GPA - CUP - TTM 20263
44 CONDO UNITS

MITIGATED NEGATIVE DECLARATION (MND)

October, 2019

City of Yucaipa
Community Development Department
34272 Yucaipa Boulevard
Yucaipa, CA 92399

CITY OF YUCAIPA
INITIAL STUDY

ENVIRONMENTAL CHECKLIST FORM

1. Project Title: Case No. 19-020/GPA/CUP/TTM 20263

2. Lead Agency Name and Address: City of Yucaipa, 34272 Yucaipa Blvd., Yucaipa, CA 92399

3. Contact Person and Phone Number: Benjamin Matlock, (909) 797-2489 x 261

4. Project Location: Directly south of the City Fire Station at the southwest corner of 5th Street and Wildwood Canyon Road APN: 0318-201-59

5. Project Sponsor's Name and Address: RC Hobbs Company, Inc. 1428 East Chapman Avenue, Orange, CA 92866

6. General Plan Designation: Rural Living (RL-2.5), Multiple Residential (RM-72C), and FW (Floodway)

7. Description of the Project: Case No. 19-020/GPA/CUP/TTM 20263: A General Plan Amendment for a change of the land use designation of a property with a split zone of RL2.5 (Rural Living, 2.5 acre minimum) and RM-72C (Multiple Residential, 7,200 square foot minimum lot size) to have a single land use designation of RM-72C, and a Conditional Use Permit and Tentative Tract Map (TTM 20263) to permit a 44-unit, detached condominium project, located on a vacant property directly south of the City Fire Station at the southwest corner of 5th Street and Wildwood Canyon Road.

8. Surrounding Land Uses and Setting: Yucaipa Fire Station and single family residential to the north, a mobile home park to the west, Yucaipa Creek and multiple family residential to the south, and single family residential to the east.

9. Other public agencies whose approval is required (e.g. permits, financing approval, or participation agreement): South Mesa Water Company, Yucaipa Valley Water District, San Bernardino County Flood Control District, Regional Water Quality Control Board.

Introduction

This section explains the background and purpose of this Mitigated Negative Declaration (MND), which is the environmental review document prepared pursuant to the provisions of the California Environmental Quality Act (CEQA) for a for a General Plan Amendment to designate a property with an existing split zone of RL2.5 (Rural Living, 2.5 acre minimum) and RM-72C (Multiple Residential, 7,200 square foot minimum lot size) to have a single land use designation of RM-72C ("GPA") to facilitate the development of a 44-unit, detached condominium project ("Project"). It establishes the context and scope for the MND, and outlines the process for reviewing the Draft MND and issuing the Final MND. The City of Yucaipa is the lead agency under CEQA. A "lead agency" is defined by Section 21067 of CEQA as "the public agency which has the principal responsibility for carrying out or approving a project which may have a significant effect upon the environment."

Environmental Review Process

This Initial Study and Notice of Intent (NOI) to adopt a MND is being circulated for agency and public review and comment for 30 days beginning October 21, 2019. All written comments must be received by 5:30 p.m. on November 20, 2019. Written comments or questions concerning this document should be directed to:

City of Yucaipa
ATTN: Benjamin Matlock
34272 Yucaipa Boulevard
Yucaipa, CA 92399

Detailed Project Description

The proposed Project consists of an amendment to the City of Yucaipa General Plan ("GPA") to change the Land Use Designation of a single parcel (APN: 0318-201-59) from a vacant property with an existing split zone of RL2.5 (Rural Living, 2.5 acre minimum) and RM-72C (Multiple Residential, 7,200 square foot minimum lot size) to have a single land use designation of RM-72C. This new designation would permit either single-family or multiple-family residential development projects. Concurrent with the GPA, the project application includes a Conditional Use Permit and Tentative Tract Map No 20263 to permit a condominium project consisting of 44 detached residential dwelling units. As such, this environmental document analyzes the condominium project that could be constructed should the GPA be adopted. A portion of the site is located within the creek and is also designated as Floodway (FW); no changes to the creek or its associated Land Use Designation are proposed.

Project Setting

The proposed GPA would change the land use designation of approximately 6.74 acres on a property at the northwest corner of 5th Street and Yucaipa Creek, directly south of the City's Fire Station No. 3 (Figure 1 and 2). The property is currently vacant, and slopes towards the channelized creek at the south end of the site. The area is surrounded by residential uses and the Fire Station to the north and east, a mobile home park to the west, and multiple family units to the south. The site is located on a property that slopes approximately 35 feet from the northeast corner of the site to the southwest corner, with no known biological resources located onsite. The site has been historically disked as part of weed abatement activities. A channelized portion of Yucaipa Creek is located along the southern perimeter of the site, and is maintained by the San Bernardino County Flood Control District. The GPA area has street frontage on 5th Street, which is a paved two (2) lane streets with an ultimate right-of-way of eighty-eight (88) feet. Proposed projects within the GPA area would be required to provide the necessary street improvements, including, curb, gutter, sidewalk, and matchup paving to the existing street along the street frontage.

Conditional Use Permit and Tentative Tract Map

As noted above, a residential entitlement is proposed parcel subject to the GPA, and has been designed to comply with the proposed Land Use District requirements. The proposed Project features three different home plans that have been designed with a traditional front facing garage, and aside from the condominium ownership, is similar to a conventional single-family subdivision design. Architectural plans for the development have been developed, and the proposed floorplans features homes ranging from 1,864 to 2,482 square feet. Private amenities to serve the residents of the development are provided as part of the Project. Common areas proposed for the Project includes open space and common area landscaping, private streets, and guest parking within the private street network. Each residential unit is also provided with a private yard.

Project Phasing

The proposed Project is expected to be phased and will be built out to meet market demand. Home construction phases are expected to overlap, where preliminary construction (foundation, framing, etc) for one phase occurs while final construction (exterior painting, interior finishing, etc) occurs for the prior phase. Conditions of Approval are included to ensure appropriate access is provided to residents and emergency responders during each phase.

Figure 1 – Aerial Image of Site

Figure 2 – Existing Land Use Designation

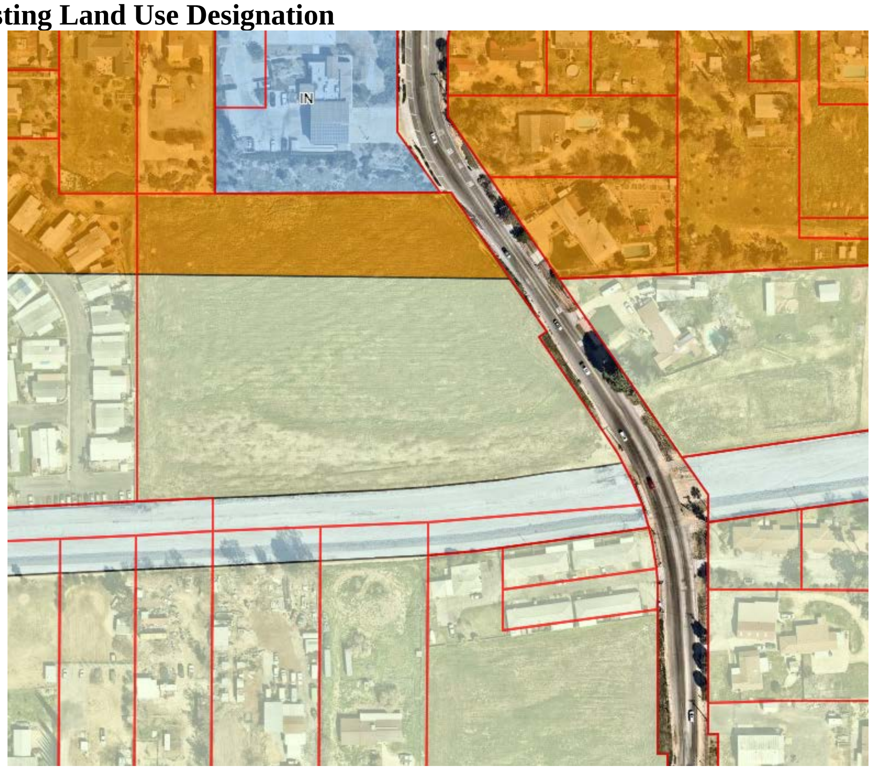
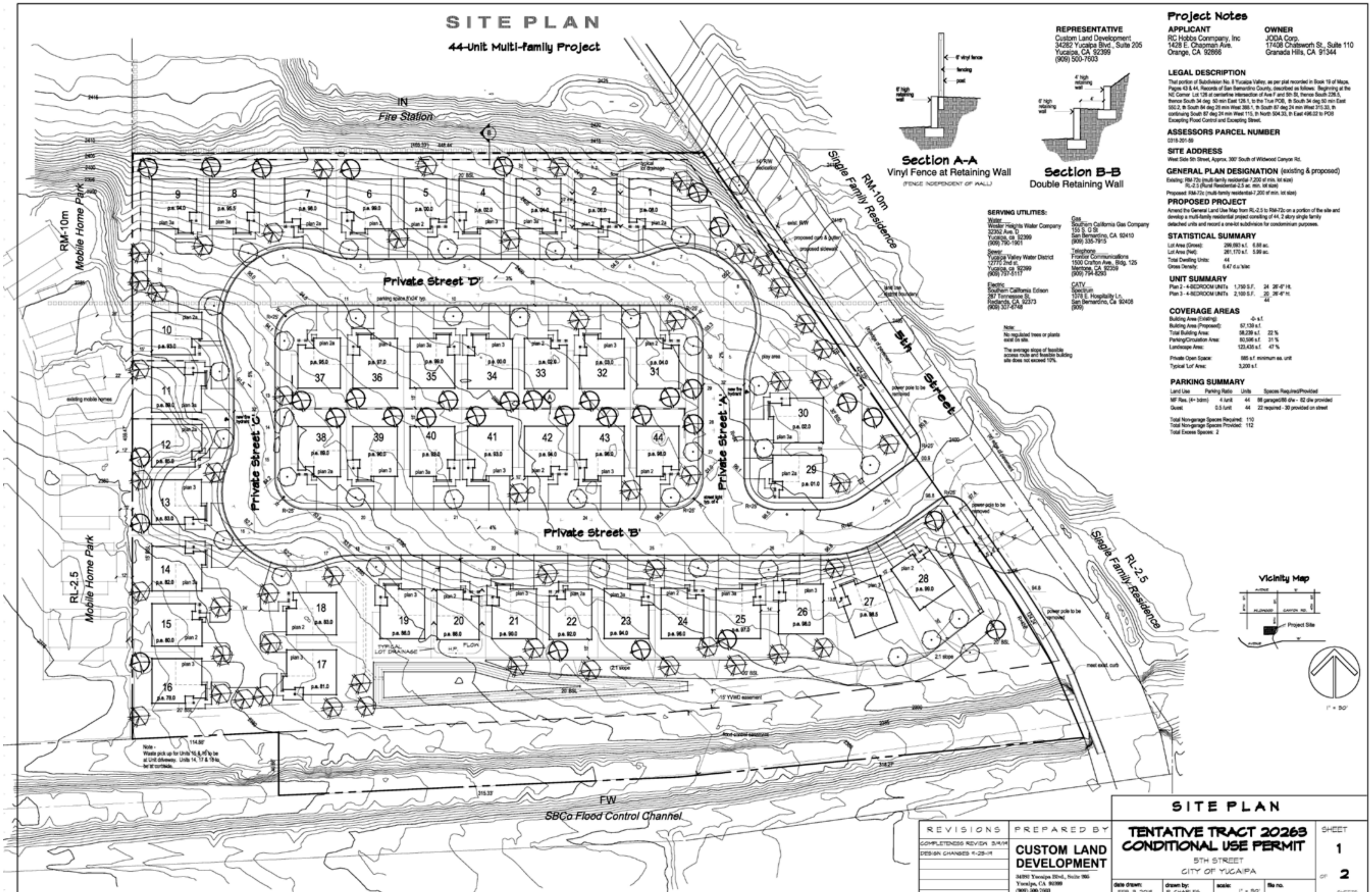


Figure 3 – Conditional Use Permit Exhibit



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		Greenhouse Gases		Public Services
	Agricultural Resources		Hazards & Hazardous Materials		Recreation
	Air Quality		Hydrology/Water Quality		Transportation/Traffic
	Biological Resources		Land Use/Planning		Tribal Resources
	Cultural Resources		Mineral Resources		Utilities/Service Systems
	Energy		Noise		Wildfire
	Geology/Soils		Population/Housing		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.	X
I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.	
I find that the proposed project MAY have a "potential 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 in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.	

Signature | 10-17-19
Date

Benjamin Matlock
Printed Name | City of Yucaipa
For

1) 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.

2) 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).

3) Must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.

4) "Negative Declaration: Potentially Significant Unless Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less Significant Impact." The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level (mitigation measures from Section 17, "Earlier Analysis," may be cross-referenced).

5) Earlier analysis may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration. Section 15063(c)(3)(d). In this case, a brief discussion should identify the following:

   (a) Earlier Analysis Used. Identify and state where they are available for review.

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

   (c) Mitigation Measures. For effects that are "Less than Significant with Mitigation Measures Incorporated," describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they 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 analysis of each issue should identify: (a) the significance criteria or threshold used to evaluate each question; and (b) the mitigation measure identified, if any, to reduce the impact to less than significance.

Issues and Supporting Information	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
1. **AESTHETICS.** Would the project:				
a) Have a substantial adverse effect on a scenic vista?			X	
b) Substantially damage scenic resources, including, but not limited to trees, rock outcroppings, and historic buildings within a state scenic highway?				X
c) In nonurbanized 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?			X	
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?			X	

a) **Less Than Significant Impact**

Policy PR-4.7, Scenic Resources, of the City's 2016 General Plan states that the City will "Protect Yucaipa's scenic resources, including scenic corridors along roads and views of the hillsides, prominent ridgelines, canyons, and other significant natural features, to the extent practical." Resources identified in the General Plan includes the City's designated Scenic Corridors (Bryant Street, Yucaipa Boulevard, Wildwood Canyon Road, and Oak Glen Road) and the prominent hillsides, ridgelines, and open space areas that surround the City, including Crafton Hills and the San Bernardino National Forest. The Project site is located on a hill that slopes approximately 35 feet from the northeast corner of the site to the southwest corner, and is located adjacent to Yucaipa Creek, a fully improved drainage channel located along the southern property line. The Project site does not feature any unique open space features such as a prominent hillside or ridgeline that impact the existing visual quality of the site. The proposed Project consists of a GPA to allow single-family or multiple-family development, such as the development of detached condominium units (TTM 20263) that would meet the requirements of the RM Land Use District. The setbacks and building separation requirements listed in the Development Code have been designed to ensure a compatible development pattern within the residential areas within City, and to ensure that the building mass and prominence of future residential projects are minimized along corridors. Specifically, the RM Land Use District requires a front yard setback of 30 feet. Existing development in the area includes single- and multiple-family housing, as well as a mobile home park. In addition, the Project area will feature maintained landscaped areas adjacent to the public right of way of 5th Street. As such, the proposed Project would have a less than significant effect on scenic vistas.

b) **No Impact**

According to Caltrans Scenic Highway Program, there are no official state designated scenic highways that exist within the City of Yucaipa. A portion of State Route 38 passes through the City of Yucaipa, and is an eligible state scenic highway that has not been officially designated; however, this section of roadway is located approximately four miles north from the proposed Project site. The City of Yucaipa has designated Bryant Street, Yucaipa Boulevard, Wildwood Canyon Road, and Oak Glen Road as scenic corridors within the City. The proposed Project is not located on a state or City-designated scenic corridor, and, there would be no adverse impacts to resources along a scenic route as a result of the proposed Project.

c) **Less Than Significant Impact**

The Project is located on a vacant lot surrounded by a mixture of single and multiple family residences, a Yucaipa Fire Station No. 3, and a mobile home park, and is within an urbanized area of the City. The frontage of the Project site is located along 5th Street. The project would install ornamental fencing along the frontage, and would also include street related improvements, among which would include street adjacent landscaping. Therefore, development of the proposed Project would have a less than significant impact to the visual quality by creating additional design elements that would enhance Project site consistent with the Development Code and City Standards, and would not conflict with applicable zoning and other regulations governing scenic quality.

Issues and Supporting Information	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact

d) **Less Than Significant Impact**

Additional lighting will occur due to the development of residences and the installation of street lights. The proposed GPA would permit the construction of 44 new homes to the area, which will result in new sources of nighttime lighting, including, but not limited to: street lighting, building-mounted lights on the proposed new homes, and ornamental landscaping and pathway lights. However, the amount of lighting will be similar to other residential areas surrounding the site, and the Project will be required to comply with the City's Development Code, which contains property development and general design standards that ensure new developments and expansions of existing developments will not have a negative impact upon surrounding land uses. This includes the requirement that any lighting to be added to the project shall be shielded to minimize light spillage to adjacent properties. Substantiated through the Architectural Review process, the perimeter of the GPA area would also be developed with drought-tolerant street trees, decorative landscaping, architectural features, and other streetscape design techniques to minimize light spillage onto neighboring areas. Therefore, impacts related to light and glare will be less than significant through compliance with the Development Code.

2. **AGRICULTURE RESOURCES**: 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. 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?				X
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?				X
c) Conflict with existing zoning for, or cause rezoning of, forest land (PRC 12220(g)), or Timberland zoned Timberland Production (GC 51104(g))				X
d) Result in the loss of forest land or conversion of forest lane to non-forest use?				X
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?				X

a-b) **No Impact**

According to the State Dept. of Conservation Important Farmland Map, San Bernardino County 2012, Sheet 2 of 2, the proposed Project site is designated as "urban and built-up land" and "other land," and does not contain any prime, unique, or important farmland. The Project site is currently a vacant lot and does not feature any agricultural activities occurring onsite. In addition, there are no active Williamson Act contracts within the City of Yucaipa. The City of Yucaipa utilizes a "one map system" in which the General Plan Land Use Designations and Zoning Categories are the same and combined onto one map. The property is designated for residential uses, which would be intensified with the proposed GPA. As such, the Project would not conflict with zoning for an agricultural use or a Williamson Act contract, and would not convert farmland to a non-agricultural use. It should be noted that a small portion of the site is also designated as Floodway, and no changes to this designation are proposed.

c-d) **No Impact**

No forest land or timberland is located within the Project site. The surrounding Project area is generally urban in nature with vacant and residential-related land uses.

e) **No Impact**

Issues and Supporting Information	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact

As noted in items a-d above, the area is designated "urban and built-up land" and "other land," and no portions of the area are currently farmed nor subject to Williamson Act contracts. In addition, no portion of the area is located within a forest area. As such, the proposed Project would not affect these resources.

