storage, disposal, and transport to prevent Project-related risks to public health and safety. All on-site generated waste that meets hazardous criteria shall be stored, manifested, transported, and disposed of in accordance with federal and state requirements, including the Toxic Substances Control Act, SCAQMD's Rule 1403, and the California Code of Regulations, Title 22.[10]

Based on the age of the structures, there is a potential for hazardous building materials (i.e., asbestos-containing materials (ACM), lead-based paint and universal wastes) to be present. Renovation of the Building C, as well as transportation and disposal of the building materials, could cause a release of such materials to the environment if they are present in the existing building. However, all projects that involve commercial building renovations are required to comply with applicable federal, state, and local requirements, as summarized below.

1. For asbestos: California Code of Regulations, Article 4, Section 1529, pertaining to Asbestos Construction Safety Orders; SCAQMD Rule 1403; Cal/OSHA Asbestos and Carcinogen Unit; California Department of Public Health; California Department of Resources, Recycling, and Recovery (CalRecycle); and EPA National Emission Standards for Hazardous Air Pollutants (NESHAP).
2. For lead: California Labor Code Sections 6716 to 6717; CCR, Title 8, Section 1532.1 et seq.; CCR, Title 17, Section 35001 et seq.; Los Angeles County Environmental Health Lead Program; California Department of Public Health; and EPA Lead Renovation, Repair, and Painting Rule.
3. For universal wastes: Department of Toxic Substances Control (DTSC) universal waste rules; CalRecycle; and EPA Solid Waste Rules (40 CFR Part 273)

Operation of the proposed Project would include use of minor quantities of commercially available hazardous materials, such as paints, lubricants, pool cleaners/chlorine, and cleaning materials. These materials are not considered acutely hazardous and are used routinely throughout urban environments for operation of commercial businesses. Handling, storage, and disposal of these hazardous materials would comply with all federal, state, and local requirements, including training of operational staff on proper handling. The proposed Project would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials, and no mitigation is required.

b) Would the project 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?

Less Than Significant Impact. Building C on the Project site would be renovated to convert from office uses to hotel uses. Based on information obtained from Los Angeles County Office of the Assessor (LA County 2019), Building C was constructed in 1978-1979. Based on a review of historic aerials and topographic maps (NETR 2019a, 2019b, 2019c), Colorado Place is part of the historic Route 66, which was constructed adjacent to the Project site in 1941. The Project site appears to have been developed as early as 1941, with various commercial structures. Two small structures were previously located on the eastern portion of the Project site beginning in the 1940s; these were removed in the 1970s to accommodate construction of the current Building C. The western portion of the Project site was developed with a commercial structure beginning in the 1950s, which was removed in 2009, with subsequent construction of the existing medical office buildings and parking structure in 2015.

[10] California Code of Regulations, Title 22, Division 4.5 – Environmental Health Standards for the Management of Hazardous Waste.

California Government Code Section 65962.5 requires that information regarding environmental impacts of hazardous substances and wastes be maintained and provided at least annually to the Secretary for Environmental Protection. Commonly referred to as the Cortese List, this information must include the following: sites impacted by hazardous wastes, public drinking water wells that contain detectable levels of contamination, underground storage tanks with unauthorized releases, solid waste disposal facilities from which there is migration of hazardous wastes, and all cease and desist and cleanup and abatement orders. While the Cortese List is no longer maintained as a single list, the following databases provide information that meet the Cortese List requirements:

- List of Hazardous Waste and Substances sites from DTSC Envirostor database (Health and Safety Codes 25220, 25242, 25356, and 116395);
- List of Leaking Underground Storage Tank (LUST) Sites by County and Fiscal Year from the State Water Resources Control Board (Water Board) GeoTracker database (Health and Safety Code 25295);
- List of solid waste disposal sites identified by the Water Board with waste constituents above hazardous waste levels outside the waste management unit (Water Code Section 13273 subdivision (e) and California Code of Regulations Title 14 Section 18051));
- List of "active" Cease and Desist Orders and Cleanup and Abatement Orders from the Water Board (Water Code Sections 13301 and 13304); and
- List of hazardous waste facilities subject to corrective action pursuant to Section 25187.5 of the Health and Safety Code, identified by DTSC.

Dudek conducted a search of the online databases that provide information on Cortese List sites. The Project site was not identified in any of the Cortese List databases. Nearby properties were identified on the DTSC and Water Board databases, and are discussed in the subsections below. No nearby properties were identified on the active Cease and Desist Orders/Cleanup and Abatement Orders list, nor on the corrective action list created by DTSC, and no solid waste disposal sites were identified on GeoTracker within one half mile of the Project site.

DTSC EnviroStor Database. Dudek identified one site located within 0.5-mile of the Project site. The former Santa Anita Ordnance Training Center, a Former Used Defense Site, which was formerly located near the Project site to the west, in the location of the existing horse race track, Westfield Santa Anita mall, and residential properties. An assessment completed in 1995 determined that no action was required to evaluate the potential for threat of former ordnances, based on the fact that the site has been fully redeveloped and is extensively used by the public (DERP 1995). Based on this information, it is unlikely that this site has impacted the environmental conditions of the Project site.

Water Board GeoTracker Database. Five LUST sites were identified within 0.5- mile of the Project site. Four of the sites have been closed and received a No Further Action (NFA) designation from the Regional Water Quality Control Board. The remaining open case file is for the Santa Anita Park, 285 West Huntington Drive. While the site address (i.e., site entrance) is located 0.3-mile southeast of the Project site, the actual former LUST is located 0.65-mile west of the Project site. The site has been fully investigated, remediated, and site closure was requested in November 2018 (GSI 2018). Based on the information provided, it is unlikely that the environmental condition of the Project site has been impacted by these nearby sites.

In addition to the Cortese List databases, Dudek consulted available online databases that provide environmental information on facilities and sites in the State of California. These databases include the

CalEPA Regulated Site Portal; National Pipeline Mapping System; and California Division of Oil, Gas, and Geothermal Resources (DOC DOGGR) online well finder. Five sites were identified on the CalEPA Site Portal within 0.5- mile of the Project site. Of these sites, one was identified as a LUST, which was also identified on the Water Board GeoTracker database as discussed above. The remaining listings appeared to be for administrative and permitting purposes, and do not necessarily indicate a release of hazardous materials to the environment. No findings were identified on the National Pipeline Mapping System database within one mile of the Project site. One idle oil and gas well was identified on DOC DOGGR within one mile of the Project site, approximately 0.85-mile to the southeast (DOC DOGGR 2019). Reportedly, the well was abandoned in 1926. Based on the information provided, it is unlikely that the environmental condition of the Project site has been impacted by these nearby sites.

As discussed under Section 3.9(a), construction would involve relatively small amounts of commonly used hazardous substances such as gasoline, diesel fuel, lubricating oil, grease, adhesive materials, solvents, and architectural coatings. These materials are not considered acutely hazardous and are used routinely throughout urban environments for both construction projects and building renovation projects. Further, these materials would be transported, stored, and handled in accordance with all federal, state, and local laws regulating the management and use of hazardous materials. In addition, construction staff would be trained in spill and release response, as applicable. For these reasons, construction of the proposed Project is not anticipated to release hazardous materials into the environment that would pose a threat to human health or the environment.

Operation of the proposed Project would include use of minor quantities of commercially available hazardous materials, such as paints, lubricants, and cleaning materials. These materials are not considered acutely hazardous and are used routinely throughout urban environments for operation of commercial businesses. Handling, storage, and disposal of these hazardous materials would comply with all federal, state, and local requirements, including training of operational staff on use, handling, and spill response. The proposed Project would not create a significant hazard to the public or the environment through the reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment, and no mitigation is required.

c) Would the project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

Less Than Significant Impact. There are three schools within the general vicinity of the Project site: Barnhart School, located approximately 0.15-mile north of the Project site; Excelsior School, located approximately 0.16-mile east of the Project site; and First Avenue Middle School, located approximately 0.37-mile southeast of the Project site. None of these schools are located adjacent to the Project site. As discussed in Section 3.9(a), Project construction would involve relatively small amounts of commonly used hazardous substances such as gasoline, diesel fuel, lubricating oil, grease, adhesive materials, solvents, paints and architectural coatings. In the event of an accidental release of fuels, oils, lubricants, or other hazardous materials associated with construction, hazardous emissions could occur within a quarter mile of a school. All spills would be quickly contained and cleaned up. Potential effects would be temporary and localized. Hazardous substances would be transported and handled in accordance with all federal, state, and local laws regulating the management and use of hazardous materials. Use of these materials for their intended purpose and in accordance with applicable safety laws would not pose a significant risk to nearby schools.

As discussed in previous sections, operation of the proposed Project would include use of minor quantities of commercially available hazardous materials, which are not considered acutely hazardous and are used routinely throughout urban environments for operation of commercial businesses. Handling, storage, and disposal of these hazardous materials would comply with all federal, state, and local requirements. Operational staff would be trained in handling, storage, and spill response techniques to avoid a release that would impact surrounding properties, including nearby schools. Therefore, Project operations would not pose a hazard to schools involving hazardous emissions or the handling of hazardous or acutely hazardous materials, substances, or waste. Impacts would be less than significant and no mitigation is required.

d) Would the project be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?

No Impact. As explained in Section 3.9(b) above, the Project site is not located on or adjacent to a hazardous material site as described in Government Code Section 65962.5. Therefore, no hazardous materials are expected to be present, and no impact would occur.

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 or excessive noise for people residing or working in the project area?

No Impact. The Project site is not located within two miles of a public or public use airport, nor is it located within an airport land use plan. Therefore, no safety hazard or excessive noise risk would be present, and no impact would occur.

f) Would the project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

No Impact. The City of Arcadia General Plan includes a Safety Element Chapter, which addresses community safety for environmental hazards, human caused hazards, threats to national security, emergency services, and emergency preparedness (City of Arcadia 2010b). In addition, Los Angeles County Department of Public Works (LADPW) has designated disaster evacuation routes for the City of Arcadia. Colorado Place and Huntington Drive, both located adjacent to the Project site, are designated disaster routes. Construction of the proposed Project would not require road closures in public right-of-ways of Colorado Place or Huntington Drive. Therefore, emergency service response times and disaster evacuation routes would not be affected. Prior to operation, the proposed Project would receive all required permits and certificates for occupancy and operation, including those issued by the City of Arcadia Fire Department, which is the agency in charge of emergency response at the Project site. Therefore, no interference or impairment of the emergency response or emergency evacuation plans would occur, and no impact would occur.

g) Would the project expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?

No Impact. The Project site is not located within a Very High Fire Hazard Severity Zone (VHFHSZ). The nearest VHFHSZ is located approximately one mile north of the Project site. Additionally, the Project site is located in an urbanized environment with little potential for wildland fires. Therefore, no exposure to wildland fires would be present, and no impact would occur.

3.10 Hydrology and Water Quality

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	☐	☐	☒	☐
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	☐	☐	☒	☐
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:				
i) result in substantial erosion or siltation on or off site;	☐	☐	☒	☐
ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on or off site;	☐	☐	☒	☐
iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or	☐	☐	☒	☐
iv) impede or redirect flood flows?	☐	☐	☐	☒
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	☐	☐	☒	☐
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	☐	☐	☒	☐

a) Would the project violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?

Less Than Significant Impact. A significant impact would occur if the proposed Project would discharge water that did not meet the water quality standards established by the SWRCB NPDES and waste discharge requirement permit programs, and the Los Angeles Regional Water Quality Control Board's (LARWQCB) *Los Angeles Region Basin Plan for the Coastal Watersheds of Los Angeles and Ventura Counties* (Basin Plan; LARWQCB 2019). The proposed Project is not anticipated to violate any water quality standard or waste discharge requirement during construction and operation, for the reasons described below.

Construction

Construction General Permit. Renovation and remodeling of the three-story structure (Building C) and the construction of a new five-story structure (Building D) would disturb a large portion of the Project site. Grading and excavation activities would result in soil disturbance, which could potentially increase sediment loads in stormwater runoff by eroding soils newly loosened by construction activities. Additionally, the proposed Project could adversely affect water quality through the accidental spills and leaks of construction-related pollutants such as petroleum products from construction vehicles.

However, the proposed Project would comply with the provisions of the Construction General Permit (CGP), which is *NPDES General Permit for Storm Water Associated with Construction Activities* (Order No 2009-009-DWQ as amended by 2010-0014-DWQ and 2012-0006-DWQ, NPDES No. CAS000002). Because the proposed Project is greater than 1 acre in size, the Applicant would be required to submit a Notice of Intent to the LARWQCB in order to obtain approval to complete construction activities under the CGP. This permit would include a number of design, management, and monitoring requirements for the protection of water quality and the reduction of construction phase impacts related to stormwater (and some non-stormwater) discharges. Permit requirements would include the preparation of a SWPPP, implementation and monitoring of BMPs, implementation of best available technology for toxic and non-conventional pollutants, implementation of best conventional technology for conventional pollutants, and periodic submittal of performance summaries and reports to the LARWQCB. The SWPPP would apply to the Project as a whole and would include reference to the major construction areas, materials staging areas, and haul roads.

Typical BMPs that could be incorporated into the SWPPP include the following:

- Diverting off-site runoff away from the construction site
- Vegetating landscaped/vegetated swale areas as soon as feasible following grading activities
- Placing perimeter straw wattles to prevent off-site transport of sediment
- Using drop inlet protection (filters and sand bags or straw wattles), with sandbag check dams within paved areas
- Regular watering of exposed soils to control dust during demolition and construction
- Implementing specifications for demolition/construction waste handling and disposal
- Using contained equipment wash-out and vehicle maintenance areas
- Maintaining erosion and sedimentation control measures throughout the construction period
- Stabilizing construction entrances to avoid trucks from imprinting soil and debris onto City roadways
- Training, including for subcontractors, on general site housekeeping

Additionally, the proposed Project would comply with the City's Municipal Code, Chapter 8, Part 2, Section 7827 and 7828, which requires that each operator of any construction activity submit evidence to the City that all applicable permits have been obtained, including but not limited to the State Water Board's CGP and a Low Impact Development (LID) plan.[11] Given the above, the proposed Project would have a less than significant impact on water quality standards and waste discharge requirements and would not otherwise substantially degrade surface or groundwater quality during construction. As a result, no mitigation is required.

Operations

Stormwater Management and Discharge Control. The purpose of the City's requirements, as set forth in Section 7800 of the Municipal Code, is to ensure the future health, safety, and general welfare of citizens by: (a) eliminating non-stormwater discharges to the municipal separate storm drain; (b) controlling the discharge from spills, dumping or disposal of materials other than stormwater to municipal separate storm drains; and (c) reducing pollutants in stormwater discharges to the maximum extent practicable. Section 7820 of the Municipal Code prohibits the discharge of non-stormwater into the City's storm drain system, unless a discharge permit, which meets the City's requirements, is obtained. The proposed Project would adhere to the City's stormwater management and discharge control regulations, and, as such, is not anticipated to violate any water quality standard or waste discharge requirement during operation.

Low Impact Development Features. In the City of Arcadia, all development and redevelopment projects must comply with the latest County of Los Angeles Department of Public Works LID Standards Manual (County of Los Angeles 2004). The LID Standards Manual complies with the requirements of the NPDES Municipal Separate Storm Sewer System (MS4) Permit for stormwater and non-stormwater discharges from the MS4, within the coastal watersheds of Los Angeles County (CAS004001, Order No. R4-2012-0175), referred to as the 2012 MS4 Permit. The LID Standards Manual provides guidance for the implementation of stormwater quality control measures in new development and redevelopment projects with the intention of improving water quality and mitigating potential water quality impacts from stormwater and non-stormwater discharges (County of Los Angeles 2014). A preliminary LID Plan, included as Appendix D, was prepared for the Project in July 2019 by Lin Consulting.

According to the LID Plan (Appendix D), the Project site is comprised of roughly 5% pervious and 95% impervious area under existing conditions. Upon operation of the proposed Project, the site would be approximately 15% pervious and 85% impervious, which would result in increased stormwater infiltration and groundwater percolation and less surface runoff. Therefore, this Project falls into redevelopment of a previously developed site in an urbanized area that does not increase the effective impervious area or decrease the infiltration capacity of pervious areas compared to the pre-project conditions. Project design, construction, and operation would be completed in accordance with the LID Standards Manual and with the Project-specific LID Plan, with the goal of reducing the amount of pollutants in stormwater and urban runoff. The LID Plan includes permanent control measures to reduce the long-term impacts of the Project on water quality and the tributary waterways. The LID Plan would use site design and stormwater management in order to maintain the site's pre-development runoff rates and volumes. The goal of the LID Plan would be to mimic the site's pre-development hydrology by

[11] City of Arcadia Municipal Code, Chapter 8, Part 2, Section 7800 – Stormwater Management and Discharge Control City of Arcadia Municipal Code, Chapter 8, Part 2, Section 7827 – Control of Runoff Required – Construction Activity. City of Arcadia Municipal Code, Chapter 8, Part 2, Section 7828 – Low Impact Development – Control of Runoff Required for Planning Priority Projects.

using design techniques that filter, store, evaporate, and detain runoff close to the source of rainfall. Some examples of these LID measures that would be incorporated into the Project include:

- Utilizing the existing 35- and 44-unit stormwater filtration chambers so as to retain and treat stormwater resulting from the design storm (i.e., 85th percentile, 24-hour rain event), until it is infiltrated into the ground.
- Providing new biofiltration areas for existing and proposed site drainages so as to capture and treat surface runoff.
- Utilizing permeable pavement so as to increase the volume of rainwater percolation (thereby reducing surface runoff), prior to discharge into the existing stormwater filtration chambers.

Per the LID Manual, the Project must retain the stormwater quality design volume (on site through infiltration, evapotranspiration, stormwater runoff harvest and reuse, or a combination thereof, unless it is demonstrated that it is technically infeasible to do so. The stormwater quality design volume is defined as the greater of the 0.75-inch, 24-hour rain event, or the 85th percentile, 24-hour rain event, as determined from the Los Angeles County 85th percentile precipitation isohyetal map.

Compliance with the SWPPP and the Project-specific recommended LID features (Appendix D) would ensure that the Project would not violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality. As such, Project impacts would be less than significant and no mitigation is required.

b) Would the project substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?

Less Than Significant Impact. The proposed Project is consistent with the General Plan and does not require a General Plan Amendment; therefore, the Project would be consistent with the City's growth projections anticipated in local and regional planning documents, including the City's 2015 Urban Water Management Plan (UWMP). As stated in the UWMP (City of Arcadia 2016b), the projected populations used in the UWMP for the City's service area were based on projections obtained from SCAG. The SCAG data incorporates demographic trends, existing land use, general plan land use policies, and input and projections from the Department of Finance and the U.S. Census Bureau.

As stated in the UWMP, the Main Basin and Raymond Basin have been well managed for the full period of their respective adjudications, resulting in a stable and reliable water supply for the City during average, single-dry, and multiple-dry water years (City of Arcadia 2016b). Additionally, imported water from Metropolitan Water District of Southern California (MWD) can be utilized as a supplemental source of supplies. City water conservation efforts will continue into the future to reduce water demands within the City due to the recently implemented tiered water rate and Water Smart program, which are intended to encourage conservation, thereby making local supplies more reliable.

According to the UWMP, the City can sustainably pump 19,500 gallons per minute (gpm) from available groundwater supplies (15,200 gpm from the Main Basin and 4,300 gpm from the Raymond Basin). If the City pumps more water than the allotted amount, replacement water must be purchased from the MWD for spreading and recharging the Main San Gabriel Groundwater Basin; however, the City has not had to rely on any imported water supplies since the 2009-2010 fiscal year (City of Arcadia 2016b). In addition to groundwater and imported water supplies, the City may pre-purchase water for cyclic storage for later use.

Furthermore, according to the UWMP, the Main Basin has the capacity to store approximately 8.7 million acre-feet of water, while historic basin operations have only ever reached a maximum of one million acre-feet (UWMP 2016a). Per the UWMP, the City does not experience water supply constraints or deficiencies and projects having adequate supply through the planning year 2040. The proposed Project would not include any wells that would directly deplete groundwater supplies, and the City's UWMP anticipates adequate supply through 2040. As such, the proposed Project would not substantially decrease groundwater supplies such that the project may impede sustainable groundwater management of the basin.

Because the Project site is currently fully developed with impervious paving, with only negligible areas of pervious surfaces for ornamental landscaping, the addition of the new development would have a nominal impact on groundwater recharge; if anything, the proposed Project would result in a slight increase in groundwater recharge due to the anticipated 10% increase in pervious area anticipated under the proposed Project. Therefore, the proposed Project would have a less than significant impact to groundwater supplies, would not interfere substantially with groundwater recharge, and no mitigation is required.

c) Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:

i) result in substantial erosion or siltation on or off site;

Less Than Significant Impact. The proposed Project is currently fully (95%) developed with impervious paving, with only negligible areas (5%) of pervious surfaces for ornamental landscaping. The addition of the new development would not substantially alter the existing drainage pattern of the site or area and would increase the amount of pervious surfaces by 10%, thus resulting in decreased runoff. The Project site currently includes minor parking lot drainage swales, with no creeks or major drainages traversing the site. As previously discussed, during construction, erosion-control measures would be implemented as part of the SWPPP for the Project, consistent with the requirements of the CGP (Order No 2009-009-DWQ as amended by 2010-0014-DWQ and 2012-0006-DWQ, NPDES No. CAS000002) or the latest approved general permit.

As stated above, for the long-term operation of the Project, the Project would adhere to the City's Municipal Code Sections 7800 et seq., which would address stormwater runoff and water quality. Stormwater flows from the Project site would continue to flow into the existing storm drain infrastructure adjacent to the Project site.

As stated in Section 3.10(a) above, Project design, construction, and operation would be completed in accordance with the LID Standards Manual and with the Project LID Plan (Appendix D), with the goal of reducing the amount of pollutants in stormwater and urban runoff. The LID Plan includes permanent control measures to reduce the long-term impacts of the Project on water quality and the tributary waterways. The LID Plan would use site design and stormwater management in order to maintain the site's pre-development runoff rates and volumes. The goal of the LID Plan would be to mimic the site's pre-development hydrology by using design techniques that filter, store, evaporate, and detain runoff close to the source of rainfall. With adherence to the SWPPP and the Project LID Plan, on- and off-site erosion and siltation would be reduced to a less-than-significant level. No mitigation is required.

ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on or off site;

Less Than Significant Impact. The new Building D would implement the BMPs outlined in the LID Plan, which are intended to mimic the site's pre-development hydrology by using design techniques that filter, store, evaporate, and detain runoff close to the source of rainfall. The recommended LID features would, as much as feasibly possible, minimize impervious surfaces, use landscape a drainage feature, and improve drainage facilities to decrease the potential of flooding on and off site. With these features implemented, the development of Building D is not anticipated to result in an increase of surface runoff and associated likelihood of flooding. In regards to the renovation and remodeling of Building C, the development would minimally alter the drainage patterns of the site and thus would not increase the rate or amount of surface runoff or flooding on or off site. Rather, the proposed Project would result in an overall 10% increase in pervious area on site, and, as such, would increase the volume of stormwater infiltration and percolation, as well as decrease the rate and volume of surface runoff on the Project site, thereby reducing the likelihood for flooding on or off site when compared to existing conditions. As such, the Projects impacts related to runoff that could result in flooding on site or off site would be less than significant, and no mitigation is required.

iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or

Less Than Significant Impact. As previously discussed, during construction, erosion-control measures would be implemented as part of the SWPPP for the Project, consistent with the requirements of the CGP (Order No 2009-009-DWQ as amended by 2010-0014-DWQ and 2012-0006-DWQ, NPDES No. CAS000002) or the latest approved general permit. The site-specific SWPPP would ensure that runoff during construction would not exceed the capacity of existing or planned stormwater infrastructure. In addition, implementation of the Project LID Plan (Appendix D) would mitigate and minimize post-construction sources of polluted runoff by mimicking the site's pre-development hydrology by filtering, storing, evaporating, and detaining water. With these features, the proposed Project would not create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff. Project impacts would be less than significant and no mitigation is required.

iv) impede or redirect flood flows?

No impact. There are no drainages, creeks, or streams on the Project site and no flows would be diverted, impeded, or redirected due to the proposed Project.

d) In flood hazard, tsunami, or seiche zones, would the project risk release of pollutants due to project inundation?

Less Than Significant Impact. No areas within the City of Arcadia are designated 100-year flood zones (City of Arcadia 2010a). According to the Federal Emergency Management Agency (FEMA), the Project is located within Zone X, which is an area of Minimal Flood Hazard (FEMA 2008). Therefore, the Project site is not located within an area that would be subject to flooding.

The Project is, however, located in the Santa Anita Dam flood inundation zone. Approximately half of the City of Arcadia is located within the dam inundation zone. Failure of the Santa Anita Dam would lead to inundation of a large eastern section of the City. At capacity, floodwaters from the dam would travel down Santa Anita Canyon to about Orange Grove Avenue and then spread across the eastern half of the city from Arcadia Wash. To comply with state dam safety regulations, the water level behind the dam is restricted to be no higher than an elevation of 1,230 feet above mean sea level, to meet the California Division of Safety of Dams seismic safety requirements and to reduce the potential magnitude of downstream flooding (City of Arcadia 2010a). Seismic retrofit of the Santa Anita Dam, which was built in 1927, was scheduled to begin in 2019 to improve public safety and prevent flood damage to downstream communities (LADPW 2018b). Dam failure potential is low and the extent of inundation would depend on the amount of water stored at the time of failure. Seismic upgrades will reduce the potential for flooding at the Project site.

The Project site is not located near a body of water or close to the ocean and as a result, is not susceptible to tsunamis or seiches. In the unlikely event that the site were to be flooded as a result of dam failure, the risk of release of pollutants due to inundation is low, as the proposed site uses (i.e., hotel) would not include storage of hazardous materials or hazardous waste. Therefore, Projects impacts would be less than significant.

e) Would the project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

Less Than Significant Impact. The *Basin Plan for the Coastal Watersheds of Los Angeles and Ventura Counties* is the Water Quality Control Plan (WQMP) for the Los Angeles Region, which includes the City of Arcadia. The Basin Plan: (i) identifies beneficial uses for surface waters and groundwaters, (ii) includes the narrative and numerical water quality objectives that must be attained or maintained to protect the designated beneficial uses and conform to the state's anti-degradation policy, and (iii) describes implementation programs and other actions that are necessary to achieve the water quality objectives established in the Basin Plan (LARWQCB 2019). The existing, potential or intermittent beneficial uses for the Arcadia Wash, the Santa Anita Wash, and the Rio Hondo Channel, where stormwaters from the City are discharged and for the underlying groundwater basins in the City (Raymond and San Gabriel Valley groundwater basins) include: domestic water supply (MUN); industrial activities (IND); industrial process dependent upon water quality (PROC); agricultural supply (AGR); groundwater recharge (GWR); Water Recreation (REC-1, REC-2); warm water ecosystems (WARM); cold water ecosystems (COLD); terrestrial ecosystems (WILD); rare, threatened or endangered species (RARE); and wetland ecosystems (WET) (LARWQCB 2019).

With compliance with applicable regulations, the proposed Project does not include any facilities or land uses that could generate pollutants that could result in substantial water quality impacts. As discussed in Threshold 3.10(a), compliance with the City's Stormwater Management requirements would protect the water quality of watercourses in a manner pursuant to and consistent with the Federal Clean Water Act, and pursuant to the NPDES CGP No. 2009-0009-DWQ. Restrictions in this Ordinance are applicable to both construction activities and operations. Additionally, compliance with CGP issued by the SWRCB would require implementation of BMPs during construction to address the potential for pollutants from entering downstream waters. The Project's potential to violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface water or groundwater quality would be less than significant and no mitigation is required.

The California Department of Water Resources (DWR) is required to prioritize and update California's groundwater basin prioritization in accordance with the requirements of the Sustainable Groundwater Management Act and related laws. The act requires that groundwater resources be managed sustainably for long-term reliability and multiple benefits for current and future beneficial uses. The Sustainable Groundwater Management Act applies to all California groundwater basins and requires that high- and medium-priority groundwater basins form Groundwater Sustainability Agencies (DWR 2019). DWR is required to prioritize California's 517 groundwater basins and subbasins as either high, medium, low, or very low. The San Gabriel Basin Valley, which underlies the City of Arcadia, was determined by DWR to be "Very Low" priority and is therefore not subject to the requirements to form a Groundwater Sustainability Agency and to develop a Groundwater Sustainability Plan.

As previously discussed, the SWPPP and LID features would reduce the Project's impact on water quality in accordance with all applicable federal, state, and local requirements. Additionally, the Project would be consistent with the assumptions set forth in the City of Arcadia's UWMP, as discussed in section (a). As a result, the Project would not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan. Therefore, the Project's impact would be less than significant and no mitigation is required.

3.11 Land Use and Planning

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Physically divide an established community?	☐	☐	☐	☒
b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☒	☐

a) Would the project physically divide an established community?

No Impact. The proposed Project would include the conversion of an existing building to a 76,754 square-foot hotel and the construction of one new 61,538-square-foot hotel annex building. The Project site is surrounded by low density residential to the north; commercial land uses to the east, recreational, hotel, and commercial land uses to the south, and horse racing land uses to the south and west. The proposed Project would not include the construction of any buildings, roads, or other infrastructure that would physically divide an established community, nor would it impede access between existing neighborhoods and other areas of the City by creating physical barriers. Rather, the proposed Project would redevelop a portion of an existing commercial site and would provide hospitality amenities to the surrounding community and to the City at large. As such, the proposed Project would not divide an established community and no impact would occur. No mitigation is required.

b) Would the project cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?

Less than Significant Impact. Land use plans and policies applicable to the proposed Project are set forth in the City's General Plan and Zoning Ordinance. The City's General Plan provides the planning framework through which development in the City is organized and carried out. The Project site is zoned General Commercial (G-C) with a Downtown Overlay. Permitted uses under the Commercial land use designation consist of an array of commercial enterprises, including restaurants, durable goods sales, food stores, lodging and professional offices (City of Arcadia 2010b).

The C-G Zone is intended to provide areas for the development of retail and service uses, offices, restaurants, public uses, and similar and compatible uses (City of Arcadia 2016a). The maximum Floor Area Ratio (FAR) permitted under the C-G Zone and under the Downtown Overlay Zone is 1.0 for new development and the maximum height permitted for new buildings is 48 feet. The proposed Project would have a FAR of 0.85 and thus would be compatible with the C-G Zone and Downtown Overlay Zone's FAR. However, the proposed Project would include a five-story, building (Building D), which would be 63'10" in height above average grade. Given the 48-foot height restriction, the Project would be subject to a height variance, to be reviewed concurrently with Project approvals. Additionally, Project approval would be subject to a CUP, which is required in order to develop hotel land uses in the C-G Zone.

With approval of the height variance, the proposed Project would be compatible with the General Plan's land use and zoning designations and would have a less than significant impact on any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect. No mitigation is required.

3.12 Mineral Resources

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
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?	☐	☐	☐	☒
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?	☐	☐	☐	☒

a) Would the project 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?

No Impact. Historically, the City has mined aggregate mineral resources, namely sand, gravel and crushed stone. According to the City's General Plan EIR, the City is located within the San Gabriel Valley Production-Consumption region, where more than 10 million tons of aggregate resources were produced in 2005 (City

of Arcadia 2010a). No mining operations are currently ongoing in the City. According to the City's General Plan, no properties in Arcadia will be subject to mining activities in the future and, as such, the City's focus is on the continued reclamation of prior quarries and the protection of properties in Arcadia from mining operations in adjacent communities (City of Arcadia 2010a). Per the Surface Mining and Reclamation Act of 1975, which mandated the classification of mineral lands by the State Geologist, the Project site is classified as a Mineral Resource Zone (MRZ-) 4. MRZ-4 zones are classified as areas where there is insufficient data to assign another designation. Additionally, only one idle oil and gas well, approximately 0.85-mile to the southeast of the Project site was identified on DOC DOGGR's online well finder. Reportedly, the well was abandoned in 1926 (DOC DOGGR 2019).

The Project site is fully developed and paved under existing conditions, and, as such, does not support any mineral or oil and natural gas extraction activities. Per the State Mining and Geology Board's classifications, the proposed Project site is within an MRZ-4 Zone, which is defined as an area where there is not enough information to assign another designation. Additionally, the City's General Plan Resource Sustainability Element maintains that no properties in Arcadia will be subject to mining activities in the future and, as such, the City's focus is on the continued reclamation of prior quarries and the protection of properties in Arcadia from mining operations in adjacent communities (City of Arcadia 2010b).

Given that: the proposed Project site and surrounding land uses are fully developed; the City does not anticipate future mining activities in the City; and, given the absence of known, significant mineral resources as mapped by the state, project implementation would not result in the loss of availability of a known mineral resource. The Project would not 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 and no mitigation is required.

b) Would the project 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?

No Impact. According to the City's General Plan, the Project site is located in a MRZ-4 zone, which is defined as an area where there is not enough information to assign another designation. The Project site is zoned C-G, which does not support mineral extraction activities. Additionally, the City's General Plan Resource Sustainability Element maintains that no properties in Arcadia will be subject to mining activities in the future and, as such, the City's focus is on the continued reclamation of prior quarries and the protection of properties in Arcadia from mining operations in adjacent communities (City of Arcadia 2010b). Given the above, the proposed Project would not result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan. The Project would not 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 and no mitigation is required.

3.13 Noise

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project result in:				
a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☒	☐	☐
b) Generation of excessive groundborne vibration or groundborne noise levels?	☐	☒	☐	☐
c) For a project located within the vicinity of a private airstrip or 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?	☐	☐	☐	☒

a) Would the project result in generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

Less Than Significant Impact. The Project is within the City of Arcadia. According to the City's General Plan, the established maximum exterior noise standard for residential land use areas is 65 dBA CNEL [decibel (dB) level as measured with a sound-level meter using the A weighting network]. No exterior noise standard is set for hotels; however, the interior noise standard is 45 dBA CNEL (Community Noise Equivalent Level).

The Arcadia Municipal Code addresses noise in several sections. In Article IV, Part 1, General Provisions, Section 4610.3 "Noise Limits," the Municipal Code designates a noise limit of 55 dBA from stationary noise sources within residential land uses from 7:00 a.m. to 10:00 p.m.; from 10:00 p.m. to 7:00 a.m., the noise limit is 50 dBA. In Article IV, Part 6, Nighttime Construction, Section 4261 "Prohibited Hours Defined," Section 4262 "Construction Limited," Section 4262.1 "Same. Exception," and Section 4263 "Permit," the Municipal Code stipulates that nighttime construction between the hours of 6:00 p.m. and 7:00 a.m. of any weekday, 5:00 p.m. and 8:00 a.m. on Saturday, and anytime on Sunday and holidays is prohibited.

Existing Noise Conditions

Noise measurements were conducted on and near the Project site in June 2019 to characterize the existing noise levels. Noise measurements were conducted at four locations on the Project site and at nearby noise-sensitive land uses to determine the approximate ambient daytime noise levels. One additional noise measurement was conducted to approximate the ambient daytime and nighttime noise levels for the Project location. The locations of the short-term monitoring on 24-hour monitoring locations are shown in Figure 7, Noise Measurement Locations.

The short-term noise measurements were conducted on June 11, 2019 between 10:46 a.m. and 12:10 p.m. and are included in Appendix E of this IS/MND. These four daytime, short-term (1 hour or less) attended sound level measurements were taken with a Piccolo SoftdB sound-level meter. This sound-level meter meets the current American National Standards Institute standard for a Type 2 (general-purpose) sound-level meter. The sound-level meter was positioned at a height of approximately 5 feet above the ground. The measured daytime average sound levels ranged from 54 to 69 dBA, as depicted in Table 16, Ambient Measured Noise Levels. The measurement results are in terms of the time-averaged equivalent noise level (L_{eq}).

Table 16. Ambient Measured Noise Levels

Site	Location	Sound Level (dBA L_{eq})	Noise Sources
Daytime Short-Term Noise Measurements			
ST1	On-Site: Existing parking lot on east side of proposed Project site (near proposed pool area and Building D).	61.9	Traffic noise, birds
ST2	Single-family residential north of Project site; 101 Santa Cruz Road	58.9	Traffic noise, distant traffic, birds
ST3	Single-family residential north-northwest of Project site; 117 Santa Cruz Road	54.4	Traffic noise, distant traffic, distant landscaping activities, birds
ST4	Northwest corner of Arcadia Park, near intersection of West Huntington Drive and Santa Clara Street	66.2	Traffic noise, birds
Daytime and Nighttime 24-Hour Noise Measurements			
LT1	Project site; near façade of proposed Building C	**Daytime Noise Measurements[a]** Range: 59.8–65.2 Average: 62.8	Attendant was not present; however, based on daytime observations noise could be attributed primarily to traffic
		Nighttime Noise Measurements[b] Range: 45.3–62.3 Average: 55.5	Attendant was not present; however, based on daytime observations noise could be attributed primarily to traffic
		Overall Weighted-Average Noise Level; 64.6 dBA CNEL	

Source: See Appendix E for complete results.
Notes: dBA = A-weighted decibels; Leq = time-averaged equivalent noise level.
a Nighttime noise measurements were taken from 10:00 p.m. to 7:00 a.m.
b Daytime noise measurements were taken from 7:00 a.m. to 10:00 p.m.

The 24-hour noise measurement was conducted from June 11 to June 12, 2019. The non-attended sound level measurements were taken with a SoftdB Piccolo sound-level meter. The sound-level meter meets the current American National Standards Institute standard for a Type 2 (general purpose) sound-level meter. The sound-level meter was placed on a tree located on site at a height of approximately 5 feet above the ground. The measured daytime average sound levels (7:00 a.m. to 10:00 p.m.) ranged from approximately 60 to 65 dBA L_{eq}, with an overall average of approximately 63 dBA L_{eq}, as depicted in Table 16. The measured nighttime average sound levels (10:00 p.m. to 7:00 a.m.) ranged from approximately 45 to 62 dBA L_{eq}, with an overall average of 58 dBA L_{eq}, as depicted in Table 16. The 24-hour weighted average

noise level at Site LT4 was approximately 65 dBA CNEL. The measurement results are in terms of the time-averaged sound level.

Anticipated on-site noise-generating activities associated with the proposed Project would include short-term construction and long-term operational noise of the proposed Project, as follows:

Construction (Short-Term Impacts)

Construction noise and vibration are temporary phenomena. Construction noise and vibration levels vary from hour to hour and day to day, depending on the equipment in use, the operations being performed, and the distance between the source and receptor.

Construction of the overall proposed Project is anticipated to take approximately 20 months, beginning in May 2020. Construction of the proposed Project would include demolition, site preparation, grading, building construction, paving, and application of architectural coatings.

Equipment that would be in operation during construction would include graders, backhoes, bulldozers, loaders, forklifts, compressors, welders, and paving equipment. The typical maximum noise levels for various pieces of construction equipment at a distance of 50 feet are presented in Table 17 below.

Table 17. Construction Equipment Maximum Noise Levels

Equipment Type	"Typical" Equipment dBA at 50 feet	"Quiet" Equipment* dBA at 50 feet
Air compressor	81	71
Backhoe	85	80
Concrete pump	82	80
Concrete vibrator	76	70
Crane	83	75
Truck	88	80
Dozer	87	83
Generator	78	71
Loader	84	80
Paver	88	80
Pneumatic tools	85	75
Water pump	76	71
Power hand saw	78	70
Shovel	82	80
Trucks	88	83

Source: U.S. DOT 2018.

* Estimated levels obtainable by selecting quieter procedures or machines and implementing noise-control features requiring no major redesign or extreme cost.

Note that the equipment noise levels presented in Table 17 are maximum noise levels. Typically, construction equipment operates in alternating cycles of full power and low power, producing average noise levels less than the maximum noise level. The average sound level of construction activity also depends on the amount of time that the equipment operates and the intensity of construction activities during that time.

The maximum noise levels at 50 feet for typical construction equipment would be 88 dB for the equipment typically used for this type of development project, although the hourly noise levels would vary. Construction noise in a well-defined area typically attenuates at approximately 6 dB per doubling of distance. Project construction would take place both near and far from adjacent, existing noise-sensitive uses. For example, demolition of existing pavement and re-paving activities would take place as near as approximately 25 feet from existing residential property line (building construction would take place approximately 70 feet away), but during construction of other components, construction would be several hundred feet away from noise sensitive receptors and potentially shielded from direct view. Most construction activities associated with the proposed Project would occur at distances of approximately 130 feet or more from existing noise-sensitive uses.

The Federal Highway Administration's (FHWA) Roadway Construction Noise Model (RCNM) (FHWA 2008) was used to estimate construction noise levels at the nearest occupied noise-sensitive land use (although the model was funded and promulgated by the FHWA, the RCNM is often used for non-roadway projects, because the same types of construction equipment used for roadway projects are often used for other types of construction). Input variables for the RCNM consist of the receiver/land use types, the equipment type and number of each (e.g., two graders, a loader, a tractor), the duty cycle for each piece of equipment (e.g., percentage of hours the equipment typically works per day), and the distance from the noise-sensitive receiver. A conservative amount of noise reduction (5 decibels) provided by the intervening solid masonry boundary wall (between the Project site and the residences to the north) was assumed for the construction noise analysis. The RCNM has default duty-cycle values for the various pieces of equipment, which were derived from an extensive study of typical construction activity patterns. Those default duty-cycle values were used for this noise analysis.

Using the FHWA's RCNM construction noise model and construction information (types and number of construction equipment by phase), the estimated noise levels from construction were calculated for a representative range of distances, as presented in Table 18, Construction Noise Model Results Summary, below. The RCNM inputs and outputs are provided in Appendix E.

Table 18. Construction Noise Model Results Summary

Construction Phase	Construction Noise at Representative Receiver Distances (dBA L_{eq})	
	Nearest Residence - Construction Distance (Approximately 25' Away for Demolition and Paving, 70' Away for other phases)	*Typical Residence - Construction Distance (Approximately 130' Away)*
Demolition	86	73
Site Preparation	76	72
Grading	75	73
Building Construction	75	71
Paving	80	69
Architectural Coating	66	60

Source: Appendix E
Notes: L_{eq} = equivalent continuous sound level

As presented in Table 18, the highest noise levels are predicted to occur during demolition activities when noise levels from construction activities would be as high as 86 dBA L_{eq} at the nearest existing residences,

approximately 25 feet away. At more typical distances of approximately 130 feet, construction noise would range from approximately 60 to 73 dBA L_{eq}.

According to the City's Municipal Code, construction work is prohibited between the hours of 6:00 p.m. and 7:00 a.m. Monday – Friday, 5:00 p.m. and 8:00 a.m. on Saturday, and anytime on Sunday and holidays. Although nearby off-site residences would be exposed to elevated construction noise levels, the noise levels would not be high enough to pose a hazard to human health[12]; furthermore, the exposure would be short-term and would cease upon completion of construction. In compliance with the City's Municipal Code, construction activities associated with the proposed Project would take place between 7:00 a.m. and 7:00 p.m. and would not take place on Sundays or public holidays. Therefore, the proposed Project construction would be in compliance with applicable noise regulations, and therefore construction noise would be less than significant.

However, construction noise levels would be higher than existing ambient daytime noise levels, which could cause temporary annoyance at nearby residential land uses. The implementation of the best practices listed in MM-NOI-1 are provided, given the proximity to residences. The best practices included in MM-NOI-1 would reduce the potential for annoyance from the temporary construction activities. Effectiveness of these measures would vary from several decibels (which in general is a relatively small change) to ten or more decibels (which subjectively would be perceived as a substantial change), depending upon the specific equipment and the original condition of that equipment, the specific locations of the noise sources and the receivers, etc. For example, installation of construction equipment silencers could range from several decibels to well over 10 decibels. Reduction of idling equipment could reduce overall noise levels from barely any reduction to several decibels. Cumulatively, the implementation of several different best practices for noise reduction, as set forth in a site-specific Construction Noise Control Plan (CNCP) would result in substantial decreases in the noise from construction.

MM-NOI-1 Prior to the issuance of a grading permit, the Project Applicant shall provide a Construction Noise Control Plan (CNCP) to the City for review and approval. The CNCP shall include best management practices to reduce short-term construction noise. Enforcement of the CNCP shall be accomplished by field inspections during construction activities and/or documentation of compliance, to the satisfaction of the City's Development Services Department. Recommended best management practices may include, but not be limited to, the following:

- All construction equipment, fixed or mobile, shall be equipped with properly operating and maintained mufflers consistent with the manufacturers' specifications and standards.
- Construction noise reduction methods such as shutting off idling equipment, maximizing the distance between construction equipment staging areas and adjacent residences, and use of electric air compressors and similar power tools, rather than diesel equipment, should be used where feasible.

[12] The most highly studied type of human exposure is occupational noise. Within the State of California, the Division of Occupational Safety and Health (DOSH), better known as Cal/OSHA, protects and improves the health and safety of working men and women in California. Cal/OSHA occupational noise regulations are similar to those of the federal government's: Cal/OSHA sets an "Action Level" (AL), of 85 dBA. The AL is defined as the average employee noise exposure for an 8-hour day, which when reached or exceeded requires the implementation of actions to reduce the risk of noise-induced hearing loss. Cal/OSHA sets a "Permissible Exposure Level" (PEL) of 90 dBA. The PEL is the average employee noise exposure for an 8-hour day, 40-hour week at which nearly all employees may be exposed without adverse health effects. Note however that these levels assume a career-long exposure; in the case of nearby residents, the noise exposure during construction activities would be quite brief.

- Stationary equipment should be placed as far away from the adjacent residential property boundary as feasible and positioned such that emitted noise is directed away from or shielded from sensitive receptors. Acoustically attenuating shields, shrouds, or enclosures may be placed over stationary equipment.
- During all Project site construction, the construction contractor shall limit all construction-related activities, including maintenance of construction equipment and the staging of haul trucks, to between the hours of 7:00 a.m. to 6:00 p.m. Monday through Friday and 8:00 a.m. to 5:00 p.m. on Saturday.
- Construction hours, allowable workdays, and the phone number of the job superintendent should be clearly posted at all construction entrances to allow surrounding property owners to contact the job superintendent, if necessary. In the event the City receives a complaint, appropriate corrective actions should be implemented and a report of the action provided to the reporting party City's Development Services Department.

Operational Noise (Long-Term Impacts)

Long-term operational noise associated with the proposed Project includes noise from the proposed hotel uses. Long-term operational noise also includes Project-generated traffic and overall traffic noise at the Project site. Each of these is addressed below.

On-Site Stationary Noise. The proposed Project would redevelop the eastern portion of the site with the Building D, as well as surface parking and sidewalk/pedestrian improvements. These uses would be in keeping with the commercial and residential character of the neighboring land uses, and no external noise sources are planned or proposed, save for HVAC equipment, suitably sized for the Project, an emergency generator, and a pool area. The pool area, balcony and patio areas would be surrounded on the north, east and west sides by the 3- to 5-story hotel structures; therefore, nearby residences would not be exposed to poolside, patio or balcony noise or mechanical equipment noise from the pool area. The parking lot area would be utilized in effectively the same fashion as it is currently and thus, there would be no change in regard to parking lot noise.

HVAC equipment would be located on the rooftops of the proposed buildings and would be screened from direct view by nearby residences by parapet walls and/or mechanical equipment screen walls. The specific details (location, size, manufacturer, and model) of the equipment have not yet been determined. However, based upon examination of several major manufacturers' HVAC equipment specifications for representative models (details of which are provided in Appendix E), the dimensionless sound power levels were found to range from approximately 68 dBA to 92 dBA. Based upon the project's site plan, the mechanical equipment would be located within approximately 150 feet of the residences. Assuming a sound power level of 92 dBA, the noise level at a distance of 150 feet from one HVAC unit would be approximately 51 dBA at the nearest existing residential property. If additional units were operating simultaneously, the resultant noise level at the nearest existing residences would be greater. Therefore, the HVAC equipment would have the potential to generate noise levels which could exceed City of Arcadia municipal noise standards (55 dBA L_{eq} daytime, 50 dBA L_{eq} nighttime).

Similarly, the details (i.e., location, equipment specifications) of the proposed emergency backup generator have not yet been developed; however, assuming a 250 kW natural gas-powered generator, and utilizing sound level outputs provided by the manufacturer for various configurations, the distances within which

the generator would exceed City of Arcadia daytime noise standards were calculated. The daytime noise standard was used based upon the assumption that the generator would be tested during daytime hours. The resultant calculations indicate that the distances within which the generator would exceed the City's noise standard would range from approximately 820 feet (if no enclosure was used) to approximately 130 feet (with a Level 3 acoustic enclosure). Thus, the noise from the generator also would have the potential to exceed the City's municipal noise standards.

As described above, operation of the proposed Project would have the potential to exceed the City's noise standards. However, implementation of mitigation measure MM-NOI-2 would reduce noise impacts from HVAC equipment and the emergency generator to a less than significant level. For these reasons, noise impacts from on-site stationary noise sources during operation are considered less than significant with mitigation incorporated. No further mitigation is required.

MM-NOI-2 The Project Applicant shall retain an acoustical specialist to review the Project's construction-level plans to ensure that the equipment specifications and plans for HVAC and emergency backup generator incorporate features to ensure that operational noise will not exceed relevant noise standards at nearby noise-sensitive land uses (e.g., residential). Such features could include, but not be limited to, the specification of quieter equipment, relocation of facilities to be of further distance from residential homes, and/or the provision of acoustical enclosures. The acoustical specialist shall certify in writing to the City that the equipment specifications and plans will achieve the City's relevant noise limits.

Off-Site Traffic Noise

The proposed Project would generate traffic along adjacent arterial roadways (primarily West Huntington Drive and Colorado Place). The City does not have a specific criterion for evaluating the significance of Project-related increases in off-site traffic noise levels at residences or noise-sensitive areas. For the purposes of this analysis, traffic noise level increases are considered significant if they exceed ambient traffic noise levels by 5 dB or more, or cause noise levels to exceed a 65 dBA CNEL noise threshold. An increase or decrease in noise level of 5 dBA is the minimum before any noticeable change in community response would be expected (Caltrans 2013). Therefore, a clearly perceptible increase (+5 dB) in noise exposure of sensitive receptors or a Project-related exceedance of the 65 dBA L_{dn} noise threshold could be considered significant.

The noise levels associated with roadway traffic were determined based on the Project's Traffic Impact Study (Appendix F) and using the FHWA TNM 2.5 Traffic Noise Model version 2.5 (FHWA 2004). The results of the traffic modeling at the nearby off-site noise-sensitive receivers (represented by modeled receivers ST2, ST3 and ST4) for the existing and existing plus project scenarios during both weekday and weekend conditions are summarized in Table 19; the traffic noise model data files are attached to this document in Appendix E. As shown, the Project-related traffic would result in a noise level increase of zero (0) dB CNEL (when rounded to whole numbers) along the studied roadways in the vicinity of the Project site. Noise levels at receiver ST3 are projected to decrease by approximately 3 dB as a result of the proposed Project; this is because of the acoustical shielding that would be provided by the proposed Building D. The proposed Project would not result in an exceedance of the City's 65 dBA CNEL noise threshold and Project-related traffic would not substantially increase the existing noise levels in the Project vicinity. Therefore, operational traffic-related noise impacts would be less than significant. No mitigation is required.

Table 19. Off-Site Traffic Noise (Existing and Existing-with-Project)

Modeled Off-Site Receiver	Weekdays			Saturdays		
	Existing Noise (dBA CNEL)	*Existing plus Project Noise (dBA CNEL)*	*Noise Increase (dB)*	*Existing Noise (dBA CNEL)*	*Existing plus Project Noise (dBA CNEL)*	*Noise Increase (dB)*
ST2 – Residential north of Project site	55	55	0	54	54	0
ST3 – Residential north – northwest of Project site	51	48	-3	50	47	-3
ST4 – Arcadia Park, northwest corner	68	68	0	67	67	0

The noise level increases associated with additional traffic volumes under future (Year 2021) with Project traffic conditions and future without Project traffic conditions are summarized in Table 20. The noise level increases associated with the Project under future traffic conditions would be zero (0) dB CNEL (when rounded to whole numbers) along the studied roadways in the vicinity of the Project site. Noise levels at receiver ST2 (during typical Saturday traffic conditions) and ST3 are projected to decrease as a result of the proposed Project; this is because of the acoustical shielding that would be provided by the proposed Building D. Increases would be below the significance threshold of 5 dB. Additionally, the proposed Project would not result in an exceedance of the City's 65 dBA CNEL noise threshold. Therefore, traffic related to the proposed Project would not substantially increase the existing noise levels in the Project vicinity, and operational traffic-related noise impacts would be less than significant. No mitigation is required.

Table 20. Off-Site Traffic Noise (Future and Future-with-Project)

Modeled Off-Site Receiver	Weekdays			Saturdays		
	Future Noise (dBA CNEL)	*Future plus Project Noise (dBA CNEL)*	*Noise Increase (dB)*	*Future Noise (dBA CNEL)*	*Future plus Project Noise (dBA CNEL)*	*Noise Increase (dB)*
ST2 – Residential north of Project site	55	55	0	55	54	-1
ST3 – Residential north – northwest of Project site	51	48	-3	50	47	-3
ST4 – Arcadia Park, northwest corner	68	68	0	67	67	0

b) Would the project result in generation of excessive groundborne vibration or groundborne noise levels?

Less Than Significant with Mitigation Incorporated. Construction activities that might expose persons to excessive ground-borne vibration or ground-borne noise could cause a potentially significant impact. Ground-borne vibration information related to construction activities has been collected by the California

Department of Transportation (Caltrans 2004). Information from Caltrans indicates that continuous vibrations with a peak particle velocity of approximately 0.1 inch/second begin to annoy people. The heavier pieces of construction equipment, such as bulldozers, would have peak particle velocities of approximately 0.089 inch/second or less at a distance of 25 feet (U.S. DOT 2018). At the distance from the nearest residence to the nearest construction activity (approximately 25 feet, during demolition of existing pavement and subsequent re-paving) and with the anticipated construction equipment, the peak particle velocity would be approximately 0.089 inch/second. Ground-borne vibration is typically attenuated over short distances; thus, at the distance from the nearest residence to other construction phases (approximately 70 feet), the peak particle velocity would be approximately 0.019 inch/second or less.

Vibration is very subjective, and some people may be annoyed at continuous vibration levels near the level of perception (or approximately a peak particle velocity of 0.01 inch/second). Although construction activities would not use construction equipment that would result in continuous vibration levels that typically annoy people, since some residences are as near as 25 feet from the construction area, residents could be temporarily annoyed with the use of some construction equipment. Implementation of MM-NOI-1 would ensure residents are notified of construction activities and provided contact information in the event they wish to report a noise- or vibration-related complaint.

Building damage can also result from construction vibration. However, construction vibration from the proposed Project would not result in structural building damage, which typically occurs at vibration levels of 0.5 inch/second or greater for buildings of reinforced-concrete, steel, or timber construction. As stated above, the peak particle velocity anticipated during proposed Project construction would be approximately 0.019 inch/second. The heavier pieces of construction equipment used for the Project would include excavators, graders, dump trucks, and vendor trucks. Pile driving, blasting, or other special construction techniques would not be used for construction of the proposed Project; therefore, excessive ground-borne vibration and ground-borne noise would not be generated. Ground-borne vibration would not be associated with the proposed Project during operation. Impacts related to ground-borne vibration are therefore considered less than significant with mitigation incorporated. No further mitigation is required.

c) For a project located within the vicinity of a private airstrip or 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?

No Impact. The Project is not located within the vicinity of a private airstrip, and the nearest airport (El Monte Airport) is located approximately 3.7 miles south of the Project site. The Project is not located within the planning area for this airport, nor is it located within two miles of this airport or any other airport (Airnav.com 2019; County of Los Angeles 2004). Therefore, the Project would not expose people residing or working in the Project area to excessive noise related to public airports. No impact would occur.

3.14 Population and Housing

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Induce substantial unplanned 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)?	☐	☐	☒	☐
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

a) Would the project induce substantial unplanned 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)?

Less Than Significant Impact. According to the United States Census Bureau, the City of Arcadia's population in 2018 was 58,610 people, with an average of 2.97 people per household (U.S. Census Bureau 2018). According to the City's General Plan EIR, SCAG has developed growth estimates for the City, and estimates that the City can expect a population of 65,704 people by 2035, as well as, 23,045 households and 30,356 employment opportunities by 2035 (City of Arcadia 2010a).

The proposed Project includes the conversion of an existing building (Building C) into a 76,754-sf hotel and the construction of a new 61,538-sf hotel annex building (Building D). Substantial population growth in any particular area is usually associated with a significant increase in available housing stock and/or employment opportunities. The proposed Project would not include a housing component, and, as such, would not result in any unplanned population growth through the provision of new homes. Furthermore, the proposed Project would not include the construction of any roads or other infrastructure, the implementation of which would result in substantial, indirect population growth.

Using employment generation factors from the LEED Reference Guide for Green Building Design and Construction (LEED 2009), the proposed Hotel Indigo would reduce the overall number of employees at the Project site when compared to the potentially full occupancy of Building C (former Worley Parsons Office Building). It is estimated that the new hotel, including spa and restaurant land uses, would generate approximately 111 new employees[13]. At full occupancy, the existing Building C office is estimated to support up to 269 employees[14]. The reduced employment at the Project site is not expected to substantively alter

[13] Building C + Building D: 124,079 sf of hotel at 1,500 square feet/employee (124,079/1,500 = 82.7 employees); 7,466 sf of Spa at 600 square feet/employee (7,466/600 = 12.4 employees); 6,747 sf of restaurant/café at 438 square feet/employee (6,747/435 = 15.4 employees)

[14] Per Traffic Report in Appendix F, Building C = 67,213 sf of Office, at 1 employee per each 250 square feet (67,213/250 = 269 employees)

the SCAG projected 2040 population growth estimates for the City. Population in the City is estimated to reach 65,900 people by 2040, an approximate increase of 7,209 people when compared to existing conditions (SCAG 2016).[15] Although some new employees associated with the proposed Project could relocate from outside of the City, it is more likely that these new hotel employment opportunities would be filled by people already residing within the City of Arcadia and the surrounding Los Angeles Metropolitan area. The proposed Project would not result in any new residents or otherwise result in substantial, unplanned population growth. Given the above, the proposed Project would have a less than significant impact on population growth and no mitigation is required.

b) Would the project displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

No Impact. The proposed Project would include the conversion of an existing building (Building C) into a 76,754-sf hotel and the construction of a new 61,538-sf hotel annex building (Building D). The proposed Project would entail the redevelopment of an existing commercial property, and would not include the take or acquisition of any existing housing, the demolition of which would displace substantial numbers of people or housing and necessitate the construction of replacement housing elsewhere. Instead, upon operation, the Hotel Indigo would provide hospitality amenities to the local and regional community. As such, no impact would occur and no mitigation is required.

3.15 Public Services

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for 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:				
Fire protection?	☐	☐	☒	☐
Police protection?	☐	☐	☒	☐
Schools?	☐	☐	☐	☒
Parks?	☐	☐	☐	☒
Other public facilities?	☐	☐	☐	☒

[15] Projected 65,900 people in 2040 – estimated 58,610 people = 7,209 population growth.

a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for 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:

Fire protection?

Less Than Significant Impact. The Arcadia Fire Department, is a full-service fire department that provides fire suppression, urban search and rescue, paramedic ambulance service, fire prevention inspections/permits, public fire education programs, emergency preparedness planning, fire cause and origin investigation, fire patrols, and other services based on community needs. The Fire Department consists of the Administration, Buildings and Grounds, Fire Prevention Bureau, Paramedics, Suppression, and Emergency Services Divisions (City of Arcadia 2010a). Fire Station 105 is the closest fire station to the Project site. Fire Station 105 is located 0.6-mile southeast of the Project site at 710 South Santa Anita Avenue. According to the General Plan EIR, Fire Station 105 is equipped, as follows (City of Arcadia 2010a):

- 16 firefighter personnel, including a Fire Chief, Deputy Fire Chief, Senior Management Analyst, Fire Administrative Specialist, Duty Battalion Chief, six firefighters and two firefighter paramedics, one Fire Marshal, one Administrative Assistant and one Fire Inspector.
- Fire truck 105 with a 100-foot ladder.
- Two fire engines, including Engine 105 (staffed with three firefighters) and a state fire engine.
- A rescue ambulance (staffed with two firefighter/paramedics).

The need for new or altered fire station facilities is usually associated with substantial population growth, such that existing facilities cannot meet the increased demand for fire protection services. As stated in Section 3.14, Population and Housing, the proposed Project is a hotel development project, and would not include any permanent housing, the construction of which would result in significant population growth. Project implementation has the potential to add new residents to the local population through the provision of new employment opportunities at the hotel at buildout; however, any population growth related to the proposed Project would be minor (as described in Section 3.14). Additionally, the proposed Project would adhere to the California Fire Code and with the City of Arcadia's Fire Code (Municipal Code, Section 3122.7).[16] As such, the proposed Project would not result in substantial adverse physical impacts associated with the provision of new or physically altered fire protection facilities, need for new or physically altered fire protection facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for fire protection services. Impacts would be less than significant and no mitigation is required.

Police protection?

Less Than Significant Impact. The Arcadia Police Department (APD) is located 0.3-mile south of the Project site at 250 West Huntington Drive. The APD is comprised of two divisions, namely the Operations Division and the Administration Division. The Operations Division, led by Captain Larry Goodman, responds to various calls for service received from the community, conducts preliminary investigations of criminal offenses, prepares police reports, provides high visibility patrol to reduce crime, participates in traffic education and enforcement programs, and coordinates parking enforcement. Patrol team officers also

[16] California Code of Regulations, Title 24, Part 9 – Fire Code. City of Arcadia Municipal Code, Section 3122.7 – Fire Code.

conduct special enforcement actions to combat violations such as alcohol sales to minors, street drug activities, and disorderly conduct (APD 2019).

The need for new or altered police station facilities is usually associated with substantial population growth, such that existing facilities cannot meet the increased demand for police protection services. As stated in Section 3.14, the proposed Project is a hotel development project, and would not include any permanent housing, the construction of which would result in significant population growth. Project implementation has the potential to add new residents to the local population through the provision of new employment opportunities at the hotel at buildout; however, any population growth related to the proposed Project would be minor. As such, the proposed Project would not induce substantial population growth such that new or physically altered APD facilities would be needed. Impacts would be less than significant and no mitigation is required.

Schools, Parks, Other Public Facilities?

No Impact. The Arcadia Unified School District serves approximately 10,000 children in 11 schools throughout the City. There are three schools within the general vicinity of the Project site: Barnhart School, located approximately 0.15-mile north of the Project site; Excelsior School, located approximately 0.16-mile east of the Project site; and First Avenue Middle School, located approximately 0.37-mile southeast of the Project site.

The City of Arcadia Recreation and Community Services Department manages the City's parks and recreational facilities and is also responsible for overseeing a broad spectrum of public recreational activities and programs. The City maintains 15 public parks, of which the Arcadia County Park is the closest to the Project site and is located immediately south across Huntington Drive. Amenities at Arcadia County Park include: 12 lighted tennis courts, an Olympic size swimming pool, three lighted ball diamonds, a play area, two large group picnic areas and barbeques (City of Arcadia 2019a).

The need for new or altered school facilities is usually associated with substantial population growth, such that existing school facilities cannot meet the increased demand for educational services. As stated in Section 3.14, the proposed Project is a hotel development project, and would not include any permanent housing, the construction of which would result in significant population growth. Project implementation may generate several new students through the provision of new employment opportunities at the hotel at buildout; however, any population growth related to the proposed Project would be minor and would not significantly affect the demand for educational services. Furthermore, the Applicant would be required to pay a school mitigation fee, per SB 50, which would be deemed full and complete mitigation for any indirect impacts to schools that may occur as a result of Project implementation. As such, no impact would occur and no mitigation is required.

The need for new or altered park facilities is usually associated with substantial population growth, such that existing park facilities cannot meet the increased demand for recreational services. As stated in Section 3.14, the proposed Project is a hotel development project, and would not include any permanent housing, the construction of which would result in significant population growth. Project implementation has the potential to add new residents to the local population through the provision of new employment opportunities at the hotel at buildout; however, any population growth related to the proposed Project would be minor. As such, the proposed Project would not induce substantial population growth such that new or physically altered parks would be needed. Impacts would be less than significant and no mitigation is required.

The need for new or altered public facilities, including libraries, is usually associated with substantial population growth, such that existing facilities cannot meet the increased demand for public/government services. As stated in Section 3.14, the proposed Project is a hotel development project, and would not include any permanent housing, the construction of which would result in significant population growth. Project implementation has the potential to add new residents to the local population through the provision of new employment opportunities at the hotel at buildout; however, any population growth related to the proposed Project would be minor. As such, the proposed Project would not induce substantial population growth such that new or physically altered public/government facilities, including libraries, would be needed. No impacts would occur and no mitigation is required.

3.16 Recreation

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☐	☒
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?	☐	☐	☐	☒

a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?

No Impact. The City of Arcadia Recreation and Community Services Department manages the City's parks and recreational facilities and is also responsible for overseeing a broad spectrum of public recreational activities and programs. The City maintains 15 public parks, of which the Arcadia County Park is the closest to the Project site and is located immediately south across Huntington Drive.

The physical deterioration of neighborhood and regional parks occurs when the number of residents utilizing the facilities surpasses the parks' capacity, and when the Recreation and Community Services Department cannot keep up with the maintenance demands of over utilized park facilities. As stated in Section 3.14, the proposed Project would not induce significant population growth. Project implementation has the potential to add new residents to the local population through the provision of new employment opportunities at the hotel at buildout; however, any population growth related to the proposed Project would be minor. As such, the proposed Project would not induce substantial population growth such that physical deterioration of parks and recreational facilities would occur. No impact would occur and no mitigation is required.

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?

No Impact. As stated above in 3.16(a), the proposed Project would include approximately 12,775 square feet of landscaping, which would include exterior planter beds, event turf/lawn, a swimming pool and ornamental trees and shrubs. This landscaping is included as part of the proposed Project and, therefore, has been analyzed for its potential environmental effects in this IS/MND. As substantiated throughout this document, no significant, adverse environmental effects would occur as a result of the proposed Project. As described above in Section 3.16(a), the proposed Project would not require construction or expansion of recreational facilities. No impact would occur and no mitigation is required.

3.17 Transportation

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?	☐	☐	☒	☐
b) Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?	☐	☐	☒	☐
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☒	☐
d) Result in inadequate emergency access?	☐	☐	☒	☐

a) Would the project conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?

Less Than Significant Impact. The City does not have adopted street segment analysis threshold criteria; however, the Circulation and Infrastructure Element of the City's General Plan indicates that roadway segments operating at Level of Service (LOS) D or better are considered to be at acceptable levels (City of Arcadia 2010b). LOS E is permitted on roadway segments adjacent to: 1) freeway ramps; 2) Santa Anita Park and all roadway links intended to carry seasonal race-related traffic; and, 3) the Downtown, Baldwin Avenue, and Live Oak Avenue commercial and mixed-use districts. The following analysis shows that the proposed Project would be consistent with the threshold criteria outlined by the City.

Existing Conditions

The proposed Project is generally bounded by Santa Cruz Road to the north, San Rafael Road to the east, San Juan Drive to the west, and West Huntington Drive and Colorado Place to the south. As shown in Figure 8, Vicinity Map, regional access to the Project site is provided via the I-210 Freeway, which is located

approximately 0.5-mile north of the Project site, while immediate access is provided via San Rafael Road, San Juan Road, and Colorado Place under existing conditions. A review of the key roadways in the Project site vicinity and study area is summarized below:

Huntington Drive is an east-west oriented roadway that borders a portion of the Project site to the south. In the Arcadia General Plan Circulation and Infrastructure Element, Huntington Drive is classified as a major arterial west of Santa Clara Street and as a primary arterial east of Santa Clara Street. Huntington Drive is also a designated truck route, as well as a principal travel corridor and a planned primary transit corridor within the City. The number of through travel lanes in each direction on Huntington Drive varies from 4 through lanes west of Holly Avenue, to 3 through lanes between Holly Avenue and Santa Clara Street, to 2 through lanes east of Santa Clara Street. Exclusive left-turn lanes are provided on Huntington Drive at major intersections. On-street parking is generally not provided along Huntington Drive in the immediate Project vicinity.

Santa Clara Street is an east-west oriented roadway that is located east of the Project site. Santa Clara Street extends from the intersection of Huntington Drive and West Colorado Place to the city boundary at 5th Avenue where Santa Clara Street becomes Chestnut Avenue in the adjacent City of Monrovia. In the Arcadia General Plan Circulation and Infrastructure Element, Santa Clara Street is classified as a secondary arterial between Huntington Drive and Santa Anita Avenue and as an enhanced collector east of Santa Anita Avenue. Santa Clara Street is also designated as a secondary travel corridor between Huntington Drive and Santa Anita Avenue and a local travel corridor east of Santa Anita Avenue. Santa Clara Street is also planned to serve as a primary transit corridor. Two through travel lanes are provided in each direction on Santa Clara Street between Huntington Drive and Santa Anita Avenue while one through travel lane is provided in each direction on Santa Clara Street east of Santa Anita Avenue.

Colorado Place is a north-south oriented roadway that borders the Project site to the west. In the Arcadia General Plan Circulation and Infrastructure Element, Colorado Place is classified as a primary arterial between Colorado Boulevard and Huntington Drive. Colorado Place is also a designated truck route, as well as a secondary travel corridor and a planned secondary transit corridor within the City. Two through travel lanes are provided in each direction on Colorado Place in the Project vicinity. On-street parking is generally not provided along Colorado Place in the immediate Project vicinity.

Santa Anita Avenue is a north-south oriented roadway that is located east of the Project site. In the Arcadia General Plan Circulation and Infrastructure Element, Santa Anita Avenue is classified as a primary arterial from the southern city boundary to Foothill Boulevard and as an enhanced corridor north of Foothill Boulevard. South of Foothill Boulevard, Santa Anita Avenue is also a designated truck route and a principal travel corridor. North of Foothill Boulevard, Santa Anita Avenue is designated as a secondary travel corridor. Santa Anita Avenue is also planned to serve as a primary transit corridor south of the I-210 Freeway and a secondary transit corridor north of the I-210 Freeway. Two through travel lanes are provided in each direction on Santa Anita Avenue south of Foothill Boulevard while 1 through travel lane is provided in each direction on Santa Anita Avenue north of Foothill Boulevard. Exclusive left-turn lanes are provided on Santa Anita Avenue at major intersections. The speed limit on Santa Anita Avenue varies from 35 MPH north of Foothill Boulevard to 40 MPH south of Foothill Boulevard.

Other roadways that provide regional access to the Project site include Hollenbeck Avenue, Barranca Avenue, Covina Boulevard, Cypress Street, Front Street, College Street, and Badillo Street. Roadways and lane configurations in the Project area are shown in Figure 9, Existing Lane Configurations.

The proposed Project site is located in the City's downtown area and is designated in the City's General Plan as "Commercial" with a Downtown Overlay and the zoning for the Project site is General Commercial (C-G) with a Downtown Overlay. As such, the proposed Project site is well-located to encourage the use of public transit and active transportation modes.

Public Bus Transit Service

Public bus transit service in the Project area is provided by Foothill Transit, Metro, and Arcadia Transit. Foothill Transit provides bus transit service along major roadways within the transportation analysis study area: Huntington Drive and Santa Anita Avenue. Foothill Transit currently operates one transit route (Route 187) in the vicinity of the Project site. This bus line provides headways of four buses during the weekday morning peak hour and four buses during the weekday afternoon peak hour. Metro provides bus transit service along major roadways within the transportation analysis study area: Huntington Drive and Santa Anita Avenue. Metro currently operates two local Metro bus transit routes (Routes 487/489) in the vicinity of the Project site. The Metro bus transit routes provide headways of two to three buses during the morning and afternoon peak hours.

Arcadia Transit provides fixed-route general public transit service with three lines (i.e., Green, Blue and Red Lines). Two of the three lines operate in the vicinity of the project site. These lines provide headways of generally one to two buses during the weekday morning peak hour and two to three buses during the weekday afternoon peak hour. Arcadia Dial-A-Ride is a demand-response service providing curb-to-curb transportation to seniors and persons with disabilities to and from any destination within the Arcadia city boundaries, including all shopping areas, commercial centers, the Methodist Hospital, medical centers, the civic center, parks, the racetrack, libraries, etc. The service is provided based on space availability and is open Monday through Friday from 7:00 a.m. to 9:00 p.m. and Saturday/Sunday from 7:00 a.m. to 7:00 p.m. Trip requests can be made the same day or up to seven days in advance.

Regional Rail Service

The Metro Gold Line Arcadia Station is also located approximately 0.5-mile northeast of the Project site, at the northwest corner of First Avenue and Santa Clara Street. Arcadia Transit provides fixed-route general public transit service with three lines (i.e., Green, Blue and Red Lines). Two of the three lines operate in the vicinity of the Project site. These lines provide headways of generally one to two buses during the weekday morning peak hour and two to three buses during the weekday afternoon peak hour.

Traffic Impact Study

The traffic impact study for the proposed Project follows the City's traffic study guidelines and is consistent with the traffic impact assessment guidelines set forth in the Caltrans Highway Capacity Model (HCM).

The traffic analysis evaluates potential Project-related impacts at eight study intersections and six street segments in the vicinity of the Project site. These study locations were considered as they have the greatest potential to experience traffic impacts as a result of the proposed Project. The intersections were evaluated during the weekday morning and afternoon peak hours. Figure 8 illustrates the Project site location and the location of the study area intersections. The eight intersections are as follows:

1. Gate 3-Holly Avenue/Huntington Drive-Campus Drive

2. Colorado Place/San Juan Drive
3. Colorado Place/Huntington Drive
4. Santa Clara Street/Huntington Drive
5. Santa Anita Avenue/I-210 Freeway Westbound (WB) Ramps
6. Santa Anita Avenue/I-210 Freeway Eastbound (EB) Ramps
7. Santa Anita Avenue/Santa Clara Street
8. Santa Anita Avenue/Huntington Drive

The six study street segments are as follows:

1. Colorado Place between San Juan Drive and Colorado Boulevard
2. Huntington Drive EB between Santa Clara Street and Centennial Way
3. Huntington Drive WB between Colorado Place and Centennial Way
4. Huntington Drive between Santa Clara Street and Santa Anita Avenue
5. Santa Anita Avenue between Santa Clara Street and Huntington Drive
6. Santa Anita Avenue south of Huntington Drive

Traffic Impact Analysis Methodology

In order to estimate the traffic impact characteristics of the proposed Project, a multistep process was utilized, as follows:

1. Forecasting trip generation, which estimates the total arriving and departing traffic volumes from the proposed Project on a peak hour and daily basis. The traffic generation potential is typically forecast by applying the appropriate vehicle trip generation equations or rates to the Project development tabulation.
2. Forecasting trip distribution, which identifies the origins and destinations of inbound and outbound Project traffic volumes. These origins and destinations are typically based on demographics and existing/anticipated travel patterns in the study area.
3. Forecasting traffic assignment, which involves the allocation of Project traffic to study area streets and intersections. Traffic assignment is typically based on minimization of travel time, which may or may not involve the shortest route, depending on prevailing operating conditions and travel speeds. Traffic distribution patterns are indicated by general percentage orientation, while traffic assignment allocates specific volume forecasts to individual roadway links and intersection turning movements throughout the study area.

With the forecasting process complete and Project traffic assignments developed, the impact of the proposed Project is evaluated by comparing LOS conditions at the study area intersections using existing and expected future traffic volumes with and without anticipated Project traffic. Based on the outcome of the "with Project" conditions, the effects of the Project are measured against City traffic guidelines to determine their significance.

Impact Criteria and Thresholds

As the City of Arcadia does not have adopted street segment analysis threshold criteria, the analysis was conducted in order to compare the overall roadway LOS without and with the proposed Project. Roadway LOS is based on capacity per lane per day and is assigned LOS A through F similar to the intersection LOS based on a volume-to-capacity (v/c) ratio. As indicated in the Circulation and Infrastructure Element of the City of Arcadia General Plan 2010, roadway segments operating at LOS D or better are considered to be at acceptable levels (City of Arcadia 2010b). Furthermore, LOS E is permitted on roadway segments adjacent to: 1) freeway ramps; 2) to Santa Anita Park and all roadway links intended to carry seasonal race-related traffic; and 3) the Downtown, Baldwin Avenue, and Live Oak Avenue commercial and mixed-use districts.

The relative impact of the added Project traffic volumes generated by the proposed Project during the weekday AM and PM peak hours was evaluated based on analysis of existing and future operating conditions at the study intersections, without and with the proposed Project. The previously discussed capacity analysis procedures were utilized to evaluate the future v/c or delay relationships and LOS characteristics at each study intersection.

The significance of the potential Project-generated traffic impacts was identified using the traffic impact criteria set forth in the City's Traffic Impact Analysis Guidelines. According to the City's guidelines, a significant transportation impact is determined based on LOS. LOS calculations were prepared for the study intersections under the following scenarios:

a) Existing Conditions.
a) Existing With Project Conditions.
b) Future Pre-Project Conditions (existing plus ambient growth and related projects traffic).
c) Future with Project Conditions.
d) Future with Project and Mitigation Conditions, if necessary.

The traffic volumes for each new condition were added to the volumes in the prior condition to determine the change in capacity utilization at the study intersections. Summaries of the v/c ratios, delays, and corresponding LOS values for the study intersections during the weekday AM, weekday PM, and Saturday PM peak hours are shown in Table 21 and data worksheets for the analyzed intersections are contained in Appendix F, Traffic Study, of this IS/MND

Table 21. Summary of Volume to Capacity Ratios/Delays and Levels of Service Weekday AM, PM, and Saturday PM Peak Hours

No.	Intersection	Peak Hour	Existing		Existing With Project		Difference		Future Without Project		Future with Project		Difference	
			V/C or Delay	*LOS[1]*	*V/C or Delay*	*LOS[1]*	*V/C or Delay*	*Sig. Impact[2]*	*V/C or Delay*	*LOS[1]*	*V/C or Delay*	*LOS[1]*	*V/C or Delay*	*Sig. Impact[2]*
1	Gate 3-Holly Avenue/Huntington Drive-Campus Drive	AM	0.588	A	0.589	A	0.001	No	0.608	B	0.609	B	0.001	No
		PM	0.582	A	0.582	A	0.000	No	0.598	A	0.598	A	0.000	No
		SAT	0.492	A	0.492	A	0.000	No	0.509	A	0.509	A	0.000	No
2	Colorado Place/San Juan Drive	AM	20.8	C	20.8	C	0.045	No	15.6	C	20.1	C	0.045	No
		PM	10.3	B	10.6	B	0.019	No	16.2	C	16.6	C	0.008	No
		SAT	11.9	B	11.9	B	0.031	No	11.9	B	12.5	B	0.011	No
		AM	0.453	–	0.498	–	–	–	0.471	–	0.516	–	–	–
		PM	0.501	–	0.520	–	–	–	0.625	–	0.633	–	–	–
		SAT	0.293	–	0.324	–	–	–	0.376	–	0.387	–	–	–
3	Colorado Place/Huntington Drive (unsignalized Intersection)	AM	0.501	A	0.508	A	0.007	No	0.536	A	0.544	A	0.008	No
		PM	0.788	C	0.796	C	0.008	No	0.873	D	0.881	D	0.008	No
		SAT	0.440	A	0.463	A	0.023	No	0.495	A	0.517	A	0.022	No
4	Santa Clara Street/Huntington Drive	AM	0.692	B	0.712	C	0.020	No	0.765	C	0.785	C	0.020	No
		PM	0.582	A	0.586	A	0.004	No	0.633	B	0.648	B	0.015	No
		SAT	0.460	A	0.482	A	0.022	No	0.538	A	0.560	A	0.022	No
5	Santa Anita Avenue/I-210 Freeway Westbound (WB) Ramps	AM	0.949	E	0.949	E	0.000	No	0.971	E	0.971	E	0.000	No
		PM	0.808	D	0.808	D	0.000	No	0.828	D	0.828	D	0.000	No
		SAT	0.599	A	0.599	A	0.000	No	0.615	B	0.615	B	0.000	No
6	Santa Anita Avenue/I-210 Freeway Eastbound (EB) Ramps	AM	0.631	B	0.636	B	0.005	No	0.663	B	0.668	B	0.005	No
		PM	0.611	B	0.616	B	0.005	No	0.665	B	0.669	B	0.004	No
		SAT	0.547	A	0.551	A	0.004	No	0.583	A	0.590	A	0.007	No

Table 21. Summary of Volume to Capacity Ratios/Delays and Levels of Service Weekday AM, PM, and Saturday PM Peak Hours

No.	Intersection	Peak Hour	Existing		Existing With Project		Difference		Future Without Project		Future with Project		Difference	
			V/C or Delay	*LOS[1]*	*V/C or Delay*	*LOS[1]*	*V/C or Delay*	*Sig. Impact[2]*	*V/C or Delay*	*LOS[1]*	*V/C or Delay*	*LOS[1]*	*V/C or Delay*	*Sig. Impact[2]*
7	Santa Anita Avenue/Santa Clara Street	AM	0.637	B	0.651	B	0.014	No	0.678	B	0.691	B	0.013	No
		PM	0.682	B	0.688	B	0.006	No	0.788	C	0.794	C	0.006	No
		SAT	0.615	B	0.623	B	0.008	No	0.702	C	0.710	C	0.008	No
8	Santa Anita Avenue/Huntington Drive	AM	0.921	E	0.938	E	0.017	No	0.993	E	1.010	F	0.017	No
		PM	0.861	D	0.864	D	0.003	No	0.915	E	0.918	E	0.003	No
		SAT	0.625	B	0.632	B	0.007	No	0.671	B	0.677	B	0.006	No

Source: Appendix F.
Notes:
1 Level of Service (LOS) is based on the reported ICU value for signalized intersections.
2 According to the City of Arcadia threshold of significance, a transportation impact at a signalized intersection shall be deemed significant in accordance with the following:

- Addition of project trips causes the peak hour level of service of the intersection to change from LOS D or better to LOS E or F.
- Addition of project trips causes an increase in the volume/capacity ratio of 0.02 or greater at LOS E or F.

Existing Traffic Volumes

As indicated in column [1] of Table 21, six of the eight study intersections are presently operating at LOS D or better during the weekday AM, weekday PM, and Saturday PM peak hours. The following study intersections are anticipated to operate at LOS E for the peak hour shown below:

- Int. No. 5: Santa Anita Ave./I-210 WB Ramps (AM Peak Hour: v/c=0.949, LOS E)
- Int. No. 8: Santa Anita Ave./Huntington Dr. (AM Peak Hour: v/c=0.921, LOS E)

As previously mentioned, the existing traffic volumes at the study intersections during the weekday AM, weekday PM, and Saturday PM peak hours are displayed in Figures 10, 11, and 12, respectively.

Cumulative Development Projects

A forecast of on-street traffic conditions prior to occupancy of the proposed Project was prepared by incorporating the potential trips associated with other known development projects (related projects) in the area. With this information, the potential impact of the proposed Project can be evaluated within the context of the cumulative impact of all ongoing development. The related projects research was based on information on file at the City of Arcadia. It should be noted that the re-occupancy of the prior office building on the Project site has been accounted for. Additionally, subsequent to the completion of the Transportation Impact Analysis, the Santa Anita Park North Barn project was withdrawn based on City staff confirmation; however, the cumulative analysis considers the project as part of the transportation assumptions and thus, represents a conservative scenario. The related projects in the study area are presented in Figure 13 and in Table 22 below.

Traffic volumes expected to be generated by the related projects were calculated using rates provided in the *ITE Trip Generation Manual*. The related project's respective traffic generation for the weekday AM and PM peak hours, as well as on a daily basis for a typical weekday, is summarized in Table 22. As shown in Table 22, the related projects are expected to generate a combined total of 1,485 daily peak hour trips during a typical weekday, 565 vehicle trips (316 inbound trips and 249 outbound trips) during the weekday AM peak hour, and 920 vehicle trips (397 inbound trips and 523 outbound trips) during the weekday PM peak hour. Refer to Appendix F for details. Additionally, the proposed Project would generate approximately 851 Saturday PM peak hour trips (443 inbound trips and 408 outbound trips).

Table 22. Related Projects List and Trip Generation

Map No.	Project Status	Project Address	Proposed Land Use	Daily Trips	AM Peak Hour (Total)			PM Peak Hour (Total)			Saturday (PM Peak Hour Total)		
					In	*Out*	*Total*	*In*	*Out*	*Total*	*In*	*Out*	*Total*
City of Arcadia													
A1	Proposed	323 – 325 N. 1st Avenue	Medical Office	196	10	3	13	5	14	19	11	9	20
			Retail	77	1	1	2	3	4	7	5	4	9
A2	Pending	117-129 E. Huntington Drive	Apartment	924	14	57	71	56	30	86	35	30	65
		124, 126, and 134 E. Wheeler Avenue	Retail	476	7	4	11	20	21	41	28	26	54
A3	Under Construction	56 E. Duarte Road	Condominium	215	3	13	16	13	6	19	9	8	17
			Retail	827	12	7	19	35	37	72	48	45	93
A4	Under Construction	57 Wheeler Avenue	Apartment	252	4	15	19	16	8	24	10	10	20
			Retail	308	4	3	7	13	14	27	18	16	34
			Office	58	7	1	8	1	7	8	1	1	2
A5	Under Construction	501 N. Santa Anita Avenue	Condominium	116	2	7	9	7	3	10	5	4	9
A6	Proposed	415 California Street	Condominium	116	2	7	9	7	3	10	5	4	9
A7	Under Construction	Santa Anita Inn Redevelopment Project	Hotel	2,774	65	64	129	114	109	223	141	120	261
			Condominium										
			Retail										
A8	Under Construction	22-26 E. Colorado Boulevard	Condominium	46	1	3	4	3	1	4	2	2	4
A9	Under Construction	288 N. Santa Anita Avenue	Medical Office	842	44	12	56	23	60	83	48	37	85
			Retail	301	4	3	7	12	14	26	18	16	34
A10	Proposed	141-145 Alice Street	Condominium	46	1	3	4	3	1	4	2	2	4
A11	Pending	230 California Street	Condominium	29	0	2	2	0	1	3	1	1	2
A12	Pending	414 Fairview Avenue	Condominium	35	1	2	3	2	1	3	2	1	3
A13	Pending	405 S. 1st Avenue	Condominium	23	0	2	2	1	1	2	2	1	3
			Retail	25	1	0	1	1	1	2	2	1	3

Table 22. Related Projects List and Trip Generation

Map No.	Project Status	Project Address	Proposed Land Use	Daily Trips	AM Peak Hour (Total)			PM Peak Hour (Total)			Saturday (PM Peak Hour Total)		
					In	*Out*	*Total*	*In*	*Out*	*Total*	*In*	*Out*	*Total*
A14*	Proposed 285 W. Huntington Drive	Santa Anita Park North Barn Project	Stables Expansion	1,469	62	20	82	18	96	114	43	39	82
			Dormitories	210	0	0	0	21	21	42	0	21	21
			Canteen	50	2	2	4	2	2	4	0	1	1
A15	Existing	125 W. Huntington Drive	Office	655	67	11	78	12	65	77	19	17	36
City of Monrovia													
M1	Under Construction	530 Fano Street	Condominium	70	1	4	5	4	2	6	3	3	6
M2	In Planning	717-721 W. Duarte Road	Condominium	46	1	3	4	3	1	4	2	2	4
			Total	**10,186**	**316**	**249**	**565**	**397**	**523**	**920**	**459**	**421**	**880**

Notes:
***** This Project's application was withdrawn after the transportation analyses was completed; however, the project's inclusion in the transportation assumptions represents a conservative scenario.
Source: Appendix F

Project Trip Generation

Traffic generation is expressed in vehicle trip ends, defined as one-way vehicular movements, either entering or exiting the generating land use. Trip generation rates provided in the *ITE Trip Generation Manual* publication were utilized to forecast Project-related trips. The ITE document contains trip rates for a variety of land uses which have been derived based on traffic counts conducted at existing sites throughout California and the United States. Trip generation forecasts for the proposed Project are as follows:

Weekday Project Trip Generation Summary

The proposed Project weekday trip generation rates and traffic volume forecasts are summarized in Table 23, Project Trip Generation, and illustrated in Figures 7-2 and 7-3 in Appendix F. As presented in Table 23, the proposed Project is expected to generate 178 net new vehicle trips (73 inbound trips and 105 outbound trips) during the weekday AM peak hour. During the weekday PM peak hour, the proposed Project is expected to generate 147 net new vehicle trips (104 inbound trips and 43 outbound trips). Over a 24-hour period, the proposed Project is forecast to generate approximately 2,442 daily trip ends during a typical weekday.

Weekend Project Trip Generation Summary

The Saturday trip generation forecast for the proposed Project is also summarized in Table 23. As summarized in Table 23 and illustrated in Figure 7-4 in Appendix F, the proposed Project is expected to generate a net increase of 245 vehicle trips (123 inbound trips and 122 outbound trips) during the Saturday PM peak hour. Over a 24-hour weekend period, the proposed Project is forecast to generate a net increase of 3,012 vehicle trips.

Existing with Project Conditions

Existing with Project LOS and traffic volumes are shown in Table 21, and illustrated in Figures 14, 15, and 16, respectively, for the weekday AM and PM peak hours and Saturday PM peak hour. Application of the City's threshold criteria to this scenario indicates that the proposed Project is not expected to create significant impacts at any of the study intersections. Incremental, but not significant, impacts are noted at the study intersections. Because there are no significant impacts, no traffic mitigation measures are required under the "Existing with Project" condition.

Future without Project Conditions

The future year 2021 pre-Project conditions were forecast based on the addition of traffic expected to be generated by the related projects, as well as the growth in traffic due to the combined effects of continuing development, intensification of existing developments and other factors (i.e., ambient growth). The v/c ratios at the study intersections appropriately reflect the addition of traffic generated by the related projects listed in Table 22 and growth in ambient traffic.

Table 23. Project Trip Generation

Proposed Land Use	Size	Daily Trip Volumes	AM Peak Hour Volumes			PM Peak Hour Volumes			Saturday Daily Trip Volumes	Saturday Peak Hour Volumes		
			In	*Out*	*Total*	*In*	*Out*	*Total*		*In*	*Out*	*Total*
Hotel	165 keys	2,018	59	43	102	59	61	120	1,733	72	72	144
Coffee Shop without Drive-Through	1,568 sf	570	81	78	159	29	28	57	930	46	47	93
Less 25% Internal Capture/Pass-by		(142)	(20)	(20)	(40)	(7)	(7)	(14)	(232)	(12)	(12)	(24)
Spa	7,466 sf	282	4	3	7	13	15	28	344	18	16	34
Less 25 % Internal Capture/Pass-by		(70)	(1)	(1)	(2)	(3)	(4)	(7)	(86)	(5)	(4)	(9)
Restaurant	4,146 sf	465	23	18	41	25	16	41	507	23	23	46
Less 25 % Internal Capture/Pass-by		(110)	(5)	(5)	(10)	(6)	(4)	(10)	(126)	(6)	(5)	(11)
Bar	1,033 sf	120	Nom.	Nom	Nom.	8	4	12	120	8	4	12
Less 25 % Internal Capture/Pass-by		(30)	Nom.	Nom	Nom.	(2)	(1)	(3)	(30)	(2)	(1)	(3)
Subtotal Proposed Project		*3,097*	*140*	*116*	*256*	*116*	*108*	*224*	*3,160*	*142*	*139*	*281*
Less Prior Use (General Office)	67,213 sf	(655)	(67)	(11)	(78)	(12)	(65)	(77)	(148)	(19)	(17)	(36)
Net Increase		**2,442**	**73**	**105**	**178**	**104**	**43**	**147**	**3,012**	**123**	**122**	**245**

Source: Appendix F

As presented in column [3] of Table 21, six of the eight study intersections are expected to continue to operate at LOS D or better during the weekday AM, weekday PM, and Saturday PM peak hours. The following study intersections are anticipated to operate at LOS E for the peak hour/s shown below with the addition of related projects traffic and ambient traffic:

- Int. No. 5: Santa Anita Ave./I-210 WB Ramps AM Peak Hour: v/c=0.971, LOS E
- Int. No. 8: Santa Anita Ave./Huntington Dr.AM Peak Hour: v/c=0.993, LOS E/PM Peak Hour: v/c=0.915, LOS E

The future pre-Project (existing, ambient growth and related projects) traffic volumes at the study intersections during the weekday AM, weekday PM, and Saturday PM peak hours are presented in Figures 10-4, Figure 10-5, and Figure 10-6 in Appendix F, respectively.

Future with Project Conditions

Future with project traffic volumes for the weekday AM and PM peak hours, and the Saturday PM peak hour are shown in Table 21 and illustrated in Figures 10-7, 10-8, and 10-9 in Appendix F, respectively for the AM and PM peak hours, application of the City's threshold criteria in this scenario indicates that the proposed Project is not expected to create significant impacts at any of the study intersections. Incremental, but not significant, impacts are noted at the study intersections. Because there are no significant impacts, no traffic mitigation measures are required or recommended for the study intersections under the "Future with Proposed Project" condition.

Street Segment Transportation Impact Analysis

The forecast traffic conditions at the analyzed street segments for existing, existing with Project, future year 2021 pre-Project (i.e., existing traffic volumes and ambient traffic growth) and future year 2021 with Project analysis scenarios are summarized in Table 24. The existing weekday and Saturday roadway segment traffic volumes and their corresponding LOS are summarized in column [1]. As presented in column [3], the proposed Project weekday and Saturday daily trips were added to the existing volumes. As shown in column [6] of Table 24, a 1% annual ambient growth rate through the year 2021 was applied to the existing weekday and Saturday daily volumes in order to estimate the future pre-Project traffic volumes. As presented in column [7] of Table 24, the proposed Project weekday trips are expected to incrementally increase future traffic volumes on the analyzed street segments. It is noted that the Project trips are based on the Project trip generation forecasts and the Project trip distribution patterns.

As indicated in Table 24 below, all of the study street segments analyzed are anticipated to operate at LOS C or better with the addition of the proposed Project weekday and Saturday daily traffic. As noted previously in the Circulation and Infrastructure Element of the City of Arcadia General Plan 2010, roadway segments operating at LOS D or better are considered to be at acceptable levels. Thus, the Project is not anticipated to significantly impact the analyzed street segments under either the existing or future year 2021 conditions. Therefore, no mitigation measures are required or recommended.

Table 24. Street Segment Analysis Summary Existing and Future Weekday and Weekend Conditions

Street Segment	Time	CAP[1]	[1] 2019 Existing Conditions			[2] Net Daily Project Build-Out Trip Ends	[3] Existing with project			[4] % ADT Increase with project	[5] Existing with Project Segment Impact	[6] Year 2021 Future Pre-Project			[7] Year 2021 with Project			[8] % ADT Increase with project	[9] Future with Project Segment Impact
			VOL	*V/C*	*LOS*		*VOL*	*V/C*	*LOS*			*VOL*	*V/C*	*LOS*	*VOL*	*V/C*	*LOS*		
Colorado Place between San Juan Drive and Colorado Boulevard	Wk.	40,000	13,902	0.35	A	952	14,854	0.37	A	6.8%	No	14,180	0.35	A	15,132	0.38	A	6.7%	No
	Sat.	40,000	9,804	0.25	A	1076	10,880	0.27	A	11%	No	10,000	0.25	A	11,076	0.28	A	10.8%	No
Huntington Drive (EB) between Santa Clara Street and Centennial Way	Wk.	30,000	14,530	0.48	A	73	14,603	0.49	A	0.5%	No	14,821	0.49	A	14,894	0.50	A	0.5%	No
	Sat.	30,000	12,384	0.41	A	139	12,523	0.42	A	1.1%	No	12,632	0.42	A	12,771	0.43	A	1.1%	No
Huntington Drive (WB) between Santa Clara Street and Centennial Way	Wk.	30,000	16,732	0.56	A	73	16,796	0.56	A	0.4%	No	17,057	0.57	A	17,130	0.57	A	0.4%	No
	Sat.	30,000	14,597	0.49	A	139	14,736	0.49	A	1.0%	No	14,889	0.50	A	15,028	0.50	A	0.9%	No
Huntington Drive between Santa Clara Street Santa Anita Avenue	Wk.	40,000	28,251	0.71	C	976	29,227	0.73	C	3.5%	No	28,816	0.72	C	29,792	0.74	C	3.4%	No
	Sat.	40,000	24,090	0.60	A	1204	25,294	0.63	B	5.0%	No	24,572	0.61	B	25,776	0.64	B	4.9%	No
Santa Anita Avenue between Santa Clara Street and Huntington Drive	Wk.	40,000	29,514	0.74	C	588	30,102	0.75	C	2.0%	No	30,104	0.75	C	30,692	0.77	C	2.0%	No
	Sat.	40,000	26,293	0.66	B	624	26,917	0.67	B	2.4%	No	26,819	0.67	B	27,443	0.69	B	2.3%	No
Santa Anita Avenue south of Huntington Drive	Wk.	40,000	30,709	0.77	C	22	30,731	0.77	C	0.1%	No	31,323	0.78	C	31,345	0.78	C	0.1%	No
	Sat.	40,000	27,018	0.68	B	128	27,146	0.68	B	0.5%	No	27,558	0.69	B	27,686	0.69	B	0.5%	No

Source: Appendix F
Notes:
[1] Daily capacity is based on 10,000 vehicles per day per lane.
[1] The existing daily traffic volumes were determined based on counts conducted by City Traffic Counters in April 2019 (provided in Appendix A).
[2] Net project build out daily trip ends include inbound and outbound trips based on the project trip generation forecasts in Table 21.
[3] Total of columns [1] and [2].
[4] Percent project-related increase based on column [2] divided by column [1].
[5]/[9] According to the General Plan, Circulation and Infrastructure Element, roadway segments operating at LOS A through LOS D are considered acceptable levels and LOS E at roadways adjacent to 1) freeway ramps; 2) Santa Anita Park and linked roadways; and 3) the Downtown, Baldwin Avenue, and Live Oak Avenue commercial and mixed-use districts.
[6] An ambient growth rate of 1% per year was assumed to derive the year 2021 future pre-project traffic volumes
[7] Total of columns [2] and [6]
[8] Percent project-related increase based on column [2] divided by column [6]

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Freeways

Each of the two Santa Anita Avenue off-ramp intersection approaches were reviewed in terms of expected maximum vehicle queues (i.e., 95th percentile queues) which represent the maximum back of vehicle queues with 95th percentile traffic volumes. The corresponding maximum vehicle queue lengths were then compared with the 85th percentile ramp storage lengths (i.e., 85% of the available storage length as measured from the applicable freeway/frontage road gore areas to the respective off-ramp lane merges/approach limit lines).

Both the I-210 Freeway Westbound Off-Ramp at the Santa Anita Avenue intersection and the I-210 Freeway Eastbound Off-Ramp at the Santa Anita Avenue intersection are controlled by traffic signals. As shown in Table 11-2 of Appendix F, adequate 85th percentile storage lengths are provided to accommodate the forecast 95th percentile queues under the year 2021 with project build-out conditions. Therefore, based on a review of the queuing analyses and the storage lengths, vehicle queuing back onto the I-210 Freeway mainline travel lanes is not expected. The corresponding weekday AM, weekday PM, and Saturday PM peak hour HCM worksheets for purposes of determining the 95th percentile vehicle queues are contained in Appendix C. In addition, based on the HCM delay based methodology, both ramp intersections identified above are operating at acceptable Levels of Service (LOS).

Caltrans Analysis

In addition to the intersection analyses, which utilize the City of Arcadia's methodology, a supplemental analysis was prepared based on the HCM (Transportation Research Board 2016) operational analysis methodologies pursuant to California Department of Transportation's (Caltrans) Guide for the Preparation of Traffic Impact Studies (Appendix F). Based on recent coordination with Caltrans, analyses of Caltrans facilities should be conducted when and if a proposed project is expected to add 50 or more peak hour trips in either direction on a freeway mainline segment (Appendix F).

The proposed Project at build-out is not expected to generate 50 or more vehicle trips, during either the weekday AM or PM commute peak hours, at any freeway mainline location. Thus, any freeway mainline location would not exceed the threshold for preparation of a Caltrans freeway mainline analysis. However, the proposed Project is expected to contribute traffic generation at two ramp intersections and they have been analyzed based on Caltrans methodology during the weekday AM, weekday PM, and Saturday PM commute peak hours. The following Caltrans study intersections have been identified for analysis based on their proximity to the Project site:

- Intersection No. 5 Santa Anita Avenue/I-210 Freeway Westbound Ramps
- Intersection No. 6 Santa Anita Avenue/I-210 Freeway Eastbound Ramps

According to the Caltrans document, the LOS for operating state highway facilities is based upon measures of effectiveness (MOEs). For state-controlled signalized study intersections, the MOE is determined based on control delay in seconds per vehicle (sec/veh). Caltrans "endeavors to maintain a target LOS at the transition between LOS C and LOS D on state highway facilities"; it does not require that LOS D (shall) be maintained. However, Caltrans acknowledges that this may not always be feasible and recommends that the lead agency consult with Caltrans to determine the appropriate target LOS. If an existing state highway facility is operating at less than the appropriate target LOS, the existing MOE should be maintained. For this analysis, LOS D is the target level of service standard and will be utilized to assess the project impacts at the Caltrans study intersections. For signalized intersections, Caltrans considers a location to be impacted

if the target MOE is not maintained and a corresponding change in control delay in seconds per vehicle (sec/veh) is 1.0 second or more.

Based on the HCM operations method of analysis, level of service for signalized intersections is defined in terms of control delay, which is a measure of driver discomfort, frustration, fuel consumption, and lost travel time. The delay experienced by a motorist is made up of a number of factors that relate to control, geometries, traffic, and incidents. Total delay is the difference between the travel time actually experienced and the reference travel time that would result during ideal conditions: in the absence of traffic control, in the absence of geometric delay, in the absence of any incidents, and when there are no other vehicles on the road.

The HCM signalized methodology calculates the control delay for each of the subject traffic movements and determines the level of service for each constrained movement. The control delay for any particular movement is a function of the capacity of the approach and the degree of saturation. The overall control delay is measured in seconds per vehicle and the level of service is then determined. The term Level of Service is used to describe intersection operations. Intersection LOS vary from LOS A (free flow) to LOS F (jammed condition). The six qualitative categories of Level of Service that have been defined along with the corresponding HCM control delay value range for signalized intersections are shown in Appendix F.

Intersection and queuing analyses were prepared utilizing the *Synchro 10* software package which implements the HCM operational methods. A *Synchro* network was created based on existing conditions field reviews at the above two (2) Caltrans study intersections. In addition, specifics such as lane configurations, storage lengths, crosswalk locations, posted speed limits, traffic signal phasing, and traffic volumes, were coded to complete the existing network.

Table 11-1 in Appendix F summarizes the intersection analyses for the existing, existing with project, and future conditions both without and with the proposed project. As shown in Table 11-1 in Appendix F, application of the Caltrans LOS standards and guidelines to the existing with project and future with project conditions indicate that the proposed Project is not expected to adversely impact either of the Caltrans study intersections. The corresponding weekday AM, weekday PM, and Saturday PM peak hour HCM worksheets are contained in Appendix F.

Public Transit

As previously discussed, existing transit service is provided in the vicinity of the proposed Project.

As shown in Table 23, during the weekday PM peak hour, the proposed Project is anticipated to generate demand for 7 net new transit trips. Over a 24-hour weekday period, the proposed Project is forecast to generate demand for 120 daily transit trips. During the Saturday PM peak hour, the proposed Project is anticipated to generate demand for 12 net new transit trips. Over a 24-hour Saturday period, the proposed Project is forecast to generate demand for 148 daily transit trips. The calculations are as follows:

Weekday AM Peak Hour = 178 * 1.4 * 0.035 = 9 Transit Trips

Weekday PM Peak Hour = 147 * 1.4 * 0.035 = 7 Transit Trips

Weekday Daily Trips = 2,442 * 1.4 * 0.035 = 120 Transit Trips

Saturday PM Peak Hour = 245 * 1.4 * 0.035 = 12 Transit Trips

Saturday Daily Trips = 3,012 * 1.4 * 0.035 = 148 Transit Trips

As explained in Section 3.17(a) and shown in Table 25, Existing Transit Routes, below, Metro, Foothill, and Arcadia Transit bus routes are provided adjacent to or in close proximity to the Project site. As outlined in Table 25 under the "No. of Buses/Trains" column, these transit lines provide service for an average (i.e., an average of the directional number of buses during the peak hours) of approximately 39 buses/trains serving the project area during the weekday AM peak hour, 43 buses/trains serving the project area during the weekday PM peak hour, and 27 buses/trains during the Saturday PM peak hour. Therefore, based on the above calculated weekday AM, weekday PM, and Saturday PM peak hour transit trips, this would correspond to an average of less than one new transit rider per bus due to the proposed project. It is anticipated that the existing transit service in the project area will adequately accommodate the project-generated transit trips. Thus, given the low number of generated transit trips per bus, no impacts on existing or future transit services in the project area are expected to occur as a result of the proposed project.

Table 25. Existing Transit Routes

Route	Destinations	Roadways Near Site	Number of Buses/ Trains During peak hour			
				Weekday		*Saturday*
			DIR	*AM*	*PM*	*PM*
Arcadia Transit Blue Line	City of Arcadia	Santa Anita Avenue, Huntington Drive, Arcadia Gold Line Station	EB	1	2	1
			WB	1	2	1
Arcadia Transit Green Line	City of Arcadia	Holly Drive, Huntington Drive, Arcadia Gold Line Station	Clockwise	2	3	3
			C/Clockwise	2	3	3
Foothill Transit 187	Azusa to Pasadena via Duarte, Monrovia, Arcadia, and Sierra Madre	Santa Anita Avenue, Santa Clara Street, Holly Avenue, and Huntington Drive	EB	4	4	2
			WB	4	4	2
Metro 79	Downtown Los Angeles to Arcadia via El Sereno, Alhambra, and South Arcadia	Santa Anita Avenue, Santa Clara Street, Holly Avenue, and Huntington Drive	EB	2	2	2
			WB	3	2	1
Metro 487	El Monte to Los Angeles via Arcadia, Pasadena, San Marino, Temple City, San Gabriel, and Downtown Los Angeles	Santa Anita Avenue, and Huntington Drive	EB	2	3	1
			WB	2	2	1
Metro Gold Line	Azusa to East Los Angeles via Irwindale, Duarte, Monrovia, Arcadia, Sierra Madre, Pasadena, South Pasadena, Highland Park, Lincoln Heights, Chinatown, and Union Station	Arcadia Gold Line Station	NB	8	8	5
			SB	8	8	5
			Total	39	43	27

Source: Appendix F

Conclusion

As shown in Table 21, application of the City's threshold criteria indicates that the proposed Project is not expected to create significant impacts at any of the study intersections under the Existing with Project or

Future with Project scenarios. Incremental, but not significant, impacts are noted at the study intersections. All study intersections would remain at LOS D or better in both peak hours, and, as such, the proposed Project would be consistent with the City's standards. As such, the proposed Project would not conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities. Impacts would be less than significant. No mitigation is required.

b) Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?

Less Than Significant Impact. CEQA Guidelines Section 15064.3, subdivision (b), lists the criteria that must be used for applying VMT analysis to development Project and for determining the significance of transportation impacts under VMT criteria. Section 15064.3, subdivision (b) is further divided into four subdivisions: (1) land use projects, (2) transportation projects, (3) qualitative analysis, and (4) methodology. The proposed Project is hospitality project, which would include the conversion of an existing 76,754-sf building (Building C) into a hotel and the construction of a new 61,538-square-foot hotel annex building (Building D). The proposed Project would comprise: 165 hotel rooms, a 1,568 sf coffee shop, 7,466 sf spa, 4,146 sf restaurant, and 1,033 sf bar. The proposed Project would generate temporary construction-related traffic and would generate 2,442 daily trips ends during typical weekday operation (refer to Appendix F).

As previously stated, the guidelines shall applied by all lead agencies, statewide, by July 1, 2020, and at this time, the City has not yet implemented VMT as a primary traffic evaluation methodology. As such, the proposed Project's potential to impact transportation and circulation has been evaluated with the City's current guidelines (based on LOS). Because the City has not adopted the use of VMT pursuant to SB 743, the proposed Project would be evaluated according to CEQA Guidelines Section 15064.3, subdivision (b)(3), qualitative analysis. This guideline recognizes that lead agencies may not be able to quantitatively estimate VMT for every project type. In those circumstances, this subdivision encourages lead agencies to evaluate factors such as the availability of transit, proximity to other destinations, and other factors that may affect the amount of driving required by the Project.

As stated above in Section 3.17(a), the proposed Project is located in close proximity to both public bus and rail service. Public bus transit service in the Project area is provided by Foothill Transit, Metro, and Arcadia Transit. Foothill Transit provides bus transit service along major roadways within the transportation analysis study area: Huntington Drive and Santa Anita Avenue. Foothill Transit currently operates one transit route in the vicinity of the Project site. This bus line provides headways of four buses during the weekday morning peak hour and four buses during the weekday afternoon peak hour. Metro provides bus transit service along major roadways within the transportation analysis study area: Huntington Drive and Santa Anita Avenue. Metro currently operates two local Metro bus transit routes in the vicinity of the Project site. The Metro bus transit routes provide headways of two to three buses during the morning and afternoon peak hours.

Arcadia Dial-A-Ride is a demand-response service providing curb-to-curb transportation to seniors and persons with disabilities to and from any destination within the Arcadia city boundaries, including all shopping areas, commercial centers, the Methodist Hospital, medical centers, the civic center, parks, the racetrack, libraries, etc. The service is provided based on space availability and is open Monday through Friday from 7:00 a.m. to 9:00 p.m. and Saturday/Sunday from 7:00 a.m. to 7:00 p.m. Trip requests can be made the same day or up to seven days in advance.

The Metro Gold Line Arcadia Station is also located approximately one-half mile northeast of the Project site, at the northwest corner of First Avenue and Santa Clara Street. Arcadia Transit provides fixed-route general public transit service with three lines (i.e., Green, Blue and Red Lines). Two of the three lines operate in the vicinity of the Project site. These lines provide headways of generally one to two buses during the weekday morning peak hour and two to three buses during the weekday afternoon peak hour.

In addition to readily available public transit, the proposed Project would provide enhanced pedestrian and bicycle amenities. The proposed Project would provide a combination of landscape and hardscape improvements that would facilitate internal accessibility and encourage active transportation. The Project site is accessible from surrounding land uses and nearby public transportation as well as via public sidewalks on Colorado Place, W. Huntington Drive and San Rafael Road. The Project is well located to further facilitate and encourage bicycling as a mode of transportation as these facilities are built throughout the City.

In summary, the proposed Project is conveniently located in close proximity to public transit and would provide opportunities for increased pedestrian and bicycle activity, all of which would contribute to reducing the proposed Project's VMT. As such, the proposed Project would not conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b). Impacts would be less than significant and no mitigation is required.

c) Would the project substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

Less Than Significant Impact. The proposed Project would not modify any other existing roadways leading to the site and would not involve construction of structures that would cause transportation hazards. All access points would be designed in accordance with the City's Municipal Code, Development Code, and Design Standards. Therefore, the proposed Project would not substantially increase roadway hazards due to design features. The proposed Project would involve construction of a hotel development in a commercial area that has been designated and planned for such uses. As such, development of the proposed Project would not introduce incompatible uses to the Project area having the potential to contribute to hazardous roadway conditions. Impacts would be less than significant. No mitigation is required.

d) Would the project result in inadequate emergency access?

No Impact. The City of Arcadia General Plan includes a Safety Element Chapter, which addresses community safety for environmental hazards, human caused hazards, threats to national security, emergency services, and emergency preparedness (City of Arcadia 2010b). In addition, Los Angeles County Department of Public Works has designated disaster evacuation routes for the City of Arcadia. Colorado Place and Huntington Drive, both located adjacent to the Project site, are designated disaster routes. Construction of the proposed Project would not require road closures in public right-of-ways of Colorado Place or Huntington Drive. Therefore, emergency service response times and disaster evacuation routes would not be affected. Prior to operation, the proposed Project would receive all required permits and certificates for occupancy and operation, including those issued by the City of Arcadia Fire Department, which is the agency in charge of emergency response at the Project site. Therefore, no interference or impairment of the emergency response or emergency evacuation plans would occur, and no impact would occur.

3.18 Tribal Cultural Resources

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:				
a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or	☐	☐	☒	☐
b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe?	☐	☒	☐	☐

a) Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:

i) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k)?

Less Than significant Impact. As described under Section 3.5, Cultural Resources, of this document, a CHRIS records search and SLF was conducted for the proposed Project site. No previously recorded tribal cultural resources (TCRs) listed in the CRHR or a local register were identified within the proposed Project site. Further, no TCRs have been identified by California Native American tribes as part of the City's Assembly Bill (AB) 52 notification and consultation process (see Section 3.18(a)(ii) below for a description of this process). Therefore, the proposed Project would not adversely affect TCRs that are listed or eligible for listing in the state or local register Impacts are considered less than significant. No mitigation is required.

ii) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe?

Less Than Significant with Mitigation Incorporated. There are no resources in the proposed Project site that have been determined by the City to be significant pursuant to the criteria set forth in Public Resources Code Section 5024.1. Further, no specific TCRs were identified in the proposed Project site through the CHRIS records search, by the NAHC, or by the City as part of the AB 52 notification and consultation process.

In an effort to proactively reach out to tribes with a cultural affiliation to the proposed Project site, the City sent notification of the proposed Project to California Native American tribal representatives identified by the NAHC as being traditionally or culturally affiliated with the geographic area pursuant to AB 52 on July 9, 2019. Of the six (6) affiliated or interested tribes, two responded: Gabrieleno Band of Mission Indians – Kizh Nation and Gabrieleno-Tongva Tribe. Furthermore, only one requested consultation; the response from representative, Andrew Salas, of the Gabrieleno Band of Mission Indians – Kizh Nation was received with a request for consultation (July 16, 2019). After several calls and emails, consultation between the City and the Gabrieleno Band of Mission Indians – Kizh Nation was scheduled for October 17, 2019; however, the meeting was cancelled (via email) by the Gabrieleno Band of Mission Indians – Kizh Nation (Tribe) on October 15, 2019. City Staff responded to email informing the Tribe that several attempts to consult were made by Staff and that the meeting should be rescheduled. No response was received. To date, no additional correspondence has occurred and consultation is considered complete.

The AB 52 government-to-government consultations initiated by the City have not resulted in the identification of a geographically defined TCR within or near the proposed Project site. As no information regarding TCRs that could be impacted by the proposed Project has been received by the City, the City has determined that no TCRs are present in the proposed Project site. However, there is still a potential for unknown subsurface TCRs to be impacted by the proposed Project, which could result in a potentially significant impact. Therefore, protocols for the inadvertent discovery of TCRs are included as mitigation measure **MM-TCR-1**, which when implemented, will reduce the potentially significant impact to a less than significant impact with mitigation incorporated.

The following mitigation measure would ensure that the proposed Project has a less-than-significant impact on TCRs.

MM-TCR-1 Should a possible TCR be encountered, construction activities within 50 feet of the discovery shall be temporarily halted and the City notified. The City will notify Native American tribes that have been identified by the NAHC to be traditionally and culturally affiliated with the geographic area of the Project. If the potential resource is archaeological in nature, appropriate management requirements shall be implemented as outlined in MM-CUL-1. If the City determines that the potential resource is a TCR (as defined by PRC, Section 21074), tribes consulting under AB 52 would be provided a reasonable period of time, typically 5 days from the date of a new discovery is made, to conduct a site visit and make recommendations

regarding future ground disturbance activities as well as the treatment of any discovered TCRs. A qualified archaeologist shall implement a plan for the treatment and disposition of any discovered TCRs based on the nature of the resource and considering the recommendations of the tribe(s). Implementation of proposed recommendations will be made based on the determination of the City that the approach is reasonable and feasible.

3.19 Utilities and Service Systems

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Require or result in the relocation or construction of new or expanded water, wastewater treatment, or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	☐	☐	☒	☐
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years?	☐	☐	☒	☐
c) 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?	☐	☐	☒	☐
d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	☐	☐	☒	☐
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	☐	☐	☐	☒

a) ***Would the project require or result in the relocation or construction of new or expanded water, wastewater treatment, or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?***

Less Than Significant Impact.

Water. According to the General Plan EIR, the City of Arcadia is its own water supplier, and provides water to approximately 96% of the population living within the City's sphere of influence. The City sources its water from the San Gabriel Valley and Raymond Groundwater Basins and from water imported from the Upper San Gabriel Valley Municipal Water District. The City's water distribution infrastructure comprises 164.6 miles of

water lines (City of Arcadia 2010a). No water infrastructure improvements are required and no off-site impacts are necessary. The proposed Project would connect to the existing water utility infrastructure and would be subject to a development impact/connection fee, which would serve as the Project's fair share contribution to water infrastructure improvements in the City. The City's water connection fees are based on the number and size of the meters and the number of fire hydrants required to serve the Project site.

Wastewater. The City's Sewer System Management Plan serves as the foundational planning document, through which the City manages and operates sewer system demand, supply, and associated infrastructure (City of Arcadia 2014). Sewer lines in the City convey wastewater into trunk lines that are maintained by the Sanitation District of Los Angeles County (LACSD). The City's sewer system comprises approximately 138 miles of sewer pipelines. According to the General Plan EIR, only 1% of the City's existing sewer infrastructure needs to be upgraded to accommodate anticipated growth through 2026 (City of Arcadia 2010a). The City's wastewater is treated at three different facilities, namely:

- The Whittier Narrows Water Reclamation Plant (WRP), located near the City of South El Monte, with a design capacity of 15 million gallons per day (mgd) and an average flow of 5.4 mgd.
- The San Jose Creek WRP, located adjacent to the City of Industry, with a design capacity of 100 mgd and an average flow of 77.1 mgd.
- The Los Coyotes WRP, located in the City of Cerritos, with a design capacity of 37.5 mgd and an average flow of 27 mgd.

The Project site is currently served by existing 10-inch and 12-inch sewer lines in Colorado Place, San Rafael Road, and San Juan Drive. Wastewater from the Project area is transported to the San Jose Creek Water Reclamation Plant, which is operated by the LACSD.

Article VII of the City's Municipal Code regulates the City's sewer line design, sewer system fees and permits.[17] The proposed Project would be connected to the existing 12-inch high-density polyethylene pipe (HDPE) line in Colorado Place and the existing 8-inch HDPE pipe in San Rafael Road, and would be transported to the San Jose Creek Water Reclamation Plant. According to the City's 2015-2016 Capital Improvement Project Form, improvements to the sewer lines in Huntington Drive were funded and approved in 2015. To date, the 10-inch sewer pipe on Huntington Drive (from Colorado Place to Centennial Way) has been replaced with a 14-inch sewer pipe, and the 12-inch sewer pipe (from Centennial Way to the LACSD connection point) was replaced with a 16-inch sewer pipe. These improvements, including phase III of the Huntington Drive Sewer Capacity Improvement Project have been completed (City of Arcadia 2018).

The proposed Project would adhere to City of Arcadia Municipal Code, Article VII, Chapter 4, Part 4, Fees and Deposits, which requires that the proposed Project pay development impact fees to meet the Project's fair share contribution to sewer infrastructure improvements. Any additional sewer infrastructure improvements or expansions would be carried out by the City; however, the Project's development fees would constitute its fair share contribution towards any needed future capital improvements. As such, implementation of the proposed Project would have a less than significant impact on wastewater infrastructure. No mitigation is required.

Stormwater. The proposed Project is not expected to generate increased stormwater runoff. As described under Section 3.10, the drainage patterns of the Project site would not substantially change relative to

[17] City of Arcadia Municipal Code, Article VII, Chapter 4, Part 1 through 8 – Sewers.

existing conditions. As previously discussed under Section 3.10, all development and redevelopment projects must comply with the latest LID Standards Manual, which complies with the requirements of the NPDES 2012 MS4 Permit. The LID Standards Manual provides guidance for the implementation of stormwater quality control measures in new development and redevelopment projects with the intention of improving water quality and mitigating potential water quality impacts from stormwater and non-stormwater discharges (LA County 2014). Project design, construction, and operation would be completed in accordance with the LID Standards Manual and the Project-specific LID Plan. The LID Plan would use site design and stormwater management in order to maintain the site's pre-development runoff rates and volumes. The goal of the LID Plan would be to mimic the site's pre-development hydrology by using design techniques that filter, store, evaporate, and detain runoff close to the source of rainfall. Compliance with state and local regulations would reduce the peak volume of stormwater runoff discharged into the City's storm drain system and would ensure that stormwater is retained on site, to the extent feasible. As such, the proposed Project would not require the construction or expansion of off-site stormwater drainage facilities, as the project would not contribute a substantial amount of new stormwater runoff relative to existing conditions.

Solid Waste. The California Solid Waste Reuse and Recycling Access Act of 1991 (AB 341) declared that cities and counties must divert 50% of all solid waste by 2000 and aims to reduce 75% of all solid waste by 2020, through source reduction, recycling and composting activities, as well as, provide adequate areas for collecting and loading recyclable materials. Under the California Solid Waste Reuse and Recycling Access Act of 1991, each local agency must adopt an ordinance for collecting and loading recyclable materials.[18] Article V of the City's Municipal Code incorporates this act by reference.[19] The proposed Project would adhere to the Solid Waste Reuse and Recycling Act through adherence with City Municipal Code, Article V, and, as such, solid waste generated under the proposed Project would be less than significant.

Electricity and Natural Gas. SCE provides electricity to the City, and operates four substations within the City's SOI. Both underground and overhead electrical distribution lines are present within the City streets and yard easements, and high-voltage transmission lines exist along the I-605 freeway (City of Arcadia 2010a). Electricity to the Project site is provided by SCE via four 66-kilovolt transmission lines located on the Project site's southern perimeter. These electrical transmission lines would be protected in place during construction-related activities. No off-site improvements for electric power infrastructure are anticipated with the implementation of the proposed Project.

Sempra Utilities provides natural gas to the City via distribution lines and laterals within the City streets and easements. A high-pressure gas line lies approximately 42 inches belowground and crosses the City along Duarte Road, from Holly Avenue to Mountain Avenue in Monrovia (City of Arcadia 2010a). These gas lines would be protected in place during construction-related activities. No off-site improvements for natural gas infrastructure are anticipated with the implementation of the proposed Project.

Telecommunication Facilities. The proposed Project would not require new or expanded telecommunication facilities.

In summary, the proposed Project would adhere to state and local legislation pertaining to the payment of impact fees to accommodate the Project's fair-share contribution to increased demand for utility

[18] Public Resources Code, Division 30, Part 3, Chapter 18, Section 42910 through 42912 - California Solid Waste Reuse and Recycling Access Act of 1991.

[19] City of Arcadia Municipal Code, Article V, Chapter 1, Part 2, Division 1, Section 5121 – Recyclables Collection.

infrastructure and services. As such, the Project would have a less than significant impact to the environment as a result of the relocation or construction of new or expanded water, wastewater treatment, or stormwater drainage, electric power, natural gas, or telecommunications facilities. No mitigation is required.

b) Would the project have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years?

Less Than Significant Impact. As stated above, according to the General Plan EIR, the City of Arcadia is its own water supplier, and provides water to approximately 96% of the population living within the City's sphere of influence. The City sources its water from the San Gabriel (Main) Valley and Raymond Groundwater Basins and from water imported from the Upper San Gabriel Valley Municipal Water District. The City's water distribution infrastructure comprises 164.6 miles of water lines (City of Arcadia 2010a).

The proposed Project is consistent with the General Plan and does not require a General Plan Amendment; therefore, the Project would be consistent with the City's growth projections anticipated in local and regional planning documents, including the City's 2015 Urban Water Management Plan (UWMP). As stated in the UWMP, the projected populations used in the UWMP for the City's service area were based on projections obtained from the SCAG. The SCAG data incorporates demographic trends, existing land use, general plan land use policies, and input and projections from the Department of Finance and the U.S. Census Bureau.

As stated in the UWMP, the Main Basin and Raymond Basin have been well managed for the full period of their respective adjudications, resulting in a stable and reliable water supply for the City during average, single-dry, and multiple-dry water years (City of Arcadia 2016b). Additionally, imported water from MWD can be utilized as a supplemental source of supplies. City water conservation efforts will continue into the future to reduce water demands within the City due to the recently implemented tiered water rate and Water Smart program, which are intended to encourage conservation, thereby making local supplies more reliable.

According to the City's UWMP, the City can sustainably pump 19,500 gpm from available groundwater supplies (15,200 gpm from the Main Basin and 4,300 gpm from the Raymond Basin). If the City pumps more water than the allotted amount, replacement water must be purchased from the MWD for spreading and recharging the Main San Gabriel Groundwater Basin; however, the City has not had to rely on any imported water supplies since the 2009-2010 fiscal year (City of Arcadia 2016b). In addition to groundwater and imported water supplies, the City may pre-purchase water for cyclic storage for later use. Furthermore, according to the UWMP, the Main Basin has the capacity to store approximately 8.7 million acre-feet of water, while historic basin operations have only ever reached a maximum of one million acre-feet (UWMP 2016a). Per the UWMP, the City does not experience water supply constraints or deficiencies and projects having adequate supply through the planning year 2040 (UWMP). The proposed Project would not include any wells that would directly deplete groundwater supplies, and the City's UWMP anticipates adequate supply through 2040.

Additionally, Arcadia operates in accordance with Phase I Mandatory Water Conservation Prohibitions, which are codified by the City's Water Conservation Plan. Section 7553, Water Conservation Plan, of the City's Municipal Code sets forth the water conservation measures that are applicable to all customers and properties served by the Water Division. Restrictions include but are not limited to prohibitions on outdoor watering of sidewalks, limits on scheduling of outdoor landscape irrigation, and restrictions on provision of water to guests at restaurants, hotels, cafes, unless expressly requested by the customer, among other restrictions.

The proposed Project would adhere to the water conservation methods established in Title 24 of the California Building Code. The Project would also adhere to the City's Water Conservation Plan and Water Efficient Landscaping Ordinance, per Article VII, Chapter 5, Part 5, Division 3 and 4 of the City's Municipal Code.[20] Additionally, the proposed Project would be subject to a development impact/connection fee, which would serve as the Project's fair share contribution to water infrastructure improvements in the City. As such, the proposed Project would have sufficient water supplies available to serve the Project and reasonably foreseeable future development during normal, dry, and multiple dry years. Impacts would be less than significant and no mitigation is required.

c) Would the project 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?

Less Than Significant Impact. As stated in Section 3.19(a), the proposed Project would be connected to the existing 12-inch HDPE wastewater line in Colorado Place and the existing 8-inch HDPE pipe in San Rafael Road, and would be transported to the San Jose Creek Water Reclamation Plant (San Jose Creek WRP). According to the LACSD, the San Jose Creek WRP provides primary, secondary and tertiary treatment for 100 million gallons of wastewater per day (mgd), 42 mgd of which is reused at different reclaimed water reuse sites (LACSD 2019). Based on the capacities of the San Jose Creek WRP, the wastewater generated by the proposed Project would be nominal (less than 0.01%) of capacity. As such, the proposed Project would not exceed current capacities of the wastewater treatment system and would not significantly impact existing wastewater treatment systems such that new facilities would be required.

d) Would the project generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?

Less Than Significant Impact. The City's non-residential solid waste is disposed of through contracts with Republic Services, Waste Management Inc., and Valley Vista Services (City of Arcadia 2019b). These waste management services offer waste and recycling collection, green waste recycling programs, organics waste composting, special waste transportation, and transfer and materials recovery services to the City as well as many other areas in Southern California.

Based on the CalEEMod solid waste generation rates, the proposed Project would generate approximately 354 pounds of solid waste per day (Appendix A). Solid waste generated by the proposed Project would be collected by Republic Services, Waste Management Inc., and Valley Vista Services and transported to a local or regional landfill. The increase in solid waste generation from implementation of the proposed Project would be minimal. Regional landfills in the Los Angeles area are anticipated to have sufficient capacity to accommodate the minor increase in solid waste generation attributable to the proposed Project. Additionally, the City adheres to the states Solid Waste Reuse and Recycling Access Act of 1991 (AB 341), which declares that cities and counties must divert 50% of all solid waste by 2000 and 75% of all solid waste by 2020, through source reduction, recycling and composting. Required compliance with this regulation would reduce the project's solid waste generation during construction. For these reasons, solid waste impacts resulting from the construction and operation of the proposed Project would be considered less than significant. No mitigation is required.

[20] City of Arcadia Municipal Code. Article VII, Chapter 5, Part 5, Division 3 (Water Conservation Plan) and 4 (Water Efficient Landscaping).

e) Would the project comply with federal, state, and local management and reduction statutes and regulations related to solid waste?

No Impact. The project Applicant is required to comply with all local, state, and federal requirements for integrated waste management (e.g., recycling, green waste) and solid waste disposal. The Project would be required to comply with the Integrated Waste Management Act of 1989, which requires that at least 75% of all annual solid waste materials, including building and demolition materials (wood, metal, electrical, piping, glass, drywall, asphalt, concrete), be diverted from landfills by 2020 (CalRecycle 2019). Republic Services, Waste Management Inc., and Valley Vista Services all adhere to AB 341, and, as such, the proposed Project would comply with federal, state, and local management and reduction statutes and regulations related to solid waste. No impact would occur.

3.20 Wildfire

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:				
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?	☐	☐	☒	☐
b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	☐	☐	☒	☐
c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines, or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	☐	☐	☒	☐
d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	☐	☐	☐	☒

a) Would the project substantially impair an adopted emergency response plan or emergency evacuation plan?

Less Than Significant Impact. According to the General Plan EIR, the City has incorporated two emergency preparedness plans, namely: the Natural Hazard Mitigation Plan and the ACTION Plan. The Natural Hazard Mitigation Plan serves to protect life and property; increase public awareness; balance natural resource management with hazard mitigation; ensure adequate emergency services; and strengthen communication and coordination in hazard management activities (City of Arcadia 2010a). The City ACTION (Arcadians Caring Together Improves Our Neighborhoods) is a cooperative program between the Arcadia Fire Department, other City departments, and the community and has three main goals: a) to educate Arcadians

on emergency preparedness and what to do after a major disaster; b) to help with crime prevention; and c) to help with fire prevention (City of Arcadia 2010a).

According to the County of Los Angeles Department of Public Works, Colorado Place, which abuts the Project site's southern perimeter, is an emergency evacuation route and the I-210 is a freeway disaster route (LADPW 2008).

In the event of a major disaster or emergency, the City's Natural Hazard Mitigation Plan and the ACTION Plan would improve the efficiency of the City's disaster response. The proposed Project would not include the construction of any buildings or infrastructure that would preclude the City's ability to implement an adopted emergency response plan or emergency evacuation plan. No short-term construction street closures are anticipated and there would be no impairment of evacuation roadways. Upon operation of the proposed Project, emergency access would be provided via the driveways on Colorado Place and San Juan Drive. As such, the proposed Project would not substantially impair an adopted emergency response plan or emergency evacuation plan and impacts would be less than significant. No mitigation is required.

b) Due to slope, prevailing winds, and other factors, would the project exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?

Less Than Significant Impact. The Project site is located within an urban setting and is surrounded by developed land uses, including developed open space (for outdoor recreation), horse racing, and public/institutional land uses to the west and south and single-family residential development to the north and east. According to the California Department of Forestry and Fire Protection FHSZ Map, the City is not located within a VHFHSZ (CAL FIRE 2011). The nearest wildland areas are located at the bottom of the San Gabriel Mountains, approximately 2.6 miles north of the Project site. The proposed Project would be constructed in adherence to the requirements set forth in the California Fire Code (Title 24, Part 9). The proposed Project would not include the construction of any buildings or infrastructure that would exacerbate wildfire risks. In the unlikely event of a fire emergency at the Project site due to wildland fires, the City of Arcadia Fire Department would respond. Specifically, Fire Station 105, located at 710 S. Santa Anita Avenue, is the closest fire station, located approximately 0.6-mile southeast of the Project site. As such, impacts would be less than significant. No mitigation is required.

c) Would the project require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines, or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?

Less Than Significant Impact. As stated above, the proposed Project would not include the construction of any buildings or infrastructure that would exacerbate fire risks. The proposed Project would be constructed in adherence to the requirements set forth in the Fire Code (Title 24, Part 9 of the California Building Code). During construction of the proposed Project, emergency access to the Project site and surrounding area would be maintained. Furthermore, new access routes would be built according to California Building Code 17.124.070, and thus would be approved by the City's Fire Department and would provide efficient ingress/egress for emergency vehicles. In the unlikely event of a fire emergency at the Project site, the City of Arcadia Fire Department would respond. Specifically, Fire Station 105, located at 710 S. Santa Anita Avenue, is the closest fire station, located approximately 0.6-mile southeast of the Project site. Given the above, the proposed Project would not include the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines, or other utilities) that may exacerbate

fire risk or that may result in temporary or ongoing impacts to the environment. Impacts would be less than significant and no mitigation is required.

d) Would the project expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?

No Impact. The proposed Project is located within a fully developed, urban area and is located on relatively flat terrain. Construction of the proposed Project would result in ground surface disruption that could temporarily alter on-site drainage patterns. However, runoff at the Project site would be managed through implementation of the BMPs described in Section 3.10. Implementation of Project-specific BMPs would ensure that the risk of flooding on or off site is minimized, to the extent practicable, during construction. The Project site as a whole would maintain the general existing drainage pattern and would remain fully developed. Given the above, the proposed Project would not expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes. No impact would occur and no mitigation is required.

3.21 Mandatory Findings of Significance

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Does the project have the potential to substantially 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, substantially 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?	☐	☒	☐	☐
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 past projects, the effects of other current projects, and the effects of probable future projects)?	☐	☒	☐	☐
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☒	☐	☐

a) Does the project have the potential to substantially 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, substantially 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?

Less Than Significant with Mitigation Incorporated. As discussed in Section 3.4, Biological Resources, of this IS/MND, the Project site is located in a completely developed and urbanized area, and does not support sensitive vegetation, sensitive wildlife species, or sensitive habitat. Additionally, the project area does not function as a corridor for the movement of native or migratory wildlife. All activities associated with the proposed Project would be conducted in the highly urbanized environment of the project area. Construction noise has the potential to disturb nesting birds potentially nesting in the trees and sparsely distributed ornamental vegetation on the Project site's perimeter. However, these impacts would be temporary in nature and would be reduced to below a level of significance with implementation of MM-BIO-1. As such, impacts to biological resources resulting from the proposed Project would be less than significant with mitigation incorporated. No further mitigation is required.

As described in Section 3.5 of this IS/MND, the Project site does not support any important examples of major periods in California history or prehistory. However, the presence of Gabrielino villages in the surrounding area indicates that the project area may be sensitive for buried cultural resources (refer to Appendix C). As such, there is a possibility of encountering previously undiscovered cultural resources at subsurface levels during ground-disturbing activities associated with the proposed project. Implementation of mitigation measure MM-CUL-1 and MM-TCR-1 would ensure that any uncovered archaeological resources and/or tribal cultural resources are protected. As such, after mitigation, the proposed Project would not substantially 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, substantially 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. Impacts would be less than significant with mitigation incorporated. No further mitigation is required.

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 past projects, the effects of other current projects, and the effects of probable future projects)?

Less Than Significant with Mitigation Incorporated. The proposed Project would result in potentially significant project-level impacts involving Biological Resources, Cultural Resources, Geology and Soils, and Tribal Cultural Resources. However, mitigation measures have been identified that would reduce these impacts to less than significant levels. Furthermore, the transportation analysis presented in Section 3.17, Transportation, of this IS/MND has quantitatively assessed cumulative impacts and have determined that cumulative traffic impacts would less than significant. All reasonably foreseeable future development in the City would be subject to the same land use and environmental regulations that have been described throughout this document. Furthermore, all development projects are guided by the policies identified in the City's General Plan and by the regulations established in the City's Municipal Code. Therefore, compliance with applicable land use and environmental regulations would ensure that environmental effects associated with the proposed Project would not combine with effects from reasonably foreseeable future development in the City to cause cumulatively considerable significant impacts. Cumulative impacts would therefore be less than significant with mitigation incorporated. No further mitigation is required.

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

Less Than Significant with Mitigation Incorporated. As detailed throughout this IS/MND, the proposed Project would not exceed any significance thresholds or result in significant impacts in the environmental categories typically associated with indirect or direct effects to human beings, such as aesthetics, air quality, hazards and hazardous materials, public services, or transportation. However, as described in Section 3.13, Noise, the proposed Project could result in potentially significant impacts in the category of noise, during both construction and operation of the project. With implementation of MM-NOI-1 and MM-NOI-2, this impact would be reduced to a less than significant level. As such, impacts would be less than significant with mitigation incorporated. No further mitigation is required.

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4.2 List of Preparers and Contributors

Lead Agency

City of Arcadia
240 W. Huntington Drive
Arcadia, California 91007

Luis Torrico, Senior Planner

Dudek

38 North Marengo Avenue
Pasadena, California 91101

Kristin Starbird, Senior Project Manager
Tamseel Mir, Senior Project Manager
Terrileigh Pellarin, CEQA/NEPA Associate Analyst
Jennifer Reed, Senior Air Quality Specialist
David Larocca, Air Quality Specialist
Linda Kry, Senior Archaeologist
Ted Roberts, Senior Archaeologist
Michael Williams, Archaeologist
Michael Cady, Senior Biologist
Glenna McMahon, Principal Engineer
Michael Greene, INCE, Senior Noise Specialist
Perry Russell, Environmental Technical Group Planner
Ryan Munnikhuis, Environmental Technical Group Associate Analyst
Christopher Starbird, GIS Specialist
Amy Seals, Senior Technical Editor
Kara Murphy, Publications Specialist

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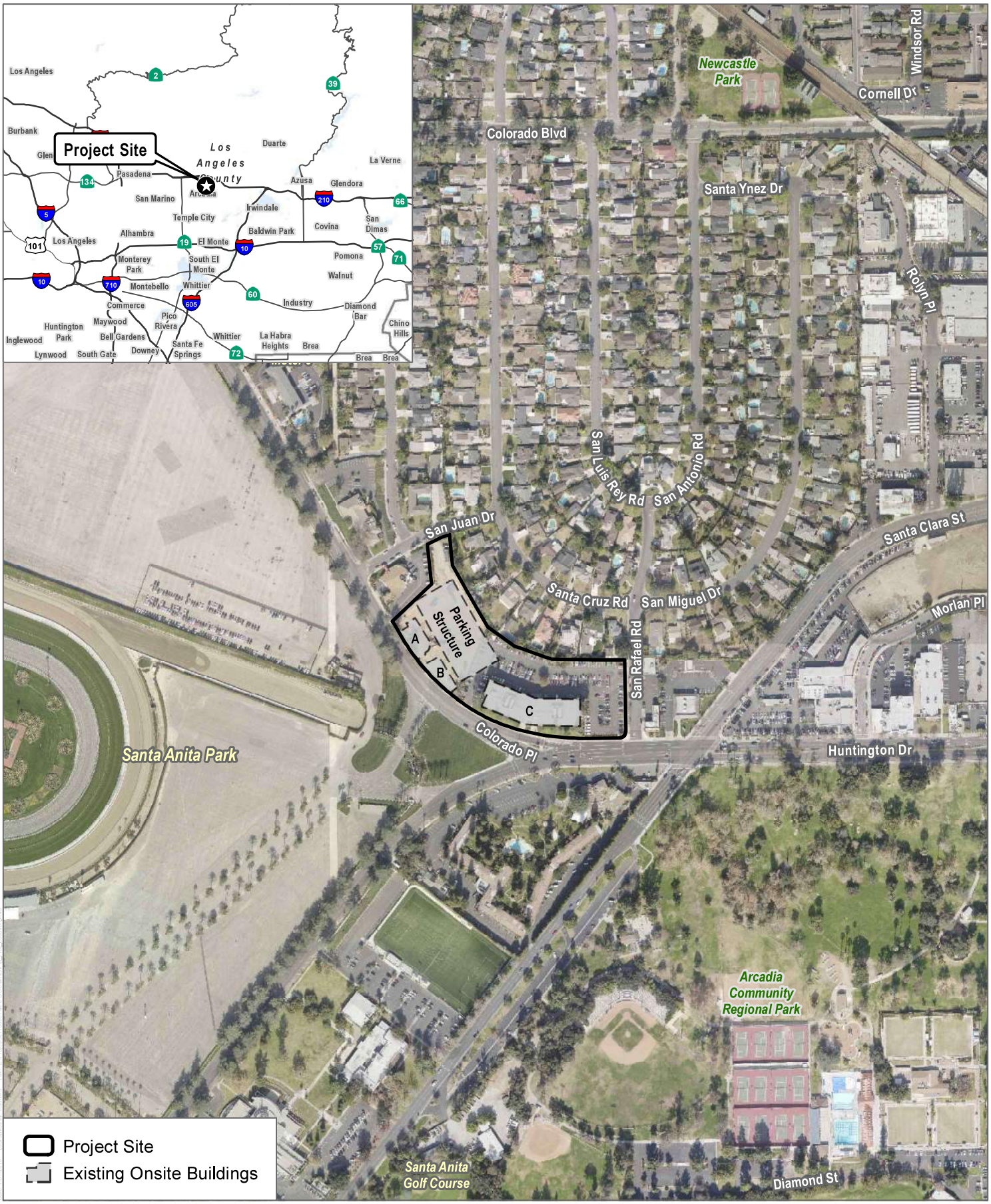

SOURCE: SOURCE: LARIAC 2014

DUDEK

0 205 410 Feet
0 55 110 Meters
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FIGURE 1

Project Location

Hotel Indigo Project

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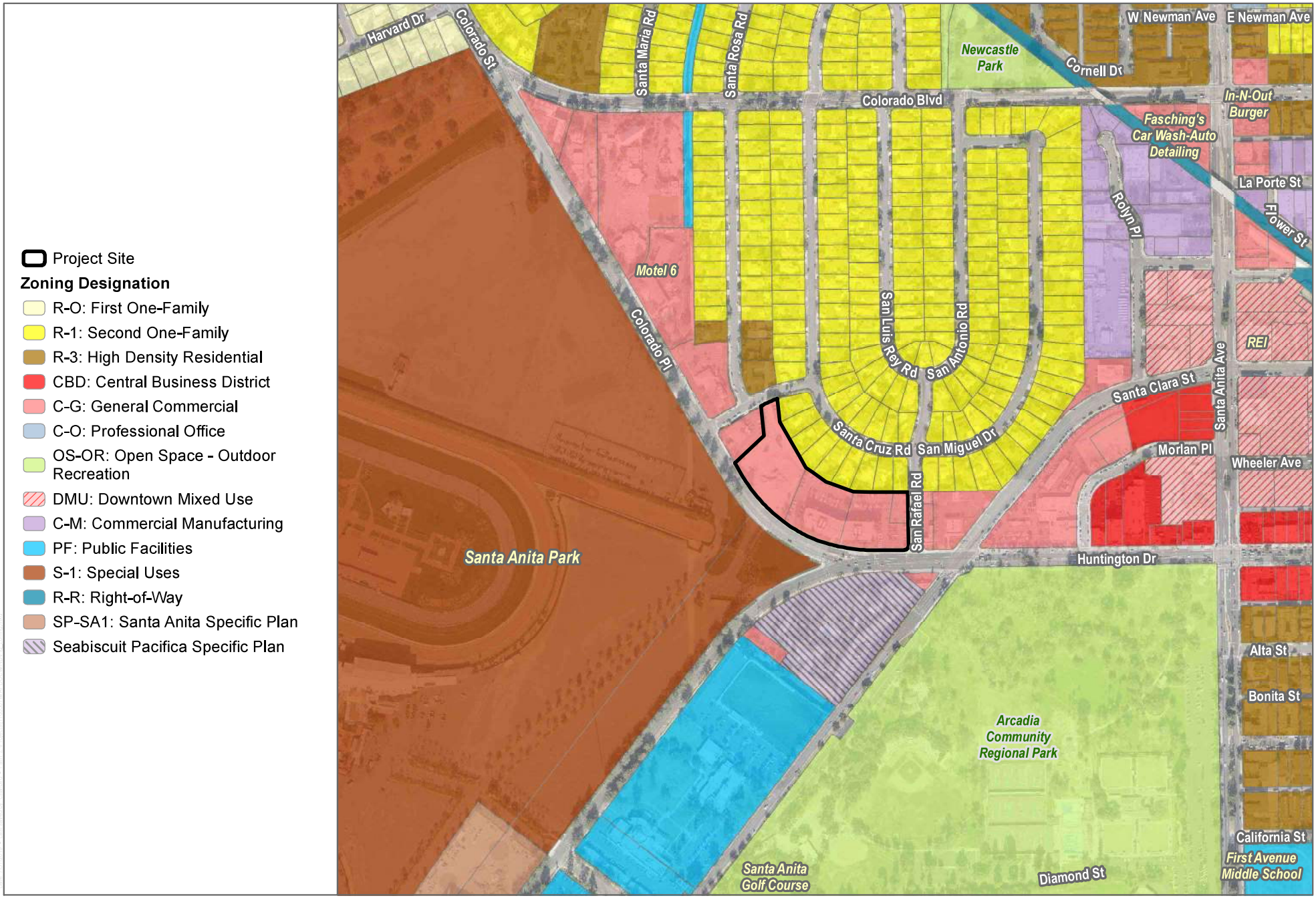

SOURCE: SOURCE: LARIAC 2014, Open Street Map, SCAG 2012

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0 275 550 Feet

FIGURE 2

Zoning

Hotel Indigo Project

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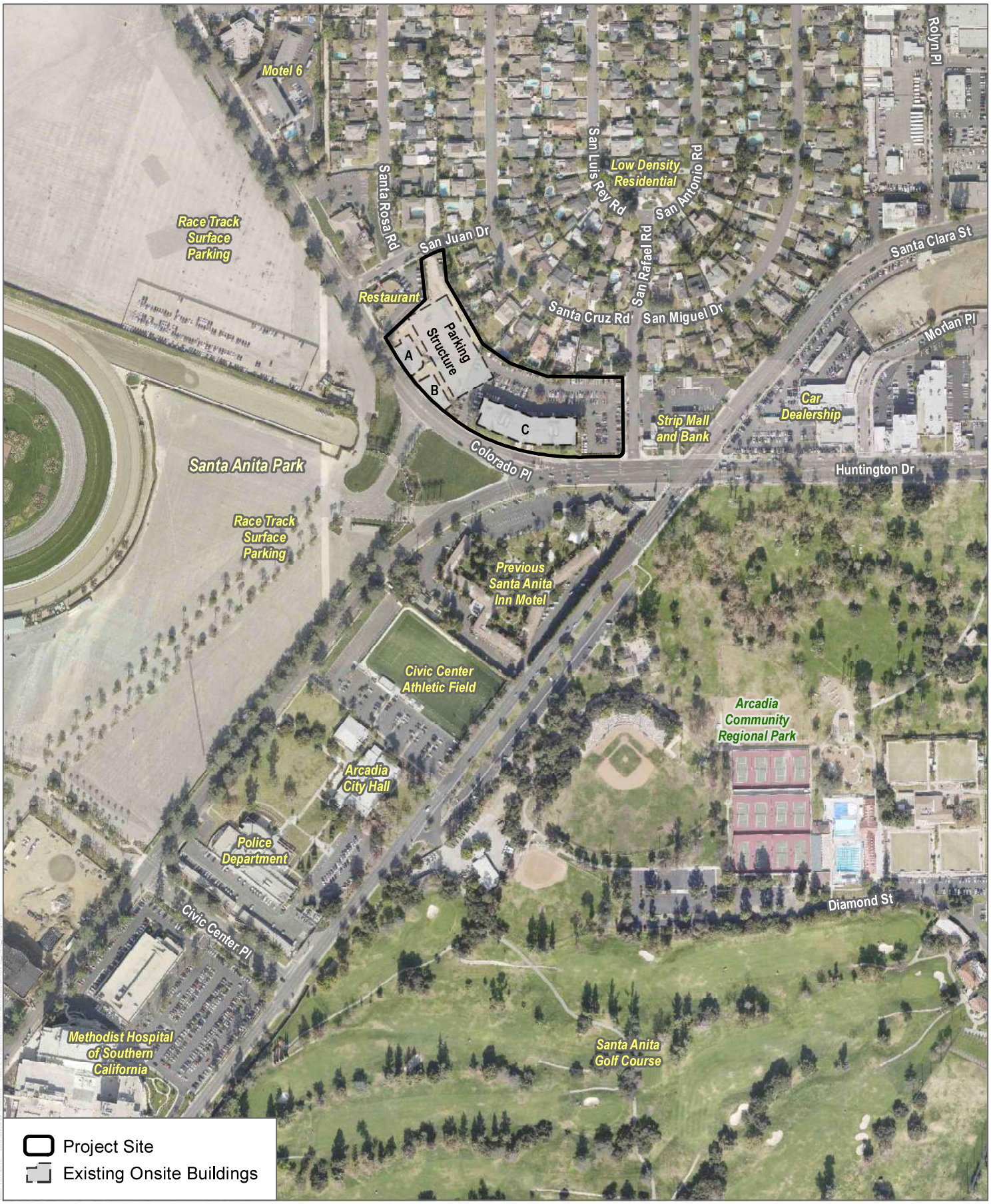

SOURCE: SOURCE: LARIAC 2014

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FIGURE 3

Surrounding Land Uses

Hotel Indigo Project

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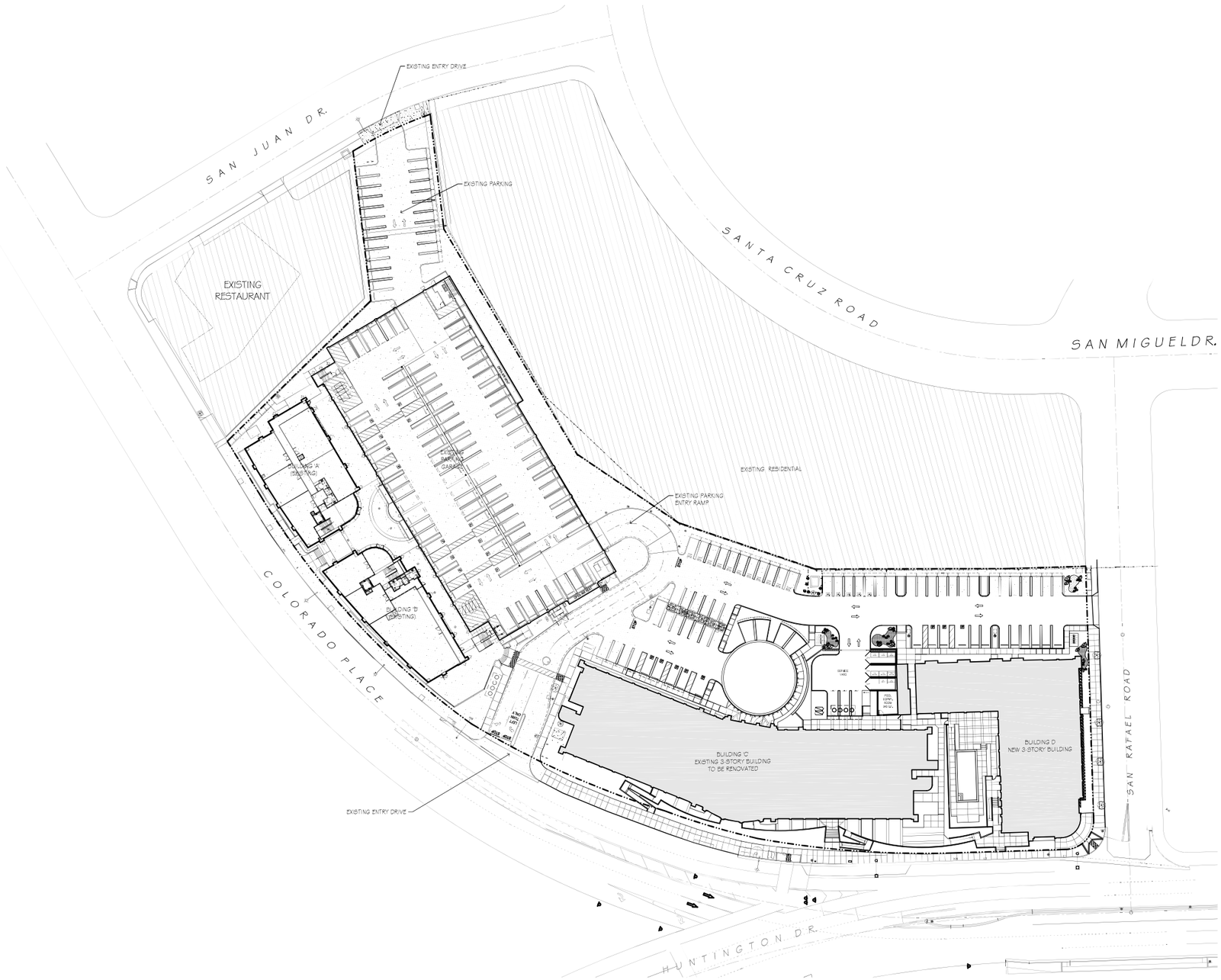

REFERENCE SITE PLAN

SOURCE: Design Group 2019

FIGURE 4A

Site Plan

Hotel Indigo Project

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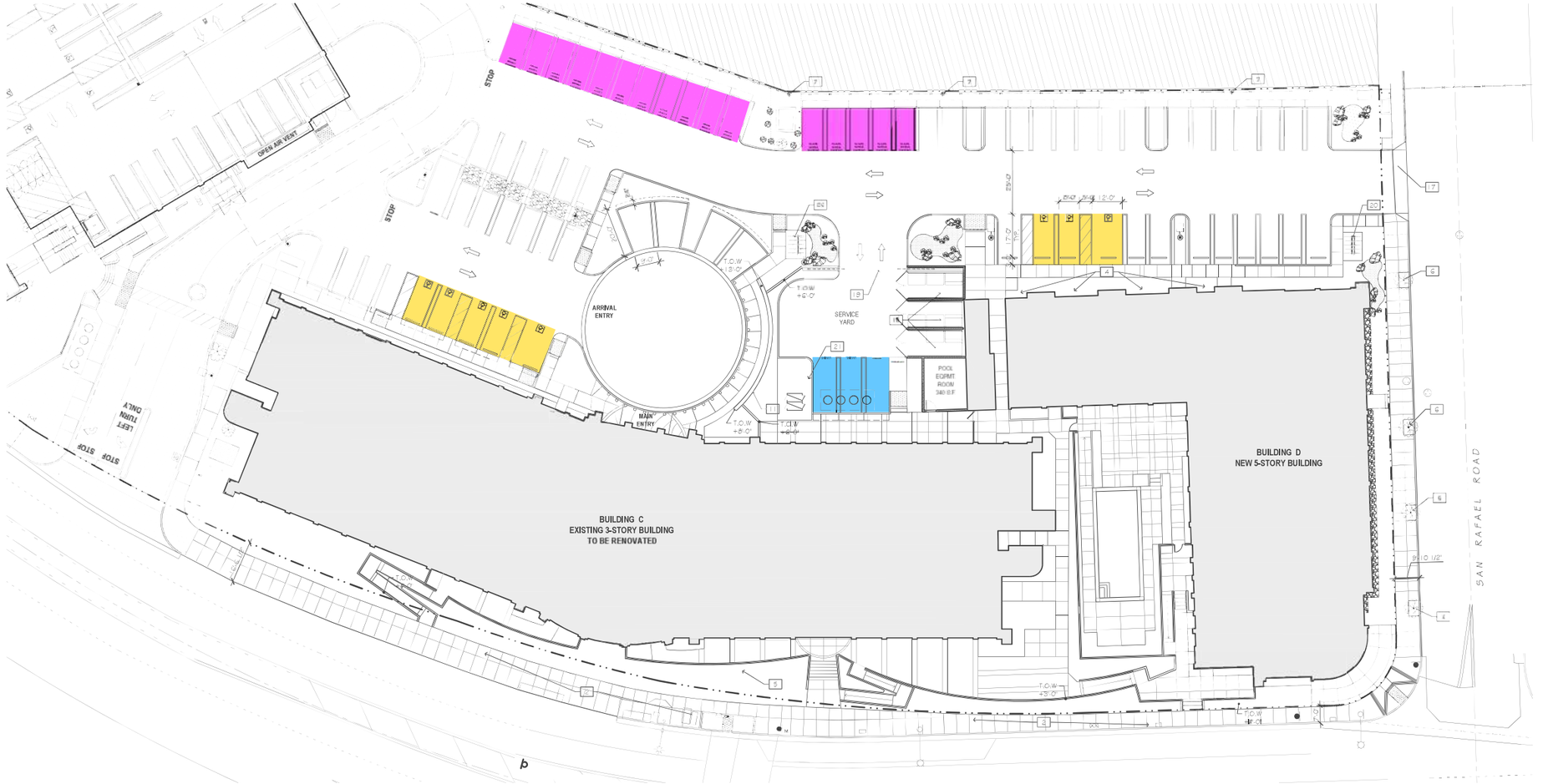

SITE PLAN

SCALE: 1" = 20' - 0"

NORTH

KEYNOTES

1. EXISTING FIRE HYDRANT TO REMAIN - PROTECT IN PLACE
2. EXISTING CURB, GUTTER, AND SIDEWALK TO BE REMOVED AND REPLACED PER CITY STANDARDS.
3. RAMP AND STAIR.
4. PLANTING AREA, PER LANDSCAPE PLANS
5. NEW GREASE INTERCEPTORS
6. EXISTING PARKWAY TREES TO REMAIN. PROTECT IN PLACE DURING CONSTRUCTION..
7. EXISTING POWER POLE TO REMAIN
8. 6'-4" HIGH CMU WALL
9. NOT USED
10. NOT USED
11. NEW MONUMENT SIGN UNDER SEPARATE PERMIT
12. NOT USED
13. SIDEWALK PER CIVIL PLANS
14. EXISTING TRASH ENCLOSURE
15. NOTE
16. NEW TRASH ENCLOSURE
17. NEW DRIVEWAY APPROACH, WITH ADA ACCESS PER CITY STANDARD PLAN 801-1.
18. NOT USED
19. ACCESS CONTROL GATE
20. BICYCLE RACK, PER CITY STANDARDS
21. LONG TERM BICYCLE STORAGE LOCKERS, 3 LOCKERS TOTAL

GENERAL NOTES

1. SEE LANDSCAPE PLANS FOR PLANTING AND IRRIGATION INFO
2. SEE CIVIL PLANS FOR CURB DESIGN
3. SEE CIVIL PLANS FOR EASEMENTS
4. ALL SIDEWALKS 5' U.N.O.
5. CURBS TO ALL BE 6" U.N.O.
6. SEPARATE WATER SERVICE, METER, AND BACK-FLOW DEVICE TO BE PROVIDE FOR EACH BUILDING.

LEGEND

- COLORED CONCRETE PER LANDSCAPING PLAN
- HERRINGBONE PATTERN BLACK IN CIVIL
- NON-STRUCTURAL CONCRETE SLAB
- PEA GRAVEL PER LANDSCAPE PLANS
- STAMPED CONCRETE SLAB
- LAND DEDICATION TO CITY PER CIVIL PLANS
- PROPERTY LINE
- LIGHT STANDARD PER ELECT. PLANS

SOURCE: Design Group 2019

DUDEK

FIGURE 4B

Enlarged Site Plan

Hotel Indigo Project

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1 VIEW LOOKING NORTH-WEST

SCALE: 1'-0" = 1'-0"

2 VIEW LOOKING NORTH-EAST

SCALE: 1'-0" = 1'-0"

3 BIRDS-EYE FROM SOUTH -WEST

SCALE: 1'-0" = 1'-0"

4 BIRDS-EYE NORTH-EAST

SCALE: 1'-0" = 1'-0"

5 BIRDS-EYE FROM SOUTH-EAST

SCALE: 1'-0" = 1'-0"

6 BIRDS-EYE FROM NORTH

SCALE: 1'-0" = 1'-0"

7 BIRDS-EYE FROM LOOKING SOUTH-EAST

SCALE: 1'-0" = 1'-0"

8 BIRDS-EYE FROM NORTH-WEST

SCALE: 1'-0" = 1'-0"

SOURCE: Design Group 2019

FIGURE 4C

Building Perspectives

Hotel Indigo Project

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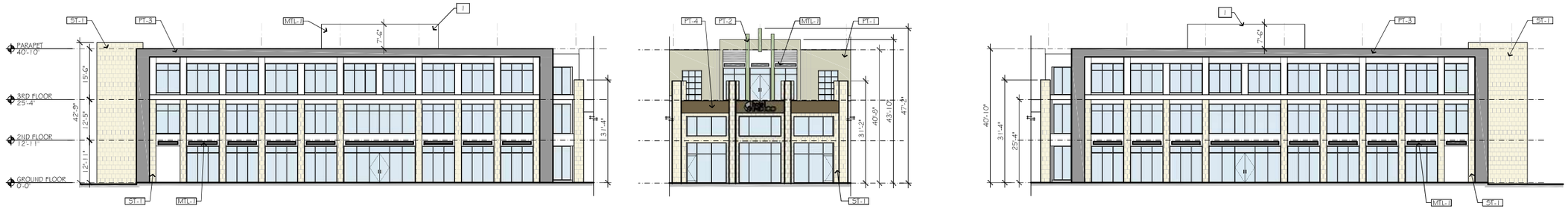
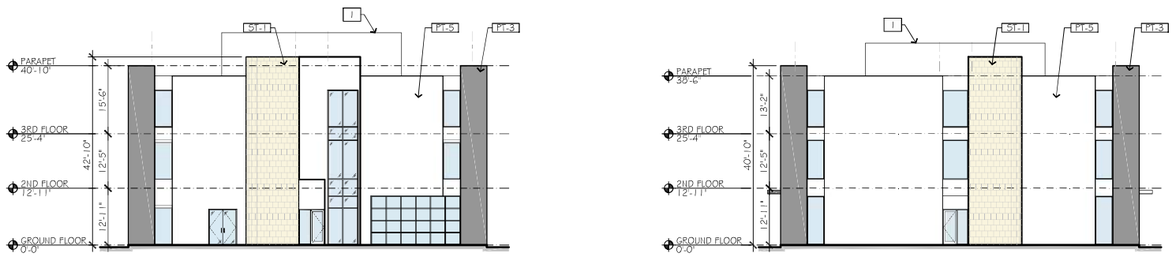


1 SOUTH ELEVATION

SCALE: 1/16" = 1'-0"

2 NORTH ELEVATION

SCALE: 1/16" = 1'-0"



3 EAST ELEVATION

SCALE: 1/16" = 1'-0"

4 WEST ELEVATION

SCALE: 1/16" = 1'-0"

MATERIAL LEGEND

SYMBOL	MATERIAL FINISH	MANUFACTURER	COLOR/FINISH	REMARKS
PT-1	PAINT	DUNN-EDWARDS	DEW357 - WHITE CREST	
PT-2	PAINT	DUNN-EDWARDS	DE6221 - FLINTSTONE	
PT-3	PAINT	DUNN-EDWARDS	DE6229 - CALICO ROCK	
PT-4	PAINT	DUNN-EDWARDS	DET520 - MOW THE LAWN	
MTL-1	PAINT	DUNN-EDWARDS	DE6070 - CHOCOLATE CHUNK	
MTL-2	PAINT	DUNN-EDWARDS	DE6386 - SNOW PEAK	
MTL-3	PAINT	DUNN-EDWARDS	DE6385 - BLACK BEAN	

SOURCE: Design Group 2019

DUDEK

FIGURE 5A

Building C Elevations

Hotel Indigo Project

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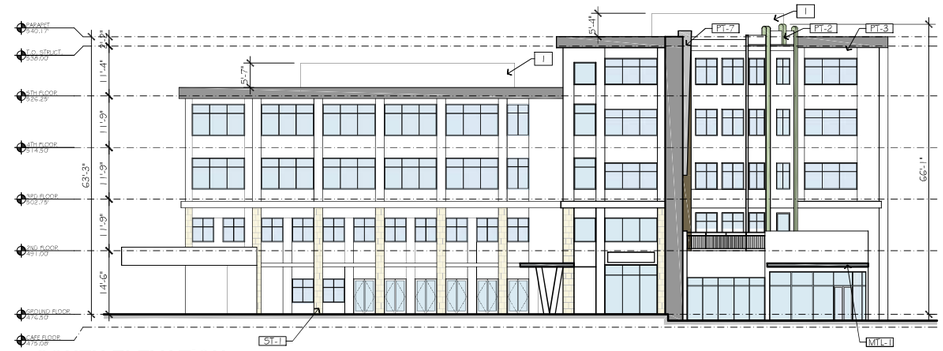
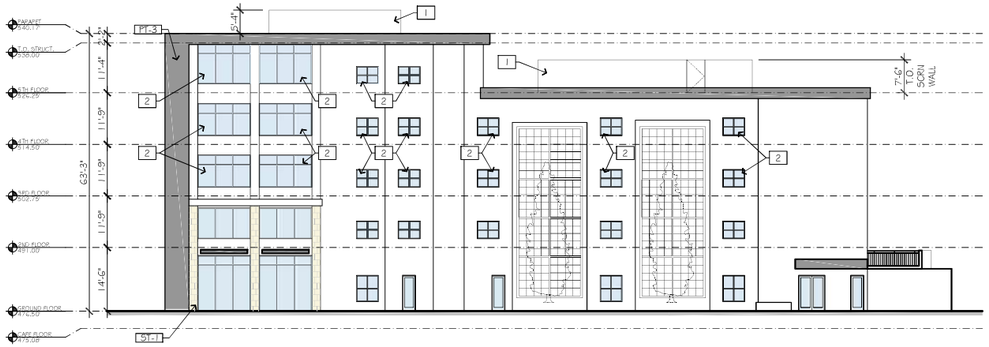


1 **SOUTH ELEVATION**

SCALE: 1/16" = 1'-0"

2 **EAST ELEVATION**

SCALE: 1/16" = 1'-0"



3 **NORTH ELEVATION**

SCALE: 1/16" = 1'-0"

4 **ELEVATION**

SCALE: 1/16" = 1'-0"

MATERIAL LEGEND

SYMBOL	MATERIAL FINISH	MANUFACTURER	COLOR/FINISH	REMARKS
PT-1	PAINT	DUNN-EDWARDS	DEW357 - WHITE CREST	
PT-2	PAINT	DUNN-EDWARDS	DE6221 - FLINTSTONE	
PT-3	PAINT	DUNN-EDWARDS	DE6229 - CALICO ROCK	
PT-4	PAINT	DUNN-EDWARDS	DET520 - MOW THE LAWN	
MTL-1	PAINT	DUNN-EDWARDS	DE6070 - CHOCOLATE CHUNK	
MTL-2	PAINT	DUNN-EDWARDS	DE6386 - SNOW PEAK	
MTL-3	PAINT	DUNN-EDWARDS	DE6385 - BLACK BEAN	

SOURCE: Design Group 2019

DUDEK

FIGURE 5B

Building D Elevations

Hotel Indigo Project

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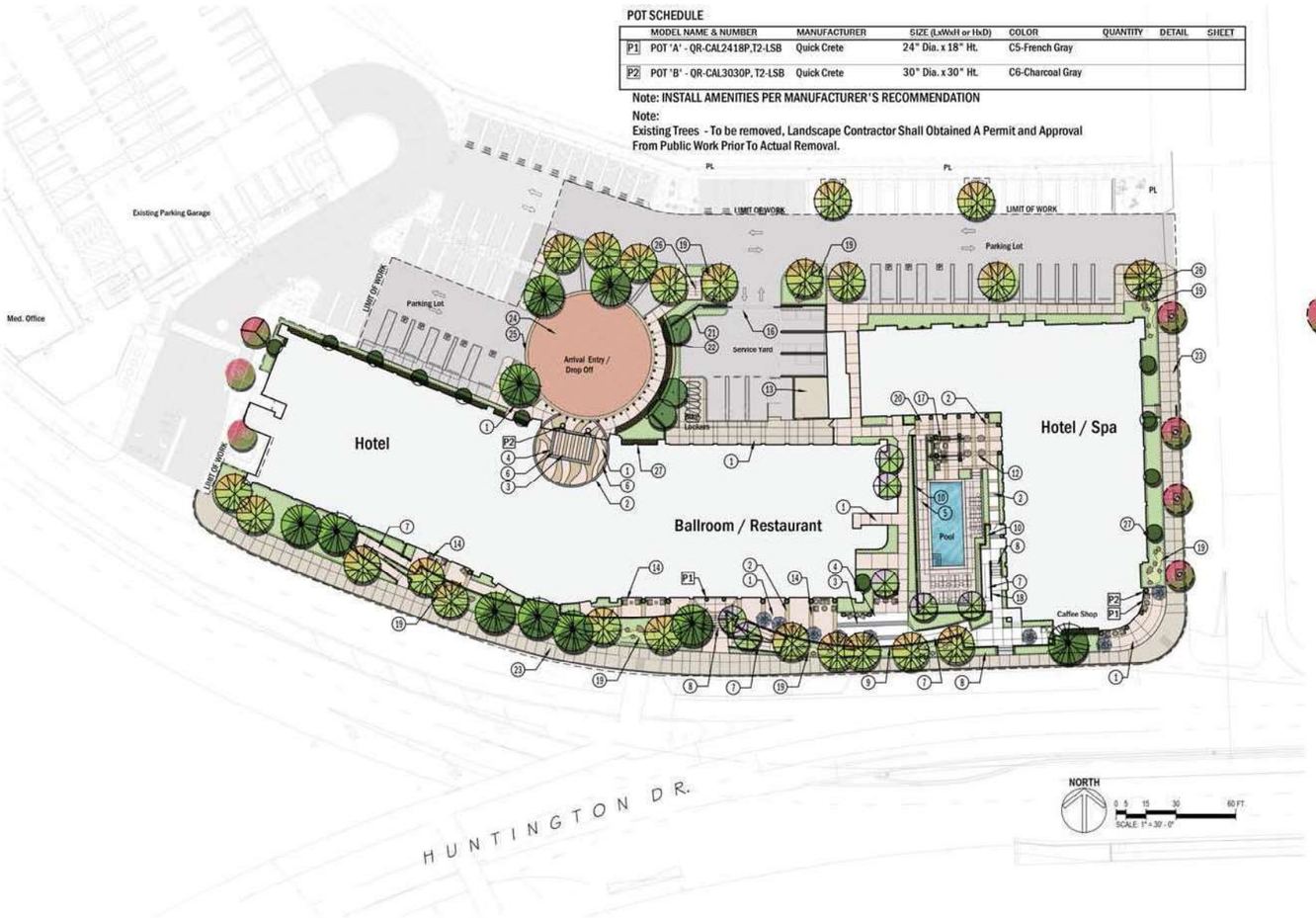

POT SCHEDULE

	MODEL NAME & NUMBER	MANUFACTURER	SIZE (LxWxH or HxD)	COLOR	QUANTITY	DETAIL	SHEET
P1	POT 'A' - QR-CAL2418P,T2-LSB	Quick Crete	24" Dia. x 18" Ht.	C5-French Gray			
P2	POT 'B' - QR-CAL3030P, T2-LSB	Quick Crete	30" Dia. x 30" Ht.	C6-Charcoal Gray			

Note: INSTALL AMENITIES PER MANUFACTURER'S RECOMMENDATION

Note:
Existing Trees - To be removed, Landscape Contractor Shall Obtained A Permit and Approval From Public Work Prior To Actual Removal.

LEGEND

1. Concrete Paving - 4" Thickness Integral Color Concrete With Light sandblast finish, Color : Mesa Bluff
2. 18" Wide Concrete Band - Integral Color Concrete With medium sandblast finish, Color: Autumn Beige
3. Concrete Paving - 4" Thickness Integral Color Concrete With Light Sandblast Finish, Color : Light Gray
4. 18" Wide Concrete Band - Integral Color Concrete With Medium Sandblast finish. Color : Dark Gray
5. Pool Deck - Accent Linear Paver
6. Concrete Paving At Main Entry Lobby - 4" Thickness Integral Color Concrete With Light sandblast Finish, Color : Mesa Beige
7. ADA Ramp With Cheek Wall And Handrail - Color To Match Adjacent Paving
8. Concrete Steps With Cheek Wall and Handrail - Color To Match Adjacent Paving
9. 42" High Glass Rail Atop Retaining Wall/ Edging Wall
10. 5' High Glass Fencing / Gate at Pool
11. Lounge Chair/ Loveseat and Coffee Table
12. Outdoor Open Space / Multi- Use Area
13. Pool Equipment Storage Area
14. Dining Terrace
15. Trash Enclosure
16. Metal Sliding Gate
17. 12' x 18' Metal Trellis
18. 36" High Glass Fencing Guard Rail
19. Vegetated Bio-Swale / Biofiltration See Civil Engineer's plan
20. Accent Paver At Outdoor Opening Space
21. 5'-0" HT. Wall With Smooth Plaster Finish
22. 8'-0" HT. Sign Wall With Smooth Plaster Finish
23. Concrete Paving - 4" Thickness Natural Gray Concrete per City Standard
24. Vehicular Conc. Paver - 4 x 8 x 80 cm Thickness, Face Mix Grind Finish, Color : Buff
25. Vehicular Conc. Band - 6" Thickness Integral Color Concrete With Light sandblast finish, Color : Autumn Beige
26. Bike Rack
27. 3" Gravel Bed Layer

Tree List

Key	Name	Size	Comments	WUCOLS
	Arbutus 'Marina' Marina Strawberry Tree	24" Box	Standard	L
	Erythrina coralloides Naked Coral Tree	36" Box	Standard	M
	Lophostemon confertus Brisbane Box	24" Box	Standard	M
	Platanus x acerfolia 'Columbia' London Plane Tree	36" Box	Standard	M
	Laurus nobilis 'Little Ragu' Little Ragu Sweet Bay	15 Gal	Standard	L
	Lagerstroemia x 'Tuscarora' Tuscarora Crape Myrtle	24" Box	Standard	M
	Existing Trees - Protect in place			

Shrub List

Key	Name	Size	Spacing	WUCOLS
	Callistemon 'Little John' Dwarf Callistemon Little John	5 Gal	30" O.C.	L
	Senecio mandraliscae Blue Chalk Sticks	1 Gal	18" O.C.	L
	Muhlenbergia capillaris Pink Muhly	1 Gal	24" O.C.	L
	Dianella revoluta Little Rev. Flax Lily	1 Gal	18" O.C.	L
	Ligustrum japonicum 'Texanum' Japanese Privet	15 Gal	36" O.C.	M
	Agave desmettiana Dwarf Smoth Agave	5 Gal	36" O.C	L
	Rhaphiolepis indica 'Ballerina' Ballerina India Hawthorne	5 Gal	36" O.C	M
	Pittosporum c.'compactum' Dwarf Karo	5 Gal	24".OC	M
	Carex pansa California Sedge	1 Gal	12" O.C	M
	Salvia greggii 'Furman's Red' Magenta Red Texas Sage	5 Gal	24".OC	M
	Dietes bicolor Fort Night Lily	5 Gal	36".OC	M
	Liriope muscari 'Big Blue' Lily Turf	1 Gal	18".OC	M
	Clytostoma callistegiodes Vine Trumpet Vine	15 Gal	Per plan	M

Pot Plant List

Key	Name	Size	Spacing	WUCOLS
P1	Dwarf Citrus spp. Dwarf Citrus	15 Gal		M
P2	Dwarf Citrus spp. Dwarf Citrus	15 Gal		M

WUCOLS NOTE: PER 'A GUIDE TO ESTIMATING IRRIGATION WATER NEEDS OF LANDSCAPE PLANTINGS IN CALIFORNIA' BY CALIFORNIA DEPARTMENT OF WATER RESOURCES, WUCOLS, WATER USE CLASSIFICATIONS OF LANDSCAPE SPECIES, IS A UNIVERSITY OF CALIFORNIA COOPERATIVE EXTENSION PUBLICATION AND IS A GUIDE TO THE WATER NEEDS OF LANDSCAPE PLANTS.

ALL AREAS ARE TO BE AUTOMATICALLY IRRIGATED BY DRIP IRRIGATION AND ADHERE TO AB1881 WATER USE

Project Site			
96,775 SF	Off-Site	Planting Area	TOTAL
	6,919 SF	96 SF	
	Parking Lot Area (12,967 SF)		
	(5% min. Parking Lot - 648.35 sf)	3,286 SF	3,286 SF
	Project On-Site (89,856 SF)		
		8,926 SF	8,926 SF
	TOTAL OF LANDSCAPE AREA		12,212 SF (13.5 %)

SOURCE: Design Group 2019

FIGURE 6

Preliminary Landscape Plan

Hotel Indigo Project

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SOURCE: SOURCE: LARIAC 2014

DUDEK

0 100 200 Feet
0 25 50 Meters
1:2,400

FIGURE 7

Noise Measurement Locations

Hotel Indigo Project

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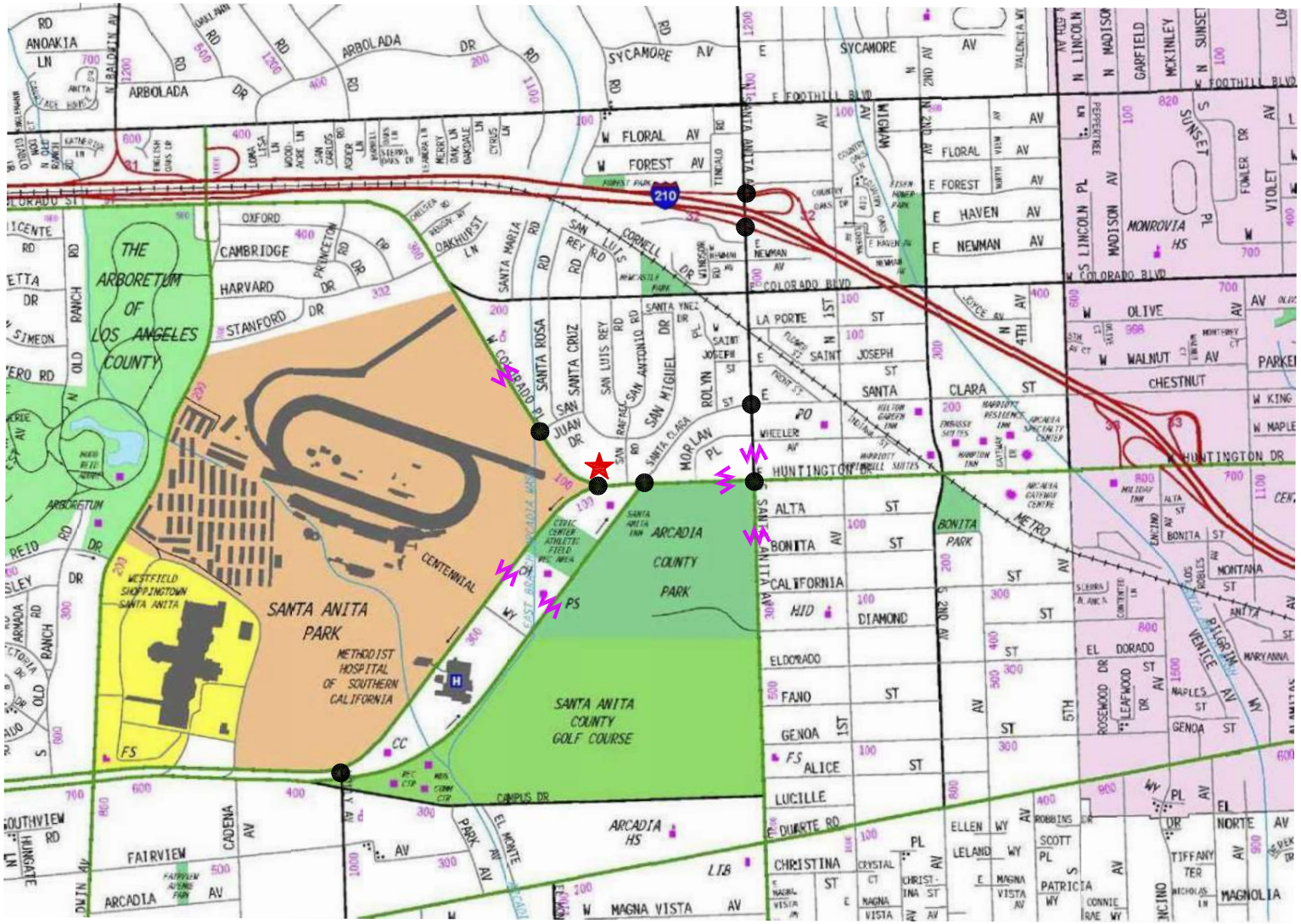

N

NOT TO SCALE

MAP SOURCE: RAND MCNALLY & COMPANY

PROJECT SITE

STUDY INTERSECTION

STUDY STREET SEGMENT

SOURCE: LINSCOTT, LAW & GREENSPAN, Engineers

DUDEK

FIGURE 8

Vicinity Map

Hotel Indigo Project

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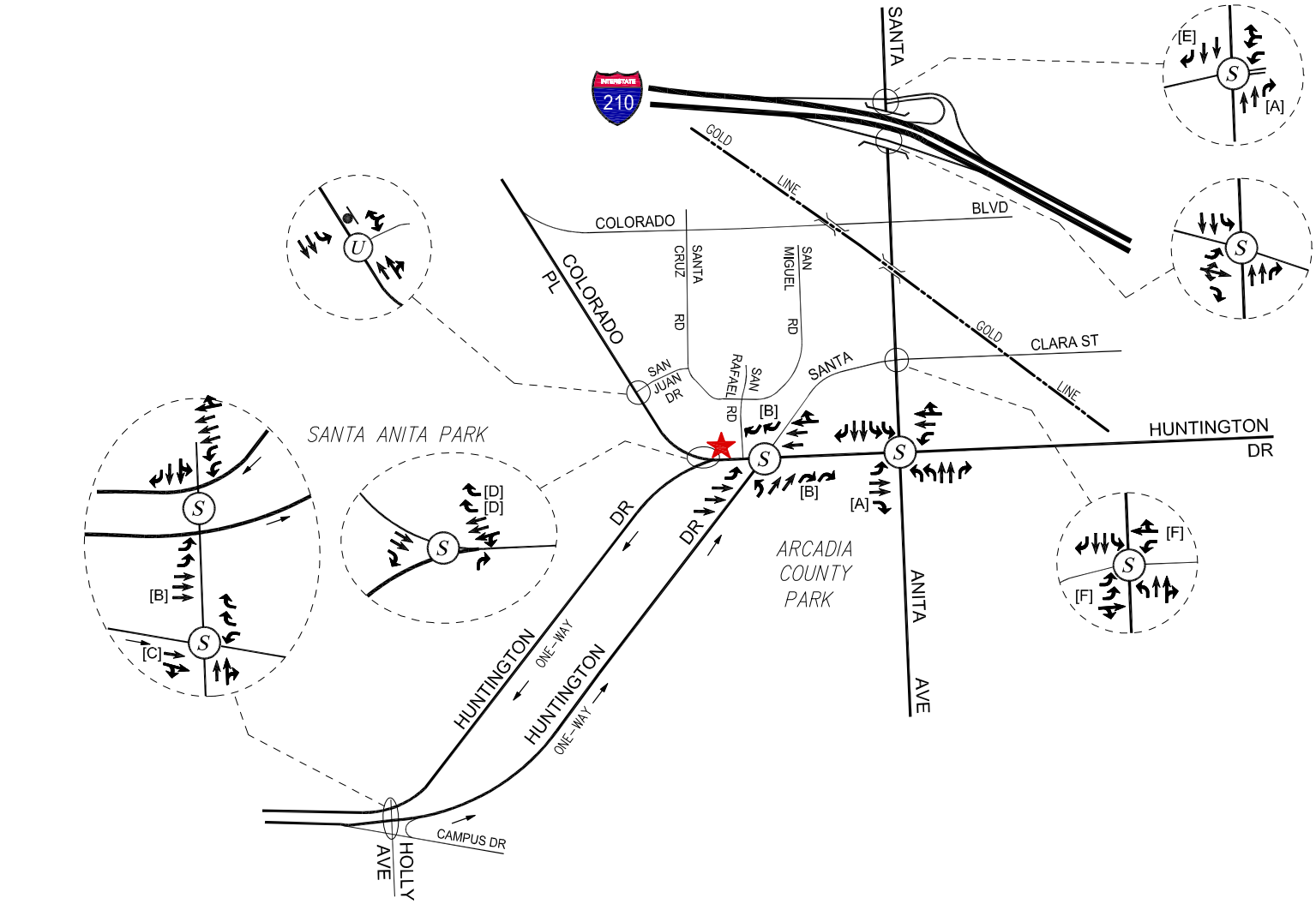

SOURCE: LINSCOTT, LAW & GREENSPAN, Engineers

FIGURE 9

Existing Lane Configurations

Hotel Indigo Project

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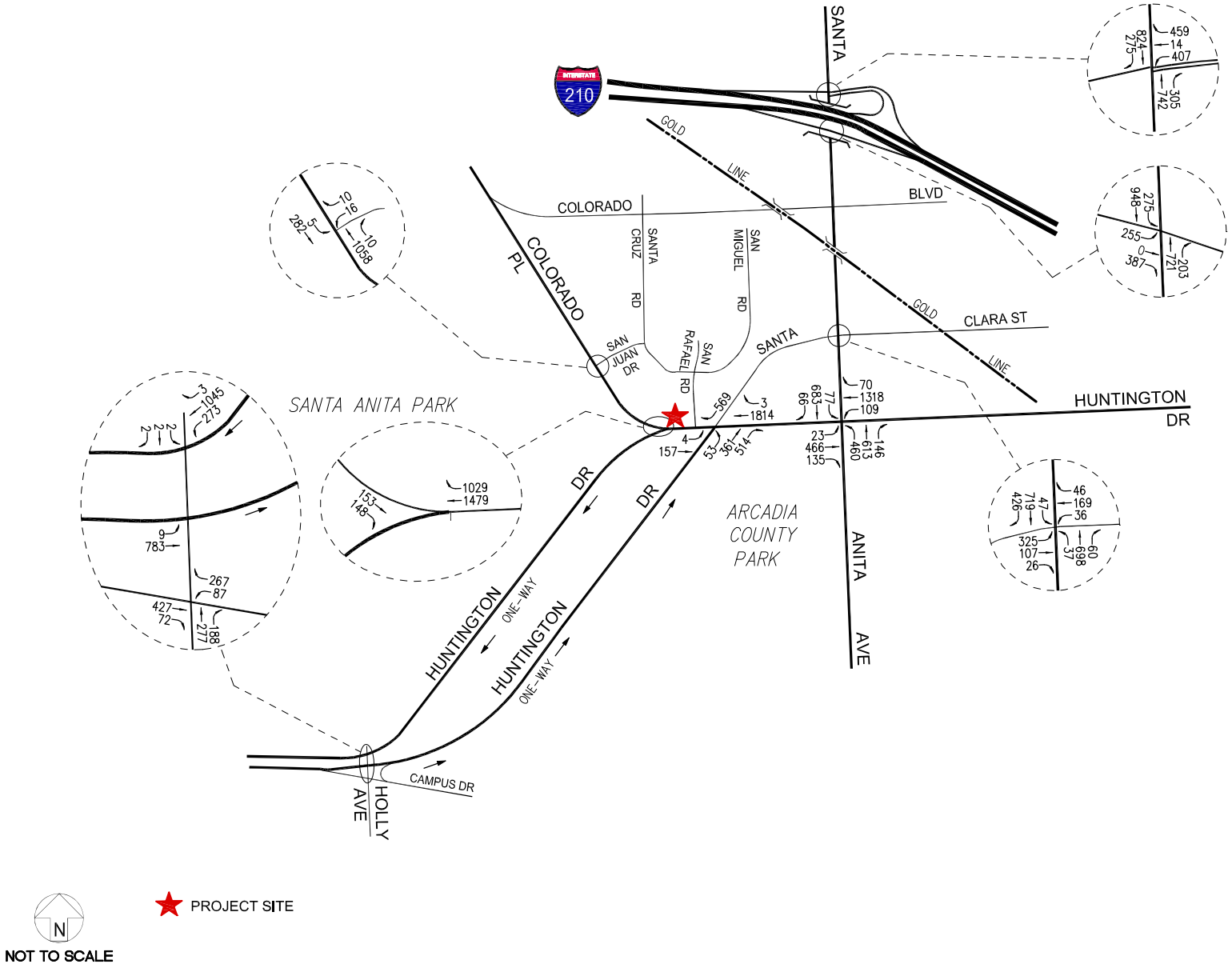

SOURCE: LINSCOTT, LAW & GREENSPAN, Engineers

FIGURE 10

Existing Traffic Volumes (Weekday AM Peak Hour)

Hotel Indigo Project

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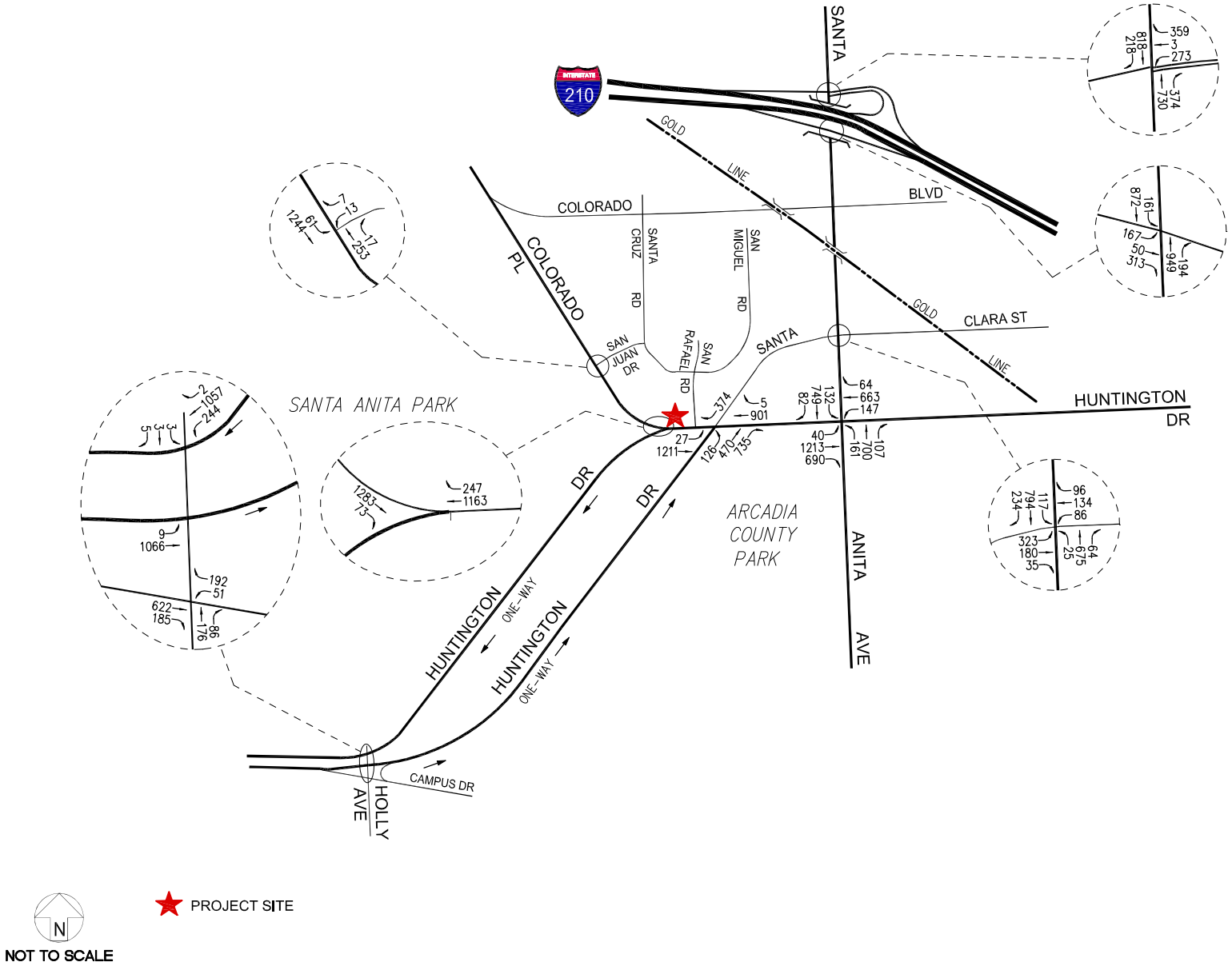

SOURCE: LINSCOTT, LAW & GREENSPAN, Engineers

FIGURE 11

Existing Traffic Volumes (Weekday PM Peak Hour)

Hotel Indigo Project

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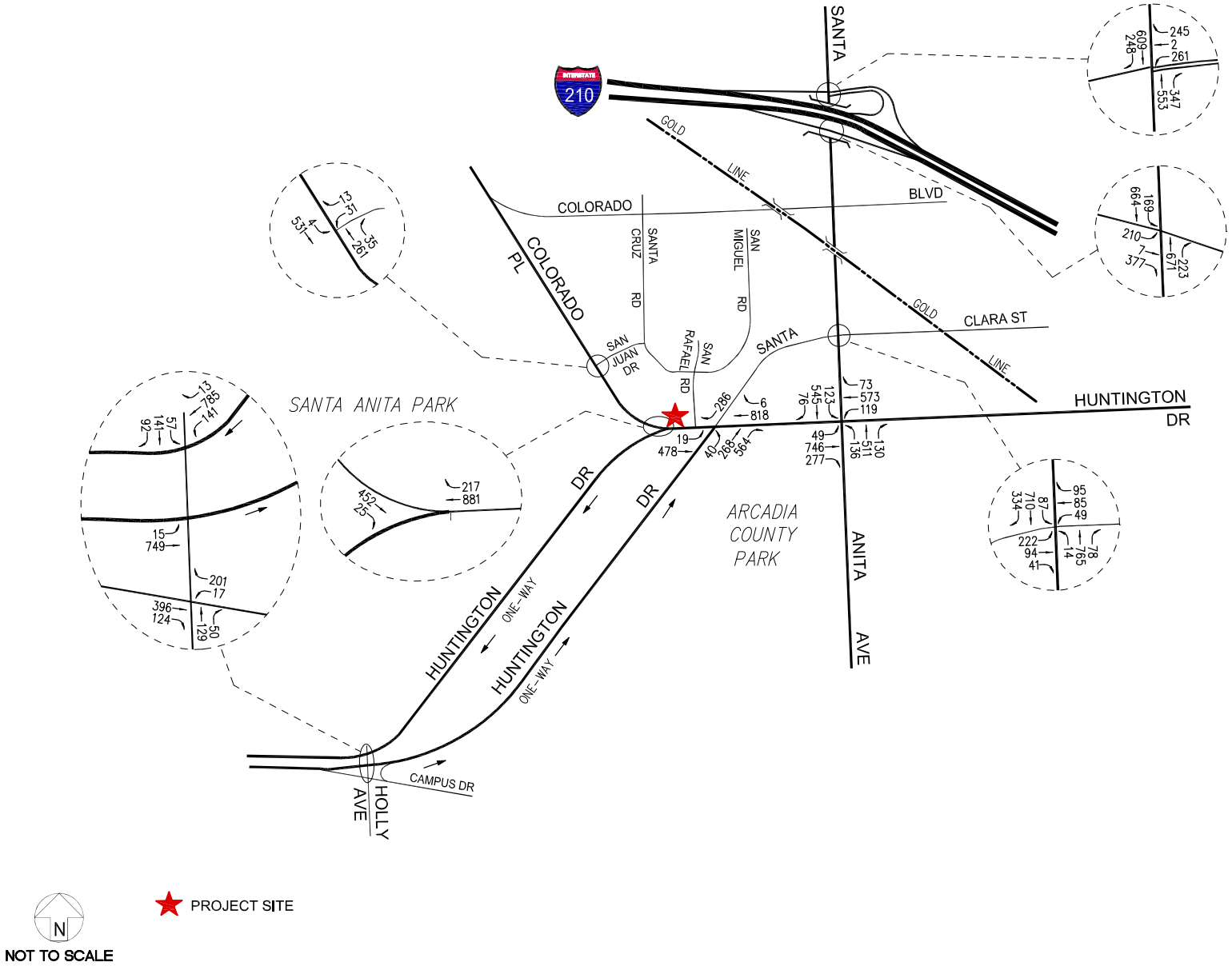

SOURCE: LINSCOTT, LAW & GREENSPAN, Engineers

FIGURE 12

Existing Traffic Volumes (Saturday PM Peak Hour)

Hotel Indigo Project

DUDEK

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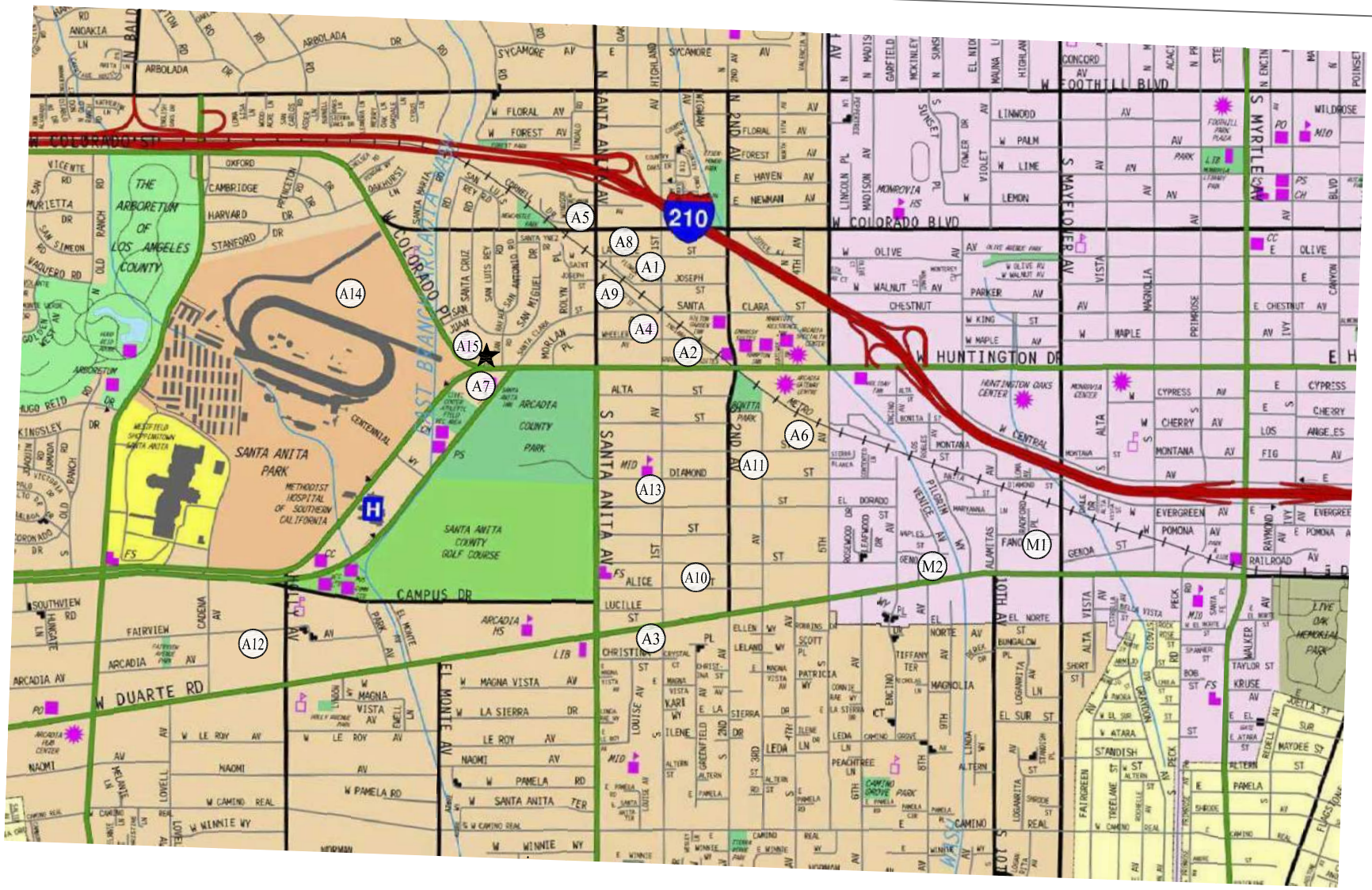

SOURCE: LINSCOTT, LAW & GREENSPAN, Engineers

DUDEK

FIGURE 13

Location of Related Projects

Hotel Indigo Project

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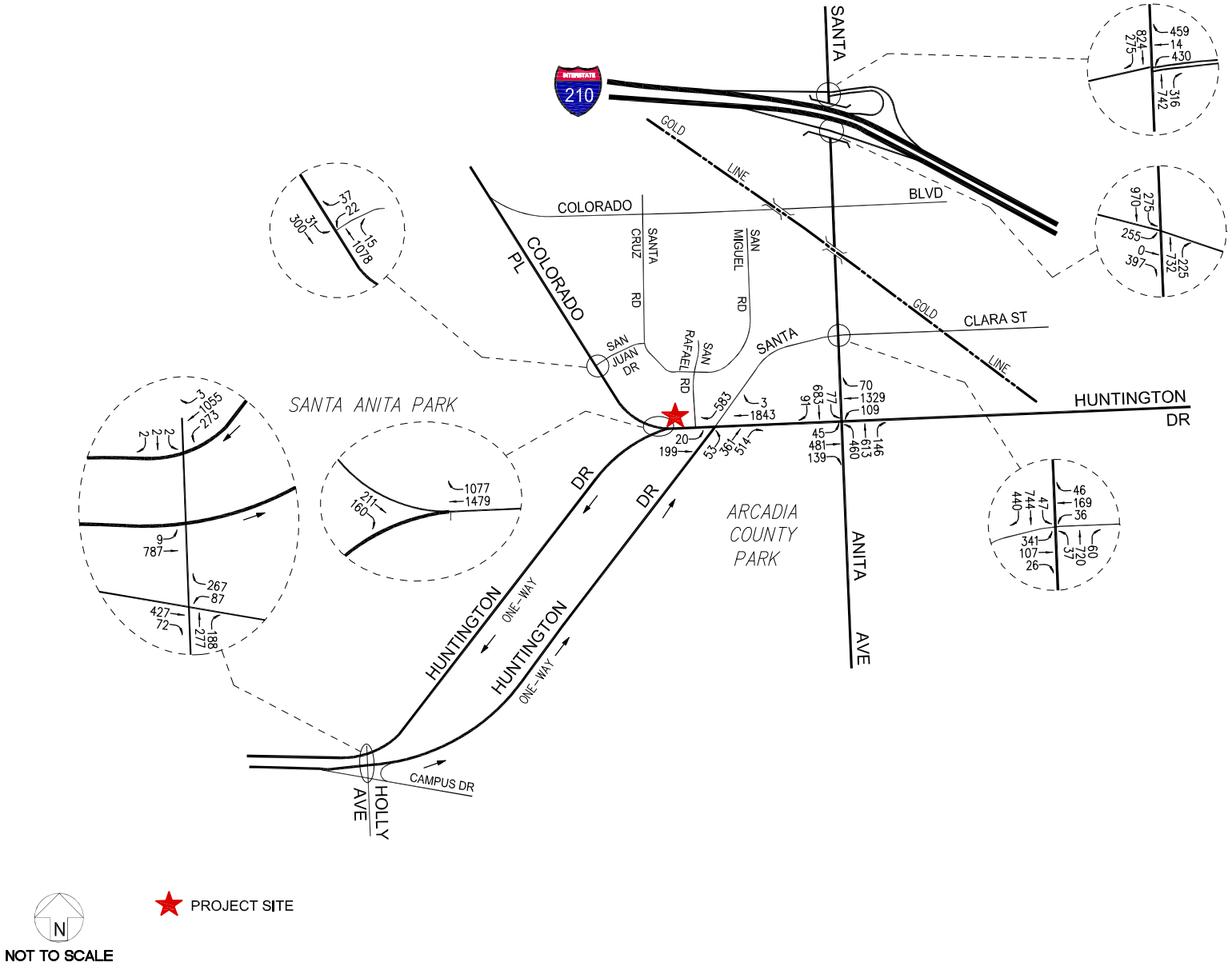

SOURCE: LINSCOTT, LAW & GREENSPAN, Engineers

FIGURE 14

Existing with Project Traffic Volumes (Weekday AM Peak Hour)

Hotel Indigo Project

DUDEK

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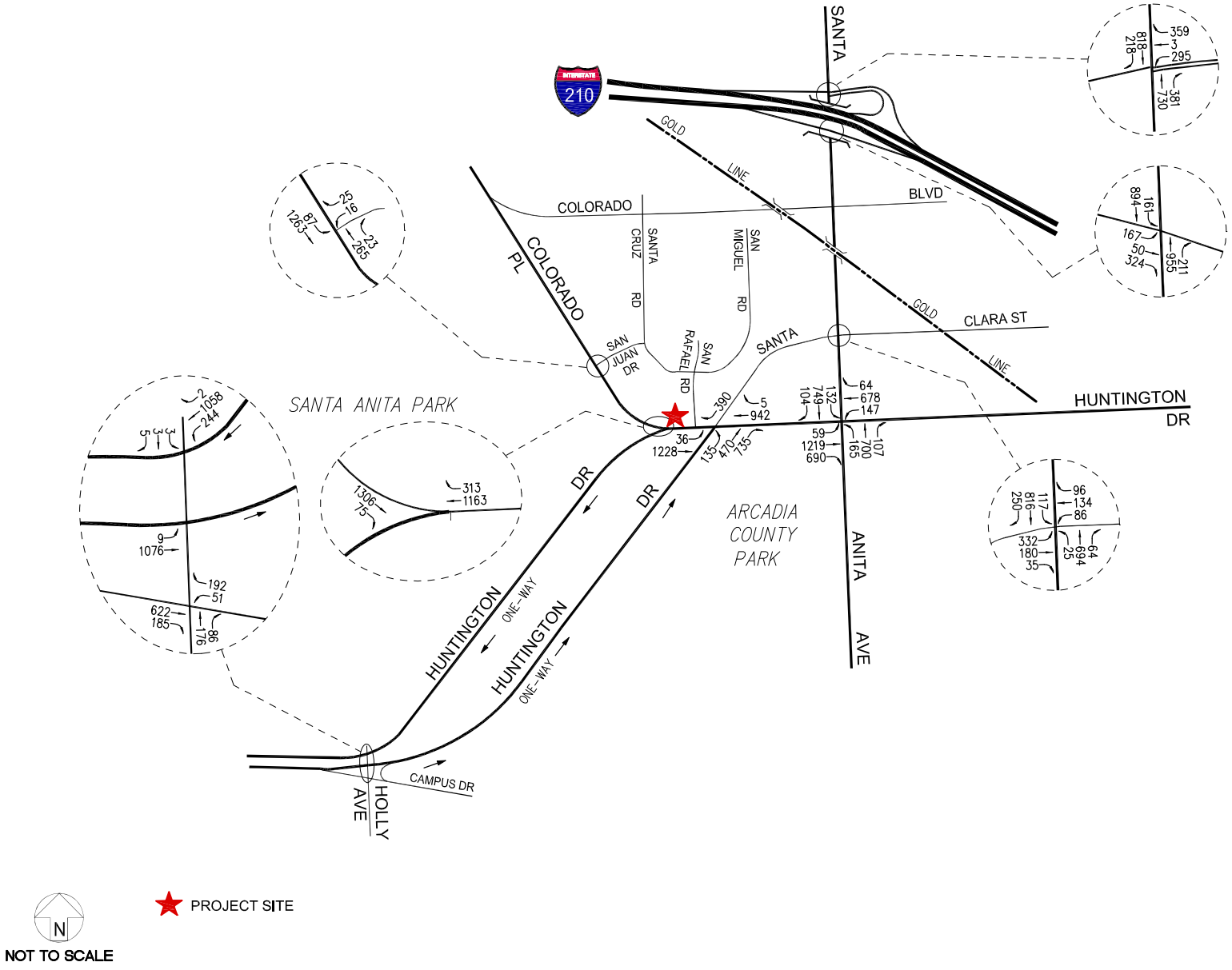

SOURCE: LINSCOTT, LAW & GREENSPAN, Engineers

FIGURE 15

Existing with Project Traffic Volumes (Weekday PM Peak Hour)

Hotel Indigo Project

DUDEK

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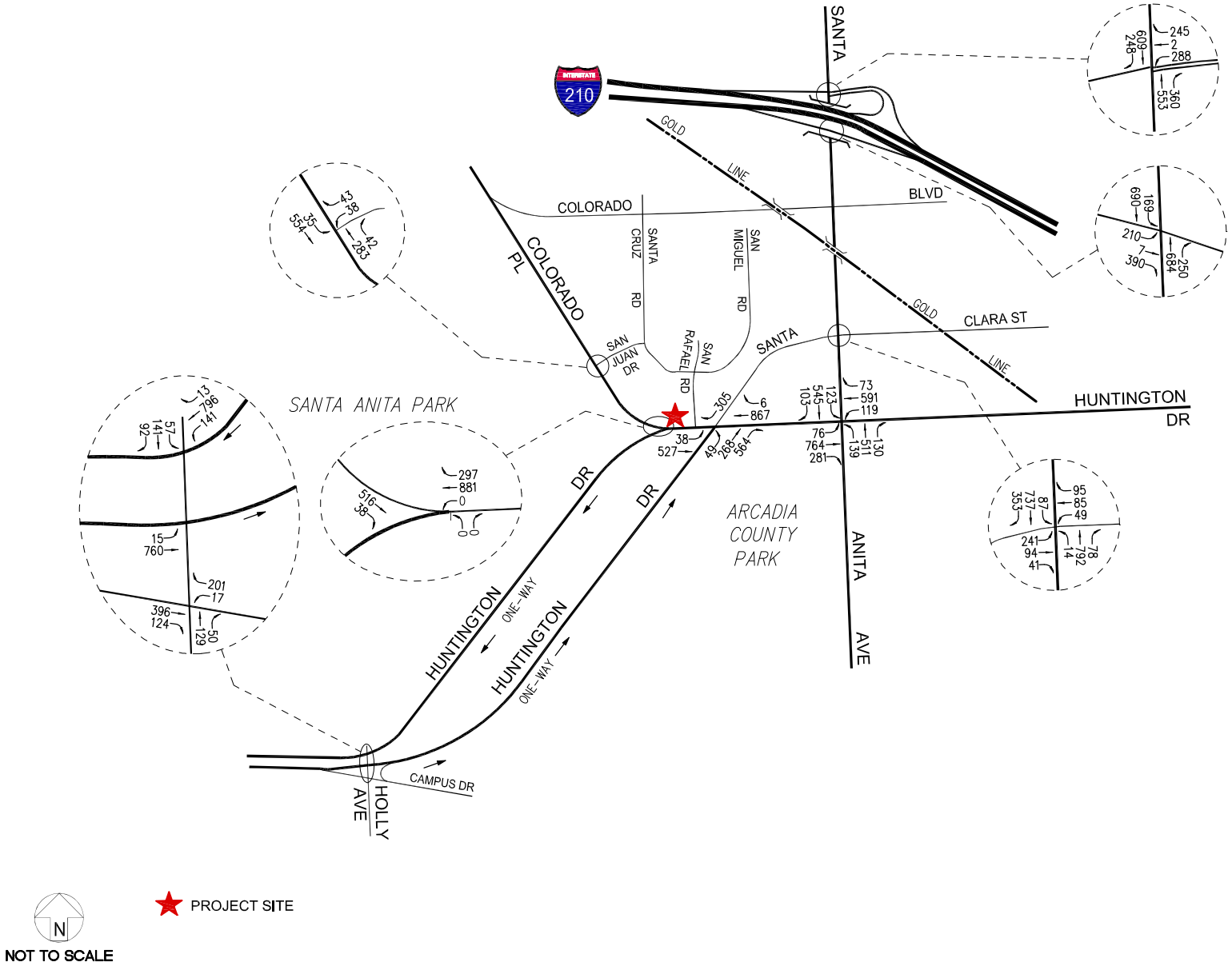

SOURCE: LINSCOTT, LAW & GREENSPAN, Engineers

FIGURE 16

Existing with Project Traffic Volumes (Saturday PM Peak Hour)

Hotel Indigo Project

DUDEK

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Appendix A

Air Quality and Greenhouse Gas Calculations

Indigo Hotel - Proposed Project

Los Angeles-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Parking Lot	95.00	Space	0.86	38,000.00	0
Fast Food Restaurant w/o Drive Thru	1.57	1000sqft	0.04	1,568.00	0
Fast Food Restaurant w/o Drive Thru	1.03	1000sqft	0.02	1,030.00	0
Health Club	7.47	1000sqft	0.17	7,466.00	0
High Turnover (Sit Down Restaurant)	3.88	1000sqft	0.09	3,885.00	0
Hotel	165.00	Room	0.31	138,292.00	0
Recreational Swimming Pool	1.80	1000sqft	0.04	1,800.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	9			**Operational Year**	2022
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	636.97	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Per 2016 SCE Power Content Label. See Section 1.0 Project Characteristics.

Land Use - Per applicant provided information. Cafe and bar modeled as fast food restaurant w/o drive separately. Lot acreage of hotel equal to new Building D ground floor. Hotel square feet set equal to total area of both existing Building C and new Building D.

Construction Phase - Per applicant provided information. Monday - Saturday construction schedule. See 3.0 Construction Detail.

Off-road Equipment - Default values. See 3.0 Construction Detail.
Off-road Equipment - Default values. See 3.0 Construction Detail.

Off-road Equipment - Default values. See 3.0 Construction Detail.

Off-road Equipment - Default values. See 3.0 Construction Detail.

Off-road Equipment - Default values. See 3.0 Construction Detail.

Off-road Equipment - Default values. See 3.0 Construction Detail.

Trips and VMT - Default values rounded up to even number of trip rates.

On-road Fugitive Dust - CalEEMod default values.

Demolition - Estimated tons of removed asphalt and sidewalk concrete from existing site, per Site Demolition Plan, Drawing AD0.1, March 11, 2019.

Grading - Per applicant information.

Architectural Coating - CalEEMod default values.

Vehicle Trips - Based on traffic analysis perpared by Linnscott, Law & Greenspan (LLG Ref. 1-16-4200-2)

Vehicle Emission Factors - CalEEMod default values

Vehicle Emission Factors - CalEEMod default values

Vehicle Emission Factors - CalEEMod default values

Road Dust - CalEEMod default values

Woodstoves - CalEEMod default values

Consumer Products - CalEEMod default values

Area Coating - CalEEMod default values

Landscape Equipment - CalEEMod default values

Energy Use - CalEEMod default values

Water And Wastewater - Default CalEEMod values for indoor and outdoor water use. Assumed 100% aerobic.

Solid Waste - CalEEMod default values

Construction Off-road Equipment Mitigation -

Mobile Land Use Mitigation - Distance to Arcadia Gold Line Station is 0.45 miles. The project encourages walking through pedestrian access linking internal uses to external streets and sidewalks. Road crossings include marked crosswalks, median islands, traffic signals and timers.

Area Mitigation -

Energy Mitigation - High efficiency lighting will be used for outdoor lighting. Percent lighting energy reduction conservatively set equal to the minimum reduction (16%) per CAPCOA-Quantification Report 9-14-Final.

Indigo Hotel - Proposed Project - Los Angeles-South Coast County, Annual

Water Mitigation - Per applicant provided information, the proposed project will utilize efficient fixtures and appliances. Therefore, low-flow indoor water use is assumed.

Waste Mitigation - Percent Reduction in Waste Disposed: 50%. Waste diversion consistent with Assembly Bill 939.

Stationary Sources - Emergency Generators and Fire Pumps - Assumed 374 hp Emergency Generator.

Stationary Sources - Emergency Generators and Fire Pumps EF - CalEEMod default values

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	20.00	27.00
tblConstructionPhase	NumDays	2.00	10.00
tblConstructionPhase	NumDays	4.00	11.00
tblConstructionPhase	NumDays	200.00	357.00
tblConstructionPhase	NumDays	10.00	20.00
tblConstructionPhase	NumDays	10.00	20.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblGrading	MaterialImported	0.00	1,363.00
tblLandUse	LandUseSquareFeet	1,570.00	1,568.00
tblLandUse	LandUseSquareFeet	7,470.00	7,466.00
tblLandUse	LandUseSquareFeet	3,880.00	3,885.00
tblLandUse	LandUseSquareFeet	239,580.00	138,292.00
tblLandUse	LotAcreage	5.50	0.31
tblProjectCharacteristics	CO2IntensityFactor	702.44	636.97
tblTripsAndVMT	VendorTripNumber	31.00	30.00
tblTripsAndVMT	WorkerTripNumber	13.00	14.00

tblTripsAndVMT	WorkerTripNumber	80.00	78.00
tblTripsAndVMT	WorkerTripNumber	13.00	14.00
tblVehicleTrips	ST_TR	696.00	403.69
tblVehicleTrips	ST_TR	20.87	46.12
tblVehicleTrips	ST_TR	158.37	122.40
tblVehicleTrips	ST_TR	8.19	10.50
tblVehicleTrips	ST_TR	9.10	0.00
tblVehicleTrips	SU_TR	500.00	185.25
tblVehicleTrips	SU_TR	26.73	30.66
tblVehicleTrips	SU_TR	131.84	124.11
tblVehicleTrips	SU_TR	5.95	8.91
tblVehicleTrips	SU_TR	13.60	0.00
tblVehicleTrips	WD_TR	716.00	265.28
tblVehicleTrips	WD_TR	32.93	37.75
tblVehicleTrips	WD_TR	127.15	112.18
tblVehicleTrips	WD_TR	8.17	12.23
tblVehicleTrips	WD_TR	33.82	0.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00

tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00

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					
2020	0.2496	1.9959	1.6944	3.7800e-003	0.1667	0.0899	0.2566	0.0561	0.0859	0.1421	0.0000	331.2342	331.2342	0.0462	0.0000	332.3884
2021	0.9321	1.7374	1.7416	3.9200e-003	0.1051	0.0731	0.1782	0.0283	0.0704	0.0987	0.0000	341.6013	341.6013	0.0422	0.0000	342.6570
Maximum	**0.9321**	**1.9959**	**1.7416**	**3.9200e-003**	**0.1667**	**0.0899**	**0.2566**	**0.0561**	**0.0859**	**0.1421**	**0.0000**	**341.6013**	**341.6013**	**0.0462**	**0.0000**	**342.6570**

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					
2020	0.2496	1.9959	1.6944	3.7800e-003	0.1248	0.0899	0.2147	0.0387	0.0859	0.1246	0.0000	331.2339	331.2339	0.0462	0.0000	332.3882
2021	0.9321	1.7374	1.7416	3.9200e-003	0.1051	0.0731	0.1782	0.0283	0.0704	0.0987	0.0000	341.6011	341.6011	0.0422	0.0000	342.6568
Maximum	**0.9321**	**1.9959**	**1.7416**	**3.9200e-003**	**0.1248**	**0.0899**	**0.2147**	**0.0387**	**0.0859**	**0.1246**	**0.0000**	**341.6011**	**341.6011**	**0.0462**	**0.0000**	**342.6568**

	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	**0.00**	**0.00**	**0.00**	**0.00**	**15.40**	**0.00**	**9.63**	**20.64**	**0.00**	**7.24**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	5-1-2020	7-31-2020	0.8775	0.8775
2	8-1-2020	10-31-2020	0.8183	0.8183
3	11-1-2020	1-31-2021	0.7973	0.7973
4	2-1-2021	4-30-2021	0.7269	0.7269
5	5-1-2021	7-31-2021	0.7498	0.7498
6	8-1-2021	9-30-2021	0.8952	0.8952
		Highest	0.8952	0.8952

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	0.6230	3.0000e-005	3.5200e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	6.8400e-003	6.8400e-003	2.0000e-005	0.0000	7.2900e-003
Energy	0.0267	0.2425	0.2037	1.4600e-003		0.0184	0.0184		0.0184	0.0184	0.0000	677.3433	677.3433	0.0239	8.7300e-003	680.5429
Mobile	0.8518	4.2027	9.7674	0.0334	2.6703	0.0284	2.6987	0.7158	0.0265	0.7423	0.0000	3,083.1359	3,083.1359	0.1680	0.0000	3,087.3360
Stationary	0.0823	7.9200e-003	0.2143	3.0000e-005		4.5000e-004	4.5000e-004		4.5000e-004	4.5000e-004	0.0000	4.7679	4.7679	9.9700e-003	0.0000	5.0171
Waste						0.0000	0.0000		0.0000	0.0000	44.5159	0.0000	44.5159	2.6308	0.0000	110.2863
Water						0.0000	0.0000		0.0000	0.0000	2.3707	28.1830	30.5537	9.4400e-003	5.4200e-003	32.4052
Total	**1.5837**	**4.4531**	**10.1889**	**0.0349**	**2.6703**	**0.0473**	**2.7175**	**0.7158**	**0.0454**	**0.7611**	**46.8866**	**3,793.4369**	**3,840.3236**	**2.8421**	**0.0142**	**3,915.5948**

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	0.6230	3.0000e-005	3.5200e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	6.8400e-003	6.8400e-003	2.0000e-005	0.0000	7.2900e-003
Energy	0.0267	0.2425	0.2037	1.4600e-003		0.0184	0.0184		0.0184	0.0184	0.0000	659.6190	659.6190	0.0231	8.5700e-003	662.7487
Mobile	0.8093	3.9150	8.7327	0.0291	2.2954	0.0249	2.3203	0.6153	0.0232	0.6385	0.0000	2,686.7254	2,686.7254	0.1498	0.0000	2,690.4695
Stationary	0.0823	7.9200e-003	0.2143	3.0000e-005		4.5000e-004	4.5000e-004		4.5000e-004	4.5000e-004	0.0000	4.7679	4.7679	9.9700e-003	0.0000	5.0171
Waste						0.0000	0.0000		0.0000	0.0000	22.2580	0.0000	22.2580	1.3154	0.0000	55.1432
Water						0.0000	0.0000		0.0000	0.0000	1.8966	22.9598	24.8564	7.5700e-003	4.3400e-003	26.3393
Total	**1.5412**	**4.1655**	**9.1542**	**0.0306**	**2.2954**	**0.0438**	**2.3392**	**0.6153**	**0.0421**	**0.6574**	**24.1545**	**3,374.0791**	**3,398.2336**	**1.5058**	**0.0129**	**3,439.7250**

	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	**2.68**	**6.46**	**10.15**	**12.34**	**14.04**	**7.36**	**13.92**	**14.04**	**7.14**	**13.63**	**48.48**	**11.05**	**11.51**	**47.02**	**8.76**	**12.15**

3.0 Construction Detail

Construction Phase

Indigo Hotel - Proposed Project - Los Angeles-South Coast County, Annual

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	5/1/2020	6/1/2020	6	27	
2	Site Preparation	Site Preparation	6/2/2020	6/12/2020	6	10	
3	Grading	Grading	6/13/2020	6/25/2020	6	11	
4	Building Construction	Building Construction	6/26/2020	8/16/2021	6	357	
5	Paving	Paving	8/17/2021	9/8/2021	6	20	
6	Architectural Coating	Architectural Coating	9/9/2021	10/1/2021	6	20	

Acres of Grading (Site Preparation Phase): 5

Acres of Grading (Grading Phase): 4.13

Acres of Paving: 0.86

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 225,225; Non-Residential Outdoor: 75,075; Striped Parking Area: 2,280 (Architectural Coating – sqft)

OffRoad Equipment

Indigo Hotel - Proposed Project - Los Angeles-South Coast County, Annual

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	1	8.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Rubber Tired Dozers	1	7.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Graders	1	6.00	187	0.41
Grading	Rubber Tired Dozers	1	6.00	247	0.40
Grading	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Building Construction	Cranes	1	6.00	231	0.29
Building Construction	Forklifts	1	6.00	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	6.00	9	0.56
Paving	Pavers	1	6.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	1	7.00	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
Demolition	5	14.00	0.00	185.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	3	8.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	3	8.00	0.00	170.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	7	78.00	30.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	14.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	16.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Demolition - 2020

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					0.0200	0.0000	0.0200	3.0200e-003	0.0000	3.0200e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0287	0.2828	0.1979	3.3000e-004		0.0156	0.0156		0.0145	0.0145	0.0000	28.4414	28.4414	7.3100e-003	0.0000	28.6241
Total	**0.0287**	**0.2828**	**0.1979**	**3.3000e-004**	**0.0200**	**0.0156**	**0.0355**	**3.0200e-003**	**0.0145**	**0.0176**	**0.0000**	**28.4414**	**28.4414**	**7.3100e-003**	**0.0000**	**28.6241**

3.2 Demolition - 2020

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	8.2000e-004	0.0275	6.0500e-003	7.0000e-005	1.5900e-003	9.0000e-005	1.6800e-003	4.4000e-004	8.0000e-005	5.2000e-004	0.0000	7.1297	7.1297	5.0000e-004	0.0000	7.1422
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	8.7000e-004	7.0000e-004	7.7800e-003	2.0000e-005	2.0700e-003	2.0000e-005	2.0900e-003	5.5000e-004	2.0000e-005	5.7000e-004	0.0000	1.9304	1.9304	6.0000e-005	0.0000	1.9319
Total	**1.6900e-003**	**0.0282**	**0.0138**	**9.0000e-005**	**3.6600e-003**	**1.1000e-004**	**3.7700e-003**	**9.9000e-004**	**1.0000e-004**	**1.0900e-003**	**0.0000**	**9.0601**	**9.0601**	**5.6000e-004**	**0.0000**	**9.0740**

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					8.9900e-003	0.0000	8.9900e-003	1.3600e-003	0.0000	1.3600e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0287	0.2828	0.1979	3.3000e-004		0.0156	0.0156		0.0145	0.0145	0.0000	28.4413	28.4413	7.3100e-003	0.0000	28.6241
Total	**0.0287**	**0.2828**	**0.1979**	**3.3000e-004**	**8.9900e-003**	**0.0156**	**0.0246**	**1.3600e-003**	**0.0145**	**0.0159**	**0.0000**	**28.4413**	**28.4413**	**7.3100e-003**	**0.0000**	**28.6241**

3.2 Demolition - 2020

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	8.2000e-004	0.0275	6.0500e-003	7.0000e-005	1.5900e-003	9.0000e-005	1.6800e-003	4.4000e-004	8.0000e-005	5.2000e-004	0.0000	7.1297	7.1297	5.0000e-004	0.0000	7.1422
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	8.7000e-004	7.0000e-004	7.7800e-003	2.0000e-005	2.0700e-003	2.0000e-005	2.0900e-003	5.5000e-004	2.0000e-005	5.7000e-004	0.0000	1.9304	1.9304	6.0000e-005	0.0000	1.9319
Total	**1.6900e-003**	**0.0282**	**0.0138**	**9.0000e-005**	**3.6600e-003**	**1.1000e-004**	**3.7700e-003**	**9.9000e-004**	**1.0000e-004**	**1.0900e-003**	**0.0000**	**9.0601**	**9.0601**	**5.6000e-004**	**0.0000**	**9.0740**

3.3 Site Preparation - 2020

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					0.0290	0.0000	0.0290	0.0148	0.0000	0.0148	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	8.1500e-003	0.0917	0.0386	9.0000e-005		4.1000e-003	4.1000e-003		3.7800e-003	3.7800e-003	0.0000	7.5633	7.5633	2.4500e-003	0.0000	7.6244
Total	**8.1500e-003**	**0.0917**	**0.0386**	**9.0000e-005**	**0.0290**	**4.1000e-003**	**0.0331**	**0.0148**	**3.7800e-003**	**0.0186**	**0.0000**	**7.5633**	**7.5633**	**2.4500e-003**	**0.0000**	**7.6244**

3.3 Site Preparation - 2020

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	1.8000e-004	1.5000e-004	1.6500e-003	0.0000	4.4000e-004	0.0000	4.4000e-004	1.2000e-004	0.0000	1.2000e-004	0.0000	0.4085	0.4085	1.0000e-005	0.0000	0.4089
Total	**1.8000e-004**	**1.5000e-004**	**1.6500e-003**	**0.0000**	**4.4000e-004**	**0.0000**	**4.4000e-004**	**1.2000e-004**	**0.0000**	**1.2000e-004**	**0.0000**	**0.4085**	**0.4085**	**1.0000e-005**	**0.0000**	**0.4089**

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					0.0131	0.0000	0.0131	6.6500e-003	0.0000	6.6500e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	8.1500e-003	0.0917	0.0386	9.0000e-005		4.1000e-003	4.1000e-003		3.7800e-003	3.7800e-003	0.0000	7.5632	7.5632	2.4500e-003	0.0000	7.6244
Total	**8.1500e-003**	**0.0917**	**0.0386**	**9.0000e-005**	**0.0131**	**4.1000e-003**	**0.0172**	**6.6500e-003**	**3.7800e-003**	**0.0104**	**0.0000**	**7.5632**	**7.5632**	**2.4500e-003**	**0.0000**	**7.6244**

3.3 Site Preparation - 2020

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	1.8000e-004	1.5000e-004	1.6500e-003	0.0000	4.4000e-004	0.0000	4.4000e-004	1.2000e-004	0.0000	1.2000e-004	0.0000	0.4085	0.4085	1.0000e-005	0.0000	0.4089
Total	**1.8000e-004**	**1.5000e-004**	**1.6500e-003**	**0.0000**	**4.4000e-004**	**0.0000**	**4.4000e-004**	**1.2000e-004**	**0.0000**	**1.2000e-004**	**0.0000**	**0.4085**	**0.4085**	**1.0000e-005**	**0.0000**	**0.4089**

3.4 Grading - 2020

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					0.0271	0.0000	0.0271	0.0139	0.0000	0.0139	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	7.4200e-003	0.0830	0.0355	8.0000e-005		3.7600e-003	3.7600e-003		3.4600e-003	3.4600e-003	0.0000	6.8143	6.8143	2.2000e-003	0.0000	6.8694
Total	**7.4200e-003**	**0.0830**	**0.0355**	**8.0000e-005**	**0.0271**	**3.7600e-003**	**0.0309**	**0.0139**	**3.4600e-003**	**0.0174**	**0.0000**	**6.8143**	**6.8143**	**2.2000e-003**	**0.0000**	**6.8694**

3.4 Grading - 2020

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	7.5000e-004	0.0252	5.5600e-003	7.0000e-005	1.4600e-003	8.0000e-005	1.5400e-003	4.0000e-004	8.0000e-005	4.8000e-004	0.0000	6.5517	6.5517	4.6000e-004	0.0000	6.5631
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	2.0000e-004	1.6000e-004	1.8100e-003	0.0000	4.8000e-004	0.0000	4.9000e-004	1.3000e-004	0.0000	1.3000e-004	0.0000	0.4494	0.4494	1.0000e-005	0.0000	0.4498
Total	**9.5000e-004**	**0.0254**	**7.3700e-003**	**7.0000e-005**	**1.9400e-003**	**8.0000e-005**	**2.0300e-003**	**5.3000e-004**	**8.0000e-005**	**6.1000e-004**	**0.0000**	**7.0010**	**7.0010**	**4.7000e-004**	**0.0000**	**7.0128**

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					0.0122	0.0000	0.0122	6.2600e-003	0.0000	6.2600e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	7.4200e-003	0.0830	0.0355	8.0000e-005		3.7600e-003	3.7600e-003		3.4600e-003	3.4600e-003	0.0000	6.8143	6.8143	2.2000e-003	0.0000	6.8694
Total	**7.4200e-003**	**0.0830**	**0.0355**	**8.0000e-005**	**0.0122**	**3.7600e-003**	**0.0160**	**6.2600e-003**	**3.4600e-003**	**9.7200e-003**	**0.0000**	**6.8143**	**6.8143**	**2.2000e-003**	**0.0000**	**6.8694**

3.4 Grading - 2020

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	7.5000e-004	0.0252	5.5600e-003	7.0000e-005	1.4600e-003	8.0000e-005	1.5400e-003	4.0000e-004	8.0000e-005	4.8000e-004	0.0000	6.5517	6.5517	4.6000e-004	0.0000	6.5631
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	2.0000e-004	1.6000e-004	1.8100e-003	0.0000	4.8000e-004	0.0000	4.9000e-004	1.3000e-004	0.0000	1.3000e-004	0.0000	0.4494	0.4494	1.0000e-005	0.0000	0.4498
Total	**9.5000e-004**	**0.0254**	**7.3700e-003**	**7.0000e-005**	**1.9400e-003**	**8.0000e-005**	**2.0300e-003**	**5.3000e-004**	**8.0000e-005**	**6.1000e-004**	**0.0000**	**7.0010**	**7.0010**	**4.7000e-004**	**0.0000**	**7.0128**

3.5 Building Construction - 2020

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	0.1645	1.1979	1.0682	1.7900e-003		0.0645	0.0645		0.0623	0.0623	0.0000	147.0491	147.0491	0.0273	0.0000	147.7316
Total	**0.1645**	**1.1979**	**1.0682**	**1.7900e-003**		**0.0645**	**0.0645**		**0.0623**	**0.0623**	**0.0000**	**147.0491**	**147.0491**	**0.0273**	**0.0000**	**147.7316**

3.5 Building Construction - 2020

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	8.8100e-003	0.2633	0.0713	6.2000e-004	0.0153	1.2200e-003	0.0165	4.4200e-003	1.1700e-003	5.5900e-003	0.0000	60.3676	60.3676	3.8400e-003	0.0000	60.4635
Worker	0.0292	0.0235	0.2601	7.1000e-004	0.0692	5.9000e-004	0.0698	0.0184	5.4000e-004	0.0189	0.0000	64.5289	64.5289	2.0300e-003	0.0000	64.5798
Total	**0.0380**	**0.2869**	**0.3314**	**1.3300e-003**	**0.0845**	**1.8100e-003**	**0.0864**	**0.0228**	**1.7100e-003**	**0.0245**	**0.0000**	**124.8965**	**124.8965**	**5.8700e-003**	**0.0000**	**125.0432**

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	0.1645	1.1978	1.0682	1.7900e-003		0.0645	0.0645		0.0623	0.0623	0.0000	147.0490	147.0490	0.0273	0.0000	147.7314
Total	**0.1645**	**1.1978**	**1.0682**	**1.7900e-003**		**0.0645**	**0.0645**		**0.0623**	**0.0623**	**0.0000**	**147.0490**	**147.0490**	**0.0273**	**0.0000**	**147.7314**

3.5 Building Construction - 2020

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	8.8100e-003	0.2633	0.0713	6.2000e-004	0.0153	1.2200e-003	0.0165	4.4200e-003	1.1700e-003	5.5900e-003	0.0000	60.3676	60.3676	3.8400e-003	0.0000	60.4635
Worker	0.0292	0.0235	0.2601	7.1000e-004	0.0692	5.9000e-004	0.0698	0.0184	5.4000e-004	0.0189	0.0000	64.5289	64.5289	2.0300e-003	0.0000	64.5798
Total	**0.0380**	**0.2869**	**0.3314**	**1.3300e-003**	**0.0845**	**1.8100e-003**	**0.0864**	**0.0228**	**1.7100e-003**	**0.0245**	**0.0000**	**124.8965**	**124.8965**	**5.8700e-003**	**0.0000**	**125.0432**

3.5 Building Construction - 2021

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	0.1767	1.3295	1.2577	2.1500e-003		0.0667	0.0667		0.0644	0.0644	0.0000	177.0089	177.0089	0.0316	0.0000	177.7990
Total	**0.1767**	**1.3295**	**1.2577**	**2.1500e-003**		**0.0667**	**0.0667**		**0.0644**	**0.0644**	**0.0000**	**177.0089**	**177.0089**	**0.0316**	**0.0000**	**177.7990**

3.5 Building Construction - 2021

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	9.0800e-003	0.2887	0.0783	7.4000e-004	0.0184	5.9000e-004	0.0190	5.3200e-003	5.6000e-004	5.8800e-003	0.0000	72.1003	72.1003	4.4200e-003	0.0000	72.2108
Worker	0.0327	0.0255	0.2876	8.3000e-004	0.0833	6.9000e-004	0.0840	0.0221	6.3000e-004	0.0228	0.0000	75.2071	75.2071	2.2100e-003	0.0000	75.2625
Total	**0.0418**	**0.3142**	**0.3659**	**1.5700e-003**	**0.1018**	**1.2800e-003**	**0.1030**	**0.0275**	**1.1900e-003**	**0.0287**	**0.0000**	**147.3074**	**147.3074**	**6.6300e-003**	**0.0000**	**147.4733**

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	0.1767	1.3295	1.2577	2.1500e-003		0.0667	0.0667		0.0644	0.0644	0.0000	177.0087	177.0087	0.0316	0.0000	177.7987
Total	**0.1767**	**1.3295**	**1.2577**	**2.1500e-003**		**0.0667**	**0.0667**		**0.0644**	**0.0644**	**0.0000**	**177.0087**	**177.0087**	**0.0316**	**0.0000**	**177.7987**

3.5 Building Construction - 2021

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	9.0800e-003	0.2887	0.0783	7.4000e-004	0.0184	5.9000e-004	0.0190	5.3200e-003	5.6000e-004	5.8800e-003	0.0000	72.1003	72.1003	4.4200e-003	0.0000	72.2108
Worker	0.0327	0.0255	0.2876	8.3000e-004	0.0833	6.9000e-004	0.0840	0.0221	6.3000e-004	0.0228	0.0000	75.2071	75.2071	2.2100e-003	0.0000	75.2625
Total	**0.0418**	**0.3142**	**0.3659**	**1.5700e-003**	**0.1018**	**1.2800e-003**	**0.1030**	**0.0275**	**1.1900e-003**	**0.0287**	**0.0000**	**147.3074**	**147.3074**	**6.6300e-003**	**0.0000**	**147.4733**

3.6 Paving - 2021

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	7.7400e-003	0.0774	0.0886	1.4000e-004		4.1500e-003	4.1500e-003		3.8300e-003	3.8300e-003	0.0000	11.7650	11.7650	3.7300e-003	0.0000	11.8582
Paving	1.1300e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**8.8700e-003**	**0.0774**	**0.0886**	**1.4000e-004**		**4.1500e-003**	**4.1500e-003**		**3.8300e-003**	**3.8300e-003**	**0.0000**	**11.7650**	**11.7650**	**3.7300e-003**	**0.0000**	**11.8582**

3.6 Paving - 2021

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	6.0000e-004	4.7000e-004	5.2900e-003	2.0000e-005	1.5300e-003	1.0000e-005	1.5500e-003	4.1000e-004	1.0000e-005	4.2000e-004	0.0000	1.3845	1.3845	4.0000e-005	0.0000	1.3855
Total	**6.0000e-004**	**4.7000e-004**	**5.2900e-003**	**2.0000e-005**	**1.5300e-003**	**1.0000e-005**	**1.5500e-003**	**4.1000e-004**	**1.0000e-005**	**4.2000e-004**	**0.0000**	**1.3845**	**1.3845**	**4.0000e-005**	**0.0000**	**1.3855**

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	7.7400e-003	0.0774	0.0886	1.4000e-004		4.1500e-003	4.1500e-003		3.8300e-003	3.8300e-003	0.0000	11.7650	11.7650	3.7300e-003	0.0000	11.8582
Paving	1.1300e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**8.8700e-003**	**0.0774**	**0.0886**	**1.4000e-004**		**4.1500e-003**	**4.1500e-003**		**3.8300e-003**	**3.8300e-003**	**0.0000**	**11.7650**	**11.7650**	**3.7300e-003**	**0.0000**	**11.8582**

3.6 Paving - 2021

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	6.0000e-004	4.7000e-004	5.2900e-003	2.0000e-005	1.5300e-003	1.0000e-005	1.5500e-003	4.1000e-004	1.0000e-005	4.2000e-004	0.0000	1.3845	1.3845	4.0000e-005	0.0000	1.3855
Total	**6.0000e-004**	**4.7000e-004**	**5.2900e-003**	**2.0000e-005**	**1.5300e-003**	**1.0000e-005**	**1.5500e-003**	**4.1000e-004**	**1.0000e-005**	**4.2000e-004**	**0.0000**	**1.3845**	**1.3845**	**4.0000e-005**	**0.0000**	**1.3855**

3.7 Architectural Coating - 2021

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	0.7012					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.1900e-003	0.0153	0.0182	3.0000e-005		9.4000e-004	9.4000e-004		9.4000e-004	9.4000e-004	0.0000	2.5533	2.5533	1.8000e-004	0.0000	2.5576
Total	**0.7034**	**0.0153**	**0.0182**	**3.0000e-005**		**9.4000e-004**	**9.4000e-004**		**9.4000e-004**	**9.4000e-004**	**0.0000**	**2.5533**	**2.5533**	**1.8000e-004**	**0.0000**	**2.5576**

3.7 Architectural Coating - 2021

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	6.9000e-004	5.4000e-004	6.0500e-003	2.0000e-005	1.7500e-003	1.0000e-005	1.7700e-003	4.7000e-004	1.0000e-005	4.8000e-004	0.0000	1.5823	1.5823	5.0000e-005	0.0000	1.5834
Total	**6.9000e-004**	**5.4000e-004**	**6.0500e-003**	**2.0000e-005**	**1.7500e-003**	**1.0000e-005**	**1.7700e-003**	**4.7000e-004**	**1.0000e-005**	**4.8000e-004**	**0.0000**	**1.5823**	**1.5823**	**5.0000e-005**	**0.0000**	**1.5834**

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	0.7012					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.1900e-003	0.0153	0.0182	3.0000e-005		9.4000e-004	9.4000e-004		9.4000e-004	9.4000e-004	0.0000	2.5533	2.5533	1.8000e-004	0.0000	2.5576
Total	**0.7034**	**0.0153**	**0.0182**	**3.0000e-005**		**9.4000e-004**	**9.4000e-004**		**9.4000e-004**	**9.4000e-004**	**0.0000**	**2.5533**	**2.5533**	**1.8000e-004**	**0.0000**	**2.5576**

3.7 Architectural Coating - 2021

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	6.9000e-004	5.4000e-004	6.0500e-003	2.0000e-005	1.7500e-003	1.0000e-005	1.7700e-003	4.7000e-004	1.0000e-005	4.8000e-004	0.0000	1.5823	1.5823	5.0000e-005	0.0000	1.5834
Total	**6.9000e-004**	**5.4000e-004**	**6.0500e-003**	**2.0000e-005**	**1.7500e-003**	**1.0000e-005**	**1.7700e-003**	**4.7000e-004**	**1.0000e-005**	**4.8000e-004**	**0.0000**	**1.5823**	**1.5823**	**5.0000e-005**	**0.0000**	**1.5834**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Increase Transit Accessibility

Improve Pedestrian Network

Provide Traffic Calming Measures

	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	0.8093	3.9150	8.7327	0.0291	2.2954	0.0249	2.3203	0.6153	0.0232	0.6385	0.0000	2,686.7254	2,686.7254	0.1498	0.0000	2,690.4695
Unmitigated	0.8518	4.2027	9.7674	0.0334	2.6703	0.0284	2.6987	0.7158	0.0265	0.7423	0.0000	3,083.1359	3,083.1359	0.1680	0.0000	3,087.3360

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Fast Food Restaurant w/o Drive Thru	416.49	633.79	290.84	777,994	668,777
Fast Food Restaurant w/o Drive Thru	273.24	415.80	190.81	510,404	438,752
Health Club	281.99	344.52	229.03	606,039	520,961
High Turnover (Sit Down Restaurant)	435.26	474.91	481.55	609,916	524,294
Hotel	2,017.95	1,732.50	1470.15	4,531,134	3,895,040
Parking Lot	0.00	0.00	0.00		
Recreational Swimming Pool	0.00	0.00	0.00		
Total	3,424.93	3,601.52	2,662.38	7,035,487	6,047,824

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
Fast Food Restaurant w/o Drive	16.60	8.40	6.90	1.50	79.50	19.00	51	37	12
Fast Food Restaurant w/o Drive	16.60	8.40	6.90	1.50	79.50	19.00	51	37	12
Health Club	16.60	8.40	6.90	16.90	64.10	19.00	52	39	9
High Turnover (Sit Down	16.60	8.40	6.90	8.50	72.50	19.00	37	20	43
Hotel	16.60	8.40	6.90	19.40	61.60	19.00	58	38	4
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Recreational Swimming Pool	16.60	8.40	6.90	33.00	48.00	19.00	52	39	9

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Fast Food Restaurant w/o Drive Thru	0.546501	0.044961	0.204016	0.120355	0.015740	0.006196	0.020131	0.030678	0.002515	0.002201	0.005142	0.000687	0.000876
Health Club	0.546501	0.044961	0.204016	0.120355	0.015740	0.006196	0.020131	0.030678	0.002515	0.002201	0.005142	0.000687	0.000876
High Turnover (Sit Down Restaurant)	0.546501	0.044961	0.204016	0.120355	0.015740	0.006196	0.020131	0.030678	0.002515	0.002201	0.005142	0.000687	0.000876
Hotel	0.546501	0.044961	0.204016	0.120355	0.015740	0.006196	0.020131	0.030678	0.002515	0.002201	0.005142	0.000687	0.000876
Parking Lot	0.546501	0.044961	0.204016	0.120355	0.015740	0.006196	0.020131	0.030678	0.002515	0.002201	0.005142	0.000687	0.000876
Recreational Swimming Pool	0.546501	0.044961	0.204016	0.120355	0.015740	0.006196	0.020131	0.030678	0.002515	0.002201	0.005142	0.000687	0.000876

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Install High Efficiency Lighting

Indigo Hotel - Proposed Project - Los Angeles-South Coast County, Annual

	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	395.6073	395.6073	0.0180	3.7300e-003	397.1680
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	413.3316	413.3316	0.0188	3.8900e-003	414.9623
NaturalGas Mitigated	0.0267	0.2425	0.2037	1.4600e-003		0.0184	0.0184		0.0184	0.0184	0.0000	264.0118	264.0118	5.0600e-003	4.8400e-003	265.5807
NaturalGas Unmitigated	0.0267	0.2425	0.2037	1.4600e-003		0.0184	0.0184		0.0184	0.0184	0.0000	264.0118	264.0118	5.0600e-003	4.8400e-003	265.5807

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					
Fast Food Restaurant w/o Drive Thru	237683	1.2800e-003	0.0117	9.7900e-003	7.0000e-005		8.9000e-004	8.9000e-004		8.9000e-004	8.9000e-004	0.0000	12.6837	12.6837	2.4000e-004	2.3000e-004	12.7590
Fast Food Restaurant w/o Drive Thru	361832	1.9500e-003	0.0177	0.0149	1.1000e-004		1.3500e-003	1.3500e-003		1.3500e-003	1.3500e-003	0.0000	19.3087	19.3087	3.7000e-004	3.5000e-004	19.4235
Health Club	135135	7.3000e-004	6.6200e-003	5.5600e-003	4.0000e-005		5.0000e-004	5.0000e-004		5.0000e-004	5.0000e-004	0.0000	7.2113	7.2113	1.4000e-004	1.3000e-004	7.2542
High Turnover (Sit Down Restaurant)	896503	4.8300e-003	0.0440	0.0369	2.6000e-004		3.3400e-003	3.3400e-003		3.3400e-003	3.3400e-003	0.0000	47.8408	47.8408	9.2000e-004	8.8000e-004	48.1251
Hotel	3.31624e+006	0.0179	0.1626	0.1366	9.8000e-004		0.0124	0.0124		0.0124	0.0124	0.0000	176.9673	176.9673	3.3900e-003	3.2400e-003	178.0189
Parking Lot	0	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
Recreational Swimming Pool	0	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
Total		**0.0267**	**0.2425**	**0.2037**	**1.4600e-003**		**0.0184**	**0.0184**		**0.0184**	**0.0184**	**0.0000**	**264.0118**	**264.0118**	**5.0600e-003**	**4.8300e-003**	**265.5807**

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					
Fast Food Restaurant w/o Drive Thru	237683	1.2800e-003	0.0117	9.7900e-003	7.0000e-005		8.9000e-004	8.9000e-004		8.9000e-004	8.9000e-004	0.0000	12.6837	12.6837	2.4000e-004	2.3000e-004	12.7590
Fast Food Restaurant w/o Drive Thru	361832	1.9500e-003	0.0177	0.0149	1.1000e-004		1.3500e-003	1.3500e-003		1.3500e-003	1.3500e-003	0.0000	19.3087	19.3087	3.7000e-004	3.5000e-004	19.4235
Health Club	135135	7.3000e-004	6.6200e-003	5.5600e-003	4.0000e-005		5.0000e-004	5.0000e-004		5.0000e-004	5.0000e-004	0.0000	7.2113	7.2113	1.4000e-004	1.3000e-004	7.2542
High Turnover (Sit Down Restaurant)	896503	4.8300e-003	0.0440	0.0369	2.6000e-004		3.3400e-003	3.3400e-003		3.3400e-003	3.3400e-003	0.0000	47.8408	47.8408	9.2000e-004	8.8000e-004	48.1251
Hotel	3.31624e+006	0.0179	0.1626	0.1366	9.8000e-004		0.0124	0.0124		0.0124	0.0124	0.0000	176.9673	176.9673	3.3900e-003	3.2400e-003	178.0189
Parking Lot	0	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
Recreational Swimming Pool	0	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
Total		**0.0267**	**0.2425**	**0.2037**	**1.4600e-003**		**0.0184**	**0.0184**		**0.0184**	**0.0184**	**0.0000**	**264.0118**	**264.0118**	**5.0600e-003**	**4.8300e-003**	**265.5807**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Fast Food Restaurant w/o Drive Thru	45464.2	13.1357	6.0000e-004	1.2000e-004	13.1876
Fast Food Restaurant w/o Drive Thru	69211.5	19.9969	9.1000e-004	1.9000e-004	20.0758
Health Club	82872.6	23.9439	1.0900e-003	2.3000e-004	24.0384
High Turnover (Sit Down Restaurant)	171484	49.5459	2.2600e-003	4.7000e-004	49.7414
Hotel	1.04825e+006	302.8663	0.0138	2.8500e-003	304.0612
Parking Lot	13300	3.8427	1.7000e-004	4.0000e-005	3.8579
Recreational Swimming Pool	0	0.0000	0.0000	0.0000	0.0000
Total		**413.3316**	**0.0188**	**3.9000e-003**	**414.9623**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Fast Food Restaurant w/o Drive Thru	44167.2	12.7610	5.8000e-004	1.2000e-004	12.8114
Fast Food Restaurant w/o Drive Thru	67237.1	19.4265	8.8000e-004	1.8000e-004	19.5031
Health Club	79169.5	22.8740	1.0400e-003	2.2000e-004	22.9643
High Turnover (Sit Down Restaurant)	166592	48.1325	2.1900e-003	4.5000e-004	48.3224
Hotel	1.0009e+006	289.1854	0.0132	2.7200e-003	290.3263
Parking Lot	11172	3.2279	1.5000e-004	3.0000e-005	3.2406
Recreational Swimming Pool	0	0.0000	0.0000	0.0000	0.0000
Total		**395.6073**	**0.0180**	**3.7200e-003**	**397.1680**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.6230	3.0000e-005	3.5200e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	6.8400e-003	6.8400e-003	2.0000e-005	0.0000	7.2900e-003
Unmitigated	0.6230	3.0000e-005	3.5200e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	6.8400e-003	6.8400e-003	2.0000e-005	0.0000	7.2900e-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	0.0701					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.5526					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	3.3000e-004	3.0000e-005	3.5200e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	6.8400e-003	6.8400e-003	2.0000e-005	0.0000	7.2900e-003
Total	**0.6230**	**3.0000e-005**	**3.5200e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**	**0.0000**	**6.8400e-003**	**6.8400e-003**	**2.0000e-005**	**0.0000**	**7.2900e-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	0.0701					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.5526					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	3.3000e-004	3.0000e-005	3.5200e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	6.8400e-003	6.8400e-003	2.0000e-005	0.0000	7.2900e-003
Total	**0.6230**	**3.0000e-005**	**3.5200e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**	**0.0000**	**6.8400e-003**	**6.8400e-003**	**2.0000e-005**	**0.0000**	**7.2900e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

Use Water Efficient Irrigation System

Indigo Hotel - Proposed Project - Los Angeles-South Coast County, Annual

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	24.8564	7.5700e-003	4.3400e-003	26.3393
Unmitigated	30.5537	9.4400e-003	5.4200e-003	32.4052

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Fast Food Restaurant w/o Drive Thru	0.789188 / 0.0503737	3.4099	1.1000e-003	6.4000e-004	3.6272
Health Club	0.441799 / 0.27078	2.6876	6.5000e-004	3.6000e-004	2.8123
High Turnover (Sit Down Restaurant)	1.17771 / 0.075173	5.0886	1.6500e-003	9.5000e-004	5.4129
Hotel	4.18552 / 0.465057	18.7199	5.8800e-003	3.3800e-003	19.8750
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Recreational Swimming Pool	0.106458 / 0.0652482	0.6476	1.6000e-004	9.0000e-005	0.6777
Total		**30.5537**	**9.4400e-003**	**5.4200e-003**	**32.4052**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Fast Food Restaurant w/o Drive Thru	0.63135 / 0.0473009	2.7504	8.8000e-004	5.1000e-004	2.9244
Health Club	0.353439 / 0.254263	2.2709	5.3000e-004	2.9000e-004	2.3712
High Turnover (Sit Down Restaurant)	0.942169 / 0.0705875	4.1045	1.3200e-003	7.6000e-004	4.3640
Hotel	3.34841 / 0.436689	15.1835	4.7100e-003	2.7100e-003	16.1084
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Recreational Swimming Pool	0.0851661 / 0.0612681	0.5472	1.3000e-004	7.0000e-005	0.5714
Total		**24.8564**	**7.5700e-003**	**4.3400e-003**	**26.3392**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	22.2580	1.3154	0.0000	55.1432
Unmitigated	44.5159	2.6308	0.0000	110.2863

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Fast Food Restaurant w/o Drive Thru	29.95	6.0796	0.3593	0.0000	15.0619
Health Club	42.58	8.6434	0.5108	0.0000	21.4136
High Turnover (Sit Down Restaurant)	46.17	9.3721	0.5539	0.0000	23.2190
Hotel	90.34	18.3382	1.0838	0.0000	45.4321
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Recreational Swimming Pool	10.26	2.0827	0.1231	0.0000	5.1598
Total		**44.5159**	**2.6308**	**0.0000**	**110.2863**

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Fast Food Restaurant w/o Drive Thru	14.975	3.0398	0.1797	0.0000	7.5310
Health Club	21.29	4.3217	0.2554	0.0000	10.7068
High Turnover (Sit Down Restaurant)	23.085	4.6861	0.2769	0.0000	11.6095
Hotel	45.17	9.1691	0.5419	0.0000	22.7161
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Recreational Swimming Pool	5.13	1.0413	0.0615	0.0000	2.5799
Total		**22.2580**	**1.3154**	**0.0000**	**55.1431**

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
Emergency Generator	1	1	50	374	0.73	CNG

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

10.1 Stationary Sources

Unmitigated/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
Equipment Type	tons/yr										MT/yr					
Emergency Generator - CNG (0 - 500 HP)	0.0823	7.9200e-003	0.2143	3.0000e-005		4.5000e-004	4.5000e-004		4.5000e-004	4.5000e-004	0.0000	4.7679	4.7679	9.9700e-003	0.0000	5.0171
Total	**0.0823**	**7.9200e-003**	**0.2143**	**3.0000e-005**		**4.5000e-004**	**4.5000e-004**		**4.5000e-004**	**4.5000e-004**	**0.0000**	**4.7679**	**4.7679**	**9.9700e-003**	**0.0000**	**5.0171**

11.0 Vegetation

Indigo Hotel - Proposed Project

Los Angeles-South Coast County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Parking Lot	95.00	Space	0.86	38,000.00	0
Fast Food Restaurant w/o Drive Thru	1.57	1000sqft	0.04	1,568.00	0
Fast Food Restaurant w/o Drive Thru	1.03	1000sqft	0.02	1,030.00	0
Health Club	7.47	1000sqft	0.17	7,466.00	0
High Turnover (Sit Down Restaurant)	3.88	1000sqft	0.09	3,885.00	0
Hotel	165.00	Room	0.31	138,292.00	0
Recreational Swimming Pool	1.80	1000sqft	0.04	1,800.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	9			**Operational Year**	2022
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	636.97	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Per 2016 SCE Power Content Label. See Section 1.0 Project Characteristics.

Land Use - Per applicant provided information. Cafe and bar modeled as fast food restaurant w/o drive separately. Lot acreage of hotel equal to new Building D ground floor. Hotel square feet set equal to total area of both existing Building C and new Building D.

Construction Phase - Per applicant provided information. Monday - Saturday construction schedule. See 3.0 Construction Detail.

Off-road Equipment - Default values. See 3.0 Construction Detail.
Off-road Equipment - Default values. See 3.0 Construction Detail.

Off-road Equipment - Default values. See 3.0 Construction Detail.

Off-road Equipment - Default values. See 3.0 Construction Detail.

Off-road Equipment - Default values. See 3.0 Construction Detail.

Off-road Equipment - Default values. See 3.0 Construction Detail.

Trips and VMT - Default values rounded up to even number of trip rates.

On-road Fugitive Dust - CalEEMod default values.

Demolition - Estimated tons of removed asphalt and sidewalk concrete from existing site, per Site Demolition Plan, Drawing AD0.1, March 11, 2019.

Grading - Per applicant information.

Architectural Coating - CalEEMod default values.

Vehicle Trips - Based on traffic analysis perpared by Linnscott, Law & Greenspan (LLG Ref. 1-16-4200-2)

Vehicle Emission Factors - CalEEMod default values

Vehicle Emission Factors - CalEEMod default values

Vehicle Emission Factors - CalEEMod default values

Road Dust - CalEEMod default values

Woodstoves - CalEEMod default values

Consumer Products - CalEEMod default values

Area Coating - CalEEMod default values

Landscape Equipment - CalEEMod default values

Energy Use - CalEEMod default values

Water And Wastewater - Default CalEEMod values for indoor and outdoor water use. Assumed 100% aerobic.

Solid Waste - CalEEMod default values

Construction Off-road Equipment Mitigation -

Mobile Land Use Mitigation - Distance to Arcadia Gold Line Station is 0.45 miles. The project encourages walking through pedestrian access linking internal uses to external streets and sidewalks. Road crossings include marked crosswalks, median islands, traffic signals and timers.

Area Mitigation -

Energy Mitigation - High efficiency lighting will be used for outdoor lighting. Percent lighting energy reduction conservatively set equal to the minimum reduction (16%) per CAPCOA-Quantification Report 9-14-Final.

Indigo Hotel - Proposed Project - Los Angeles-South Coast County, Summer

Water Mitigation - Per applicant provided information, the proposed project will utilize efficient fixtures and appliances. Therefore, low-flow indoor water use is assumed.

Waste Mitigation - Percent Reduction in Waste Disposed: 50%. Waste diversion consistent with Assembly Bill 939.

Stationary Sources - Emergency Generators and Fire Pumps - Assumed 374 hp Emergency Generator.

Stationary Sources - Emergency Generators and Fire Pumps EF - CalEEMod default values

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	20.00	27.00
tblConstructionPhase	NumDays	2.00	10.00
tblConstructionPhase	NumDays	4.00	11.00
tblConstructionPhase	NumDays	200.00	357.00
tblConstructionPhase	NumDays	10.00	20.00
tblConstructionPhase	NumDays	10.00	20.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblGrading	MaterialImported	0.00	1,363.00
tblLandUse	LandUseSquareFeet	1,570.00	1,568.00
tblLandUse	LandUseSquareFeet	7,470.00	7,466.00
tblLandUse	LandUseSquareFeet	3,880.00	3,885.00
tblLandUse	LandUseSquareFeet	239,580.00	138,292.00
tblLandUse	LotAcreage	5.50	0.31
tblProjectCharacteristics	CO2IntensityFactor	702.44	636.97
tblTripsAndVMT	VendorTripNumber	31.00	30.00
tblTripsAndVMT	WorkerTripNumber	13.00	14.00

tblTripsAndVMT	WorkerTripNumber	80.00	78.00
tblTripsAndVMT	WorkerTripNumber	13.00	14.00
tblVehicleTrips	ST_TR	696.00	403.69
tblVehicleTrips	ST_TR	20.87	46.12
tblVehicleTrips	ST_TR	158.37	122.40
tblVehicleTrips	ST_TR	8.19	10.50
tblVehicleTrips	ST_TR	9.10	0.00
tblVehicleTrips	SU_TR	500.00	185.25
tblVehicleTrips	SU_TR	26.73	30.66
tblVehicleTrips	SU_TR	131.84	124.11
tblVehicleTrips	SU_TR	5.95	8.91
tblVehicleTrips	SU_TR	13.60	0.00
tblVehicleTrips	WD_TR	716.00	265.28
tblVehicleTrips	WD_TR	32.93	37.75
tblVehicleTrips	WD_TR	127.15	112.18
tblVehicleTrips	WD_TR	8.17	12.23
tblVehicleTrips	WD_TR	33.82	0.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00

tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00

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					
2020	2.4962	22.9623	17.4394	0.0390	5.8890	1.1601	6.7107	2.9774	1.0834	3.7334	0.0000	3,749.6016	3,749.6016	0.6421	0.0000	3,760.8798
2021	70.4104	16.7786	16.8025	0.0387	1.0639	0.6973	1.7613	0.2865	0.6730	0.9595	0.0000	3,714.1024	3,714.1024	0.4320	0.0000	3,724.9029
Maximum	**70.4104**	**22.9623**	**17.4394**	**0.0390**	**5.8890**	**1.1601**	**6.7107**	**2.9774**	**1.0834**	**3.7334**	**0.0000**	**3,749.6016**	**3,749.6016**	**0.6421**	**0.0000**	**3,760.8798**

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					
2020	2.4962	22.9623	17.4394	0.0390	2.6992	1.1601	3.5209	1.3529	1.0834	2.1088	0.0000	3,749.6016	3,749.6016	0.6421	0.0000	3,760.8798
2021	70.4104	16.7786	16.8025	0.0387	1.0639	0.6973	1.7613	0.2865	0.6730	0.9595	0.0000	3,714.1024	3,714.1024	0.4320	0.0000	3,724.9029
Maximum	**70.4104**	**22.9623**	**17.4394**	**0.0390**	**2.6992**	**1.1601**	**3.5209**	**1.3529**	**1.0834**	**2.1088**	**0.0000**	**3,749.6016**	**3,749.6016**	**0.6421**	**0.0000**	**3,760.8798**

	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	**0.00**	**0.00**	**0.00**	**0.00**	**45.88**	**0.00**	**37.65**	**49.77**	**0.00**	**34.62**	**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	3.4147	2.6000e-004	0.0282	0.0000		1.0000e-004	1.0000e-004		1.0000e-004	1.0000e-004		0.0604	0.0604	1.6000e-004		0.0643
Energy	0.1462	1.3289	1.1163	7.9700e-003		0.1010	0.1010		0.1010	0.1010		1,594.6475	1,594.6475	0.0306	0.0292	1,604.1237
Mobile	5.7710	25.9170	63.4752	0.2192	17.2437	0.1797	17.4233	4.6147	0.1675	4.7822		22,323.8055	22,323.8055	1.1768		22,353.2248
Stationary	3.2905	0.3168	8.5699	1.1500e-003		0.0182	0.0182		0.0182	0.0182		210.2289	210.2289	0.4396		221.2182
Total	**12.6223**	**27.5629**	**73.1896**	**0.2283**	**17.2437**	**0.2989**	**17.5426**	**4.6147**	**0.2868**	**4.9015**		**24,128.7423**	**24,128.7423**	**1.6471**	**0.0292**	**24,178.6309**

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	lb/day										lb/day					
Area	3.4147	2.6000e-004	0.0282	0.0000		1.0000e-004	1.0000e-004		1.0000e-004	1.0000e-004		0.0604	0.0604	1.6000e-004		0.0643
Energy	0.1462	1.3289	1.1163	7.9700e-003		0.1010	0.1010		0.1010	0.1010		1,594.6475	1,594.6475	0.0306	0.0292	1,604.1237
Mobile	5.4971	24.2305	56.4320	0.1910	14.8229	0.1576	14.9806	3.9669	0.1470	4.1138		19,457.7503	19,457.7503	1.0468		19,483.9201
Stationary	3.2905	0.3168	8.5699	1.1500e-003		0.0182	0.0182		0.0182	0.0182		210.2289	210.2289	0.4396		221.2182
Total	**12.3485**	**25.8764**	**66.1464**	**0.2001**	**14.8229**	**0.2769**	**15.0998**	**3.9669**	**0.2662**	**4.2331**		**21,262.6871**	**21,262.6871**	**1.5171**	**0.0292**	**21,309.3263**

	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	**2.17**	**6.12**	**9.62**	**12.35**	**14.04**	**7.38**	**13.92**	**14.04**	**7.18**	**13.64**	**0.00**	**11.88**	**11.88**	**7.89**	**0.00**	**11.87**

3.0 Construction Detail

Construction Phase

Indigo Hotel - Proposed Project - Los Angeles-South Coast County, Summer

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	5/1/2020	6/1/2020	6	27	
2	Site Preparation	Site Preparation	6/2/2020	6/12/2020	6	10	
3	Grading	Grading	6/13/2020	6/25/2020	6	11	
4	Building Construction	Building Construction	6/26/2020	8/16/2021	6	357	
5	Paving	Paving	8/17/2021	9/8/2021	6	20	
6	Architectural Coating	Architectural Coating	9/9/2021	10/1/2021	6	20	

Acres of Grading (Site Preparation Phase): 5

Acres of Grading (Grading Phase): 4.13

Acres of Paving: 0.86

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 225,225; Non-Residential Outdoor: 75,075; Striped Parking Area: 2,280 (Architectural Coating – sqft)

OffRoad Equipment

Indigo Hotel - Proposed Project - Los Angeles-South Coast County, Summer

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	1	8.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Rubber Tired Dozers	1	7.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Graders	1	6.00	187	0.41
Grading	Rubber Tired Dozers	1	6.00	247	0.40
Grading	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Building Construction	Cranes	1	6.00	231	0.29
Building Construction	Forklifts	1	6.00	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	6.00	9	0.56
Paving	Pavers	1	6.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	1	7.00	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
Demolition	5	14.00	0.00	185.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	3	8.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	3	8.00	0.00	170.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	7	78.00	30.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	14.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	16.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Demolition - 2020

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					1.4797	0.0000	1.4797	0.2240	0.0000	0.2240			0.0000			0.0000
Off-Road	2.1262	20.9463	14.6573	0.0241		1.1525	1.1525		1.0761	1.0761		2,322.3127	2,322.3127	0.5970		2,337.2363
Total	**2.1262**	**20.9463**	**14.6573**	**0.0241**	**1.4797**	**1.1525**	**2.6322**	**0.2240**	**1.0761**	**1.3002**		**2,322.3127**	**2,322.3127**	**0.5970**		**2,337.2363**

3.2 Demolition - 2020

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	0.0599	1.9702	0.4366	5.4100e-003	0.1198	6.2900e-003	0.1261	0.0328	6.0200e-003	0.0389		586.4033	586.4033	0.0399		587.4011
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	0.0644	0.0458	0.6130	1.6500e-003	0.1565	1.3100e-003	0.1578	0.0415	1.2100e-003	0.0427		164.6558	164.6558	5.1900e-003		164.7856
Total	**0.1243**	**2.0160**	**1.0496**	**7.0600e-003**	**0.2763**	**7.6000e-003**	**0.2839**	**0.0743**	**7.2300e-003**	**0.0816**		**751.0591**	**751.0591**	**0.0451**		**752.1867**

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					0.6659	0.0000	0.6659	0.1008	0.0000	0.1008			0.0000			0.0000
Off-Road	2.1262	20.9463	14.6573	0.0241		1.1525	1.1525		1.0761	1.0761	0.0000	2,322.3127	2,322.3127	0.5970		2,337.2363
Total	**2.1262**	**20.9463**	**14.6573**	**0.0241**	**0.6659**	**1.1525**	**1.8184**	**0.1008**	**1.0761**	**1.1770**	**0.0000**	**2,322.3127**	**2,322.3127**	**0.5970**		**2,337.2363**

3.2 Demolition - 2020

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	0.0599	1.9702	0.4366	5.4100e-003	0.1198	6.2900e-003	0.1261	0.0328	6.0200e-003	0.0389		586.4033	586.4033	0.0399		587.4011
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	0.0644	0.0458	0.6130	1.6500e-003	0.1565	1.3100e-003	0.1578	0.0415	1.2100e-003	0.0427		164.6558	164.6558	5.1900e-003		164.7856
Total	**0.1243**	**2.0160**	**1.0496**	**7.0600e-003**	**0.2763**	**7.6000e-003**	**0.2839**	**0.0743**	**7.2300e-003**	**0.0816**		**751.0591**	**751.0591**	**0.0451**		**752.1867**

3.3 Site Preparation - 2020

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					5.7996	0.0000	5.7996	2.9537	0.0000	2.9537			0.0000			0.0000
Off-Road	1.6299	18.3464	7.7093	0.0172		0.8210	0.8210		0.7553	0.7553		1,667.4119	1,667.4119	0.5393		1,680.8937
Total	**1.6299**	**18.3464**	**7.7093**	**0.0172**	**5.7996**	**0.8210**	**6.6205**	**2.9537**	**0.7553**	**3.7090**		**1,667.4119**	**1,667.4119**	**0.5393**		**1,680.8937**

3.3 Site Preparation - 2020

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	0.0368	0.0262	0.3503	9.4000e-004	0.0894	7.5000e-004	0.0902	0.0237	6.9000e-004	0.0244		94.0890	94.0890	2.9700e-003		94.1632
Total	**0.0368**	**0.0262**	**0.3503**	**9.4000e-004**	**0.0894**	**7.5000e-004**	**0.0902**	**0.0237**	**6.9000e-004**	**0.0244**		**94.0890**	**94.0890**	**2.9700e-003**		**94.1632**

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					2.6098	0.0000	2.6098	1.3292	0.0000	1.3292			0.0000			0.0000
Off-Road	1.6299	18.3464	7.7093	0.0172		0.8210	0.8210		0.7553	0.7553	0.0000	1,667.4119	1,667.4119	0.5393		1,680.8937
Total	**1.6299**	**18.3464**	**7.7093**	**0.0172**	**2.6098**	**0.8210**	**3.4308**	**1.3292**	**0.7553**	**2.0844**	**0.0000**	**1,667.4119**	**1,667.4119**	**0.5393**		**1,680.8937**

3.3 Site Preparation - 2020

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	0.0368	0.0262	0.3503	9.4000e-004	0.0894	7.5000e-004	0.0902	0.0237	6.9000e-004	0.0244		94.0890	94.0890	2.9700e-003		94.1632
Total	**0.0368**	**0.0262**	**0.3503**	**9.4000e-004**	**0.0894**	**7.5000e-004**	**0.0902**	**0.0237**	**6.9000e-004**	**0.0244**		**94.0890**	**94.0890**	**2.9700e-003**		**94.1632**

3.4 Grading - 2020

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					4.9288	0.0000	4.9288	2.5278	0.0000	2.5278			0.0000			0.0000
Off-Road	1.3498	15.0854	6.4543	0.0141		0.6844	0.6844		0.6296	0.6296		1,365.7183	1,365.7183	0.4417		1,376.7609
Total	**1.3498**	**15.0854**	**6.4543**	**0.0141**	**4.9288**	**0.6844**	**5.6131**	**2.5278**	**0.6296**	**3.1574**		**1,365.7183**	**1,365.7183**	**0.4417**		**1,376.7609**

3.4 Grading - 2020

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	0.1350	4.4438	0.9847	0.0122	0.2702	0.0142	0.2844	0.0741	0.0136	0.0876		1,322.6492	1,322.6492	0.0900		1,324.8999
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	0.0368	0.0262	0.3503	9.4000e-004	0.0894	7.5000e-004	0.0902	0.0237	6.9000e-004	0.0244		94.0890	94.0890	2.9700e-003		94.1632
Total	**0.1718**	**4.4700**	**1.3350**	**0.0132**	**0.3596**	**0.0149**	**0.3746**	**0.0978**	**0.0143**	**0.1120**		**1,416.7382**	**1,416.7382**	**0.0930**		**1,419.0631**

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					2.2179	0.0000	2.2179	1.1375	0.0000	1.1375			0.0000			0.0000
Off-Road	1.3498	15.0854	6.4543	0.0141		0.6844	0.6844		0.6296	0.6296	0.0000	1,365.7183	1,365.7183	0.4417		1,376.7609
Total	**1.3498**	**15.0854**	**6.4543**	**0.0141**	**2.2179**	**0.6844**	**2.9023**	**1.1375**	**0.6296**	**1.7671**	**0.0000**	**1,365.7183**	**1,365.7183**	**0.4417**		**1,376.7609**

3.4 Grading - 2020

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	0.1350	4.4438	0.9847	0.0122	0.2702	0.0142	0.2844	0.0741	0.0136	0.0876		1,322.6492	1,322.6492	0.0900		1,324.8999
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	0.0368	0.0262	0.3503	9.4000e-004	0.0894	7.5000e-004	0.0902	0.0237	6.9000e-004	0.0244		94.0890	94.0890	2.9700e-003		94.1632
Total	**0.1718**	**4.4700**	**1.3350**	**0.0132**	**0.3596**	**0.0149**	**0.3746**	**0.0978**	**0.0143**	**0.1120**		**1,416.7382**	**1,416.7382**	**0.0930**		**1,419.0631**

3.5 Building Construction - 2020

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	2.0305	14.7882	13.1881	0.0220		0.7960	0.7960		0.7688	0.7688		2,001.1595	2,001.1595	0.3715		2,010.4467
Total	**2.0305**	**14.7882**	**13.1881**	**0.0220**		**0.7960**	**0.7960**		**0.7688**	**0.7688**		**2,001.1595**	**2,001.1595**	**0.3715**		**2,010.4467**

3.5 Building Construction - 2020

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	0.1067	3.1912	0.8361	7.7800e-003	0.1921	0.0150	0.2071	0.0553	0.0144	0.0697		831.0741	831.0741	0.0507		832.3420
Worker	0.3590	0.2554	3.4152	9.2100e-003	0.8719	7.2900e-003	0.8791	0.2312	6.7100e-003	0.2379		917.3680	917.3680	0.0289		918.0911
Total	**0.4657**	**3.4465**	**4.2513**	**0.0170**	**1.0639**	**0.0223**	**1.0862**	**0.2865**	**0.0211**	**0.3076**		**1,748.4421**	**1,748.4421**	**0.0796**		**1,750.4331**

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	2.0305	14.7882	13.1881	0.0220		0.7960	0.7960		0.7688	0.7688	0.0000	2,001.1595	2,001.1595	0.3715		2,010.4467
Total	**2.0305**	**14.7882**	**13.1881**	**0.0220**		**0.7960**	**0.7960**		**0.7688**	**0.7688**	**0.0000**	**2,001.1595**	**2,001.1595**	**0.3715**		**2,010.4467**

3.5 Building Construction - 2020

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	0.1067	3.1912	0.8361	7.7800e-003	0.1921	0.0150	0.2071	0.0553	0.0144	0.0697		831.0741	831.0741	0.0507		832.3420
Worker	0.3590	0.2554	3.4152	9.2100e-003	0.8719	7.2900e-003	0.8791	0.2312	6.7100e-003	0.2379		917.3680	917.3680	0.0289		918.0911
Total	**0.4657**	**3.4465**	**4.2513**	**0.0170**	**1.0639**	**0.0223**	**1.0862**	**0.2865**	**0.0211**	**0.3076**		**1,748.4421**	**1,748.4421**	**0.0796**		**1,750.4331**

3.5 Building Construction - 2021

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	1.8125	13.6361	12.8994	0.0221		0.6843	0.6843		0.6608	0.6608		2,001.2200	2,001.2200	0.3573		2,010.1517
Total	**1.8125**	**13.6361**	**12.8994**	**0.0221**		**0.6843**	**0.6843**		**0.6608**	**0.6608**		**2,001.2200**	**2,001.2200**	**0.3573**		**2,010.1517**

3.5 Building Construction - 2021

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	0.0912	2.9127	0.7615	7.7200e-003	0.1921	5.9600e-003	0.1980	0.0553	5.7000e-003	0.0610		824.6419	824.6419	0.0486		825.8564
Worker	0.3344	0.2298	3.1416	8.9200e-003	0.8719	7.0400e-003	0.8789	0.2312	6.4900e-003	0.2377		888.2405	888.2405	0.0262		888.8948
Total	**0.4255**	**3.1425**	**3.9031**	**0.0166**	**1.0639**	**0.0130**	**1.0769**	**0.2865**	**0.0122**	**0.2987**		**1,712.8824**	**1,712.8824**	**0.0748**		**1,714.7512**

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	1.8125	13.6361	12.8994	0.0221		0.6843	0.6843		0.6608	0.6608	0.0000	2,001.2200	2,001.2200	0.3573		2,010.1517
Total	**1.8125**	**13.6361**	**12.8994**	**0.0221**		**0.6843**	**0.6843**		**0.6608**	**0.6608**	**0.0000**	**2,001.2200**	**2,001.2200**	**0.3573**		**2,010.1517**

3.5 Building Construction - 2021

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	0.0912	2.9127	0.7615	7.7200e-003	0.1921	5.9600e-003	0.1980	0.0553	5.7000e-003	0.0610		824.6419	824.6419	0.0486		825.8564
Worker	0.3344	0.2298	3.1416	8.9200e-003	0.8719	7.0400e-003	0.8789	0.2312	6.4900e-003	0.2377		888.2405	888.2405	0.0262		888.8948
Total	**0.4255**	**3.1425**	**3.9031**	**0.0166**	**1.0639**	**0.0130**	**1.0769**	**0.2865**	**0.0122**	**0.2987**		**1,712.8824**	**1,712.8824**	**0.0748**		**1,714.7512**

3.6 Paving - 2021

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	0.7739	7.7422	8.8569	0.0135		0.4153	0.4153		0.3830	0.3830		1,296.8664	1,296.8664	0.4111		1,307.1442
Paving	0.1127					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.8865**	**7.7422**	**8.8569**	**0.0135**		**0.4153**	**0.4153**		**0.3830**	**0.3830**		**1,296.8664**	**1,296.8664**	**0.4111**		**1,307.1442**

3.6 Paving - 2021

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	0.0600	0.0413	0.5639	1.6000e-003	0.1565	1.2600e-003	0.1578	0.0415	1.1600e-003	0.0427		159.4278	159.4278	4.7000e-003		159.5452
Total	**0.0600**	**0.0413**	**0.5639**	**1.6000e-003**	**0.1565**	**1.2600e-003**	**0.1578**	**0.0415**	**1.1600e-003**	**0.0427**		**159.4278**	**159.4278**	**4.7000e-003**		**159.5452**

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	0.7739	7.7422	8.8569	0.0135		0.4153	0.4153		0.3830	0.3830	0.0000	1,296.8664	1,296.8664	0.4111		1,307.1442
Paving	0.1127					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.8865**	**7.7422**	**8.8569**	**0.0135**		**0.4153**	**0.4153**		**0.3830**	**0.3830**	**0.0000**	**1,296.8664**	**1,296.8664**	**0.4111**		**1,307.1442**

3.6 Paving - 2021

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	0.0600	0.0413	0.5639	1.6000e-003	0.1565	1.2600e-003	0.1578	0.0415	1.1600e-003	0.0427		159.4278	159.4278	4.7000e-003		159.5452
Total	**0.0600**	**0.0413**	**0.5639**	**1.6000e-003**	**0.1565**	**1.2600e-003**	**0.1578**	**0.0415**	**1.1600e-003**	**0.0427**		**159.4278**	**159.4278**	**4.7000e-003**		**159.5452**

3.7 Architectural Coating - 2021

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	70.1229					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941		281.4481	281.4481	0.0193		281.9309
Total	**70.3418**	**1.5268**	**1.8176**	**2.9700e-003**		**0.0941**	**0.0941**		**0.0941**	**0.0941**		**281.4481**	**281.4481**	**0.0193**		**281.9309**

3.7 Architectural Coating - 2021

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	0.0686	0.0471	0.6444	1.8300e-003	0.1788	1.4500e-003	0.1803	0.0474	1.3300e-003	0.0488		182.2032	182.2032	5.3700e-003		182.3374
Total	**0.0686**	**0.0471**	**0.6444**	**1.8300e-003**	**0.1788**	**1.4500e-003**	**0.1803**	**0.0474**	**1.3300e-003**	**0.0488**		**182.2032**	**182.2032**	**5.3700e-003**		**182.3374**

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	70.1229					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941	0.0000	281.4481	281.4481	0.0193		281.9309
Total	**70.3418**	**1.5268**	**1.8176**	**2.9700e-003**		**0.0941**	**0.0941**		**0.0941**	**0.0941**	**0.0000**	**281.4481**	**281.4481**	**0.0193**		**281.9309**

3.7 Architectural Coating - 2021

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	0.0686	0.0471	0.6444	1.8300e-003	0.1788	1.4500e-003	0.1803	0.0474	1.3300e-003	0.0488		182.2032	182.2032	5.3700e-003		182.3374
Total	**0.0686**	**0.0471**	**0.6444**	**1.8300e-003**	**0.1788**	**1.4500e-003**	**0.1803**	**0.0474**	**1.3300e-003**	**0.0488**		**182.2032**	**182.2032**	**5.3700e-003**		**182.3374**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Increase Transit Accessibility

Improve Pedestrian Network

Provide Traffic Calming Measures

	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	5.4971	24.2305	56.4320	0.1910	14.8229	0.1576	14.9806	3.9669	0.1470	4.1138		19,457.7503	19,457.7503	1.0468		19,483.9201
Unmitigated	5.7710	25.9170	63.4752	0.2192	17.2437	0.1797	17.4233	4.6147	0.1675	4.7822		22,323.8055	22,323.8055	1.1768		22,353.2248

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Fast Food Restaurant w/o Drive Thru	416.49	633.79	290.84	777,994	668,777
Fast Food Restaurant w/o Drive Thru	273.24	415.80	190.81	510,404	438,752
Health Club	281.99	344.52	229.03	606,039	520,961
High Turnover (Sit Down Restaurant)	435.26	474.91	481.55	609,916	524,294
Hotel	2,017.95	1,732.50	1470.15	4,531,134	3,895,040
Parking Lot	0.00	0.00	0.00		
Recreational Swimming Pool	0.00	0.00	0.00		
Total	3,424.93	3,601.52	2,662.38	7,035,487	6,047,824

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
Fast Food Restaurant w/o Drive	16.60	8.40	6.90	1.50	79.50	19.00	51	37	12
Fast Food Restaurant w/o Drive	16.60	8.40	6.90	1.50	79.50	19.00	51	37	12
Health Club	16.60	8.40	6.90	16.90	64.10	19.00	52	39	9
High Turnover (Sit Down	16.60	8.40	6.90	8.50	72.50	19.00	37	20	43
Hotel	16.60	8.40	6.90	19.40	61.60	19.00	58	38	4
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Recreational Swimming Pool	16.60	8.40	6.90	33.00	48.00	19.00	52	39	9

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Fast Food Restaurant w/o Drive Thru	0.546501	0.044961	0.204016	0.120355	0.015740	0.006196	0.020131	0.030678	0.002515	0.002201	0.005142	0.000687	0.000876
Health Club	0.546501	0.044961	0.204016	0.120355	0.015740	0.006196	0.020131	0.030678	0.002515	0.002201	0.005142	0.000687	0.000876
High Turnover (Sit Down Restaurant)	0.546501	0.044961	0.204016	0.120355	0.015740	0.006196	0.020131	0.030678	0.002515	0.002201	0.005142	0.000687	0.000876
Hotel	0.546501	0.044961	0.204016	0.120355	0.015740	0.006196	0.020131	0.030678	0.002515	0.002201	0.005142	0.000687	0.000876
Parking Lot	0.546501	0.044961	0.204016	0.120355	0.015740	0.006196	0.020131	0.030678	0.002515	0.002201	0.005142	0.000687	0.000876
Recreational Swimming Pool	0.546501	0.044961	0.204016	0.120355	0.015740	0.006196	0.020131	0.030678	0.002515	0.002201	0.005142	0.000687	0.000876

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Install High Efficiency Lighting

Indigo Hotel - Proposed Project - Los Angeles-South Coast County, Summer

	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	0.1462	1.3289	1.1163	7.9700e-003		0.1010	0.1010		0.1010	0.1010		1,594.6475	1,594.6475	0.0306	0.0292	1,604.1237
NaturalGas Unmitigated	0.1462	1.3289	1.1163	7.9700e-003		0.1010	0.1010		0.1010	0.1010		1,594.6475	1,594.6475	0.0306	0.0292	1,604.1237

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					
Fast Food Restaurant w/o Drive Thru	651.186	7.0200e-003	0.0638	0.0536	3.8000e-004		4.8500e-003	4.8500e-003		4.8500e-003	4.8500e-003		76.6101	76.6101	1.4700e-003	1.4000e-003	77.0653
Fast Food Restaurant w/o Drive Thru	991.32	0.0107	0.0972	0.0816	5.8000e-004		7.3900e-003	7.3900e-003		7.3900e-003	7.3900e-003		116.6258	116.6258	2.2400e-003	2.1400e-003	117.3189
Health Club	370.232	3.9900e-003	0.0363	0.0305	2.2000e-004		2.7600e-003	2.7600e-003		2.7600e-003	2.7600e-003		43.5567	43.5567	8.3000e-004	8.0000e-004	43.8155
High Turnover (Sit Down Restaurant)	2456.17	0.0265	0.2408	0.2023	1.4400e-003		0.0183	0.0183		0.0183	0.0183		288.9614	288.9614	5.5400e-003	5.3000e-003	290.6785
Hotel	9085.59	0.0980	0.8907	0.7482	5.3400e-003		0.0677	0.0677		0.0677	0.0677		1,068.8935	1,068.8935	0.0205	0.0196	1,075.2454
Parking Lot	0	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
Recreational Swimming Pool	0	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
Total		**0.1462**	**1.3289**	**1.1163**	**7.9600e-003**		**0.1010**	**0.1010**		**0.1010**	**0.1010**		**1,594.6475**	**1,594.6475**	**0.0306**	**0.0292**	**1,604.1237**

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					
Fast Food Restaurant w/o Drive Thru	0.99132	0.0107	0.0972	0.0816	5.8000e-004		7.3900e-003	7.3900e-003		7.3900e-003	7.3900e-003		116.6258	116.6258	2.2400e-003	2.1400e-003	117.3189
Fast Food Restaurant w/o Drive Thru	0.651186	7.0200e-003	0.0638	0.0536	3.8000e-004		4.8500e-003	4.8500e-003		4.8500e-003	4.8500e-003		76.6101	76.6101	1.4700e-003	1.4000e-003	77.0653
Health Club	0.370232	3.9900e-003	0.0363	0.0305	2.2000e-004		2.7600e-003	2.7600e-003		2.7600e-003	2.7600e-003		43.5567	43.5567	8.3000e-004	8.0000e-004	43.8155
High Turnover (Sit Down Restaurant)	2.45617	0.0265	0.2408	0.2023	1.4400e-003		0.0183	0.0183		0.0183	0.0183		288.9614	288.9614	5.5400e-003	5.3000e-003	290.6785
Hotel	9.08559	0.0980	0.8907	0.7482	5.3400e-003		0.0677	0.0677		0.0677	0.0677		1,068.8935	1,068.8935	0.0205	0.0196	1,075.2454
Parking Lot	0	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
Recreational Swimming Pool	0	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
Total		**0.1462**	**1.3289**	**1.1163**	**7.9600e-003**		**0.1010**	**0.1010**		**0.1010**	**0.1010**		**1,594.6475**	**1,594.6475**	**0.0306**	**0.0292**	**1,604.1237**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	3.4147	2.6000e-004	0.0282	0.0000		1.0000e-004	1.0000e-004		1.0000e-004	1.0000e-004		0.0604	0.0604	1.6000e-004		0.0643
Unmitigated	3.4147	2.6000e-004	0.0282	0.0000		1.0000e-004	1.0000e-004		1.0000e-004	1.0000e-004		0.0604	0.0604	1.6000e-004		0.0643

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	0.3842					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	3.0278					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.6200e-003	2.6000e-004	0.0282	0.0000		1.0000e-004	1.0000e-004		1.0000e-004	1.0000e-004		0.0604	0.0604	1.6000e-004		0.0643
Total	**3.4147**	**2.6000e-004**	**0.0282**	**0.0000**		**1.0000e-004**	**1.0000e-004**		**1.0000e-004**	**1.0000e-004**		**0.0604**	**0.0604**	**1.6000e-004**		**0.0643**

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	0.3842					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	3.0278					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.6200e-003	2.6000e-004	0.0282	0.0000		1.0000e-004	1.0000e-004		1.0000e-004	1.0000e-004		0.0604	0.0604	1.6000e-004		0.0643
Total	**3.4147**	**2.6000e-004**	**0.0282**	**0.0000**		**1.0000e-004**	**1.0000e-004**		**1.0000e-004**	**1.0000e-004**		**0.0604**	**0.0604**	**1.6000e-004**		**0.0643**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

Use Water Efficient Irrigation System

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
Emergency Generator	1	1	50	374	0.73	CNG

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

10.1 Stationary Sources

Unmitigated/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
Equipment Type	lb/day										lb/day					
Emergency Generator - CNG (0 - 500 HP)	3.2905	0.3168	8.5699	1.1500e-003		0.0182	0.0182		0.0182	0.0182		210.2289	210.2289	0.4396		221.2182
Total	**3.2905**	**0.3168**	**8.5699**	**1.1500e-003**		**0.0182**	**0.0182**		**0.0182**	**0.0182**		**210.2289**	**210.2289**	**0.4396**		**221.2182**

11.0 Vegetation

Indigo Hotel - Proposed Project

Los Angeles-South Coast County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Parking Lot	95.00	Space	0.86	38,000.00	0
Fast Food Restaurant w/o Drive Thru	1.57	1000sqft	0.04	1,568.00	0
Fast Food Restaurant w/o Drive Thru	1.03	1000sqft	0.02	1,030.00	0
Health Club	7.47	1000sqft	0.17	7,466.00	0
High Turnover (Sit Down Restaurant)	3.88	1000sqft	0.09	3,885.00	0
Hotel	165.00	Room	0.31	138,292.00	0
Recreational Swimming Pool	1.80	1000sqft	0.04	1,800.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	9			**Operational Year**	2022
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	636.97	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Per 2016 SCE Power Content Label. See Section 1.0 Project Characteristics.

Land Use - Per applicant provided information. Cafe and bar modeled as fast food restaurant w/o drive separately. Lot acreage of hotel equal to new Building D ground floor. Hotel square feet set equal to total area of both existing Building C and new Building D.

Construction Phase - Per applicant provided information. Monday - Saturday construction schedule. See 3.0 Construction Detail.

Off-road Equipment - Default values. See 3.0 Construction Detail.
Off-road Equipment - Default values. See 3.0 Construction Detail.

Off-road Equipment - Default values. See 3.0 Construction Detail.

Off-road Equipment - Default values. See 3.0 Construction Detail.

Off-road Equipment - Default values. See 3.0 Construction Detail.

Off-road Equipment - Default values. See 3.0 Construction Detail.

Trips and VMT - Default values rounded up to even number of trip rates.

On-road Fugitive Dust - CalEEMod default values.

Demolition - Estimated tons of removed asphalt and sidewalk concrete from existing site, per Site Demolition Plan, Drawing AD0.1, March 11, 2019.

Grading - Per applicant information.

Architectural Coating - CalEEMod default values.

Vehicle Trips - Based on traffic analysis perpared by Linnscott, Law & Greenspan (LLG Ref. 1-16-4200-2)

Vehicle Emission Factors - CalEEMod default values

Vehicle Emission Factors - CalEEMod default values

Vehicle Emission Factors - CalEEMod default values

Road Dust - CalEEMod default values

Woodstoves - CalEEMod default values

Consumer Products - CalEEMod default values

Area Coating - CalEEMod default values

Landscape Equipment - CalEEMod default values

Energy Use - CalEEMod default values

Water And Wastewater - Default CalEEMod values for indoor and outdoor water use. Assumed 100% aerobic.

Solid Waste - CalEEMod default values

Construction Off-road Equipment Mitigation -

Mobile Land Use Mitigation - Distance to Arcadia Gold Line Station is 0.45 miles. The project encourages walking through pedestrian access linking internal uses to external streets and sidewalks. Road crossings include marked crosswalks, median islands, traffic signals and timers.

Area Mitigation -

Energy Mitigation - High efficiency lighting will be used for outdoor lighting. Percent lighting energy reduction conservatively set equal to the minimum reduction (16%) per CAPCOA-Quantification Report 9-14-Final.

Indigo Hotel - Proposed Project - Los Angeles-South Coast County, Winter

Water Mitigation - Per applicant provided information, the proposed project will utilize efficient fixtures and appliances. Therefore, low-flow indoor water use is assumed.

Waste Mitigation - Percent Reduction in Waste Disposed: 50%. Waste diversion consistent with Assembly Bill 939.

Stationary Sources - Emergency Generators and Fire Pumps - Assumed 374 hp Emergency Generator.

Stationary Sources - Emergency Generators and Fire Pumps EF - CalEEMod default values

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	20.00	27.00
tblConstructionPhase	NumDays	2.00	10.00
tblConstructionPhase	NumDays	4.00	11.00
tblConstructionPhase	NumDays	200.00	357.00
tblConstructionPhase	NumDays	10.00	20.00
tblConstructionPhase	NumDays	10.00	20.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblGrading	MaterialImported	0.00	1,363.00
tblLandUse	LandUseSquareFeet	1,570.00	1,568.00
tblLandUse	LandUseSquareFeet	7,470.00	7,466.00
tblLandUse	LandUseSquareFeet	3,880.00	3,885.00
tblLandUse	LandUseSquareFeet	239,580.00	138,292.00
tblLandUse	LotAcreage	5.50	0.31
tblProjectCharacteristics	CO2IntensityFactor	702.44	636.97
tblTripsAndVMT	VendorTripNumber	31.00	30.00
tblTripsAndVMT	WorkerTripNumber	13.00	14.00

tblTripsAndVMT	WorkerTripNumber	80.00	78.00
tblTripsAndVMT	WorkerTripNumber	13.00	14.00
tblVehicleTrips	ST_TR	696.00	403.69
tblVehicleTrips	ST_TR	20.87	46.12
tblVehicleTrips	ST_TR	158.37	122.40
tblVehicleTrips	ST_TR	8.19	10.50
tblVehicleTrips	ST_TR	9.10	0.00
tblVehicleTrips	SU_TR	500.00	185.25
tblVehicleTrips	SU_TR	26.73	30.66
tblVehicleTrips	SU_TR	131.84	124.11
tblVehicleTrips	SU_TR	5.95	8.91
tblVehicleTrips	SU_TR	13.60	0.00
tblVehicleTrips	WD_TR	716.00	265.28
tblVehicleTrips	WD_TR	32.93	37.75
tblVehicleTrips	WD_TR	127.15	112.18
tblVehicleTrips	WD_TR	8.17	12.23
tblVehicleTrips	WD_TR	33.82	0.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00

tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00

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					
2020	2.5406	22.9927	17.2381	0.0383	5.8890	1.1602	6.7107	2.9774	1.0835	3.7334	0.0000	3,673.2946	3,673.2946	0.6432	0.0000	3,684.6138
2021	70.4181	16.7971	16.6141	0.0380	1.0639	0.6975	1.7615	0.2865	0.6732	0.9597	0.0000	3,639.6124	3,639.6124	0.4337	0.0000	3,650.4538
Maximum	**70.4181**	**22.9927**	**17.2381**	**0.0383**	**5.8890**	**1.1602**	**6.7107**	**2.9774**	**1.0835**	**3.7334**	**0.0000**	**3,673.2946**	**3,673.2946**	**0.6432**	**0.0000**	**3,684.6138**

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					
2020	2.5406	22.9927	17.2381	0.0383	2.6992	1.1602	3.5209	1.3529	1.0835	2.1088	0.0000	3,673.2946	3,673.2946	0.6432	0.0000	3,684.6138
2021	70.4181	16.7971	16.6141	0.0380	1.0639	0.6975	1.7615	0.2865	0.6732	0.9597	0.0000	3,639.6124	3,639.6124	0.4337	0.0000	3,650.4538
Maximum	**70.4181**	**22.9927**	**17.2381**	**0.0383**	**2.6992**	**1.1602**	**3.5209**	**1.3529**	**1.0835**	**2.1088**	**0.0000**	**3,673.2946**	**3,673.2946**	**0.6432**	**0.0000**	**3,684.6138**

	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	**0.00**	**0.00**	**0.00**	**0.00**	**45.88**	**0.00**	**37.65**	**49.77**	**0.00**	**34.62**	**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	3.4147	2.6000e-004	0.0282	0.0000		1.0000e-004	1.0000e-004		1.0000e-004	1.0000e-004		0.0604	0.0604	1.6000e-004		0.0643
Energy	0.1462	1.3289	1.1163	7.9700e-003		0.1010	0.1010		0.1010	0.1010		1,594.6475	1,594.6475	0.0306	0.0292	1,604.1237
Mobile	5.5956	26.2928	61.4784	0.2082	17.2437	0.1811	17.4247	4.6147	0.1689	4.7836		21,215.9290	21,215.9290	1.1859		21,245.5762
Stationary	3.2905	0.3168	8.5699	1.1500e-003		0.0182	0.0182		0.0182	0.0182		210.2289	210.2289	0.4396		221.2182
Total	**12.4469**	**27.9387**	**71.1928**	**0.2174**	**17.2437**	**0.3003**	**17.5440**	**4.6147**	**0.2881**	**4.9028**		**23,020.8657**	**23,020.8657**	**1.6562**	**0.0292**	**23,070.9824**

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	lb/day										lb/day					
Area	3.4147	2.6000e-004	0.0282	0.0000		1.0000e-004	1.0000e-004		1.0000e-004	1.0000e-004		0.0604	0.0604	1.6000e-004		0.0643
Energy	0.1462	1.3289	1.1163	7.9700e-003		0.1010	0.1010		0.1010	0.1010		1,594.6475	1,594.6475	0.0306	0.0292	1,604.1237
Mobile	5.3286	24.5077	55.0990	0.1813	14.8229	0.1590	14.9819	3.9669	0.1483	4.1151		18,480.2934	18,480.2934	1.0593		18,506.7748
Stationary	3.2905	0.3168	8.5699	1.1500e-003		0.0182	0.0182		0.0182	0.0182		210.2289	210.2289	0.4396		221.2182
Total	**12.1799**	**26.1536**	**64.8134**	**0.1905**	**14.8229**	**0.2782**	**15.1012**	**3.9669**	**0.2675**	**4.2344**		**20,285.2302**	**20,285.2302**	**1.5295**	**0.0292**	**20,332.1810**

	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	**2.15**	**6.39**	**8.96**	**12.37**	**14.04**	**7.35**	**13.92**	**14.04**	**7.15**	**13.63**	**0.00**	**11.88**	**11.88**	**7.65**	**0.00**	**11.87**

3.0 Construction Detail

Construction Phase

Indigo Hotel - Proposed Project - Los Angeles-South Coast County, Winter

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	5/1/2020	6/1/2020	6	27	
2	Site Preparation	Site Preparation	6/2/2020	6/12/2020	6	10	
3	Grading	Grading	6/13/2020	6/25/2020	6	11	
4	Building Construction	Building Construction	6/26/2020	8/16/2021	6	357	
5	Paving	Paving	8/17/2021	9/8/2021	6	20	
6	Architectural Coating	Architectural Coating	9/9/2021	10/1/2021	6	20	

Acres of Grading (Site Preparation Phase): 5

Acres of Grading (Grading Phase): 4.13

Acres of Paving: 0.86

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 225,225; Non-Residential Outdoor: 75,075; Striped Parking Area: 2,280 (Architectural Coating – sqft)

OffRoad Equipment

Indigo Hotel - Proposed Project - Los Angeles-South Coast County, Winter

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	1	8.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Rubber Tired Dozers	1	7.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Graders	1	6.00	187	0.41
Grading	Rubber Tired Dozers	1	6.00	247	0.40
Grading	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Building Construction	Cranes	1	6.00	231	0.29
Building Construction	Forklifts	1	6.00	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	6.00	9	0.56
Paving	Pavers	1	6.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	1	7.00	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
Demolition	5	14.00	0.00	185.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	3	8.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	3	8.00	0.00	170.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	7	78.00	30.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	14.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	16.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Demolition - 2020

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					1.4797	0.0000	1.4797	0.2240	0.0000	0.2240			0.0000			0.0000
Off-Road	2.1262	20.9463	14.6573	0.0241		1.1525	1.1525		1.0761	1.0761		2,322.3127	2,322.3127	0.5970		2,337.2363
Total	**2.1262**	**20.9463**	**14.6573**	**0.0241**	**1.4797**	**1.1525**	**2.6322**	**0.2240**	**1.0761**	**1.3002**		**2,322.3127**	**2,322.3127**	**0.5970**		**2,337.2363**

3.2 Demolition - 2020

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	0.0613	1.9957	0.4640	5.3200e-003	0.1198	6.3800e-003	0.1262	0.0328	6.1100e-003	0.0390		576.3052	576.3052	0.0414		577.3393
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	0.0715	0.0508	0.5614	1.5600e-003	0.1565	1.3100e-003	0.1578	0.0415	1.2100e-003	0.0427		155.0389	155.0389	4.8900e-003		155.1610
Total	**0.1328**	**2.0464**	**1.0254**	**6.8800e-003**	**0.2763**	**7.6900e-003**	**0.2840**	**0.0743**	**7.3200e-003**	**0.0817**		**731.3440**	**731.3440**	**0.0463**		**732.5004**

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					0.6659	0.0000	0.6659	0.1008	0.0000	0.1008			0.0000			0.0000
Off-Road	2.1262	20.9463	14.6573	0.0241		1.1525	1.1525		1.0761	1.0761	0.0000	2,322.3127	2,322.3127	0.5970		2,337.2363
Total	**2.1262**	**20.9463**	**14.6573**	**0.0241**	**0.6659**	**1.1525**	**1.8184**	**0.1008**	**1.0761**	**1.1770**	**0.0000**	**2,322.3127**	**2,322.3127**	**0.5970**		**2,337.2363**

3.2 Demolition - 2020

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	0.0613	1.9957	0.4640	5.3200e-003	0.1198	6.3800e-003	0.1262	0.0328	6.1100e-003	0.0390		576.3052	576.3052	0.0414		577.3393
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	0.0715	0.0508	0.5614	1.5600e-003	0.1565	1.3100e-003	0.1578	0.0415	1.2100e-003	0.0427		155.0389	155.0389	4.8900e-003		155.1610
Total	**0.1328**	**2.0464**	**1.0254**	**6.8800e-003**	**0.2763**	**7.6900e-003**	**0.2840**	**0.0743**	**7.3200e-003**	**0.0817**		**731.3440**	**731.3440**	**0.0463**		**732.5004**

3.3 Site Preparation - 2020

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					5.7996	0.0000	5.7996	2.9537	0.0000	2.9537			0.0000			0.0000
Off-Road	1.6299	18.3464	7.7093	0.0172		0.8210	0.8210		0.7553	0.7553		1,667.4119	1,667.4119	0.5393		1,680.8937
Total	**1.6299**	**18.3464**	**7.7093**	**0.0172**	**5.7996**	**0.8210**	**6.6205**	**2.9537**	**0.7553**	**3.7090**		**1,667.4119**	**1,667.4119**	**0.5393**		**1,680.8937**

3.3 Site Preparation - 2020

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	0.0409	0.0290	0.3208	8.9000e-004	0.0894	7.5000e-004	0.0902	0.0237	6.9000e-004	0.0244		88.5936	88.5936	2.7900e-003		88.6634
Total	**0.0409**	**0.0290**	**0.3208**	**8.9000e-004**	**0.0894**	**7.5000e-004**	**0.0902**	**0.0237**	**6.9000e-004**	**0.0244**		**88.5936**	**88.5936**	**2.7900e-003**		**88.6634**

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					2.6098	0.0000	2.6098	1.3292	0.0000	1.3292			0.0000			0.0000
Off-Road	1.6299	18.3464	7.7093	0.0172		0.8210	0.8210		0.7553	0.7553	0.0000	1,667.4119	1,667.4119	0.5393		1,680.8937
Total	**1.6299**	**18.3464**	**7.7093**	**0.0172**	**2.6098**	**0.8210**	**3.4308**	**1.3292**	**0.7553**	**2.0844**	**0.0000**	**1,667.4119**	**1,667.4119**	**0.5393**		**1,680.8937**

3.3 Site Preparation - 2020

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	0.0409	0.0290	0.3208	8.9000e-004	0.0894	7.5000e-004	0.0902	0.0237	6.9000e-004	0.0244		88.5936	88.5936	2.7900e-003		88.6634
Total	**0.0409**	**0.0290**	**0.3208**	**8.9000e-004**	**0.0894**	**7.5000e-004**	**0.0902**	**0.0237**	**6.9000e-004**	**0.0244**		**88.5936**	**88.5936**	**2.7900e-003**		**88.6634**

3.4 Grading - 2020

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					4.9288	0.0000	4.9288	2.5278	0.0000	2.5278			0.0000			0.0000
Off-Road	1.3498	15.0854	6.4543	0.0141		0.6844	0.6844		0.6296	0.6296		1,365.7183	1,365.7183	0.4417		1,376.7609
Total	**1.3498**	**15.0854**	**6.4543**	**0.0141**	**4.9288**	**0.6844**	**5.6131**	**2.5278**	**0.6296**	**3.1574**		**1,365.7183**	**1,365.7183**	**0.4417**		**1,376.7609**

3.4 Grading - 2020

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	0.1383	4.5013	1.0465	0.0120	0.2702	0.0144	0.2846	0.0741	0.0138	0.0879		1,299.8727	1,299.8727	0.0933		1,302.2052
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	0.0409	0.0290	0.3208	8.9000e-004	0.0894	7.5000e-004	0.0902	0.0237	6.9000e-004	0.0244		88.5936	88.5936	2.7900e-003		88.6634
Total	**0.1792**	**4.5303**	**1.3673**	**0.0129**	**0.3596**	**0.0152**	**0.3748**	**0.0978**	**0.0145**	**0.1123**		**1,388.4663**	**1,388.4663**	**0.0961**		**1,390.8686**

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					2.2179	0.0000	2.2179	1.1375	0.0000	1.1375			0.0000			0.0000
Off-Road	1.3498	15.0854	6.4543	0.0141		0.6844	0.6844		0.6296	0.6296	0.0000	1,365.7183	1,365.7183	0.4417		1,376.7609
Total	**1.3498**	**15.0854**	**6.4543**	**0.0141**	**2.2179**	**0.6844**	**2.9023**	**1.1375**	**0.6296**	**1.7671**	**0.0000**	**1,365.7183**	**1,365.7183**	**0.4417**		**1,376.7609**

3.4 Grading - 2020

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	0.1383	4.5013	1.0465	0.0120	0.2702	0.0144	0.2846	0.0741	0.0138	0.0879		1,299.8727	1,299.8727	0.0933		1,302.2052
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	0.0409	0.0290	0.3208	8.9000e-004	0.0894	7.5000e-004	0.0902	0.0237	6.9000e-004	0.0244		88.5936	88.5936	2.7900e-003		88.6634
Total	**0.1792**	**4.5303**	**1.3673**	**0.0129**	**0.3596**	**0.0152**	**0.3748**	**0.0978**	**0.0145**	**0.1123**		**1,388.4663**	**1,388.4663**	**0.0961**		**1,390.8686**

3.5 Building Construction - 2020

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	2.0305	14.7882	13.1881	0.0220		0.7960	0.7960		0.7688	0.7688		2,001.1595	2,001.1595	0.3715		2,010.4467
Total	**2.0305**	**14.7882**	**13.1881**	**0.0220**		**0.7960**	**0.7960**		**0.7688**	**0.7688**		**2,001.1595**	**2,001.1595**	**0.3715**		**2,010.4467**

3.5 Building Construction - 2020

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	0.1115	3.1905	0.9222	7.5700e-003	0.1921	0.0153	0.2073	0.0553	0.0146	0.0699		808.3472	808.3472	0.0541		809.6985
Worker	0.3986	0.2827	3.1279	8.6700e-003	0.8719	7.2900e-003	0.8791	0.2312	6.7100e-003	0.2379		863.7879	863.7879	0.0272		864.4686
Total	**0.5101**	**3.4733**	**4.0500**	**0.0162**	**1.0639**	**0.0226**	**1.0865**	**0.2865**	**0.0213**	**0.3078**		**1,672.1351**	**1,672.1351**	**0.0813**		**1,674.1671**

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	2.0305	14.7882	13.1881	0.0220		0.7960	0.7960		0.7688	0.7688	0.0000	2,001.1595	2,001.1595	0.3715		2,010.4467
Total	**2.0305**	**14.7882**	**13.1881**	**0.0220**		**0.7960**	**0.7960**		**0.7688**	**0.7688**	**0.0000**	**2,001.1595**	**2,001.1595**	**0.3715**		**2,010.4467**

3.5 Building Construction - 2020

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	0.1115	3.1905	0.9222	7.5700e-003	0.1921	0.0153	0.2073	0.0553	0.0146	0.0699		808.3472	808.3472	0.0541		809.6985
Worker	0.3986	0.2827	3.1279	8.6700e-003	0.8719	7.2900e-003	0.8791	0.2312	6.7100e-003	0.2379		863.7879	863.7879	0.0272		864.4686
Total	**0.5101**	**3.4733**	**4.0500**	**0.0162**	**1.0639**	**0.0226**	**1.0865**	**0.2865**	**0.0213**	**0.3078**		**1,672.1351**	**1,672.1351**	**0.0813**		**1,674.1671**

3.5 Building Construction - 2021

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	1.8125	13.6361	12.8994	0.0221		0.6843	0.6843		0.6608	0.6608		2,001.2200	2,001.2200	0.3573		2,010.1517
Total	**1.8125**	**13.6361**	**12.8994**	**0.0221**		**0.6843**	**0.6843**		**0.6608**	**0.6608**		**2,001.2200**	**2,001.2200**	**0.3573**		**2,010.1517**

3.5 Building Construction - 2021

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	0.0957	2.9067	0.8423	7.5100e-003	0.1921	6.1500e-003	0.1982	0.0553	5.8800e-003	0.0612		802.0366	802.0366	0.0518		803.3310
Worker	0.3719	0.2544	2.8724	8.3900e-003	0.8719	7.0400e-003	0.8789	0.2312	6.4900e-003	0.2377		836.3559	836.3559	0.0246		836.9711
Total	**0.4677**	**3.1611**	**3.7147**	**0.0159**	**1.0639**	**0.0132**	**1.0771**	**0.2865**	**0.0124**	**0.2989**		**1,638.3924**	**1,638.3924**	**0.0764**		**1,640.3021**

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	1.8125	13.6361	12.8994	0.0221		0.6843	0.6843		0.6608	0.6608	0.0000	2,001.2200	2,001.2200	0.3573		2,010.1517
Total	**1.8125**	**13.6361**	**12.8994**	**0.0221**		**0.6843**	**0.6843**		**0.6608**	**0.6608**	**0.0000**	**2,001.2200**	**2,001.2200**	**0.3573**		**2,010.1517**

3.5 Building Construction - 2021

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	0.0957	2.9067	0.8423	7.5100e-003	0.1921	6.1500e-003	0.1982	0.0553	5.8800e-003	0.0612		802.0366	802.0366	0.0518		803.3310
Worker	0.3719	0.2544	2.8724	8.3900e-003	0.8719	7.0400e-003	0.8789	0.2312	6.4900e-003	0.2377		836.3559	836.3559	0.0246		836.9711
Total	**0.4677**	**3.1611**	**3.7147**	**0.0159**	**1.0639**	**0.0132**	**1.0771**	**0.2865**	**0.0124**	**0.2989**		**1,638.3924**	**1,638.3924**	**0.0764**		**1,640.3021**

3.6 Paving - 2021

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	0.7739	7.7422	8.8569	0.0135		0.4153	0.4153		0.3830	0.3830		1,296.8664	1,296.8664	0.4111		1,307.1442
Paving	0.1127					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.8865**	**7.7422**	**8.8569**	**0.0135**		**0.4153**	**0.4153**		**0.3830**	**0.3830**		**1,296.8664**	**1,296.8664**	**0.4111**		**1,307.1442**

3.6 Paving - 2021

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	0.0668	0.0457	0.5156	1.5100e-003	0.1565	1.2600e-003	0.1578	0.0415	1.1600e-003	0.0427		150.1152	150.1152	4.4200e-003		150.2256
Total	**0.0668**	**0.0457**	**0.5156**	**1.5100e-003**	**0.1565**	**1.2600e-003**	**0.1578**	**0.0415**	**1.1600e-003**	**0.0427**		**150.1152**	**150.1152**	**4.4200e-003**		**150.2256**

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	0.7739	7.7422	8.8569	0.0135		0.4153	0.4153		0.3830	0.3830	0.0000	1,296.8664	1,296.8664	0.4111		1,307.1442
Paving	0.1127					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.8865**	**7.7422**	**8.8569**	**0.0135**		**0.4153**	**0.4153**		**0.3830**	**0.3830**	**0.0000**	**1,296.8664**	**1,296.8664**	**0.4111**		**1,307.1442**

3.6 Paving - 2021

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	0.0668	0.0457	0.5156	1.5100e-003	0.1565	1.2600e-003	0.1578	0.0415	1.1600e-003	0.0427		150.1152	150.1152	4.4200e-003		150.2256
Total	**0.0668**	**0.0457**	**0.5156**	**1.5100e-003**	**0.1565**	**1.2600e-003**	**0.1578**	**0.0415**	**1.1600e-003**	**0.0427**		**150.1152**	**150.1152**	**4.4200e-003**		**150.2256**

3.7 Architectural Coating - 2021

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	70.1229					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941		281.4481	281.4481	0.0193		281.9309
Total	**70.3418**	**1.5268**	**1.8176**	**2.9700e-003**		**0.0941**	**0.0941**		**0.0941**	**0.0941**		**281.4481**	**281.4481**	**0.0193**		**281.9309**

3.7 Architectural Coating - 2021

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	0.0763	0.0522	0.5892	1.7200e-003	0.1788	1.4500e-003	0.1803	0.0474	1.3300e-003	0.0488		171.5602	171.5602	5.0500e-003		171.6864
Total	**0.0763**	**0.0522**	**0.5892**	**1.7200e-003**	**0.1788**	**1.4500e-003**	**0.1803**	**0.0474**	**1.3300e-003**	**0.0488**		**171.5602**	**171.5602**	**5.0500e-003**		**171.6864**

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	70.1229					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941	0.0000	281.4481	281.4481	0.0193		281.9309
Total	**70.3418**	**1.5268**	**1.8176**	**2.9700e-003**		**0.0941**	**0.0941**		**0.0941**	**0.0941**	**0.0000**	**281.4481**	**281.4481**	**0.0193**		**281.9309**

3.7 Architectural Coating - 2021

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	0.0763	0.0522	0.5892	1.7200e-003	0.1788	1.4500e-003	0.1803	0.0474	1.3300e-003	0.0488		171.5602	171.5602	5.0500e-003		171.6864
Total	**0.0763**	**0.0522**	**0.5892**	**1.7200e-003**	**0.1788**	**1.4500e-003**	**0.1803**	**0.0474**	**1.3300e-003**	**0.0488**		**171.5602**	**171.5602**	**5.0500e-003**		**171.6864**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Increase Transit Accessibility

Improve Pedestrian Network

Provide Traffic Calming Measures

	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	5.3286	24.5077	55.0990	0.1813	14.8229	0.1590	14.9819	3.9669	0.1483	4.1151		18,480.2934	18,480.2934	1.0593		18,506.7748
Unmitigated	5.5956	26.2928	61.4784	0.2082	17.2437	0.1811	17.4247	4.6147	0.1689	4.7836		21,215.9290	21,215.9290	1.1859		21,245.5762

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Fast Food Restaurant w/o Drive Thru	416.49	633.79	290.84	777,994	668,777
Fast Food Restaurant w/o Drive Thru	273.24	415.80	190.81	510,404	438,752
Health Club	281.99	344.52	229.03	606,039	520,961
High Turnover (Sit Down Restaurant)	435.26	474.91	481.55	609,916	524,294
Hotel	2,017.95	1,732.50	1470.15	4,531,134	3,895,040
Parking Lot	0.00	0.00	0.00		
Recreational Swimming Pool	0.00	0.00	0.00		
Total	3,424.93	3,601.52	2,662.38	7,035,487	6,047,824

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
Fast Food Restaurant w/o Drive	16.60	8.40	6.90	1.50	79.50	19.00	51	37	12
Fast Food Restaurant w/o Drive	16.60	8.40	6.90	1.50	79.50	19.00	51	37	12
Health Club	16.60	8.40	6.90	16.90	64.10	19.00	52	39	9
High Turnover (Sit Down	16.60	8.40	6.90	8.50	72.50	19.00	37	20	43
Hotel	16.60	8.40	6.90	19.40	61.60	19.00	58	38	4
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Recreational Swimming Pool	16.60	8.40	6.90	33.00	48.00	19.00	52	39	9

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Fast Food Restaurant w/o Drive Thru	0.546501	0.044961	0.204016	0.120355	0.015740	0.006196	0.020131	0.030678	0.002515	0.002201	0.005142	0.000687	0.000876
Health Club	0.546501	0.044961	0.204016	0.120355	0.015740	0.006196	0.020131	0.030678	0.002515	0.002201	0.005142	0.000687	0.000876
High Turnover (Sit Down Restaurant)	0.546501	0.044961	0.204016	0.120355	0.015740	0.006196	0.020131	0.030678	0.002515	0.002201	0.005142	0.000687	0.000876
Hotel	0.546501	0.044961	0.204016	0.120355	0.015740	0.006196	0.020131	0.030678	0.002515	0.002201	0.005142	0.000687	0.000876
Parking Lot	0.546501	0.044961	0.204016	0.120355	0.015740	0.006196	0.020131	0.030678	0.002515	0.002201	0.005142	0.000687	0.000876
Recreational Swimming Pool	0.546501	0.044961	0.204016	0.120355	0.015740	0.006196	0.020131	0.030678	0.002515	0.002201	0.005142	0.000687	0.000876

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Install High Efficiency Lighting

Indigo Hotel - Proposed Project - Los Angeles-South Coast County, Winter

	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	0.1462	1.3289	1.1163	7.9700e-003		0.1010	0.1010		0.1010	0.1010		1,594.6475	1,594.6475	0.0306	0.0292	1,604.1237
NaturalGas Unmitigated	0.1462	1.3289	1.1163	7.9700e-003		0.1010	0.1010		0.1010	0.1010		1,594.6475	1,594.6475	0.0306	0.0292	1,604.1237

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					
Fast Food Restaurant w/o Drive Thru	651.186	7.0200e-003	0.0638	0.0536	3.8000e-004		4.8500e-003	4.8500e-003		4.8500e-003	4.8500e-003		76.6101	76.6101	1.4700e-003	1.4000e-003	77.0653
Fast Food Restaurant w/o Drive Thru	991.32	0.0107	0.0972	0.0816	5.8000e-004		7.3900e-003	7.3900e-003		7.3900e-003	7.3900e-003		116.6258	116.6258	2.2400e-003	2.1400e-003	117.3189
Health Club	370.232	3.9900e-003	0.0363	0.0305	2.2000e-004		2.7600e-003	2.7600e-003		2.7600e-003	2.7600e-003		43.5567	43.5567	8.3000e-004	8.0000e-004	43.8155
High Turnover (Sit Down Restaurant)	2456.17	0.0265	0.2408	0.2023	1.4400e-003		0.0183	0.0183		0.0183	0.0183		288.9614	288.9614	5.5400e-003	5.3000e-003	290.6785
Hotel	9085.59	0.0980	0.8907	0.7482	5.3400e-003		0.0677	0.0677		0.0677	0.0677		1,068.8935	1,068.8935	0.0205	0.0196	1,075.2454
Parking Lot	0	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
Recreational Swimming Pool	0	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
Total		**0.1462**	**1.3289**	**1.1163**	**7.9600e-003**		**0.1010**	**0.1010**		**0.1010**	**0.1010**		**1,594.6475**	**1,594.6475**	**0.0306**	**0.0292**	**1,604.1237**

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					
Fast Food Restaurant w/o Drive Thru	0.651186	7.0200e-003	0.0638	0.0536	3.8000e-004		4.8500e-003	4.8500e-003		4.8500e-003	4.8500e-003		76.6101	76.6101	1.4700e-003	1.4000e-003	77.0653
Fast Food Restaurant w/o Drive Thru	0.99132	0.0107	0.0972	0.0816	5.8000e-004		7.3900e-003	7.3900e-003		7.3900e-003	7.3900e-003		116.6258	116.6258	2.2400e-003	2.1400e-003	117.3189
Health Club	0.370232	3.9900e-003	0.0363	0.0305	2.2000e-004		2.7600e-003	2.7600e-003		2.7600e-003	2.7600e-003		43.5567	43.5567	8.3000e-004	8.0000e-004	43.8155
High Turnover (Sit Down Restaurant)	2.45617	0.0265	0.2408	0.2023	1.4400e-003		0.0183	0.0183		0.0183	0.0183		288.9614	288.9614	5.5400e-003	5.3000e-003	290.6785
Hotel	9.08559	0.0980	0.8907	0.7482	5.3400e-003		0.0677	0.0677		0.0677	0.0677		1,068.8935	1,068.8935	0.0205	0.0196	1,075.2454
Parking Lot	0	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
Recreational Swimming Pool	0	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
Total		**0.1462**	**1.3289**	**1.1163**	**7.9600e-003**		**0.1010**	**0.1010**		**0.1010**	**0.1010**		**1,594.6475**	**1,594.6475**	**0.0306**	**0.0292**	**1,604.1237**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	3.4147	2.6000e-004	0.0282	0.0000		1.0000e-004	1.0000e-004		1.0000e-004	1.0000e-004		0.0604	0.0604	1.6000e-004		0.0643
Unmitigated	3.4147	2.6000e-004	0.0282	0.0000		1.0000e-004	1.0000e-004		1.0000e-004	1.0000e-004		0.0604	0.0604	1.6000e-004		0.0643

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	0.3842					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	3.0278					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.6200e-003	2.6000e-004	0.0282	0.0000		1.0000e-004	1.0000e-004		1.0000e-004	1.0000e-004		0.0604	0.0604	1.6000e-004		0.0643
Total	**3.4147**	**2.6000e-004**	**0.0282**	**0.0000**		**1.0000e-004**	**1.0000e-004**		**1.0000e-004**	**1.0000e-004**		**0.0604**	**0.0604**	**1.6000e-004**		**0.0643**

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	0.3842					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	3.0278					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.6200e-003	2.6000e-004	0.0282	0.0000		1.0000e-004	1.0000e-004		1.0000e-004	1.0000e-004		0.0604	0.0604	1.6000e-004		0.0643
Total	**3.4147**	**2.6000e-004**	**0.0282**	**0.0000**		**1.0000e-004**	**1.0000e-004**		**1.0000e-004**	**1.0000e-004**		**0.0604**	**0.0604**	**1.6000e-004**		**0.0643**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

Use Water Efficient Irrigation System

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
Emergency Generator	1	1	50	374	0.73	CNG

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

10.1 Stationary Sources

Unmitigated/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
Equipment Type	lb/day										lb/day					
Emergency Generator - CNG (0 - 500 HP)	3.2905	0.3168	8.5699	1.1500e-003		0.0182	0.0182		0.0182	0.0182		210.2289	210.2289	0.4396		221.2182
Total	**3.2905**	**0.3168**	**8.5699**	**1.1500e-003**		**0.0182**	**0.0182**		**0.0182**	**0.0182**		**210.2289**	**210.2289**	**0.4396**		**221.2182**

11.0 Vegetation

Indigo Hotel - Existing Operation

Los Angeles-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	60.81	1000sqft	1.40	60,810.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	9			**Operational Year**	2019
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	636.97	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Indigo Hotel - Existing Operation - Los Angeles-South Coast County, Annual

Project Characteristics - Per 2016 SCE Power Content Label

Land Use - Per applicant provided information. Modeled for operation only supporting air pollutant netting analysis.

Construction Phase - Operational analysis only, construciton emissions are not included in this analysis.

Off-road Equipment - Operational analysis only, construciton emissions are not included in this analysis.

Off-road Equipment - Operational analysis only, construciton emissions are not included in this analysis.

Trips and VMT - Operational analysis only, construciton emissions are not included in this analysis.

On-road Fugitive Dust - Operational analysis only, construciton emissions are not included in this analysis.

Grading - Operational analysis only, construciton emissions are not included in this analysis.

Architectural Coating - Operational analysis only, construciton emissions are not included in this analysis.

Vehicle Trips - WkDy and Saturday based on traffic analysis perpared by Linnscott, Law & Greenspan (LLG Ref. 1-16-4200-2). Sunday based on traffic study WkDy scaled based on CalEEMod defaults.

Vehicle Emission Factors - CalEEMod default values.

Vehicle Emission Factors - CalEEMod default values.

Vehicle Emission Factors - CalEEMod default values.

Road Dust - CalEEMod default values.

Energy Use -

Water And Wastewater - Default CalEEMod values for indoor and outdoor water use. Assumed 100% aerobic.

Solid Waste - CalEEMod default values.

Construction Off-road Equipment Mitigation -

Energy Mitigation -

Waste Mitigation - Percent Reduction in Waste Disposed: 50%. Waste diversion consistent with Assembly Bill 939.

Fleet Mix -

Stationary Sources - Emergency Generators and Fire Pumps -

Mobile Land Use Mitigation - Distance to Arcadia Gold Line Station is 0.45 miles. Existing pedestrian access linking internal uses to external streets and sidewalks. Road crossings include marked crosswalks, median islands, traffic signals and timers.

Indigo Hotel - Existing Operation - Los Angeles-South Coast County, Annual

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	200.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblProjectCharacteristics	CO2IntensityFactor	702.44	636.97
tblVehicleTrips	ST_TR	2.46	2.21
tblVehicleTrips	SU_TR	1.05	0.93
tblVehicleTrips	WD_TR	11.03	9.74
tblWater	AerobicPercent	87.46	100.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	SepticTankPercent	10.33	0.00

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					
2020	6.0000e-005	5.8000e-004	5.4000e-004	0.0000	1.4000e-004	0.0000	1.4000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.2212	0.2212	1.0000e-005	0.0000	0.2215
Maximum	**6.0000e-005**	**5.8000e-004**	**5.4000e-004**	**0.0000**	**1.4000e-004**	**0.0000**	**1.4000e-004**	**4.0000e-005**	**0.0000**	**4.0000e-005**	**0.0000**	**0.2212**	**0.2212**	**1.0000e-005**	**0.0000**	**0.2215**

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					
2020	6.0000e-005	5.8000e-004	5.4000e-004	0.0000	1.4000e-004	0.0000	1.4000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.2212	0.2212	1.0000e-005	0.0000	0.2215
Maximum	**6.0000e-005**	**5.8000e-004**	**5.4000e-004**	**0.0000**	**1.4000e-004**	**0.0000**	**1.4000e-004**	**4.0000e-005**	**0.0000**	**4.0000e-005**	**0.0000**	**0.2212**	**0.2212**	**1.0000e-005**	**0.0000**	**0.2215**

	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	**0.00**	**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**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	5-1-2020	7-31-2020	0.0004	0.0004
		Highest	0.0004	0.0004

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	0.2480	1.0000e-005	7.8000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.5100e-003	1.5100e-003	0.0000	0.0000	1.6100e-003
Energy	3.4100e-003	0.0310	0.0261	1.9000e-004		2.3600e-003	2.3600e-003		2.3600e-003	2.3600e-003	0.0000	262.0090	262.0090	0.0110	2.7700e-003	263.1101
Mobile	0.1743	0.8829	2.3809	7.2100e-003	0.5507	8.4300e-003	0.5591	0.1476	7.9200e-003	0.1556	0.0000	663.9994	663.9994	0.0392	0.0000	664.9797
Waste						0.0000	0.0000		0.0000	0.0000	11.4791	0.0000	11.4791	0.6784	0.0000	28.4391
Water						0.0000	0.0000		0.0000	0.0000	3.8239	61.9242	65.7480	0.0160	8.9000e-003	68.7995
Total	**0.4257**	**0.9139**	**2.4078**	**7.4000e-003**	**0.5507**	**0.0108**	**0.5615**	**0.1476**	**0.0103**	**0.1579**	**15.3030**	**987.9340**	**1,003.2370**	**0.7446**	**0.0117**	**1,025.3299**

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	0.2480	1.0000e-005	7.8000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.5100e-003	1.5100e-003	0.0000	0.0000	1.6100e-003
Energy	3.4100e-003	0.0310	0.0261	1.9000e-004		2.3600e-003	2.3600e-003		2.3600e-003	2.3600e-003	0.0000	262.0090	262.0090	0.0110	2.7700e-003	263.1101
Mobile	0.1630	0.8017	2.1072	6.2500e-003	0.4734	7.3300e-003	0.4807	0.1269	6.8900e-003	0.1338	0.0000	575.6414	575.6414	0.0346	0.0000	576.5058
Waste						0.0000	0.0000		0.0000	0.0000	5.7396	0.0000	5.7396	0.3392	0.0000	14.2195
Water						0.0000	0.0000		0.0000	0.0000	3.8239	61.9242	65.7480	0.0160	8.9000e-003	68.7995
Total	**0.4144**	**0.8328**	**2.1341**	**6.4400e-003**	**0.4734**	**9.6900e-003**	**0.4831**	**0.1269**	**9.2500e-003**	**0.1362**	**9.5635**	**899.5760**	**909.1395**	**0.4008**	**0.0117**	**922.6365**

	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	**2.65**	**8.88**	**11.37**	**12.97**	**14.04**	**10.19**	**13.96**	**14.04**	**10.02**	**13.78**	**37.51**	**8.94**	**9.38**	**46.17**	**0.00**	**10.02**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Building Construction	Building Construction	6/26/2020	6/26/2020	5	1	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Building Construction	Cranes	0	6.00	231	0.29
Building Construction	Forklifts	0	6.00	89	0.20
Building Construction	Generator Sets	0	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	0	6.00	97	0.37
Building Construction	Welders	0	8.00	46	0.45

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
Building Construction	0	19.00	10.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Building Construction - 2020

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	0.0000	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
Total	**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**

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	2.0000e-005	5.4000e-004	1.5000e-004	0.0000	3.0000e-005	0.0000	3.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.1242	0.1242	1.0000e-005	0.0000	0.1244
Worker	4.0000e-005	4.0000e-005	3.9000e-004	0.0000	1.0000e-004	0.0000	1.0000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0970	0.0970	0.0000	0.0000	0.0971
Total	**6.0000e-005**	**5.8000e-004**	**5.4000e-004**	**0.0000**	**1.3000e-004**	**0.0000**	**1.3000e-004**	**4.0000e-005**	**0.0000**	**4.0000e-005**	**0.0000**	**0.2212**	**0.2212**	**1.0000e-005**	**0.0000**	**0.2215**

3.2 Building Construction - 2020

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	0.0000	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
Total	**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**

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	2.0000e-005	5.4000e-004	1.5000e-004	0.0000	3.0000e-005	0.0000	3.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.1242	0.1242	1.0000e-005	0.0000	0.1244
Worker	4.0000e-005	4.0000e-005	3.9000e-004	0.0000	1.0000e-004	0.0000	1.0000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0970	0.0970	0.0000	0.0000	0.0971
Total	**6.0000e-005**	**5.8000e-004**	**5.4000e-004**	**0.0000**	**1.3000e-004**	**0.0000**	**1.3000e-004**	**4.0000e-005**	**0.0000**	**4.0000e-005**	**0.0000**	**0.2212**	**0.2212**	**1.0000e-005**	**0.0000**	**0.2215**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Increase Transit Accessibility

Improve Pedestrian Network

Provide Traffic Calming Measures

	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	0.1630	0.8017	2.1072	6.2500e-003	0.4734	7.3300e-003	0.4807	0.1269	6.8900e-003	0.1338	0.0000	575.6414	575.6414	0.0346	0.0000	576.5058
Unmitigated	0.1743	0.8829	2.3809	7.2100e-003	0.5507	8.4300e-003	0.5591	0.1476	7.9200e-003	0.1556	0.0000	663.9994	663.9994	0.0392	0.0000	664.9797

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Office Building	592.29	134.39	56.55	1,450,758	1,247,096
Total	592.29	134.39	56.55	1,450,758	1,247,096

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
General Office Building	16.60	8.40	6.90	33.00	48.00	19.00	77	19	4

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Office Building	0.548007	0.045751	0.200309	0.124119	0.017133	0.006025	0.018861	0.028423	0.002391	0.002469	0.004915	0.000672	0.000925

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	228.2280	228.2280	0.0104	2.1500e-003	229.1284
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	228.2280	228.2280	0.0104	2.1500e-003	229.1284
NaturalGas Mitigated	3.4100e-003	0.0310	0.0261	1.9000e-004		2.3600e-003	2.3600e-003		2.3600e-003	2.3600e-003	0.0000	33.7810	33.7810	6.5000e-004	6.2000e-004	33.9818
NaturalGas Unmitigated	3.4100e-003	0.0310	0.0261	1.9000e-004		2.3600e-003	2.3600e-003		2.3600e-003	2.3600e-003	0.0000	33.7810	33.7810	6.5000e-004	6.2000e-004	33.9818

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					
General Office Building	633032	3.4100e-003	0.0310	0.0261	1.9000e-004		2.3600e-003	2.3600e-003		2.3600e-003	2.3600e-003	0.0000	33.7810	33.7810	6.5000e-004	6.2000e-004	33.9818
Total		**3.4100e-003**	**0.0310**	**0.0261**	**1.9000e-004**		**2.3600e-003**	**2.3600e-003**		**2.3600e-003**	**2.3600e-003**	**0.0000**	**33.7810**	**33.7810**	**6.5000e-004**	**6.2000e-004**	**33.9818**

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					
General Office Building	633032	3.4100e-003	0.0310	0.0261	1.9000e-004		2.3600e-003	2.3600e-003		2.3600e-003	2.3600e-003	0.0000	33.7810	33.7810	6.5000e-004	6.2000e-004	33.9818
Total		**3.4100e-003**	**0.0310**	**0.0261**	**1.9000e-004**		**2.3600e-003**	**2.3600e-003**		**2.3600e-003**	**2.3600e-003**	**0.0000**	**33.7810**	**33.7810**	**6.5000e-004**	**6.2000e-004**	**33.9818**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Office Building	789922	228.2280	0.0104	2.1500e-003	229.1284
Total		**228.2280**	**0.0104**	**2.1500e-003**	**229.1284**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Office Building	789922	228.2280	0.0104	2.1500e-003	229.1284
Total		**228.2280**	**0.0104**	**2.1500e-003**	**229.1284**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.2480	1.0000e-005	7.8000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.5100e-003	1.5100e-003	0.0000	0.0000	1.6100e-003
Unmitigated	0.2480	1.0000e-005	7.8000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.5100e-003	1.5100e-003	0.0000	0.0000	1.6100e-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	0.0282					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.2197					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	7.0000e-005	1.0000e-005	7.8000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.5100e-003	1.5100e-003	0.0000	0.0000	1.6100e-003
Total	**0.2480**	**1.0000e-005**	**7.8000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**1.5100e-003**	**1.5100e-003**	**0.0000**	**0.0000**	**1.6100e-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	0.0282					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.2197					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	7.0000e-005	1.0000e-005	7.8000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.5100e-003	1.5100e-003	0.0000	0.0000	1.6100e-003
Total	**0.2480**	**1.0000e-005**	**7.8000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**1.5100e-003**	**1.5100e-003**	**0.0000**	**0.0000**	**1.6100e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	65.7480	0.0160	8.9000e-003	68.7995
Unmitigated	65.7480	0.0160	8.9000e-003	68.7995

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Office Building	10.808 / 6.62425	65.7480	0.0160	8.9000e-003	68.7995
Total		**65.7480**	**0.0160**	**8.9000e-003**	**68.7995**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Office Building	10.808 / 6.62425	65.7480	0.0160	8.9000e-003	68.7995
Total		**65.7480**	**0.0160**	**8.9000e-003**	**68.7995**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	5.7396	0.3392	0.0000	14.2195
Unmitigated	11.4791	0.6784	0.0000	28.4391

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Office Building	56.55	11.4791	0.6784	0.0000	28.4391
Total		**11.4791**	**0.6784**	**0.0000**	**28.4391**

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Office Building	28.275	5.7396	0.3392	0.0000	14.2195
Total		**5.7396**	**0.3392**	**0.0000**	**14.2195**

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Indigo Hotel - Existing Operation

Los Angeles-South Coast County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	60.81	1000sqft	1.40	60,810.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	9			**Operational Year**	2019
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	636.97	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Indigo Hotel - Existing Operation - Los Angeles-South Coast County, Summer

Project Characteristics - Per 2016 SCE Power Content Label

Land Use - Per applicant provided information. Modeled for operation only supporting air pollutant netting analysis.

Construction Phase - Operational analysis only, construciton emissions are not included in this analysis.

Off-road Equipment - Operational analysis only, construciton emissions are not included in this analysis.

Off-road Equipment - Operational analysis only, construciton emissions are not included in this analysis.

Trips and VMT - Operational analysis only, construciton emissions are not included in this analysis.

On-road Fugitive Dust - Operational analysis only, construciton emissions are not included in this analysis.

Grading - Operational analysis only, construciton emissions are not included in this analysis.

Architectural Coating - Operational analysis only, construciton emissions are not included in this analysis.

Vehicle Trips - WkDy and Saturday based on traffic analysis perpared by Linnscott, Law & Greenspan (LLG Ref. 1-16-4200-2). Sunday based on traffic study WkDy scaled based on CalEEMod defaults.

Vehicle Emission Factors - CalEEMod default values.

Vehicle Emission Factors - CalEEMod default values.

Vehicle Emission Factors - CalEEMod default values.

Road Dust - CalEEMod default values.

Energy Use -

Water And Wastewater - Default CalEEMod values for indoor and outdoor water use. Assumed 100% aerobic.

Solid Waste - CalEEMod default values.

Construction Off-road Equipment Mitigation -

Energy Mitigation -

Waste Mitigation - Percent Reduction in Waste Disposed: 50%. Waste diversion consistent with Assembly Bill 939.

Fleet Mix -

Stationary Sources - Emergency Generators and Fire Pumps -

Mobile Land Use Mitigation - Distance to Arcadia Gold Line Station is 0.45 miles. Existing pedestrian access linking internal uses to external streets and sidewalks. Road crossings include marked crosswalks, median islands, traffic signals and timers.

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	200.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblProjectCharacteristics	CO2IntensityFactor	702.44	636.97
tblVehicleTrips	ST_TR	2.46	2.21
tblVehicleTrips	SU_TR	1.05	0.93
tblVehicleTrips	WD_TR	11.03	9.74
tblWater	AerobicPercent	87.46	100.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	SepticTankPercent	10.33	0.00

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					
2020	0.1230	1.1259	1.1106	4.8300e-003	0.2764	6.7800e-003	0.2832	0.0748	6.4200e-003	0.0812	0.0000	500.4862	500.4862	0.0240	0.0000	501.0849
Maximum	**0.1230**	**1.1259**	**1.1106**	**4.8300e-003**	**0.2764**	**6.7800e-003**	**0.2832**	**0.0748**	**6.4200e-003**	**0.0812**	**0.0000**	**500.4862**	**500.4862**	**0.0240**	**0.0000**	**501.0849**

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					
2020	0.1230	1.1259	1.1106	4.8300e-003	0.2764	6.7800e-003	0.2832	0.0748	6.4200e-003	0.0812	0.0000	500.4862	500.4862	0.0240	0.0000	501.0849
Maximum	**0.1230**	**1.1259**	**1.1106**	**4.8300e-003**	**0.2764**	**6.7800e-003**	**0.2832**	**0.0748**	**6.4200e-003**	**0.0812**	**0.0000**	**500.4862**	**500.4862**	**0.0240**	**0.0000**	**501.0849**

	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	**0.00**	**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**	**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	1.3591	6.0000e-005	6.2700e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0133	0.0133	4.0000e-005		0.0142
Energy	0.0187	0.1700	0.1428	1.0200e-003		0.0129	0.0129		0.0129	0.0129		204.0394	204.0394	3.9100e-003	3.7400e-003	205.2519
Mobile	1.3237	6.0834	17.8060	0.0540	4.0577	0.0608	4.1185	1.0861	0.0572	1.1433		5,484.1702	5,484.1702	0.3149		5,492.0433
Total	**2.7015**	**6.2535**	**17.9551**	**0.0551**	**4.0577**	**0.0738**	**4.1315**	**1.0861**	**0.0701**	**1.1562**		**5,688.2228**	**5,688.2228**	**0.3189**	**3.7400e-003**	**5,697.3094**

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	1.3591	6.0000e-005	6.2700e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0133	0.0133	4.0000e-005		0.0142
Energy	0.0187	0.1700	0.1428	1.0200e-003		0.0129	0.0129		0.0129	0.0129		204.0394	204.0394	3.9100e-003	3.7400e-003	205.2519
Mobile	1.2410	5.5407	15.6851	0.0468	3.4881	0.0529	3.5409	0.9336	0.0497	0.9833		4,754.5070	4,754.5070	0.2772		4,761.4360
Total	**2.6187**	**5.7108**	**15.8342**	**0.0479**	**3.4881**	**0.0658**	**3.5539**	**0.9336**	**0.0626**	**0.9963**		**4,958.5597**	**4,958.5597**	**0.2811**	**3.7400e-003**	**4,966.7021**

	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	3.06	8.68	11.81	13.08	14.04	10.78	13.98	14.04	10.67	13.83	0.00	12.83	12.83	11.84	0.00	12.82

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Building Construction	Building Construction	6/26/2020	6/26/2020	5	1	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Building Construction	Cranes	0	6.00	231	0.29
Building Construction	Forklifts	0	6.00	89	0.20
Building Construction	Generator Sets	0	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	0	6.00	97	0.37
Building Construction	Welders	0	8.00	46	0.45

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
Building Construction	0	19.00	10.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Building Construction - 2020

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	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**		**0.0000**

3.2 Building Construction - 2020

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	0.0356	1.0637	0.2787	2.5900e-003	0.0640	5.0100e-003	0.0690	0.0184	4.7900e-003	0.0232		277.0247	277.0247	0.0169		277.4473
Worker	0.0874	0.0622	0.8319	2.2400e-003	0.2124	1.7800e-003	0.2142	0.0563	1.6400e-003	0.0580		223.4615	223.4615	7.0500e-003		223.6376
Total	**0.1230**	**1.1259**	**1.1106**	**4.8300e-003**	**0.2764**	**6.7900e-003**	**0.2832**	**0.0748**	**6.4300e-003**	**0.0812**		**500.4862**	**500.4862**	**0.0240**		**501.0849**

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	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000
Total	**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**

3.2 Building Construction - 2020

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	0.0356	1.0637	0.2787	2.5900e-003	0.0640	5.0100e-003	0.0690	0.0184	4.7900e-003	0.0232		277.0247	277.0247	0.0169		277.4473
Worker	0.0874	0.0622	0.8319	2.2400e-003	0.2124	1.7800e-003	0.2142	0.0563	1.6400e-003	0.0580		223.4615	223.4615	7.0500e-003		223.6376
Total	**0.1230**	**1.1259**	**1.1106**	**4.8300e-003**	**0.2764**	**6.7900e-003**	**0.2832**	**0.0748**	**6.4300e-003**	**0.0812**		**500.4862**	**500.4862**	**0.0240**		**501.0849**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Increase Transit Accessibility

Improve Pedestrian Network

Provide Traffic Calming Measures

	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	1.2410	5.5407	15.6851	0.0468	3.4881	0.0529	3.5409	0.9336	0.0497	0.9833		4,754.5070	4,754.5070	0.2772		4,761.4360
Unmitigated	1.3237	6.0834	17.8060	0.0540	4.0577	0.0608	4.1185	1.0861	0.0572	1.1433		5,484.1702	5,484.1702	0.3149		5,492.0433

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Office Building	592.29	134.39	56.55	1,450,758	1,247,096
Total	592.29	134.39	56.55	1,450,758	1,247,096

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
General Office Building	16.60	8.40	6.90	33.00	48.00	19.00	77	19	4

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Office Building	0.548007	0.045751	0.200309	0.124119	0.017133	0.006025	0.018861	0.028423	0.002391	0.002469	0.004915	0.000672	0.000925

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0187	0.1700	0.1428	1.0200e-003		0.0129	0.0129		0.0129	0.0129		204.0394	204.0394	3.9100e-003	3.7400e-003	205.2519
NaturalGas Unmitigated	0.0187	0.1700	0.1428	1.0200e-003		0.0129	0.0129		0.0129	0.0129		204.0394	204.0394	3.9100e-003	3.7400e-003	205.2519

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					
General Office Building	1734.33	0.0187	0.1700	0.1428	1.0200e-003		0.0129	0.0129		0.0129	0.0129		204.0394	204.0394	3.9100e-003	3.7400e-003	205.2519
Total		**0.0187**	**0.1700**	**0.1428**	**1.0200e-003**		**0.0129**	**0.0129**		**0.0129**	**0.0129**		**204.0394**	**204.0394**	**3.9100e-003**	**3.7400e-003**	**205.2519**

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					
General Office Building	1.73433	0.0187	0.1700	0.1428	1.0200e-003		0.0129	0.0129		0.0129	0.0129		204.0394	204.0394	3.9100e-003	3.7400e-003	205.2519
Total		**0.0187**	**0.1700**	**0.1428**	**1.0200e-003**		**0.0129**	**0.0129**		**0.0129**	**0.0129**		**204.0394**	**204.0394**	**3.9100e-003**	**3.7400e-003**	**205.2519**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.3591	6.0000e-005	6.2700e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0133	0.0133	4.0000e-005		0.0142
Unmitigated	1.3591	6.0000e-005	6.2700e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0133	0.0133	4.0000e-005		0.0142

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	0.1544					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.2040					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	5.9000e-004	6.0000e-005	6.2700e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0133	0.0133	4.0000e-005		0.0142
Total	**1.3591**	**6.0000e-005**	**6.2700e-003**	**0.0000**		**2.0000e-005**	**2.0000e-005**		**2.0000e-005**	**2.0000e-005**		**0.0133**	**0.0133**	**4.0000e-005**		**0.0142**

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	0.1544					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.2040					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	5.9000e-004	6.0000e-005	6.2700e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0133	0.0133	4.0000e-005		0.0142
Total	**1.3591**	**6.0000e-005**	**6.2700e-003**	**0.0000**		**2.0000e-005**	**2.0000e-005**		**2.0000e-005**	**2.0000e-005**		**0.0133**	**0.0133**	**4.0000e-005**		**0.0142**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Indigo Hotel - Existing Operation

Los Angeles-South Coast County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	60.81	1000sqft	1.40	60,810.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	9			**Operational Year**	2019
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	636.97	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Indigo Hotel - Existing Operation - Los Angeles-South Coast County, Winter

Project Characteristics - Per 2016 SCE Power Content Label

Land Use - Per applicant provided information. Modeled for operation only supporting air pollutant netting analysis.

Construction Phase - Operational analysis only, construciton emissions are not included in this analysis.

Off-road Equipment - Operational analysis only, construciton emissions are not included in this analysis.

Off-road Equipment - Operational analysis only, construciton emissions are not included in this analysis.

Trips and VMT - Operational analysis only, construciton emissions are not included in this analysis.

On-road Fugitive Dust - Operational analysis only, construciton emissions are not included in this analysis.

Grading - Operational analysis only, construciton emissions are not included in this analysis.

Architectural Coating - Operational analysis only, construciton emissions are not included in this analysis.

Vehicle Trips - WkDy and Saturday based on traffic analysis perpared by Linnscott, Law & Greenspan (LLG Ref. 1-16-4200-2). Sunday based on traffic study WkDy scaled based on CalEEMod defaults.

Vehicle Emission Factors - CalEEMod default values.

Vehicle Emission Factors - CalEEMod default values.

Vehicle Emission Factors - CalEEMod default values.

Road Dust - CalEEMod default values.

Energy Use -

Water And Wastewater - Default CalEEMod values for indoor and outdoor water use. Assumed 100% aerobic.

Solid Waste - CalEEMod default values.

Construction Off-road Equipment Mitigation -

Energy Mitigation -

Waste Mitigation - Percent Reduction in Waste Disposed: 50%. Waste diversion consistent with Assembly Bill 939.

Fleet Mix -

Stationary Sources - Emergency Generators and Fire Pumps -

Mobile Land Use Mitigation - Distance to Arcadia Gold Line Station is 0.45 miles. Existing pedestrian access linking internal uses to external streets and sidewalks. Road crossings include marked crosswalks, median islands, traffic signals and timers.