3. **AIR QUALITY:** Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?			X	
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?.			X	
d) Expose sensitive receptors to substantial pollutant concentrations?			X	
e) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?			X	

a) **Less Than Significant Impact**

Air quality plans describe air pollution control strategies to be implemented by a city, county, or regional air district. The primary purpose of the air quality plans is to bring an area that does not attain federal and state air quality standards into compliance with those standards pursuant to the requirements of the Clean Air Act and California Clean Air Act. A consistency determination plays an important role in local agency project review by linking local planning and individual projects to the applicable air quality plan.

The proposed Project is within the South Coast Air Basin (Basin), and the South Coast Air Quality Management District (SCAQMD) is the agency principally responsible for comprehensive air pollution control in the Basin. SCAQMD is directly responsible for reducing emissions from stationary (area and point), mobile, and indirect sources, and responded to this requirement by preparing the 2016 Air Quality Management Plan (AQMP), an air quality management plan covering all portions of the Basin.

The regional emissions inventory for the South Coast Air Basin was compiled by SCAQMD, the San Bernardino Association of Governments (SANBAG), and the Southern California Association of Governments (SCAG), and is used for the AQMP. Regional population, housing, and employment projections are based, in part, on the City's General Plan land use designations. The proposed GPA would result in a land use change on approximately 6.74 acres, with an existing split zone of RL2.5 (Rural Living, 2.5 acre minimum) and RM-72C (Multiple Residential, 7,200 square foot minimum lot size) to have a single Land Use Designation of RM-72C..

The SCAQMD CEQA Handbook states that "New or amended General Plan Elements (including land use zoning and density amendments), Specific Plans, and significant projects must be analyzed for consistency with the AQMP." A proposed project should be considered to be consistent with the AQMP if it furthers one or more policies and does not obstruct other policies. The SCAQMD CEQA Handbook identifies two key indicators of consistency:

> (1) Whether the project will result in an increase in the frequency or severity of existing air quality violations or cause or contribute to new violations, or delay timely attainment of air quality standards or the interim emission reductions specified in the AQMP.
>
> (2) Whether the project will exceed the assumptions in the AQMP or increments based on the year of project buildout and phase.

Based on the air quality modeling analysis that has been completed, neither short-term construction, nor long-term operation of the proposed Project will result in significant impacts based on SCAQMD regional and local thresholds of significance. The proposed Project is not expected to contribute to the exceedance of any air pollutant concentration standards and is found to be consistent with the AQMP for the first criterion.

Furthermore, the proposed Project is not anticipated to substantially exceed the AQMP assumptions for the project site and is consistent with the AQMP for the second criterion because the project site currently has a residential General Plan designation, and the change of General Plan Land Use Designation from a portion of the site from Rural Living (RL) to Multiple Residential (RM) will not substantially change the residential nature of the designation. The addition would result in a total of 44 homes, which would not result in a substantial change of the built-out projection for the City, and would represent a fractional change to the entire SCAB area. Specifically, the change in designation affects a small portion of the City, and the higher density development and proposed improvements would generally have a net benefit for Vehicle Miles Traveled (VMTs), which has a positive benefit towards air quality-related impacts. Based on the above, the proposed project will not result in an inconsistency with the SCAQMD AQMP. Therefore, the Project will not conflict with or obstruct the implementation of the 2016 AQMP, and a less than significant impact will occur.

b) **Less Than Significant Impact**

The proposed Project would result in the development of approximately 6.74 acres into 44 total residential condominium units. To quantify project-related impacts, the proposed Project was evaluated utilizing the CalEEMod version 2016.3.2 air quality modeling program for this MND, using very conservative parameters for its assessment. The results are as follows:

Construction - Maximum Daily Emissions

	VOC	NOx	CO	SO2	PM 10	PM 2.5
Year	**LB/Day**					
2020	4.17	42.48	22.31	.04	10.53	6.55
2021	25.01	17.96	17.25	.03	1.17	.96
SCAQMD Threshold	75	100	550	150	150	55
Exceed?	**No**	**No**	**No**	**No**	**No**	**No**

Operation - Maximum Daily Emissions

	VOC	NOx	CO	SO2	PM 10	PM 2.5
Category	**LB/Day**					
Area	1.89	.69	3.92	4.3800e-003	.07	.07
Energy	.04	.34	.14	2.1700e-003	.03	.03
Mobile	.80	4.02	10.94	.04	3.20	.88
Total	2.74	5.06	15.00	.05	3.30	.98
SCAQMD Threshold	55	55	550	150	150	55
Exceed?	**No**	**No**	**No**	**No**	**No**	**No**

Construction related impacts would be reduced by the appropriate dust control measures implemented during each phase of development, as required by SCAQMD Rule 403 - Fugitive Dust. The requirements for Rule 403 include, but are not limited to, applying water in sufficient quantities to prevent the generation of visible dust plumes, applying soil binders to uncovered areas, reestablishing ground cover as quickly as possible, utilizing a wheel washing system to remove bulk material from tires and vehicle undercarriages before vehicles exit the lots, and maintaining effective cover over exposed areas. Engineering Department specific Conditions of Approval for any future development proposals would include provisions for Rule 403 that will apply during grading and building activities to minimize fugitive dust. Other SCAQMD rules would also apply, such as Rule 1113 for low VOC paints and materials. Operational impacts would be minimized by adherence to the Building Code and Title 24 requirements. Other SCAQMD rules, such as Rule 445 prohibiting the use of wood-burning fireplaces, would also apply and reduce operational impacts. As such, impacts would be less than significant.

c, d) **Less Than Significant Impact**

The Project site is adjacent to several residences, which are considered to be sensitive receptors by the City's General Plan. During site improvement construction activities associated with the future park development, there may be some level of odor exposure resulting from asphalt paving for the parking lot and exhaust from heavy-duty equipment. However, the limited duration and area involved in construction and paving activities would not result in significant levels of odors affecting a substantial number of people. In addition, the operations of residential projects do not include materials or uses that create substantial odors. As such, impacts would be less than significant.

4. **BIOLOGICAL RESOURCES**. 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?				X
b) Have a substantially 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 Wildlife or U. S. Wildlife Service?				X
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?				X
d) Interfere substantially with the movement of any resident or migratory fish or wildlife species or with established native resident migratory wildlife corridors, or impede the use of native wildlife nursery sites?				X
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?				X
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Conservation Community Plan, other approved local, regional, or state habitat conservation plan?				X

a-f) **No Impact**

The Project site is located within an urbanized area of the City of Yucaipa. The Project site is identified in Figure PR-5, Wildlife Corridors of the General Plan as a potential local wildlife linkage due to the Yucaipa Creek, which is located within the southern boundary of the site. A visual site investigation conducted by Staff confirmed that that the Project site has been disturbed by prior disking for weed abatement activities, and does not feature any candidate, sensitive, or special status species; riparian habitat or other sensitive natural community; wetlands; and wildlife corridors. The portion of Yucaipa Creek within the project boundary is currently improved, and does not feature any natural habitat. To avoid potential flood-related hazards, the site design avoids the channel, and would not have any substantial impacts to the site. Further, the site does not feature Coast Live Oak Trees, which are protected by the City of Yucaipa. As such, the future residential development project would not impact biological resources. The proposed Project revisions would not conflict with any local policies or ordinances relating to biological resources, and no Habitat Conservation Plans, Natural Community Conservation Plans, or other approved plans apply to the site. Therefore, the proposed Project would have no effect on biological resources.

5. **CULTURAL RESOURCES**. Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5?				X
b) Cause a substantial adverse change in the significance of an archaeological resources pursuant to Section 15064.5?			X	

Issues and Supporting Information	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
c) Disturb any human remains, including those interred outside of formal cemeteries?		X		

a) **No Impact**

The proposed Project is located on a vacant property located south of Fire Station No. 3, along 5th Street. A Cultural Resources Assessment was prepared by Archeological Associates in February, 2019, to assess the potential impacts to cultural and tribal resources that could result of the Project. The report noted that there are no known "historical resources" onsite, and a records investigation did not reference any known resources onsite. In addition, no other resources, including tribal resources, have been previously discovered onsite, and no resources were found during a survey that was conducted onsite as part of the Assessment. As such, the site is not considered historic, and no impacts to historic resources would occur as part of development of the Project. It should be noted, however, that tribal resources have been found within the general area of the Project site.

b) **Less Than Significant Impact (Tribal Mitigation Measures referenced)**

Figure PR-6 of the City's General Plan identifies that the subject site is located within a Cultural Sensitivity Area. The proposed Project consists of a GPA and a TTM to permit the development of a 44-unit condominium residential subdivision on a vacant parcel. Consultation with local tribes, pursuant to SB18 and AB 52, is required for the proposed Project, and additional details are included within the Tribal resources section of this MND. In accordance with AB 52 and SB 18 requirements, the City sent invitation letters to representatives of the Native American contacts provided by the NAHC on April 30, 2019, formally inviting tribes to consult with the City on the GPA. The intent of the consultations is to provide an opportunity for interested Native American contacts to work together with the City during the project planning process to identify and protect tribal cultural resources. A response letter was received from the San Manuel Band of Mission Indians, Morongo Band of Mission Indians and the Morongo Band of Mission Indians requesting consultation, which concluded on May 10, 2019 and June 18, 2019 respectively. Letters were also received from the Augustine Band of Cahuilla Indians noting that monitors qualified in tribal resourced should be used as part of the development of the Project. In addition, the Aqua Caliente Band of Mission Indians and Torres Martinez Desert Cahuilla Indians noted that the site may be sensitive, and to reach out to local tribes for input as part of the Project consultation process. The Agua Caliente Band of Cahuilla Indians also requested that any cultural resource documentation (report and site records) generated in connection with this project be sent to their tribe. As a result of the consultation efforts, Mitigation Measures TRI-1, TRI-2, TRI-3, and TRI-4 have been developed for the Project and are included as part of the proposed Project's Condition of Approval. Incorporation of the Mitigation Measures will ensure a less than significant impact.

c) **Less Than Significant Impact with Mitigation (Tribal Mitigation Measures referenced)**

There are no known human remains on the site. A review of historic aerial photos and maps at Netronline.com was conducted and did not identify possible cemeteries in the area, and therefore a low likelihood exists that human remains could be uncovered during ground-disturbing activities. However, there is always a possibility that unidentified human remains could be discovered during Project construction. Consistent with State law, if at any time during grading human remains are found, the project is to be conditioned to halt work and contact made with the San Bernardino County Coroner's Office. Standard Conditions of Approval are included pertaining to State Health and Safety Code Section 7050.5. In addition, any discoveries of remains would also be assessed to determine if they are of Native American origin, which is further discussed within the tribal resources section of this MND. Measure TRI-4 is included to reduce impacts to a less than significant level.

<u>Mitigation Measure:</u>

TRI-4: Discovery of Human Remains. In the event that human remains (or remains that may be human) are discovered at the project site during grading or earthmoving, the construction contractors, project archaeologist, and/or designated Native American Monitor shall immediately stop all activities within 100 feet of the find. The project proponent shall then inform the San Bernardino County Coroner and the City of Yucaipa Community Development Department immediately, and the coroner shall be permitted to examine the remains as required by California Health and Safety Code Section 7050.5(b). Section 7050.5 requires that excavation be stopped in the vicinity of discovered human remains until the coroner can determine whether the remains are those of a Native American. If human remains are determined as those of Native American origin, the applicant shall comply with the state relating to the disposition of Native American burials that fall within the jurisdiction of the Native American Heritage Commission (NAHC) (PRC Section 5097). The coroner shall contact the NAHC to determine the most likely descendant(s)(MLD). The MLD shall complete his or her inspection and make recommendations or preferences for treatment within 48 hours of being granted access to the site. The disposition of the remains shall be overseen by the MLD to determine the most appropriate means of treating the human remains and any associated grave artifacts.

The specific locations of Native American burials and reburials will be proprietary and not disclosed to the general public. The locations will be documented by the consulting archaeologist in conjunction with the various stakeholders and a report of findings will be filed with the San Bernardino County Museum.

According to California Health and Safety Code, six or more human burials at one location constitute a cemetery (Section 8100), and disturbance of Native American cemeteries is a felony (Section 7052) determined in consultation between the project proponent and the MLD. In the event that the project proponent and the MLD are in disagreement regarding the disposition of the remains, State law will apply and the median and decision process will occur with the NAHC (see Public Resources Code Section 5097.98(e) and 5097.94(k)).

6**. Energy**. 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?			X	
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?			X	

a, b) **Less Than Significant Impact**

During construction, the Project would result in energy consumption through the combustion of fossil fuels used for worker vehicles and construction equipment, such as bulldozers, frontend loaders, and forklifts, and through the use of electricity to provide power for temporary construction buildings, lighting, and other sources. California Code of Regulations Title 13, Sections 2449(d)(3) and 2485, limits idling from both on-road and off-road diesel-powered equipment and is enforced by the California Air Resources Board. These limitations on idling of vehicles and equipment, and the requirements that equipment be properly maintained, would result in fuel savings. Idling limitation are also included as Best Management Practices to reduce noise-related impacts. Also, due to the cost of fuel, contractors and owners have a practical financial incentive to avoid wasteful, inefficient, and unnecessary consumption of energy during construction. Due to the temporary nature of construction and the financial incentives for developers and contractors to use energy-consuming resources in an efficient manner, the construction phase of the Project would not result in wasteful, inefficient, and unnecessary consumption of energy. Further, there are no policies at the local level applicable to energy conservation specific to the construction phase. Therefore, it is anticipated that the construction phase of the Project would not conflict with State or local renewable or energy efficiency objectives

The operational phase of the Project would consume energy as part of building operations and transportation activities. Building operations for the Project would involve energy consumption for multiple purposes including, but not limited to, building heating and cooling, lighting, and home electronics. The Project's residential structures be designed and constructed in accordance with the State's Title 24 energy efficiency standards. These standards, widely regarded as the most advanced energy efficiency standards, would help reduce the amount of energy required for lighting, water heating, and heating and air conditioning in buildings and promote energy conservation. The Project would be required by State law to comply with these energy conservation standards. In addition, the residential structures are required to provide solar panels to further reduce energy usage. Operational energy would also be consumed during vehicle trips associated with the Project. Increased density development projects further work to reduce vehicle miles traveled, especially when located adjacent to developed areas. Therefore, the Project would not result in an inefficient, wasteful, or unnecessary use of energy. Operational energy impacts would be less than significant.

Further, the Project would provide consistency with the City's locally adopted GHG Reduction Plan. This Project consists of the construction of 44 new dwelling units an undeveloped lot. The new park building would be built to meet or exceed all California Green Building Standards Codes (CALGreen Code) resulting in lower energy use and GHG emissions compared to older buildings. This would ensure project compliance with applicable CAP measures:

- State-1: Senate Bill 1078 (2002)/Senate Bill 107 (2006) and Senate Bill 2 (2011) Renewable Portfolio Standard
- State-2: Title 24 Standards for Non-Residential and Residential Buildings (Energy Efficiency Standards and CALGreen)
- State-3: AB 1109 (Huffman) Lighting Efficiency and Toxics Reduction Act
- PS-1 GHG Performance Standard for New Development

The landscaping would be low water-tolerant and energy-efficient, thus minimizing landscape water usage, and ensuring compliance with CAP measure Water-3. These Project features also show consistency with the GHG Performance Standard for New Development in the CAP, and reduce the energy usage of new buildings. Thus, the Project would not Conflict with or obstruct a state or local plan for renewable energy or energy efficiency. Operational energy impacts would be less than significant.