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	200.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblProjectCharacteristics	CO2IntensityFactor	702.44	636.97
tblVehicleTrips	ST_TR	2.46	2.21
tblVehicleTrips	SU_TR	1.05	0.93
tblVehicleTrips	WD_TR	11.03	9.74
tblWater	AerobicPercent	87.46	100.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	SepticTankPercent	10.33	0.00

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					
2020	0.1343	1.1324	1.0693	4.6300e-003	0.2764	6.8600e-003	0.2833	0.0748	6.5000e-003	0.0813	0.0000	479.8589	479.8589	0.0247	0.0000	480.4752
Maximum	**0.1343**	**1.1324**	**1.0693**	**4.6300e-003**	**0.2764**	**6.8600e-003**	**0.2833**	**0.0748**	**6.5000e-003**	**0.0813**	**0.0000**	**479.8589**	**479.8589**	**0.0247**	**0.0000**	**480.4752**

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					
2020	0.1343	1.1324	1.0693	4.6300e-003	0.2764	6.8600e-003	0.2833	0.0748	6.5000e-003	0.0813	0.0000	479.8589	479.8589	0.0247	0.0000	480.4752
Maximum	**0.1343**	**1.1324**	**1.0693**	**4.6300e-003**	**0.2764**	**6.8600e-003**	**0.2833**	**0.0748**	**6.5000e-003**	**0.0813**	**0.0000**	**479.8589**	**479.8589**	**0.0247**	**0.0000**	**480.4752**

	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	**0.00**	**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**	**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	1.3591	6.0000e-005	6.2700e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0133	0.0133	4.0000e-005		0.0142
Energy	0.0187	0.1700	0.1428	1.0200e-003		0.0129	0.0129		0.0129	0.0129		204.0394	204.0394	3.9100e-003	3.7400e-003	205.2519
Mobile	1.2905	6.2605	16.9742	0.0514	4.0577	0.0612	4.1189	1.0861	0.0575	1.1437		5,215.6254	5,215.6254	0.3133		5,223.4573
Total	**2.6683**	**6.4306**	**17.1233**	**0.0524**	**4.0577**	**0.0742**	**4.1319**	**1.0861**	**0.0705**	**1.1566**		**5,419.6781**	**5,419.6781**	**0.3172**	**3.7400e-003**	**5,428.7234**

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	1.3591	6.0000e-005	6.2700e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0133	0.0133	4.0000e-005		0.0142
Energy	0.0187	0.1700	0.1428	1.0200e-003		0.0129	0.0129		0.0129	0.0129		204.0394	204.0394	3.9100e-003	3.7400e-003	205.2519
Mobile	1.2098	5.6859	15.0474	0.0445	3.4881	0.0533	3.5413	0.9336	0.0501	0.9837		4,520.1097	4,520.1097	0.2766		4,527.0243
Total	**2.5876**	**5.8560**	**15.1965**	**0.0455**	**3.4881**	**0.0662**	**3.5543**	**0.9336**	**0.0630**	**0.9966**		**4,724.1624**	**4,724.1624**	**0.2805**	**3.7400e-003**	**4,732.2903**

	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	3.02	8.94	11.25	13.08	14.04	10.72	13.98	14.04	10.61	13.83	0.00	12.83	12.83	11.57	0.00	12.83

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Building Construction	Building Construction	6/26/2020	6/26/2020	5	1	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Building Construction	Cranes	0	6.00	231	0.29
Building Construction	Forklifts	0	6.00	89	0.20
Building Construction	Generator Sets	0	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	0	6.00	97	0.37
Building Construction	Welders	0	8.00	46	0.45

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
Building Construction	0	19.00	10.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Building Construction - 2020

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	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**		**0.0000**

3.2 Building Construction - 2020

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	0.0372	1.0635	0.3074	2.5200e-003	0.0640	5.0900e-003	0.0691	0.0184	4.8700e-003	0.0233		269.4491	269.4491	0.0180		269.8995
Worker	0.0971	0.0689	0.7619	2.1100e-003	0.2124	1.7800e-003	0.2142	0.0563	1.6400e-003	0.0580		210.4099	210.4099	6.6300e-003		210.5757
Total	**0.1343**	**1.1324**	**1.0693**	**4.6300e-003**	**0.2764**	**6.8700e-003**	**0.2833**	**0.0748**	**6.5100e-003**	**0.0813**		**479.8589**	**479.8589**	**0.0247**		**480.4752**

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	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000
Total	**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**

3.2 Building Construction - 2020

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	0.0372	1.0635	0.3074	2.5200e-003	0.0640	5.0900e-003	0.0691	0.0184	4.8700e-003	0.0233		269.4491	269.4491	0.0180		269.8995
Worker	0.0971	0.0689	0.7619	2.1100e-003	0.2124	1.7800e-003	0.2142	0.0563	1.6400e-003	0.0580		210.4099	210.4099	6.6300e-003		210.5757
Total	**0.1343**	**1.1324**	**1.0693**	**4.6300e-003**	**0.2764**	**6.8700e-003**	**0.2833**	**0.0748**	**6.5100e-003**	**0.0813**		**479.8589**	**479.8589**	**0.0247**		**480.4752**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Increase Transit Accessibility

Improve Pedestrian Network

Provide Traffic Calming Measures

	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	1.2098	5.6859	15.0474	0.0445	3.4881	0.0533	3.5413	0.9336	0.0501	0.9837		4,520.1097	4,520.1097	0.2766		4,527.0243
Unmitigated	1.2905	6.2605	16.9742	0.0514	4.0577	0.0612	4.1189	1.0861	0.0575	1.1437		5,215.6254	5,215.6254	0.3133		5,223.4573

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Office Building	592.29	134.39	56.55	1,450,758	1,247,096
Total	592.29	134.39	56.55	1,450,758	1,247,096

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
General Office Building	16.60	8.40	6.90	33.00	48.00	19.00	77	19	4

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Office Building	0.548007	0.045751	0.200309	0.124119	0.017133	0.006025	0.018861	0.028423	0.002391	0.002469	0.004915	0.000672	0.000925

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0187	0.1700	0.1428	1.0200e-003		0.0129	0.0129		0.0129	0.0129		204.0394	204.0394	3.9100e-003	3.7400e-003	205.2519
NaturalGas Unmitigated	0.0187	0.1700	0.1428	1.0200e-003		0.0129	0.0129		0.0129	0.0129		204.0394	204.0394	3.9100e-003	3.7400e-003	205.2519

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					
General Office Building	1734.33	0.0187	0.1700	0.1428	1.0200e-003		0.0129	0.0129		0.0129	0.0129		204.0394	204.0394	3.9100e-003	3.7400e-003	205.2519
Total		**0.0187**	**0.1700**	**0.1428**	**1.0200e-003**		**0.0129**	**0.0129**		**0.0129**	**0.0129**		**204.0394**	**204.0394**	**3.9100e-003**	**3.7400e-003**	**205.2519**

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					
General Office Building	1.73433	0.0187	0.1700	0.1428	1.0200e-003		0.0129	0.0129		0.0129	0.0129		204.0394	204.0394	3.9100e-003	3.7400e-003	205.2519
Total		**0.0187**	**0.1700**	**0.1428**	**1.0200e-003**		**0.0129**	**0.0129**		**0.0129**	**0.0129**		**204.0394**	**204.0394**	**3.9100e-003**	**3.7400e-003**	**205.2519**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.3591	6.0000e-005	6.2700e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0133	0.0133	4.0000e-005		0.0142
Unmitigated	1.3591	6.0000e-005	6.2700e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0133	0.0133	4.0000e-005		0.0142

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	0.1544					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.2040					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	5.9000e-004	6.0000e-005	6.2700e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0133	0.0133	4.0000e-005		0.0142
Total	**1.3591**	**6.0000e-005**	**6.2700e-003**	**0.0000**		**2.0000e-005**	**2.0000e-005**		**2.0000e-005**	**2.0000e-005**		**0.0133**	**0.0133**	**4.0000e-005**		**0.0142**

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	0.1544					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.2040					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	5.9000e-004	6.0000e-005	6.2700e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0133	0.0133	4.0000e-005		0.0142
Total	**1.3591**	**6.0000e-005**	**6.2700e-003**	**0.0000**		**2.0000e-005**	**2.0000e-005**		**2.0000e-005**	**2.0000e-005**		**0.0133**	**0.0133**	**4.0000e-005**		**0.0142**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Appendix B

Tree Survey

Tree Case Management, Inc.
August 9, 2019

Report Prepared For:

Mike Soo
VG Property Investments, LLC
25 E. Huntington Dr.
Arcadia, CA 91107
donaldj@pdg-arch.com

Location Subject of Report:

Tree Survey
125 W. Huntington Dr.
Arcadia, CA 91107

Report Prepared By:

Greg J. Monfette, CEO
Certified Arborist #WE0729
Registered Consulting Arborist #481
State Contractors License #953525
ISA Tree Risk Assessor Qualified
4617 Purdue Ave
Culver City, CA 90230
ncatree@gmail.com
(310) 398-8338

TREE CASE MANAGEMENT
TCM
MANAGING ALL YOUR TREE NEEDS

Tree Case Management (TCM) visited the site on August 8, 2019 to develop a Tree Survey of all existing trees on the project site and below is our observations, findings, and recommendations:

Project description-

The proposed project is a new 3 story hotel in an existing 3-story office building w/ the addition of 75 rooms in a new 4/5 story building. The parking lot will be realigned and new hardscape and landscaping will be installed.

Observations-

1. There is a total of 38 trees on the site and 4 of these are the city trees on the San Rafael Rd street side (trees #21 thru #24).

2. TCM noticed that two of the trees #17 and #18 (very small trees) have been removed and no longer exist.

3. TCM used the map from the initial survey for our map with this report (with a few amendments) and we noticed that trees #32 and #37 had two entries on the map so we adjusted the numbers accordingly to Tree #32a, Tree #32b, tree #37a, and tree #37b (see attached survey map.

4. TCM assessed each tree for the following: Specie, diameter, height, condition, if the tree is protected, if the tree requires removal, mitigation measures, and general notes where warranted (see attached matrix of the tree inventory).

5. There are no protected trees on this property other the 4 city trees on the street side.

6. TCM also viewed the adjacent properties and confirmed there are no protected trees that might have their canopies affected by the proposed construction project.

Findings-

1. The 4 city trees (#21 thru #24) are to be preserved in place.

2. The remaining 34 private property trees need to be removed in order for the project to be built as planned.

3. There are two properties, located north of the project, that have California Live Oak trees on their sites. The canopies of both Oak trees do not encroach on or into the project zone or the project boundaries, and the trees are more then 15 feet from the project limits. There is no conflict here with these Oak trees.

4. The current landscape plans for the project call for the following 59 tree plantings to take place:
    a. (13) 18-feet tall Palm trees
    b. (25) 36-inch box size trees
    c. (9) 24-inch box size trees
    d. (12) 15-gallon size trees

Recommendations-

1. The 4 city trees (#21 thru #24) shall be preserved in place in accordance with the City of Arcadia's guidelines.
2. Approve the removal of the 34 private property trees so the project may be built as planned.

I hope you find this information helpful in assisting to make the important decisions about dealing with these challenging tree issues. If I can be of further assistance please do not hesitate to contact me.

TCM is committed to Tree Preservation while working on all project sites and will take every precaution necessary to ensure that the work is done according to the most current arboriculture and professional practices.

If you have any further questions, or if you would like to schedule the site visit please contact me directly at (310) 902-6581.

Thank you,

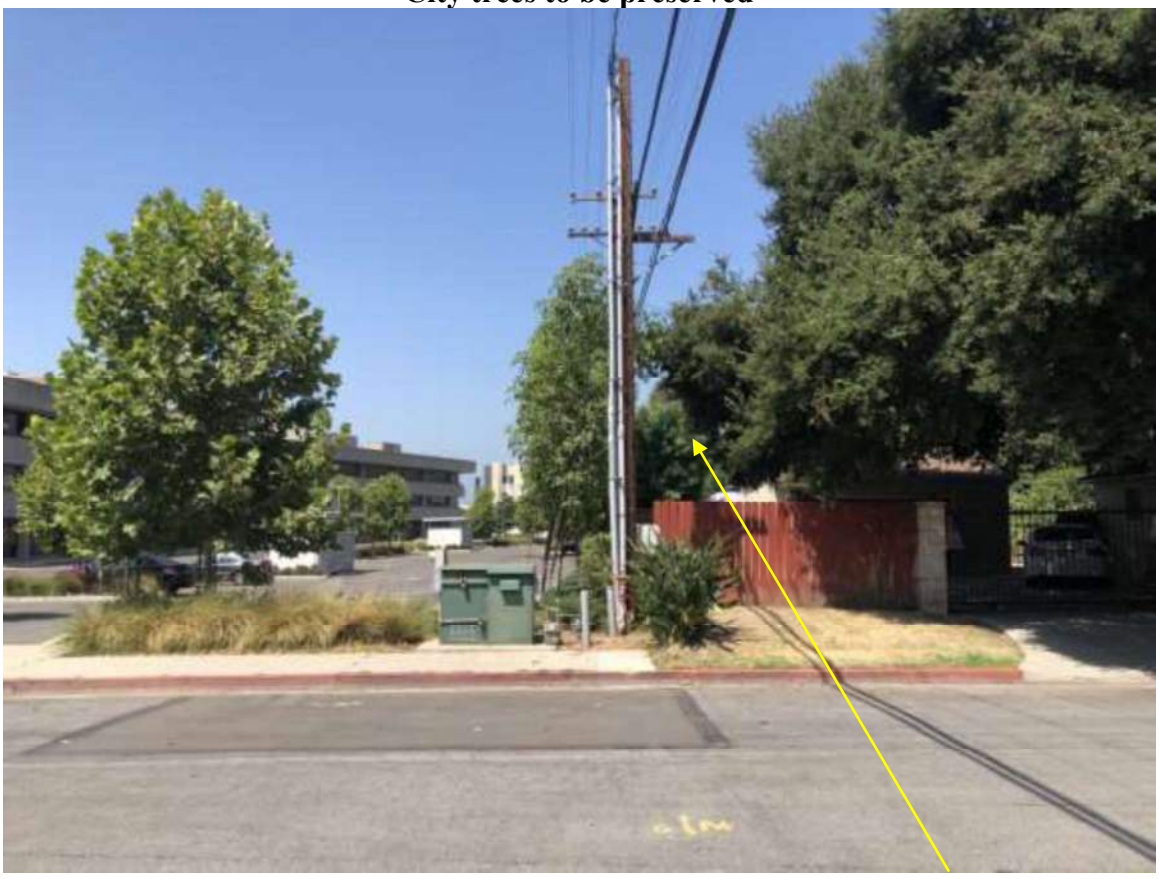
Greg Monfette
Tree Case Management
Certified Arborist #WE0729
ISA Tree Risk Assessor Qualified
State Contractors License #953525
Registered Consulting Arborist #481
Visit our web site at: www.treecasemanagement.com

See Photos Below:

Trees on site

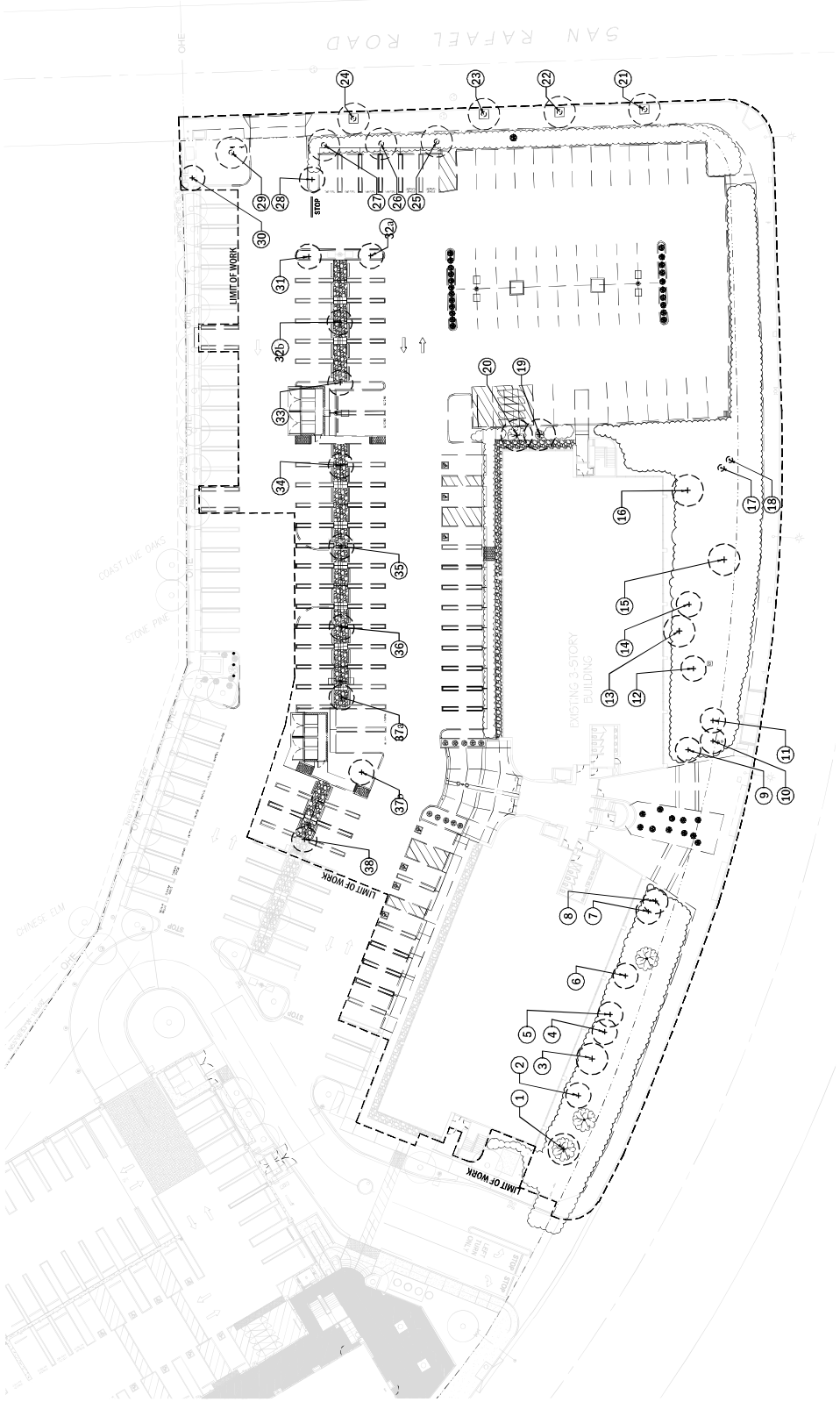
Trees on site

City trees to be preserved



Oak tree on neighboring property to the north outside of project limits

Current Landscape Plan



Site Survey Map

125 W. Huntington Dr, Arcadia, CA 8-8-19									
Tree #	Specie	Common name	DBH	Apx Hgt	Cond.	Protected	Remove	Mitigation measures	General Notes
1	Pinus canariensis	Canary Island Pine	18.5	60	Good	No	Yes	36 in box	
2	Lagerstromia X 'Tucarora'	Crape Myrtle	3, 3, 3	25	Good	No	Yes	36 in box	multi-trunk
3	Pinus canariensis	Canary Island Pine	21.6	60	Good	No	Yes	36 in box	
4	Lagerstromia X 'Tucarora'	Crape Myrtle	3, 2, 3	25	Good	No	Yes	36 in box	multi-trunk
5	Lagerstromia X 'Tucarora'	Crape Myrtle	4, 2, 3	25	Good	No	Yes	36 in box	multi-trunk
6	Pinus canariensis	Canary Island Pine	14.1	60	Good	No	Yes	36 in box	
7	Lagerstromia X 'Tucarora'	Crape Myrtle	2, 3, 3	25	Good	No	Yes	36 in box	multi-trunk
8	Lagerstromia X 'Tucarora'	Crape Myrtle	3, 4, 2	25	Good	No	Yes	36 in box	multi-trunk
9	Lagerstromia X 'Tucarora'	Crape Myrtle	2, 3, 2	25	Good	No	Yes	36 in box	multi-trunk
10	Lagerstromia X 'Tucarora'	Crape Myrtle	2, 2, 4	25	Good	No	Yes	36 in box	multi-trunk
11	Lagerstromia X 'Tucarora'	Crape Myrtle	4.1	3	Dead	No	Yes	36 in box	Tree broken off
12	Lagerstromia X 'Tucarora'	Crape Myrtle	4, 2, 2	25	Good	No	Yes	36 in box	multi-trunk
13	Pinus canariensis	Canary Island Pine	21.6	60	Good	No	Yes	36 in box	
14	Lagerstromia X 'Tucarora'	Crape Myrtle	3, 3, 3	25	Good	No	Yes	36 in box	multi-trunk
15	Pinus canariensis	Canary Island Pine	21.2	40	Good	No	Yes	36 in box	lost its top in past
16	Pinus canariensis	Canary Island Pine	21.6	60	Good	No	Yes	36 in box	
17		No Tree							Tree no longer here
18		No Tree							Tree no longer here
19	Eucalyptus citriodora	Lemon-scent gum	22.8	55	Fair	No	Yes	36 in box	
20	Eucalyptus citriodora	Lemon-scent gum	16.1	55	Fair	No	Yes	36 in box	
21	Lagerstromia X 'Tucarora'	Crape Myrtle	6.9	17	Good	Yes	No	n/a	city tree, sidewalk off grade
22	Lagerstromia X 'Tucarora'	Crape Myrtle	8.6	17	Good	Yes	No	n/a	city tree, sidewalk off grade
23	Lagerstromia X 'Tucarora'	Crape Myrtle	5.7, 7.3	20	Good	Yes	No	n/a	city tree, sidewalk off grade
24	Lagerstromia X 'Tucarora'	Crape Myrtle	5.4	12	Good	Yes	No	n/a	city tree, sidewalk off grade
25	Platanus X acerfolia 'Cloumbia'	London plane	3.1	12	Good	No	Yes	36 in box	
26	Platanus X acerfolia 'Cloumbia'	London plane	4.5	15	Good	No	Yes	36 in box	
27	Platanus X acerfolia 'Cloumbia'	London plane	5.5	15	Good	No	Yes	36 in box	
28	Platanus X acerfolia 'Cloumbia'	London plane	4.1	17	Good	No	Yes	36 in box	leaning over driveway
29	Platanus X acerfolia 'Cloumbia'	London plane	5.8	18	Good	No	Yes	36 in box	
30	Lophostemon confertus	Brisbane box	5.1	18	Good	No	Yes	36 in box	
31	Platanus X acerfolia 'Cloumbia'	London plane	4.1	16	Good	No	Yes	36 in box	
32a	Platanus X acerfolia 'Cloumbia'	London plane	6.1	20	Good	No	Yes	24 in box	
32b	Platanus X acerfolia 'Cloumbia'	London plane	4.5	18	Good	No	Yes	24 in box	
33	Platanus X acerfolia 'Cloumbia'	London plane	5.2	22	Good	No	Yes	24 in box	
34	Platanus X acerfolia 'Cloumbia'	London plane	4.2	17	Good	No	Yes	24 in box	

35	Platanus X acerfolia 'Cloumbia'	London plane	3.8	16	Fair	No	Yes	24 in box	
36	Platanus X acerfolia 'Cloumbia'	London plane	3.2	16	Good	No	Yes	24 in box	
37a	Platanus X acerfolia 'Cloumbia'	London plane	4.2	16	Good	No	Yes	24 in box	tree leaning into lot
37b	Platanus X acerfolia 'Cloumbia'	London plane	2.5	10	Good	No	Yes	24 in box	
38	Platanus X acerfolia 'Cloumbia'	London plane	4.2	17	Good	No	Yes	24 in box	

LIMIT OF WORK

LIMIT OF WORK

EXISTING 3-STORY BUILDING

OHE

STOP

SAN RAFAEL ROAD

Appendix C

Sacred Lands File and Native American Contacts List Request

Linda Kry

From: Erica Nicolay
Sent: Wednesday, May 1, 2019 4:17 PM
To: 'NAHC@NAHC'
Cc: Linda Kry
Subject: SLF Search and Consultation List Request - Indigo Hotel MND Project 11663
Attachments: Dudek_Indigo Hotel MND-SLF Request.pdf

To whom it may concern,

Please find attached the SLF Search and Consultation List Request for the Indigo Hotel MND Project (PN 11663). The project is located at 125 West Huntington Drive in the city of Arcadia. The project proposes to construct a hotel and annex. Construction would include the renovation of two existing 3-story structures to allow for 71,603 square feet of hotel and appurtenant uses. The project also proposes the construction of a new Hotel Annex which would include a 59, 447 square feet, 5-story structure with 76 hotel rooms and various amenities.

If you have any comments or concerns please contact me at this email or at the phone numbers listed below.

Thank you,

Erica Nicolay, MA
Archaeologist

DUDEK
38 North Marengo Avenue
Pasadena, California 91101
C: 760.936.7952
www.dudek.com

Sacred Lands File & Native American Contacts List Request

NATIVE AMERICAN HERITAGE COMMISSION
1550 Harbor Blvd, Suite 100
West Sacramento, CA 95501
(916) 373-3710
(916) 373-5471 – Fax
nahc@nahc.ca.gov

Information Below is Required for a Sacred Lands File Search

Project: Indigo Hotel MND Project 11663

County: Los Angeles

USGS Quadrangle

Name: Mt Wilson, CA (see attached map)

Township: 1N Range: 11W Section(s): 28

Company/Firm/Agency:

Dudek

Contact Person: Erica Nicolay

Street Address: 38 North Marengo Avenue

City: Pasadena Zip: 91101

Phone: (626) 204-9830 Extension: N/A

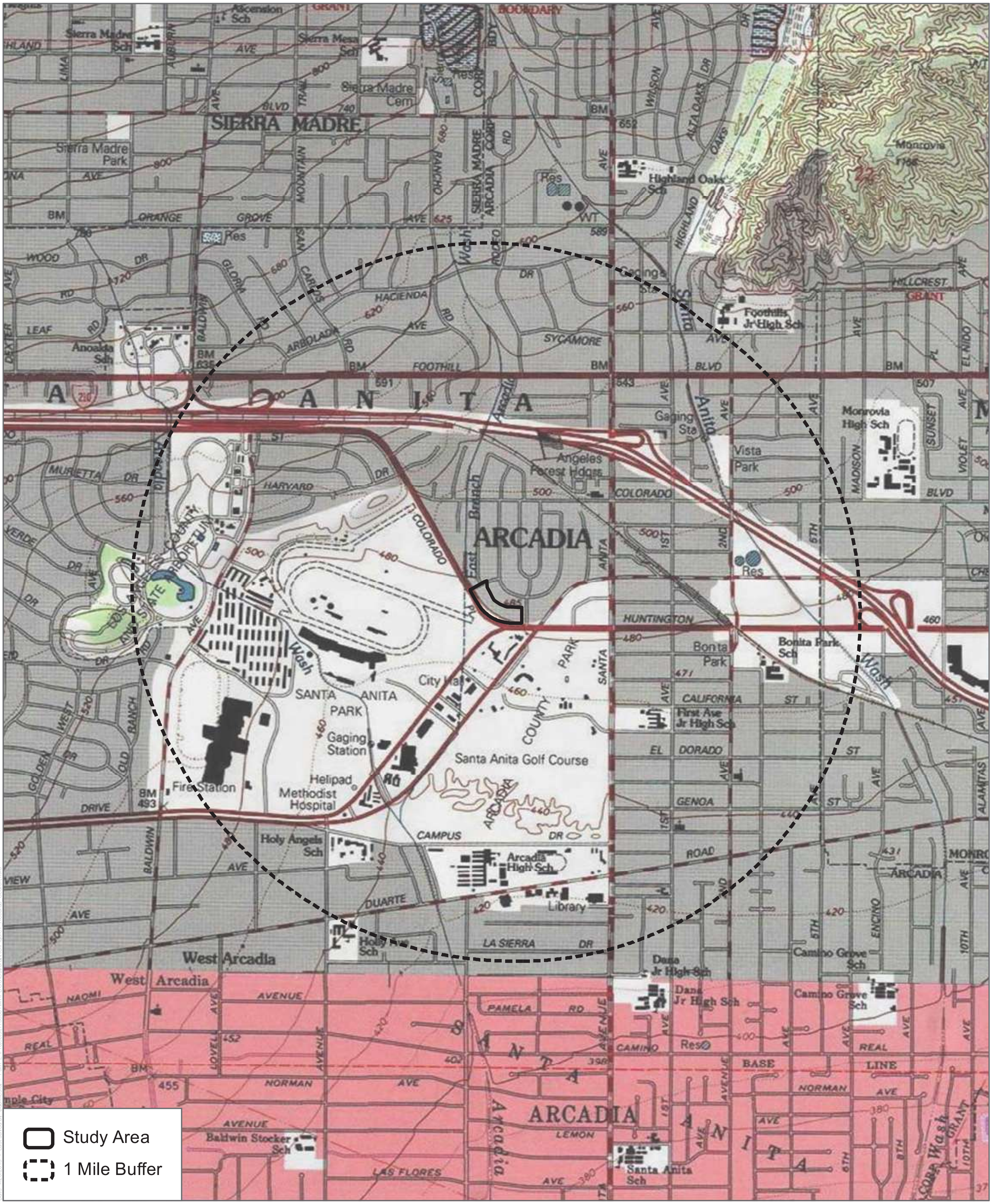
Fax: (760) 632-0164

Email: enicolay@dudek.com

Project Description:

The project is located at 125 West Huntington Drive in the city of Arcadia. The project proposes to construct a hotel and annex. Construction would include the renovation of two existing 3-story structures to allow for 71,603 square feet of hotel and appurtenant uses. The project also proposes the construction of a new Hotel Annex which would include a 59, 447 square feet, 5-story structure with 76 hotel rooms and various amenities.

☑ Project Location Map is attached



SOURCE: SOURCE: USGS 7.5-Minute Series Mt Wilson Quadrangle
Township 1N; Range 11W; Sections 20, 21, 22, 27, 28, 29, 32, 33, 34

DUDEK

0 1,000 2,000 Feet
0 285 570 Meters
1:24,000

FIGURE 1

Records Search

Indigo Hotel MND

Linda Kry

From: Quinn, Steven@NAHC <Steven.Quinn@nahc.ca.gov>
Sent: Friday, May 17, 2019 11:02 AM
To: Erica Nicolay
Cc: Administration Gabrieleno
Subject: Indigo Hotel MND Project
Attachments: SLFYesIndigo 5.17.2019.pdf; Indigo 5.17.2019.pdf

Good Morning,

Attached is the response to the project referenced above. If you have any additional questions, please feel free to contact our office email at nahc@nahc.ca.gov.

Regards,

Steven Quinn
Native American Heritage Commission
1550 Harbor Blvd., Suite 100
West Sacramento, CA 95691
Steven.Quinn@nahc.ca.gov
Direct Line: (916) 573-1033
Office: (916) 373-3710

NATIVE AMERICAN HERITAGE COMMISSION
Cultural and Environmental Department
1550 Harbor Blvd., Suite 100
West Sacramento, CA 95691
Phone: (916) 373-3710
Email: nahc@nahc.ca.gov
Website: http://www.nahc.ca.gov
Twitter: @CA_NAHC

May 17, 2019

Erica Nicolay
Dudek

VIA Email to: enicolay@dudek.com

RE: Indigo Hotel MND Project, Los Angeles County

Dear Ms. Nicolay:

A record search of the Native American Heritage Commission (NAHC) Sacred Lands File (SLF) was completed for the information you have submitted for the above referenced project. The results were positive. Please contact the Gabrieleno Band of Mission Indians – Kizh Nation on the attached list for more information. Other sources of cultural resources should also be contacted for information regarding known and recorded sites.

Attached is a list of Native American tribes who may also have knowledge of cultural resources in the project area. This list should provide a starting place in locating areas of potential adverse impact within the proposed project area. I suggest you contact all of those indicated; if they cannot supply information, they might recommend others with specific knowledge. By contacting all those listed, your organization will be better able to respond to claims of failure to consult with the appropriate tribe. If a response has not been received within two weeks of notification, the Commission requests that you follow-up with a telephone call or email to ensure that the project information has been received.

If you receive notification of change of addresses and phone numbers from tribes, please notify the NAHC. With your assistance, we can assure that our lists contain current information. If you have any questions or need additional information, please contact me at my email address: steven.quinn@nahc.ca.gov.

Sincerely,

Steven Quinn
Associate Governmental Program Analyst

Attachment

Native American Heritage Commission
Native American Contact List
Los Angeles County
5/17/2019

Gabrieleno Band of Mission Indians - Kizh Nation
Andrew Salas, Chairperson
P.O. Box 393 — Gabrieleno
Covina, CA, 91723
Phone: (626) 926 - 4131
admin@gabrielenoindians.org

Gabrieleno/Tongva San Gabriel Band of Mission Indians
Anthony Morales, Chairperson
P.O. Box 693 — Gabrieleno
San Gabriel, CA, 91778
Phone: (626) 483 - 3564
Fax: (626) 286-1262
GTTribalcouncil@aol.com

Gabrielino /Tongva Nation
Sandonne Goad, Chairperson
106 1/2 Judge John Aiso St., #231 — Gabrielino
Los Angeles, CA, 90012
Phone: (951) 807 - 0479
sgoad@gabrielino-tongva.com

Gabrielino Tongva Indians of California Tribal Council
Robert Dorame, Chairperson
P.O. Box 490 — Gabrielino
Bellflower, CA, 90707
Phone: (562) 761 - 6417
Fax: (562) 761-6417
gtongva@gmail.com

Gabrielino-Tongva Tribe
Charles Alvarez,
23454 Vanowen Street — Gabrielino
West Hills, CA, 91307
Phone: (310) 403 - 6048
roadkingcharles@aol.com

San Fernando Band of Mission Indians
Donna Yocum, Chairperson
P.O. Box 221838 — Kitanemuk
Newhall, CA, 91322 — Vanyume
Phone: (503) 539 - 0933 — Tataviam
Fax: (503) 574-3308
ddyocum@comcast.net

This list is current only as of the date of this document. Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resource Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native Americans with regard to cultural resources assessment for the proposed Indigo Hotel MND Project, Los Angeles County.

Appendix D

Preliminary Low Impact Development Report

Preliminary Low Impact Development Report (LID)

for

Hotel Building
125 W. Huntington Dr., Arcadia, CA 91006

Parcel No. 12826 & Tract No. 62234
APN: 5775-015-028

PREPARED FOR

VG Property Investment, LLC
25 E. Huntington Drive,
Arcadia, CA 91006
Tel No.: 626-821-8777
Fax No.: 626-821-8778

PREPARED BY

Lin Consulting, Inc.
21660 E. Copley Drive, #270
Diamond Bar, CA 91765
Tel No.: 909-396-6850
Fax No.: 909-396-8150

LID Prepared: July 26, 2019

Section 1 Project Description

1.1 Project Information

Owner:	Mike Soo
Address:	25 E. Huntington Drive, Arcadia, CA 91006
Telephone No:	(626) 821-8777
Company:	VG Property Investment, LLC, a California Limited Liability Company
Project Site Address:	125 W Huntington Drive., Arcadia, CA 91006
Zone:	General Commercial, C-2

Standard Industrial Classification (SIC) Code: 7011

1.2 Permits

CUP#:

1.3 Project Description

This report was prepared to address the County of Los Angeles Low Impact Development (LID) requirements and to conform with the National Pollutant Discharge Elimination System (NPDES) for the new hotel building, located at 125 W. Huntington Drive, east of Colorado Place and north of Huntington Drive, in the City of Arcadia.

The project site is within the watershed of the Rio Hondo, Reach 2 and sub-watershed is Arcadia Wash. The existing site is a gentle sloping down from northeast side to the southwest side of the property.

The proposed land-use of the project site is a hotel, in the downtown overlay, C-2 General Commercial zoning.

The proposed development is a phase 3 in the three phasing of the existing improvement project at 161 Colorado Place & 125 W. Huntington Drive. The project development will be a hotel building with swimming pool, the surface parking spaces and outdoor patio area.

The improvement is a part of the existing 200,085 sq. ft., or 4.59 acre commercial development. The approximate disturbed area is 65,820 sq. ft., or 1.511 acres. The project will consist of a new hotel building.

This project is a **Designated Project**. The project falls into category of Redevelopment projects, which are developments that result in creation or addition or replacement of either: (1) 5,000 square feet or more of impervious surface on site that was previously developed as described in the above bullet; or (2) 10,000 square feet or more of impervious surface area on a site that was previously developed as a single-family home and Parking lots with 5,000 square feet or more of impervious surface area, or with 25 or more parking spaces.

Once developed, the project will have 65,820 sq. ft of impervious area which is less than 50 percent of impervious surface of a previously developed site. [(65,820/200,085) *100 = 32.9%)] Therefore, the project will consist of only the proposed alteration must meet the requirements of the LID Standard Manual.

1.4 Site Description

The project is located at 125 W. Huntington Drive, south of Santa Cruz Road, in the City of Arcadia, County of Los Angeles. The existing site is in the general commercial zone C-2, a composed of a commercial office building. The site's soil classification is type 006 as listed per the Los Angeles County Department of Public Works Hydrology GIS Map (http://dpw.lacounty.gov/wrd/hydrologygis/#map). The project is within the debris potential area 7. Topography of the project site has a decreasing slope from the northeast to southwest. Proposed land-use of the project site is for new hotel building.

1.5 Drainage Condition

The site is currently comprised of roughly 5% pervious and 95% impervious area. The existing drainage is discharged to the southwest of the site. Once developed, the site will be 15% pervious and 85% impervious. Therefore, after development, the proposed project will divide the site into eight (8) subarea drains.

The existing 44-unit of storm water chamber in subarea 8 and 35-unit of stormwater chamber in subarea 1 of the improvement project at 161 Colorado Place & 125 W. Huntington Drive; will be used as a stormwater treatment system of phase 3. For the existing volume of 35-unit of storm water chamber is included the future volume of stormwater from a hotel roof area.

Subarea DA 1 is a portion of hotel roof area and parking area. The stormwater from this subarea will be collected in the roof drain downspout and discharge to the existing 35-unit of stormwater chamber in subarea DA1. For the parking area, the project will have a concrete swale to collect the stormwater and discharge to the existing stormwater chamber to infiltrate the stormwater underlay.

Subarea DA 2 is a portion of hotel roof area. The project will have a roof gutter to collect the stormwater and discharge to the biofiltration which is located in subarea DA4.

Subarea DA 3 is a walkway, swimming pool area, and landscape area. The project will have the area drain to collect the stormwater and discharge to the biofiltration which is located at the southside of subarea drain DA3.

Subarea DA 4 is a portion of walkway, landscape area and biofiltration area. The project will discharge the stormwater to the biofiltration which is located in subarea DA 4, along San Rafael Road.

Subarea DA 5 consist a portion of entrance walkway area of building #4. The project will discharge the stormwater to the biofiltration which is located in subarea DA 5, along Colorado Place.

Subarea DA 6 consist a portion of entrance walkway area of building #4 and landscape area. The project will discharge the stormwater to the biofiltration which is located in subarea DA 6, along Colorado Place.

Subarea DA 7 consist a driveway and parking area and walkway area. The project will have a pervious paver at the driveway to minimize impervious area and infiltrate underground. For the overflow, the project will discharge to the existing 44-unit of storm water chamber which is located in subarea DA8.

Subarea DA 8 consist a driveway and parking area. This subarea is a part of existing subarea 8 of improvement project at 161 Colorado Place & 125 W. Huntington Drive. The project will discharge to the existing 44-unit of storm water chamber to infiltrate underground.

Subarea DA 1A is an existing parking area of the improvement project at 161 Colorado Place & 125 W. Huntington Drive that will remain and protect in place. The stormwater from this subarea will discharge to the existing 35-unit stormwater chamber which is located in subarea DA1.

Currently stormwater quality requirements are based on treating a specific volume of stormwater runoff from the project site (stormwater quality design volume [SWQDv]). By treating the SWQDv, it is expected that pollutant loads, which are typically higher during the beginning of the storm events, will be reduced in the discharge to or prevented from reaching the receiving waters. The design storm, from which the SWQDv is calculated, is defined as the greater of

- The 0.75-inch, 24-hour rain event; or
- The 85th percentile, 24-hour rain event as determined from the Los Angeles County 85th percentile precipitation isoheytal map.

After calculation, the volume from 85th percentile, 24-hour rain event is more than the volume from 0.75-inch, 24-hour rain event. Therefore, **the project will use the 85th percentile, 24-hour rain event for design of BMPs.**

From Appendix A: the volume from 0.75-inch, 24-hour rain event

For subarea DA 1:	Q_{BMP1}	= **0.1237**	cfs
	V_{BMP1}	= **1465.19**	cu.ft.
For subarea DA 2:	Q_{BMP2}	= **0.0559**	cfs
	V_{BMP2}	= **420.39**	cu.ft.
For subarea DA 3:	Q_{BMP3}	= **0.0550**	cfs
	V_{BMP3}	= **520.29**	cu.ft.
For subarea DA 4:	Q_{BMP4}	= **0.0063**	cfs
	V_{BMP4}	= **74.33**	cu.ft.
For subarea DA 5:	Q_{BMP5}	= **0.0084**	cfs
	V_{BMP5}	= **76.73**	cu.ft.
For subarea DA 6:	Q_{BMP6}	= **0.0057**	cfs
	V_{BMP6}	= **59.49**	cu.ft.
For subarea DA 7:	Q_{BMP7}	= **0.0299**	cfs
	V_{BMP7}	= **183.90**	cu.ft.
For subarea DA 8:	Q_{BMP8}	= **0.0456**	cfs
	V_{BMP8}	= **381.51**	cu.ft.
For subarea DA 1A:	Q_{BMP1A}	= **0.034**	cfs
	V_{BMP1A}	= **186.66**	cu.ft.
Total:	Q_{BMP}	= **0.365**	cfs
	V_{BMP}	= **3368**	cu.ft.

From Appendix B: the volume from 85th percentile, 24-hour rain event

For subarea DA 1:	Q_{BMP1}	= **0.1913**	cfs
	V_{BMP1}	= **2051.26**	cu.ft.
For subarea DA 2:	Q_{BMP2}	= **0.0833**	cfs
	V_{BMP2}	= **588.55**	cu.ft.
For subarea DA 3:	Q_{BMP3}	= **0.0887**	cfs
	V_{BMP3}	= **728.90**	cu.ft.
For subarea DA 4:	Q_{BMP4}	= **0.0097**	cfs
	V_{BMP4}	= **104.06**	cu.ft.
For subarea DA 5:	Q_{BMP5}	= **0.0152**	cfs
	V_{BMP5}	= **107.96**	cu.ft.
For subarea DA 6:	Q_{BMP6}	= **0.0118**	cfs
	V_{BMP6}	= **84.03**	cu.ft.
For subarea DA 7:	Q_{BMP7}	= **0.0559**	cfs
	V_{BMP7}	= **260.28**	cu.ft.
For subarea DA 8:	Q_{BMP8}	= **0.0710**	cfs
	V_{BMP8}	= **534.11**	cu.ft.
For subarea DA 1A:	Q_{BMP1A}	= **0.0536**	cfs
	V_{BMP1A}	= **263.15**	cu.ft.
Total:	Q_{BMP}	= **0.581**	cfs
	V_{BMP}	= **4722**	cu.ft.

Design to use: Volume Base Design V_{BMP}

For Subarea DA1 + DA1A

BMP-1: Based on approval standard urban stormwater mitigation plan (SUSMP) for phase 1 and 2 – sub area 9: Design to use 35-unit of Storm water Chamber by Contech Engineer Solution, Model No.: ChamberMaxx Stormwater Retention.

Chamber Storage: 1,092 + 648 = 1,740 cu.ft

Porous Stone Storage: 821 + 526 = 1,347 cu.ft

Total Storage Provided: 1,912 + 1,174 = 3,086 cu.ft

Rectangular Footprint (WxL): 35 ft. x 43 ft.

$V_{REQUIRED} = V_{BMP, DA1} + V_{BMP, DA1A} = 2{,}051.26 + 263.15 = 2314.41$ cu.ft.

Then,

$V_{DESIGN} = 3{,}086$ cu.ft. $> V_{REQUIRED} = 2{,}314.41$ cu.ft.

For Subarea DA2 & DA4

BMP-2: Evaluate Stormwater Runoff Biofiltration

Step 1: Calculate the design volume

$$V_B = 1.5 \times (SWQD_V - V_R)$$

Where:

V_B = Biofiltration volume [ft^3]

$SWQD_V$ = Stormwater quality design volume [ft^3]

V_R = Volume of stormwater runoff reliably retained on-site [ft^3]

From Appendix B:

$SWQD_V = V_{BMP2} + V_{BMP4}$

$= 588.55 + 104.06 = 693\ ft^3$

Then

$V_B = 1.5 \times (693 - 0) = 1{,}039.50\ ft^3$

Step 2: Calculate the design infiltration rate

From soil report and the result of infiltration testing, the infiltration rate (f_{design}) is 60 in/hr

According to the latest County of Los Angeles Administrative Manual (GS200.1), the measured infiltration rates must be reduced with correction factors to determine the design rate which will represent the long-term performance of the proposed infiltration system.

The Total Correction Factor (CF) $= CF_t \mathbf{x} CF_v \mathbf{x} CF_s$

where CF_t = Correction Factor for Test ; = 2 (per soil report)

CF_v = Correction Factor for Site Variability; = 1 (per soil report)

CF_s = Correction Factor for Siltation, Plugging, and, Maintenance; the flow from sub area 5 is treated and regular maintenance program. Therefore, a correction factor is 1.

Then,

$$CF = CF_t \mathbf{x} CF_v \mathbf{x} CF_s = 2 \text{ x } 1 \text{x } 1 = 2$$

Then find,

$$f_{Design} = \frac{60}{2} = 30 \text{ in/hr.}$$

Step 3: Calculate the surface area

$$d = t_p \text{ x } \frac{f_{design}}{12}$$

Where

d = Ponding depth (max 1.5 ft) [ft]
t_p = Required detention time for surface ponding (max 96 hr) [hr] and
f_{design} = Design infiltration rate [in/hr]

Then

$$0.67 = t_p \text{ x } (30/12)$$

$$t_p = 0.268 = 1 \text{ hr} < t_{p,max} = 96 \text{ hr}$$

Step 4: Calculate the required infiltrating surface (filter bottom area)

$$A = \frac{V_B}{(T_{fill} f_{design}/12)+d}$$

Where:

A = Bottom surface area of biofiltration area (ft^2)

d = Ponding depth, = 0.67 ft.

V_B = Biofiltration volume, = 1039.50 ft^3

T_{fill} = Time to fill to max ponding depth with water (max 3 hrs) [hr],

Then,

$$A = \frac{1039.50}{[(3x30/12)+0.67]} = 127.23\ ft^2$$

A_{Design} = 590 ft^2

Step 5: Calculate the storage depth

$D_{storage}$ = Ponding depth + (Gravel Layer x n)

Design to use: Gravel Layer = 1.5 ft.

n = void ratio (use 0.4 for gap graded gravel)

Then,

$D_{storage}$ = 0.67 + (1.5 x 0.4) = 1.27 ft

The proposed project will have a **5 ft. W x 118 ft. L x 1.5 ft. D,** Biofiltration.

For Subarea DA3

BMP-3: Evaluate Stormwater Runoff Biofiltration

Step 1: Calculate the design volume

$$V_B = 1.5 \times (SWQD_V - V_R)$$

Where:

V_B = Biofiltration volume [ft^3]

$SWQD_V$ = Stormwater quality design volume [ft^3]

V_R = Volume of stormwater runoff reliably retained on-site [ft^3]

From Appendix B:

$SWQD_V = V_{BMP3}$

$= 728.90\ ft^3$

Then

$V_B = 1.5 \times (728.90 - 0) = 1{,}093.35\ ft^3$

Step 2: Calculate the design infiltration rate

From soil report and the result of infiltration testing, the infiltration rate (f_{design}) is 60 in/hr

According to the latest County of Los Angeles Administrative Manual (GS200.1), the measured infiltration rates must be reduced with correction factors to determine the design rate which will represent the long-term performance of the proposed infiltration system.

The Total Correction Factor (CF) $= CF_t \mathbf{x}\ CF_v \mathbf{x}\ CF_s$

where CF_t = Correction Factor for Test ; = 2 (per soil report)

CF_v = Correction Factor for Site Variability; = 1 (per soil report)

CF_s = Correction Factor for Siltation, Plugging, and, Maintenance; the flow from sub area 5 is treated and regular maintenance program. Therefore, a correction factor is 1.

Then,

$CF = CF_t \mathbf{x}\ CF_v \mathbf{x}\ CF_s = 2 \times 1 \times 1 = 2$

Then find,

$$f_{Design} = \frac{60}{2} = 30 \text{ in/hr.}$$

Step 3: Calculate the surface area

$$d = t_p \times \frac{f_{design}}{12}$$

Where

d = Ponding depth (max 1.5 ft) [ft]
t_p = Required detention time for surface ponding (max 96 hr) [hr] and
f_{design} = Design infiltration rate [in/hr]

Then

$$1.5 = t_p \times (30/12)$$

$$t_p = 0.6 = 1 \text{ hr} < t_{p,max} = 96 \text{ hr}$$

Step 4: Calculate the required infiltrating surface (filter bottom area)

$$A = \frac{V_B}{(T_{fill} f_{design}/12)+d}$$

Where:
A = Bottom surface area of biofiltration area (ft^2)
d = Ponding depth, = 1.5 ft.
V_B = Biofiltration volume, = 1093.35 ft^3
T_{fill} = Time to fill to max ponding depth with water (max 3 hrs) [hr],

Then,

$$A = \frac{1093.35}{[(3x30/12)+1.5]} = 121.48 \text{ ft}^2$$

A_{Design} = 300 ft^2

Step 5: Calculate the storage depth

$$D_{storage} = \text{Ponding depth} + (\text{Gravel Layer} \times n)$$

Design to use: Gravel Layer = 2.5 ft.

n = void ratio (use 0.4 for gap graded gravel)

Then,

$$D_{storage} = 1.5 + (2.5 \times 0.4) = 2.5 \text{ ft}$$

The proposed project will have a **3 ft. W x 100 ft. L x 2.5 ft. D,** Biofiltration.

For Subarea DA5

BMP-4: Evaluate Stormwater Runoff Biofiltration

Step 1: Calculate the design volume

$$V_B = 1.5 \times (SWQD_V - V_R)$$

Where:

V_B = Biofiltration volume [ft^3]

$SWQD_V$ = Stormwater quality design volume [ft^3]

V_R = Volume of stormwater runoff reliably retained on-site [ft^3]

From Appendix B:

$SWQD_V = V_{BMP5}$

$= 107.96\ ft^3$

Then

$V_B = 1.5 \times (107.96 - 0) = 161.94\ ft^3$

Step 2: Calculate the design infiltration rate

From soil report and the result of infiltration testing, the infiltration rate (f_{design}) is 60 in/hr

According to the latest County of Los Angeles Administrative Manual (GS200.1), the measured infiltration rates must be reduced with correction factors to determine the design rate which will represent the long-term performance of the proposed infiltration system.

The Total Correction Factor (CF) $= CF_t \mathbf{x}\ CF_v \mathbf{x}\ CF_s$

where CF_t = Correction Factor for Test ; = 2 (per soil report)

CF_v = Correction Factor for Site Variability; = 1 (per soil report)

CF_s = Correction Factor for Siltation, Plugging, and, Maintenance; the flow from sub area 5 is treated and regular maintenance program. Therefore, a correction factor is 1.

Then,

$CF = CF_t \mathbf{x}\ CF_v \mathbf{x}\ CF_s = 2 \times 1 \times 1 = 2$

Then find,

$$f_{Design} = \frac{60}{2} = 30\ in/hr.$$

Step 3: Calculate the surface area

$$d = t_p \times \frac{f_{design}}{12}$$

Where

d = Ponding depth (max 1.5 ft) [ft]
t_p = Required detention time for surface ponding (max 96 hr) [hr] and
f_{design} = Design infiltration rate [in/hr]

Then

$$1.5 = t_p \times (30/12)$$

$$t_p = 0.6 = 1 \text{ hr} < t_{p,max} = 96 \text{ hr}$$

Step 4: Calculate the required infiltrating surface (filter bottom area)

$$A = \frac{V_B}{(T_{fill} f_{design}/12)+d}$$

Where:
A = Bottom surface area of biofiltration area (ft^2)
d = Ponding depth, = 1.5 ft.
V_B = Biofiltration volume, = 161.94 ft^3
T_{fill} = Time to fill to max ponding depth with water (max 3 hrs) [hr],

Then,

$$A = \frac{161.94}{[(3x30/12)+1.5]} = 17.99 \text{ ft}^2$$

A_{Design} = 350 ft^2

Step 5: Calculate the storage depth

$$D_{storage} = \text{Ponding depth} + (\text{Gravel Layer} \times n)$$

Design to use: Gravel Layer = 1 ft.

n = void ratio (use 0.4 for gap graded gravel)

Then,

$$D_{storage} = 1.5 + (1 \times 0.4) = 1.9 \text{ ft}$$

The proposed project will have a **5 ft. W x 70 ft. L x 2 ft. D,** Biofiltration.

For Subarea DA6

BMP-5: Evaluate Stormwater Runoff Biofiltration

Step 1: Calculate the design volume

$$V_B = 1.5 \times (SWQD_V - V_R)$$

Where:

V_B = Biofiltration volume [ft^3]

$SWQD_V$ = Stormwater quality design volume [ft^3]

V_R = Volume of stormwater runoff reliably retained on-site [ft^3]

From Appendix B:

$SWQD_V = V_{BMP5}$

$= 84.03\ ft^3$

Then

$V_B = 1.5 \times (84.03 - 0) = 126.05\ ft^3$

Step 2: Calculate the design infiltration rate

From soil report and the result of infiltration testing, the infiltration rate (f_{design}) is 60 in/hr

According to the latest County of Los Angeles Administrative Manual (GS200.1), the measured infiltration rates must be reduced with correction factors to determine the design rate which will represent the long-term performance of the proposed infiltration system.

The Total Correction Factor (CF) $= CF_t \mathbf{x}\ CF_v \mathbf{x}\ CF_s$

where CF_t = Correction Factor for Test ; = 2 (per soil report)

CF_v = Correction Factor for Site Variability; = 1 (per soil report)

CF_s = Correction Factor for Siltation, Plugging, and, Maintenance; the flow from sub area 5 is treated and regular maintenance program. Therefore, a correction factor is 1.

Then,

$CF = CF_t \mathbf{x}\ CF_v \mathbf{x}\ CF_s = 2 \times 1 \times 1 = 2$

Then find,

$$f_{Design} = \frac{60}{2} = 30 \text{ in/hr.}$$

Step 3: Calculate the surface area

$$d = t_p \times \frac{f_{design}}{12}$$

Where

d = Ponding depth (max 1.5 ft) [ft]
t_p = Required detention time for surface ponding (max 96 hr) [hr] and
f_{design} = Design infiltration rate [in/hr]

Then

$$1.5 = t_p \times (30/12)$$

$$t_p = 0.6 = 1 \text{ hr} < t_{p,max} = 96 \text{ hr}$$

Step 4: Calculate the required infiltrating surface (filter bottom area)

$$A = \frac{V_B}{(T_{fill} f_{design}/12)+d}$$

Where:
A = Bottom surface area of biofiltration area (ft^2)
d = Ponding depth, = 1.5 ft.
V_B = Biofiltration volume, = 126.05 ft^3
T_{fill} = Time to fill to max ponding depth with water (max 3 hrs) [hr],

Then,

$$A = \frac{126.05}{[(3x30/12)+1.5]} = 14 \text{ ft}^2$$

A_{Design} = 60 ft^2

Step 5: Calculate the storage depth

$$D_{storage} = \text{Ponding depth} + (\text{Gravel Layer} \times n)$$

Design to use: Gravel Layer = 1 ft.

n = void ratio (use 0.4 for gap graded gravel)

Then,

$$D_{storage} = 1.5 + (1 \times 0.4) = 1.9 \text{ ft}$$

The proposed project will have a **3 ft. W x 20 ft. L x 2 ft. D,** Biofiltration.

For subarea DA 7

BMP-6: Permeable pavement without an underdrain

Step 1: Calculate the design volume

From Appendix B:

$SWQD_V = V_{BMP7}$

$= 260.28\ ft^3$

Step 2: Calculate the design infiltration rate

From soil report and the result of infiltration testing, the infiltration rate (f_{design}) is 60 in/hr

According to the latest County of Los Angeles Administrative Manual (GS200.1), the measured infiltration rates must be reduced with correction factors to determine the design rate which will represent the long-term performance of the proposed infiltration system.

The Total Correction Factor (CF) $= CF_t \mathbf{x} CF_v \mathbf{x} CF_s$

where CF_t = Correction Factor for Test ; = 2 (per soil report)

CF_v = Correction Factor for Site Variability; = 1 (per soil report)

CF_s = Correction Factor for Siltation, Plugging, and, Maintenance; the flow from sub area 5 is treated and regular maintenance program. Therefore, a correction factor is 1.

Then,

$CF = CF_t \mathbf{x} CF_v \mathbf{x} CF_s = 2 \times 1 \times 1 = 2$

Then find,

$$f_{Design} = \frac{60}{2} = 30 \text{ in/hr.}$$

Step 3: Calculate the surface area

$$d_{max} = \frac{f_{design} \times t}{12}$$

Where:

d_{max} = Maximum depth of sub-base reservoir layer [ft]

f_{design} = Design infiltration rate [in/hr]

t = Maximum retention time (max 96 hrs) [hr]

Then,

$$d_{max} = \frac{30 \text{ in/hr}}{12 \text{ in/ft}} \times 48 \text{ hr} = 120 \text{ ft.}$$

Select the permeable pavement sub-base reservoir layer depth (d_t) such that:

$$d_t \leq \frac{d_{max}}{n_t}$$

Where:

d_t = Depth of permeable pavement sub-base reservoir layer [ft]
d_{max} = Maximum depth of water that can be infiltrated within the maximum retention time [ft]
n_t = permeable pavement sub-base reservoir layer porosity

Assume $n_t = 0.4$ and $d_t = 1$ ft

$$d_t = 1 \leq \frac{120}{0.4} = 300 \text{ ft}$$

The required permeable pavement surface area is calculated using the following equation:

$$A_s = \frac{SWQD_V}{d_t \times n_t}$$

Where:

A_s = Permeable pavement surface area [ft^2]
$SWQD_V$ = Stormwater quality design volume [ft^3]
d_t = Depth if permeable pavement sub-base reservoir layer [ft]
n_t = Infiltration trench porosity

$$A_s = \frac{260.28}{1 \times 0.4} = 651 \text{ ft}^2$$

Therefore, the project will provide 2,952 ft^2 of permeable pavement without an underdrain.

For Subarea DA8

BMP-7: Based on approval standard urban stormwater mitigation plan (SUSMP) for phase 1 and 2 – sub area 9: Design to use 44-unit of Storm water Chamber by Contech Engineer Solution, Model No.: ChamberMaxx Stormwater Retention.

Chamber Storage:	2,183	cu.ft
Porous Stone Storage:	1,492	cu.ft
Total Storage Provided:	3,675	cu.ft
Rectangular Footprint (WxL):	30 ft. x 65 ft.	

$V_{REQUIRED} = V_{BMP8} = 534.11$ cu.ft.

Then,

$V_{DESIGN} = 3{,}675$ cu.ft. $> V_{REQUIRED} = 534.11$ cu.ft.

1.6 Watershed

- Downstream receiving water is Rio Hondo, Reach 2
- The Final California 2010 Integrated Report (303(d) List / 305(b) Report) List of water quality limited segments (USEPA final approval date: October 11, 2011) for Rio Hondo, Reach 2 (At Spreading Grounds) are Coliform Bacteria and Cyanide.

1.7 Hydromodification Requirements

This project falls into redevelopment of a previously developed site in an urbanized area that does not increase the effective impervious area or decrease the infiltration capacity of pervious areas compared to the pre-project conditions; therefore, this project is **exempt** to do a hydromodification requirement.

The existing 13-unit of 35-unit stormwater chamber calculation of the improvement project at 161 Colorado place & 125 W. Huntington Drive.

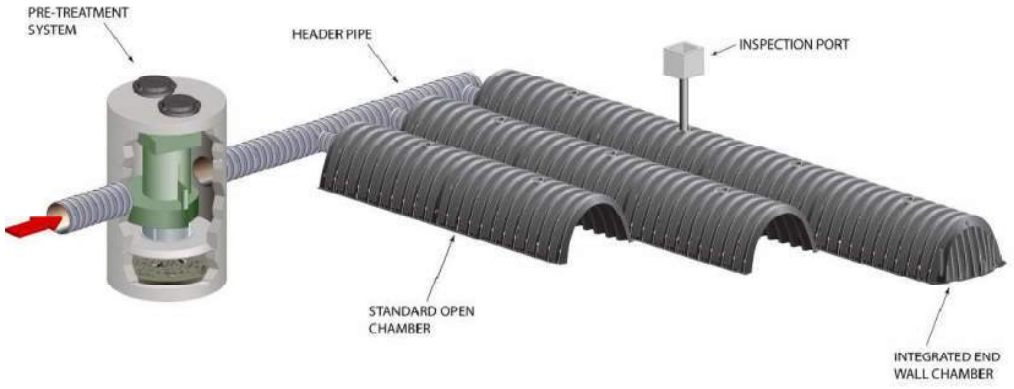
DYODS™ Design Your Own Detention System

CHAMBERMaxx™

CONTECH CONSTRUCTION PRODUCTS INC.

For design assistance, drawings, and pricing send completed worksheet to:
dyods@contech-cpi.com

BMP-1: For subarea DA1 + DA1A



Project Summary

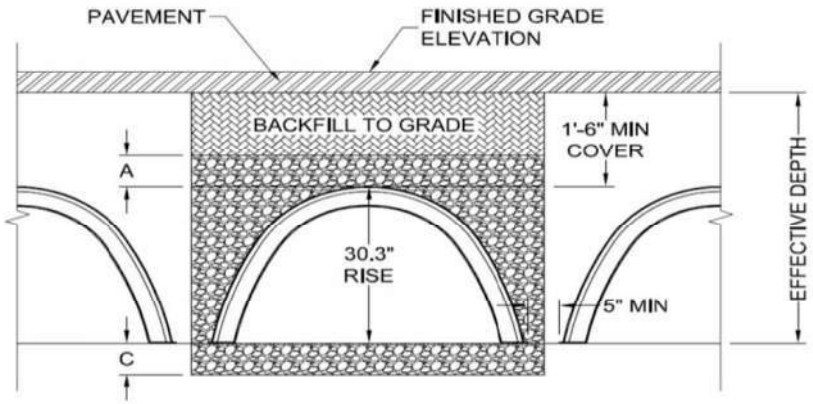
Date:	3/25/2013
Project Name:	161 Colorado Pl.,
City, State:	Arcadia, CA
County:	Los Angeles
Designed By:	Lin Consulting
Company:	Lin Consulting
Telephone:	909-396-6850

Enter Information in Blue Cells

ChamberMaxx Calculator

Storage Volume Required (cf):	1,019
Chamber Invert Depth Below Asphalt (ft):	5.00
Limiting Width (ft):	17
Porous Stone Backfill Included For Storage:	Yes
Depth A: Porous Stone Above Chamber (in):	6
Depth C: Porous Stone Below Chamber (in):	6
Stone Porosity (0 to 40%):	40

Waterway Area (ft^2)
10.78



System Sizing

Use Custom Layout (at right) for layout adjustment

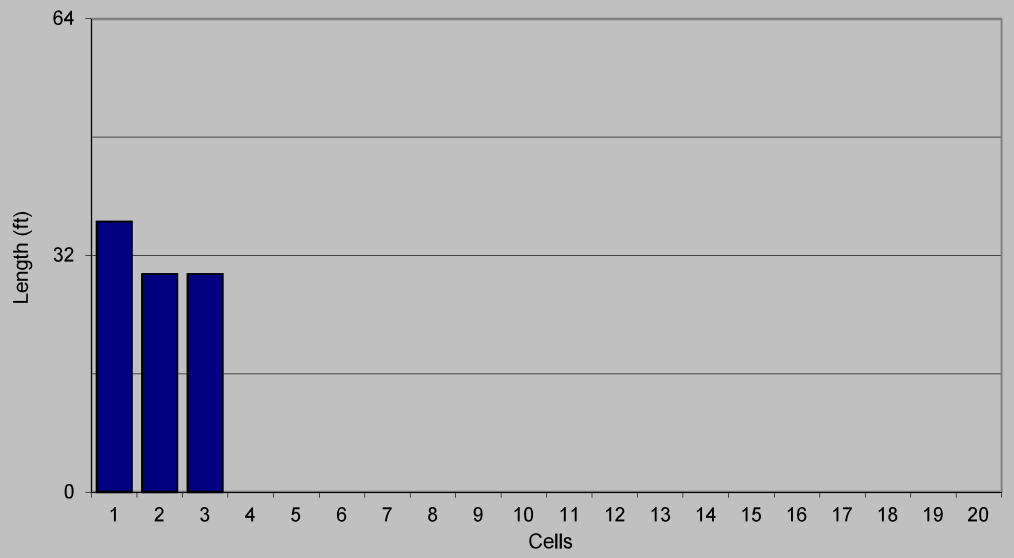
Required Chambers:	13	Chambers	
Chamber Storage:	648	cf	
Porous Stone Storage:	526	cf	
Total Storage Provided:	1,174	cf	115.2% of Req'd Storage
Rectangular Footprint (W x L):	15.7 ft x 43.1 ft		

Additional Units Required = 0

Custom Layout

To adjust layout, select the appropriate number of chambers in the light blue boxes below.

5	4	4																	



CONTECH Materials

ChamberMaxx Middle Units:	7	Chambers @ 7'1" installed length
ChamberMaxx Start Units:	3	Chambers @ 8' installed length
ChamberMaxx End Units:	3	Chambers @ 7'5" installed length
Manifold Fittings (1 manifold):	2	ea Tees and 1ea Elbow
Scour Protection Netting:	16	ft long x 7.5' wide
Approximate Truckloads:	1	Trucks

Construction Quantities

Total Excavation:	146	cy (assumes 4" asphalt)
Stone Backfill:	49	cy stone
Remaining Backfill To Asphalt:	65	cy backfill per specifications
Non-Woven Geotextile:	133	sy for top and sides of excavation

***Construction Quantities are approximate and should be verified upon final design*

The existing 22-unit of 35-unit stormwater chamber calculation of the improvement project at 161 Colorado place & 125 W. Huntington Drive.

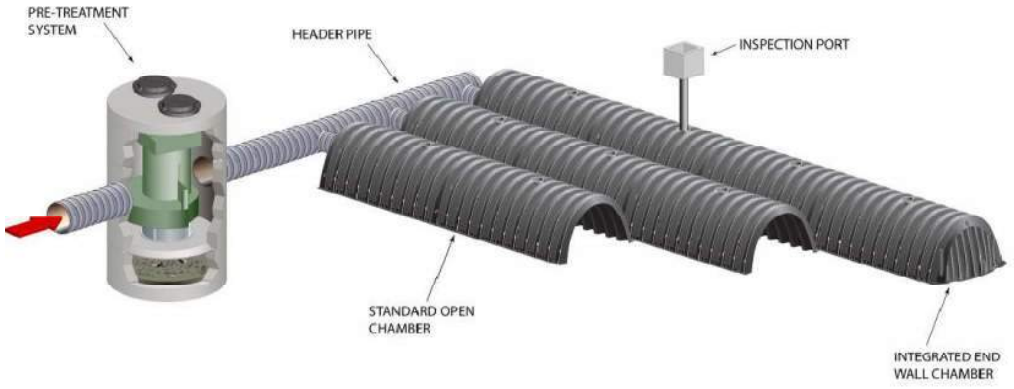
DYODS™ Design Your Own Detention System

CHAMBERMaxx™

CONTECH CONSTRUCTION PRODUCTS INC.

For design assistance, drawings, and pricing send completed worksheet to:
dyods@contech-cpi.com

BMP-1: For subarea DA1 + DA1A



Project Summary

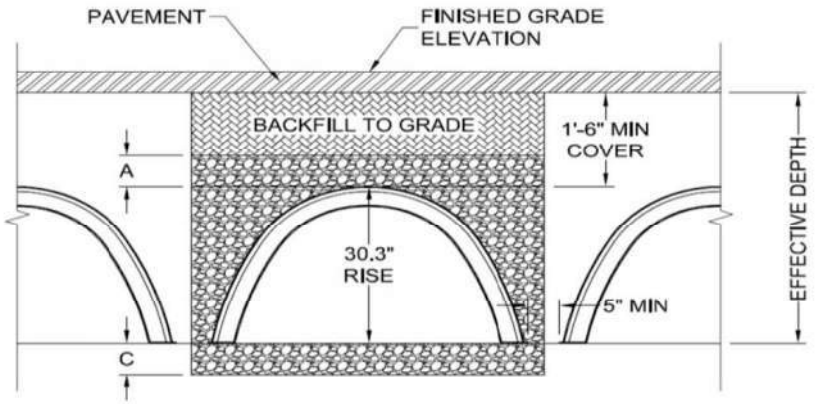
Date:	3/25/2013
Project Name:	161 Colorado Pl.,
City, State:	Arcadia, CA
County:	Los Angeles
Designed By:	Lin Consulting
Company:	Lin Consulting
Telephone:	909-396-6850

Enter Information in Blue Cells

ChamberMaxx Calculator

Storage Volume Required (cf):	1,743
Chamber Invert Depth Below Asphalt (ft):	5.00
Limiting Width (ft):	17
Porous Stone Backfill Included For Storage:	Yes
Depth A: Porous Stone Above Chamber (in):	6
Depth C: Porous Stone Below Chamber (in):	6
Stone Porosity (0 to 40%):	40

Waterway Area (ft^2) 10.78



System Sizing

Use Custom Layout (at right) for layout adjustment

Required Chambers:	22	Chambers	
Chamber Storage:	1,092	cf	
Porous Stone Storage:	821	cf	
Total Storage Provided:	1,912	cf	109.7% of Req'd Storage
Rectangular Footprint (W x L):	15.7 ft x 64.4 ft		

CONTECH Materials

ChamberMaxx Middle Units:	16	Chambers @ 7'1" installed length
ChamberMaxx Start Units:	3	Chambers @ 8' installed length
ChamberMaxx End Units:	3	Chambers @ 7'5" installed length
Manifold Fittings (1 manifold):	2	ea Tees and 1ea Elbow
Scour Protection Netting:	16	ft long x 7.5' wide
Approximate Truckloads:	1	Trucks

Construction Quantities

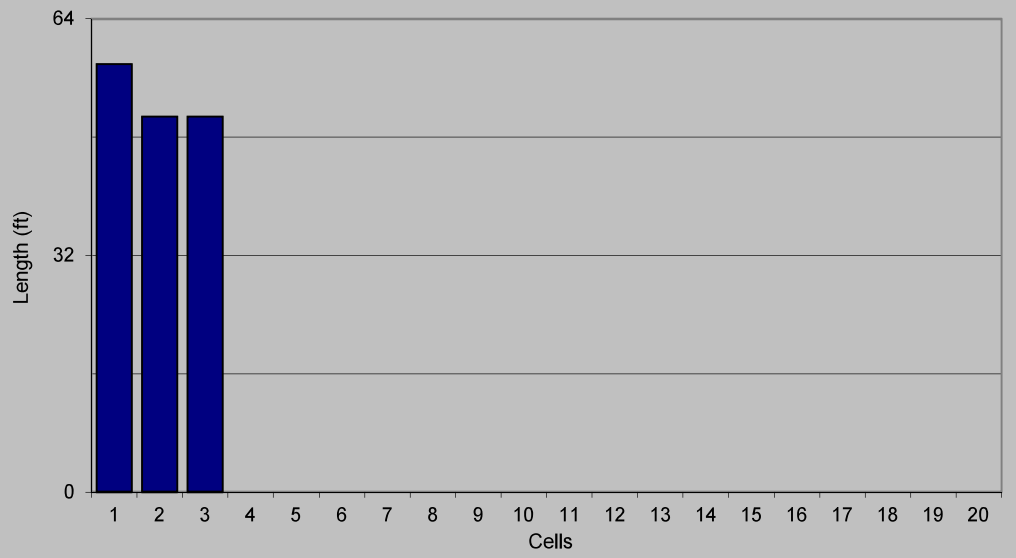
Total Excavation:	218	cy (assumes 4" asphalt)
Stone Backfill:	76	cy stone
Remaining Backfill To Asphalt:	90	cy backfill per specifications
Non-Woven Geotextile:	193	sy for top and sides of excavation

***Construction Quantities are approximate and should be verified upon final design*

Additional Units Required = 0 **Custom Layout**

To adjust layout, select the appropriate number of chambers in the light blue boxes below.

8	7	7																	



The existing 44-unit stormwater chamber calculation of the improvement project at 161 Colorado place & 125 W. Huntington Drive.

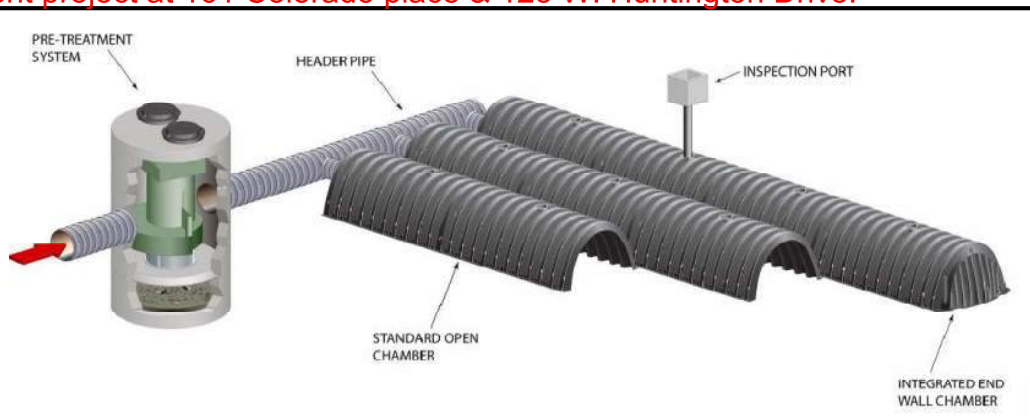
DYODS™ Design Your Own Detention System

CHAMBERMaxx™

CONTECH CONSTRUCTION PRODUCTS INC.

For design assistance, drawings, and pricing send completed worksheet to:
dyods@contech-cpi.com

BMP-7: For subarea DA8



Project Summary

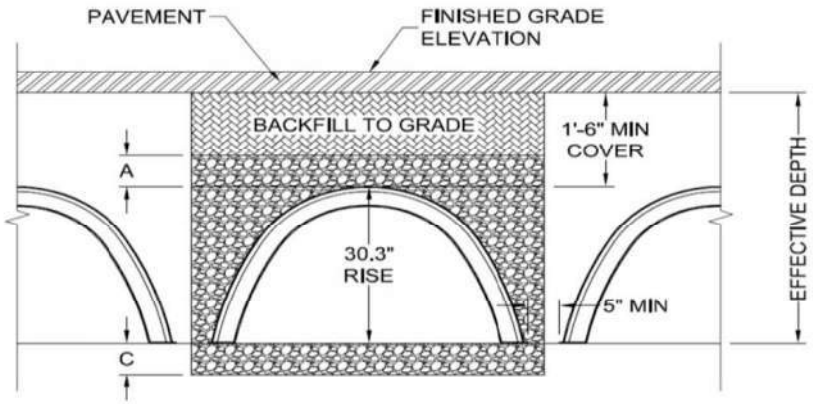
Date:	1/29/2014
Project Name:	161 Colorado Pl.,
City, State:	Arcadia, CA
County:	Los Angeles
Designed By:	Lin Consulting
Company:	Lin Consulting
Telephone:	909-396-6850

Enter Information in Blue Cells

ChamberMaxx Calculator

Storage Volume Required (cf):	3,485
Chamber Invert Depth Below Asphalt (ft):	5.00
Limiting Width (ft):	30
Porous Stone Backfill Included For Storage:	Yes
Depth A: Porous Stone Above Chamber (in):	6
Depth C: Porous Stone Below Chamber (in):	6
Stone Porosity (0 to 40%):	40

Waterway Area (ft^2) 10.78



System Sizing

Use Custom Layout (at right) for layout adjustment

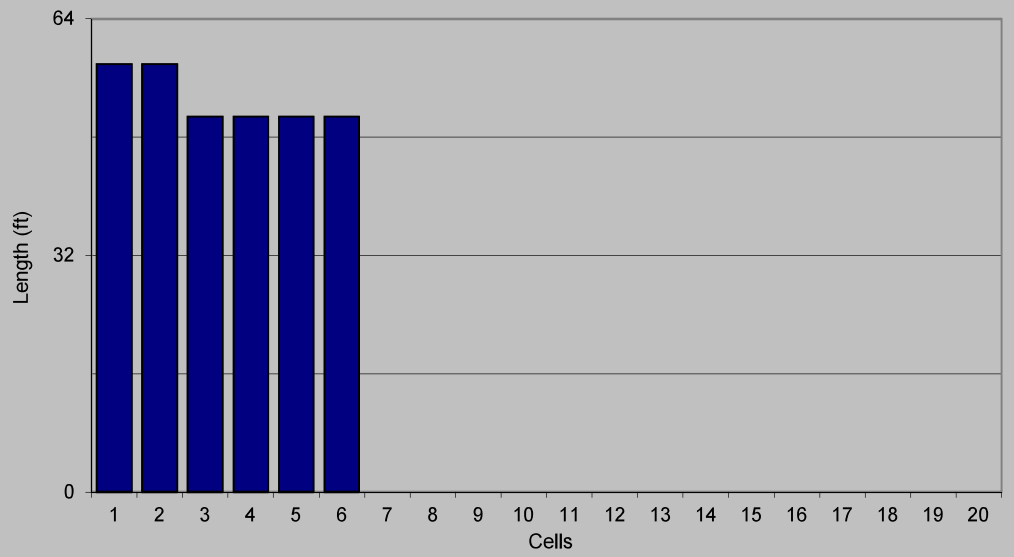
Required Chambers:	44	Chambers	
Chamber Storage:	2,183	cf	
Porous Stone Storage:	1,492	cf	
Total Storage Provided:	3,675	cf	105.4% of Req'd Storage
Rectangular Footprint (W x L):	29.8 ft x 64.4 ft		

Additional Units Required = 0

Custom Layout

To adjust layout, select the appropriate number of chambers in the light blue boxes below.

8	8	7	7	7	7														



CONTECH Materials

ChamberMaxx Middle Units:	32	Chambers @ 7'1" installed length
ChamberMaxx Start Units:	6	Chambers @ 8' installed length
ChamberMaxx End Units:	6	Chambers @ 7'5" installed length
Manifold Fittings (1 manifold):	5	ea Tees and 1ea Elbow
Scour Protection Netting:	30	ft long x 7.5' wide
Approximate Truckloads:	1	Trucks

Construction Quantities

Total Excavation:	414	cy (assumes 4" asphalt)
Stone Backfill:	138	cy stone
Remaining Backfill To Asphalt:	172	cy backfill per specifications
Non-Woven Geotextile:	316	sy for top and sides of excavation

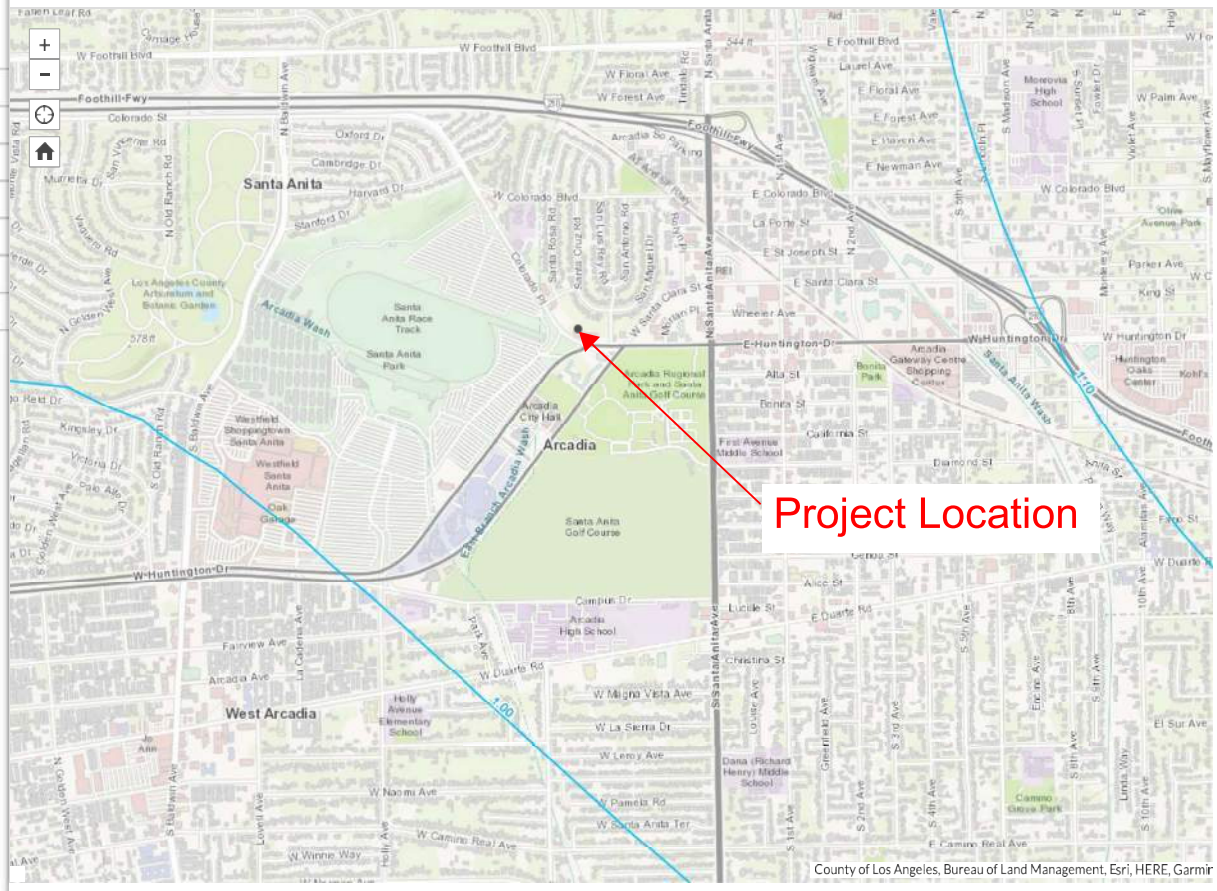
***Construction Quantities are approximate and should be verified upon final design*

About | Legend | Layers

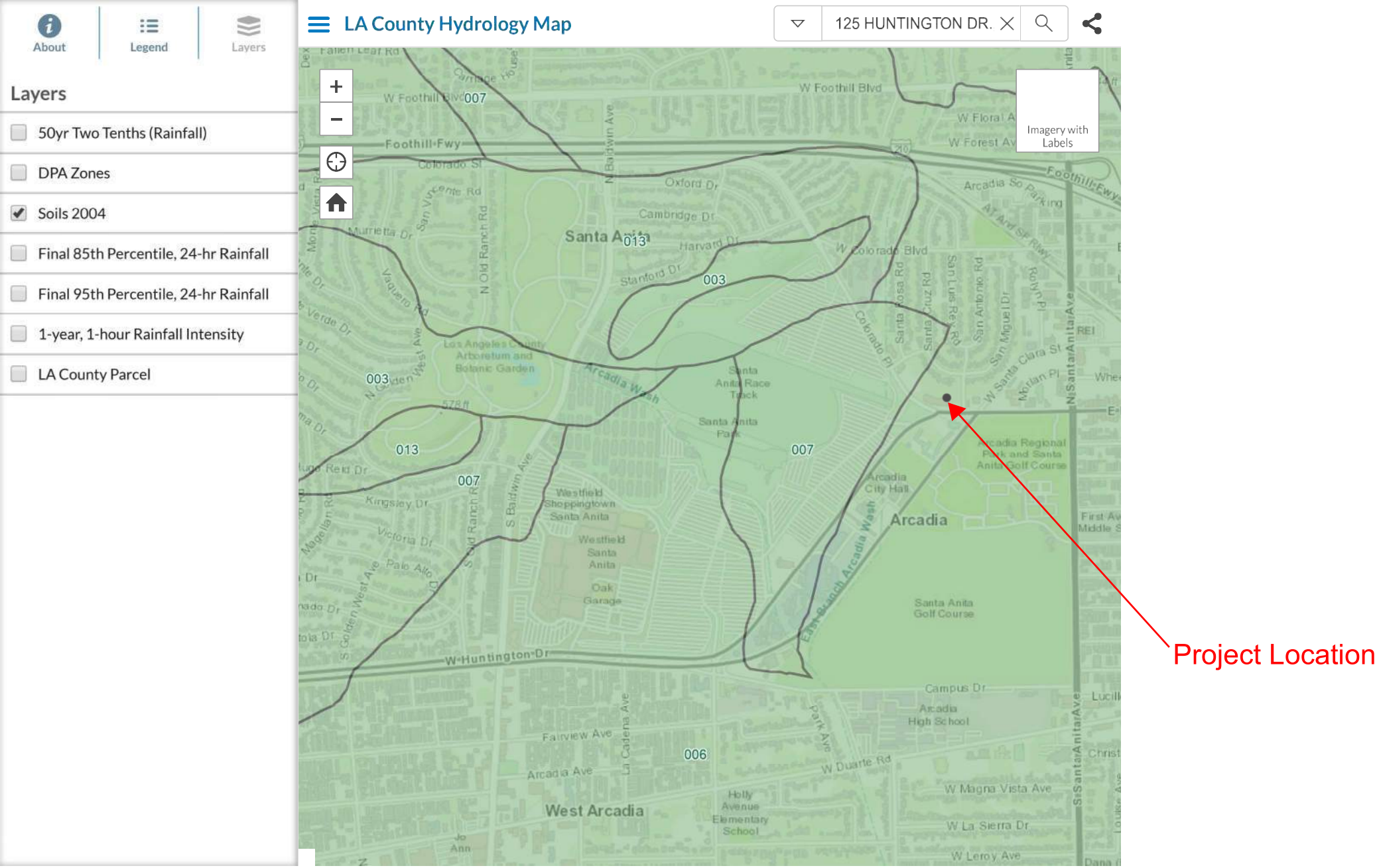
Layers

- [ ] 50yr Two Tenths (Rainfall)
- [ ] DPA Zones
- [ ] Soils 2004
- [x] Final 85th Percentile, 24-hr Rainfall
- [ ] Final 95th Percentile, 24-hr Rainfall
- [ ] 1-year, 1-hour Rainfall Intensity
- [ ] LA County Parcel

LA County Hydrology Map



County of Los Angeles, Bureau of Land Management, Esri, HERE, Garmin


About
Legend
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Layers
50yr Two Tenths (Rainfall)
DPA Zones
Soils 2004
Final 85th Percentile, 24-hr Rainfall
Final 95th Percentile, 24-hr Rainfall
1-year, 1-hour Rainfall Intensity
LA County Parcel
LA County Hydrology Map
125 HUNTINGTON DR.
Imagery with Labels
Project Location
Santa Anita
Arcadia
West Arcadia
W Foothill Blvd
Foothill Fwy
W Huntington Dr
Arcadia Wash
007
013
003
006

Appendix A

Flow Rates and Volumes based on 0.75-inches, 24-hour rain event Calculation

Hotel -Tc Data for Post-Development (o.75-inches, 24-hour rain event)

Project	Subarea	Area	%imp	Frequency	Soil Type	Length	Slope	0.75-inches Rainfall Depth	Fire Factor
P9716	DA1	0.631	0.95	0.75	6	365	0.019	0.75	0
P9716	DA2	0.173	1	0.75	6	90	0.02	0.75	0
P9716	DA3	0.235	0.9	0.75	6	165	0.025	0.75	0
P9716	DA4	0.062	0.43	0.75	6	175	0.02	0.75	0
P9716	DA5	0.049	0.6	0.75	6	100	0.02	0.75	0
P9716	DA6	0.068	0.28	0.75	6	80	0.02	0.75	0
P9716	DA7	0.136	0.5	0.75	6	30	0.02	0.75	0
P9716	DA8	0.157	1	0.75	6	100	0.01	0.75	0
P9716	DA1A	0.124	0.57	0.75	6	23.5	0.03	0.75	0

Hotel -Tc Result for Post-Development (o.75-inches, 24-hour rain event)

Project	Subarea	Area (ac)	%imp	Frequency	Soil Type	Length	Slope	Model (0.75-inch) Rainfall Depth	Peak Intensity (in/hr)	Undeveloped Runoff Coefficient (Cu)	Developed Runoff Coefficient (Cd)	Time of Concentration (min)	Clear Peak Flow Rate (cfs)	24-Hr Clear Runoff Volume (ac-ft)	24-Hr Clear Runoff Volume (cu-ft)
P9716	DA1	0.631	0.95	0.75	6	365	0.019	0.75	0.2279	0.1	0.860	21	0.1237	0.0336	1465.19
P9716	DA2	0.173	1	0.75	6	90	0.02	0.75	0.3588	0.1	0.9	8	0.0559	0.0097	420.39
P9716	DA3	0.235	0.9	0.75	6	165	0.025	0.75	0.2856	0.1	0.820	13	0.0550	0.0119	520.29
P9716	DA4	0.062	0.43	0.75	6	175	0.02	0.75	0.2279	0.1	0.444	21	0.0063	0.0017	74.33
P9716	DA5	0.049	0.6	0.75	6	100	0.02	0.75	0.2965	0.1	0.58	12	0.0084	0.0018	76.73
P9716	DA6	0.068	0.28	0.75	6	80	0.02	0.75	0.259	0.1	0.324	16	0.0057	0.0014	59.49
P9716	DA7	0.136	0.5	0.75	6	30	0.02	0.75	0.4107	0.17	0.535	6	0.0299	0.0042	183.90
P9716	DA8	0.157	1	0.75	6	100	0.01	0.75	0.3231	0.1	0.900	10	0.0456	0.0088	381.51
P9716	DA1A	0.124	0.57	0.75	6	23.5	0.03	0.75	0.4475	0.2331	0.613	5	0.0340	0.0043	186.66

A_{TOTAL} **1.635** ac

$Q_{0.75\text{-inch TOTAL}}$ **0.365** cfs

$V_{0.75\text{-inch TOTAL}}$ **3368** ac-ft

Peak Flow Hydrologic Analysis

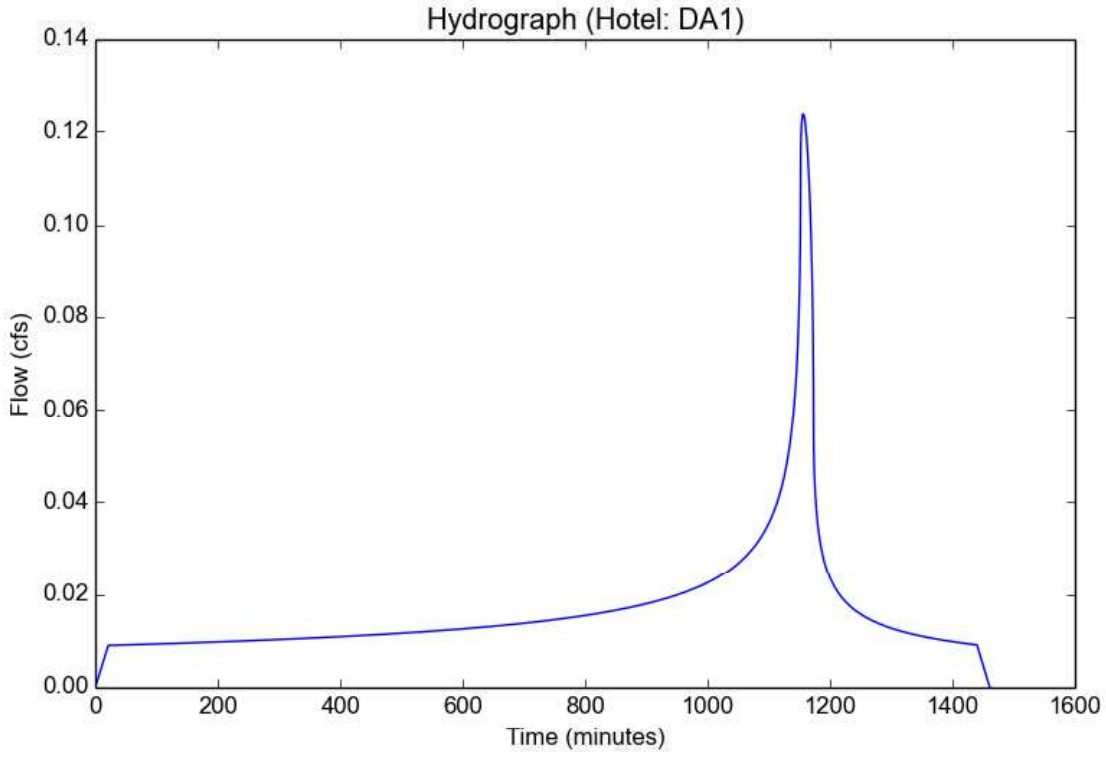
File location: //lci.local/Users/FolderRedirections/vickym/Desktop/Hotel Report.pdf
Version: HydroCalc 1.0.3

Input Parameters

Project Name	Hotel
Subarea ID	DA1
Area (ac)	0.631
Flow Path Length (ft)	365.0
Flow Path Slope (vft/hft)	0.019
0.75-inch Rainfall Depth (in)	0.75
Percent Impervious	0.95
Soil Type	6
Design Storm Frequency	0.75 inch storm
Fire Factor	0
LID	True

Output Results

Modeled (0.75 inch storm) Rainfall Depth (in)	0.75
Peak Intensity (in/hr)	0.2279
Undeveloped Runoff Coefficient (Cu)	0.1
Developed Runoff Coefficient (Cd)	0.86
Time of Concentration (min)	21.0
Clear Peak Flow Rate (cfs)	0.1237
Burned Peak Flow Rate (cfs)	0.1237
24-Hr Clear Runoff Volume (ac-ft)	0.0336
24-Hr Clear Runoff Volume (cu-ft)	1465.1902



Peak Flow Hydrologic Analysis

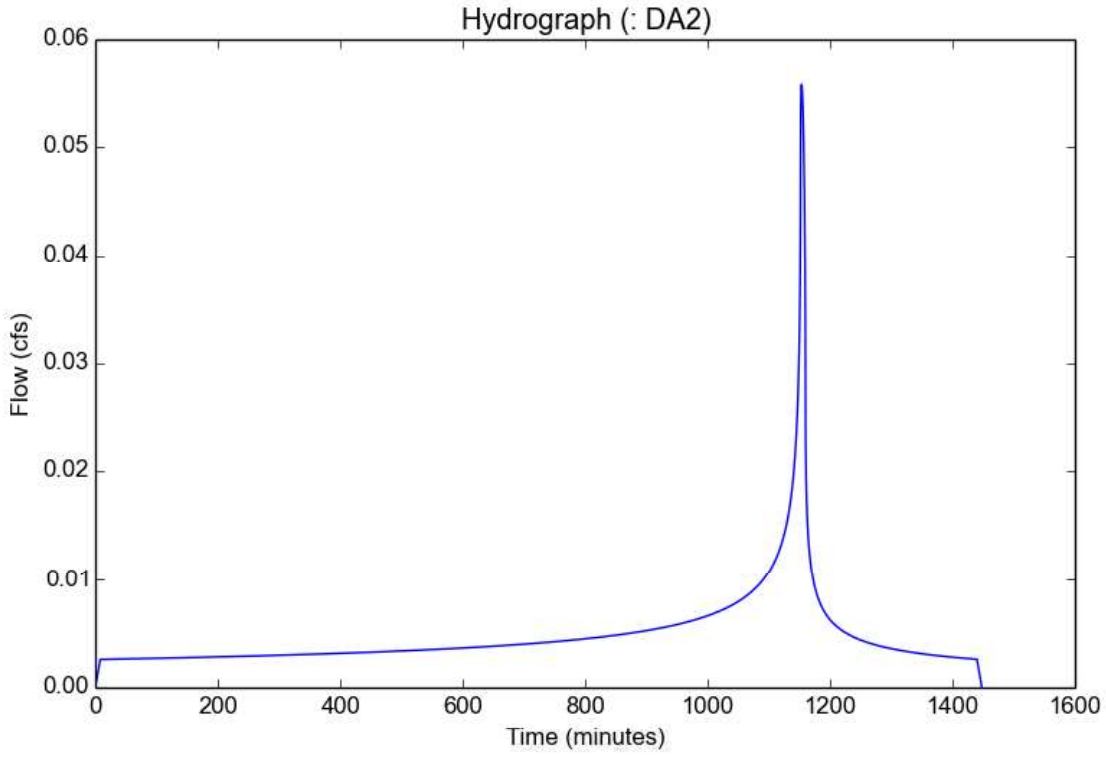
File location: //lci.local/Users/FolderRedirections/vickym/Desktop/Hotel Report.pdf
Version: HydroCalc 1.0.3

Input Parameters

Project Name	
Subarea ID	DA2
Area (ac)	0.173
Flow Path Length (ft)	90.0
Flow Path Slope (vft/hft)	0.02
0.75-inch Rainfall Depth (in)	0.75
Percent Impervious	1.0
Soil Type	6
Design Storm Frequency	0.75 inch storm
Fire Factor	0
LID	True

Output Results

Modeled (0.75 inch storm) Rainfall Depth (in)	0.75
Peak Intensity (in/hr)	0.3588
Undeveloped Runoff Coefficient (Cu)	0.1
Developed Runoff Coefficient (Cd)	0.9
Time of Concentration (min)	8.0
Clear Peak Flow Rate (cfs)	0.0559
Burned Peak Flow Rate (cfs)	0.0559
24-Hr Clear Runoff Volume (ac-ft)	0.0097
24-Hr Clear Runoff Volume (cu-ft)	420.3903



Peak Flow Hydrologic Analysis

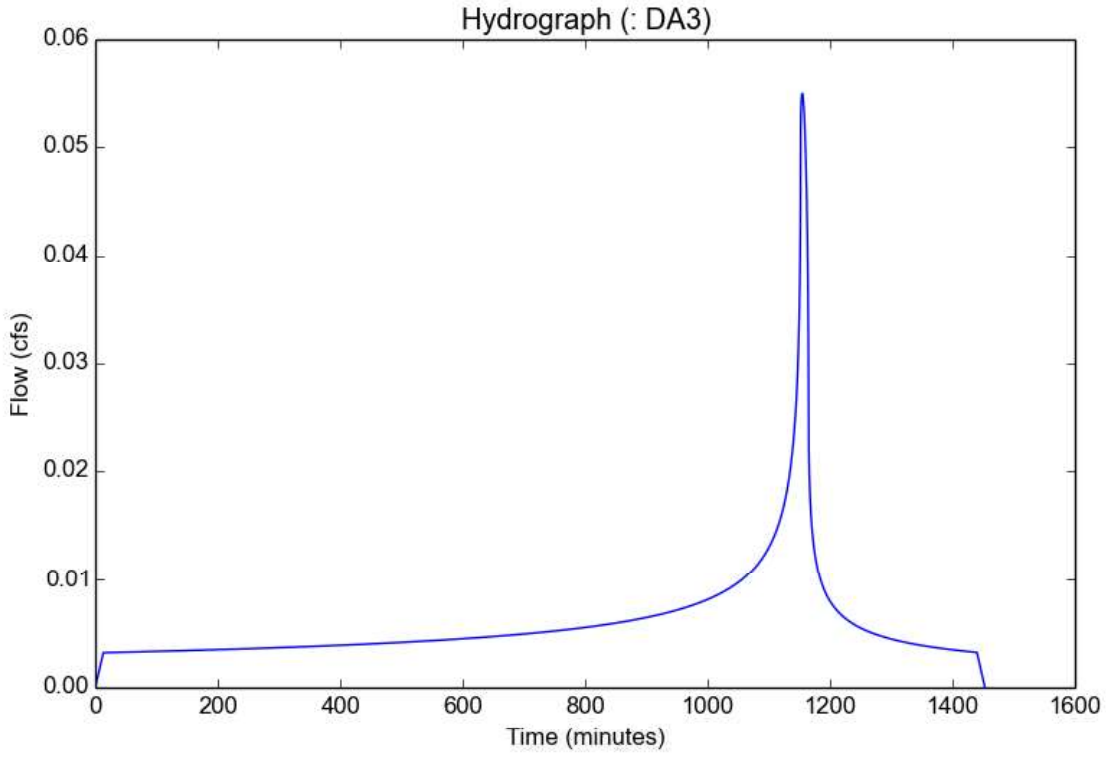
File location: //lci.local/Users/FolderRedirections/vickym/Desktop/Hotel Report.pdf
Version: HydroCalc 1.0.3

Input Parameters

Project Name	
Subarea ID	DA3
Area (ac)	0.235
Flow Path Length (ft)	165.0
Flow Path Slope (vft/hft)	0.025
0.75-inch Rainfall Depth (in)	0.75
Percent Impervious	0.9
Soil Type	6
Design Storm Frequency	0.75 inch storm
Fire Factor	0
LID	True

Output Results

Modeled (0.75 inch storm) Rainfall Depth (in)	0.75
Peak Intensity (in/hr)	0.2856
Undeveloped Runoff Coefficient (Cu)	0.1
Developed Runoff Coefficient (Cd)	0.82
Time of Concentration (min)	13.0
Clear Peak Flow Rate (cfs)	0.055
Burned Peak Flow Rate (cfs)	0.055
24-Hr Clear Runoff Volume (ac-ft)	0.0119
24-Hr Clear Runoff Volume (cu-ft)	520.2911



Peak Flow Hydrologic Analysis

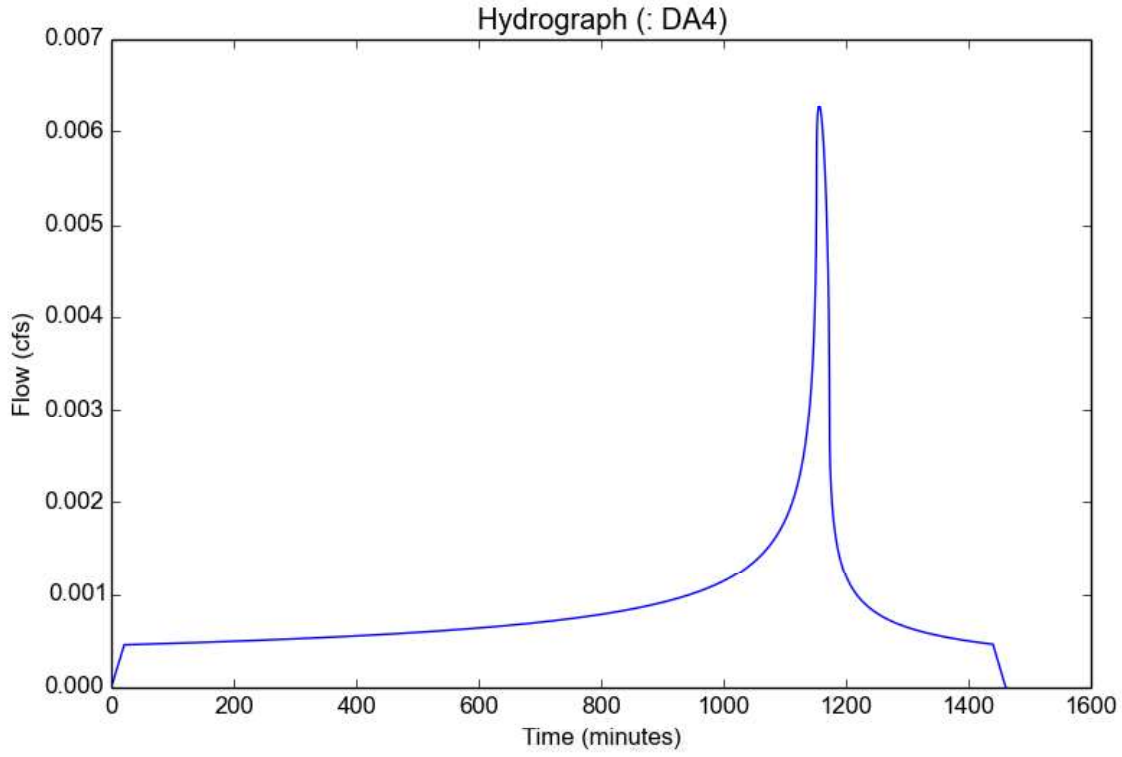
File location: //lci.local/Users/FolderRedirections/vickym/Desktop/Hotel Report.pdf
Version: HydroCalc 1.0.3

Input Parameters

Project Name	
Subarea ID	DA4
Area (ac)	0.062
Flow Path Length (ft)	175.0
Flow Path Slope (vft/hft)	0.02
0.75-inch Rainfall Depth (in)	0.75
Percent Impervious	0.43
Soil Type	6
Design Storm Frequency	0.75 inch storm
Fire Factor	0
LID	True

Output Results

Modeled (0.75 inch storm) Rainfall Depth (in)	0.75
Peak Intensity (in/hr)	0.2279
Undeveloped Runoff Coefficient (Cu)	0.1
Developed Runoff Coefficient (Cd)	0.444
Time of Concentration (min)	21.0
Clear Peak Flow Rate (cfs)	0.0063
Burned Peak Flow Rate (cfs)	0.0063
24-Hr Clear Runoff Volume (ac-ft)	0.0017
24-Hr Clear Runoff Volume (cu-ft)	74.326



Peak Flow Hydrologic Analysis

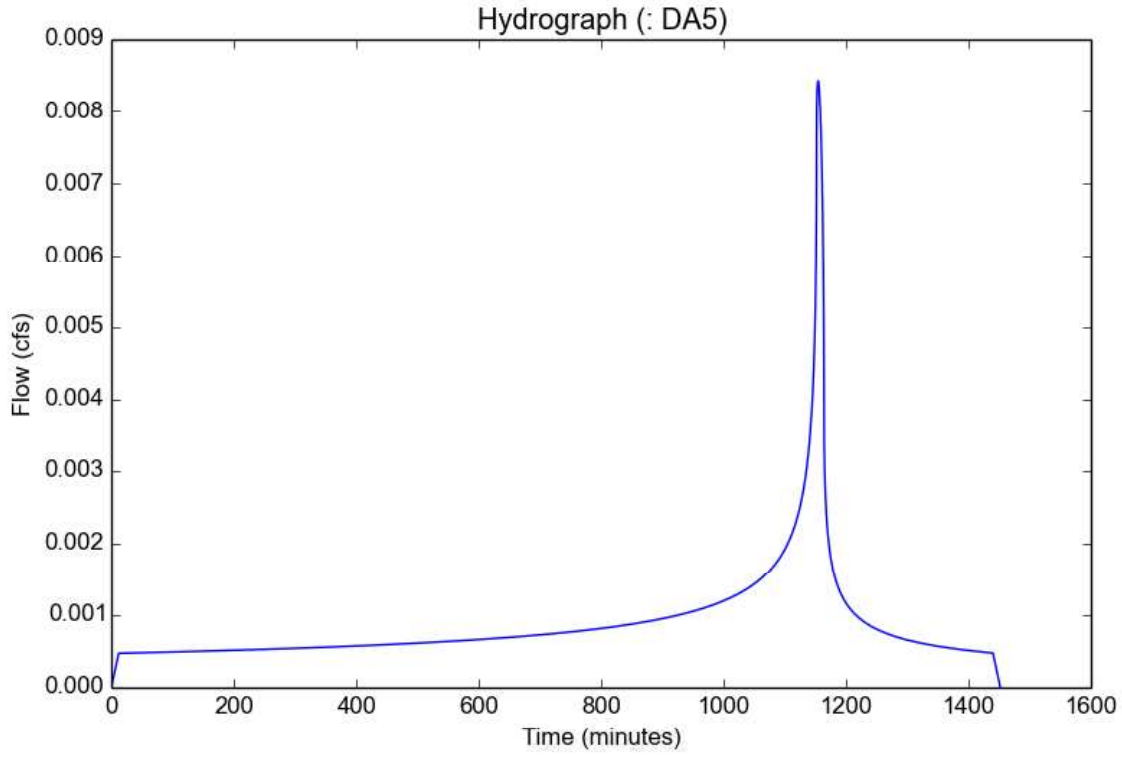
File location: //lci.local/Users/FolderRedirections/vickym/Desktop/Hotel Report.pdf
Version: HydroCalc 1.0.3

Input Parameters

Project Name	
Subarea ID	DA5
Area (ac)	0.049
Flow Path Length (ft)	100.0
Flow Path Slope (vft/hft)	0.02
0.75-inch Rainfall Depth (in)	0.75
Percent Impervious	0.6
Soil Type	6
Design Storm Frequency	0.75 inch storm
Fire Factor	0
LID	True

Output Results

Modeled (0.75 inch storm) Rainfall Depth (in)	0.75
Peak Intensity (in/hr)	0.2965
Undeveloped Runoff Coefficient (Cu)	0.1
Developed Runoff Coefficient (Cd)	0.58
Time of Concentration (min)	12.0
Clear Peak Flow Rate (cfs)	0.0084
Burned Peak Flow Rate (cfs)	0.0084
24-Hr Clear Runoff Volume (ac-ft)	0.0018
24-Hr Clear Runoff Volume (cu-ft)	76.7341



Peak Flow Hydrologic Analysis

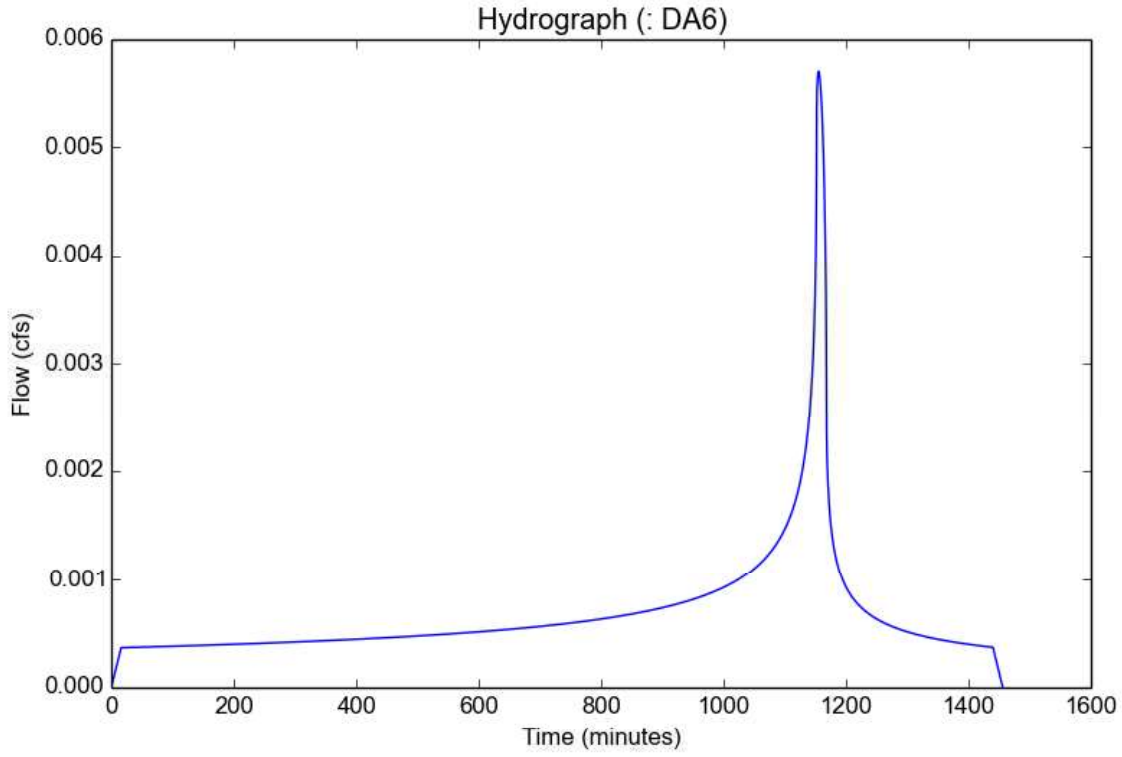
File location: //lci.local/Users/FolderRedirections/vickym/Desktop/Hotel Report.pdf
Version: HydroCalc 1.0.3

Input Parameters

Project Name	
Subarea ID	DA6
Area (ac)	0.068
Flow Path Length (ft)	80.0
Flow Path Slope (vft/hft)	0.02
0.75-inch Rainfall Depth (in)	0.75
Percent Impervious	0.28
Soil Type	6
Design Storm Frequency	0.75 inch storm
Fire Factor	0
LID	True

Output Results

Modeled (0.75 inch storm) Rainfall Depth (in)	0.75
Peak Intensity (in/hr)	0.259
Undeveloped Runoff Coefficient (Cu)	0.1
Developed Runoff Coefficient (Cd)	0.324
Time of Concentration (min)	16.0
Clear Peak Flow Rate (cfs)	0.0057
Burned Peak Flow Rate (cfs)	0.0057
24-Hr Clear Runoff Volume (ac-ft)	0.0014
24-Hr Clear Runoff Volume (cu-ft)	59.4866



Peak Flow Hydrologic Analysis

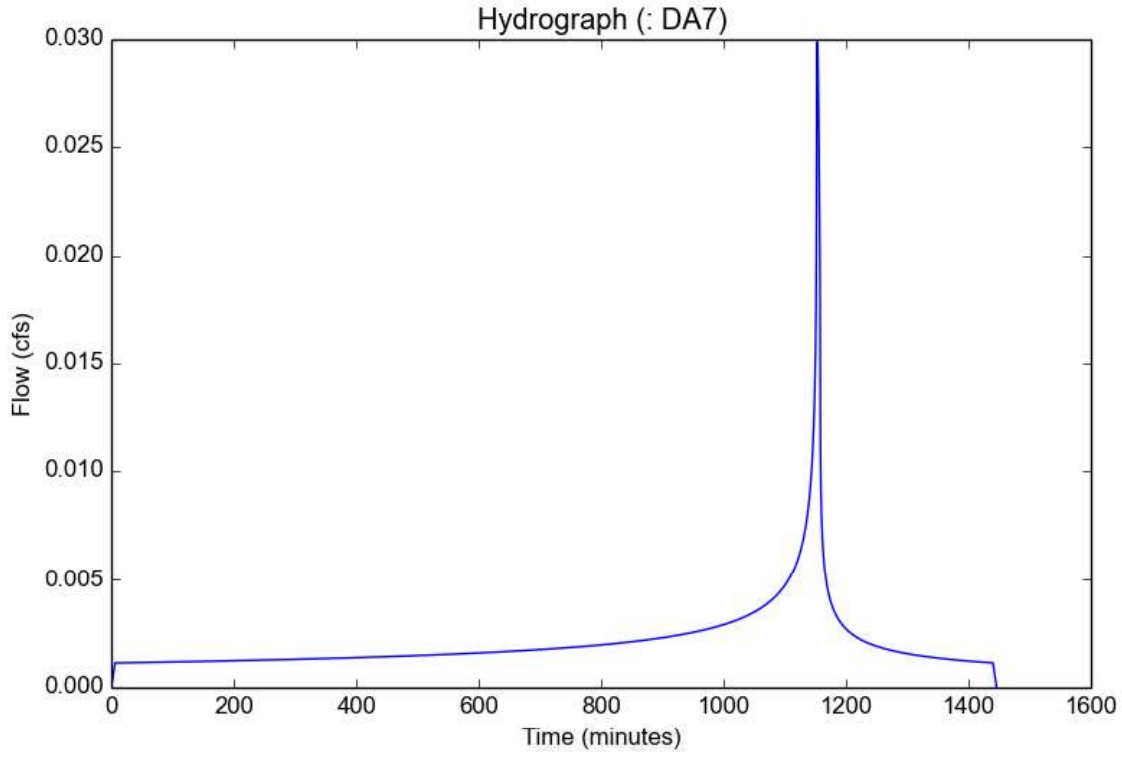
File location: //lci.local/Users/FolderRedirections/vickym/Desktop/Hotel Report.pdf
Version: HydroCalc 1.0.3

Input Parameters

Project Name	
Subarea ID	DA7
Area (ac)	0.136
Flow Path Length (ft)	30.0
Flow Path Slope (vft/hft)	0.02
0.75-inch Rainfall Depth (in)	0.75
Percent Impervious	0.5
Soil Type	6
Design Storm Frequency	0.75 inch storm
Fire Factor	0
LID	True

Output Results

Modeled (0.75 inch storm) Rainfall Depth (in)	0.75
Peak Intensity (in/hr)	0.4107
Undeveloped Runoff Coefficient (Cu)	0.17
Developed Runoff Coefficient (Cd)	0.535
Time of Concentration (min)	6.0
Clear Peak Flow Rate (cfs)	0.0299
Burned Peak Flow Rate (cfs)	0.0299
24-Hr Clear Runoff Volume (ac-ft)	0.0042
24-Hr Clear Runoff Volume (cu-ft)	183.9016



Peak Flow Hydrologic Analysis

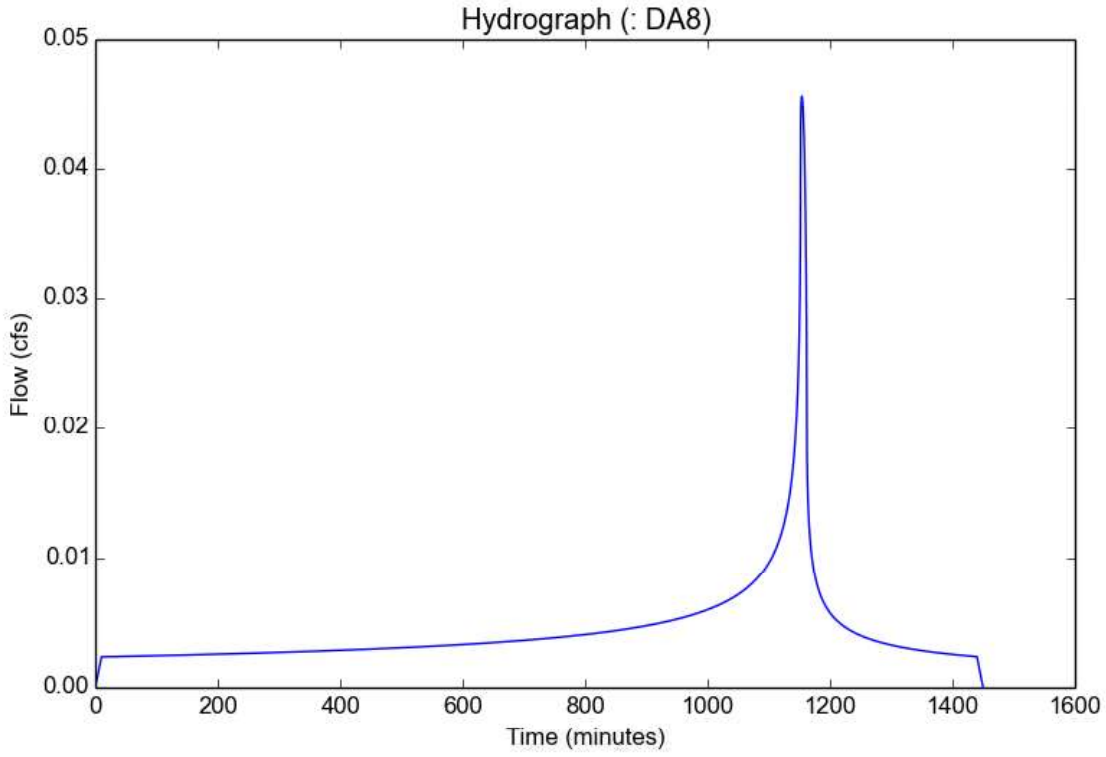
File location: //lci.local/Users/FolderRedirections/vickym/Desktop/Hotel Report.pdf
Version: HydroCalc 1.0.3

Input Parameters

Project Name	
Subarea ID	DA8
Area (ac)	0.157
Flow Path Length (ft)	100.0
Flow Path Slope (vft/hft)	0.01
0.75-inch Rainfall Depth (in)	0.75
Percent Impervious	1.0
Soil Type	6
Design Storm Frequency	0.75 inch storm
Fire Factor	0
LID	True

Output Results

Modeled (0.75 inch storm) Rainfall Depth (in)	0.75
Peak Intensity (in/hr)	0.3231
Undeveloped Runoff Coefficient (Cu)	0.1
Developed Runoff Coefficient (Cd)	0.9
Time of Concentration (min)	10.0
Clear Peak Flow Rate (cfs)	0.0456
Burned Peak Flow Rate (cfs)	0.0456
24-Hr Clear Runoff Volume (ac-ft)	0.0088
24-Hr Clear Runoff Volume (cu-ft)	381.5105



Peak Flow Hydrologic Analysis

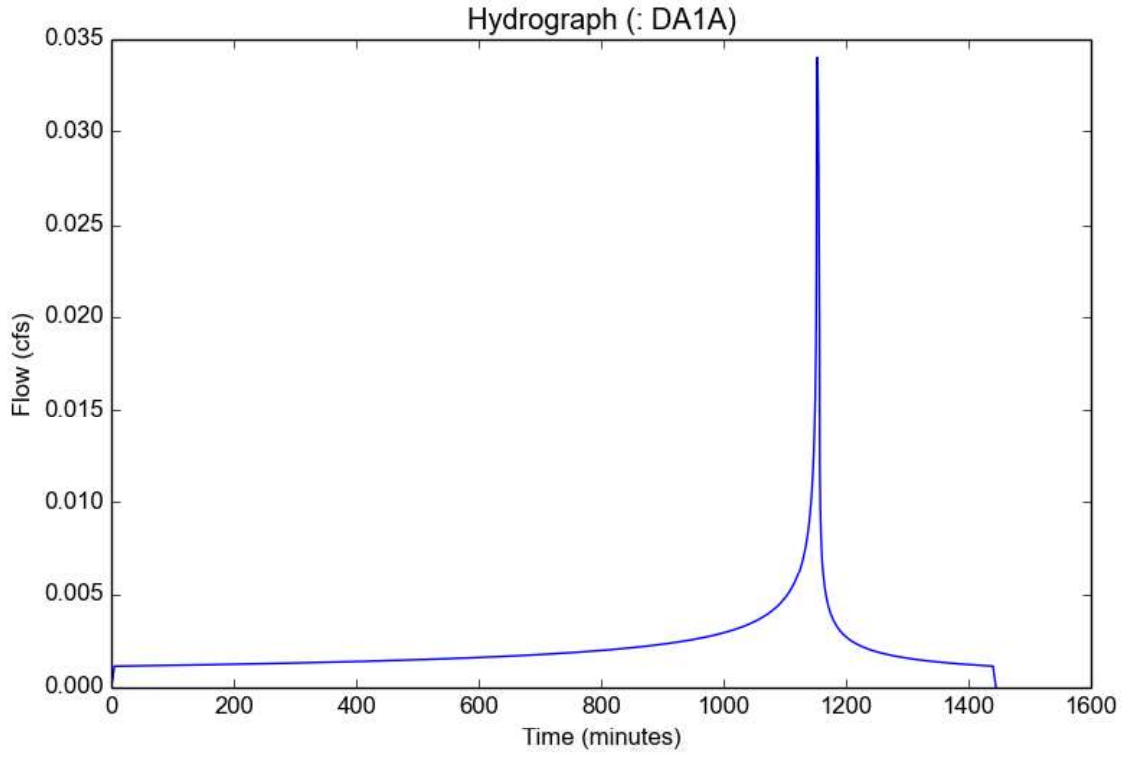
File location: //lci.local/Users/FolderRedirections/vickym/Desktop/Hotel Report.pdf
Version: HydroCalc 1.0.3

Input Parameters

Project Name	
Subarea ID	DA1A
Area (ac)	0.124
Flow Path Length (ft)	23.5
Flow Path Slope (vft/hft)	0.03
0.75-inch Rainfall Depth (in)	0.75
Percent Impervious	0.57
Soil Type	6
Design Storm Frequency	0.75 inch storm
Fire Factor	0
LID	True

Output Results

Modeled (0.75 inch storm) Rainfall Depth (in)	0.75
Peak Intensity (in/hr)	0.4475
Undeveloped Runoff Coefficient (Cu)	0.2331
Developed Runoff Coefficient (Cd)	0.6132
Time of Concentration (min)	5.0
Clear Peak Flow Rate (cfs)	0.034
Burned Peak Flow Rate (cfs)	0.034
24-Hr Clear Runoff Volume (ac-ft)	0.0043
24-Hr Clear Runoff Volume (cu-ft)	186.662



Appendix B

Flow Rates and Volumes based on

85th Percentile, 24-hour rain event

Calculation

Hotel -Tc Data for Post-Development (85th percentile)

Project	Subarea	Area	%imp	Frequency	Soil Type	Length	Slope	85th percentile Rainfall Depth (in)	Fire Factor
P9716	DA1	0.631	0.95	85th	6	365	0.019	1.05	0
P9716	DA2	0.173	1	85th	6	90	0.02	1.05	0
P9716	DA3	0.235	0.9	85th	6	165	0.025	1.05	0
P9716	DA4	0.062	0.43	85th	6	175	0.02	1.05	0
P9716	DA5	0.049	0.6	85th	6	100	0.02	1.05	0
P9716	DA6	0.068	0.28	85th	6	80	0.02	1.05	0
P9716	DA7	0.136	0.5	85th	6	30	0.02	1.05	0
P9716	DA8	0.157	1	85th	6	100	0.01	1.05	0
P9716	DA1A	0.124	0.57	85th	6	23.5	0.03	1.05	0

Hotel -Tc Result for Post-Development (85th percentile)

Project	Subarea	Area (ac)	%imp	Frequency	Soil Type	Length	Slope	85th percentile Rainfall Depth (in)	Peak Intensity (in/hr)	Undeveloped Runoff Coefficient (Cu)	Developed Runoff Coefficient (Cd)	Time of Concentration (min)	Clear Peak Flow Rate (cfs)	24-Hr Clear Runoff Volume (ac-ft)	24-Hr Clear Runoff Volume (cu-ft)
P9716	DA1	0.631	0.95	85th	6	365	0.019	1.05	0.3524	0.1	0.860	17	0.1913	0.0471	2051.26
P9716	DA2	0.173	1	85th	6	90	0.02	1.05	0.5348	0.348	0.9	7	0.0833	0.0135	588.55
P9716	DA3	0.235	0.9	85th	6	165	0.025	1.05	0.4523	0.2414	0.834	10	0.0887	0.0167	728.90
P9716	DA4	0.062	0.43	85th	6	175	0.02	1.05	0.3524	0.1	0.444	17	0.0097	0.0024	104.06
P9716	DA5	0.049	0.6	85th	6	100	0.02	1.05	0.4752	0.2808	0.6523	9	0.0152	0.0025	107.96
P9716	DA6	0.068	0.28	85th	6	80	0.02	1.05	0.4325	0.2073	0.401	11	0.0118	0.0019	84.03
P9716	DA7	0.136	0.5	85th	6	30	0.02	1.05	0.6265	0.4127	0.6563	5	0.0559	0.0060	260.28
P9716	DA8	0.157	1	85th	6	100	0.01	1.05	0.5023	0.325	0.900	8	0.0710	0.0123	534.11
P9716	DA1A	0.124	0.57	85th	6	23.5	0.03	1.05	0.6265	0.4127	0.690	5	0.0536	0.0060	263.15

A_{TOTAL} **1.635** **ac**

$Q_{85th\ TOTAL}$ **0.581** **cfs**

$V_{85th\ TOTAL}$ **4722** **ac-ft**

Peak Flow Hydrologic Analysis

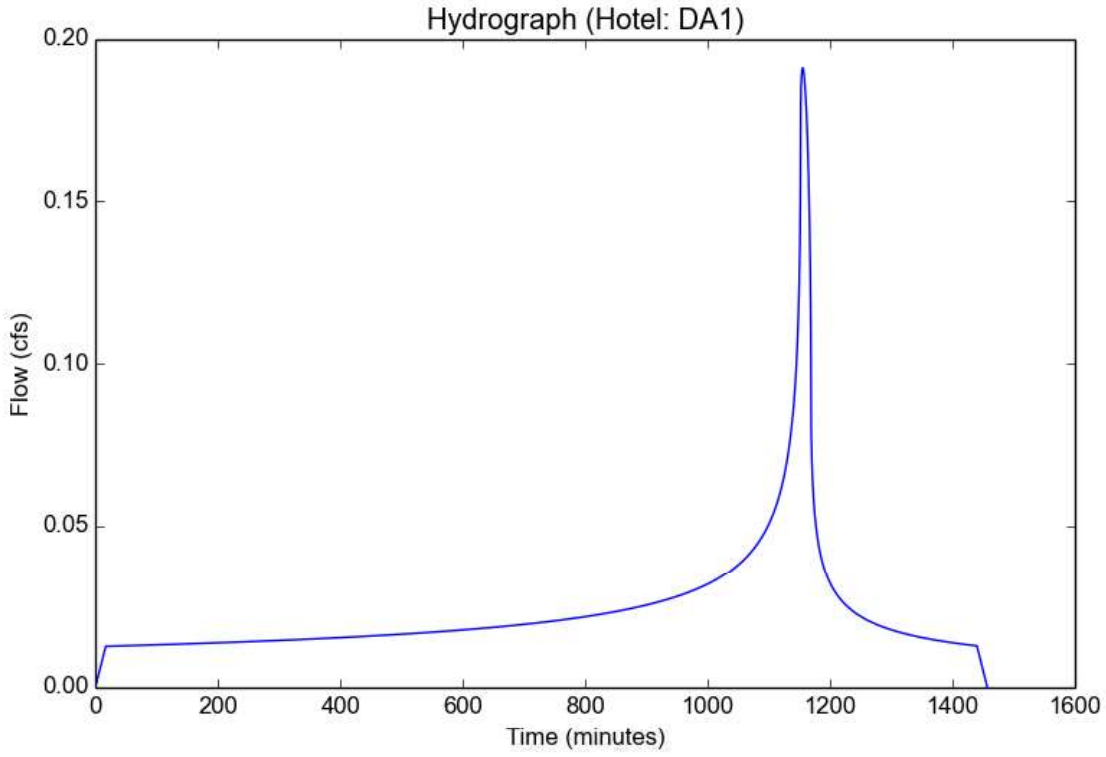
File location: //lci.local/Users/FolderRedirections/vickym/Desktop/Hotel Report.pdf
Version: HydroCalc 1.0.3

Input Parameters

Project Name	Hotel
Subarea ID	DA1
Area (ac)	0.631
Flow Path Length (ft)	365.0
Flow Path Slope (vft/hft)	0.019
85th Percentile Rainfall Depth (in)	1.05
Percent Impervious	0.95
Soil Type	6
Design Storm Frequency	85th percentile storm
Fire Factor	0
LID	True

Output Results

Modeled (85th percentile storm) Rainfall Depth (in)	1.05
Peak Intensity (in/hr)	0.3524
Undeveloped Runoff Coefficient (Cu)	0.1
Developed Runoff Coefficient (Cd)	0.86
Time of Concentration (min)	17.0
Clear Peak Flow Rate (cfs)	0.1913
Burned Peak Flow Rate (cfs)	0.1913
24-Hr Clear Runoff Volume (ac-ft)	0.0471
24-Hr Clear Runoff Volume (cu-ft)	2051.2623



Peak Flow Hydrologic Analysis

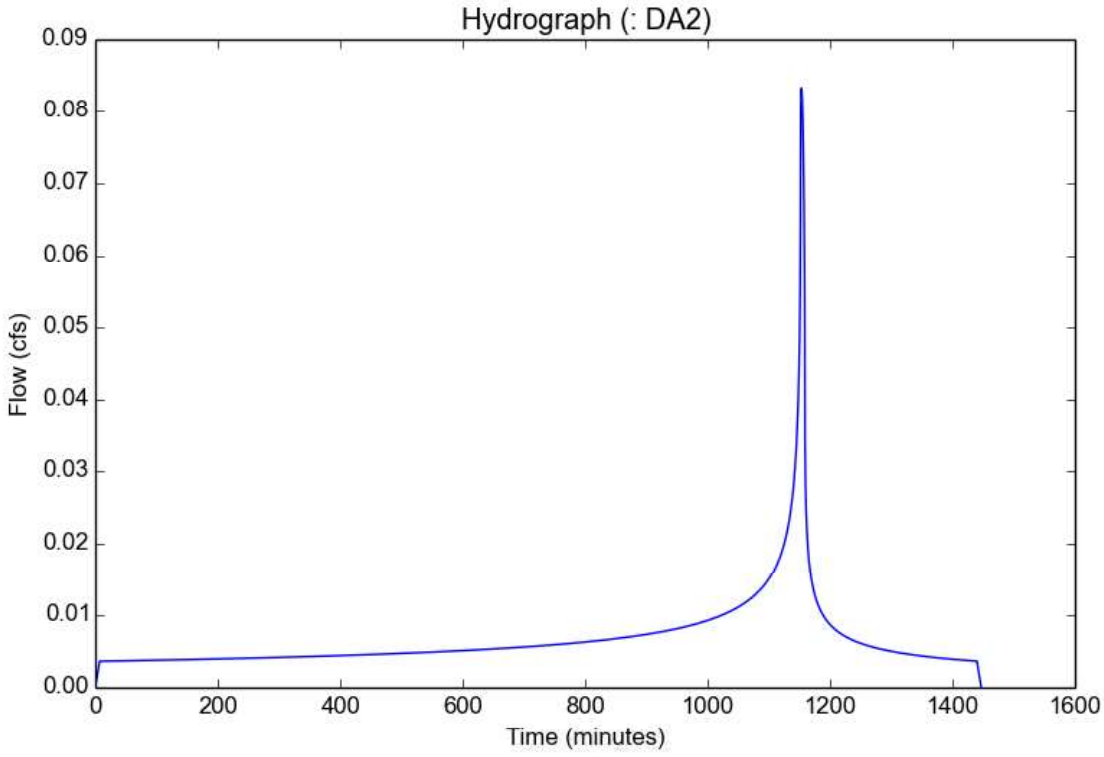
File location: //lci.local/Users/FolderRedirections/vickym/Desktop/Hotel Report.pdf
Version: HydroCalc 1.0.3

Input Parameters

Project Name	
Subarea ID	DA2
Area (ac)	0.173
Flow Path Length (ft)	90.0
Flow Path Slope (vft/hft)	0.02
85th Percentile Rainfall Depth (in)	1.05
Percent Impervious	1.0
Soil Type	6
Design Storm Frequency	85th percentile storm
Fire Factor	0
LID	True

Output Results

Modeled (85th percentile storm) Rainfall Depth (in)	1.05
Peak Intensity (in/hr)	0.5348
Undeveloped Runoff Coefficient (Cu)	0.348
Developed Runoff Coefficient (Cd)	0.9
Time of Concentration (min)	7.0
Clear Peak Flow Rate (cfs)	0.0833
Burned Peak Flow Rate (cfs)	0.0833
24-Hr Clear Runoff Volume (ac-ft)	0.0135
24-Hr Clear Runoff Volume (cu-ft)	588.5464



Peak Flow Hydrologic Analysis

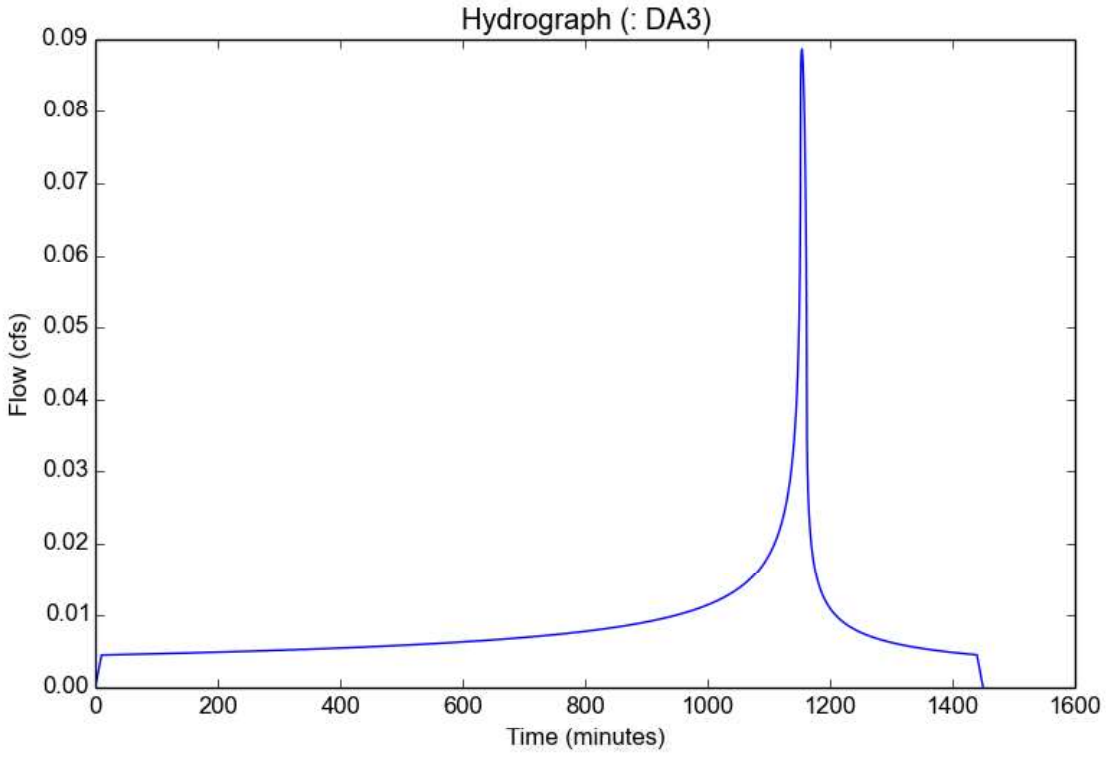
File location: //lci.local/Users/FolderRedirections/vickym/Desktop/Hotel Report.pdf
Version: HydroCalc 1.0.3

Input Parameters

Project Name	
Subarea ID	DA3
Area (ac)	0.235
Flow Path Length (ft)	165.0
Flow Path Slope (vft/hft)	0.025
85th Percentile Rainfall Depth (in)	1.05
Percent Impervious	0.9
Soil Type	6
Design Storm Frequency	85th percentile storm
Fire Factor	0
LID	True

Output Results

Modeled (85th percentile storm) Rainfall Depth (in)	1.05
Peak Intensity (in/hr)	0.4523
Undeveloped Runoff Coefficient (Cu)	0.2414
Developed Runoff Coefficient (Cd)	0.8341
Time of Concentration (min)	10.0
Clear Peak Flow Rate (cfs)	0.0887
Burned Peak Flow Rate (cfs)	0.0887
24-Hr Clear Runoff Volume (ac-ft)	0.0167
24-Hr Clear Runoff Volume (cu-ft)	728.9002



Peak Flow Hydrologic Analysis

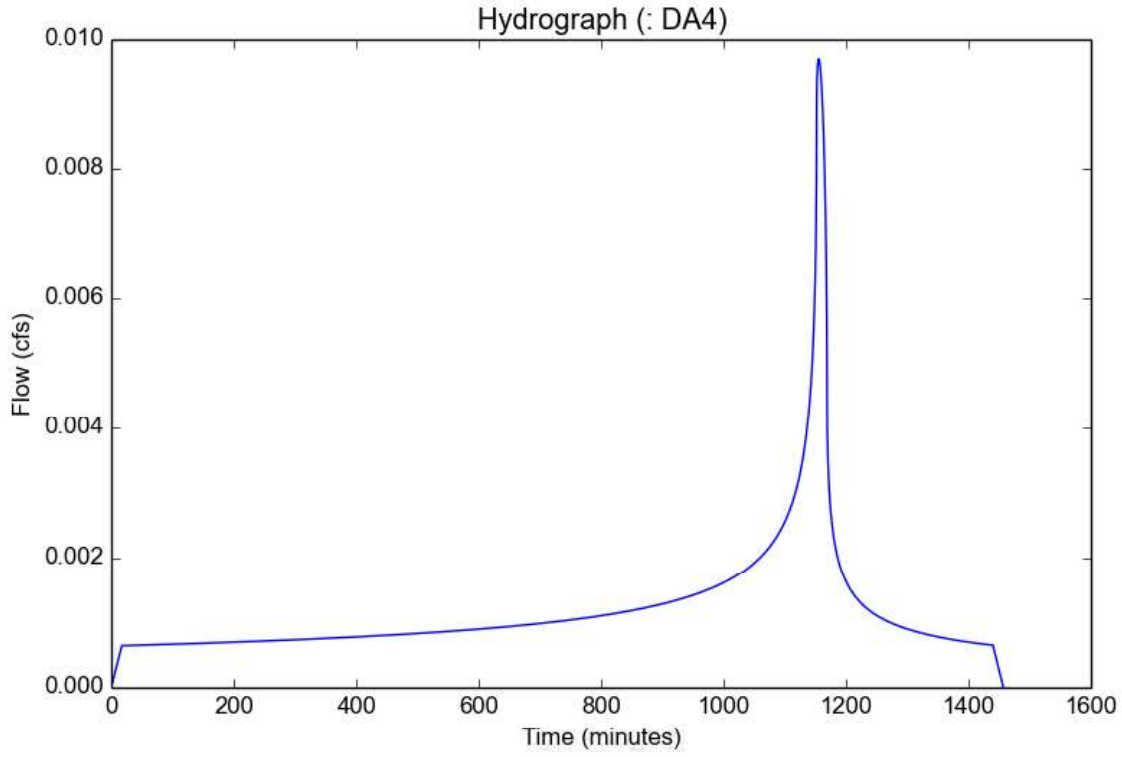
File location: //lci.local/Users/FolderRedirections/vickym/Desktop/Hotel Report.pdf
Version: HydroCalc 1.0.3

Input Parameters

Project Name	
Subarea ID	DA4
Area (ac)	0.062
Flow Path Length (ft)	175.0
Flow Path Slope (vft/hft)	0.02
85th Percentile Rainfall Depth (in)	1.05
Percent Impervious	0.43
Soil Type	6
Design Storm Frequency	85th percentile storm
Fire Factor	0
LID	True

Output Results

Modeled (85th percentile storm) Rainfall Depth (in)	1.05
Peak Intensity (in/hr)	0.3524
Undeveloped Runoff Coefficient (Cu)	0.1
Developed Runoff Coefficient (Cd)	0.444
Time of Concentration (min)	17.0
Clear Peak Flow Rate (cfs)	0.0097
Burned Peak Flow Rate (cfs)	0.0097
24-Hr Clear Runoff Volume (ac-ft)	0.0024
24-Hr Clear Runoff Volume (cu-ft)	104.0562



Peak Flow Hydrologic Analysis

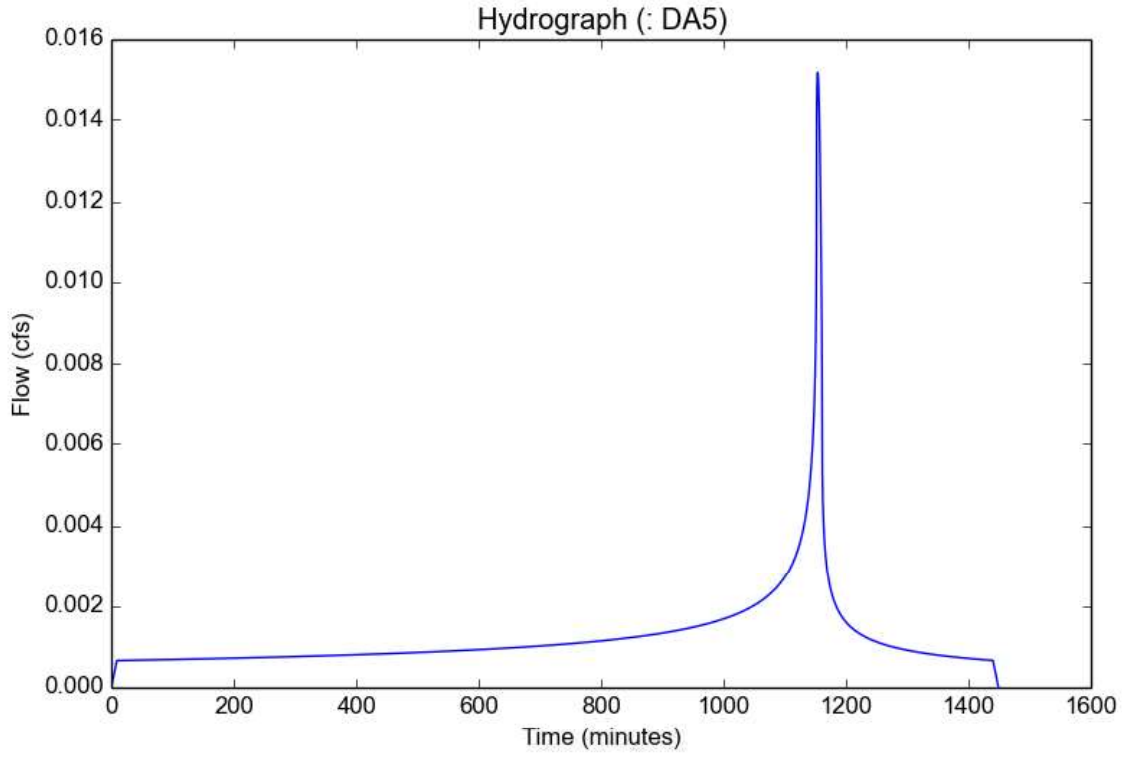
File location: //lci.local/Users/FolderRedirections/vickym/Desktop/Hotel Report.pdf
Version: HydroCalc 1.0.3

Input Parameters

Project Name	
Subarea ID	DA5
Area (ac)	0.049
Flow Path Length (ft)	100.0
Flow Path Slope (vft/hft)	0.02
85th Percentile Rainfall Depth (in)	1.05
Percent Impervious	0.6
Soil Type	6
Design Storm Frequency	85th percentile storm
Fire Factor	0
LID	True

Output Results

Modeled (85th percentile storm) Rainfall Depth (in)	1.05
Peak Intensity (in/hr)	0.4752
Undeveloped Runoff Coefficient (Cu)	0.2808
Developed Runoff Coefficient (Cd)	0.6523
Time of Concentration (min)	9.0
Clear Peak Flow Rate (cfs)	0.0152
Burned Peak Flow Rate (cfs)	0.0152
24-Hr Clear Runoff Volume (ac-ft)	0.0025
24-Hr Clear Runoff Volume (cu-ft)	107.9624



Peak Flow Hydrologic Analysis

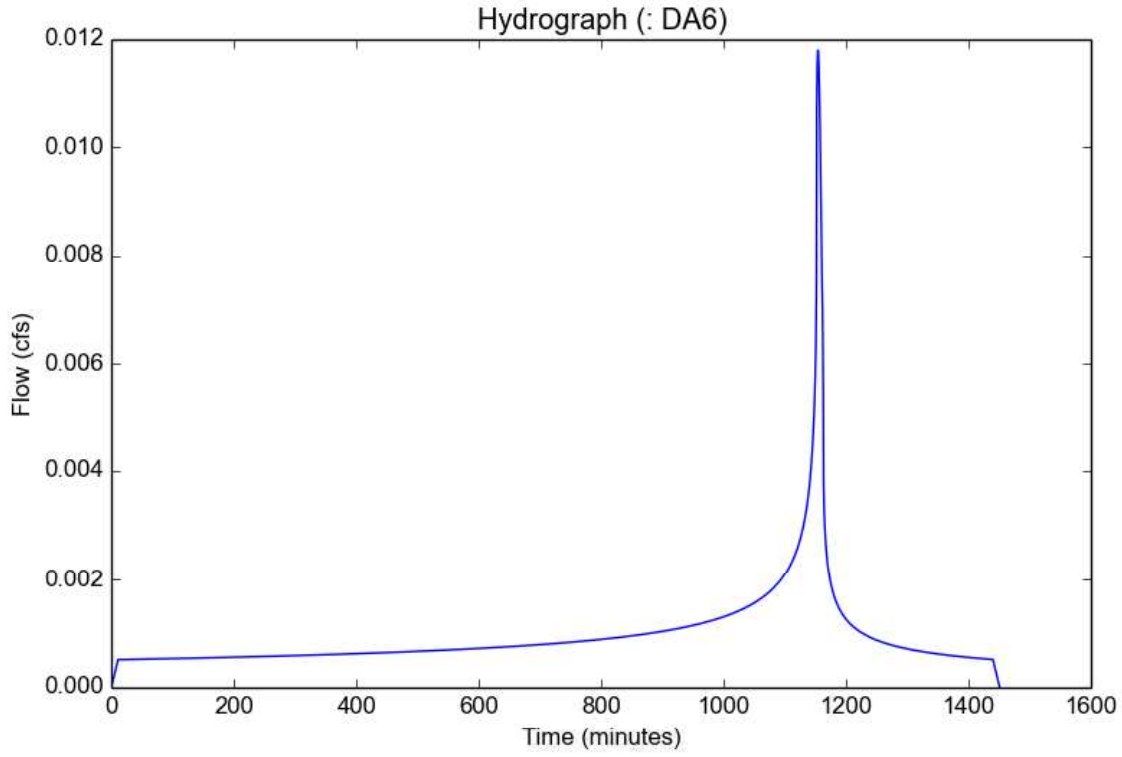
File location: //lci.local/Users/FolderRedirections/vickym/Desktop/Hotel Report.pdf
Version: HydroCalc 1.0.3

Input Parameters

Project Name	
Subarea ID	DA6
Area (ac)	0.068
Flow Path Length (ft)	80.0
Flow Path Slope (vft/hft)	0.02
85th Percentile Rainfall Depth (in)	1.05
Percent Impervious	0.28
Soil Type	6
Design Storm Frequency	85th percentile storm
Fire Factor	0
LID	True

Output Results

Modeled (85th percentile storm) Rainfall Depth (in)	1.05
Peak Intensity (in/hr)	0.4325
Undeveloped Runoff Coefficient (Cu)	0.2073
Developed Runoff Coefficient (Cd)	0.4013
Time of Concentration (min)	11.0
Clear Peak Flow Rate (cfs)	0.0118
Burned Peak Flow Rate (cfs)	0.0118
24-Hr Clear Runoff Volume (ac-ft)	0.0019
24-Hr Clear Runoff Volume (cu-ft)	84.0339



Peak Flow Hydrologic Analysis

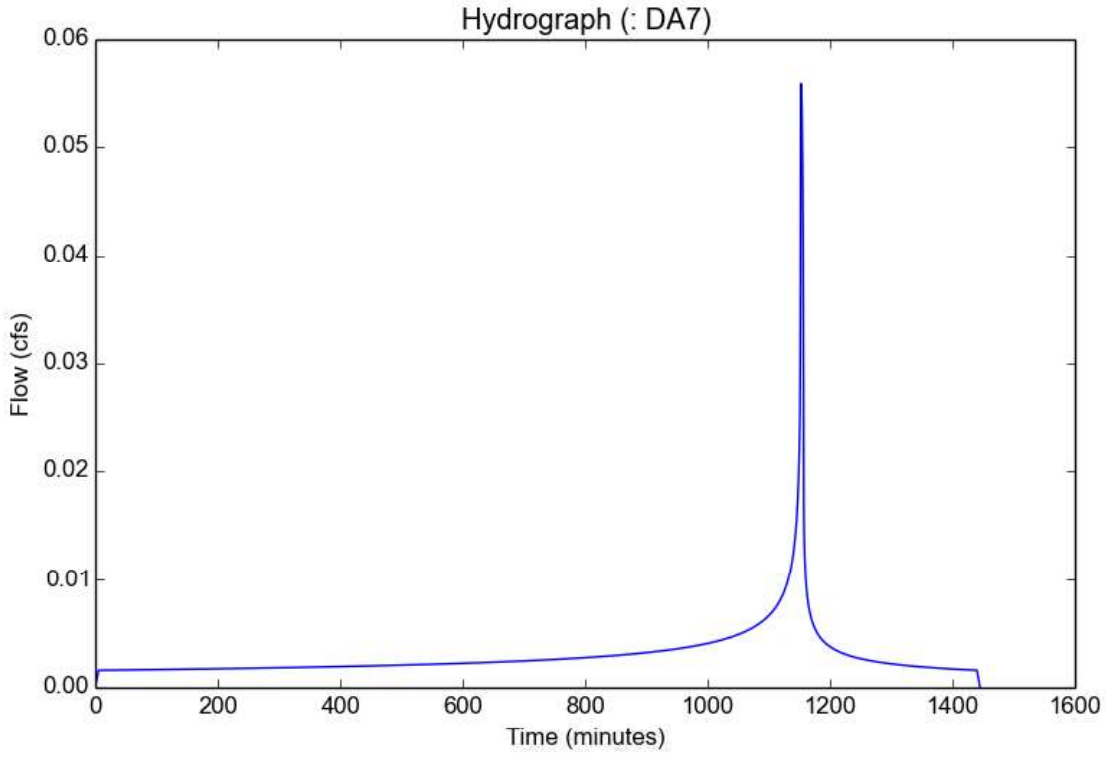
File location: //lci.local/Users/FolderRedirections/vickym/Desktop/Hotel Report.pdf
Version: HydroCalc 1.0.3

Input Parameters

Project Name	
Subarea ID	DA7
Area (ac)	0.136
Flow Path Length (ft)	30.0
Flow Path Slope (vft/hft)	0.02
85th Percentile Rainfall Depth (in)	1.05
Percent Impervious	0.5
Soil Type	6
Design Storm Frequency	85th percentile storm
Fire Factor	0
LID	True

Output Results

Modeled (85th percentile storm) Rainfall Depth (in)	1.05
Peak Intensity (in/hr)	0.6265
Undeveloped Runoff Coefficient (Cu)	0.4127
Developed Runoff Coefficient (Cd)	0.6563
Time of Concentration (min)	5.0
Clear Peak Flow Rate (cfs)	0.0559
Burned Peak Flow Rate (cfs)	0.0559
24-Hr Clear Runoff Volume (ac-ft)	0.006
24-Hr Clear Runoff Volume (cu-ft)	260.2827



Peak Flow Hydrologic Analysis

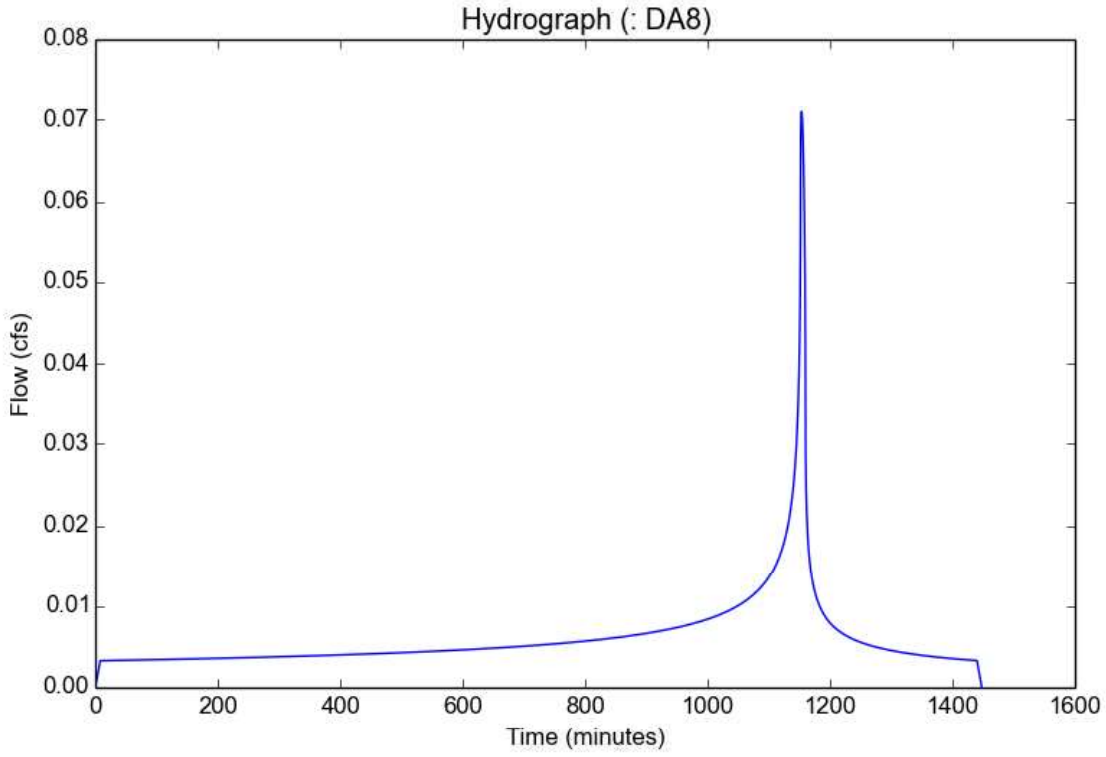
File location: //lci.local/Users/FolderRedirections/vickym/Desktop/Hotel Report.pdf
Version: HydroCalc 1.0.3

Input Parameters

Project Name	
Subarea ID	DA8
Area (ac)	0.157
Flow Path Length (ft)	100.0
Flow Path Slope (vft/hft)	0.01
85th Percentile Rainfall Depth (in)	1.05
Percent Impervious	1.0
Soil Type	6
Design Storm Frequency	85th percentile storm
Fire Factor	0
LID	True

Output Results

Modeled (85th percentile storm) Rainfall Depth (in)	1.05
Peak Intensity (in/hr)	0.5023
Undeveloped Runoff Coefficient (Cu)	0.325
Developed Runoff Coefficient (Cd)	0.9
Time of Concentration (min)	8.0
Clear Peak Flow Rate (cfs)	0.071
Burned Peak Flow Rate (cfs)	0.071
24-Hr Clear Runoff Volume (ac-ft)	0.0123
24-Hr Clear Runoff Volume (cu-ft)	534.1144



Peak Flow Hydrologic Analysis

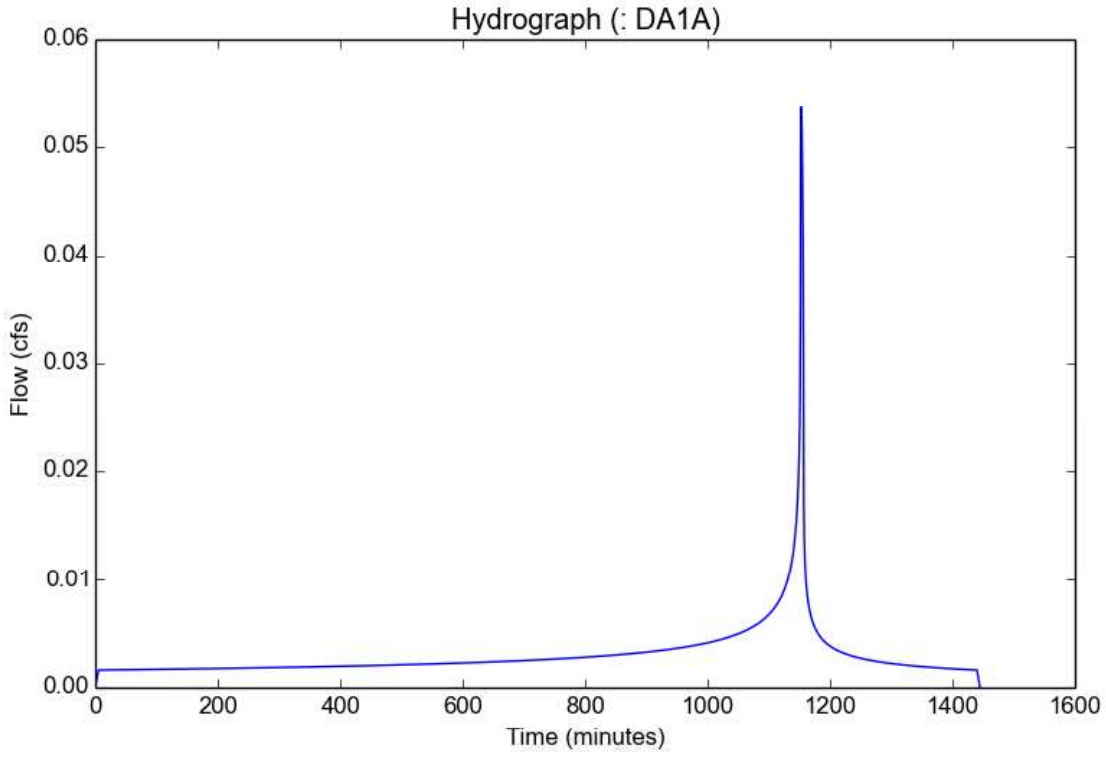
File location: //lci.local/Users/FolderRedirections/vickym/Desktop/Hotel Report.pdf
Version: HydroCalc 1.0.3

Input Parameters

Project Name	
Subarea ID	DA1A
Area (ac)	0.124
Flow Path Length (ft)	23.5
Flow Path Slope (vft/hft)	0.03
85th Percentile Rainfall Depth (in)	1.05
Percent Impervious	0.57
Soil Type	6
Design Storm Frequency	85th percentile storm
Fire Factor	0
LID	True

Output Results

Modeled (85th percentile storm) Rainfall Depth (in)	1.05
Peak Intensity (in/hr)	0.6265
Undeveloped Runoff Coefficient (Cu)	0.4127
Developed Runoff Coefficient (Cd)	0.6904
Time of Concentration (min)	5.0
Clear Peak Flow Rate (cfs)	0.0536
Burned Peak Flow Rate (cfs)	0.0536
24-Hr Clear Runoff Volume (ac-ft)	0.006
24-Hr Clear Runoff Volume (cu-ft)	263.151



Preliminary BMPs Site Plan

DA7

475.68FS
0" CF

476.25FS
0" CF

(476.60)FF
476.58FS

(476.60)FF
476.58FS

(476.60)FF
476.58FS

(476.60)FF
476.58FS

475.00TG
473.00IE

476.36TC
475.86FS

476.05TC
475.55FS

(476.60)FF
476.58FS

476.40FL

(476.60)FF
476.58FS

476.58FG

476.50 FF

(476.50)FF
476.48FS

NEW BUILDING #5
476.50 FF

476.50FF
476.48FS

476.48FS

476.50FF
476.48FS

EX. BUILDING #4
(476.60) FF

476.39FS

(476.60)FF
476.58FS

476.58FS

(476.60)FF
476.58FS

476.51FS

476.32FS

DA3

SWIMMING
POOL
476.30FS

476.50FF
476.48FS

476.10FS

474.86FS

475.08FF
475.06FS

476.30FS

474.86FS

475.08
475.06

474.33TG
472.33IE

474.45FS

474.92FS

476.75TW
473.85FG

463.86IE

TO LID
TREATMENT

476.75TW
473.75FG

462.82IE
(461.32)IE

(476.60)FF
476.58FS

476.44FS

476.44FS

(476.60)FF
476.58FS

476.94TW
473.94FG

476.44FS

(476.60)FF
476.58FS

476.50FS

476.50FS

476.50FS

476.44FS

473.73BW

476.94TW
473.94FG

473.13BW

476.94TW
473.94FG

473.21BW

473.50FS

8.3%@13'

8.3%@19'

473.49BW

473.51BW

476.94TW
473.94FG

BMP-5

DA5

BMP-4

BMP-3

COLORADO PL ℄

HUNTINGTON DR ℄

Appendix E

Noise Measurement Data Sheets

Noise Appendix

Field Noise Measurement Data Sheets

DUDEK

FIELD NOISE MEASUREMENT DATA

PROJECT: INDIGO HOTEL — PROJECT #: 11663.0
SITE ID:
SITE ADDRESS:
OBSERVER(S): PETE VIJAR
START DATE: 6/11/14 — END DATE: 6/12/14
START TIME: 10:33 — END TIME: 16:34

METEOROLOGICAL CONDITIONS

TEMP ____ F — HUMIDITY ____ % R.H. — WIND: CALM / LIGHT / MODERATE
WINDSPD ____ MPH — DIR. N NE E SE S SW W NW — VARIABLE / STEADY / GUSTY
SKY: SUNNY / CLEAR / OVRCAST / PRTLY CLDY / FOG / RAIN

ACOUSTIC MEASUREMENTS

MEAS. INSTRUMENT: PICCOLO SLM-3 — TYPE 1 2 — SERIAL # 1309270[illegible]
CALIBRATOR: B&SWA CA 114 — SERIAL # 48015
CALIBRATION CHECK — PRE-TEST ____ dBA SPL — POST-TEST ____ dBA SPL — WINDSCRN: YES

SETTINGS: A-WTD / SLOW / FAST / FRONTAL / RANDOM / ANSI / OTHER:

	REC. #	BEGIN	END	Leq	Lmax	Lmin	L90	L50	L10	OTHER (SPECIFY METRIC
LT-1	1-97	6/11-10:33	6/12-10:34	60.4	74.4	52.0				

COMMENTS: READING TAKEN AT 175 W. HUNTINGTON DRIVE, IN FRONT OF EXISTING BUILDING; PRIMARY NOISE SOURCE IS TRAFFIC ON W. HUNTINGTON DR.; METER CONCEALED IN SHRUB IN FRONT OF BUILDING

SOURCE INFO AND TRAFFIC COUNTS

PRIMARY NOISE SOURCE: TRAFFIC / AIRCRAFT / RAIL / INDUSTRIAL / OTHER:
ROADWAY TYPE: ASPHALT — DIST. TO RDWY C/L OR EOP: 4Px 28'
TRAFFIC COUNT DURATION: ___ MIN — SPEED ___ MIN — SPEED

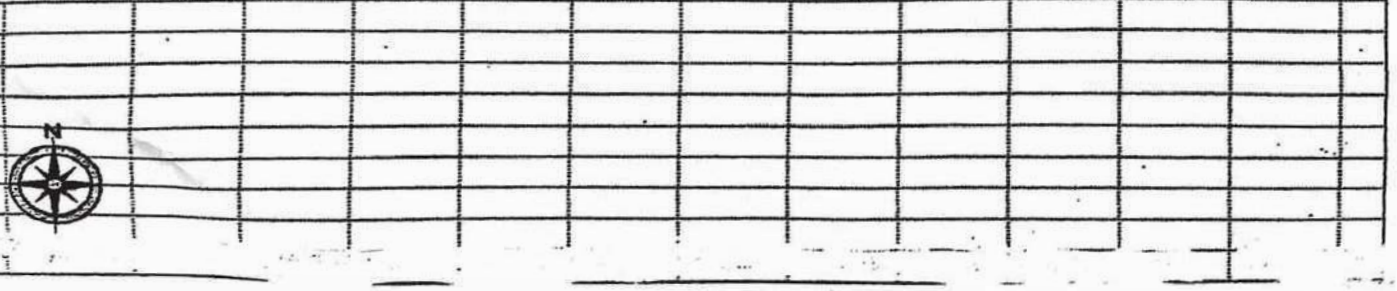
COUNT 1 (OR RDWY 1) DIRECTION	NB/EB	SB/WB	NB/EB SPEED	SB/WB SPEED	IF COUNTING BOTH DIRECTIONS AS ONE, CHECK HERE	COUNT 2 (OR RDWY 2) NB/EB	SB/WB	NB/EB SPEED	SB/WB SPEED
AUTOS									
MED TRKS									
HVY TRKS									
BUSES									
MOTRCLS									

SPEEDS ESTIMATED BY: RADAR / DRIVING THE PACE
POSTED SPEED LIMIT SIGNS SAY:

OTHER NOISE SOURCES (BACKGROUND): DIST. AIRCRAFT RUSTLING LEAVES DIST. BARKING DOGS / BIRDS / DIST. INDUSTRIAL
DIST. KIDS PLAYING DIST. CONVRSTNS / YELLING DIST. TRAFFIC (LIST RDWYS BELOW) DISTD GARDENERS/LANDSCAPING NOISE
OTHER:

DESCRIPTION / SKETCH

TERRAIN: HARD / SOFT / MIXED / FLAT / OTHER:
PHOTOS: 4836; 4837; 4838; 4839; 4840; 4841; 4842; 4843; 4844; 4845; 4847
OTHER COMMENTS / SKETCH



DUDEK

FIELD NOISE MEASUREMENT DATA

PROJECT INDIGO HOTEL — PROJECT # 11663.0
SITE ID
SITE ADDRESS — OBSERVER(S) PETE VITAR
START DATE 6/11/19 — END DATE 6/11/19
START TIME — END TIME

METEOROLOGICAL CONDITIONS
TEMP 86 F — HUMIDITY 40 % R.H. — WIND (CALM) LIGHT MODERATE
WINDSPD — MPH — DIR. N NE S SE S SW W NW — VARIABLE STEADY GUSTY
SKY (SUNNY) PRTLY CLDY OVRCAST — FOG — RAIN

ACOUSTIC MEASUREMENTS
MEAS. INSTRUMENT PICCOLO SLM-3 — TYPE 1 2 — SERIAL # 14037004
CALIBRATOR BSWA CA 114 — SERIAL # 980151
CALIBRATION CHECK — PRE-TEST ____ dBA SPL — POST-TEST ____ dBA SPL — WINDSCRN YES

SETTINGS — A-WTD (SLOW) FAST — FRONTAL RANDOM ANSI — OTHER:

REC. #	BEGIN	END	Leq	Lmax	Lmin	L90	L50	L10	OTHER (SPECIFY METRIC
(ST-1) 18-19	10:46	11:01	61.9	78.3	54.8				

COMMENTS
READING TAKEN IN PARKING LOT, TO THE EAST OF 125 W. HUNTINGTON DR.;
PRIMARY NOISE SOURCE IS TRAFFIC ON W. HUNTINGTON DR.;

SOURCE INFO AND TRAFFIC COUNTS
PRIMARY NOISE SOURCE (TRAFFIC) AIRCRAFT RAIL INDUSTRIAL OTHER:
ROADWAY TYPE: ASPHALT — DIST. TO RDWY C/L OR EOP: ABT 70'
TRAFFIC COUNT DURATION: 15 MIN — SPEED ____ MIN — SPEED

COUNT 1 (OR RDWY 1) DIRECTION	NB/EB	SB/WB	NB/EB SPEED	SB/WB SPEED
AUTOS	391			
MED TRKS	6			
HVY TRKS	6			
BUSES	2			
MOTRCLS	0			

IF COUNTING BOTH DIRECTIONS AS ONE, CHECK HERE ✓

COUNT 2 (OR RDWY 2)	NB/EB	SB/WB	NB/EB SPEED	SB/WB SPEED

SPEEDS ESTIMATED BY: RADAR / DRIVING THE PACE
POSTED SPEED LIMIT SIGNS SAY:

OTHER NOISE SOURCES (BACKGROUND): DIST. AIRCRAFT RUSTLING LEAVES DIST. BARKING DOGS (BIRDS) DIST. INDUSTRIAL
DIST. KIDS PLAYING DIST. CONVRSTNS / YELLING DIST. TRAFFIC (LIST RDWYS BELOW) DISTD GARDENERS/LANDSCAPING NOISE
OTHER:

DESCRIPTION / SKETCH
TERRAIN (HARD) SOFT MIXED FLAT OTHER:
PHOTOS 4849; 4850; 4851; 4852; 4853; 4854
OTHER COMMENTS / SKETCH

DUDEK

FIELD NOISE MEASUREMENT DATA

PROJECT: INDIGO HOTEL — PROJECT #: 11663.0
SITE ID:
SITE ADDRESS:
OBSERVER(S): PETE VITAR
START DATE: 6/11/19 — END DATE: 6/11/19
START TIME: — END TIME:

METEOROLOGICAL CONDITIONS
TEMP: 90 F — HUMIDITY: 34 % R.H. — WIND: (CALM) LIGHT MODERATE
WINDSPD: MPH — DIR. N NE S SE S SW W NW — VARIABLE STEADY GUSTY
SKY: (SUNNY) CLEAR — OVRCAST — (PRTLY CLDY) — FOG — RAIN

ACOUSTIC MEASUREMENTS
MEAS. INSTRUMENT: PICCOLO SLM-3 — TYPE 1 2 — SERIAL #: 14037004
CALIBRATOR: BSWA CA 114 — SERIAL #: 480151
CALIBRATION CHECK — PRE-TEST: dBA SPL — POST-TEST: dBA SPL — WINDSCRN: YES

SETTINGS: A-WTD (SLOW) FAST FRONTAL RANDOM ANSI OTHER:

(ST-2) REC. #	BEGIN	END	Leq	Lmax	Lmin	L90	L50	L10	OTHER (SPECIFY METRIC
20-21	11:05	11:20	58.9	73.4	51.4				

COMMENTS: READING TAKEN ON EAST SIDE OF PROPERTY AT 101 SANTA CRUZ RD. (RESIDENT). PRIMARY NOISE SOURCE IS TRAFFIC ON W. HUNTINGTON DR; SECONDARY IS LIGHT TRAFFIC ON SANTA CRUZ RD;

SOURCE INFO AND TRAFFIC COUNTS
PRIMARY NOISE SOURCE: (TRAFFIC) AIRCRAFT RAIL INDUSTRIAL OTHER:
ROADWAY TYPE: ASPHALT — DIST. TO RDWY C/L OR (EOP): 10' TO SANTA CRUZ EOP
TRAFFIC COUNT DURATION: 15 MIN — SPEED — ___ MIN — SPEED

COUNT 1 (OR RDWY 1) DIRECTION	NB/EB	SB/WB	NB/EB SPEED	SB/WB SPEED
AUTOS	9			
MED TRKS	0			
HVY TRKS	0			
BUSES	0			
MOTRCLS	0			

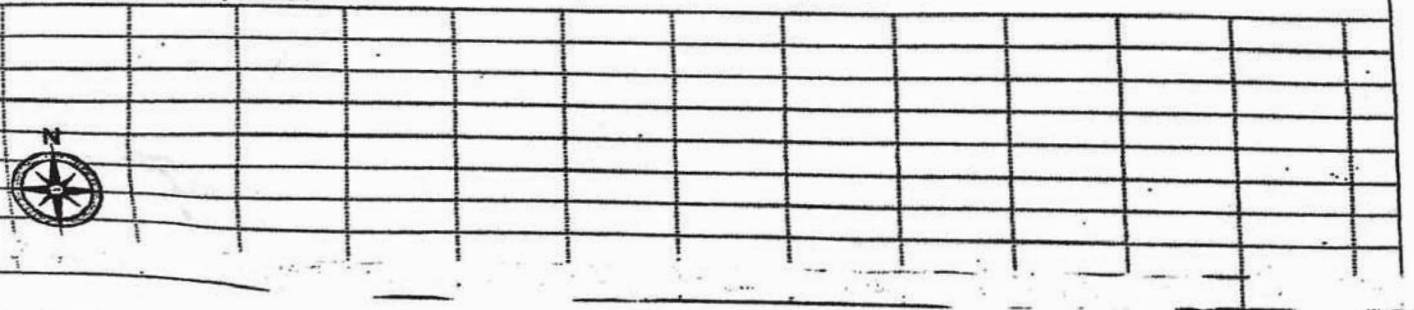
IF COUNTING BOTH DIRECTIONS AS ONE, CHECK HERE ✓

COUNT 2 (OR RDWY 2)	NB/EB	SB/WB	NB/EB SPEED	SB/WB SPEED

SPEEDS ESTIMATED BY: RADAR / DRIVING THE PACE
POSTED SPEED LIMIT SIGNS SAY:

OTHER NOISE SOURCES (BACKGROUND): DIST. AIRCRAFT RUSTLING LEAVES DIST. BARKING DOGS (BIRDS) DIST. INDUSTRIAL
DIST. KIDS PLAYING DIST. CONVRSTNS / YELLING (DIST. TRAFFIC (LIST RDWYS BELOW)) DISTD GARDENERS/LANDSCAPING NOISE
OTHER: W. HUNTINGTON DR

DESCRIPTION / SKETCH
TERRAIN: HARD SOFT (MIXED) FLAT OTHER:
PHOTOS: 4856; 4857; 4858; 4859; 4860; 4861;
OTHER COMMENTS / SKETCH



DUDEK

FIELD NOISE MEASUREMENT DATA

PROJECT: INDIGO HOTEL — PROJECT #: 11663.0
SITE ID:
SITE ADDRESS:
OBSERVER(S): PETE VITAR
START DATE: 6/11/19 — END DATE: 6/11/19
START TIME: — END TIME:

METEOROLOGICAL CONDITIONS
TEMP: 90 F — HUMIDITY: 33 % R.H. — WIND: (CALM) LIGHT MODERATE VARIABLE STEADY GUSTY
WINDSPD: MPH — DIR. N NE S SE S SW W NW
SKY: (SUNNY) CLEAR — OVRCAST — (PRTLY CLDY) — FOG — RAIN

ACOUSTIC MEASUREMENTS
MEAS. INSTRUMENT: PICCOLO SLM-3 — TYPE 1 2 — SERIAL #: 14037604
CALIBRATOR: B&WA CA 114 — SERIAL #: 480151
CALIBRATION CHECK — PRE-TEST: ____ dBA SPL — POST-TEST: ____ dBA SPL — WINDSCRN: YES

SETTINGS: A-WTD (SLOW) FAST FRONTAL RANDOM ANSI OTHER:

REC. #	BEGIN	END	Leq	Lmax	Lmin	L90	L50	L10	OTHER (SPECIFY METRIC
(ST-3) 22-23	11:23	11:38	54.4	63.0	50.1				

COMMENTS: READING TAKEN AT BACK PROPERTY LINE OF 117 SANTA CRUZ RD (RESIDENTIAL), IN ADJACENT PARKING LOT; PRIMARY NOISE SOURCE IS TRAFFIC ON W. HUNTINGTON DR, WHICH IS BLOCKED BY EXISTING BUILDING;

SOURCE INFO AND TRAFFIC COUNTS
PRIMARY NOISE SOURCE: (TRAFFIC) AIRCRAFT RAIL INDUSTRIAL OTHER:
ROADWAY TYPE: ASPHALT — DIST. TO RDWY C/L OR EOP:
TRAFFIC COUNT DURATION: 15 MIN — SPEED — ___ MIN — SPEED

COUNT 1 (OR RDWY 1) DIRECTION	NB/EB	SB/WB	NB/EB SPEED	SB/WB SPEED
AUTOS				
MED TRKS				
HVY TRKS				
BUSES				
MOTRCLS				

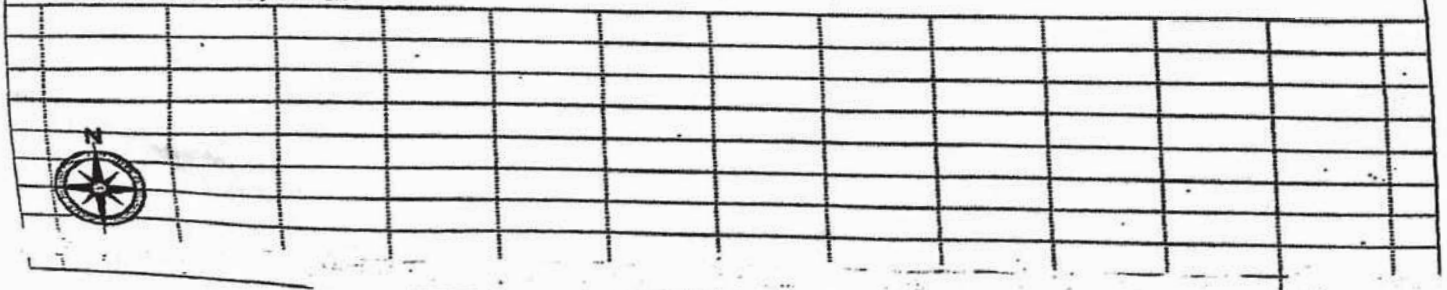
IF COUNTING BOTH DIRECTIONS AS ONE, CHECK HERE ✓

COUNT 2 (OR RDWY 2)	NB/EB	SB/WB	NB/EB SPEED	SB/WB SPEED

SPEEDS ESTIMATED BY: RADAR / DRIVING THE PACE
POSTED SPEED LIMIT SIGNS SAY:

OTHER NOISE SOURCES (BACKGROUND): DIST. AIRCRAFT RUSTLING LEAVES DIST. BARKING DOGS (BIRDS) DIST. INDUSTRIAL
DIST. KIDS PLAYING DIST. CONVRSTNS / YELLING (DIST. TRAFFIC (LIST RDWYS BELOW)) (DIST. GARDENERS/LANDSCAPING NOISE)
OTHER: W. HUNTINGTON DR;

DESCRIPTION / SKETCH
TERRAIN: HARD SOFT (MIXED) FLAT OTHER:
PHOTOS: 4863; 4864; 4865; 4866; 4867; 4868;
OTHER COMMENTS / SKETCH:



DUDEK

FIELD NOISE MEASUREMENT DATA

PROJECT: INDIGO HOTEL — PROJECT #: 11663.0
SITE ID:
SITE ADDRESS:
OBSERVER(S): PETE VITAR
START DATE: 6/11/19 — END DATE: 6/11/19
START TIME: — END TIME:

METEOROLOGICAL CONDITIONS
TEMP: 93 F — HUMIDITY: 30 % R.H. — WIND: (CALM) LIGHT MODERATE VARIABLE STEADY GUSTY
WINDSPD: MPH — DIR. N NE E SE S SW W NW
SKY: (SUNNY) CLEAR OVRCAST (PRTLY CLDY) FOG RAIN

ACOUSTIC MEASUREMENTS
MEAS. INSTRUMENT: PICCOLO SLM-3 — TYPE 1 2 — SERIAL #: 1403/004
CALIBRATOR: BSWA CA 114 — SERIAL #: 480151
CALIBRATION CHECK — PRE-TEST: dBA SPL — POST-TEST: dBA SPL — WINDSCRN: YES

SETTINGS: A-WTD (SLOW) FAST FRONTAL RANDOM ANSI OTHER:

	REC. #	BEGIN	END	Leq	Lmax	Lmin	L90	L50	L10	OTHER (SPECIFY METRIC
(ST-4)	24-25	11:55	12:10	66.2	86.0	54.5				

COMMENTS: READING TAKEN AT NORTHWEST CORNER OF ARCADIA PARK, NEAR INTERSECTION OF W. HUNTINGTON DR & SANTA CLARA STREET; PRIMARY NOISE SOURCE IS TRAFFIC ON HUNTINGTON DR & SANTA CLARA ST

SOURCE INFO AND TRAFFIC COUNTS
PRIMARY NOISE SOURCE: (TRAFFIC) AIRCRAFT RAIL INDUSTRIAL OTHER:
ROADWAY TYPE: ASPHALT — DIST. TO RDWY C/L OR (EOP): 80' FROM HUNTINGTON EOP
TRAFFIC COUNT DURATION: 15 MIN — SPEED: ___ MIN

COUNT 1 (OR RDWY 1)	DIRECTION	NB/EB	SB/WB	NB/EB SPEED	SB/WB SPEED
	AUTOS	386			
	MED TRKS	8			
	HVY TRKS	0			
	BUSES	3			
	MOTRCLS	2			

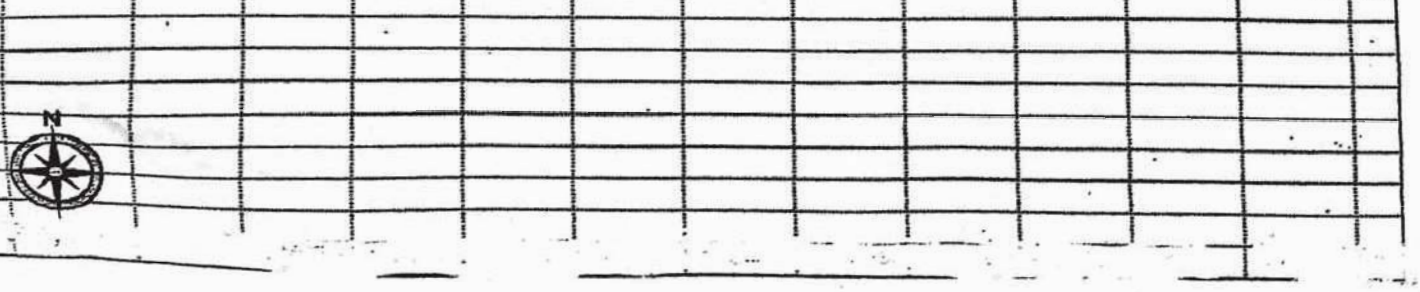
IF COUNTING BOTH DIRECTIONS AS ONE, CHECK HERE ✓

COUNT 2 (OR RDWY 2)	NB/EB	SB/WB	NB/EB SPEED	SB/WB SPEED

SPEEDS ESTIMATED BY: RADAR / DRIVING THE PACE — ON W. HUNTINGTON DR.
POSTED SPEED LIMIT SIGNS SAY:

OTHER NOISE SOURCES (BACKGROUND): DIST. AIRCRAFT RUSTLING LEAVES DIST. BARKING DOGS (BIRDS) DIST. INDUSTRIAL
DIST. KIDS PLAYING DIST. CONVRSTNS / YELLING DIST. TRAFFIC (LIST RDWYS BELOW) DISTD GARDENERS/LANDSCAPING NOISE
OTHER:

DESCRIPTION / SKETCH
TERRAIN: HARD SOFT (MIXED) FLAT OTHER:
PHOTOS: 4870; 4871; 4872; 4873; 4874; 4875
OTHER COMMENTS / SKETCH



Construction Noise Model Input / Output

Report date: 8/1/2019
Case Description: Indigo Hotel MND - Demolition

---- Receptor #1 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Nearest Resi - Source	Residential	65	60	55

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Concrete Saw	No	20		89.6	25	5
Excavator	No	40		80.7	30	5
Excavator	No	40		80.7	35	5
Excavator	No	40		80.7	75	5
Dozer	No	40		81.7	30	5
Dozer	No	40		81.7	70	5

Results

Equipment	Calculated (dBA) *Lmax	Leq	Noise Limits (dBA) Day Lmax	Day Leq	Evening Lmax	Evening Leq
Concrete Saw	90.6	83.6	N/A	N/A	N/A	N/A
Excavator	80.1	76.2	N/A	N/A	N/A	N/A
Excavator	78.8	74.8	N/A	N/A	N/A	N/A
Excavator	72.2	68.2	N/A	N/A	N/A	N/A
Dozer	81.1	77.1	N/A	N/A	N/A	N/A
Dozer	73.7	69.8	N/A	N/A	N/A	N/A
Total	90.6	85.7	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #2 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Typical Resi - Source	Residential	65	60	55

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Concrete Saw	No	20		89.6	130	5
Excavator	No	40		80.7	130	5
Excavator	No	40		80.7	130	5
Excavator	No	40		80.7	130	5
Dozer	No	40		81.7	130	5
Dozer	No	40		81.7	130	5

		Results					
		Calculated (dBA)		Noise Limits (dBA)			
				Day		Evening	
Equipment		*Lmax	Leq	Lmax	Leq	Lmax	Leq
Concrete Saw		76.3	69.3	N/A	N/A	N/A	N/A
Excavator		67.4	63.4	N/A	N/A	N/A	N/A
Excavator		67.4	63.4	N/A	N/A	N/A	N/A
Excavator		67.4	63.4	N/A	N/A	N/A	N/A
Dozer		68.4	64.4	N/A	N/A	N/A	N/A
Dozer		68.4	64.4	N/A	N/A	N/A	N/A
	Total	76.3	73.1	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 7/8/2019
Case Description: Indigo Hotel MND - Site Prep

				---- Receptor #1 ----		
		Baselines (dBA)				
Description	Land Use	Daytime	Evening	Night		
Nearest Resi - Source	Residential	65	60	55		

			Equipment			
			Spec	Actual	Receptor	Estimated
	Impact		Lmax	Lmax	Distance	Shielding
Description	Device	Usage(%)	(dBA)	(dBA)	(feet)	(dBA)
Dozer	No	40		81.7	70	5
Dozer	No	40		81.7	100	5
Dozer	No	40		81.7	120	5
Backhoe	No	40		77.6	75	5
Front End Loader	No	40		79.1	100	5
Front End Loader	No	40		79.1	120	5
Tractor	No	40	84		75	5

		Results					
		Calculated (dBA)		Noise Limits (dBA)			
				Day		Evening	
Equipment		*Lmax	Leq	Lmax	Leq	Lmax	Leq
Dozer		73.7	69.8	N/A	N/A	N/A	N/A
Dozer		70.6	66.7	N/A	N/A	N/A	N/A
Dozer		69.1	65.1	N/A	N/A	N/A	N/A
Backhoe		69	65.1	N/A	N/A	N/A	N/A
Front End Loader		68.1	64.1	N/A	N/A	N/A	N/A
Front End Loader		66.5	62.5	N/A	N/A	N/A	N/A
Tractor		75.5	71.5	N/A	N/A	N/A	N/A
	Total	75.5	75.9	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #2 ----

Baselines (dBA)

Description	Land Use	Daytime	Evening	Night
Typical Resi - Source	Residential	65	60	55

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Dozer	No	40		81.7	130	5
Dozer	No	40		81.7	130	5
Dozer	No	40		81.7	130	5
Backhoe	No	40		77.6	130	5
Front End Loader	No	40		79.1	130	5
Front End Loader	No	40		79.1	130	5
Tractor	No	40	84		130	5

Results

	Calculated (dBA)		Noise Limits (dBA)			
			Day		Evening	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq
Dozer	68.4	64.4	N/A	N/A	N/A	N/A
Dozer	68.4	64.4	N/A	N/A	N/A	N/A
Dozer	68.4	64.4	N/A	N/A	N/A	N/A
Backhoe	64.3	60.3	N/A	N/A	N/A	N/A
Front End Loader	65.8	61.8	N/A	N/A	N/A	N/A
Front End Loader	65.8	61.8	N/A	N/A	N/A	N/A
Tractor	70.7	66.7	N/A	N/A	N/A	N/A
Total	70.7	72.3	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 7/8/2019
Case Description: Indigo Hotel MND - Grading

---- Receptor #1 ----

Baselines (dBA)

Description	Land Use	Daytime	Evening	Night
Nearest Resi - Source	Residential	65	60	55

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Excavator	No	40		80.7	70	5
Grader	No	40	85		100	5
Dozer	No	40		81.7	120	5
Backhoe	No	40		77.6	75	5
Front End Loader	No	40		79.1	100	5

Tractor	No	40	84		120	5

		Results			
	Calculated (dBA)		Noise Limits (dBA)			
			Day		Evening	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq
Excavator	72.8	68.8	N/A	N/A	N/A	N/A
Grader	74	70	N/A	N/A	N/A	N/A
Dozer	69.1	65.1	N/A	N/A	N/A	N/A
Backhoe	69	65.1	N/A	N/A	N/A	N/A
Front End Loader	68.1	64.1	N/A	N/A	N/A	N/A
Tractor	71.4	67.4	N/A	N/A	N/A	N/A
Total	74	75.1	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #2 ----

		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
Typical Resi - Source	Residential	65	60	55

			Equipment			
			Spec	Actual	Receptor	Estimated
	Impact		Lmax	Lmax	Distance	Shielding
Description	Device	Usage(%)	(dBA)	(dBA)	(feet)	(dBA)
Excavator	No	40		80.7	130	5
Grader	No	40	85		130	5
Dozer	No	40		81.7	130	5
Backhoe	No	40		77.6	130	5
Front End Loader	No	40		79.1	130	5
Tractor	No	40	84		130	5

		Results			
	Calculated (dBA)		Noise Limits (dBA)			
			Day		Evening	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq
Excavator	67.4	63.4	N/A	N/A	N/A	N/A
Grader	71.7	67.7	N/A	N/A	N/A	N/A
Dozer	68.4	64.4	N/A	N/A	N/A	N/A
Backhoe	64.3	60.3	N/A	N/A	N/A	N/A
Front End Loader	65.8	61.8	N/A	N/A	N/A	N/A
Tractor	70.7	66.7	N/A	N/A	N/A	N/A
Total	71.7	72.6	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Report date: 7/8/2019
Case Description: Indigo Hotel MND - Building Construction

---- Receptor #1 ----

		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
Nearest Resi - Source	Residential	65	60	55

			Equipment			
			Spec	Actual	Receptor	Estimated
	Impact		Lmax	Lmax	Distance	Shielding
Description	Device	Usage(%)	(dBA)	(dBA)	(feet)	(dBA)
Crane	No	16		80.6	70	5
Man Lift	No	20		74.7	75	5
Man Lift	No	20		74.7	100	5
Man Lift	No	20		74.7	120	5
Generator	No	50		80.6	75	5
Backhoe	No	40		77.6	100	5
Front End Loader	No	40		79.1	120	5
Tractor	No	40	84		85	5
Welder / Torch	No	40		74	100	5

				Results			
		Calculated (dBA)			Noise Limits (dBA)		
				Day		Evening	
Equipment		*Lmax	Leq	Lmax	Leq	Lmax	Leq
Crane		72.6	64.7	N/A	N/A	N/A	N/A
Man Lift		66.2	59.2	N/A	N/A	N/A	N/A
Man Lift		63.7	56.7	N/A	N/A	N/A	N/A
Man Lift		62.1	55.1	N/A	N/A	N/A	N/A
Generator		72.1	69.1	N/A	N/A	N/A	N/A
Backhoe		66.5	62.6	N/A	N/A	N/A	N/A
Front End Loader		66.5	62.5	N/A	N/A	N/A	N/A
Tractor		74.4	70.4	N/A	N/A	N/A	N/A
Welder / Torch		63	59	N/A	N/A	N/A	N/A
	Total	74.4	74.5	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #2 ----

		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
Typical Resi - Source	Residential	65	60	55

			Equipment			
			Spec	Actual	Receptor	Estimated
	Impact		Lmax	Lmax	Distance	Shielding
Description	Device	Usage(%)	(dBA)	(dBA)	(feet)	(dBA)
Crane	No	16		80.6	130	5
Man Lift	No	20		74.7	130	5
Man Lift	No	20		74.7	130	5
Man Lift	No	20		74.7	130	5
Generator	No	50		80.6	130	5
Backhoe	No	40		77.6	130	5
Front End Loader	No	40		79.1	130	5
Tractor	No	40	84		130	5
Welder / Torch	No	40		74	130	5

		Results					
		Calculated (dBA)		Noise Limits (dBA)			
				Day		Evening	
Equipment		*Lmax	Leq	Lmax	Leq	Lmax	Leq
Crane		67.3	59.3	N/A	N/A	N/A	N/A
Man Lift		61.4	54.4	N/A	N/A	N/A	N/A
Man Lift		61.4	54.4	N/A	N/A	N/A	N/A
Man Lift		61.4	54.4	N/A	N/A	N/A	N/A
Generator		67.3	64.3	N/A	N/A	N/A	N/A
Backhoe		64.3	60.3	N/A	N/A	N/A	N/A
Front End Loader		65.8	61.8	N/A	N/A	N/A	N/A
Tractor		70.7	66.7	N/A	N/A	N/A	N/A
Welder / Torch		60.7	56.7	N/A	N/A	N/A	N/A
	Total	70.7	70.8	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 8/1/2019
Case Description: Indigo Hotel MND - Paving

				---- Receptor #1 ----		
		Baselines (dBA)				
Description	Land Use	Daytime	Evening	Night		
Nearest Resi - Source	Residential	65	60	55		

			Equipment			
			Spec	Actual	Receptor	Estimated
	Impact		Lmax	Lmax	Distance	Shielding
Description	Device	Usage(%)	(dBA)	(dBA)	(feet)	(dBA)
Paver	No	50		77.2	25	5
Paver	No	50		77.2	30	5
Drum Mixer	No	50		80	75	5
Concrete Pump Truck	No	20		81.4	35	5
Roller	No	20		80	50	5
Roller	No	20		80	35	5

		Results					
		Calculated (dBA)		Noise Limits (dBA)			
				Day		Evening	
Equipment		*Lmax	Leq	Lmax	Leq	Lmax	Leq
Paver		78.2	75.2	N/A	N/A	N/A	N/A
Paver		76.7	73.6	N/A	N/A	N/A	N/A
Drum Mixer		71.5	68.5	N/A	N/A	N/A	N/A
Concrete Pump Truck		79.5	72.5	N/A	N/A	N/A	N/A
Roller		75	68	N/A	N/A	N/A	N/A
Roller		78.1	71.1	N/A	N/A	N/A	N/A
	Total	79.5	80	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

		---- Receptor #2 ----		
		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
Typical Resi - Source	Residential	65	60	55

			Equipment			
			Spec	Actual	Receptor	Estimated
	Impact		Lmax	Lmax	Distance	Shielding
Description	Device	Usage(%)	(dBA)	(dBA)	(feet)	(dBA)
Paver	No	50		77.2	130	5
Paver	No	50		77.2	130	5
Drum Mixer	No	50		80	130	5
Concrete Pump Truck	No	20		81.4	130	5
Roller	No	20		80	130	5
Roller	No	20		80	130	5

		Results					
		Calculated (dBA)		Noise Limits (dBA)			
				Day		Evening	
Equipment		*Lmax	Leq	Lmax	Leq	Lmax	Leq
Paver		63.9	60.9	N/A	N/A	N/A	N/A
Paver		63.9	60.9	N/A	N/A	N/A	N/A
Drum Mixer		66.7	63.7	N/A	N/A	N/A	N/A
Concrete Pump Truck		68.1	61.1	N/A	N/A	N/A	N/A
Roller		66.7	59.7	N/A	N/A	N/A	N/A
Roller		66.7	59.7	N/A	N/A	N/A	N/A
	Total	68.1	69	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 7/8/2019
Case Description: Indigo Hotel MND - Arch Coating

		---- Receptor #1 ----		
		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
Nearest Resi - Source	Residential	65	60	55

			Equipment			
			Spec	Actual	Receptor	Estimated
	Impact		Lmax	Lmax	Distance	Shielding
Description	Device	Usage(%)	(dBA)	(dBA)	(feet)	(dBA)
Compressor (air)	No	40		77.7	70	5

	Results	
Calculated (dBA)		Noise Limits (dBA)

Equipment		*Lmax	Leq	Day Lmax	Day Leq	Evening Lmax	Evening Leq
Compressor (air)		69.7	65.8	N/A	N/A	N/A	N/A
	Total	69.7	65.8	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #2 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Typical Resi - Source	Residential	65	60	55

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Compressor (air)	No	40		77.7	130	5

Results

		Calculated (dBA)		Noise Limits (dBA) Day Lmax	Day Leq	Evening Lmax	Evening Leq
Equipment		*Lmax	Leq				
Compressor (air)		64.4	60.4	N/A	N/A	N/A	N/A
	Total	64.4	60.4	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

HVAC Noise Reference Information

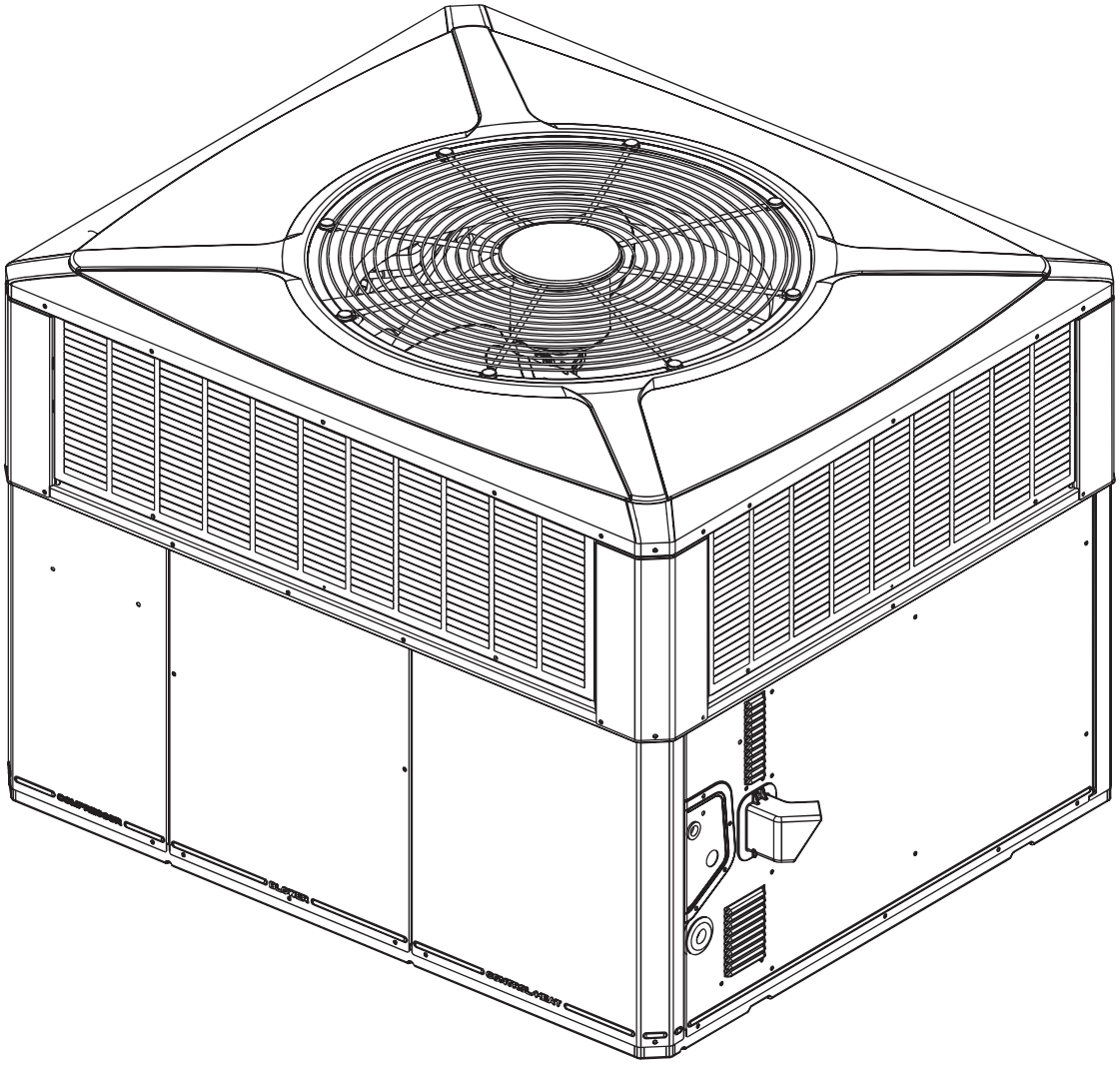
TRANE®

22-1799-17

Product Data

4DCY4024 through 4DCY4060

Single Packaged Convertible Dual Fuel
14 SEER
2 - 5 Ton, 40 - 120 MBTU
R-410A



Pub. No. 22-1799-17

General Data

MODEL	4DCY4024A1064B	4DCY4030A1075B	4DCY4036C1075A
RATED Volts/PH/Hz	208-230/1/60	208-230/1/60	208-230/1/60
Performance Cooling BTUH①	23600	30000	37000
Indoor Airflow (CFM)	760	880	1150
Power Input (KW)	2.162	2.15	3.11
EER/SEER(BTU/Watt-Hr.)⑤	12/14.0	12.0 / 14.25	12.0 / 14.0
Sound Power Rating [dB(A)]⑦	68	71	69
HP Heating Performance			
(High Temp.)BTUH / COP	22400 / 3.7	28000 / 3.9	33200 / 3.6
Power Input (KW)	1.77	2.15	2.7
(Low Temp.) BTUH / COP	11600 / 2.38	15400 / 2.48	22400 / 2.4
Power Input (KW)	1.24	1.81	2.5
HSPF (BTU / Watt-Hr.)	8.0	8.0	8.0
Gas Heating Performance②			
(High) Input BTUH	64000	75000	75000
Capacity BTUH	51500	60500	60500
Temp. Rise — Min/Max (°F)	35 / 65	30 / 60	30 / 60
(Low) Input BTUH	48000	56250	56250
Capacity BTUH	41200	48400	48400
AFUE	79	79.5	79.5
Type of Gas ③	NATURAL	NATURAL/LP	NATURAL
Gas Pipe Size (in.)	1/2	1/2	1/2
POWER CONN.—V/PH/HZ	208-230/1/60	208-230/1/60	208-230/1/60
Min. Brch. Cir. Ampacity④	16.1	19.1	26.2
Fuse Size — Max. (amps)	25	30	40
Fuse Size — Recmd. (amps)	25	30	40
COMPRESSOR	RECIPROCATING	RECIPROCATING	SCROLL
Volts/Ph/Hz	208-230/1/60	200-230/1/60	208-230/1/60
R.L. Amps — L.R. Amps	8.3 / 57.8	11.1 / 63	16.7 / 79
OUTDOOR COIL — TYPE	SPINE-FIN	SPINE-FIN	SPINE-FIN
Rows/F.P.I.	2 / 24	2 / 24	2 / 24
Face Area (sq.ft.)	13.32	13.32	15.49
Tube Size (in.)	3/8	3/8	3/8
Refrigerant Control	EXPANSION VALVE	EXPANSION VALVE	EXPANSION VALVE
INDOOR COIL — TYPE	PLATE FIN	PLATE FIN	PLATE FIN
Rows/F.P.I.	3 / 15	4 / 15	4 / 15
Face Area (sq.ft.)	3.54	3.54	3.54
Tube Size (in.)	3/8	3/8	3/8
Refrigerant Control	EXPANSION VALVE	EXPANSION VALVE	EXPANSION VALVE
Drain Conn. Size (in.)	3/4 FEMALE NPT	3/4 FEMALE NPT	3/4 FEMALE NPT
OUTDOOR FAN — TYPE	PROPELLER	PROPELLER	PROPELLER
Dia. (in.)	23.4	23.4	23.4
Drive/No. Speeds	DIRECT / 1	DIRECT / 1	DIRECT / 1
CFM @ 0.0 in. w.g. ⑦	2590	3250	3310
Motor — HP/R.P.M.	1/12 / 810	1/6 / 830	1/5 / 830
Volts/Ph/Hz	208-230/1/60	208-230/1/60	208-230/1/60
F.L. Amps/L.R. Amps	0.54 / 0.95	1.0 / 1.7	1.1 / 1.9
INDOOR FAN — TYPE	CENTRIFUGAL	CENTRIFUGAL	CENTRIFUGAL
Dia x Width (in.)	10 X 10	10 X 10	10 X 10
Drive/No. Speeds	DIRECT / VARIABLE	DIRECT / VARIABLE	DIRECT / VARIABLE
CFM @ 0.0 in. w.g.⑤	SEE FAN PERFORMANCE TABLE	SEE FAN PERFORMANCE TABLE	SEE FAN PERFORMANCE TABLE
Motor — HP/R.P.M.	1/2 / VARIABLE	1/2 / VARIABLE	1/2 / VARIABLE
Volts/Ph/Hz	200-230/1/60	208-230/1/60	200-230/1/60
F.L. Amps/L.R. Amps	4.3 / 4.3	4.3 / 4.3	4.3 / 4.3
COMBUSTION FAN — TYPE	CENTRIFUGAL	CENTRIFUGAL	CENTRIFUGAL
Drive/No. Speeds	DIRECT / 2	DIRECT / 2	DIRECT / 2
Motor — HP/R.P.M. (High/Low)	1/45 / 2800/1500	1/45 / 2800/1500	1/45 / 2800/1500
Volts/Ph/Hz	208-230/1/60	208-230/1/60	208-230/1/60
FLA	0.34	0.34	0.34
FILTER / FURNISHED	NO	NO	NO
Type Recommended	THROWAWAY	THROWAWAY	THROWAWAY
Recmd. Face Area (sq. ft.)⑥	4	4	4
REFRIGERANT / Charge (lbs.)	R410A / 6.5	R410A / 6.56	R410A / 7.5
DIMENSIONS	H X W X L	H X W X L	H X W X L
Crated (in.)	45.86 / 44.5 / 52.03	45.86 / 44.5 / 52.03	47.86 / 44.5 / 52.03
WEIGHT / Shipping / Net (lbs.)	481 / 385	481 / 385	488 / 392

① Certified in accordance with the Unitary Air-Conditioner Equipment certification program, which is based on AHRI Standard 210/240.

② All models are U L Listed. Ratings shown are for elevations up to 2000 ft. For higher elevations reduce ratings at a rate of 4% per 1000 ft. elevation.

③ Convertible to LPG.

④ This value is approximate. For more precise value, see Unit Nameplate.

⑤ Based on U.S. Government Standard Tests.

⑥ Filters must be installed in return air stream. Square footages listed are based on 300 f.p.m. face velocity. If permanent filters are used size per manufacturer's recommendation with a clean resistance of 0.05" W.C.

⑦ Sound Power values are not adjusted for AHRI 270-95 tonal corrections.

⑧ Standard Air — Dry Coil — Outdoor.

General Data

MODEL	4DCY4036B3075A	4DCY4042A1096B	4DCY4048B1096B
RATED Volts/PH/Hz	208-230/3/60	208-230/1/60	208-230/1/60
Performance Cooling BTUH①	36000	42000	47500
Indoor Airflow (CFM)	1185	1370	1470
Power Input (KW)	3.28	3.27	3.96
EER/SEER(BTU/Watt-Hr.)⑤	11.4 / 14.0	12.8 / 14.25	12.0 / 14.0
Sound Power Rating [dB(A)]⑦	69	74	73
HP Heating Performance			
(High Temp.)BTUH / COP	32400 / 3.5	39500 / 3.6	45000 / 3.5
Power Input (KW)	2.7	3.27	3.77
(Low Temp.) BTUH / COP	20600 / 2.36	23600 / 2.26	26800 / 2.3
Power Input (KW)	2.6	3.06	3.44
HSPF (BTU / Watt-Hr.)	8.0	8.0	8.0
Gas Heating Performance②			
(High) Input BTUH	75000	96000	96000
Capacity BTUH	60500	77500	77500
Temp. Rise — Min/Max (°F)	30 / 60	30 / 60	30 / 60
(Low) Input BTUH	56250	72000	72000
Capacity BTUH	48400	62000	62000
AFUE	80.0	80	80
Type of Gas ③	NATURAL	NATURAL/LP	NATURAL
Gas Pipe Size (in.)	1/2	1/2	1/2
POWER CONN.—V/PH/HZ	208-230/3/60	208-230/1/60	208-230/1/60
Min. Brch. Cir. Ampacity④	18.5	31.5	33.9
Fuse Size — Max. (amps)	25	50	50
Fuse Size — Recmd. (amps)	25	50	50
COMPRESSOR	SCROLL	SCROLL	SCROLL
Volts/Ph/Hz	208-230/3/60	208-230/1/60	208-230/1/60
R.L. Amps — L.R. Amps	10.4 / 73	18.6 / 105	20.5 / 109
OUTDOOR COIL — TYPE	SPINE-FIN	SPINE-FIN	SPINE-FIN
Rows/F.P.I.	2 / 24	2 / 24	2 / 24
Face Area (sq.ft.)	15.49	18.01	18.01
Tube Size (in.)	3/8	3/8	3/8
Refrigerant Control	EXPANSION VALVE	EXPANSION VALVE	EXPANSION VALVE
INDOOR COIL — TYPE	PLATE FIN	PLATE FIN	PLATE FIN
Rows/F.P.I.	4 / 15	3 / 15	3 / 15
Face Area (sq.ft.)	3.54	5	5.0
Tube Size (in.)	3/8	3/8	3/8
Refrigerant Control	EXPANSION VALVE	EXPANSION VALVE	EXPANSION VALVE
Drain Conn. Size (in.)	3/4 FEMALE NPT	3/4 FEMALE NPT	3/4 FEMALE NPT
OUTDOOR FAN — TYPE	PROPELLER	PROPELLER	PROPELLER
Dia. (in.)	23.4	28.2	28.2
Drive/No. Speeds	DIRECT / 1	DIRECT / 1	DIRECT / 1
CFM @ 0.0 in. w.g. ⑦	3270	4440	4450
Motor — HP/R.P.M.	1/5 / 830	1/4 / 825	1/4 / 825
Volts/Ph/Hz	208-230/1/60	208-230/1/60	208-230/1/60
F.L. Amps/L.R. Amps	1.1 / 1.9	1.5 / 3.4	1.4 / 3.5
INDOOR FAN — TYPE	CENTRIFUGAL	CENTRIFUGAL	CENTRIFUGAL
Dia x Width (in.)	10 X 10	11 X 10	11 X 10
Drive/No. Speeds	DIRECT / VARIABLE	DIRECT / VARIABLE	DIRECT / VARIABLE
CFM @ 0.0 in. w.g.⑤	SEE FAN PERFORMANCE TABLE	SEE FAN PERFORMANCE TABLE	SEE FAN PERFORMANCE TABLE
Motor — HP/R.P.M.	1/2 / VARIABLE	3/4 / VARIABLE	3/4 / VARIABLE
Volts/Ph/Hz	200-230/1/60	208-230/1/60	200-230/1/60
F.L. Amps/L.R. Amps	4.3 / 4.3	6.8 / 6.8	6.8 / 6.8
COMBUSTION FAN — TYPE	CENTRIFUGAL	CENTRIFUGAL	CENTRIFUGAL
Drive/No. Speeds	DIRECT / 2	DIRECT / 2	DIRECT / 2
Motor — HP/R.P.M. (High/Low)	1/45 / 2800/1500	1/45 / 2800/1500	1/45 / 2800/1500
Volts/Ph/Hz	208-230/1/60	208-230/1/60	208-230/1/60
FLA	0.34	0.34	0.34
FILTER / FURNISHED	NO	NO	NO
Type Recommended	THROWAWAY	THROWAWAY	THROWAWAY
Recmd. Face Area (sq. ft.)⑥	4	5.3	5.3
REFRIGERANT / Charge (lbs.)	R410A / 7.4	R410A / 7.25	R410A / 7.75
DIMENSIONS	H X W X L	H X W X L	H X W X L
Crated (in.)	47.86 / 44.5 / 52.03	47.86 / 47.4 / 61.75	47.86 / 47.4 / 61.75
WEIGHT / Shipping / Net (lbs.)	488 / 392	653 / 525	653 / 525

① Certified in accordance with the Unitary Air-Conditioner Equipment certification program, which is based on AHRI Standard 210/240.

② All models are U L Listed. Ratings shown are for elevations up to 2000 ft. For higher elevations reduce ratings at a rate of 4% per 1000 ft. elevation.

③ Convertible to LPG.

④ This value is approximate. For more precise value, see Unit Nameplate.

⑤ Based on U.S. Government Standard Tests.

⑥ Filters must be installed in return air stream. Square footages listed are based on 300 f.p.m. face velocity. If permanent filters are used size per manufacturer's recommendation with a clean resistance of 0.05" W.C.

⑦ Sound Power values are not adjusted for AHRI 270-95 tonal corrections.

⑧ Standard Air — Dry Coil — Outdoor.

General Data

MODEL	4DCY4048A3096C	4DCY4060B1120C	4DCY4060A3120C
RATED Volts/PH/Hz	208-230/3/60	208-230/1/60	208-230/3/60
Performance Cooling BTUH①	47000	58000	57500
Indoor Airflow (CFM)	1470	1785	1745
Power Input (KW)	4.03	4.83	5.48
EER/SEER(BTU/Watt-Hr.)⑤	10.65 / 14.0	12.0 / 14.0	11.5 / 14.0
Sound Power Rating [dB(A)]⑦	73	76	76
HP Heating Performance			
(High Temp.)BTUH / COP	42500 / 3.5	55000 / 3.6	54500 / 3.5
Power Input (KW)	3.56	4.48	4.56
(Low Temp.) BTUH / COP	26800 / 2.3	35400 / 2.4	36400 / 2.48
Power Input (KW)	3.44	4.30	4.29
HSPF (BTU / Watt-Hr.)	8.0	8.0	8.0
Gas Heating Performance②			
(High) Input BTUH	96000	120000	120000
Capacity BTUH	77500	96000	96000
Temp. Rise — Min/Max (°F)	30 / 60	30 / 60	30 / 60
(Low) Input BTUH	72000	90000	90000
Capacity BTUH	62000	77500	77500
AFUE	80	80.0	80.0
Type of Gas ③	NATURAL	NATURAL	NATURAL
Gas Pipe Size (in.)	1/2	1/2	1/2
POWER CONN.—V/PH/HZ	208-230/3/60	208-230/1/60	208-230/3/60
Min. Brch. Cir. Ampacity④	25.3	39.9	28.6
Fuse Size — Max. (amps)	35	60	45
Fuse Size — Recmd. (amps)	35	60	45
COMPRESSOR	SCROLL	SCROLL	SCROLL
Volts/Ph/Hz	208-230/3/60	208-230/1/60	208-230/3/60
R.L. Amps — L.R. Amps	13.7 / 83.1	25 / 134	16.0 / 110
OUTDOOR COIL — TYPE	SPINE-FIN	SPINE-FIN	SPINE-FIN
Rows/F.P.I.	2 / 24	2 / 24	2 / 24
Face Area (sq.ft.)	18.01	23.07	23.57
Tube Size (in.)	3/8	3/8	3/8
Refrigerant Control	EXPANSION VALVE	EXPANSION VALVE	EXPANSION VALVE
INDOOR COIL — TYPE	PLATE FIN	PLATE FIN	PLATE FIN
Rows/F.P.I.	3 / 15	4 / 15	4 / 15
Face Area (sq.ft.)	5.0	5.0	5.0
Tube Size (in.)	3/8	3/8	3/8
Refrigerant Control	EXPANSION VALVE	EXPANSION VALVE	EXPANSION VALVE
Drain Conn. Size (in.)	3/4 FEMALE NPT	3/4 FEMALE NPT	3/4 FEMALE NPT
OUTDOOR FAN — TYPE	PROPELLER	PROPELLER	PROPELLER
Dia. (in.)	28.2	28.2	28.2
Drive/No. Speeds	DIRECT / 1	DIRECT / 1	DIRECT / 1
CFM @ 0.0 in. w.g. ⑦	4450	5710	
Motor — HP/R.P.M.	1/4 / 825	1/3 / 830	1/3 / 830
Volts/Ph/Hz	208-230/1/60	208-230/1/60	208-230/1/60
F.L. Amps/L.R. Amps	1.4 / 3.5	1.7 / 3.5	1.7 / 3.5
INDOOR FAN — TYPE	CENTRIFUGAL	CENTRIFUGAL	CENTRIFUGAL
Dia x Width (in.)	11 X 10	11 X 10	11 X 10
Drive/No. Speeds	DIRECT / VARIABLE	DIRECT / VARIABLE	DIRECT / VARIABLE
CFM @ 0.0 in. w.g.⑤	SEE FAN PERFORMANCE TABLE	SEE FAN PERFORMANCE TABLE	SEE FAN PERFORMANCE TABLE
Motor — HP/R.P.M.	3/4 / VARIABLE	1 / VARIABLE	1 / VARIABLE
Volts/Ph/Hz	200-230/1/60	208-230/1/60	208-230/1/60
F.L. Amps/L.R. Amps	6.8 / 6.8	6.9 / 6.9	6.9 / 6.9
COMBUSTION FAN — TYPE	CENTRIFUGAL	CENTRIFUGAL	CENTRIFUGAL
Drive/No. Speeds	DIRECT / 2	DIRECT / 2	DIRECT / 2
Motor — HP/R.P.M. (High/Low)	1/45 / 2800/1500	1/45 / 2800/1500	1/45 / 2800/1500
Volts/Ph/Hz	208-230/1/60	208-230/1/60	208-230/1/60
FLA	0.34	0.34	0.34
FILTER / FURNISHED	NO	NO	NO
Type Recommended	THROWAWAY	THROWAWAY	THROWAWAY
Recmd. Face Area (sq. ft.)⑥	5.3	6.7	6.7
REFRIGERANT / Charge (lbs.)	R410A / 7.75	R410A / 11.94	R410A / 10.125
DIMENSIONS	H X W X L	H X W X L	H X W X L
Crated (in.)	47.86 / 47.4 / 61.75	51.86 / 47.4 / 61.75	51.86 / 47.4 / 61.75
WEIGHT / Shipping / Net (lbs.)	653 / 525	676 / 548	676 / 548

① Certified in accordance with the Unitary Air-Conditioner Equipment certification program, which is based on AHRI Standard 210/240.

② All models are U L Listed. Ratings shown are for elevations up to 2000 ft. For higher elevations reduce ratings at a rate of 4% per 1000 ft. elevation.

③ Convertible to LPG.

④ This value is approximate. For more precise value, see Unit Nameplate.

⑤ Based on U.S. Government Standard Tests.

⑥ Filters must be installed in return air stream. Square footages listed are based on 300 f.p.m. face velocity. If permanent filters are used size per manufacturer's recommendation with a clean resistance of 0.05" W.C.

⑦ Sound Power values are not adjusted for AHRI 270-95 tonal corrections.

⑧ Standard Air — Dry Coil — Outdoor.

TECHNICAL GUIDE

R-410A
ZE/ZF/ZR/XN/XP SERIES
3 - 6 TON
60 Hertz

Description

YORK® ZE/ZF/ZR/XN/XP Series units are convertible single package high efficiency rooftops with a common roof curb for the 3, 4, 5 and 6 Ton sizes (ZE, ZR, XN, XP not available in 6 Ton). Although the units are primarily designed for curb mounting on a roof, they can also be slab-mounted at ground level or set on steel beams above a finished roof.

All ZE/ZF/ZR/XN/XP Series units are self-contained and assembled on rigid full perimeter base rails allowing for overhead rigging. Every unit is completely charged, wired, piped and tested at the factory to provide a quick and easy field installation.

All models (including those with an economizer) are convertible between bottom and horizontal duct connections.

ZE/ZF/ZR Series units are available in the following configurations: cooling only, cooling with electric heat, and cooling with one or two stage gas heat. Electric heaters are available as factory-installed option or field installed accessory.

XN/XP Series units are available in the following configurations: cooling and heating only and cooling and heating with electric heat.

Tested in accordance with:

DESIGN CERTIFIED

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CERTIFIED

AHRI CERTIFIED www.ahridirectory.org Unitary Small AC AHRI Standard 210/240

AHRI CERTIFIED www.ahridirectory.org Unitary Small HP AHRI Standard 210/240

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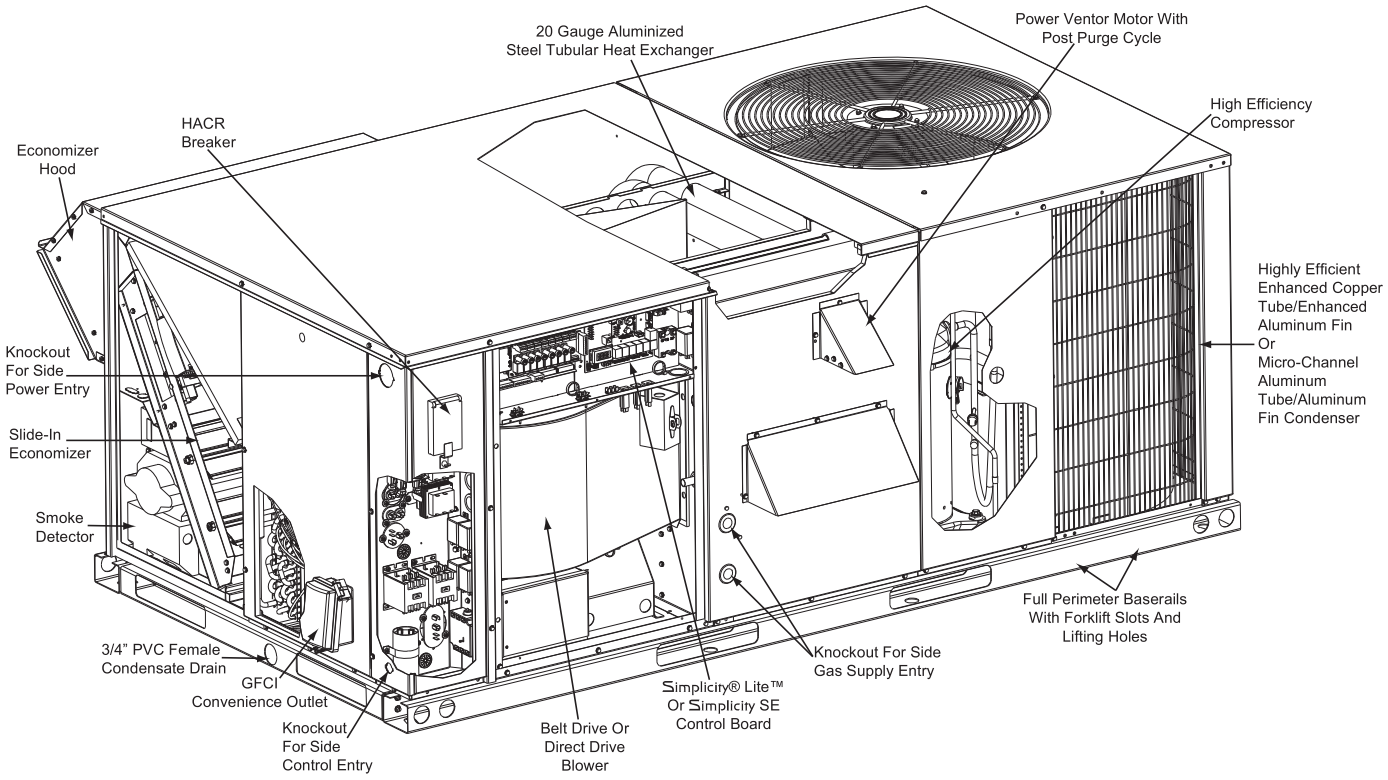
Component Location

Gas/Electric



Sound Performance

ZF/ZR/XP Indoor Sound Power Levels

Size (Tons)	CFM	ESP (IWG)	Blower		Sound Power, dB (10^{-12}) Watts							
					Sound Rating[1]	Octave Band Centerline Frequency (Hz)						
			RPM	BHP	dB (A)	63	125	250	500	1000	2000	4000	8000
036 (3.0)	1200	0.2	630	0.41	63	82	77	59	50	43	42	40	45
048 (4.0)	1600	0.2	791	0.54	72	95	84	58	54	46	44	45	44
060 (5.0)	2000	0.2	840	0.67	62	84	71	58	53	50	49	49	49
072 (6.0)	2200	0.3	920	1.45	76	61	71	68	67	72	66	61	54

1. These values have been accessed using a model of sound propagation from a point source into the hemispheric/free field. The dBA values provided are to be used for reference only. Calculation of dBA values cover matters of system design and the fan manufacture has no way of knowing the details of each system. This constitutes an exception to any specification or guarantee requiring a dBA value of sound data in any other form than sound power level ratings.

ZE/ZF/ZR Outdoor Sound Power Levels

Size (Tons)	Sound Rating[1] dB (A)	Octave Band Centerline Frequency (Hz)							
		63	125	250	500	1000	2000	4000	8000
036 (3.0)	81	87.5	86.0	81.0	77.0	75.0	69.5	65.5	70.5
048 (4.0)	80	84.5	81.0	80.0	78.0	75.0	70.0	67.0	70.5
060 (5.0)	82	86.5	87.5	81.5	77.5	75.0	71.5	68.0	70.5
072 (6.0)	83	-	84.0	85.0	79.0	80.0	72.0	67.5	62.5

1. Rated in accordance with AHRI 270 standard.

XN/XP Outdoor Sound Power Levels

Size (Tons)	Sound Rating[1] dB (A)	Octave Band Centerline Frequency (Hz)							
		63	125	250	500	1000	2000	4000	8000
036 (3.0)	76	83.5	84.5	76.5	72.0	68.0	66.0	60.0	56.0
048 (4.0)	80	85.0	83.0	81.0	77.5	75.5	71.5	67.5	61.5
060 (5.0)	80	86.0	84.0	81.0	77.0	75.5	71.0	66.5	60.5

1. Rated in accordance with AHRI 270 standard.

YORK® PREDATOR®

TECHNICAL GUIDE
R-410A
ZF SERIES
6.5 - 12.5 TON
60 Hertz

ZF 6.5 THROUGH 10 TON

ZF12.5 TON

Description

ASHRAE 90.1 COMPLIANT

YORK® Predator® units are convertible single packages with a common footprint cabinet and common roof curb for all 6.5 through 12.5 ton models. All units have two compressors with independent refrigeration circuits to provide 2 stages of cooling. The units were designed for light commercial applications and can be easily installed on a roof curb, slab, or frame.

All Predator® units are self-contained and assembled on rigid full perimeter base rails allowing for 3-way forklift access and overhead rigging. Every unit is completely charged, wired, piped, and tested at the factory to provide a quick and easy field installation.

Predator® units in all tonnage sizes are convertible between side airflow and down airflow, with corresponding economizer if economizer option is desired.

Predator® units are available in the following configurations: cooling only, cooling with electric heat, and cooling with gas heat. Electric heaters are available as factory-installed options or field-installed accessories.

All units provide constant supply air volume. A variable air volume (VAV) option, which features a variable frequency drive (VFD), is available on 6.5 through 12.5 ton models.

SMART EQUIPMENT

Tested in accordance with:

DESIGN CERTIFIED

C SA US

AHRI CERTIFIED
www.ahridirectory.org
Unitary Large AC
AHRI Standard 340/360

CSA CERTIFIED

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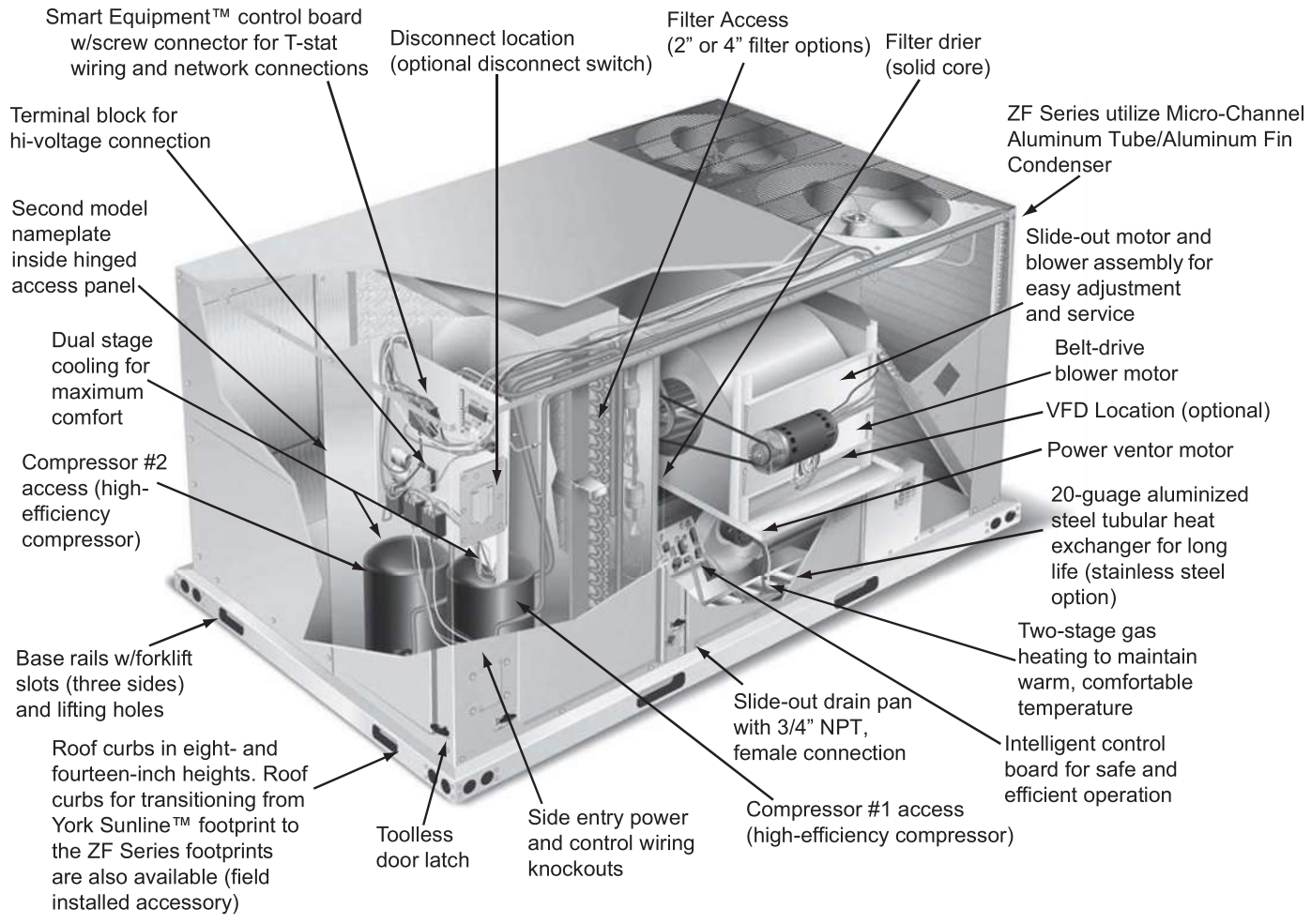
Component Location

Cooling With Gas Heat



Electric Heat Multipliers

Voltage		kW Capacity Multipliers[1]
Nominal	Applied	
240	208	0.75
	230	0.92
480	460	0.92
600	575	0.92

1. Electric heaters are rated at nominal voltage. Use this table to determine the electric heat capacity for heaters applied at lower voltages.

Sound Performance

Indoor Sound Power Levels

Size (Tons)	Model	CFM	ESP (IWG)	Blower		Sound Power, dB (10^{-12}) Watts							
						Sound Rating[1] dB (A)	Octave Band Centerline Frequency (Hz)						
				RPM	BHP		63	125	250	500	1000	2000	4000	8000
078 (6.5)	ZF	2600	0.6	812	1.14	74	71	73	73	71	69	65	65	60
090 (7.5)	ZF	3000	0.6	854	1.47	77	74	76	76	74	72	68	68	63
102 (8.5)	ZF	3400	0.6	872	1.65	80	77	79	79	77	75	71	71	66
120 (10)	ZF	4000	0.6	959	2.29	83	80	82	82	80	78	74	74	69
150 (12.5)	ZF	5000	0.6	1132	3.74	87	84	86	86	84	82	78	78	73

1. These values have been accessed using a model of sound propagation from a point source into the hemispheric/free field. The dBA values provided are to be used for reference only. Calculation of dBA values cover matters of system design and the fan manufacture has no way of knowing the details of each system. This constitutes an exception to any specification or guarantee requiring a dBA value of sound data in any other form than sound power level ratings.

Outdoor Sound Power Levels

ZF078-150

Size (Tons)	Model	Sound Rating[1] dB (A)	Octave Band Centerline Frequency (Hz)							
			63	125	250	500	1000	2000	4000	8000
078 (6.5)	ZF	84	86.0	87.5	86.0	82.5	79.0	73.5	68.5	62.0
090 (7.5)	ZF	89	89.5	92.0	89.0	87.5	84.0	78.5	73.5	66.5
102 (8.5)	ZF	91	91.5	93.5	92.5	89.0	85.5	80.5	76.0	71.0
120 (10)	ZF	92	99.5	94.5	92.0	90.0	87.0	81.0	76.0	70.0
150 (12.5)	ZF	88	91.0	92.5	90.0	85.0	81.5	77.0	73.0	66.5

1. Rated in accordance with AHRI 270 standard.

Traffic Noise Model Input / Output

Dudek				1 August 2019							
MG				TNM 2.5							
INPUT: ROADWAYS							Average pavement type shall be used unless				
PROJECT/CONTRACT:	11663.01						a State highway agency substantiates the use				
RUN:	Indigo Hotel Project - Existing Weekday						of a different type with the approval of FHWA				
Roadway		Points									
Name	Width	Name	No.	Coordinates (pavement)			Flow Control			Segment	
				X	Y	Z	Control Device	Speed Constraint	Percent Vehicles Affected	Pvmt Type	On Struct?
	ft			ft	ft	ft		mph	%		
W Huntington Dr east of Santa Clara St	75.0	point1	1	2,339.2	678.7	475.00				Average	
		point3	3	1,964.5	670.5	475.00				Average	
		point4	4	1,427.5	669.8	475.00					
Santa Clara St north of W Huntington Dr	75.0	point32	32	2,024.1	1,340.1	475.00				Average	
		point25	25	1,957.2	1,304.5	475.00				Average	
		point26	26	1,860.9	1,218.6	475.00				Average	
		point27	27	1,748.9	1,077.2	475.00				Average	
		point28	28	1,434.3	687.3	475.00				Average	
		point29	29	1,412.6	656.9	475.00					
Colorado Place	56.0	point34	34	968.8	669.6	475.00				Average	
		point18	18	870.4	689.3	475.00				Average	
		point19	19	747.9	737.4	475.00				Average	
		point20	20	660.4	794.3	475.00				Average	
		point21	21	583.9	853.3	475.00				Average	
		point22	22	504.7	944.2	475.00				Average	
		point23	23	366.9	1,174.3	475.00					
W Huntington Dr west of Santa Clara St	75.0	point35	35	1,416.3	671.2	475.00				Average	
		point5	5	1,245.7	668.1	475.00				Average	
		point6	6	1,088.3	665.5	475.00				Average	
		point7	7	1,025.7	660.5	475.00					
Huntington Dr EB	75.0	point36	36	1,412.6	656.9	475.00				Average	
		point30	30	1,244.2	435.0	475.00				Average	
		point2	2	885.5	-24.3	475.00					
W Huntington Dr west of Colorado Pl	75.0	point37	37	1,025.7	660.5	475.00				Average	
		point8	8	956.2	641.4	475.00				Average	

		point9	9	829.5	601.5	475.00				Average	
		point10	10	726.2	558.9	475.00				Average	
		point11	11	652.5	519.7	475.00				Average	
		point12	12	575.4	464.6	475.00				Average	
		point13	13	481.7	392.3	475.00				Average	
		point14	14	376.3	264.1	475.00				Average	
		point15	15	340.5	215.9	475.00				Average	
		point16	16	169.9	-5.0	475.00					

Dudek 1 August 201

MG TNM 2.5

INPUT: TRAFFIC FOR LAeq1h Percentages

PROJECT/CONTRACT: 11663.01

RUN: Indigo Hotel Project - Existing Weekday

Roadway	Points												
Name	Name	No.	Segment										
			Total	Autos		MTrucks		HTrucks		Buses		Motorcycles	
			Volume	P	S	P	S	P	S	P	S	P	S
			veh/hr	%	mph	%	mph	%	mph	%	mph	%	mph
W Huntington Dr east of Santa Clara St	point1	1	2825	97	30	2	30	1	30	0	0	0	0
	point3	3	2825	97	30	2	30	1	30	0	0	0	0
	point4	4											
Santa Clara St north of W Huntington Dr	point32	32	1453	97	45	2	45	1	45	0	0	0	0
	point25	25	1453	97	45	2	45	1	45	0	0	0	0
	point26	26	1453	97	45	2	45	1	45	0	0	0	0
	point27	27	1453	97	45	2	45	1	45	0	0	0	0
	point28	28	1453	97	45	2	45	1	45	0	0	0	0
	point29	29											
Colorado Place	point34	34	1390	97	40	2	40	1	40	0	0	0	0
	point18	18	1390	97	40	2	40	1	40	0	0	0	0
	point19	19	1390	97	40	2	40	1	40	0	0	0	0
	point20	20	1390	97	40	2	40	1	40	0	0	0	0
	point21	21	1390	97	40	2	40	1	40	0	0	0	0
	point22	22	1390	97	40	2	40	1	40	0	0	0	0
	point23	23											
W Huntington Dr west of Santa Clara St	point35	35	2825	97	30	2	30	1	30	0	0	0	0
	point5	5	2825	97	30	2	30	1	30	0	0	0	0
	point6	6	2825	97	30	2	30	1	30	0	0	0	0
	point7	7											
Huntington Dr EB	point36	36	1453	97	45	2	45	1	45	0	0	0	0
	point30	30	1453	97	45	2	45	1	45	0	0	0	0
	point2	2											

W Huntington Dr west of Colorado Pl	point37	37	1672	97	45	2	45	1	45	0	0	0	0
	point8	8	1672	97	45	2	45	1	45	0	0	0	0
	point9	9	1672	97	45	2	45	1	45	0	0	0	0
	point10	10	1672	97	45	2	45	1	45	0	0	0	0
	point11	11	1672	97	45	2	45	1	45	0	0	0	0
	point12	12	1672	97	45	2	45	1	45	0	0	0	0
	point13	13	1672	97	45	2	45	1	45	0	0	0	0
	point14	14	1672	97	45	2	45	1	45	0	0	0	0
	point15	15	1672	97	45	2	45	1	45	0	0	0	0
	point16	16											

Dudek						1 August 2019					
MG						TNM 2.5					
INPUT: RECEIVERS											
PROJECT/CONTRACT:	11663.01										
RUN:	Indigo Hotel Project - Existing Weekday										
Receiver											
Name	No.	#DUs	Coordinates (ground)			Height	Input Sound Levels and Criteria				Active
			X	Y	Z	above	Existing	Impact Criteria		NR	in
						Ground	LAeq1h	LAeq1h	Sub'l	Goal	Calc.
			ft	ft	ft	ft	dBA	dBA	dB	dB	
ST1	1	1	1,117.8	781.8	475.00	5.00	0.00	66	10.0	8.0	Y
ST2	2	1	1,201.9	968.4	475.00	5.00	0.00	66	10.0	8.0	Y
ST3	3	1	891.2	976.2	475.00	5.00	0.00	66	10.0	8.0	Y
ST4	4	1	1,447.8	547.1	475.00	5.00	0.00	66	10.0	8.0	Y
LT1	5	1	1,045.4	735.2	475.00	5.00	0.00	66	10.0	8.0	Y

Dudek 1 August 2019
MG TNM 2.5

INPUT: BARRIERS
PROJECT/CONTRACT: 11663.01
RUN: Indigo Hotel Project - Existing Weekday

Barrier									Points										
Name	Type	Height		If Wall	If Berm			Add'tnl	Name	No.	Coordinates (bottom)			Height	Segment				
		Min	Max	$ per Unit Area	$ per Unit Vol.	Top Width	Run:Rise	$ per Unit Length			X	Y	Z	at Point	Seg Ht Increment	#Up	#Dn	On Struct?	Important Reflections?
		ft	ft	$/sq ft	$/cu yd	ft	ft:ft	$/ft			ft	ft	ft	ft	ft				
Barrier1	W	0.00	99.99	0.00				0.00	point1	1	1,208.5	959.8	475.00	6.00	0.00	0	0		
									point3	3	1,035.7	955.5	475.00	6.00	0.00	0	0		
									point4	4	923.1	986.1	475.00	6.00	0.00	0	0		
									point5	5	806.1	1,052.8	475.00	6.00	0.00	0	0		
									point6	6	732.8	1,142.5	475.00	6.00					
Barrier6	W	0.00	99.99	0.00				0.00	point21	21	732.8	810.0	475.00	35.00	0.00	0	0		
									point23	23	900.1	743.3	475.00	35.00	0.00	0	0		
									point24	24	1,066.3	746.6	475.00	35.00	0.00	0	0		
									point25	25	1,067.4	830.8	475.00	35.00	0.00	0	0		
									point26	26	905.5	831.9	475.00	35.00	0.00	0	0		
									point27	27	761.2	894.2	475.00	35.00					
Barrier6-2-2	W	0.00	99.99	0.00				0.00	point48	48	529.4	1,146.8	475.00	30.00	0.00	0	0		
									point29	29	675.9	900.8	475.00	30.00	0.00	0	0		
									point30	30	785.3	963.1	475.00	30.00	0.00	0	0		
									point31	31	645.3	1,224.5	475.00	30.00					
Barrier6-2-2-2-2	W	0.00	99.99	0.00				0.00	point50	50	1,359.3	770.7	475.00	20.00	0.00	0	0		
									point33	33	1,443.5	768.5	475.00	20.00	0.00	0	0		
									point34	34	1,445.7	852.6	475.00	20.00	0.00	0	0		
									point35	35	1,361.5	854.8	475.00	20.00					
Barrier6-2-2-2-2-2-2	W	0.00	99.99	0.00				0.00	point52	52	2,055.7	835.8	475.00	20.00	0.00	0	0		
									point37	37	2,057.9	719.9	475.00	20.00	0.00	0	0		
									point38	38	2,158.5	724.3	475.00	20.00	0.00	0	0		
									point39	39	2,158.5	781.1	475.00	20.00	0.00	0	0		
									point40	40	2,230.6	778.9	475.00	20.00	0.00	0	0		
									point41	41	2,221.9	1,026.0	475.00	20.00	0.00	0	0		
									point42	42	2,171.6	1,028.2	475.00	20.00	0.00	0	0		
									point43	43	2,168.7	981.4	475.00	20.00					
Barrier6-2-2-2-2-2-2-2-2	W	0.00	99.99	0.00				0.00	point54	54	1,995.0	801.8	475.00	20.00	0.00	0	0		
									point45	45	1,996.1	722.0	475.00	20.00	0.00	0	0		
									point46	46	2,056.2	725.3	475.00	20.00	0.00	0	0		
									point22	22	2,054.1	801.0	475.00	20.00					

Dudek
MG
1 August 2019
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: 11663.01
RUN: Indigo Hotel Project - Existing Weekday
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h		Increase over existing		Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Noise Reduction Goal	Calculated minus Goal
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc					
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
ST1	1	1	0.0	64.3	66	64.3	10	----	64.3	0.0	8	-8.0
ST2	2	1	0.0	55.1	66	55.1	10	----	55.1	0.0	8	-8.0
ST3	3	1	0.0	50.7	66	50.7	10	----	50.7	0.0	8	-8.0
ST4	4	1	0.0	67.5	66	67.5	10	Snd Lvl	67.5	0.0	8	-8.0
LT1	5	1	0.0	67.3	66	67.3	10	Snd Lvl	67.3	0.0	8	-8.0

Dwelling Units	# DUs	Noise Reduction Min	Noise Reduction Avg	Noise Reduction Max
		dB	dB	dB
All Selected	5	0.0	0.0	0.0
All Impacted	2	0.0	0.0	0.0
All that meet NR Goal	0	0.0	0.0	0.0

Dudek				1 August 2019							
MG				TNM 2.5							
INPUT: ROADWAYS							Average pavement type shall be used unless				
PROJECT/CONTRACT:	11663.01						a State highway agency substantiates the use				
RUN:	Indigo Hotel Project - Existing Saturday						of a different type with the approval of FHWA				
Roadway		Points									
Name	Width	Name	No.	Coordinates (pavement)			Flow Control			Segment	
				X	Y	Z	Control Device	Speed Constraint	Percent Vehicles Affected	Pvmt Type	On Struct?
	ft			ft	ft	ft		mph	%		
W Huntington Dr east of Santa Clara St	75.0	point1	1	2,339.2	678.7	475.00				Average	
		point3	3	1,964.5	670.5	475.00				Average	
		point4	4	1,427.5	669.8	475.00					
Santa Clara St north of W Huntington Dr	75.0	point32	32	2,024.1	1,340.1	475.00				Average	
		point25	25	1,957.2	1,304.5	475.00				Average	
		point26	26	1,860.9	1,218.6	475.00				Average	
		point27	27	1,748.9	1,077.2	475.00				Average	
		point28	28	1,434.3	687.3	475.00				Average	
		point29	29	1,412.6	656.9	475.00					
Colorado Place	56.0	point34	34	968.8	669.6	475.00				Average	
		point18	18	870.4	689.3	475.00				Average	
		point19	19	747.9	737.4	475.00				Average	
		point20	20	660.4	794.3	475.00				Average	
		point21	21	583.9	853.3	475.00				Average	
		point22	22	504.7	944.2	475.00				Average	
		point23	23	366.9	1,174.3	475.00					
W Huntington Dr west of Santa Clara St	75.0	point35	35	1,416.3	671.2	475.00				Average	
		point5	5	1,245.7	668.1	475.00				Average	
		point6	6	1,088.3	665.5	475.00				Average	
		point7	7	1,025.7	660.5	475.00					
Huntington Dr EB	75.0	point36	36	1,412.6	656.9	475.00				Average	
		point30	30	1,244.2	435.0	475.00				Average	
		point2	2	885.5	-24.3	475.00					
W Huntington Dr west of Colorado Pl	75.0	point37	37	1,025.7	660.5	475.00				Average	
		point8	8	956.2	641.4	475.00				Average	

		point9	9	829.5	601.5	475.00				Average	
		point10	10	726.2	558.9	475.00				Average	
		point11	11	652.5	519.7	475.00				Average	
		point12	12	575.4	464.6	475.00				Average	
		point13	13	481.7	392.3	475.00				Average	
		point14	14	376.3	264.1	475.00				Average	
		point15	15	340.5	215.9	475.00				Average	
		point16	16	169.9	-5.0	475.00					

Dudek 1 August 201

MG TNM 2.5

INPUT: TRAFFIC FOR LAeq1h Percentages

PROJECT/CONTRACT: 11663.01

RUN: Indigo Hotel Project - Existing Saturday

Roadway	Points												
Name	Name	No.	Segment										
			Total	Autos		MTrucks		HTrucks		Buses		Motorcycles	
			Volume	P	S	P	S	P	S	P	S	P	S
			veh/hr	%	mph	%	mph	%	mph	%	mph	%	mph
W Huntington Dr east of Santa Clara St	point1	1	2409	97	30	2	30	1	30	0	0	0	0
	point3	3	2409	97	30	2	30	1	30	0	0	0	0
	point4	4											
Santa Clara St north of W Huntington Dr	point32	32	1238	97	45	2	45	1	45	0	0	0	0
	point25	25	1238	97	45	2	45	1	45	0	0	0	0
	point26	26	1238	97	45	2	45	1	45	0	0	0	0
	point27	27	1238	97	45	2	45	1	45	0	0	0	0
	point28	28	1238	97	45	2	45	1	45	0	0	0	0
	point29	29											
Colorado Place	point34	34	980	97	40	2	40	1	40	0	0	0	0
	point18	18	980	97	40	2	40	1	40	0	0	0	0
	point19	19	980	97	40	2	40	1	40	0	0	0	0
	point20	20	980	97	40	2	40	1	40	0	0	0	0
	point21	21	980	97	40	2	40	1	40	0	0	0	0
	point22	22	980	97	40	2	40	1	40	0	0	0	0
	point23	23											
W Huntington Dr west of Santa Clara St	point35	35	2409	97	30	2	30	1	30	0	0	0	0
	point5	5	2409	97	30	2	30	1	30	0	0	0	0
	point6	6	2409	97	30	2	30	1	30	0	0	0	0
	point7	7											
Huntington Dr EB	point36	36	1238	97	45	2	45	1	45	0	0	0	0
	point30	30	1238	97	45	2	45	1	45	0	0	0	0
	point2	2											

W Huntington Dr west of Colorado Pl	point37	37	1460	97	45	2	45	1	45	0	0	0	0
	point8	8	1460	97	45	2	45	1	45	0	0	0	0
	point9	9	1460	97	45	2	45	1	45	0	0	0	0
	point10	10	1460	97	45	2	45	1	45	0	0	0	0
	point11	11	1460	97	45	2	45	1	45	0	0	0	0
	point12	12	1460	97	45	2	45	1	45	0	0	0	0
	point13	13	1460	97	45	2	45	1	45	0	0	0	0
	point14	14	1460	97	45	2	45	1	45	0	0	0	0
	point15	15	1460	97	45	2	45	1	45	0	0	0	0
	point16	16											

Dudek						1 August 2019					
MG						TNM 2.5					
INPUT: RECEIVERS											
PROJECT/CONTRACT:	11663.01										
RUN:	Indigo Hotel Project - Existing Saturday										
Receiver											
Name	No.	#DUs	Coordinates (ground)			Height	Input Sound Levels and Criteria				Active
			X	Y	Z	above	Existing	Impact Criteria		NR	in
						Ground	LAeq1h	LAeq1h	Sub'l	Goal	Calc.
			ft	ft	ft	ft	dBA	dBA	dB	dB	
ST1	1	1	1,117.8	781.8	475.00	5.00	0.00	66	10.0	8.0	Y
ST2	2	1	1,201.9	968.4	475.00	5.00	0.00	66	10.0	8.0	Y
ST3	3	1	891.2	976.2	475.00	5.00	0.00	66	10.0	8.0	Y
ST4	4	1	1,447.8	547.1	475.00	5.00	0.00	66	10.0	8.0	Y
LT1	5	1	1,045.4	735.2	475.00	5.00	0.00	66	10.0	8.0	Y

Dudek 1 August 2019
MG TNM 2.5

INPUT: BARRIERS
PROJECT/CONTRACT: 11663.01
RUN: Indigo Hotel Project - Existing Saturday

Barrier									Points										
Name	Type	Height		If Wall	If Berm			Add'tnl	Name	No.	Coordinates (bottom)			Height	Segment				
		Min	Max	$ per	$ per	Top	Run:Rise	$ per			X	Y	Z	at	Seg Ht Perturbs			On	Important
				Unit	Unit	Width		Unit						Point	Incre-	#Up	#Dn	Struct?	Reflec-
				Area	Vol.			Length							ment				tions?
		ft	ft	$/sq ft	$/cu yd	ft	ft:ft	$/ft			ft	ft	ft	ft	ft				
Barrier1	W	0.00	99.99	0.00				0.00	point1	1	1,208.5	959.8	475.00	6.00	0.00	0	0		
									point3	3	1,035.7	955.5	475.00	6.00	0.00	0	0		
									point4	4	923.1	986.1	475.00	6.00	0.00	0	0		
									point5	5	806.1	1,052.8	475.00	6.00	0.00	0	0		
									point6	6	732.8	1,142.5	475.00	6.00					
Barrier6	W	0.00	99.99	0.00				0.00	point21	21	732.8	810.0	475.00	35.00	0.00	0	0		
									point23	23	900.1	743.3	475.00	35.00	0.00	0	0		
									point24	24	1,066.3	746.6	475.00	35.00	0.00	0	0		
									point25	25	1,067.4	830.8	475.00	35.00	0.00	0	0		
									point26	26	905.5	831.9	475.00	35.00	0.00	0	0		
									point27	27	761.2	894.2	475.00	35.00					
Barrier6-2-2	W	0.00	99.99	0.00				0.00	point48	48	529.4	1,146.8	475.00	30.00	0.00	0	0		
									point29	29	675.9	900.8	475.00	30.00	0.00	0	0		
									point30	30	785.3	963.1	475.00	30.00	0.00	0	0		
									point31	31	645.3	1,224.5	475.00	30.00					
Barrier6-2-2-2-2	W	0.00	99.99	0.00				0.00	point50	50	1,359.3	770.7	475.00	20.00	0.00	0	0		
									point33	33	1,443.5	768.5	475.00	20.00	0.00	0	0		
									point34	34	1,445.7	852.6	475.00	20.00	0.00	0	0		
									point35	35	1,361.5	854.8	475.00	20.00					
Barrier6-2-2-2-2-2-2	W	0.00	99.99	0.00				0.00	point52	52	2,055.7	835.8	475.00	20.00	0.00	0	0		
									point37	37	2,057.9	719.9	475.00	20.00	0.00	0	0		
									point38	38	2,158.5	724.3	475.00	20.00	0.00	0	0		
									point39	39	2,158.5	781.1	475.00	20.00	0.00	0	0		
									point40	40	2,230.6	778.9	475.00	20.00	0.00	0	0		
									point41	41	2,221.9	1,026.0	475.00	20.00	0.00	0	0		
									point42	42	2,171.6	1,028.2	475.00	20.00	0.00	0	0		
									point43	43	2,168.7	981.4	475.00	20.00					
Barrier6-2-2-2-2-2-2-2-2	W	0.00	99.99	0.00				0.00	point54	54	1,995.0	801.8	475.00	20.00	0.00	0	0		
									point45	45	1,996.1	722.0	475.00	20.00	0.00	0	0		
									point46	46	2,056.2	725.3	475.00	20.00	0.00	0	0		
									point22	22	2,054.1	801.0	475.00	20.00					

Dudek
MG
1 August 2019
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: 11663.01
RUN: Indigo Hotel Project - Existing Saturday
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
ST1	1	1	0.0	63.6	66	63.6	10	----	63.6	0.0	8	-8.0
ST2	2	1	0.0	54.4	66	54.4	10	----	54.4	0.0	8	-8.0
ST3	3	1	0.0	49.8	66	49.8	10	----	49.8	0.0	8	-8.0
ST4	4	1	0.0	66.8	66	66.8	10	Snd Lvl	66.8	0.0	8	-8.0
LT1	5	1	0.0	66.6	66	66.6	10	Snd Lvl	66.6	0.0	8	-8.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	5	0.0	0.0	0.0
All Impacted	2	0.0	0.0	0.0
All that meet NR Goal	0	0.0	0.0	0.0

Dudek 1 August 2019
MG TNM 2.5

INPUT: ROADWAYS
PROJECT/CONTRACT: 11663.01
RUN: Indigo Hotel Proj - Exist w Project Wkdy

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with the approval of FHWA

Roadway Name	Width	Points Name	No.	Coordinates (pavement) X	Y	Z	Flow Control Control Device	Speed Constraint	Percent Vehicles Affected	Segment Pvmt Type	On Struct?
	ft			ft	ft	ft		mph	%		
W Huntington Dr east of Santa Clara St	75.0	point1	1	2,339.2	678.7	475.00				Average	
		point3	3	1,964.5	670.5	475.00				Average	
		point4	4	1,427.5	669.8	475.00					
Sant Clara St north of W Huntington Dr	75.0	point32	32	2,024.1	1,340.1	475.00				Average	
		point25	25	1,957.2	1,304.5	475.00				Average	
		point26	26	1,860.9	1,218.6	475.00				Average	
		point27	27	1,748.9	1,077.2	475.00				Average	
		point28	28	1,434.3	687.3	475.00				Average	
		point29	29	1,412.6	656.9	475.00					
Colorado Place	56.0	point34	34	968.8	669.6	475.00				Average	
		point18	18	870.4	689.3	475.00				Average	
		point19	19	747.9	737.4	475.00				Average	
		point20	20	660.4	794.3	475.00				Average	
		point21	21	583.9	853.3	475.00				Average	
		point22	22	504.7	944.2	475.00				Average	
		point23	23	366.9	1,174.3	475.00					
W Huntington Dr west of Santa Clara St	75.0	point35	35	1,416.3	671.2	475.00				Average	
		point5	5	1,245.7	668.1	475.00				Average	
		point6	6	1,088.3	665.5	475.00				Average	
		point7	7	1,025.7	660.5	475.00					
Sant Clara St south of W Huntington Dr	75.0	point36	36	1,412.6	656.9	475.00				Average	
		point30	30	1,244.2	435.0	475.00				Average	
		point2	2	885.5	-24.3	475.00					
W Huntington Dr west of Colorado Pl	75.0	point37	37	1,025.7	660.5	475.00				Average	
		point8	8	956.2	641.4	475.00				Average	

		point9	9	829.5	601.5	475.00				Average	
		point10	10	726.2	558.9	475.00				Average	
		point11	11	652.5	519.7	475.00				Average	
		point12	12	575.4	464.6	475.00				Average	
		point13	13	481.7	392.3	475.00				Average	
		point14	14	376.3	264.1	475.00				Average	
		point15	15	340.5	215.9	475.00				Average	
		point16	16	169.9	-5.0	475.00					

Dudek 1 August 201

MG TNM 2.5

INPUT: TRAFFIC FOR LAeq1h Percentages

PROJECT/CONTRACT: 11663.01

RUN: Indigo Hotel Proj - Exist w Project Wkdy

Roadway	Points												
Name	Name	No.	Segment										
			Total	Autos		MTrucks		HTrucks		Buses		Motorcycles	
			Volume	P	S	P	S	P	S	P	S	P	S
			veh/hr	%	mph	%	mph	%	mph	%	mph	%	mph
W Huntington Dr east of Santa Clara St	point1	1	2920	97	30	2	30	1	30	0	0	0	0
	point3	3	2920	97	30	2	30	1	30	0	0	0	0
	point4	4											
Sant Clara St north of W Huntington Dr	point32	32	1460	97	45	2	45	1	45	0	0	0	0
	point25	25	1460	97	45	2	45	1	45	0	0	0	0
	point26	26	1460	97	45	2	45	1	45	0	0	0	0
	point27	27	1460	97	45	2	45	1	45	0	0	0	0
	point28	28	1460	97	45	2	45	1	45	0	0	0	0
	point29	29											
Colorado Place	point34	34	1483	97	40	2	40	1	40	0	0	0	0
	point18	18	1483	97	40	2	40	1	40	0	0	0	0
	point19	19	1483	97	40	2	40	1	40	0	0	0	0
	point20	20	1483	97	40	2	40	1	40	0	0	0	0
	point21	21	1483	97	40	2	40	1	40	0	0	0	0
	point22	22	1483	97	40	2	40	1	40	0	0	0	0
	point23	23											
W Huntington Dr west of Santa Clara St	point35	35	2920	97	30	2	30	1	30	0	0	0	0
	point5	5	2920	97	30	2	30	1	30	0	0	0	0
	point6	6	2920	97	30	2	30	1	30	0	0	0	0
	point7	7											
Sant Clara St south of W Huntington Dr	point36	36	1460	97	45	2	45	1	45	0	0	0	0
	point30	30	1460	97	45	2	45	1	45	0	0	0	0
	point2	2											

INPUT: TRAFFIC FOR LAeq1h Percentages **11663.01**

W Huntington Dr west of Colorado Pl	point37	37	1679	97	45	2	45	1	45	0	0	0	0
	point8	8	1679	97	45	2	45	1	45	0	0	0	0
	point9	9	1679	97	45	2	45	1	45	0	0	0	0
	point10	10	1679	97	45	2	45	1	45	0	0	0	0
	point11	11	1679	97	45	2	45	1	45	0	0	0	0
	point12	12	1679	97	45	2	45	1	45	0	0	0	0
	point13	13	1679	97	45	2	45	1	45	0	0	0	0
	point14	14	1679	97	45	2	45	1	45	0	0	0	0
	point15	15	1679	97	45	2	45	1	45	0	0	0	0
	point16	16											

Dudek						1 August 2019					
MG						TNM 2.5					
INPUT: RECEIVERS											
PROJECT/CONTRACT:	11663.01										
RUN:	Indigo Hotel Proj - Exist w Project Wkdy										
Receiver											
Name	No.	#DUs	Coordinates (ground)			Height	Input Sound Levels and Criteria				Active
			X	Y	Z	above	Existing	Impact Criteria		NR	in
						Ground	LAeq1h	LAeq1h	Sub'l	Goal	Calc.
			ft	ft	ft	ft	dBA	dBA	dB	dB	
ST1	1	1	1,117.8	781.8	475.00	5.00	0.00	66	10.0	8.0	Y
ST2	2	1	1,201.9	968.4	475.00	5.00	0.00	66	10.0	8.0	Y
ST3	3	1	891.2	976.2	475.00	5.00	0.00	66	10.0	8.0	Y
ST4	4	1	1,447.8	547.1	475.00	5.00	0.00	66	10.0	8.0	Y
LT1	5	1	1,045.4	735.2	475.00	5.00	0.00	66	10.0	8.0	Y

Dudek 1 August 2019
MG TNM 2.5

INPUT: BARRIERS
PROJECT/CONTRACT: 11663.01
RUN: Indigo Hotel Proj - Exist w Project Wkdy

Barrier									Points										
Name	Type	Height		If Wall	If Berm			Add'tnl	Name	No.	Coordinates (bottom)			Height	Segment				
		Min	Max	$ per Unit Area	$ per Unit Vol.	Top Width	Run:Rise	$ per Unit Length			X	Y	Z	at Point	Seg Ht Increment	Perturbs #Up	#Dn	On Struct?	Important Reflections?
		ft	ft	$/sq ft	$/cu yd	ft	ft:ft	$/ft			ft	ft	ft	ft	ft				
Barrier1	W	0.00	99.99	0.00				0.00	point1	1	1,208.5	959.8	475.00	6.00	0.00	0	0		
									point3	3	1,035.7	955.5	475.00	6.00	0.00	0	0		
									point4	4	923.1	986.1	475.00	6.00	0.00	0	0		
									point5	5	806.1	1,052.8	475.00	6.00	0.00	0	0		
									point6	6	732.8	1,142.5	475.00	6.00					
Barrier6	W	0.00	99.99	0.00				0.00	point21	21	732.8	810.0	475.00	35.00	0.00	0	0		
									point23	23	900.1	743.3	475.00	35.00	0.00	0	0		
									point24	24	1,066.3	746.6	475.00	35.00	0.00	0	0		
									point25	25	1,067.4	830.8	475.00	35.00	0.00	0	0		
									point26	26	905.5	831.9	475.00	35.00	0.00	0	0		
									point27	27	761.2	894.2	475.00	35.00					
Barrier6-2-2	W	0.00	99.99	0.00				0.00	point48	48	529.4	1,146.8	475.00	30.00	0.00	0	0		
									point29	29	675.9	900.8	475.00	30.00	0.00	0	0		
									point30	30	785.3	963.1	475.00	30.00	0.00	0	0		
									point31	31	645.3	1,224.5	475.00	30.00					
Barrier6-2-2-2-2	W	0.00	99.99	0.00				0.00	point50	50	1,359.3	770.7	475.00	20.00	0.00	0	0		
									point33	33	1,443.5	768.5	475.00	20.00	0.00	0	0		
									point34	34	1,445.7	852.6	475.00	20.00	0.00	0	0		
									point35	35	1,361.5	854.8	475.00	20.00					
Barrier6-2-2-2-2-2-2	W	0.00	99.99	0.00				0.00	point52	52	2,055.7	835.8	475.00	20.00	0.00	0	0		
									point37	37	2,057.9	719.9	475.00	20.00	0.00	0	0		
									point38	38	2,158.5	724.3	475.00	20.00	0.00	0	0		
									point39	39	2,158.5	781.1	475.00	20.00	0.00	0	0		
									point40	40	2,230.6	778.9	475.00	20.00	0.00	0	0		
									point41	41	2,221.9	1,026.0	475.00	20.00	0.00	0	0		
									point42	42	2,171.6	1,028.2	475.00	20.00	0.00	0	0		
									point43	43	2,168.7	981.4	475.00	20.00					
Barrier6-2-2-2-2-2-2-2-2	W	0.00	99.99	0.00				0.00	point54	54	1,995.0	801.8	475.00	20.00	0.00	0	0		
									point45	45	1,996.1	722.0	475.00	20.00	0.00	0	0		
									point46	46	2,056.2	725.3	475.00	20.00	0.00	0	0		
									point22	22	2,054.1	801.0	475.00	20.00					
Barrier15	W	0.00	99.99	0.00				0.00	point55	55	1,139.3	729.3	475.00	60.00	0.00	0	0		
									point57	57	1,208.2	732.0	475.00	60.00	0.00	0	0		
									point58	58	1,206.8	878.1	475.00	60.00	0.00	0	0		
									point59	59	1,047.0	876.7	475.00	60.00	0.00	0	0		

									point60	60	1,048.4	839.5	475.00	60.00	0.00	0	0		
									point56	56	1,135.2	838.1	475.00	60.00					

Dudek
MG
1 August 2019
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: 11663.01
RUN: Indigo Hotel Proj - Exist w Project Wkdy
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h		Increase over existing		Type Impact	With Barrier Calculated LAeq1h	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
ST1	1	1	0.0	62.0	66	62.0	10	----	62.0	0.0	8	-8.0
ST2	2	1	0.0	54.6	66	54.6	10	----	54.6	0.0	8	-8.0
ST3	3	1	0.0	47.7	66	47.7	10	----	47.7	0.0	8	-8.0
ST4	4	1	0.0	67.6	66	67.6	10	Snd Lvl	67.6	0.0	8	-8.0
LT1	5	1	0.0	67.4	66	67.4	10	Snd Lvl	67.4	0.0	8	-8.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	5	0.0	0.0	0.0
All Impacted	2	0.0	0.0	0.0
All that meet NR Goal	0	0.0	0.0	0.0

Dudek 1 August 2019
MG TNM 2.5

INPUT: ROADWAYS
PROJECT/CONTRACT: 11663.01
RUN: Indigo Hotel Proj - Exist w Project Sat

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with the approval of FHWA

Roadway Name	Width	Points Name	No.	Coordinates (pavement) X	Y	Z	Flow Control Control Device	Speed Constraint	Percent Vehicles Affected	Segment Pvmt Type	On Struct?
	ft			ft	ft	ft		mph	%		
W Huntington Dr east of Santa Clara St	75.0	point1	1	2,339.2	678.7	475.00				Average	
		point3	3	1,964.5	670.5	475.00				Average	
		point4	4	1,427.5	669.8	475.00					
Sant Clara St north of W Huntington Dr	75.0	point32	32	2,024.1	1,340.1	475.00				Average	
		point25	25	1,957.2	1,304.5	475.00				Average	
		point26	26	1,860.9	1,218.6	475.00				Average	
		point27	27	1,748.9	1,077.2	475.00				Average	
		point28	28	1,434.3	687.3	475.00				Average	
		point29	29	1,412.6	656.9	475.00					
Colorado Place	56.0	point34	34	968.8	669.6	475.00				Average	
		point18	18	870.4	689.3	475.00				Average	
		point19	19	747.9	737.4	475.00				Average	
		point20	20	660.4	794.3	475.00				Average	
		point21	21	583.9	853.3	475.00				Average	
		point22	22	504.7	944.2	475.00				Average	
		point23	23	366.9	1,174.3	475.00					
W Huntington Dr west of Santa Clara St	75.0	point35	35	1,416.3	671.2	475.00				Average	
		point5	5	1,245.7	668.1	475.00				Average	
		point6	6	1,088.3	665.5	475.00				Average	
		point7	7	1,025.7	660.5	475.00					
Sant Clara St south of W Huntington Dr	75.0	point36	36	1,412.6	656.9	475.00				Average	
		point30	30	1,244.2	435.0	475.00				Average	
		point2	2	885.5	-24.3	475.00					
W Huntington Dr west of Colorado Pl	75.0	point37	37	1,025.7	660.5	475.00				Average	
		point8	8	956.2	641.4	475.00				Average	

		point9	9	829.5	601.5	475.00				Average	
		point10	10	726.2	558.9	475.00				Average	
		point11	11	652.5	519.7	475.00				Average	
		point12	12	575.4	464.6	475.00				Average	
		point13	13	481.7	392.3	475.00				Average	
		point14	14	376.3	264.1	475.00				Average	
		point15	15	340.5	215.9	475.00				Average	
		point16	16	169.9	-5.0	475.00					

Dudek 1 August 201

MG TNM 2.5

INPUT: TRAFFIC FOR LAeq1h Percentages

PROJECT/CONTRACT: 11663.01

RUN: Indigo Hotel Proj - Exist w Project Sat

Roadway	Points												
Name	Name	No.	Segment										
			Total	Autos		MTrucks		HTrucks		Buses		Motorcycles	
			Volume	P	S	P	S	P	S	P	S	P	S
			veh/hr	%	mph	%	mph	%	mph	%	mph	%	mph
W Huntington Dr east of Santa Clara St	point1	1	2527	97	30	2	30	1	30	0	0	0	0
	point3	3	2527	97	30	2	30	1	30	0	0	0	0
	point4	4											
Sant Clara St north of W Huntington Dr	point32	32	1252	97	45	2	45	1	45	0	0	0	0
	point25	25	1252	97	45	2	45	1	45	0	0	0	0
	point26	26	1252	97	45	2	45	1	45	0	0	0	0
	point27	27	1252	97	45	2	45	1	45	0	0	0	0
	point28	28	1252	97	45	2	45	1	45	0	0	0	0
	point29	29											
Colorado Place	point34	34	1086	97	40	2	40	1	40	0	0	0	0
	point18	18	1086	97	40	2	40	1	40	0	0	0	0
	point19	19	1086	97	40	2	40	1	40	0	0	0	0
	point20	20	1086	97	40	2	40	1	40	0	0	0	0
	point21	21	1086	97	40	2	40	1	40	0	0	0	0
	point22	22	1086	97	40	2	40	1	40	0	0	0	0
	point23	23											
W Huntington Dr west of Santa Clara St	point35	35	2527	97	30	2	30	1	30	0	0	0	0
	point5	5	2527	97	30	2	30	1	30	0	0	0	0
	point6	6	2527	97	30	2	30	1	30	0	0	0	0
	point7	7											
Sant Clara St south of W Huntington Dr	point36	36	1252	97	45	2	45	1	45	0	0	0	0
	point30	30	1252	97	45	2	45	1	45	0	0	0	0
	point2	2											

W Huntington Dr west of Colorado Pl	point37	37	1473	97	45	2	45	1	45	0	0	0	0
	point8	8	1473	97	45	2	45	1	45	0	0	0	0
	point9	9	1473	97	45	2	45	1	45	0	0	0	0
	point10	10	1473	97	45	2	45	1	45	0	0	0	0
	point11	11	1473	97	45	2	45	1	45	0	0	0	0
	point12	12	1473	97	45	2	45	1	45	0	0	0	0
	point13	13	1473	97	45	2	45	1	45	0	0	0	0
	point14	14	1473	97	45	2	45	1	45	0	0	0	0
	point15	15	1473	97	45	2	45	1	45	0	0	0	0
	point16	16											

Dudek						1 August 2019					
MG						TNM 2.5					
INPUT: RECEIVERS											
PROJECT/CONTRACT:	11663.01										
RUN:	Indigo Hotel Proj - Exist w Project Sat										
Receiver											
Name	No.	#DUs	Coordinates (ground)			Height	Input Sound Levels and Criteria				Active
			X	Y	Z	above	Existing	Impact Criteria		NR	in
						Ground	LAeq1h	LAeq1h	Sub'l	Goal	Calc.
			ft	ft	ft	ft	dBA	dBA	dB	dB	
ST1	1	1	1,117.8	781.8	475.00	5.00	0.00	66	10.0	8.0	Y
ST2	2	1	1,201.9	968.4	475.00	5.00	0.00	66	10.0	8.0	Y
ST3	3	1	891.2	976.2	475.00	5.00	0.00	66	10.0	8.0	Y
ST4	4	1	1,447.8	547.1	475.00	5.00	0.00	66	10.0	8.0	Y
LT1	5	1	1,045.4	735.2	475.00	5.00	0.00	66	10.0	8.0	Y

Dudek 1 August 2019
MG TNM 2.5

INPUT: BARRIERS
PROJECT/CONTRACT: 11663.01
RUN: Indigo Hotel Proj - Exist w Project Sat

Barrier									Points										
Name	Type	Height		If Wall	If Berm			Add'tnl	Name	No.	Coordinates (bottom)			Height	Segment				
		Min	Max	$ per	$ per	Top	Run:Rise	$ per			X	Y	Z	at	Seg Ht Perturbs			On	Important
				Unit	Unit	Width		Unit						Point	Incre-	#Up	#Dn	Struct?	Reflec-
				Area	Vol.			Length							ment				tions?
		ft	ft	$/sq ft	$/cu yd	ft	ft:ft	$/ft			ft	ft	ft	ft	ft				
Barrier1	W	0.00	99.99	0.00				0.00	point1	1	1,208.5	959.8	475.00	6.00	0.00	0	0		
									point3	3	1,035.7	955.5	475.00	6.00	0.00	0	0		
									point4	4	923.1	986.1	475.00	6.00	0.00	0	0		
									point5	5	806.1	1,052.8	475.00	6.00	0.00	0	0		
									point6	6	732.8	1,142.5	475.00	6.00					
Barrier6	W	0.00	99.99	0.00				0.00	point21	21	732.8	810.0	475.00	35.00	0.00	0	0		
									point23	23	900.1	743.3	475.00	35.00	0.00	0	0		
									point24	24	1,066.3	746.6	475.00	35.00	0.00	0	0		
									point25	25	1,067.4	830.8	475.00	35.00	0.00	0	0		
									point26	26	905.5	831.9	475.00	35.00	0.00	0	0		
									point27	27	761.2	894.2	475.00	35.00					
Barrier6-2-2	W	0.00	99.99	0.00				0.00	point48	48	529.4	1,146.8	475.00	30.00	0.00	0	0		
									point29	29	675.9	900.8	475.00	30.00	0.00	0	0		
									point30	30	785.3	963.1	475.00	30.00	0.00	0	0		
									point31	31	645.3	1,224.5	475.00	30.00					
Barrier6-2-2-2-2	W	0.00	99.99	0.00				0.00	point50	50	1,359.3	770.7	475.00	20.00	0.00	0	0		
									point33	33	1,443.5	768.5	475.00	20.00	0.00	0	0		
									point34	34	1,445.7	852.6	475.00	20.00	0.00	0	0		
									point35	35	1,361.5	854.8	475.00	20.00					
Barrier6-2-2-2-2-2-2	W	0.00	99.99	0.00				0.00	point52	52	2,055.7	835.8	475.00	20.00	0.00	0	0		
									point37	37	2,057.9	719.9	475.00	20.00	0.00	0	0		
									point38	38	2,158.5	724.3	475.00	20.00	0.00	0	0		
									point39	39	2,158.5	781.1	475.00	20.00	0.00	0	0		
									point40	40	2,230.6	778.9	475.00	20.00	0.00	0	0		
									point41	41	2,221.9	1,026.0	475.00	20.00	0.00	0	0		
									point42	42	2,171.6	1,028.2	475.00	20.00	0.00	0	0		
									point43	43	2,168.7	981.4	475.00	20.00					
Barrier6-2-2-2-2-2-2-2-2	W	0.00	99.99	0.00				0.00	point54	54	1,995.0	801.8	475.00	20.00	0.00	0	0		
									point45	45	1,996.1	722.0	475.00	20.00	0.00	0	0		
									point46	46	2,056.2	725.3	475.00	20.00	0.00	0	0		
									point22	22	2,054.1	801.0	475.00	20.00					
Barrier15	W	0.00	99.99	0.00				0.00	point55	55	1,139.3	729.3	475.00	60.00	0.00	0	0		
									point57	57	1,208.2	732.0	475.00	60.00	0.00	0	0		
									point58	58	1,206.8	878.1	475.00	60.00	0.00	0	0		
									point59	59	1,047.0	876.7	475.00	60.00	0.00	0	0		

									point60	60	1,048.4	839.5	475.00	60.00	0.00	0	0		
									point56	56	1,135.2	838.1	475.00	60.00					

Dudek
MG
1 August 2019
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: 11663.01
RUN: Indigo Hotel Proj - Exist w Project Sat
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h		Increase over existing		Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Noise Reduction Goal	Calculated minus Goal
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc					
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
ST1	1	1	0.0	61.3	66	61.3	10	----	61.3	0.0	8	-8.0
ST2	2	1	0.0	53.9	66	53.9	10	----	53.9	0.0	8	-8.0
ST3	3	1	0.0	46.5	66	46.5	10	----	46.5	0.0	8	-8.0
ST4	4	1	0.0	66.9	66	66.9	10	Snd Lvl	66.9	0.0	8	-8.0
LT1	5	1	0.0	66.7	66	66.7	10	Snd Lvl	66.7	0.0	8	-8.0

Dwelling Units	# DUs	Noise Reduction Min	Noise Reduction Avg	Noise Reduction Max
		dB	dB	dB
All Selected	5	0.0	0.0	0.0
All Impacted	2	0.0	0.0	0.0
All that meet NR Goal	0	0.0	0.0	0.0

Dudek 1 August 2019
MG TNM 2.5

INPUT: ROADWAYS
PROJECT/CONTRACT: 11663.01
RUN: Indigo Hotel Proj - Future 2021 Weekday

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with the approval of FHWA

Roadway Name	Width	Points Name	No.	Coordinates (pavement) X	Y	Z	Flow Control Control Device	Speed Constraint	Percent Vehicles Affected	Segment Pvmt Type	On Struct?
	ft			ft	ft	ft		mph	%		
W Huntington Dr east of Santa Clara St	75.0	point1	1	2,339.2	678.7	475.00				Average	
		point3	3	1,964.5	670.5	475.00				Average	
		point4	4	1,427.5	669.8	475.00					
Santa Clara St north of W Huntington Dr	75.0	point32	32	2,024.1	1,340.1	475.00				Average	
		point25	25	1,957.2	1,304.5	475.00				Average	
		point26	26	1,860.9	1,218.6	475.00				Average	
		point27	27	1,748.9	1,077.2	475.00				Average	
		point28	28	1,434.3	687.3	475.00				Average	
		point29	29	1,412.6	656.9	475.00					
Colorado Place	56.0	point34	34	968.8	669.6	475.00				Average	
		point18	18	870.4	689.3	475.00				Average	
		point19	19	747.9	737.4	475.00				Average	
		point20	20	660.4	794.3	475.00				Average	
		point21	21	583.9	853.3	475.00				Average	
		point22	22	504.7	944.2	475.00				Average	
		point23	23	366.9	1,174.3	475.00					
W Huntington Dr west of Santa Clara St	75.0	point35	35	1,416.3	671.2	475.00				Average	
		point5	5	1,245.7	668.1	475.00				Average	
		point6	6	1,088.3	665.5	475.00				Average	
		point7	7	1,025.7	660.5	475.00					
Huntington Dr EB	75.0	point36	36	1,412.6	656.9	475.00				Average	
		point30	30	1,244.2	435.0	475.00				Average	
		point2	2	885.5	-24.3	475.00					
W Huntington Dr west of Colorado Pl	75.0	point37	37	1,025.7	660.5	475.00				Average	
		point8	8	956.2	641.4	475.00				Average	

		point9	9	829.5	601.5	475.00				Average	
		point10	10	726.2	558.9	475.00				Average	
		point11	11	652.5	519.7	475.00				Average	
		point12	12	575.4	464.6	475.00				Average	
		point13	13	481.7	392.3	475.00				Average	
		point14	14	376.3	264.1	475.00				Average	
		point15	15	340.5	215.9	475.00				Average	
		point16	16	169.9	-5.0	475.00					

Dudek 1 August 201

MG TNM 2.5

INPUT: TRAFFIC FOR LAeq1h Percentages

PROJECT/CONTRACT: 11663.01

RUN: Indigo Hotel Proj - Future 2021 Weekday

Roadway	Points		Segment										
Name	Name	No.	Total	Autos		MTrucks		HTrucks		Buses		Motorcycles	
			Volume	P	S	P	S	P	S	P	S	P	S
			veh/hr	%	mph	%	mph	%	mph	%	mph	%	mph
W Huntington Dr east of Santa Clara St	point1	1	2882	97	30	2	30	1	30	0	0	0	0
	point3	3	2882	97	30	2	30	1	30	0	0	0	0
	point4	4											
Santa Clara St north of W Huntington Dr	point32	32	1482	97	45	2	45	1	45	0	0	0	0
	point25	25	1482	97	45	2	45	1	45	0	0	0	0
	point26	26	1482	97	45	2	45	1	45	0	0	0	0
	point27	27	1482	97	45	2	45	1	45	0	0	0	0
	point28	28	1482	97	45	2	45	1	45	0	0	0	0
	point29	29											
Colorado Place	point34	34	1418	97	40	2	40	1	40	0	0	0	0
	point18	18	1418	97	40	2	40	1	40	0	0	0	0
	point19	19	1418	97	40	2	40	1	40	0	0	0	0
	point20	20	1418	97	40	2	40	1	40	0	0	0	0
	point21	21	1418	97	40	2	40	1	40	0	0	0	0
	point22	22	1418	97	40	2	40	1	40	0	0	0	0
	point23	23											
W Huntington Dr west of Santa Clara St	point35	35	2882	97	30	2	30	1	30	0	0	0	0
	point5	5	2882	97	30	2	30	1	30	0	0	0	0
	point6	6	2882	97	30	2	30	1	30	0	0	0	0
	point7	7											
Huntington Dr EB	point36	36	1482	97	45	2	45	1	45	0	0	0	0
	point30	30	1482	97	45	2	45	1	45	0	0	0	0
	point2	2											

W Huntington Dr west of Colorado Pl	point37	37	1706	97	45	2	45	1	45	0	0	0	0
	point8	8	1706	97	45	2	45	1	45	0	0	0	0
	point9	9	1706	97	45	2	45	1	45	0	0	0	0
	point10	10	1706	97	45	2	45	1	45	0	0	0	0
	point11	11	1706	97	45	2	45	1	45	0	0	0	0
	point12	12	1706	97	45	2	45	1	45	0	0	0	0
	point13	13	1706	97	45	2	45	1	45	0	0	0	0
	point14	14	1706	97	45	2	45	1	45	0	0	0	0
	point15	15	1706	97	45	2	45	1	45	0	0	0	0
	point16	16											

Dudek						1 August 2019					
MG						TNM 2.5					
INPUT: RECEIVERS											
PROJECT/CONTRACT:	11663.01										
RUN:	Indigo Hotel Proj - Future 2021 Weekday										
Receiver											
Name	No.	#DUs	Coordinates (ground)			Height	Input Sound Levels and Criteria				Active
			X	Y	Z	above	Existing	Impact Criteria		NR	in
						Ground	LAeq1h	LAeq1h	Sub'l	Goal	Calc.
			ft	ft	ft	ft	dBA	dBA	dB	dB	
ST1	1	1	1,117.8	781.8	475.00	5.00	0.00	66	10.0	8.0	Y
ST2	2	1	1,201.9	968.4	475.00	5.00	0.00	66	10.0	8.0	Y
ST3	3	1	891.2	976.2	475.00	5.00	0.00	66	10.0	8.0	Y
ST4	4	1	1,447.8	547.1	475.00	5.00	0.00	66	10.0	8.0	Y
LT1	5	1	1,045.4	735.2	475.00	5.00	0.00	66	10.0	8.0	Y

Dudek 1 August 2019
MG TNM 2.5

INPUT: BARRIERS
PROJECT/CONTRACT: 11663.01
RUN: Indigo Hotel Proj - Future 2021 Weekday

Barrier									Points										
Name	Type	Height		If Wall	If Berm			Add'tnl	Name	No.	Coordinates (bottom)			Height	Segment				
		Min	Max	$ per	$ per	Top	Run:Rise	$ per			X	Y	Z	at	Seg Ht	Perturbs		On	Important
				Unit	Unit	Width		Unit						Point	Incre-	#Up	#Dn	Struct?	Reflec-
				Area	Vol.			Length							ment				tions?
		ft	ft	$/sq ft	$/cu yd	ft	ft:ft	$/ft			ft	ft	ft	ft	ft				
Barrier1	W	0.00	99.99	0.00				0.00	point1	1	1,208.5	959.8	475.00	6.00	0.00	0	0		
									point3	3	1,035.7	955.5	475.00	6.00	0.00	0	0		
									point4	4	923.1	986.1	475.00	6.00	0.00	0	0		
									point5	5	806.1	1,052.8	475.00	6.00	0.00	0	0		
									point6	6	732.8	1,142.5	475.00	6.00					
Barrier6	W	0.00	99.99	0.00				0.00	point21	21	732.8	810.0	475.00	35.00	0.00	0	0		
									point23	23	900.1	743.3	475.00	35.00	0.00	0	0		
									point24	24	1,066.3	746.6	475.00	35.00	0.00	0	0		
									point25	25	1,067.4	830.8	475.00	35.00	0.00	0	0		
									point26	26	905.5	831.9	475.00	35.00	0.00	0	0		
									point27	27	761.2	894.2	475.00	35.00					
Barrier6-2-2	W	0.00	99.99	0.00				0.00	point48	48	529.4	1,146.8	475.00	30.00	0.00	0	0		
									point29	29	675.9	900.8	475.00	30.00	0.00	0	0		
									point30	30	785.3	963.1	475.00	30.00	0.00	0	0		
									point31	31	645.3	1,224.5	475.00	30.00					
Barrier6-2-2-2-2	W	0.00	99.99	0.00				0.00	point50	50	1,359.3	770.7	475.00	20.00	0.00	0	0		
									point33	33	1,443.5	768.5	475.00	20.00	0.00	0	0		
									point34	34	1,445.7	852.6	475.00	20.00	0.00	0	0		
									point35	35	1,361.5	854.8	475.00	20.00					
Barrier6-2-2-2-2-2-2	W	0.00	99.99	0.00				0.00	point52	52	2,055.7	835.8	475.00	20.00	0.00	0	0		
									point37	37	2,057.9	719.9	475.00	20.00	0.00	0	0		
									point38	38	2,158.5	724.3	475.00	20.00	0.00	0	0		
									point39	39	2,158.5	781.1	475.00	20.00	0.00	0	0		
									point40	40	2,230.6	778.9	475.00	20.00	0.00	0	0		
									point41	41	2,221.9	1,026.0	475.00	20.00	0.00	0	0		
									point42	42	2,171.6	1,028.2	475.00	20.00	0.00	0	0		
									point43	43	2,168.7	981.4	475.00	20.00					
Barrier6-2-2-2-2-2-2-2-2	W	0.00	99.99	0.00				0.00	point54	54	1,995.0	801.8	475.00	20.00	0.00	0	0		
									point45	45	1,996.1	722.0	475.00	20.00	0.00	0	0		
									point46	46	2,056.2	725.3	475.00	20.00	0.00	0	0		
									point22	22	2,054.1	801.0	475.00	20.00					

Dudek
MG
1 August 2019
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: 11663.01
RUN: Indigo Hotel Proj - Future 2021 Weekday
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h		Increase over existing		Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Noise Reduction Goal	Calculated minus Goal
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc					
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
ST1	1	1	0.0	64.4	66	64.4	10	----	64.4	0.0	8	-8.0
ST2	2	1	0.0	55.1	66	55.1	10	----	55.1	0.0	8	-8.0
ST3	3	1	0.0	50.8	66	50.8	10	----	50.8	0.0	8	-8.0
ST4	4	1	0.0	67.6	66	67.6	10	Snd Lvl	67.6	0.0	8	-8.0
LT1	5	1	0.0	67.4	66	67.4	10	Snd Lvl	67.4	0.0	8	-8.0

Dwelling Units	# DUs	Noise Reduction Min	Noise Reduction Avg	Noise Reduction Max
		dB	dB	dB
All Selected	5	0.0	0.0	0.0
All Impacted	2	0.0	0.0	0.0
All that meet NR Goal	0	0.0	0.0	0.0

Dudek				1 August 2019							
MG				TNM 2.5							
INPUT: ROADWAYS							Average pavement type shall be used unless				
PROJECT/CONTRACT:	11663.01						a State highway agency substantiates the use				
RUN:	Indigo Hotel Proj - Future 2021 Saturday						of a different type with the approval of FHWA				
Roadway		Points									
Name	Width	Name	No.	Coordinates (pavement)			Flow Control			Segment	
				X	Y	Z	Control Device	Speed Constraint	Percent Vehicles Affected	Pvmt Type	On Struct?
	ft			ft	ft	ft		mph	%		
W Huntington Dr east of Santa Clara St	75.0	point1	1	2,339.2	678.7	475.00				Average	
		point3	3	1,964.5	670.5	475.00				Average	
		point4	4	1,427.5	669.8	475.00					
Santa Clara St north of W Huntington Dr	75.0	point32	32	2,024.1	1,340.1	475.00				Average	
		point25	25	1,957.2	1,304.5	475.00				Average	
		point26	26	1,860.9	1,218.6	475.00				Average	
		point27	27	1,748.9	1,077.2	475.00				Average	
		point28	28	1,434.3	687.3	475.00				Average	
		point29	29	1,412.6	656.9	475.00					
Colorado Place	56.0	point34	34	968.8	669.6	475.00				Average	
		point18	18	870.4	689.3	475.00				Average	
		point19	19	747.9	737.4	475.00				Average	
		point20	20	660.4	794.3	475.00				Average	
		point21	21	583.9	853.3	475.00				Average	
		point22	22	504.7	944.2	475.00				Average	
		point23	23	366.9	1,174.3	475.00					
W Huntington Dr west of Santa Clara St	75.0	point35	35	1,416.3	671.2	475.00				Average	
		point5	5	1,245.7	668.1	475.00				Average	
		point6	6	1,088.3	665.5	475.00				Average	
		point7	7	1,025.7	660.5	475.00					
Huntington Dr EB	75.0	point36	36	1,412.6	656.9	475.00				Average	
		point30	30	1,244.2	435.0	475.00				Average	
		point2	2	885.5	-24.3	475.00					
W Huntington Dr west of Colorado Pl	75.0	point37	37	1,025.7	660.5	475.00				Average	
		point8	8	956.2	641.4	475.00				Average	

		point9	9	829.5	601.5	475.00				Average	
		point10	10	726.2	558.9	475.00				Average	
		point11	11	652.5	519.7	475.00				Average	
		point12	12	575.4	464.6	475.00				Average	
		point13	13	481.7	392.3	475.00				Average	
		point14	14	376.3	264.1	475.00				Average	
		point15	15	340.5	215.9	475.00				Average	
		point16	16	169.9	-5.0	475.00					

Dudek 1 August 201

MG TNM 2.5

INPUT: TRAFFIC FOR LAeq1h Percentages

PROJECT/CONTRACT: 11663.01

RUN: Indigo Hotel Proj - Future 2021 Saturday

Roadway	Points												
Name	Name	No.	Segment										
			Total	Autos		MTrucks		HTrucks		Buses		Motorcycles	
			Volume	P	S	P	S	P	S	P	S	P	S
			veh/hr	%	mph	%	mph	%	mph	%	mph	%	mph
W Huntington Dr east of Santa Clara St	point1	1	2457	97	30	2	30	1	30	0	0	0	0
	point3	3	2457	97	30	2	30	1	30	0	0	0	0
	point4	4											
Santa Clara St north of W Huntington Dr	point32	32	1482	97	45	2	45	1	45	0	0	0	0
	point25	25	1482	97	45	2	45	1	45	0	0	0	0
	point26	26	1482	97	45	2	45	1	45	0	0	0	0
	point27	27	1482	97	45	2	45	1	45	0	0	0	0
	point28	28	1482	97	45	2	45	1	45	0	0	0	0
	point29	29											
Colorado Place	point34	34	1000	97	40	2	40	1	40	0	0	0	0
	point18	18	1000	97	40	2	40	1	40	0	0	0	0
	point19	19	1000	97	40	2	40	1	40	0	0	0	0
	point20	20	1000	97	40	2	40	1	40	0	0	0	0
	point21	21	1000	97	40	2	40	1	40	0	0	0	0
	point22	22	1000	97	40	2	40	1	40	0	0	0	0
	point23	23											
W Huntington Dr west of Santa Clara St	point35	35	2457	97	30	2	30	1	30	0	0	0	0
	point5	5	2457	97	30	2	30	1	30	0	0	0	0
	point6	6	2457	97	30	2	30	1	30	0	0	0	0
	point7	7											
Huntington Dr EB	point36	36	1263	97	45	2	45	1	45	0	0	0	0
	point30	30	1263	97	45	2	45	1	45	0	0	0	0
	point2	2											

W Huntington Dr west of Colorado Pl	point37	37	1489	97	45	2	45	1	45	0	0	0	0
	point8	8	1489	97	45	2	45	1	45	0	0	0	0
	point9	9	1489	97	45	2	45	1	45	0	0	0	0
	point10	10	1489	97	45	2	45	1	45	0	0	0	0
	point11	11	1489	97	45	2	45	1	45	0	0	0	0
	point12	12	1489	97	45	2	45	1	45	0	0	0	0
	point13	13	1489	97	45	2	45	1	45	0	0	0	0
	point14	14	1489	97	45	2	45	1	45	0	0	0	0
	point15	15	1489	97	45	2	45	1	45	0	0	0	0
	point16	16											

Dudek						1 August 2019					
MG						TNM 2.5					
INPUT: RECEIVERS											
PROJECT/CONTRACT:	11663.01										
RUN:	Indigo Hotel Proj - Future 2021 Saturday										
Receiver											
Name	No.	#DUs	Coordinates (ground)			Height	Input Sound Levels and Criteria				Active
			X	Y	Z	above	Existing	Impact Criteria		NR	in
						Ground	LAeq1h	LAeq1h	Sub'l	Goal	Calc.
			ft	ft	ft	ft	dBA	dBA	dB	dB	
ST1	1	1	1,117.8	781.8	475.00	5.00	0.00	66	10.0	8.0	Y
ST2	2	1	1,201.9	968.4	475.00	5.00	0.00	66	10.0	8.0	Y
ST3	3	1	891.2	976.2	475.00	5.00	0.00	66	10.0	8.0	Y
ST4	4	1	1,447.8	547.1	475.00	5.00	0.00	66	10.0	8.0	Y
LT1	5	1	1,045.4	735.2	475.00	5.00	0.00	66	10.0	8.0	Y

Dudek 1 August 2019
MG TNM 2.5

INPUT: BARRIERS
PROJECT/CONTRACT: 11663.01
RUN: Indigo Hotel Proj - Future 2021 Saturday

Barrier									Points										
Name	Type	Height		If Wall	If Berm			Add'tnl	Name	No.	Coordinates (bottom)			Height	Segment				
		Min	Max	$ per	$ per	Top	Run:Rise	$ per			X	Y	Z	at	Seg Ht	Perturbs		On	Important
				Unit	Unit	Width		Unit						Point	Incre-	#Up	#Dn	Struct?	Reflec-
				Area	Vol.			Length							ment				tions?
		ft	ft	$/sq ft	$/cu yd	ft	ft:ft	$/ft			ft	ft	ft	ft	ft				
Barrier1	W	0.00	99.99	0.00				0.00	point1	1	1,208.5	959.8	475.00	6.00	0.00	0	0		
									point3	3	1,035.7	955.5	475.00	6.00	0.00	0	0		
									point4	4	923.1	986.1	475.00	6.00	0.00	0	0		
									point5	5	806.1	1,052.8	475.00	6.00	0.00	0	0		
									point6	6	732.8	1,142.5	475.00	6.00					
Barrier6	W	0.00	99.99	0.00				0.00	point21	21	732.8	810.0	475.00	35.00	0.00	0	0		
									point23	23	900.1	743.3	475.00	35.00	0.00	0	0		
									point24	24	1,066.3	746.6	475.00	35.00	0.00	0	0		
									point25	25	1,067.4	830.8	475.00	35.00	0.00	0	0		
									point26	26	905.5	831.9	475.00	35.00	0.00	0	0		
									point27	27	761.2	894.2	475.00	35.00					
Barrier6-2-2	W	0.00	99.99	0.00				0.00	point48	48	529.4	1,146.8	475.00	30.00	0.00	0	0		
									point29	29	675.9	900.8	475.00	30.00	0.00	0	0		
									point30	30	785.3	963.1	475.00	30.00	0.00	0	0		
									point31	31	645.3	1,224.5	475.00	30.00					
Barrier6-2-2-2-2	W	0.00	99.99	0.00				0.00	point50	50	1,359.3	770.7	475.00	20.00	0.00	0	0		
									point33	33	1,443.5	768.5	475.00	20.00	0.00	0	0		
									point34	34	1,445.7	852.6	475.00	20.00	0.00	0	0		
									point35	35	1,361.5	854.8	475.00	20.00					
Barrier6-2-2-2-2-2-2	W	0.00	99.99	0.00				0.00	point52	52	2,055.7	835.8	475.00	20.00	0.00	0	0		
									point37	37	2,057.9	719.9	475.00	20.00	0.00	0	0		
									point38	38	2,158.5	724.3	475.00	20.00	0.00	0	0		
									point39	39	2,158.5	781.1	475.00	20.00	0.00	0	0		
									point40	40	2,230.6	778.9	475.00	20.00	0.00	0	0		
									point41	41	2,221.9	1,026.0	475.00	20.00	0.00	0	0		
									point42	42	2,171.6	1,028.2	475.00	20.00	0.00	0	0		
									point43	43	2,168.7	981.4	475.00	20.00					
Barrier6-2-2-2-2-2-2-2-2	W	0.00	99.99	0.00				0.00	point54	54	1,995.0	801.8	475.00	20.00	0.00	0	0		
									point45	45	1,996.1	722.0	475.00	20.00	0.00	0	0		
									point46	46	2,056.2	725.3	475.00	20.00	0.00	0	0		
									point22	22	2,054.1	801.0	475.00	20.00					

Dudek
MG
1 August 2019
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: 11663.01
RUN: Indigo Hotel Proj - Future 2021 Saturday
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h		Increase over existing		Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Noise Reduction Goal	Calculated minus Goal
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc					
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
ST1	1	1	0.0	63.8	66	63.8	10	----	63.8	0.0	8	-8.0
ST2	2	1	0.0	54.9	66	54.9	10	----	54.9	0.0	8	-8.0
ST3	3	1	0.0	50.0	66	50.0	10	----	50.0	0.0	8	-8.0
ST4	4	1	0.0	67.1	66	67.1	10	Snd Lvl	67.1	0.0	8	-8.0
LT1	5	1	0.0	66.7	66	66.7	10	Snd Lvl	66.7	0.0	8	-8.0

Dwelling Units	# DUs	Noise Reduction Min	Noise Reduction Avg	Noise Reduction Max
		dB	dB	dB
All Selected	5	0.0	0.0	0.0
All Impacted	2	0.0	0.0	0.0
All that meet NR Goal	0	0.0	0.0	0.0

Dudek 1 August 2019
MG TNM 2.5

INPUT: ROADWAYS
PROJECT/CONTRACT: 11663.01
RUN: Indigo Hotel Proj - Exist w Project Wkdy

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with the approval of FHWA

Roadway Name	Width	Points Name	No.	Coordinates (pavement) X	Y	Z	Flow Control Control Device	Speed Constraint	Percent Vehicles Affected	Segment Pvmt Type	On Struct?
	ft			ft	ft	ft		mph	%		
W Huntington Dr east of Santa Clara St	75.0	point1	1	2,339.2	678.7	475.00				Average	
		point3	3	1,964.5	670.5	475.00				Average	
		point4	4	1,427.5	669.8	475.00					
Sant Clara St north of W Huntington Dr	75.0	point32	32	2,024.1	1,340.1	475.00				Average	
		point25	25	1,957.2	1,304.5	475.00				Average	
		point26	26	1,860.9	1,218.6	475.00				Average	
		point27	27	1,748.9	1,077.2	475.00				Average	
		point28	28	1,434.3	687.3	475.00				Average	
		point29	29	1,412.6	656.9	475.00					
Colorado Place	56.0	point34	34	968.8	669.6	475.00				Average	
		point18	18	870.4	689.3	475.00				Average	
		point19	19	747.9	737.4	475.00				Average	
		point20	20	660.4	794.3	475.00				Average	
		point21	21	583.9	853.3	475.00				Average	
		point22	22	504.7	944.2	475.00				Average	
		point23	23	366.9	1,174.3	475.00					
W Huntington Dr west of Santa Clara St	75.0	point35	35	1,416.3	671.2	475.00				Average	
		point5	5	1,245.7	668.1	475.00				Average	
		point6	6	1,088.3	665.5	475.00				Average	
		point7	7	1,025.7	660.5	475.00					
Sant Clara St south of W Huntington Dr	75.0	point36	36	1,412.6	656.9	475.00				Average	
		point30	30	1,244.2	435.0	475.00				Average	
		point2	2	885.5	-24.3	475.00					
W Huntington Dr west of Colorado Pl	75.0	point37	37	1,025.7	660.5	475.00				Average	
		point8	8	956.2	641.4	475.00				Average	

		point9	9	829.5	601.5	475.00				Average	
		point10	10	726.2	558.9	475.00				Average	
		point11	11	652.5	519.7	475.00				Average	
		point12	12	575.4	464.6	475.00				Average	
		point13	13	481.7	392.3	475.00				Average	
		point14	14	376.3	264.1	475.00				Average	
		point15	15	340.5	215.9	475.00				Average	
		point16	16	169.9	-5.0	475.00					

Dudek 1 August 201

MG TNM 2.5

INPUT: TRAFFIC FOR LAeq1h Percentages

PROJECT/CONTRACT: 11663.01

RUN: Indigo Hotel Proj - Exist w Project Wkdy

Roadway	Points		Segment										
Name	Name	No.	Total	Autos		MTrucks		HTrucks		Buses		Motorcycles	
			Volume	P	S	P	S	P	S	P	S	P	S
			veh/hr	%	mph	%	mph	%	mph	%	mph	%	mph
W Huntington Dr east of Santa Clara St	point1	1	2977	97	30	2	30	1	30	0	0	0	0
	point3	3	2977	97	30	2	30	1	30	0	0	0	0
	point4	4											
Sant Clara St north of W Huntington Dr	point32	32	1489	97	45	2	45	1	45	0	0	0	0
	point25	25	1489	97	45	2	45	1	45	0	0	0	0
	point26	26	1489	97	45	2	45	1	45	0	0	0	0
	point27	27	1489	97	45	2	45	1	45	0	0	0	0
	point28	28	1489	97	45	2	45	1	45	0	0	0	0
	point29	29											
Colorado Place	point34	34	1511	97	40	2	40	1	40	0	0	0	0
	point18	18	1511	97	40	2	40	1	40	0	0	0	0
	point19	19	1511	97	40	2	40	1	40	0	0	0	0
	point20	20	1511	97	40	2	40	1	40	0	0	0	0
	point21	21	1511	97	40	2	40	1	40	0	0	0	0
	point22	22	1511	97	40	2	40	1	40	0	0	0	0
	point23	23											
W Huntington Dr west of Santa Clara St	point35	35	2977	97	30	2	30	1	30	0	0	0	0
	point5	5	2977	97	30	2	30	1	30	0	0	0	0
	point6	6	2977	97	30	2	30	1	30	0	0	0	0
	point7	7											
Sant Clara St south of W Huntington Dr	point36	36	1489	97	45	2	45	1	45	0	0	0	0
	point30	30	1489	97	45	2	45	1	45	0	0	0	0
	point2	2											

W Huntington Dr west of Colorado Pl	point37	37	1713	97	45	2	45	1	45	0	0	0	0
	point8	8	1713	97	45	2	45	1	45	0	0	0	0
	point9	9	1713	97	45	2	45	1	45	0	0	0	0
	point10	10	1713	97	45	2	45	1	45	0	0	0	0
	point11	11	1713	97	45	2	45	1	45	0	0	0	0
	point12	12	1713	97	45	2	45	1	45	0	0	0	0
	point13	13	1713	97	45	2	45	1	45	0	0	0	0
	point14	14	1713	97	45	2	45	1	45	0	0	0	0
	point15	15	1713	97	45	2	45	1	45	0	0	0	0
	point16	16											

Dudek						1 August 2019					
MG						TNM 2.5					
INPUT: RECEIVERS											
PROJECT/CONTRACT:	11663.01										
RUN:	Indigo Hotel Proj - Exist w Project Wkdy										
Receiver											
Name	No.	#DUs	Coordinates (ground)			Height	Input Sound Levels and Criteria				Active
			X	Y	Z	above	Existing	Impact Criteria		NR	in
						Ground	LAeq1h	LAeq1h	Sub'l	Goal	Calc.
			ft	ft	ft	ft	dBA	dBA	dB	dB	
ST1	1	1	1,117.8	781.8	475.00	5.00	0.00	66	10.0	8.0	Y
ST2	2	1	1,201.9	968.4	475.00	5.00	0.00	66	10.0	8.0	Y
ST3	3	1	891.2	976.2	475.00	5.00	0.00	66	10.0	8.0	Y
ST4	4	1	1,447.8	547.1	475.00	5.00	0.00	66	10.0	8.0	Y
LT1	5	1	1,045.4	735.2	475.00	5.00	0.00	66	10.0	8.0	Y

Dudek 1 August 2019
MG TNM 2.5

INPUT: BARRIERS
PROJECT/CONTRACT: 11663.01
RUN: Indigo Hotel Proj - Exist w Project Wkdy

Barrier									Points										
Name	Type	Height		If Wall	If Berm			Add'tnl	Name	No.	Coordinates (bottom)			Height	Segment				
		Min	Max	$ per	$ per	Top	Run:Rise	$ per			X	Y	Z	at	Seg Ht	Perturbs		On	Important
				Unit	Unit	Width		Unit						Point	Incre-	#Up	#Dn	Struct?	Reflec-
				Area	Vol.			Length							ment				tions?
		ft	ft	$/sq ft	$/cu yd	ft	ft:ft	$/ft			ft	ft	ft	ft	ft				
Barrier1	W	0.00	99.99	0.00				0.00	point1	1	1,208.5	959.8	475.00	6.00	0.00	0	0		
									point3	3	1,035.7	955.5	475.00	6.00	0.00	0	0		
									point4	4	923.1	986.1	475.00	6.00	0.00	0	0		
									point5	5	806.1	1,052.8	475.00	6.00	0.00	0	0		
									point6	6	732.8	1,142.5	475.00	6.00					
Barrier6	W	0.00	99.99	0.00				0.00	point21	21	732.8	810.0	475.00	35.00	0.00	0	0		
									point23	23	900.1	743.3	475.00	35.00	0.00	0	0		
									point24	24	1,066.3	746.6	475.00	35.00	0.00	0	0		
									point25	25	1,067.4	830.8	475.00	35.00	0.00	0	0		
									point26	26	905.5	831.9	475.00	35.00	0.00	0	0		
									point27	27	761.2	894.2	475.00	35.00					
Barrier6-2-2	W	0.00	99.99	0.00				0.00	point48	48	529.4	1,146.8	475.00	30.00	0.00	0	0		
									point29	29	675.9	900.8	475.00	30.00	0.00	0	0		
									point30	30	785.3	963.1	475.00	30.00	0.00	0	0		
									point31	31	645.3	1,224.5	475.00	30.00					
Barrier6-2-2-2-2	W	0.00	99.99	0.00				0.00	point50	50	1,359.3	770.7	475.00	20.00	0.00	0	0		
									point33	33	1,443.5	768.5	475.00	20.00	0.00	0	0		
									point34	34	1,445.7	852.6	475.00	20.00	0.00	0	0		
									point35	35	1,361.5	854.8	475.00	20.00					
Barrier6-2-2-2-2-2-2	W	0.00	99.99	0.00				0.00	point52	52	2,055.7	835.8	475.00	20.00	0.00	0	0		
									point37	37	2,057.9	719.9	475.00	20.00	0.00	0	0		
									point38	38	2,158.5	724.3	475.00	20.00	0.00	0	0		
									point39	39	2,158.5	781.1	475.00	20.00	0.00	0	0		
									point40	40	2,230.6	778.9	475.00	20.00	0.00	0	0		
									point41	41	2,221.9	1,026.0	475.00	20.00	0.00	0	0		
									point42	42	2,171.6	1,028.2	475.00	20.00	0.00	0	0		
									point43	43	2,168.7	981.4	475.00	20.00					
Barrier6-2-2-2-2-2-2-2-2	W	0.00	99.99	0.00				0.00	point54	54	1,995.0	801.8	475.00	20.00	0.00	0	0		
									point45	45	1,996.1	722.0	475.00	20.00	0.00	0	0		
									point46	46	2,056.2	725.3	475.00	20.00	0.00	0	0		
									point22	22	2,054.1	801.0	475.00	20.00					
Barrier15	W	0.00	99.99	0.00				0.00	point55	55	1,139.3	729.3	475.00	60.00	0.00	0	0		
									point57	57	1,208.2	732.0	475.00	60.00	0.00	0	0		
									point58	58	1,206.8	878.1	475.00	60.00	0.00	0	0		
									point59	59	1,047.0	876.7	475.00	60.00	0.00	0	0		

									point60	60	1,048.4	839.5	475.00	60.00	0.00	0	0		
									point56	56	1,135.2	838.1	475.00	60.00					

Dudek
MG
1 August 2019
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: 11663.01
RUN: Indigo Hotel Proj - Exist w Project Wkdy
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h		Increase over existing		Type Impact	With Barrier Calculated LAeq1h	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
ST1	1	1	0.0	62.1	66	62.1	10	----	62.1	0.0	8	-8.0
ST2	2	1	0.0	54.7	66	54.7	10	----	54.7	0.0	8	-8.0
ST3	3	1	0.0	47.8	66	47.8	10	----	47.8	0.0	8	-8.0
ST4	4	1	0.0	67.7	66	67.7	10	Snd Lvl	67.7	0.0	8	-8.0
LT1	5	1	0.0	67.5	66	67.5	10	Snd Lvl	67.5	0.0	8	-8.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	5	0.0	0.0	0.0
All Impacted	2	0.0	0.0	0.0
All that meet NR Goal	0	0.0	0.0	0.0

Dudek 1 August 2019
MG TNM 2.5

INPUT: ROADWAYS
PROJECT/CONTRACT: 11663.01
RUN: Indigo Hotel Proj - Exist w Project Satuday

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with the approval of FHWA

Roadway Name	Width	Points Name	No.	Coordinates (pavement) X	Y	Z	Flow Control Control Device	Speed Constraint	Percent Vehicles Affected	Segment Pvmt Type	On Struct?
	ft			ft	ft	ft		mph	%		
W Huntington Dr east of Santa Clara St	75.0	point1	1	2,339.2	678.7	475.00				Average	
		point3	3	1,964.5	670.5	475.00				Average	
		point4	4	1,427.5	669.8	475.00					
Sant Clara St north of W Huntington Dr	75.0	point32	32	2,024.1	1,340.1	475.00				Average	
		point25	25	1,957.2	1,304.5	475.00				Average	
		point26	26	1,860.9	1,218.6	475.00				Average	
		point27	27	1,748.9	1,077.2	475.00				Average	
		point28	28	1,434.3	687.3	475.00				Average	
		point29	29	1,412.6	656.9	475.00					
Colorado Place	56.0	point34	34	968.8	669.6	475.00				Average	
		point18	18	870.4	689.3	475.00				Average	
		point19	19	747.9	737.4	475.00				Average	
		point20	20	660.4	794.3	475.00				Average	
		point21	21	583.9	853.3	475.00				Average	
		point22	22	504.7	944.2	475.00				Average	
		point23	23	366.9	1,174.3	475.00					
W Huntington Dr west of Santa Clara St	75.0	point35	35	1,416.3	671.2	475.00				Average	
		point5	5	1,245.7	668.1	475.00				Average	
		point6	6	1,088.3	665.5	475.00				Average	
		point7	7	1,025.7	660.5	475.00					
Sant Clara St south of W Huntington Dr	75.0	point36	36	1,412.6	656.9	475.00				Average	
		point30	30	1,244.2	435.0	475.00				Average	
		point2	2	885.5	-24.3	475.00					
W Huntington Dr west of Colorado Pl	75.0	point37	37	1,025.7	660.5	475.00				Average	
		point8	8	956.2	641.4	475.00				Average	

		point9	9	829.5	601.5	475.00				Average	
		point10	10	726.2	558.9	475.00				Average	
		point11	11	652.5	519.7	475.00				Average	
		point12	12	575.4	464.6	475.00				Average	
		point13	13	481.7	392.3	475.00				Average	
		point14	14	376.3	264.1	475.00				Average	
		point15	15	340.5	215.9	475.00				Average	
		point16	16	169.9	-5.0	475.00					

Dudek 1 August 201

MG TNM 2.5

INPUT: TRAFFIC FOR LAeq1h Percentages

PROJECT/CONTRACT: 11663.01

RUN: Indigo Hotel Proj - Exist w Project Satuday

Roadway	Points												
Name	Name	No.	Segment										
			Total	Autos		MTrucks		HTrucks		Buses		Motorcycles	
			Volume	P	S	P	S	P	S	P	S	P	S
			veh/hr	%	mph	%	mph	%	mph	%	mph	%	mph
W Huntington Dr east of Santa Clara St	point1	1	2575	97	30	2	30	1	30	0	0	0	0
	point3	3	2575	97	30	2	30	1	30	0	0	0	0
	point4	4											
Sant Clara St north of W Huntington Dr	point32	32	1277	97	45	2	45	1	45	0	0	0	0
	point25	25	1277	97	45	2	45	1	45	0	0	0	0
	point26	26	1277	97	45	2	45	1	45	0	0	0	0
	point27	27	1277	97	45	2	45	1	45	0	0	0	0
	point28	28	1277	97	45	2	45	1	45	0	0	0	0
	point29	29											
Colorado Place	point34	34	1106	97	40	2	40	1	40	0	0	0	0
	point18	18	1106	97	40	2	40	1	40	0	0	0	0
	point19	19	1106	97	40	2	40	1	40	0	0	0	0
	point20	20	1106	97	40	2	40	1	40	0	0	0	0
	point21	21	1106	97	40	2	40	1	40	0	0	0	0
	point22	22	1106	97	40	2	40	1	40	0	0	0	0
	point23	23											
W Huntington Dr west of Santa Clara St	point35	35	2575	97	30	2	30	1	30	0	0	0	0
	point5	5	2575	97	30	2	30	1	30	0	0	0	0
	point6	6	2575	97	30	2	30	1	30	0	0	0	0
	point7	7											
Sant Clara St south of W Huntington Dr	point36	36	1277	97	45	2	45	1	45	0	0	0	0
	point30	30	1277	97	45	2	45	1	45	0	0	0	0
	point2	2											

INPUT: TRAFFIC FOR LAeq1h Percentages **11663.01**

W Huntington Dr west of Colorado Pl	point37	37	1503	97	45	2	45	1	45	0	0	0	0
	point8	8	1503	97	45	2	45	1	45	0	0	0	0
	point9	9	1503	97	45	2	45	1	45	0	0	0	0
	point10	10	1503	97	45	2	45	1	45	0	0	0	0
	point11	11	1503	97	45	2	45	1	45	0	0	0	0
	point12	12	1503	97	45	2	45	1	45	0	0	0	0
	point13	13	1503	97	45	2	45	1	45	0	0	0	0
	point14	14	1503	97	45	2	45	1	45	0	0	0	0
	point15	15	1503	97	45	2	45	1	45	0	0	0	0
	point16	16											

Dudek						1 August 2019					
MG						TNM 2.5					
INPUT: RECEIVERS											
PROJECT/CONTRACT:	11663.01										
RUN:	Indigo Hotel Proj - Exist w Project Satuday										
Receiver											
Name	No.	#DUs	Coordinates (ground)			Height	Input Sound Levels and Criteria				Active
			X	Y	Z	above	Existing	Impact Criteria		NR	in
						Ground	LAeq1h	LAeq1h	Sub'l	Goal	Calc.
			ft	ft	ft	ft	dBA	dBA	dB	dB	
ST1	1	1	1,117.8	781.8	475.00	5.00	0.00	66	10.0	8.0	Y
ST2	2	1	1,201.9	968.4	475.00	5.00	0.00	66	10.0	8.0	Y
ST3	3	1	891.2	976.2	475.00	5.00	0.00	66	10.0	8.0	Y
ST4	4	1	1,447.8	547.1	475.00	5.00	0.00	66	10.0	8.0	Y
LT1	5	1	1,045.4	735.2	475.00	5.00	0.00	66	10.0	8.0	Y

Dudek 1 August 2019
MG TNM 2.5

INPUT: BARRIERS
PROJECT/CONTRACT: 11663.01
RUN: Indigo Hotel Proj - Exist w Project Satuday

Barrier									Points										
Name	Type	Height		If Wall	If Berm			Add'tnl	Name	No.	Coordinates (bottom)			Height	Segment				
		Min	Max	$ per	$ per	Top	Run:Rise	$ per			X	Y	Z	at	Seg Ht	Perturbs		On	Important
				Unit	Unit	Width		Unit						Point	Incre-	#Up	#Dn	Struct?	Reflec-
				Area	Vol.			Length							ment				tions?
		ft	ft	$/sq ft	$/cu yd	ft	ft:ft	$/ft			ft	ft	ft	ft	ft				
Barrier1	W	0.00	99.99	0.00				0.00	point1	1	1,208.5	959.8	475.00	6.00	0.00	0	0		
									point3	3	1,035.7	955.5	475.00	6.00	0.00	0	0		
									point4	4	923.1	986.1	475.00	6.00	0.00	0	0		
									point5	5	806.1	1,052.8	475.00	6.00	0.00	0	0		
									point6	6	732.8	1,142.5	475.00	6.00					
Barrier6	W	0.00	99.99	0.00				0.00	point21	21	732.8	810.0	475.00	35.00	0.00	0	0		
									point23	23	900.1	743.3	475.00	35.00	0.00	0	0		
									point24	24	1,066.3	746.6	475.00	35.00	0.00	0	0		
									point25	25	1,067.4	830.8	475.00	35.00	0.00	0	0		
									point26	26	905.5	831.9	475.00	35.00	0.00	0	0		
									point27	27	761.2	894.2	475.00	35.00					
Barrier6-2-2	W	0.00	99.99	0.00				0.00	point48	48	529.4	1,146.8	475.00	30.00	0.00	0	0		
									point29	29	675.9	900.8	475.00	30.00	0.00	0	0		
									point30	30	785.3	963.1	475.00	30.00	0.00	0	0		
									point31	31	645.3	1,224.5	475.00	30.00					
Barrier6-2-2-2-2	W	0.00	99.99	0.00				0.00	point50	50	1,359.3	770.7	475.00	20.00	0.00	0	0		
									point33	33	1,443.5	768.5	475.00	20.00	0.00	0	0		
									point34	34	1,445.7	852.6	475.00	20.00	0.00	0	0		
									point35	35	1,361.5	854.8	475.00	20.00					
Barrier6-2-2-2-2-2-2	W	0.00	99.99	0.00				0.00	point52	52	2,055.7	835.8	475.00	20.00	0.00	0	0		
									point37	37	2,057.9	719.9	475.00	20.00	0.00	0	0		
									point38	38	2,158.5	724.3	475.00	20.00	0.00	0	0		
									point39	39	2,158.5	781.1	475.00	20.00	0.00	0	0		
									point40	40	2,230.6	778.9	475.00	20.00	0.00	0	0		
									point41	41	2,221.9	1,026.0	475.00	20.00	0.00	0	0		
									point42	42	2,171.6	1,028.2	475.00	20.00	0.00	0	0		
									point43	43	2,168.7	981.4	475.00	20.00					
Barrier6-2-2-2-2-2-2-2-2	W	0.00	99.99	0.00				0.00	point54	54	1,995.0	801.8	475.00	20.00	0.00	0	0		
									point45	45	1,996.1	722.0	475.00	20.00	0.00	0	0		
									point46	46	2,056.2	725.3	475.00	20.00	0.00	0	0		
									point22	22	2,054.1	801.0	475.00	20.00					
Barrier15	W	0.00	99.99	0.00				0.00	point55	55	1,139.3	729.3	475.00	60.00	0.00	0	0		
									point57	57	1,208.2	732.0	475.00	60.00	0.00	0	0		
									point58	58	1,206.8	878.1	475.00	60.00	0.00	0	0		
									point59	59	1,047.0	876.7	475.00	60.00	0.00	0	0		

									point60	60	1,048.4	839.5	475.00	60.00	0.00	0	0		
									point56	56	1,135.2	838.1	475.00	60.00					

RESULTS: SOUND LEVELS 11663.01

Dudek
MG
1 August 2019
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: 11663.01
RUN: Indigo Hotel Proj - Exist w Project Satuday
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h		Increase over existing		Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Noise Reduction Goal	Calculated minus Goal
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc					
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
ST1	1	1	0.0	61.4	66	61.4	10	----	61.4	0.0	8	-8.0
ST2	2	1	0.0	54.0	66	54.0	10	----	54.0	0.0	8	-8.0
ST3	3	1	0.0	46.6	66	46.6	10	----	46.6	0.0	8	-8.0
ST4	4	1	0.0	67.0	66	67.0	10	Snd Lvl	67.0	0.0	8	-8.0
LT1	5	1	0.0	66.8	66	66.8	10	Snd Lvl	66.8	0.0	8	-8.0

Dwelling Units	# DUs	Noise Reduction Min	Noise Reduction Avg	Noise Reduction Max
		dB	dB	dB
All Selected	5	0.0	0.0	0.0
All Impacted	2	0.0	0.0	0.0
All that meet NR Goal	0	0.0	0.0	0.0

Appendix F

Transportation Impact Analysis

LINSCOTT LAW & GREENSPAN engineers

TRANSPORTATION IMPACT ANALYSIS
125 W. HUNTINGTON DRIVE, BUILDINGS C & D

City of Arcadia, California
December 3, 2019

Prepared for:

VG Property Investments
25 East Huntington Drive
Arcadia, California 91006

LLG Ref. 1-16-4200-2

Prepared By:

Chin S. Taing, PTP
Transportation Planner III

Under the Supervision of:

Clare M. Look-Jaeger, P.E.
Principal

Linscott, Law & Greenspan, Engineers

600 S. Lake Avenue,
Suite 500
Pasadena, CA 91106

626.796.2322 T
626.792.0941 F
www.llgengineers.com

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125 W. HUNTINGTON DRIVE, BUILDINGS C & D

City of Arcadia, California
December 3, 2019

1.0 INTRODUCTION

This transportation analysis has been conducted to identify and evaluate the potential transportation impacts of the proposed 125 W. Huntington Drive, Buildings C and D project, located within the City of Arcadia, California. The project site location and general vicinity are shown in ***Figure 1-1***.

The transportation analysis follows the City of Arcadia transportation study procedures. This transportation analysis evaluates potential project-related transportation impacts at eight (8) key intersections and six (6) study street segments in the vicinity of the project site. The study locations were determined based on consultation with City of Arcadia Development Services Department Engineering Division staff. The Intersection Capacity Utilization (ICU) method was used to determine volume-to-capacity ratios and corresponding Levels of Service for the signalized study intersections while the analysis method from the *Highway Capacity Manual*[1] (HCM) was utilized to determine intersection delay values and corresponding Levels of Service for the unsignalized study intersection.

This study (i) presents existing traffic volumes, (ii) forecasts existing-plus-project traffic volumes, (iii) forecasts future traffic volumes without the project, (iv) forecasts future traffic volumes with the proposed project, (v) determines proposed project-related impacts, and (vi) identifies mitigation measures, where necessary.

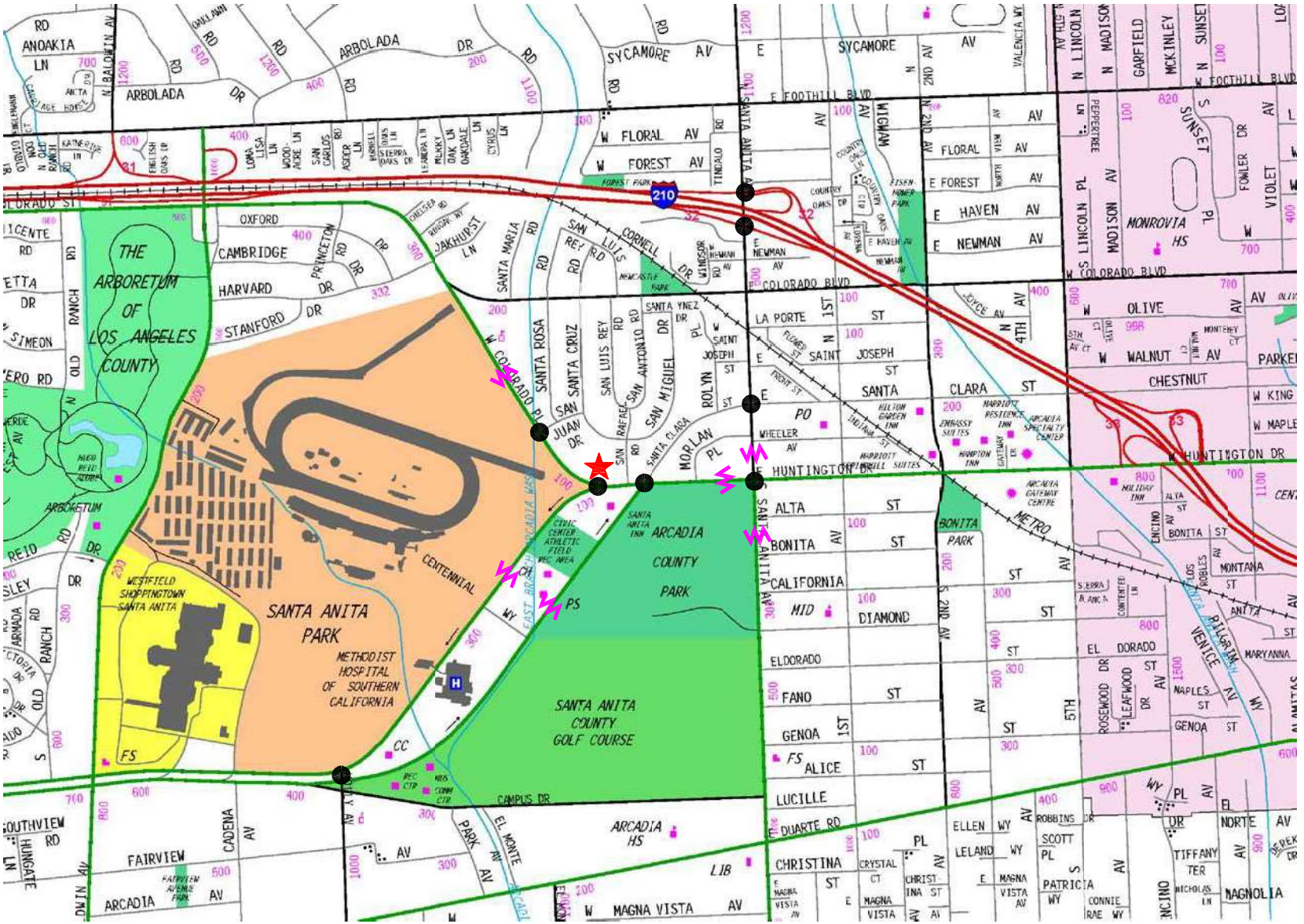
1.1 Study Area

The general location of the project in relation to the study locations and surrounding street system is presented in *Figure 1-1*. The transportation analysis study area is comprised of those locations which have the greatest potential to experience significant traffic impacts due to the proposed project as defined by the Lead Agency. In the traffic engineering practice, the study area generally includes those intersections that are:

a. Immediately adjacent or in close proximity to the project site;

b. In the vicinity of the project site that are documented to have current or projected future adverse operational issues; and

[1] *Highway Capacity Manual 6th Edition*, Transportation Research Board of the National Academies of Sciences-Engineering-Medicine, 2016.



N

NOT TO SCALE

MAP SOURCE: RAND MCNALLY & COMPANY

PROJECT SITE

STUDY INTERSECTION

STUDY STREET SEGMENT

FIGURE 1-1
VICINITY MAP

LINSCOTT, LAW & GREENSPAN, engineers

125 W. HUNTINGTON DRIVE, BUILDINGS C & D PROJECT

c. In the vicinity of the project site that are forecast to experience a relatively greater percentage of project-related vehicular turning movements.

The locations selected for analysis were based on the above criteria, forecast net new project peak hour vehicle trip generation, anticipated distribution of project vehicle trips, existing intersection/corridor operations, and consultation with Arcadia Development Services Department Engineering Division staff.

The intersection volume-to-capacity, delay and Level of Service calculations for the study intersections were used to evaluate the potential traffic-related impacts associated with area growth, cumulative projects and the proposed project. It should be noted that additional intersections in the project vicinity were not selected for analysis because they do not satisfy the aforementioned criteria, and as such, they are not anticipated to experience significant impacts due to project-generated traffic volumes.

1.2 Overview of Senate Bill 743

On September 27, 2013, Governor Brown signed Senate Bill (SB) 743 (Steinberg, 2013). Among other things, SB 743 creates a process to change the methodology to analyze transportation impacts under CEQA (Public Resources Code section 21000 and following), which could include analysis based on project vehicle miles traveled (VMT) rather than impacts to intersection Level of Service. On December 30, 2013, the State of California Governor's Office of Planning and Research (OPR) released a preliminary evaluation of alternative methods of transportation analysis. The intent of the original guidance documentation was geared first towards projects located within areas that are designated as transit priority areas, to be followed by other areas of the State. OPR issued other draft discussion documents in March 2015 and January 2016, suggesting some new revisions to the State CEQA Guidelines. In November 2017, OPR submitted the proposed amendments to the CEQA Guidelines to the State's Natural Resources Agency (that include a proposed new Guidelines section 15064.3 which governs how VMT-based analyses of potential traffic impacts should be conducted). On January 26, 2018, the Natural Resources Agency published a Notice of Rulemaking, commencing the formal rulemaking process for the amendments to the CEQA Guidelines. While OPR has now issued final revisions to the state CEQA Guidelines in order to implement the CEQA traffic analysis component of SB 743, Cities, like Arcadia, have until July 1, 2020, to update their transportation analysis guidelines. Therefore, the analysis in this study utilizes existing, long-established protocols in accordance with CEQA and the City's current significance thresholds.

2.0 PROJECT DESCRIPTION

2.1 Existing Project Site

The project site is located at 125 West Huntington Drive in the City of Arcadia, California. The existing site is situated on the northeast side of Colorado Place and is generally bounded by a restaurant and San Juan Drive to the north, San Rafael Road to the south, Colorado Place to the west and residential uses to the north and east. The project site and general vicinity are illustrated in *Figure 1-1*.

The northern portion of the project site was previously constructed under the prior Conditional Use Permit (CUP) with the following gross square feet (GSF) of building floor area and corresponding land use components.

- Building 1: 163,116 GSF Parking Structure (Built)
- Building A: 19,845 GSF of Medical Office Use (Built)
- Building B: 16,231 GSF of Medical Office Use + 3,000 GSF of Restaurant Use (Built)

In addition, the southern portion of the project site is currently developed and previously occupied by a three-story office building (Building C) which totals 67,213 gross square feet and associated surface parking area.

- Building C: 67,213 GSF of General Office Use

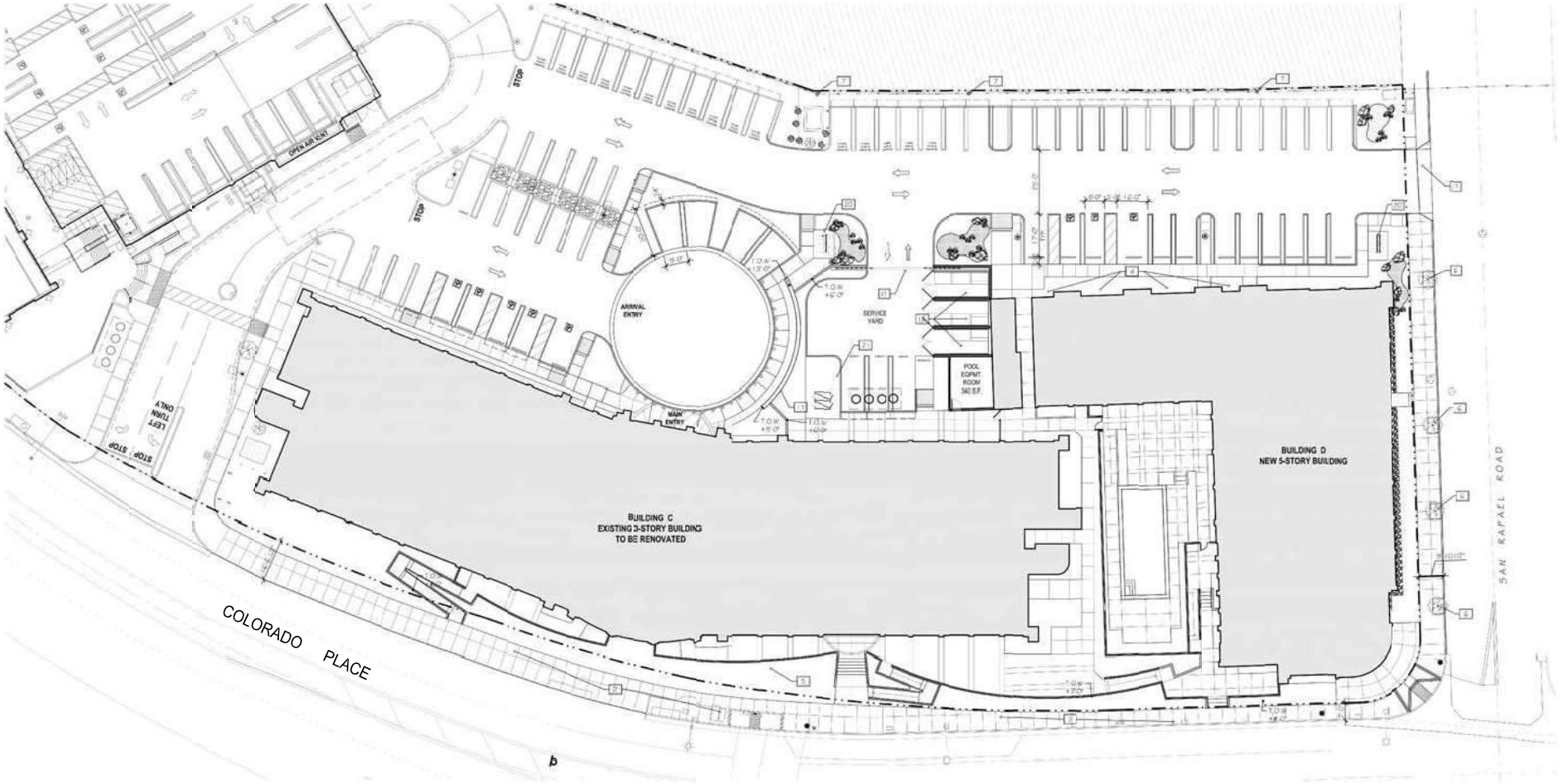
2.2 Proposed Project Description

The proposed project consists of remodeling the existing office building (Building C) in order to fully convert it to a 90-room hotel, with amenities including restaurant and bar areas and the existing surface parking lot will be reduced in order to allow for construction of a five-story hotel annex building (Building D) at the south end of the site. The following building floor areas and corresponding land uses are proposed for both buildings:

- Building C: 90 hotel guestrooms, 4,146 GSF of restaurant use, and 1,033 GSF of bar use
- Building D: 75 hotel guestrooms, 7,466 GSF of spa, and 1,568 GSF of café use

Other portions of the project site, including the parking structure and the two existing medical office buildings (i.e., Buildings A and B) that have been constructed as part of the prior CUP, are not included in this transportation analysis since both buildings are currently occupied. Construction of the proposed project and subsequent occupancy is planned by year 2021. The proposed project site plan is shown in ***Figure 2-1***.

Vehicular access to the project site will be provided via three existing driveways: one driveway on San Juan Drive, one driveway on Colorado Place, and one driveway on San Rafael Road. Further discussion of the project's access and circulation scheme is provided in Section 3.0.



N

NOT TO SCALE

SOURCE: PACIFIC DESIGN GROUP

FIGURE 2-1
PROJECT SITE PLAN

LINSCOTT, LAW & GREENSPAN, engineers

125 W. HUNTINGTON DRIVE, BUILDINGS C & D PROJECT

3.0 SITE ACCESS AND CIRCULATION

The site access scheme for the proposed project is displayed in *Figure 2-1*. Descriptions of the existing site access and proposed project site access and circulation schemes are provided in the following subsections.

3.1 Existing Site Access

Vehicular access to the existing project site is presently provided via three driveways: one driveway on Colorado Place south of the existing parking structure, one driveway on San Juan Drive, and one driveway on San Rafael Road near the southeasterly property frontage. A two-way left-turn lane is available on Colorado Place along the project frontage. All existing project driveways currently accommodate full access (i.e., left-turn and right-turn ingress and egress movements).

3.2 Proposed Project Site Access

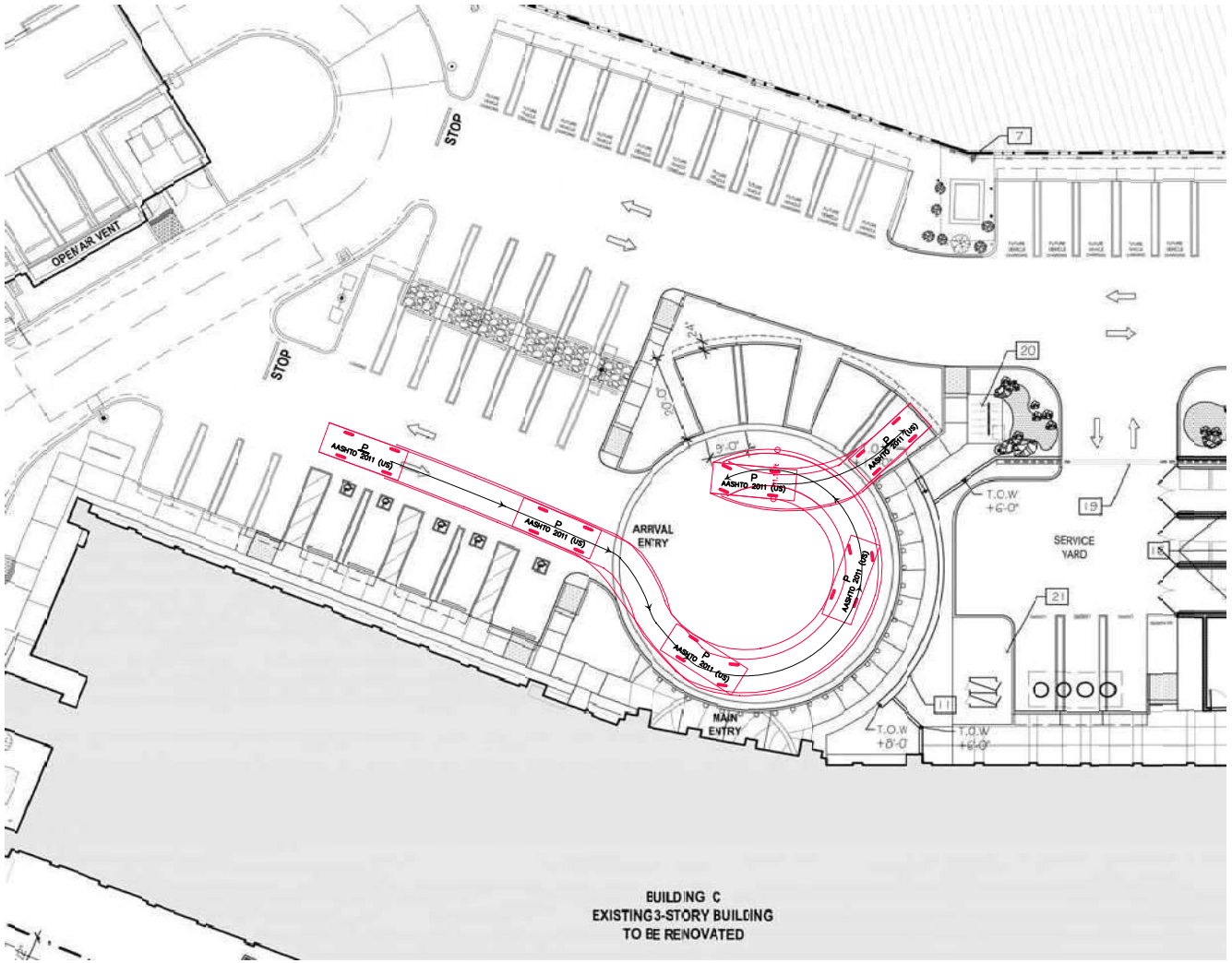
The proposed project site access scheme is displayed in *Figure 2-1*. Vehicular access to the project site will continue to be provided via the existing project driveways on Colorado Place, San Juan Drive, and San Rafael Road. ***Figure 3-1*** illustrates the vehicular maneuvering and circulation on-site in the hotel porte cochère/main entry area located adjacent to (north of) Building C. Descriptions of the project site access points are provided in the following paragraphs.

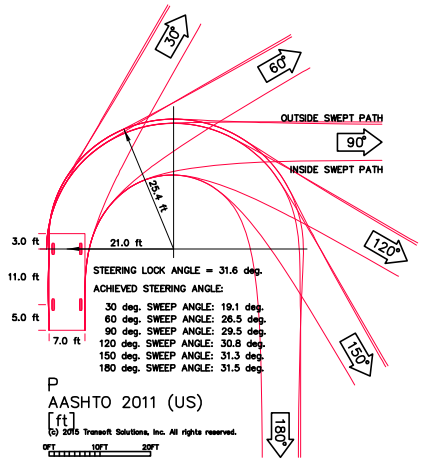
- *Colorado Place Project Driveway:*

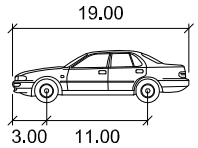
  The existing Colorado Place project driveway is located on the east side of Colorado Place approximately mid-way between San Juan Drive and San Rafael Road. This project driveway will continue to provide vehicular access to the existing parking structure. One outbound left-turn lane and one outbound right-turn lane along with one inbound lane are provided at this driveway. The Colorado Place project driveway will continue to accommodate full access (i.e., left-turn and right-turn ingress and egress movements).

- *San Rafael Road Project Driveway:*

  The existing San Rafael Road project driveway is located on the westerly side of San Rafael Road at the southeast quadrant of the project site. This project driveway will continue to provide vehicular access to the existing parking structure as well as the on-site surface parking areas located to the south of the parking structure. The San Rafael Road project driveway will continue to accommodate full access (i.e., left-turn and right-turn ingress and egress movements).







P	feet
Width	: 7.00
Track	: 6.00
Lock to Lock Time	: 6.0
Steering Angle	: 31.6

N

SCALE 1"=40'

FIGURE 3-1
VEHICLE MANEUVERING ANALYSIS

AASHTO (US) PASSENGER VEHICLE

125 W. HUNTINGTON DRIVE, BUILDINGS C & D PROJECT

LINSCOTT, LAW & GREENSPAN, engineers

- *San Juan Drive Project Driveway:*

  The San Juan Drive project driveway will be located on the south side of San Juan Drive at the northeast quadrant of the project site. This project driveway will provide direct vehicular access to the existing parking structure as well as the on-site surface parking area located to the north of the parking structure. The San Juan Drive project driveway will continue to accommodate full access (i.e., left-turn and right-turn ingress and egress movements).

4.0 PROJECT PARKING

This section summarizes the review of the project's parking requirements according to the City of Arcadia Zoning Code requirements and the planned project parking supply.

4.1 City Code Parking Requirements

In accordance with City of Arcadia Zoning Code[2] parking requirements, a total of 463 parking spaces is required for the entire project site development (i.e., Buildings A, B, C, and D). Since on-site parking will be shared between the various buildings, the parking requirement has been identified for the entire site development. The City of Arcadia requirements for various land uses are set forth in Article IX, Chapter 1: Development Code of the Municipal Zoning Code. The following City Code parking requirements have been identified for the proposed project and the entire site development:

- Medical and Dental Offices (larger than 10,000 SF) – 1.0 space per 200 SF
- Restaurant, Small – 1.0 space per 200 SF
- Hotel – 1.2 space for every guest room. Allowed uses within this parking ratio include banquet hall, and/or assembly places such as a conference center, spas, and breakfast lounges serving only hotel guests.
- Restaurant, within Hotel or Motel Structure – 1.0 space per 200 SF
- Bar, Lounges, Nightclubs, and Taverns – 1.0 space per 100 SF
- Retail Sales, General – 1.0 space per 200 SF

Based on the identified Code parking requirements, a total of 469 spaces is required for the entire site (i.e., 195 spaces for Buildings A and B, 274 spaces for Buildings C and D) as shown in the following calculations:

Existing Buildings A and B:

- Medical Office: 36,076 GSF x 1.0 space/200 GSF = 180 spaces
- Restaurant Space within the Bldg. B MOB: 3,000 GSF x 1.0 space/200 GSF = 15 spaces

Total City Code Required Parking (Buildings A and B) = 195 spaces

Proposed Buildings C and D:

- Hotel: 165 rooms × 1.2 spaces/room = 198 spaces
- Restaurant Space within Hotel: 4,146 GSF x 1.0 space/200 GSF = 21 spaces
- Bar: 1,033 GSF x 1.0 space/100 GSF = 10 spaces
- Spa: 7,466 GSF x 1.0 space/200 GSF = 37 spaces
- Restaurant Space (Café) within Hotel: 1,568 GSF x 1.0 space/200 GSF = 8 spaces

Total City Code Required Project Parking (Buildings C and D) = 274 spaces

[2] City of Arcadia Zoning Code – Article IX: Division and Use of Land, Chapter 1: Development Code, Division 3, Section 9103.07.060 Tables 3-5 and 3-6, October 29, 2018.

4.2 Proposed Project Parking Supply

A total of 478 parking spaces is planned to be provided within the project site, including 387 spaces in the parking structure, 24 in the north side surface parking area, and 67 spaces in the south side surface parking area. The City of Arcadia parking requirement for the entire site totals 469 spaces (i.e., 195 spaces for Buildings A and B, and 274 spaces for Buildings C and D). Thus, the project parking supply of 478 spaces is nine (9) spaces more than the calculated Code parking requirement.

As part of the parking supply, the project must also provide a minimum of nine accessible spaces, two of which will need to be van accessible. This complies with the American with Disabilities Act requirement of a minimum of nine spaces of the on-site parking supply as accessible spaces for parking facilities with 401 to 500 spaces, with one in every six handicap spaces being van accessible.

5.0 EXISTING STREET SYSTEM

5.1 Study Intersections

Immediate vehicular access to the project site is provided via Colorado Place, San Juan Drive and San Rafael Road. The following eight (8) study intersections were selected for analysis in consultation with City of Arcadia Development Services Department Engineering Division staff in order to determine potential impacts related to the proposed project:

1. Gate 3-Holly Avenue/Huntington Drive-Campus Drive
2. Colorado Place/San Juan Drive
3. Colorado Place/Huntington Drive
4. Santa Clara Street/Huntington Drive
5. Santa Anita Avenue/I-210 Freeway Westbound Ramps
6. Santa Anita Avenue/I-210 Freeway Eastbound Ramps
7. Santa Anita Avenue/Santa Clara Street
8. Santa Anita Avenue/Huntington Drive

Seven of the eight study intersections are presently controlled by traffic signals. The Colorado Place/San Juan Drive intersection is currently controlled by a stop sign facing the westbound San Juan Drive approach. The existing lane configurations and regulatory controls at the eight study intersections are displayed in ***Figure 5-1***.

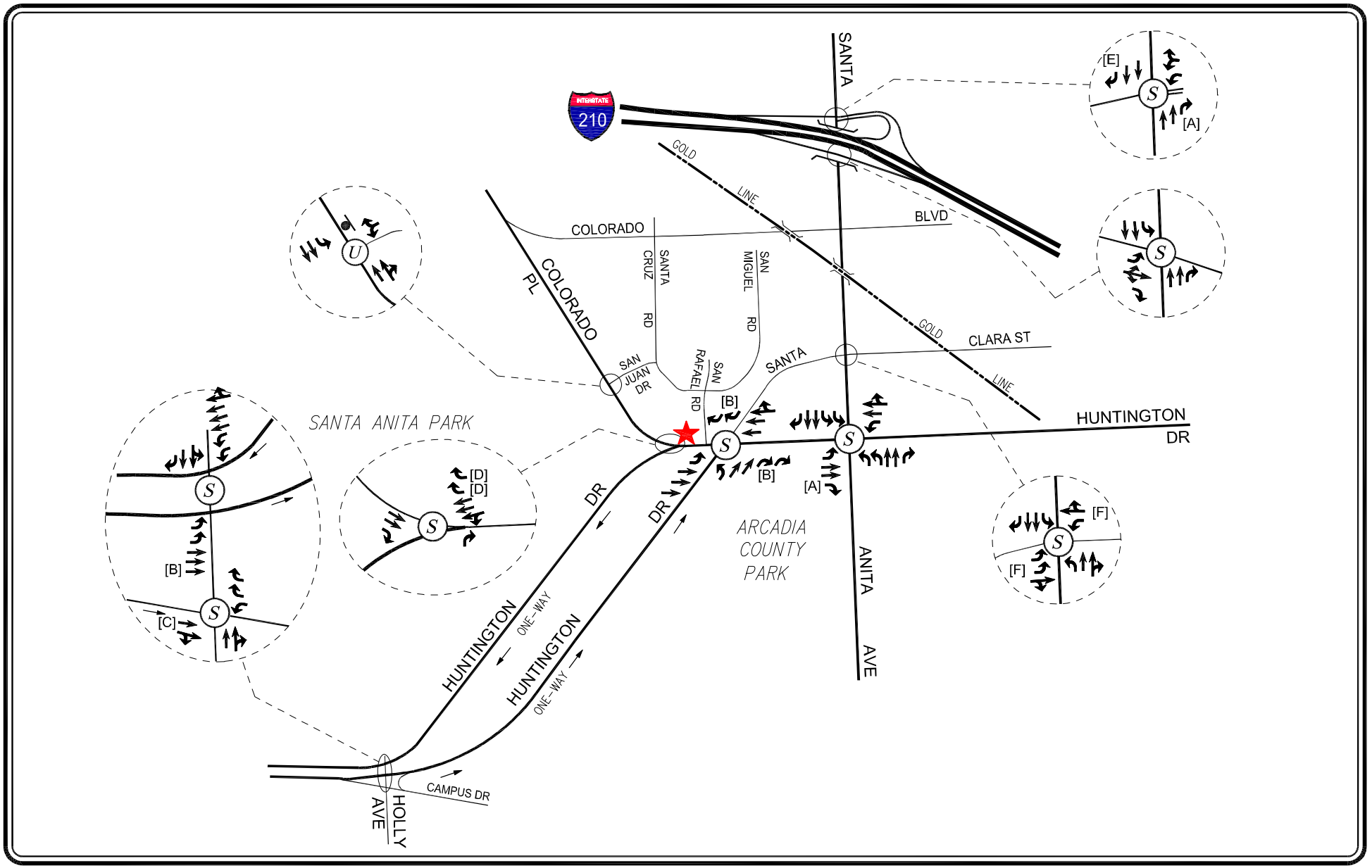
5.2 Study Street Segments

The following six study street segment locations were identified for analysis in consultation with City staff for inclusion in the street segment analysis:

1. Colorado Place between San Juan Drive and Colorado Boulevard;
2. Huntington Drive (EB) between Santa Clara Street and Centennial Way;
3. Huntington Drive (WB) between Colorado Place and Centennial Way;
4. Huntington Drive between Santa Clara Street and Santa Anita Avenue;
5. Santa Anita Avenue between Santa Clara Street and Huntington Drive; and
6. Santa Anita Avenue south of Huntington Drive.

5.3 Roadway Classifications

The City of Arcadia utilizes similar roadway categories recognized by regional, state and federal transportation agencies. There are four general categories in the roadway hierarchy, ranging from freeways with the highest capacity to two-lane undivided roadways with the lowest capacity. The roadway categories are summarized as follows:



NOT TO SCALE

PROJECT SITE

SIGNALIZED INTERSECTION

UNSIGNALIZED INTERSECTION

STOP SIGN

LINSCOTT, LAW & GREENSPAN, engineers

[A] OVERLAP PHASE
[B] NO RIGHT-TURN
[C] NO LEFT-TURN
[D] FREE-FLOW MOVEMENT
[E] FUNCTIONAL RIGHT-TURN LANE
[F] SPLIT-PHASE OPERATION

FIGURE 5-1
EXISTING LANE CONFIGURATIONS

125 W. HUNTINGTON DRIVE, BUILDINGS C & D PROJECT

- *Freeways* are limited-access and high-speed travel ways included in the state and federal highway systems. Their purpose is to carry regional through-traffic. Access is provided by interchanges with typical spacing of one mile or greater. No local access is provided to adjacent land uses.

- *Arterial* roadways are major streets that primarily serve through-traffic and provide access to abutting properties as a secondary function. Arterials are generally designed with two to six travel lanes and their major intersections are signalized. This roadway type is divided into two categories: major and minor arterials. Major arterials are typically four-or-more lane roadways and serve both local and regional through-traffic. Minor arterials are typically two-to-four lane streets that service local and commuter traffic.

- *Collector* roadways are streets that provide access and traffic circulation within residential and non-residential (e.g., commercial and industrial) areas. Collector roadways connect local streets to arterials and are typically designed with two through travel lanes (i.e., one through travel lane in each direction) that may accommodate on-street parking. They may also provide access to abutting properties.

- *Local* roadways distribute traffic within a neighborhood, or similar adjacent neighborhoods, and are not intended for use as a through-street or a link between higher capacity facilities such as collector or arterial roadways. Local streets are fronted by residential uses and do not typically serve commercial uses.

5.4 Regional Highway System

Regional vehicular access to the project site is provided by the Foothill Freeway (I-210) which is located approximately one-half mile north of the project site. A brief description of the I-210 Freeway is provided in the following paragraph.

Foothill Freeway (I-210) is a major east-west oriented freeway connecting the Golden State Freeway (I-5) in the San Fernando area to the Orange Freeway (SR-57) near San Dimas in the project vicinity, and extends easterly to the I-215 Freeway in San Bernardino. The I-210 Freeway generally contains four mainline freeway lanes and one high occupancy vehicle lane in each direction near the study area. Full freeway connections (i.e., eastbound and westbound ramp connections) are provided at Baldwin Avenue and Santa Anita Avenue within the project study area.

5.5 Roadway Descriptions

A review of the key roadways in the project site vicinity and study area is summarized in ***Table 5-1***. As indicated in *Table 5-1*, the roadways within the project study area were inventoried on a segment basis in terms of the number of lanes provided, the median types, posted speed limits, etc. Brief descriptions of the important roadways in the project site vicinity are provided in the following paragraphs.

Table 5-1
EXISTING ROADWAY DESCRIPTIONS

Roadway	Classification [1]	Travel Lanes		Median Types [4]	Speed Limit
		Direction [2]	No. Lanes [3]		
Holly Avenue	Collector	N-S	2	N/A	30
Colorado Place	Primary Arterial	N-S	4	2WLT/RMI	40
Huntington Drive					
-Michillinda Ave to La Cadena Ave	Major Arterial	E-W	8	RMI	45
-La Cadena Ave to Santa Clara St	Major Arterial (1-Way)	S	3	N/A	45
-La Cadena Ave to Santa Clara St	Major Arterial (1-Way)	N	3	N/A	45
-Santa Clara St to 5th St	Primary Arterial	E-W	4 to 5	RMI	30
Santa Clara Street	Secondary Arterial	N-S	4	2WLT	35
Santa Anita Avenue					
-Grandview Ave to Foothill Blvd	Enhanced Collector	N-S	2 [5]	RMI	35
-Foothill Blvd to Live Oak Ave	Primary Arterial	N-S	4	RMI	35 to 40
San Juan Drive	Local Street	E-W	2	N/A	25

Notes:
[1] Roadway classifications obtained from the *City of Arcadia General Plan Circulation and Infrastructure Element, adopted November 2010.*
[2] Direction of roadways in the project area: N-S - North/South; and E-W - East/West.
[3] Number of lanes in both directions of the roadway.
[4] Median type of the road: RMI - Raised Median Island; 2WLT - 2-Way Left-Turn Lane; and N/A-Not Applicable.
[5] Bike Lane (Class II)

Colorado Place is a north-south oriented roadway that borders the project site to the west. In the Arcadia General Plan Circulation and Infrastructure Element, Colorado Place is classified as a primary arterial between Colorado Boulevard and Huntington Drive. Colorado Place is also a designated truck route, as well as a secondary travel corridor and a planned secondary transit corridor within the City. Two through travel lanes are provided in each direction on Colorado Place in the project vicinity. On-street parking is generally not provided along Colorado Place in the immediate project vicinity. The speed limit on Colorado Place is 40 miles per hour (MPH).