7. **GEOLOGY AND SOILS**. Would the project:				
a) Expose people or structures to 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.			X	
(ii) Strong seismic ground shaking?			X	
(iii) Seismic-related ground failure, including liquefaction?				X
(iv) Landslides?				X
(b) Result in substantial soil erosion or the loss of topsoil?			X	
(c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?			X	
(d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?			X	
(e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?				X
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?		X		

a) **Less Than Significant Impact**

i, ii. **Less Than Significant Impact**

The site does not lie within the boundaries of an Earthquake Fault Zone as defined by the State of California

Alquist-Priolo Earthquake Fault Zoning Act. However, Southern California is a seismically active area. As such, seismic shaking may occur, and seismic ground shaking and ground rupture due to movement of a fault is a potential hazard in Yucaipa. The Project will be required to comply with the Yucaipa Municipal Code and the Building Code, which is designed to mitigate earthquake hazards. The California Building Code (CBC) has identified groundwater within 50 feet of the surface as a potential problem for seismic-related ground failure, including liquefaction. According to the Yucaipa General Plan, ground water can vary within the City from depths lower than 300 feet below surface elevation to 40 feet. Based upon information contained within the Yucaipa General Plan, Yucaipa Valley Water District, and the San Bernardino Municipal Valley Water District, the depth to ground water at the subject property and the surrounding Calimesa Sub-Basin is more than 150 feet. Due to the depth of groundwater, the potential for liquefaction near the subject area is considered minimal. The Project site is also located on sloping property, with approximately 35 foot elevation change. Due the topographical change from Wildwood Canyon Road, a small portion at the northwest corner of the site is located within an area identified by Figure S-1 of the General Plan as having a general susceptibility to seismically induced landslides. To accommodate the proposed grading of the site, retaining walls are proposed to create leveled pad areas for the proposed dwelling units. These plans and grading information would be submitted for review, and would include a soil study to ensure that the proposed home pads are stable to prevent the risk of loss, injury or death occurring as a result from any landslides.

iii. **No Impact**

The Uniform Building Code (UBC) has identified groundwater within 50 feet of the surface as a potential problem for seismic-related ground failure, including liquefaction. According to the Yucaipa General Plan ground water can vary within the City from depths lower than 300 feet below surface elevation to as close as 40 feet. Based on San Bernardino County hazard maps and the City’s Geologic Hazards Map, the Project site is not located in a zone of liquefaction susceptibility, and therefore the potential for liquefaction near the subject area is considered minimal.

iv. **No Impact**

Landslides can occur if areas of steep slopes consisting of unstable soils are disturbed by ground shaking and/or heavy rainfall. The Project site is also located on and surrounded by relatively flat land, with existing grade changes proposed to be graded, compacted, and all slopes will be landscaped, consistent with the City’s Standard Conditions of Approval, to ensure slope stability. The site is therefore not susceptible to seismically induced landslides.

b) **Less Than Significant Impact**

The Project site is located adjacent to the channelized Yucaipa Creek drainage channel, which is located along the southern perimeter of the parcel boundary. Development within the City is required to prepare an erosion control plan to minimize erosion during grading and construction, and such plan is required to be prepared in compliance with the Regional Water Quality Control Board (RWQCB) standards. In addition, the Project’s excavation and grading activities will be required to be carried out pursuant to a National Pollutant Discharge Elimination System (NPDES) permit that requires adoption of an appropriate Storm Water Pollution Prevention Plan (SWPPP) and implementation of Best Management Practices (BMPs) to reduce erosion from storm water runoff. Land developers are required to provide the SWPPP and compliance with a Water Quality Management Plan (WQMP) prior to construction. These plans are a standard condition for projects over one (1) acre in size and are intended to minimize soil erosion and prevent the off-site discharge of pollutants. To control post construction erosion and pollution discharge and manage those facilities, a WQMP shall be filed as part of the issuance of building permits. The SWPPP and WQMP establish criteria for reducing sediment and water quality issues during construction and during the operational of the Project. A less than significant impact is anticipated with compliance with standard conditions of approval and no mitigation measures are required.

c) **Less Than Significant Impact**

See above items 6 (a) and (b). The Project area is identified as being within the City's Geologic Hazard Overlay as shown on General Plan Exhibit S-1, as the northwest corner of the site may be susceptible to landslides and related phenomenon due to the elevation change from Wildwood Canyon Road towards the Yucaipa Creek (Figure 4). To accommodate the proposed grading of the site, retaining walls are proposed to create leveled pad areas for the proposed dwelling units. These plans and grading information would be submitted for review, and would include a soil study to ensure that the proposed home pads are stable to prevent the risk of loss, injury or death occurring as a result from any landslides.

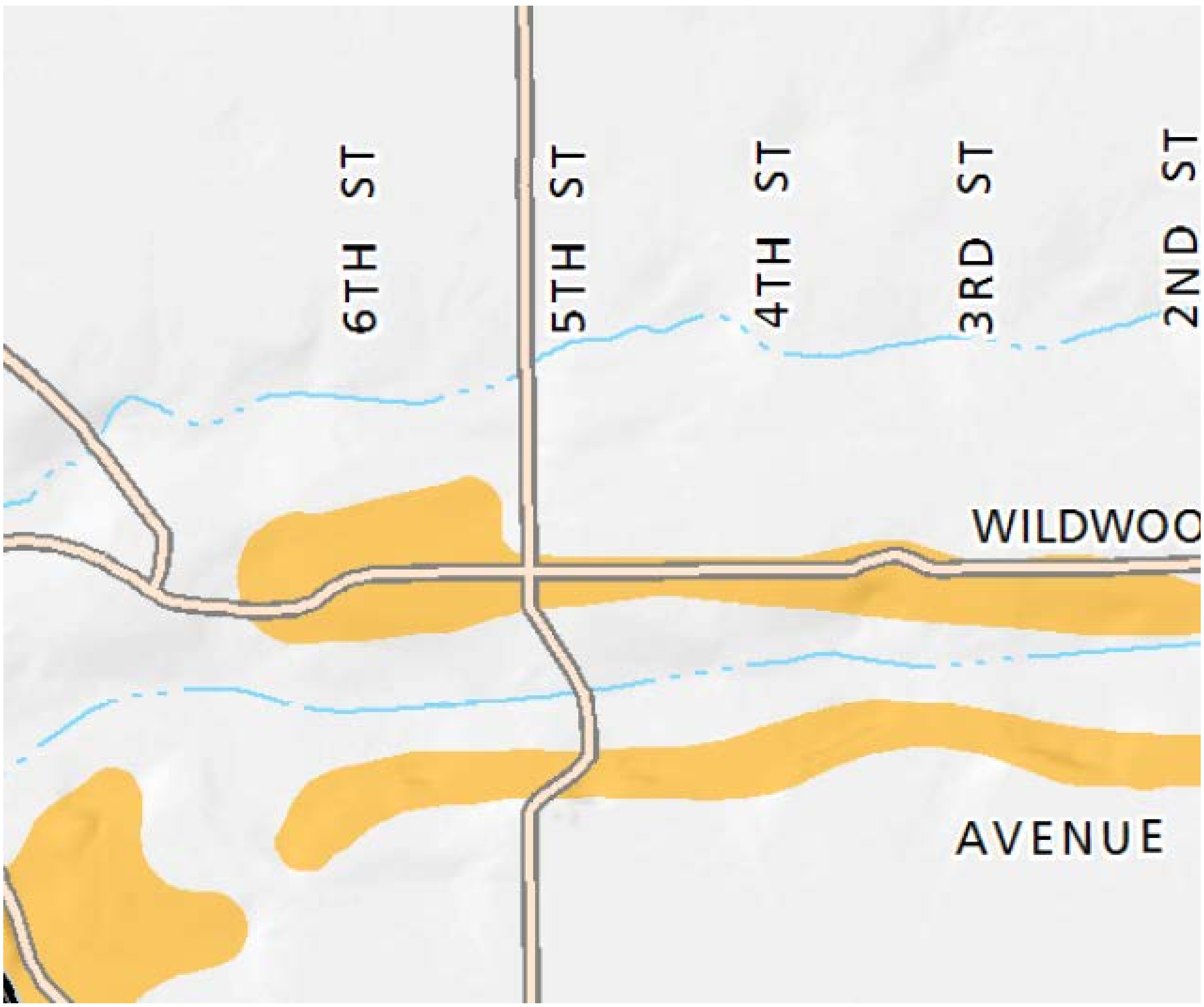


Figure 4: Excerpt from General Plan Exhibit S-1

d) **Less Than Significant Impact**

According to the Geologic Map of the Yucaipa 7.5' Quandrangle, prepared by the United States Geologic Survey (2003), the Project site is located within an area comprised of young axial-valley deposits (unit 5), which are predominantly granular sand to silty sands, and old axial-valley deposits (unit 1 and 3), which are moderately to well consolidated silt, sand, and gravel (Figure 5). Near-surface sediments throughout the City may also feature some clay. Expansive soils generally occur within areas that feature high clay content, whereas the site features more sand, and the expansion potential is anticipated to be very low. Therefore, the soils are not considered expansive. As a uniformly applicable development policy, foundations for the Project would be required to comply with the CBC requirements, as implemented by the City's Municipal Code, and would be competed through the plan check and permitting process. Thus, impacts due to expansive soils are less than significant and no mitigation measures are required.

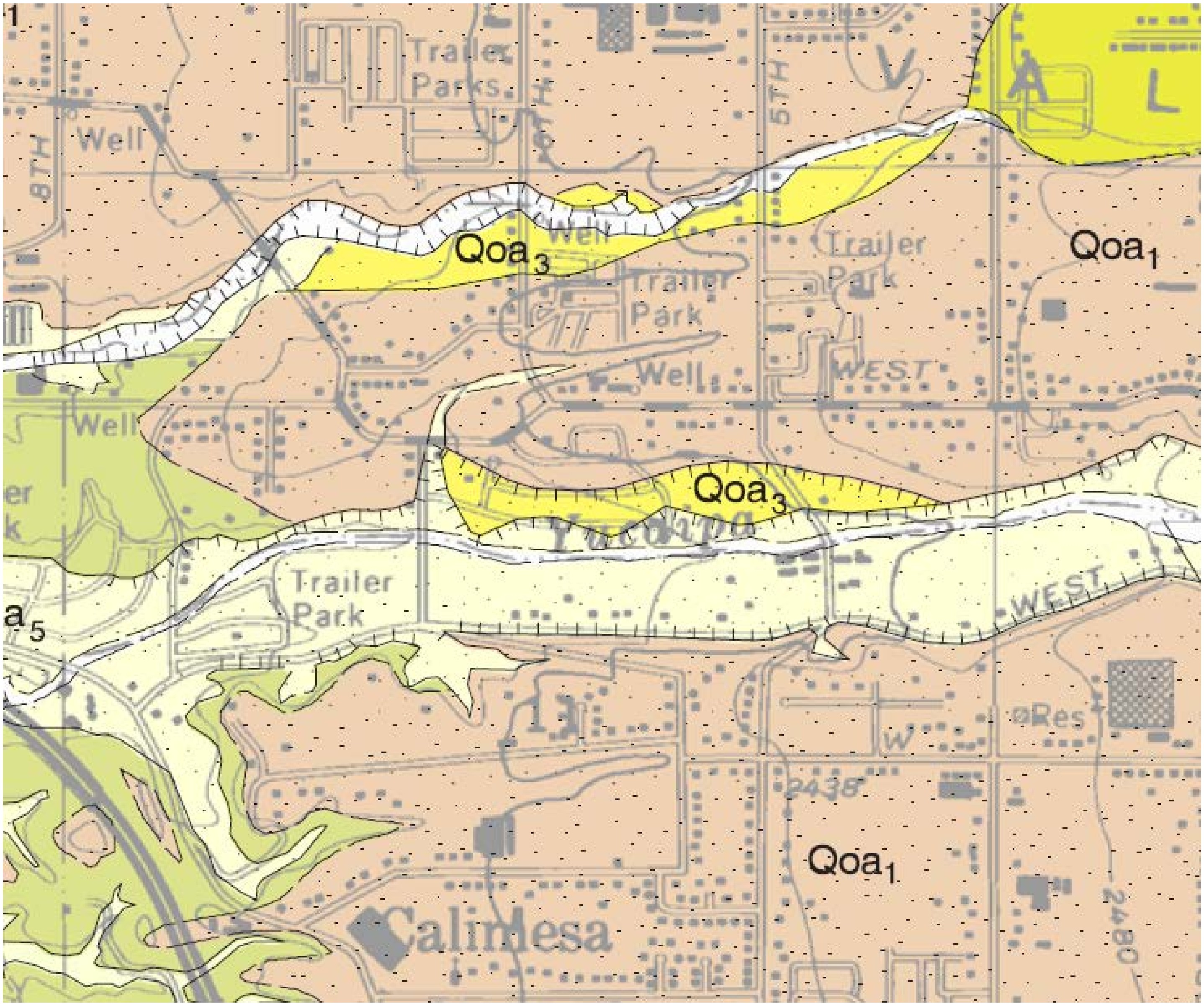


Figure 5: Excerpt from Geologic Map of the Yucaipa 7.5' Quandrangle

e) **No Impact**

The proposed Project will connect to the Yucaipa Valley Water District (YVWD) sewer services that are available to the site, and will not utilize any septic tanks.

f) **Less Than Significant Impact with Mitigation**

Figure PR-6 of the City's General Plan identifies a portion of the subject site as being located within a Paleontological Resource Sensitivity Area. The proposed Project consists of a GPA, CUP, and a TTM to permit the development of a 44-unit residential condominium subdivision. The City's standard conditions of approval require arrangements to be made through the County Museum to provide a qualified vertebrate paleontologist to monitor the site during rough grading activities. The monitor would have the authority to temporarily suspend grading operations in the vicinity of such resources until they have been evaluated and appropriate data recovery measures implemented. The results of the monitoring are to be documented in writing and submitted to the County Museum for review prior to issuance of building permits.

Mitigation Measure:

- **GEO-1**: Prior to grading, arrangements acceptable to the County Museum shall be made to have present during grading a qualified vertebrate paleontologist to monitor in the event paleontologic resources are encountered during rough grading. The monitor shall have the authority to temporarily suspend grading operations in the vicinity of such resources until they have been evaluated and appropriate data recovery measures implemented. The results of the monitoring shall be documented in writing and submitted to the County Museum for review prior to issuance of building permits. For more information, contact the County Museum at 909-307-2669.

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

a, b) **Less Than Significant Impact with Mitigation**

In September 2015, the City of Yucaipa adopted a Climate Action Plan (CAP) that includes GHG emission inventories, identifies the effectiveness of California initiatives to reduce GHG emissions, and identifies local measures to reduce GHG emissions. The City has selected a goal to reduce community-wide GHG emissions by 15 percent below 2008 baseline levels by the year 2020, consistent with AB 32, and ensures that the City is providing GHG reductions locally that will complement the state and international efforts of stabilizing climate change.

As part of the CAP, the City adopted a "GHG Performance Standard for New Development" (PS) that would provide a streamlined and flexible program for new residential and nonresidential projects to reduce their emissions. The PS established a goal of a 29% GHG reduction, and provides a screening table checklist for project applicants to utilize to demonstrate their GHG reduction. Therefore, consistency with the CAP would be based on whether the Project implements the measures in the Screening Tables.

The point values in the CAP Screening Tables correspond to the minimum emissions reduction expected from each feature of a project. The menu of features allows maximum flexibility and options for how development projects can implement the GHG reduction measures. The CAP identifies that projects that garner a total of 100 points or greater from the screening tables would have a less than significant individual and cumulative impact for GHG emissions. Residential development could include measures to address energy efficiency, renewable energy generation, water conservation, vehicle trips, bicycle infrastructure, and neighborhood electric vehicle infrastructure. A future development application would achieve a total of 100 points would also be consistent with the CAP, and would demonstrate that it would have a less than significant impact in regards to GHG emissions.

Mitigation Measure:

GHG-1: Prior to issuance of building permits, the Project shall achieve at least 100 points under the Screening Table for residential projects in the City of Yucaipa Climate Action Plan.

9. **HAZARDS AND HAZARDOUS MATERIALS.** Would the project?				
a) Create a significant hazard to the public or the environment through the routine transport, use or disposal of hazardous materials?			X	
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the likely release of hazardous materials into the environment?				X
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?				X
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result would it create a significant hazard to the public or the environment?				X
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?				X
f) Impair implementation of, or physically interfere with an adopted emergency response plan or emergency evacuation plan?				X
g) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?			X	

a) **Less Than Significant Impact**

The GPA would permit residential development consistent with the proposed RM land use designation, and allow for either single-family or multiple-family uses. A CUP and TTM application has also been submitted for the subject parcels that would allow for the construction of 44 detached residential dwelling units as part of a condominium development. It is not anticipated that a residential project would directly involve the routine transport of hazardous materials; however, equipment used at the site during construction activities could utilize substances considered by regulatory bodies as hazardous, such as diesel fuel and gasoline from typical construction equipment, and would therefore have the potential to discharge hazardous materials during construction. These types of materials are not acutely hazardous, and all storage, handling, use, and disposal of these materials are regulated by federal and state requirements, which the project construction activities are required to strictly adhere to. These regulations include: the federal Occupational Safety and Health Act and Hazardous Materials Transportation Act; Title 8 of the California Code of Regulations (CalOSHA), and the state Unified Hazardous Waste and Hazardous Materials Management Regulatory Program. This amount of hazardous material discharge during construction is expected to be less than significant, and the Project would be required to comply with applicable laws, ordinances and procedures, and impacts would be less than significant through compliance with the aforementioned laws and requirements, and also through the implementation of a SWPPP and the WQMP requirements to prevent the off-site discharge of pollutants during construction and operation of the Project.

During operation of the Project, potential hazardous materials would be limited to routine elements associated with residential development, including the use of yard fertilizers, house cleaners and solvents, and chlorine for swimming pools, which would not represent a significant hazard.

c-d) **No Impact**

There are no known hazardous materials located onsite, and no hazardous materials will be transported to or from the site during Project construction or operation. Therefore, it is unlikely that the Project would create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the likely release of hazardous materials into the environment. The Project site is also not included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5, nor is it within a quarter mile from a school facility.

e) **No Impact**

The Project site is not within two miles of an airport of any type. The nearest airport is Redlands Municipal Airport (REI), which is located over 6.5 miles northwest from the Project site. In addition, the Project is not within the Redlands Airport Land Use Compatibility Plan. No impacts would occur with the Project.

f) **No Impact**

The proposed Project site is adjacent to 5th Street, which is an existing paved roadway, and development of the site would not impact access to users traveling along the public right-of-way. However, the project would be conditioned to make improvements to the roadway, and widen it pursuant to the requirements of the General Plan. Figure S-5 of the Yucaipa General Plan does not designate 5th Street as a local evacuation route, and therefore the Project will not impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan.

g) **Less Than Significant Impact**

The Project site is within an urbanized area, adjacent to existing residential development, and is not adjacent to wildland areas. However, the Project site is within the Fire Safety Review Area 2 according to the City General Plan, and would be subject to Fire Department conditions of approval to reduce fire related risks. In addition, the City has also adopted the most recent version of the California Building and Fire Codes, which includes sections on fire-resistant construction material requirements based on building use and occupancy. The construction requirements are a function of building size, purpose, type, materials, location, proximity to other structures, and the type of fire suppression systems installed. Many of these requirements are also included as part of the Project's Conditions of Approval as a uniformly applicable development policy, which includes provisions for adequate fire access, sprinkler water systems within indoor spaces, and placement of new fire hydrants at applicable intervals that meet the water flow requirements of the Fire Code. Through these standard requirements, impacts from fire-related hazards would be less than significant.

10. **HYDROLOGY AND WATER QUALIT**Y. Would the project:				
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality			X	
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?			X	
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:				
i) result in a substantial erosion or siltation on- or off-site;			X	
ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;			X	
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			X	
iv) impede or redirect flood flows?			X	
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?			X	
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?			X	

a) **Less Than Significant Impact**

The proposed Project has the potential to release water pollutants during the construction and operation phases, which would have the potential to violate water quality standards.

Construction:

Three general sources of potential short-term, construction-related stormwater pollution associated with the proposed Project include: 1) the handling, storage, and disposal of construction materials containing pollutants; 2) the maintenance and operation of construction equipment; and 3) earthmoving activities which, when not controlled, may generate soil erosion via storm runoff or mechanical equipment.