Huntington Drive is an east-west oriented roadway that borders a portion of the project site to the south. In the Arcadia General Plan Circulation and Infrastructure Element, Huntington Drive is classified as a major arterial west of Santa Clara Street and as a primary arterial east of Santa Clara Street. Huntington Drive is also a designated truck route, as well as a principal travel corridor and a planned primary transit corridor within the City. The number of through travel lanes in each direction on Huntington Drive varies from four through lanes west of Holly Avenue, to three through lanes between Holly Avenue and Santa Clara Street, to two through lanes east of Santa Clara Street. Exclusive left-turn lanes are provided on Huntington Drive at major intersections. On-street parking is generally not provided along Huntington Drive in the immediate project vicinity. The speed limit on Huntington Drive varies from 30 MPH east of Santa Clara Street to 45 MPH west of Santa Clara Street.

Santa Clara Street is an east-west oriented roadway that is located east of the project site. Santa Clara Street extends from the intersection of Huntington Drive and West Colorado Place to the city boundary at 5th Avenue where Santa Clara Street becomes Chestnut Avenue in the adjacent City of Monrovia. In the Arcadia General Plan Circulation and Infrastructure Element, Santa Clara Street is classified as a secondary arterial between Huntington Drive and Santa Anita Avenue and as an enhanced collector east of Santa Anita Avenue. Santa Clara Street is also designated as a secondary travel corridor between Huntington Drive and Santa Anita Avenue and a local travel corridor east of Santa Anita Avenue. Santa Clara Street is also planned to serve as a primary transit corridor. Two through travel lanes are provided in each direction on Santa Clara Street between Huntington Drive and Santa Anita Avenue while one through travel lane is provided in each direction on Santa Clara Street east of Santa Anita Avenue. The speed limit on Santa Clara Street is 35 MPH.

Santa Anita Avenue is a north-south oriented roadway that is located east of the project site. In the Arcadia General Plan Circulation and Infrastructure Element, Santa Anita Avenue is classified as a primary arterial from the southern city boundary to Foothill Boulevard and as an enhanced corridor north of Foothill Boulevard. South of Foothill Boulevard, Santa Anita Avenue is also a designated truck route and a principal travel corridor. North of Foothill Boulevard, Santa Anita Avenue is designated as a secondary travel corridor. Santa Anita Avenue is also planned to serve as a primary transit corridor south of the I-210 Freeway and a secondary transit corridor north of the I-210 Freeway. Two through travel lanes are provided in each direction on Santa Anita Avenue south of Foothill Boulevard while one through travel lane is provided in each direction on Santa Anita Avenue north of Foothill Boulevard. Exclusive left-turn lanes are provided on Santa Anita Avenue at major intersections. The speed limit on Santa

Anita Avenue varies from 35 MPH north of Foothill Boulevard to 40 MPH south of Foothill Boulevard.

5.6 Existing Public Transit Services

Public bus transit service in the project vicinity is currently provided by the Metropolitan Transportation Authority (Metro), Foothill Transit, and Arcadia Transit. A summary of the existing transit routes for Metro, Foothill Transit, and Arcadia Transit, including the transit route, destinations and number of buses during the AM and PM peak hours is presented in ***Table 5-2***. The existing public transit routes in the project vicinity are illustrated in ***Figure 5-2***.

5.6.1 *Metro Transit Services*

Metro provides bus transit service along major roadways within the transportation analysis study area: Huntington Drive and Santa Anita Avenue. Metro currently operates two local Metro bus transit routes in the vicinity of the project site. The Metro bus transit routes provide headways of two to three buses during the morning and afternoon peak hours. The Metro Gold Line Arcadia Station is also located approximately one-half mile northeast of the project site, at the northwest corner of First Avenue and Santa Clara Street.

5.6.2 *Foothill Transit Services*

Foothill Transit provides bus transit service along major roadways within the transportation analysis study area: Huntington Drive and Santa Anita Avenue. Foothill Transit currently operates one transit route in the vicinity of the project site. This bus line provides headways of four buses during the weekday morning peak hour and four buses during the weekday afternoon peak hour.

5.6.3 *Arcadia Transit Services*

Arcadia Transit provides fixed-route general public transit service with three lines (i.e., Green, Blue and Red Lines). Two of the three lines operate in the vicinity of the project site. These lines provide headways of generally one to two buses during the weekday morning peak hour and two to three buses during the weekday afternoon peak hour.

Arcadia Dial-A-Ride is a demand-response service providing curb-to-curb transportation to seniors and persons with disabilities to and from any destination within the Arcadia city boundaries, including all shopping areas, commercial centers, the Methodist Hospital, medical centers, the civic center, parks, the racetrack, libraries, etc. The service is provided based on space availability and is open Monday through Friday from 7:00 AM to 9:00 PM and Saturday/Sunday from 7:00 AM to 7:00 PM. Trip requests can be made the same day or up to seven days in advance.

Table 5-2
EXISTING TRANSIT ROUTES [1]

ROUTE	DESTINATIONS	ROADWAY(S) NEAR SITE	DIR	NO. OF BUSES/TRAINS DURING PEAK HOUR		
				WEEKDAY		SAT
				AM	PM	PM
Arcadia Transit Blue Line	City of Arcadia	Santa Anita Avenue, Huntington Drive Arcadia Gold Line Station	EB WB	1 1	2 2	1 1
Arcadia Transit Green Line	City of Arcadia	Holly Drive, Huntington Drive Arcadia Gold Line Station	Clockwise C/Clockwise	2 2	3 3	3 3
Foothill Transit 187	Azusa to Pasadena via Duarte, Monrovia, Arcadia and Sierra Madre	Santa Anita Avenue, Santa Clara Street, Holly Avenue, Huntington Drive	EB WB	4 4	4 4	2 2
Metro 79	Downtown Los Angeles to Arcadia via El Sereno, Alhambra and South Arcadia	Santa Clara Street, Santa Anita Avenue, Holly Drive, Huntington Drive	EB WB	2 3	2 2	2 1
Metro 487	El Monte to Los Angeles via Arcadia, Pasadena, San Marino, Temple City, San Gabriel and Downtown Los Angeles	Santa Anita Avenue, Huntington Drive	EB WB	2 2	3 2	1 1
Metro Gold Line	Azusa to East Los Angeles via Irwindale, Duarte, Monrovia, Arcadia, Sierra Madre, Pasadena, South Pasadena, Highland Park, Lincoln Heights, Chinatown and Union Station	Arcadia Gold Line Station	NB SB	8 8	8 8	5 5
			Total	**39**	**43**	**27**

[1] Sources: City of Arcadia Transit, Foothill Transit and Los Angeles County Metropolitan Transportation Authority (Metro) websites, 2019.

-18-

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MAP SOURCE: METROPOLITAN TRANSPORTATION AUTHORITY (METRO), ARCADIA TRANSIT WEBSITES

★ PROJECT SITE

FIGURE 5-2
EXISTING TRANSIT ROUTES

LINSCOTT, LAW & GREENSPAN, engineers

125 W. HUNTINGTON DRIVE, BUILDINGS C & D PROJECT

6.0 TRAFFIC COUNTS

6.1 Manual Intersection Traffic Counts

Manual counts of vehicular turning movements were conducted in April 2019 or May 2018, when local schools were in session, at each of the study intersections during the weekday morning (AM) and afternoon (PM) commuter periods, as well as the Saturday afternoon (PM) peak period, to determine the peak hour traffic volumes. The manual traffic counts at the study intersections were conducted by a traffic count subconsultant from 7:00 AM to 9:00 AM to determine the weekday AM peak commuter hour, from 4:00 PM to 6:00 PM to determine the weekday PM peak commuter hour, and from 4:00 PM to 6:00 PM to determine the Saturday PM peak hour. These periods are typically associated with peak hours in the metropolitan area.

The existing weekday AM, weekday PM, and Saturday PM peak hour intersection traffic volumes by approach are summarized in ***Table 6-1***. The existing vehicular turning movements at the study intersections during the weekday AM, weekday PM, and Saturday PM peak hours are shown in ***Figures 6-1***, ***6-2***, and ***6-3*** respectively. For each study intersection, the highest one-hour total traffic volumes (i.e., four consecutive 15-minute time intervals) traversing through the intersection during the 7:00 to 9:00 AM and 4:00 to 6:00 PM time periods were selected so as to determine the respective AM and PM peak hour traffic volumes for each study intersection. For purposes of the traffic impact analysis, this common traffic engineering practice ensures that a more conservative (i.e., worst-case) assessment of existing operating conditions be attained for each study intersection. Therefore, the traffic volumes shown in *Figures 6-1*, *6-2* and *6-3* for the study intersections do not necessarily reflect the same exact one hour time period during the morning and/or afternoon peak commuter conditions (i.e., one intersection's peak hour may have occurred between 7:30 and 8:30 AM, while another intersection's peak hour may have occurred between 7:45 and 8:45 AM). Summary data worksheets of the manual traffic counts of the study intersections are contained in ***Appendix A***.

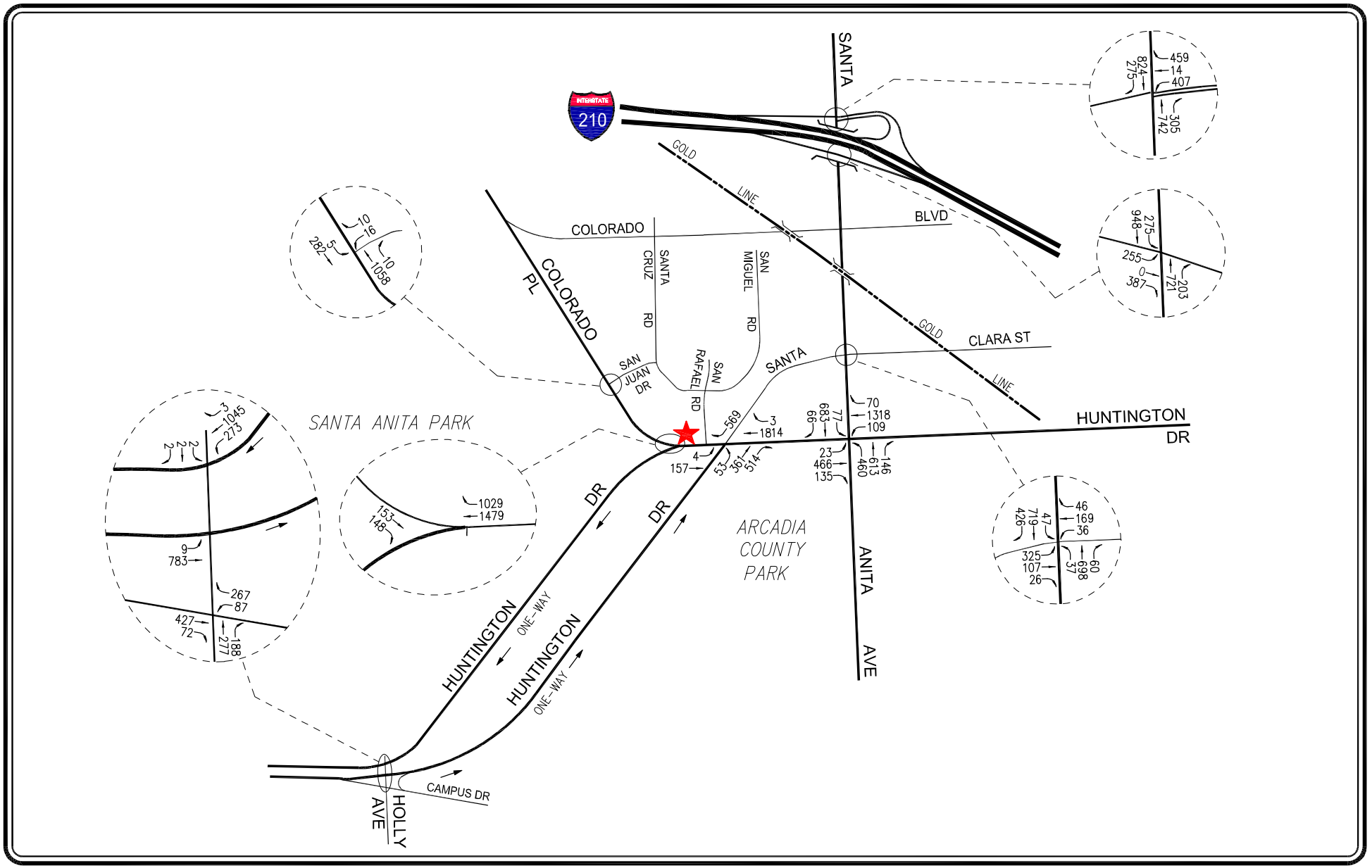
6.2 Automatic 24-Hour Machine Traffic Counts

Automatic 24-hour machine traffic counts of the six study street segments were conducted by a traffic count subconsultant during one mid-week day and one weekend day (Saturday) in April 2019. Copies of the current 24-hour machine traffic counts for the study street segment locations are also contained in *Appendix A*.

Table 6-1
EXISTING TRAFFIC VOLUMES [1]

NO.	INTERSECTION	DATE	DIR	AM PEAK HOUR		PM PEAK HOUR		SAT PM PEAK HOUR	
				BEGAN	VOLUME	BEGAN	VOLUME	BEGAN	VOLUME
1	Gate 3 - Holly Avenue/	04/17/2019	NB	8:00	465	5:00	262	5:00	179
	Huntington Drive - Campus Drive	04/13/2019	SB		6		11		290
			EB		792		1,075		764
			WB		1,321		1,303		939
			EB-Campus Dr.		499		807		520
			WB-Campus Dr.		354		243		218
2	Colorado Place/	04/17/2019	NB	7:30	1,068	4:45	270	4:15	296
	San Juan Drive	04/13/2019	SB		287		1,305		535
			EB		0		0		0
			WB		26		20		44
3	Colorado Place/	04/17/2019	NB	7:45	0	5:00	0	4:00	0
	Huntington Drive	04/13/2019	SB		301		1,356		477
			EB		0		0		0
			WB		2,508		1,410		1,098
4	Santa Clara Street/	04/17/2019	NB	7:45	928	5:00	1,331	4:00	872
	Huntington Drive	04/13/2019	SB		569		374		286
			EB		161		1,238		497
			WB		1,817		906		824
5	Santa Anita Avenue/	04/17/2019	NB	7:45	1,047	5:00	1,104	4:00	900
	I-210 Freeway WB Ramps	04/13/2019	SB		1,099		1,036		857
			EB		0		0		0
			WB		880		635		508
6	Santa Anita Avenue/	04/17/2019	NB	7:45	924	5:00	1,143	4:30	894
	I-210 Freeway EB Ramps	04/13/2019	SB		1,223		1,033		833
			EB		642		530		594
			WB		0		0		0
7	Santa Anita Avenue/	05/03/2018	NB	7:30	795	5:00	764	1:00	857
	Santa Clara Street	05/19/2018	SB		1,192		1,145		1,131
		[2]	EB		458		538		357
			WB		251		316		229
8	Santa Anita Avenue/	04/17/2019	NB	8:00	1,219	5:00	968	4:00	777
	Huntington Drive	04/13/2019	SB		826		963		744
			EB		624		1,943		1,072
			WB		1,497		874		765

[1] Counts conducted by City Traffic Counters.
[2] Counts conducted by National Data & Surveying Services. The traffic counts were adjusted by 1% per year to account for ambient growth in determining year 2019 traffic volumes.



PROJECT SITE

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NOT TO SCALE

FIGURE 6-1
EXISTING TRAFFIC VOLUMES

WEEKDAY AM PEAK HOUR

125 W. HUNTINGTON DRIVE, BUILDINGS C & D PROJECT

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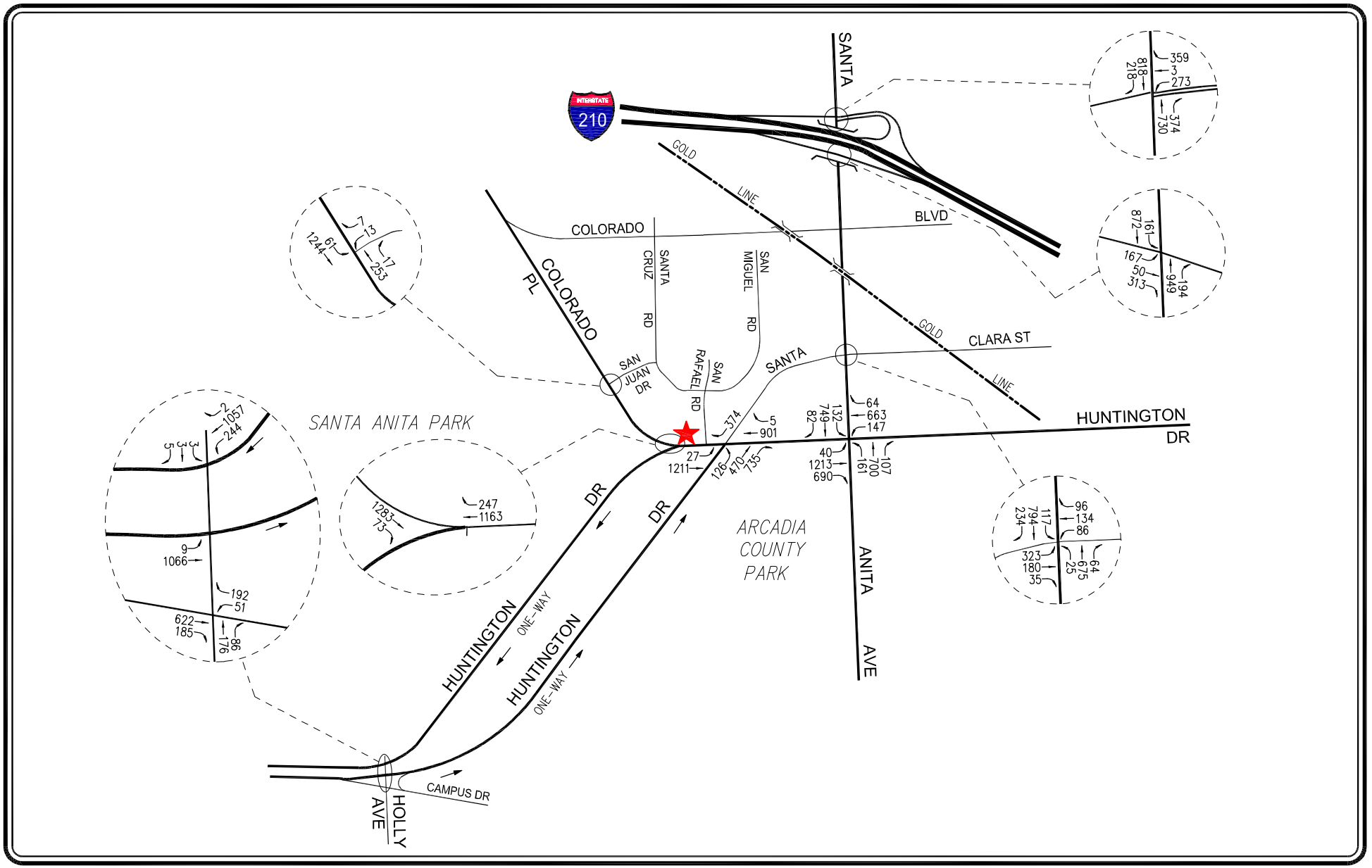


★ PROJECT SITE

N

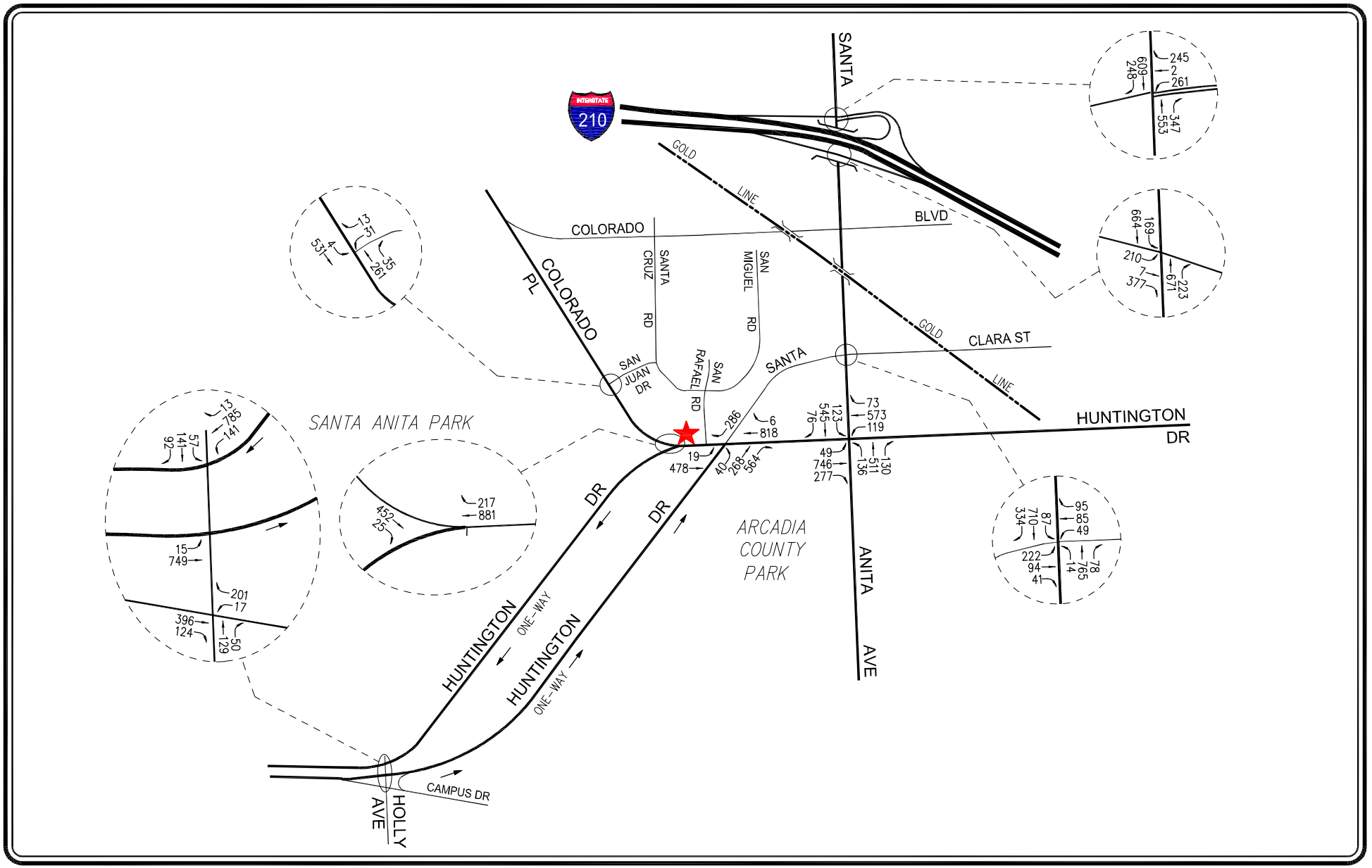
NOT TO SCALE

FIGURE 6-2
EXISTING TRAFFIC VOLUMES

WEEKDAY PM PEAK HOUR

125 W. HUNTINGTON DRIVE, BUILDINGS C & D PROJECT

LINSCOTT, LAW & GREENSPAN, engineers



PROJECT SITE

NOT TO SCALE

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FIGURE 6-3
EXISTING TRAFFIC VOLUMES

SATURDAY PM PEAK HOUR

125 W. HUNTINGTON DRIVE, BUILDINGS C & D PROJECT

7.0 TRAFFIC FORECASTING METHODOLOGY

In order to estimate the traffic impact characteristics of the proposed project, a multi-step process has been utilized. The first step is trip generation, which estimates the total arriving and departing traffic volumes on a peak-hour and daily basis. For projects, the traffic generation potential is typically forecast by applying the appropriate vehicle trip generation equations or rates to the project development tabulation.

The second step of the forecasting process is trip distribution, which identifies the origins and destinations of inbound and outbound project traffic volumes. These origins and destinations are typically based on demographics and existing/anticipated travel patterns in the study area.

The third step is traffic assignment, which involves the allocation of project traffic to study area streets and intersections. Traffic assignment is typically based on minimization of travel time, which may or may not involve the shortest route, depending on prevailing operating conditions and travel speeds. Traffic distribution patterns are indicated by general percentage orientation, while traffic assignment allocates specific volume forecasts to individual roadway links and intersections throughout the study area.

With the forecasting process complete and project traffic assignments developed, the impact of the proposed project is isolated by comparing operational (i.e., Level of Service [LOS]) conditions at selected key intersections using existing and expected future traffic volumes with and without forecast project traffic. The need for site-specific and/or cumulative local area traffic improvements can then be evaluated and the significance of the project's impacts identified.

7.1 Project Trip Generation

Traffic generation is expressed in vehicle trip ends, defined as one-way vehicular movements, either entering or exiting the generating land use. Trip generation rates provided in the ITE *Trip Generation Manual* publication were utilized to forecast project-related trips. The ITE document contains trip rates for a variety of land uses which have been derived based on traffic counts conducted at existing sites throughout California and the United States. Trip generation forecasts for the proposed land use and prior office use to be removed are summarized in the following paragraphs.

7.1.1 *Proposed Project Trip Generation*

Traffic volumes expected to be generated by the proposed project were estimated for the weekday commuter AM and PM peak hours, as well as over a 24-hour daily period, using trip generation rates published in the Institute of Transportation Engineers' (ITE) *Trip Generation Manual*[3]. Additionally, the traffic volumes expected to be generated by the project were estimated for the Saturday PM peak hour as well as over a 24-hour Saturday daily period using the ITE trip generation rates. The Saturday trip generation forecasts reflect the assumption that

[3] Institute of Transportation Engineers *Trip Generation Manual*, 10th Edition, 2017.

each land use's individual peak hour of generator traffic volumes occur during the same Saturday PM peak hour in order to provide a conservative analysis. In actuality, there will be offsets in the Saturday peak hour trip generation for the various project land use components.

Traffic volumes expected to be generated by the proposed project were based upon rates per occupied room or thousand square feet of building floor area. ITE Land Use Code 310 (Hotel) trip generation average rates were used to forecast the traffic volumes expected to be generated by the proposed hotel component. ITE Land Use Code 936 (Coffee/Donut Shop without Drive-Through Window), ITE Land Use Code 820 (Shopping Center), ITE Land Use Code 932 (High-Turnover [Sit-Down] Restaurant), and ITE Land Use Code 925 (Drinking Place) trip generation average rates were used to forecast the traffic volumes expected to be generated by the proposed café, spa, restaurant and bar uses within the hotel component, respectively.

Internal capture trips are those trips made internal to the site between land uses in a mixed or multi-use development. When combined within a mixed or multi-use development, land uses tend to interact, and thus attract a portion of each other's trip generation. In addition to internal capture trips, pass-by trips are made as intermediate stops on the way from an origin to a primary destination without a route diversion. Pass-by trips are attracted from traffic passing the site on an adjacent street or roadway that offers direct access to the site.

It should be noted that while the proposed restaurant, café, spa, and bar uses within the hotel buildings are anticipated to be ancillary in nature and will primarily serve the employees/staff, hotel guests, and visitors of the medical office buildings and proposed hotel buildings, these uses have been separated and trips have been generated for each in order to provide a conservative forecast. Since these uses are not expected to be a primary traffic generator, a combined internal capture/pass-by adjustment factor of only 25% has been applied to the restaurant, café, spa, and bar traffic generation forecast to provide a conservative analysis.

7.1.2 *Prior Use Trip Generation*

Although the former office building on-site (i.e., Worley Parsons building) was vacated prior to the conduct of the traffic counts at the study locations, a prior use trip credit for the former office building has been applied for the project as the space could be re-occupied/leased at any time. As such, the re-occupancy of the office building has been accounted for in the future pre-project conditions analysis as a related project. Traffic volumes generated by the prior use during the weekday AM and PM peak hours were based upon rates per thousand square feet of gross building floor area. ITE Land Use Code 710 (General Office Building) trip generation average rates were used to forecast the traffic volumes expected to be generated by the prior office use. A summary of the prior use trip generation (i.e., to be applied as a credit/reduction in the project trip generation forecasts as it will be removed with the proposed project) is presented in ***Table 7-1.***

Table 7-1
PROJECT TRIP GENERATION [1]

LAND USE	SIZE	DAILY TRIP ENDS [2] VOLUMES	AM PEAK HOUR VOLUMES [2] IN	AM PEAK HOUR VOLUMES [2] OUT	AM PEAK HOUR VOLUMES [2] TOTAL	PM PEAK HOUR VOLUMES [2] IN	PM PEAK HOUR VOLUMES [2] OUT	PM PEAK HOUR VOLUMES [2] TOTAL	SAT DAILY TRIP ENDS [2] VOLUMES	SAT PEAK HOUR VOLUMES [2] IN	SAT PEAK HOUR VOLUMES [2] OUT	SAT PEAK HOUR VOLUMES [2] TOTAL
Proposed Uses												
Hotel [3]	165 Occ. Rooms	2,018	59	43	102	59	61	120	1,733	72	72	144
Coffee Shop without Drive-Through [4]	1,568 GSF	570	81	78	159	29	28	57	930	46	47	93
Less 25% Internal Capture/Pass-by [5]		(142)	(20)	(20)	(40)	(7)	(7)	(14)	(232)	(12)	(12)	(24)
Spa [6]	7,466 GLSF	282	4	3	7	13	15	28	344	18	16	34
Less 25% Internal Capture/Pass-by [5]		(70)	(1)	(1)	(2)	(3)	(4)	(7)	(86)	(5)	(4)	(9)
Restaurant [7]	4,146 GSF	465	23	18	41	25	16	41	507	23	23	46
Less 25% Internal Capture/Pass-by [5]		(116)	(6)	(5)	(11)	(6)	(4)	(10)	(126)	(6)	(6)	(12)
Bar [8]	1,033 GSF	120	nom.	nom.	nom.	8	4	12	120	8	4	12
Less 25% Internal Capture/Pass-by [5]		(30)	nom.	nom.	nom.	(2)	(1)	(3)	(30)	(2)	(1)	(3)
SUBTOTAL PROPOSED PROJECT		**3,097**	**140**	**116**	**256**	**116**	**108**	**224**	**3,160**	**142**	**139**	**281**
Less Prior Use												
General Office [9]	(67,213) GSF	(655)	(67)	(11)	(78)	(12)	(65)	(77)	(148)	(19)	(17)	(36)
SUBTOTAL PRIOR USE		**(655)**	**(67)**	**(11)**	**(78)**	**(12)**	**(65)**	**(77)**	**(148)**	**(19)**	**(17)**	**(36)**
NET INCREASE		**2,442**	**73**	**105**	**178**	**104**	**43**	**147**	**3,012**	**123**	**122**	**245**

[1] Source: ITE "Trip Generation Manual", 10th Edition, 2017.

[2] Trips are one-way traffic movements, entering or leaving.

[3] ITE Land Use Code 310 (Hotel) trip generation average rates.

- Daily Trip Rate: 12.23 trips/occupied rooms; 50% inbound/50% outbound
- AM Peak Hour Trip Rate: 0.62 trips/occupied rooms; 58% inbound/42% outbound
- PM Peak Hour Trip Rate: 0.73 trips/occupied rooms; 49% inbound/51% outbound
- Saturday Daily Trip Rate: 10.5 trips/occupied rooms; 50% inbound/50% outbound
- Saturday Peak Hour of Generator Trip Rate: 0.87 trips/occupied rooms; 50% inbound/50% outbound

[4] ITE Land Use Code 936 (Coffee/Donut Shop without Drive-Through Window) trip generation average rates.

- Daily Trip Rate: Not available; PM peak hour trips assumed to be 10 percent of total daily trips.
- AM Peak Hour Trip Rate: 101.14 trips/1,000 SF of floor area; 51% inbound/49% outbound
- PM Peak Hour Trip Rate: 36.31 trips/1,000 SF of floor area; 50% inbound/50% outbound
- Saturday Daily Trip Rate: Not available; Saturday PM peak hour trips assumed to be 10 percent of total daily trips.
- Saturday Peak Hour of Generator Trip Rate: 59.01 trips/1,000 SF of floor area; 49% inbound/51% outbound

Table 7-1 (Continued)
PROJECT TRIP GENERATION [1]

[5] The coffee shop, spa, restaurant, and bar spaces are anticipated to primarily serve the staff and patients of the medical office building and hotel guests (i.e., not a primary traffic generator). As a result, a combined 25% internal capture/pass-by reduction factor has been conservatively applied to the coffee shop, spa, restaurant, and bar uses.

[6] ITE Land Use Code 820 (Shopping Center) trip generation average rates.
- Daily Trip Rate: 37.75 trips/1,000 SF of leasable floor area; 50% inbound/50% outbound
- AM Peak Hour Trip Rate: 0.94 trips/1,000 SF of leasable floor area; 62% inbound/38% outbound
- PM Peak Hour Trip Rate: 3.81 trips/1,000 SF of leasable floor area; 48% inbound/52% outbound
- Saturday Daily Trip Rate: 46.12 trips/1,000 SF of leasable floor area; 50% inbound/50% outbound
- Saturday Peak Hour of Generator Trip Rate: 4.5 trips/1,000 SF of leasable floor area; 52% inbound/48% outbound

[7] ITE Land Use Code 932 (High-Turnover [Sit-Down] Restaurant) trip generation average rates.
- Daily Trip Rate: 112.18 trips/1,000 SF of floor area; 50% inbound/50% outbound
- AM Peak Hour Trip Rate: 9.94 trips/1,000 SF of floor area; 55% inbound/45% outbound
- PM Peak Hour Trip Rate: 9.77 trips/1,000 SF of floor area; 62% inbound/38% outbound
- Saturday Daily Trip Rate: 122.4 trips/1,000 SF of floor area; 50% inbound/50% outbound
- Saturday Peak Hour of Generator Trip Rate: 11.19 trips/1,000 SF of floor area; 51% inbound/49% outbound

[8] ITE Land Use Code 925 (Drinking Place) trip generation average rates.
- Daily Trip Rate: Not available; assumed the weekday PM peak hour trips are approximately 10 percent of the weekday daily total trips; 50% inbound/50% outbound
- AM Peak Hour Trip Rate: Assumed to be nominal.
- PM Peak Hour Trip Rate: 11.36 trips/1,000 SF of floor area; 66% inbound/34% outbound
- Saturday Daily Trip Rate: Not available; assumed the weekday PM peak hour trips are approximately 10 percent of the weekend daily total trips; 50% inbound/50% outbound
- Saturday Peak Hour of Generator Trip Rate: Not available; assumed weekday PM peak hour trip rate.

[9] ITE Land Use Code 710 (General Office Building) trip generation average rates.
- Daily Trip Rate: 9.74 trips/1,000 SF of floor area; 50% inbound/50% outbound
- AM Peak Hour Trip Rate: 1.16 trips/1,000 SF of floor area; 86% inbound/14% outbound
- PM Peak Hour Trip Rate: 1.15 trips/1,000 SF of floor area; 16% inbound/84% outbound
- Saturday Daily Trip Rate: 2.21 trips/1,000 SF of floor area; 50% inbound/50% outbound
- Saturday Peak Hour of Generator Trip Rate: 0.53 trips/1,000 SF of floor area; 54% inbound/46% outbound

7.1.3 *Weekday Project Trip Generation Summary*

The proposed project weekday trip generation rates and traffic volume forecasts are summarized in *Table 7-1*. As presented in *Table 7-1*, the proposed project is expected to generate 178 net new vehicle trips (73 inbound trips and 105 outbound trips) during the weekday AM peak hour. During the weekday PM peak hour, the proposed project is expected to generate 147 net new vehicle trips (104 inbound trips and 43 outbound trips). Over a 24-hour period, the proposed project is forecast to generate approximately 2,442 daily trip ends during a typical weekday (approximately 1,221 inbound trips and 1,221 outbound trips).

7.1.4 *Weekend Project Trip Generation Summary*

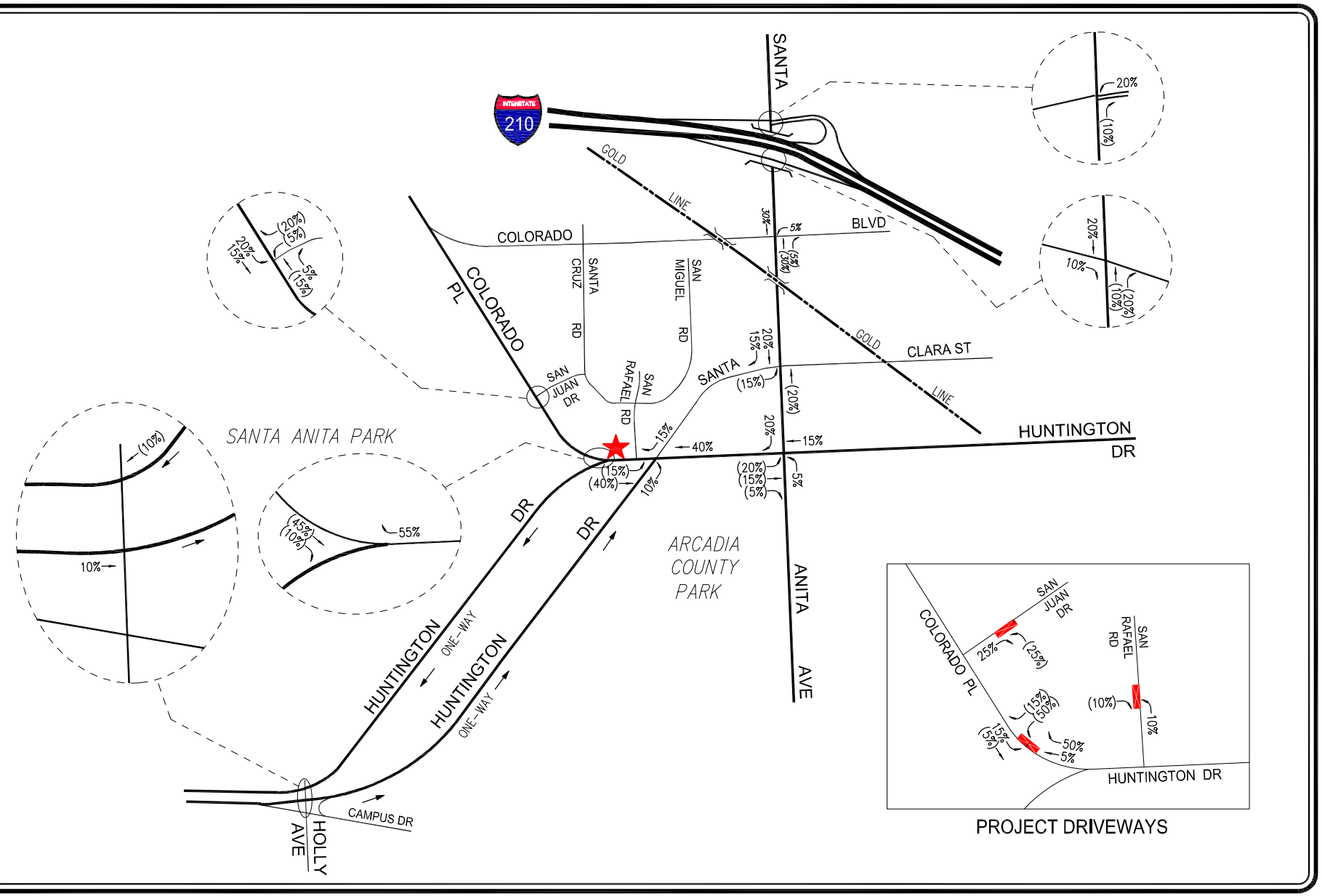
The Saturday trip generation forecast for the proposed project is also summarized in *Table 7-1*. As summarized in *Table 7-1*, the proposed project is expected to generate a net increase of 245 vehicle trips (123 inbound trips and 122 outbound trips) during the Saturday PM peak hour. Over a 24-hour weekend period, the proposed project is forecast to generate a net increase of 3,012 vehicle trips (approximately 1,506 inbound trips and 1,506 outbound trips).

7.2 Project Trip Distribution

The traffic distribution pattern for the proposed project was determined based on the proximity of the project access points to the major and secondary arterials and local streets serving the study area. The major arterial routes in the immediate vicinity of the project site include Huntington Drive, Colorado Place, and Santa Anita Avenue. Project traffic volumes both entering and exiting the site have been distributed and assigned to the adjacent street system based on the following considerations:

- The nature of the proposed project land use components (i.e., hotel use);
- The site's proximity to major traffic corridors (i.e., Colorado Place, Huntington Drive, Santa Anita Avenue, etc.);
- Expected localized traffic flow patterns based on adjacent roadway channelization and presence of traffic signals;
- Existing intersection traffic volumes;
- Ingress/egress availability at the project site; and
- Nearby population and employment centers.

The general, directional traffic distribution patterns for the proposed project is presented in ***Figure 7-1***. The forecast net new weekday AM, weekday PM, and Saturday PM peak hour project traffic volumes at the study intersections are displayed in ***Figures 7-2***, ***7-3***, and ***7-4***, respectively. The net new project traffic volume assignments presented in *Figures 7-2, 7-3,* and *7-4* reflect the traffic distribution characteristics shown in *Figure 7-1*, the project traffic generation forecast presented in *Table 7-1*, and the reduction of the prior use traffic generation and traffic volume distribution percentages as shown in ***Figure 7-5***.



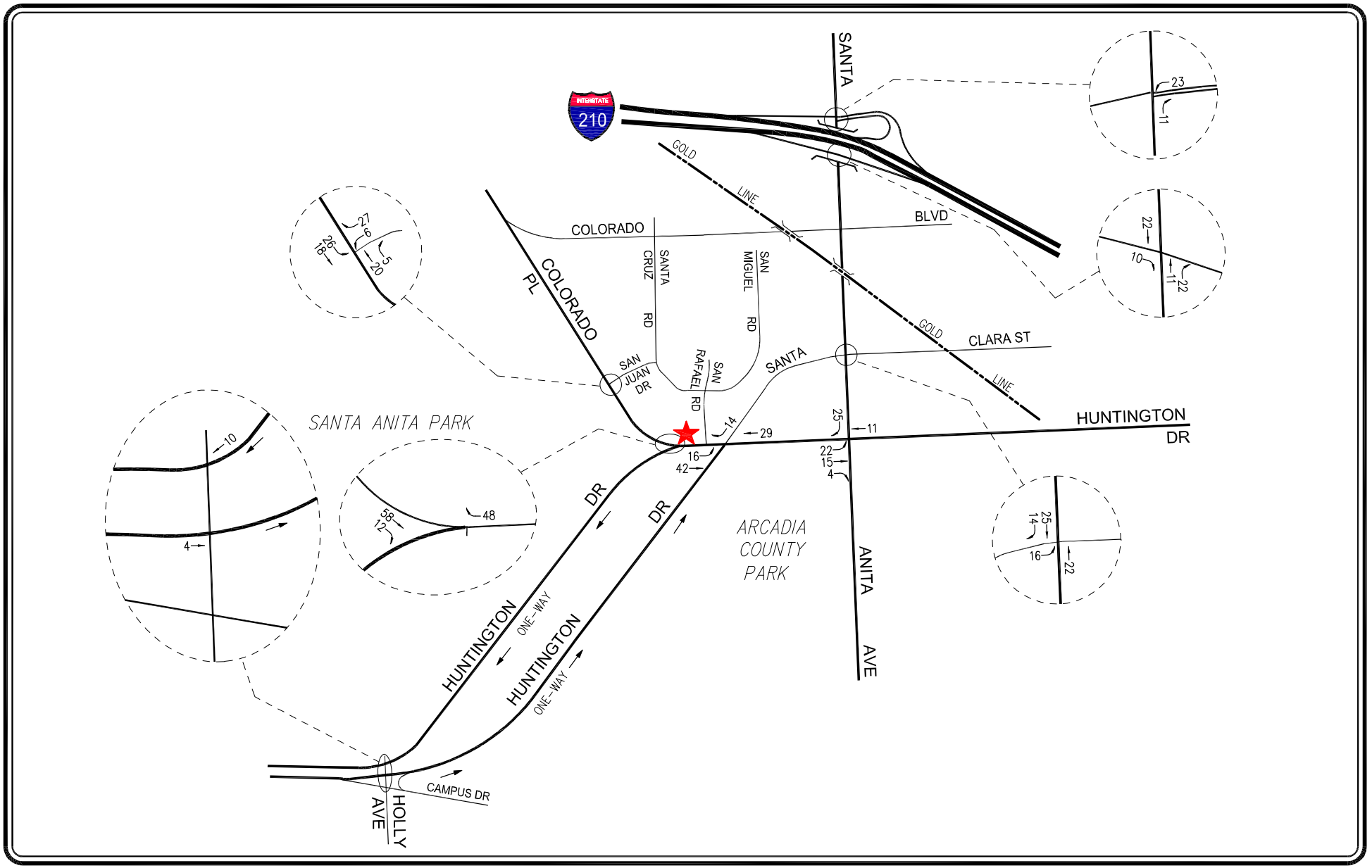
PROJECT SITE
XX = INBOUND PERCENTAGE
(XX) = OUTBOUND PERCENTAGE

NOT TO SCALE

FIGURE 7-1
PROJECT TRIP DISTRIBUTION

LINSCOTT, LAW & GREENSPAN, engineers

125 W. HUNTINGTON DRIVE, BUILDINGS C & D PROJECT



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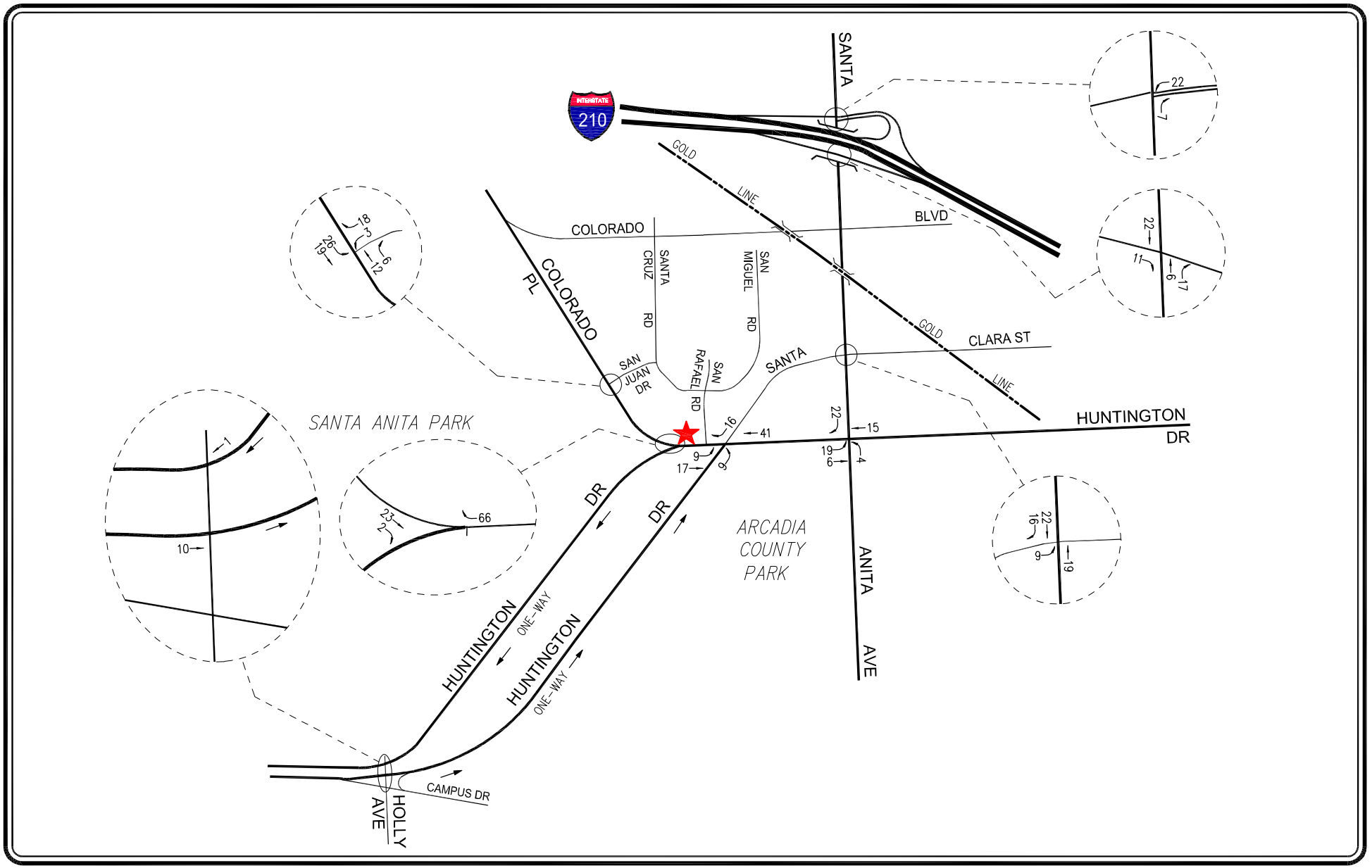
PROJECT SITE

FIGURE 7-2
NET TOTAL PROJECT TRAFFIC VOLUMES

WEEKDAY AM PEAK HOUR

125 W. HUNTINGTON DRIVE, BUILDINGS C & D PROJECT

LINSCOTT, LAW & GREENSPAN, engineers



PROJECT SITE

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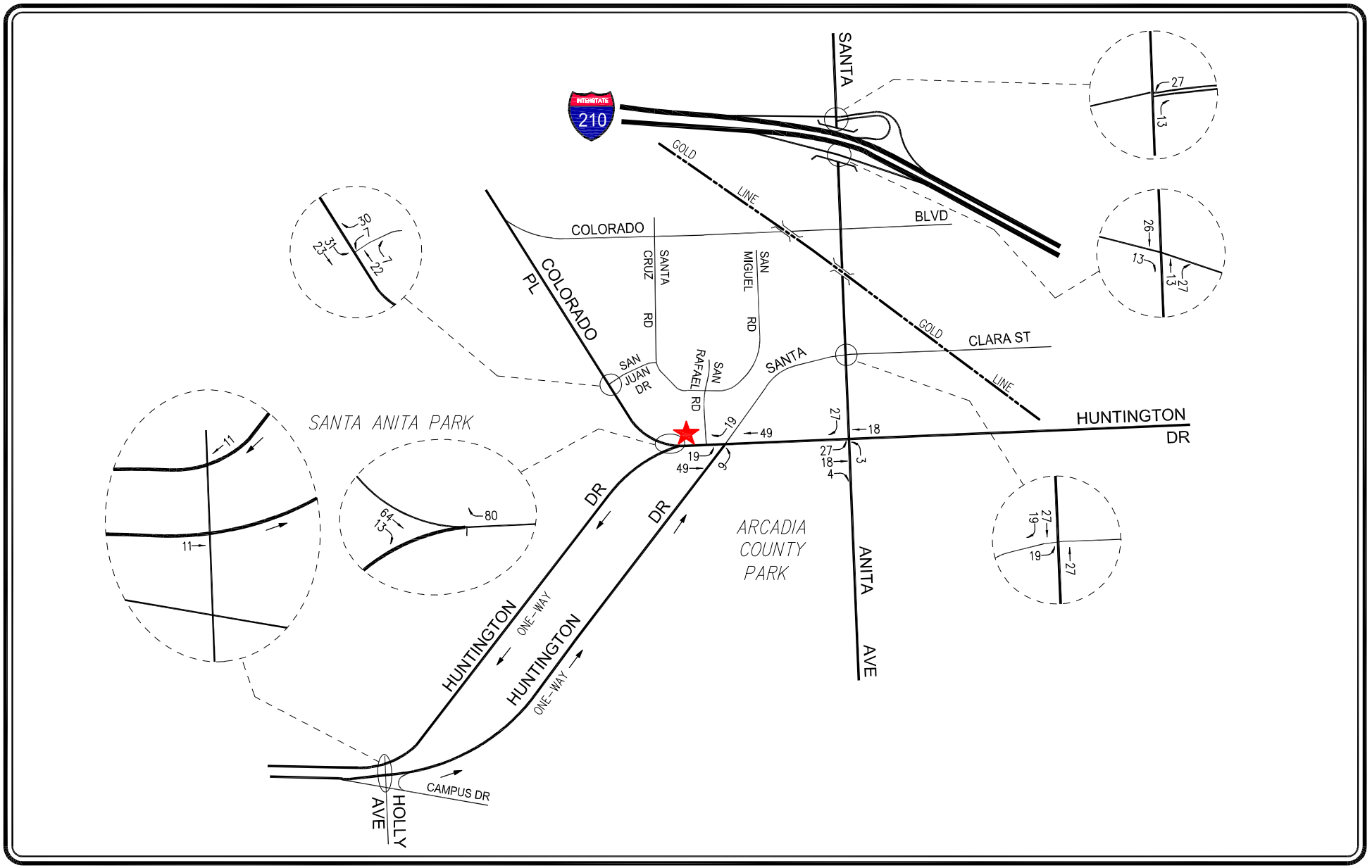
FIGURE 7-3
NET TOTAL PROJECT TRAFFIC VOLUMES

WEEKDAY PM PEAK HOUR

125 W. HUNTINGTON DRIVE, BUILDINGS C & D PROJECT

LINSCOTT, LAW & GREENSPAN, engineers



PROJECT SITE

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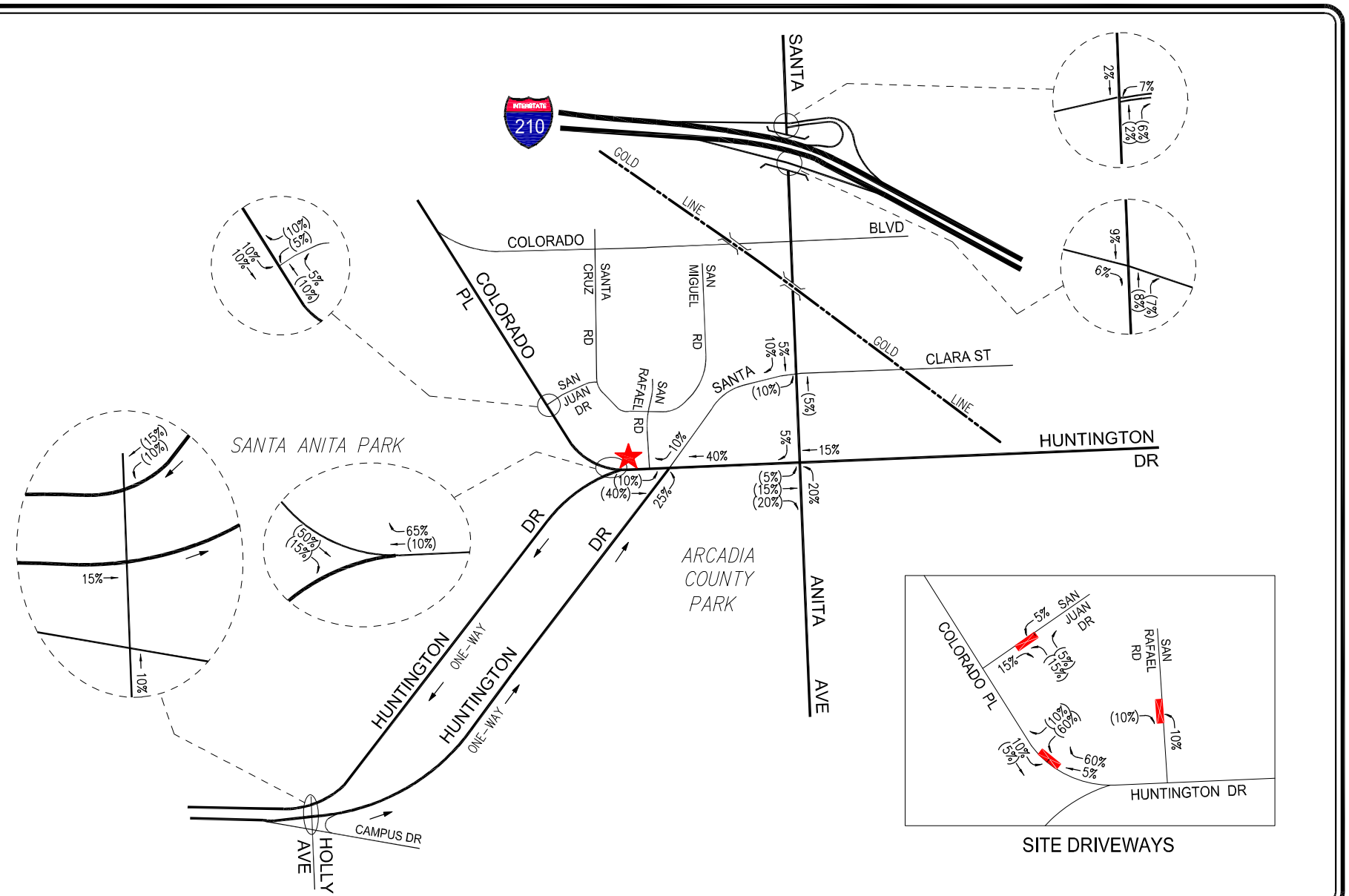
LINSCOTT, LAW & GREENSPAN, engineers

FIGURE 7-4
NET TOTAL PROJECT TRAFFIC VOLUMES

SATURDAY PM PEAK HOUR

125 W. HUNTINGTON DRIVE, BUILDINGS C & D PROJECT



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NOT TO SCALE

★ PROJECT SITE

XX = INBOUND PERCENTAGE

(XX) = OUTBOUND PERCENTAGE

FIGURE 7-5
PRIOR USE TRIP DISTRIBUTION

LINSCOTT, LAW & GREENSPAN, engineers

125 W HUNTINGTON DRIVE, BUILDINGS C & D

8.0 FUTURE PRE-PROJECT DEVELOPMENT

The forecast of future pre-project conditions was prepared in accordance to procedures outlined in Section 15130 of the CEQA Guidelines. Specifically, the CEQA Guidelines provide two options for developing the future traffic volume forecast:

> "(A) A list of past, present, and probable future projects producing related or cumulative impacts, including, if necessary, those projects outside the control of the [lead] agency, or
>
> (B) A summary of projections contained in an adopted local, regional or statewide plan, or related planning document, that describes or evaluates conditions contributing to the cumulative effect. Such plans may include: a general plan, regional transportation plan, or plans for the reduction of greenhouse gas emissions. A summary of projections may also be contained in an adopted or certified prior environmental document for such a plan. Such projections may be supplemented with additional information such as a regional modeling program. Any such document shall be referenced and made available to the public at a location specified by the lead agency."

Accordingly, the traffic analysis provides a highly conservative estimate of future pre-project traffic volumes as it incorporates both the "A" and "B" options outlined in the CEQA Guidelines for purposes of developing the forecast.

8.1 Related Projects

A forecast of on-street traffic conditions prior to occupancy of the proposed project was prepared by incorporating the potential trips associated with other known development projects (related projects) in the area. With this information, the potential impact of the proposed project can be evaluated within the context of the cumulative impact of all ongoing development. The list of related projects was based on information on file at the City of Arcadia Development Services Department Planning Division and the City of Monrovia Community Development Department Planning Division. It should be noted that the re-occupancy of the prior office building on the project site has been accounted for as a related project. In addition, the list also includes the Santa Anita Park North Barns project which has subsequently been withdrawn based on confirmation from City staff. The list of related projects in the project site area is presented in ***Table 8-1***. The location of the related projects is shown in ***Figure 8-1***.

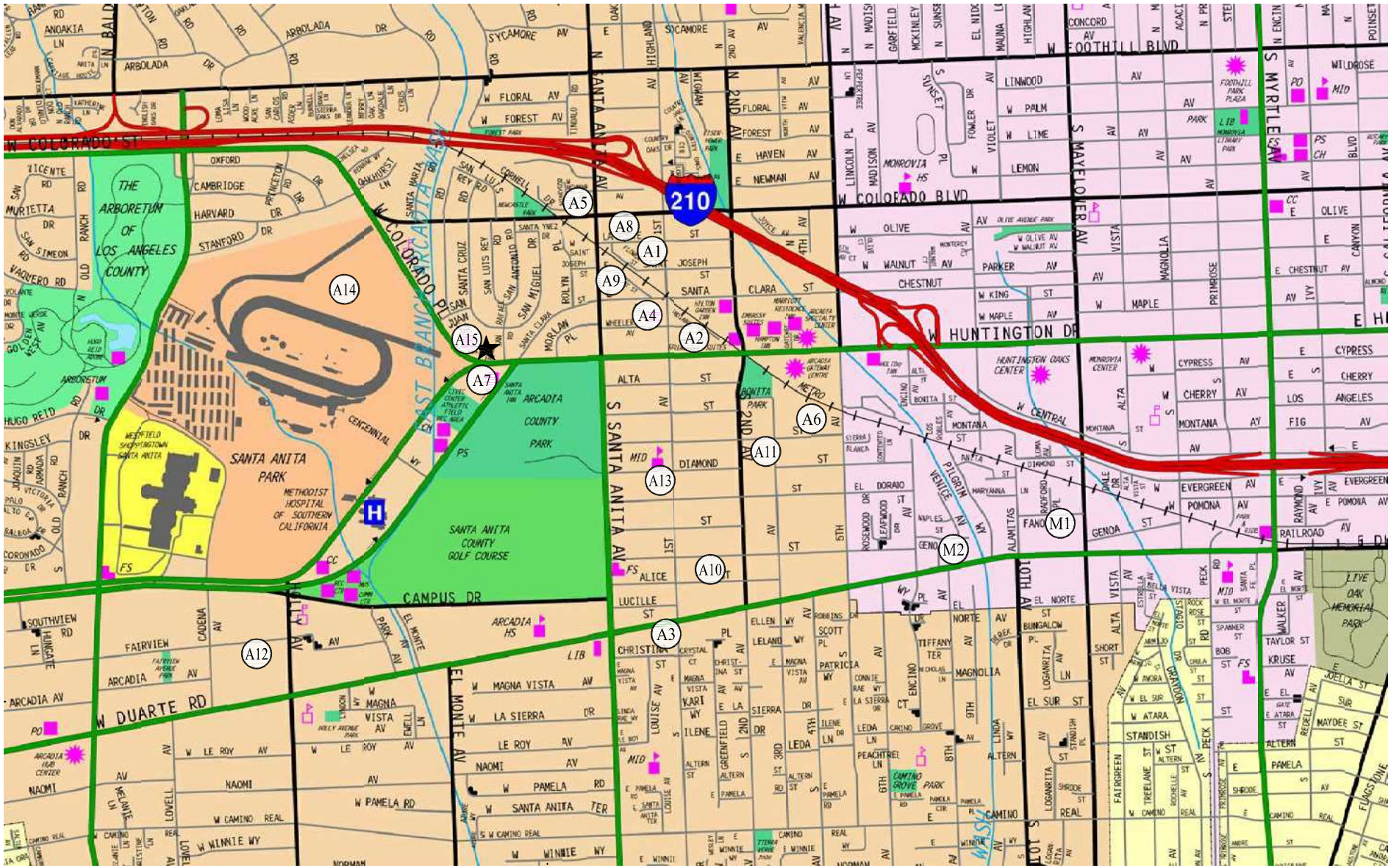
Traffic volumes expected to be generated by the related projects were calculated using rates provided in the ITE *Trip Generation Manual*. The related projects' respective traffic generation for the weekday AM and PM peak hours, as well as on a daily basis for a typical weekday, is summarized in *Table 8-1*. The related projects' respective Saturday traffic generation for the PM peak hour, as well as on a daily basis, is also summarized in *Table 8-1*.

Table 8-1
RELATED PROJECTS LIST AND TRIP GENERATION [1]

MAP NO.	PROJECT STATUS	PROJECT NAME/NUMBER ADDRESS/LOCATION	LAND USE DATA		PROJECT DATA SOURCE	DAILY TRIP ENDS [2] VOLUMES	AM PEAK HOUR VOLUMES [2]			PM PEAK HOUR VOLUMES [2]			SAT. DAILY TRIP ENDS [2] VOLUMES	SAT. PM PEAK HOUR VOLUMES [2]		
			LAND-USE	SIZE			IN	OUT	TOTAL	IN	OUT	TOTAL		IN	OUT	TOTAL
City of Arcadia																
A1	Proposed	323-325 N. 1st Avenue	Medical Office Retail	5,420 GSF 1,806 GLSF	[3] [4]	196 77	10 1	3 1	13 2	5 3	14 4	19 7	49 90	11 5	9 4	20 9
A2	Pending	117-129 E. Huntington Drive 124, 126 & 134 E. Wheeler Avenue	Apartment Retail	139 DU 11,150 GLSF	[5] [4]	924 476	14 7	57 4	71 11	56 20	30 21	86 41	788 557	35 28	30 26	65 54
A3	Under Construction	56 E. Duarte Road	Condominium Retail	37 DU 19,360 GLSF	[6] [4]	215 827	3 12	13 7	16 19	13 35	6 37	19 72	210 967	9 48	8 45	17 93
A4	Under Construction	57 Wheeler Avenue	Apartment Retail Office	38 DU 10,730 GLSF 7,120 GSF	[7] [7] [7]	252 308 58	4 4 7	15 3 1	19 7 8	16 13 1	8 14 7	24 27 8	243 362 14	10 18 1	10 16 1	20 34 2
A5	Under Construction	501 N. Santa Anita Avenue	Condominium	20 DU	[6]	116	2	7	9	7	3	10	113	5	4	9
A6	Proposed	415 California Street	Condominium	20 DU	[6]	116	2	7	9	7	3	10	113	5	4	9
A7	Pending	Santa Anita Inn Redevelopment Project 130 W. Huntington Drive	Hotel Condominium Retail	227 Rooms 96 DU 38,196 GLSF	[8]	2,774	65	64	129	114	109	223	2,792	141	120	261
A8	Under Construction	22-26 E. Colorado Boulevard	Condominium	8 DU	[6]	46	1	3	4	3	1	4	45	2	2	4
A9	Proposed	288 N. Santa Anita Avenue	Medical Office Retail	23,300 GSF 7,050 GLSF	[3] [4]	842 301	44 4	12 3	56 7	23 12	60 14	83 26	209 352	48 18	37 16	85 34
A10	Proposed	141-145 Alice Street	Condominium	8 DU	[6]	46	1	3	4	3	1	4	45	2	2	4
A11	Pending	230 California Street	Condominium	5 DU	[6]	29	0	2	2	2	1	3	28	1	1	2
A12	Pending	414 Fairview Avenue	Condominium	6 DU	[6]	35	1	2	3	2	1	3	34	2	1	3
A13	Pending	405 S. 1st Avenue	Condominium Retail	4 DU 585 GLSF	[6] [4]	23 25	0 1	2 0	2 1	1 1	1 1	2 2	23 29	1 2	1 1	2 3
A14	Proposed	Santa Anita Park North Barn Project 285 W. Huntington Drive	Barn/Stables Expansion Dormitories Canteen	816 Stalls 104 Units 3,391 GSF	[9] [9] [9]	1,469 210 50	62 0 2	20 0 2	82 0 4	18 21 2	96 21 2	114 42 4	1,616 210 50	43 0 0	39 21 1	82 21 1
A15	Existing	125 W. Huntington Drive	Office	67,213 GSF	[10]	655	67	11	78	12	65	77	149	19	17	36
City of Monrovia																
M1	Under Construction	530 Fano Street	Condominium	12 DU	[6]	70	1	4	5	4	2	6	68	3	3	6
M2	In Planning	717-721 W. Duarte Road	Condominium	8 DU	[6]	46	1	3	4	3	1	4	45	2	2	4
TOTAL						**10,186**	**316**	**249**	**565**	**397**	**523**	**920**	**9,201**	**459**	**421**	**880**

Table 8-1 (Continued)
RELATED PROJECTS LIST AND TRIP GENERATION [1]

[1] Sources: City of Arcadia Development Services Department - Planning Division, City of Monrovia Community Development Department - Planning Division. Trip generation for the related projects are based on ITE "Trip Generation Manual", 9th Edition, 2012 or 10th Edition, 2017, (as referenced in the Project Data Source column), unless otherwise noted.
[2] Trips are one-way traffic movements, entering or leaving.
[3] ITE Land Use Code 720 (Medical-Dental Office Building) trip generation average rates.
[4] ITE Land Use Code 820 (Shopping Center) trip generation average rates.
[5] ITE Land Use Code 220 (Apartment) trip generation average rates.
[6] ITE Land Use Code 230 (Residential Condominium/Townhouse) trip generation average rates.
[7] Source: "Traffic Impact Study Wheeler Mixed-Use Project", prepared by LLG Engineers, dated May 27, 2015.
[8] Source: "Traffic Impact Study for Santa Anita Inn Redevelopment Project", prepared by Kimley Horn, dated April 2018. Based on information provided by City staff, the proposed Santa Anita Inn Redevelopment project has since been updated to consist of a 233-room hotel, 96-unit condominium, and 10,600 square feet of retail space.
[9] Source: "Draft Santa Anita Park North Barn Project Transportation Impact Analysis", prepared by Fehr & Peers, dated February 2019.
[10] Accounts for the re-occupancy of the former office building located on the project site. ITE Land Use Code 710 (General Office Building) trip generation average rates.



NOT TO SCALE

★ PROJECT SITE

(A) CITY OF ARCADIA RELATED PROJECT

(M) CITY OF MONROVIA RELATED PROJECT

FIGURE 8-1
LOCATION OF RELATED PROJECTS

LINSCOTT, LAW & GREENSPAN, engineers

125 W. HUNTINGTON DRIVE, BUILDINGS C & D PROJECT

8.2 Ambient Traffic Growth

In order to account for area-wide regional growth not included herein as a related project, the existing traffic volumes were increased at an annual rate of one percent (1.0%) to the year 2021 (i.e., the anticipated year of project build-out). The ambient growth factor was based on review of the background traffic growth estimates for the City of Arcadia (included as part of Regional Statistical Area No. 25) published in the *2010 Congestion Management Program*[4], which indicate that existing traffic volumes would be expected to increase at an annual rate of approximately 0.82% between years 2015 and 2020. Therefore, use of one percent annual growth factor allows for a conservative forecast of future traffic volumes in the area. Further, it is noted that the CMP manual's traffic growth rate is intended to anticipate future traffic generated by development projects in the project vicinity. Thus, the inclusion in this traffic analysis of both a forecast of traffic generated by known related projects plus the use of an ambient traffic growth factor based on CMP traffic model data results in a conservative estimate of future traffic volumes at the study intersections.

[4] *2010 Congestion Management Program*, Los Angeles County Metropolitan Transportation Authority, October 2010.

9.0 TRANSPORTATION IMPACT ANALYSIS METHODOLOGY

9.1 Study Intersections

9.1.1 *Intersection Analysis Methodology*

The weekday AM, weekday PM, and Saturday PM peak hour operating conditions for the study intersections were evaluated using the Intersection Capacity Utilization (ICU) methodology for signalized intersections and the methodology outlined in the *Highway Capacity Manual* (HCM) 6th edition for unsignalized intersections.

The ICU method of analysis determines Volume-to-Capacity (*v/c*) ratios on a critical lane basis. The overall intersection *v/c* ratio is subsequently assigned a Level of Service (LOS) value to describe intersection operations. Level of Service varies from LOS A (free flow) to LOS F (jammed condition). A description of the ICU method and corresponding Level of Service is provided in ***Appendix B***.

The *Highway Capacity Manual* (HCM) methodology outlined in Chapter 19 for unsignalized/two-way stop-controlled (TWSC) intersections was utilized for the analysis of the unsignalized intersection. The TWSC methodology estimates the average control delay for each minor-street movement (or shared movement) as well as major-street left-turns and determines the LOS for each constrained movement. It should be noted that LOS is not defined for the overall TWSC intersection because major-street movements with no delays typically result in a weighted average delay that is extremely low. Average control delay for any particular movement is a function of the capacity of the approach and the degree of saturation. The average control delay is measured in seconds per vehicle, and includes delay due to deceleration to a stop at the back of the queue from free-flow speed, move-up time within the queue, stopped delay at the front of the queue, and delay due to acceleration back to free-flow speed. A description of the HCM method and corresponding Level of Service is also provided in *Appendix B*.

9.1.2 *Intersection Impact Criteria and Thresholds*

The relative impact of the added project traffic volumes to be generated by the proposed project during the weekday AM, weekday PM, and Saturday PM peak hours was evaluated based on analysis of existing and future operating conditions at the study intersections, without and with the proposed project. The previously discussed capacity analysis procedures were utilized to evaluate the future *v/c* or *delay* relationships and service level characteristics at each study intersection.

The significance of the potential impacts of project-generated traffic at each study intersection was identified using guidelines provided by the City of Arcadia. According to the City of Arcadia's methodology for calculating the level of impact due to traffic generated by the proposed project, a significant transportation impact is determined based on the following:

- A significant impact occurs if traffic generated by the project causes an intersection to worsen from LOS D or better to LOS E or worse, or

- For an intersection operating at LOS E or LOS F conditions, the addition of project traffic increases the *v/c* by 0.02 or greater.

As indicated in the Circulation and Infrastructure Element of the *City of Arcadia General Plan 2010*, LOS D is established as the performance standard within the City. While the City seeks to maintain LOS D throughout the City, it is recognized that LOS E is permitted at: 1) intersections adjacent to freeway ramps, 2) intersections adjacent to Santa Anita Park intended to carry seasonal race-related traffic; and 3) intersections at or adjacent to the Downtown, Baldwin Avenue, and Live Oak Avenue commercial and mixed-use districts.

The City's method requires mitigation of project traffic impacts whenever traffic generated by the proposed development exceeds the criteria above. For unsignalized study intersections, the HCM method is utilized to determine the Level of Service and the ICU method is utilized to determine the increase in the *v/c* ratio.

The ICU calculations incorporate a lane capacity of 1,600 vehicles per hour (vph) for left-turn, through and right-turn lanes, and 2,880 vph for dual left-turn lanes. A clearance interval of 0.10 is also included in the ICU calculations.

9.1.3 *Transportation Impact Analysis Scenarios*

Transportation impacts at the study intersections were analyzed for the following conditions:

(a) Existing Conditions.

(b) Existing With Project Conditions.

(c) Future Pre-Project Conditions (existing plus ambient growth and related projects traffic).

(d) Future With Project Conditions.

(e) Future With Project and Mitigation Conditions, if necessary.

The traffic volumes for each new condition were added to the volumes in the prior condition to determine the change in capacity utilization at the study intersections. Summaries of the *v/c* ratios, delays, and corresponding LOS values for the study intersections during the weekday AM, weekday PM, and Saturday PM peak hours are shown in ***Table 9-1***. The ICU and HCM data worksheets for the analyzed intersections are contained in *Appendix B*.

9.2 Study Street Segments

9.2.1 *Street Segment Impact Criteria and Thresholds*

Based on coordination with City of Arcadia staff, LOS impact analyses were prepared for six (6) study street segment locations in the project study area. The study street segment locations identified for analysis were listed previously in Section 5.2 and depicted in *Figure 1-1*. Automatic 24-hour machine traffic counts were conducted at the study locations during a mid-

Table 9-1
SUMMARY OF VOLUME TO CAPACITY RATIOS/DELAY
AND LEVELS OF SERVICE
WEEKDAY AM, PM, AND SATURDAY PM PEAK HOURS

			[1]		[2]				[3]		[4]			
NO.	INTERSECTION	PEAK HOUR	YEAR 2019 EXISTING V/C or DELAY	LOS [a]	YEAR 2019 EXISTING W/ PROJECT V/C or Delay	LOS [a]	CHANGE V/C or DELAY [(2)-(1)]	SIGNIF. IMPACT [b]	YEAR 2021 FUTURE PRE-PROJECT V/C or DELAY	LOS [a]	YEAR 2021 FUTURE W/ PROJECT V/C or DELAY	LOS [a]	CHANGE V/C or DELAY [(4)-(3)]	SIGNIF. IMPACT [b]
1	Gate 3 - Holly Avenue/	AM	0.588	A	0.589	A	0.001	No	0.608	B	0.609	B	0.001	No
	Huntington Drive - Campus Drive	PM	0.582	A	0.582	A	0.000	No	0.598	A	0.598	A	0.000	No
		SAT	0.492	A	0.492	A	0.000	No	0.509	A	0.509	A	0.000	No
2	Colorado Place/	AM	20.8	C	20.8	C	0.045	No	15.6	C	20.1	C	0.045	No
	San Juan Drive [c]	PM	10.3	B	10.6	B	0.019	No	16.2	C	16.6	C	0.008	No
		SAT	11.9	B	11.9	B	0.031	No	11.9	B	12.5	B	0.011	No
		AM	0.453		0.498				0.471		0.516			
		PM	0.501		0.520				0.625		0.633			
		SAT	0.293		0.324				0.376		0.387			
3	Colorado Place/	AM	0.501	A	0.508	A	0.007	No	0.536	A	0.544	A	0.008	No
	Huntington Drive	PM	0.788	C	0.796	C	0.008	No	0.873	D	0.881	D	0.008	No
		SAT	0.440	A	0.463	A	0.023	No	0.495	A	0.517	A	0.022	No
4	Santa Clara Street/	AM	0.692	B	0.712	C	0.020	No	0.765	C	0.785	C	0.020	No
	Huntington Drive	PM	0.582	A	0.586	A	0.004	No	0.633	B	0.648	B	0.015	No
		SAT	0.460	A	0.482	A	0.022	No	0.538	A	0.560	A	0.022	No
5	Santa Anita Avenue/	AM	0.949	E	0.949	E	0.000	No	0.971	E	0.971	E	0.000	No
	I-210 Freeway WB Ramps	PM	0.808	D	0.808	D	0.000	No	0.828	D	0.828	D	0.000	No
		SAT	0.599	A	0.599	A	0.000	No	0.615	B	0.615	B	0.000	No
6	Santa Anita Avenue/	AM	0.631	B	0.636	B	0.005	No	0.663	B	0.668	B	0.005	No
	I-210 Freeway EB Ramps	PM	0.611	B	0.616	B	0.005	No	0.665	B	0.669	B	0.004	No
		SAT	0.547	A	0.551	A	0.004	No	0.583	A	0.590	A	0.007	No
7	Santa Anita Avenue/	AM	0.637	B	0.651	B	0.014	No	0.678	B	0.691	B	0.013	No
	Santa Clara Street	PM	0.682	B	0.688	B	0.006	No	0.788	C	0.794	C	0.006	No
		SAT	0.615	B	0.623	B	0.008	No	0.702	C	0.710	C	0.008	No
8	Santa Anita Avenue/	AM	0.921	E	0.938	E	0.017	No	0.993	E	1.010	F	0.017	No
	Huntington Drive	PM	0.861	D	0.864	D	0.003	No	0.915	E	0.918	E	0.003	No
		SAT	0.625	B	0.632	B	0.007	No	0.671	B	0.677	B	0.006	No

[a] Level of Service (LOS) is based on the reported ICU value for signalized intersections.
[b] According to the City of Arcadia threshold of significance, a transportation impact at a signalized intersection shall be deemed significant in accordance with the following:
- Addition of project trips causes the peak hour level of service of the intersection to change from LOS D or better to LOS E or F.
- Addition of project trips causes an increase in the volume/capacity ratio of 0.02 or greater at LOS E or F.
[c] Unsignalized intersection.

week day (i.e., Wednesday) and weekend day (i.e., Saturday). Copies of the 24-hour machine traffic counts are contained in *Appendix A*.

As the City of Arcadia does not have adopted street segment analysis threshold criteria, the analysis was conducted in order to compare the overall roadway level of service without and with the proposed project. Roadway level of service is based on capacity per lane per day and is assigned LOS A through F similar to the intersection LOS based on a volume-to-capacity (*v/c*) ratio. As indicated in the Circulation and Infrastructure Element of the *City of Arcadia General Plan 2010*, roadway segments operating at LOS D or better are considered to be at acceptable levels. Furthermore, LOS E is permitted on roadway segments adjacent to: 1) freeway ramps; 2) to Santa Anita Park and all roadway links intended to carry seasonal race-related traffic; and 3) the Downtown, Baldwin Avenue, and Live Oak Avenue commercial and mixed-use districts.

10.0 TRANSPORTATION ANALYSIS

10.1 Existing Conditions

As indicated in column [1] of *Table 9-1*, six of the eight study intersections are presently operating at LOS D or better during the weekday AM, weekday PM, and Saturday PM peak hours. The following study intersections are anticipated to operate at LOS E for the peak hour shown below:

- Int. No. 5: Santa Anita Ave./I-210 Fwy. WB Ramps AM Peak Hour: *v/c*=0.949, LOS E
- Int. No. 8: Santa Anita Ave./Huntington Dr. AM Peak Hour: *v/c*=0.921, LOS E

As previously mentioned, the existing traffic volumes at the study intersections during the weekday AM, weekday PM, and Saturday PM peak hours are displayed in *Figures 6-1*, *6-2*, and *6-3*, respectively.

10.2 Existing With Project Conditions

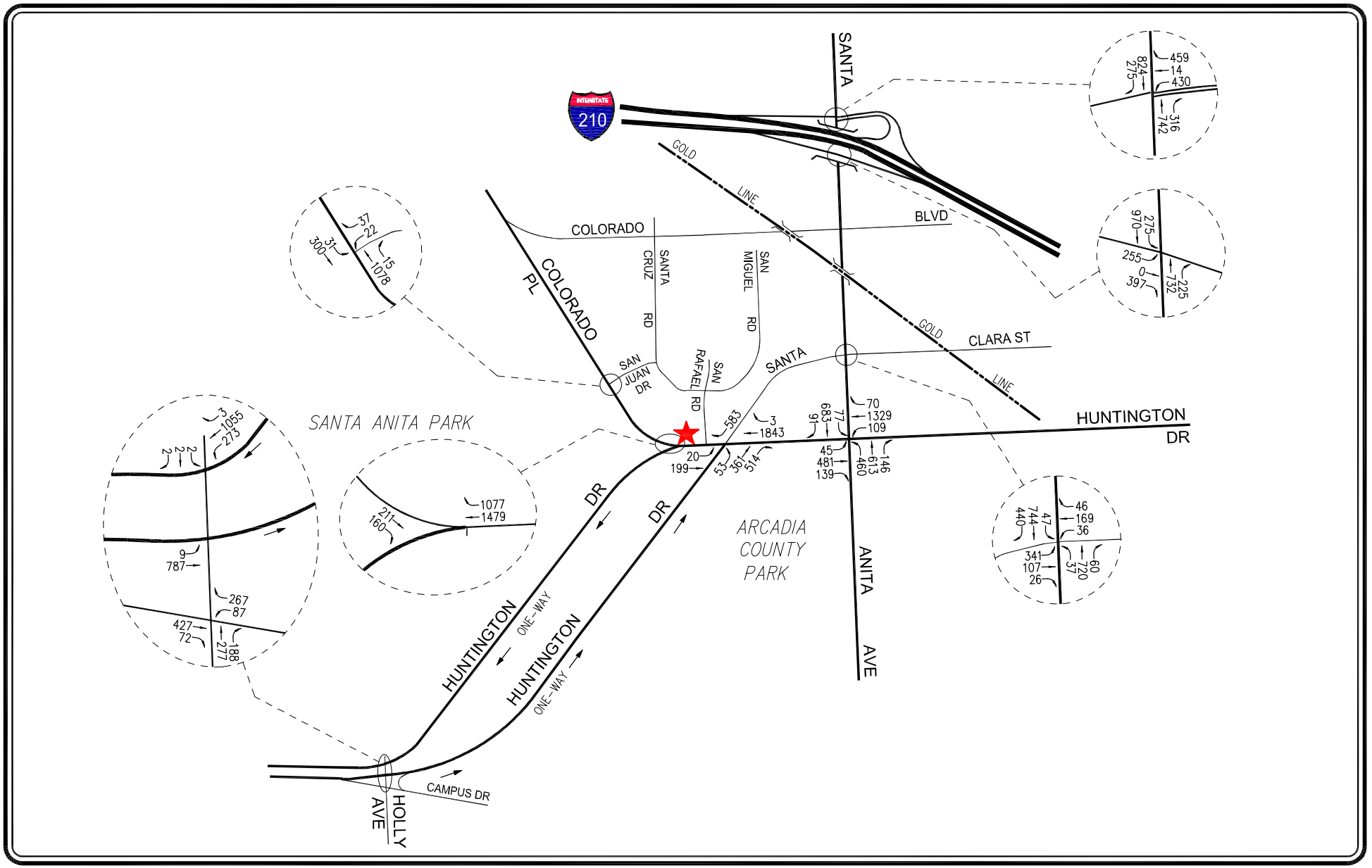
In order to determine the operating conditions of the street system under existing with project conditions, traffic expected to be generated by the proposed project was added to the existing traffic conditions. As indicated in column [2] of *Table 9-1*, application of the City's threshold criteria to the "Existing With Project" scenario indicates that the proposed project is not expected to create any significant impacts at the eight study intersections. Incremental, but less than significant impacts are noted at the study intersections, as presented in *Table 9-1*. Because there are no significant impacts, no traffic mitigation measures are required or recommended for the study intersections under the "Existing With Project" conditions. The existing with project traffic volumes (existing traffic volumes plus proposed project traffic volumes) at the study intersections during the weekday AM, weekday PM, and Saturday PM peak hours are shown in ***Figures 10-1***, ***10-2***, and ***10-3***, respectively.

10.3 Future Pre-Project Conditions

The future year 2021 pre-project conditions were forecast based on the addition of traffic expected to be generated by the related projects, as well as the growth in traffic due to the combined effects of continuing development, intensification of existing developments and other factors (i.e., ambient growth). The *v/c* ratios at the study intersections appropriately reflect the addition of traffic generated by the related projects listed in *Table 8-1* and growth in ambient traffic.

As presented in column [3] of *Table 9-1*, six of the eight study intersections are expected to continue to operate at LOS D or better during the weekday AM, weekday PM, and Saturday PM peak hours. The following study intersections are anticipated to operate at LOS E for the peak hour/s shown below with the addition of related projects traffic and ambient traffic:

- Int. No. 5: Santa Anita Ave./I-210 Fwy. WB Ramps AM Peak Hour: *v/c*=0.971, LOS E



PROJECT SITE

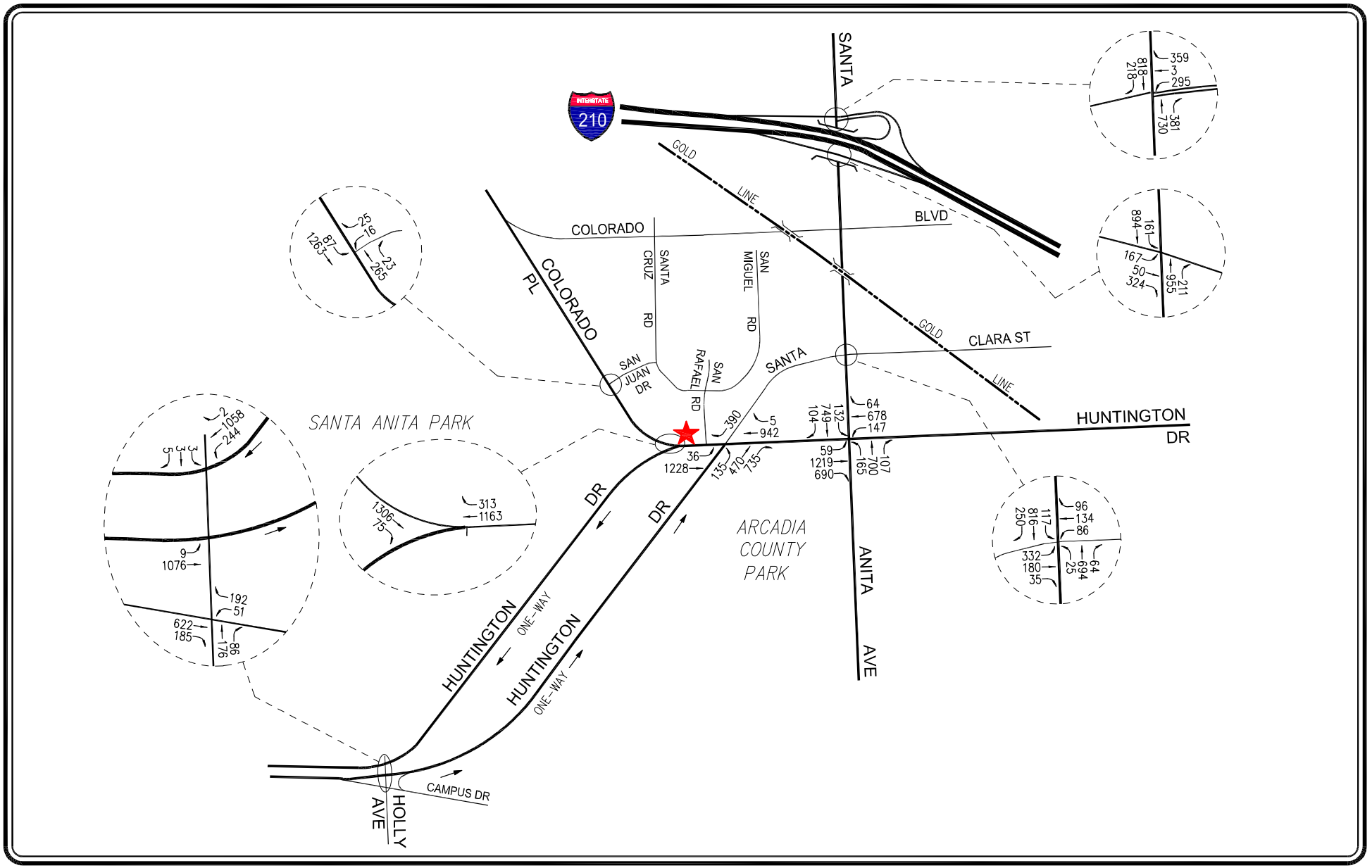
NOT TO SCALE

FIGURE 10-1
EXISTING WITH PROJECT TRAFFIC VOLUMES

WEEKDAY AM PEAK HOUR

125 W. HUNTINGTON DRIVE, BUILDINGS C & D PROJECT

LINSCOTT, LAW & GREENSPAN, engineers



PROJECT SITE

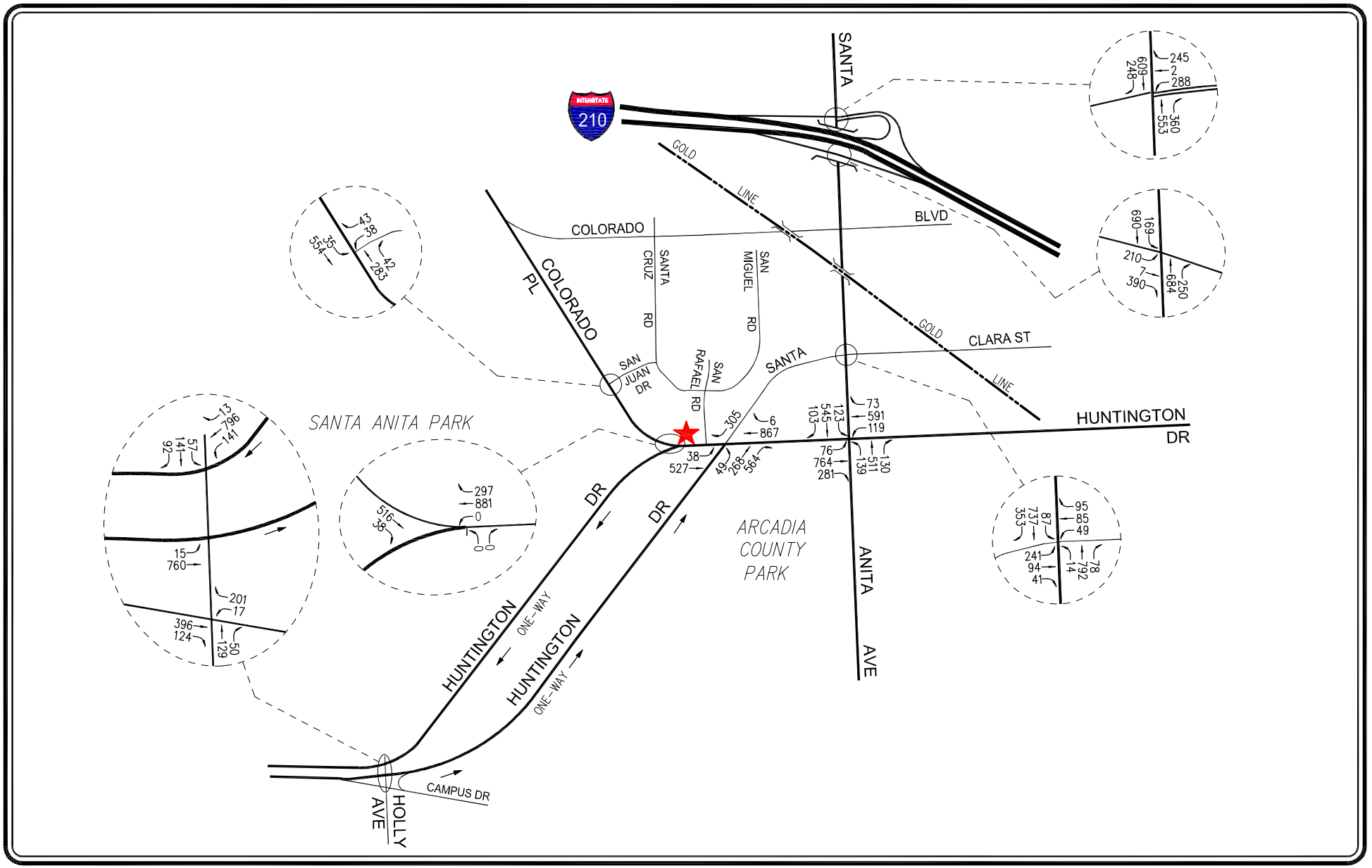
NOT TO SCALE

FIGURE 10-2
EXISTING WITH PROJECT TRAFFIC VOLUMES

WEEKDAY PM PEAK HOUR

125 W. HUNTINGTON DRIVE, BUILDINGS C & D PROJECT

LINSCOTT, LAW & GREENSPAN, engineers



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NOT TO SCALE

★ PROJECT SITE

FIGURE 10-3
EXISTING WITH PROJECT TRAFFIC VOLUMES

SATURDAY PM PEAK HOUR

125 W. HUNTINGTON DRIVE, BUILDINGS C & D PROJECT

LINSCOTT, LAW & GREENSPAN, engineers

- Int. No. 8: Santa Anita Ave./Huntington Dr. AM Peak Hour: *v/c*=0.993, LOS E
  PM Peak Hour: *v/c*=0.915, LOS E

The future pre-project (existing, ambient growth and related projects) traffic volumes at the study intersections during the weekday AM, weekday PM, and Saturday PM peak hours are presented in ***Figures 10-4***, ***10-5***, and ***10-6***, respectively.

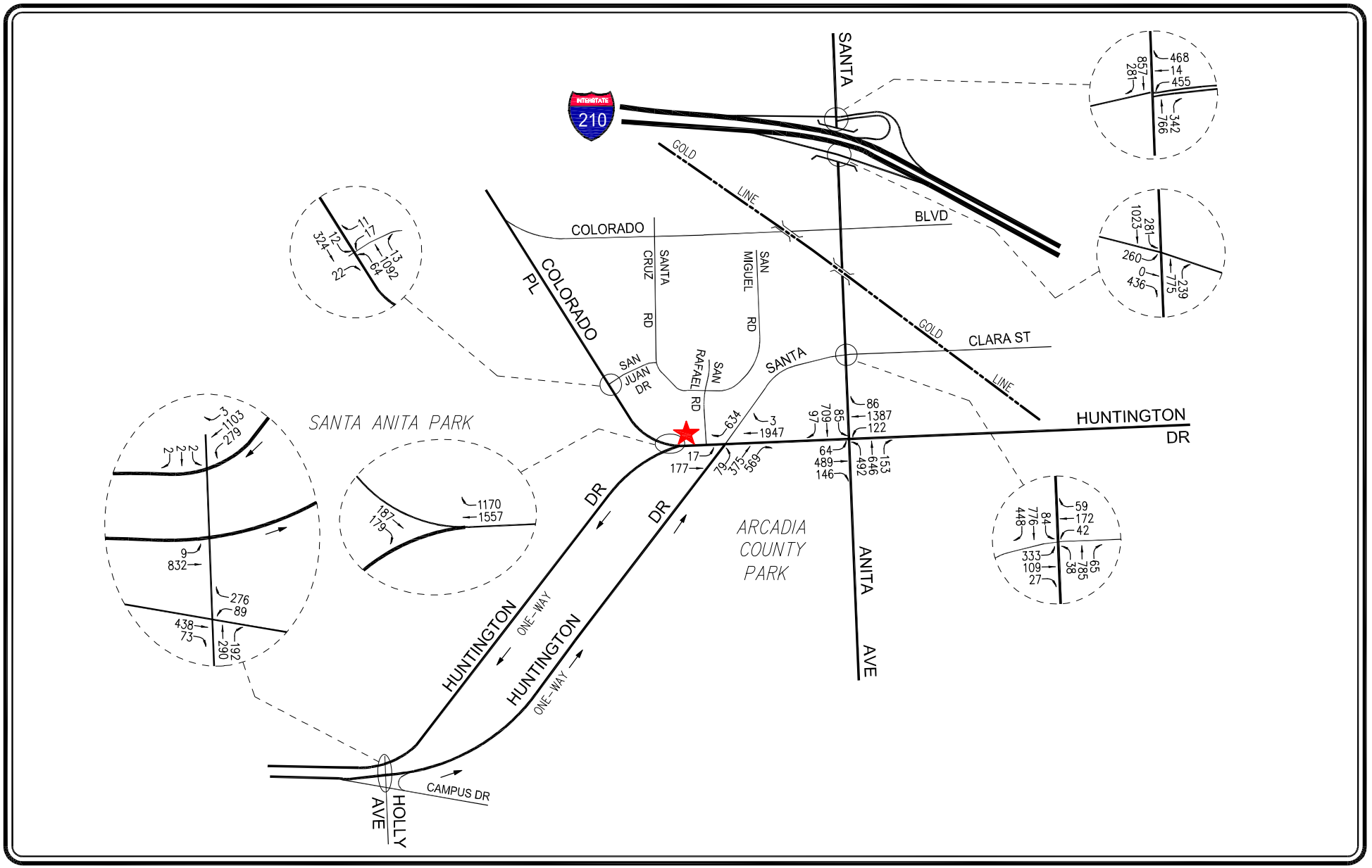
10.4 Future With Project Conditions

In order to determine the operating conditions of the street system under the year 2021 future with project conditions, traffic expected to be generated by the proposed project was added to the year 2021 future pre-project conditions. As indicated in column [4] of *Table 9-1*, application of the City's threshold criteria to the "Future With Project" scenario indicates that the proposed project is not expected to create any significant impacts at the eight study intersections. Incremental, but less than significant impacts are noted at the study intersections, as presented in *Table 9-1*. It should be noted that one of the study intersections (Intersection No. 8: Santa Anita Avenue/Huntington Drive) is expected to operate at LOS F during the weekday AM peak hour with the addition of growth in ambient traffic, project traffic, and related project traffic under the future cumulative with project conditions. The proposed project is not expected to contribute to a significant traffic impact at this location since the *v/c* ratio increase is less than the 0.02 threshold for an intersection operating at LOS F. Because there are no significant impacts, no traffic mitigation measures are required or recommended for the study intersections under the "Future With Project" conditions. The future with project (existing, ambient growth, related projects and project) traffic volumes at the study intersections during the weekday AM, weekday PM, and Saturday PM peak hours are illustrated in ***Figures 10-7***, ***10-8***, and ***10-9***, respectively.

10.5 Street Segment Transportation Impact Analysis

The forecast traffic conditions at the analyzed street segments for existing, existing with project, future year 2021 pre-project (i.e., existing traffic volumes and ambient traffic growth) and future year 2021 with project analysis scenarios are summarized in ***Table 10-1***. The existing weekday and Saturday roadway segment traffic volumes and their corresponding LOS are summarized in column [1]. As presented in column [3], the proposed project weekday and Saturday daily trips were added to the existing volumes. As shown in column [6] of *Table 10-1*, a 1.0 percent (1.0%) annual ambient growth rate through the year 2021 was applied to the existing weekday and Saturday daily volumes in order to estimate the future pre-project traffic volumes. As presented in column [7] of *Table 10-1*, the proposed project weekday trips are expected to incrementally increase future traffic volumes on the analyzed street segments. It is noted that the project trips are based on the project trip generation forecasts (refer to *Table 7-1*) and the project trip distribution patterns (refer to *Figure 7-1*).

As indicated in *Table 10-1*, all of the study street segments analyzed are anticipated to operate at LOS C or better with the addition of the proposed project weekday and Saturday daily traffic. As noted previously in the Circulation and Infrastructure Element of the *City of Arcadia General Plan 2010*, roadway segments operating at LOS D or better are considered to be at acceptable



PROJECT SITE

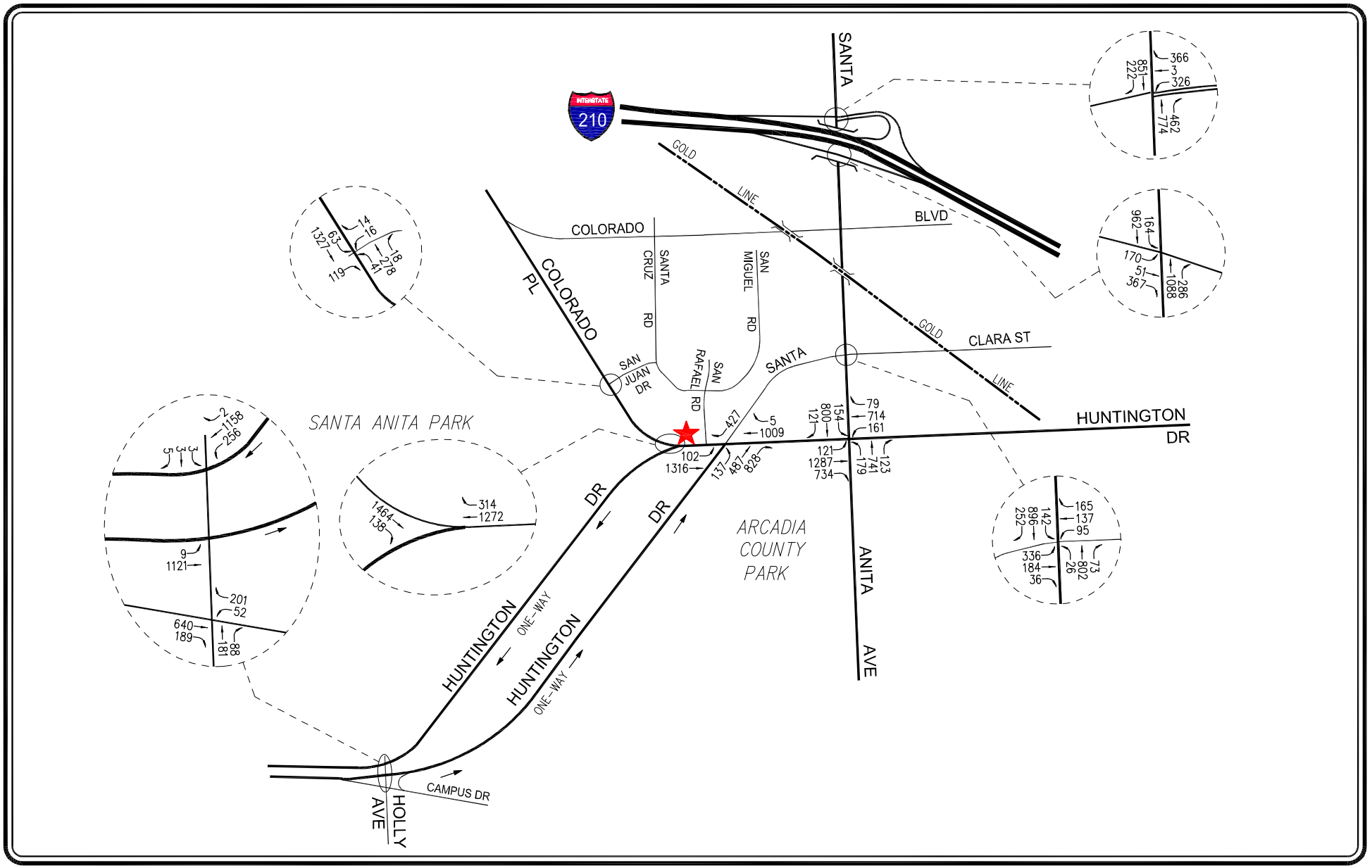
NOT TO SCALE

FIGURE 10-4
FUTURE PRE-PROJECT TRAFFIC VOLUMES

WEEKDAY AM PEAK HOUR

125 W. HUNTINGTON DRIVE, BUILDINGS C & D PROJECT

LINSCOTT, LAW & GREENSPAN, engineers



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NOT TO SCALE

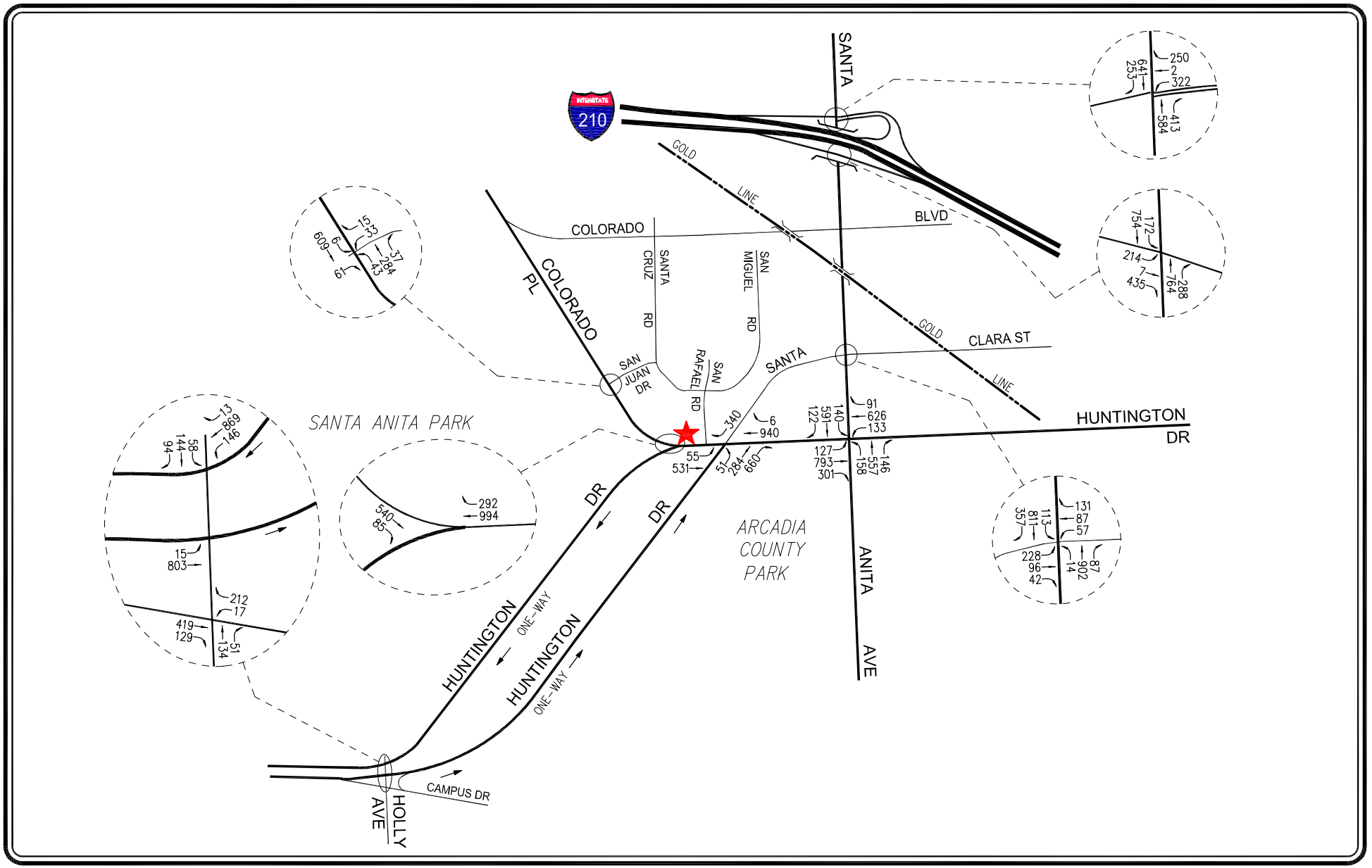
★ PROJECT SITE

FIGURE 10-5
FUTURE PRE-PROJECT TRAFFIC VOLUMES

WEEKDAY PM PEAK HOUR

125 W. HUNTINGTON DRIVE, BUILDINGS C & D PROJECT

LINSCOTT, LAW & GREENSPAN, engineers



PROJECT SITE

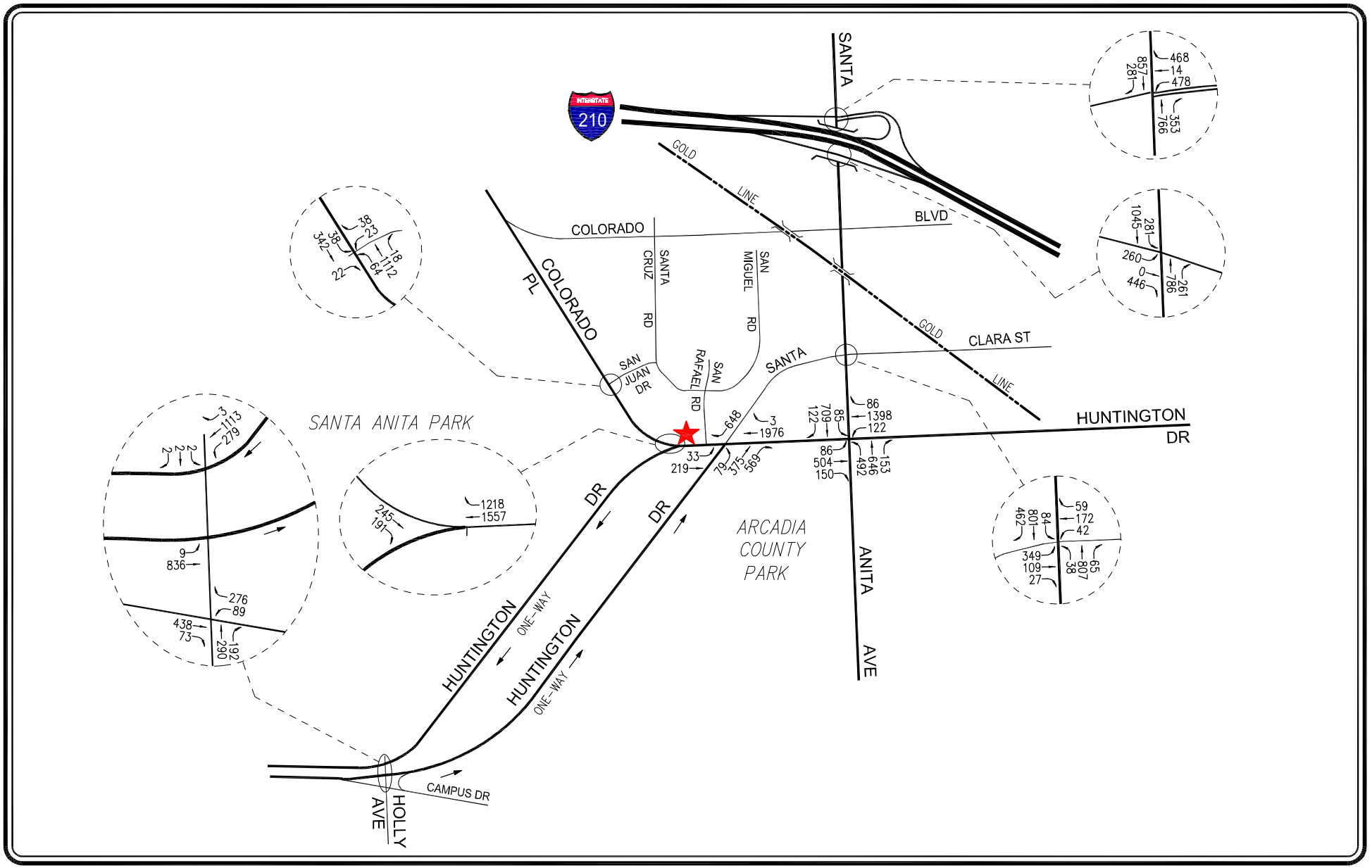
NOT TO SCALE

FIGURE 10-6
FUTURE PRE-PROJECT TRAFFIC VOLUMES

SATURDAY PM PEAK HOUR

125 W. HUNTINGTON DRIVE, BUILDINGS C & D PROJECT

LINSCOTT, LAW & GREENSPAN, engineers



PROJECT SITE

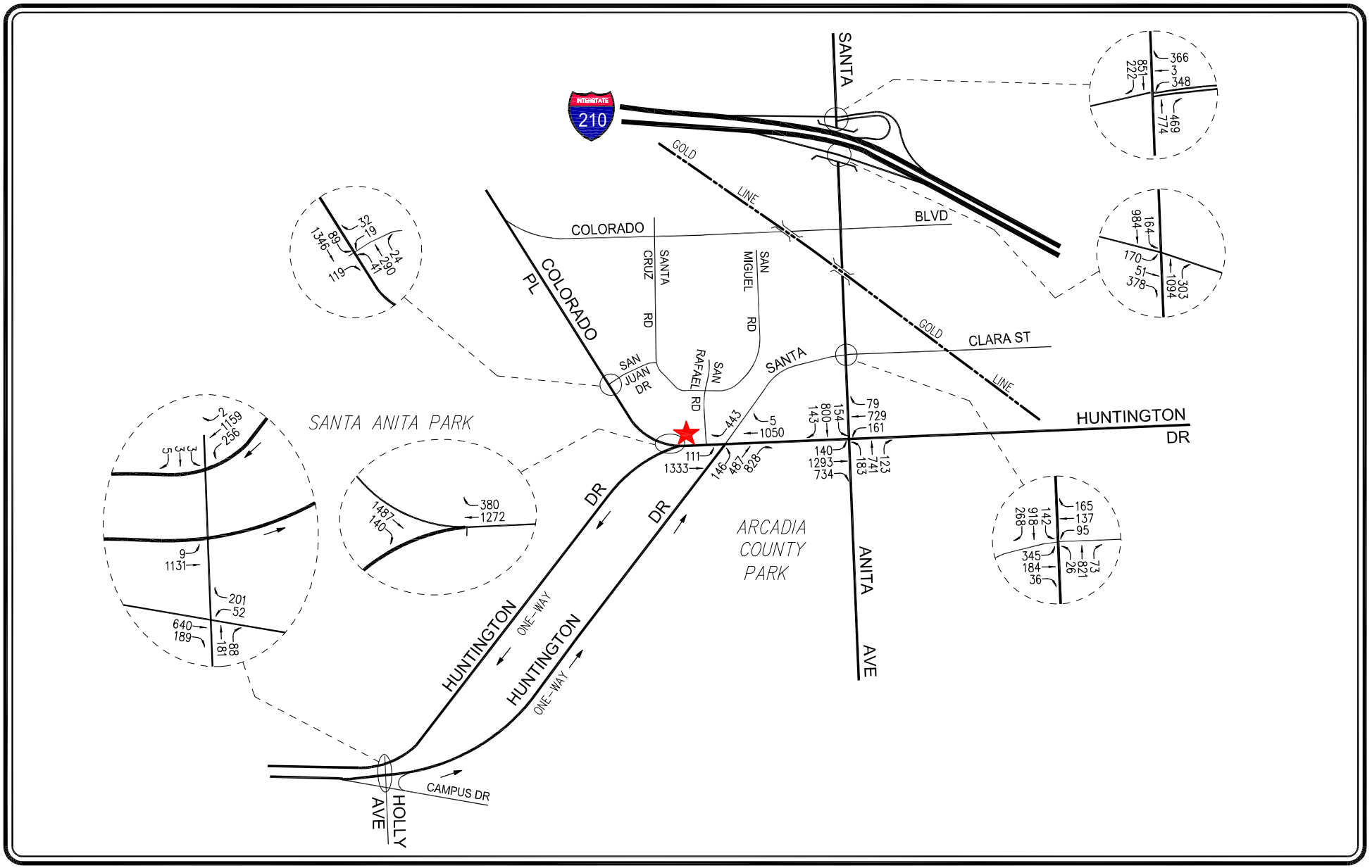
NOT TO SCALE

FIGURE 10-7
FUTURE WITH PROJECT TRAFFIC VOLUMES

WEEKDAY AM PEAK HOUR

125 W. HUNTINGTON DRIVE, BUILDINGS C & D PROJECT

LINSCOTT, LAW & GREENSPAN, engineers



PROJECT SITE

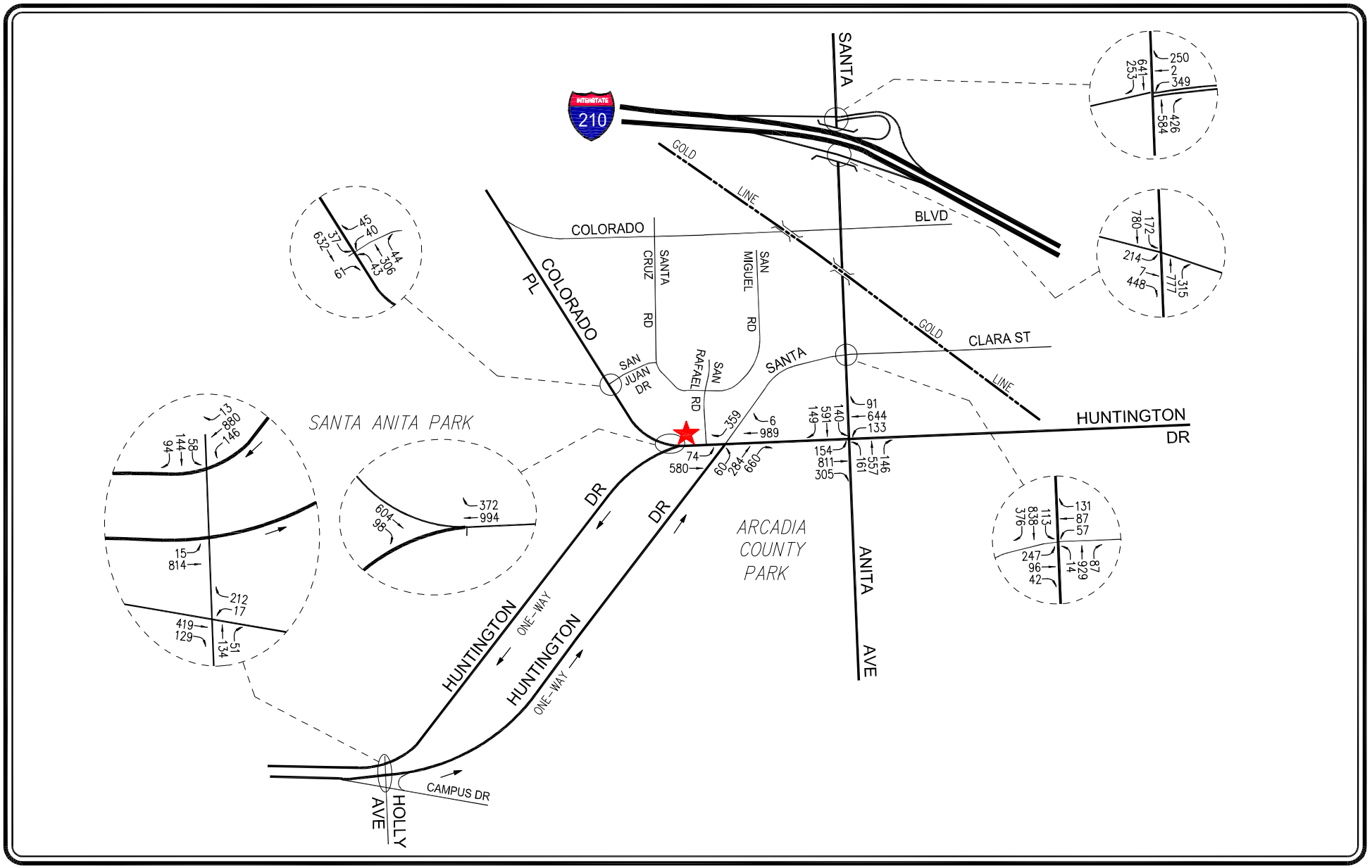
NOT TO SCALE

FIGURE 10-8
FUTURE WITH PROJECT TRAFFIC VOLUMES

WEEKDAY PM PEAK HOUR

125 W. HUNTINGTON DRIVE, BUILDINGS C & D PROJECT

LINSCOTT, LAW & GREENSPAN, engineers



N

NOT TO SCALE

PROJECT SITE

FIGURE 10-9
FUTURE WITH PROJECT TRAFFIC VOLUMES

SATURDAY PM PEAK HOUR

125 W. HUNTINGTON DRIVE, BUILDINGS C & D PROJECT

LINSCOTT, LAW & GREENSPAN, engineers

Table 10-1
STREET SEGMENT ANALYSIS SUMMARY
EXISTING AND FUTURE WEEKDAY AND WEEKEND CONDITIONS

NO.	STREET SEGMENT	TIME PERIOD	CAP. [a]	[1] 2019 EXISTING CONDITIONS VOL	V/C	LOS	[2] NET DAILY PROJECT BUILD-OUT TRIP ENDS	[3] EXISTING WITH PROJECT [(1)+(2)] VOL	V/C	LOS	[4] % ADT INCREASE WITH PROJECT [(2)/(1)]	[5] EXISTING WITH PROJECT SEGMENT IMPACT	[6] YEAR 2021 FUTURE PRE-PROJECT VOL	V/C	LOS	[7] YEAR 2021 FUTURE WITH PROJECT [(2)+(6)] VOL	V/C	LOS	[8] % ADT INCREASE WITH PROJECT [(2)/(6)]	[9] FUTURE WITH PROJECT SEGMENT IMPACT
1.	Colorado Place between	Weekday	40,000	13,902	0.35	A	952	14,854	0.37	A	6.8%	NO	14,180	0.35	A	15,132	0.38	A	6.7%	NO
	San Juan Dr. & Colorado Blvd.	Saturday	40,000	9,804	0.25	A	1076	10,880	0.27	A	11.0%	NO	10,000	0.25	A	11,076	0.28	A	10.8%	NO
2.	Huntington Drive (EB) between	Weekday	30,000	14,530	0.48	A	73	14,603	0.49	A	0.5%	NO	14,821	0.49	A	14,894	0.50	A	0.5%	NO
	Santa Clara St. & Centennial Wy.	Saturday	30,000	12,384	0.41	A	139	12,523	0.42	A	1.1%	NO	12,632	0.42	A	12,771	0.43	A	1.1%	NO
3.	Huntington Drive (WB) between	Weekday	30,000	16,723	0.56	A	73	16,796	0.56	A	0.4%	NO	17,057	0.57	A	17,130	0.57	A	0.4%	NO
	Colorado Pl. & Centennial Wy.	Saturday	30,000	14,597	0.49	A	139	14,736	0.49	A	1.0%	NO	14,889	0.50	A	15,028	0.50	A	0.9%	NO
4.	Huntington Drive between	Weekday	40,000	28,251	0.71	C	976	29,227	0.73	C	3.5%	NO	28,816	0.72	C	29,792	0.74	C	3.4%	NO
	Santa Clara St. & Santa Anita Ave.	Saturday	40,000	24,090	0.60	A	1204	25,294	0.63	B	5.0%	NO	24,572	0.61	B	25,776	0.64	B	4.9%	NO
5.	Santa Anita Avenue between	Weekday	40,000	29,514	0.74	C	588	30,102	0.75	C	2.0%	NO	30,104	0.75	C	30,692	0.77	C	2.0%	NO
	Santa Clara St. & Huntington Dr.	Saturday	40,000	26,293	0.66	B	624	26,917	0.67	B	2.4%	NO	26,819	0.67	B	27,443	0.69	B	2.3%	NO
6.	Santa Anita Avenue south of	Weekday	40,000	30,709	0.77	C	22	30,731	0.77	C	0.1%	NO	31,323	0.78	C	31,345	0.78	C	0.1%	NO
	Huntington Dr.	Saturday	40,000	27,018	0.68	B	128	27,146	0.68	B	0.5%	NO	27,558	0.69	B	27,686	0.69	B	0.5%	NO

[a] Daily capacity is based on 10,000 vehicles per day per lane.
[1] The existing daily traffic volumes were determined based on counts conducted by City Traffic Counters in April 2019. Copies of the daily traffic count summary data worksheets are provided in Appendix A.
[2] Net project build-out daily trip ends include inbound and outbound trips based on the project trip generation forecasts provided in Table 7-1.
[3] Total of columns [1] and [2].
[4] Percent project-related increase based on column [2] divided by column [1].
[5]/[9] According to the City of Arcadia General Plan 2010, Circulation and Infrastructure Element, roadway segments operating at LOS A through LOS D are considered at acceptable levels and LOS E is permitted at roadways adjacent to: 1) freeway ramps; 2) Santa Anita Park and all roadway links intended to carry seasonal race-related traffic; and 3) the Downtown, Baldwin Avenue, and Live Oak Avenue commercial and mixed-use districts.
[6] An ambient growth rate of 1.0 percent (1.0%) per year was assumed to derive the year 2021 future pre-project traffic volumes.
[7] Total of columns [2] and [6].
[8] Percent project-related increase based on column [2] divided by column [6].

levels. Thus, the project is not anticipated to significantly impact the analyzed street segments under either the existing or future year 2021 conditions. Therefore, no mitigation measures are required or recommended.

10.6 Transportation Impact Fee Program

The City of Arcadia has adopted a citywide Transportation Impact Fee Program to implement the improvements needed to address the cumulative impacts of the developments currently proposed in the City and those that may be constructed under the General Plan. As such, the proposed project, like other new development projects within the City, would be subject to the payment of the Transportation Impact Fee as part of the Transportation Impact Fee Program (i.e., Resolution No. 7151) previously adopted by the City Council. The fees collected by the City will be used to implement specific roadway improvement measures and are intended to fund on a fair-share basis the improvements to maintain Level of Service D conditions. A project's transportation impact fee (i.e., the fair-share contribution toward transportation improvements) is determined based on the number of PM peak hour vehicle trips generated by the project. Currently, the revised transportation fee which was updated in 2016 is $1,983.00 per PM peak hour vehicle trip. With a total of 147 net new vehicle trips conservatively estimated to be generated during the PM peak hour, the proposed project Applicant would be required to contribute a transportation impact fee of $291,501.00, based on the City's fee schedule.

11.0 CALIFORNIA DEPARTMENT OF TRANSPORTATION ANALYSIS

In addition to the intersection analyses, which utilize the City of Arcadia's methodology, a supplemental analysis was prepared based on the *Highway Capacity Manual*[5] (HCM) operational analysis methodologies pursuant to California Department of Transportation's (Caltrans) *Guide for the Preparation of Traffic Impact Studies*[6]. Based on recent coordination with Caltrans, analyses of Caltrans facilities should be conducted when and if a proposed project is expected to add 50 or more peak hour trips in either direction on a freeway mainline segment. The proposed project at build-out is not expected to generate 50 or more vehicle trips, during either the weekday AM or PM commute peak hours, at any freeway mainline location. Thus, any freeway mainline location would not exceed the threshold for preparation of a Caltrans freeway mainline analysis. However, the proposed project is expected to contribute traffic generation at two ramp intersections and they have been analyzed based on Caltrans methodology during the weekday AM, weekday PM, and Saturday PM commute peak hours. The following Caltrans study intersections have been identified for analysis based on their proximity to the project site:

- Intersection No. 5: Santa Anita Avenue/I-210 Freeway Westbound Ramps
- Intersection No. 6: Santa Anita Avenue/I-210 Freeway Eastbound Ramps

According to the Caltrans document, the LOS for operating State highway facilities is based upon measures of effectiveness (MOEs). For state-controlled signalized study intersections, the MOE is determined based on control delay in seconds per vehicle (sec/veh). Caltrans "endeavors to maintain a target LOS at the transition between LOS C and LOS D on State highway facilities"; it does not require that LOS D (shall) be maintained. However, Caltrans acknowledges that this may not always be feasible and recommends that the lead agency consult with Caltrans to determine the appropriate target LOS. If an existing State highway facility is operating at less than the appropriate target LOS, the existing MOE should be maintained. For this analysis, LOS D is the target level of service standard and will be utilized to assess the project impacts at the Caltrans study intersections. For signalized intersections, Caltrans considers a location to be impacted if the target MOE is not maintained and a corresponding change in control delay in seconds per vehicle (sec/veh) is 1.0 second or more.

11.1 Highway Capacity Manual Method of Analysis

Based on the HCM operations method of analysis, level of service for signalized intersections is defined in terms of control delay, which is a measure of driver discomfort, frustration, fuel consumption, and lost travel time. The delay experienced by a motorist is made up of a number of factors that relate to control, geometries, traffic, and incidents. Total delay is the difference between the travel time actually experienced and the reference travel time that would result

[5] *Highway Capacity Manual 6th Edition*, Transportation Research Board of the National Academies of Sciences-Engineering-Medicine, 2016.

[6] *Guide for the Preparation of Traffic Impact Studies*, State of California Department of Transportation, December 2002.

during ideal conditions: in the absence of traffic control, in the absence of geometric delay, in the absence of any incidents, and when there are no other vehicles on the road.

The HCM signalized methodology calculates the control delay for each of the subject traffic movements and determines the level of service for each constrained movement. The control delay for any particular movement is a function of the capacity of the approach and the degree of saturation. The overall control delay is measured in seconds per vehicle and the level of service is then determined. The term Level of Service (LOS) is used to describe intersection operations. Intersection Levels of Service vary from LOS A (free flow) to LOS F (jammed condition). The six qualitative categories of Level of Service that have been defined along with the corresponding HCM control delay value range for signalized intersections are shown in *Appendix B.*

11.2 Intersection Impact Analysis and Queuing Review

Intersection and queuing analyses were prepared utilizing the *Synchro 10* software package which implements the Highway Capacity Manual operational methods. A *Synchro* network was created based on existing conditions field reviews at the above two (2) Caltrans study intersections. In addition, specifics such as lane configurations, storage lengths, crosswalk locations, posted speed limits, traffic signal phasing, and traffic volumes, were coded to complete the existing network.

11.2.1 *Intersection (Ramp) Impact Analysis*

Table 11-1 summarizes the intersection analyses for the existing, existing with project, and future conditions both without and with the proposed project. The first column [1] of *Table 11-1* presents a summary of existing traffic conditions. The second column [2] presents existing with project traffic conditions based on existing intersection geometry. The third column [3] presents year 2021 traffic conditions based on existing intersection geometry, but without any proposed project-generated traffic. The fourth column [4] presents future forecast traffic conditions with the addition of project traffic.

As shown in *Table 11-1,* application of the Caltrans LOS standards and guidelines to the existing with project and future with project conditions indicate that the proposed project is not expected to adversely impact either of the Caltrans study intersections. The corresponding weekday AM, weekday PM, and Saturday PM peak hour HCM worksheets are contained in ***Appendix C***.

11.2.2 *Freeway Off-Ramp Queuing Analysis*

Each of the two Santa Anita Avenue off-ramp intersection approaches were reviewed in terms of expected maximum vehicle queues (i.e., 95th percentile queues) which represent the maximum back of vehicle queues with 95th percentile traffic volumes. The corresponding maximum vehicle queue lengths were then compared with the 85th percentile ramp storage lengths (i.e., 85 percent of the available storage length as measured from the applicable freeway/frontage road gore areas to the respective off-ramp lane merges/approach limit lines).

Table 11-1
CALTRANS INTERSECTION IMPACT ANALYSIS [a]
WEEKDAY AM, PM, AND SATURDAY PM PEAK HOURS

NO.	INTERSECTION	PEAK HOUR	[1] YEAR 2019 EXISTING DELAY [b]	[1] YEAR 2019 EXISTING LOS [c]	[2] YEAR 2019 EXISTING W/ PROJECT DELAY [b]	[2] YEAR 2019 EXISTING W/ PROJECT LOS [c]	[2] CHANGE IN DELAY [(2)-(1)]	[2] IMPACT	[3] YEAR 2021 FUTURE PRE-PROJ. W/ AMBIENT GROWTH & RELATED PROJ. DELAY [b]	[3] YEAR 2021 FUTURE PRE-PROJ. W/ AMBIENT GROWTH & RELATED PROJ. LOS [c]	[4] YEAR 2021 FUTURE W/ PROJECT DELAY [b]	[4] YEAR 2021 FUTURE W/ PROJECT LOS [c]	[4] CHANGE IN DELAY [(4)-(3)]	[4] IMPACT
5	Santa Anita Avenue/	AM	14.1	B	14.3	B	0.2	No	14.4	B	14.6	B	0.2	No
	I-210 Freeway Westbound Ramps	PM	17.9	B	18.1	B	0.2	No	18.2	B	18.4	B	0.2	No
		SAT	14.7	B	15.1	B	0.4	No	15.4	B	15.7	B	0.3	No
6	Santa Anita Avenue/	AM	22.2	C	22.3	C	0.1	No	24.4	C	25.1	C	0.7	No
	I-210 Freeway Eastbound Ramps	PM	16.9	B	17.0	B	0.1	No	17.8	B	18.0	B	0.2	No
		SAT	20.0	B	20.1	C	0.1	No	22.0	C	23.0	C	1.0	No

[a] Intersection analysis based on the Highway Capacity Manual operational analysis methodologies, per the Caltrans' *Guide for the Preparation of Traffic Impact Studies, December 2002.*

[b] Reported control delay values in seconds per vehicle.

[c] Signalized Intersection Levels of Service are based on the following criteria:

Control Delay (s/veh)	LOS
<= 10	A
> 10-20	B
> 20-35	C
> 35-55	D
> 55-80	E
> 80	F

Both the I-210 Freeway Westbound Off-Ramp at the Santa Anita Avenue intersection and the I-210 Freeway Eastbound Off-Ramp at the Santa Anita Avenue intersection are controlled by traffic signals. As shown in ***Table 11-2***, adequate 85th percentile storage lengths are provided to accommodate the forecast 95th percentile queues under the year 2021 with project build-out conditions. Therefore, based on a review of the queuing analyses and the storage lengths, vehicle queuing back onto the I-210 Freeway mainline travel lanes is not expected. The corresponding weekday AM, weekday PM, and Saturday PM peak hour HCM worksheets for purposes of determining the 95th percentile vehicle queues are contained in *Appendix C*. In addition, based on the HCM delay based methodology, both ramp intersections identified above are operating at acceptable Levels of Service (LOS).

Table 11-2
SUMMARY OF OFF-RAMP QUEUING ANALYSIS [1]
WEEKDAY AM, PM AND SATURDAY PM PEAK HOURS

	INTERSECTION	PEAK HOUR	85th PERCENTILE AVAILABLE OFF-RAMP STORAGE [2] (FEET)	2019 EXISTING		2019 EXISTING WITH PROJECT		FUTURE YEAR 2021 WITHOUT PROJECT		FUTURE YEAR 2021 WITH PROJECT	
				95th PERCENTILE QUEUE [3] (FEET)	EXCEEDS 85th PERCENTILE STORAGE? (YES/NO)	95th PERCENTILE QUEUE [3] (FEET)	EXCEEDS 85th PERCENTILE STORAGE? (YES/NO)	95th PERCENTILE QUEUE [3] (FEET)	EXCEEDS 85th PERCENTILE STORAGE? (YES/NO)	95th PERCENTILE QUEUE [3] (FEET)	EXCEEDS 85th PERCENTILE STORAGE? (YES/NO)
5	Santa Anita Avenue/	AM	2,350	740	No	760	No	785	No	805	No
	I-210 Freeway Westbound Ramps	PM	2,350	598	No	620	No	653	No	675	No
		SAT	2,350	478	No	498	No	528	No	548	No
6	Santa Anita Avenue/	AM	1,140	753	No	768	No	863	No	893	No
	I-210 Freeway Eastbound Ramps	PM	1,140	588	No	598	No	648	No	663	No
		SAT	1,140	628	No	643	No	730	No	770	No

[1] Refer to intersection queuing calculation worksheets in Appendix C.

[2] Available storage represents 85% of storage space, as measured via Caltrans Earth, 2016.

[3] The 95th percentile queue is the maximum back of queue with 95th percentile traffic volumes. An average vehicle length of 25 feet (including vehicle separation) was assumed for analysis purposes.

12.0 CONGESTION MANAGEMENT PROGRAM STATUS

The Congestion Management Program (CMP) was previously a state-mandated program that was enacted by the California State Legislature with the passage of Proposition 111 in 1990 that primarily utilized a level of service (LOS) performance metric. Senate Bill 743 contains amendments to current congestion management law that allows counties to opt out of the LOS standards that would otherwise apply in areas where CMPs are utilized. Pursuant to California Government Code §65088.3, local jurisdictions may opt out of the CMP requirement without penalty if a majority of the local jurisdictions representing a majority of the County's population formally adopt resolutions requesting to opt out of the program. As of October 2019, the majority of local agencies representing the majority of the County's population have adopted resolutions to opt out of the program. Therefore, the CMP is no longer applicable in Los Angeles County.

13.0 CONCLUSIONS

This transportation impact study has been prepared to identify and evaluate the potential impacts of traffic generated by the proposed 125 W. Huntington Drive, Buildings C & D project. The proposed project consists of the development of the following building floor areas and corresponding land uses:

- Building C: 90 hotel guestrooms, 4,146 GSF of restaurant use, and 1,033 GSF of bar use
- Building D: 75 hotel guestrooms, 7,466 GSF of spa, and 1,568 GSF of café use

Other portions of the project site including the parking structure and two existing medical office buildings (i.e., Buildings A and B) that have been constructed as part of the prior CUP are not included in this transportation analysis for purposes of determining the potential transportation impacts since both buildings are currently occupied. Construction of the proposed project and subsequent occupancy is planned by year 2021.

In order to evaluate the potential impacts due to the proposed project, eight (8) intersections and six (6) street segments locations were identified for evaluation in consultation with the City of Arcadia to determine changes in operations following occupancy and utilization of the project. The proposed project is expected to generate 178 net new vehicle trips (73 inbound trips and 105 outbound trips) during the weekday AM peak hour. During the weekday PM peak hour, the proposed project is expected to generate 147 net new vehicle trips (104 inbound trips and 43 outbound trips). Over a 24-hour period, the proposed project is forecast to generate approximately 2,442 net new daily trip ends during a typical weekday. The proposed project is also expected to generate 245 net new vehicle trips (123 inbound trips and 122 outbound trips) during the Saturday PM peak hour. Over a 24-hour weekend period, the proposed project is forecast to generate 3,012 net new daily vehicle trips.

It is concluded that the proposed project will not create significant traffic impacts at any of the study intersections or study street segments. Incremental, but less than significant impacts are noted at the study locations. Therefore, no traffic mitigation measures are required or recommended for the study locations. The proposed project, like other new development projects within the City, would be subject to the payment of the Transportation Impact Fee as part of the Transportation Impact Fee Program. The project's transportation impact fee (i.e., the fair-share contribution toward transportation improvements) is determined based on the number of PM peak hour vehicle trips generated by the project.

Application of the Caltrans LOS standards and guidelines to the existing with project and future with project conditions indicate that the proposed project is not expected to adversely impact the two Caltrans study intersections. Adequate 85th percentile storage lengths are provided to accommodate the forecast 95th percentile queues under the future with project build-out conditions at the two studied I-210 Freeway off-ramp locations at Santa Anita Avenue.

APPENDIX A

TRAFFIC COUNT DATA

INTERSECTION TURNING MOVEMENT COUNT SUMMARY

CLIENT: LLG - PASADENA
PROJECT: ARCADIA HOTEL PROJECT
DATE: WEDNESDAY, APRIL 17, 2019
PERIOD: 07:00 AM TO 09:00 AM
INTERSECTION: N/S HOLLY AVENUE / SANTA ANITA PARK DRIVE (GATE 3)
E/W HUNTINGTON DRIVE / CAMPUS DRIVE
FILE NUMBER: 1-AM

	GATE 3				HUNTINGTON DRIVE (WB)					CAMPUS DRIVE (WB)				HOLLY AVENUE				CAMPUS DRIVE (EB)		HUNTINGTON DRIVE (EB)		
15 MINUTE	1	2	3A	3B	4	5	6A	6B	6C	4A	4B, 4C	5B	6	7A	7B	8	9	10A	11A	11	12A	12B
TOTALS	SBRT	SBTH	SBLT	SBLT	WBRT	WBTH	WBLT	WBLT	WBLT	WBR2	WBRT	WBR2	WBL2	NBRT	NBTH	NBTH	NBTH	EBR2	EBL2	EBTH	EBLT	EBLT
0700-0715	3	1	0	0	1	168	0	1	14	26	0	31	0	13	5	0	25	8	31	81	1	0
0715-0730	1	0	0	0	10	215	1	7	16	26	0	57	3	19	6	0	33	15	42	131	0	0
0730-0745	0	0	0	0	0	244	1	9	35	26	0	63	12	35	8	0	52	17	47	128	4	0
0745-0800	0	0	0	1	1	248	1	7	70	23	1	70	13	39	17	1	60	24	85	219	2	0
0800-0815	0	0	0	0	0	265	2	19	56	13	1	66	17	60	13	1	64	24	64	211	4	0
0815-0830	0	0	0	0	2	269	5	17	27	28	0	65	21	48	16	0	57	27	76	205	1	0
0830-0845	2	0	0	0	0	266	1	34	27	22	1	75	11	37	17	3	46	10	105	164	2	1
0845-0900	0	2	2	0	1	245	2	51	32	78	1	58	38	43	23	0	37	11	182	203	1	0

	GATE 3				HUNTINGTON DRIVE (WB)					CAMPUS DRIVE (WB)				HOLLY AVENUE				CAMPUS DRIVE (EB)		HUNTINGTON DRIVE (EB)			
1 HOUR	1	2	3A	3B	4	5	6A	6B	6C	4A	4B	5B	6	7A	7B	8	9	10A	11A	11	12A	12B	
TOTALS	SBRT	SBTH	SBLT	SBLT	WBRT	WBTH	WBLT	WBLT	WBLT	WBR2	WBRT	WBR2	WBL2	NBRT	NBTH	NBTH	NBTH	EBR2	EBL2	EBTH	EBLT	EBLT	TOTALS
0700-0800	4	1	0	1	12	875	3	24	135	101	1	221	28	106	36	1	170	64	205	559	7	0	2554
0715-0815	1	0	0	1	11	972	5	42	177	88	2	256	45	153	44	2	209	80	238	689	10	0	3025
0730-0830	0	0	0	1	3	1026	9	52	188	90	2	264	63	182	54	2	233	92	272	763	11	0	3307
0745-0845	2	0	0	1	3	1048	9	77	180	86	3	276	62	184	63	5	227	85	330	799	9	1	3450
0800-0900	2	2	2	0	3	1045	10	121	142	141	3	264	87	188	69	4	204	72	427	783	8	1	3578

INTERSECTION TURNING MOVEMENT COUNT SUMMARY

CLIENT: LLG - PASADENA
PROJECT: ARCADIA HOTEL PROJECT
DATE: WEDNESDAY, APRIL 17, 2019
PERIOD: 04:00 PM TO 06:00 PM
INTERSECTION: N/S HOLLY AVENUE / SANTA ANITA PARK DRIVE (GATE 3)
E/W HUNTINGTON DRIVE / CAMPUS DRIVE
FILE NUMBER: 1-PM

	GATE 3				HUNTINGTON DRIVE (WB)					CAMPUS DRIVE (WB)				HOLLY AVENUE				CAMPUS DRIVE (EB)		HUNTINGTON DRIVE (EB)		
15 MINUTE	1	2	3A	3B	4	5	6A	6B	6C	4A	4B, 4C	5B	6	7A	7B	8	9	10A	11A	11	12A	12B
TOTALS	SBRT	SBTH	SBLT	SBLT	WBRT	WBTH	WBLT	WBLT	WBLT	WBR2	WBRT	WBR2	WBL2	NBRT	NBTH	NBTH	NBTH	EBR2	EBL2	EBTH	EBLT	EBLT
0400-0415	0	3	3	3	0	204	2	15	45	17	1	51	7	16	5	0	27	40	116	241	1	1
0415-0430	2	1	2	3	1	219	4	13	48	6	2	53	3	27	10	1	14	51	122	254	1	0
0430-0445	1	3	1	0	0	234	6	14	44	11	0	55	11	21	6	0	29	45	139	248	1	0
0445-0500	1	0	1	0	1	247	5	7	42	5	0	36	13	24	10	1	35	38	160	260	2	1
0500-0515	1	1	1	1	0	269	5	20	40	11	2	56	18	19	12	0	28	44	122	215	1	0
0515-0530	1	0	0	0	2	279	4	13	40	15	3	44	8	18	7	0	32	54	153	255	2	0
0530-0545	1	1	0	0	0	268	3	21	48	10	0	42	15	31	6	1	51	55	165	300	4	0
0545-0600	2	1	1	0	0	241	2	10	38	9	0	45	10	18	8	2	29	32	182	296	2	0

	GATE 3				HUNTINGTON DRIVE (WB)					CAMPUS DRIVE (WB)				HOLLY AVENUE				CAMPUS DRIVE (EB)		HUNTINGTON DRIVE (EB)			
1 HOUR	1	2	3A	3B	4	5	6A	6B	6C	4A	4B	5B	6	7A	7B	8	9	10A	11A	11	12A	12B	
TOTALS	SBRT	SBTH	SBLT	SBLT	WBRT	WBTH	WBLT	WBLT	WBLT	WBR2	WBRT	WBR2	WBL2	NBRT	NBTH	NBTH	NBTH	EBR2	EBL2	EBTH	EBLT	EBLT	TOTALS
0400-0500	4	7	7	6	2	904	17	49	179	39	3	195	34	88	31	2	105	174	537	1003	5	2	3393
0415-0515	5	5	5	4	2	969	20	54	174	33	4	200	45	91	38	2	106	178	543	977	5	1	3461
0430-0530	4	4	3	1	3	1029	20	54	166	42	5	191	50	82	35	1	124	181	574	978	6	1	3554
0445-0545	4	2	2	1	3	1063	17	61	170	41	5	178	54	92	35	2	146	191	600	1030	9	1	3707
0500-0600	5	3	2	1	2	1057	14	64	166	45	5	187	51	86	33	3	140	185	622	1066	9	0	3746

INTERSECTION TURNING MOVEMENT COUNT SUMMARY

CLIENT: LLG - PASADENA
PROJECT: 125 W. HUNTINGTON DRIVE, CITY OF ARCADIA
DATE: SATURDAY, APRIL 13, 2019
PERIOD: 04:00 PM TO 06:00 PM
INTERSECTION: N/S HOLLY AVENUE / SANTA ANITA PARK DRIVE (GATE 3)
E/W HUNTINGTON DRIVE / CAMPUS DRIVE
FILE NUMBER: 1-SATPM

	GATE 3				HUNTINGTON DRIVE (WB)					CAMPUS DRIVE (WB)				HOLLY AVENUE				CAMPUS DRIVE (EB)		HUNTINGTON DRIVE (EB)		
15 MINUTE	1	2	3A	3B	4	5	6A	6B	6C	4A	4B, 4C	5B	6	7A	7B	8	9	10A	11A	11	12A	12B
TOTALS	SBRT	SBTH	SBLT	SBLT	WBRT	WBTH	WBLT	WBLT	WBLT	WBR2	WBRT	WBR2	WBL2	NBRT	NBTH	NBTH	NBTH	EBR2	EBL2	EBTH	EBLT	EBLT
0400-0415	17	19	8	5	13	231	0	5	31	6	4	56	3	22	3	1	30	42	101	167	3	3
0415-0430	13	14	4	4	3	211	0	5	24	2	0	43	2	11	6	1	30	42	92	206	5	6
0430-0445	15	14	8	0	2	184	0	2	39	9	1	48	5	13	6	4	25	41	89	145	9	5
0445-0500	15	8	4	1	4	193	3	9	21	3	2	51	6	12	3	2	27	33	90	213	4	7
0500-0515	24	24	9	1	3	188	2	10	33	8	1	48	4	14	4	0	29	30	117	166	2	0
0515-0530	16	19	1	2	3	178	2	4	25	3	0	57	1	13	4	3	17	36	91	203	2	2
0530-0545	35	55	25	2	1	228	0	0	31	2	4	42	8	13	5	1	31	31	104	179	2	3
0545-0600	17	43	11	6	6	191	3	6	25	3	2	47	4	10	3	2	30	27	84	201	0	4

	GATE 3				HUNTINGTON DRIVE (WB)					CAMPUS DRIVE (WB)				HOLLY AVENUE				CAMPUS DRIVE (EB)		HUNTINGTON DRIVE (EB)			
1 HOUR	1	2	3A	3B	4	5	6A	6B	6C	4A	4B	5B	6	7A	7B	8	9	10A	11A	11	12A	12B	
TOTALS	SBRT	SBTH	SBLT	SBLT	WBRT	WBTH	WBLT	WBLT	WBLT	WBR2	WBRT	WBR2	WBL2	NBRT	NBTH	NBTH	NBTH	EBR2	EBL2	EBTH	EBLT	EBLT	TOTALS
0400-0500	60	55	24	10	22	819	3	21	115	20	7	198	16	58	18	8	112	158	372	731	21	21	2869
0415-0515	67	60	25	6	12	776	5	26	117	22	4	190	17	50	19	7	111	146	388	730	20	18	2816
0430-0530	70	65	22	4	12	743	7	25	118	23	4	204	16	52	17	9	98	140	387	727	17	14	2774
0445-0545	90	106	39	6	11	787	7	23	110	16	7	198	19	52	16	6	104	130	402	761	10	12	2912
0500-0600	92	141	46	11	13	785	7	20	114	16	7	194	17	50	16	6	107	124	396	749	6	9	2926

CITY TRAFFIC COUNTERS

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File Name : ColoradoPl_SanJuan_Wed_April2019
Site Code : 00000000
Start Date : 4/17/2019

Groups Printed- Vehicles

	Colorado Place Southbound			San Juan Drive Westbound			Colorado Place Northbound			Eastbound			
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Int. Total
07:00 AM	0	25	0	2	0	0	0	269	2	0	0	0	298
07:15 AM	0	31	0	5	0	3	0	276	0	0	0	0	315
07:30 AM	0	52	0	1	0	2	0	291	2	0	0	0	348
07:45 AM	2	86	0	9	0	3	0	276	2	0	0	0	378
Total	2	194	0	17	0	8	0	1112	6	0	0	0	1339
08:00 AM	1	76	0	6	0	3	0	225	6	0	0	0	317
08:15 AM	2	68	0	0	0	2	0	266	0	0	0	0	338
08:30 AM	0	69	0	3	0	0	0	255	2	0	0	0	329
08:45 AM	1	72	0	3	0	2	0	251	0	0	0	0	329
Total	4	285	0	12	0	7	0	997	8	0	0	0	1313
04:00 PM	1	278	0	0	0	0	0	60	4	0	0	0	343
04:15 PM	1	223	0	5	0	3	0	54	2	0	0	0	288
04:30 PM	1	315	0	5	0	2	0	48	4	0	0	0	375
04:45 PM	9	308	0	3	0	2	0	68	1	0	0	0	391
Total	12	1124	0	13	0	7	0	230	11	0	0	0	1397
05:00 PM	8	343	0	7	0	3	0	67	3	0	0	0	431
05:15 PM	17	307	0	1	0	1	0	66	5	0	0	0	397
05:30 PM	27	286	0	2	0	1	0	52	8	0	0	0	376
05:45 PM	17	305	0	4	0	2	0	50	1	0	0	0	379
Total	69	1241	0	14	0	7	0	235	17	0	0	0	1583
Grand Total	87	2844	0	56	0	29	0	2574	42	0	0	0	5632
Apprch %	3	97	0	65.9	0	34.1	0	98.4	1.6	0	0	0	
Total %	1.5	50.5	0	1	0	0.5	0	45.7	0.7	0	0	0	

CITY TRAFFIC COUNTERS

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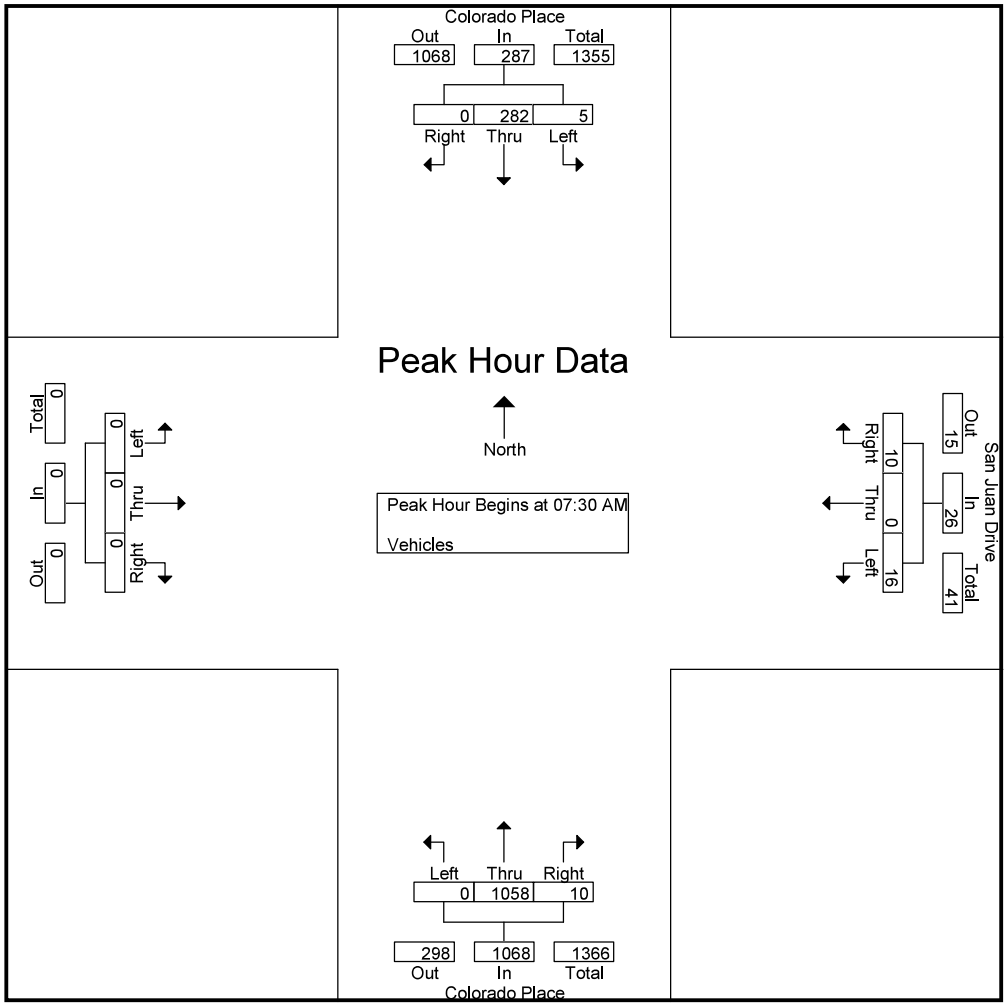
File Name : ColoradoPl_SanJuan_Wed_April2019
Site Code : 00000000
Start Date : 4/17/2019
Page No : 2

	Colorado Place Southbound				San Juan Drive Westbound				Colorado Place Northbound				Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	52	0	52	1	0	2	3	0	**291**	2	**293**	0	0	0	0	348
07:45 AM	**2**	**86**	0	**88**	**9**	0	**3**	**12**	0	276	2	278	0	0	0	0	**378**
08:00 AM	1	76	0	77	6	0	3	9	0	225	**6**	231	0	0	0	0	317
08:15 AM	2	68	0	70	0	0	2	2	0	266	0	266	0	0	0	0	338
Total Volume	5	282	0	287	16	0	10	26	0	1058	10	1068	0	0	0	0	1381
% App. Total	1.7	98.3	0		61.5	0	38.5		0	99.1	0.9		0	0	0		
PHF	.625	.820	.000	.815	.444	.000	.833	.542	.000	.909	.417	.911	.000	.000	.000	.000	.913



CITY TRAFFIC COUNTERS

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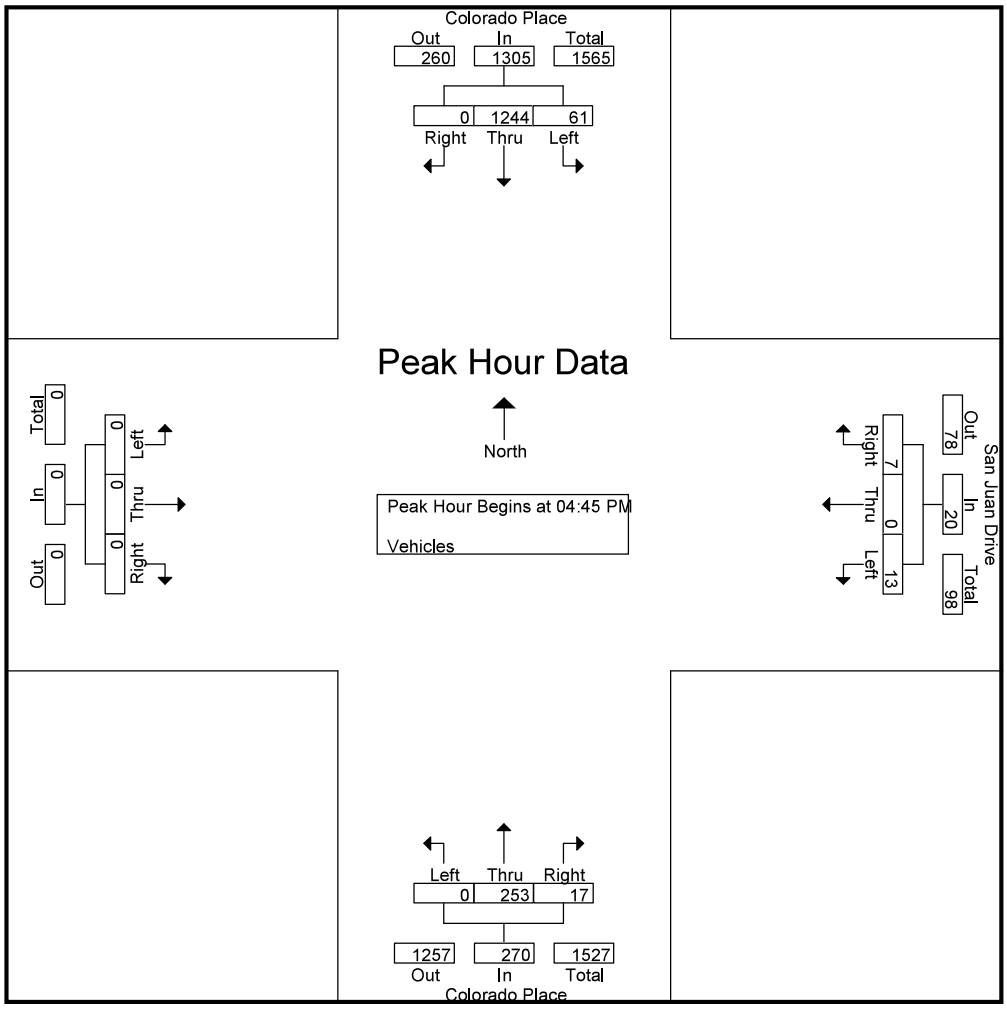
File Name : ColoradoPl_SanJuan_Wed_April2019
Site Code : 00000000
Start Date : 4/17/2019
Page No : 3

	Colorado Place Southbound				San Juan Drive Westbound				Colorado Place Northbound				Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	9	308	0	317	3	0	2	5	0	**68**	1	69	0	0	0	0	391
05:00 PM	8	**343**	0	**351**	**7**	0	**3**	**10**	0	67	3	70	0	0	0	0	**431**
05:15 PM	17	307	0	324	1	0	1	2	0	66	5	**71**	0	0	0	0	397
05:30 PM	**27**	286	0	313	2	0	1	3	0	52	**8**	60	0	0	0	0	376
Total Volume	61	1244	0	1305	13	0	7	20	0	253	17	270	0	0	0	0	1595
% App. Total	4.7	95.3	0		65	0	35		0	93.7	6.3		0	0	0		
PHF	.565	.907	.000	.929	.464	.000	.583	.500	.000	.930	.531	.951	.000	.000	.000	.000	.925



CITY TRAFFIC COUNTERS

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File Name : ColoradoPl_SanJuan_BP_Wed_April2019
Site Code : 00000000
Start Date : 4/17/2019

Groups Printed- Bikes & Peds

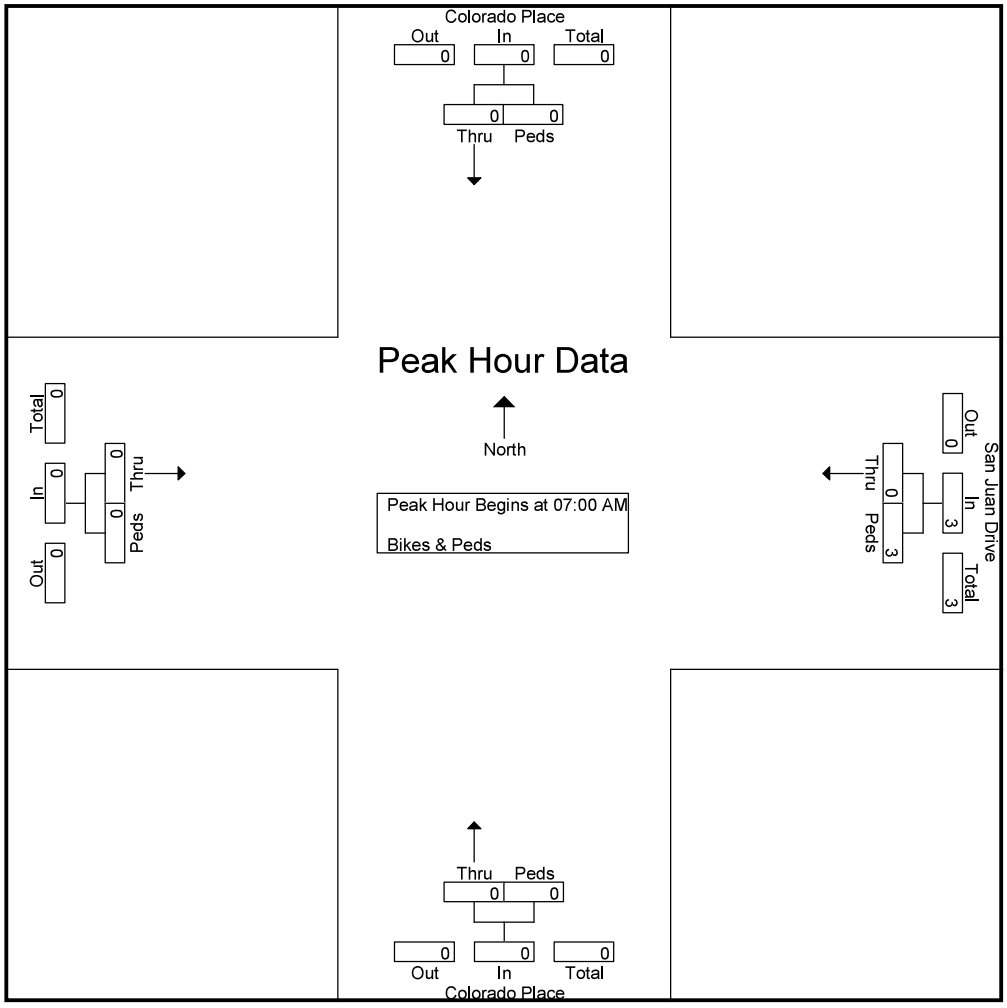
	Colorado Place Southbound		San Juan Drive Westbound		Colorado Place Northbound		Eastbound		
Start Time	Bikes	Peds	Bikes	Peds	Bikes	Peds	Bikes	Peds	Int. Total
07:00 AM	0	0	0	2	0	0	0	0	2
07:30 AM	0	0	0	1	0	0	0	0	1
Total	0	0	0	3	0	0	0	0	3
08:15 AM	0	0	0	1	0	0	0	0	1
Total	0	0	0	1	0	0	0	0	1
04:30 PM	0	0	1	0	0	0	0	0	1
Total	0	0	1	0	0	0	0	0	1
05:15 PM	0	0	0	0	1	0	0	0	1
05:30 PM	0	0	0	1	0	0	0	0	1
Total	0	0	0	1	1	0	0	0	2
Grand Total	0	0	1	5	1	0	0	0	7
Apprch %	0	0	16.7	83.3	100	0	0	0	
Total %	0	0	14.3	71.4	14.3	0	0	0	

CITY TRAFFIC COUNTERS

WWW.CTCOUNTERS.COM

File Name : ColoradoPl_SanJuan_BP_Wed_April2019
Site Code : 00000000
Start Date : 4/17/2019
Page No : 2

	Colorado Place Southbound			San Juan Drive Westbound			Colorado Place Northbound			Eastbound			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 07:00 AM													
07:00 AM	0	0	0	0	**2**	**2**	0	0	0	0	0	0	**2**
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	1	1	0	0	0	0	0	0	1
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	3	3	0	0	0	0	0	0	3
% App. Total	0	0		0	100		0	0		0	0		
PHF	.000	.000	.000	.000	.375	.375	.000	.000	.000	.000	.000	.000	.375



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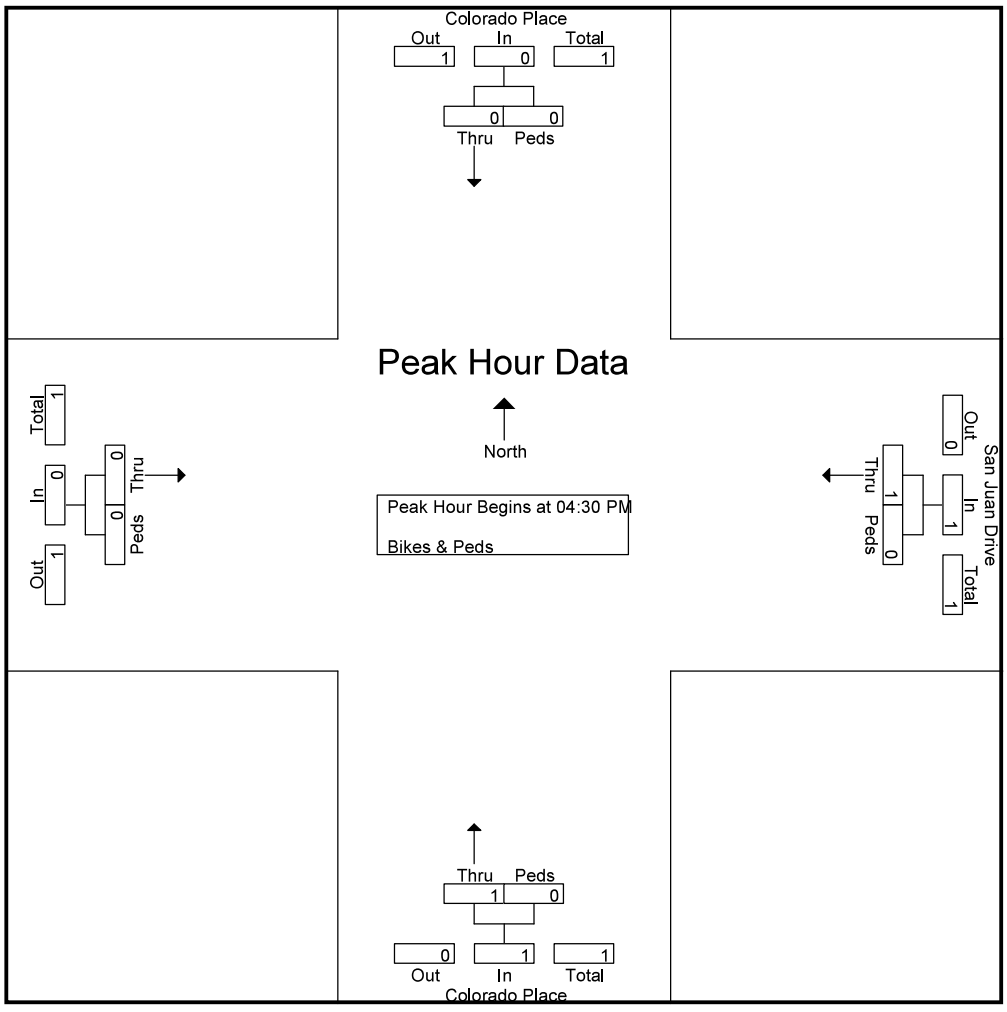
	Colorado Place Southbound			San Juan Drive Westbound			Colorado Place Northbound			Eastbound			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 05:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 04:30 PM													
04:30 PM	0	0	0	**1**	0	**1**	0	0	0	0	0	0	**1**
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	**1**	0	**1**	0	0	0	1
Total Volume	0	0	0	1	0	1	1	0	1	0	0	0	2
% App. Total	0	0		100	0		100	0		0	0		
PHF	.000	.000	.000	.250	.000	.250	.250	.000	.250	.000	.000	.000	.500



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Groups Printed- Vehicles

	Colorado Place Southbound			San Juan Drive Westbound			Colorado Place Northbound			Eastbound			
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Int. Total
04:00 PM	4	131	0	1	0	5	0	58	7	0	0	0	206
04:15 PM	1	168	0	0	0	3	0	59	5	0	0	0	236
04:30 PM	1	121	0	3	0	2	0	70	6	0	0	0	203
04:45 PM	1	121	0	11	0	5	0	62	18	0	0	0	218
Total	7	541	0	15	0	15	0	249	36	0	0	0	863
05:00 PM	1	121	0	17	0	3	0	70	6	0	0	0	218
05:15 PM	1	121	0	10	0	7	0	66	5	0	0	0	210
05:30 PM	1	121	0	7	0	5	0	81	5	0	0	0	220
05:45 PM	1	55	0	2	0	6	0	72	11	0	0	0	147
Total	4	418	0	36	0	21	0	289	27	0	0	0	795
Grand Total	11	959	0	51	0	36	0	538	63	0	0	0	1658
Apprch %	1.1	98.9	0	58.6	0	41.4	0	89.5	10.5	0	0	0	
Total %	0.7	57.8	0	3.1	0	2.2	0	32.4	3.8	0	0	0	

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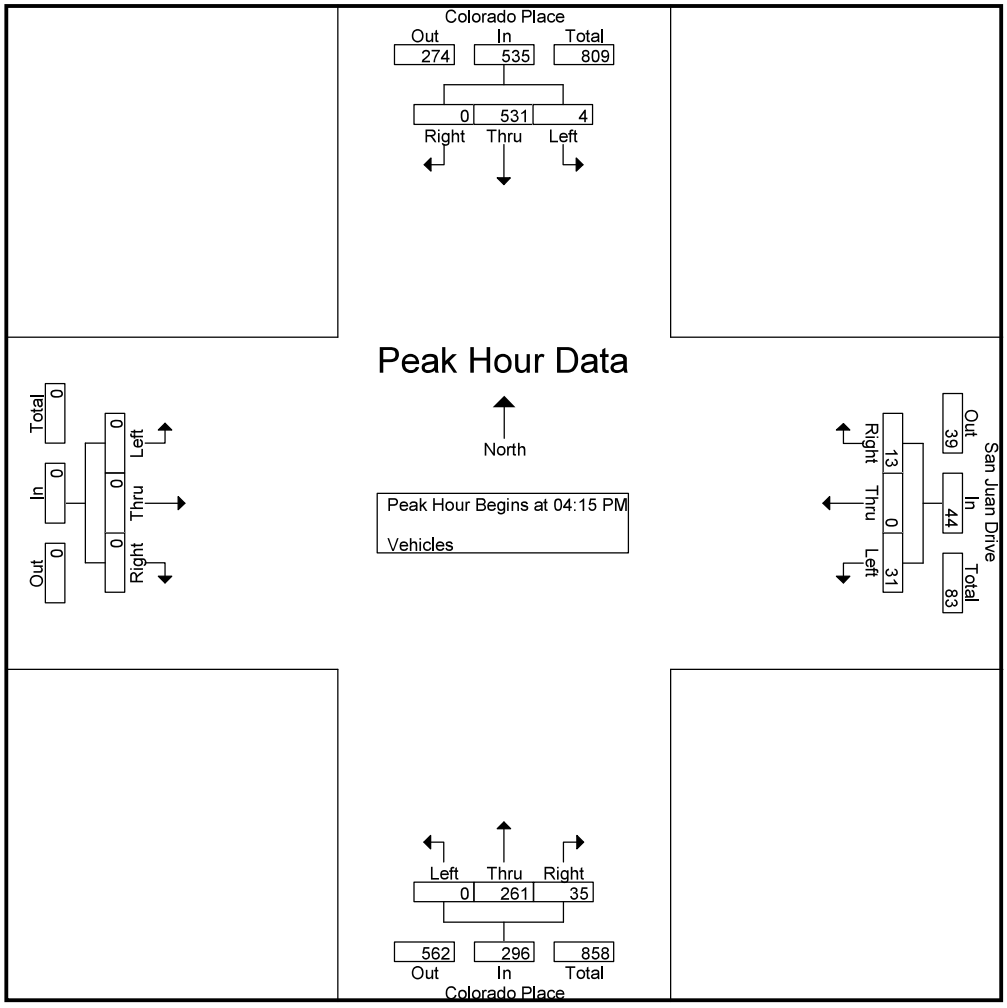
	Colorado Place Southbound				San Juan Drive Westbound				Colorado Place Northbound				Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:15 PM																	
04:15 PM	**1**	**168**	0	**169**	0	0	3	3	0	59	5	64	0	0	0	0	**236**
04:30 PM	1	121	0	122	3	0	2	5	0	**70**	6	76	0	0	0	0	203
04:45 PM	1	121	0	122	11	0	**5**	16	0	62	**18**	**80**	0	0	0	0	218
05:00 PM	1	121	0	122	**17**	0	3	**20**	0	70	6	76	0	0	0	0	218
Total Volume	4	531	0	535	31	0	13	44	0	261	35	296	0	0	0	0	875
% App. Total	0.7	99.3	0		70.5	0	29.5		0	88.2	11.8		0	0	0		
PHF	1.00	.790	.000	.791	.456	.000	.650	.550	.000	.932	.486	.925	.000	.000	.000	.000	.927



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Groups Printed- Bikes & Peds

	Colorado Place Southbound		San Juan Drive Westbound		Colorado Place Northbound		Eastbound		
Start Time	Bikes	Peds	Bikes	Peds	Bikes	Peds	Bikes	Peds	Int. Total
04:00 PM	0	0	0	1	0	0	0	0	1
04:30 PM	0	0	2	0	0	0	0	0	2
Total	0	0	2	1	0	0	0	0	3
05:00 PM	0	0	0	3	0	0	0	0	3
05:30 PM	0	0	0	2	0	0	0	0	2
05:45 PM	0	0	1	3	0	1	0	0	5
Total	0	0	1	8	0	1	0	0	10
Grand Total	0	0	3	9	0	1	0	0	13
Apprch %	0	0	25	75	0	100	0	0	
Total %	0	0	23.1	69.2	0	7.7	0	0	

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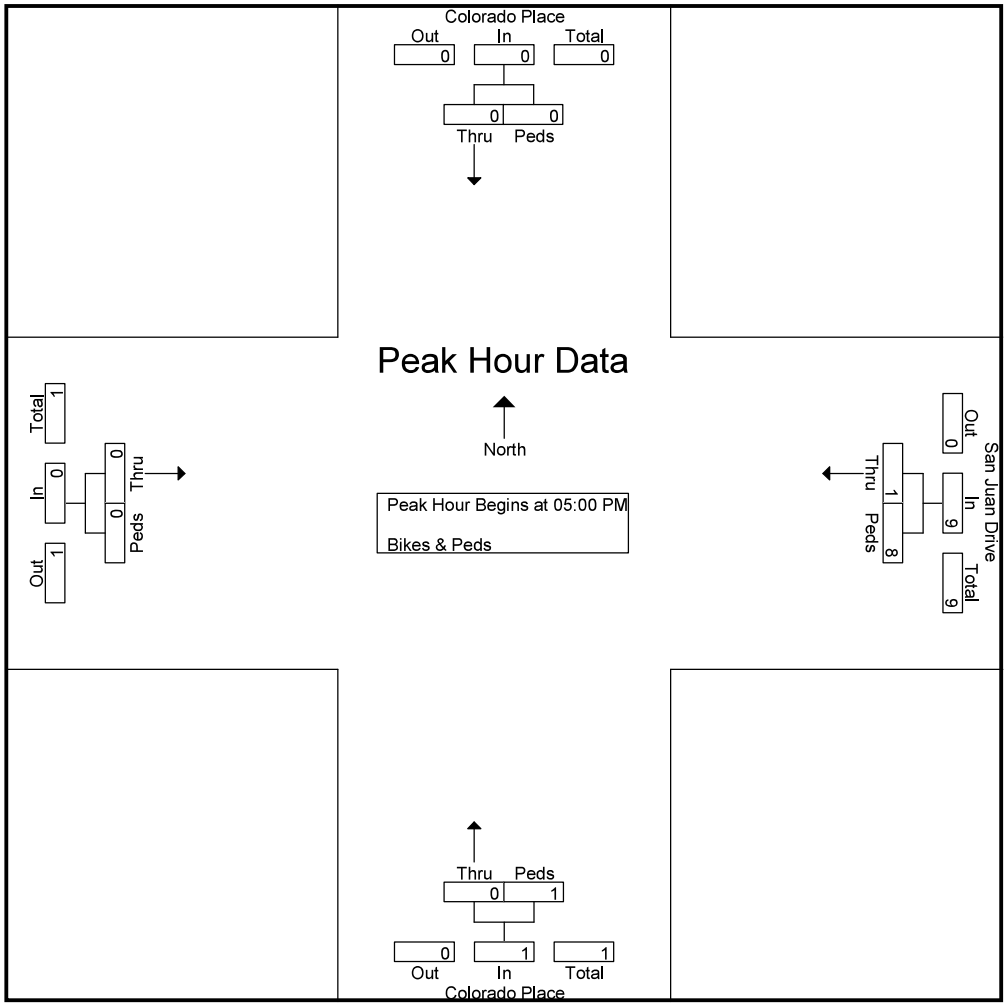
	Colorado Place Southbound			San Juan Drive Westbound			Colorado Place Northbound			Eastbound			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 05:00 PM													
05:00 PM	0	0	0	0	**3**	3	0	0	0	0	0	0	3
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	2	2	0	0	0	0	0	0	2
05:45 PM	0	0	0	**1**	3	**4**	0	**1**	**1**	0	0	0	**5**
Total Volume	0	0	0	1	8	9	0	1	1	0	0	0	10
% App. Total	0	0		11.1	88.9		0	100		0	0		
PHF	.000	.000	.000	.250	.667	.563	.000	.250	.250	.000	.000	.000	.500



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Groups Printed- Vehicles

	Colorado Place Southbound			Huntington Drive Westbound			Northbound			Eastbound			
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Int. Total
07:00 AM	0	10	19	0	226	259	0	0	0	0	0	0	514
07:15 AM	0	16	16	0	295	266	0	0	0	0	0	0	593
07:30 AM	0	21	27	0	350	281	0	0	0	0	0	0	679
07:45 AM	0	43	38	0	361	277	0	0	0	0	0	0	719
Total	0	90	100	0	1232	1083	0	0	0	0	0	0	2505
08:00 AM	0	39	39	0	384	237	0	0	0	0	0	0	699
08:15 AM	0	31	31	0	365	257	0	0	0	0	0	0	684
08:30 AM	0	40	40	0	369	258	0	0	0	0	0	0	707
08:45 AM	0	39	34	0	345	251	0	0	0	0	0	0	669
Total	0	149	144	0	1463	1003	0	0	0	0	0	0	2759
04:00 PM	0	317	15	0	243	59	0	0	0	0	0	0	634
04:15 PM	0	220	21	0	256	57	0	0	0	0	0	0	554
04:30 PM	0	315	13	0	252	57	0	0	0	0	0	0	637
04:45 PM	0	308	12	0	287	65	0	0	0	0	0	0	672
Total	0	1160	61	0	1038	238	0	0	0	0	0	0	2497
05:00 PM	0	350	21	0	290	71	0	0	0	0	0	0	732
05:15 PM	0	293	13	0	288	67	0	0	0	0	0	0	661
05:30 PM	0	322	11	0	284	60	0	0	0	0	0	0	677
05:45 PM	0	318	28	0	301	49	0	0	0	0	0	0	696
Total	0	1283	73	0	1163	247	0	0	0	0	0	0	2766
Grand Total	0	2682	378	0	4896	2571	0	0	0	0	0	0	10527
Apprch %	0	87.6	12.4	0	65.6	34.4	0	0	0	0	0	0	
Total %	0	25.5	3.6	0	46.5	24.4	0	0	0	0	0	0	

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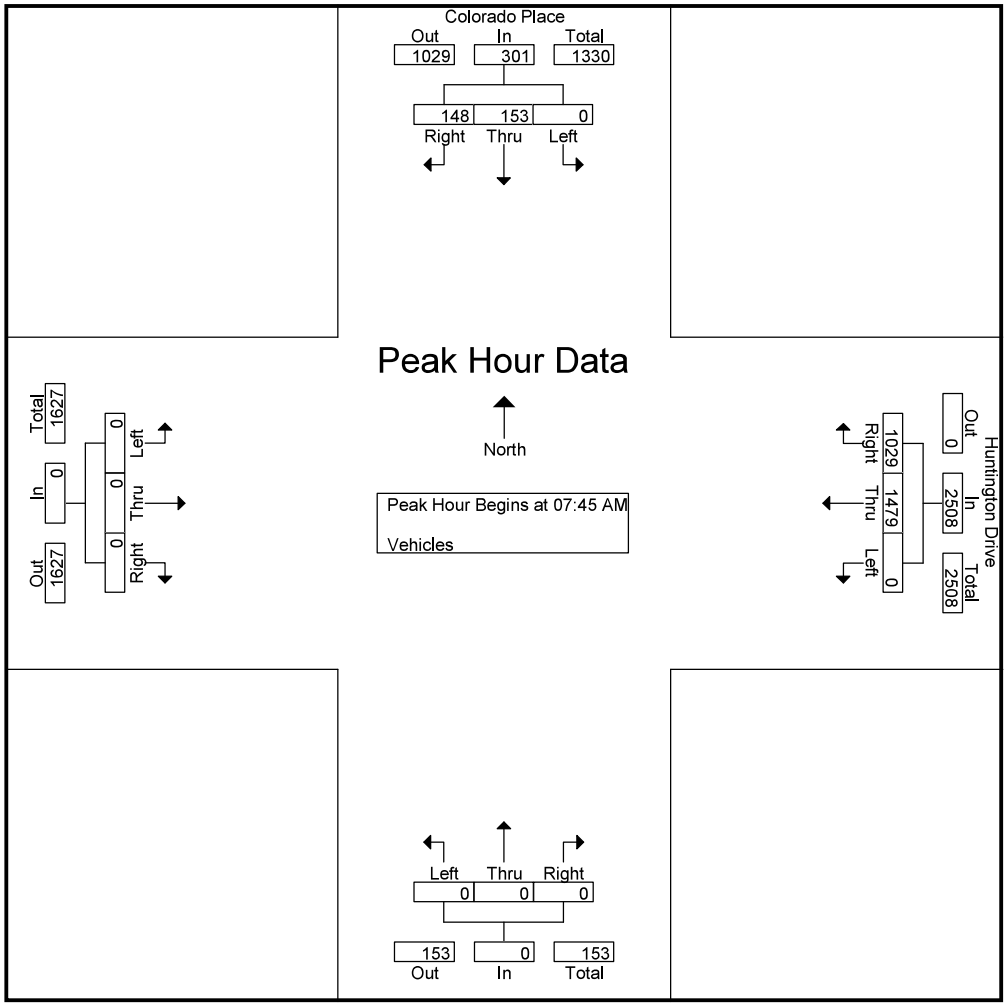
	Colorado Place Southbound				Huntington Drive Westbound				Northbound				Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	0	**43**	38	**81**	0	361	**277**	**638**	0	0	0	0	0	0	0	0	**719**
08:00 AM	0	39	39	78	0	**384**	237	621	0	0	0	0	0	0	0	0	699
08:15 AM	0	31	31	62	0	365	257	622	0	0	0	0	0	0	0	0	684
08:30 AM	0	40	**40**	80	0	369	258	627	0	0	0	0	0	0	0	0	707
Total Volume	0	153	148	301	0	1479	1029	2508	0	0	0	0	0	0	0	0	2809
% App. Total	0	50.8	49.2		0	59	41		0	0	0		0	0	0		
PHF	.000	.890	.925	.929	.000	.963	.929	.983	.000	.000	.000	.000	.000	.000	.000	.000	.977



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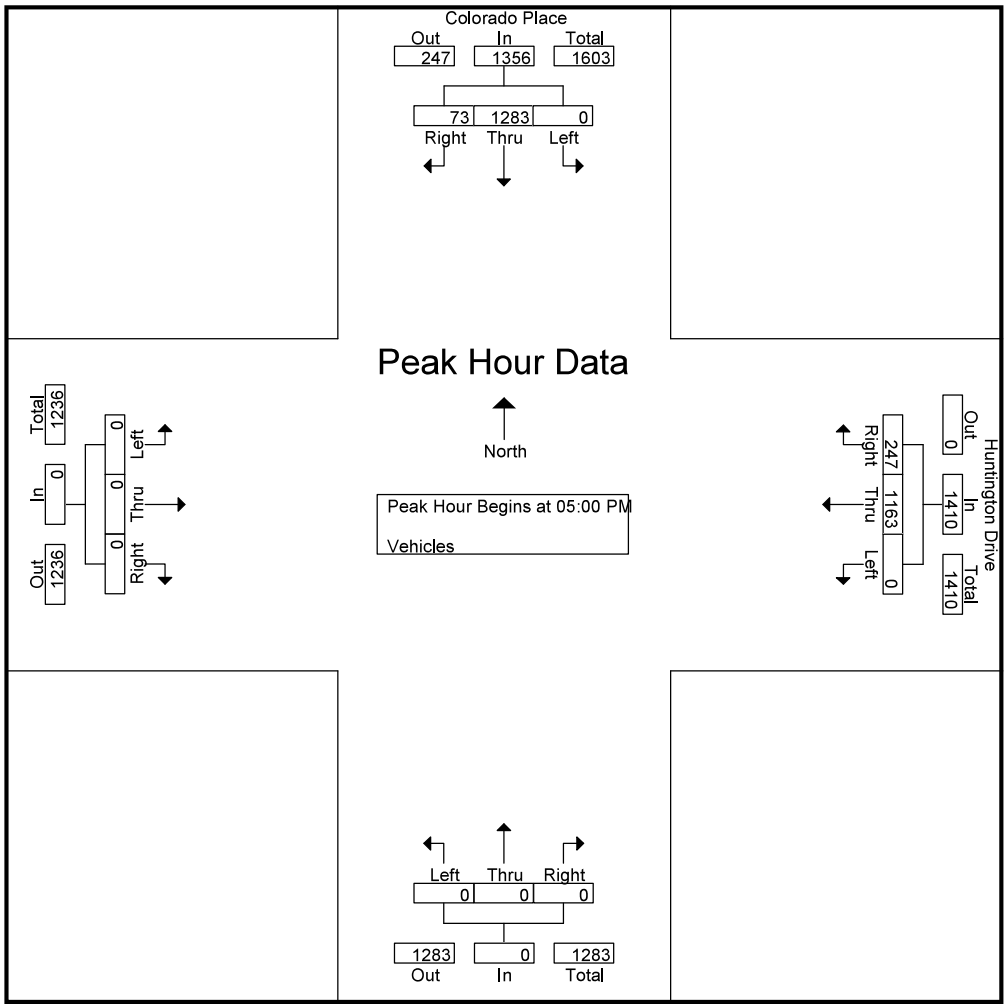
	Colorado Place Southbound				Huntington Drive Westbound				Northbound				Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	0	**350**	21	**371**	0	290	**71**	**361**	0	0	0	0	0	0	0	0	**732**
05:15 PM	0	293	13	306	0	288	67	355	0	0	0	0	0	0	0	0	661
05:30 PM	0	322	11	333	0	284	60	344	0	0	0	0	0	0	0	0	677
05:45 PM	0	318	**28**	346	0	**301**	49	350	0	0	0	0	0	0	0	0	696
Total Volume	0	1283	73	1356	0	1163	247	1410	0	0	0	0	0	0	0	0	2766
% App. Total	0	94.6	5.4		0	82.5	17.5		0	0	0		0	0	0		
PHF	.000	.916	.652	.914	.000	.966	.870	.976	.000	.000	.000	.000	.000	.000	.000	.000	.945



CITY TRAFFIC COUNTERS

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Groups Printed- Bikes & Peds

	Colorado Place Southbound		Huntington Drive Westbound		Northbound		Eastbound		
Start Time	Bikes	Peds	Bikes	Peds	Bikes	Peds	Bikes	Peds	Int. Total
07:30 AM	1	0	0	0	0	0	1	0	2
07:45 AM	0	0	0	0	0	0	0	1	1
Total	1	0	0	0	0	0	1	1	3
08:15 AM	1	1	0	0	0	0	0	0	2
08:45 AM	4	0	0	0	0	0	0	0	4
Total	5	1	0	0	0	0	0	0	6
04:00 PM	2	0	0	0	0	0	0	0	2
04:15 PM	0	2	0	0	0	0	0	0	2
04:30 PM	0	0	0	0	0	0	1	0	1
04:45 PM	2	0	0	0	0	0	0	0	2
Total	4	2	0	0	0	0	1	0	7
05:00 PM	2	1	0	0	0	0	0	0	3
05:15 PM	0	0	1	0	0	0	0	0	1
05:30 PM	1	1	0	0	0	0	1	1	4
Total	3	2	1	0	0	0	1	1	8
Grand Total	13	5	1	0	0	0	3	2	24
Apprch %	72.2	27.8	100	0	0	0	60	40	
Total %	54.2	20.8	4.2	0	0	0	12.5	8.3	

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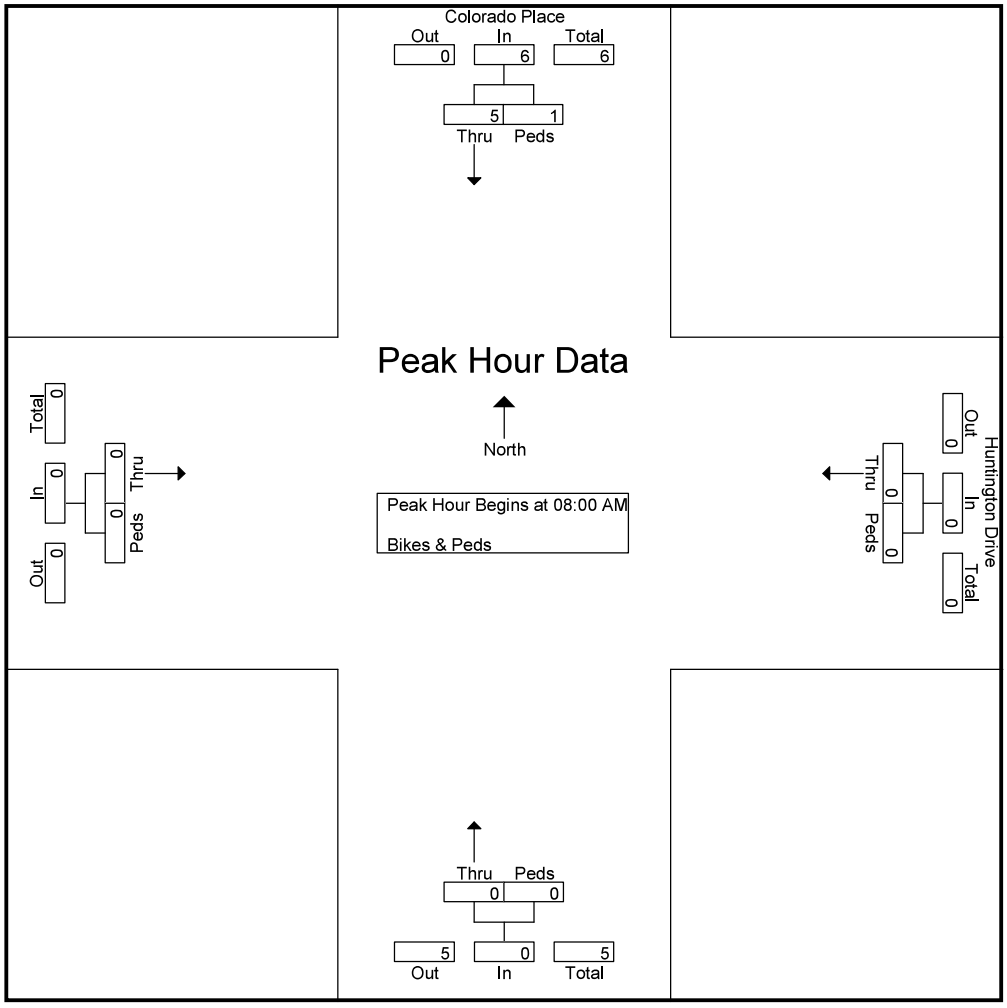
	Colorado Place Southbound			Huntington Drive Westbound			Northbound			Eastbound			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 08:00 AM													
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	1	**1**	2	0	0	0	0	0	0	0	0	0	2
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	**4**	0	**4**	0	0	0	0	0	0	0	0	0	**4**
Total Volume	5	1	6	0	0	0	0	0	0	0	0	0	6
% App. Total	83.3	16.7		0	0		0	0		0	0		
PHF	.313	.250	.375	.000	.000	.000	.000	.000	.000	.000	.000	.000	.375



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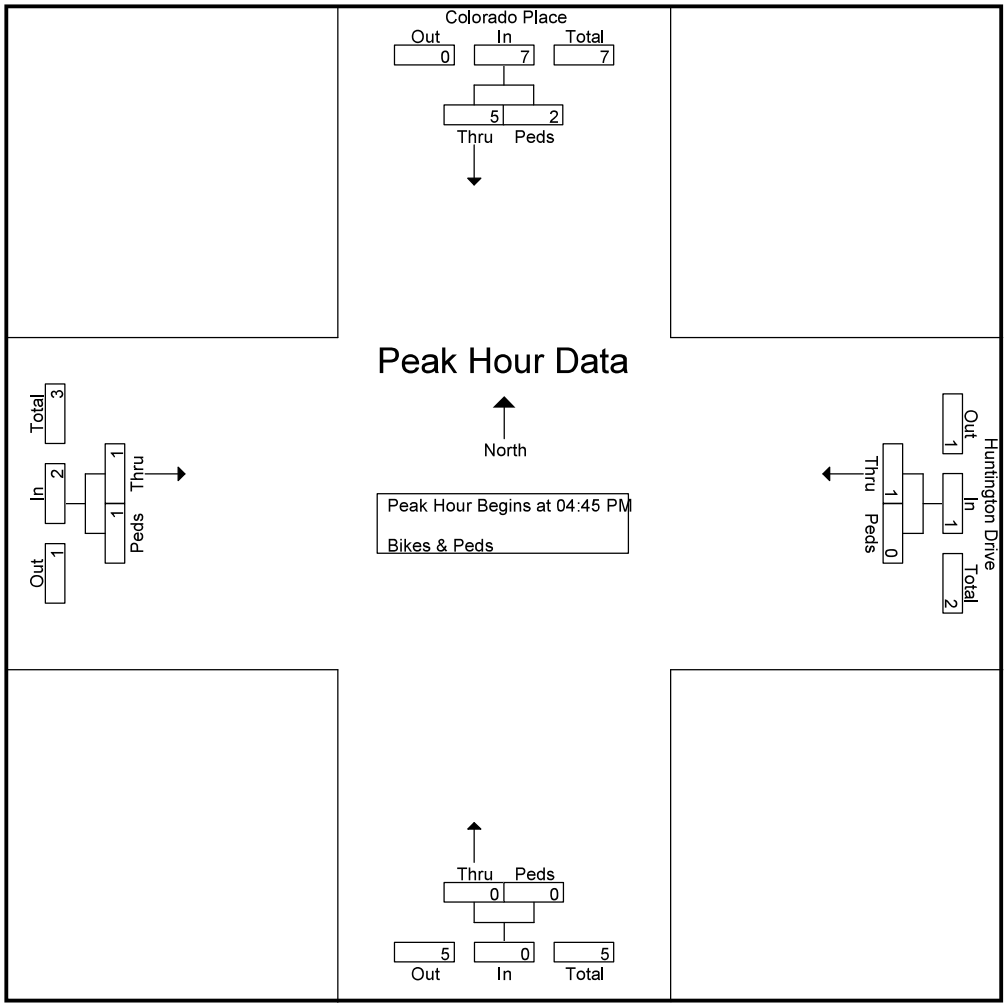
	Colorado Place Southbound			Huntington Drive Westbound			Northbound			Eastbound			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 05:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 04:45 PM													
04:45 PM	**2**	0	2	0	0	0	0	0	0	0	0	0	2
05:00 PM	2	**1**	**3**	0	0	0	0	0	0	0	0	0	3
05:15 PM	0	0	0	**1**	0	**1**	0	0	0	0	0	0	1
05:30 PM	1	1	2	0	0	0	0	0	0	**1**	**1**	**2**	**4**
Total Volume	5	2	7	1	0	1	0	0	0	1	1	2	10
% App. Total	71.4	28.6		100	0		0	0		50	50		
PHF	.625	.500	.583	.250	.000	.250	.000	.000	.000	.250	.250	.250	.625



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Groups Printed- Vehicles

	Colorado Place Southbound			Huntington Drive Westbound			Northbound			Eastbound			
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Int. Total
04:00 PM	0	142	12	0	230	42	0	0	0	0	0	0	426
04:15 PM	0	156	9	0	247	45	0	0	0	0	0	0	457
04:30 PM	0	133	3	0	200	58	0	0	0	0	0	0	394
04:45 PM	0	21	1	0	204	72	0	0	0	0	0	0	298
Total	0	452	25	0	881	217	0	0	0	0	0	0	1575
05:00 PM	0	62	4	0	225	49	0	0	0	0	0	0	340
05:15 PM	0	22	2	0	222	58	0	0	0	0	0	0	304
05:30 PM	0	61	4	0	223	44	0	0	0	0	0	0	332
05:45 PM	0	89	8	0	203	40	0	0	0	0	0	0	340
Total	0	234	18	0	873	191	0	0	0	0	0	0	1316
Grand Total	0	686	43	0	1754	408	0	0	0	0	0	0	2891
Apprch %	0	94.1	5.9	0	81.1	18.9	0	0	0	0	0	0	
Total %	0	23.7	1.5	0	60.7	14.1	0	0	0	0	0	0	

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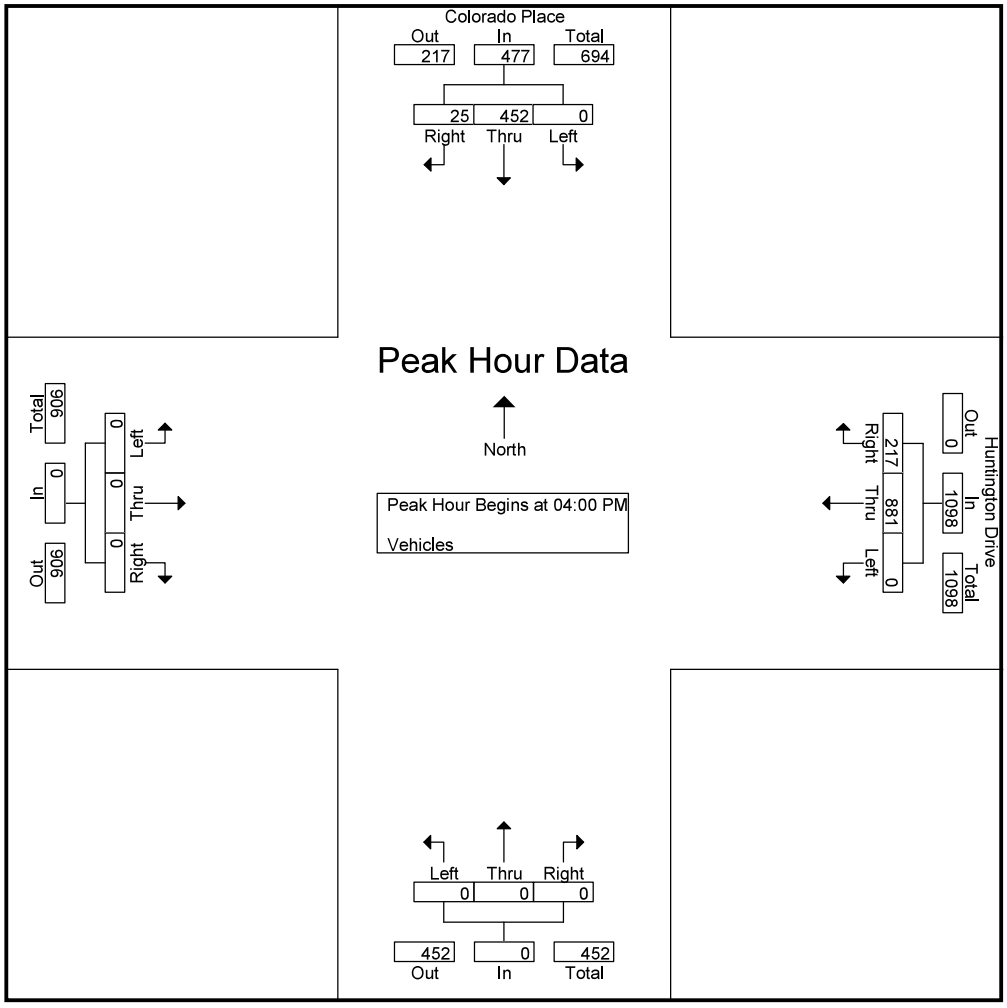
	Colorado Place Southbound				Huntington Drive Westbound				Northbound				Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	0	142	**12**	154	0	230	42	272	0	0	0	0	0	0	0	0	426
04:15 PM	0	**156**	9	**165**	0	**247**	45	**292**	0	0	0	0	0	0	0	0	**457**
04:30 PM	0	133	3	136	0	200	58	258	0	0	0	0	0	0	0	0	394
04:45 PM	0	21	1	22	0	204	**72**	276	0	0	0	0	0	0	0	0	298
Total Volume	0	452	25	477	0	881	217	1098	0	0	0	0	0	0	0	0	1575
% App. Total	0	94.8	5.2		0	80.2	19.8		0	0	0		0	0	0		
PHF	.000	.724	.521	.723	.000	.892	.753	.940	.000	.000	.000	.000	.000	.000	.000	.000	.862



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Groups Printed- Bikes & Peds

	Colorado Place Southbound		Huntington Drive Westbound		Northbound		Eastbound		
Start Time	Bikes	Peds	Bikes	Peds	Thru	Peds	Thru	Peds	Int. Total
04:00 PM	0	1	1	2	0	0	0	0	4
04:15 PM	0	1	0	3	0	0	0	0	4
04:30 PM	0	1	1	0	0	0	0	0	2
Total	0	3	2	5	0	0	0	0	10
05:00 PM	0	1	0	6	0	0	0	0	7
05:15 PM	0	0	0	1	0	0	0	0	1
05:30 PM	2	2	1	3	0	0	0	0	8
05:45 PM	1	1	1	2	0	0	0	0	5
Total	3	4	2	12	0	0	0	0	21
Grand Total	3	7	4	17	0	0	0	0	31
Apprch %	30	70	19	81	0	0	0	0	
Total %	9.7	22.6	12.9	54.8	0	0	0	0	

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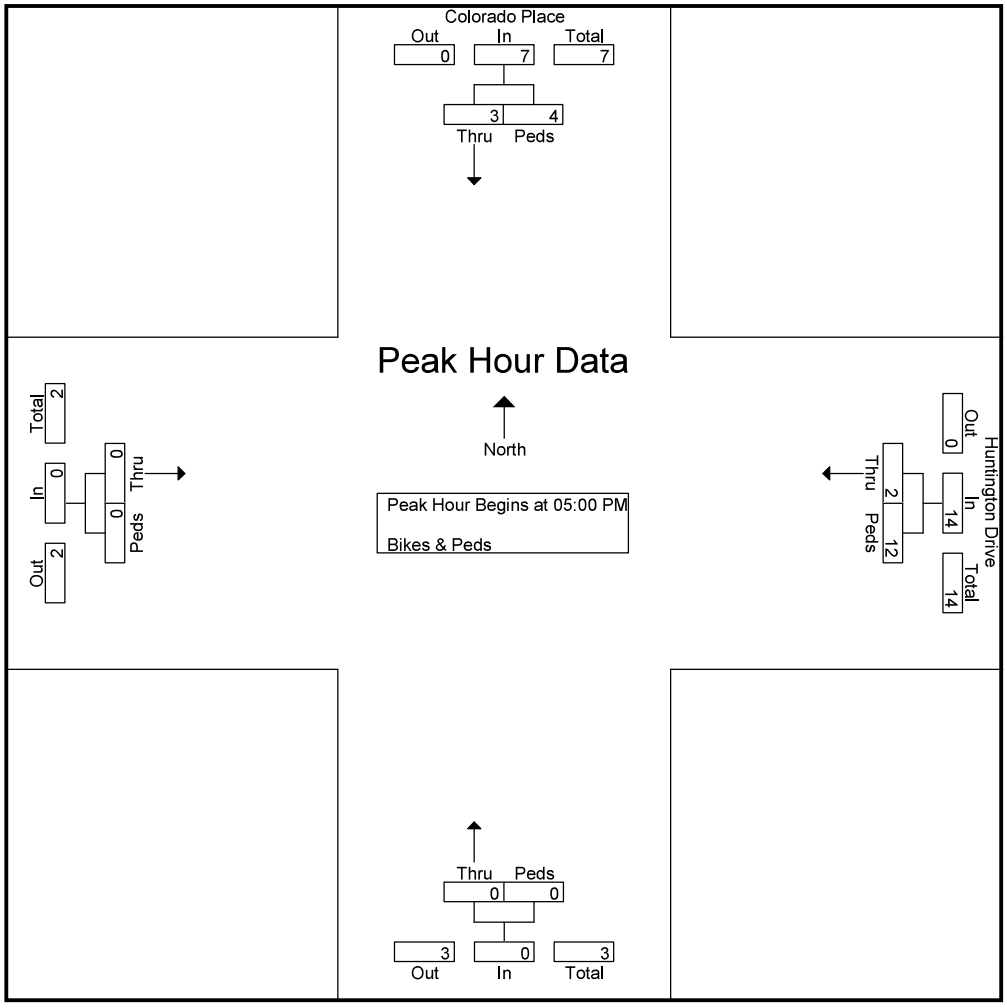
	Colorado Place Southbound			Huntington Drive Westbound			Northbound			Eastbound			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Thru	Peds	App. Total	Thru	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 05:00 PM													
05:00 PM	0	1	1	0	**6**	**6**	0	0	0	0	0	0	7
05:15 PM	0	0	0	0	1	1	0	0	0	0	0	0	1
05:30 PM	**2**	**2**	**4**	**1**	3	4	0	0	0	0	0	0	**8**
05:45 PM	1	1	2	1	2	3	0	0	0	0	0	0	5
Total Volume	3	4	7	2	12	14	0	0	0	0	0	0	21
% App. Total	42.9	57.1		14.3	85.7		0	0		0	0		
PHF	.375	.500	.438	.500	.500	.583	.000	.000	.000	.000	.000	.000	.656



CITY TRAFFIC COUNTERS

WWW.CTCOUNTERS.COM

File Name : SantaClara_Huntington_Wed_April2019
Site Code : 00000000
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Groups Printed- Vehicles

	Santa Clara St Southbound			Huntington Drive Westbound			Huntington Drive Northbound			Huntington Drive Eastbound			
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Int. Total
07:00 AM	0	0	66	0	423	0	15	31	56	1	9	0	601
07:15 AM	0	0	85	0	453	1	10	48	55	1	16	0	669
07:30 AM	0	0	140	0	477	3	13	66	93	0	21	0	813
07:45 AM	0	0	139	0	462	1	12	95	172	1	41	0	923
Total	0	0	430	0	1815	5	50	240	376	3	87	0	3006
08:00 AM	0	0	132	0	458	1	13	92	125	1	46	0	868
08:15 AM	0	0	162	0	435	1	10	97	116	1	29	0	851
08:30 AM	0	0	136	0	459	0	18	77	101	1	41	0	833
08:45 AM	0	0	117	0	450	2	24	105	173	4	37	0	912
Total	0	0	547	0	1802	4	65	371	515	7	153	0	3464
04:00 PM	0	0	67	0	201	3	32	112	190	6	310	0	921
04:15 PM	0	0	82	0	186	2	29	125	186	4	212	0	826
04:30 PM	0	0	89	0	188	1	18	124	183	2	272	0	877
04:45 PM	0	0	82	0	228	0	18	126	173	4	297	0	928
Total	0	0	320	0	803	6	97	487	732	16	1091	0	3552
05:00 PM	0	0	80	0	250	2	45	97	177	2	335	0	988
05:15 PM	0	0	93	0	208	1	33	113	192	4	280	0	924
05:30 PM	0	0	86	0	237	0	29	123	184	13	292	0	964
05:45 PM	0	0	115	0	206	2	19	137	182	8	304	0	973
Total	0	0	374	0	901	5	126	470	735	27	1211	0	3849
Grand Total	0	0	1671	0	5321	20	338	1568	2358	53	2542	0	13871
Apprch %	0	0	100	0	99.6	0.4	7.9	36.8	55.3	2	98	0	
Total %	0	0	12	0	38.4	0.1	2.4	11.3	17	0.4	18.3	0	

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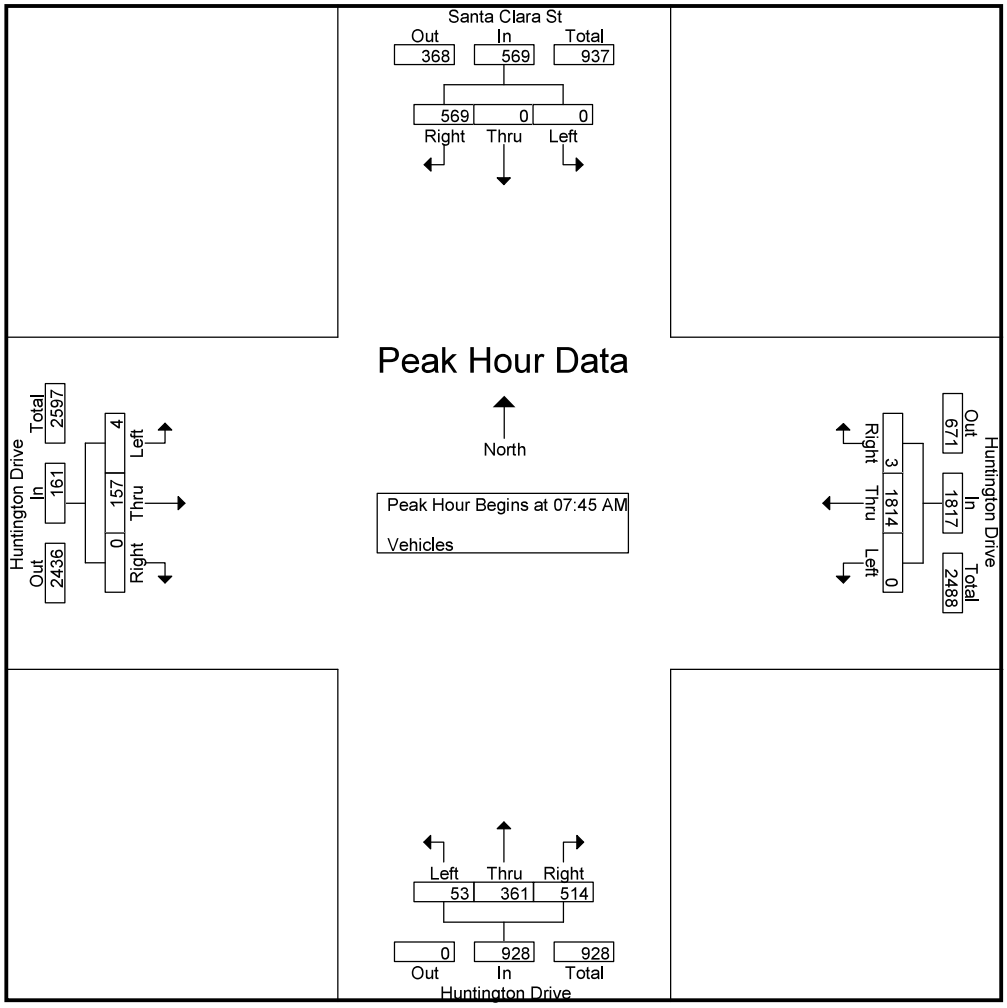
	Santa Clara St Southbound				Huntington Drive Westbound				Huntington Drive Northbound				Huntington Drive Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	0	0	139	139	0	**462**	**1**	**463**	12	95	**172**	**279**	**1**	41	0	42	**923**
08:00 AM	0	0	132	132	0	458	1	459	13	92	125	230	1	**46**	0	**47**	868
08:15 AM	0	0	**162**	**162**	0	435	1	436	10	**97**	116	223	1	29	0	30	851
08:30 AM	0	0	136	136	0	459	0	459	**18**	77	101	196	1	41	0	42	833
Total Volume	0	0	569	569	0	1814	3	1817	53	361	514	928	4	157	0	161	3475
% App. Total	0	0	100		0	99.8	0.2		5.7	38.9	55.4		2.5	97.5	0		
PHF	.000	.000	.878	.878	.000	.982	.750	.981	.736	.930	.747	.832	1.00	.853	.000	.856	.941



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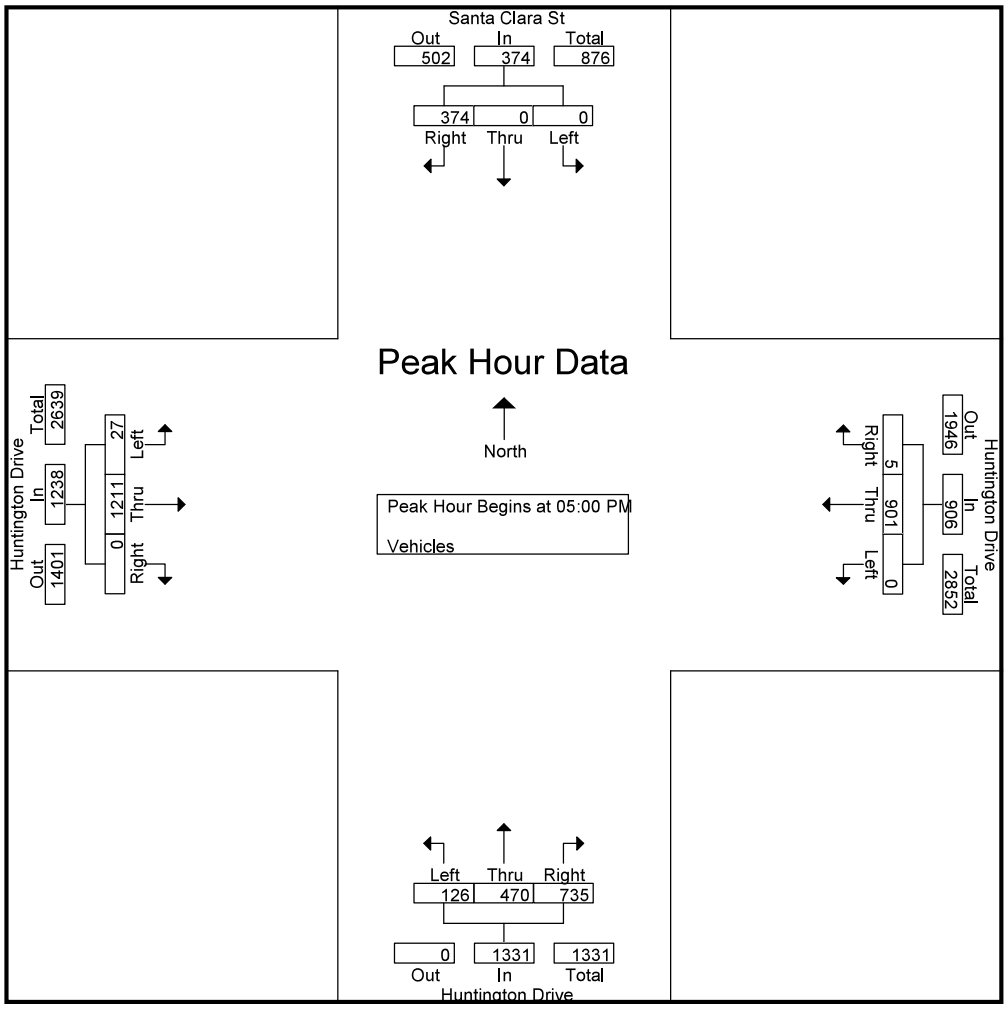
	Santa Clara St Southbound				Huntington Drive Westbound				Huntington Drive Northbound				Huntington Drive Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	0	0	80	80	0	**250**	**2**	**252**	**45**	97	177	319	2	**335**	0	**337**	**988**
05:15 PM	0	0	93	93	0	208	1	209	33	113	**192**	**338**	4	280	0	284	924
05:30 PM	0	0	86	86	0	237	0	237	29	123	184	336	**13**	292	0	305	964
05:45 PM	0	0	**115**	**115**	0	206	2	208	19	**137**	182	338	8	304	0	312	973
Total Volume	0	0	374	374	0	901	5	906	126	470	735	1331	27	1211	0	1238	3849
% App. Total	0	0	100		0	99.4	0.6		9.5	35.3	55.2		2.2	97.8	0		
PHF	.000	.000	.813	.813	.000	.901	.625	.899	.700	.858	.957	.984	.519	.904	.000	.918	.974



CITY TRAFFIC COUNTERS

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File Name : SantaClara_Huntington_BP_Wed_April2019
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Groups Printed- Bikes & Peds

	Santa Clara St Southbound		Huntington Drive Westbound		Huntington Drive Northbound		Huntington Drive Eastbound		
Start Time	Bikes	Peds	Bikes	Peds	Bikes	Peds	Bikes	Peds	Int. Total
07:00 AM	0	6	0	3	0	1	0	0	10
07:15 AM	0	2	0	2	0	0	0	0	4
07:30 AM	2	4	0	8	1	0	0	0	15
07:45 AM	0	1	1	1	1	1	0	0	5
Total	2	13	1	14	2	2	0	0	34
08:00 AM	0	0	1	0	0	1	0	0	2
08:15 AM	1	0	1	0	0	1	0	0	3
08:30 AM	1	0	0	0	0	0	0	0	1
08:45 AM	1	0	2	0	0	0	0	0	3
Total	3	0	4	0	0	2	0	0	9
04:30 PM	2	1	1	1	0	0	0	0	5
04:45 PM	1	2	0	8	0	0	0	0	11
Total	3	3	1	9	0	0	0	0	16
05:15 PM	1	1	1	15	0	0	0	0	18
05:30 PM	1	0	1	4	2	0	0	0	8
05:45 PM	0	0	1	0	0	0	0	0	1
Total	2	1	3	19	2	0	0	0	27
Grand Total	10	17	9	42	4	4	0	0	86
Apprch %	37	63	17.6	82.4	50	50	0	0	
Total %	11.6	19.8	10.5	48.8	4.7	4.7	0	0	

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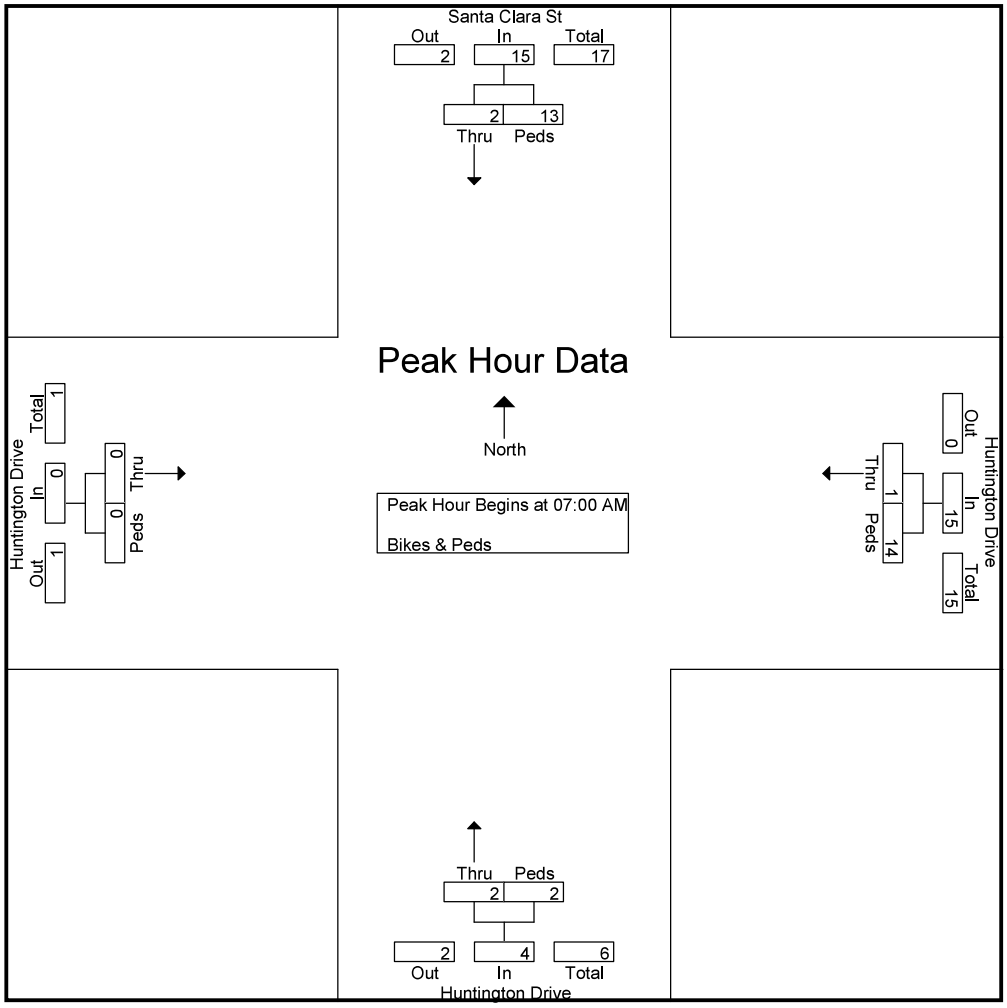
	Santa Clara St Southbound			Huntington Drive Westbound			Huntington Drive Northbound			Huntington Drive Eastbound			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 07:00 AM													
07:00 AM	0	**6**	**6**	0	3	3	0	**1**	1	0	0	0	10
07:15 AM	0	2	2	0	2	2	0	0	0	0	0	0	4
07:30 AM	**2**	4	6	0	**8**	**8**	**1**	0	1	0	0	0	**15**
07:45 AM	0	1	1	**1**	1	2	1	1	**2**	0	0	0	5
Total Volume	2	13	15	1	14	15	2	2	4	0	0	0	34
% App. Total	13.3	86.7		6.7	93.3		50	50		0	0		
PHF	.250	.542	.625	.250	.438	.469	.500	.500	.500	.000	.000	.000	.567



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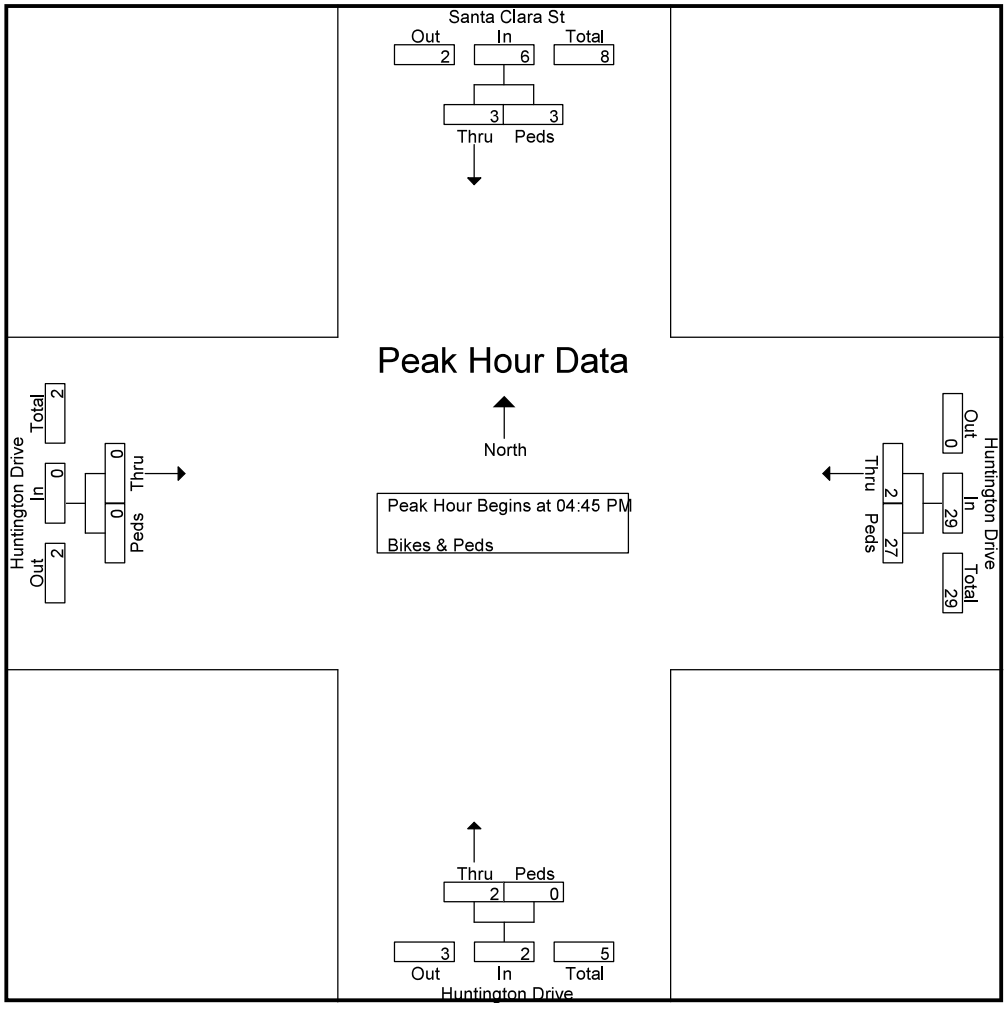
	Santa Clara St Southbound			Huntington Drive Westbound			Huntington Drive Northbound			Huntington Drive Eastbound			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 05:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 04:45 PM													
04:45 PM	**1**	**2**	**3**	0	8	8	0	0	0	0	0	0	11
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	1	1	2	**1**	**15**	**16**	0	0	0	0	0	0	**18**
05:30 PM	1	0	1	1	4	5	**2**	0	**2**	0	0	0	8
Total Volume	3	3	6	2	27	29	2	0	2	0	0	0	37
% App. Total	50	50		6.9	93.1		100	0		0	0		
PHF	.750	.375	.500	.500	.450	.453	.250	.000	.250	.000	.000	.000	.514



CITY TRAFFIC COUNTERS

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Groups Printed- Vehicles

	Santa Clara St Southbound			Huntington Dr Westbound			Huntington Drive Northbound			Huntington Dr Eastbound			
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Int. Total
04:00 PM	0	0	60	0	233	3	7	66	119	7	150	0	645
04:15 PM	0	0	77	0	205	0	12	87	159	2	166	0	708
04:30 PM	0	0	64	0	202	1	13	48	130	6	140	0	604
04:45 PM	0	0	85	0	178	2	8	67	156	4	22	0	522
Total	0	0	286	0	818	6	40	268	564	19	478	0	2479
05:00 PM	0	0	71	0	204	3	10	59	140	7	55	0	549
05:15 PM	0	0	77	0	183	1	17	90	170	4	24	0	566
05:30 PM	0	0	77	0	206	1	10	55	156	18	86	0	609
05:45 PM	0	0	58	0	157	2	17	74	192	7	90	0	597
Total	0	0	283	0	750	7	54	278	658	36	255	0	2321
Grand Total	0	0	569	0	1568	13	94	546	1222	55	733	0	4800
Apprch %	0	0	100	0	99.2	0.8	5	29.3	65.6	7	93	0	
Total %	0	0	11.9	0	32.7	0.3	2	11.4	25.5	1.1	15.3	0	

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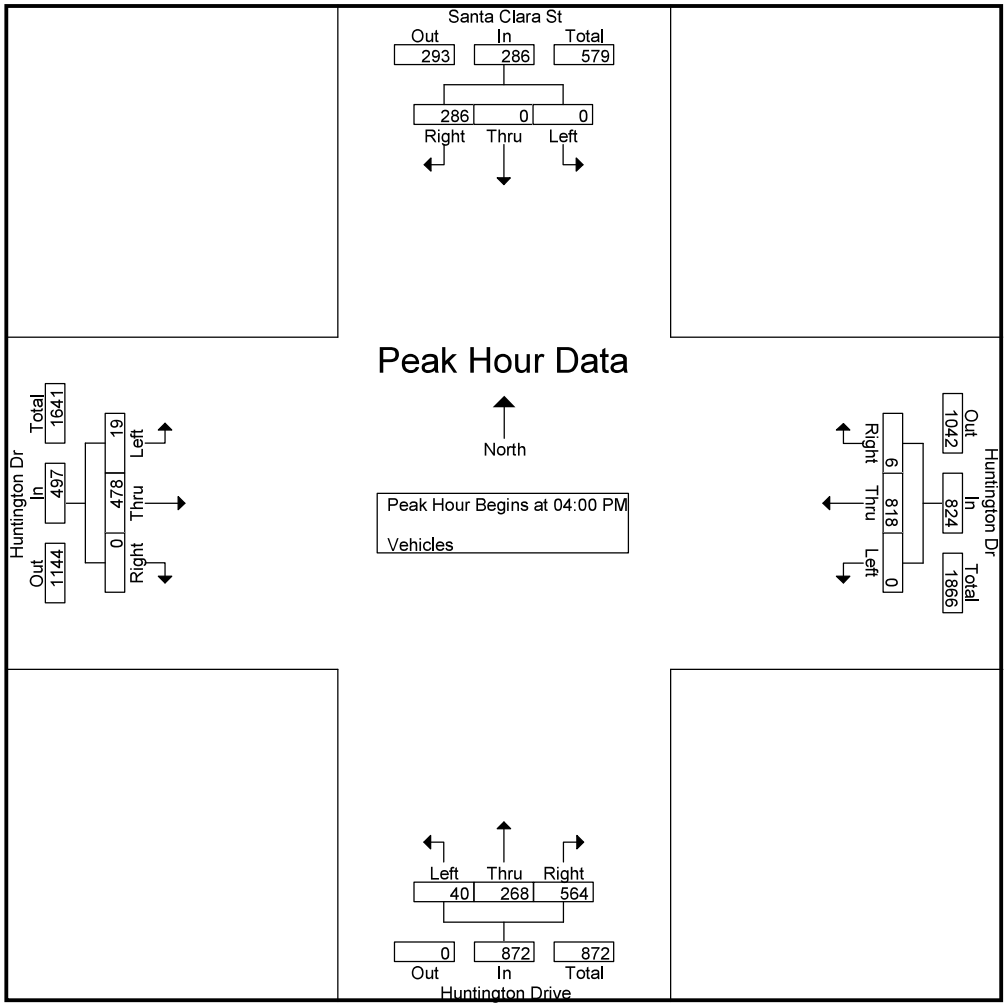
	Santa Clara St Southbound				Huntington Dr Westbound				Huntington Drive Northbound				Huntington Dr Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	0	0	60	60	0	**233**	**3**	**236**	7	66	119	192	**7**	150	0	157	645
04:15 PM	0	0	77	77	0	205	0	205	12	**87**	**159**	**258**	2	**166**	0	**168**	**708**
04:30 PM	0	0	64	64	0	202	1	203	**13**	48	130	191	6	140	0	146	604
04:45 PM	0	0	**85**	**85**	0	178	2	180	8	67	156	231	4	22	0	26	522
Total Volume	0	0	286	286	0	818	6	824	40	268	564	872	19	478	0	497	2479
% App. Total	0	0	100		0	99.3	0.7		4.6	30.7	64.7		3.8	96.2	0		
PHF	.000	.000	.841	.841	.000	.878	.500	.873	.769	.770	.887	.845	.679	.720	.000	.740	.875



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Groups Printed- Bikes & Peds

	Santa Clara St Southbound		Huntington Dr Westbound		Huntington Drive Northbound		Huntington Dr Eastbound		
Start Time	Bikes	Peds	Bikes	Peds	Bikes	Peds	Bikes	Peds	Int. Total
04:00 PM	0	6	0	4	0	4	0	0	14
04:15 PM	0	1	0	2	0	0	0	0	3
04:30 PM	0	3	1	0	0	0	0	0	4
04:45 PM	0	4	0	3	0	1	0	0	8
Total	0	14	1	9	0	5	0	0	29
05:00 PM	0	3	0	1	0	1	0	0	5
05:15 PM	0	0	1	1	0	0	0	0	2
05:30 PM	0	2	0	1	0	2	0	0	5
05:45 PM	2	2	0	0	0	5	0	0	9
Total	2	7	1	3	0	8	0	0	21
Grand Total	2	21	2	12	0	13	0	0	50
Apprch %	8.7	91.3	14.3	85.7	0	100	0	0	
Total %	4	42	4	24	0	26	0	0	

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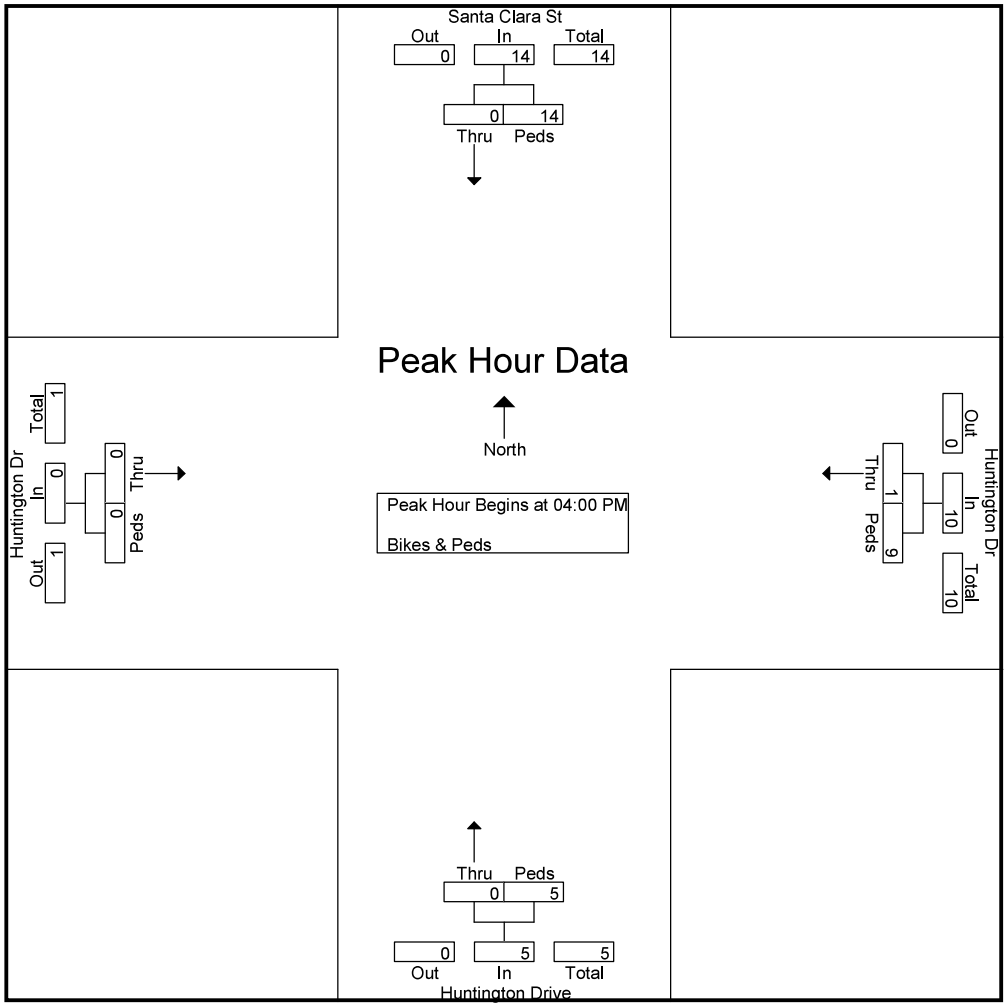
	Santa Clara St Southbound			Huntington Dr Westbound			Huntington Drive Northbound			Huntington Dr Eastbound			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 04:00 PM													
04:00 PM	0	**6**	**6**	0	**4**	**4**	0	**4**	**4**	0	0	0	**14**
04:15 PM	0	1	1	0	2	2	0	0	0	0	0	0	3
04:30 PM	0	3	3	**1**	0	1	0	0	0	0	0	0	4
04:45 PM	0	4	4	0	3	3	0	1	1	0	0	0	8
Total Volume	0	14	14	1	9	10	0	5	5	0	0	0	29
% App. Total	0	100		10	90		0	100		0	0		
PHF	.000	.583	.583	.250	.563	.625	.000	.313	.313	.000	.000	.000	.518



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Groups Printed- Vehicles

	Santa Anita Ave Southbound			I-210 Frwy WB On/Off-Ramps Westbound			Santa Anita Ave Northbound			I-210 Frwy WB On-Ramp Eastbound			
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Int. Total
07:00 AM	0	99	84	35	4	89	0	96	85	0	0	0	492
07:15 AM	0	139	79	54	4	94	0	123	114	0	0	0	607
07:30 AM	0	169	83	75	7	122	0	133	63	0	0	0	652
07:45 AM	0	191	68	98	7	132	0	195	74	0	0	0	765
Total	0	598	314	262	22	437	0	547	336	0	0	0	2516
08:00 AM	0	185	69	105	4	99	0	211	94	0	0	0	767
08:15 AM	0	225	70	98	1	116	0	172	70	0	0	0	752
08:30 AM	0	223	68	106	2	112	0	164	67	0	0	0	742
08:45 AM	0	178	56	96	2	110	0	184	77	0	0	0	703
Total	0	811	263	405	9	437	0	731	308	0	0	0	2964
04:00 PM	0	176	59	48	0	56	0	129	92	0	0	0	560
04:15 PM	0	162	39	51	2	77	0	154	101	0	0	0	586
04:30 PM	0	169	48	64	2	83	0	152	98	0	0	0	616
04:45 PM	0	169	58	61	5	81	0	196	110	0	0	0	680
Total	0	676	204	224	9	297	0	631	401	0	0	0	2442
05:00 PM	0	191	70	52	0	82	0	170	100	0	0	0	665
05:15 PM	0	187	61	72	1	80	0	191	104	0	0	0	696
05:30 PM	0	226	43	64	2	92	0	183	79	0	0	0	689
05:45 PM	0	214	44	85	0	105	0	186	91	0	0	0	725
Total	0	818	218	273	3	359	0	730	374	0	0	0	2775
Grand Total	0	2903	999	1164	43	1530	0	2639	1419	0	0	0	10697
Apprch %	0	74.4	25.6	42.5	1.6	55.9	0	65	35	0	0	0	
Total %	0	27.1	9.3	10.9	0.4	14.3	0	24.7	13.3	0	0	0	

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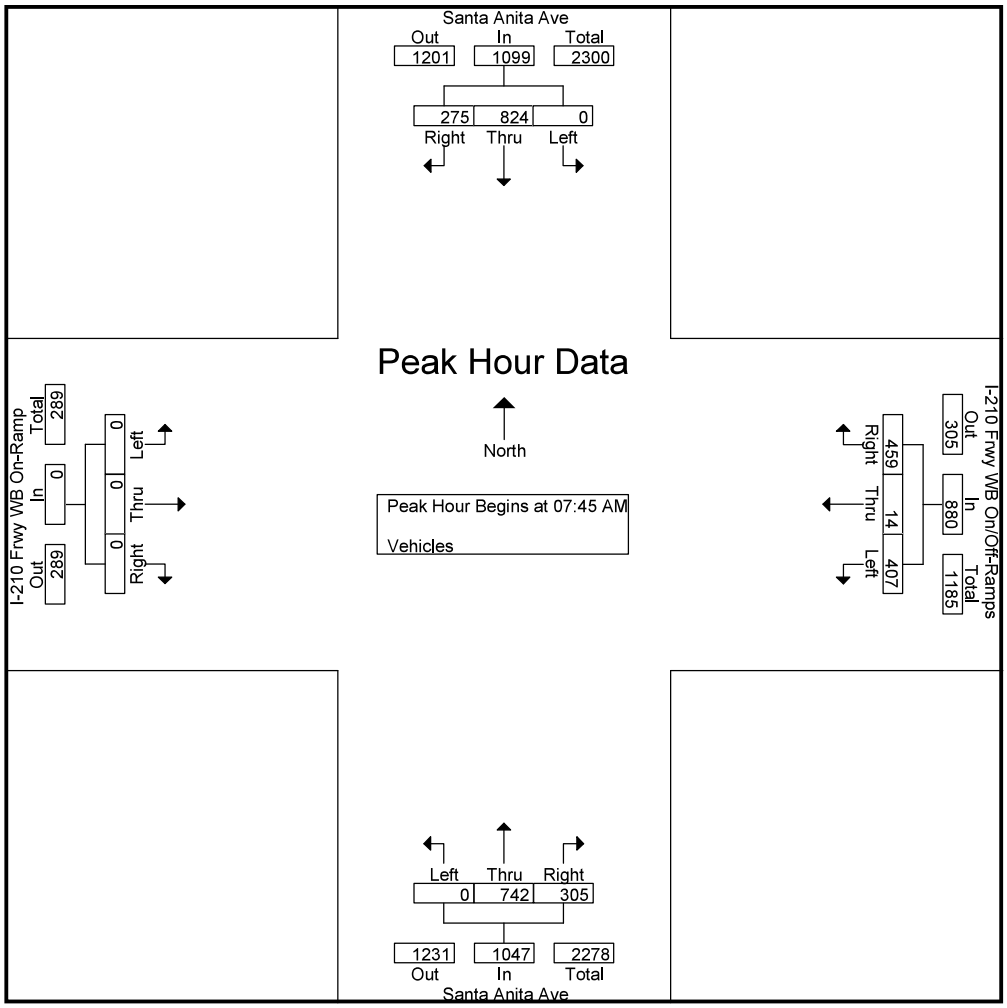
	Santa Anita Ave Southbound				I-210 Frwy WB On/Off-Ramps Westbound				Santa Anita Ave Northbound				I-210 Frwy WB On-Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	0	191	68	259	98	**7**	**132**	**237**	0	195	74	269	0	0	0	0	765
08:00 AM	0	185	69	254	105	4	99	208	0	**211**	**94**	**305**	0	0	0	0	**767**
08:15 AM	0	**225**	**70**	**295**	98	1	116	215	0	172	70	242	0	0	0	0	752
08:30 AM	0	223	68	291	**106**	2	112	220	0	164	67	231	0	0	0	0	742
Total Volume	0	824	275	1099	407	14	459	880	0	742	305	1047	0	0	0	0	3026
% App. Total	0	75	25		46.2	1.6	52.2		0	70.9	29.1		0	0	0		
PHF	.000	.916	.982	.931	.960	.500	.869	.928	.000	.879	.811	.858	.000	.000	.000	.000	.986



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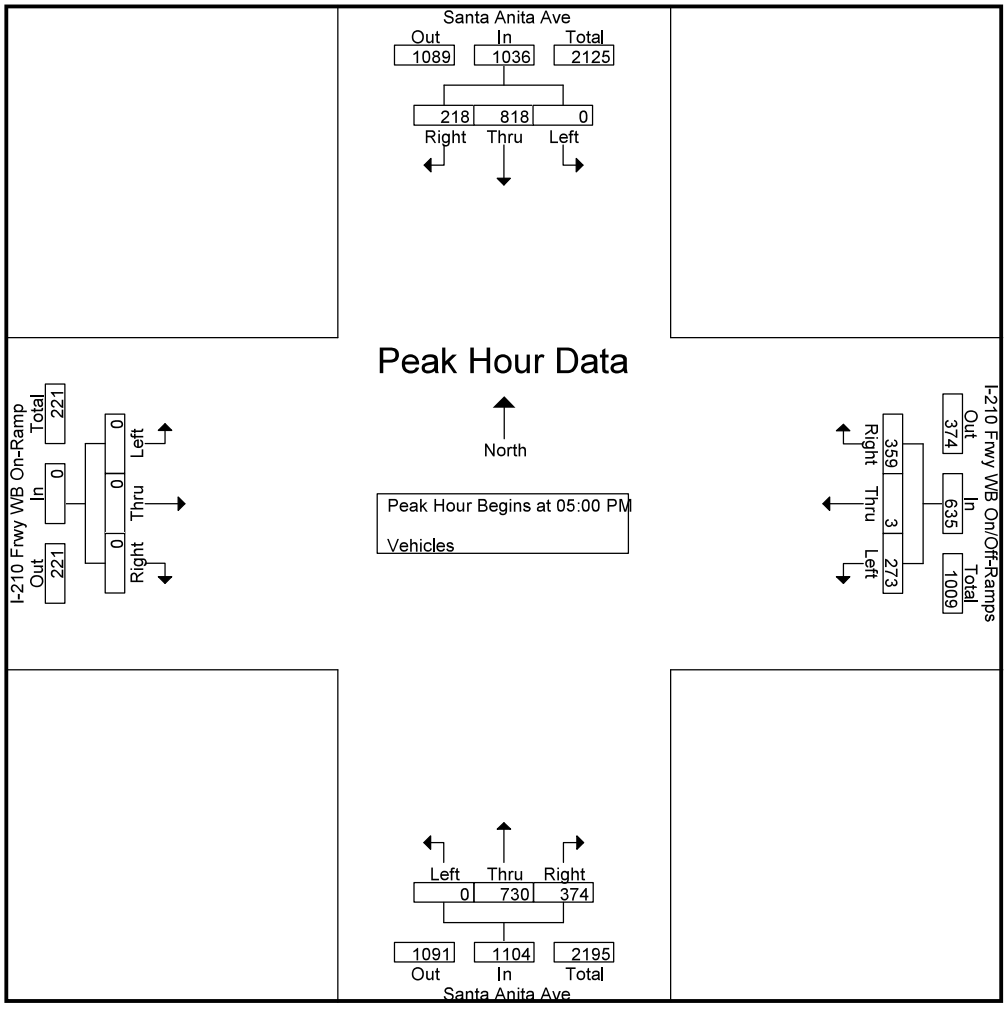
	Santa Anita Ave Southbound				I-210 Frwy WB On/Off-Ramps Westbound				Santa Anita Ave Northbound				I-210 Frwy WB On-Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	0	191	**70**	261	52	0	82	134	0	170	100	270	0	0	0	0	665
05:15 PM	0	187	61	248	72	1	80	153	0	**191**	**104**	**295**	0	0	0	0	696
05:30 PM	0	**226**	43	**269**	64	**2**	92	158	0	183	79	262	0	0	0	0	689
05:45 PM	0	214	44	258	**85**	0	**105**	**190**	0	186	91	277	0	0	0	0	**725**
Total Volume	0	818	218	1036	273	3	359	635	0	730	374	1104	0	0	0	0	2775
% App. Total	0	79	21		43	0.5	56.5		0	66.1	33.9		0	0	0		
PHF	.000	.905	.779	.963	.803	.375	.855	.836	.000	.955	.899	.936	.000	.000	.000	.000	.957



CITY TRAFFIC COUNTERS

WWW.CTCOUNTERS.COM

File Name : SantaAnita_I-210FrwyWBRamps_BP_Wed_April2019
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Groups Printed- Bikes & Peds

	Santa Anita Ave Southbound		I-210 Frwy WB On/Off-Ramps Westbound		Santa Anita Ave Northbound		I-210 Frwy WB On-Ramp Eastbound		
Start Time	Bikes	Peds	Bikes	Peds	Bikes	Peds	Bikes	Peds	Int. Total
07:00 AM	0	0	0	3	0	0	0	0	3
07:15 AM	0	2	0	0	0	0	0	0	2
Total	0	2	0	3	0	0	0	0	5
08:00 AM	0	1	1	1	0	0	0	0	3
08:15 AM	0	0	0	3	0	0	0	0	3
08:45 AM	0	0	0	2	0	0	0	0	2
Total	0	1	1	6	0	0	0	0	8
04:30 PM	0	0	1	0	0	0	0	0	1
Total	0	0	1	0	0	0	0	0	1
05:30 PM	0	0	0	1	0	0	0	0	1
05:45 PM	0	0	0	1	0	0	0	0	1
Total	0	0	0	2	0	0	0	0	2
Grand Total	0	3	2	11	0	0	0	0	16
Apprch %	0	100	15.4	84.6	0	0	0	0	
Total %	0	18.8	12.5	68.8	0	0	0	0	

File Name : SantaAnita_I-210FrwyWBRamps_BP_Wed_April2019
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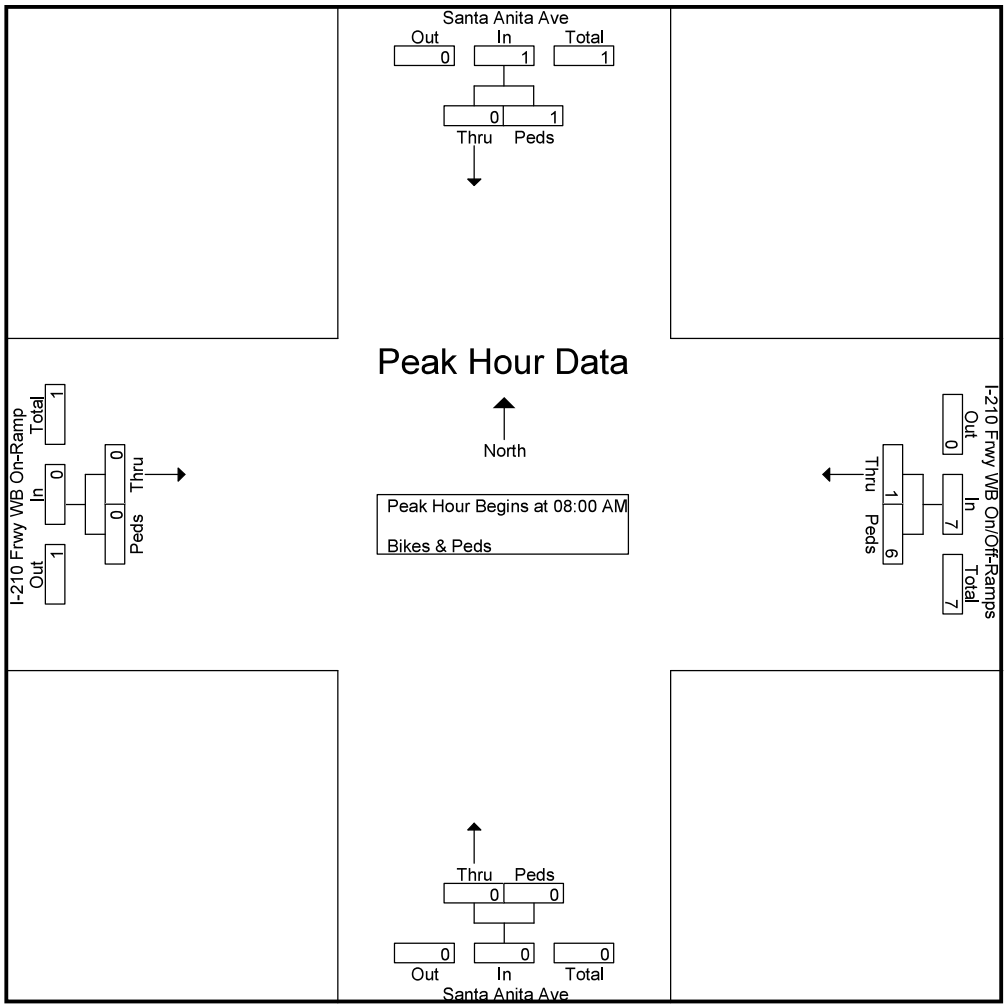
	Santa Anita Ave Southbound			I-210 Frwy WB On/Off-Ramps Westbound			Santa Anita Ave Northbound			I-210 Frwy WB On-Ramp Eastbound			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 08:00 AM													
08:00 AM	0	**1**	**1**	**1**	1	2	0	0	0	0	0	0	**3**
08:15 AM	0	0	0	0	**3**	**3**	0	0	0	0	0	0	3
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	2	2	0	0	0	0	0	0	2
Total Volume	0	1	1	1	6	7	0	0	0	0	0	0	8
% App. Total	0	100		14.3	85.7		0	0		0	0		
PHF	.000	.250	.250	.250	.500	.583	.000	.000	.000	.000	.000	.000	.667



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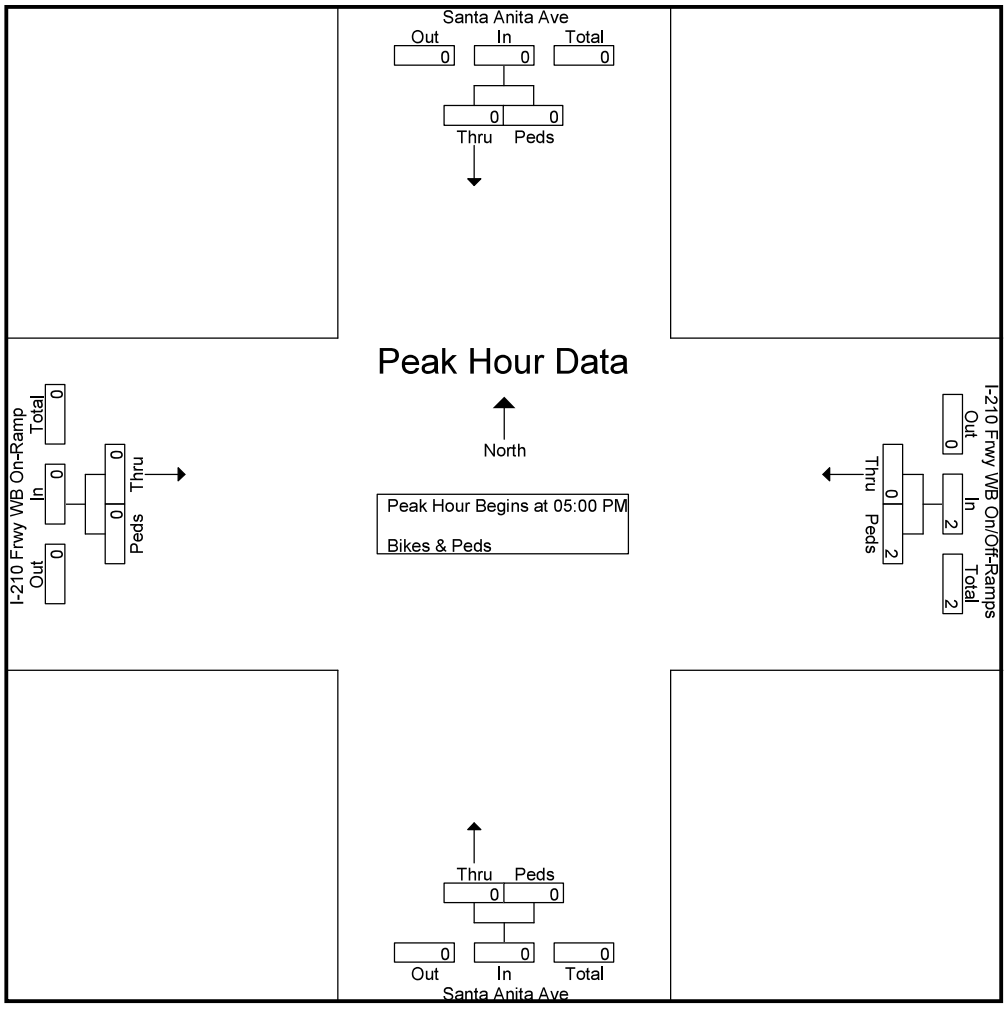
	Santa Anita Ave Southbound			I-210 Frwy WB On/Off-Ramps Westbound			Santa Anita Ave Northbound			I-210 Frwy WB On-Ramp Eastbound			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 05:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 05:00 PM													
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	**1**	**1**	0	0	0	0	0	0	**1**
05:45 PM	0	0	0	0	1	1	0	0	0	0	0	0	1
Total Volume	0	0	0	0	2	2	0	0	0	0	0	0	2
% App. Total	0	0		0	100		0	0		0	0		
PHF	.000	.000	.000	.000	.500	.500	.000	.000	.000	.000	.000	.000	.500



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File Name : SantaAnita_I-210FrwyWBRamps_Sat_April2019
Site Code : 00000000
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Groups Printed- Vehicles

	Santa Anita Ave Southbound			I-210 Frwy WB On/Off-Ramps Westbound			Santa Anita Ave Northbound			I-210 Frwy WB On-Ramp Eastbound			
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Int. Total
04:00 PM	0	143	59	65	2	80	0	141	93	0	0	0	583
04:15 PM	0	175	68	67	0	65	0	122	92	0	0	0	589
04:30 PM	0	151	65	71	0	48	0	160	79	0	0	0	574
04:45 PM	0	140	56	58	0	52	0	130	83	0	0	0	519
Total	0	609	248	261	2	245	0	553	347	0	0	0	2265
05:00 PM	0	160	56	80	3	56	0	122	99	0	0	0	576
05:15 PM	0	115	60	75	0	92	0	138	77	0	0	0	557
05:30 PM	0	116	75	68	0	49	0	127	84	0	0	0	519
05:45 PM	0	103	66	63	1	42	0	137	102	0	0	0	514
Total	0	494	257	286	4	239	0	524	362	0	0	0	2166
Grand Total	0	1103	505	547	6	484	0	1077	709	0	0	0	4431
Apprch %	0	68.6	31.4	52.7	0.6	46.7	0	60.3	39.7	0	0	0	
Total %	0	24.9	11.4	12.3	0.1	10.9	0	24.3	16	0	0	0	

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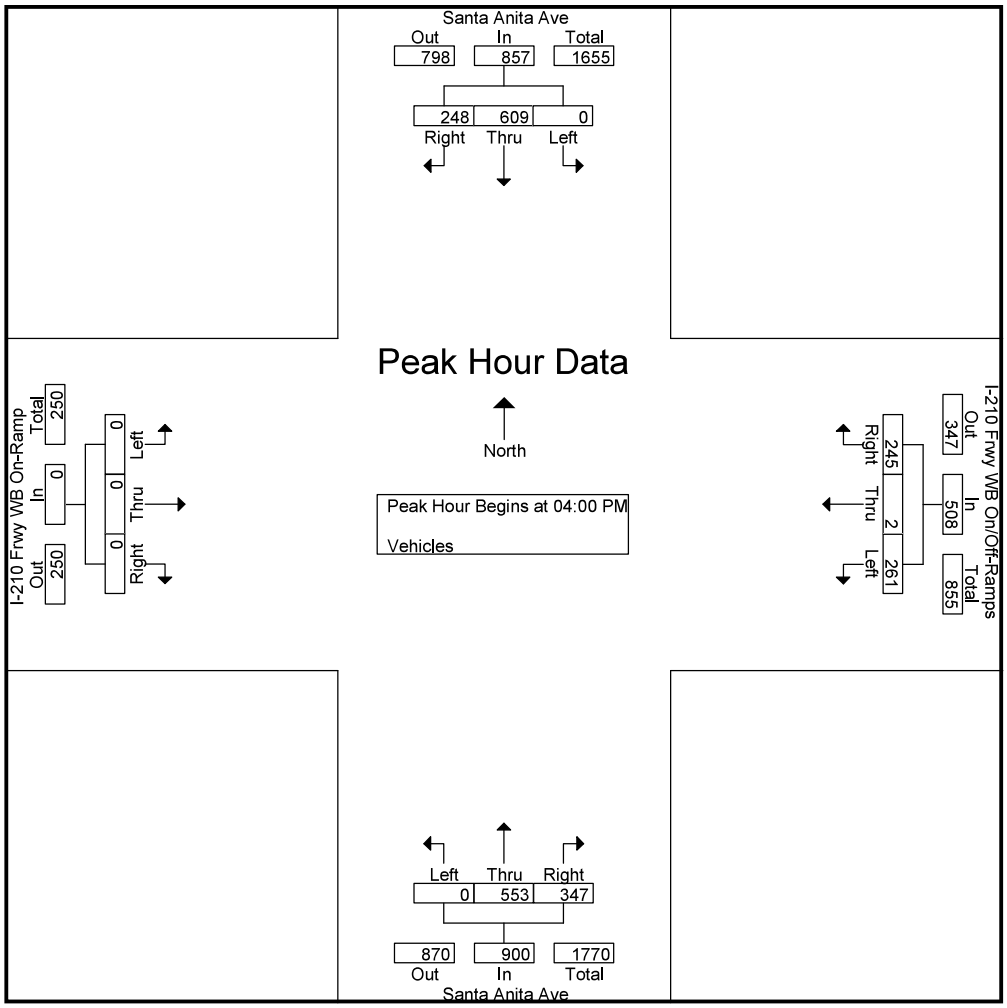
	Santa Anita Ave Southbound				I-210 Frwy WB On/Off-Ramps Westbound				Santa Anita Ave Northbound				I-210 Frwy WB On-Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	0	143	59	202	65	**2**	**80**	**147**	0	141	**93**	234	0	0	0	0	583
04:15 PM	0	**175**	**68**	**243**	67	0	65	132	0	122	92	214	0	0	0	0	**589**
04:30 PM	0	151	65	216	**71**	0	48	119	0	**160**	79	**239**	0	0	0	0	574
04:45 PM	0	140	56	196	58	0	52	110	0	130	83	213	0	0	0	0	519
Total Volume	0	609	248	857	261	2	245	508	0	553	347	900	0	0	0	0	2265
% App. Total	0	71.1	28.9		51.4	0.4	48.2		0	61.4	38.6		0	0	0		
PHF	.000	.870	.912	.882	.919	.250	.766	.864	.000	.864	.933	.941	.000	.000	.000	.000	.961



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File Name : SantaAnita_I-210FrwyWBRamps_BP_Sat_April2019
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Groups Printed- Bikes & Peds

	Santa Anita Ave Southbound		I-210 Frwy WB On/Off-Ramps Westbound		Santa Anita Ave Northbound		I-210 Frwy WB On-Ramp Eastbound		
Start Time	Bikes	Peds	Bikes	Peds	Bikes	Peds	Bikes	Peds	Int. Total
04:45 PM	0	0	1	2	0	0	0	0	3
Total	0	0	1	2	0	0	0	0	3
05:45 PM	0	0	2	0	0	0	0	0	2
Total	0	0	2	0	0	0	0	0	2
Grand Total	0	0	3	2	0	0	0	0	5
Apprch %	0	0	60	40	0	0	0	0	
Total %	0	0	60	40	0	0	0	0	

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File Name : SantaAnita_I-210FrwyWBRamps_BP_Sat_April2019
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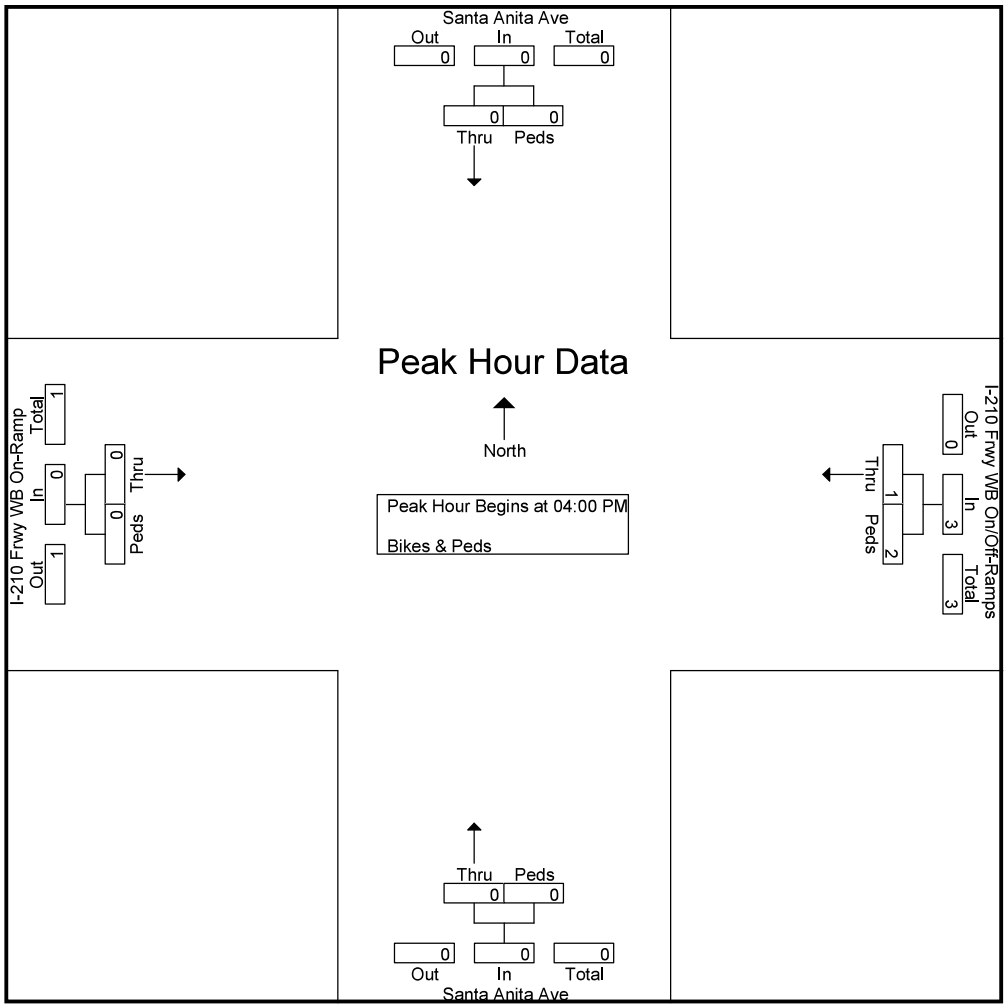
	Santa Anita Ave Southbound			I-210 Frwy WB On/Off-Ramps Westbound			Santa Anita Ave Northbound			I-210 Frwy WB On-Ramp Eastbound			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 04:00 PM													
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	**1**	**2**	**3**	0	0	0	0	0	0	**3**
Total Volume	0	0	0	1	2	3	0	0	0	0	0	0	3
% App. Total	0	0		33.3	66.7		0	0		0	0		
PHF	.000	.000	.000	.250	.250	.250	.000	.000	.000	.000	.000	.000	.250



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Groups Printed- Vehicles

	Santa Anita Ave Southbound			I-210 Frwy EB On-Ramp Westbound			Santa Anita Ave Northbound			I-210 Frwy EB Off-Ramp Eastbound			
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Int. Total
07:00 AM	42	85	0	0	0	0	0	151	32	36	2	76	424
07:15 AM	53	122	0	0	0	0	0	201	31	34	1	94	536
07:30 AM	61	180	0	0	0	0	0	147	42	45	0	82	557
07:45 AM	67	213	0	0	0	0	0	174	52	54	0	115	675
Total	223	600	0	0	0	0	0	673	157	169	3	367	2192
08:00 AM	60	223	0	0	0	0	0	228	56	66	0	89	722
08:15 AM	77	258	0	0	0	0	0	159	44	79	0	86	703
08:30 AM	71	254	0	0	0	0	0	160	51	56	0	97	689
08:45 AM	68	199	0	0	0	0	0	187	50	66	0	76	646
Total	276	934	0	0	0	0	0	734	201	267	0	348	2760
04:00 PM	46	168	0	0	0	0	0	197	65	26	2	60	564
04:15 PM	36	173	0	0	0	0	0	224	61	34	8	87	623
04:30 PM	42	188	0	0	0	0	0	222	57	33	16	63	621
04:45 PM	39	199	0	0	0	0	0	265	52	44	22	57	678
Total	163	728	0	0	0	0	0	908	235	137	48	267	2486
05:00 PM	34	187	0	0	0	0	0	244	57	28	16	75	641
05:15 PM	44	217	0	0	0	0	0	246	52	55	11	82	707
05:30 PM	54	212	0	0	0	0	0	218	40	42	15	83	664
05:45 PM	29	256	0	0	0	0	0	241	45	42	8	73	694
Total	161	872	0	0	0	0	0	949	194	167	50	313	2706
Grand Total	823	3134	0	0	0	0	0	3264	787	740	101	1295	10144
Apprch %	20.8	79.2	0	0	0	0	0	80.6	19.4	34.6	4.7	60.6	
Total %	8.1	30.9	0	0	0	0	0	32.2	7.8	7.3	1	12.8	

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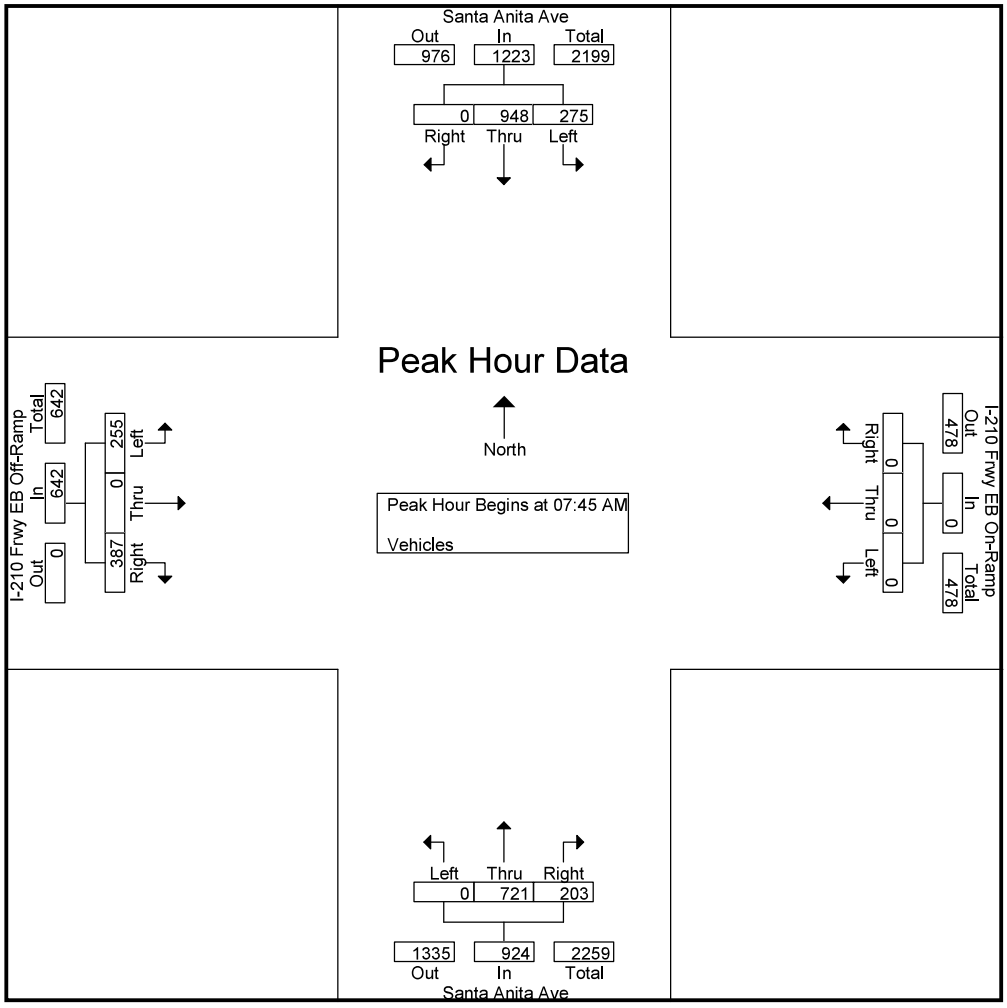
	Santa Anita Ave Southbound				I-210 Frwy EB On-Ramp Westbound				Santa Anita Ave Northbound				I-210 Frwy EB Off-Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	67	213	0	280	0	0	0	0	0	174	52	226	54	0	**115**	**169**	675
08:00 AM	60	223	0	283	0	0	0	0	0	**228**	**56**	**284**	66	0	89	155	**722**
08:15 AM	**77**	**258**	0	**335**	0	0	0	0	0	159	44	203	**79**	0	86	165	703
08:30 AM	71	254	0	325	0	0	0	0	0	160	51	211	56	0	97	153	689
Total Volume	275	948	0	1223	0	0	0	0	0	721	203	924	255	0	387	642	2789
% App. Total	22.5	77.5	0		0	0	0		0	78	22		39.7	0	60.3		
PHF	.893	.919	.000	.913	.000	.000	.000	.000	.000	.791	.906	.813	.807	.000	.841	.950	.966



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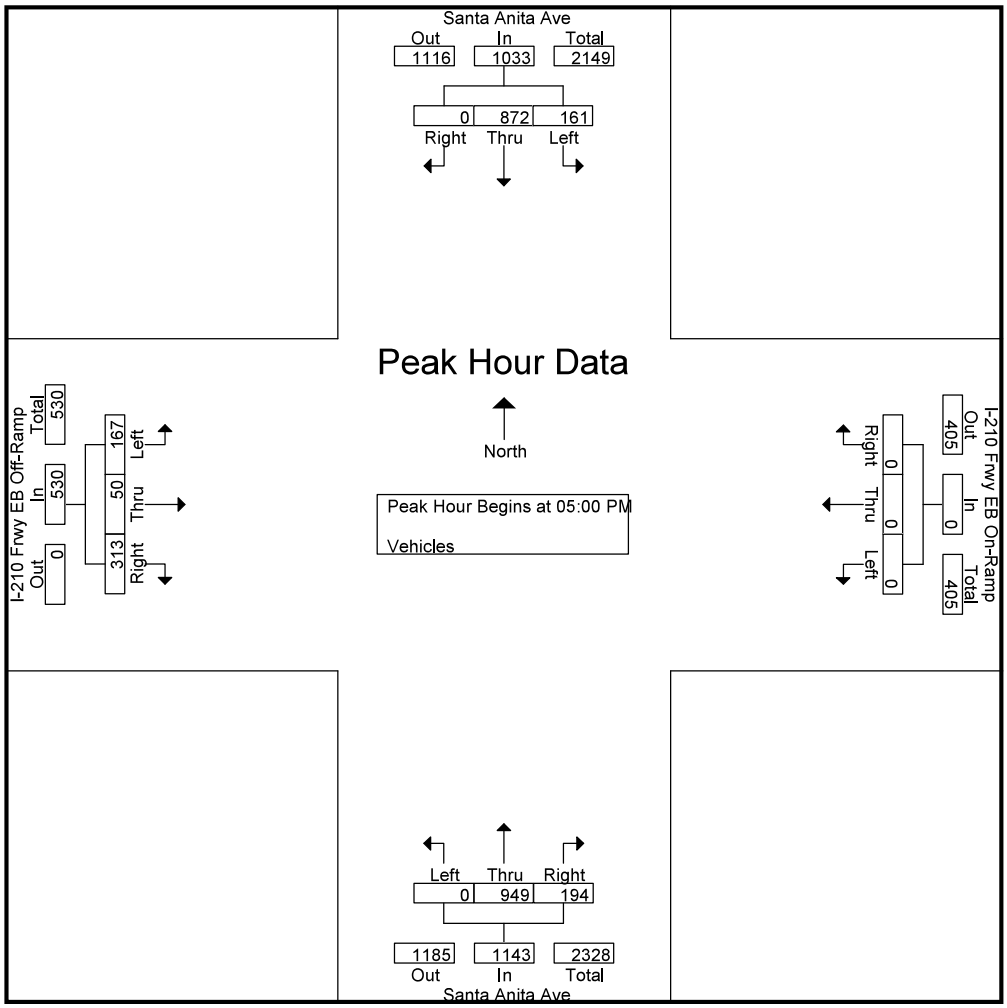
	Santa Anita Ave Southbound				I-210 Frwy EB On-Ramp Westbound				Santa Anita Ave Northbound				I-210 Frwy EB Off-Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	34	187	0	221	0	0	0	0	0	244	**57**	**301**	28	**16**	75	119	641
05:15 PM	44	217	0	261	0	0	0	0	0	**246**	52	298	**55**	11	82	**148**	**707**
05:30 PM	**54**	212	0	266	0	0	0	0	0	218	40	258	42	15	**83**	140	664
05:45 PM	29	**256**	0	**285**	0	0	0	0	0	241	45	286	42	8	73	123	694
Total Volume	161	872	0	1033	0	0	0	0	0	949	194	1143	167	50	313	530	2706
% App. Total	15.6	84.4	0		0	0	0		0	83	17		31.5	9.4	59.1		
PHF	.745	.852	.000	.906	.000	.000	.000	.000	.000	.964	.851	.949	.759	.781	.943	.895	.957



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Groups Printed- Bikes & Peds

	Santa Anita Ave Southbound		I-210 Frwy EB On-Ramp Westbound		Santa Anita Ave Northbound		I-210 Frwy EB Off-Ramp Eastbound		
Start Time	Bikes	Peds	Bikes	Peds	Bikes	Peds	Bikes	Peds	Int. Total
07:00 AM	0	0	0	0	0	0	1	0	1
07:30 AM	0	0	0	0	0	0	1	0	1
07:45 AM	0	0	0	0	0	0	0	1	1
Total	0	0	0	0	0	0	2	1	3
08:00 AM	0	0	0	0	0	0	0	2	2
08:15 AM	0	0	0	0	0	0	1	0	1
08:30 AM	0	0	0	0	0	0	1	1	2
08:45 AM	0	0	0	0	0	0	2	0	2
Total	0	0	0	0	0	0	4	3	7
05:45 PM	0	0	0	0	0	0	1	2	3
Total	0	0	0	0	0	0	1	2	3
Grand Total	0	0	0	0	0	0	7	6	13
Apprch %	0	0	0	0	0	0	53.8	46.2	
Total %	0	0	0	0	0	0	53.8	46.2	

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File Name : SantaAnita_I-210FrwyEBRamps_BP_Wed_April2019
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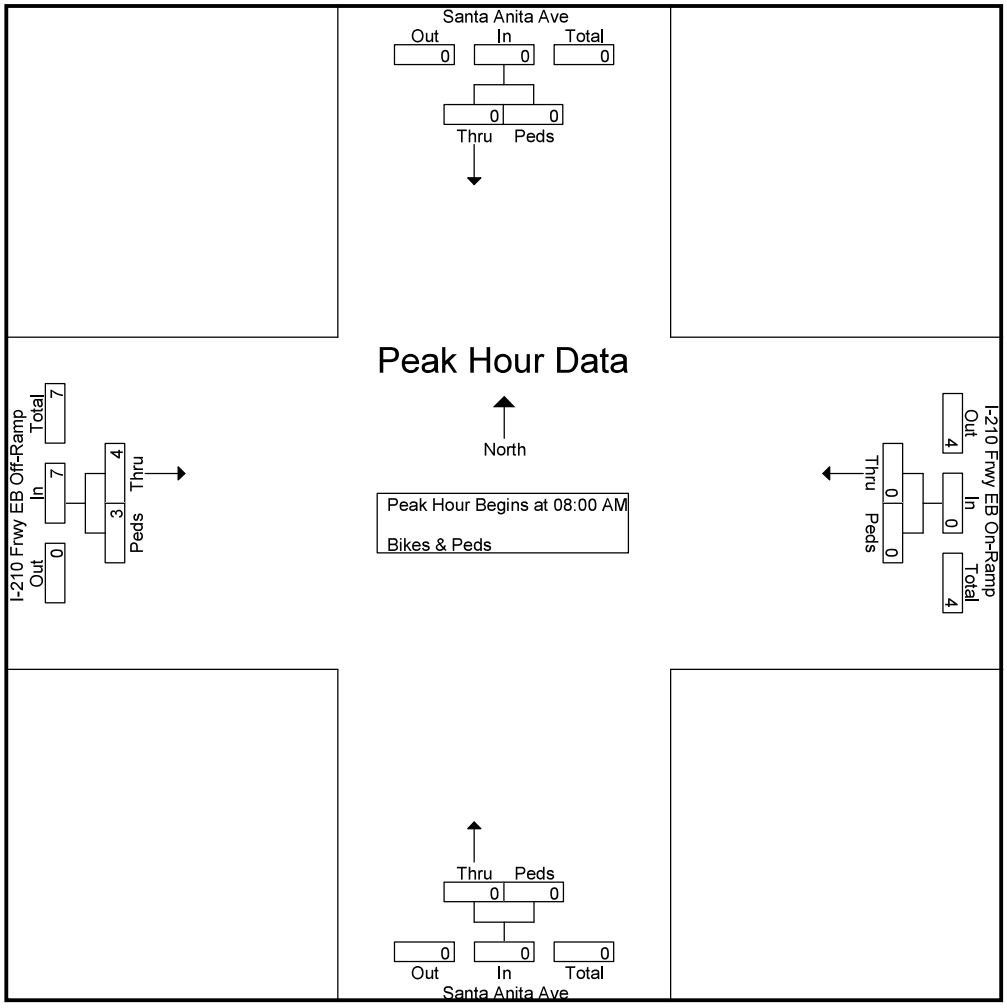
	Santa Anita Ave Southbound			I-210 Frwy EB On-Ramp Westbound			Santa Anita Ave Northbound			I-210 Frwy EB Off-Ramp Eastbound			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 08:00 AM													
08:00 AM	0	0	0	0	0	0	0	0	0	0	**2**	**2**	**2**
08:15 AM	0	0	0	0	0	0	0	0	0	1	0	1	1
08:30 AM	0	0	0	0	0	0	0	0	0	1	1	2	2
08:45 AM	0	0	0	0	0	0	0	0	0	**2**	0	2	2
Total Volume	0	0	0	0	0	0	0	0	0	4	3	7	7
% App. Total	0	0		0	0		0	0		57.1	42.9		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.500	.375	.875	.875



CITY TRAFFIC COUNTERS
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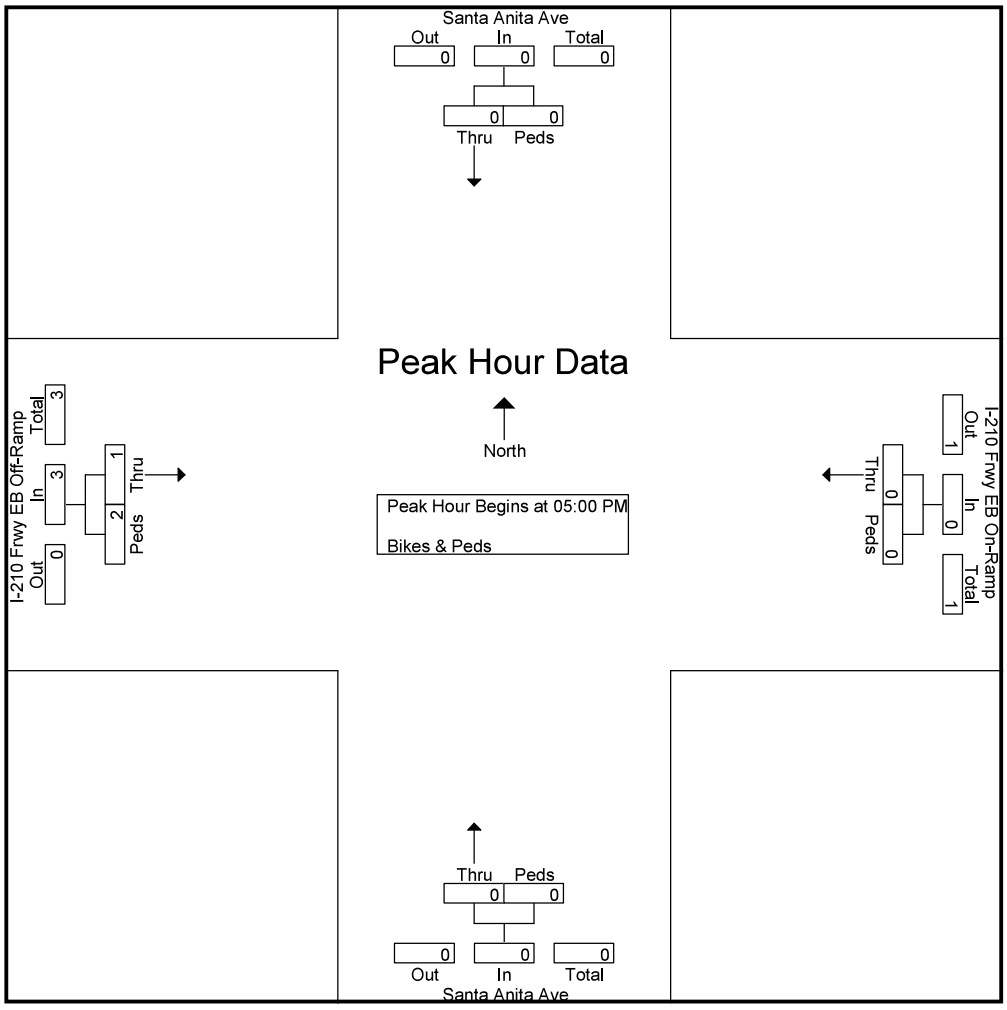
File Name : SantaAnita_I-210FrwyEBRamps_BP_Wed_April2019
Site Code : 00000000
Start Date : 4/17/2019
Page No : 3

	Santa Anita Ave Southbound			I-210 Frwy EB On-Ramp Westbound			Santa Anita Ave Northbound			I-210 Frwy EB Off-Ramp Eastbound			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 05:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 05:00 PM													
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	**1**	**2**	**3**	**3**
Total Volume	0	0	0	0	0	0	0	0	0	1	2	3	3
% App. Total	0	0		0	0		0	0		33.3	66.7		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.250	.250	.250	.250



CITY TRAFFIC COUNTERS

WWW.CTCOUNTERS.COM

File Name : SantaAnita_I-210FrwyEBRamps_Sat_April2019
Site Code : 00000000
Start Date : 4/13/2019
Page No : 1

Groups Printed- Vehicles

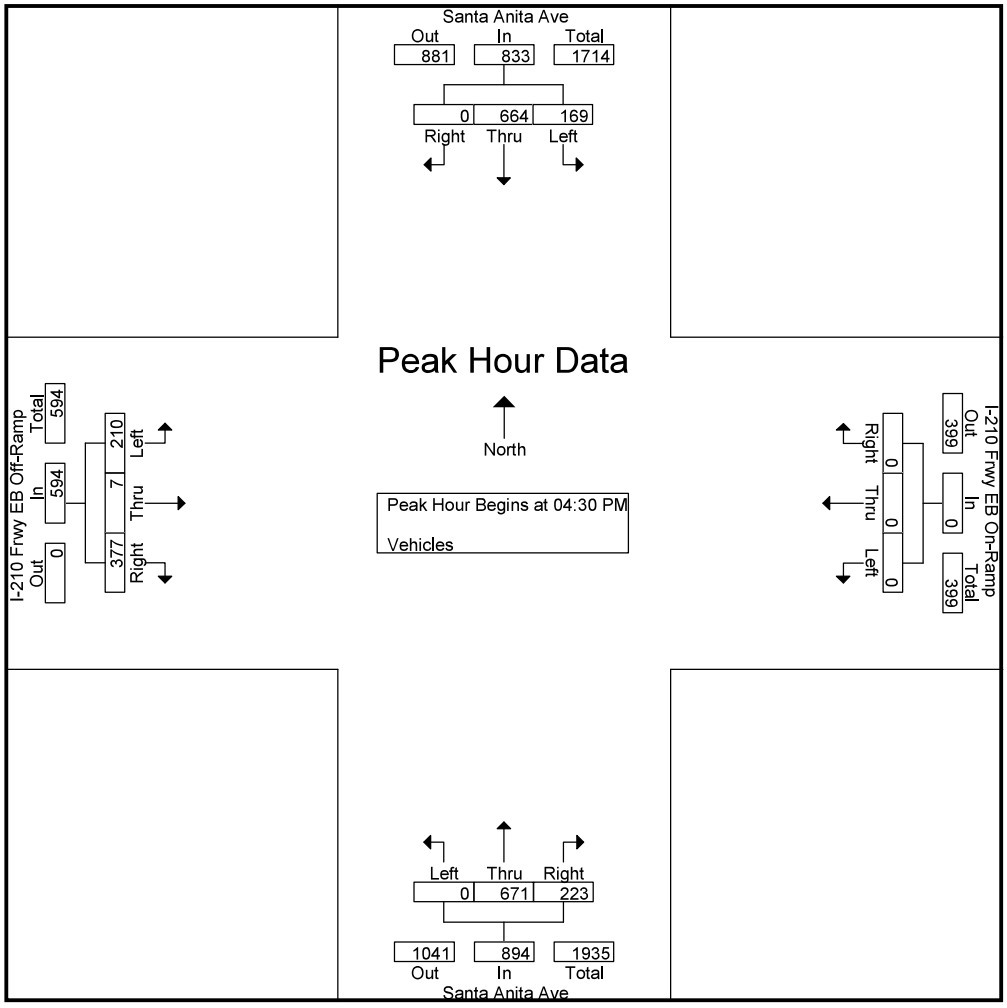
	Santa Anita Ave Southbound			I-210 Frwy EB On-Ramp Westbound			Santa Anita Ave Northbound			I-210 Frwy EB Off-Ramp Eastbound			
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Int. Total
04:00 PM	57	154	0	0	0	0	0	188	68	51	3	70	591
04:15 PM	57	170	0	0	0	0	0	174	43	36	0	80	560
04:30 PM	43	169	0	0	0	0	0	175	54	64	4	71	580
04:45 PM	48	152	0	0	0	0	0	157	47	52	3	94	553
Total	205	645	0	0	0	0	0	694	212	203	10	315	2284
05:00 PM	52	181	0	0	0	0	0	173	58	41	0	95	600
05:15 PM	26	162	0	0	0	0	0	166	64	53	0	117	588
05:30 PM	28	143	0	0	0	0	0	152	81	47	0	98	549
05:45 PM	31	130	0	0	0	0	0	169	93	60	5	87	575
Total	137	616	0	0	0	0	0	660	296	201	5	397	2312
Grand Total	342	1261	0	0	0	0	0	1354	508	404	15	712	4596
Apprch %	21.3	78.7	0	0	0	0	0	72.7	27.3	35.7	1.3	63	
Total %	7.4	27.4	0	0	0	0	0	29.5	11.1	8.8	0.3	15.5	

CITY TRAFFIC COUNTERS

WWW.CTCOUNTERS.COM

File Name : SantaAnita_I-210FrwyEBRamps_Sat_April2019
Site Code : 00000000
Start Date : 4/13/2019
Page No : 2

	Santa Anita Ave Southbound				I-210 Frwy EB On-Ramp Westbound				Santa Anita Ave Northbound				I-210 Frwy EB Off-Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	43	169	0	212	0	0	0	0	0	**175**	54	229	**64**	**4**	71	139	580
04:45 PM	48	152	0	200	0	0	0	0	0	157	47	204	52	3	94	149	553
05:00 PM	**52**	**181**	0	**233**	0	0	0	0	0	173	58	**231**	41	0	95	136	**600**
05:15 PM	26	162	0	188	0	0	0	0	0	166	**64**	230	53	0	**117**	**170**	588
Total Volume	169	664	0	833	0	0	0	0	0	671	223	894	210	7	377	594	2321
% App. Total	20.3	79.7	0		0	0	0		0	75.1	24.9		35.4	1.2	63.5		
PHF	.813	.917	.000	.894	.000	.000	.000	.000	.000	.959	.871	.968	.820	.438	.806	.874	.967



CITY TRAFFIC COUNTERS

WWW.CTCOUNTERS.COM

File Name : SantaAnita_I-210FrwyEBRamps_BP_Sat_April2019
Site Code : 00000000
Start Date : 4/13/2019
Page No : 1

Groups Printed- Bikes & Peds

	Santa Anita Ave Southbound		I-210 Frwy EB On-Ramp Westbound		Santa Anita Ave Northbound		I-210 Frwy EB Off-Ramp Eastbound		
Start Time	Bikes	Peds	Bikes	Peds	Bikes	Peds	Bikes	Peds	Int. Total
04:15 PM	0	0	0	0	0	0	0	1	1
04:30 PM	0	0	0	0	0	0	1	0	1
Total	0	0	0	0	0	0	1	1	2
05:45 PM	0	0	0	0	0	0	1	0	1
Total	0	0	0	0	0	0	1	0	1
Grand Total	0	0	0	0	0	0	2	1	3
Apprch %	0	0	0	0	0	0	66.7	33.3	
Total %	0	0	0	0	0	0	66.7	33.3	

CITY TRAFFIC COUNTERS
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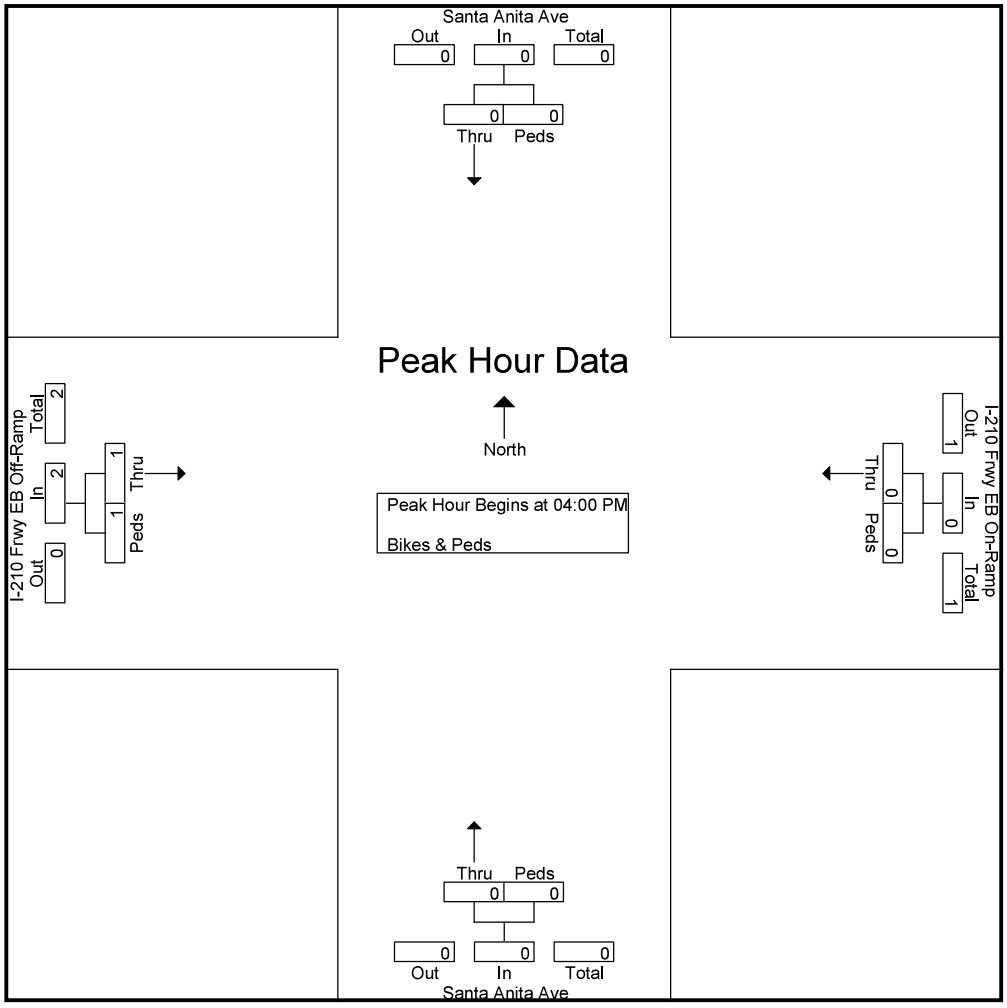
File Name : SantaAnita_I-210FrwyEBRamps_BP_Sat_April2019
Site Code : 00000000
Start Date : 4/13/2019
Page No : 2

	Santa Anita Ave Southbound			I-210 Frwy EB On-Ramp Westbound			Santa Anita Ave Northbound			I-210 Frwy EB Off-Ramp Eastbound			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 04:00 PM													
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	**1**	**1**	**1**
04:30 PM	0	0	0	0	0	0	0	0	0	**1**	0	1	1
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	1	1	2	2
% App. Total	0	0		0	0		0	0		50	50		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.250	.250	.500	.500



10	156	18	0	12	208	138	0	97	34	7	0	6	47	12
12	186	13	0	17	155	79	1	99	33	10	0	12	33	17
11	170	15	0	12	160	92	0	57	20	8	0	11	42	8
2	142	17	0	18	185	67	0	48	19	9	0	7	26	7
2	130	12	0	23	182	64	0	40	22	6	0	7	13	10

NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR
48	1273	113	0	102	1303	692	1	459	177	46	0	64	259	83
3.35%	88.77%	7.88%	0.00%	4.86%	62.11%	32.98%	0.05%	67.30%	25.95%	6.74%	0.00%	15.76%	63.79%	20.44%
07:30 AM - 08:30 AM														
37	691	59	0	46	712	422	1	322	106	26	0	36	167	46
771	0.929	0.819	0.000	0.676	0.856	0.764	0.250	0.813	0.779	0.650	0.000	0.750	0.888	0.676
	0.932				0.825				0.799				0.958	

	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND		
1	2	0	0	1	2	1	0	2	0.5	0.5	0	1	1	0
NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR
1	187	10	1	35	175	47	3	68	49	8	0	16	26	31
3	167	21	1	31	189	62	0	90	54	9	0	16	18	21
4	178	18	2	21	191	35	0	85	49	8	0	21	26	20
4	157	15	1	31	175	68	1	83	31	22	0	27	23	23
6	164	20	0	25	173	57	2	89	52	14	0	17	31	17
4	173	21	1	26	220	63	0	57	44	6	0	27	35	21
5	157	16	0	37	203	60	0	85	37	7	0	15	27	23
8	174	6	1	25	190	52	1	89	45	8	0	26	40	34

NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR
35	1357	127	7	231	1516	444	7	646	361	82	0	165	226	190
2.29%	88.93%	8.32%	0.46%	10.51%	68.97%	20.20%	0.32%	59.32%	33.15%	7.53%	0.00%	28.40%	38.90%	32.70%
05:00 PM - 06:00 PM														
23	668	63	2	113	786	232	3	320	178	35	0	85	133	95
719	0.960	0.750	0.500	0.764	0.893	0.921	0.375	0.899	0.856	0.625	0.000	0.787	0.831	0.699
	0.950				0.917				0.860				0.783	

0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
0	0	0	0	0	1	0	0	0	1	0	0	0	0	0
0	0	0	0	0	3	0	0	0	1	0	0	0	1	0
0	0	0	0	0	1	0	0	0	1	0	0	0	0	0
1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	1	0	1	0	1	2	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR
1	0	0	0	1	6	1	0	1	6	0	0	0	1	0
0.00%	0.00%	0.00%	0.00%	12.50%	75.00%	12.50%	0.00%	14.29%	85.71%	0.00%	0.00%	0.00%	100.00%	0.00%
07:30 AM - 08:30 AM														
1	0	0	0	0	5	0	0	0	3	0	0	0	1	0
250	0.000	0.000	0.000	0.000	0.417	0.000	0.000	0.000	0.750	0.000	0.000	0.000	0.250	0.000
0.250				0.417				0.750				0.250		

NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND		
1	2	0	0	1	2	1	0	2	0.5	0.5	0	1	1	0
NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR
0	0	0	0	0	0	0	0	0	1	0	0	0	1	0
0	0	0	0	0	0	1	0	0	1	0	0	0	0	0
0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	1	0	0	0	0	0	0	0	2	0
0	0	0	0	1	2	0	0	0	1	0	0	0	0	0
0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR
0	0	0	0	1	3	1	0	0	6	0	0	0	3	0
				20.00%	60.00%	20.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	100.00%	0.00%
05:00 PM - 06:00 PM														
0	0	0	0	1	3	0	0	0	2	0	0	0	2	0
.00	0.000	0.000	0.000	0.250	0.375	0.000	0.000	0.000	0.500	0.000	0.000	0.000	0.250	0.000
				0.333				0.500				0.250		

National Data & Surveying Services

Intersection Turning Movement Count

Location: N Santa Anita Ave & E Santa Clara St
City: Arcadia

Project ID: 18-05292-021
Date: 5/3/2018

Pedestrians (Crosswalks)

NS/EW Streets:	N Santa Anita Ave		N Santa Anita Ave		E Santa Clara St		E Santa Clara St		
AM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
7:00 AM	0	1	0	1	1	1	0	0	4
7:15 AM	0	3	1	0	0	0	0	1	5
7:30 AM	0	1	0	0	0	1	0	0	2
7:45 AM	0	2	0	0	0	0	0	0	2
8:00 AM	0	2	0	0	1	0	0	0	3
8:15 AM	1	3	0	0	0	2	0	0	6
8:30 AM	0	3	0	0	1	0	0	0	4
8:45 AM	0	1	1	0	0	0	0	2	4
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
TOTAL VOLUMES :	1	16	2	1	3	4	0	3	30
APPROACH %'s :	5.88%	94.12%	66.67%	33.33%	42.86%	57.14%	0.00%	100.00%	
PEAK HR :	07:30 AM - 08:30 AM								TOTAL
PEAK HR VOL :	1	8	0	0	1	3	0	0	13
PEAK HR FACTOR :	0.250	0.667			0.250	0.375			0.542
	0.563				0.500				

PM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
4:00 PM	2	1	1	0	1	0	0	1	6
4:15 PM	0	0	1	1	0	0	0	2	4
4:30 PM	0	1	0	1	0	1	0	0	3
4:45 PM	4	1	1	0	0	0	1	1	8
5:00 PM	3	2	1	2	1	1	1	2	13
5:15 PM	2	4	1	1	1	1	0	0	10
5:30 PM	0	1	0	1	0	1	0	0	3
5:45 PM	2	0	0	0	1	1	0	0	4
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
TOTAL VOLUMES :	13	10	5	6	4	5	2	6	51
APPROACH %'s :	56.52%	43.48%	45.45%	54.55%	44.44%	55.56%	25.00%	75.00%	
PEAK HR :	05:00 PM - 06:00 PM								TOTAL
PEAK HR VOL :	7	7	2	4	3	4	1	2	30
PEAK HR FACTOR :	0.583	0.438	0.500	0.500	0.750	1.000	0.250	0.250	0.577
	0.583		0.500		0.875		0.250		

Prepared by National Data & Surveying Services

N Santa Anita Ave & E Santa Clara St

Peak Hour Turning Movement Count

ID: 18-05292-021
City: Arcadia

Day: Thursday
Date: 05/03/2018

N Santa Anita Ave

SOUTHBOUND

PEAK HOURS									COUNT PERIODS
07:30 AM - 08:30 AM	AM	422	712	46	1	1060	AM		07:00 AM - 09:00 AM
NONE	NOON	0	0	0	0	0	NOON		NONE
05:00 PM - 06:00 PM	PM	232	786	113	3	1086	PM		04:00 PM - 06:00 PM

E Santa Clara St

EASTBOUND

AM	NOON	PM		
626	0	388	⇦	
0	0	0	↶	0
322	0	320	↱	2
106	0	178	→	0.5
26	0	35	↴	0.5
AM	NOON	PM		

CONTROL

Signalized

TEV	2671 AM	0 NOON	2736 PM
PHF	0.90		0.98

WESTBOUND

	PM	NOON	AM
0 ↰	95	0	46
1 ←	133	0	167
1 ↰	85	0	36
0 ↶	0	0	0
⇨	354	0	211
	PM	NOON	AM

E Santa Clara St

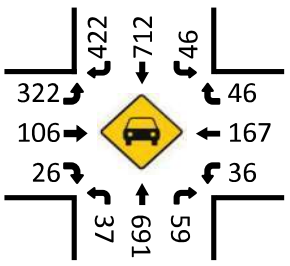
	1	2	1	0
	↰	↓	↱	↶
	0	1	2	0

NORTHBOUND

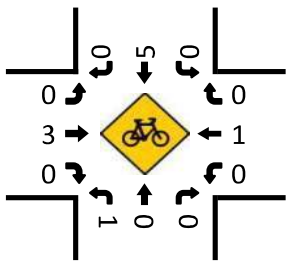
PM	908	2	23	668	63	PM
NOON	0	0	0	0	0	NOON
AM	774	0	37	691	59	AM

N Santa Anita Ave

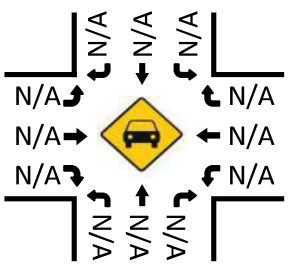
Total Vehicles (AM)



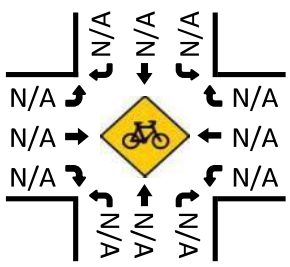
Bikes (AM)



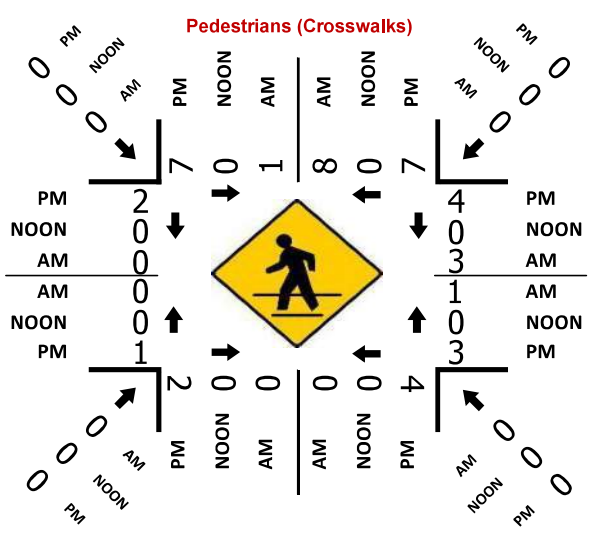
Total Vehicles (Noon)



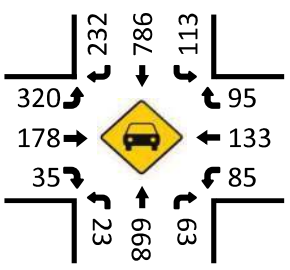
Bikes (NOON)



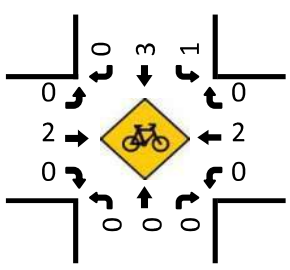
Pedestrians (Crosswalks)



Total Vehicles (PM)



Bikes (PM)



1	2	0	0	1	2	1	0	2	0.5	0.5	0	1	1
NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT
3	194	22	0	15	165	82	4	63	31	9	0	12	20
3	184	29	0	19	197	84	0	44	18	10	0	14	23
4	182	12	0	25	169	91	0	54	27	10	0	14	25
4	197	14	0	21	172	74	2	59	17	12	0	9	16
2	184	22	0	21	150	78	3	74	20	7	0	17	19
2	174	18	0	22	203	81	3	58	24	7	0	15	21
3	180	16	0	23	178	79	3	65	26	8	0	21	26
0	158	22	1	21	185	77	1	64	21	11	0	14	24
NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT
21	1453	155	1	167	1419	646	16	481	184	74	0	116	174
1.29%	89.14%	9.51%	0.06%	7.43%	63.12%	28.74%	0.71%	65.09%	24.90%	10.01%	0.00%	25.44%	38.16%
01:00 PM - 02:00 PM													
14	757	77	0	80	703	331	6	220	93	41	0	49	84
0.875	0.961	0.664	0.000	0.800	0.892	0.909	0.375	0.873	0.750	0.854	0.000	0.875	0.840
0.968				0.933				0.859				0.873	

	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBO	
	1	2	0	0	1	2	1	0	2	0.5	0.5	0	1	1
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT
M	0	0	0	0	0	0	0	0	0	3	0	0	0	0
M	0	0	0	0	2	2	0	0	0	0	0	0	0	0
M	0	0	0	0	0	1	0	0	0	1	0	0	0	0
M	0	1	0	0	0	0	0	0	0	0	0	0	0	0
M	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M	0	0	0	0	0	0	0	0	0	1	0	0	0	0
M	0	0	0	0	0	1	0	0	0	0	0	0	0	1
M	0	0	1	0	0	0	0	0	0	0	0	0	0	1
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT
:	0	1	1	0	2	4	0	0	0	5	0	0	0	2
:	0.00%	50.00%	50.00%	0.00%	33.33%	66.67%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	66.67%
:	01:00 PM - 02:00 PM													
:	0	1	0	0	2	3	0	0	0	4	0	0	0	0
:	0.00	0.250	0.000	0.000	0.250	0.375	0.000	0.000	0.000	0.333	0.000	0.000	0.000	0.000
		0.250				0.313				0.333				0.250

National Data & Surveying Services

Intersection Turning Movement Count

Location: N Santa Anita Ave & Santa Clara St
City: Arcadia

Project ID: 18-05329-021
Date: 2018-05-19

Pedestrians (Crosswalks)

NS/EW Streets:	N Santa Anita Ave		N Santa Anita Ave		Santa Clara St		Santa Clara St		
NOON	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
1:00 PM	2	2	0	0	0	1	1	1	7
1:15 PM	7	1	0	0	2	1	0	2	13
1:30 PM	0	5	0	3	0	2	0	0	10
1:45 PM	0	0	0	1	0	1	0	0	2
2:00 PM	3	0	4	0	0	0	0	0	7
2:15 PM	0	2	0	0	0	0	0	1	3
2:30 PM	2	4	0	2	0	1	1	0	10
2:45 PM	2	0	0	1	1	4	1	0	9
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
TOTAL VOLUMES :	16	14	4	7	3	10	3	4	61
APPROACH %'s :	53.33%	46.67%	36.36%	63.64%	23.08%	76.92%	42.86%	57.14%	
PEAK HR :	**01:00 PM - 02:00 PM**								TOTAL
PEAK HR VOL :	9	8	0	4	2	5	1	3	32
PEAK HR FACTOR :	0.321	0.400		0.333	0.250	0.625	0.250	0.375	0.615
	0.531		0.333		0.583		0.500		

Prepared by National Data & Surveying Services

N Santa Anita Ave & Santa Clara St

Peak Hour Turning Movement Count

ID: 18-05329-021
City: Arcadia

Day: Saturday
Date: 05/19/2018

N Santa Anita Ave

SOUTHBOUND

PEAK HOURS								COUNT PERIODS
NONE	AM	0	0	0	0	0	AM	NONE
01:00 PM - 02:00 PM	NOON	331	703	80	6	1077	NOON	01:00 PM - 03:00 PM
NONE	PM	0	0	0	0	0	PM	NONE

	1	2	1	0

Santa Clara St

EASTBOUND

AM	NOON	PM	
0	429	0	
0	0	0	0
0	220	0	2
0	93	0	0.5
0	41	0	0.5

CONTROL

Signalized

	AM	NOON	PM
TEV	0	2549	0
PHF		0.98	

WESTBOUND

PM	NOON	AM	
0	94	0	0
0	84	0	1
0	49	0	1
0	0	0	0
0	250	0	

Santa Clara St

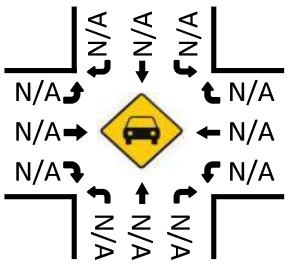
	0	1	2	0

PM	0	0	0	0	0	PM
NOON	793	0	14	757	77	NOON
AM	0	0	0	0	0	AM

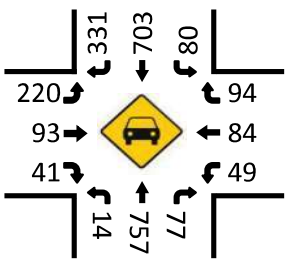
NORTHBOUND

N Santa Anita Ave

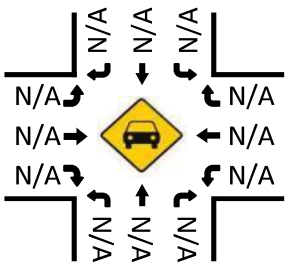
Total Vehicles (AM)



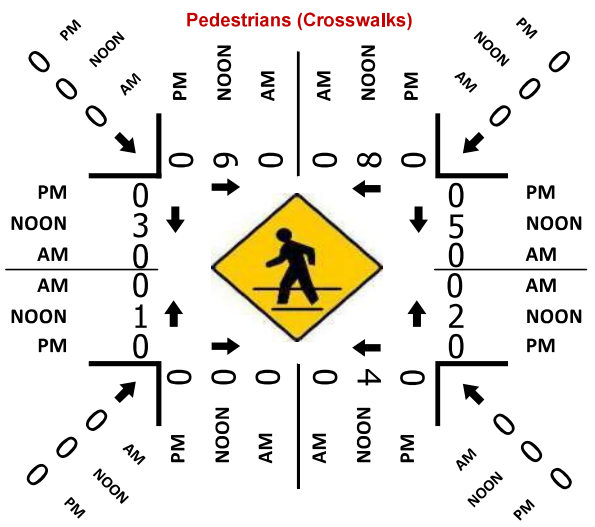
Total Vehicles (Noon)



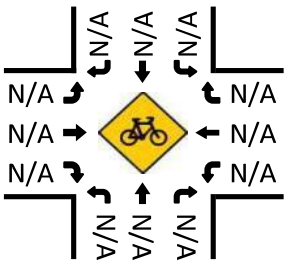
Total Vehicles (PM)



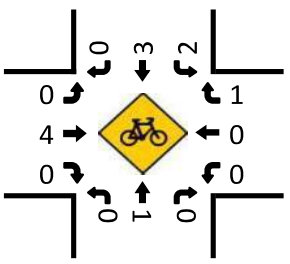
Pedestrians (Crosswalks)



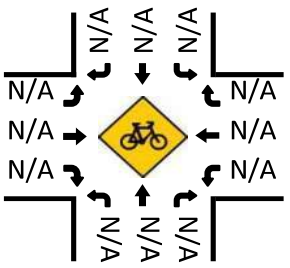
Bikes (AM)



Bikes (NOON)



Bikes (PM)



CITY TRAFFIC COUNTERS

WWW.CTCOUNTERS.COM

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Groups Printed- Vehicles

	Santa Anita Ave Southbound			Huntington Drive Westbound			Santa Anita Ave Northbound			Huntington Drive Eastbound			
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Int. Total
07:00 AM	12	86	12	9	287	18	103	160	18	1	50	12	768
07:15 AM	8	131	13	18	341	21	127	193	22	4	40	21	939
07:30 AM	10	132	10	12	332	24	133	148	26	7	75	28	937
07:45 AM	22	155	10	12	340	25	128	149	24	12	135	51	1063
Total	52	504	45	51	1300	88	491	650	90	24	300	112	3707
08:00 AM	30	153	18	24	307	15	128	154	28	3	130	48	1038
08:15 AM	16	166	19	19	347	22	110	153	40	6	100	26	1024
08:30 AM	17	182	17	36	348	8	99	140	40	7	106	26	1026
08:45 AM	14	182	12	30	316	25	123	166	38	7	130	35	1078
Total	77	683	66	109	1318	70	460	613	146	23	466	135	4166
04:00 PM	25	166	15	22	118	17	32	127	28	15	280	152	997
04:15 PM	34	164	20	32	122	25	40	138	21	11	279	143	1029
04:30 PM	41	164	17	27	107	20	44	171	22	8	290	121	1032
04:45 PM	30	153	17	42	173	25	54	169	23	15	286	176	1163
Total	130	647	69	123	520	87	170	605	94	49	1135	592	4221
05:00 PM	44	182	18	49	150	10	52	175	29	10	303	178	1200
05:15 PM	27	175	24	35	156	17	42	180	20	11	297	179	1163
05:30 PM	28	199	24	32	183	22	44	154	30	12	295	165	1188
05:45 PM	33	193	16	31	174	15	23	191	28	7	318	168	1197
Total	132	749	82	147	663	64	161	700	107	40	1213	690	4748
Grand Total	391	2583	262	430	3801	309	1282	2568	437	136	3114	1529	16842
Apprch %	12.1	79.8	8.1	9.5	83.7	6.8	29.9	59.9	10.2	2.8	65.2	32	
Total %	2.3	15.3	1.6	2.6	22.6	1.8	7.6	15.2	2.6	0.8	18.5	9.1	

CITY TRAFFIC COUNTERS

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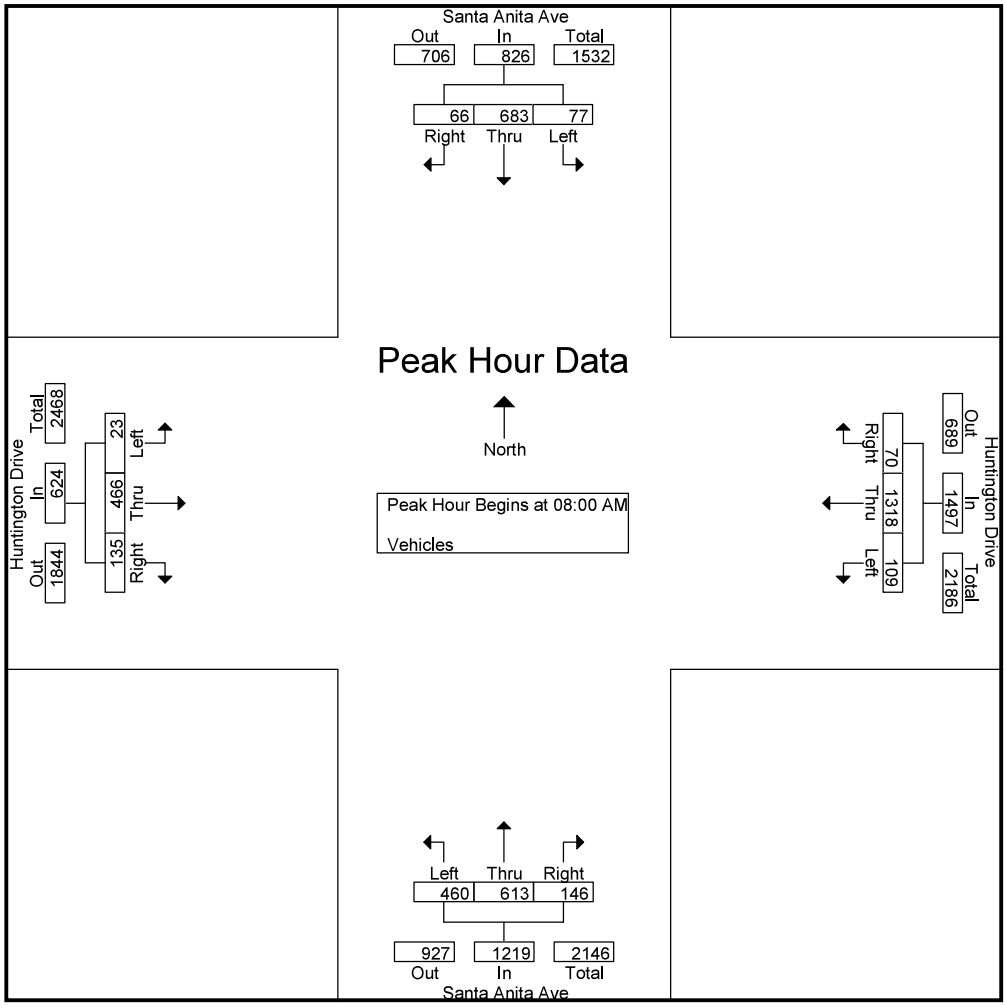
	Santa Anita Ave Southbound				Huntington Drive Westbound				Santa Anita Ave Northbound				Huntington Drive Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 08:00 AM																	
08:00 AM	**30**	153	18	201	24	307	15	346	**128**	154	28	310	3	**130**	**48**	**181**	1038
08:15 AM	16	166	**19**	201	19	347	22	388	110	153	**40**	303	6	100	26	132	1024
08:30 AM	17	**182**	17	**216**	**36**	**348**	8	**392**	99	140	40	279	**7**	106	26	139	1026
08:45 AM	14	182	12	208	30	316	**25**	371	123	**166**	38	**327**	7	130	35	172	**1078**
Total Volume	77	683	66	826	109	1318	70	1497	460	613	146	1219	23	466	135	624	4166
% App. Total	9.3	82.7	8		7.3	88	4.7		37.7	50.3	12		3.7	74.7	21.6		
PHF	.642	.938	.868	.956	.757	.947	.700	.955	.898	.923	.913	.932	.821	.896	.703	.862	.966



CITY TRAFFIC COUNTERS

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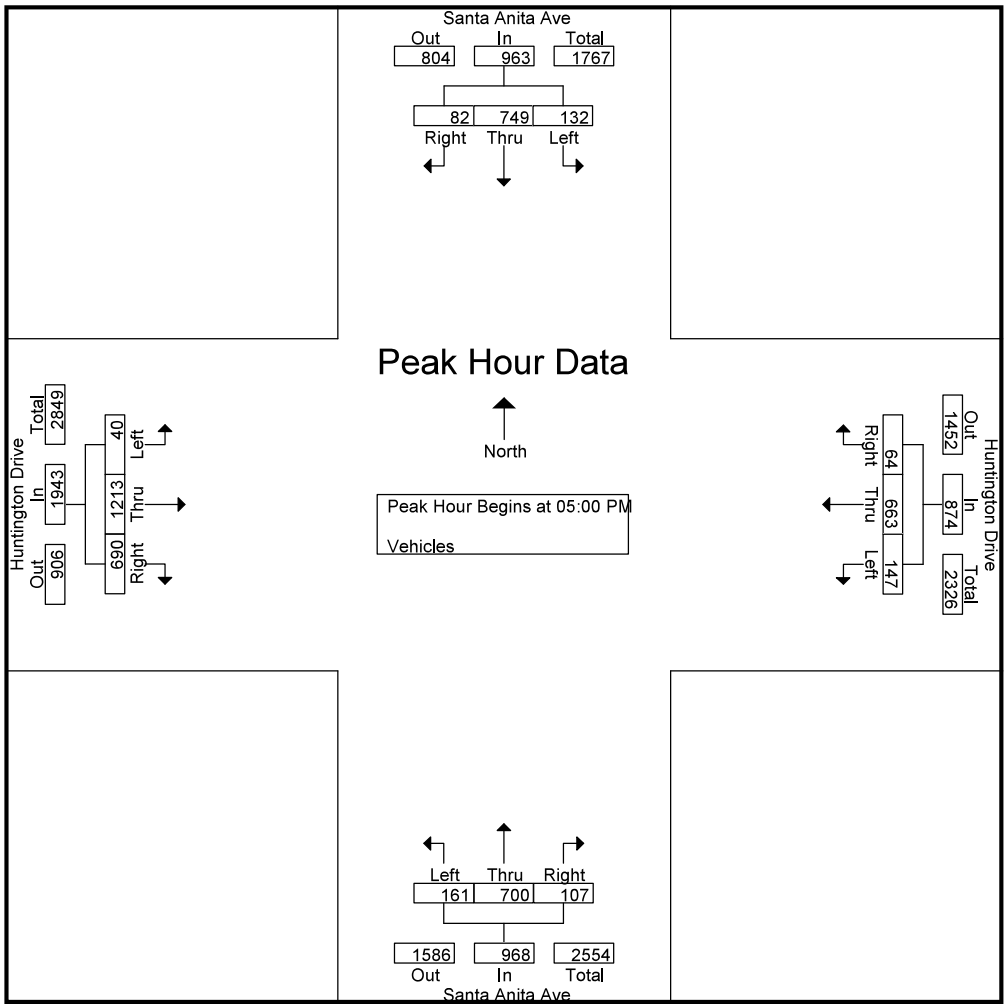
	Santa Anita Ave Southbound				Huntington Drive Westbound				Santa Anita Ave Northbound				Huntington Drive Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	**44**	182	18	244	**49**	150	10	209	**52**	175	29	**256**	10	303	178	491	**1200**
05:15 PM	27	175	**24**	226	35	156	17	208	42	180	20	242	11	297	**179**	487	1163
05:30 PM	28	**199**	24	**251**	32	**183**	**22**	**237**	44	154	**30**	228	**12**	295	165	472	1188
05:45 PM	33	193	16	242	31	174	15	220	23	**191**	28	242	7	**318**	168	**493**	1197
Total Volume	132	749	82	963	147	663	64	874	161	700	107	968	40	1213	690	1943	4748
% App. Total	13.7	77.8	8.5		16.8	75.9	7.3		16.6	72.3	11.1		2.1	62.4	35.5		
PHF	.750	.941	.854	.959	.750	.906	.727	.922	.774	.916	.892	.945	.833	.954	.964	.985	.989



CITY TRAFFIC COUNTERS

WWW.CTCOUNTERS.COM

File Name : SantaAnita_Huntington_BP_Wed_April2019
Site Code : 00000000
Start Date : 4/17/2019
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Groups Printed- Bikes & Peds

	Santa Anita Ave Southbound		Huntington Drive Westbound		Santa Anita Ave Northbound		Huntington Drive Eastbound		
Start Time	Bikes	Peds	Bikes	Peds	Bikes	Peds	Bikes	Peds	Int. Total
07:00 AM	0	5	0	1	0	3	0	2	11
07:15 AM	0	4	0	0	0	2	0	1	7
07:30 AM	1	5	2	3	2	1	2	1	17
07:45 AM	1	3	1	3	0	3	0	0	11
Total	2	17	3	7	2	9	2	4	46
08:00 AM	1	6	0	4	0	10	0	3	24
08:15 AM	0	1	0	4	1	4	1	1	12
08:30 AM	1	2	0	0	1	1	1	1	7
08:45 AM	0	1	0	2	0	0	0	1	4
Total	2	10	0	10	2	15	2	6	47
04:00 PM	0	4	0	2	0	4	0	3	13
04:15 PM	0	4	1	3	0	16	0	1	25
04:30 PM	1	2	0	5	0	4	1	5	18
04:45 PM	0	3	0	2	0	2	0	5	12
Total	1	13	1	12	0	26	1	14	68
05:00 PM	0	0	0	5	0	1	0	5	11
05:15 PM	2	2	0	2	0	1	1	2	10
05:30 PM	1	4	0	3	0	7	0	2	17
05:45 PM	0	3	0	4	0	2	1	2	12
Total	3	9	0	14	0	11	2	11	50
Grand Total	8	49	4	43	4	61	7	35	211
Apprch %	14	86	8.5	91.5	6.2	93.8	16.7	83.3	
Total %	3.8	23.2	1.9	20.4	1.9	28.9	3.3	16.6	

CITY TRAFFIC COUNTERS
WWW.CTCOUNTERS.COM

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Site Code : 00000000
Start Date : 4/17/2019
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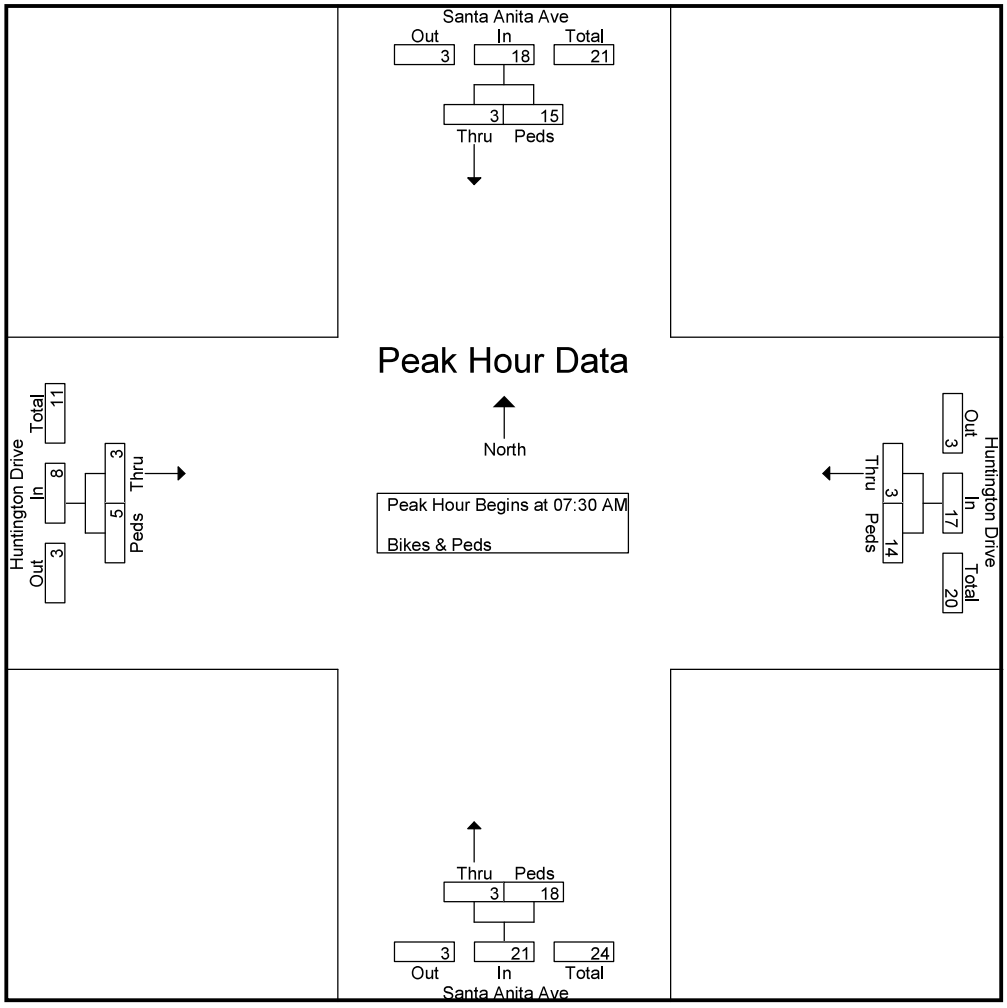
	Santa Anita Ave Southbound			Huntington Drive Westbound			Santa Anita Ave Northbound			Huntington Drive Eastbound			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 07:30 AM													
07:30 AM	**1**	5	6	**2**	3	**5**	**2**	1	3	**2**	1	**3**	17
07:45 AM	1	3	4	1	3	4	0	3	3	0	0	0	11
08:00 AM	1	**6**	**7**	0	**4**	4	0	**10**	**10**	0	**3**	3	**24**
08:15 AM	0	1	1	0	4	4	1	4	5	1	1	2	12
Total Volume	3	15	18	3	14	17	3	18	21	3	5	8	64
% App. Total	16.7	83.3		17.6	82.4		14.3	85.7		37.5	62.5		
PHF	.750	.625	.643	.375	.875	.850	.375	.450	.525	.375	.417	.667	.667



CITY TRAFFIC COUNTERS
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File Name : SantaAnita_Huntington_BP_Wed_April2019
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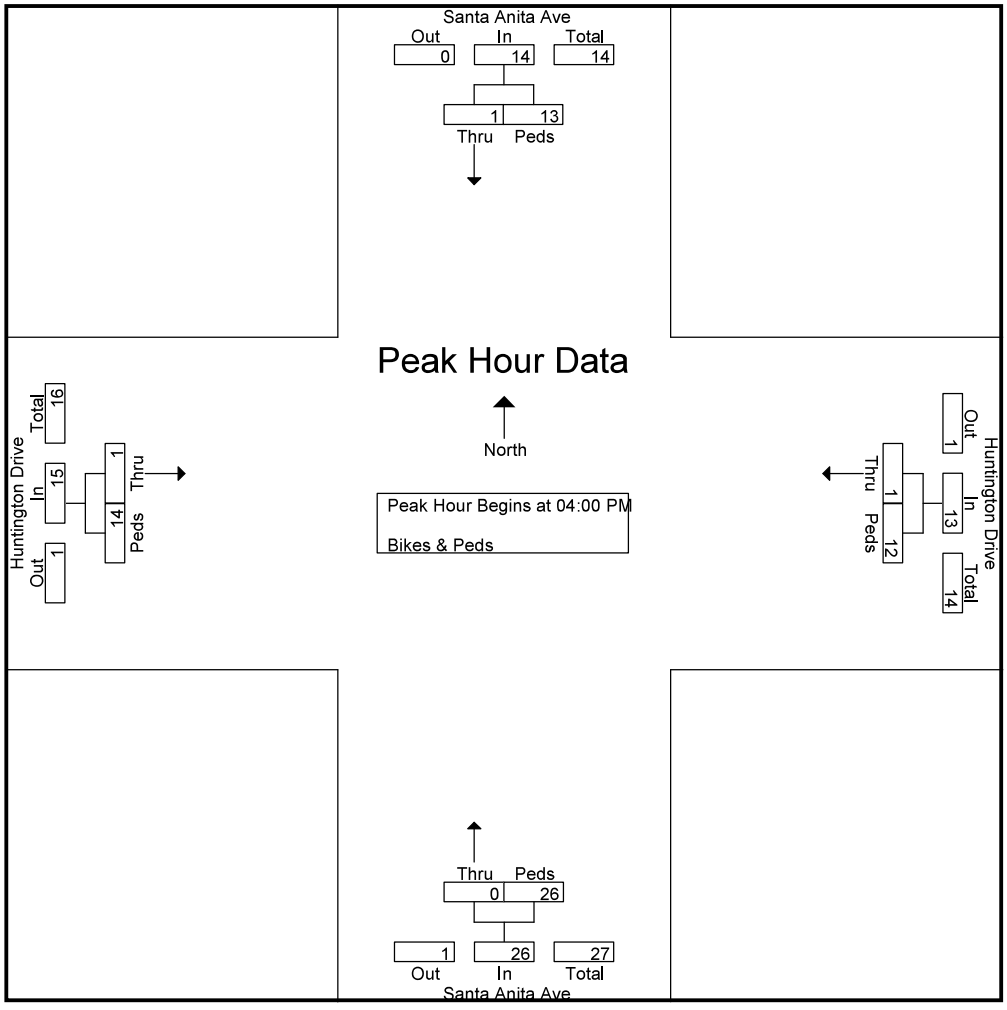
	Santa Anita Ave Southbound			Huntington Drive Westbound			Santa Anita Ave Northbound			Huntington Drive Eastbound			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 05:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 04:00 PM													
04:00 PM	0	**4**	**4**	0	2	2	0	4	4	0	3	3	13
04:15 PM	0	4	4	**1**	3	4	0	**16**	**16**	0	1	1	**25**
04:30 PM	**1**	2	3	0	**5**	**5**	0	4	4	**1**	**5**	**6**	18
04:45 PM	0	3	3	0	2	2	0	2	2	0	5	5	12
Total Volume	1	13	14	1	12	13	0	26	26	1	14	15	68
% App. Total	7.1	92.9		7.7	92.3		0	100		6.7	93.3		
PHF	.250	.813	.875	.250	.600	.650	.000	.406	.406	.250	.700	.625	.680



CITY TRAFFIC COUNTERS

WWW.CTCOUNTERS.COM

File Name : SantaAnita_Huntington_Sat_April2019
Site Code : 00000000
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Groups Printed- Vehicles

	Santa Anita Ave Southbound			Huntington Dr Westbound			Santa Anita Ave Northbound			Huntington Dr Eastbound			
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Int. Total
04:00 PM	17	115	25	31	151	24	37	147	28	13	201	85	874
04:15 PM	31	113	22	33	156	11	29	120	29	7	201	83	835
04:30 PM	29	124	18	27	128	18	40	118	29	20	206	90	847
04:45 PM	46	193	11	28	138	20	30	126	44	9	138	19	802
Total	123	545	76	119	573	73	136	511	130	49	746	277	3358
05:00 PM	35	186	19	34	112	15	60	116	34	4	149	29	793
05:15 PM	45	178	16	18	116	19	28	113	39	13	159	28	772
05:30 PM	40	179	22	23	140	20	33	115	31	7	145	31	786
05:45 PM	47	156	10	27	120	24	24	130	42	24	191	36	831
Total	167	699	67	102	488	78	145	474	146	48	644	124	3182
Grand Total	290	1244	143	221	1061	151	281	985	276	97	1390	401	6540
Apprch %	17.3	74.2	8.5	15.4	74	10.5	18.2	63.9	17.9	5.1	73.6	21.2	
Total %	4.4	19	2.2	3.4	16.2	2.3	4.3	15.1	4.2	1.5	21.3	6.1	

CITY TRAFFIC COUNTERS

WWW.CTCOUNTERS.COM

File Name : SantaAnita_Huntington_Sat_April2019
Site Code : 00000000
Start Date : 4/13/2019
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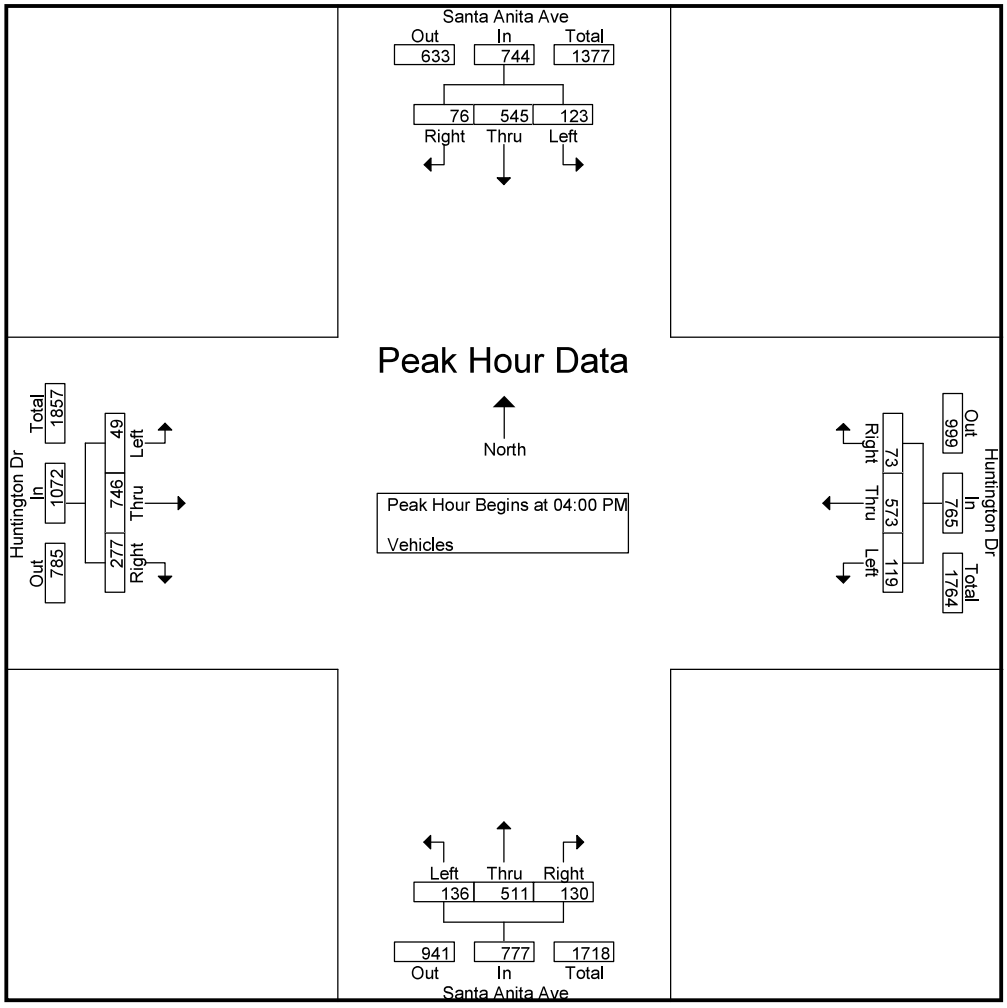
	Santa Anita Ave Southbound				Huntington Dr Westbound				Santa Anita Ave Northbound				Huntington Dr Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	17	115	**25**	157	31	151	**24**	**206**	37	**147**	28	**212**	13	201	85	299	**874**
04:15 PM	31	113	22	166	**33**	**156**	11	200	29	120	29	178	7	201	83	291	835
04:30 PM	29	124	18	171	27	128	18	173	**40**	118	29	187	**20**	**206**	**90**	**316**	847
04:45 PM	**46**	**193**	11	**250**	28	138	20	186	30	126	**44**	200	9	138	19	166	802
Total Volume	123	545	76	744	119	573	73	765	136	511	130	777	49	746	277	1072	3358
% App. Total	16.5	73.3	10.2		15.6	74.9	9.5		17.5	65.8	16.7		4.6	69.6	25.8		
PHF	.668	.706	.760	.744	.902	.918	.760	.928	.850	.869	.739	.916	.613	.905	.769	.848	.961



CITY TRAFFIC COUNTERS

WWW.CTCOUNTERS.COM

File Name : SantaAnita_Huntington_BP_Sat_April2019
Site Code : 00000000
Start Date : 4/13/2019
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Groups Printed- Bikes & Peds

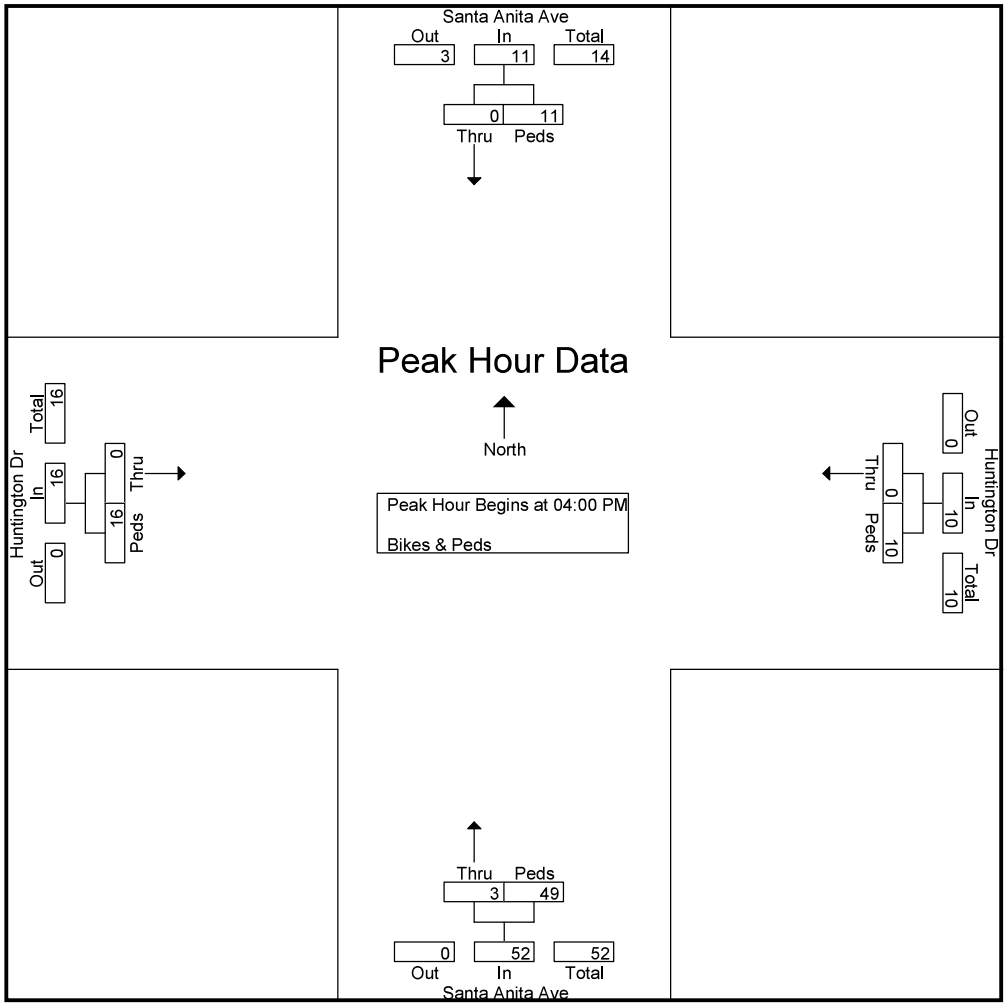
	Santa Anita Ave Southbound		Huntington Dr Westbound		Santa Anita Ave Northbound		Huntington Dr Eastbound		
Start Time	Bikes	Peds	Bikes	Peds	Bikes	Peds	Bikes	Peds	Int. Total
04:00 PM	0	0	0	3	0	26	0	7	36
04:15 PM	0	3	0	0	2	10	0	4	19
04:30 PM	0	7	0	4	1	8	0	4	24
04:45 PM	0	1	0	3	0	5	0	1	10
Total	0	11	0	10	3	49	0	16	89
05:00 PM	0	2	0	1	0	9	0	0	12
05:15 PM	0	6	1	2	1	2	0	3	15
05:30 PM	1	2	1	1	1	4	0	1	11
05:45 PM	1	3	0	1	0	9	0	0	14
Total	2	13	2	5	2	24	0	4	52
Grand Total	2	24	2	15	5	73	0	20	141
Apprch %	7.7	92.3	11.8	88.2	6.4	93.6	0	100	
Total %	1.4	17	1.4	10.6	3.5	51.8	0	14.2	

CITY TRAFFIC COUNTERS

WWW.CTCOUNTERS.COM

File Name : SantaAnita_Huntington_BP_Sat_April2019
Site Code : 00000000
Start Date : 4/13/2019
Page No : 2

	Santa Anita Ave Southbound			Huntington Dr Westbound			Santa Anita Ave Northbound			Huntington Dr Eastbound			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 04:00 PM													
04:00 PM	0	0	0	0	3	3	0	**26**	**26**	0	**7**	**7**	**36**
04:15 PM	0	3	3	0	0	0	**2**	10	12	0	4	4	19
04:30 PM	0	**7**	**7**	0	**4**	**4**	1	8	9	0	4	4	24
04:45 PM	0	1	1	0	3	3	0	5	5	0	1	1	10
Total Volume	0	11	11	0	10	10	3	49	52	0	16	16	89
% App. Total	0	100		0	100		5.8	94.2		0	100		
PHF	.000	.393	.393	.000	.625	.625	.375	.471	.500	.000	.571	.571	.618



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Colorado Place
Btwn San Juan Dr & Colorado Blvd

Start Time	17-Apr-19 Wed	North Morning	North Afternoon	Hour Totals Morning	Hour Totals Afternoon	South Morning	South Afternoon	Hour Totals Morning	Hour Totals Afternoon	Combined Totals Morning	Combined Totals Afternoon
12:00		4	65			4	53				
12:15		1	52			5	67				
12:30		4	58			5	70				
12:45		4	55	13	230	2	74	16	264	29	494
01:00		2	55			2	85				
01:15		0	50			4	88				
01:30		1	57			4	105				
01:45		0	68	3	230	0	86	10	364	13	594
02:00		2	58			2	82				
02:15		1	66			4	94				
02:30		3	74			1	134				
02:45		1	80	7	278	0	130	7	440	14	718
03:00		0	68			0	150				
03:15		1	80			0	188				
03:30		2	65			4	189				
03:45		4	41	7	254	0	273	4	800	11	1054
04:00		3	64			3	277				
04:15		1	64			1	242				
04:30		3	59			4	325				
04:45		4	73	11	260	4	338	12	1182	23	1442
05:00		3	73			5	364				
05:15		8	77			5	346				
05:30		18	59			5	339				
05:45		17	59	46	268	14	340	29	1389	75	1657
06:00		35	60			12	352				
06:15		74	53			28	311				
06:30		143	49			28	298				
06:45		263	43	515	205	45	229	113	1190	628	1395
07:00		277	46			31	171				
07:15		299	43			36	131				
07:30		305	50			63	71				
07:45		294	30	1175	169	104	58	234	431	1409	600
08:00		236	34			91	53				
08:15		289	31			84	37				
08:30		265	29			80	34				
08:45		272	39	1062	133	88	36	343	160	1405	293
09:00		159	32			50	36				
09:15		134	20			43	39				
09:30		125	22			64	22				
09:45		105	17	523	91	48	26	205	123	728	214
10:00		85	13			54	19				
10:15		66	10			42	19				
10:30		68	12			43	15				
10:45		53	5	272	40	57	10	196	63	468	103
11:00		72	10			64	10				
11:15		50	6			58	8				
11:30		61	6			58	12				
11:45		53	4	236	26	57	6	237	36	473	62
Total		3870	2184			1406	6442			5276	8626
Percent		63.9%	36.1%			17.9%	82.1%			38.0%	62.0%
Grand Total		3870	2184			1406	6442			5276	8626
Percent		63.9%	36.1%			17.9%	82.1%			38.0%	62.0%
ADT		ADT 13,902		AADT 13,902							

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Colorado Place
Btwn San Juan Dr & Colorado Blvd

Start Time	13-Apr-19 Sat	North Morning	North Afternoon	Hour Totals Morning	Hour Totals Afternoon	South Morning	South Afternoon	Hour Totals Morning	Hour Totals Afternoon	Combined Totals Morning	Combined Totals Afternoon
12:00		7	78			13	132				
12:15		3	97			12	148				
12:30		6	74			15	121				
12:45		5	79	21	328	7	154	47	555	68	883
01:00		5	86			7	131				
01:15		3	66			3	147				
01:30		6	82			1	105				
01:45		7	80	21	314	1	122	12	505	33	819
02:00		3	66			4	137				
02:15		2	90			7	151				
02:30		3	90			3	139				
02:45		2	64	10	310	2	181	16	608	26	918
03:00		2	76			2	147				
03:15		0	64			3	168				
03:30		2	89			1	199				
03:45		5	81	9	310	2	190	8	704	17	1014
04:00		2	69			3	133				
04:15		4	67			1	168				
04:30		3	84			5	122				
04:45		3	75	12	295	4	122	13	545	25	840
05:00		2	79			2	122				
05:15		4	74			2	122				
05:30		5	89			3	122				
05:45		7	85	18	327	9	63	16	429	34	756
06:00		6	53			6	74				
06:15		17	58			11	51				
06:30		10	51			14	59				
06:45		7	54	40	216	12	58	43	242	83	458
07:00		19	52			19	63				
07:15		15	40			22	52				
07:30		28	33			21	44				
07:45		28	36	90	161	34	34	96	193	186	354
08:00		33	28			42	37				
08:15		32	18			43	42				
08:30		29	36			40	38				
08:45		32	22	126	104	25	37	150	154	276	258
09:00		52	23			34	46				
09:15		44	28			30	26				
09:30		62	18			34	19				
09:45		50	21	208	90	46	14	144	105	352	195
10:00		50	27			59	35				
10:15		43	17			130	19				
10:30		60	24			278	22				
10:45		61	17	214	85	248	18	715	94	929	179
11:00		66	18			219	17				
11:15		71	10			184	12				
11:30		66	10			170	10				
11:45		81	9	284	47	137	21	710	60	994	107
Total		1053	2587			1970	4194			3023	6781
Percent		28.9%	71.1%			32.0%	68.0%			30.8%	69.2%
Grand Total		1053	2587			1970	4194			3023	6781
Percent		28.9%	71.1%			32.0%	68.0%			30.8%	69.2%
ADT		ADT 9,804		AADT 9,804							

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Huntington Drive (EB)
Btwn Santa Clara St & Centennial Way

Start Time	17-Apr-19 Wed	East Morning	East Afternoon	Hour Totals Morning	Hour Totals Afternoon
12:00		36	219		
12:15		17	205		
12:30		15	203		
12:45		15	197	83	824
01:00		14	229		
01:15		9	214		
01:30		8	249		
01:45		8	243	39	935
02:00		13	248		
02:15		9	287		
02:30		8	299		
02:45		4	290	34	1124
03:00		3	334		
03:15		2	341		
03:30		3	358		
03:45		5	244	13	1277
04:00		3	344		
04:15		5	322		
04:30		9	337		
04:45		13	286	30	1289
05:00		14	309		
05:15		18	313		
05:30		21	355		
05:45		35	330	88	1307
06:00		41	273		
06:15		60	289		
06:30		60	248		
06:45		79	251	240	1061
07:00		105	209		
07:15		103	224		
07:30		187	274		
07:45		259	185	654	892
08:00		243	168		
08:15		208	138		
08:30		203	155		
08:45		297	118	951	579
09:00		206	151		
09:15		185	154		
09:30		165	108		
09:45		170	81	726	494
10:00		151	70		
10:15		158	68		
10:30		175	78		
10:45		180	50	664	266
11:00		169	39		
11:15		186	43		
11:30		210	47		
11:45		240	26	805	155
Total		4327	10203		
Percent		29.8%	70.2%		
Grand Total		4327	10203		
Percent		29.8%	70.2%		
ADT		ADT 14,530		AADT 14,530	

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Huntington Drive (EB)
Btwn Santa Clara St & Centennial Way

Start Time	13-Apr-19 Sat	East Morning	East Afternoon	Hour Totals Morning	Hour Totals Afternoon
12:00		46	235		
12:15		35	224		
12:30		36	209		
12:45		37	246	154	914
01:00		31	255		
01:15		25	224		
01:30		18	232		
01:45		16	226	90	937
02:00		14	234		
02:15		11	242		
02:30		13	247		
02:45		6	245	44	968
03:00		4	257		
03:15		10	218		
03:30		6	236		
03:45		5	236	25	947
04:00		9	223		
04:15		6	227		
04:30		8	198		
04:45		9	222	32	870
05:00		6	208		
05:15		9	256		
05:30		17	217		
05:45		23	271	55	952
06:00		19	216		
06:15		21	204		
06:30		42	191		
06:45		46	197	128	808
07:00		51	183		
07:15		51	188		
07:30		100	188		
07:45		112	175	314	734
08:00		97	158		
08:15		79	147		
08:30		94	122		
08:45		123	140	393	567
09:00		110	140		
09:15		129	152		
09:30		145	129		
09:45		175	105	559	526
10:00		158	103		
10:15		195	108		
10:30		203	87		
10:45		217	67	773	365
11:00		265	74		
11:15		227	73		
11:30		231	67		
11:45		238	54	961	268
Total		3528	8856		
Percent		28.5%	71.5%		
Grand Total		3528	8856		
Percent		28.5%	71.5%		
ADT		ADT 12,384		AADT 12,384	

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Huntington Drive (WB)
Btwn Colorado Place & Centennial Way

Start Time	17-Apr-19 Wed	West Morning	West Afternoon	Hour Totals Morning	Hour Totals Afternoon
12:00		23	238		
12:15		16	262		
12:30		15	251		
12:45		11	243	65	994
01:00		15	269		
01:15		12	232		
01:30		12	264		
01:45		7	265	46	1030
02:00		5	241		
02:15		9	277		
02:30		4	286		
02:45		4	268	22	1072
03:00		0	286		
03:15		10	280		
03:30		13	251		
03:45		9	234	32	1051
04:00		9	225		
04:15		17	268		
04:30		29	231		
04:45		31	286	86	1010
05:00		38	286		
05:15		47	289		
05:30		60	282		
05:45		77	315	222	1172
06:00		95	308		
06:15		144	299		
06:30		196	267		
06:45		209	270	644	1144
07:00		238	211		
07:15		304	224		
07:30		348	162		
07:45		399	172	1289	769
08:00		391	177		
08:15		394	164		
08:30		387	141		
08:45		383	160	1555	642
09:00		312	141		
09:15		294	90		
09:30		278	114		
09:45		267	72	1151	417
10:00		288	89		
10:15		224	68		
10:30		249	53		
10:45		254	46	1015	256
11:00		197	34		
11:15		227	41		
11:30		243	27		
11:45		244	26	911	128
Total		7038	9685		
Percent		42.1%	57.9%		
Grand Total		7038	9685		
Percent		42.1%	57.9%		
ADT		ADT 16,723		AADT 16,723	

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Huntington Drive (WB)
Btwn Colorado Place & Centennial Way

Start Time	13-Apr-19 Sat	West Morning	West Afternoon	Hour Totals Morning	Hour Totals Afternoon
12:00		29	280		
12:15		24	337		
12:30		24	263		
12:45		34	307	111	1187
01:00		26	260		
01:15		21	263		
01:30		11	278		
01:45		9	284	67	1085
02:00		16	302		
02:15		13	317		
02:30		13	282		
02:45		7	286	49	1187
03:00		4	279		
03:15		11	271		
03:30		12	274		
03:45		7	242	34	1066
04:00		8	258		
04:15		5	281		
04:30		16	210		
04:45		22	218	51	967
05:00		14	246		
05:15		18	237		
05:30		22	263		
05:45		25	229	79	975
06:00		51	220		
06:15		53	256		
06:30		74	196		
06:45		82	274	260	946
07:00		70	228		
07:15		69	222		
07:30		81	219		
07:45		135	214	355	883
08:00		142	203		
08:15		140	170		
08:30		123	147		
08:45		167	133	572	653
09:00		144	127		
09:15		213	98		
09:30		191	128		
09:45		271	103	819	456
10:00		221	124		
10:15		205	92		
10:30		246	101		
10:45		250	84	922	401
11:00		246	99		
11:15		310	115		
11:30		261	75		
11:45		308	58	1125	347
Total		4444	10153		
Percent		30.4%	69.6%		
Grand Total		4444	10153		
Percent		30.4%	69.6%		
ADT		ADT 14,597		AADT 14,597	

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Huntington Drive
Btwn Santa Clara St & Santa Anita Ave

Start Time	17-Apr-19 Wed	East		Hour Totals		West		Hour Totals		Combined Totals	
		Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00		24	161			17	205				
12:15		14	188			9	173				
12:30		11	160			7	200				
12:45		10	146	59	655	7	179	40	757	99	1412
01:00		8	174			8	196				
01:15		10	170			8	167				
01:30		9	208			10	185				
01:45		10	229	37	781	6	199	32	747	69	1528
02:00		9	186			4	164				
02:15		9	250			2	204				
02:30		5	280			4	179				
02:45		4	288	27	1004	2	204	12	751	39	1755
03:00		2	292			0	186				
03:15		1	350			7	204				
03:30		2	389			9	191				
03:45		5	347	10	1378	10	151	26	732	36	2110
04:00		4	472			6	192				
04:15		4	395			7	178				
04:30		5	458			21	190				
04:45		8	460	21	1785	20	215	54	775	75	2560
05:00		10	489			32	230				
05:15		8	473			35	197				
05:30		14	464			47	227				
05:45		31	485	63	1911	62	203	176	857	239	2768
06:00		25	398			83	247				
06:15		34	329			176	180				
06:30		36	370			279	170				
06:45		52	319	147	1416	363	154	901	751	1048	2167
07:00		64	268			401	161				
07:15		64	220			450	139				
07:30		112	194			476	128				
07:45		192	166	432	848	450	119	1777	547	2209	1395
08:00		180	130			443	135				
08:15		131	106			427	133				
08:30		139	101			447	84				
08:45		185	95	635	432	436	98	1753	450	2388	882
09:00		163	112			340	94				
09:15		119	126			292	71				
09:30		150	74			270	82				
09:45		132	65	564	377	242	54	1144	301	1708	678
10:00		108	54			230	55				
10:15		104	44			185	41				
10:30		112	52			221	32				
10:45		125	36	449	186	170	25	806	153	1255	339
11:00		120	26			168	21				
11:15		156	23			175	26				
11:30		176	32			188	15				
11:45		158	24	610	105	174	10	705	72	1315	177
Total		3054	10878			7426	6893			10480	17771
Percent		21.9%	78.1%			51.9%	48.1%			37.1%	62.9%
Grand Total		3054	10878			7426	6893			10480	17771
Percent		21.9%	78.1%			51.9%	48.1%			37.1%	62.9%
ADT		ADT 28,251		AADT 28,251							

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Huntington Drive
Btwn Santa Clara St & Santa Anita Ave

Start Time	13-Apr-19 Sat	East Morning	East Afternoon	Hour Totals Morning	Hour Totals Afternoon	West Morning	West Afternoon	Hour Totals Morning	Hour Totals Afternoon	Combined Totals Morning	Combined Totals Afternoon
12:00		35	235			21	290				
12:15		32	220			15	297				
12:30		33	222			22	250				
12:45		25	219	125	896	21	236	79	1073	204	1969
01:00		21	260			20	240				
01:15		23	231			9	219				
01:30		13	253			10	237				
01:45		12	252	69	996	10	253	49	949	118	1945
02:00		11	292			12	250				
02:15		11	253			7	223				
02:30		8	286			6	263				
02:45		7	290	37	1121	8	211	33	947	70	2068
03:00		5	299			5	221				
03:15		6	285			9	238				
03:30		4	348			10	237				
03:45		5	326	20	1258	10	190	34	886	54	2144
04:00		9	282			5	231				
04:15		5	301			11	216				
04:30		10	303			16	183				
04:45		6	157	30	1043	12	184	44	814	74	1857
05:00		4	187			5	194				
05:15		4	174			13	178				
05:30		15	206			23	200				
05:45		20	262	43	829	17	148	58	720	101	1549
06:00		12	245			39	167				
06:15		12	191			37	199				
06:30		25	176			42	203				
06:45		32	160	81	772	43	171	161	740	242	1512
07:00		40	182			55	194				
07:15		43	171			53	147				
07:30		65	160			77	175				
07:45		88	151	236	664	104	140	289	656	525	1320
08:00		73	129			88	138				
08:15		62	134			101	132				
08:30		82	117			95	113				
08:45		99	108	316	488	105	109	389	492	705	980
09:00		89	113			123	113				
09:15		95	120			143	97				
09:30		115	101			160	102				
09:45		116	69	415	403	191	88	617	400	1032	803
10:00		129	84			160	110				
10:15		219	75			172	75				
10:30		339	67			211	69				
10:45		369	73	1056	299	224	44	767	298	1823	597
11:00		302	70			245	54				
11:15		251	65			237	49				
11:30		257	48			233	45				
11:45		203	52	1013	235	259	28	974	176	1987	411
Total		3441	9004			3494	8151			6935	17155
Percent		27.6%	72.4%			30.0%	70.0%			28.8%	71.2%
Grand Total		3441	9004			3494	8151			6935	17155
Percent		27.6%	72.4%			30.0%	70.0%			28.8%	71.2%
ADT		ADT 24,090		AADT 24,090							

City Traffic Counters
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Santa Anita Ave
Btwn Santa Clara St & Huntington Dr

Start Time	17-Apr-19 Wed	North Morning	North Afternoon	Hour Totals Morning	Hour Totals Afternoon	South Morning	South Afternoon	Hour Totals Morning	Hour Totals Afternoon	Combined Totals Morning	Combined Totals Afternoon
12:00		26	173			30	241				
12:15		18	201			38	249				
12:30		22	198			35	176				
12:45		20	214	86	786	19	216	122	882	208	1668
01:00		7	199			20	220				
01:15		8	168			29	187				
01:30		9	177			17	163				
01:45		8	198	32	742	8	243	74	813	106	1555
02:00		8	206			16	265				
02:15		13	170			18	248				
02:30		8	214			4	234				
02:45		4	215	33	805	7	285	45	1032	78	1837
03:00		8	234			9	314				
03:15		8	271			11	262				
03:30		15	275			13	212				
03:45		11	236	42	1016	8	251	41	1039	83	2055
04:00		14	242			6	256				
04:15		23	261			9	305				
04:30		27	244			20	304				
04:45		49	268	113	1015	22	323	57	1188	170	2203
05:00		60	278			15	328				
05:15		70	296			35	311				
05:30		112	233			51	336				
05:45		120	264	362	1071	73	331	174	1306	536	2377
06:00		128	231			73	329				
06:15		177	255			74	273				
06:30		174	227			99	226				
06:45		219	262	698	975	93	296	339	1124	1037	2099
07:00		191	196			147	291				
07:15		311	193			209	213				
07:30		214	185			174	220				
07:45		252	211	968	785	224	193	754	917	1722	1702
08:00		225	230			260	188				
08:15		245	202			278	143				
08:30		220	119			278	142				
08:45		279	126	969	677	273	149	1089	622	2058	1299
09:00		223	109			209	142				
09:15		187	149			185	133				
09:30		197	121			218	127				
09:45		186	96	793	475	235	125	847	527	1640	1002
10:00		197	51			206	110				
10:15		168	70			191	99				
10:30		191	51			201	92				
10:45		187	58	743	230	214	60	812	361	1555	591
11:00		186	50			216	59				
11:15		200	24			183	46				
11:30		186	31			227	35				
11:45		196	25	768	130	235	34	861	174	1629	304
Total		5607	8707			5215	9985			10822	18692
Percent		39.2%	60.8%			34.3%	65.7%			36.7%	63.3%
Grand Total		5607	8707			5215	9985			10822	18692
Percent		39.2%	60.8%			34.3%	65.7%			36.7%	63.3%
ADT		ADT 29,514		AADT 29,514							

City Traffic Counters
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Santa Anita Ave
Btwn Santa Clara St & Huntington Dr

Start Time	13-Apr-19 Sat	North Morning	North Afternoon	Hour Totals Morning	Hour Totals Afternoon	South Morning	South Afternoon	Hour Totals Morning	Hour Totals Afternoon	Combined Totals Morning	Combined Totals Afternoon
12:00		29	231			43	233				
12:15		23	193			46	213				
12:30		37	196			51	230				
12:45		25	212	114	832	32	216	172	892	286	1724
01:00		13	199			32	190				
01:15		19	246			29	193				
01:30		20	191			20	167				
01:45		18	245	70	881	20	174	101	724	171	1605
02:00		6	238			19	200				
02:15		10	205			15	162				
02:30		5	198			10	173				
02:45		7	213	28	854	12	170	56	705	84	1559
03:00		13	164			23	208				
03:15		18	195			13	222				
03:30		15	167			22	179				
03:45		10	187	56	713	12	151	70	760	126	1473
04:00		10	214			10	183				
04:15		13	202			17	191				
04:30		23	182			16	213				
04:45		29	191	75	789	17	299	60	886	135	1675
05:00		32	185			11	297				
05:15		28	185			27	311				
05:30		29	175			17	281				
05:45		42	209	131	754	21	290	76	1179	207	1933
06:00		34	193			35	202				
06:15		62	205			43	221				
06:30		72	145			64	215				
06:45		73	174	241	717	89	206	231	844	472	1561
07:00		92	147			66	172				
07:15		137	207			104	191				
07:30		140	152			109	184				
07:45		157	131	526	637	159	169	438	716	964	1353
08:00		166	156			167	161				
08:15		193	152			159	113				
08:30		180	128			187	126				
08:45		197	125	736	561	238	115	751	515	1487	1076
09:00		237	129			277	128				
09:15		208	142			229	129				
09:30		232	111			250	131				
09:45		257	134	934	516	292	117	1048	505	1982	1021
10:00		231	99			257	110				
10:15		238	99			259	140				
10:30		222	83			279	116				
10:45		236	92	927	373	292	80	1087	446	2014	819
11:00		258	82			279	98				
11:15		246	62			242	81				
11:30		237	60			226	79				
11:45		220	48	961	252	274	74	1021	332	1982	584
Total		4799	7879			5111	8504			9910	16383
Percent		37.9%	62.1%			37.5%	62.5%			37.7%	62.3%
Grand Total		4799	7879			5111	8504			9910	16383
Percent		37.9%	62.1%			37.5%	62.5%			37.7%	62.3%
ADT		ADT 26,293		AADT 26,293							

City Traffic Counters
www.ctcounters.com

Santa Anita Ave
S/O Huntington Drive

Start Time	17-Apr-19 Wed	North Morning	North Afternoon	Hour Totals Morning	Hour Totals Afternoon	South Morning	South Afternoon	Hour Totals Morning	Hour Totals Afternoon	Combined Totals Morning	Combined Totals Afternoon
12:00		17	181			32	196				
12:15		15	211			30	247				
12:30		17	231			25	176				
12:45		13	203	62	826	15	191	102	810	164	1636
01:00		7	198			18	219				
01:15		6	197			21	197				
01:30		3	187			14	199				
01:45		6	221	22	803	14	241	67	856	89	1659
02:00		4	215			13	229				
02:15		8	220			15	239				
02:30		10	223			10	241				
02:45		4	234	26	892	4	252	42	961	68	1853
03:00		4	281			5	349				
03:15		7	297			9	318				
03:30		14	295			10	256				
03:45		11	245	36	1118	5	336	29	1259	65	2377
04:00		10	213			5	353				
04:15		24	208			7	352				
04:30		20	247			8	323				
04:45		42	251	96	919	24	386	44	1414	140	2333
05:00		56	269			14	392				
05:15		61	262			30	401				
05:30		97	228			36	400				
05:45		106	247	320	1006	64	410	144	1603	464	2609
06:00		127	223			49	413				
06:15		180	228			70	353				
06:30		219	205			71	272				
06:45		290	202	816	858	88	334	278	1372	1094	2230
07:00		306	204			118	304				
07:15		340	179			188	231				
07:30		327	176			173	228				
07:45		297	191	1270	750	217	204	696	967	1966	1717
08:00		326	211			257	201				
08:15		290	185			239	157				
08:30		308	116			248	136				
08:45		323	115	1247	627	251	153	995	647	2242	1274
09:00		282	91			203	160				
09:15		267	115			149	134				
09:30		252	108			203	132				
09:45		232	71	1033	385	216	127	771	553	1804	938
10:00		229	47			166	114				
10:15		202	61			148	106				
10:30		218	37			166	78				
10:45		222	51	871	196	170	56	650	354	1521	550
11:00		216	34			197	57				
11:15		235	23			168	38				
11:30		218	26			202	26				
11:45		205	17	874	100	217	37	784	158	1658	258
Total		6673	8480			4602	10954			11275	19434
Percent		44.0%	56.0%			29.6%	70.4%			36.7%	63.3%
Grand Total		6673	8480			4602	10954			11275	19434
Percent		44.0%	56.0%			29.6%	70.4%			36.7%	63.3%
ADT		ADT 30,709		AADT 30,709							

City Traffic Counters
www.ctcounters.com

Santa Anita Ave
S/O Huntington Drive

Start Time	13-Apr-19 Sat	North Morning	North Afternoon	Hour Totals Morning	Hour Totals Afternoon	South Morning	South Afternoon	Hour Totals Morning	Hour Totals Afternoon	Combined Totals Morning	Combined Totals Afternoon
12:00		27	275			44	252				
12:15		21	252			30	215				
12:30		31	279			29	227				
12:45		19	257	98	1063	28	208	131	902	229	1965
01:00		17	224			27	201				
01:15		14	243			27	192				
01:30		19	234			10	185				
01:45		13	292	63	993	17	217	81	795	144	1788
02:00		10	249			18	213				
02:15		9	226			14	222				
02:30		4	248			8	212				
02:45		5	223	28	946	11	230	51	877	79	1823
03:00		10	204			17	234				
03:15		9	199			11	261				
03:30		15	190			16	242				
03:45		11	214	45	807	11	245	55	982	100	1789
04:00		6	241			7	238				
04:15		11	207			13	261				
04:30		19	211			12	267				
04:45		24	213	60	872	12	274	44	1040	104	1912
05:00		23	228			12	266				
05:15		26	219			12	249				
05:30		28	186			15	256				
05:45		42	193	119	826	28	248	67	1019	186	1845
06:00		42	214			24	250				
06:15		66	220			33	225				
06:30		64	163			45	233				
06:45		71	177	243	774	68	200	170	908	413	1682
07:00		102	162			68	182				
07:15		107	199			78	201				
07:30		148	138			84	180				
07:45		174	117	531	616	146	146	376	709	907	1325
08:00		195	145			128	166				
08:15		218	125			141	133				
08:30		187	118			162	156				
08:45		243	108	843	496	189	110	620	565	1463	1061
09:00		285	112			191	149				
09:15		230	105			199	133				
09:30		279	93			216	139				
09:45		281	109	1075	419	206	124	812	545	1887	964
10:00		276	100			219	120				
10:15		269	97			179	124				
10:30		272	82			225	95				
10:45		307	76	1124	355	242	100	865	439	1989	794
11:00		302	66			222	94				
11:15		299	70			220	81				
11:30		269	36			197	63				
11:45		293	36	1163	208	242	79	881	317	2044	525
Total		5392	8375			4153	9098			9545	17473
Percent		39.2%	60.8%			31.3%	68.7%			35.3%	64.7%
Grand Total		5392	8375			4153	9098			9545	17473
Percent		39.2%	60.8%			31.3%	68.7%			35.3%	64.7%
ADT		ADT 27,018		AADT 27,018							

APPENDIX B

ICU/HCM AND LEVELS OF SERVICE EXPLANATION

ICU AND HCM DATA WORKSHEETS
WEEKDAY AM, WEEKDAY PM, AND SATURDAY PM
PEAK HOURS

INTERSECTION CAPACITY UTILIZATION (ICU) DESCRIPTION

Level of Service is a term used to describe prevailing conditions and their effect on traffic. Broadly interpreted, the Levels of Service concept denotes any one of a number of differing combinations of operating conditions which may occur as a roadway is accommodating various traffic volumes. Level of Service is a qualitative measure of the effect of such factors as travel speed, travel time, traffic interruptions, freedom to maneuver, safety, driving comfort and convenience.