The proposed project would disturb approximately 6.7 acres of land and therefore would be subject to the NPDES permit requirements during construction activities. Prior to issuance of building permits, the Project would be required to comply with all applicable NPDES requirements through adoption and implementation of a submitted SWPPP and WQMP during the construction and operational phases of the Project. The SWPPP shall identify erosion control BMPs to minimize pollutant discharges during construction activities, and would include stabilized construction entrances, sand bagging, designated concrete washout, tire wash racks, silt fencing, and curb cut/inlet protection. The structural and nonstructural BMPs, and other measures included in the SWPPP and WQMP, would address water quality and waste discharge concerns associated with the Project. Compliance with these requirements is included as standard Conditions of Approval for the Project. As part of the review process for these documents, the City also verifies that there is a financial mechanism in place to ensure the continued maintenance of the measures proposed as part of the WQMP. Further, documentation will be provided to ensure all construction-related plans are consistent with each other. Impacts with regard to construction would be less than significant with implementation of existing regulations.

Operation:

The development of the Project would increase the amount of impervious areas onsite by replacing the vacant property with hardscape areas for the residential development, which includes the building footprints for the 44 homes, the internal street network within the site, driveways for each of the homes, and rear yard improvements that may include concrete patios. Common area landscaping is also proposed as part of Project design throughout the site. To address water quality issues, a detention basin is proposed along the southern boundary of the site to receive and filtrate the runoff generated from the impervious surfaces. Compliance with existing federal, State, and local regulations related to water quality, implementation of BMPs included in the Project construction SWPPP, and design recommendations in the WQMP, would result in less than significant impacts.

Waste water treatment for the Project area is provided by YVWD, and the proposed Project would be required to connect to the YVWD sewer collection and treatment system. The proposed Project would not generate hazardous wastewater that would require any special waste discharge permits. Impacts would be less than significant with implementation of existing regulations.

b) **Less Than Significant Impact**

The proposed Project will use potable water provided by South Mesa Water Company, and a Preliminary Service Evaluation letter has been provided by the Water Company indicating that the have ‘ample supply’ and will be able to serve the Project. No hazardous materials or other materials will be injected into groundwater supplies and no wells are proposed for the Project which would have the potential to draw from the groundwater table. Further, the Project would not impact any existing groundwater recharge areas, or substantially reduce runoff to which recharge facilities would no longer be able to operate. Impacts would be less than significant.

c) **Less Than Significant Impact**

Yucaipa Creek, a soft-bottom channelized drainage channel, is located along the southern boundary of the site. The drainage course is also a floodway that is located within the 100-year floodplain. The proposed residential development is located outside of the drainage channel and outside of the 100-year floodplain, as delineated by FEMA Flood Insurance Rate Map (FIRM) Map, 06071C8740H, revised by Letter of Map Revision Case No. 14-09-0135P (Figure 6). However, the residential development is proposed within a limited area of the site that is delineated as the 500-year floodplain. Outside of the channel for the Creek, the Project site features a 35 foot elevation change to the creek improvements, and does not feature any significant drainage features. The development would not locate any dwelling units with the 100-year floodplain, and the site grading proposed for the Project would raise the existing elevations to bets locate future pad elevations outside of the 500-year floodplain. In addition, the proposed Project would not alter the existing design of the Yucaipa Creek channel, and would not impede or redirect flood flows.

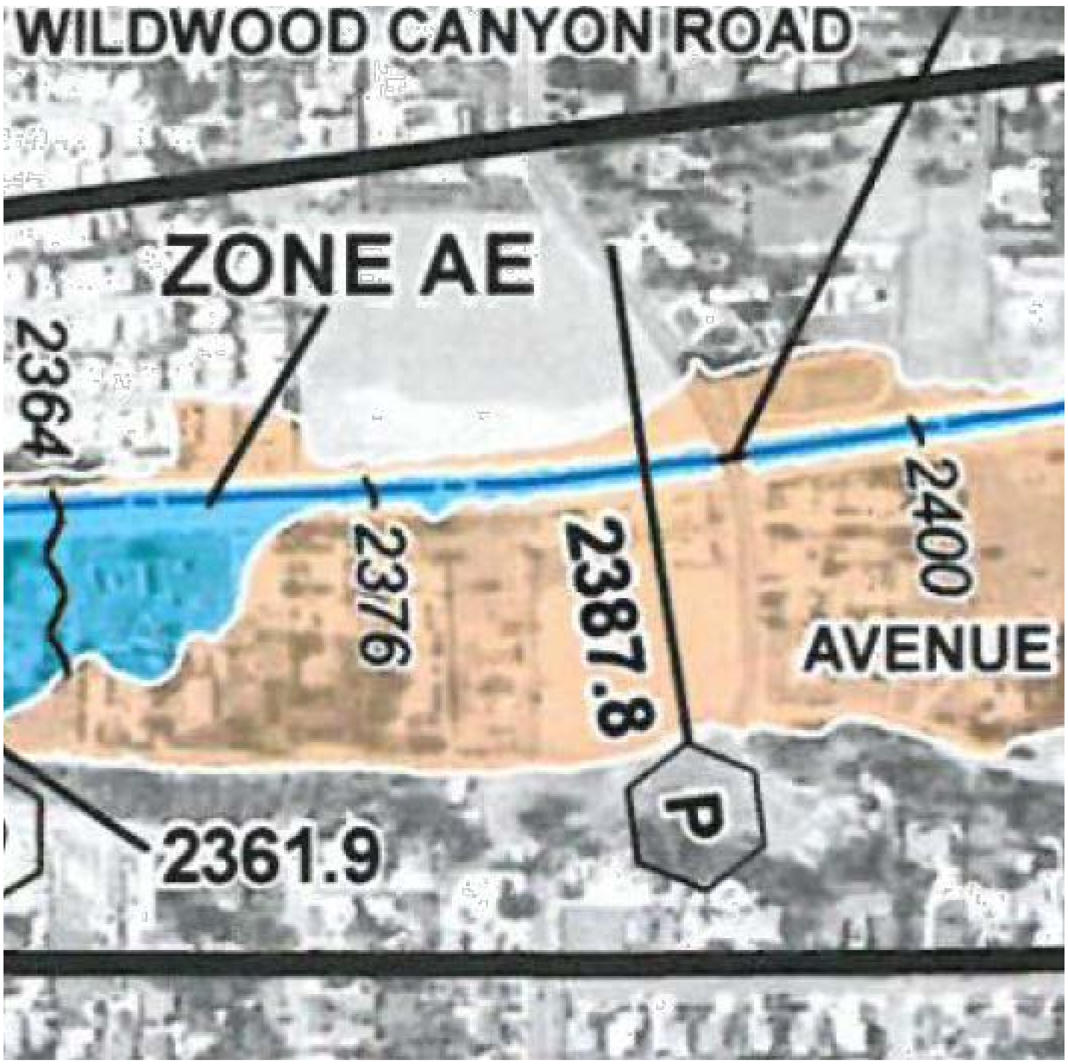


Figure 6: Excerpt from FEMA FIRM Map 06071C8740H

Construction and operation of the proposed Project would result in the increase of the net area of impermeable surfaces on the site because the site is currently vacant. The Project will be conditioned to ensure the amount of historical runoff through the property will not be adversely affected by the construction and operation of the site. As noted above, the Project is would be subject to the NPDES permit requirements and a SWPPP and WQMP would implemented during the construction and operational phases of the Project. To meet the Conditions of Approval pertaining to storm water runoff, the Project features a detention basin within the interior of the Project site. This basin is designed to capture the storm runoff within the property, and would prevent substantial erosion or siltation on- or off-site, or any increase in the rate or amount of surface runoff that would create flood-related hazards. Implementation of the various structural and non-structural BMPs from the SWPPP and WQMP would also ensure that runoff water does not exceed the capacity of existing or planned stormwater drainage systems or result in significant pollution.

d) **Less Than Significant Impact**

Based on review of the 2016 General Plan and recent aerial photo maps, the proposed Project is not subject to the potential effects of a seiche, tsunami, or mudflows caused by such due to lack of upstream water bodies. The City of Yucaipa is located just northeast of the I-10 freeway and is over 55 miles east of the Pacific Ocean. As such, the City is not under threat of a tsunami, otherwise known as a seismic sea wave. Similarly, the potential for a seiche to occur is remote, given the limited number of large water bodies within Yucaipa and its sphere of influence. Therefore, no impact is expected.

e) **Less Than Significant Impact**

On May 22, 2017, the City Council, adopted Resolution 2017-18, approving a Memorandum of Agreement (MOA) to form the Yucaipa Sub-Basin Groundwater Sustainability Agency (YGSA) with the Cities of Calimesa and Redlands; the South Mesa Water Company; the South Mountain Water Company; the Western Heights Water Company; the Yucaipa Valley Water District; the San Bernardino Valley Municipal Water District; and the San Gorgonio Pass Water Agency. The MOA was formally adopted by all agencies party to the Agreement, and was submitted to the State Department of Water Resources by the San Bernardino Valley Municipal Water District.

The Sustainable Groundwater Management Act (SGMA) provides the YSGA broad powers in the implementation of the YGSP and collaborative management of the Yucaipa Groundwater Sub-Basin. This includes the adoption of rules, regulations, ordinances and resolutions as may be necessary to manage and protect the basin. One of the many goals of the YSGA is the development of groundwater recharge projects. The City, in cooperation with the San Bernardino County Flood Control District, San Bernardino Valley Municipal Water District, and other partners and stakeholders have developed and constructed projects that capture and recharge storm flows for replenishment of the Yucaipa Basin. Future projects will also be developed to allow for active groundwater recharge opportunities. The proposed Project would not conflict with or obstruct implementation of the efforts of the YGSA.

The City is a municipal separate storm sewer system (MS4) stormwater permittee and participates with 20 other municipal agencies in the San Bernardino Valley region to establish Best Management Practices (BMPs) for residents, businesses, students, and governments in preventing and reducing stormwater pollution. Keeping pollutants out of stormwater is an integral component of a sustainable groundwater management program. Under the MS4 permit, the City requires new development to design and implement WQMPs that meet the San Bernardino County Technical Guideline threshold. As part of this project, a WQMP will be required to be reviewed and approved as part of the City's standard Condition of Approval. Implementation of the various structural and non-structural BMPs for the WQMP, and demonstrating that Low Impact Development (LID) concepts have been utilized, the Project would not conflict with or obstruct implementation of a water quality control plan.

11. **LAND USE AND PLANNING**. Would the project:				
a) Physically divide an established community?				X
b) Conflict with an applicable land use plan, policy or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?			X	

a) **No Impact**

Dividing an established community typically involves creating a physical barrier that changes the connectivity between areas of the community. The Project site is located on a property that is vacant. The development of the site with either single-family or multiple-family projects would not bisect any portion of the City, and would be completely contained within existing site. As such, no new structures that could be proposed will have the potential to physically divide a community, and the Project does not propose any other action that would physically divide an established community.

b) **Less Than Significant Impact**

The proposed GPA would change the City's General Plan/Land Use Map to allow for multiple-family residential development within the entire site, rather than a portion of the site, as the site currently features a split land use designation. The proposed RM Land Use Designation would result in a continuation of the land use throughout the entire parcel, and would permit a more uniform development residential proposal, such as the CUP and TTM for the 44-unit condominium subdivision. As part of the development, the roadway adjacent to the Project site will be conditioned to be improved to meet the City's Standards, which includes the addition of curb, gutter, and sidewalk along 5th Street. Other improvements to the site are also required to occur consistent with adopted development standards and good planning practices. Grading and building improvements would be undertaken consistent with appropriate City standards and drainage design criteria. The Wildwood Canyon area of the City, including the subject site, had lower density residential land use designations since the incorporation of the City due to historic flood hazards that existed within the area. Through various flood control and City projects, these flood hazards have been minimized and the 100-year floodplain no longer encompasses the site, removing the flood risk to new development. Further, multiple-family development and a mobile home park are located adjacent to the proposed Project site and are of comparable land use densities to the proposed Project. The Project would likely create an overall benefit as the current land use arrangement would create a haphazard development pattern to conform to the split zone designation, and opportunities for additional housing has become a major priority for the State of California, reiterated by the Housing Crisis Act of 2019. No policies or plans exist for avoiding or mitigating an environmental effect that have not been taken into consideration.

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

a-b) **No Impact**

The City General Plan indicates the entire City is within an MRZ-3 (Mineral Resource Zone 3) classification, in which the significance of mineral deposit cannot be evaluated. No mining activities currently occur in the area, and no significant mineral resources are known to exist within the City of Yucaipa. Due to the size of the Project site and proximity to residential uses, the site is unlikely to be considered a viable site for mineral extraction.

13. **NOISE.** 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?			X	
b) Generation of excessive groundborne vibration or groundborne noise levels?			X	
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?				X

Issues and Supporting Information	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact

a-b) **Less Than Significant Impact**

The Project site is adjacent to residential land uses, which are considered noise sensitive land uses in the City General Plan. The General Plan and Municipal Code identify noise levels for various types of land uses, certain activities, and how noise levels are to be measured.

During the construction phases for the Project, noise and vibration will be generated from typical activities associated with new home construction, which includes the use of grading equipment, hammers, nail guns, and other typical construction techniques. No unique construction techniques or pilings would be required as part of construction that might cause excessive ground-borne vibration. Section 87.0905(e) of the Municipal Code allows for "Temporary construction, repair, or demolition activities between 7am and 7pm, except Sundays and Federal holidays." While construction activities will periodically raise noise levels above their current levels, the level of noise increase is not expected to be substantial and will only occur during the limited time associated with these activities. Adherence with the Municipal Code would result in less than significant construction impacts.

The operation of future residential development within the GPA area would be similar to other types of single and multiple-family housing within the City limits. Constructed homes may feature individual HVAC, pool pumps and other electromechanical equipment that would produce noise (when operating) but at levels that would be expected to be compliant with local regulations where received by existing residential land uses. Therefore, impacts would be less than significant.

c) **No Impact**

The Project site is not within two miles of an airport of any type. The nearest airport is Redlands Municipal Airport (REI), which is located 6.5 miles northwest from the Project site. In addition, the Project is not within the Redlands Airport Land Use Compatibility Plan. No impacts would occur with development of the Project.

14. **POPULATION AND HOUSING.** Would the project:				
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?			X	
b) Displace substantial numbers of existing housing or housing, necessitating the construction of replacement housing elsewhere?				X

a) **Less Than Significant Impact**

The proposed Project site is located within an area generally developed with single and multiple-family residences, and a mobile home park. The Project includes the development of a total of 44 dwelling units, or a population increase of approximately 127 people based upon the average Yucaipa household size of 2.89, as identified by the 2019 California Department of Finance E-5 Population and Housing Estimates. This increase represents a nominal difference in the City's expected build-out population of over 79,000 people. In addition, existing infrastructure on 5th Street is adequate to accommodate the proposed Project and GPA. Further, the current land use arrangement would create a haphazard development pattern due to the split zone designation, and opportunities for additional housing has become a major priority for the State of California, reiterated by the Housing Crisis Act of 2019. As such, impacts are expected to be less than significant.

b) **No Impact**

There are no residences currently located on the subject Project. This Project would therefore not result in the displacement of existing houses.

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

a) **Less Than Significant Impact**

The City of Yucaipa is currently served by the California Department of Forestry (CAL FIRE). The Project site is accessible from an existing improved street and new on-site streets will be designed consistent with existing City Engineering and Fire Department standards, and would not require unique or altered fire protection services. As a standard condition of approval, developers are required to pay development impact fees for fire facilities that are assessed from the details of proposed Project. The proposed Project would have a less than significant impact on fire protection services, and would not affect fire department service ratios or response times, nor would it require the construction of any new fire facilities.

b) **Less Than Significant Impact**

The San Bernardino County Sheriff's Department currently serves the Project site and surrounding area. As a standard condition of approval, developers are required to pay development impact fees for Public facilities based upon the size of the Project site. The proposed Project would not require unique police protection services, since the site has been and will continue to be accessible from surrounding streets and the payment of development impact fees would off-set potential demands for increased facilities.

c) **Less Than Significant Impact**

The Yucaipa-Calimesa School District would serve future development in the area. As a standard condition of approval, developers are required to pay development impact fees to the District for school facilities, prior to issuance of building permits. Under State law impacts to school facilities are addressed by the State of California through specific procedures, such as development impact fees and issuance of bonds.

d) **Less Than Significant Impact**

The proposed Project will involve new residential development and, therefore, potentially increase the number of potential park users or affect existing park facilities. The City of Yucaipa has adopted development impact fees to off-set the potential impact of new users caused by new development. Any future residences will be required to pay these development impact fees. In addition, the Project will provide recreation amenities such as a tot lot and open play area to serve the residents of the development.

e) **Less Than Significant Impact**

The proposed Project would not require new or altered public facilities or services. The City requires future development to pay development impact fees for a variety of public facilities, including drainage improvements, traffic, and civic center facilities. In addition, the Project will complete street improvements and onsite drainage improvements to meet state and local requirements, and impacts have been addressed as part of this MND. Other necessary improvements, such as water and sewer facilities, would be provided by other agencies that have the ability to require necessary facilities be installed by the developer and/or require payment of fees to provide for that service.

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

a-b) **Less Than Significant Impact**

See response to 15d. The Project includes open space and recreation facilities as part of the development, which is provided for use by the residents. The Homeowners Association established for the proposed condominium development would assume maintenance responsibilities for the proposed recreation facilities.

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

a, b) **Less Than Significant Impact with Mitigation**

A Traffic Impact Analysis (TIA) was prepared by Hernandez, Kroone, and Associates in July, 2019, to address the potential traffic related impacts that would occur with approval of the GPA and associated condominium project. For the scope of work, the TIA assessed the operational capabilities and future Level of Service (LOS) of the following intersections:

- 5th Street and Wildwood Canyon Road
- 5th Street and Avenue G
- 5th Street and Avenue H
- 5th Street and County Line Road
- New intersection of 5th Street and Private Street A (project)

The LOS analysis was performed using the TrafficWare Synchro Studio 10 software, a widely accepted level of service software program, in accordance with the Highway Capacity Manual, Sixth Edition and the SBCTA CMP, Appendix B, Guidelines for Traffic Impact Analysis Reports (SBCTA CMP). LOS "A" is the highest LOS, meaning the intersection is operating very well. LOS "F" is the poorest rating, meaning the longest delay times and highest levels of congestion. Policy T-2.1 of the City's General Plan establishes a LOS "C" as the minimum acceptable for intersections that do not use a roundabout.

Table 6 of the TIA identified the results for the referenced sections:

Table 6: LOS Results

	Existing Year	Opening Year	Opening Year + Cumulative	Opening Year + Cumulative + Project	Future Year	Future Year + Project
Wildwood Canyon Rd. & 5th St.	D/C	D/D	D/D	D/D	D/D	D/D
Ave. G & 5th St.	C,C/C,C	C,C/C,C	C,C/C,C	C,C/C,C	C,C /D,D	D,D/E,D
Ave. H & 5th St.	E/D	E/F	E/F	F/F	F/F	F/F
County Line Rd. & 5th St.	C/B	C/C	C/C	C/C	D/C	D/D
Private St. A & 5th St.	N/A	N/A	N/A	B/C	N/A	C/D

1. X/X indicates AM/PM LOS
2. X,X indicates Eastbound, Westbound LOS for minor approach on Two-Way Stop-Controlled intersection

Two intersections, 5th Street / County Line Road and 5th Street / Private Street A, both met the City's minimum requirement of LOS "C" for all six scenarios studied. The intersection of 5th Street and Avenue G met minimum level of service criteria except for the eastbound approach of the minor stop-controlled street (Avenue G), in which the level of service dropped to a "D" for the Future Year AM and PM Peak Hour without project traffic scenario as well as the Future Year AM and PM Peak Hour with project traffic scenario. Currently, this intersection has one lane in each approach with the left, through, and right movements serviced through the one lane. The addition of another northbound through lane would mitigate the LOS issue, bringing the eastbound approach LOS "D" up to a LOS "C." This results in two northbound lanes, one servicing left and through movements, and the other servicing right and through movements. Implementation of this design would improve the level of service to acceptable levels.

The intersections of 5th Street / Wildwood Canyon Road and 5th Street / Avenue H both did not meet the LOS "C" criteria for any scenario analyzed, with the exception of 5th Street / Wildwood Canyon Road achieving a LOS "C" for the Existing PM Peak Hour without project traffic. These intersections are underperforming in existing conditions and require mitigation. At the intersection of Wildwood Canyon Road and 5th Street, the addition of a through lane in each the eastbound and westbound directions would increase the level of service to an acceptable value. In its current state, both the eastbound and westbound approaches contain a designated left turn pocket, designated right turn pocket, and designated through lane. The mitigation effort would change these designated right turn pockets to through plus right movements. Implementation of this design would improve the level of service to acceptable levels.

At the intersection of Avenue H and 5th Street, the addition of a through lane in the each the northbound and southbound directions would increase the level of service to an acceptable value. In its current state, both the northbound and southbound approaches are one lane with de-facto right turns. The mitigation effort would change the de-facto right turns to be through plus right movements, resulting in two lanes, one servicing left and through movements, and the other servicing right and through movements. Implementation of this design would improve the level of service to acceptable levels.

Table 7: LOS Results and Mitigated Results Comparison

	Future Year + Project	Mitigated Future Year + Project
Wildwood Canyon Rd. & 5th St.	D/D	C/C
Ave. G & 5th St.	D,C/D,C	C,C/C,C
Ave. H & 5th St.	F/F	C/C
County Line Rd. & 5th St.	C/C	C/C
Private St. A & 5th St.	C/C	C/C

1. X/X indicates AM/PM LOS
2. X,X indicates Eastbound, Westbound LOS for minor approach on Two-Way Stop-Controlled intersection

The TIA performed a fair share analysis to determine the proposed Project's responsibility for the intersection improvements identified above. It should be noted that the assessment focused on the original project scope for a 43-unit development project. The fair share mitigation measures have been increased by 2% to reflect the one (1) additional for the Project. The minor change of the project would not impact the Level of Service analysis for the aforementioned intersections.

The following numbers are the fair share responsibility of the Project.

Intersection	Fair Share Percentage
Wildwood Canyon Road & 5th Street	4.05%
Avenue G & 5th Street	4.23%
Avenue H & 5th Street	2.27%

Implementation of the proposed intersection improvements would mitigate impacts to a less than significant level. The project applicant would be responsible for paying their fair share of those improvements.

Issues and Supporting Information	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact

c) **No Impact**

Project site is not within close proximity to an airport of any type. The nearest airport is Redlands Municipal Airport (REI), which is located 6.5 miles northwest from the Project site. The maximum height permitted within the RM and the RL Land Use Districts is 35 feet, and the distance of the Project from airports would mean that structures would not impact any flight patterns. Further, the Land Use District change to create a complete RM-designated property would not alter the building heights permitted onsite.

d) **Less Than Significant Impact**

Final project site plans would be subject to City review and approval, which would ensure that Project driveway intersections and internal circulation are safe, with adequate sight distance, driveway widths and stop signs where necessary for entering and exiting the site. The proposed Project includes a driveway entrance located along 5th Street. Due the curvature of the road, a Sight Line Analysis was provided by Sitetech, Inc, which provided recommendations on the Project entrance location to ensure that a safe transition to and from the site is provided. The Project has since been redesigned to align with the recommendations to prevent any potential impacts due to an unsafe roadway design feature. The Project site is also surrounded by residential uses, and the development of a more residences would not create hazards due to incompatible uses. Impacts would therefore be less than significant.

e) **No Impact**

The proposed Project site is adjacent to 5th Street, which is an existing paved roadway, and development of the site would not impact access to users traveling along the public right-of-way. However, the project would be conditioned to make improvements to the roadway, and widen it pursuant to the requirements of the General Plan. Figure S-5 of the Yucaipa General Plan does not designate 5th Street as a local evacuation route, and therefore the Project will not result in inadequate emergency access.

f) **Less Than Significant Impact**

The proposed Project will not affect future opportunities to provide alternative transportation modes. As part of the Conditions of Approval, sidewalks would be installed along the Street Frontage of 5th Street, which would connect to the adjacent Fire Station. In addition, an internal pedestrian network would be provided onsite for future residents.

<u>Mitigation Measure:</u>

TRA-1: The project applicant shall contribute their fair-share cost for roadway improvements to Wildwood Canyon Road & 5th Street, Avenue G & 5th Street, and Avenue H & 5th Street, prior to the issuance of any building permit for a residence.

18. **TRIBAL RESOURCES.** Would the project:				
a) 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), or				X
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 for the purposes of this		X		

Issues and Supporting Information	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
paragraph, the lead agency shall consider the significance of the resource to a California Native American tribe.				

i) **No Impact**

A Cultural Resources Assessment was prepared by Archeological Associates in February, 2019, to assess the potential impacts to cultural and tribal resources that could result of the Project. The report noted that there are no known "historical resources" onsite, and a records investigation did not reference any known resources onsite. In addition, no other resources, including tribal resources, have been previously discovered onsite, and no resources were found during a survey that was conducted onsite as part of the Assessment. As such, the site is not considered historic, and no impacts to historic resources would occur as part of development of the Project. It should be noted, however, that tribal resources have been found within the general area of the Project site.

ii) **Less Than Significant Impact with Mitigation**

Conducting consultation early in the CEQA process allows tribal governments, public lead agencies, and project proponents to discuss the level of environmental review, identify and address potential adverse impacts to tribal cultural resources, and reduce the potential for delay and conflict in the environmental review process.

Consultation with local tribes, pursuant to SB18 and AB 52, is required for the proposed Project, and additional details are included within the Tribal resources section of this MND. In accordance with AB 52 and SB 18 requirements, the City sent invitation letters to representatives of the Native American contacts provided by the NAHC on April 30, 2019, formally inviting tribes to consult with the City on the GPA. The intent of the consultations is to provide an opportunity for interested Native American contacts to work together with the City during the project planning process to identify and protect tribal cultural resources.

Archaeological research in the area indicates the Project area appears to have been inhabited by the Mountain Serrano, but is also within the boundaries of traditional Cahuilla territory, which lies within the geographic center of Southern California and the Cocopa-Maricopa Trail, a major prehistoric trade route that linked the Colorado Desert with the Pacific Coast. Further, the name “Yucaipa” is a form of the Serrano word, “Yucaipat.” Given the territory’s close proximity to the Cocopa-Maricopa Trail, interactions with surrounding tribes were extensive. Due to this history, Figure PR-6 of the City’s General Plan identifies that the subject site is located within a Cultural Sensitivity Area. The Cultural Resources Assessment did not identify any resources to be onsite, but noted that resources have been discovered in the general area. In addition, land disturbing activities may have the potential to uncover such remnants from this history and result in an inadvertent discovery.

A response letter was received from the San Manuel Band of Mission Indians, Morongo Band of Mission Indians and the Morongo Band of Mission Indians requesting consultation, which concluded on May 10, 2019 and June 18, 2019 respectively. Letters were also received from the Augustine Band of Cahuilla Indians noting that monitors qualified in tribal resourced should be used as part of the development of the Project. In addition, the Aqua Caliente Band of Mission Indians and Torres Martinez Desert Cahuilla Indians noted that the site may be sensitive, and to reach out to local tribes for input as part of the Project consultation process. The Agua Caliente Band of Cahuilla Indians also requested that any cultural resource documentation (report and site records) generated in connection with this project be sent to their tribe. As a result of the consultation efforts, Mitigation Measures TRI-1, TRI-2, TRI-3, and TRI-4 have been developed for the Project and are included as part of the proposed Project’s Condition of Approval. Incorporation of the mitigation measures will ensure a less than significant impact.

Mitigation Measures:

TRI-1: Prior to grading permit issuance, if there are any changes to project site design and/or proposed grades, the future developer shall contact the San Manuel Band of Mission Indians and Morongo Band of Mission Indians (Consulting Tribes) to provide an electronic copy of the revised plans for review. Additional consultation shall occur between the City, developer and Consulting Tribes to discuss the proposed changes and to review any new impacts and/or potential avoidance/preservation of the cultural resources on the project. The developer shall make all attempts to avoid and/or preserve in place as many as possible of the cultural resources located on the project site. In specific circumstances where existing and/or new resources are determined to be unavoidable and/or unable to be preserved in place despite all feasible alternatives, the developer shall make every effort to relocate the resource to a nearby open space or designated location on the property that is not subject to future development, erosion or flooding.

TRI-2: Archaeological Monitoring/Testing

1. Due to the existence of a Sacred Lands File near the project site and concerns about the possibility of present archaeological materials within the project site, as detailed by the Consulting Tribes, one of the following shall occur:

    a. Archaeological testing shall be conducted prior to any and all ground-disturbing activity. The testing plan shall be approved by the Consulting Tribes and should be created upon review of available geological information, such as a geotechnical study, USGS geology maps, and USDS soil maps. Testing shall be implemented in-field by at least one Secretary of Interior Standards qualified archaeologist with at least 3 years of regional experience in archaeology and at least one Tribal representative from the Consulting Tribes. Any findings during testing shall be properly recorded on-site and reburied within the original find location (no collection shall be permitted). A testing report shall be completed, to include recordation documents (if any finds occur), and be provided to the Lead Agency for dissemination to the Consulting Tribes. The Lead Agency shall, in good faith, consult with the Consulting Tribes concerning the results of the testing plan and, if positive, work toward avoidance of the resources, if feasible, as well as implement the monitoring process, by way of an Archaeological Monitoring Plan. Should no findings occur during Tribal-approved testing, monitoring shall not occur on-site and the Consulting Tribes will be notified of any inadvertent discoveries.

    OR

    b. At least 30-days prior to application for a grading permit and before any ground disturbing activities on the site take place (which includes, but is not limited to, tree/shrub removal and planting, clearing/grubbing, grading, excavation, trenching, compaction, fence/gate removal and installation, drainage and irrigation removal and installation, hardscape installation [benches, signage, boulders, walls, seat walls, fountains, etc.], etc., the future developer shall retain a Secretary of Interior Standards qualified archaeologist with at least 3 years of regional experience and Tribal monitors representing the Consulting Tribes to monitor all ground-disturbing activities in an effort to identify any unknown archaeological resources. A sufficient number of archaeological and Tribal monitors shall be present each work day to ensure that simultaneously occurring ground disturbing activities receive thorough levels of monitoring coverage. Prior to the issuance of a grading permit, the applicant shall provide the City of Yucaipa evidence of monitoring agreements with the San Manuel Band of Mission Indians, and Morongo Band of Mission Indians

2. Should monitoring occur, the archaeologist, in consultation with Consulting Tribes, the developer, and the City of Yucaipa, shall develop an Archaeological Monitoring Plan (AMP) to address the details, timing and responsibility of all archaeological and cultural activities that will occur on the project site. Details in the AMP shall include:

    a. Project-related ground disturbance (including, but not limited to, brush clearing, grading, trenching, etc.)

and development scheduling;

b. The development of a rotating or simultaneous schedule in coordination with the developer and the project archeologist for designated Native American Tribal Monitors from the consulting tribes during grading, excavation and ground disturbing activities on the site: including the scheduling, safety requirements, duties, scope of work, and Native American Tribal Monitors' authority to stop and redirect grading activities in coordination with all project archaeologists (if the tribes cannot come to a consensus on the rotating or simultaneous schedule of tribal monitoring, the Lead Agency shall designate the schedule for the onsite Native American Tribal Monitor for the proposed project);

c. The protocols and stipulations that the developer, City, Consulting Tribes, and project archaeologist will follow in the event of inadvertent cultural resources discoveries, including any newly discovered cultural resource deposits that shall be subject to a cultural resources evaluation.

TRI-3: Treatment and Disposition of Cultural Resources. In the event that Native American cultural resources are inadvertently discovered during the course of any ground disturbing activities, including but not limited to brush clearance, grading, trenching, archaeological testing, etc., for the proposed project, the following procedures will be carried out for treatment and disposition of the discoveries:

1. Avoidance and Preservation in Place: Avoidance and preservation in place shall be the preferred treatment for any and all discoveries of archaeological materials. Should the resource not be a candidate for avoidance or preservation in place, a resource-specific mitigation plan shall be developed, reviewed by all Parties, and implemented following the guidelines within item C below.

2. Temporary Curation and Storage for Removed Resources: For resources that cannot be left in place, they shall be temporarily curated in a secure location onsite at an agreed to location that is secure and accessed only by a limited number of on-site supervisors, specified Tribal monitors, and the archaeologist. The removal of any artifacts from the project site will need to be thoroughly inventoried with tribal monitor oversite of the process; and

3. Treatment and Final Disposition of Removed Resources: For resources that cannot be left in place, the landowner(s) shall relinquish ownership of all cultural resources, including sacred items, burial goods, and all archaeological artifacts and non-human remains as part of the required mitigation for impacts to cultural resources. The applicant shall relinquish the artifacts through one or more of the following methods and provide the City of Yucaipa with evidence of same:

   a. Accommodate the process for onsite reburial of the discovered items with the Consulting Tribes. This shall include measures and provisions to protect the future reburial area from any future impacts. Reburial shall not occur until all cataloguing, basic analysis, and other analyses as recommended by the project archeologist and approved by the Consulting Tribes have been completed, all documents should be at a level of standard professional practice to allow the writing of a report of professional quality;

   b. A curation agreement with an appropriate qualified repository within San Bernardino County that meets federal standards per 36 CFR Part 79 and therefore would be professionally curated and made available to other archaeologists/researchers for further study, should the resources not be candidates for reburial. The collections and associated records shall be transferred, including title, to an appropriate curation facility within San Bernardino County, to be accompanied by payment of the fees necessary for permanent curation;

   c. If more than one Native American tribe or band is involved with the project and cannot come to a consensus as to the disposition of cultural materials, they shall be curated at the San Bernardino County Museum by default; and

4. At the completion of all ground disturbing activities on the site, a Monitoring Report shall be submitted to the City documenting monitoring activities conducted by the project archaeologist and Native Tribal Monitors within 60 days of completion of grading. This report shall document the impacts to the known resources on the property; describe how each mitigation measure was fulfilled; document the type of cultural resources recovered and the disposition of such resources; provide evidence of the required cultural sensitivity training for the construction staff held during the required pre-grade meeting; and, in a confidential appendix, include the daily/weekly monitoring notes from the archaeologist. All reports produced will be submitted to the City and Consulting Tribes. Should the resources be placed within a curation facility as a final treatment, copies of all reports will be provided to the facility to remain with the collection.

TRI-4: Discovery of Human Remains. In the event that human remains (or remains that may be human) are discovered at the project site during grading or earthmoving, the construction contractors, project archaeologist, and/or designated Native American Monitor shall immediately stop all activities within 100 feet of the find. The project proponent shall then inform the San Bernardino County Coroner and the City of Yucaipa Community Development Department immediately, and the coroner shall be permitted to examine the remains as required by California Health and Safety Code Section 7050.5(b). Section 7050.5 requires that excavation be stopped in the vicinity of discovered human remains until the coroner can determine whether the remains are those of a Native American. If human remains are determined as those of Native American origin, the applicant shall comply with the state relating to the disposition of Native American burials that fall within the jurisdiction of the Native American Heritage Commission (NAHC) (PRC Section 5097). The coroner shall contact the NAHC to determine the most likely descendant(s)(MLD). The MLD shall complete his or her inspection and make recommendations or preferences for treatment within 48 hours of being granted access to the site. The disposition of the remains shall be overseen by the MLD to determine the most appropriate means of treating the human remains and any associated grave artifacts.

The specific locations of Native American burials and reburials will be proprietary and not disclosed to the general public. The locations will be documented by the consulting archaeologist in conjunction with the various stakeholders and a report of findings will be filed with the San Bernardino County Museum.

According to California Health and Safety Code, six or more human burials at one location constitute a cemetery (Section 8100), and disturbance of Native American cemeteries is a felony (Section 7052) determined in consultation between the project proponent and the MLD. In the event that the project proponent and the MLD are in disagreement regarding the disposition of the remains, State law will apply and the median and decision process will occur with the NAHC (see Public Resources Code Section 5097.98(e) and 5097.94(k)).