Six Levels of Service, A through F, have been defined in the 1965 *Highway Capacity Manual*, published by the Transportation Research Board. Level of Service A describes a condition of free flow, with low traffic volumes and relatively high speeds, while Level of Service F describes forced traffic flow at low speeds with jammed conditions and queues which cannot clear during the green phases.

The Intersection Capacity Utilization (ICU) method of intersection capacity analysis has been used in our studies. It directly relates traffic demand and available capacity for key intersection movements, regardless of present signal timing, The capacity per hour of green time for each approach is calculated based on the methods of the *Highway Capacity Manual*. The proportion of total signal time needed by each key movement is determined and compared to the total time available (100 percent of the hour). The result of summing the requirements of the conflicting key movements plus an allowance for clearance times is expressed as a decimal fraction. Conflicting key traffic movements are those opposing movements whose combined green time requirements are greatest.

The resulting ICU represents the proportion of the total hour required to accommodate intersection demand volumes if the key conflicting traffic movements are operating at capacity. Other movements may be operating near capacity, or may be operating at significantly better levels. The ICU may be translated to a Level of Service as tabulated below.

The Levels of Service (abbreviated from the *Highway Capacity Manual*) are listed here with their corresponding ICU and Load Factor equivalents. Load Factor is that proportion of the signal cycles during the peak hour which are fully loaded; i.e. when all of the vehicles waiting at the beginning of green are not able to clear on that green phase.

Intersection Capacity Utilization Characteristics

Level of Service	Load Factor	Equivalent ICU
A	0.0	0.00 - 0.60
B	0.0 - 0.1	0.61 - 0.70
C	0.1 - 0.3	0.71 - 0.80
D	0.3 - 0.7	0.81 - 0.90
E	0.7 - 1.0	0.91 - 1.00
F	Not Applicable	Not Applicable

SERVICE LEVEL A
There are no loaded cycles and few are even close to loaded at this service level. No approach phase is fully utilized by traffic and no vehicle waits longer than one red indication.

SERVICE LEVEL B
This level represents stable operation where an occasional approach phase is fully utilized and a substantial number are approaching full use. Many drivers begin to feel restricted within platoons of vehicles.

SERVICE LEVEL C
At this level stable operation continues. Loading is still intermittent but more frequent than at Level B. Occasionally drivers may have to wait through more than one red signal indication and backups may develop behind turning vehicles. Most drivers feel somewhat restricted, but not objectionably so.

SERVICE LEVEL D
This level encompasses a zone of increasing restriction approaching instability at the intersection. Delays to approaching vehicles may be substantial during short peaks within the peak hour, but enough cycles with lower demand occur to permit periodic clearance of queues, thus preventing excessive backups. Drivers frequently have to wait through more than one red signal. This level is the lower limit of acceptable operation to most drivers.

SERVICE LEVEL E
This represents near capacity and capacity operation. At capacity (ICU = 1.0) it represents the most vehicles that the particular intersection can accommodate. However, full utilization of every signal cycle is seldom attained no matter how great the demand. At this level all drivers wait through more than one red signal, and frequently through several.

SERVICE LEVEL F
Jammed conditions. Traffic backed up from a downstream location on one of the street restricts or prevents movement of traffic through the intersection under consideration.

LEVEL OF SERVICE FOR UNSIGNALIZED INTERSECTIONS

In the *Highway Capacity Manual (HCM)*, published by the Transportation Research Board, 2000, level of service for unsignalized intersections is defined in terms of delay, which is a measure of driver discomfort, frustration, fuel consumption, and lost travel time. The delay experienced by a motorist is made up of a number of factors that relate to control, geometrics, traffic, and incidents. Total delay is the difference between the travel time actually experienced and the reference travel time that would result during base conditions, in the absence of incidents, control, traffic, or geometric delay. Only the portion of total delay attributed to the traffic control measures, either traffic signals or stop signs, is quantified. This delay is called *control delay*. Control delay includes initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay.

Level of Service criteria for unsignalized intersections are stated in terms of the average control delay per vehicle. The level of service is determined by the computed or measured control delay and is defined for each minor movement. Average control delay for any particular minor movement is a function of the service time for the approach and the degree of utilization. (Level of service is not defined for the intersection as a whole for two-way stop controlled intersections.)

Level of Service Criteria for TWSC/AWSC Intersections

Level of Service	Average Control Delay (Sec/Veh)
A	≤ 10
B	> 10 and ≤ 15
C	> 15 and ≤ 25
D	> 25 and ≤ 35
E	> 35 and ≤ 50
F	> 50

Level of Service (LOS) values are used to describe intersection operations with service levels varying from LOS A (free flow) to LOS F (jammed condition). The following descriptions summarize *HCM* criteria for each level of service:

LOS A describes operations with very low control delay, up to 10 seconds per vehicle.

LOS B describes operations with control delay greater than 10 and up to 15 seconds per vehicle.

LOS C describes operations with control delay greater than 15 and up to 25 seconds per vehicle.

LOS D describes operations with control delay greater than 25 and up to 35 seconds per vehicle.

LOS E describes operations with control delay greater than 35 and up to 50 seconds per vehicle.

LOS F describes operations with control delay in excess of 50 seconds per vehicle. For two-way stop controlled intersections, LOS F exists when there are insufficient gaps of suitable size to allow side-street demand to safely cross through a major-street traffic stream. This level of service is generally evident from extremely long control delays experienced by side-street traffic and by queuing on the minor-street approaches.

LINSCOTT, LAW & GREENSPAN, ENGINEERS
600 S. Lake Avenue, Suite 500, Pasadena CA 91106
(626) 796.2322 Fax (626) 792.0941

INTERSECTION CAPACITY UTILIZATION

Gate 3-Holly Avenue @ Huntington Drive-Campus Drive

N-S St: Gate 3-Holly Avenue
E-W St: Huntington Drive-Campus Drive
Project: 125 W. Huntington Drive, Buildings C & D Project/1-16-4200-2
File: ICU1

Peak hr: AM
Annual Growth: 1.00%

Date: 08/20/2019
Date of Count: 2019
Projection Year: 2021

	2019 EXIST. TRAFFIC			2019 EXISTING WITH PROJECT				2019 EXIST. W/PROJECT + MITIGATION				2021 FUTURE PRE-PROJECT				2021 FUTURE WITH PROJECT				2021 FUTURE W/PROJECT + MITIGATIO			
	1	2	V/C	Added	Total		V/C	Added	Total	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C
Movement	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio
Nb Left	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Nb Thru	277	3200	0.145 *	0	277	3200	0.145 *	0	277	3200	0.145 *	7	290	3200	0.150 *	0	290	3200	0.150 *	0	290	3200	0.150 *
Nb Right	188	0	-	0	188	0	-	0	188	0	-	0	192	0	-	0	192	0	-	0	192	0	-
Sb Left	2	0	0.001	0	2	0	0.001	0	2	0	0.001	0	2	0	0.001	0	2	0	0.001	0	2	0	0.001
Sb Thru	2	3200	0.001	0	2	3200	0.001	0	2	3200	0.001	0	2	3200	0.001	0	2	3200	0.001	0	2	3200	0.001
Sb Right	2	1600	0.001	0	2	1600	0.001	0	2	1600	0.001	0	2	1600	0.001	0	2	1600	0.001	0	2	1600	0.001
Eb Left	9	2880	0.003	0	9	2880	0.003	0	9	2880	0.003	0	9	2880	0.003	0	9	2880	0.003	0	9	2880	0.003
Eb Thru	783	4800	0.163 *	4	787	4800	0.164 *	0	787	4800	0.164 *	33	832	4800	0.173 *	4	836	4800	0.174 *	0	836	4800	0.174 *
Eb Right	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-
Wb Left	273	2880	0.095 *	0	273	2880	0.095 *	0	273	2880	0.095 *	1	279	2880	0.097 *	0	279	2880	0.097 *	0	279	2880	0.097 *
Wb Thru	1045	6400	0.164	10	1055	6400	0.165	0	1055	6400	0.165	37	1103	6400	0.173	10	1113	6400	0.174	0	1113	6400	0.174
Wb Right	3	0	-	0	3	0	-	0	3	0	-	0	3	0	-	0	3	0	-	0	3	0	-
Eb2 Left[3]	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Eb2 Thru[3]	427	3200	0.156	0	427	3200	0.156	0	427	3200	0.156	2	438	3200	0.160	0	438	3200	0.160	0	438	3200	0.160
Eb2 Right[3]	72	0	-	0	72	0	-	0	72	0	-	0	73	0	-	0	73	0	-	0	73	0	-
Wb2 Left[4]	87	1600	0.054	0	87	1600	0.054	0	87	1600	0.054	0	89	1600	0.055	0	89	1600	0.055	0	89	1600	0.055
Wb2 Thru[4]	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Wb2 Right[4]	267	3200	0.083 *	0	267	3200	0.083 *	0	267	3200	0.083 *	4	276	3200	0.086 *	0	276	3200	0.086 *	0	276	3200	0.086 *
Yellow Allowance: (NB-SB-WB2 Split Phase)			0.100 *				0.100 *				0.100 *				0.100 *				0.100 *				0.100 *
ICU			0.588				0.589				0.589				0.608				0.609				0.609
LOS			A				A				A				B				B				B

** Key conflicting movement as a part of ICU*
1 Counts conducted by The Traffic Solution
2 Capacity expressed in veh/hour of green
3 Represents Campus Drive eastbound approach. This approach operates concurrently during the Huntington Drive eastbound approach phase.
4 Represents Campus Drive westbound approach

LINSCOTT, LAW & GREENSPAN, ENGINEERS
600 S. Lake Avenue, Suite 500, Pasadena CA 91106
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INTERSECTION CAPACITY UTILIZATION

Gate 3-Holly Avenue @ Huntington Drive-Campus Drive

N-S St: Gate 3-Holly Avenue
E-W St: Huntington Drive-Campus Drive
Project: 125 W. Huntington Drive, Buildings C & D Project/1-16-4200-2
File: ICU1

Peak hr: PM
Annual Growth: 1.00%

Date: 08/20/2019
Date of Count: 2019
Projection Year: 2021

	2019 EXIST. TRAFFIC			2019 EXISTING WITH PROJECT				2019 EXIST. W/PROJECT + MITIGATION				2021 FUTURE PRE-PROJECT				2021 FUTURE WITH PROJECT				2021 FUTURE W/PROJECT + MITIGATIO			
	1	2	V/C	Added	Total		V/C	Added	Total	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C
Movement	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio
Nb Left	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Nb Thru	176	3200	0.082 *	0	176	3200	0.082 *	0	176	3200	0.082 *	1	181	3200	0.084 *	0	181	3200	0.084 *	0	181	3200	0.084 *
Nb Right	86	0	-	0	86	0	-	0	86	0	-	0	88	0	-	0	88	0	-	0	88	0	-
Sb Left	3	0	0.001	0	3	0	0.001	0	3	0	0.001	0	3	0	0.001	0	3	0	0.001	0	3	0	0.001
Sb Thru	3	3200	0.002	0	3	3200	0.002	0	3	3200	0.002	0	3	3200	0.002	0	3	3200	0.002	0	3	3200	0.002
Sb Right	5	1600	0.003 *	0	5	1600	0.003 *	0	5	1600	0.003 *	0	5	1600	0.003 *	0	5	1600	0.003 *	0	5	1600	0.003 *
Eb Left	9	2880	0.003	0	9	2880	0.003	0	9	2880	0.003	0	9	2880	0.003	0	9	2880	0.003	0	9	2880	0.003
Eb Thru	1066	4800	0.222	10	1076	4800	0.224	0	1076	4800	0.224	34	1121	4800	0.234	10	1131	4800	0.236	0	1131	4800	0.236
Eb Right	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-
Wb Left	244	2880	0.085 *	0	244	2880	0.085 *	0	244	2880	0.085 *	7	256	2880	0.089 *	0	256	2880	0.089 *	0	256	2880	0.089 *
Wb Thru	1057	6400	0.165	1	1058	6400	0.166	0	1058	6400	0.166	80	1158	6400	0.181	1	1159	6400	0.181	0	1159	6400	0.181
Wb Right	2	0	-	0	2	0	-	0	2	0	-	0	2	0	-	0	2	0	-	0	2	0	-
Eb2 Left[3]	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Eb2 Thru[3]	622	3200	0.252 *	0	622	3200	0.252 *	0	622	3200	0.252 *	6	640	3200	0.259 *	0	640	3200	0.259 *	0	640	3200	0.259 *
Eb2 Right[3]	185	0	-	0	185	0	-	0	185	0	-	0	189	0	-	0	189	0	-	0	189	0	-
Wb2 Left[4]	51	1600	0.032	0	51	1600	0.032	0	51	1600	0.032	0	52	1600	0.033	0	52	1600	0.033	0	52	1600	0.033
Wb2 Thru[4]	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Wb2 Right[4]	192	3200	0.060 *	0	192	3200	0.060 *	0	192	3200	0.060 *	5	201	3200	0.063 *	0	201	3200	0.063 *	0	201	3200	0.063 *
Yellow Allowance: (NB-SB-WB2 Split Phase)			0.100 *				0.100 *				0.100 *				0.100 *				0.100 *				0.100 *
ICU			0.582				0.582				0.582				0.598				0.598				0.598
LOS			A				A				A				A				A				A

** Key conflicting movement as a part of ICU*
1 Counts conducted by The Traffic Solution
2 Capacity expressed in veh/hour of green
3 Represents Campus Drive eastbound approach. This approach operates concurrently during the Huntington Drive eastbound approach phase.
4 Represents Campus Drive westbound approach

LINSCOTT, LAW & GREENSPAN, ENGINEERS
600 S. Lake Avenue, Suite 500, Pasadena CA 91106
(626) 796.2322 Fax (626) 792.0941

INTERSECTION CAPACITY UTILIZATION

Gate 3-Holly Avenue @ Huntington Drive-Campus Drive

N-S St: Gate 3-Holly Avenue
E-W St: Huntington Drive-Campus Drive
Project: 125 W. Huntington Drive, Buildings C & D Project/1-16-4200-2
File: ICU1

Peak hr: SAT PM
Annual Growth: 1.00%

Date: 08/20/2019
Date of Count: 2019
Projection Year: 2021

	2019 EXIST. TRAFFIC			2019 EXISTING WITH PROJECT				2019 EXIST. W/PROJECT + MITIGATION				2021 FUTURE PRE-PROJECT				2021 FUTURE WITH PROJECT				2021 FUTURE W/PROJECT + MITIGATIO			
	1	2	V/C	Added	Total		V/C	Added	Total	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C
Movement	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio
Nb Left	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Nb Thru	129	3200	0.056 *	0	129	3200	0.056 *	0	129	3200	0.056 *	2	134	3200	0.058 *	0	134	3200	0.058 *	0	134	3200	0.058 *
Nb Right	50	0	-	0	50	0	-	0	50	0	-	0	51	0	-	0	51	0	-	0	51	0	-
Sb Left	57	0	0.018	0	57	0	0.018	0	57	0	0.018	0	58	0	0.018	0	58	0	0.018	0	58	0	0.018
Sb Thru	141	3200	0.062 *	0	141	3200	0.062 *	0	141	3200	0.062 *	0	144	3200	0.063 *	0	144	3200	0.063 *	0	144	3200	0.063 *
Sb Right	92	1600	0.058	0	92	1600	0.058	0	92	1600	0.058	0	94	1600	0.059	0	94	1600	0.059	0	94	1600	0.059
Eb Left	15	2880	0.005	0	15	2880	0.005	0	15	2880	0.005	0	15	2880	0.005	0	15	2880	0.005	0	15	2880	0.005
Eb Thru	749	4800	0.156	11	760	4800	0.158	0	760	4800	0.158	39	803	4800	0.167	11	814	4800	0.170	0	814	4800	0.170
Eb Right	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-
Wb Left	141	2880	0.049 *	0	141	2880	0.049 *	0	141	2880	0.049 *	2	146	2880	0.051 *	0	146	2880	0.051 *	0	146	2880	0.051 *
Wb Thru	785	6400	0.125	11	796	6400	0.126	0	796	6400	0.126	68	869	6400	0.138	11	880	6400	0.140	0	880	6400	0.140
Wb Right	13	0	-	0	13	0	-	0	13	0	-	0	13	0	-	0	13	0	-	0	13	0	-
Eb2 Left[3]	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Eb2 Thru[3]	396	3200	0.163 *	0	396	3200	0.163 *	0	396	3200	0.163 *	15	419	3200	0.171 *	0	419	3200	0.171 *	0	419	3200	0.171 *
Eb2 Right[3]	124	0	-	0	124	0	-	0	124	0	-	2	129	0	-	0	129	0	-	0	129	0	-
Wb2 Left[4]	17	1600	0.011	0	17	1600	0.011	0	17	1600	0.011	0	17	1600	0.011	0	17	1600	0.011	0	17	1600	0.011
Wb2 Thru[4]	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Wb2 Right[4]	201	3200	0.063 *	0	201	3200	0.063 *	0	201	3200	0.063 *	7	212	3200	0.066 *	0	212	3200	0.066 *	0	212	3200	0.066 *
Yellow Allowance: (NB-SB-WB2 Split Phase)			0.100 *				0.100 *				0.100 *				0.100 *				0.100 *				0.100 *
ICU			0.492				0.492				0.492				0.509				0.509				0.509
LOS			A				A				A				A				A				A

** Key conflicting movement as a part of ICU*
1 Counts conducted by The Traffic Solution
2 Capacity expressed in veh/hour of green
3 Represents Campus Drive eastbound approach. This approach operates concurrently during the Huntington Drive eastbound approach phase.
4 Represents Campus Drive westbound approach

Int. 2: Colorado Place/San Juan Drive

	EXISTING (2019) CONDITIONS			EXISTING (2019) WITH PROJECT CONDITIONS			YEAR 2021 WITHOUT PROJECT CONDITIONS			YEAR 2021 WITH PROJECT CONDITIONS		
	v (veh/h)	Control Delay (s/veh)	LOS	v (veh/h)	Control Delay (s/veh)	LOS	v (veh/h)	Control Delay (s/veh)	LOS	v (veh/h)	Control Delay (s/veh)	LOS
Weekday AM Peak Hour												
Movement 1	0	0.0	A	0	0.0	A	64	8.1	A	64	8.2	A
Movement 4	5	10.6	B	31	11.0	B	12	10.9	B	38	11.3	B
Movement 8	26	22.8	C	59	23.1	C	28	39.7	E	61	41.9	E
Movement 12	0	0.0	A	0	0.0	A	22	9.3	A	22	9.4	A
Average Weighted Delay		20.8	C		20.8	C		15.6	C		20.1	C
Weekday PM Peak Hour												
Movement 1	0	0.0	A	0	0.0	A	41	12.7	B	41	12.8	B
Movement 4	61	7.9	A	87	8.1	A	63	8.0	A	89	8.1	A
Movement 8	20	17.7	C	41	15.9	C	30	32.0	D	51	31.0	D
Movement 12	0	0.0	A	0	0.0	A	119	17.7	C	119	18.0	C
Average Weighted Delay		10.3	B		10.6	B		16.2	C		16.6	C
Saturday PM Peak Hour												
Movement 1	0	0.0	A	0	0.0	A	43	8.9	A	43	9.0	A
Movement 4	4	7.9	A	35	8.0	A	6	7.9	A	37	8.1	A
Movement 8	44	12.3	B	81	12.8	B	48	16.7	C	85	17.3	C
Movement 12	0	0.0	A	0	0.0	A	61	10.7	B	61	10.8	B
Average Weighted Delay		11.9	B		11.9	B		11.9	B		12.5	B

HCS7 Two-Way Stop-Control Report

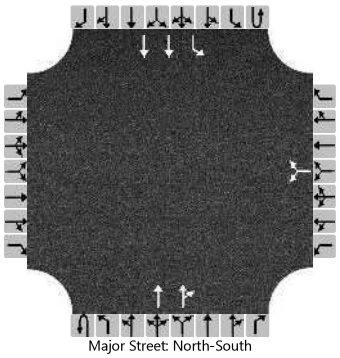
General Information

Analyst	DR
Agency/Co.	LLG Engineers
Date Performed	6/19/2019
Analysis Year	2019
Time Analyzed	AM PH Existing
Intersection Orientation	North-South
Project Description	125 W. Huntington Dr. Bldgs C & D/1-16-4200-2

Site Information

Intersection	Int-2
Jurisdiction	Arcadia
East/West Street	San Juan Drive
North/South Street	Colorado Place
Peak Hour Factor	1.00
Analysis Time Period (hrs)	0.25

Lanes


Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		0	1	0	0	0	2	0	0	1	2	0
Configuration							LR				T	TR		L	T	
Volume (veh/h)						16		10			1058	10	0	5	282	
Percent Heavy Vehicles (%)						3		3					3	3		
Proportion Time Blocked																
Percent Grade (%)						0										
Right Turn Channelized																
Median Type | Storage		Undivided														

Critical and Follow-up Headways

Base Critical Headway (sec)						7.5		6.9						4.1		
Critical Headway (sec)						6.86		6.96						4.16		
Base Follow-Up Headway (sec)						3.5		3.3						2.2		
Follow-Up Headway (sec)						3.53		3.33						2.23		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)							26							5		
Capacity, c (veh/h)							228							642		
v/c Ratio							0.11							0.01		
95% Queue Length, Q_{95} (veh)							0.4							0.0		
Control Delay (s/veh)							22.8							10.6		
Level of Service (LOS)							C							B		
Approach Delay (s/veh)						22.8							0.2			
Approach LOS						C										

HCS7 Two-Way Stop-Control Report

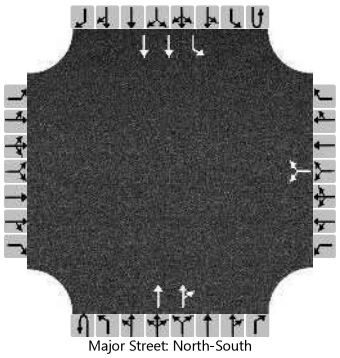
General Information

Analyst	DR
Agency/Co.	LLG Engineers
Date Performed	6/19/2019
Analysis Year	2019
Time Analyzed	PM PH Existing
Intersection Orientation	North-South
Project Description	125 W. Huntington Dr. Bldgs C & D/1-16-4200-2

Site Information

Intersection	Int-2
Jurisdiction	Arcadia
East/West Street	San Juan Drive
North/South Street	Colorado Place
Peak Hour Factor	1.00
Analysis Time Period (hrs)	0.25

Lanes


Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		0	1	0	0	0	2	0	0	1	2	0
Configuration							LR				T	TR		L	T	
Volume (veh/h)						13		7			253	17	0	61	1244	
Percent Heavy Vehicles (%)						3		3					3	3		
Proportion Time Blocked																
Percent Grade (%)						0										
Right Turn Channelized																
Median Type | Storage		Undivided														

Critical and Follow-up Headways

Base Critical Headway (sec)						7.5		6.9						4.1		
Critical Headway (sec)						6.86		6.96						4.16		
Base Follow-Up Headway (sec)						3.5		3.3						2.2		
Follow-Up Headway (sec)						3.53		3.33						2.23		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)							20							61		
Capacity, c (veh/h)							304							1283		
v/c Ratio							0.07							0.05		
95% Queue Length, Q_{95} (veh)							0.2							0.1		
Control Delay (s/veh)							17.7							7.9		
Level of Service (LOS)							C							A		
Approach Delay (s/veh)						17.7								0.4		
Approach LOS						C										

HCS7 Two-Way Stop-Control Report

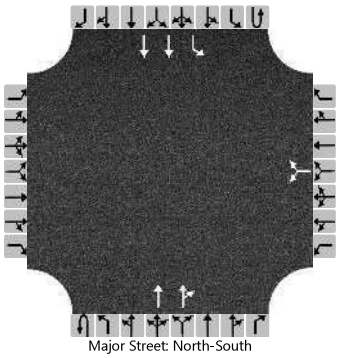
General Information

Analyst	DR
Agency/Co.	LLG Engineers
Date Performed	6/19/2019
Analysis Year	2019
Time Analyzed	SAT PH Existing
Intersection Orientation	North-South
Project Description	125 W. Huntington Dr. Bldgs C & D/1-16-4200-2

Site Information

Intersection	Int-2
Jurisdiction	Arcadia
East/West Street	San Juan Drive
North/South Street	Colorado Place
Peak Hour Factor	1.00
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		0	1	0	0	0	2	0	0	1	2	0
Configuration							LR				T	TR		L	T	
Volume (veh/h)						31		13			261	35	0	4	531	
Percent Heavy Vehicles (%)						3		3					3	3		
Proportion Time Blocked																
Percent Grade (%)						0										
Right Turn Channelized																
Median Type | Storage						Undivided										

Critical and Follow-up Headways

Base Critical Headway (sec)						7.5		6.9						4.1		
Critical Headway (sec)						6.86		6.96						4.16		
Base Follow-Up Headway (sec)						3.5		3.3						2.2		
Follow-Up Headway (sec)						3.53		3.33						2.23		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)							44							4		
Capacity, c (veh/h)							534							1255		
v/c Ratio							0.08							0.00		
95% Queue Length, Q_{95} (veh)							0.3							0.0		
Control Delay (s/veh)							12.3							7.9		
Level of Service (LOS)							B							A		
Approach Delay (s/veh)						12.3							0.1			
Approach LOS						B										

HCS7 Two-Way Stop-Control Report

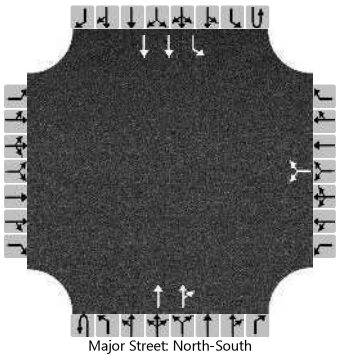
General Information

Analyst	DR
Agency/Co.	LLG Engineers
Date Performed	8/19/2019
Analysis Year	2019
Time Analyzed	AM PH Existing + Project
Intersection Orientation	North-South
Project Description	125 W. Huntington Dr. Bldgs C & D/1-16-4200-2

Site Information

Intersection	Int-2
Jurisdiction	Arcadia
East/West Street	San Juan Drive
North/South Street	Colorado Place
Peak Hour Factor	1.00
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		0	1	0	0	0	2	0	0	1	2	0
Configuration							LR				T	TR		L	T	
Volume (veh/h)						22		37			1078	15	0	31	300	
Percent Heavy Vehicles (%)						3		3					3	3		
Proportion Time Blocked																
Percent Grade (%)						0										
Right Turn Channelized																
Median Type | Storage		Undivided														

Critical and Follow-up Headways

Base Critical Headway (sec)						7.5		6.9						4.1		
Critical Headway (sec)						6.86		6.96						4.16		
Base Follow-Up Headway (sec)						3.5		3.3						2.2		
Follow-Up Headway (sec)						3.53		3.33						2.23		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)							59							31		
Capacity, c (veh/h)							257							628		
v/c Ratio							0.23							0.05		
95% Queue Length, Q_{95} (veh)							0.9							0.2		
Control Delay (s/veh)							23.1							11.0		
Level of Service (LOS)							C							B		
Approach Delay (s/veh)						23.1								1.0		
Approach LOS						C										

HCS7 Two-Way Stop-Control Report

General Information

Analyst	DR
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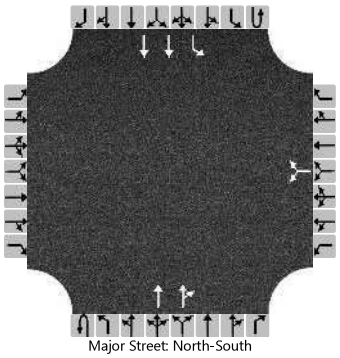
Intersection Orientation	North-South
Project Description	125 W. Huntington Dr. Bldgs C & D/1-16-4200-2

Site Information

Intersection	Int-2
Jurisdiction	Arcadia
East/West Street	San Juan Drive
North/South Street	Colorado Place
Peak Hour Factor	1.00
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		0	1	0	0	0	2	0	0	1	2	0
Configuration							LR				T	TR		L	T	
Volume (veh/h)						16		25			265	23	0	87	1263	
Percent Heavy Vehicles (%)						3		3					3	3		
Proportion Time Blocked																
Percent Grade (%)						0										
Right Turn Channelized																
Median Type | Storage		Undivided														

Critical and Follow-up Headways

Base Critical Headway (sec)						7.5		6.9						4.1		
Critical Headway (sec)						6.86		6.96						4.16		
Base Follow-Up Headway (sec)						3.5		3.3						2.2		
Follow-Up Headway (sec)						3.53		3.33						2.23		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)							41							87		
Capacity, c (veh/h)							372							1264		
v/c Ratio							0.11							0.07		
95% Queue Length, Q_{95} (veh)							0.4							0.2		
Control Delay (s/veh)							15.9							8.1		
Level of Service (LOS)							C							A		
Approach Delay (s/veh)						15.9								0.5		
Approach LOS						C										

HCS7 Two-Way Stop-Control Report

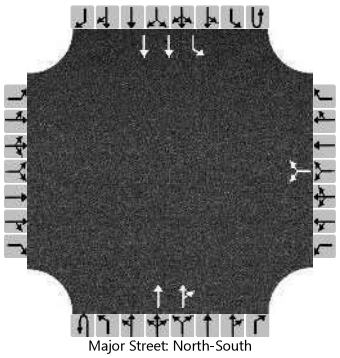
General Information

Analyst	DR
Agency/Co.	LLG Engineers
Date Performed	8/19/2019
Analysis Year	2019
Time Analyzed	SAT PH Existing + Project
Intersection Orientation	North-South
Project Description	125 W. Huntington Dr. Bldgs C & D/1-16-4200-2

Site Information

Intersection	Int-2
Jurisdiction	Arcadia
East/West Street	San Juan Drive
North/South Street	Colorado Place
Peak Hour Factor	1.00
Analysis Time Period (hrs)	0.25

Lanes


Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		0	1	0	0	0	2	0	0	1	2	0
Configuration							LR				T	TR		L	T	
Volume (veh/h)						38		43			283	42	0	35	554	
Percent Heavy Vehicles (%)						3		3					3	3		
Proportion Time Blocked																
Percent Grade (%)						0										
Right Turn Channelized																
Median Type | Storage						Undivided										

Critical and Follow-up Headways

Base Critical Headway (sec)						7.5		6.9						4.1		
Critical Headway (sec)						6.86		6.96						4.16		
Base Follow-Up Headway (sec)						3.5		3.3						2.2		
Follow-Up Headway (sec)						3.53		3.33						2.23		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)							81							35		
Capacity, c (veh/h)							545							1224		
v/c Ratio							0.15							0.03		
95% Queue Length, Q_{95} (veh)							0.5							0.1		
Control Delay (s/veh)							12.8							8.0		
Level of Service (LOS)							B							A		
Approach Delay (s/veh)						12.8							0.5			
Approach LOS						B										

HCS7 Two-Way Stop-Control Report

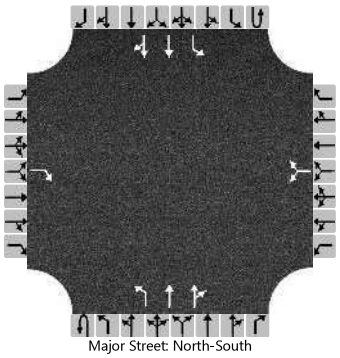
General Information

Analyst	DR
Agency/Co.	LLG Engineers
Date Performed	6/19/2019
Analysis Year	2021
Time Analyzed	AM PH Future Pre-Project
Intersection Orientation	North-South
Project Description	125 W. Huntington Dr. Bldgs C & D/1-16-4200-2

Site Information

Intersection	Int-2
Jurisdiction	Arcadia
East/West Street	San Juan Drive
North/South Street	Colorado Place
Peak Hour Factor	1.00
Analysis Time Period (hrs)	0.25

Lanes


Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	1		0	1	0	0	1	2	0	0	1	2	0
Configuration				R			LR			L	T	TR		L	T	TR
Volume (veh/h)				22		17		11	0	64	1092	13	0	12	324	0
Percent Heavy Vehicles (%)				3		3		3	3	3			3	3		
Proportion Time Blocked																
Percent Grade (%)		0				0										
Right Turn Channelized		No														
Median Type | Storage		Undivided														

Critical and Follow-up Headways

Base Critical Headway (sec)				6.9		7.5		6.9		4.1				4.1		
Critical Headway (sec)				6.96		7.56		6.96		4.16				4.16		
Base Follow-Up Headway (sec)				3.3		3.5		3.3		2.2				2.2		
Follow-Up Headway (sec)				3.33		3.53		3.33		2.23				2.23		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)				22			28			64				12		
Capacity, c (veh/h)				851			131			1225				622		
v/c Ratio				0.03			0.21			0.05				0.02		
95% Queue Length, Q_{95} (veh)				0.1			0.8			0.2				0.1		
Control Delay (s/veh)				9.3			39.7			8.1				10.9		
Level of Service (LOS)				A			E			A				B		
Approach Delay (s/veh)		9.3				39.7				0.4				0.4		
Approach LOS		A				E										

HCS7 Two-Way Stop-Control Report

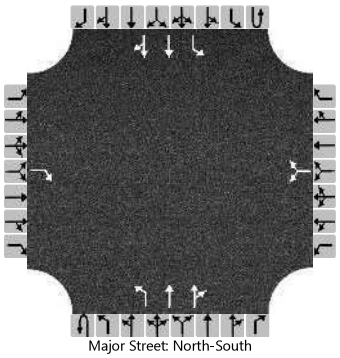
General Information

Analyst	DR
Agency/Co.	LLG Engineers
Date Performed	6/19/2019
Analysis Year	2021
Time Analyzed	PM PH Future Pre-Project
Intersection Orientation	North-South
Project Description	125 W. Huntington Dr. Bldgs C & D/1-16-4200-2

Site Information

Intersection	Int-2
Jurisdiction	Arcadia
East/West Street	San Juan Drive
North/South Street	Colorado Place
Peak Hour Factor	1.00
Analysis Time Period (hrs)	0.25

Lanes


Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	1		0	1	0	0	1	2	0	0	1	2	0
Configuration				R			LR			L	T	TR		L	T	TR
Volume (veh/h)				119		16		14	0	41	278	18	0	63	1327	0
Percent Heavy Vehicles (%)				3		3		3	3	3			3	3		
Proportion Time Blocked																
Percent Grade (%)	0				0											
Right Turn Channelized	No															
Median Type | Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)				6.9		7.5		6.9		4.1				4.1		
Critical Headway (sec)				6.96		7.56		6.96		4.16				4.16		
Base Follow-Up Headway (sec)				3.3		3.5		3.3		2.2				2.2		
Follow-Up Headway (sec)				3.33		3.53		3.33		2.23				2.23		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)				119			30			41				63		
Capacity, c (veh/h)				401			163			511				1255		
v/c Ratio				0.30			0.18			0.08				0.05		
95% Queue Length, Q_{95} (veh)				1.2			0.7			0.3				0.2		
Control Delay (s/veh)				17.7			32.0			12.7				8.0		
Level of Service (LOS)				C			D			B				A		
Approach Delay (s/veh)	17.7				32.0				1.5				0.4			
Approach LOS	C				D											

HCS7 Two-Way Stop-Control Report

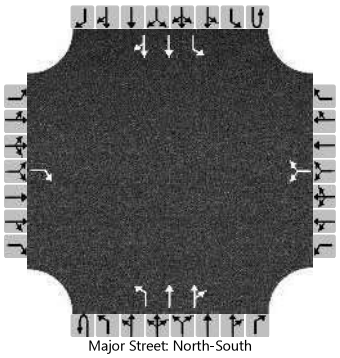
General Information

Analyst	DR
Agency/Co.	LLG Engineers
Date Performed	6/19/2019
Analysis Year	2021
Time Analyzed	SAT PH Future Pre-Project
Intersection Orientation	North-South
Project Description	125 W. Huntington Dr. Bldgs C & D/1-16-4200-2

Site Information

Intersection	Int-2
Jurisdiction	Arcadia
East/West Street	San Juan Drive
North/South Street	Colorado Place
Peak Hour Factor	1.00
Analysis Time Period (hrs)	0.25

Lanes


Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	1		0	1	0	0	1	2	0	0	1	2	0
Configuration				R			LR			L	T	TR		L	T	TR
Volume (veh/h)				61		33		15	0	43	284	37	0	6	609	0
Percent Heavy Vehicles (%)				3		3		3	3	3			3	3		
Proportion Time Blocked																
Percent Grade (%)	0				0											
Right Turn Channelized	No															
Median Type | Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)				6.9		7.5		6.9		4.1				4.1		
Critical Headway (sec)				6.96		7.56		6.96		4.16				4.16		
Base Follow-Up Headway (sec)				3.3		3.5		3.3		2.2				2.2		
Follow-Up Headway (sec)				3.33		3.53		3.33		2.23				2.23		

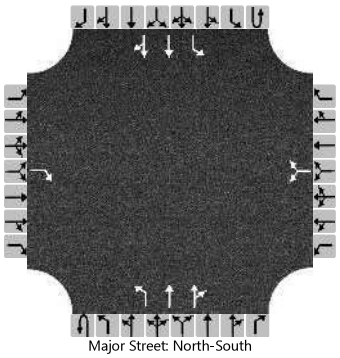
Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)				61			48			43				6		
Capacity, c (veh/h)				689			356			959				1228		
v/c Ratio				0.09			0.13			0.04				0.00		
95% Queue Length, Q_{95} (veh)				0.3			0.5			0.1				0.0		
Control Delay (s/veh)				10.7			16.7			8.9				7.9		
Level of Service (LOS)				B			C			A				A		
Approach Delay (s/veh)	10.7				16.7				1.1				0.1			
Approach LOS	B				C											

HCS7 Two-Way Stop-Control Report

General Information		Site Information	
Analyst	DR	Intersection	Int-2
Agency/Co.	LLG Engineers	Jurisdiction	Arcadia
Date Performed	8/19/2019	East/West Street	San Juan Drive
Analysis Year	2021	North/South Street	Colorado Place
Time Analyzed	AM PH Future With Project	Peak Hour Factor	1.00
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25
Project Description	125 W. Huntington Dr. Bldgs C & D/1-16-4200-2		

Lanes


Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	1		0	1	0	0	1	2	0	0	1	2	0
Configuration				R			LR			L	T	TR		L	T	TR
Volume (veh/h)				22		23		38	0	64	1112	18	0	38	342	0
Percent Heavy Vehicles (%)				3		3		3	3	3			3	3		
Proportion Time Blocked																
Percent Grade (%)	0				0											
Right Turn Channelized	No															
Median Type | Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)				6.9		7.5		6.9		4.1				4.1		
Critical Headway (sec)				6.96		7.56		6.96		4.16				4.16		
Base Follow-Up Headway (sec)				3.3		3.5		3.3		2.2				2.2		
Follow-Up Headway (sec)				3.33		3.53		3.33		2.23				2.23		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)				22			61			64				38		
Capacity, c (veh/h)				840			157			1207				608		
v/c Ratio				0.03			0.39			0.05				0.06		
95% Queue Length, Q_{95} (veh)				0.1			1.7			0.2				0.2		
Control Delay (s/veh)				9.4			41.9			8.2				11.3		
Level of Service (LOS)				A			E			A				B		
Approach Delay (s/veh)	9.4				41.9				0.4				1.1			
Approach LOS	A				E											

HCS7 Two-Way Stop-Control Report

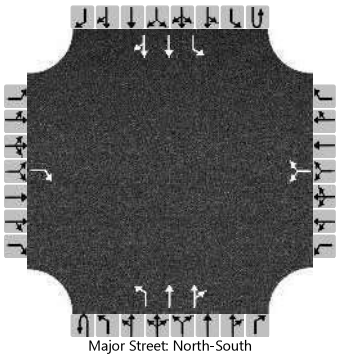
General Information

Analyst	DR
Agency/Co.	LLG Engineers
Date Performed	8/19/2019
Analysis Year	2021
Time Analyzed	PM PH Future With Project
Intersection Orientation	North-South
Project Description	125 W. Huntington Dr. Bldgs C & D/1-16-4200-2

Site Information

Intersection	Int-2
Jurisdiction	Arcadia
East/West Street	San Juan Drive
North/South Street	Colorado Place
Peak Hour Factor	1.00
Analysis Time Period (hrs)	0.25

Lanes


Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	1		0	1	0	0	1	2	0	0	1	2	0
Configuration				R			LR			L	T	TR		L	T	TR
Volume (veh/h)				119		19		32	0	41	290	24	0	89	1346	0
Percent Heavy Vehicles (%)				3		3		3	3	3			3	3		
Proportion Time Blocked																
Percent Grade (%)	0				0											
Right Turn Channelized	No															
Median Type | Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)				6.9		7.5		6.9		4.1				4.1		
Critical Headway (sec)				6.96		7.56		6.96		4.16				4.16		
Base Follow-Up Headway (sec)				3.3		3.5		3.3		2.2				2.2		
Follow-Up Headway (sec)				3.33		3.53		3.33		2.23				2.23		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)				119			51			41				89		
Capacity, c (veh/h)				395			189			502				1236		
v/c Ratio				0.30			0.27			0.08				0.07		
95% Queue Length, Q_{95} (veh)				1.2			1.0			0.3				0.2		
Control Delay (s/veh)				18.0			31.0			12.8				8.1		
Level of Service (LOS)				C			D			B				A		
Approach Delay (s/veh)	18.0				31.0				1.5				0.5			
Approach LOS	C				D											

HCS7 Two-Way Stop-Control Report

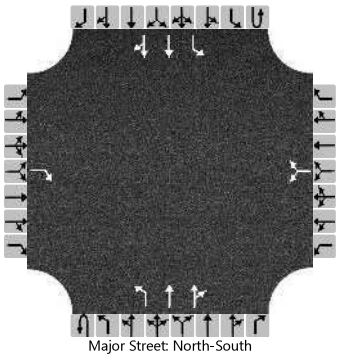
General Information

Analyst	DR
Agency/Co.	LLG Engineers
Date Performed	8/19/2019
Analysis Year	2021
Time Analyzed	SAT PH Future WithProject
Intersection Orientation	North-South
Project Description	125 W. Huntington Dr. Bldgs C & D/1-16-4200-2

Site Information

Intersection	Int-2
Jurisdiction	Arcadia
East/West Street	San Juan Drive
North/South Street	Colorado Place
Peak Hour Factor	1.00
Analysis Time Period (hrs)	0.25

Lanes


Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	1		0	1	0	0	1	2	0	0	1	2	0
Configuration				R			LR			L	T	TR		L	T	TR
Volume (veh/h)				61		40		45	0	43	306	44	0	37	632	0
Percent Heavy Vehicles (%)				3		3		3	3	3			3	3		
Proportion Time Blocked																
Percent Grade (%)	0				0											
Right Turn Channelized	No															
Median Type | Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)				6.9		7.5		6.9		4.1				4.1		
Critical Headway (sec)				6.96		7.56		6.96		4.16				4.16		
Base Follow-Up Headway (sec)				3.3		3.5		3.3		2.2				2.2		
Follow-Up Headway (sec)				3.33		3.53		3.33		2.23				2.23		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)				61			85			43				37		
Capacity, c (veh/h)				677			378			940				1198		
v/c Ratio				0.09			0.23			0.05				0.03		
95% Queue Length, Q_{95} (veh)				0.3			0.9			0.1				0.1		
Control Delay (s/veh)				10.8			17.3			9.0				8.1		
Level of Service (LOS)				B			C			A				A		
Approach Delay (s/veh)	10.8				17.3				1.0				0.4			
Approach LOS	B				C											

LINSCOTT, LAW & GREENSPAN, ENGINEERS
600 S. Lake Avenue, Suite 500, Pasadena CA 91106
(626) 796.2322 Fax (626) 792.0941

INTERSECTION CAPACITY UTILIZATION

N-S St: Colorado Place
E-W St: Huntington Drive
Project: 125 W. Huntington Drive, Buildings C & D Project/1-16-4200-2
File: ICU3

Colorado Place @ Huntington Drive
Peak hr: AM
Annual Growth: 1.00%

Date: 08/20/2019
Date of Count: 2019
Projection Year: 2021

	2019 EXIST. TRAFFIC			2019 EXISTING PLUS PROJECT				2019 EXIST. W/PROJECT + MITIGATION				2021 FUTURE PRE-PROJECT				2021 FUTURE WITH PROJECT				2021 FUTURE W/PROJECT + MITIGATIO			
	1	2	V/C	Added	Total		V/C	Added	Total	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C
Movement	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio
Nb Left	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *	0	0		0.000	0	0	0	0.000	0	0	0	0.000
Nb Thru	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Nb Right	0	1600	0.000	0	0	1600	0.000	0	0	1600	0.000	0	0	1600	0.000	0	0	1600	0.000	0	0	1600	0.000
Sb Left	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Sb Thru	153	2880	0.053	58	211	2880	0.073	0	211	2880	0.073	31	187	2880	0.065	58	245	2880	0.085	0	245	2880	0.085
Sb Right	148	1600	0.093 *	12	160	1600	0.100 *	0	160	1600	0.100 *	28	179	1600	0.112 *	12	191	1600	0.119 *	0	191	1600	0.119 *
Eb Left	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Eb Thru	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Eb Right	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-
Wb Left	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Wb Thru	1479	4800	0.308 *	0	1479	4800	0.308 *	0	1479	4800	0.308 *	48	1557	4800	0.324 *	0	1557	4800	0.324 *	0	1557	4800	0.324 *
Wb Right [3	1029	1600	0.000	48	1077	1600	0.000	0	1077	1600	0.000	120	1170	1600	0.000	48	1218	1600	0.000	0	1218	1600	0.000
Yellow Allowance:			0.100 *				0.100 *				0.100 *				0.100 *				0.100 *				0.100 *
ICU			0.501				0.508				0.508				0.536				0.544				0.544
LOS			A				A				A				A				A				A

** Key conflicting movement as a part of ICU*
1 Counts conducted by City Traffic Counters
2 Capacity expressed in veh/hour of green
3 Free-flow movement.

LINSCOTT, LAW & GREENSPAN, ENGINEERS
600 S. Lake Avenue, Suite 500, Pasadena CA 91106
(626) 796.2322 Fax (626) 792.0941

INTERSECTION CAPACITY UTILIZATION

N-S St: Colorado Place
E-W St: Huntington Drive
Project: 125 W. Huntington Drive, Buildings C & D Project/1-16-4200-2
File: ICU3

Colorado Place @ Huntington Drive
Peak hr: PM
Annual Growth: 1.00%

Date: 08/20/2019
Date of Count: 2019
Projection Year: 2021

	2019 EXIST. TRAFFIC			2019 EXISTING PLUS PROJECT				2019 EXIST. W/PROJECT + MITIGATION				2021 FUTURE PRE-PROJECT				2021 FUTURE WITH PROJECT				2021 FUTURE W/PROJECT + MITIGATIO			
	1	2	V/C	Added	Total		V/C	Added	Total	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C
Movement	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio
Nb Left	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Nb Thru	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Nb Right	0	1600	0.000	0	0	1600	0.000	0	0	1600	0.000	0	0	1600	0.000	0	0	1600	0.000	0	0	1600	0.000
Sb Left	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Sb Thru	1283	2880	0.445 *	23	1306	2880	0.453 *	0	1306	2880	0.453 *	155	1464	2880	0.508 *	23	1487	2880	0.516 *	0	1487	2880	0.516 *
Sb Right	73	1600	0.046	2	75	1600	0.047	0	75	1600	0.047	64	138	1600	0.087	2	140	1600	0.088	0	140	1600	0.088
Eb Left	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *
Eb Thru	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Eb Right	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-
Wb Left	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Wb Thru	1163	4800	0.242 *	0	1163	4800	0.242 *	0	1163	4800	0.242 *	86	1272	4800	0.265 *	0	1272	4800	0.265 *	0	1272	4800	0.265 *
Wb Right [3	247	1600	0.000	66	313	1600	0.000	0	313	1600	0.000	62	314	1600	0.000	66	380	1600	0.000	0	380	1600	0.000
Yellow Allowance:			0.100 *				0.100 *				0.100 *				0.100 *				0.100 *				0.100 *
ICU			0.788				0.796				0.796				0.873				0.881				0.881
LOS			C				C				C				D				D				D

** Key conflicting movement as a part of ICU*
1 Counts conducted by City Traffic Counters
2 Capacity expressed in veh/hour of green
3 Free-flow movement.

LINSCOTT, LAW & GREENSPAN, ENGINEERS
600 S. Lake Avenue, Suite 500, Pasadena CA 91106
(626) 796.2322 Fax (626) 792.0941

INTERSECTION CAPACITY UTILIZATION

Colorado Place @ Huntington Drive
Peak hr: SAT PM
Annual Growth: 1.00%

N-S St: Colorado Place
E-W St: Huntington Drive
Project: 125 W. Huntington Drive, Buildings C & D Project/1-16-4200-2
File: ICU3

Date: 08/20/2019
Date of Count: 2019
Projection Year: 2021

	2019 EXIST. TRAFFIC			2019 EXISTING PLUS PROJECT				2019 EXIST. W/PROJECT + MITIGATION				2021 FUTURE PRE-PROJECT				2021 FUTURE WITH PROJECT				2021 FUTURE W/PROJECT + MITIGATIO			
	1		2	V/C	Added	Total		V/C	Added	Total		V/C	Added	Total		V/C	Added	Total		V/C	Added	Total		V/C
Movement	Volume	Capacity		Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio
Nb Left	0	0	0.000 *		0	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Nb Thru	0	0	0.000		0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Nb Right	0	1600	0.000		0	0	1600	0.000	0	0	1600	0.000	0	0	1600	0.000	0	0	1600	0.000	0	0	1600	0.000
Sb Left	0	0	0.000		0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Sb Thru	452	2880	0.157 *		64	516	2880	0.179 *	0	516	2880	0.179 *	79	540	2880	0.188 *	64	604	2880	0.210 *	0	604	2880	0.210 *
Sb Right	25	1600	0.016		13	38	1600	0.024	0	38	1600	0.024	59	85	1600	0.053	13	98	1600	0.061	0	98	1600	0.061
Eb Left	0	0	0.000 *		0	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *
Eb Thru	0	0	0.000		0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Eb Right	0	0	-		0	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-
Wb Left	0	0	0.000		0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Wb Thru	881	4800	0.184 *		0	881	4800	0.184 *	0	881	4800	0.184 *	95	994	4800	0.207 *	0	994	4800	0.207 *	0	994	4800	0.207 *
Wb Right [3	217	1600	0.000		80	297	1600	0.000	0	297	1600	0.000	71	292	1600	0.000	80	372	1600	0.000	0	372	1600	0.000
Yellow Allowance:			0.100 *					0.100 *				0.100 *				0.100 *				0.100 *				0.100 *
ICU			0.440					0.463				0.463				0.495				0.517				0.517
LOS			A					A				A				A				A				A

** Key conflicting movement as a part of ICU*
1 Counts conducted by City Traffic Counters
2 Capacity expressed in veh/hour of green
3 Free-flow movement.

LINSCOTT, LAW & GREENSPAN, ENGINEERS
600 S. Lake Avenue, Suite 500, Pasadena CA 91106
(626) 796.2322 Fax (626) 792.0941

INTERSECTION CAPACITY UTILIZATION

N-S St: Santa Clara Street
E-W St: Huntington Drive
Project: 125 W. Huntington Drive, Buildings C & D Project/1-16-4200-2
File: ICU4

Santa Clara Street @ Huntington Drive
Peak hr: AM
Annual Growth: 1.00%

Date: 08/20/2019
Date of Count: 2019
Projection Year: 2021

	2019 EXIST. TRAFFIC			2019 EXISTING WITH PROJECT				2019 EXIST. W/PROJECT + MITIGATION				2021 FUTURE PRE-PROJECT				2021 FUTURE WITH PROJECT				2021 FUTURE W/PROJECT + MITIGATIO			
	1	2	V/C	Added	Total		V/C	Added	Total	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C
Movement	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio
Nb Left	53	1600	0.033 *	0	53	1600	0.033 *	0	53	1600	0.033 *	25	79	1600	0.049 *	0	79	1600	0.049 *	0	79	1600	0.049 *
Nb Thru	361	3200	0.113	0	361	3200	0.113	0	361	3200	0.113	7	375	3200	0.117	0	375	3200	0.117	0	375	3200	0.117
Nb Right [3]	514	3200	0.161	0	514	3200	0.161	0	514	3200	0.161	45	569	3200	0.178	0	569	3200	0.178	0	569	3200	0.178
Sb Left	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Sb Thru	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Sb Right [3]	569	3200	0.178 *	14	583	3200	0.182 *	0	583	3200	0.182 *	54	634	3200	0.198 *	14	648	3200	0.203 *	0	648	3200	0.203 *
Eb Left	4	1600	0.003	16	20	1600	0.013	0	20	1600	0.013	13	17	1600	0.011	16	33	1600	0.021	0	33	1600	0.021
Eb Thru	157	4800	0.033	42	199	4800	0.041	0	199	4800	0.041	17	177	4800	0.037	42	219	4800	0.046	0	219	4800	0.046
Eb Right	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-
Wb Left	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Wb Thru	1814	4800	0.379 *	29	1843	4800	0.385 *	0	1843	4800	0.385 *	97	1947	4800	0.406 *	29	1976	4800	0.412 *	0	1976	4800	0.412 *
Wb Right	3	0	-	0	3	0	-	0	3	0	-	0	3	0	-	0	3	0	-	0	3	0	-
Yellow Allowance:			0.100 *				0.100 *				0.100 *				0.100 *				0.100 *				0.100 *
ICU			0.692				0.712				0.712				0.765				0.785				0.785
LOS			B				C				C				C				C				C

** Key conflicting movement as a part of ICU*
1 Counts conducted by The Traffic Solution
2 Capacity expressed in veh/hour of green
3 No right-turn on red.

LINSCOTT, LAW & GREENSPAN, ENGINEERS
600 S. Lake Avenue, Suite 500, Pasadena CA 91106
(626) 796.2322 Fax (626) 792.0941

INTERSECTION CAPACITY UTILIZATION

Santa Clara Street @ Huntington Drive

N-S St: Santa Clara Street
E-W St: Huntington Drive
Project: 125 W. Huntington Drive, Buildings C & D Project/1-16-4200-2
File: ICU4

Peak hr: PM
Annual Growth: 1.00%

Date: 08/20/2019
Date of Count: 2019
Projection Year: 2021

	2019 EXIST. TRAFFIC			2019 EXISTING WITH PROJECT				2019 EXIST. W/PROJECT + MITIGATION				2021 FUTURE PRE-PROJECT				2021 FUTURE WITH PROJECT				2021 FUTURE W/PROJECT + MITIGATIO			
	1	2	V/C	Added	Total		V/C	Added	Total	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C
Movement	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio
Nb Left	126	1600	0.079	9	135	1600	0.084	0	135	1600	0.084	8	137	1600	0.085	9	146	1600	0.091	0	146	1600	0.091
Nb Thru	470	3200	0.147	0	470	3200	0.147	0	470	3200	0.147	8	487	3200	0.152	0	487	3200	0.152	0	487	3200	0.152
Nb Right [3]	735	3200	0.230 *	0	735	3200	0.230 *	0	735	3200	0.230 *	78	828	3200	0.259 *	0	828	3200	0.259 *	0	828	3200	0.259 *
Sb Left	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *
Sb Thru	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Sb Right [3]	374	3200	0.117	16	390	3200	0.122	0	390	3200	0.122	46	427	3200	0.134	16	443	3200	0.139	0	443	3200	0.139
Eb Left	27	1600	0.017	9	36	1600	0.023	0	36	1600	0.023	74	102	1600	0.063 *	9	111	1600	0.069 *	0	111	1600	0.069 *
Eb Thru	1211	4800	0.252 *	17	1228	4800	0.256 *	0	1228	4800	0.256 *	81	1316	4800	0.274	17	1333	4800	0.278	0	1333	4800	0.278
Eb Right	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-
Wb Left	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Wb Thru	901	4800	0.189	41	942	4800	0.197	0	942	4800	0.197	90	1009	4800	0.211 *	41	1050	4800	0.220 *	0	1050	4800	0.220 *
Wb Right	5	0	-	0	5	0	-	0	5	0	-	0	5	0	-	0	5	0	-	0	5	0	-
Yellow Allowance:			0.100 *				0.100 *				0.100 *				0.100 *				0.100 *				0.100 *
ICU			0.582				0.586				0.586				0.633				0.648				0.648
LOS			A				A				A				B				B				B

** Key conflicting movement as a part of ICU*
1 Counts conducted by The Traffic Solution
2 Capacity expressed in veh/hour of green
3 No right-turn on red.

LINSCOTT, LAW & GREENSPAN, ENGINEERS
600 S. Lake Avenue, Suite 500, Pasadena CA 91106
(626) 796.2322 Fax (626) 792.0941

INTERSECTION CAPACITY UTILIZATION

Santa Clara Street @ Huntington Drive
Peak hr: SAT PM
Annual Growth: 1.00%

N-S St: Santa Clara Street
E-W St: Huntington Drive
Project: 125 W. Huntington Drive, Buildings C & D Project/1-16-4200-2
File: ICU4

Date: 08/20/2019
Date of Count: 2019
Projection Year: 2021

	2019 EXIST. TRAFFIC			2019 EXISTING WITH PROJECT				2019 EXIST. W/PROJECT + MITIGATION				2021 FUTURE PRE-PROJECT				2021 FUTURE WITH PROJECT				2021 FUTURE W/PROJECT + MITIGATIO			
	1	2	V/C	Added	Total		V/C	Added	Total	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C
Movement	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio
Nb Left	40	1600	0.025	9	49	1600	0.031	0	49	1600	0.031	10	51	1600	0.032	9	60	1600	0.037	0	60	1600	0.037
Nb Thru	268	3200	0.084	0	268	3200	0.084	0	268	3200	0.084	11	284	3200	0.089	0	284	3200	0.089	0	284	3200	0.089
Nb Right [3]	564	3200	0.176 *	0	564	3200	0.176 *	0	564	3200	0.176 *	85	660	3200	0.206 *	0	660	3200	0.206 *	0	660	3200	0.206 *
Sb Left	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *
Sb Thru	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Sb Right [3]	286	3200	0.089	19	305	3200	0.095	0	305	3200	0.095	48	340	3200	0.106	19	359	3200	0.112	0	359	3200	0.112
Eb Left	19	1600	0.012 *	19	38	1600	0.024 *	0	38	1600	0.024 *	36	55	1600	0.035 *	19	74	1600	0.046 *	0	74	1600	0.046 *
Eb Thru	478	4800	0.100	49	527	4800	0.110	0	527	4800	0.110	43	531	4800	0.111	49	580	4800	0.121	0	580	4800	0.121
Eb Right	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-
Wb Left	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Wb Thru	818	4800	0.172 *	49	867	4800	0.182 *	0	867	4800	0.182 *	106	940	4800	0.197 *	49	989	4800	0.207 *	0	989	4800	0.207 *
Wb Right	6	0	-	0	6	0	-	0	6	0	-	0	6	0	-	0	6	0	-	0	6	0	-
Yellow Allowance:			0.100 *				0.100 *				0.100 *				0.100 *				0.100 *				0.100 *
ICU			0.460				0.482				0.482				0.538				0.560				0.560
LOS			A				A				A				A				A				A

** Key conflicting movement as a part of ICU*
1 Counts conducted by The Traffic Solution
2 Capacity expressed in veh/hour of green
3 No right-turn on red.

LINSCOTT, LAW & GREENSPAN, ENGINEERS
600 S. Lake Avenue, Suite 500, Pasadena CA 91106
(626) 796.2322 Fax (626) 792.0941

INTERSECTION CAPACITY UTILIZATION

Santa Anita Avenue @ I-210 Freeway WB Ramps

N-S St: Santa Anita Avenue
E-W St: I-210 Freeway WB Ramps
Project: 125 W. Huntington Drive, Buildings C & D Project/1-16-4200-2
File: ICU5

Peak hr: AM
Annual Growth: 1.00%

Date: 08/20/2019
Date of Count: 2019
Projection Year: 2021

	2019 EXIST. TRAFFIC			2019 EXISTING PLUS PROJECT				2019 EXIST. W/PROJECT + MITIGATION				2021 FUTURE PRE-PROJECT				2021 FUTURE WITH PROJECT				2021 FUTURE W/PROJECT + MITIGATIO			
	1	2	V/C	Added	Total		V/C	Added	Total	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C
Movement	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio
Nb Left	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *
Nb Thru	742	3200	0.232	0	742	3200	0.232	0	742	3200	0.232	9	766	3200	0.239	0	766	3200	0.239	0	766	3200	0.239
Nb Right [3]	305	1600	0.021	11	316	1600	0.018	0	316	1600	0.018	31	342	1600	0.024	11	353	1600	0.021	0	353	1600	0.021
Sb Left	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Sb Thru	824	3200	0.258 *	0	824	3200	0.258 *	0	824	3200	0.258 *	17	857	3200	0.268 *	0	857	3200	0.268 *	0	857	3200	0.268 *
Sb Right [4]	275	1600	0.172	0	275	1600	0.172	0	275	1600	0.172	0	281	1600	0.175	0	281	1600	0.175	0	281	1600	0.175
Eb Left	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *
Eb Thru	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Eb Right	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-
Wb Left [5]	407	2400	0.170	23	430	2400	0.179	0	430	2400	0.179	40	455	2400	0.190	23	478	2400	0.199	0	478	2400	0.199
Wb Thru [5]	14	800	0.591 *	0	14	800	0.591 *	0	14	800	0.591 *	0	14	800	0.603 *	0	14	800	0.603 *	0	14	800	0.603 *
Wb Right [5	459	0	-	0	459	0	-	0	459	0	-	0	468	0	-	0	468	0	-	0	468	0	-
Yellow Allowance:			0.100 *				0.100 *				0.100 *				0.100 *				0.100 *				0.100 *
ICU			0.949				0.949				0.949				0.971				0.971				0.971
LOS			E				E				E				E				E				E

** Key conflicting movement as a part of ICU*
1 Counts conducted by City Traffic Counters
2 Capacity expressed in veh/hour of green
3 The northbound right-turn lane has an overlapping phase with the westbound left-turn phase.
4 Functional right-turn lane assumed.
5 The westbound approach consists of one left-turn lane and one left/right shared lane. It was assumed that 25% of the left-turn volumes would be assigned in the left/right shared lane.

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(626) 796.2322 Fax (626) 792.0941

INTERSECTION CAPACITY UTILIZATION

Santa Anita Avenue @ I-210 Freeway WB Ramps

N-S St: Santa Anita Avenue
E-W St: I-210 Freeway WB Ramps
Project: 125 W. Huntington Drive, Buildings C & D Project/1-16-4200-2
File: ICU5

Peak hr: PM
Annual Growth: 1.00%

Date: 08/20/2019
Date of Count: 2019
Projection Year: 2021

	2019 EXIST. TRAFFIC			2019 EXISTING PLUS PROJECT				2019 EXIST. W/PROJECT + MITIGATION				2021 FUTURE PRE-PROJECT				2021 FUTURE WITH PROJECT				2021 FUTURE W/PROJECT + MITIGATIO			
	1	2	V/C	Added	Total		V/C	Added	Total	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C
Movement	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio
Nb Left	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *
Nb Thru	730	3200	0.228	0	730	3200	0.228	0	730	3200	0.228	29	774	3200	0.242	0	774	3200	0.242	0	774	3200	0.242
Nb Right [3]	374	1600	0.120	7	381	1600	0.115	0	381	1600	0.115	81	462	1600	0.153	7	469	1600	0.148	0	469	1600	0.148
Sb Left	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Sb Thru	818	3200	0.256 *	0	818	3200	0.256 *	0	818	3200	0.256 *	17	851	3200	0.266 *	0	851	3200	0.266 *	0	851	3200	0.266 *
Sb Right [4]	218	1600	0.136	0	218	1600	0.136	0	218	1600	0.136	0	222	1600	0.139	0	222	1600	0.139	0	222	1600	0.139
Eb Left	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *
Eb Thru	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Eb Right	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-
Wb Left [5]	273	2400	0.114	22	295	2400	0.123	0	295	2400	0.123	48	326	2400	0.136	22	348	2400	0.145	0	348	2400	0.145
Wb Thru [5]	3	800	0.453 *	0	3	800	0.453 *	0	3	800	0.453 *	0	3	800	0.462 *	0	3	800	0.462 *	0	3	800	0.462 *
Wb Right [5	359	0	-	0	359	0	-	0	359	0	-	0	366	0	-	0	366	0	-	0	366	0	-
Yellow Allowance:			0.100 *				0.100 *				0.100 *				0.100 *				0.100 *				0.100 *
ICU			0.808				0.808				0.808				0.828				0.828				0.828
LOS			D				D				D				D				D				D

** Key conflicting movement as a part of ICU*
1 Counts conducted by City Traffic Counters
2 Capacity expressed in veh/hour of green
3 The northbound right-turn lane has an overlapping phase with the westbound left-turn phase.
4 Functional right-turn lane assumed.
5 The westbound approach consists of one left-turn lane and one left/right shared lane. It was assumed that 25% of the left-turn volumes would be assigned in the left/right shared lane.

LINSCOTT, LAW & GREENSPAN, ENGINEERS
600 S. Lake Avenue, Suite 500, Pasadena CA 91106
(626) 796.2322 Fax (626) 792.0941

INTERSECTION CAPACITY UTILIZATION

Santa Anita Avenue @ I-210 Freeway WB Ramps

N-S St: Santa Anita Avenue
E-W St: I-210 Freeway WB Ramps
Project: 125 W. Huntington Drive, Buildings C & D Project/1-16-4200-2
File: ICU5

Peak hr: SAT PM
Annual Growth: 1.00%

Date: 08/20/2019
Date of Count: 2019
Projection Year: 2021

	2019 EXIST. TRAFFIC			2019 EXISTING PLUS PROJECT				2019 EXIST. W/PROJECT + MITIGATION				2021 FUTURE PRE-PROJECT				2021 FUTURE WITH PROJECT				2021 FUTURE W/PROJECT + MITIGATIO			
	1	2	V/C	Added	Total		V/C	Added	Total	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C
Movement	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio
Nb Left	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *
Nb Thru	553	3200	0.173	0	553	3200	0.173	0	553	3200	0.173	20	584	3200	0.183	0	584	3200	0.183	0	584	3200	0.183
Nb Right [3]	347	1600	0.108	13	360	1600	0.105	0	360	1600	0.105	59	413	1600	0.124	13	426	1600	0.121	0	426	1600	0.121
Sb Left	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Sb Thru	609	3200	0.190 *	0	609	3200	0.190 *	0	609	3200	0.190 *	20	641	3200	0.200 *	0	641	3200	0.200 *	0	641	3200	0.200 *
Sb Right [4]	248	1600	0.155	0	248	1600	0.155	0	248	1600	0.155	0	253	1600	0.158	0	253	1600	0.158	0	253	1600	0.158
Eb Left	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *
Eb Thru	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Eb Right	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-
Wb Left [5]	261	2400	0.109	27	288	2400	0.120	0	288	2400	0.120	56	322	2400	0.134	27	349	2400	0.146	0	349	2400	0.146
Wb Thru [5]	2	800	0.309 *	0	2	800	0.309 *	0	2	800	0.309 *	0	2	800	0.315 *	0	2	800	0.315 *	0	2	800	0.315 *
Wb Right [5	245	0	-	0	245	0	-	0	245	0	-	0	250	0	-	0	250	0	-	0	250	0	-
Yellow Allowance:			0.100 *				0.100 *				0.100 *				0.100 *				0.100 *				0.100 *
ICU			0.599				0.599				0.599				0.615				0.615				0.615
LOS			A				A				A				B				B				B

** Key conflicting movement as a part of ICU*
1 Counts conducted by City Traffic Counters
2 Capacity expressed in veh/hour of green
3 The northbound right-turn lane has an overlapping phase with the westbound left-turn phase.
4 Functional right-turn lane assumed.
5 The westbound approach consists of one left-turn lane and one left/right shared lane. It was assumed that 25% of the left-turn volumes would be assigned in the left/right shared lane.

LINSCOTT, LAW & GREENSPAN, ENGINEERS
600 S. Lake Avenue, Suite 500, Pasadena CA 91106
(626) 796.2322 Fax (626) 792.0941

INTERSECTION CAPACITY UTILIZATION

Santa Anita Avenue @ I-210 Freeway EB Ramps

N-S St: Santa Anita Avenue
E-W St: I-210 Freeway EB Ramps
Project: 125 W. Huntington Drive, Buildings C & D Project/1-16-4200-2
File: ICU6

Peak hr: AM
Annual Growth: 1.00%

Date: 08/20/2019
Date of Count: 2019
Projection Year: 2021

	2019 EXIST. TRAFFIC			2019 EXISTING PLUS PROJECT				2019 EXIST. W/PROJECT + MITIGATION				2021 FUTURE PRE-PROJECT				2021 FUTURE WITH PROJECT				2021 FUTURE W/PROJECT + MITIGATIO			
	1	2	V/C	Added	Total		V/C	Added	Total	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C
Movement	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio
Nb Left	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Nb Thru	721	3200	0.225 *	11	732	3200	0.229 *	0	732	3200	0.229 *	40	775	3200	0.242 *	11	786	3200	0.246 *	0	786	3200	0.246 *
Nb Right	203	1600	0.127	22	225	1600	0.141	0	225	1600	0.141	32	239	1600	0.149	22	261	1600	0.163	0	261	1600	0.163
Sb Left	275	1600	0.172 *	0	275	1600	0.172 *	0	275	1600	0.172 *	0	281	1600	0.175 *	0	281	1600	0.175 *	0	281	1600	0.175 *
Sb Thru	948	3200	0.296	22	970	3200	0.303	0	970	3200	0.303	56	1023	3200	0.320	22	1045	3200	0.327	0	1045	3200	0.327
Sb Right	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-
Eb Left [3]	255	0	0.053	0	255	0	0.053	0	255	0	0.053	0	260	0	0.054	0	260	0	0.054	0	260	0	0.054
Eb Thru [3]	0	4800	0.134 *	0	0	4800	0.136 *	0	0	4800	0.136 *	0	0	4800	0.145 *	0	0	4800	0.147 *	0	0	4800	0.147 *
Eb Right [3]	387	0	-	10	397	0	-	0	397	0	-	41	436	0	-	10	446	0	-	0	446	0	-
Wb Left	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *
Wb Thru	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Wb Right	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-
Yellow Allowance:			0.100 *				0.100 *				0.100 *				0.100 *				0.100 *				0.100 *
ICU			0.631				0.636				0.636				0.663				0.668				0.668
LOS			B				B				B				B				B				B

** Key conflicting movement as a part of ICU*
1 Counts conducted by City Traffic Counters
2 Capacity expressed in veh/hour of green
3 The eastbound approach consists of one left-turn lane, one left/through/right shared lane, and one right-turn only lane. The lane capacity was assigned based on the peak hour traffic volumes.

LINSCOTT, LAW & GREENSPAN, ENGINEERS
600 S. Lake Avenue, Suite 500, Pasadena CA 91106
(626) 796.2322 Fax (626) 792.0941

INTERSECTION CAPACITY UTILIZATION

Santa Anita Avenue @ I-210 Freeway EB Ramps

N-S St: Santa Anita Avenue
E-W St: I-210 Freeway EB Ramps
Project: 125 W. Huntington Drive, Buildings C & D Project/1-16-4200-2
File: ICU6

Peak hr: PM
Annual Growth: 1.00%

Date: 08/20/2019
Date of Count: 2019
Projection Year: 2021

	2019 EXIST. TRAFFIC			2019 EXISTING PLUS PROJECT				2019 EXIST. W/PROJECT + MITIGATION				2021 FUTURE PRE-PROJECT				2021 FUTURE WITH PROJECT				2021 FUTURE W/PROJECT + MITIGATIO			
	1	2	V/C	Added	Total		V/C	Added	Total	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C
Movement	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio
Nb Left	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Nb Thru	949	3200	0.297 *	6	955	3200	0.298 *	0	955	3200	0.298 *	120	1088	3200	0.340 *	6	1094	3200	0.342 *	0	1094	3200	0.342 *
Nb Right	194	1600	0.121	17	211	1600	0.132	0	211	1600	0.132	88	286	1600	0.179	17	303	1600	0.189	0	303	1600	0.189
Sb Left	161	1600	0.101 *	0	161	1600	0.101 *	0	161	1600	0.101 *	0	164	1600	0.103 *	0	164	1600	0.103 *	0	164	1600	0.103 *
Sb Thru	872	3200	0.273	22	894	3200	0.279	0	894	3200	0.279	73	962	3200	0.301	22	984	3200	0.308	0	984	3200	0.308
Sb Right	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-
Eb Left [3]	167	1600	0.104	0	167	1600	0.104	0	167	1600	0.104	0	170	0	0.035	0	170	0	0.035	0	170	0	0.035
Eb Thru [3]	50	3200	0.113 *	0	50	3200	0.117 *	0	50	3200	0.117 *	0	51	4800	0.123 *	0	51	4800	0.125 *	0	51	4800	0.125 *
Eb Right [3]	313	0	-	11	324	0	-	0	324	0	-	48	367	0	-	11	378	0	-	0	378	0	-
Wb Left	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *
Wb Thru	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Wb Right	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-
Yellow Allowance:			0.100 *				0.100 *				0.100 *				0.100 *				0.100 *				0.100 *
ICU			0.611				0.616				0.616				0.665				0.669				0.669
LOS			B				B				B				B				B				B

** Key conflicting movement as a part of ICU*
1 Counts conducted by City Traffic Counters
2 Capacity expressed in veh/hour of green
3 The eastbound approach consists of one left-turn lane, one left/through/right shared lane, and one right-turn only lane. The lane capacity was assigned based on the peak hour traffic volumes.

LINSCOTT, LAW & GREENSPAN, ENGINEERS
600 S. Lake Avenue, Suite 500, Pasadena CA 91106
(626) 796.2322 Fax (626) 792.0941

INTERSECTION CAPACITY UTILIZATION

Santa Anita Avenue @ I-210 Freeway EB Ramps

N-S St: Santa Anita Avenue
E-W St: I-210 Freeway EB Ramps
Project: 125 W. Huntington Drive, Buildings C & D Project/1-16-4200-2
File: ICU6

Peak hr: SAT PM
Annual Growth: 1.00%

Date: 08/20/2019
Date of Count: 2019
Projection Year: 2021

	2019 EXIST. TRAFFIC			2019 EXISTING PLUS PROJECT				2019 EXIST. W/PROJECT + MITIGATION				2021 FUTURE PRE-PROJECT				2021 FUTURE WITH PROJECT				2021 FUTURE W/PROJECT + MITIGATIO			
	1	2	V/C	Added	Total		V/C	Added	Total	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C
Movement	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio
Nb Left	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Nb Thru	671	3200	0.210 *	13	684	3200	0.214 *	0	684	3200	0.214 *	80	764	3200	0.239 *	13	777	3200	0.243 *	0	777	3200	0.243 *
Nb Right	223	1600	0.139	27	250	1600	0.156	0	250	1600	0.156	61	288	1600	0.180	27	315	1600	0.197	0	315	1600	0.197
Sb Left	169	1600	0.106 *	0	169	1600	0.106 *	0	169	1600	0.106 *	0	172	1600	0.108 *	0	172	1600	0.108 *	0	172	1600	0.108 *
Sb Thru	664	3200	0.208	26	690	3200	0.216	0	690	3200	0.216	77	754	3200	0.236	26	780	3200	0.244	0	780	3200	0.244
Sb Right	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-
Eb Left [3]	210	1600	0.131	0	210	1600	0.131	0	210	1600	0.131	0	214	0	0.045	0	214	0	0.045	0	214	0	0.045
Eb Thru [3]	7	3200	0.120	0	7	3200	0.124	0	7	3200	0.124	0	7	4800	0.137 *	0	7	4800	0.139 *	0	7	4800	0.139 *
Eb Right [3]	377	0	-	13	390	0	-	0	390	0	-	50	435	0	-	13	448	0	-	0	448	0	-
Wb Left	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *
Wb Thru	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Wb Right	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-
Yellow Allowance:			0.100 *				0.100 *				0.100 *				0.100 *				0.100 *				0.100 *
ICU			0.547				0.551				0.551				0.583				0.590				0.590
LOS			A				A				A				A				A				A

** Key conflicting movement as a part of ICU*
1 Counts conducted by City Traffic Counters
2 Capacity expressed in veh/hour of green
3 The eastbound approach consists of one left-turn lane, one left/through/right shared lane, and one right-turn only lane. The lane capacity was assigned based on the peak hour traffic volumes.

LINSCOTT, LAW & GREENSPAN, ENGINEERS
600 S. Lake Avenue, Suite 500, Pasadena CA 91106
(626) 796.2322 Fax (626) 792.0941

INTERSECTION CAPACITY UTILIZATION

Santa Anita Avenue @ Santa Clara Street

N-S St: Santa Anita Avenue
E-W St: Santa Clara Street
Project: 125 W. Huntington Drive, Buildings C & D Project/1-16-4200-2
File: ICU7

Peak hr: AM
Annual Growth: 1.00%

Date: 08/20/2019
Date of Count: 2019
Projection Year: 2021

	2019 EXIST. TRAFFIC			2019 EXISTING WITH PROJECT				2019 EXIST. W/PROJECT + MITIGATION				2021 FUTURE PRE-PROJECT				2021 FUTURE WITH PROJECT				2021 FUTURE W/PROJECT + MITIGATIO			
	1	2	V/C	Added	Total		V/C	Added	Total	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C
Movement	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio
Nb Left	37	1600	0.023 *	0	37	1600	0.023 *	0	37	1600	0.023 *	0	38	1600	0.024	0	38	1600	0.024	0	38	1600	0.024
Nb Thru	698	3200	0.237	22	720	3200	0.244	0	720	3200	0.244	73	785	3200	0.266 *	22	807	3200	0.273 *	0	807	3200	0.273 *
Nb Right	60	0	-	0	60	0	-	0	60	0	-	4	65	0	-	0	65	0	-	0	65	0	-
Sb Left	47	1600	0.029	0	47	1600	0.029	0	47	1600	0.029	36	84	1600	0.052 *	0	84	1600	0.052 *	0	84	1600	0.052 *
Sb Thru	719	3200	0.225	25	744	3200	0.233	0	744	3200	0.233	43	776	3200	0.243	25	801	3200	0.250	0	801	3200	0.250
Sb Right	426	1600	0.266 *	14	440	1600	0.275 *	0	440	1600	0.275 *	13	448	1600	0.280	14	462	1600	0.288	0	462	1600	0.288
Eb Left [3]	325	2880	0.113 *	16	341	2880	0.118 *	0	341	2880	0.118 *	1	333	2880	0.115 *	16	349	2880	0.121 *	0	349	2880	0.121 *
Eb Thru [3]	107	1600	0.083	0	107	1600	0.083	0	107	1600	0.083	0	109	1600	0.085	0	109	1600	0.085	0	109	1600	0.085
Eb Right [3]	26	0	-	0	26	0	-	0	26	0	-	0	27	0	-	0	27	0	-	0	27	0	-
Wb Left [3]	36	1600	0.023	0	36	1600	0.023	0	36	1600	0.023	5	42	1600	0.026	0	42	1600	0.026	0	42	1600	0.026
Wb Thru [3]	169	1600	0.134 *	0	169	1600	0.134 *	0	169	1600	0.134 *	0	172	1600	0.145 *	0	172	1600	0.145 *	0	172	1600	0.145 *
Wb Right [3	46	0	-	0	46	0	-	0	46	0	-	12	59	0	-	0	59	0	-	0	59	0	-
Yellow Allowance:			0.100 *				0.100 *				0.100 *				0.100 *				0.100 *				0.100 *
ICU			0.637				0.651				0.651				0.678				0.691				0.691
LOS			B				B				B				B				B				B

** Key conflicting movement as a part of ICU*
1 Counts conducted by National Data & Surveying Services
2 Capacity expressed in veh/hour of green
3 Split phase operation.

LINSCOTT, LAW & GREENSPAN, ENGINEERS
600 S. Lake Avenue, Suite 500, Pasadena CA 91106
(626) 796.2322 Fax (626) 792.0941

INTERSECTION CAPACITY UTILIZATION

Santa Anita Avenue @ Santa Clara Street

N-S St: Santa Anita Avenue
E-W St: Santa Clara Street
Project: 125 W. Huntington Drive, Buildings C & D Project/1-16-4200-2
File: ICU7

Peak hr: PM
Annual Growth: 1.00%

Date: 08/20/2019
Date of Count: 2019
Projection Year: 2021

	2019 EXIST. TRAFFIC			2019 EXISTING WITH PROJECT				2019 EXIST. W/PROJECT + MITIGATION				2021 FUTURE PRE-PROJECT				2021 FUTURE WITH PROJECT				2021 FUTURE W/PROJECT + MITIGATIO			
	1	2	V/C	Added	Total		V/C	Added	Total	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C
Movement	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio
Nb Left	25	1600	0.016	0	25	1600	0.016	0	25	1600	0.016	0	26	1600	0.016	0	26	1600	0.016	0	26	1600	0.016
Nb Thru	675	3200	0.231 *	19	694	3200	0.237 *	0	694	3200	0.237 *	113	802	3200	0.273 *	19	821	3200	0.279 *	0	821	3200	0.279 *
Nb Right	64	0	-	0	64	0	-	0	64	0	-	8	73	0	-	0	73	0	-	0	73	0	-
Sb Left	117	1600	0.073 *	0	117	1600	0.073 *	0	117	1600	0.073 *	23	142	1600	0.089 *	0	142	1600	0.089 *	0	142	1600	0.089 *
Sb Thru	794	3200	0.248	22	816	3200	0.255	0	816	3200	0.255	86	896	3200	0.280	22	918	3200	0.287	0	918	3200	0.287
Sb Right	234	1600	0.146	16	250	1600	0.156	0	250	1600	0.156	13	252	1600	0.157	16	268	1600	0.167	0	268	1600	0.167
Eb Left [3]	323	2880	0.112	9	332	2880	0.115	0	332	2880	0.115	7	336	2880	0.117	9	345	2880	0.120	0	345	2880	0.120
Eb Thru [3]	180	1600	0.134 *	0	180	1600	0.134 *	0	180	1600	0.134 *	0	184	1600	0.137 *	0	184	1600	0.137 *	0	184	1600	0.137 *
Eb Right [3]	35	0	-	0	35	0	-	0	35	0	-	0	36	0	-	0	36	0	-	0	36	0	-
Wb Left [3]	86	1600	0.054	0	86	1600	0.054	0	86	1600	0.054	7	95	1600	0.059	0	95	1600	0.059	0	95	1600	0.059
Wb Thru [3]	134	1600	0.144 *	0	134	1600	0.144 *	0	134	1600	0.144 *	0	137	1600	0.189 *	0	137	1600	0.189 *	0	137	1600	0.189 *
Wb Right [3	96	0	-	0	96	0	-	0	96	0	-	67	165	0	-	0	165	0	-	0	165	0	-
Yellow Allowance:			0.100 *				0.100 *				0.100 *				0.100 *				0.100 *				0.100 *
ICU			0.682				0.688				0.688				0.788				0.794				0.794
LOS			B				B				B				C				C				C

** Key conflicting movement as a part of ICU*
1 Counts conducted by National Data & Surveying Services
2 Capacity expressed in veh/hour of green
3 Split phase operation.

LINSCOTT, LAW & GREENSPAN, ENGINEERS
600 S. Lake Avenue, Suite 500, Pasadena CA 91106
(626) 796.2322 Fax (626) 792.0941

INTERSECTION CAPACITY UTILIZATION

N-S St: Santa Anita Avenue
E-W St: Santa Clara Street
Project: 125 W. Huntington Drive, Buildings C & D Project/1-16-4200-2
File: ICU7

Santa Anita Avenue @ Santa Clara Street
Peak hr: SAT PM
Annual Growth: 1.00%

Date: 08/20/2019
Date of Count: 2019
Projection Year: 2021

	2019 EXIST. TRAFFIC			2019 EXISTING WITH PROJECT				2019 EXIST. W/PROJECT + MITIGATION				2021 FUTURE PRE-PROJECT				2021 FUTURE WITH PROJECT				2021 FUTURE W/PROJECT + MITIGATIO			
	1	2	V/C	Added	Total		V/C	Added	Total	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C
Movement	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio
Nb Left	14	1600	0.009	0	14	1600	0.009	0	14	1600	0.009	0	14	1600	0.009	0	14	1600	0.009	0	14	1600	0.009
Nb Thru	765	3200	0.263 *	27	792	3200	0.272 *	0	792	3200	0.272 *	122	902	3200	0.309 *	27	929	3200	0.317 *	0	929	3200	0.317 *
Nb Right	78	0	-	0	78	0	-	0	78	0	-	7	87	0	-	0	87	0	-	0	87	0	-
Sb Left	87	1600	0.054 *	0	87	1600	0.054 *	0	87	1600	0.054 *	24	113	1600	0.070 *	0	113	1600	0.070 *	0	113	1600	0.070 *
Sb Thru	710	3200	0.222	27	737	3200	0.230	0	737	3200	0.230	87	811	3200	0.254	27	838	3200	0.262	0	838	3200	0.262
Sb Right	334	1600	0.209	19	353	1600	0.221	0	353	1600	0.221	16	357	1600	0.223	19	376	1600	0.235	0	376	1600	0.235
Eb Left [3]	222	2880	0.077	19	241	2880	0.084	0	241	2880	0.084	2	228	2880	0.079	19	247	2880	0.086	0	247	2880	0.086
Eb Thru [3]	94	1600	0.084 *	0	94	1600	0.084 *	0	94	1600	0.084 *	0	96	1600	0.086 *	0	96	1600	0.086 *	0	96	1600	0.086 *
Eb Right [3]	41	0	-	0	41	0	-	0	41	0	-	0	42	0	-	0	42	0	-	0	42	0	-
Wb Left [3]	49	1600	0.031	0	49	1600	0.031	0	49	1600	0.031	7	57	1600	0.036	0	57	1600	0.036	0	57	1600	0.036
Wb Thru [3]	85	1600	0.113 *	0	85	1600	0.113 *	0	85	1600	0.113 *	0	87	1600	0.136 *	0	87	1600	0.136 *	0	87	1600	0.136 *
Wb Right [3	95	0	-	0	95	0	-	0	95	0	-	34	131	0	-	0	131	0	-	0	131	0	-
Yellow Allowance:			0.100 *				0.100 *				0.100 *				0.100 *				0.100 *				0.100 *
ICU			0.615				0.623				0.623				0.702				0.710				0.710
LOS			B				B				B				C				C				C

** Key conflicting movement as a part of ICU*
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600 S. Lake Avenue, Suite 500, Pasadena CA 91106
(626) 796.2322 Fax (626) 792.0941

INTERSECTION CAPACITY UTILIZATION

Santa Anita Avenue @ Huntington Drive

N-S St: Santa Anita Avenue
E-W St: Huntington Drive
Project: 125 W. Huntington Drive, Buildings C & D Project/1-16-4200-2
File: ICU8

Peak hr: AM
Annual Growth: 1.00%

Date: 08/20/2019
Date of Count: 2019
Projection Year: 2021

	2019 EXIST. TRAFFIC			2019 EXISTING WITH PROJECT				2019 EXIST. W/PROJECT + MITIGATION				2021 FUTURE PRE-PROJECT				2021 FUTURE WITH PROJECT				2021 FUTURE W/PROJECT + MITIGATIO			
	1	2	V/C	Added	Total		V/C	Added	Total	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C
Movement	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio
Nb Left	460	2880	0.160 *	0	460	2880	0.160 *	0	460	2880	0.160 *	23	492	2880	0.171 *	0	492	2880	0.171 *	0	492	2880	0.171 *
Nb Thru	613	3200	0.192	0	613	3200	0.192	0	613	3200	0.192	21	646	3200	0.202	0	646	3200	0.202	0	646	3200	0.202
Nb Right	146	1600	0.091	0	146	1600	0.091	0	146	1600	0.091	4	153	1600	0.096	0	153	1600	0.096	0	153	1600	0.096
Sb Left	77	2880	0.027	0	77	2880	0.027	0	77	2880	0.027	6	85	2880	0.029	0	85	2880	0.029	0	85	2880	0.029
Sb Thru	683	3200	0.213 *	0	683	3200	0.213 *	0	683	3200	0.213 *	12	709	3200	0.221 *	0	709	3200	0.221 *	0	709	3200	0.221 *
Sb Right	66	1600	0.041	25	91	1600	0.057	0	91	1600	0.057	30	97	1600	0.061	25	122	1600	0.076	0	122	1600	0.076
Eb Left	23	1600	0.014 *	22	45	1600	0.028 *	0	45	1600	0.028 *	41	64	1600	0.040 *	22	86	1600	0.054 *	0	86	1600	0.054 *
Eb Thru	466	3200	0.146	15	481	3200	0.150	0	481	3200	0.150	14	489	3200	0.153	15	504	3200	0.158	0	504	3200	0.158
Eb Right [3]	135	1600	0.000	4	139	1600	0.000	0	139	1600	0.000	8	146	1600	0.000	4	150	1600	0.000	0	150	1600	0.000
Wb Left	109	1600	0.068	0	109	1600	0.068	0	109	1600	0.068	11	122	1600	0.076	0	122	1600	0.076	0	122	1600	0.076
Wb Thru	1318	3200	0.434 *	11	1329	3200	0.437 *	0	1329	3200	0.437 *	43	1387	3200	0.461 *	11	1398	3200	0.464 *	0	1398	3200	0.464 *
Wb Right	70	0	-	0	70	0	-	0	70	0	-	15	86	0	-	0	86	0	-	0	86	0	-
Yellow Allowance:			0.100 *				0.100 *				0.100 *				0.100 *				0.100 *				0.100 *
ICU			0.921				0.938				0.938				0.993				1.010				1.010
LOS			E				E				E				E				F				F

** Key conflicting movement as a part of ICU*
1 Counts conducted by The Traffic Solution
2 Capacity expressed in veh/hour of green
3 The eastbound right-turn lane has an overlapping phase with the northbound left-turn phase.

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(626) 796.2322 Fax (626) 792.0941

INTERSECTION CAPACITY UTILIZATION

Santa Anita Avenue @ Huntington Drive

N-S St: Santa Anita Avenue
E-W St: Huntington Drive
Project: 125 W. Huntington Drive, Buildings C & D Project/1-16-4200-2
File: ICU8

Peak hr: PM
Annual Growth: 1.00%

Date: 08/20/2019
Date of Count: 2019
Projection Year: 2021

	2019 EXIST. TRAFFIC			2019 EXISTING WITH PROJECT				2019 EXIST. W/PROJECT + MITIGATION				2021 FUTURE PRE-PROJECT				2021 FUTURE WITH PROJECT				2021 FUTURE W/PROJECT + MITIGATIO			
	1	2	V/C	Added	Total		V/C	Added	Total	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C
Movement	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio
Nb Left	161	2880	0.056 *	4	165	2880	0.057 *	0	165	2880	0.057 *	15	179	2880	0.062 *	4	183	2880	0.064 *	0	183	2880	0.064 *
Nb Thru	700	3200	0.219	0	700	3200	0.219	0	700	3200	0.219	27	741	3200	0.232	0	741	3200	0.232	0	741	3200	0.232
Nb Right	107	1600	0.067	0	107	1600	0.067	0	107	1600	0.067	14	123	1600	0.077	0	123	1600	0.077	0	123	1600	0.077
Sb Left	132	2880	0.046	0	132	2880	0.046	0	132	2880	0.046	19	154	2880	0.053	0	154	2880	0.053	0	154	2880	0.053
Sb Thru	749	3200	0.234 *	0	749	3200	0.234 *	0	749	3200	0.234 *	36	800	3200	0.250 *	0	800	3200	0.250 *	0	800	3200	0.250 *
Sb Right	82	1600	0.051	22	104	1600	0.065	0	104	1600	0.065	37	121	1600	0.075	22	143	1600	0.089	0	143	1600	0.089
Eb Left	40	1600	0.025	19	59	1600	0.037	0	59	1600	0.037	80	121	1600	0.076	19	140	1600	0.087	0	140	1600	0.087
Eb Thru	1213	3200	0.379 *	6	1219	3200	0.381 *	0	1219	3200	0.381 *	50	1287	3200	0.402 *	6	1293	3200	0.404 *	0	1293	3200	0.404 *
Eb Right [3]	690	1600	0.375	0	690	1600	0.374	0	690	1600	0.374	30	734	1600	0.396	0	734	1600	0.395	0	734	1600	0.395
Wb Left	147	1600	0.092 *	0	147	1600	0.092 *	0	147	1600	0.092 *	11	161	1600	0.101 *	0	161	1600	0.101 *	0	161	1600	0.101 *
Wb Thru	663	3200	0.227	15	678	3200	0.232	0	678	3200	0.232	38	714	3200	0.248	15	729	3200	0.253	0	729	3200	0.253
Wb Right	64	0	-	0	64	0	-	0	64	0	-	14	79	0	-	0	79	0	-	0	79	0	-
Yellow Allowance:			0.100 *				0.100 *				0.100 *				0.100 *				0.100 *				0.100 *
ICU			0.861				0.864				0.864				0.915				0.918				0.918
LOS			D				D				D				E				E				E

** Key conflicting movement as a part of ICU*
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INTERSECTION CAPACITY UTILIZATION

Santa Anita Avenue @ Huntington Drive

N-S St: Santa Anita Avenue
E-W St: Huntington Drive
Project: 125 W. Huntington Drive, Buildings C & D Project/1-16-4200-2
File: ICU8

Peak hr: SAT PM
Annual Growth: 1.00%

Date: 08/20/2019
Date of Count: 2019
Projection Year: 2021

	2019 EXIST. TRAFFIC			2019 EXISTING WITH PROJECT				2019 EXIST. W/PROJECT + MITIGATION				2021 FUTURE PRE-PROJECT				2021 FUTURE WITH PROJECT				2021 FUTURE W/PROJECT + MITIGATIO			
	1	2	V/C	Added	Total		V/C	Added	Total	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C
Movement	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio
Nb Left	136	2880	0.047 *	3	139	2880	0.048 *	0	139	2880	0.048 *	19	158	2880	0.055 *	3	161	2880	0.056 *	0	161	2880	0.056 *
Nb Thru	511	3200	0.160	0	511	3200	0.160	0	511	3200	0.160	36	557	3200	0.174	0	557	3200	0.174	0	557	3200	0.174
Nb Right	130	1600	0.081	0	130	1600	0.081	0	130	1600	0.081	13	146	1600	0.091	0	146	1600	0.091	0	146	1600	0.091
Sb Left	123	2880	0.043	0	123	2880	0.043	0	123	2880	0.043	15	140	2880	0.049	0	140	2880	0.049	0	140	2880	0.049
Sb Thru	545	3200	0.170 *	0	545	3200	0.170 *	0	545	3200	0.170 *	35	591	3200	0.185 *	0	591	3200	0.185 *	0	591	3200	0.185 *
Sb Right	76	1600	0.048	27	103	1600	0.064	0	103	1600	0.064	44	122	1600	0.076	27	149	1600	0.093	0	149	1600	0.093
Eb Left	49	1600	0.031	27	76	1600	0.048	0	76	1600	0.048	77	127	1600	0.079	27	154	1600	0.096	0	154	1600	0.096
Eb Thru	746	3200	0.233 *	18	764	3200	0.239 *	0	764	3200	0.239 *	32	793	3200	0.248 *	18	811	3200	0.253 *	0	811	3200	0.253 *
Eb Right [3]	277	1600	0.126	4	281	1600	0.127	0	281	1600	0.127	18	301	1600	0.133	4	305	1600	0.135	0	305	1600	0.135
Wb Left	119	1600	0.074 *	0	119	1600	0.074 *	0	119	1600	0.074 *	12	133	1600	0.083 *	0	133	1600	0.083 *	0	133	1600	0.083 *
Wb Thru	573	3200	0.202	18	591	3200	0.208	0	591	3200	0.208	42	626	3200	0.224	18	644	3200	0.230	0	644	3200	0.230
Wb Right	73	0	-	0	73	0	-	0	73	0	-	17	91	0	-	0	91	0	-	0	91	0	-
Yellow Allowance:			0.100 *				0.100 *				0.100 *				0.100 *				0.100 *				0.100 *
ICU			0.625				0.632				0.632				0.671				0.677				0.677
LOS			B				B				B				B				B				B

** Key conflicting movement as a part of ICU*
1 Counts conducted by The Traffic Solution
2 Capacity expressed in veh/hour of green
3 The eastbound right-turn lane has an overlapping phase with the northbound left-turn phase.

APPENDIX C

CALTRANS ANALYSIS DATA WORKSHEETS

Appendix Table C-1
CALCULATION OF OFF-RAMP QUEUING [1]
WEEKDAY AM, PM AND SATURDAY PM PEAK HOURS

INT. NO.	OFF-RAMP LOCATION	PEAK HOUR	LANE GROUP MOVEMENT [2]	NO. OF LANES [2]	2019 EXISTING		2019 EXISTING WITH PROJECT		FUTURE YEAR 2021 WITHOUT PROJECT		FUTURE YEAR 2021 WITH PROJECT	
					MAXIMUM BACK OF QUEUE [4] (FEET)	MAXIMUM TOTAL QUEUE [5] (FEET)	MAXIMUM BACK OF QUEUE [4] (FEET)	MAXIMUM TOTAL QUEUE [5] (FEET)	MAXIMUM BACK OF QUEUE [4] (FEET)	MAXIMUM TOTAL QUEUE [5] (FEET)	MAXIMUM BACK OF QUEUE [4] (FEET)	MAXIMUM TOTAL QUEUE [5] (FEET)
5	Santa Anita Avenue/	AM	WB Left	1	13.2	13.2	14.0	14.0	14.8	14.8	15.6	15.6
	I-210 Freeway Westbound Ramps		WB Left-Through-Right	1	16.4	16.4	16.4	16.4	16.6	16.6	16.6	16.6
			Total AM Queueing			29.6		30.4		31.4		32.2
		PM	WB Left	1	10.1	10.1	11.0	11.0	12.1	12.1	13.0	13.0
			WB Left-Through-Right	1	13.8	13.8	13.8	13.8	14.0	14.0	14.0	14.0
			Total PM Queueing			23.9		24.8		26.1		27.0
		SAT	WB Left	1	9.5	9.5	9.8	9.8	10.3	10.3	10.6	10.6
			WB Left-Through-Right	1	9.6	9.6	10.1	10.1	10.8	10.8	11.3	11.3
			Total SAT Queueing			19.1		19.9		21.1		21.9
6	Santa Anita Avenue/	AM	EB Left	1	7.3	7.3	7.3	7.3	7.5	7.5	7.5	7.5
	I-210 Freeway Eastbound Ramps		EB Right	2	11.4	22.8	11.7	23.4	13.5	27.0	14.1	28.2
			Total AM Queueing			30.1		30.7		34.5		35.7
		PM	EB Left	1	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
			EB Right	2	9.0	18.0	9.2	18.4	10.2	20.4	10.5	21.0
			Total PM Queueing			23.5		23.9		25.9		26.5
		SAT	EB Left	1	5.3	5.3	5.3	5.3	5.4	5.4	5.4	5.4
			EB Right	2	9.9	19.8	10.2	20.4	11.9	23.8	12.7	25.4
			Total SAT Queueing			25.1		25.7		29.2		30.8

[1] Queues calculated herein are utilized in the off-ramp queuing analysis presented in Table 11-2.

[2] Off-ramp movements and lane geometry were obtained from aerials provided by Caltrans Earth, 2016.

[4] The 95th percentile queue length as reported by Synchro reflects the maximum back of queue for the lane with the highest queue in the lane group. Refer to the queuing analysis worksheets contained in Appendix C.

[5] The 95th percentile maximum queue was obtained by multiplying the reported queue by the number of lanes in the lane group.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	407	14	459	0	742	305	0	824	275
Future Volume (veh/h)	0	0	0	407	14	459	0	742	305	0	824	275
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		0.98	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
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1870	1870	1870	0	1870	1870	0	1870	1870
Adj Flow Rate, veh/h				411	14	464	0	749	308	0	832	278
Peak Hour Factor				0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %				2	2	2	0	2	2	0	2	2
Cap, veh/h				597	16	518	0	1990	1405	0	1990	888
Arrive On Green				0.34	0.34	0.34	0.00	1.00	1.00	0.00	0.56	0.56
Sat Flow, veh/h				1781	47	1546	0	3647	1560	0	3647	1585
Grp Volume(v), veh/h				411	0	478	0	749	308	0	832	278
Grp Sat Flow(s),veh/h/ln				1781	0	1592	0	1777	1560	0	1777	1585
Q Serve(g_s), s				19.9	0.0	28.5	0.0	0.0	0.0	0.0	13.5	9.4
Cycle Q Clear(g_c), s				19.9	0.0	28.5	0.0	0.0	0.0	0.0	13.5	9.4
Prop In Lane				1.00		0.97	0.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h				597	0	533	0	1990	1405	0	1990	888
V/C Ratio(X)				0.69	0.00	0.90	0.00	0.38	0.22	0.00	0.42	0.31
Avail Cap(c_a), veh/h				1113	0	995	0	1990	1405	0	1990	888
HCM Platoon Ratio				1.00	1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.00	0.84	0.84	0.00	1.00	1.00
Uniform Delay (d), s/veh				28.7	0.0	31.6	0.0	0.0	0.0	0.0	12.6	11.7
Incr Delay (d2), s/veh				0.5	0.0	2.2	0.0	0.5	0.3	0.0	0.6	0.9
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(95%),veh/ln				13.2	0.0	16.4	0.0	0.2	0.2	0.0	8.9	5.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				29.3	0.0	33.8	0.0	0.5	0.3	0.0	13.3	12.7
LnGrp LOS				C	A	C	A	A	A	A	B	B
Approach Vol, veh/h					889			1057			1110	
Approach Delay, s/veh					31.7			0.4			13.1	
Approach LOS					C			A			B	

Timer - Assigned Phs	2	4	6
Phs Duration (G+Y+Rc), s	61.5	38.5	61.5
Change Period (Y+Rc), s	5.5	5.0	5.5
Max Green Setting (Gmax), s	27.0	62.5	27.0
Max Q Clear Time (g_c+I1), s	2.0	30.5	15.5
Green Ext Time (p_c), s	12.4	3.0	7.7

Intersection Summary	
HCM 6th Ctrl Delay	14.1
HCM 6th LOS	B

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												
Traffic Volume (veh/h)	0	0	0	430	14	459	0	742	316	0	824	275
Future Volume (veh/h)	0	0	0	430	14	459	0	742	316	0	824	275
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		0.98	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
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1870	1870	1870	0	1870	1870	0	1870	1870
Adj Flow Rate, veh/h				434	14	464	0	749	319	0	832	278
Peak Hour Factor				0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %				2	2	2	0	2	2	0	2	2
Cap, veh/h				597	16	518	0	1989	1405	0	1989	887
Arrive On Green				0.34	0.34	0.34	0.00	1.00	1.00	0.00	0.56	0.56
Sat Flow, veh/h				1781	47	1546	0	3647	1560	0	3647	1585
Grp Volume(v), veh/h				434	0	478	0	749	319	0	832	278
Grp Sat Flow(s),veh/h/ln				1781	0	1592	0	1777	1560	0	1777	1585
Q Serve(g_s), s				21.4	0.0	28.5	0.0	0.0	0.0	0.0	13.5	9.4
Cycle Q Clear(g_c), s				21.4	0.0	28.5	0.0	0.0	0.0	0.0	13.5	9.4
Prop In Lane				1.00		0.97	0.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h				597	0	534	0	1989	1405	0	1989	887
V/C Ratio(X)				0.73	0.00	0.90	0.00	0.38	0.23	0.00	0.42	0.31
Avail Cap(c_a), veh/h				1113	0	995	0	1989	1405	0	1989	887
HCM Platoon Ratio				1.00	1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.00	0.84	0.84	0.00	1.00	1.00
Uniform Delay (d), s/veh				29.2	0.0	31.6	0.0	0.0	0.0	0.0	12.7	11.8
Incr Delay (d2), s/veh				0.6	0.0	2.2	0.0	0.5	0.3	0.0	0.6	0.9
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(95%),veh/ln				14.0	0.0	16.4	0.0	0.2	0.2	0.0	8.9	5.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				29.8	0.0	33.8	0.0	0.5	0.3	0.0	13.3	12.7
LnGrp LOS				C	A	C	A	A	A	A	B	B
Approach Vol, veh/h					912			1068			1110	
Approach Delay, s/veh					31.9			0.4			13.1	
Approach LOS					C			A			B	

Timer - Assigned Phs	2	4	6
Phs Duration (G+Y+Rc), s	61.5	38.5	61.5
Change Period (Y+Rc), s	5.5	5.0	5.5
Max Green Setting (Gmax), s	27.0	62.5	27.0
Max Q Clear Time (g_c+I1), s	2.0	30.5	15.5
Green Ext Time (p_c), s	12.5	3.0	7.7

Intersection Summary	
HCM 6th Ctrl Delay	14.3
HCM 6th LOS	B

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												
Traffic Volume (veh/h)	0	0	0	455	14	468	0	766	342	0	857	281
Future Volume (veh/h)	0	0	0	455	14	468	0	766	342	0	857	281
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		0.98	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
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1870	1870	1870	0	1870	1870	0	1870	1870
Adj Flow Rate, veh/h				460	14	473	0	774	345	0	866	284
Peak Hour Factor				0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %				2	2	2	0	2	2	0	2	2
Cap, veh/h				608	16	528	0	1967	1405	0	1967	877
Arrive On Green				0.34	0.34	0.34	0.00	1.00	1.00	0.00	0.55	0.55
Sat Flow, veh/h				1781	46	1546	0	3647	1560	0	3647	1585
Grp Volume(v), veh/h				460	0	487	0	774	345	0	866	284
Grp Sat Flow(s),veh/h/ln				1781	0	1592	0	1777	1560	0	1777	1585
Q Serve(g_s), s				22.9	0.0	29.0	0.0	0.0	0.0	0.0	14.4	9.7
Cycle Q Clear(g_c), s				22.9	0.0	29.0	0.0	0.0	0.0	0.0	14.4	9.7
Prop In Lane				1.00		0.97	0.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h				608	0	544	0	1967	1405	0	1967	877
V/C Ratio(X)				0.76	0.00	0.90	0.00	0.39	0.25	0.00	0.44	0.32
Avail Cap(c_a), veh/h				1113	0	995	0	1967	1405	0	1967	877
HCM Platoon Ratio				1.00	1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.00	0.81	0.81	0.00	1.00	1.00
Uniform Delay (d), s/veh				29.2	0.0	31.2	0.0	0.0	0.0	0.0	13.2	12.1
Incr Delay (d2), s/veh				0.7	0.0	2.2	0.0	0.5	0.3	0.0	0.7	1.0
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(95%),veh/ln				14.8	0.0	16.6	0.0	0.2	0.2	0.0	9.4	6.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				30.0	0.0	33.4	0.0	0.5	0.3	0.0	13.9	13.1
LnGrp LOS				C	A	C	A	A	A	A	B	B
Approach Vol, veh/h					947			1119			1150	
Approach Delay, s/veh					31.7			0.4			13.7	
Approach LOS					C			A			B	

Timer - Assigned Phs	2	4	6
Phs Duration (G+Y+Rc), s	60.9	39.1	60.9
Change Period (Y+Rc), s	5.5	5.0	5.5
Max Green Setting (Gmax), s	27.0	62.5	27.0
Max Q Clear Time (g_c+I1), s	2.0	31.0	16.4
Green Ext Time (p_c), s	13.0	3.1	7.4

Intersection Summary	
HCM 6th Ctrl Delay	14.4
HCM 6th LOS	B

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												
Traffic Volume (veh/h)	0	0	0	478	14	468	0	766	353	0	857	281
Future Volume (veh/h)	0	0	0	478	14	468	0	766	353	0	857	281
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		0.98	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
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1870	1870	1870	0	1870	1870	0	1870	1870
Adj Flow Rate, veh/h				483	14	473	0	774	357	0	866	284
Peak Hour Factor				0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %				2	2	2	0	2	2	0	2	2
Cap, veh/h				609	16	528	0	1966	1405	0	1966	877
Arrive On Green				0.34	0.34	0.34	0.00	1.00	1.00	0.00	0.55	0.55
Sat Flow, veh/h				1781	46	1546	0	3647	1560	0	3647	1585
Grp Volume(v), veh/h				483	0	487	0	774	357	0	866	284
Grp Sat Flow(s),veh/h/ln				1781	0	1592	0	1777	1560	0	1777	1585
Q Serve(g_s), s				24.5	0.0	29.0	0.0	0.0	0.0	0.0	14.4	9.8
Cycle Q Clear(g_c), s				24.5	0.0	29.0	0.0	0.0	0.0	0.0	14.4	9.8
Prop In Lane				1.00		0.97	0.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h				609	0	544	0	1966	1405	0	1966	877
V/C Ratio(X)				0.79	0.00	0.90	0.00	0.39	0.25	0.00	0.44	0.32
Avail Cap(c_a), veh/h				1113	0	995	0	1966	1405	0	1966	877
HCM Platoon Ratio				1.00	1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.00	0.81	0.81	0.00	1.00	1.00
Uniform Delay (d), s/veh				29.7	0.0	31.2	0.0	0.0	0.0	0.0	13.2	12.2
Incr Delay (d2), s/veh				0.9	0.0	2.2	0.0	0.5	0.4	0.0	0.7	1.0
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(95%),veh/ln				15.6	0.0	16.6	0.0	0.2	0.2	0.0	9.4	6.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				30.6	0.0	33.4	0.0	0.5	0.4	0.0	13.9	13.1
LnGrp LOS				C	A	C	A	A	A	A	B	B
Approach Vol, veh/h					970			1131			1150	
Approach Delay, s/veh					32.0			0.4			13.7	
Approach LOS					C			A			B	

Timer - Assigned Phs	2	4	6
Phs Duration (G+Y+Rc), s	60.8	39.2	60.8
Change Period (Y+Rc), s	5.5	5.0	5.5
Max Green Setting (Gmax), s	27.0	62.5	27.0
Max Q Clear Time (g_c+I1), s	2.0	31.0	16.4
Green Ext Time (p_c), s	13.2	3.2	7.4

Intersection Summary	
HCM 6th Ctrl Delay	14.6
HCM 6th LOS	B

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												
Traffic Volume (veh/h)	0	0	0	273	3	359	0	730	374	0	818	218
Future Volume (veh/h)	0	0	0	273	3	359	0	730	374	0	818	218
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				0.90	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1870	1870	1870	0	1870	1870	0	1870	1870
Adj Flow Rate, veh/h				284	3	374	0	760	390	0	852	227
Peak Hour Factor				0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %				2	2	2	0	2	2	0	2	2
Cap, veh/h				432	3	424	0	2224	1418	0	2224	992
Arrive On Green				0.27	0.27	0.27	0.00	0.21	0.21	0.00	0.63	0.63
Sat Flow, veh/h				1603	13	1574	0	3647	1584	0	3647	1585
Grp Volume(v), veh/h				284	0	377	0	760	390	0	852	227
Grp Sat Flow(s),veh/h/ln				1603	0	1587	0	1777	1584	0	1777	1585
Q Serve(g_s), s				15.7	0.0	22.8	0.0	18.3	6.0	0.0	11.8	6.3
Cycle Q Clear(g_c), s				15.7	0.0	22.8	0.0	18.3	6.0	0.0	11.8	6.3
Prop In Lane				1.00		0.99	0.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h				432	0	427	0	2224	1418	0	2224	992
V/C Ratio(X)				0.66	0.00	0.88	0.00	0.34	0.28	0.00	0.38	0.23
Avail Cap(c_a), veh/h				914	0	905	0	2224	1418	0	2224	992
HCM Platoon Ratio				1.00	1.00	1.00	1.00	0.33	0.33	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.00	0.84	0.84	0.00	1.00	1.00
Uniform Delay (d), s/veh				32.4	0.0	35.0	0.0	22.1	1.8	0.0	9.2	8.2
Incr Delay (d2), s/veh				0.6	0.0	2.4	0.0	0.4	0.4	0.0	0.5	0.5
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(95%),veh/ln				10.1	0.0	13.8	0.0	13.2	13.6	0.0	7.6	3.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				33.1	0.0	37.4	0.0	22.4	2.2	0.0	9.7	8.7
LnGrp LOS				C	A	D	A	C	A	A	A	A
Approach Vol, veh/h					661			1150			1079	
Approach Delay, s/veh					35.6			15.6			9.5	
Approach LOS					D			B			A	

Timer - Assigned Phs	2	4	6
Phs Duration (G+Y+Rc), s	68.1	31.9	68.1
Change Period (Y+Rc), s	5.5	5.0	5.5
Max Green Setting (Gmax), s	32.5	57.0	32.5
Max Q Clear Time (g_c+I1), s	20.3	24.8	13.8
Green Ext Time (p_c), s	8.1	2.2	10.8

Intersection Summary	
HCM 6th Ctrl Delay	17.9
HCM 6th LOS	B

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												
Traffic Volume (veh/h)	0	0	0	295	3	359	0	730	381	0	818	218
Future Volume (veh/h)	0	0	0	295	3	359	0	730	381	0	818	218
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				0.90	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1870	1870	1870	0	1870	1870	0	1870	1870
Adj Flow Rate, veh/h				307	3	374	0	760	397	0	852	227
Peak Hour Factor				0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %				2	2	2	0	2	2	0	2	2
Cap, veh/h				432	3	424	0	2223	1418	0	2223	991
Arrive On Green				0.27	0.27	0.27	0.00	0.21	0.21	0.00	0.63	0.63
Sat Flow, veh/h				1603	13	1574	0	3647	1584	0	3647	1585
Grp Volume(v), veh/h				307	0	377	0	760	397	0	852	227
Grp Sat Flow(s),veh/h/ln				1603	0	1587	0	1777	1584	0	1777	1585
Q Serve(g_s), s				17.3	0.0	22.8	0.0	18.3	6.1	0.0	11.8	6.3
Cycle Q Clear(g_c), s				17.3	0.0	22.8	0.0	18.3	6.1	0.0	11.8	6.3
Prop In Lane				1.00		0.99	0.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h				432	0	428	0	2223	1418	0	2223	991
V/C Ratio(X)				0.71	0.00	0.88	0.00	0.34	0.28	0.00	0.38	0.23
Avail Cap(c_a), veh/h				914	0	905	0	2223	1418	0	2223	991
HCM Platoon Ratio				1.00	1.00	1.00	1.00	0.33	0.33	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.00	0.84	0.84	0.00	1.00	1.00
Uniform Delay (d), s/veh				33.0	0.0	35.0	0.0	22.1	1.8	0.0	9.2	8.2
Incr Delay (d2), s/veh				0.8	0.0	2.4	0.0	0.4	0.4	0.0	0.5	0.5
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(95%),veh/ln				11.0	0.0	13.8	0.0	13.1	13.8	0.0	7.6	3.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				33.8	0.0	37.4	0.0	22.5	2.3	0.0	9.7	8.7
LnGrp LOS				C	A	D	A	C	A	A	A	A
Approach Vol, veh/h					684			1157			1079	
Approach Delay, s/veh					35.8			15.5			9.5	
Approach LOS					D			B			A	

Timer - Assigned Phs	2	4	6
Phs Duration (G+Y+Rc), s	68.0	32.0	68.0
Change Period (Y+Rc), s	5.5	5.0	5.5
Max Green Setting (Gmax), s	32.5	57.0	32.5
Max Q Clear Time (g_c+I1), s	20.3	24.8	13.8
Green Ext Time (p_c), s	8.1	2.2	10.8

Intersection Summary	
HCM 6th Ctrl Delay	18.1
HCM 6th LOS	B

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												
Traffic Volume (veh/h)	0	0	0	326	3	366	0	774	462	0	851	222
Future Volume (veh/h)	0	0	0	326	3	366	0	774	462	0	851	222
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				0.90	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1870	1870	1870	0	1870	1870	0	1870	1870
Adj Flow Rate, veh/h				340	3	381	0	806	481	0	886	231
Peak Hour Factor				0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %				2	2	2	0	2	2	0	2	2
Cap, veh/h				440	3	432	0	2205	1418	0	2205	984
Arrive On Green				0.27	0.27	0.27	0.00	0.20	0.20	0.00	0.62	0.62
Sat Flow, veh/h				1603	12	1575	0	3647	1584	0	3647	1585
Grp Volume(v), veh/h				340	0	384	0	806	481	0	886	231
Grp Sat Flow(s),veh/h/ln				1603	0	1587	0	1777	1584	0	1777	1585
Q Serve(g_s), s				19.5	0.0	23.2	0.0	19.5	7.4	0.0	12.6	6.5
Cycle Q Clear(g_c), s				19.5	0.0	23.2	0.0	19.5	7.4	0.0	12.6	6.5
Prop In Lane				1.00		0.99	0.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h				440	0	436	0	2205	1418	0	2205	984
V/C Ratio(X)				0.77	0.00	0.88	0.00	0.37	0.34	0.00	0.40	0.23
Avail Cap(c_a), veh/h				914	0	905	0	2205	1418	0	2205	984
HCM Platoon Ratio				1.00	1.00	1.00	1.00	0.33	0.33	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.00	0.78	0.78	0.00	1.00	1.00
Uniform Delay (d), s/veh				33.4	0.0	34.7	0.0	22.8	2.0	0.0	9.6	8.4
Incr Delay (d2), s/veh				1.1	0.0	2.4	0.0	0.4	0.5	0.0	0.5	0.6
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(95%),veh/ln				12.1	0.0	14.0	0.0	13.7	16.4	0.0	8.1	3.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				34.5	0.0	37.1	0.0	23.2	2.5	0.0	10.1	9.0
LnGrp LOS				C	A	D	A	C	A	A	B	A
Approach Vol, veh/h					724			1287			1117	
Approach Delay, s/veh					35.9			15.5			9.9	
Approach LOS					D			B			A	

Timer - Assigned Phs	2	4	6
Phs Duration (G+Y+Rc), s	67.6	32.4	67.6
Change Period (Y+Rc), s	5.5	5.0	5.5
Max Green Setting (Gmax), s	32.5	57.0	32.5
Max Q Clear Time (g_c+I1), s	21.5	25.2	14.6
Green Ext Time (p_c), s	8.0	2.3	10.8

Intersection Summary	
HCM 6th Ctrl Delay	18.2
HCM 6th LOS	B

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												
Traffic Volume (veh/h)	0	0	0	348	3	366	0	774	469	0	851	222
Future Volume (veh/h)	0	0	0	348	3	366	0	774	469	0	851	222
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				0.90	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1870	1870	1870	0	1870	1870	0	1870	1870
Adj Flow Rate, veh/h				362	3	381	0	806	489	0	886	231
Peak Hour Factor				0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %				2	2	2	0	2	2	0	2	2
Cap, veh/h				440	3	433	0	2204	1418	0	2204	983
Arrive On Green				0.27	0.27	0.27	0.00	0.20	0.20	0.00	0.62	0.62
Sat Flow, veh/h				1603	12	1575	0	3647	1584	0	3647	1585
Grp Volume(v), veh/h				362	0	384	0	806	489	0	886	231
Grp Sat Flow(s),veh/h/ln				1603	0	1587	0	1777	1584	0	1777	1585
Q Serve(g_s), s				21.2	0.0	23.2	0.0	19.5	7.6	0.0	12.6	6.5
Cycle Q Clear(g_c), s				21.2	0.0	23.2	0.0	19.5	7.6	0.0	12.6	6.5
Prop In Lane				1.00		0.99	0.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h				440	0	436	0	2204	1418	0	2204	983
V/C Ratio(X)				0.82	0.00	0.88	0.00	0.37	0.34	0.00	0.40	0.23
Avail Cap(c_a), veh/h				914	0	905	0	2204	1418	0	2204	983
HCM Platoon Ratio				1.00	1.00	1.00	1.00	0.33	0.33	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.00	0.78	0.78	0.00	1.00	1.00
Uniform Delay (d), s/veh				34.0	0.0	34.7	0.0	22.9	2.0	0.0	9.6	8.4
Incr Delay (d2), s/veh				1.5	0.0	2.3	0.0	0.4	0.5	0.0	0.5	0.6
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(95%),veh/ln				13.0	0.0	14.0	0.0	13.7	16.6	0.0	8.1	3.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				35.5	0.0	37.0	0.0	23.2	2.5	0.0	10.2	9.0
LnGrp LOS				D	A	D	A	C	A	A	B	A
Approach Vol, veh/h					746			1295			1117	
Approach Delay, s/veh					36.3			15.4			9.9	
Approach LOS					D			B			A	

Timer - Assigned Phs	2	4	6
Phs Duration (G+Y+Rc), s	67.5	32.5	67.5
Change Period (Y+Rc), s	5.5	5.0	5.5
Max Green Setting (Gmax), s	32.5	57.0	32.5
Max Q Clear Time (g_c+I1), s	21.5	25.2	14.6
Green Ext Time (p_c), s	8.0	2.3	10.8

Intersection Summary	
HCM 6th Ctrl Delay	18.4
HCM 6th LOS	B

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												
Traffic Volume (veh/h)	0	0	0	261	2	245	0	553	347	0	609	248
Future Volume (veh/h)	0	0	0	261	2	245	0	553	347	0	609	248
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		0.99	1.00		1.00
Parking Bus, Adj				0.90	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1870	1870	1870	0	1870	1870	0	1870	1870
Adj Flow Rate, veh/h				264	12	255	0	576	361	0	634	258
Peak Hour Factor				0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %				2	2	2	0	2	2	0	2	2
Cap, veh/h				321	14	305	0	2428	1386	0	2428	1083
Arrive On Green				0.20	0.20	0.20	0.00	0.23	0.23	0.00	0.68	0.68
Sat Flow, veh/h				1603	72	1524	0	3647	1564	0	3647	1585
Grp Volume(v), veh/h				264	0	267	0	576	361	0	634	258
Grp Sat Flow(s),veh/h/ln				1603	0	1596	0	1777	1564	0	1777	1585
Q Serve(g_s), s				14.2	0.0	14.5	0.0	11.9	6.4	0.0	6.2	5.5
Cycle Q Clear(g_c), s				14.2	0.0	14.5	0.0	11.9	6.4	0.0	6.2	5.5
Prop In Lane				1.00		0.96	0.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h				321	0	319	0	2428	1386	0	2428	1083
V/C Ratio(X)				0.82	0.00	0.84	0.00	0.24	0.26	0.00	0.26	0.24
Avail Cap(c_a), veh/h				873	0	869	0	2428	1386	0	2428	1083
HCM Platoon Ratio				1.00	1.00	1.00	1.00	0.33	0.33	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.00	0.90	0.90	0.00	1.00	1.00
Uniform Delay (d), s/veh				34.5	0.0	34.6	0.0	15.7	2.4	0.0	5.5	5.4
Incr Delay (d2), s/veh				2.0	0.0	2.2	0.0	0.2	0.4	0.0	0.3	0.5
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(95%),veh/ln				9.5	0.0	9.6	0.0	9.3	11.5	0.0	3.5	2.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				36.5	0.0	36.8	0.0	15.9	2.8	0.0	5.8	5.9
LnGrp LOS				D	A	D	A	B	A	A	A	A
Approach Vol, veh/h					531			937			892	
Approach Delay, s/veh					36.7			10.8			5.8	
Approach LOS					D			B			A	

Timer - Assigned Phs	2	4	6
Phs Duration (G+Y+Rc), s	67.0	23.0	67.0
Change Period (Y+Rc), s	5.5	5.0	5.5
Max Green Setting (Gmax), s	30.5	49.0	30.5
Max Q Clear Time (g_c+I1), s	13.9	16.5	8.2
Green Ext Time (p_c), s	8.3	1.5	9.7

Intersection Summary	
HCM 6th Ctrl Delay	14.7
HCM 6th LOS	B

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												
Traffic Volume (veh/h)	0	0	0	288	2	245	0	553	360	0	609	248
Future Volume (veh/h)	0	0	0	288	2	245	0	553	360	0	609	248
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		0.99	1.00		1.00
Parking Bus, Adj				0.90	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1870	1870	1870	0	1870	1870	0	1870	1870
Adj Flow Rate, veh/h				278	32	255	0	576	375	0	634	258
Peak Hour Factor				0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %				2	2	2	0	2	2	0	2	2
Cap, veh/h				339	38	303	0	2388	1386	0	2388	1065
Arrive On Green				0.21	0.21	0.21	0.00	0.22	0.22	0.00	0.67	0.67
Sat Flow, veh/h				1603	180	1433	0	3647	1564	0	3647	1585
Grp Volume(v), veh/h				278	0	287	0	576	375	0	634	258
Grp Sat Flow(s),veh/h/ln				1603	0	1612	0	1777	1564	0	1777	1585
Q Serve(g_s), s				14.9	0.0	15.4	0.0	12.0	6.5	0.0	6.4	5.7
Cycle Q Clear(g_c), s				14.9	0.0	15.4	0.0	12.0	6.5	0.0	6.4	5.7
Prop In Lane				1.00		0.89	0.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h				339	0	341	0	2388	1386	0	2388	1065
V/C Ratio(X)				0.82	0.00	0.84	0.00	0.24	0.27	0.00	0.27	0.24
Avail Cap(c_a), veh/h				873	0	878	0	2388	1386	0	2388	1065
HCM Platoon Ratio				1.00	1.00	1.00	1.00	0.33	0.33	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.00	0.89	0.89	0.00	1.00	1.00
Uniform Delay (d), s/veh				33.9	0.0	34.1	0.0	16.1	2.4	0.0	5.9	5.8
Incr Delay (d2), s/veh				1.9	0.0	2.2	0.0	0.2	0.4	0.0	0.3	0.5
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(95%),veh/ln				9.8	0.0	10.1	0.0	9.4	12.0	0.0	3.7	3.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				35.8	0.0	36.3	0.0	16.4	2.8	0.0	6.2	6.3
LnGrp LOS				D	A	D	A	B	A	A	A	A
Approach Vol, veh/h					565			951			892	
Approach Delay, s/veh					36.0			11.0			6.2	
Approach LOS					D			B			A	

Timer - Assigned Phs	2	4	6
Phs Duration (G+Y+Rc), s	66.0	24.0	66.0
Change Period (Y+Rc), s	5.5	5.0	5.5
Max Green Setting (Gmax), s	30.5	49.0	30.5
Max Q Clear Time (g_c+I1), s	14.0	17.4	8.4
Green Ext Time (p_c), s	8.4	1.6	9.6

Intersection Summary	
HCM 6th Ctrl Delay	15.1
HCM 6th LOS	B

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												
Traffic Volume (veh/h)	0	0	0	322	2	250	0	584	413	0	641	253
Future Volume (veh/h)	0	0	0	322	2	250	0	584	413	0	641	253
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		0.99	1.00		1.00
Parking Bus, Adj				0.90	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1870	1870	1870	0	1870	1870	0	1870	1870
Adj Flow Rate, veh/h				298	53	260	0	608	430	0	668	264
Peak Hour Factor				0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %				2	2	2	0	2	2	0	2	2
Cap, veh/h				363	62	306	0	2335	1386	0	2335	1041
Arrive On Green				0.23	0.23	0.23	0.00	0.22	0.22	0.00	0.66	0.66
Sat Flow, veh/h				1603	276	1352	0	3647	1564	0	3647	1585
Grp Volume(v), veh/h				298	0	313	0	608	430	0	668	264
Grp Sat Flow(s),veh/h/ln				1603	0	1627	0	1777	1564	0	1777	1585
Q Serve(g_s), s				15.9	0.0	16.6	0.0	12.8	7.2	0.0	7.1	6.2
Cycle Q Clear(g_c), s				15.9	0.0	16.6	0.0	12.8	7.2	0.0	7.1	6.2
Prop In Lane				1.00		0.83	0.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h				363	0	368	0	2335	1386	0	2335	1041
V/C Ratio(X)				0.82	0.00	0.85	0.00	0.26	0.31	0.00	0.29	0.25
Avail Cap(c_a), veh/h				873	0	886	0	2335	1386	0	2335	1041
HCM Platoon Ratio				1.00	1.00	1.00	1.00	0.33	0.33	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.00	0.87	0.87	0.00	1.00	1.00
Uniform Delay (d), s/veh				33.1	0.0	33.3	0.0	17.1	2.4	0.0	6.5	6.4
Incr Delay (d2), s/veh				1.8	0.0	2.2	0.0	0.2	0.5	0.0	0.3	0.6
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(95%),veh/ln				10.3	0.0	10.8	0.0	9.8	13.6	0.0	4.2	3.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				34.9	0.0	35.5	0.0	17.3	2.9	0.0	6.8	6.9
LnGrp LOS				C	A	D	A	B	A	A	A	A
Approach Vol, veh/h					611			1038			932	
Approach Delay, s/veh					35.2			11.3			6.9	
Approach LOS					D			B			A	

Timer - Assigned Phs	2	4	6
Phs Duration (G+Y+Rc), s	64.6	25.4	64.6
Change Period (Y+Rc), s	5.5	5.0	5.5
Max Green Setting (Gmax), s	30.5	49.0	30.5
Max Q Clear Time (g_c+I1), s	14.8	18.6	9.1
Green Ext Time (p_c), s	8.8	1.8	9.9

Intersection Summary	
HCM 6th Ctrl Delay	15.4
HCM 6th LOS	B

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												
Traffic Volume (veh/h)	0	0	0	349	2	250	0	584	426	0	641	253
Future Volume (veh/h)	0	0	0	349	2	250	0	584	426	0	641	253
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		0.99	1.00		1.00
Parking Bus, Adj				0.90	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1870	1870	1870	0	1870	1870	0	1870	1870
Adj Flow Rate, veh/h				313	73	260	0	608	444	0	668	264
Peak Hour Factor				0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %				2	2	2	0	2	2	0	2	2
Cap, veh/h				381	85	304	0	2295	1387	0	2295	1024
Arrive On Green				0.24	0.24	0.24	0.00	0.21	0.21	0.00	0.65	0.65
Sat Flow, veh/h				1603	359	1280	0	3647	1564	0	3647	1585
Grp Volume(v), veh/h				313	0	333	0	608	444	0	668	264
Grp Sat Flow(s),veh/h/ln				1603	0	1640	0	1777	1564	0	1777	1585
Q Serve(g_s), s				16.6	0.0	17.5	0.0	12.8	7.3	0.0	7.4	6.4
Cycle Q Clear(g_c), s				16.6	0.0	17.5	0.0	12.8	7.3	0.0	7.4	6.4
Prop In Lane				1.00		0.78	0.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h				381	0	390	0	2295	1387	0	2295	1024
V/C Ratio(X)				0.82	0.00	0.85	0.00	0.26	0.32	0.00	0.29	0.26
Avail Cap(c_a), veh/h				873	0	893	0	2295	1387	0	2295	1024
HCM Platoon Ratio				1.00	1.00	1.00	1.00	0.33	0.33	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.00	0.87	0.87	0.00	1.00	1.00
Uniform Delay (d), s/veh				32.5	0.0	32.8	0.0	17.6	2.3	0.0	7.0	6.8
Incr Delay (d2), s/veh				1.7	0.0	2.1	0.0	0.2	0.5	0.0	0.3	0.6
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(95%),veh/ln				10.6	0.0	11.3	0.0	9.9	14.0	0.0	4.4	3.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				34.2	0.0	34.9	0.0	17.8	2.8	0.0	7.3	7.4
LnGrp LOS				C	A	C	A	B	A	A	A	A
Approach Vol, veh/h					646			1052			932	
Approach Delay, s/veh					34.6			11.5			7.3	
Approach LOS					C			B			A	

Timer - Assigned Phs	2	4	6
Phs Duration (G+Y+Rc), s	63.6	26.4	63.6
Change Period (Y+Rc), s	5.5	5.0	5.5
Max Green Setting (Gmax), s	30.5	49.0	30.5
Max Q Clear Time (g_c+I1), s	14.8	19.5	9.4
Green Ext Time (p_c), s	8.9	1.9	9.8

Intersection Summary	
HCM 6th Ctrl Delay	15.7
HCM 6th LOS	B

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												
Traffic Volume (veh/h)	255	0	387	0	0	0	0	721	203	275	948	0
Future Volume (veh/h)	255	0	387	0	0	0	0	721	203	275	948	0
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
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870				0	1870	1870	1870	1870	0
Adj Flow Rate, veh/h	175	0	493				0	743	209	284	977	0
Peak Hour Factor	0.97	0.97	0.97				0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	311	0	554				0	1775	792	313	2560	0
Arrive On Green	0.17	0.00	0.17				0.00	0.50	0.50	0.35	1.00	0.00
Sat Flow, veh/h	1781	0	3170				0	3647	1585	1781	3647	0
Grp Volume(v), veh/h	175	0	493				0	743	209	284	977	0
Grp Sat Flow(s),veh/h/ln	1781	0	1585				0	1777	1585	1781	1777	0
Q Serve(g_s), s	9.0	0.0	15.2				0.0	13.2	7.6	15.2	0.0	0.0
Cycle Q Clear(g_c), s	9.0	0.0	15.2				0.0	13.2	7.6	15.2	0.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	311	0	554				0	1775	792	313	2560	0
V/C Ratio(X)	0.56	0.00	0.89				0.00	0.42	0.26	0.91	0.38	0.00
Avail Cap(c_a), veh/h	321	0	571				0	1775	792	428	2560	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	2.00	2.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.85	0.85	0.00
Uniform Delay (d), s/veh	37.8	0.0	40.3				0.0	15.8	14.4	31.7	0.0	0.0
Incr Delay (d2), s/veh	2.1	0.0	15.8				0.0	0.7	0.8	15.7	0.4	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
%ile BackOfQ(95%),veh/ln	7.3	0.0	11.4				0.0	9.0	5.0	10.3	0.2	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	39.9	0.0	56.1				0.0	16.6	15.2	47.4	0.4	0.0
LnGrp LOS	D	A	E				A	B	B	D	A	A
Approach Vol, veh/h		668						952			1261	
Approach Delay, s/veh		51.8						16.3			11.0	
Approach LOS		D						B			B	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	22.1	55.5		22.5		77.5
Change Period (Y+Rc), s	4.5	5.5		5.0		5.5
Max Green Setting (Gmax), s	24.0	43.0		18.0		71.5
Max Q Clear Time (g_c+I1), s	17.2	15.2		17.2		2.0
Green Ext Time (p_c), s	0.4	11.9		0.3		19.2

Intersection Summary	
HCM 6th Ctrl Delay	22.2
HCM 6th 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												
Traffic Volume (veh/h)	255	0	397	0	0	0	0	732	225	275	970	0
Future Volume (veh/h)	255	0	397	0	0	0	0	732	225	275	970	0
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
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870				0	1870	1870	1870	1870	0
Adj Flow Rate, veh/h	175	0	503				0	755	232	284	1000	0
Peak Hour Factor	0.97	0.97	0.97				0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	315	0	561				0	1768	788	313	2552	0
Arrive On Green	0.18	0.00	0.18				0.00	0.50	0.50	0.35	1.00	0.00
Sat Flow, veh/h	1781	0	3170				0	3647	1585	1781	3647	0
Grp Volume(v), veh/h	175	0	503				0	755	232	284	1000	0
Grp Sat Flow(s),veh/h/ln	1781	0	1585				0	1777	1585	1781	1777	0
Q Serve(g_s), s	9.0	0.0	15.5				0.0	13.6	8.6	15.2	0.0	0.0
Cycle Q Clear(g_c), s	9.0	0.0	15.5				0.0	13.6	8.6	15.2	0.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	315	0	561				0	1768	788	313	2552	0
V/C Ratio(X)	0.56	0.00	0.90				0.00	0.43	0.29	0.91	0.39	0.00
Avail Cap(c_a), veh/h	321	0	571				0	1768	788	428	2552	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	2.00	2.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.84	0.84	0.00
Uniform Delay (d), s/veh	37.6	0.0	40.3				0.0	16.0	14.8	31.7	0.0	0.0
Incr Delay (d2), s/veh	2.0	0.0	16.7				0.0	0.8	0.9	15.6	0.4	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
%ile BackOfQ(95%),veh/ln	7.3	0.0	11.7				0.0	9.2	5.7	10.2	0.2	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	39.6	0.0	57.0				0.0	16.8	15.7	47.2	0.4	0.0
LnGrp LOS	D	A	E				A	B	B	D	A	A
Approach Vol, veh/h		678						987			1284	
Approach Delay, s/veh		52.5						16.5			10.7	
Approach LOS		D						B			B	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	22.1	55.2		22.7		77.3
Change Period (Y+Rc), s	4.5	5.5		5.0		5.5
Max Green Setting (Gmax), s	24.0	43.0		18.0		71.5
Max Q Clear Time (g_c+I1), s	17.2	15.6		17.5		2.0
Green Ext Time (p_c), s	0.4	12.3		0.2		20.0

Intersection Summary	
HCM 6th Ctrl Delay	22.3
HCM 6th 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												
Traffic Volume (veh/h)	260	0	436	0	0	0	0	775	239	281	1023	0
Future Volume (veh/h)	260	0	436	0	0	0	0	775	239	281	1023	0
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
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870				0	1870	1870	1870	1870	0
Adj Flow Rate, veh/h	179	0	545				0	799	246	290	1055	0
Peak Hour Factor	0.97	0.97	0.97				0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	321	0	571				0	1745	778	319	2541	0
Arrive On Green	0.18	0.00	0.18				0.00	0.49	0.49	0.36	1.00	0.00
Sat Flow, veh/h	1781	0	3170				0	3647	1585	1781	3647	0
Grp Volume(v), veh/h	179	0	545				0	799	246	290	1055	0
Grp Sat Flow(s),veh/h/ln	1781	0	1585				0	1777	1585	1781	1777	0
Q Serve(g_s), s	9.2	0.0	17.0				0.0	14.8	9.3	15.5	0.0	0.0
Cycle Q Clear(g_c), s	9.2	0.0	17.0				0.0	14.8	9.3	15.5	0.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	321	0	571				0	1745	778	319	2541	0
V/C Ratio(X)	0.56	0.00	0.96				0.00	0.46	0.32	0.91	0.42	0.00
Avail Cap(c_a), veh/h	321	0	571				0	1745	778	428	2541	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	2.00	2.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.81	0.81	0.00
Uniform Delay (d), s/veh	37.4	0.0	40.6				0.0	16.7	15.3	31.3	0.0	0.0
Incr Delay (d2), s/veh	2.2	0.0	26.8				0.0	0.9	1.1	15.8	0.4	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
%ile BackOfQ(95%),veh/ln	7.5	0.0	13.5				0.0	9.9	6.2	10.3	0.3	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	39.5	0.0	67.4				0.0	17.6	16.4	47.1	0.4	0.0
LnGrp LOS	D	A	E				A	B	B	D	A	A
Approach Vol, veh/h		724						1045			1345	
Approach Delay, s/veh		60.5						17.3			10.5	
Approach LOS		E						B			B	

Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	22.4	54.6		23.0		77.0						
Change Period (Y+Rc), s	4.5	5.5		5.0		5.5						
Max Green Setting (Gmax), s	24.0	43.0		18.0		71.5						
Max Q Clear Time (g_c+I1), s	17.5	16.8		19.0		2.0						
Green Ext Time (p_c), s	0.4	12.8		0.0		21.8						

Intersection Summary	
HCM 6th Ctrl Delay	24.4
HCM 6th 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												
Traffic Volume (veh/h)	260	0	446	0	0	0	0	786	261	281	1045	0
Future Volume (veh/h)	260	0	446	0	0	0	0	786	261	281	1045	0
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
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870				0	1870	1870	1870	1870	0
Adj Flow Rate, veh/h	179	0	556				0	810	269	290	1077	0
Peak Hour Factor	0.97	0.97	0.97				0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	321	0	571				0	1745	778	319	2541	0
Arrive On Green	0.18	0.00	0.18				0.00	0.49	0.49	0.36	1.00	0.00
Sat Flow, veh/h	1781	0	3170				0	3647	1585	1781	3647	0
Grp Volume(v), veh/h	179	0	556				0	810	269	290	1077	0
Grp Sat Flow(s),veh/h/ln	1781	0	1585				0	1777	1585	1781	1777	0
Q Serve(g_s), s	9.2	0.0	17.4				0.0	15.0	10.4	15.5	0.0	0.0
Cycle Q Clear(g_c), s	9.2	0.0	17.4				0.0	15.0	10.4	15.5	0.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	321	0	571				0	1745	778	319	2541	0
V/C Ratio(X)	0.56	0.00	0.97				0.00	0.46	0.35	0.91	0.42	0.00
Avail Cap(c_a), veh/h	321	0	571				0	1745	778	428	2541	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	2.00	2.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.80	0.80	0.00
Uniform Delay (d), s/veh	37.4	0.0	40.8				0.0	16.8	15.6	31.3	0.0	0.0
Incr Delay (d2), s/veh	2.2	0.0	31.1				0.0	0.9	1.2	15.6	0.4	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
%ile BackOfQ(95%),veh/ln	7.5	0.0	14.1				0.0	10.0	6.9	10.2	0.3	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	39.5	0.0	71.9				0.0	17.7	16.8	47.0	0.4	0.0
LnGrp LOS	D	A	E				A	B	B	D	A	A
Approach Vol, veh/h		735						1079			1367	
Approach Delay, s/veh		64.0						17.5			10.3	
Approach LOS		E						B			B	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	22.4	54.6		23.0		77.0
Change Period (Y+Rc), s	4.5	5.5		5.0		5.5
Max Green Setting (Gmax), s	24.0	43.0		18.0		71.5
Max Q Clear Time (g_c+I1), s	17.5	17.0		19.4		2.0
Green Ext Time (p_c), s	0.4	13.1		0.0		22.5

Intersection Summary	
HCM 6th Ctrl Delay	25.1
HCM 6th 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												
Traffic Volume (veh/h)	167	50	313	0	0	0	0	949	194	161	872	0
Future Volume (veh/h)	167	50	313	0	0	0	0	949	194	161	872	0
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
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870				0	1870	1870	1870	1870	0
Adj Flow Rate, veh/h	133	0	404				0	989	202	168	908	0
Peak Hour Factor	0.96	0.96	0.96				0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	275	0	490				0	2074	925	199	2632	0
Arrive On Green	0.15	0.00	0.15				0.00	0.58	0.58	0.22	1.00	0.00
Sat Flow, veh/h	1781	0	3170				0	3647	1585	1781	3647	0
Grp Volume(v), veh/h	133	0	404				0	989	202	168	908	0
Grp Sat Flow(s),veh/h/ln	1781	0	1585				0	1777	1585	1781	1777	0
Q Serve(g_s), s	6.8	0.0	12.3				0.0	16.1	6.1	9.0	0.0	0.0
Cycle Q Clear(g_c), s	6.8	0.0	12.3				0.0	16.1	6.1	9.0	0.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	275	0	490				0	2074	925	199	2632	0
V/C Ratio(X)	0.48	0.00	0.82				0.00	0.48	0.22	0.84	0.35	0.00
Avail Cap(c_a), veh/h	356	0	634				0	2074	925	392	2632	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	2.00	2.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.89	0.89	0.00
Uniform Delay (d), s/veh	38.6	0.0	41.0				0.0	12.0	9.9	38.0	0.0	0.0
Incr Delay (d2), s/veh	1.3	0.0	6.9				0.0	0.8	0.5	7.3	0.3	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
%ile BackOfQ(95%),veh/ln	5.5	0.0	9.0				0.0	10.0	3.8	6.9	0.2	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	39.9	0.0	47.8				0.0	12.8	10.5	45.3	0.3	0.0
LnGrp LOS	D	A	D				A	B	B	D	A	A
Approach Vol, veh/h		537						1191			1076	
Approach Delay, s/veh		45.9						12.4			7.3	
Approach LOS		D						B			A	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	15.7	63.9		20.4		79.6
Change Period (Y+Rc), s	4.5	5.5		5.0		5.5
Max Green Setting (Gmax), s	22.0	43.0		20.0		69.5
Max Q Clear Time (g_c+I1), s	11.0	18.1		14.3		2.0
Green Ext Time (p_c), s	0.3	14.6		1.1		17.0

Intersection Summary	
HCM 6th Ctrl Delay	16.9
HCM 6th LOS	B

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												
Traffic Volume (veh/h)	167	50	324	0	0	0	0	955	211	161	894	0
Future Volume (veh/h)	167	50	324	0	0	0	0	955	211	161	894	0
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
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870				0	1870	1870	1870	1870	0
Adj Flow Rate, veh/h	133	0	416				0	995	220	168	931	0
Peak Hour Factor	0.96	0.96	0.96				0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	281	0	501				0	2062	920	199	2619	0
Arrive On Green	0.16	0.00	0.16				0.00	0.58	0.58	0.22	1.00	0.00
Sat Flow, veh/h	1781	0	3170				0	3647	1585	1781	3647	0
Grp Volume(v), veh/h	133	0	416				0	995	220	168	931	0
Grp Sat Flow(s),veh/h/ln	1781	0	1585				0	1777	1585	1781	1777	0
Q Serve(g_s), s	6.8	0.0	12.7				0.0	16.3	6.8	9.0	0.0	0.0
Cycle Q Clear(g_c), s	6.8	0.0	12.7				0.0	16.3	6.8	9.0	0.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	281	0	501				0	2062	920	199	2619	0
V/C Ratio(X)	0.47	0.00	0.83				0.00	0.48	0.24	0.84	0.36	0.00
Avail Cap(c_a), veh/h	356	0	634				0	2062	920	392	2619	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	2.00	2.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.89	0.89	0.00
Uniform Delay (d), s/veh	38.3	0.0	40.8				0.0	12.2	10.2	38.0	0.0	0.0
Incr Delay (d2), s/veh	1.2	0.0	7.4				0.0	0.8	0.6	7.3	0.3	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
%ile BackOfQ(95%),veh/ln	5.5	0.0	9.2				0.0	10.2	4.2	6.9	0.2	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	39.5	0.0	48.2				0.0	13.0	10.8	45.3	0.3	0.0
LnGrp LOS	D	A	D				A	B	B	D	A	A
Approach Vol, veh/h		549						1215			1099	
Approach Delay, s/veh		46.1						12.6			7.2	
Approach LOS		D						B			A	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	15.7	63.5		20.8		79.2
Change Period (Y+Rc), s	4.5	5.5		5.0		5.5
Max Green Setting (Gmax), s	22.0	43.0		20.0		69.5
Max Q Clear Time (g_c+I1), s	11.0	18.3		14.7		2.0
Green Ext Time (p_c), s	0.3	14.7		1.1		17.7

Intersection Summary	
HCM 6th Ctrl Delay	17.0
HCM 6th LOS	B

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												
Traffic Volume (veh/h)	170	51	367	0	0	0	0	1088	286	164	962	0
Future Volume (veh/h)	170	51	367	0	0	0	0	1088	286	164	962	0
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
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870				0	1870	1870	1870	1870	0
Adj Flow Rate, veh/h	136	0	462				0	1133	298	171	1002	0
Peak Hour Factor	0.96	0.96	0.96				0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	304	0	542				0	2010	896	202	2573	0
Arrive On Green	0.17	0.00	0.17				0.00	0.57	0.57	0.23	1.00	0.00
Sat Flow, veh/h	1781	0	3170				0	3647	1585	1781	3647	0
Grp Volume(v), veh/h	136	0	462				0	1133	298	171	1002	0
Grp Sat Flow(s),veh/h/ln	1781	0	1585				0	1777	1585	1781	1777	0
Q Serve(g_s), s	6.9	0.0	14.1				0.0	20.3	10.1	9.2	0.0	0.0
Cycle Q Clear(g_c), s	6.9	0.0	14.1				0.0	20.3	10.1	9.2	0.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	304	0	542				0	2010	896	202	2573	0
V/C Ratio(X)	0.45	0.00	0.85				0.00	0.56	0.33	0.85	0.39	0.00
Avail Cap(c_a), veh/h	356	0	634				0	2010	896	392	2573	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	2.00	2.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.86	0.86	0.00
Uniform Delay (d), s/veh	37.2	0.0	40.2				0.0	13.9	11.6	37.8	0.0	0.0
Incr Delay (d2), s/veh	1.0	0.0	9.6				0.0	1.2	1.0	7.0	0.4	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
%ile BackOfQ(95%),veh/ln	5.5	0.0	10.2				0.0	12.4	6.4	6.9	0.2	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	38.2	0.0	49.9				0.0	15.0	12.6	44.9	0.4	0.0
LnGrp LOS	D	A	D				A	B	B	D	A	A
Approach Vol, veh/h		598						1431			1173	
Approach Delay, s/veh		47.2						14.5			6.9	
Approach LOS		D						B			A	

Timer - Assigned Phs	1	2	4	6
Phs Duration (G+Y+Rc), s	15.9	62.1	22.1	77.9
Change Period (Y+Rc), s	4.5	5.5	5.0	5.5
Max Green Setting (Gmax), s	22.0	43.0	20.0	69.5
Max Q Clear Time (g_c+I1), s	11.2	22.3	16.1	2.0
Green Ext Time (p_c), s	0.3	14.9	0.9	19.9

Intersection Summary	
HCM 6th Ctrl Delay	17.8
HCM 6th LOS	B

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												
Traffic Volume (veh/h)	170	51	378	0	0	0	0	1094	303	164	984	0
Future Volume (veh/h)	170	51	378	0	0	0	0	1094	303	164	984	0
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
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870				0	1870	1870	1870	1870	0
Adj Flow Rate, veh/h	136	0	474				0	1140	316	171	1025	0
Peak Hour Factor	0.96	0.96	0.96				0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	310	0	552				0	1998	891	202	2562	0
Arrive On Green	0.17	0.00	0.17				0.00	0.56	0.56	0.23	1.00	0.00
Sat Flow, veh/h	1781	0	3170				0	3647	1585	1781	3647	0
Grp Volume(v), veh/h	136	0	474				0	1140	316	171	1025	0
Grp Sat Flow(s),veh/h/ln	1781	0	1585				0	1777	1585	1781	1777	0
Q Serve(g_s), s	6.8	0.0	14.5				0.0	20.7	10.9	9.2	0.0	0.0
Cycle Q Clear(g_c), s	6.8	0.0	14.5				0.0	20.7	10.9	9.2	0.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	310	0	552				0	1998	891	202	2562	0
V/C Ratio(X)	0.44	0.00	0.86				0.00	0.57	0.35	0.85	0.40	0.00
Avail Cap(c_a), veh/h	356	0	634				0	1998	891	392	2562	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	2.00	2.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.86	0.86	0.00
Uniform Delay (d), s/veh	36.9	0.0	40.1				0.0	14.1	12.0	37.8	0.0	0.0
Incr Delay (d2), s/veh	1.0	0.0	10.3				0.0	1.2	1.1	7.0	0.4	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
%ile BackOfQ(95%),veh/ln	5.5	0.0	10.5				0.0	12.5	6.9	6.9	0.3	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	37.9	0.0	50.4				0.0	15.3	13.1	44.9	0.4	0.0
LnGrp LOS	D	A	D				A	B	B	D	A	A
Approach Vol, veh/h		610						1456			1196	
Approach Delay, s/veh		47.6						14.8			6.8	
Approach LOS		D						B			A	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	15.9	61.7		22.4		77.6
Change Period (Y+Rc), s	4.5	5.5		5.0		5.5
Max Green Setting (Gmax), s	22.0	43.0		20.0		69.5
Max Q Clear Time (g_c+I1), s	11.2	22.7		16.5		2.0
Green Ext Time (p_c), s	0.3	14.8		0.9		20.6

Intersection Summary	
HCM 6th Ctrl Delay	18.0
HCM 6th LOS	B

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												
Traffic Volume (veh/h)	210	7	377	0	0	0	0	671	223	169	664	0
Future Volume (veh/h)	210	7	377	0	0	0	0	671	223	169	664	0
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
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870				0	1870	1870	1870	1870	0
Adj Flow Rate, veh/h	146	0	468				0	692	230	174	685	0
Peak Hour Factor	0.97	0.97	0.97				0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	302	0	538				0	1949	869	206	2537	0
Arrive On Green	0.17	0.00	0.17				0.00	0.55	0.55	0.23	1.00	0.00
Sat Flow, veh/h	1781	0	3170				0	3647	1585	1781	3647	0
Grp Volume(v), veh/h	146	0	468				0	692	230	174	685	0
Grp Sat Flow(s),veh/h/ln	1781	0	1585				0	1777	1585	1781	1777	0
Q Serve(g_s), s	6.7	0.0	12.9				0.0	9.8	6.9	8.4	0.0	0.0
Cycle Q Clear(g_c), s	6.7	0.0	12.9				0.0	9.8	6.9	8.4	0.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	302	0	538				0	1949	869	206	2537	0
V/C Ratio(X)	0.48	0.00	0.87				0.00	0.36	0.26	0.85	0.27	0.00
Avail Cap(c_a), veh/h	317	0	564				0	1949	869	277	2537	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	2.00	2.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.93	0.93	0.00
Uniform Delay (d), s/veh	33.8	0.0	36.4				0.0	11.4	10.7	33.8	0.0	0.0
Incr Delay (d2), s/veh	1.2	0.0	13.4				0.0	0.5	0.7	14.5	0.2	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
%ile BackOfQ(95%),veh/ln	5.3	0.0	9.9				0.0	6.6	4.3	7.1	0.2	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	35.0	0.0	49.9				0.0	11.9	11.5	48.4	0.2	0.0
LnGrp LOS	D	A	D				A	B	B	D	A	A
Approach Vol, veh/h		614						922			859	
Approach Delay, s/veh		46.3						11.8			10.0	
Approach LOS		D						B			A	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	14.9	54.8		20.3		69.7
Change Period (Y+Rc), s	4.5	5.5		5.0		5.5
Max Green Setting (Gmax), s	14.0	45.0		16.0		63.5
Max Q Clear Time (g_c+I1), s	10.4	11.8		14.9		2.0
Green Ext Time (p_c), s	0.1	12.3		0.3		11.2

Intersection Summary	
HCM 6th Ctrl Delay	20.0
HCM 6th 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												
Traffic Volume (veh/h)	210	7	390	0	0	0	0	684	250	169	690	0
Future Volume (veh/h)	210	7	390	0	0	0	0	684	250	169	690	0
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
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870				0	1870	1870	1870	1870	0
Adj Flow Rate, veh/h	146	0	481				0	705	258	174	711	0
Peak Hour Factor	0.97	0.97	0.97				0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	307	0	547				0	1938	864	206	2526	0
Arrive On Green	0.17	0.00	0.17				0.00	0.55	0.55	0.23	1.00	0.00
Sat Flow, veh/h	1781	0	3170				0	3647	1585	1781	3647	0
Grp Volume(v), veh/h	146	0	481				0	705	258	174	711	0
Grp Sat Flow(s),veh/h/ln	1781	0	1585				0	1777	1585	1781	1777	0
Q Serve(g_s), s	6.6	0.0	13.3				0.0	10.1	8.0	8.4	0.0	0.0
Cycle Q Clear(g_c), s	6.6	0.0	13.3				0.0	10.1	8.0	8.4	0.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	307	0	547				0	1938	864	206	2526	0
V/C Ratio(X)	0.47	0.00	0.88				0.00	0.36	0.30	0.85	0.28	0.00
Avail Cap(c_a), veh/h	317	0	564				0	1938	864	277	2526	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	2.00	2.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.92	0.92	0.00
Uniform Delay (d), s/veh	33.6	0.0	36.3				0.0	11.6	11.1	33.8	0.0	0.0
Incr Delay (d2), s/veh	1.1	0.0	14.5				0.0	0.5	0.9	14.4	0.3	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
%ile BackOfQ(95%),veh/ln	5.3	0.0	10.2				0.0	6.8	5.0	7.1	0.2	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	34.7	0.0	50.9				0.0	12.1	12.0	48.3	0.3	0.0
LnGrp LOS	C	A	D				A	B	B	D	A	A
Approach Vol, veh/h		627						963			885	
Approach Delay, s/veh		47.1						12.1			9.7	
Approach LOS		D						B			A	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	14.9	54.6		20.5		69.5
Change Period (Y+Rc), s	4.5	5.5		5.0		5.5
Max Green Setting (Gmax), s	14.0	45.0		16.0		63.5
Max Q Clear Time (g_c+I1), s	10.4	12.1		15.3		2.0
Green Ext Time (p_c), s	0.1	12.8		0.2		11.8

Intersection Summary	
HCM 6th Ctrl Delay	20.1
HCM 6th 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												
Traffic Volume (veh/h)	214	7	435	0	0	0	0	764	288	172	754	0
Future Volume (veh/h)	214	7	435	0	0	0	0	764	288	172	754	0
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
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870				0	1870	1870	1870	1870	0
Adj Flow Rate, veh/h	150	0	529				0	788	297	177	777	0
Peak Hour Factor	0.97	0.97	0.97				0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	317	0	564				0	1913	853	209	2507	0
Arrive On Green	0.18	0.00	0.18				0.00	0.54	0.54	0.23	1.00	0.00
Sat Flow, veh/h	1781	0	3170				0	3647	1585	1781	3647	0
Grp Volume(v), veh/h	150	0	529				0	788	297	177	777	0
Grp Sat Flow(s),veh/h/ln	1781	0	1585				0	1777	1585	1781	1777	0
Q Serve(g_s), s	6.8	0.0	14.8				0.0	11.8	9.6	8.5	0.0	0.0
Cycle Q Clear(g_c), s	6.8	0.0	14.8				0.0	11.8	9.6	8.5	0.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	317	0	564				0	1913	853	209	2507	0
V/C Ratio(X)	0.47	0.00	0.94				0.00	0.41	0.35	0.85	0.31	0.00
Avail Cap(c_a), veh/h	317	0	564				0	1913	853	277	2507	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	2.00	2.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.90	0.90	0.00
Uniform Delay (d), s/veh	33.2	0.0	36.5				0.0	12.3	11.8	33.7	0.0	0.0
Incr Delay (d2), s/veh	1.1	0.0	23.7				0.0	0.7	1.1	14.7	0.3	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
%ile BackOfQ(95%),veh/ln	5.4	0.0	11.9				0.0	7.9	6.0	7.2	0.2	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	34.3	0.0	60.3				0.0	13.0	12.9	48.4	0.3	0.0
LnGrp LOS	C	A	E				A	B	B	D	A	A
Approach Vol, veh/h		679						1085			954	
Approach Delay, s/veh		54.5						13.0			9.2	
Approach LOS		D						B			A	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	15.0	54.0		21.0		69.0
Change Period (Y+Rc), s	4.5	5.5		5.0		5.5
Max Green Setting (Gmax), s	14.0	45.0		16.0		63.5
Max Q Clear Time (g_c+I1), s	10.5	13.8		16.8		2.0
Green Ext Time (p_c), s	0.1	14.3		0.0		13.3

Intersection Summary	
HCM 6th Ctrl Delay	22.0
HCM 6th 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												
Traffic Volume (veh/h)	214	7	448	0	0	0	0	777	315	172	780	0
Future Volume (veh/h)	214	7	448	0	0	0	0	777	315	172	780	0
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
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870				0	1870	1870	1870	1870	0
Adj Flow Rate, veh/h	150	0	543				0	801	325	177	804	0
Peak Hour Factor	0.97	0.97	0.97				0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	317	0	564				0	1913	853	209	2507	0
Arrive On Green	0.18	0.00	0.18				0.00	0.54	0.54	0.23	1.00	0.00
Sat Flow, veh/h	1781	0	3170				0	3647	1585	1781	3647	0
Grp Volume(v), veh/h	150	0	543				0	801	325	177	804	0
Grp Sat Flow(s),veh/h/ln	1781	0	1585				0	1777	1585	1781	1777	0
Q Serve(g_s), s	6.8	0.0	15.3				0.0	12.1	10.7	8.5	0.0	0.0
Cycle Q Clear(g_c), s	6.8	0.0	15.3				0.0	12.1	10.7	8.5	0.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	317	0	564				0	1913	853	209	2507	0
V/C Ratio(X)	0.47	0.00	0.96				0.00	0.42	0.38	0.85	0.32	0.00
Avail Cap(c_a), veh/h	317	0	564				0	1913	853	277	2507	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	2.00	2.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.89	0.89	0.00
Uniform Delay (d), s/veh	33.2	0.0	36.7				0.0	12.4	12.1	33.7	0.0	0.0
Incr Delay (d2), s/veh	1.1	0.0	28.8				0.0	0.7	1.3	14.6	0.3	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
%ile BackOfQ(95%),veh/ln	5.4	0.0	12.7				0.0	8.0	6.8	7.1	0.2	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	34.3	0.0	65.6				0.0	13.1	13.4	48.3	0.3	0.0
LnGrp LOS	C	A	E				A	B	B	D	A	A
Approach Vol, veh/h		693						1126			981	
Approach Delay, s/veh		58.8						13.1			9.0	
Approach LOS		E						B			A	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	15.0	54.0		21.0		69.0
Change Period (Y+Rc), s	4.5	5.5		5.0		5.5
Max Green Setting (Gmax), s	14.0	45.0		16.0		63.5
Max Q Clear Time (g_c+I1), s	10.5	14.1		17.3		2.0
Green Ext Time (p_c), s	0.1	14.8		0.0		14.0

Intersection Summary	
HCM 6th Ctrl Delay	23.0
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Appendix G

Architectural Design Review and Variance Application

HOTEL AT HUNTINGTON CENTER

FOR

VG PROPERTY INVESTMENTS, LLC

125 W. HUNTINGTON DRIVE - BUILDING C & D
ARCADIA, CALIFORNIA 91006

JOB NO.: 1819S00

ARCHITECTURAL DESIGN REVIEW & VARIANCE APPLICATION

ABBREVIATIONS

∠	ANGLE
℄	CENTER LINE
⌀	DIAMETER
ℙ	PLATE OR PROPERTY LINE
&	AND
@	AT OR ABOUT
'	FOOT
"	INCH OR REPEAT
#	POUND OR NUMBER
A.B.	ANCHOR BOLT
A.C.	ASPHALTIC CONCRETE
A/C	AIR CONDITIONING
ACOUS.	ACOUSTICAL
ADJ.	ADJUSTABLE/ADJACENT
A.F.F.	ABOVE FINISH FLOOR
AGGR.	AGGREGATE
ALUM.	ALUMINUM
ANOD.	ANODIZED
APPROX.	APPROXIMATE
ARCH.	ARCHITECTURAL
ASPH.	ASPHALT
ASSY.	ASSEMBLY
AC.T.	ACOUSTICAL TILE
BD.	BOARD
BITUM.	BITUMINOUS
BLDG.	BUILDING
BLK.	BLOCK
BLKG.	BLOCKING
BM.	BEAM
B.M.	BENCHMARK
BOT.	BOTTOM
B/S	BOTH SIDES
B.W.	BOTH WAYS
CAB.	CABINET
C.B.	CATCH BASIN
CEM.	CEMENT
CER.	CERAMIC
C.F.M.	CUBIC FEET PER MINUTE
C.I.	CAST IRON
C.J.	CLG. JOIST OR CONTROL JT.
CLG.	CEILING
CLO.	CLOSET
CLR.	CLEAR
C.M.U.	CONCRETE MASONRY UNIT
COL.	COLUMN
COMPO.	COMPOSITION
CONC.	CONCRETE
CONN.	CONNECTION
CONSTR.	CONSTRUCTION
CONT.	CONTINUOUS
CONTR.	CONTRACTOR
CORR.	CORRIDOR
C.R.B.	CRUSHER RUN BASE
CSK.	COUNTERSUNK
C.T.	CERAMIC TILE
CYL.	CYLINDER
DBL.	DOUBLE
DEPT.	DEPARTMENT
DET.	DETAIL
D.F.	DRINKING FOUNTAIN
DF	DOUGLAS FIR
DIA.	DIAMETER
DIAG.	DIAGONAL
DIM.	DIMENSION
DISP.	DISPENSER/DISPOSAL
DN.	DOWN
DO.	DITTO/REPEAT
DR.	DOOR
D.S.	DOWNSPOUT
D.S.P.	DRY STANDPIPE
DWG.	DRAWING
DWR.	DRAWER
(E)	EXISTING
E.	EAST/ENAMEL
EA.	EACH
E.G.	EXISTING GRADE
E.J.	EXPANSION JOINT
EL.	ELEVATION
ELEC.	ELECTRICAL
ELEV.	ELEVATOR/ELEVATION
EMER.	EMERGENCY
ENCL.	ENCLOSURE
E.O.S.	EDGE OF SLAB
EQ.	EQUAL
EQPT.	WQUIPMENT
E.S.	EACH SIDE
E.W.	EACH WAY
E.W.C.	ELECTRIC WATER COOLER
EXH.	EXHAUST
EXIST.	EXISTING
EXP.	EXPANSION
EXPO.	EXPOSED
EXT.	EXTERIOR
F.A.	FIRE ALARM
FAC.	FACTORY
F.B.	FLAT BAR
F.D.	FLOOR DRAIN
F.E.C.	FIRE EXTINGUISHER CABINET
F.F.	FINISH FLOOR/FACTORY FINISH
F.G.	FINISH GRADE/FIXED GLASS
F.H.	FLAT HEAD/FIRE HYDRANT
F.H.C.	FIRE HOSE CABINET
FIN.	FINISH
FIX.	FIXTURE
F.J.	FLOOR JOIST
F.L.	FLOW LINE
FLASH.	FLASHING
FLR.	FLOOR
FLUOR.	FLUORESCENT
FNDN.	FOUNDATION
F.O.C.	FACE OF CONCRETE
F.O.F.	FACE OF FINISH
F.O.A.	FACE OF ALUMINUM
F.O.M.	FACE OF MASONRY
F.O.P.	FACE OF "GFRC" PANEL
F.O.S.	FACE OF STUDS
F.R.P.	FIBERGLASS REINFORCED PANEL
F.S.	FULL SIZE/FINISH SURFACE
FT.	FOOT OR FEET
FTG.	FOOTING
FURR.	FURRING
FUT.	FUTURE
GA.	GUAGE/GAGE
GALV.	GALVANIZED IRON
G.B.	GRAB BAR
GEN.	GENERAL
G.I.	GALVANIZED IRON
GL.	GLASS
GLU-LAM	GLUE LAMINATED BEAM
GR.	GRADE
GYP.	GYPSUM
GYP. BD.	GYSUM BOARD
HC.	HANDICAPPED
H.B.	HOSE BIBB
H.C.	HOLLOW CORE
HD.	HEAD
HDR.	HEADER
HDWD.	HARDWOOD
HDWR.	HARDWARE
HGT.	HEIGHT
H.M.	HOLLOW METAL
HORIZ.	HORIZONTAL
H.P.	HIGH POINT
HR.	HOUR
HVAC.	HEATING, VENT, AIR COND.
I.D.	INISIDE DIAMETER/DIM.
IN.	INCH
INCND.	INCANDESCENT
INSL.	INSULATION
INT.	INTERIOR
INV.	INVERT
JAN.	JANITOR
JT.	JOINT
JST.	JOIST
K.D.	KNOCK-DOWN
KIT.	KITCHEN
LAB.	LABORATORY
LAM.	LAMINATE
LAV.	LAVATORY
LB.	POUND
L.F.	LINEAL FEET
LLH.	LONG LEG HORIZONTAL
LLV.	LONG LEG VERTICAL
L.P.	LOW POINT
LT.	LIGHT
LT. WT.	LIGHT WEIGHT
M.	MEN
MACH.	MACHINE
MAT.	MATERIAL
MAX.	MAXIMUM
M.B.	MACHINE BOLT
MECH.	MECHANICAL
MED.	MEDIUM
MEMB.	MEMBRANE
MET.	METAL
MEZZ.	MEZZANINE
MFR.	MANUFACTURER
MH.	MANHOLE
MIN.	MINIMUM/MINUTE
MISC.	MISCELLANEOUS
M.L.& PL.	METAL LATH AND PLASTER
M.O.	MASONRY OPENING
MTD.	MOUNTED
MUL.	MULLION
(N)	NEW
NAT.	NATURAL
NT. GR.	NATURAL GRADE
N.I.C.	NOT IN CONTRACT
NO.	NUMBER
NOM.	NOMINAL
N.T.S.	NOT TO SCALE
O/	OVER
O.A.	OVERALL/OUTSIDE AIR
OBS.	OBSCURE
O.C.	ON CENTER
O.D.	OUTSIDE DIAMETER/DIMENSION
OFLOW	OVERFLOW
OFF.	OFFICE
O.H.	OVERHEAD
OPNG.	OPENING
OPP.	OPPOSITE
OED.	ORDINANCE
OZ.	OUNCE
P.I.V.	PRESSURE INDICATOR VALVE
PTN.	PARTITION
PL.	PLATE
P. LAM.	PLASTIC LAMINATE
PLAS.	PLASTER
PLUMB.	PLUMBING
PLWD.	PLYWOOD
P.M.	PRESSED METAL
PNL.	PANEL
P/P	PUSH-PULL
PR.	PAIR
PREFAB.	PREFABRICATED
PT.	POINT
Q.T.	QUARRY TILE
R.	RISER/RADIUS
R.A.	RETURN AIR
RAD.	RADIUS
R.C.P.	REINFORCED CLAY PIPE
R.D.	ROOF DRAIN
REC.	RECESSED/RECEIVING
RECPT.	RECEPTACLE
REF.	REFERENCE
REFR.	REFRIGERATOR
REV.	REVERSE
REG.	REGISTER/REGULAR
REINF.	REINFORCED
REQ.	REQUIRED
RESIL.	RESILIENT
R.H.	ROUND HEAD
RM.	ROOM
R.O.	ROUGH OPENING
RWD.	REDWOOD
S.	SOUTH/SPANDREL
S.C.	SOLID CORE
SCHED.	SCHEDULE
SECT.	SECTION
SERV.	SERVICE/SERVING
S.F.	SQUARE FOOT
S.G.E.	SEMI-GLOSS ENAMEL
SHT.	SHEET
SHTG.	SHEATHING
SIM.	SIMILAR
SL.	SLIDING
SPEC.	SPECIFICATION
SQ.	SQUARE
S.S.	STAINLESS STEEL
S/S	SERVICE SINK
STA.	STATION
STD.	STANDARD
STL.	STEEL
STOR.	STORAGE
STRUCT.	STRUCTURAL
SUSP.	SUSPENDED
SYM.	SYMMETRICAL
SKLT.	SKYLIGHT
T.	TREAD/TEMP.
T.B.	TOP OF BEAM
T.C.	TOP OF CURB, OR CONCRETE
TEL.	TELEPHONE
TEMP.	TEMPERED / TEMPORARY
TERR.	TERRAZZO
TEXT.	TEXTURED
T&G	TONGUE & GROOVE
THK.	THICK
THRSH.	THRESHOLD
T.L.	TOP OF LEDGER
TOIL.	TOILET
T.P.	TOP OF PARAPET
T.S.	TOP OF STEEL
T.V.	TELEVISION
T.W.	TOP OF WALL
TYP.	TYPICAL
TRNSF.	TRANSFORMER
U.B.C.	UNIFORM BUILDING CODE
U.L.	UNDERWRITER'S LAB
UNFIN.	UNFINISHED
U.N.O.	UNLESS NOTED OTHERWISE
URN.	URINAL
V.	VINYL
V.C.T.	VINYL COMP. TILE
VEN.	VENEER
VENT.	VENTILATOR
VERT.	VERTICAL
VEST.	VESTIBULE
V.G.	VERTICAL GRAIN
V.O.J.	VERIFY ON JOB
V.T.R.	VENT THRU ROOF
V.W.C.	VINYL WALL COVERING
W.	WEST/WOMEN
W/	WITH
WSCT.	WAINSCOT
W.C.	WATER CLOSET
WD.	WOOD
W.H.	WATER HEATER
W.I.	WROUGHT IRON
W/O	WITHOUT
WP.	WATERPROOF
W.R.	WATER RESISTANT
W.S.	WOOD SCREW
WT.	WEIGHT
W.W.M.	WELDED WIRE MESH

SITE DATA

1. ZONING: C-G GENERAL COMMERCIAL WITH DOWNTOWN OVERLAY

2. BLDG HEIGHT PERMITTED: 48 FT (DOWNTOWN OVERLAY ZONE)
   ASKING FOR A HEIGHT VARIANCE OF 64'-0"

3. BLDG HEIGHT PROVIDED: EXISTING BLDG. 1 PARKING GARAGE: 23'-8 1/2" ABOVE AVERAGE GRADE WITH PORTIONS AS HIGH AS 42'-2 1/2" ABOVE GRADE
   EXISTING BLDG. A: 44'-11 1/2" ABOVE AVERAGE GRADE
   EXISTING BLDG. B: 44'-11 1/2" ABOVE AVERAGE GRADE
   REMODELED BLDG. C: 44'-7 1/2" ABOVE AVERAGE GRADE
   NEW BLDG. D: ±63'-10" ABOVE AVERAGE GRADE

4. NO. OF STORIES PROVIDED: EXISTING BLDG. 1 PARKING GARAGE: 3 STORIES + BASEMENT
   EXISTING BLDG. A: 3 STORIES + BASEMENT
   EXISTING BLDG. B: 3 STORIES + BASEMENT
   REMODELED BLDG. C: 3 STORIES + BASEMENT
   NEW BLDG. D: 4 & 5 STORIES

5. SITE AREA:
   GROSS AREA: 200,144 SQ. FT. = 4.59 ACRES
   125 W HUNTINGTON DR.

6. EXISTING BUILDING AREA

PARKING GARAGE	
EXISTING BASEMENT	57,517 SQ. FT.
EXISTING BUILDING 1 1ST FLOOR	38,778 SQ. FT.
EXISTING BUILDING 1 2ND FLOOR	38,778 SQ. FT.
EXISTING BUILDING 1 3RD FLOOR	28,043 SQ. FT.
EXISTING BUILDING 1 TOTAL	163,116 SQ. FT.
BUILDING A	
EXISTING BUILDING A 1ST FLOOR	6,855 SQ. FT.
EXISTING BUILDING A 2ND FLOOR	6,358 SQ. FT.
EXISTING BUILDING A 3RD FLOOR	6,632 SQ. FT.
EXISTING BUILDING A TOTAL	19,845 SQ. FT.
BUILDING B	
EXISTING BUILDING B 1ST FLOOR	6,657 SQ. FT.
EXISTING BUILDING B 2ND FLOOR	6,137 SQ. FT.
EXISTING BUILDING B 3RD FLOOR	6,437 SQ. FT.
EXISTING BUILDING B TOTAL	19,231 SQ. FT.
BUILDING C - MAIN HOTEL	
REMODELED BUILDING C BASEMENT	2,726 SQ. FT.
REMODELED BUILDING C 1ST FLOOR	24,664 SQ. FT.
REMODELED BUILDING C 2ND FLOOR	24,870 SQ. FT.
REMODELED BUILDING C 3RD FLOOR	24,494 SQ. FT.
REMODELED BUILDING C TOTAL	76,754 SQ. FT.