19. **UTILITIES AND SERVICE SYSTEMS.** 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?			X	
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?			X	
c) Result in a determination by the waste water 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?			X	
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?			X	
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?			X	

a-c) **Less Than Significant Impact**

Issues and Supporting Information	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact

The YVWD provides wastewater treatment facilities for the Project site. However, infrastructure improvements have been developed to increase their storage capabilities to meet the demand of future residents and businesses based on the City's General Plan. This includes several recharge facilities to increase water supply for potable water purposes that have been developed by the City of Yucaipa. As part of the Project application, the City of Yucaipa had obtained a Preliminary Service Evaluation letter from YVWD noting that they would be able to accommodate the required sewer needs of the proposed Project. Potable water would be provided by South Mesa Water Company. As part of the TTM and GPA application submittal, the Company noted that there was sufficient infrastructure to serve the proposed GPA area, and that the proposed residential development could be accommodated. The Project would not require the expansion of their facilities. As such, impacts will be less than significant.

The proposed Project will result in an incremental increase in the amount of storm water runoff from the property. The proposed development will require new storm water drainage facilities to capture the additional runoff that is generated, which will be provided for by an on-site drainage detention basin along the southern edge of the site. As a condition of Project approval and prior to this issuance of grading permits, the Project is required to submit a SWPPP and WQMP that describes BMPs and site design measures that will be implemented to minimize site runoff that is created. Therefore, the impact would be less than significant.

Other utilities, including electric power, natural gas, or telecommunications facilities, are provided along 5th Street, and no substantive changes are necessary to connect to those utilities.

d, e) **Less Than Significant Impact**

Solid waste services in the City of Yucaipa are provided through a contract with Burrtec, and disposed of within the San Timoteo Sanitary Landfill. As a part of the contract, the disposal service company is required to comply with all appropriate regulations. According to information from the CalRecycle website, operated by the State of California, this landfill has an average annual capacity of 500,000 to 749,999 tons per year, and has a remaining capacity of over 13 million cubic yards and a daily landfill capacity is 2,000 tons per day. Information on the CalRecycle website provides solid waste characterization databases by types of use, referenced from various environmental documents. Although the State does not officially endorse this information, it does provide some point of reference. The latest study on the list identified a generation rate of almost 10 pounds per dwelling per day for single-family homes. This would result in approximately 78 tons of solid waste per year. Since the daily landfill capacity is 2,000 tons per day, the landfill has the capacity to meet projected demand and impacts would be less than significant.

20. **WILDFIRE.** 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?				X
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?			X	
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?			X	
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?			X	

a) **No Impact**

The proposed Project site is adjacent to 5th Street, which is an existing paved roadway, and development of the site would not impact access to users traveling along the public right-of-way. However, the project would be conditioned to make improvements to the roadway, and widen it pursuant to the requirements of the General Plan. Figure S-5 of the Yucaipa General Plan does not designate 5th Street as a local evacuation route, and therefore the Project will not impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan.

b-d) **Less Than Significant Impact**

The Project site is within an urbanized area, adjacent to existing residential development, and is not adjacent to wildland areas. However, the Project site is within the Fire Safety Review Area 2 according to the City General Plan, and would be subject to Fire Department conditions of approval to reduce fire related risks. In addition, the City has also adopted the most recent version of the California Building and Fire Codes, which includes sections on fire-resistant construction material requirements based on building use and occupancy. The construction requirements are a function of building size, purpose, type, materials, location, proximity to other structures, and the type of fire suppression systems installed. Many of these requirements are also included as part of the Project's Conditions of Approval as a uniformly applicable development policy, which includes provisions for adequate fire access, sprinkler water systems within indoor spaces, and placement of new fire hydrants at applicable intervals that meet the water flow requirements of the Fire Code. Through these standard requirements, impacts from fire-related hazards would be less than significant. There are no other factors onsite that would exacerbate wildfire risks, or slopes that would pose significant risks, such as post-fire slope instability, or downstream flooding or landslides.

21. **MANDATORY FINDINGS OF SIGNIFICANCE.**				
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?			X	
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of the past projects, the effects of other current projects, and the effects of probable future projects)?			X	
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?			X	

a) **Less Than Significant Impact**

The proposed Project will not result in significant impacts that have the potential to degrade the quality of the environment. No sensitive plant or animal species or habitats are expected to be significantly impacted by the Project site. In addition, no significant earth moving activities are proposed which could impact cultural or tribal resources. The proposed Project consists of a GPA that would facilitate either single-family or multiple-family residential development in lieu of single family development. As part of the project, a detached condominium development is proposed on the subject parcel. As noted within this MND, the future development that could occur would not have significant impacts.

b) **Less Than Significant Impact**

The proposed Project consists of a General Plan Amendment for a change of the land use designation of a property with a split zone of RL2.5 (Rural Living, 2.5 acre minimum) and RM-72C (Multiple Residential, 7,200 square foot minimum lot size) to have a single land use designation of RM-72C, and features a concurrent submittal of the project design that would comply with the RM Land Use designation. Given the relatively small size of the land use change, as well as analysis contained herein related to the potential development that could occur, the cumulative effects of this project are not expected to result in significant impacts. The evaluation of the proposed Project utilized topical sections related to agriculture, biology, cultural, air quality, geology/soils, greenhouse gases, hydrology, land use, noise, land use, mineral resources, population and housing, recreation, traffic, utilities and services and did not identify potential significant or cumulative impacts that could not be mitigated to a level that is less than significant.

c) **Less Than Significant Impact**

Future development that could occur as a result of the GPA will involve site improvements that are to be constructed consistent with existing City regulations, standards, and processes, and those of other agencies, and the Conditional Use Permit and Tentative Tract Map submitted concurrent with the application meet the requirements of the proposed RM Land Use Designation. The topical issues discussed within this document did not identify the potential for adverse effects due, in part, to the incorporation of mitigation measures and standard Conditions of Approval that be applied to any future development would address potential impacts or adverse effects on human beings.

SUPPORTING INFORMATION SOURCES:

1. City of Yucaipa General Plan, 2016
2. City of Yucaipa General Plan EIR, 2016
3. City of Yucaipa Development Code (as amended)
4. Caltrans Web Site for Scenic Highways, www.dot.ca.gov.
5. California State Department of Conservation for farmland mapping, www.consrv.ca.gov.
6. California Department of Toxic Substances Control, www.dtsc.ca.gov.
7. State Water Resources Control Board.
8. Cal Fire Mapping, www.fire.ca.gov.
9. Yucaipa, CA U.S.G.S. Map

Appendix List:

Appendix A – CalEEMod Output
Appendix B - Traffic
Appendix C – Cultural Resources Evaluation

19-020 Hobbs GPA CUP TTM 20263

South Coast Air Basin, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Single Family Housing	44.00	Dwelling Unit	6.74	79,200.00	126

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	31
Climate Zone	10			**Operational Year**	2021
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	702.44	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - 44 detached condominium units on 6.74 acres

Construction Phase - Default values used

Off-road Equipment - Default values used

Grading - Default values used

Demolition - Default values used

Trips and VMT - Default values used

On-road Fugitive Dust - Default values used

Construction Off-road Equipment Mitigation - SCAQMD Rule 403 applies

Mobile Land Use Mitigation -

Area Mitigation - No wood fireplace per SCAQMD due to elevation. Low VOC paint per SCAQMD Rule 1113

Table Name	Column Name	Default Value	New Value
tblLandUse	LotAcreage	14.29	6.74

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	0.3136	2.9057	2.3650	4.0900e-003	0.1821	0.1592	0.3413	0.0904	0.1490	0.2394	0.0000	355.8684	355.8684	0.0848	0.0000	357.9880
2021	0.2811	0.3067	0.3263	5.5000e-004	3.8400e-003	0.0164	0.0202	1.0300e-003	0.0153	0.0164	0.0000	47.6163	47.6163	0.0118	0.0000	47.9121
Maximum	**0.3136**	**2.9057**	**2.3650**	**4.0900e-003**	**0.1821**	**0.1592**	**0.3413**	**0.0904**	**0.1490**	**0.2394**	**0.0000**	**355.8684**	**355.8684**	**0.0848**	**0.0000**	**357.9880**

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	0.3136	2.9057	2.3650	4.0900e-003	0.0964	0.1592	0.2555	0.0445	0.1490	0.1936	0.0000	355.8680	355.8680	0.0848	0.0000	357.9877
2021	0.2811	0.3067	0.3263	5.5000e-004	3.8400e-003	0.0164	0.0202	1.0300e-003	0.0153	0.0164	0.0000	47.6162	47.6162	0.0118	0.0000	47.9121
Maximum	**0.3136**	**2.9057**	**2.3650**	**4.0900e-003**	**0.0964**	**0.1592**	**0.2555**	**0.0445**	**0.1490**	**0.1936**	**0.0000**	**355.8680**	**355.8680**	**0.0848**	**0.0000**	**357.9877**

	ROG	**NOx**	**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**	**46.11**	**0.00**	**23.71**	**50.14**	**0.00**	**17.92**	**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	**1-1-2020**	**3-31-2020**	1.0538	1.0538
2	**4-1-2020**	**6-30-2020**	0.7140	0.7140
3	**7-1-2020**	**9-30-2020**	0.7219	0.7219
4	**10-1-2020**	**12-31-2020**	0.7223	0.7223
5	**1-1-2021**	**3-31-2021**	0.5936	0.5936
		Highest	1.0538	1.0538

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	0.4689	0.0167	0.7345	7.4000e-004		0.0445	0.0445		0.0445	0.0445	4.6736	9.7223	14.3960	0.0147	3.2000e-004	14.8569
Energy	7.2600e-003	0.0620	0.0264	4.0000e-004		5.0200e-003	5.0200e-003		5.0200e-003	5.0200e-003	0.0000	194.0393	194.0393	6.4200e-003	2.3600e-003	194.9034
Mobile	0.1309	0.7095	1.8090	6.5300e-003	0.5395	5.3300e-003	0.5448	0.1446	4.9800e-003	0.1495	0.0000	602.7120	602.7120	0.0296	0.0000	603.4510
Waste						0.0000	0.0000		0.0000	0.0000	10.4865	0.0000	10.4865	0.6197	0.0000	25.9799
Water						0.0000	0.0000		0.0000	0.0000	0.9095	18.2913	19.2008	0.0942	2.3600e-003	22.2589
Total	**0.6070**	**0.7882**	**2.5699**	**7.6700e-003**	**0.5395**	**0.0549**	**0.5943**	**0.1446**	**0.0545**	**0.1991**	**16.0697**	**824.7649**	**840.8345**	**0.7646**	**5.0400e-003**	**861.4500**

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	0.3257	0.0135	0.4582	8.0000e-005		3.1700e-003	3.1700e-003		3.1700e-003	3.1700e-003	0.0000	10.2506	10.2506	9.0000e-004	1.7000e-004	10.3251
Energy	7.2600e-003	0.0620	0.0264	4.0000e-004		5.0200e-003	5.0200e-003		5.0200e-003	5.0200e-003	0.0000	194.0393	194.0393	6.4200e-003	2.3600e-003	194.9034
Mobile	0.1310	0.7099	1.8104	6.5400e-003	0.5400	5.3300e-003	0.5453	0.1447	4.9800e-003	0.1497	0.0000	603.2495	603.2495	0.0296	0.0000	603.9891
Waste						0.0000	0.0000		0.0000	0.0000	10.4865	0.0000	10.4865	0.6197	0.0000	25.9799
Water						0.0000	0.0000		0.0000	0.0000	0.9095	18.2913	19.2008	0.0942	2.3600e-003	22.2589
Total	**0.4639**	**0.7854**	**2.2950**	**7.0200e-003**	**0.5400**	**0.0135**	**0.5535**	**0.1447**	**0.0132**	**0.1579**	**11.3960**	**825.8307**	**837.2267**	**0.7508**	**4.8900e-003**	**857.4563**

	ROG	**NOx**	**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	**23.57**	**0.35**	**10.69**	**8.47**	**-0.09**	**75.36**	**6.87**	**-0.09**	**75.84**	**20.70**	**29.08**	**-0.13**	**0.43**	**1.80**	**2.98**	**0.46**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2020	1/28/2020	5	20	
2	Site Preparation	Site Preparation	1/29/2020	2/11/2020	5	10	
3	Grading	Grading	2/12/2020	3/10/2020	5	20	
4	Building Construction	Building Construction	3/11/2020	1/26/2021	5	230	
5	Paving	Paving	1/27/2021	2/23/2021	5	20	
6	Architectural Coating	Architectural Coating	2/24/2021	3/23/2021	5	20	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 10

Acres of Paving: 0

Residential Indoor: 160,380; Residential Outdoor: 53,460; 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
Architectural Coating	Air Compressors	1	6.00	78	0.48
Demolition	Excavators	3	8.00	158	0.38
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Grading	Excavators	1	8.00	158	0.38
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Paving	Pavers	2	8.00	130	0.42
Paving	Rollers	2	8.00	80	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Grading	Graders	1	8.00	187	0.41
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Paving	Paving Equipment	2	8.00	132	0.36
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Building Construction	Welders	1	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
Demolition	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	16.00	5.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	3.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Soil Stabilizer

Replace Ground Cover

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					
Off-Road	0.0331	0.3320	0.2175	3.9000e-004		0.0166	0.0166		0.0154	0.0154	0.0000	33.9986	33.9986	9.6000e-003	0.0000	34.2386
Total	**0.0331**	**0.3320**	**0.2175**	**3.9000e-004**		**0.0166**	**0.0166**		**0.0154**	**0.0154**	**0.0000**	**33.9986**	**33.9986**	**9.6000e-003**	**0.0000**	**34.2386**

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	0.0000	0.0000	0.0000	0.0000	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	6.7000e-004	5.1000e-004	5.6900e-003	2.0000e-005	1.6500e-003	1.0000e-005	1.6600e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.4829	1.4829	4.0000e-005	0.0000	1.4840
Total	**6.7000e-004**	**5.1000e-004**	**5.6900e-003**	**2.0000e-005**	**1.6500e-003**	**1.0000e-005**	**1.6600e-003**	**4.4000e-004**	**1.0000e-005**	**4.5000e-004**	**0.0000**	**1.4829**	**1.4829**	**4.0000e-005**	**0.0000**	**1.4840**

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	0.0331	0.3320	0.2175	3.9000e-004		0.0166	0.0166		0.0154	0.0154	0.0000	33.9986	33.9986	9.6000e-003	0.0000	34.2385
Total	**0.0331**	**0.3320**	**0.2175**	**3.9000e-004**		**0.0166**	**0.0166**		**0.0154**	**0.0154**	**0.0000**	**33.9986**	**33.9986**	**9.6000e-003**	**0.0000**	**34.2385**

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	0.0000	0.0000	0.0000	0.0000	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	6.7000e-004	5.1000e-004	5.6900e-003	2.0000e-005	1.6500e-003	1.0000e-005	1.6600e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.4829	1.4829	4.0000e-005	0.0000	1.4840
Total	**6.7000e-004**	**5.1000e-004**	**5.6900e-003**	**2.0000e-005**	**1.6500e-003**	**1.0000e-005**	**1.6600e-003**	**4.4000e-004**	**1.0000e-005**	**4.5000e-004**	**0.0000**	**1.4829**	**1.4829**	**4.0000e-005**	**0.0000**	**1.4840**

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					0.0903	0.0000	0.0903	0.0497	0.0000	0.0497	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0204	0.2121	0.1076	1.9000e-004		0.0110	0.0110		0.0101	0.0101	0.0000	16.7153	16.7153	5.4100e-003	0.0000	16.8505
Total	**0.0204**	**0.2121**	**0.1076**	**1.9000e-004**	**0.0903**	**0.0110**	**0.1013**	**0.0497**	**0.0101**	**0.0598**	**0.0000**	**16.7153**	**16.7153**	**5.4100e-003**	**0.0000**	**16.8505**

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	4.0000e-004	3.1000e-004	3.4100e-003	1.0000e-005	9.9000e-004	1.0000e-005	1.0000e-003	2.6000e-004	1.0000e-005	2.7000e-004	0.0000	0.8898	0.8898	3.0000e-005	0.0000	0.8904
Total	**4.0000e-004**	**3.1000e-004**	**3.4100e-003**	**1.0000e-005**	**9.9000e-004**	**1.0000e-005**	**1.0000e-003**	**2.6000e-004**	**1.0000e-005**	**2.7000e-004**	**0.0000**	**0.8898**	**0.8898**	**3.0000e-005**	**0.0000**	**0.8904**

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					0.0407	0.0000	0.0407	0.0223	0.0000	0.0223	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0204	0.2121	0.1076	1.9000e-004		0.0110	0.0110		0.0101	0.0101	0.0000	16.7153	16.7153	5.4100e-003	0.0000	16.8505
Total	**0.0204**	**0.2121**	**0.1076**	**1.9000e-004**	**0.0407**	**0.0110**	**0.0516**	**0.0223**	**0.0101**	**0.0325**	**0.0000**	**16.7153**	**16.7153**	**5.4100e-003**	**0.0000**	**16.8505**

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	4.0000e-004	3.1000e-004	3.4100e-003	1.0000e-005	9.9000e-004	1.0000e-005	1.0000e-003	2.6000e-004	1.0000e-005	2.7000e-004	0.0000	0.8898	0.8898	3.0000e-005	0.0000	0.8904
Total	**4.0000e-004**	**3.1000e-004**	**3.4100e-003**	**1.0000e-005**	**9.9000e-004**	**1.0000e-005**	**1.0000e-003**	**2.6000e-004**	**1.0000e-005**	**2.7000e-004**	**0.0000**	**0.8898**	**0.8898**	**3.0000e-005**	**0.0000**	**0.8904**

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					0.0655	0.0000	0.0655	0.0337	0.0000	0.0337	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0243	0.2639	0.1605	3.0000e-004		0.0127	0.0127		0.0117	0.0117	0.0000	26.0588	26.0588	8.4300e-003	0.0000	26.2694
Total	**0.0243**	**0.2639**	**0.1605**	**3.0000e-004**	**0.0655**	**0.0127**	**0.0783**	**0.0337**	**0.0117**	**0.0454**	**0.0000**	**26.0588**	**26.0588**	**8.4300e-003**	**0.0000**	**26.2694**

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	0.0000	0.0000	0.0000	0.0000	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	6.7000e-004	5.1000e-004	5.6900e-003	2.0000e-005	1.6500e-003	1.0000e-005	1.6600e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.4829	1.4829	4.0000e-005	0.0000	1.4840
Total	**6.7000e-004**	**5.1000e-004**	**5.6900e-003**	**2.0000e-005**	**1.6500e-003**	**1.0000e-005**	**1.6600e-003**	**4.4000e-004**	**1.0000e-005**	**4.5000e-004**	**0.0000**	**1.4829**	**1.4829**	**4.0000e-005**	**0.0000**	**1.4840**

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					0.0295	0.0000	0.0295	0.0152	0.0000	0.0152	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0243	0.2639	0.1605	3.0000e-004		0.0127	0.0127		0.0117	0.0117	0.0000	26.0587	26.0587	8.4300e-003	0.0000	26.2694
Total	**0.0243**	**0.2639**	**0.1605**	**3.0000e-004**	**0.0295**	**0.0127**	**0.0422**	**0.0152**	**0.0117**	**0.0269**	**0.0000**	**26.0587**	**26.0587**	**8.4300e-003**	**0.0000**	**26.2694**

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	0.0000	0.0000	0.0000	0.0000	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	6.7000e-004	5.1000e-004	5.6900e-003	2.0000e-005	1.6500e-003	1.0000e-005	1.6600e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.4829	1.4829	4.0000e-005	0.0000	1.4840
Total	**6.7000e-004**	**5.1000e-004**	**5.6900e-003**	**2.0000e-005**	**1.6500e-003**	**1.0000e-005**	**1.6600e-003**	**4.4000e-004**	**1.0000e-005**	**4.5000e-004**	**0.0000**	**1.4829**	**1.4829**	**4.0000e-005**	**0.0000**	**1.4840**

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	0.2247	2.0337	1.7859	2.8500e-003		0.1184	0.1184		0.1113	0.1113	0.0000	245.5066	245.5066	0.0599	0.0000	247.0040
Total	**0.2247**	**2.0337**	**1.7859**	**2.8500e-003**		**0.1184**	**0.1184**		**0.1113**	**0.1113**	**0.0000**	**245.5066**	**245.5066**	**0.0599**	**0.0000**	**247.0040**

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	1.7900e-003	0.0568	0.0143	1.3000e-004	3.3400e-003	2.8000e-004	3.6200e-003	9.6000e-004	2.7000e-004	1.2300e-003	0.0000	12.9663	12.9663	8.7000e-004	0.0000	12.9879
Worker	7.5500e-003	5.8100e-003	0.0643	1.9000e-004	0.0186	1.4000e-004	0.0188	4.9400e-003	1.3000e-004	5.0700e-003	0.0000	16.7672	16.7672	4.8000e-004	0.0000	16.7792
Total	**9.3400e-003**	**0.0626**	**0.0787**	**3.2000e-004**	**0.0220**	**4.2000e-004**	**0.0224**	**5.9000e-003**	**4.0000e-004**	**6.3000e-003**	**0.0000**	**29.7335**	**29.7335**	**1.3500e-003**	**0.0000**	**29.7672**

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	0.2247	2.0337	1.7859	2.8500e-003		0.1184	0.1184		0.1113	0.1113	0.0000	245.5063	245.5063	0.0599	0.0000	247.0037
Total	**0.2247**	**2.0337**	**1.7859**	**2.8500e-003**		**0.1184**	**0.1184**		**0.1113**	**0.1113**	**0.0000**	**245.5063**	**245.5063**	**0.0599**	**0.0000**	**247.0037**

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	1.7900e-003	0.0568	0.0143	1.3000e-004	3.3400e-003	2.8000e-004	3.6200e-003	9.6000e-004	2.7000e-004	1.2300e-003	0.0000	12.9663	12.9663	8.7000e-004	0.0000	12.9879
Worker	7.5500e-003	5.8100e-003	0.0643	1.9000e-004	0.0186	1.4000e-004	0.0188	4.9400e-003	1.3000e-004	5.0700e-003	0.0000	16.7672	16.7672	4.8000e-004	0.0000	16.7792
Total	**9.3400e-003**	**0.0626**	**0.0787**	**3.2000e-004**	**0.0220**	**4.2000e-004**	**0.0224**	**5.9000e-003**	**4.0000e-004**	**6.3000e-003**	**0.0000**	**29.7335**	**29.7335**	**1.3500e-003**	**0.0000**	**29.7672**

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	0.0171	0.1569	0.1492	2.4000e-004		8.6300e-003	8.6300e-003		8.1100e-003	8.1100e-003	0.0000	20.8474	20.8474	5.0300e-003	0.0000	20.9731
Total	**0.0171**	**0.1569**	**0.1492**	**2.4000e-004**		**8.6300e-003**	**8.6300e-003**		**8.1100e-003**	**8.1100e-003**	**0.0000**	**20.8474**	**20.8474**	**5.0300e-003**	**0.0000**	**20.9731**

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	1.3000e-004	4.3800e-003	1.1100e-003	1.0000e-005	2.8000e-004	1.0000e-005	2.9000e-004	8.0000e-005	1.0000e-005	9.0000e-005	0.0000	1.0926	1.0926	7.0000e-005	0.0000	1.0944
Worker	6.0000e-004	4.4000e-004	5.0300e-003	2.0000e-005	1.5800e-003	1.0000e-005	1.5900e-003	4.2000e-004	1.0000e-005	4.3000e-004	0.0000	1.3776	1.3776	4.0000e-005	0.0000	1.3785
Total	**7.3000e-004**	**4.8200e-003**	**6.1400e-003**	**3.0000e-005**	**1.8600e-003**	**2.0000e-005**	**1.8800e-003**	**5.0000e-004**	**2.0000e-005**	**5.2000e-004**	**0.0000**	**2.4702**	**2.4702**	**1.1000e-004**	**0.0000**	**2.4729**

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	0.0171	0.1569	0.1492	2.4000e-004		8.6300e-003	8.6300e-003		8.1100e-003	8.1100e-003	0.0000	20.8473	20.8473	5.0300e-003	0.0000	20.9731
Total	**0.0171**	**0.1569**	**0.1492**	**2.4000e-004**		**8.6300e-003**	**8.6300e-003**		**8.1100e-003**	**8.1100e-003**	**0.0000**	**20.8473**	**20.8473**	**5.0300e-003**	**0.0000**	**20.9731**

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	1.3000e-004	4.3800e-003	1.1100e-003	1.0000e-005	2.8000e-004	1.0000e-005	2.9000e-004	8.0000e-005	1.0000e-005	9.0000e-005	0.0000	1.0926	1.0926	7.0000e-005	0.0000	1.0944
Worker	6.0000e-004	4.4000e-004	5.0300e-003	2.0000e-005	1.5800e-003	1.0000e-005	1.5900e-003	4.2000e-004	1.0000e-005	4.3000e-004	0.0000	1.3776	1.3776	4.0000e-005	0.0000	1.3785
Total	**7.3000e-004**	**4.8200e-003**	**6.1400e-003**	**3.0000e-005**	**1.8600e-003**	**2.0000e-005**	**1.8800e-003**	**5.0000e-004**	**2.0000e-005**	**5.2000e-004**	**0.0000**	**2.4702**	**2.4702**	**1.1000e-004**	**0.0000**	**2.4729**

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	0.0126	0.1292	0.1465	2.3000e-004		6.7800e-003	6.7800e-003		6.2400e-003	6.2400e-003	0.0000	20.0235	20.0235	6.4800e-003	0.0000	20.1854
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0126**	**0.1292**	**0.1465**	**2.3000e-004**		**6.7800e-003**	**6.7800e-003**		**6.2400e-003**	**6.2400e-003**	**0.0000**	**20.0235**	**20.0235**	**6.4800e-003**	**0.0000**	**20.1854**

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	6.2000e-004	4.6000e-004	5.2300e-003	2.0000e-005	1.6500e-003	1.0000e-005	1.6600e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.4350	1.4350	4.0000e-005	0.0000	1.4359
Total	**6.2000e-004**	**4.6000e-004**	**5.2300e-003**	**2.0000e-005**	**1.6500e-003**	**1.0000e-005**	**1.6600e-003**	**4.4000e-004**	**1.0000e-005**	**4.5000e-004**	**0.0000**	**1.4350**	**1.4350**	**4.0000e-005**	**0.0000**	**1.4359**

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	0.0126	0.1292	0.1465	2.3000e-004		6.7800e-003	6.7800e-003		6.2400e-003	6.2400e-003	0.0000	20.0235	20.0235	6.4800e-003	0.0000	20.1854
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0126**	**0.1292**	**0.1465**	**2.3000e-004**		**6.7800e-003**	**6.7800e-003**		**6.2400e-003**	**6.2400e-003**	**0.0000**	**20.0235**	**20.0235**	**6.4800e-003**	**0.0000**	**20.1854**

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	6.2000e-004	4.6000e-004	5.2300e-003	2.0000e-005	1.6500e-003	1.0000e-005	1.6600e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.4350	1.4350	4.0000e-005	0.0000	1.4359
Total	**6.2000e-004**	**4.6000e-004**	**5.2300e-003**	**2.0000e-005**	**1.6500e-003**	**1.0000e-005**	**1.6600e-003**	**4.4000e-004**	**1.0000e-005**	**4.5000e-004**	**0.0000**	**1.4350**	**1.4350**	**4.0000e-005**	**0.0000**	**1.4359**

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	0.2478					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	**0.2500**	**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	1.2000e-004	9.0000e-005	1.0500e-003	0.0000	3.3000e-004	0.0000	3.3000e-004	9.0000e-005	0.0000	9.0000e-005	0.0000	0.2870	0.2870	1.0000e-005	0.0000	0.2872
Total	**1.2000e-004**	**9.0000e-005**	**1.0500e-003**	**0.0000**	**3.3000e-004**	**0.0000**	**3.3000e-004**	**9.0000e-005**	**0.0000**	**9.0000e-005**	**0.0000**	**0.2870**	**0.2870**	**1.0000e-005**	**0.0000**	**0.2872**

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	0.2478					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	**0.2500**	**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	1.2000e-004	9.0000e-005	1.0500e-003	0.0000	3.3000e-004	0.0000	3.3000e-004	9.0000e-005	0.0000	9.0000e-005	0.0000	0.2870	0.2870	1.0000e-005	0.0000	0.2872
Total	**1.2000e-004**	**9.0000e-005**	**1.0500e-003**	**0.0000**	**3.3000e-004**	**0.0000**	**3.3000e-004**	**9.0000e-005**	**0.0000**	**9.0000e-005**	**0.0000**	**0.2870**	**0.2870**	**1.0000e-005**	**0.0000**	**0.2872**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Increase Density

Improve Pedestrian Network

	ROG	NOx	CO	SO2	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	0.1310	0.7099	1.8104	6.5400e-003	0.5400	5.3300e-003	0.5453	0.1447	4.9800e-003	0.1497	0.0000	603.2495	603.2495	0.0296	0.0000	603.9891
Unmitigated	0.1309	0.7095	1.8090	6.5300e-003	0.5395	5.3300e-003	0.5448	0.1446	4.9800e-003	0.1495	0.0000	602.7120	602.7120	0.0296	0.0000	603.4510

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Single Family Housing	418.88	436.04	379.28	1,420,422	1,421,760
Total	418.88	436.04	379.28	1,420,422	1,421,760

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
Single Family Housing	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Single Family Housing	0.551391	0.043400	0.201050	0.120272	0.016162	0.005864	0.021029	0.030512	0.002059	0.001866	0.004766	0.000706	0.000924

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	122.1993	122.1993	5.0400e-003	1.0400e-003	122.6365
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	122.1993	122.1993	5.0400e-003	1.0400e-003	122.6365
NaturalGas Mitigated	7.2600e-003	0.0620	0.0264	4.0000e-004		5.0200e-003	5.0200e-003		5.0200e-003	5.0200e-003	0.0000	71.8400	71.8400	1.3800e-003	1.3200e-003	72.2669
NaturalGas Unmitigated	7.2600e-003	0.0620	0.0264	4.0000e-004		5.0200e-003	5.0200e-003		5.0200e-003	5.0200e-003	0.0000	71.8400	71.8400	1.3800e-003	1.3200e-003	72.2669

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					
Single Family Housing	1.34623e+006	7.2600e-003	0.0620	0.0264	4.0000e-004		5.0200e-003	5.0200e-003		5.0200e-003	5.0200e-003	0.0000	71.8400	71.8400	1.3800e-003	1.3200e-003	72.2669
Total		**7.2600e-003**	**0.0620**	**0.0264**	**4.0000e-004**		**5.0200e-003**	**5.0200e-003**		**5.0200e-003**	**5.0200e-003**	**0.0000**	**71.8400**	**71.8400**	**1.3800e-003**	**1.3200e-003**	**72.2669**

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					
Single Family Housing	1.34623e +006	7.2600e-003	0.0620	0.0264	4.0000e-004		5.0200e-003	5.0200e-003		5.0200e-003	5.0200e-003	0.0000	71.8400	71.8400	1.3800e-003	1.3200e-003	72.2669
Total		**7.2600e-003**	**0.0620**	**0.0264**	**4.0000e-004**		**5.0200e-003**	**5.0200e-003**		**5.0200e-003**	**5.0200e-003**	**0.0000**	**71.8400**	**71.8400**	**1.3800e-003**	**1.3200e-003**	**72.2669**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Single Family Housing	383525	122.1993	5.0400e-003	1.0400e-003	122.6365
Total		**122.1993**	**5.0400e-003**	**1.0400e-003**	**122.6365**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Single Family Housing	383525	122.1993	5.0400e-003	1.0400e-003	122.6365
Total		**122.1993**	**5.0400e-003**	**1.0400e-003**	**122.6365**

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Paint - Residential Interior

Use Low VOC Paint - Residential Exterior

Use only Natural Gas Hearths

Use Low VOC Cleaning Supplies

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.3257	0.0135	0.4582	8.0000e-005		3.1700e-003	3.1700e-003		3.1700e-003	3.1700e-003	0.0000	10.2506	10.2506	9.0000e-004	1.7000e-004	10.3251
Unmitigated	0.4689	0.0167	0.7345	7.4000e-004		0.0445	0.0445		0.0445	0.0445	4.6736	9.7223	14.3960	0.0147	3.2000e-004	14.8569

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	0.0248					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.2862					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.1441	0.0114	0.2797	7.1000e-004		0.0420	0.0420		0.0420	0.0420	4.6736	8.9811	13.6548	0.0139	3.2000e-004	14.0977
Landscaping	0.0138	5.2500e-003	0.4547	2.0000e-005		2.5100e-003	2.5100e-003		2.5100e-003	2.5100e-003	0.0000	0.7412	0.7412	7.2000e-004	0.0000	0.7592
Total	**0.4689**	**0.0167**	**0.7344**	**7.3000e-004**		**0.0445**	**0.0445**		**0.0445**	**0.0445**	**4.6736**	**9.7223**	**14.3960**	**0.0147**	**3.2000e-004**	**14.8569**

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	0.0248					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.2862					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	9.6000e-004	8.2100e-003	3.4900e-003	5.0000e-005		6.6000e-004	6.6000e-004		6.6000e-004	6.6000e-004	0.0000	9.5094	9.5094	1.8000e-004	1.7000e-004	9.5659
Landscaping	0.0138	5.2500e-003	0.4547	2.0000e-005		2.5100e-003	2.5100e-003		2.5100e-003	2.5100e-003	0.0000	0.7412	0.7412	7.2000e-004	0.0000	0.7592
Total	**0.3257**	**0.0135**	**0.4582**	**7.0000e-005**		**3.1700e-003**	**3.1700e-003**		**3.1700e-003**	**3.1700e-003**	**0.0000**	**10.2506**	**10.2506**	**9.0000e-004**	**1.7000e-004**	**10.3251**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	19.2008	0.0942	2.3600e-003	22.2589
Unmitigated	19.2008	0.0942	2.3600e-003	22.2589

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Single Family Housing	2.86678 / 1.80732	19.2008	0.0942	2.3600e-003	22.2589
Total		**19.2008**	**0.0942**	**2.3600e-003**	**22.2589**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Single Family Housing	2.86678 / 1.80732	19.2008	0.0942	2.3600e-003	22.2589
Total		**19.2008**	**0.0942**	**2.3600e-003**	**22.2589**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	10.4865	0.6197	0.0000	25.9799
Unmitigated	10.4865	0.6197	0.0000	25.9799

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Single Family Housing	51.66	10.4865	0.6197	0.0000	25.9799
Total		**10.4865**	**0.6197**	**0.0000**	**25.9799**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Single Family Housing	51.66	10.4865	0.6197	0.0000	25.9799
Total		**10.4865**	**0.6197**	**0.0000**	**25.9799**

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

19-020 Hobbs GPA CUP TTM 20263

South Coast Air Basin, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Single Family Housing	44.00	Dwelling Unit	6.74	79,200.00	126

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	31
Climate Zone	10			**Operational Year**	2021
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	702.44	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - 44 detached condominium units on 6.74 acres

Construction Phase - Default values used

Off-road Equipment - Default values used

Grading - Default values used

Demolition - Default values used

Trips and VMT - Default values used

On-road Fugitive Dust - Default values used

Construction Off-road Equipment Mitigation - SCAQMD Rule 403 applies

Mobile Land Use Mitigation -

Area Mitigation - No wood fireplace per SCAQMD due to elevation. Low VOC paint per SCAQMD Rule 1113

Table Name	Column Name	Default Value	New Value
tblLandUse	LotAcreage	14.29	6.74

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	4.1572	42.4719	22.3646	0.0405	18.2675	2.1990	20.4664	9.9840	2.0230	12.0071	0.0000	3,919.2804	3,919.2804	1.1978	0.0000	3,945.8527
2021	25.0102	17.9546	17.2922	0.0300	0.2108	0.9609	1.1718	0.0566	0.9034	0.9601	0.0000	2,865.8395	2,865.8395	0.7183	0.0000	2,881.5685
Maximum	**25.0102**	**42.4719**	**22.3646**	**0.0405**	**18.2675**	**2.1990**	**20.4664**	**9.9840**	**2.0230**	**12.0071**	**0.0000**	**3,919.2804**	**3,919.2804**	**1.1978**	**0.0000**	**3,945.8527**