(REMODELED EXISTING BUILDING, NEW USE AND CONSTRUCTION)

7. PROPOSED BUILDING D AREA

BUILDING D - HOTEL ANNEX	
BUILDING D 1ST FLOOR	14,414 SQ. FT.
BUILDING D 2ND FLOOR	13,124 SQ. FT.
BUILDING D 3RD FLOOR	12,836 SQ. FT.
BUILDING D 4TH FLOOR	12,849 SQ. FT.
BUILDING D 5TH FLOOR	8,315 SQ.FT.
BUILDING D TOTAL	61,538 SQ. FT.

8. F.A.R PERMITTED: 1.0 (DOWNTOWN OVERLAY ZONE)
   (ZONING SEC. 9102.05.030 TABLE 2-11)
   F.A.R PROVIDED TOTAL = BLDG. AREA / SITE AREA = F.A.R. (ZONING SEC. 9103.01.030, A)
   177,368 SQ.FT / 200,144 SQ.FT = 0.89 < 1.0

9. EXISTING LANDSCAPE UNDER PREVIOUS APPROVED PLANS COMPLETED.

10. NEW MODIFICATION OF EXISTING LANDSCAPE: 12,775 SQ. FT.

11. PARKING REQUIRED (ZONING SEC. 9103.07.060, C, TABLES 3-5 &, 3-6)

A. EXISTING BUILDING A	19,845 SQ.FT.	MEDICAL OFFICE	1/200	= 99
B. EXISTING BUILDING B	19,231 SQ.FT.	MEDICAL OFFICE	1/200	= 96
C. REMODELED BUILDING C	90 ROOMS	GUESTROOM	1.2	= 108
	4,146 SQ.FT.	RESTAURANT	1/200	= 21
	1,033 SQ.FT.	BAR	1/100	= 11
D. BUILDING D	75 ROOMS	GUESTROOM	1.2	= 90
	7,466 SQ.FT.	SPA	1/200	= 38
	1,568 SQ.FT.	CAFE	1/200	= 8
TOTAL PARKING REQUIRED				471

12. ACCESSIBLE PARKING STALLS REQUIRED (CBC 11B-208.2 TABLE 11B-208.2)

A. BUILDING A MEDICAL OFFICE	4
B. BUILDING B MEDICAL OFFICE	5
C. HOTEL & RESTAURANT	5
D. HOTEL & SPA	5
TOTAL	19

13. 1 VAN PER 8 ACCESSIBLE STALLS (CBC 11B-208.2.4)

VAN ACCESSIBLE PARKING STALLS REQUIRED	3
PROVIDED	4

14. PARKING PROVIDED

A. WEST SIDE SURFACE PARKING	24 SPACES
B. PARKING STRUCTURE BASEMENT	114 SPACES
PARKING STRUCTURE 1ST FLOOR	80 SPACES
PARKING STRUCTURE 2ND FLOOR	88 SPACES
PARKING STRUCTURE 3RD FLOOR	105 SPACES
C. EAST SIDE SURFACE PARKING	71 SPACES
TOTAL PARKING PROVIDED	(482 - 4 LOADING) = 478 STALLS

* COMMERCIAL LOADING ZONE STALLS HAVE BEEN REMOVED FROM CALCULATION

15. PROVIDED PARKING BREAKDOWN

	DEMO	EXISTING	NEW	TOTAL
LOADING ZONES 10X25'	(4)	1	3	4
ACCESSIBLE VAN STALLS	(2)	2	2	4
ACCESSIBLE CAR STALLS	(5)	14	5	19
9X20' CAR STALLS	(105)	451	15	455
				482 STALLS

* REQUIRED PARKING - 471 STALLS
* PROVIDED PARKING - 478 STALLS
7 STALLS EXCESS

16. BIKE RACK
   A. BIKE PARKING REQUIRED PER GREEN BUILDING: 5% OF 471 = 24 BIKES
   B. BIKE PARKING PROVIDED: = 30 BIKES

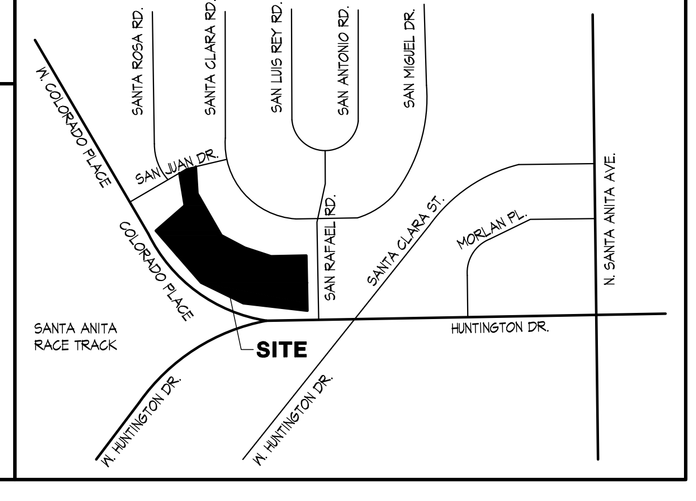
17. BIKE LOCKERS
   A. BIKE LOCKERS REQUIRED PER GREEN BUILDING: 5% OF 471 = 24 BIKE LOCKERS
   B. BIKE LOCKERS PROVIDED: = 24 BIKE LOCKERS

18. FUEL EFFICIENT VEHICLES
   A. FUEL EFFICIENT VEHICLE PARKING REQUIRED: 8% X 471 = 38 CARS
   B. FUEL EFFICIENT VEHICLE PARKING PROVIDED: = 38 CARS

19. FUTURE ELECTRIC VEHICLES
   A. FUTURE ELECTRICAL VEHICLE PARKING REQUIRED: 6% X 253 = 15 CARS
   B. FUTURE ELECTRICAL VEHICLE PARKING PROVIDED: = 15 CARS
   ** EXISTING BUILDINGS A & B PARKING STALLS REQUIRED 196 STALLS - REQUIRED 438 TOTAL STALLS = 253 REQUIRED STALLS FOR BUILDINGS C & D. WE CALCULATED FUTURE ELECTRIC VEHICLE BASED ON BUILDINGS C & D PARKING REQUIREMENT.
   C. FUTURE CHARGING STATIONS QUALIFY AS DESIGNATED PARKING FOR FUEL EFFICIENT CLEAN AIR VEHICLES.

SHEET INDEX

VICINITY MAP



FIRE DEPARTMENT NOTES

1. ALL STRUCTURES SHALL BE FULLY SPRINKLERED. CLASS 1 STANDPIPES SHALL BE PROVIDED IN ALL STAIRWELLS/STAIRWAYS UP TO THE ROOF LEVEL.
2. THE SPRINKLER SYSTEM SHALL BE FULLY MONITORED, INTERIOR NOTIFICATION DEVICES SHALL BE PROVIDED THROUGHOUT ALL STRUCTURES.
3. KNOX BOXES WITH KEYS FOR ACCESS TO RESTRICTED AREAS SHALL BE PROVIDED FOR ALL STRUCTURES.
4. ADDITIONAL FIRE HYDRANTS SHALL BE PROVIDED AT THE FRONT OF BUILDING 2 AND ADJACENT TO THE ENTRANCE DRIVE ON SAN JUAN DRIVE. PLEASE COORDINATE WITH THE CITYS FIRE MARSHAL, MARK KRIKORIAN AT (626) 574-5106.
5. ALL STRUCTURES SHALL BE PROVIDED WITH MINIMUM 2A:10BC FIRE EXTINGUISHERS.

LEGAL DESCRIPTION

REAL PROPERTY IN THE CITY OF ARCADIA, COUNTY OF LOS ANGELES, STATE OF CALIFORNIA, DESCRIBED AS FOLLOWS:

PARCEL ONE: (5775-015-024,025 & 026) 125 HUNTINGTON DR.

PARCEL 1 AS SHOWN UPON PARCEL MAP NO. 12826, IN THE CITY OF ARCADIA, IN THE COUNTY OF LOS ANGELES, STATE OF CALIFORNIA, FILED IN BOOK 129 PAGE 35 OF PARCEL MAPS, IN THE OFFICE OF THE COUNTY RECORDER OF SAID COUNTY AS SAID PARCEL MAP NO. 12826 WAS CORRECTED BY CERTIFICATE OF CORRECTION RECORDED ON NOVEMBER 28, 1980 AS DOCUMENT NO. 80-1203029 OFFICIAL RECORDS, IN THE OFFICE OF THE COUNTY RECORDER OF SAID COUNTY.

EXCEPT THAT PORTION OF SAID PARCEL INCLUDED WITHIN THE LINES OF THE LAND DESCRIBED IN THE DEED TO THE CITY OF ARCADIA, RECORDED ON NOVEMBER 26, 1979 AS DOCUMENT NO. 79-1326058 OFFICIAL RECORDS, IN THE OFFICE OF THE COUNTY RECORDER OF SAID COUNTY.

ALSO EXCEPT THEREFROM ANY EXISTING STREET, PROPOSED STREET, OR PORTION OF ANY STREET OF PROPOSED STREET LYING OUTSIDE THE BOUNDARIES OF SAID LAND WHICH MIGHT OTHERWISE PASS WITH A CONVEYANCE OF SAID LAND AS RESERVED IN THE DEED FROM THE ARCADIA REDEVELOPMENT AGENCY A PUBLIC BODY CORPORATE AND POLITICAL RECORDED MAY 31, 1978 AS INSTRUMENT NO. 78-582148 OFFICIAL RECORDS.
First American Title

REAL PROPERTY IN THE CITY OF ARCADIA, COUNTY OF LOS ANGELES, STATE OF CALIFORNIA, DESCRIBED AS FOLLOWS:

PARCEL TWO: (5775-015-027) 161 COLORADO PLACE

LOT 1 OF TRACT 62234, IN THE CITY OF ARCADIA, IN THE COUNTY OF LOS ANGELES, STATE OF CALIFORNIA, AS PER MAP FILED IN BOOK 1345 PAGES 92 AND 93 OF MAPS, IN THE OFFICE OF THE COUNTY RECORDER OF SAID COUNTY.
First American Title

CORPORATE HEADQUARTERS
150 EL CAMINO REAL, 112
TUSTIN, CA 92780
714-832-8100

DENVER METRO OFFICE
7979 E. TUFTS AVENUE
CENTENNIAL, CO 80015
714-458-5930

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LICENSED ARCHITECT
DAVID D. HUNG
No. C25796
Exp. 05-31-21
STATE OF CALIFORNIA

PROJECT:
HOTEL AT HUNTINGTON CENTER
VG PROPERTY INVESTMENTS, LLC
125 W. HUNTINGTON DRIVE - BLDGS C & D
ARCADIA, CA 91006

SHEET TITLE:
TITLE SHEET & SITE DATA

drawn by:	PDG
plot date:	Nov 25, 2019
issue date:	Nov 25, 2019
job#:	1819S00
cad file:	1819-G0.0.dwg
drawing no:	**G0.0**

DRAWING FILE: T:\PDG\2018 PROJECTS\1819S00 - HOTEL\04-DRAWINGS\01-DESIGN\01-ARCHITECTURAL\01-PLAN OPTIONS\2018-12-10\1819-G0.0.DWG
PLOTTED: November 25, 2019 Layout: 1819-sBDR (1819-sBDR.dwg)
XREFS INCLUDED:

BUILDING C - CODE ANALYSIS

Applicable Codes

The following codes are currently being enforced in City of Arcadia:

- Building regulations specified in Article VIII, Sections 8110- 8970 of the Arcadia Municipal Code.

CBC 2016 California Building Code (Based on 2012 International Building Code)
CMC 2013 California Mechanical Code
CPC 2013 California Plumbing Code
CFC 2013 California Fire Code (Based on 2012 International Building Code)
CEC 2013 California Electrical Code
CGBC 2013 California Green Building Standards Code
2013 California **Energy** Code.

Building Data and Code Analysis

- Zoning – **CG General Commercial**
- Occupancy Classification – **Chapter 3**
  1. Existing Occupancy – B (Office)
  2. New Proposed Occupancy - R-1 (Hotel)
- Construction Type - Type VA New (Existing is Type IIIA)
- Fire Sprinkler System - **Yes** (Existing & New)

Hotel Building "C" (Renovating existing building)

- Actual Floor Area:

First Floor	= 24,664 SF
Second Floor	= 24,870 SF
Third Floor	= 23,908 SF
Total Actual Floor Area	= 73,441 SF

- **Occupancy Classification – Chapter 3**
  1. This building will be mixed occupancy building
  2. Banquet and Restaurant A-2 (sec. 303.3)
  3. Gym A-3: (sec. 303.4)
  4. Business B (sec.304.1)
  5. Hotel R-1 (sec. 310.3)

- **Frontage increase (506.3)**
  1. Perimeter of entire building
     P = 1036 lin.ft.
  2. Building perimeter that fronts on a public way or open space having 20ft. min. width
     F = 1006.5 lin.ft
  3. Width of Public Way or Open Space (sec. 506.3.2) weighted average
     W=[(Lₙ*wₙ) + (Lₜ*wₜ)]/F=
     (942.75'(30) +28.75'(29.67) + 9'(20.16) + 8'(26.33) + 18'(29.16))/1006.5 = 29.86
  4. Increase due to frontage (equation 5.2) If=(F/P-.25)W/30
     If= ((1006.5/1036)-.25)*29.86/30 = .72
- **First Floor Mixed Occupancy**
- A-2 and A-3 Occupancy first floor
  1. Heights and Areas – Chapter 5
     a. Occupancy A-2, A-3
     b. Construction Type VA
     c. Fire Sprinklers YES
  2. Allowable Building Height (table 504.3)
     a. Total building height permitted = 50 ft
     b. Total actual building height = 13'-5" ft.
     c. 13'-5" is < 70 ft. so OK
  3. Allowable Number Stories (Table 504.4)
     a. Total number of stories permitted A-2 occup = 2
     b. Total actual number of stories A-2 occup = 1
     c. 1 stories is < 2 stories so OK
  4. Basic Allowable area per story A-2 occupancy (sec. 503.1, 506.1, 506.2.4 508.1)
     a. Tabular allowable area factor per story (table 506.2) [At] = 34,500 s.f.
     b. NS tabular area per story from table 506.2 [NS] = 11,500 s.f.
     c. If from 2.d above = .72
     d. Maximum allowable floor area per story due to frontage and sprinkler increases (sec 506.2.4) Aa=[At +(NS x If)] = 42,780 s.f.
        Aa = 34,500 + (11,500 x.72)
     e. Actual Largest Floor area per story A-2 occupancy = 13,567 s.f.
     f. No single story shall exceed the allowable area per story
        e. above= 13,567 s.f. actual < d. above 42,780 so = OK
  5. Occupancy Ratio Actual area A-2/allowable area A-2 ratio
     7,278 sq. ft./42,780 sq.ft. = .317
- B Occupancy first floor
  1. Heights and Areas – Chapter 5
     a. Occupancy B
     b. Construction Type VA

     c. Fire Sprinklers YES
  2. Allowable Building Height (Table 504.3)
     a. Total building height permitted = 70 ft
     b. Total actual building height = 13'-6"
     c 13'-6" is < 70 ft. so OK
  3. Allowable Number Stories (Table 504.4)
     a. Total number of stories permitted B occup = 4
     b. Total actual number of stories = 1
     c. 1 stories is < 4 stories so OK
  4. Basic Allowable area per story B occup (sec. 503.1, 506.1, 506.2.4 508.1)
     a. Tabular allowable area factor per story (table 506.2) [At] = 54,000 s.f.
     b. NS tabular area per story from table 506.2 [NS] = 18,000 s.f.
     c. If from 2.d above = .72
     d. Maximum allowable floor area per story due to frontage and sprinkler increases (sec 506.2.4) Aa=[At +(NS x If)] = 66,960 s.f.
        Aa = 54,000 + (18,000 x.72)
     e. Actual Largest Floor area per story B occupancy = 1,597 s.f.
     f. No single story shall exceed the allowable area per story
        e. above= 1,597 s.f. actual < d. above 66,960 so = OK
  5. Occupancy Ratio Actual area B/allowable area B ratio
     1,597 s.f./66,960 s.f. = .024
- R-1 Occupancy first floor
  1. Heights and Areas – Chapter 5
     a. Occupancy R-1
     b. Construction Type VA
     c. Fire Sprinklers YES
  2. Allowable Building Height (Table 504.3)
     a. Total building height permitted = 50 ft
     b. Total actual building height = 13'-6"
     c. 13'-6" is < 50 ft. so height is OK
  3. Allowable Number Stories (Table 504.4)
     a. Total number of stories permitted R-1 occup = 3
     b. Total actual number of stories = 1
     c. 1 stories is < 2 stories so number of stories are OK
  4. Basic Allowable area per story R-1 occupancy (sec. 503.1, 506.1, 506.2.4 508.1)
     a. Tabular allowable area factor per story (table 506.2) [At] = 36,000 s.f.
     b. NS tabular area per story from table 506.2 [NS] = 12,000 s.f.
     c. If from 2.d above = .72
     d. Maximum allowable floor area per story due to frontage and sprinkler increases (sec 506.2.4) Aa=[At +(NS x If)] = 44,640 s.f.
        Aa = 36,000 + (12,000 x.72)
     e. Actual Largest Floor area per story R-1 occupancy = 9,499 s.f.
     f. No single story shall exceed the allowable area per story

        e. above=9,499 s.f. actual < d. above 44,640 so = OK
  5. Occupancy Ratio Actual area R-1/allowable area R-1 ratio
     9,499 s.f./44,640 s.f. = .213
- **Sum of First Floor Ratios CBC 508.4.2**

A-2/A-3 = .317
B = .024
R-1 = .213
Total = .554 < 1 so OK

- **Second Floor R.1 Occupancy**
  1. Heights and Areas – Chapter 5
     a. Occupancy R.1
     b. Construction Type VA
     c. Fire Sprinklers YES
  2. Allowable Building Height (Table 504.3)
     a. Total building height permitted(section 504 R.1) = 50 ft
     b. Total actual building height = 26 ft
     c. 26 ft. is < 70 ft. so height is OK
  3. Allowable Number Stories (Table 504.4)
     a. Total number of stories permitted R.1occup (sect. 504) = 3
     b. Total actual number of stories = 2
     c. 2 stories is < 3 stories so stories are OK
  4. Basic Allowable area per story R.1 occupancy (sec. 503.1, 506.1, 506.2.4 508.1)
     a. Tabular allowable area factor per story (table 506.2) [At] = 36,000 s.f.
     b. NS tabular area per story from table 506.2 [NS] = 12,000 s.f.
     c. If from If above = .72
     d. Maximum allowable floor area per story due to frontage and sprinkler increases (sec 506.2.4) Aa=[At +(NS x If)] = 44,640 s.f.
        Aa = 36,000 + (12,000 x.72)
     e. Actual Largest Floor area per story R.1 occupancy = 24,870 s.f.
     f. No single story shall exceed the allowable area per story
        e. above= 24,870 s.f. actual < d. above (44,400) so = OK
  5. Occupancy Ratio Actual area R.1/allowable area R.1 ratio
     24,870 s.f./44,640 s.f. =.557
- **Third Floor R.1 Occupancy**
  1. Heights and Areas – Chapter 5
     a. Occupancy R.1
     b. Construction Type VA
     c. Fire Sprinklers YES

  2. Allowable Building Height (Table 504.3)
     a. Total building height permitted (section 504 R-1) = 50 ft
     b. Total actual building height = 40 ft
     c. 40 ft. is < 50ft. so height is OK
  3. Allowable Number Stories (Table 504.4)
     a. Total number of stories permitted R.1occup (sect. 504) = 3
     b. Total actual number of stories = 3
     c. 3 stories is = 3 stories so number of stories OK
  4. Basic Allowable area per story R.1 occupancy (sec. 503.1, 506.1, 506.2.4 508.1)
     a. Tabular allowable area factor per story (table 506.2) [At] = 36,000 s.f.
     b. NS tabular area per story from table 506.2 [NS] = 12,000 s.f.
     c. If from If above = .72
     d. Maximum allowable floor area per story due to frontage and sprinkler increases (sec 506.2.4) Aa=[At +(NS x If)] = 44,640 s.f.
        Aa = 36,000 + (12,000 x.70)
     e. Actual Floor area per story R.1 occupancy = 23,908 s.f.
     f. No single story shall exceed the allowable area per story
        e. above= 23,908 s.f. actual < d. above 44,640 so = OK
  5. Occupancy Ratio Actual area R.1/allowable area R.1 ratio
     23,908 s.f./44,640 s.f. = .54
- Building Mixed Occupancy Ratio 506.2.4
  First floor .554
  Second Floor .557
  Third Floor .535
  Total 1.646 < 2 so ok

BUILDING D - CODE ANALYSIS

Applicable Codes

The following codes are currently being enforced in City of Arcadia:

- Building regulations specified in Article VIII, Sections 8110- 8970 of the Arcadia Municipal Code.

CBC 2016 California Building Code (Based on 2012 International Building Code)
CMC 2013 California Mechanical Code
CPC 2013 California Plumbing Code
CFC 2013 California Fire Code (Based on 2012 International Building Code)
CEC 2013 California Electrical Code
CGBC 2013 California Green Building Standards Code
2013 California **Energy** Code.

Building Data and Code Analysis

- Zoning – CG General Commercial with downtown overlay
- Occupancy Classification – **Chapter 3**
  1. Proposed Occupancy - R-1 (Hotel)
  2. A-2, Occupancy Restaurant, Banquet
  3. B Occupancy Spa
- Construction Type - Type I-A- 1st floor (Podium)
  Type V-A 2nd floor to 5th floor
- Fire Sprinkler System - Yes

Hotel Building D-1, D-2 and D-3

- The floors above the podium are being split into 2 buildings (Building D-2 and Building D-3) vertically full height along grid-line #5 and are being separated with a 2-hour Fire Wall. The two structures will be separate and require a seismic joint.
- Actual Floor Area:

Building Area D-1

A-2 first floor	= 13,806 s.f.
Total Area D-1	= 13,806 s.f.

Building Area D-2

2nd Floor	= 9,805 s.f.
3rd Floor	= 9,553 s.f.
4th Floor	= 9,553 s.f.
5th Floor	= 9,637 s.f.
Total Area D-2	= 38,548 s.f.

Building Area D-3

2nd Floor	= 3,174 s.f.
3rd Floor	= 3,144 s.f.
4th Floor	= 3,144 s.f.
Total Area D-3	= 9,462 s.f.

- **Occupancy Classification – Chapter 3**
  This structure will consist of 3 "Buildings". Building D-1 will be a mixed occupancy 1 story podium building of Type I-A Construction.
  1. Business B, Spa (sec.304.1)
  2. Assembly A-2, Café and Banquet (sec. 303.3)

  With two multi-story single occupancy buildings above (Building D-2 and D-3) of Type V-A Construction.
  1. Hotel R-1 (sec 310.3)
- Horizontal Building Separation section 510.2 allows the first floor to be its own building for area limitations, continuity of fire wall, limits of number of stories and type of construction

Hotel Building D-1, Mixed Occupancy

- **Frontage increase (506.3)**
  1. Perimeter of entire building
     P = = 647 lin.ft.
  2. Building perimeter that fronts on a public way or open space having 20ft. min. width
     F = 29' + 8'+ 18' + 562.83' = 617.83 lin.ft
  3. Width of Public Way or Open Space (sec. 506.3.2) weighted average
     W=[(Lₙ)(wₙ) + (Lₜ)(wₜ)]/F=
     29'(28.5') +8'(26.5') + 18'(29') + 562.83'(30')/617.83 lin ft.= 29.86
  4. Increase due to frontage (equation 5.2) If=((F/P)-.25)*(W/30)
     If=((617.83/647)-.25)*(29.86/30) = .702
- **First Floor 1 story Mixed Occupancy**
- A-2 Occupancy first floor
  1. Heights and Areas – Chapter 5
     a. Occupancy A-2
     b. Construction Type I-A
     c. Fire Sprinklers YES
  2. Allowable Building Height (table 504.3)
     a. Total building height permitted = unlimited
     b. Total actual building height = 15'-0"
     c. 15'-0" < than unlimited so OK

  3. Allowable Number Stories (table 504.4)
     a. Total number of stories permitted = unlimited
     b. Total actual number of stories A-2 = 1
     c. A-2 occupancy only occurs on 1st floor
        1 < unlimited so OK
  4. Basic Allowable area per story A-2 occupancy (sec. 503.1, 506.1, 506.2.4 508.1)
     a. Tabular allowable area factor per story (table506.2) [At] = unlimited
     b. NS tabular area per story from table 506.2 [NS] = unlimited
     c. If from above = .702
     d. Maximum allowable floor area per story due to frontage and sprinkler increases (sec 506.2.4) Aa=[At +(NS x If)]
        Aa = unlimited + (unlimited x.702 = unlimited sq.ft.
     e. Actual Largest Floor area per story A-2 occupancy = 9,092.5 sq.ft.
     f. No single story shall exceed the allowable area per story
        e. above= 9,092.5 sq.ft. actual < d. above unlimited so = OK
  5. Occupancy Ratio Actual area A-2/allowable area A-2 ratio
     9,092.5 sq. ft./unlimited . = .000
- B Occupancy first floor
  1. Heights and Areas – Chapter 5
     a. Occupancy B
     b. Construction Type IA
     c. Fire Sprinklers YES
  2. Allowable Building Height (table 504.3)
     a. Total building height permitted = unlimited
     b. Total actual building height = 15'-0" ft.
     c. 15'-0" is < unlimited so OK
  3. Allowable Number Stories (Table 504.4)
     a. Total number of stories permitted B occup = unlimited
     b. Total actual number of stories B occup = 1
     c. 1 stories is < unlimited so OK
  4. Basic Allowable area per story B occupancy (sec. 503.1, 506.1, 506.2.4 508.1)
     a. Tabular allowable area factor per story (table 506.2) [At] = unlimited
     b. NS tabular area per story from table 506.2 [NS] = unlimited
     c. If from above = .702
     d. Maximum allowable floor area per story due to frontage and sprinkler increases (sec 506.2.4) Aa=[At +(NS x If)]
        Aa = unlimited + (unlimited x.58) = unlimited
     e. Actual Largest Floor area per story B occupancy = 4,173 s.f.
     f. No single story shall exceed the allowable area per story
        e. above= 4,173 s.f. actual < d. above unlimited so = OK
  5. Occupancy Ratio Actual area A-2/allowable area A-2 ratio
     4,173 sq. ft./unlimited = .000

- **Sum of First Floor Ratios CBC 508.4.2**

A-2 = .000
B = .000
Total = .000 < 2 so OK

Hotel Building D-2, Single Occupancy

- **Frontage increase (506.3)**
  1. Perimeter of entire building
     P = = 455 lin.ft.
  2. Building perimeter that fronts on a public way or open space having 20ft. min. width
     F = 29' + 8'+ 18' + 358.75' = 413.75 lin.ft
  3. Width of Public Way or Open Space (sec. 506.3.2) weighted average
     W=[(Lₙ)(wₙ) + (Lₜ)(wₜ)]/F=
     29'(28.5') +8'(26.5') + 18'(29') + 358.75(30')/413.75 lin ft.= 29.78
  4. Increase due to frontage (equation 5.2) If=((F/P)-.25)*(W/30)
     If=((413.75/455)-.25)*(29.78/30) = .654
- **Floors 2 to 5 of 5 story building, R.1 Occupancy**
  1. Heights and Areas – Chapter 5
     a. Occupancy R-1
     b. Construction Type V-A
     c. Fire Sprinklers YES
  2. Allowable Building Height (Table 504.3)
     a. Total building height permitted, taking height increase (section 504 R.1) =70 ft
     b. Total actual building height = 61 ft
     c. 61' is < 70' so OK
  3. Allowable Number Stories (Table 504.4)
     a. Total number of stories permitted R-1, taking height increase (sect. 504) = 4
     b. Total actual number of stories = 4
     c. 4 stories is = 4 stories so OK
  4. Basic Allowable area per story R.1 occupancy (sec. 503.1, 506.1, 506.2.4 508.1)
     a. Tabular allowable area factor per story (table 506.2) [At] = 12,000 s.f.
     b. NS tabular area per story from table 506.2 [NS] = 12,000 s.f.
     c. If from If above = .654
     d. Sa per section 506.2.3 = 2
     e. Maximum allowable floor area per building due to frontage and sprinkler increases (sec 506.2.4) Aa=[At +(NS x If)]xSa
        Aa = 12,000 + (12,000 x.654)x2 = 39,696 s.f.
        Actual Building area 9,805 s.f.+(9,553 s.f. *2)+9,637 s.f. = 38,548 s.f.
        38,548 s.f. < 39,696 s.f. so Building D-2 is OK

        Aa = 12,000 + (12,000 x.654)x2 = 39,696 s.f.
        Actual Building area 9,805 s.f.+(9,553 s.f. *2)+9,637 s.f. = 38,548 s.f.
        38,548 s.f. < 39,696 s.f. so Building D-2 is OK

Hotel Building D-3, Single Occupancy

- **Frontage increase (506.3)**
  1. Perimeter of entire building
     P = = 274.5 lin.ft.
  2. Building perimeter that fronts on a public way or open space having 20ft. min. width
     F = 29' + 8'+ 18' + 358.75' = 204.08 lin.ft
  3. Width of Public Way or Open Space (sec. 506.3.2) weighted average
     W=[(Lₙ)(wₙ) + (Lₜ)(wₜ)]/F=
     29'(28.5') +175'(30') /204.08 lin ft.= 29.79
  4. Increase due to frontage (equation 5.2) If=((F/P)- .25)*(W/30)
     If=((204.08/274.5)-.25)*(29.79/30) = .490
- **Floors 2 to 4 of 4 story building, R.1 Occupancy**
  1. Heights and Areas – Chapter 5
     a. Occupancy R-1
     b. Construction Type V-A
     c. Fire Sprinklers YES
  2. Allowable Building Height (Table 504.3)
     a. Total building height permitted, taking height increase (section 504 R.1) =70 ft
     b. Total actual building height = 49.75 ft
     c. 49.75' is < 70' so OK
  3. Allowable Number Stories (Table 504.4)
     a. Total number of stories permitted R-1, taking height increase (sect. 504) = 4
     b. Total actual number of stories = 3
     c. 4 stories is = 4 stories so OK
  4. Basic Allowable area per story R.1 occupancy (sec. 503.1, 506.1, 506.2.4 508.1)
     a. Tabular allowable area factor per story (table 506.2) [At] = 12,000 s.f.
     b. NS tabular area per story from table 506.2 [NS] = 12,000 s.f.
     c. If from If above = .490
     d. Sa per section 506.2.3 = 2
     e. Maximum allowable floor area per building due to frontage and sprinkler increases (sec 506.2.4) Aa=[At +(NS x If)]xSa
        Aa = 12,000 + (12,000 x.654)x2 = 39,696 s.f.
        Actual Building area 3,174 s.f + 3,144 + 3,144 s.f. = 9,462 s.f.
        9,462 s.f. < 39,696 s.f. so OK

LICENSED ARCHITECT
DAVID D. HUNG
No. C25796
Exp. 05-31-21
STATE OF CALIFORNIA

CORPORATE HEADQUARTERS
150 EL CAMINO REAL, 112
TUSTIN, CA 92780
714-832-5100

DENVER METRO OFFICE
7535 E. HAMPDEN AVE.
DENTENNIAL, CO 80015
714-458-5930

PACIFIC DESIGN GROUP
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PROJECT:
HOTEL AT HUNTINGTON CENTER
VG PROPERTY INVESTMENTS, LLC
125 W. HUNTINGTON DRIVE - BLDGS C & D
ARCADIA, CA 91006

SHEET TITLE:
BUILDING C & D - BUILDING ANALYSIS

drawn by: PDG
plot date: Nov 25, 2019
issue date: Nov 25, 2019
job#: 1819500
cad file: 1819-G0.1-Code.dwg
drawing no: **G0.1**

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PLOTTED: November 25, 2019 - Jaylou
XREFS INCLUDED: 1524-xBDR (1819-xBDR.dwg)

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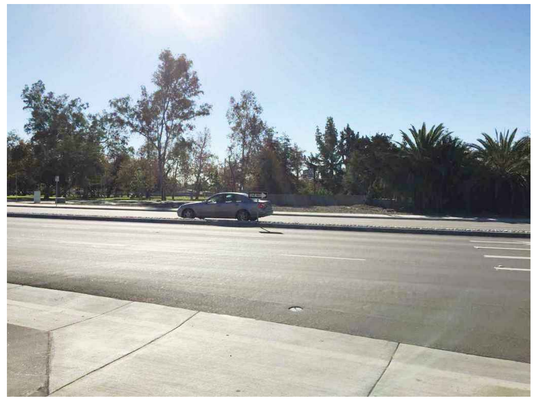

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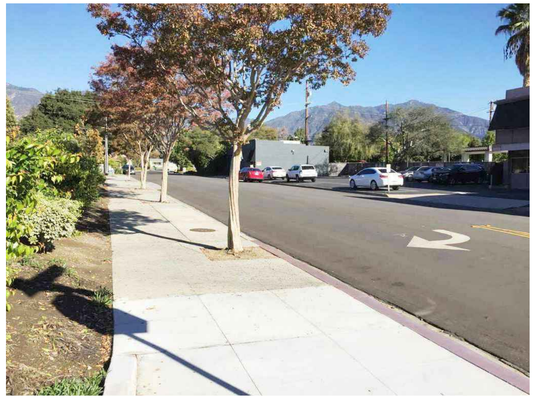
4 SAN RAFAEL RD. - EAST



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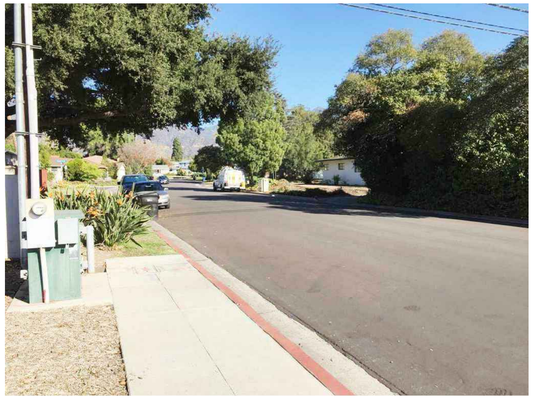

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7 SAN RAFAEL RD. - EAST

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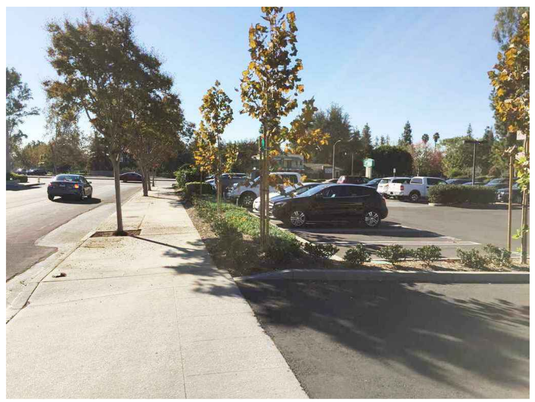

9 SAN RAFAEL RD. - SOUTH

10 SAN RAFAEL RD. - SOUTH WEST

11 SAN RAFAEL RD. - WEST

12 @ REAR OF SITE. - NORTH-EAST

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PLOTTED: November 25, 2019 Layout:
XREFS INCLUDED: 15X+6DR (1819-x6DR.dwg)

LICENSED ARCHITECT
DAVID D. HUNTER
No. C25796
Exp. 05-31-21
STATE OF CALIFORNIA

CORPORATE HEADQUARTERS
150 EL CAMINO REAL, 112
TUSTIN, CA 92780
714-832-5100

DENVER METRO OFFICE
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SHEET TITLE:
EXISTING SITE PHOTOS

drawn by:	PDG
plot date:	Nov 25, 2019
issue date:	Nov 25, 2019
job#:	1819500
cad file:	1819-G1.0-Site_Photos.dwg
drawing no:	G1.0

(13) @ REAR OF SITE. - EAST

(14) @ REAR OF SITE. - SOUTH EAST

(15) @ REAR OF SITE. - NORTH EAST

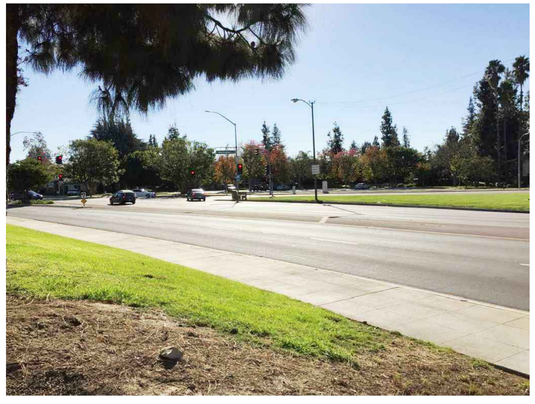
(16) @ REAR OF SITE. - NORTH EAST

(17) @ REAR OF SITE. - SOUTH WEST

(18) @ REAR OF SITE. - NORTH EAST

(19) @ SITE. - NORTH

(20) COLORADO PLACE - WEST



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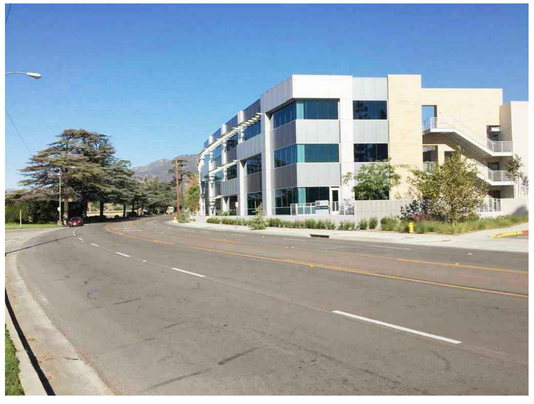
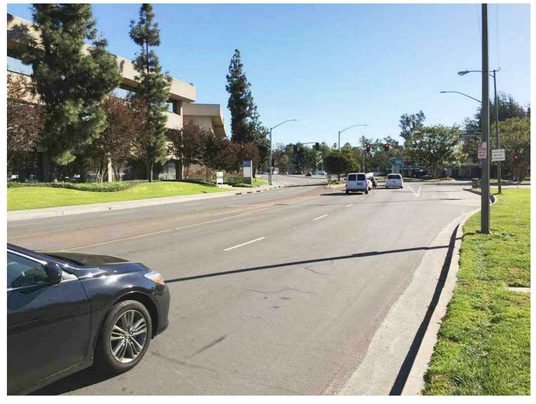


(22) COLORADO PLACE - NORTH WEST



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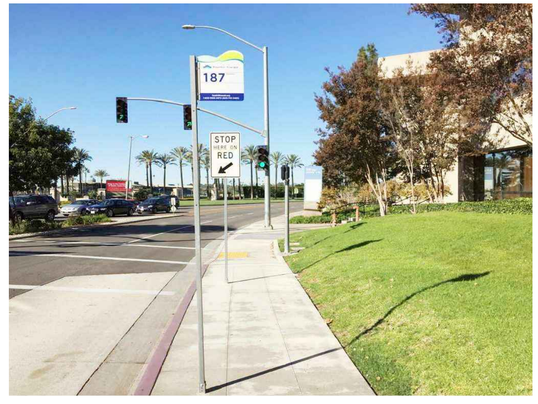

(24) COLORADO PLACE/W. HUNTINGTON DR. - WEST

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PLOTTED: November 25, 2019 Layout: 1524-xBDR (1819-xBDR.dwg)
XREFS INCLUDED: .....

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SHEET TITLE:
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plot date:	Nov 25, 2019
issue date:	Nov 25, 2019
job#:	1819500
cad file:	1819-G1.1-Site_Photos.dwg
drawing no:	**G1.1**

1 VIEW LOOKING NORTH-WEST

SCALE: 1'-0" = 1'-0"

2 VIEW LOOKING NORTH-EAST

SCALE: 1'-0" = 1'-0"

3 BIRDS-EYE FROM SOUTH -WEST

SCALE: 1'-0" = 1'-0"

4 BIRDS-EYE NORTH-EAST

SCALE: 1'-0" = 1'-0"

5 BIRDS-EYE FROM SOUTH-EAST

SCALE: 1'-0" = 1'-0"

6 BIRDS-EYE FROM NORTH

SCALE: 1'-0" = 1'-0"

7 BIRDS-EYE FROM LOOKING SOUTH-EAST

SCALE: 1'-0" = 1'-0"

8 BIRDS-EYE FROM NORTH-WEST

SCALE: 1'-0" = 1'-0"

DRAWING FILE: T:\PROJ\2018 PROJECTS\1915SOD - HOTEL\04-DRAWINGS\01-DESIGN\01-ARCHITECTURAL\01-PLAN OPTIONS\2018-12-10\1819-G2.1.DWG
PLOTTED: November 25, 2019 | Layout: 1819-sBDR.1 | 1819-sBDR.dwg
XREFS INCLUDED: .....

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DAVID D. HUNG
No. C25796
Exp. 05-31-21
STATE OF CALIFORNIA

CORPORATE HEADQUARTERS
150 EL CAMINO REAL, 112
TUSTIN, CA 92780
714-832-5100

DENVER METRO OFFICE
6400 S. FIDDLERS GRN. CIR.
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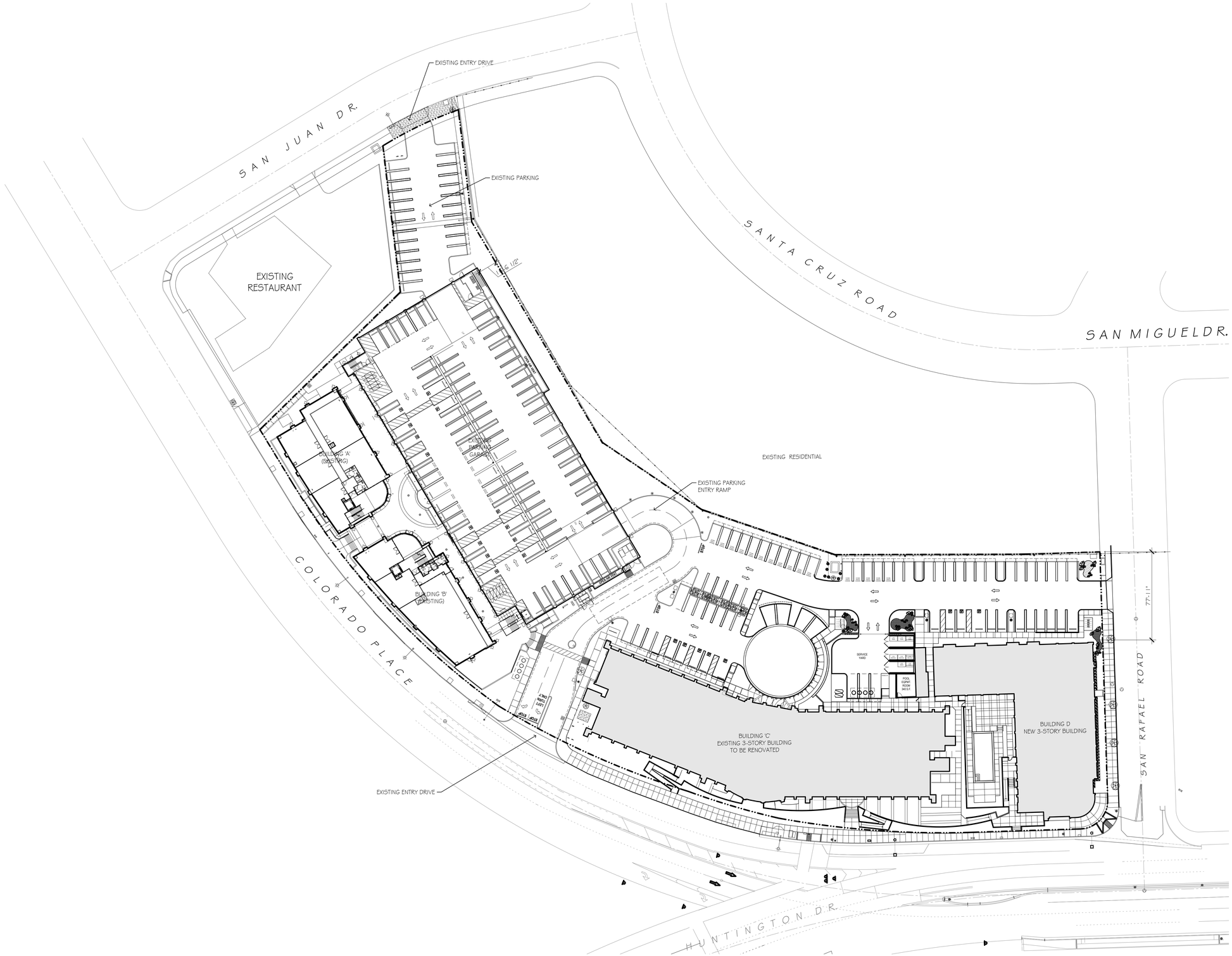
ARCADIA, CA 91006

SHEET TITLE:
BUILDING PERSPECTIVES

drawn by:	PDG
plot date:	Nov 25, 2019
issue date:	Nov 25, 2019
job#:	1819500
cad file:	1819-G2.1.dwg
drawing no:	**G2.1**



REFERENCE SITE PLAN

SCALE: 1" = 40' - 0"

0 20 40 80

NORTH

DRAWING FILE: T:\PDG\2018 PROJECTS\1819SOO - HOTEL\04-DRAWINGS\01-DESIGN\01-ARCHITECTURAL\01-PLAN OPTIONS\2018-12-10\1819-A0.0-SITE_PLAN.DWG
PLOTTED: November 25, 2019 Layout
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DAVID D. HUNTER
No. C25796
Exp. 05-31-21
STATE OF CALIFORNIA

CORPORATE HEADQUARTERS
150 EL CAMINO REAL, 112
TUSTIN, CA 92780
714-832-5100

DENVER METRO OFFICE
6400 S. FIDDLERS GR.
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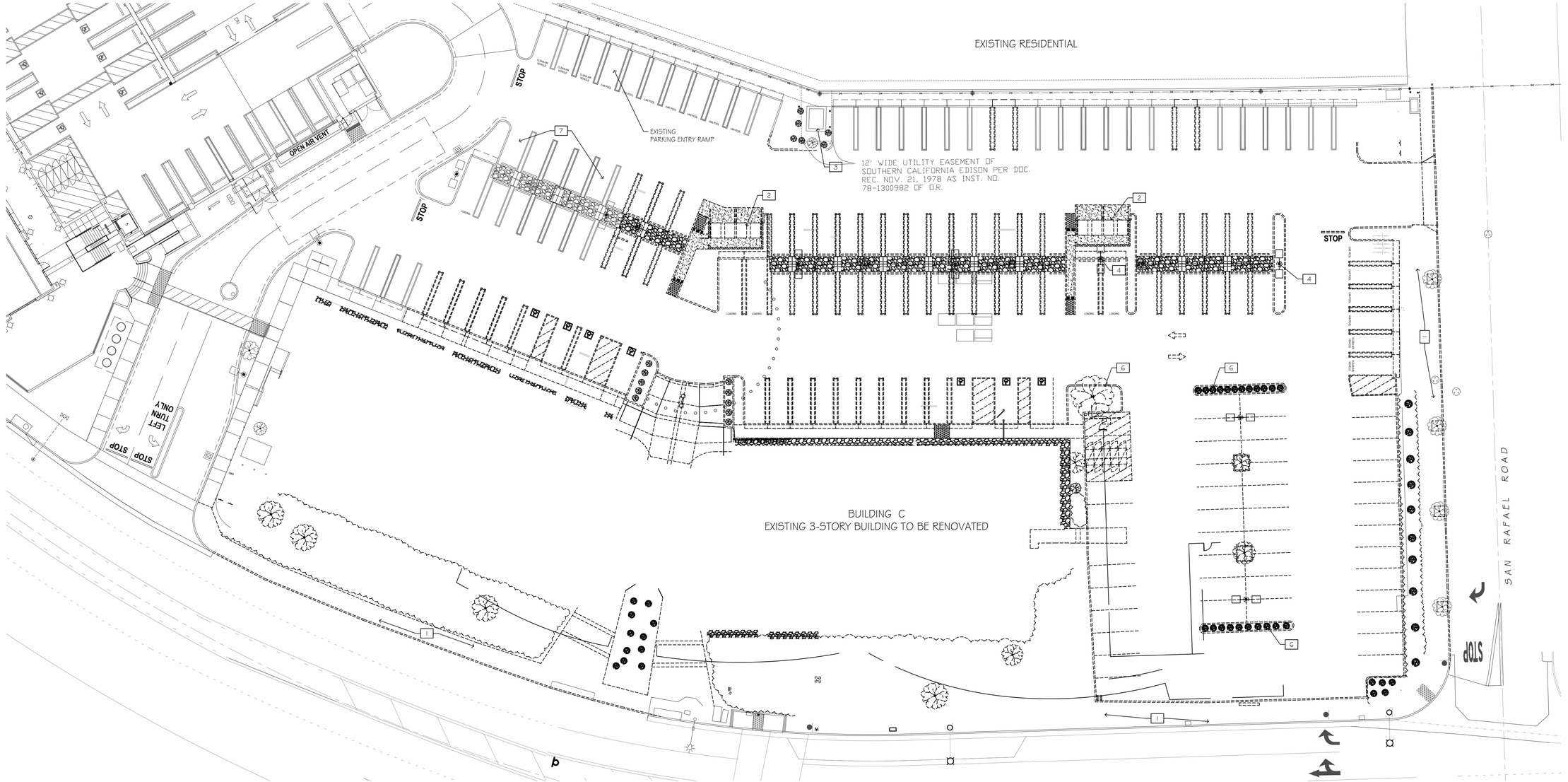
SHEET TITLE:
SITE PLAN

drawn by:	PDG
plot date:	Nov. 25, 2019
issue date:	Nov 25, 2019
job#:	1819SOO
cad file:	1819-A0.0-Site_Plan.dwg
drawing no:	**A0.0**



SITE DEMOLITION PLAN

SCALE: 1" = 20' - 0"

NORTH

LEGEND	GENERAL NOTES	KEYNOTES
		1 EXISTING PEDESTRIAN SIDEWALK 2 EXISTING TRASH ENCLOSURE TO BE DEMOLISHED 3 EXISTING TRANSFORMER 4 EXISTING LIGHT POLE TO BE DEMOLISHED, TYP. 5 EXISTING ACCESSIBLE PARKING STALLS TO BE REPAINTED PER CODE 6 EXISTING LANDSCAPE TO BE DEMOLISHED 7 EXISTING PARKING STALLS

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PLOTTED: November 25, 2019 by jaycyt
XREFS INCLUDED: 1524-xSite (I:\1819-xSite.dwg] 1524-xBDR (I:\1819-xBDR.dwg]

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No. C25796
Exp. 05-31-21
STATE OF CALIFORNIA

CORPORATE HEADQUARTERS
150 EL CAMINO REAL, 112
TUSTIN, CA 92780
714-832-5100

DENVER METRO OFFICE
7400 E. ORCHARD RD.
CENTENNIAL, CO 80015
714-458-5930

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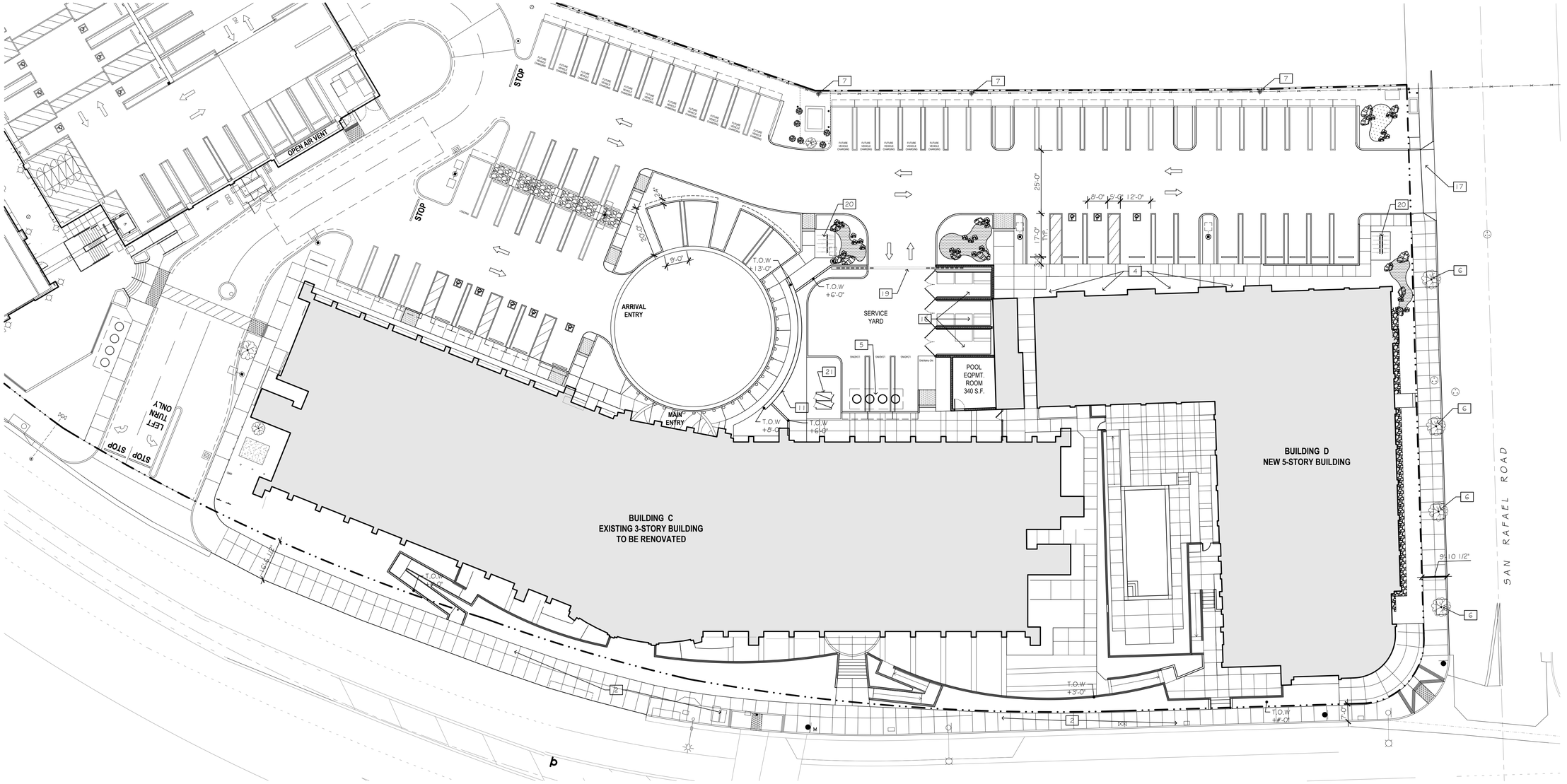
SHEET TITLE:
SITE DEMOLITION PLAN

drawn by:	PDG
plot date:	Nov 25, 2019
issue date:	Nov 25, 2019
job#:	1819500
cad file:	1819-AD0.1-Site Demo Plan.dwg
drawing no:	**AD0.1**



SITE PLAN

KEYNOTES

1. EXISTING FIRE HYDRANT TO REMAIN - PROTECT IN PLACE
2. EXISTING CURB, GUTTER, AND SIDEWALK TO BE REMOVED AND REPLACED PER CITY STANDARDS.
3. RAMP AND STAIR
4. PLANTING AREA, PER LANDSCAPE PLANS
5. NEW GREASE INTERCEPTORS
6. EXISTING PARKWAY TREES TO REMAIN. PROTECT IN PLACE DURING CONSTRUCTION.
7. EXISTING POWER POLE TO REMAIN
8. 8'-4" HIGH CMU WALL
9. NOT USED
10. NOT USED
11. NEW MONUMENT SIGN UNDER SEPARATE PERMIT
12. NOT USED
13. BIOSWALE PER CIVIL PLANS
14. EXISTING TRASH ENCLOSURE
15. NOTE
16. NEW TRASH ENCLOSURE
17. NEW DRIVEWAY APPROACH, WITH ADA ACCESS PER CITY STANDARD PLAN 801-1.
18. NOT USED
19. ACCESS CONTROL GATE
20. BICYCLE RACK, PER CITY STANDARDS
21. LONG TERM BICYCLE STORAGE LOCKERS, 3 LOCKERS TOTAL

GENERAL NOTES

1. SEE LANDSCAPE PLANS FOR PLANTING AND IRRIGATION INFO
2. SEE CIVIL PLANS FOR CURB DESIGN
3. SEE CIVIL PLANS FOR EASEMENTS
4. ALL SIDEWALKS 5' U.N.O.
5. CURBS TO ALL BE 6" U.N.O.
6. SEPARATE WATER SERVICE, METER, AND BACK-FLOW DEVICE TO BE PROVIDE FOR EACH BUILDING.

LEGEND

- COLORED CONCRETE PER LANDSCAPING PLAN
- HERRINGBONE PATTERN BLACK IN CIVIL
- NON-STRUCTURAL CONCRETE SLAB
- PEA GRAVEL PER LANDSCAPE PLANS
- STAMPED CONCRETE SLAB
- LAND DEDICATION TO CITY PER CIVIL PLANS
- PROPERTY LINE
- LIGHT STANDARD PER ELECT. PLANS

LICENSED ARCHITECT
DAVID D. HUNTER
No. C25796
Exp. 05-31-21
STATE OF CALIFORNIA

CORPORATE HEADQUARTERS
150 EL CAMINO REAL, 112
TUSTIN, CA 92780
714-832-5100

DENVER METRO OFFICE
6400 S. FIDDLERS GREEN CIR.
CENTENNIAL, CO 80015
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SHEET TITLE:
ENLARGED SITE PLAN

drawn by:	PDG
plot date:	Nov. 25, 2019
issue date:	Nov. 25, 2019
job#:	1819500
cad file:	1819-A0.1-Enlarged Site P
drawing no:	**A0.1**

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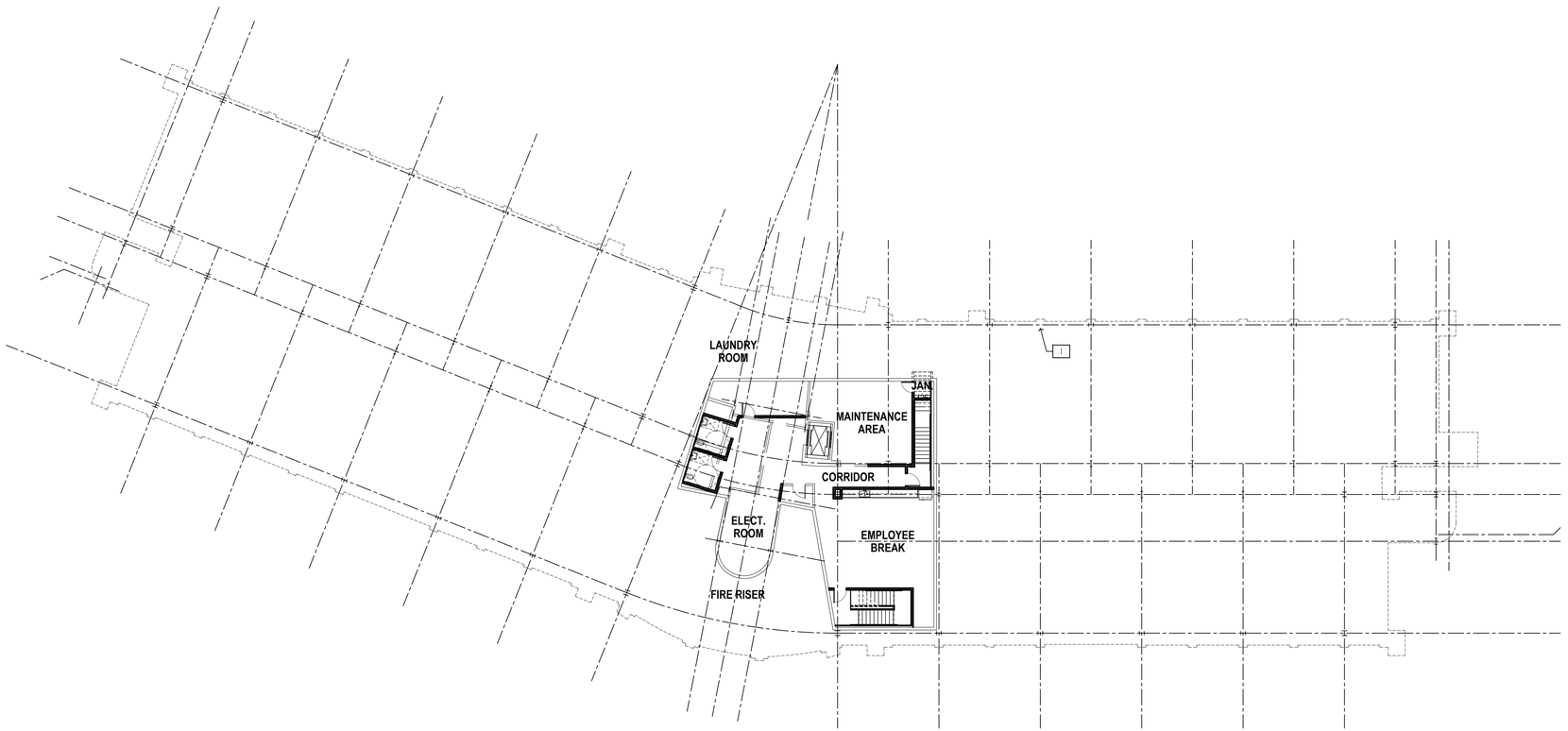
PLOTTED: November 25, 2019 Layout: 1524-x-Site | 1819-Site.dwg | 1524-x-BDR | 1819-xBDR.dwg
XREFS INCLUDED: .....



BUILDING C - BASEMENT FLOOR PLAN

0 5 10 20 40 FT.
SCALE: 1/16" = 1' - 0"

NORTH

KEYNOTES

1 BUILDING FOOT PRINT ABOVE

2 EXISTING FIRE RATED STRUCTURAL COLUMN

LEGEND

EXISTING WALL TO REMAIN

GENERAL NOTES

KEY PLAN

LICENSED ARCHITECT
DAVID D. HUNTER
No. C25796
Exp. 05-31-21
STATE OF CALIFORNIA

CORPORATE HEADQUARTERS
150 EL CAMINO REAL, 112
TUSTIN, CA 92780
714-832-5100

DENVER METRO OFFICE
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SHEET TITLE:
BUILDING C - BASEMENT FLOOR PLAN

drawn by:	PDG
plot date:	Nov 25, 2019
issue date:	Nov 25, 2019
job#:	1819500
cad file:	1819-4a2.0-base_flr.dwg
drawing no:	**4A2.0**

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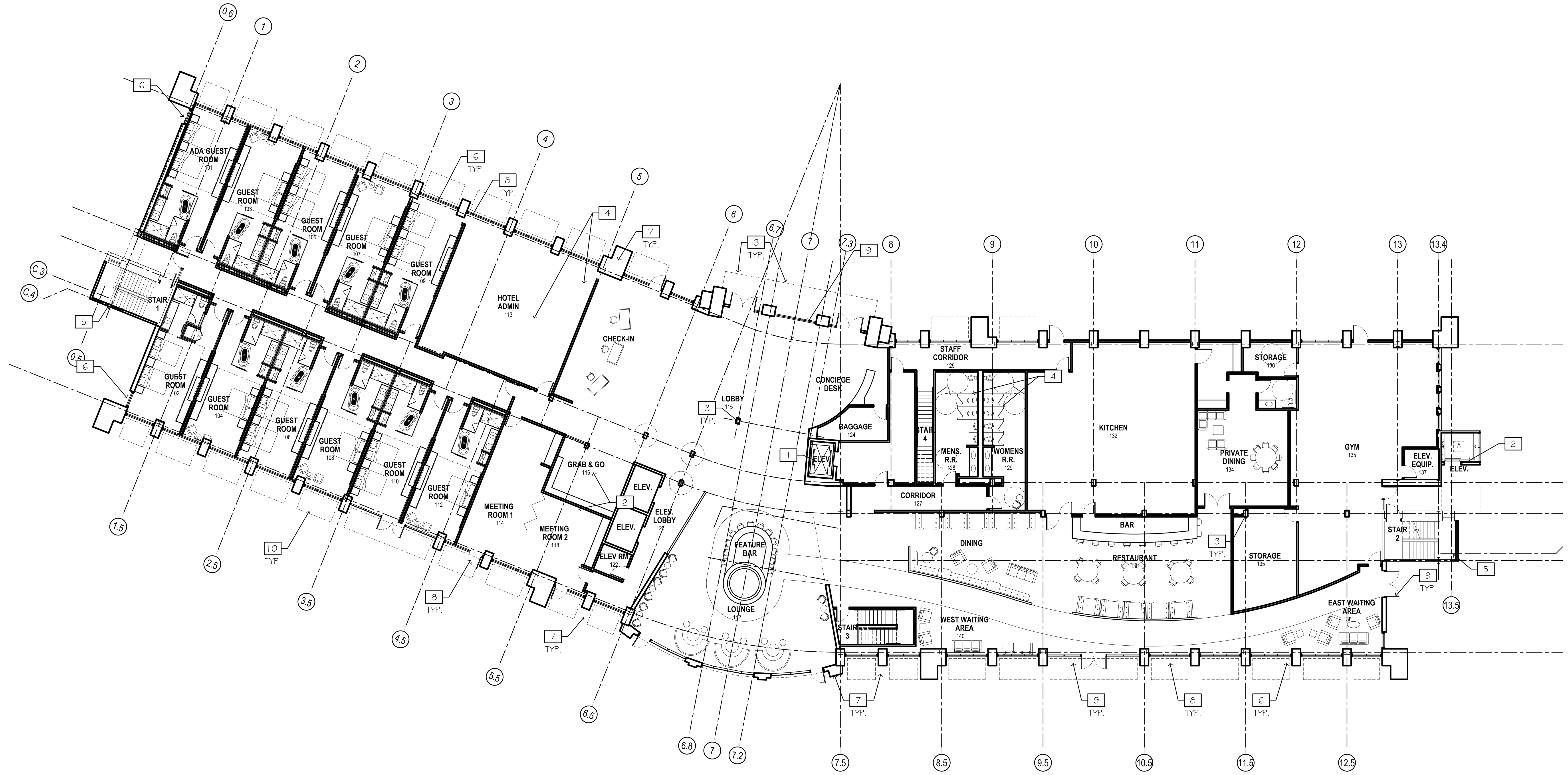


BUILDING C - FIRST FLOOR PLAN

0 5 10 20 40 FT.
SCALE: 1/16" = 1' - 0"

NORTH

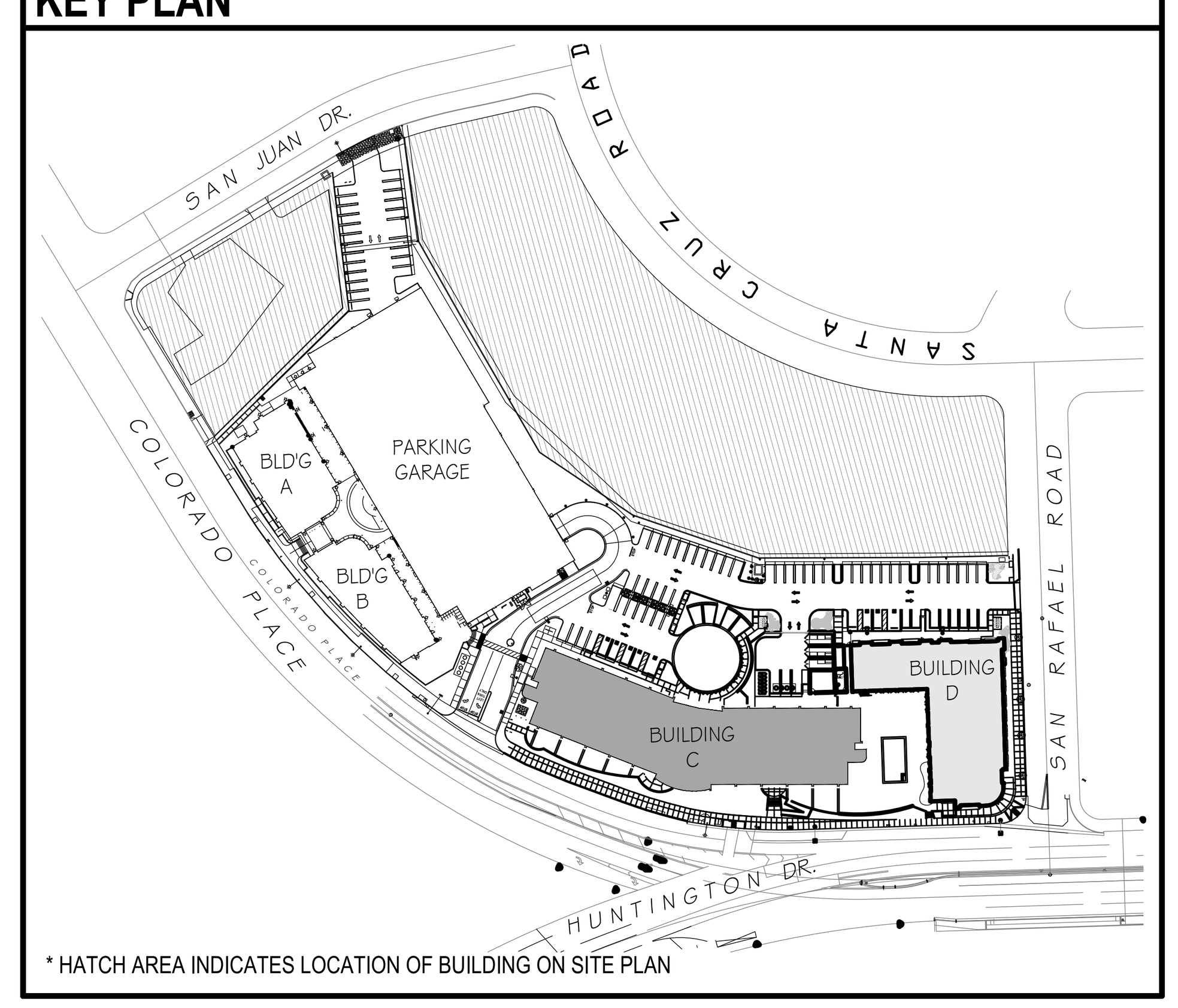
KEYNOTES

1. EXISTING ELEVATOR TO BE REPLACED
2. NEW ELEVATOR
3. NOT USED
4. ACCESSIBLE COMMON AREA RESTROOMS
5. EXISTING STAIR ENCLOSURE TO REMAIN
6. SOFFIT ABOVE
7. ARCHITECTURAL PROJECTION. SEE EXTERIOR ELEVATIONS
8. 1" INSULATING GLASS
9. ALUMINUM STOREFRONT AND GLASS DOORS
10. SUNSCREEN ABOVE
11. ROOF ACCESS HATCH
12. CANOPY BELOW
13. 2ND FLOOR POOL DECK / GARDEN ACCESS

GENERAL NOTES

1. ALL DIMENSIONS ARE TO FACE OF CONCRETE OPENING, FACE OF FINISH, CENTER OF COLUMN'S AND CENTER OF DOOR / WINDOW OPENINGS AT STUD FRAMING.

KEY PLAN



* HATCH AREA INDICATES LOCATION OF BUILDING ON SITE PLAN

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CORPORATE HEADQUARTERS
150 EL CAMINO REAL, 112
TUSTIN, CA 92780
714-832-5100

DENVER METRO OFFICE
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SHEET TITLE:
BUILDING C - FIRST FLOOR PLAN

drawn by:	PDG
plot date:	Nov 25, 2019
issue date:	Nov 25, 2019
job#:	1819500
cad file:	1819-4A2.1-1st_Flr.dwg
drawing no:	4A2.1

KEYNOTES

1. EXISTING ELEVATOR TO BE REPLACED
2. NEW ELEVATOR
3. NOT USED
4. ACCESSIBLE COMMON AREA RESTROOMS
5. EXISTING STAIR ENCLOSURE TO REMAIN
6. SOFFIT ABOVE
7. ARCHITECTURAL PROJECTION. SEE EXTERIOR ELEVATIONS
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GENERAL NOTES

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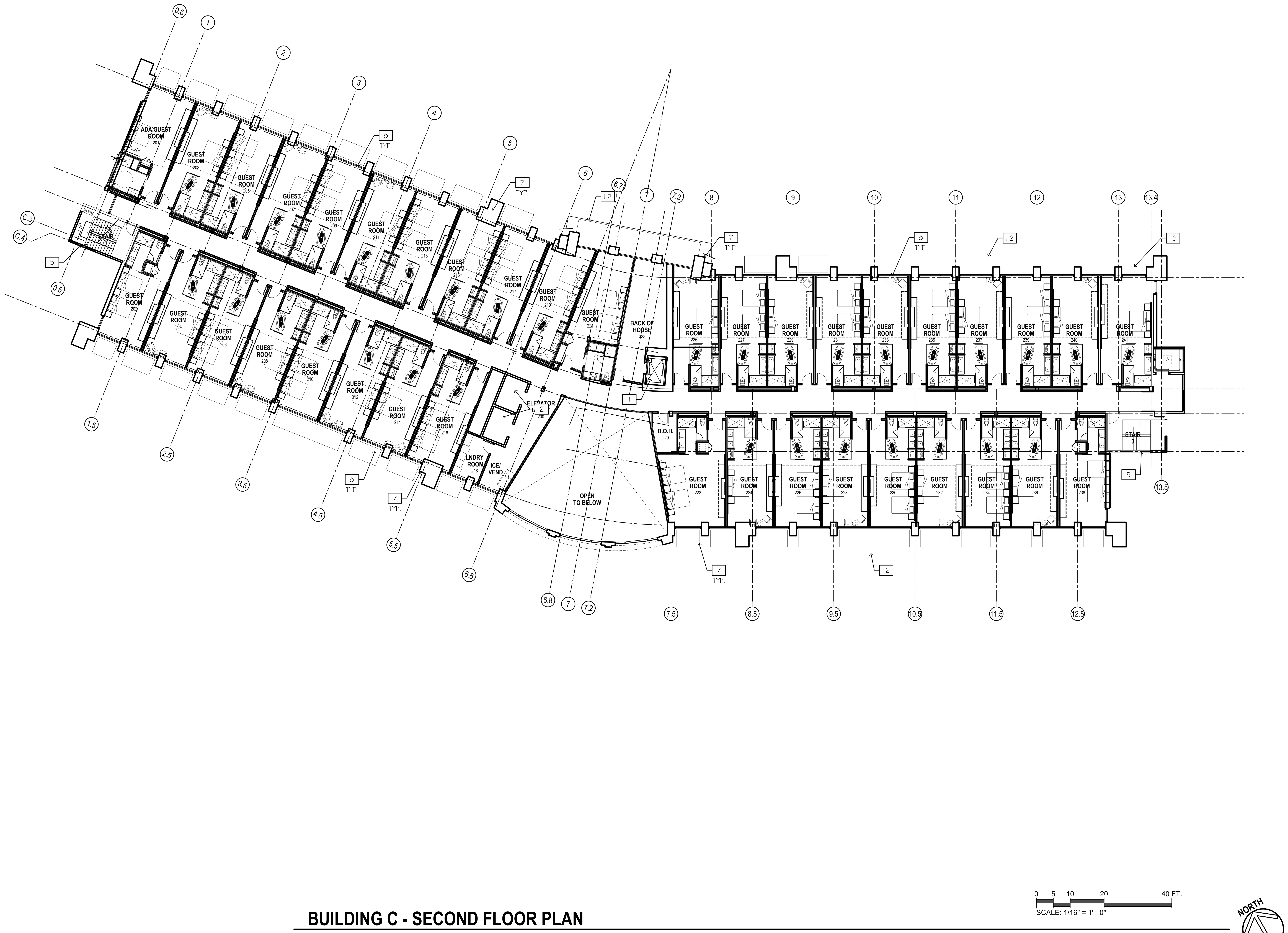
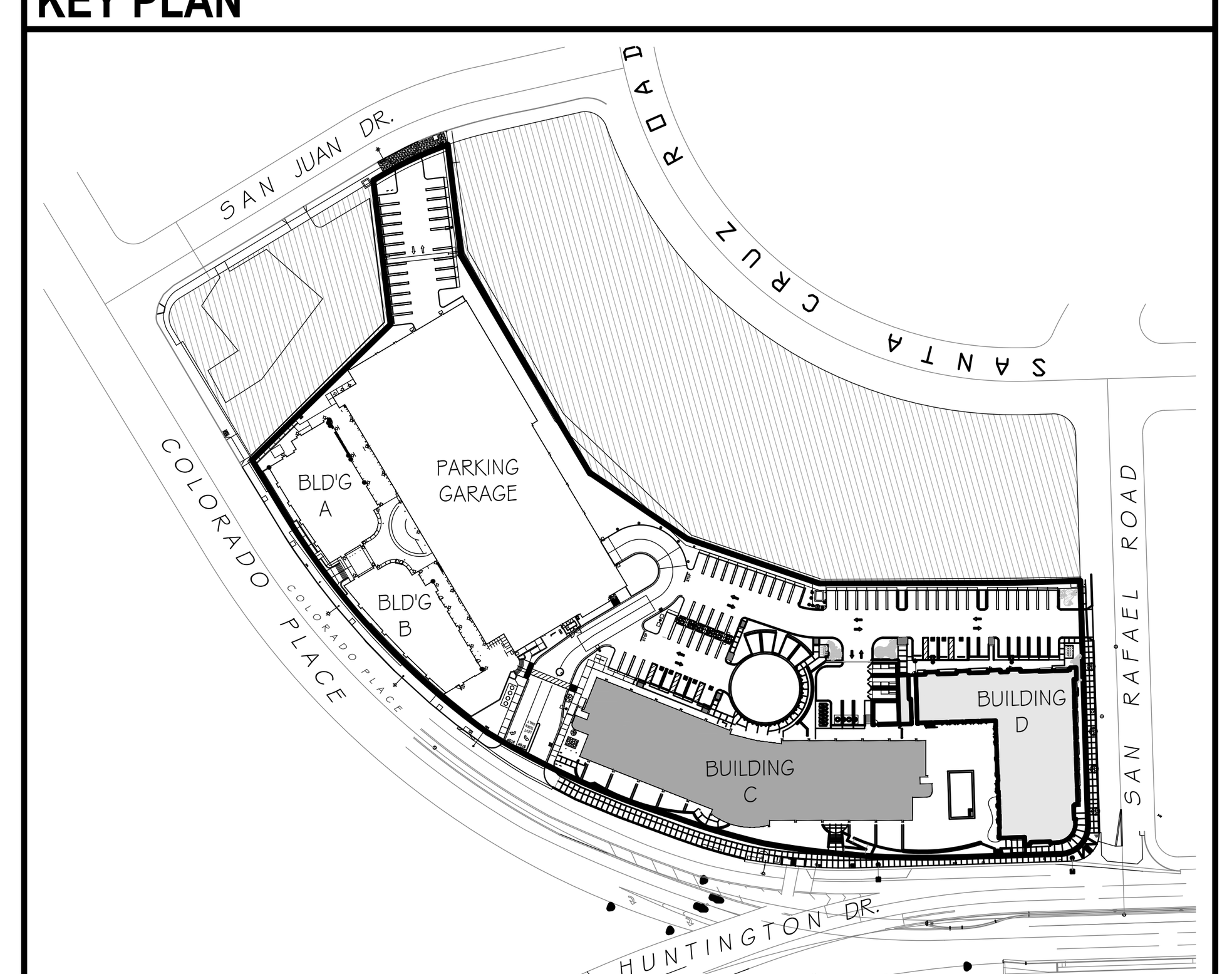


BUILDING C - SECOND FLOOR PLAN

KEY PLAN



* HATCH AREA INDICATES LOCATION OF BUILDING ON SITE PLAN

LICENSED ARCHITECT
DAVID D. HUNG
No. C25796
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STATE OF CALIFORNIA

CORPORATE HEADQUARTERS
150 EL CAMINO REAL, 112
TUSTIN, CA 92780
714-832-5100

DENVER METRO OFFICE
16710 E. PRENTICE CIR.
CENTENNIAL, CO 80015
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SHEET TITLE:
BUILDING C - SECOND FLOOR PLAN

drawn by:	PDG
plot date:	Nov 25, 2019
issue date:	Nov 25, 2019
job#:	1819500
cad file:	1819-4A2.2-2nd_Flr.dwg
drawing no:	4A2.2

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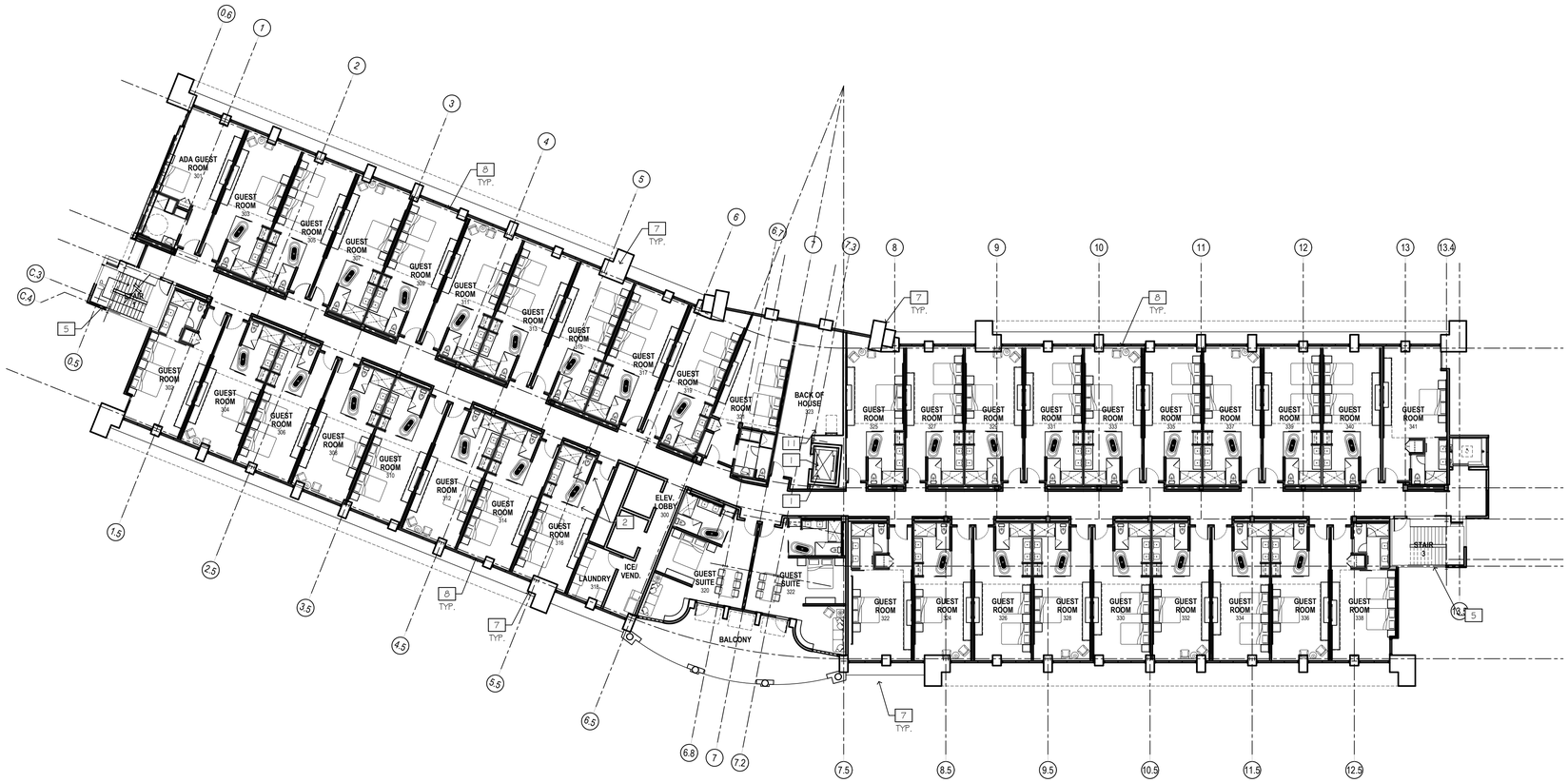


BUILDING C - THIRD FLOOR PLAN

0 5 10 20 40 FT.
SCALE: 1/16" = 1' - 0"

NORTH

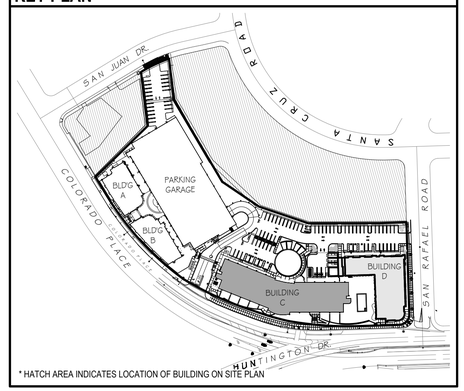
KEYNOTES

1. EXISTING ELEVATOR TO BE REPLACED
2. NEW ELEVATOR
3. NOT USED
4. ACCESSIBLE COMMON AREA RESTROOMS
5. EXISTING STAIR ENCLOSURE TO REMAIN
6. SOFFIT ABOVE
7. ARCHITECTURAL PROJECTION. SEE EXTERIOR ELEVATIONS
8. 1" INSULATING GLASS
9. ALUMINUM STOREFRONT AND GLASS DOORS
10. SUNSCREEN ABOVE
11. ROOF ACCESS HATCH
12. CANOPY BELOW
13. 2ND FLOOR POOL DECK / GARDEN ACCESS

GENERAL NOTES

1. ALL DIMENSIONS ARE TO FACE OF CONCRETE OPENING, FACE OF FINISH, CENTER OF COLUMNS AND CENTER OF DOOR / WINDOW OPENINGS AT STUD FRAMING.

KEY PLAN



* HATCH AREA INDICATES LOCATION OF BUILDING ON SITE PLAN

LICENSED ARCHITECT
DAVID D. HUNT
No. C25796
Exp. 05-31-21
STATE OF CALIFORNIA

CORPORATE HEADQUARTERS
150 EL CAMINO REAL, 112
TUSTIN, CA 92780
714-832-5100

DENVER METRO OFFICE
4582 S. ULSTER ST.
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SHEET TITLE:
BUILDING C - THIRD FLOOR PLAN

drawn by:	PDG
plot date:	Nov 25, 2019
issue date:	Nov 25, 2019
job#:	18195OO
cad file:	1819-4A2.3-3rd Flr.dwg
drawing no:	**4A2.3**

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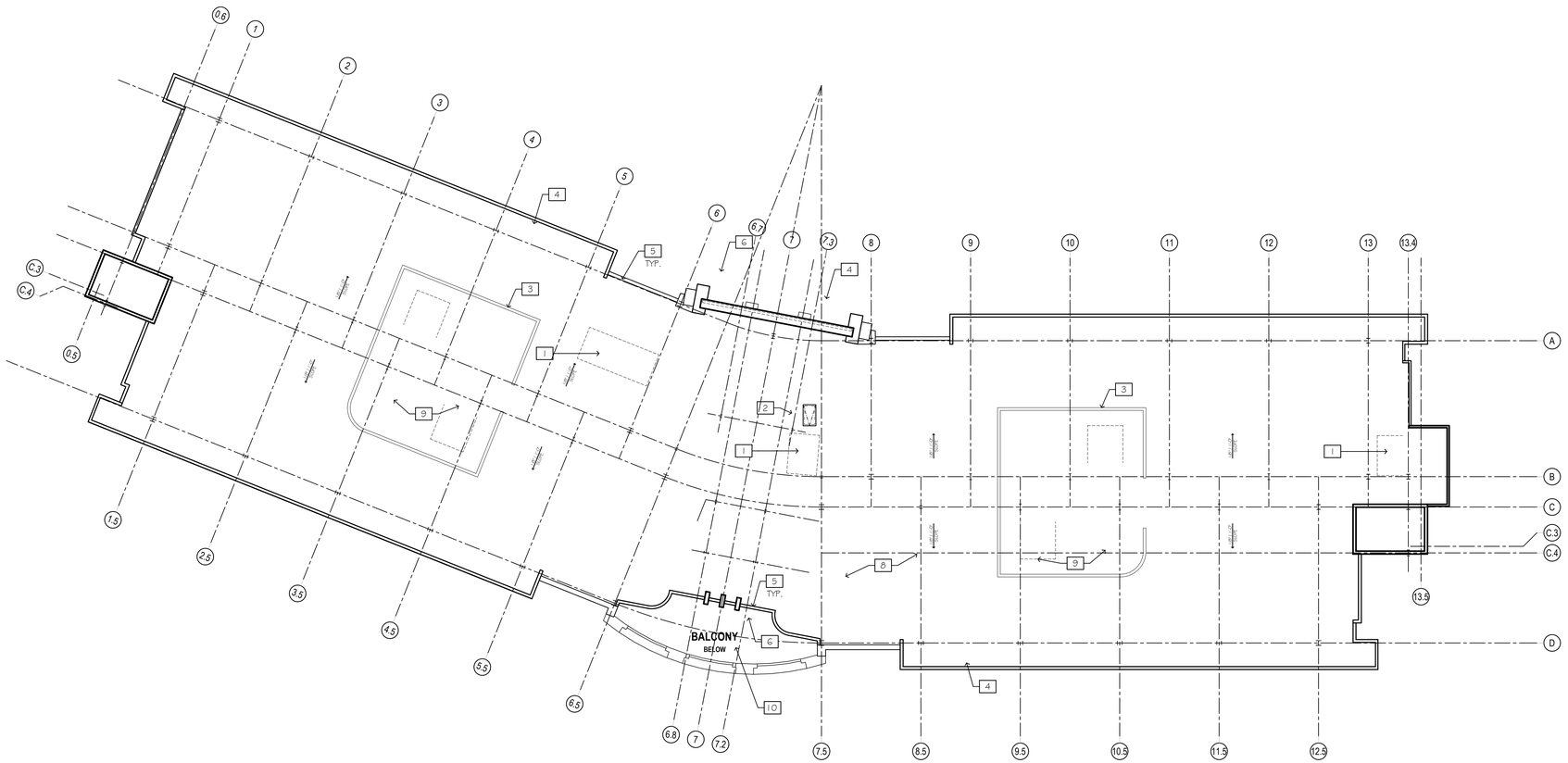


BUILDING C - ROOF PLAN

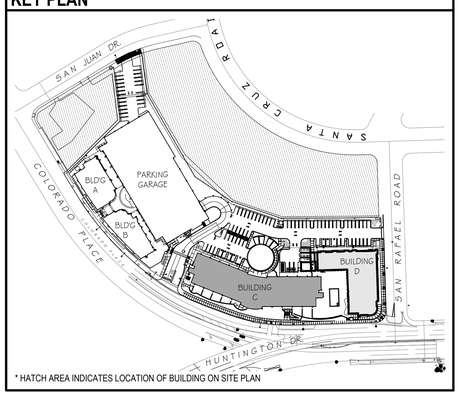
KEYNOTES

1. ELEVATOR SHAFT BELOW.
2. ROOF ACCESS HATCH.
3. EXISTING MECHANICAL SCREEN TO REMAIN
4. ARCHITECTURAL PROJECTIONS. SEE EXTERIOR ELEVATIONS.
5. ROOF PARAPET WALL. SEE EXTERIOR ELEVATIONS.
6. CANTILEVERED ALUMINUM SUNSHADE BELOW. SEE EXTERIOR ELEVATIONS
7. PAINTED STEEL WITH STEEL SIDING MECHANICAL SCREEN.
8. SPRAYED ON FOAM ROOFING.
9. HVAC EQUIPMENT.
10. OPEN BALCONY AT 3RD. FLOOR LEVEL. SEE 3RD. FLOOR PLAN SHT.#4A2.3

GENERAL NOTES

1. ALL DIMENSIONS ARE TO FACE OF STUD U.N.O.
2. SEE DETAILS 1, 2, 3, 4, & 5 ON A17.0 FOR TYPICAL, GENERAL ROOFING DETAILS.

KEY PLAN



* HATCH AREA INDICATES LOCATION OF BUILDING ON SITE PLAN

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DAVID D. HUNTER
No. C25796
Exp. 05-31-21
STATE OF CALIFORNIA

CORPORATE HEADQUARTERS
150 EL CAMINO REAL, 112
TUSTIN, CA 92780
714-832-5100

DENVER METRO OFFICE
6400 S. FIDDLERS GREEN CIR.
CENTENNIAL, CO 80015
714-458-5930

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ARCADIA, CA 91006

SHEET TITLE:
BUILDING C - ROOF PLAN

drawn by:	PDG
plot date:	Nov 25, 2019
issue date:	Nov 25, 2019
job#:	1819500
cad file:	1819-4A3.1-Roof.dwg
drawing no:	**4A3.1**

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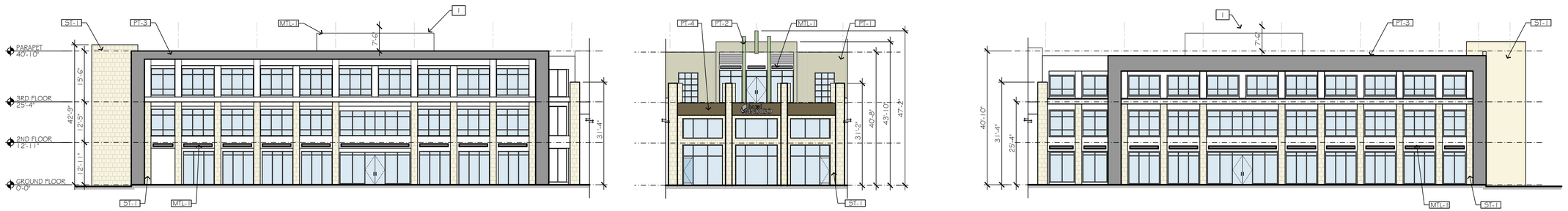
PLOTTED: November 25, 2019 by Layout
XREFS INCLUDED: 1524-x4Roof (\1819-x4Roof.dwg) 1524-x4Grid (\1819-x4Grid.dwg) 1524-xBDR (\1819-xBDR.dwg) 1819-xSPort_Shell (T:\PDG\2018 PROJECTS\1819500 - Hotel\04-DRAWINGS\01-Design\01-Architectural\01-Plan Options\2018-12-10\Bldg D\1819-xSPort_Shell.dwg) 1819-xSPort_Shell (T:\PDG\2018 PROJECTS\1819500 - Hotel\04-DRAWINGS\01-Design\01-Architectural\01-Plan Options\2018-12-10\Bldg C\1819-xSPort_Shell.dwg)

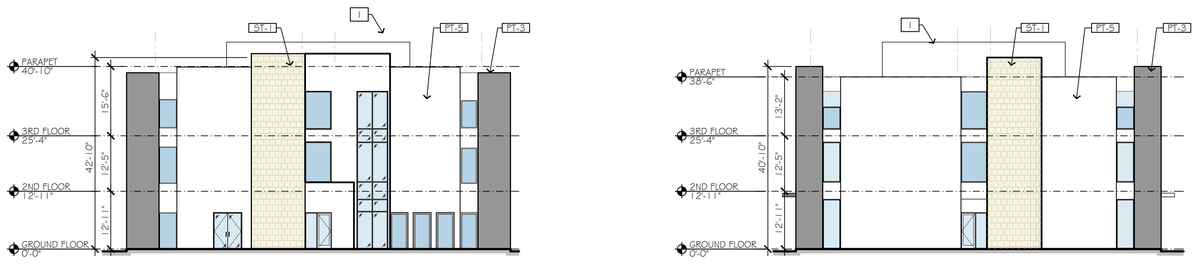


1 SOUTH ELEVATION

SCALE: 1/16" = 1'-0"

2 NORTH ELEVATION

SCALE: 1/16" = 1'-0"



3 EAST ELEVATION

SCALE: 1/16" = 1'-0"

4 WEST ELEVATION

SCALE: 1/16" = 1'-0"

MATERIAL LEGEND

SYMBOL	MATERIAL FINISH	MANUFACTURER	COLOR/FINISH	REMARKS
PT-1	PAINT	DUNN-EDWARDS	DEW357 - WHITE CREST	
PT-2	PAINT	DUNN-EDWARDS	DE6221 - FLINTSTONE	
PT-3	PAINT	DUNN-EDWARDS	DE6229 - CALICO ROCK	
PT-4	PAINT	DUNN-EDWARDS	DET520 - MOW THE LAWN	
MTL-1	PAINT	DUNN-EDWARDS	DE6070 - CHOCOLATE CHUNK	
MTL-2	PAINT	DUNN-EDWARDS	DE6386 - SNOW PEAK	
MTL-3	PAINT	DUNN-EDWARDS	DE6385 - BLACK BEAN	

KEYNOTES

1 MECHANICAL SCREEN

LICENSED ARCHITECT
DAVID D. HUNTER
No. C25796
Exp. 05-31-21
STATE OF CALIFORNIA

CORPORATE HEADQUARTERS
150 EL CAMINO REAL, 112
TUSTIN, CA 92780
714-832-5100

DENVER METRO OFFICE
6312 S. FIDDLERS GRN. CIR.
GREENWOOD VILLAGE, CO 80111
714-458-5930

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PROJECT:
HOTEL AT HUNTINGTON CENTER
VG PROPERTY INVESTMENTS, LLC
125 W. HUNTINGTON DRIVE - BLDGS C & D
ARCADIA, CA 91006

SHEET TITLE:
EXTERIOR ELEVATIONS - BUILDING 'C'

drawn by: PDG
plot date: Nov 26, 2019
issue date: Nov 26, 2019
job#: 1819500
cad file: 1819-4A5.1-Ext_Elev.dwg
drawing no: **4A5.1**

DRAWING FILE: T:\PDG\2018 PROJECTS\1819500 - HOTEL\04-DRAWINGS\01-DESIGN\01-ARCHITECTURAL\01-PLAN OPTIONS\2019-12-10\BLDG C\1819-4A5.1-EXT. ELEV.DWG
PLOTTED: November 26, 2019 | Layout: 1819-xElev | 1819-xElev.dwg | 1819-dBDR | 1819-dBDR.dwg | 1819-xLegend_Mat | 1819-xLegend_Mat.dwg
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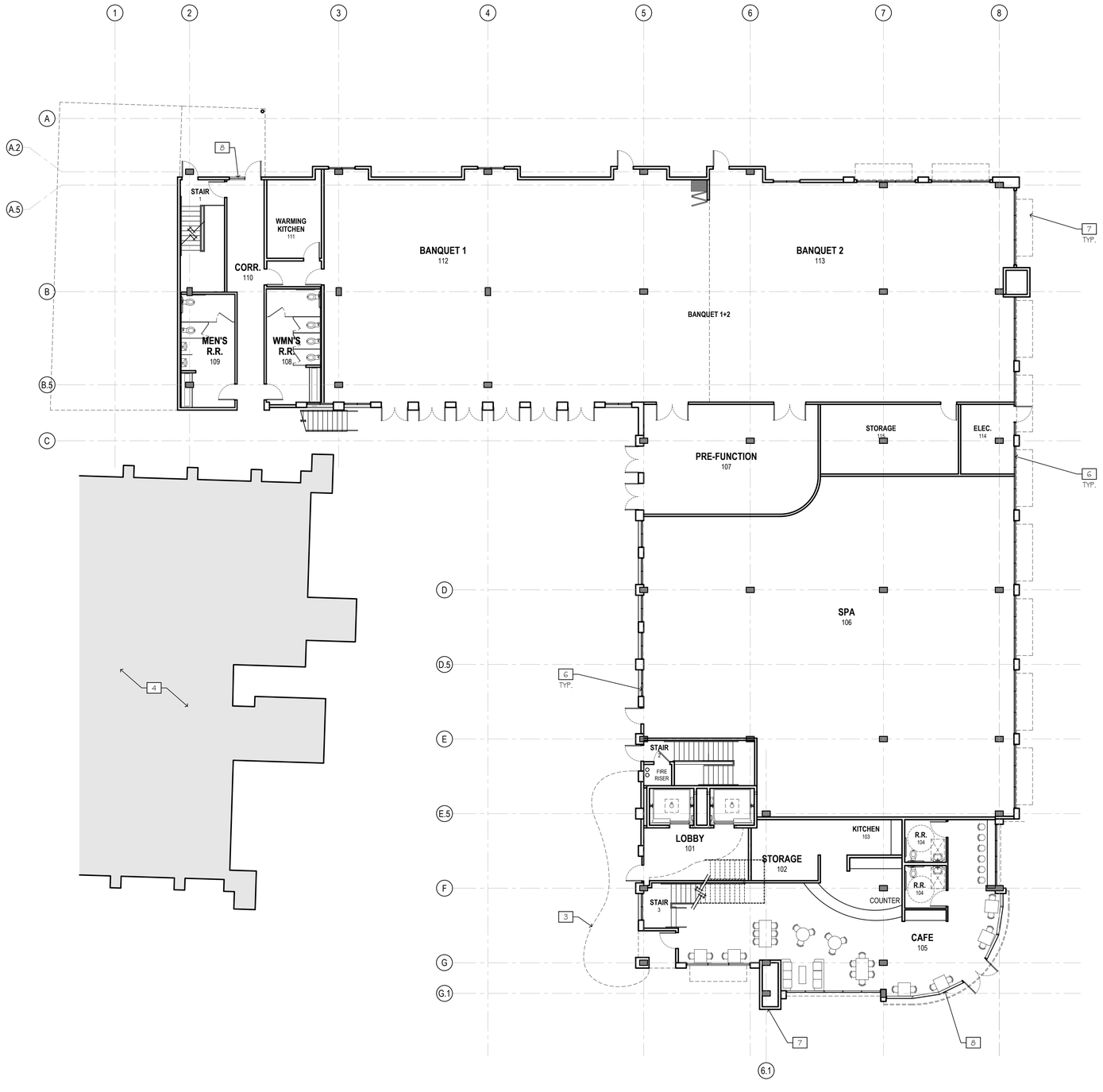

BUILDING D - FIRST FLOOR PLAN

0 5 10 20 FT.
SCALE: 3/32" = 1' - 0"

NORTH

KEYNOTES

1. ELEVATOR
2. MECHANICAL SHAFT
3. CANOPY ABOVE, SEE BUILDING ELEVATION
4. EXISTING BUILDING
5. CANTILEVERED ALUMINUM SUNSHADE ABOVE.
6. 1" INSULATING GLASS
7. ARCHITECTURAL PROJECTION. SEE EXTERIOR ELEVATIONS
8. ALUMINUM STOREFRONT AND GLASS DOORS

GENERAL NOTES

1. ALL DIMENSIONS ARE TO FACE OF CONCRETE OPENING, FACE OF FINISH, CENTER OF COLUMNS AND CENTER OF DOOR / WINDOW OPENINGS AT STUD FRAMING.

KEY PLAN

LICENSED ARCHITECT
DAVID D. HUNTER
No. C25796
Exp. 05-31-21
STATE OF CALIFORNIA

CORPORATE HEADQUARTERS
150 EL CAMINO REAL, 112
TUSTIN, CA 92780
714-832-5100

DENVER METRO OFFICE
6312 S. FIDDLERS GRN. CIR.
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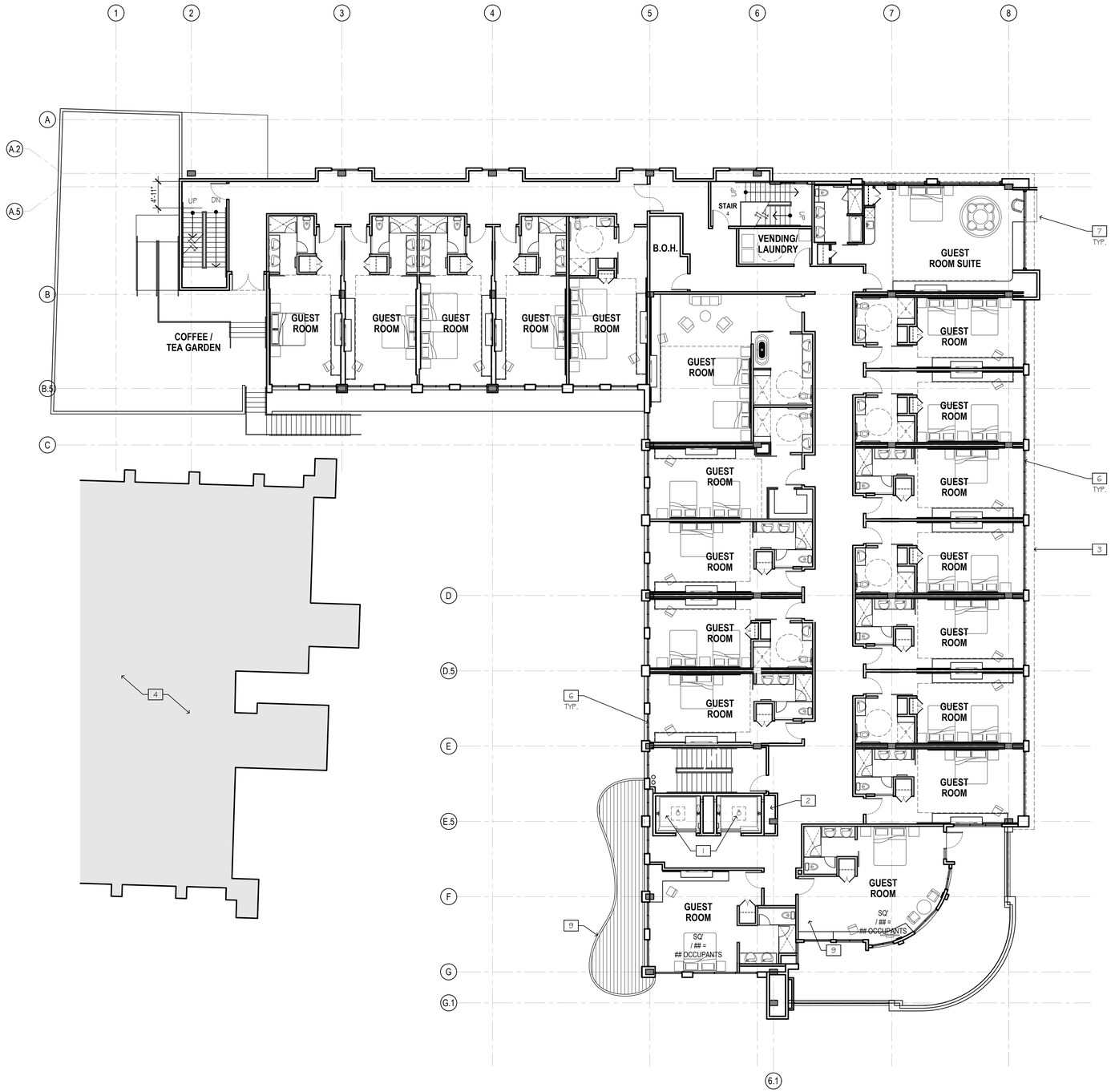
VG PROPERTY INVESTMENTS, LLC
125 W. HUNTINGTON DRIVE - BLDGS C & D
ARCADIA, CA 91006

SHEET TITLE:
BUILDING D - FIRST FLOOR PLAN

drawn by:	PDG
plot date:	Nov 25, 2019
issue date:	Nov 25, 2019
job#:	1819500
cad file:	1819-5A2.1-1st Flr.dwg
drawing no:	**5A2.1**

DRAWING FILE: T:\PDG\2018 PROJECTS\1819500 - HOTEL\04-DRAWINGS\01-DESIGN\01-ARCHITECTURAL\01-PLAN OPTIONS\2018-12-10\BLDG D\1819-5A2.1-1ST_FLR.DWG
PLOTTED: November 25, 2019 Layout
XREFS INCLUDED: 1819-x2Grd [1819-x2Grd.dwg] 1819-xDFlr1_Shell [1819-xDFlr1_Shell.dwg] 1819-xDFlr1 [1819-xDFlr1.dwg] 1819-xsite [1819-xsite.dwg] 1819-xBDR [1819-xBDR.dwg]



BUILDING D - SECOND FLOOR PLAN

SCALE: 3/32" = 1' - 0"

0 5 10 20 FT.

NORTH

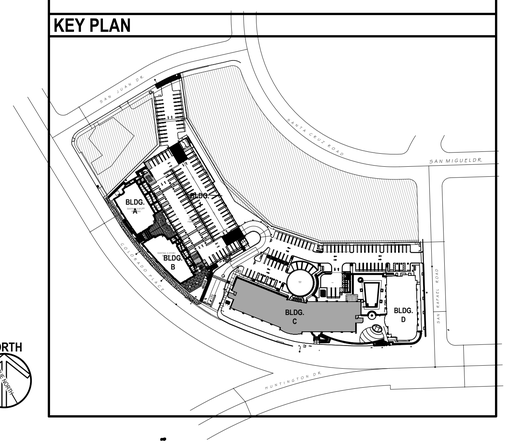
KEYNOTES

1. ELEVATOR
2. MECHANICAL SHAFT
3. CANOPY ABOVE, SEE BUILDING ELEVATION
4. EXISTING BUILDING
5. CANTILEVERED ALUMINUM SUNSHADE ABOVE.
6. 1" INSULATING GLASS
7. ARCHITECTURAL PROJECTION. SEE EXTERIOR ELEVATIONS
8. ALUMINUM STOREFRONT AND GLASS DOORS
9. ENTRY CANOPY BELOW

GENERAL NOTES

1. ALL DIMENSIONS ARE TO FACE OF CONCRETE OPENING, FACE OF FINISH, CENTER OF COLUMNS AND CENTER OF DOOR / WINDOW OPENINGS AT STUD FRAMING.

KEY PLAN



LICENSED ARCHITECT
DAVID D. HUNTER
No. C25796
Exp. 05-31-21
STATE OF CALIFORNIA

CORPORATE HEADQUARTERS
150 EL CAMINO REAL, 112
TUSTIN, CA 92780
714-832-5100

DENVER METRO OFFICE
6312 S. FIDDLERS GREEN CIR.
CENTENNIAL, CO 80015
714-458-5930

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PROJECT:
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VG PROPERTY INVESTMENTS, LLC
125 W. HUNTINGTON DRIVE - BLDGS C & D
ARCADIA, CA 91006

SHEET TITLE:
BUILDING D - SECOND FLOOR PLAN

drawn by:	PDG
plot date:	Nov 25, 2019
issue date:	Nov 25, 2019
job#:	1819500
cad file:	1819-5A2.2-2nd_Flr.dwg
drawing no:	**5A2.2**

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PLOTTED: November 25, 2019 Layout
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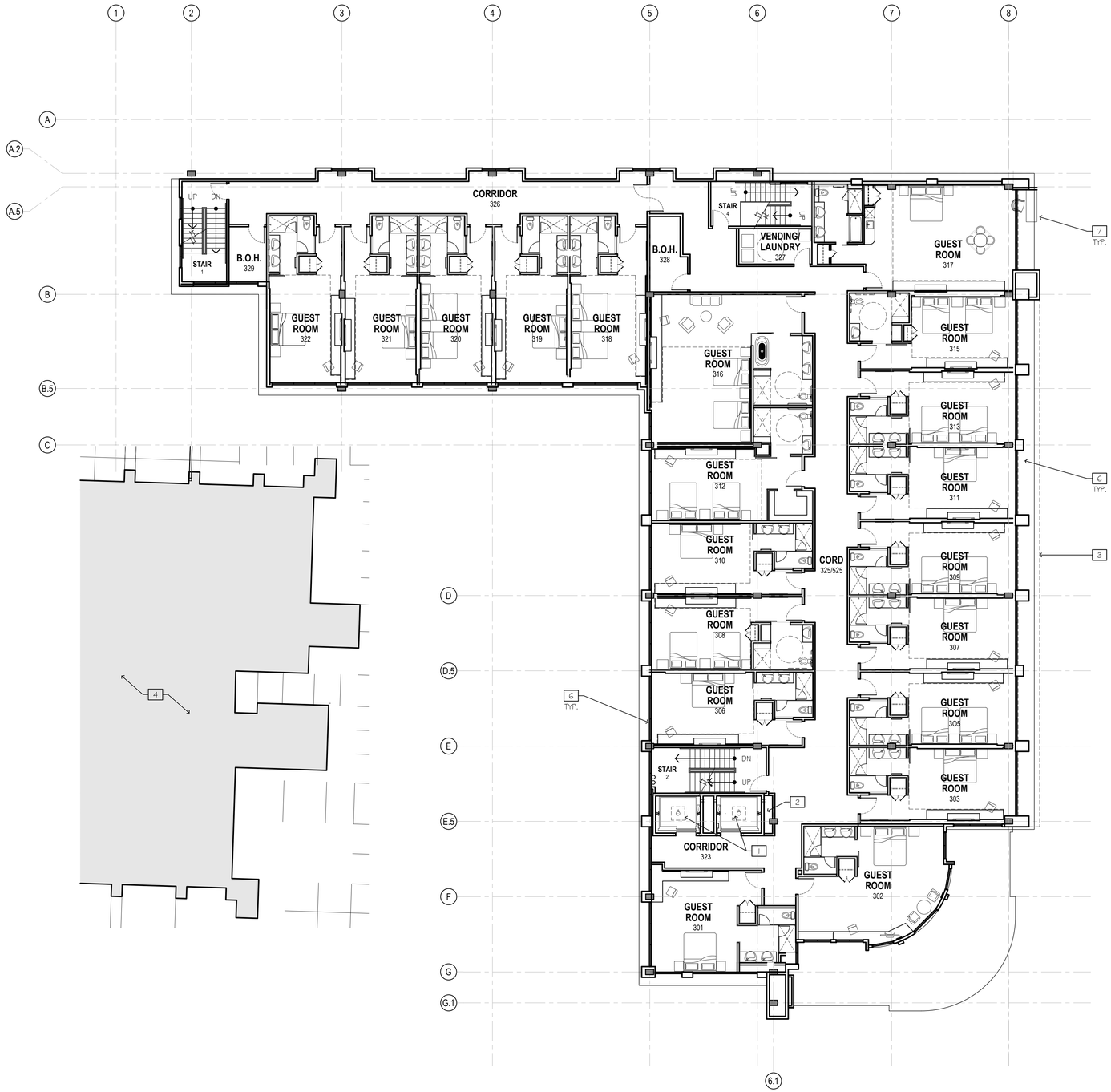

BUILDING D - THIRD FLOOR PLAN

0 5 10 20 FT.
SCALE: 3/32" = 1' - 0"

NORTH

KEYNOTES

1. ELEVATOR
2. MECHANICAL SHAFT
3. CANOPY ABOVE, SEE BUILDING ELEVATION
4. EXISTING BUILDING
5. CANTILEVERED ALUMINUM SUNSHADE ABOVE.
6. 1" INSULATING GLASS
7. ARCHITECTURAL PROJECTION. SEE EXTERIOR ELEVATIONS
8. ALUMINUM STOREFRONT AND GLASS DOORS

GENERAL NOTES

1. ALL DIMENSIONS ARE TO FACE OF CONCRETE OPENING, FACE OF FINISH, CENTER OF COLUMNS AND CENTER OF DOOR / WINDOW OPENINGS AT STUD FRAMING.

KEY PLAN

LICENSED ARCHITECT
DAVID D. HUNTER
No. C25796
Exp. 05-31-21
STATE OF CALIFORNIA

CORPORATE HEADQUARTERS
150 EL CAMINO REAL, 112
TUSTIN, CA 92780
714-832-5100

DENVER METRO OFFICE
6400 S. FIDDLERS GR.
CENTENNIAL, CO 80015
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VG PROPERTY INVESTMENTS, LLC
125 W. HUNTINGTON DRIVE - BLDGS C & D
ARCADIA, CA 91006

SHEET TITLE:
BUILDING D - THIRD FLOOR PLAN

drawn by:	PDG
plot date:	Nov 25, 2019
issue date:	Nov 25, 2019
job#:	1819500
cad file:	1819-5A2.3-3rd_Flr.dwg
drawing no:	**5A2.3**

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PLOTTED: November 25, 2019 Layout
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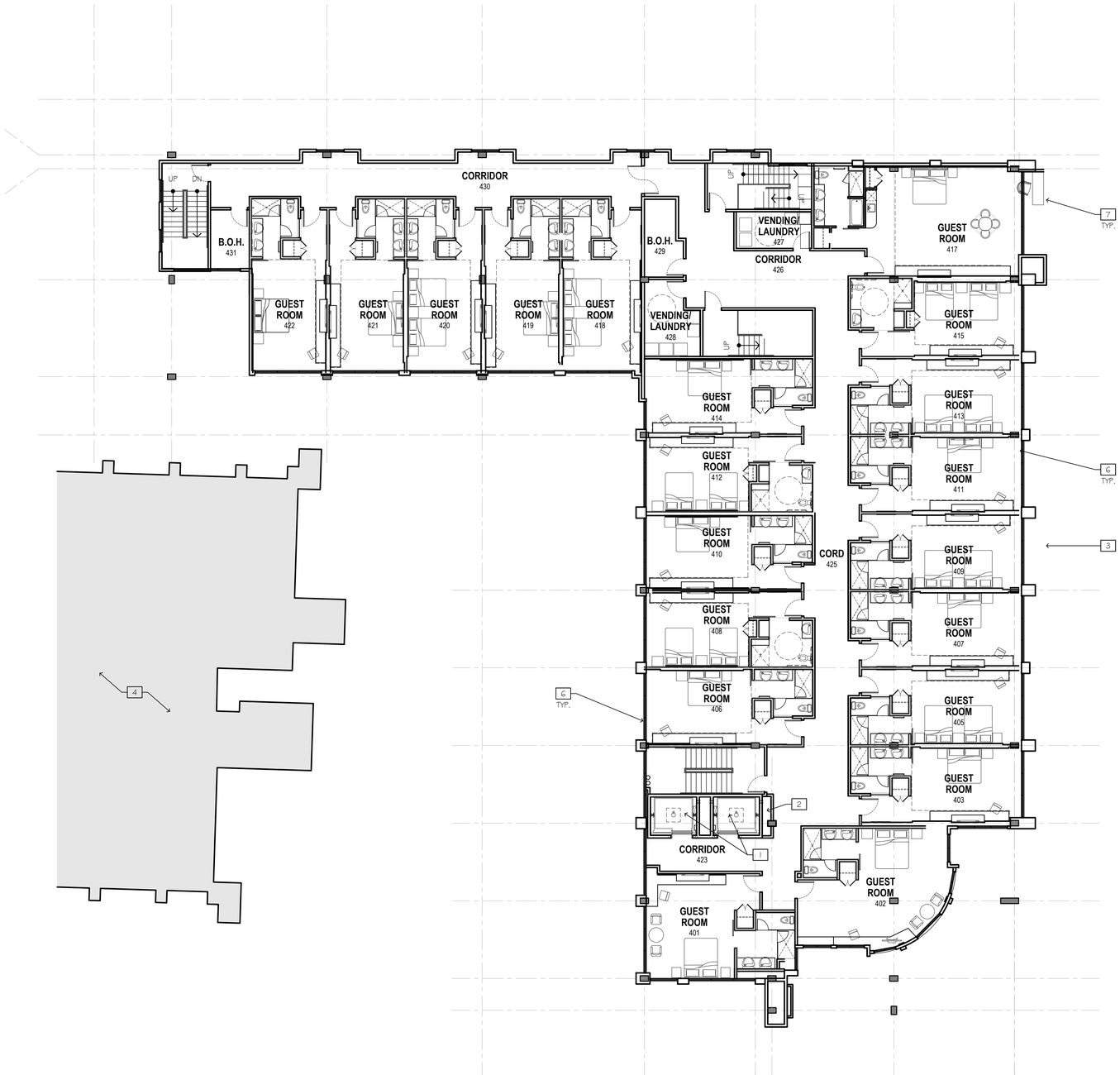


BUILDING D - FOURTH FLOOR PLAN

0 5 10 20 FT.
SCALE: 3/32" = 1' - 0"

NORTH

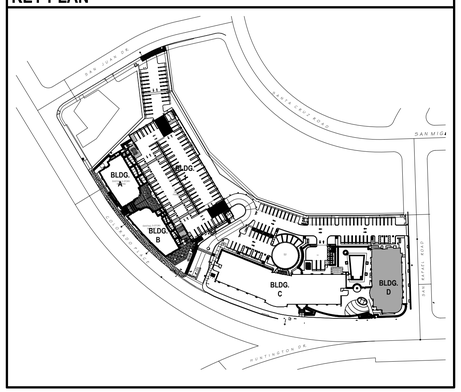
KEYNOTES

1. ELEVATOR
2. MECHANICAL SHAFT
3. CANOPY ABOVE, SEE BUILDING ELEVATION
4. EXISTING BUILDING
5. CANTILEVERED ALUMINUM SUNSHADE ABOVE.
6. 1" INSULATING GLASS
7. ARCHITECTURAL PROJECTION. SEE EXTERIOR ELEVATIONS

GENERAL NOTES

1. ALL DIMENSIONS ARE TO FACE OF CONCRETE OPENING, FACE OF FINISH, CENTER OF COLUMNS AND CENTER OF DOOR / WINDOW OPENINGS AT STUD FRAMING.

KEY PLAN



LICENSED ARCHITECT
DAVID D. HUNTER
No. C25796
Exp. 05-31-21
STATE OF CALIFORNIA

CORPORATE HEADQUARTERS
150 EL CAMINO REAL, 112
TUSTIN, CA 92780
714-832-5100

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PROJECT:
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VG PROPERTY INVESTMENTS, LLC
125 W. HUNTINGTON DRIVE - BLDGS C & D
ARCADIA, CA 91006

SHEET TITLE:
BUILDING D - FOURTH FLOOR PLAN

drawn by:	PDG
plot date:	Nov. 25, 2019
issue date:	Nov 25, 2019
job#:	1819500
cad file:	1819-5A2.4-4th Flr.dwg
drawing no:	**5A2.4**

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PLOTTED: November 25, 2019 Layout
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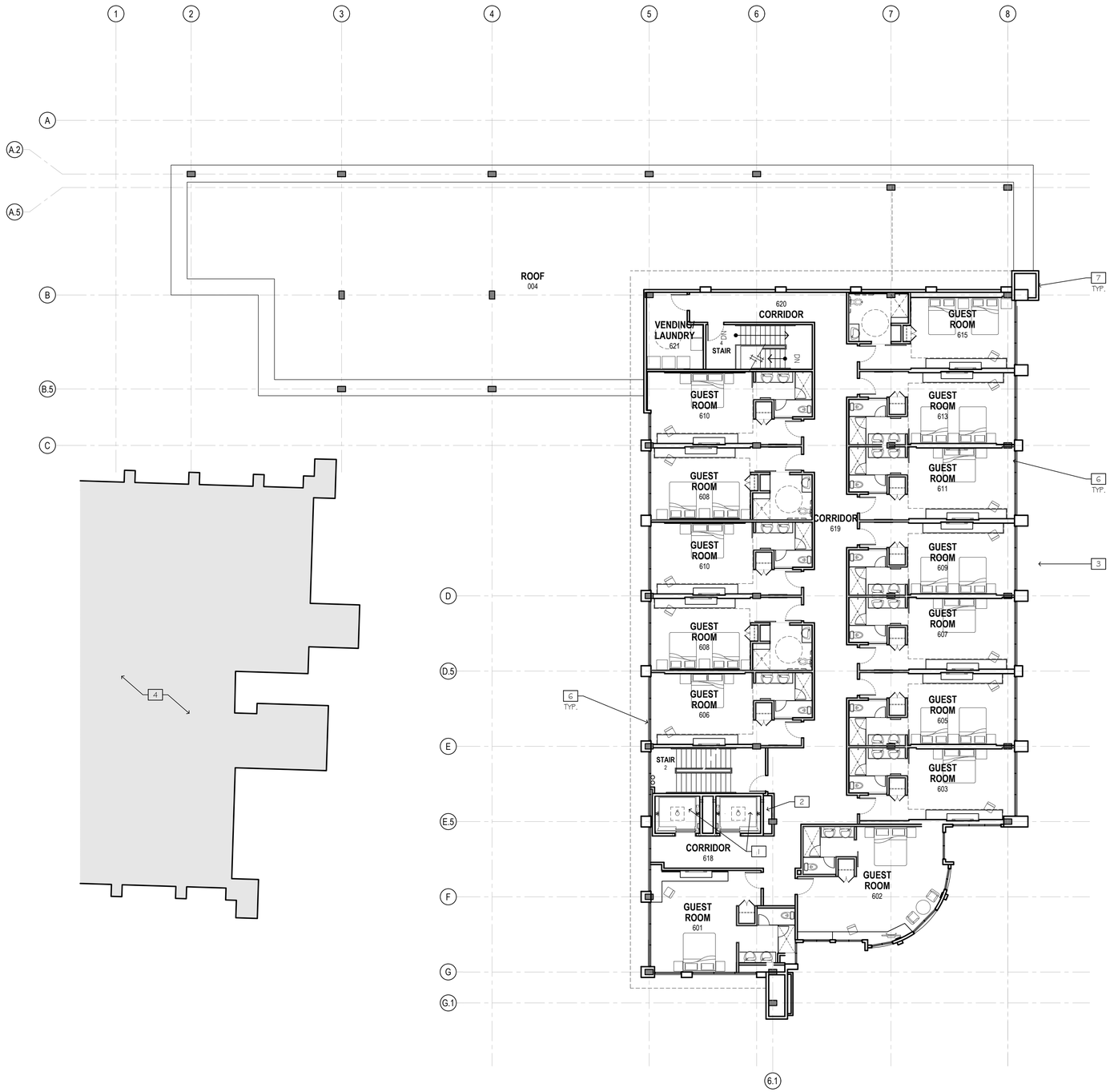

BUILDING D - FIFTH FLOOR PLAN

SCALE: 3/32" = 1' - 0"

0 5 10 20 FT.

NORTH

KEYNOTES

1. ELEVATOR
2. MECHANICAL SHAFT
3. CANOPY ABOVE, SEE BUILDING ELEVATION
4. EXISTING BUILDING
5. CANTILEVERED ALUMINUM SUNSHADE ABOVE.
6. 1" INSULATING GLASS
7. ARCHITECTURAL PROJECTION. SEE EXTERIOR ELEVATIONS

GENERAL NOTES

1. ALL DIMENSIONS ARE TO FACE OF CONCRETE OPENING, FACE OF FINISH, CENTER OF COLUMNS AND CENTER OF DOOR / WINDOW OPENINGS AT STUD FRAMING.

KEY PLAN

LICENSED ARCHITECT
DAVID D. HUNTER
No. C25796
Exp. 05-31-21
STATE OF CALIFORNIA

CORPORATE HEADQUARTERS
150 EL CAMINO REAL, 112
TUSTIN, CA 92780
714-832-5100

DENVER METRO OFFICE
6421 APPALOOSA RD.
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PROJECT:
HOTEL AT HUNTINGTON CENTER
VG PROPERTY INVESTMENTS, LLC
125 W. HUNTINGTON DRIVE - BLDGS C & D
ARCADIA, CA 91006

SHEET TITLE:
BUILDING D - FIFTH FLOOR PLAN

drawn by:	PDG
plot date:	Nov 25, 2019
issue date:	Nov 25, 2019
job#:	18195OO
cad file:	1819-5A2.5-5th Flr.dwg
drawing no:	**5A2.5**

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PLOTTED: November 25, 2019 Layout
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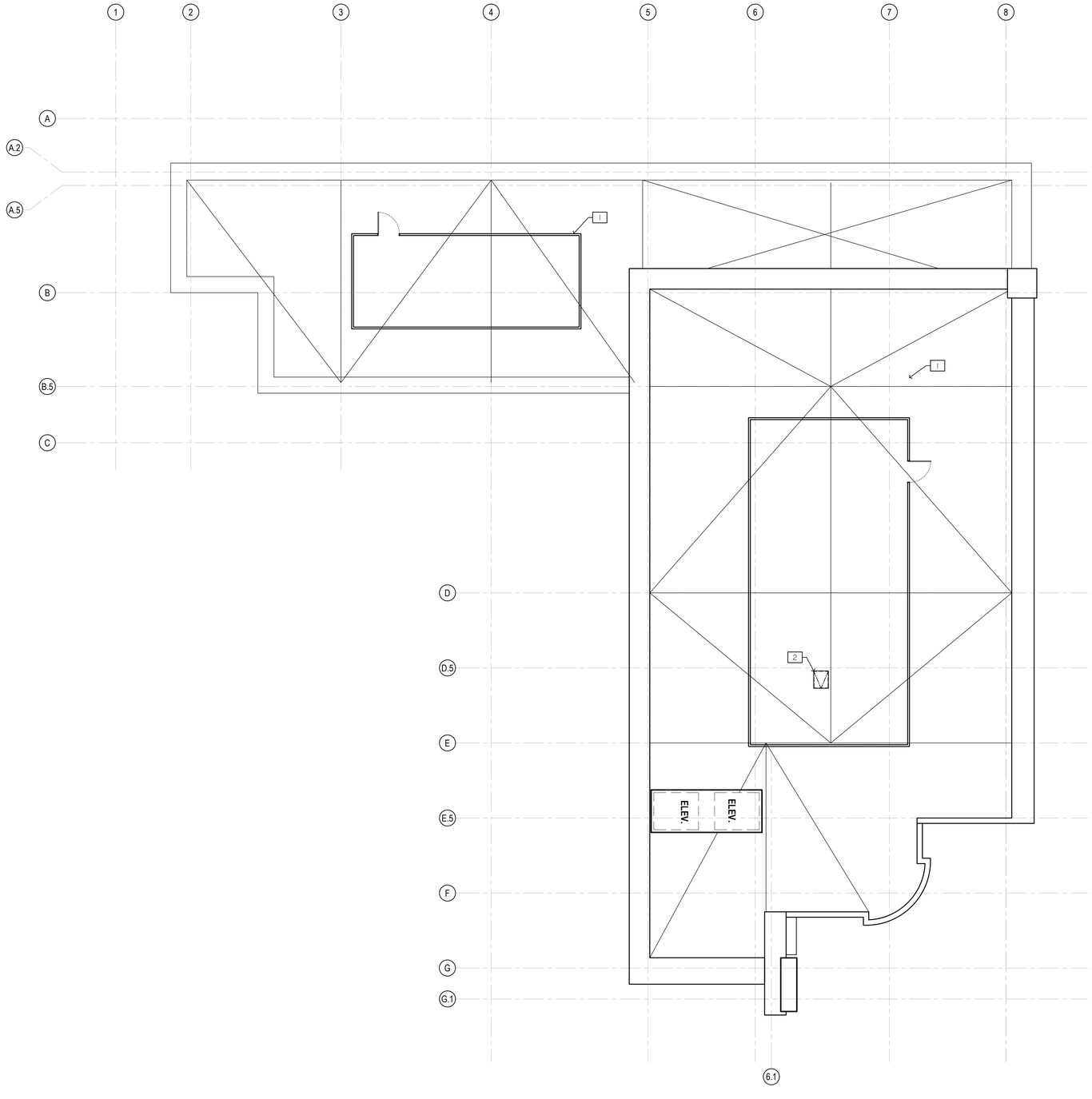

BUILDING D - ROOF PLAN

0 5 10 20 FT.
SCALE: 3/32" = 1' - 0"

NORTH

KEYNOTES

1 MECHANICAL SCREEN WALL
2 ROOF ACCESS HATCH

LICENSED ARCHITECT
DAVID D. HUNTER
No. C25796
Exp. 05-31-21
STATE OF CALIFORNIA

CORPORATE HEADQUARTERS
150 EL CAMINO REAL, 112
TUSTIN, CA 92780
714-832-5100

DENVER METRO OFFICE
6312 E. PANORAMA CIR.
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PROJECT:
HOTEL AT HUNTINGTON CENTER
VG PROPERTY INVESTMENTS, LLC
125 W. HUNTINGTON DRIVE - BLDGS C & D
ARCADIA, CA 91006

SHEET TITLE:
BUILDING D - ROOF PLAN

drawn by:	PDG
plot date:	Nov 25, 2019
issue date:	Nov 25, 2019
job#:	18195OO
cad file:	1819-5A3.1_Roof.dwg
drawing no:	**5A3.1**

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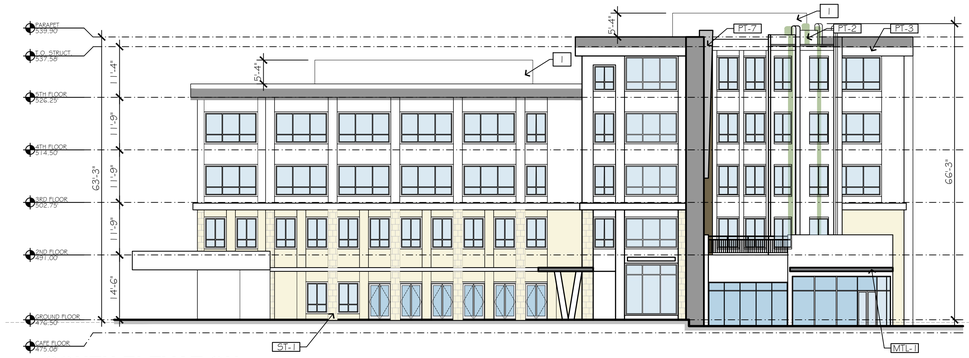
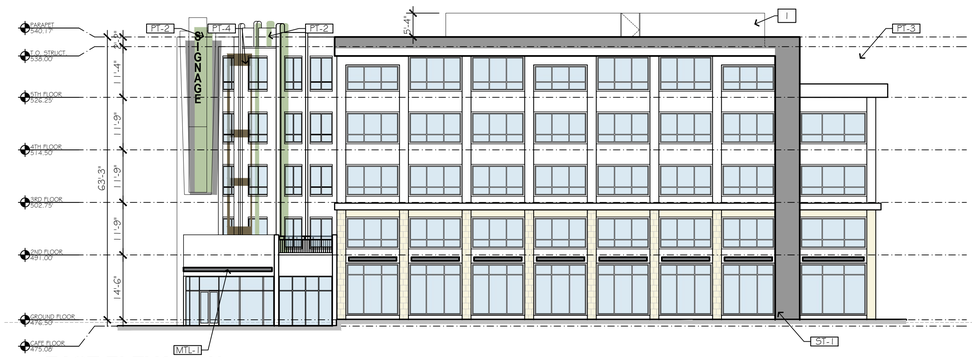
PLOTTED: November 25, 2019 Layout
XREFS INCLUDED: 1819-xBDR [..\1819-xBDR.dwg] 1819-xGrid [..\1819-xGrid.dwg] 1819-xSFor2_Shell [..\1819-xSFor2_Shell.dwg] 1819-xRoof [..\1819-xRoof.dwg].....



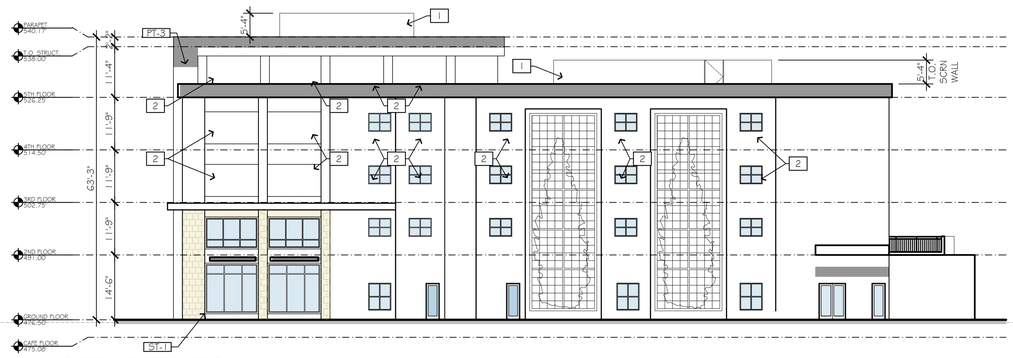
1 SOUTH ELEVATION

SCALE: 1/16" = 1'-0"



2 EAST ELEVATION

SCALE: 1/16" = 1'-0"



3 NORTH ELEVATION

SCALE: 1/16" = 1'-0"

4 ELEVATION

SCALE: 1/16" = 1'-0"

MATERIAL LEGEND

SYMBOL	MATERIAL FINISH	MANUFACTURER	COLOR/FINISH	REMARKS
PT-1	PAINT	DUNN-EDWARDS	DEW357 - WHITE CREST	
PT-2	PAINT	DUNN-EDWARDS	DE6221 - FLINTSTONE	
PT-3	PAINT	DUNN-EDWARDS	DE6229 - CALICO ROCK	
PT-4	PAINT	DUNN-EDWARDS	DET520 - MOW THE LAWN	
MTL-1	PAINT	DUNN-EDWARDS	DE6070 - CHOCOLATE CHUNK	
MTL-2	PAINT	DUNN-EDWARDS	DE6386 - SNOW PEAK	
MTL-3	PAINT	DUNN-EDWARDS	DE6385 - BLACK BEAN	

KEYNOTES

1 MECHANICAL SCREEN

2 FROSTED GLASS WINDOWS (NON-TRANSPARENT)

CORPORATE HEADQUARTERS
150 EL CAMINO REAL, 112
TUSTIN, CA 92780
714-832-5100

DENVER METRO OFFICE
6312 E. ARAPAHOE CIR.
CENTENNIAL, CO 80016
714-458-5930

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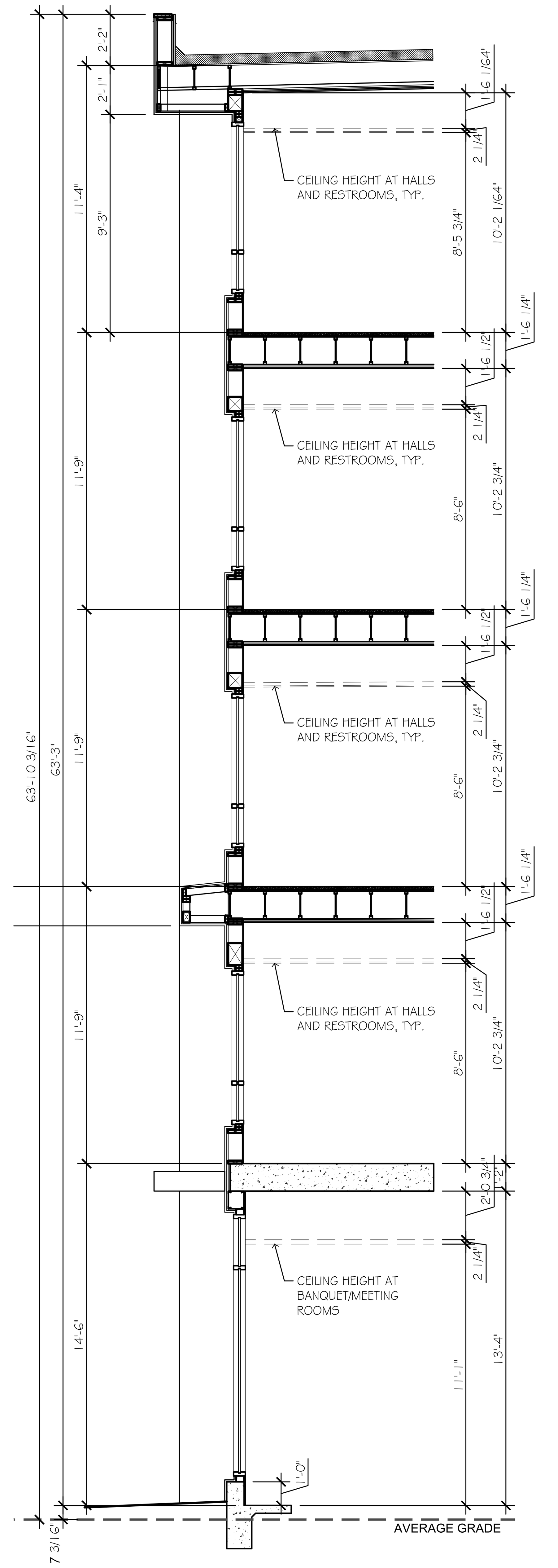
PROJECT: HOTEL AND ANNEX BUILDINGS
VG PROPERTY INVESTMETNS, LLC
125 W. HUNTINGTON DRIVE - BLDGS C & D
ARCADIA, CA 91006

SHEET TITLE: EXTERIOR ELEVATIONS - BUILDING 'C'

drawn by: PDG
plot date: Nov 26, 2019
issue date: Nov 26, 2019
job#: 1524500
cad file: 1819-5A5.1-Ext_Elev.dwg
drawing no: 5A5.1

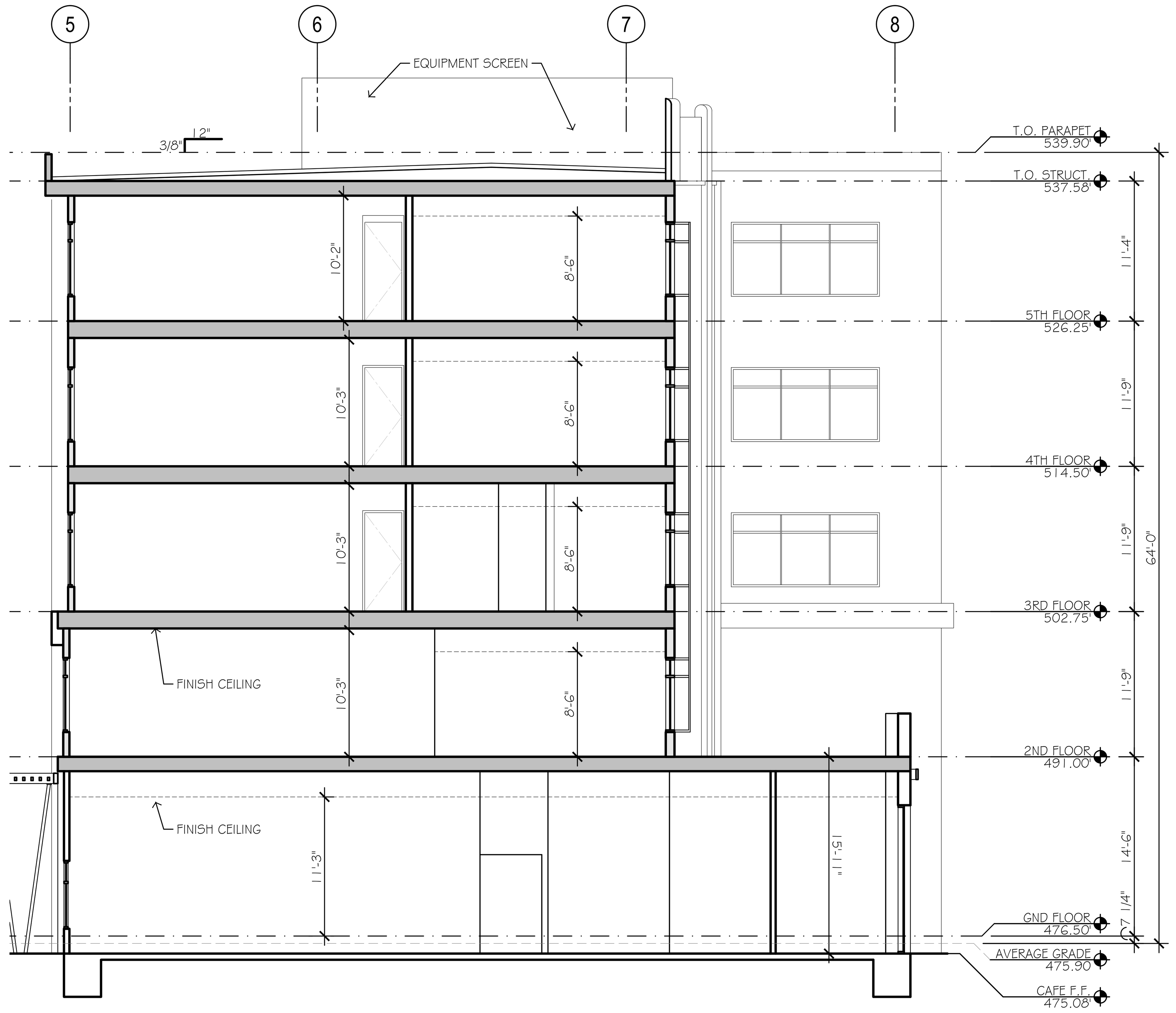
LICENSED ARCHITECT DAVID D. HONG No. C25796 Exp. 05-31-19 STATE OF CALIFORNIA

DRAWING FILE: T:\PDG\2018 PROJECTS\1819SOO - HOTEL\04-DRAWINGS\01-DESIGN\01-ARCHITECTURAL\01-PLAN OPTIONS\2018-12-10\BLDG D\1819-5A5.1-EXT_ELEV.DWG
PLOTTED: November 26, 2019 layout
XREFS INCLUDED: 1819-xElev [T:\PDG\2018 PROJECTS\1819SOO - Hotel\04-DRAWINGS\01-Design\01-Architectural\01-Plan Options\2018-12-10\Bldg D\1819-xElev.dwg] 1819-xLegend_Mat [T:\PDG\2018 PROJECTS\1819SOO - Hotel\04-DRAWINGS\01-Design\01-Architectural\01-Plan Options\2018-12-10\Bldg D\1819-xElev.dwg]



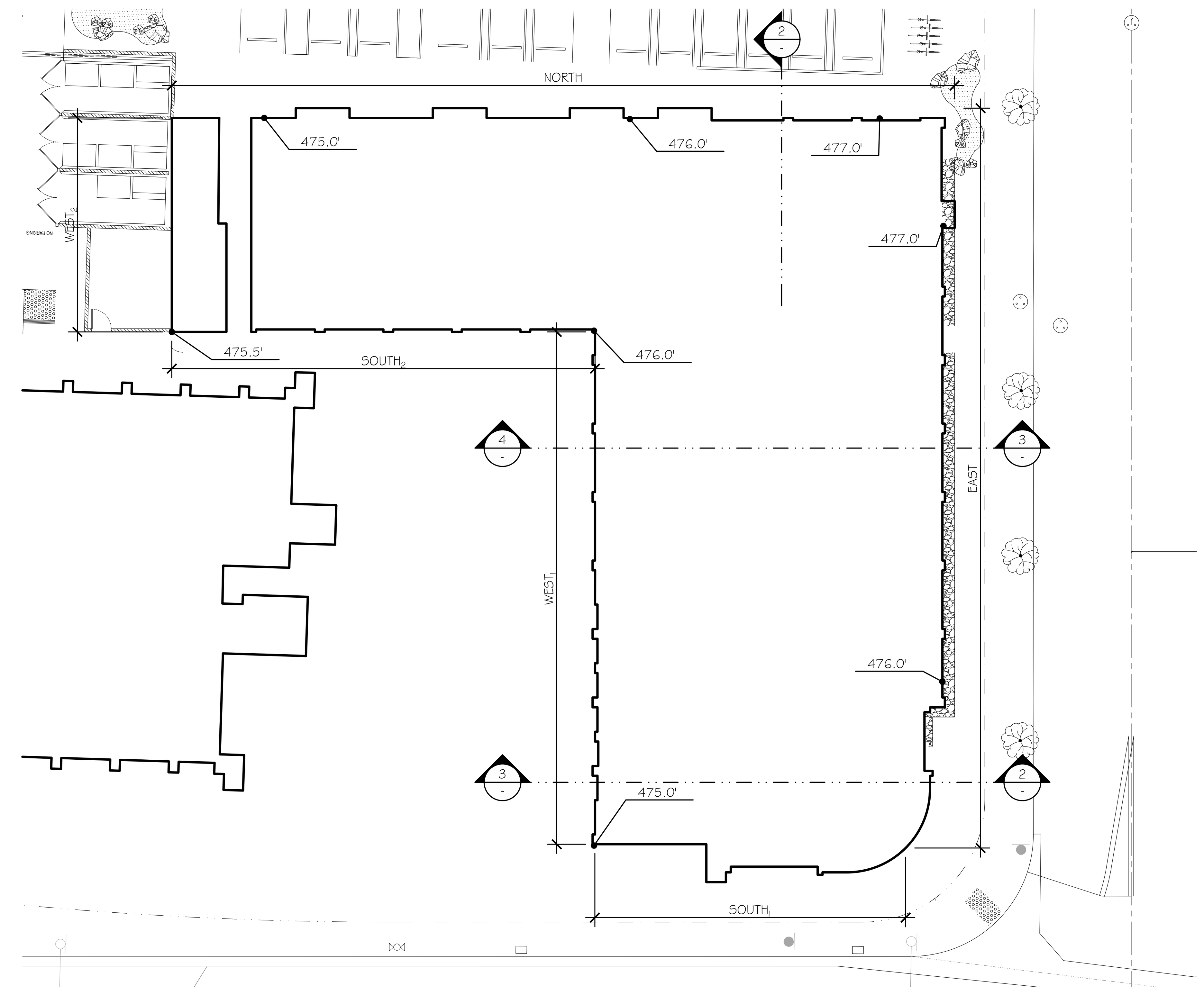
4 WALL SECTION

SCALE: 1/4" = 1'-0"



2 BUILDING SECTION

SCALE: 1/8" = 1'-0"

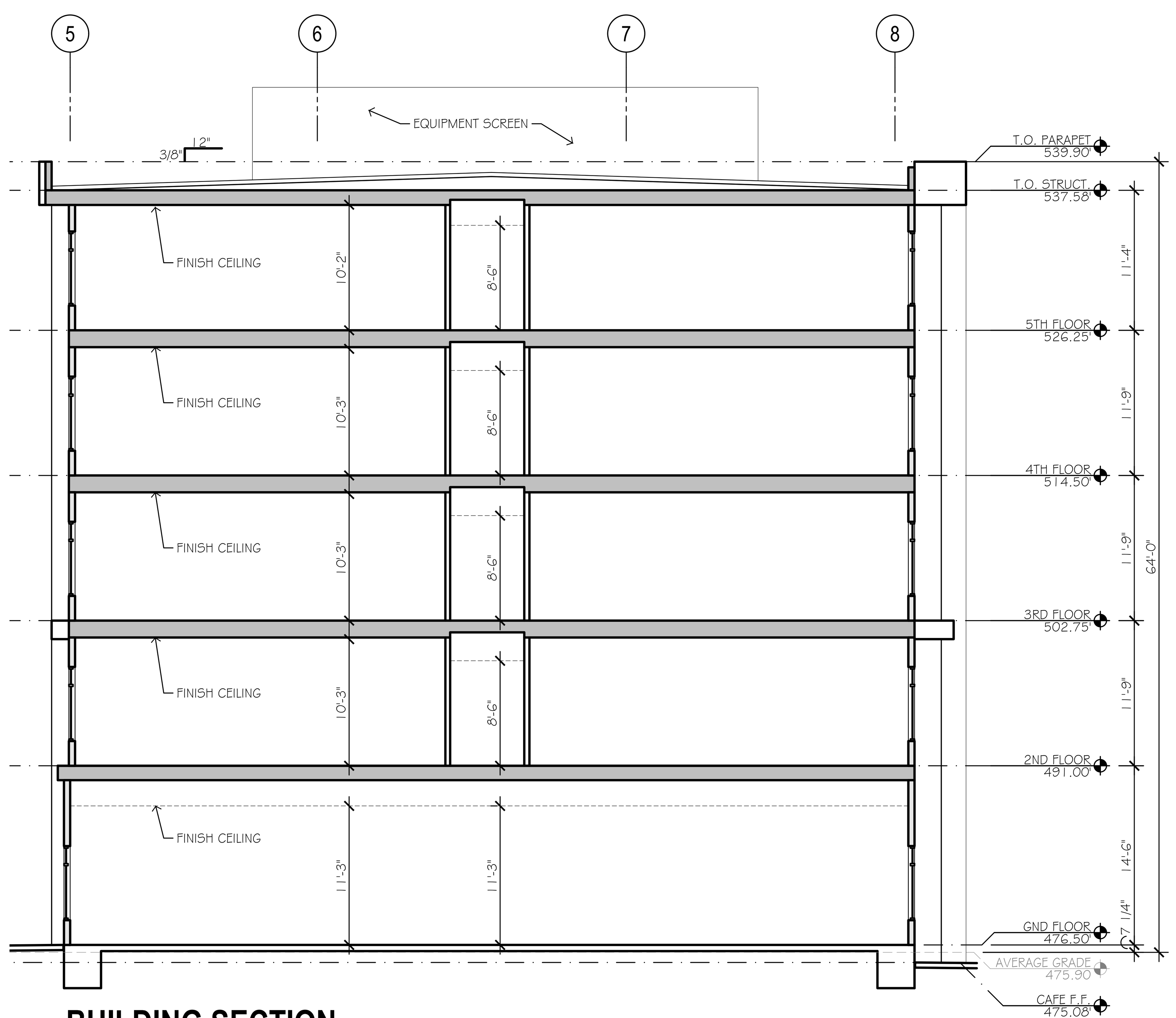


1 REFERENCE PLAN

SCALE: 1" = 20'-0"

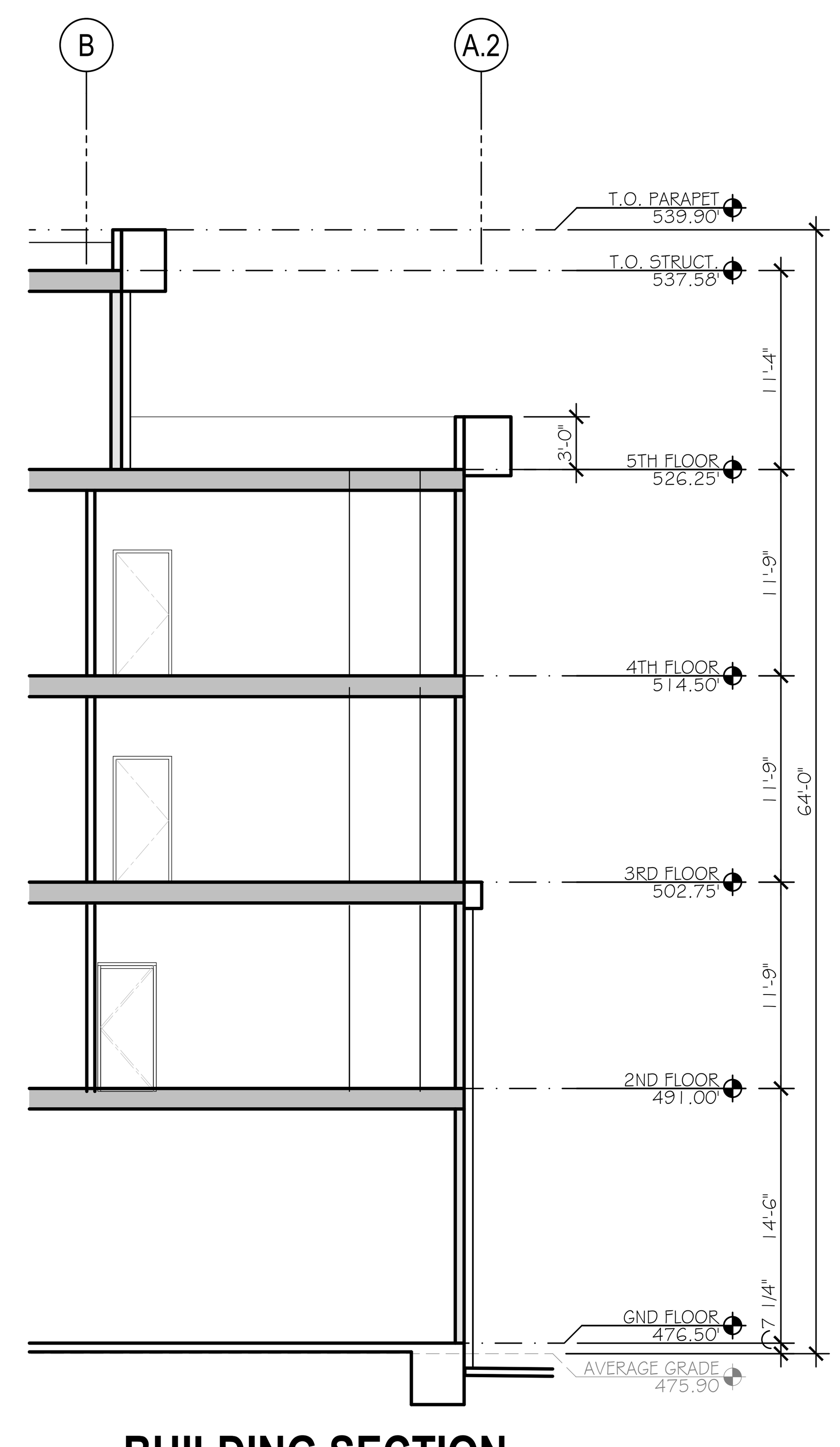
Average Grade Calculation

Elevation	Length (Ft) L_e		Average Grade G_e	
North	160.0	x	476.00	76,160.00
East	155.1	x	476.50	73,897.21
$South_1$	74.6	x	475.50	35,464.38
$South_2$	70.3	x	475.75	33,421.44
$West_1$	104.8	x	475.50	49,808.63
$West_2$	43.8	x	475.25	20,792.19
	608.4			289,543.83
	Average Grade =		475.90	



3 BUILDING SECTION

SCALE: 1/8" = 1'-0"



2 BUILDING SECTION

SCALE: 1/8" = 1'-0"

LICENSED ARCHITECT DAVID D. HUANG No. C25796 Exp. 05-31-21 STATE OF CALIFORNIA

CORPORATE HEADQUARTERS
150 EL CAMINO REAL, 112
TUSTIN, CA 92780
714-832-5100

DENVER METRO OFFICE
16710 E. PRENTICE CIR.
CENTENNIAL, CO 80015
714-458-5930

PACIFIC DESIGN GROUP

www.pdg-arch.com

PROJECT:
HOTEL AT HUNTINGTON CENTER
VG PROPERTY INVESTMENTS, LLC
125 W. HUNTINGTON DRIVE - BLDGS C & D
ARCADIA, CA 91006

SHEET TITLE:
BUILDING SECTIONS & HEIGHT CALCULATION

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plot date: Nov 25, 2019
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