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	4.1572	42.4719	22.3646	0.0405	8.3310	2.1990	10.5300	4.5222	2.0230	6.5452	0.0000	3,919.2804	3,919.2804	1.1978	0.0000	3,945.8527
2021	25.0102	17.9546	17.2922	0.0300	0.2108	0.9609	1.1718	0.0566	0.9034	0.9601	0.0000	2,865.8395	2,865.8395	0.7183	0.0000	2,881.5685
Maximum	**25.0102**	**42.4719**	**22.3646**	**0.0405**	**8.3310**	**2.1990**	**10.5300**	**4.5222**	**2.0230**	**6.5452**	**0.0000**	**3,919.2804**	**3,919.2804**	**1.1978**	**0.0000**	**3,945.8527**

	ROG	**NOx**	**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**	**53.77**	**0.00**	**45.92**	**54.40**	**0.00**	**42.12**	**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	13.3437	0.9549	26.0142	0.0573		3.3811	3.3811		3.3811	3.3811	412.1444	798.5363	1,210.6807	1.2354	0.0280	1,249.9025
Energy	0.0398	0.3399	0.1446	2.1700e-003		0.0275	0.0275		0.0275	0.0275		433.9180	433.9180	8.3200e-003	7.9600e-003	436.4966
Mobile	0.8046	3.9214	10.9270	0.0392	3.1668	0.0307	3.1975	0.8472	0.0287	0.8759		3,982.1688	3,982.1688	0.1894		3,986.9036
Total	**14.1881**	**5.2163**	**37.0858**	**0.0986**	**3.1668**	**3.4393**	**6.6061**	**0.8472**	**3.4373**	**4.2845**	**412.1444**	**5,214.6231**	**5,626.7675**	**1.4331**	**0.0359**	**5,673.3026**

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	1.8910	0.6989	3.9175	4.3800e-003		0.0732	0.0732		0.0732	0.0732	0.0000	845.1245	845.1245	0.0224	0.0154	850.2662
Energy	0.0398	0.3399	0.1446	2.1700e-003		0.0275	0.0275		0.0275	0.0275		433.9180	433.9180	8.3200e-003	7.9600e-003	436.4966
Mobile	0.8049	3.9236	10.9358	0.0392	3.1698	0.0307	3.2005	0.8480	0.0287	0.8767		3,985.7200	3,985.7200	0.1895		3,990.4585
Total	**2.7357**	**4.9624**	**14.9979**	**0.0458**	**3.1698**	**0.1314**	**3.3011**	**0.8480**	**0.1293**	**0.9773**	**0.0000**	**5,264.7625**	**5,264.7625**	**0.2203**	**0.0233**	**5,277.2212**

	ROG	NOx	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	80.72	4.87	59.56	53.61	-0.09	96.18	50.03	-0.09	96.24	77.19	100.00	-0.96	6.43	84.63	35.07	6.98

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2020	1/28/2020	5	20	
2	Site Preparation	Site Preparation	1/29/2020	2/11/2020	5	10	
3	Grading	Grading	2/12/2020	3/10/2020	5	20	
4	Building Construction	Building Construction	3/11/2020	1/26/2021	5	230	
5	Paving	Paving	1/27/2021	2/23/2021	5	20	
6	Architectural Coating	Architectural Coating	2/24/2021	3/23/2021	5	20	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 10

Acres of Paving: 0

Residential Indoor: 160,380; Residential Outdoor: 53,460; 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
Architectural Coating	Air Compressors	1	6.00	78	0.48
Demolition	Excavators	3	8.00	158	0.38
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Grading	Excavators	1	8.00	158	0.38
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Paving	Pavers	2	8.00	130	0.42
Paving	Rollers	2	8.00	80	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Grading	Graders	1	8.00	187	0.41
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Paving	Paving Equipment	2	8.00	132	0.36
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Building Construction	Welders	1	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
Demolition	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	16.00	5.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	3.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Soil Stabilizer

Replace Ground Cover

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					
Off-Road	3.3121	33.2010	21.7532	0.0388		1.6587	1.6587		1.5419	1.5419		3,747.704 9	3,747.704 9	1.0580		3,774.153 6
Total	**3.3121**	**33.2010**	**21.7532**	**0.0388**		**1.6587**	**1.6587**		**1.5419**	**1.5419**		**3,747.704 9**	**3,747.704 9**	**1.0580**		**3,774.153 6**

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	0.0000	0.0000	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	0.0673	0.0455	0.6114	1.7200e-003	0.1677	1.2800e-003	0.1689	0.0445	1.1800e-003	0.0456		171.5755	171.5755	4.9400e-003		171.6991
Total	**0.0673**	**0.0455**	**0.6114**	**1.7200e-003**	**0.1677**	**1.2800e-003**	**0.1689**	**0.0445**	**1.1800e-003**	**0.0456**		**171.5755**	**171.5755**	**4.9400e-003**		**171.6991**

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	3.3121	33.2010	21.7532	0.0388		1.6587	1.6587		1.5419	1.5419	0.0000	3,747.7049	3,747.7049	1.0580		3,774.1536
Total	**3.3121**	**33.2010**	**21.7532**	**0.0388**		**1.6587**	**1.6587**		**1.5419**	**1.5419**	**0.0000**	**3,747.7049**	**3,747.7049**	**1.0580**		**3,774.1536**

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	0.0000	0.0000	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	0.0673	0.0455	0.6114	1.7200e-003	0.1677	1.2800e-003	0.1689	0.0445	1.1800e-003	0.0456		171.5755	171.5755	4.9400e-003		171.6991
Total	**0.0673**	**0.0455**	**0.6114**	**1.7200e-003**	**0.1677**	**1.2800e-003**	**0.1689**	**0.0445**	**1.1800e-003**	**0.0456**		**171.5755**	**171.5755**	**4.9400e-003**		**171.6991**

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					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	4.0765	42.4173	21.5136	0.0380		2.1974	2.1974		2.0216	2.0216		3,685.1016	3,685.1016	1.1918		3,714.8975
Total	**4.0765**	**42.4173**	**21.5136**	**0.0380**	**18.0663**	**2.1974**	**20.2637**	**9.9307**	**2.0216**	**11.9523**		**3,685.1016**	**3,685.1016**	**1.1918**		**3,714.8975**

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	0.0807	0.0546	0.7336	2.0700e-003	0.2012	1.5300e-003	0.2027	0.0534	1.4100e-003	0.0548		205.8905	205.8905	5.9300e-003		206.0389
Total	**0.0807**	**0.0546**	**0.7336**	**2.0700e-003**	**0.2012**	**1.5300e-003**	**0.2027**	**0.0534**	**1.4100e-003**	**0.0548**		**205.8905**	**205.8905**	**5.9300e-003**		**206.0389**

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					8.1298	0.0000	8.1298	4.4688	0.0000	4.4688			0.0000			0.0000
Off-Road	4.0765	42.4173	21.5136	0.0380		2.1974	2.1974		2.0216	2.0216	0.0000	3,685.1016	3,685.1016	1.1918		3,714.8975
Total	**4.0765**	**42.4173**	**21.5136**	**0.0380**	**8.1298**	**2.1974**	**10.3272**	**4.4688**	**2.0216**	**6.4904**	**0.0000**	**3,685.1016**	**3,685.1016**	**1.1918**		**3,714.8975**

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	0.0807	0.0546	0.7336	2.0700e-003	0.2012	1.5300e-003	0.2027	0.0534	1.4100e-003	0.0548		205.8905	205.8905	5.9300e-003		206.0389
Total	**0.0807**	**0.0546**	**0.7336**	**2.0700e-003**	**0.2012**	**1.5300e-003**	**0.2027**	**0.0534**	**1.4100e-003**	**0.0548**		**205.8905**	**205.8905**	**5.9300e-003**		**206.0389**

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					6.5523	0.0000	6.5523	3.3675	0.0000	3.3675			0.0000			0.0000
Off-Road	2.4288	26.3859	16.0530	0.0297		1.2734	1.2734		1.1716	1.1716		2,872.4851	2,872.4851	0.9290		2,895.7106
Total	**2.4288**	**26.3859**	**16.0530**	**0.0297**	**6.5523**	**1.2734**	**7.8258**	**3.3675**	**1.1716**	**4.5390**		**2,872.4851**	**2,872.4851**	**0.9290**		**2,895.7106**

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	0.0000	0.0000	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	0.0673	0.0455	0.6114	1.7200e-003	0.1677	1.2800e-003	0.1689	0.0445	1.1800e-003	0.0456		171.5755	171.5755	4.9400e-003		171.6991
Total	**0.0673**	**0.0455**	**0.6114**	**1.7200e-003**	**0.1677**	**1.2800e-003**	**0.1689**	**0.0445**	**1.1800e-003**	**0.0456**		**171.5755**	**171.5755**	**4.9400e-003**		**171.6991**

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					2.9486	0.0000	2.9486	1.5154	0.0000	1.5154			0.0000			0.0000
Off-Road	2.4288	26.3859	16.0530	0.0297		1.2734	1.2734		1.1716	1.1716	0.0000	2,872.4851	2,872.4851	0.9290		2,895.7106
Total	**2.4288**	**26.3859**	**16.0530**	**0.0297**	**2.9486**	**1.2734**	**4.2220**	**1.5154**	**1.1716**	**2.6869**	**0.0000**	**2,872.4851**	**2,872.4851**	**0.9290**		**2,895.7106**

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	0.0000	0.0000	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	0.0673	0.0455	0.6114	1.7200e-003	0.1677	1.2800e-003	0.1689	0.0445	1.1800e-003	0.0456		171.5755	171.5755	4.9400e-003		171.6991
Total	**0.0673**	**0.0455**	**0.6114**	**1.7200e-003**	**0.1677**	**1.2800e-003**	**0.1689**	**0.0445**	**1.1800e-003**	**0.0456**		**171.5755**	**171.5755**	**4.9400e-003**		**171.6991**

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	2.1198	19.1860	16.8485	0.0269		1.1171	1.1171		1.0503	1.0503		2,553.0631	2,553.0631	0.6229		2,568.6345
Total	**2.1198**	**19.1860**	**16.8485**	**0.0269**		**1.1171**	**1.1171**		**1.0503**	**1.0503**		**2,553.0631**	**2,553.0631**	**0.6229**		**2,568.6345**

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	0.0166	0.5266	0.1281	1.2800e-003	0.0320	2.6100e-003	0.0346	9.2100e-003	2.4900e-003	0.0117		136.3957	136.3957	8.7300e-003		136.6139
Worker	0.0718	0.0485	0.6521	1.8400e-003	0.1788	1.3600e-003	0.1802	0.0474	1.2600e-003	0.0487		183.0138	183.0138	5.2700e-003		183.1457
Total	**0.0884**	**0.5751**	**0.7802**	**3.1200e-003**	**0.2108**	**3.9700e-003**	**0.2148**	**0.0566**	**3.7500e-003**	**0.0604**		**319.4095**	**319.4095**	**0.0140**		**319.7596**

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	2.1198	19.1860	16.8485	0.0269		1.1171	1.1171		1.0503	1.0503	0.0000	2,553.0631	2,553.0631	0.6229		2,568.6345
Total	**2.1198**	**19.1860**	**16.8485**	**0.0269**		**1.1171**	**1.1171**		**1.0503**	**1.0503**	**0.0000**	**2,553.0631**	**2,553.0631**	**0.6229**		**2,568.6345**

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	0.0166	0.5266	0.1281	1.2800e-003	0.0320	2.6100e-003	0.0346	9.2100e-003	2.4900e-003	0.0117		136.3957	136.3957	8.7300e-003		136.6139
Worker	0.0718	0.0485	0.6521	1.8400e-003	0.1788	1.3600e-003	0.1802	0.0474	1.2600e-003	0.0487		183.0138	183.0138	5.2700e-003		183.1457
Total	**0.0884**	**0.5751**	**0.7802**	**3.1200e-003**	**0.2108**	**3.9700e-003**	**0.2148**	**0.0566**	**3.7500e-003**	**0.0604**		**319.4095**	**319.4095**	**0.0140**		**319.7596**

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	1.9009	17.4321	16.5752	0.0269		0.9586	0.9586		0.9013	0.9013		2,553.3639	2,553.3639	0.6160		2,568.7643
Total	**1.9009**	**17.4321**	**16.5752**	**0.0269**		**0.9586**	**0.9586**		**0.9013**	**0.9013**		**2,553.3639**	**2,553.3639**	**0.6160**		**2,568.7643**

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	0.0141	0.4788	0.1163	1.2600e-003	0.0320	9.8000e-004	0.0330	9.2100e-003	9.3000e-004	0.0102		135.3719	135.3719	8.3700e-003		135.5812
Worker	0.0670	0.0437	0.6008	1.7800e-003	0.1788	1.3200e-003	0.1802	0.0474	1.2200e-003	0.0487		177.1037	177.1037	4.7700e-003		177.2231
Total	**0.0810**	**0.5225**	**0.7170**	**3.0400e-003**	**0.2108**	**2.3000e-003**	**0.2131**	**0.0566**	**2.1500e-003**	**0.0588**		**312.4756**	**312.4756**	**0.0131**		**312.8042**

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	1.9009	17.4321	16.5752	0.0269		0.9586	0.9586		0.9013	0.9013	0.0000	2,553.3639	2,553.3639	0.6160		2,568.7643
Total	**1.9009**	**17.4321**	**16.5752**	**0.0269**		**0.9586**	**0.9586**		**0.9013**	**0.9013**	**0.0000**	**2,553.3639**	**2,553.3639**	**0.6160**		**2,568.7643**

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	0.0141	0.4788	0.1163	1.2600e-003	0.0320	9.8000e-004	0.0330	9.2100e-003	9.3000e-004	0.0102		135.3719	135.3719	8.3700e-003		135.5812
Worker	0.0670	0.0437	0.6008	1.7800e-003	0.1788	1.3200e-003	0.1802	0.0474	1.2200e-003	0.0487		177.1037	177.1037	4.7700e-003		177.2231
Total	**0.0810**	**0.5225**	**0.7170**	**3.0400e-003**	**0.2108**	**2.3000e-003**	**0.2131**	**0.0566**	**2.1500e-003**	**0.0588**		**312.4756**	**312.4756**	**0.0131**		**312.8042**

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	1.2556	12.9191	14.6532	0.0228		0.6777	0.6777		0.6235	0.6235		2,207.2109	2,207.2109	0.7139		2,225.0573
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.2556**	**12.9191**	**14.6532**	**0.0228**		**0.6777**	**0.6777**		**0.6235**	**0.6235**		**2,207.2109**	**2,207.2109**	**0.7139**		**2,225.0573**

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	0.0628	0.0410	0.5632	1.6700e-003	0.1677	1.2400e-003	0.1689	0.0445	1.1400e-003	0.0456		166.0347	166.0347	4.4800e-003		166.1466
Total	**0.0628**	**0.0410**	**0.5632**	**1.6700e-003**	**0.1677**	**1.2400e-003**	**0.1689**	**0.0445**	**1.1400e-003**	**0.0456**		**166.0347**	**166.0347**	**4.4800e-003**		**166.1466**

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	1.2556	12.9191	14.6532	0.0228		0.6777	0.6777		0.6235	0.6235	0.0000	2,207.2109	2,207.2109	0.7139		2,225.0573
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.2556**	**12.9191**	**14.6532**	**0.0228**		**0.6777**	**0.6777**		**0.6235**	**0.6235**	**0.0000**	**2,207.2109**	**2,207.2109**	**0.7139**		**2,225.0573**

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	0.0628	0.0410	0.5632	1.6700e-003	0.1677	1.2400e-003	0.1689	0.0445	1.1400e-003	0.0456		166.0347	166.0347	4.4800e-003		166.1466
Total	**0.0628**	**0.0410**	**0.5632**	**1.6700e-003**	**0.1677**	**1.2400e-003**	**0.1689**	**0.0445**	**1.1400e-003**	**0.0456**		**166.0347**	**166.0347**	**4.4800e-003**		**166.1466**

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	24.7787					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	**24.9976**	**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	0.0126	8.1900e-003	0.1126	3.3000e-004	0.0335	2.5000e-004	0.0338	8.8900e-003	2.3000e-004	9.1200e-003		33.2070	33.2070	9.0000e-004		33.2293
Total	**0.0126**	**8.1900e-003**	**0.1126**	**3.3000e-004**	**0.0335**	**2.5000e-004**	**0.0338**	**8.8900e-003**	**2.3000e-004**	**9.1200e-003**		**33.2070**	**33.2070**	**9.0000e-004**		**33.2293**

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	24.7787					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	**24.9976**	**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	0.0126	8.1900e-003	0.1126	3.3000e-004	0.0335	2.5000e-004	0.0338	8.8900e-003	2.3000e-004	9.1200e-003		33.2070	33.2070	9.0000e-004		33.2293
Total	**0.0126**	**8.1900e-003**	**0.1126**	**3.3000e-004**	**0.0335**	**2.5000e-004**	**0.0338**	**8.8900e-003**	**2.3000e-004**	**9.1200e-003**		**33.2070**	**33.2070**	**9.0000e-004**		**33.2293**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Increase Density

Improve Pedestrian Network

	ROG	NOx	CO	SO2	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	0.8049	3.9236	10.9358	0.0392	3.1698	0.0307	3.2005	0.8480	0.0287	0.8767		3,985.7200	3,985.7200	0.1895		3,990.4585
Unmitigated	0.8046	3.9214	10.9270	0.0392	3.1668	0.0307	3.1975	0.8472	0.0287	0.8759		3,982.1688	3,982.1688	0.1894		3,986.9036

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Single Family Housing	418.88	436.04	379.28	1,420,422	1,421,760
Total	418.88	436.04	379.28	1,420,422	1,421,760

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
Single Family Housing	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Single Family Housing	0.551391	0.043400	0.201050	0.120272	0.016162	0.005864	0.021029	0.030512	0.002059	0.001866	0.004766	0.000706	0.000924

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	0.0398	0.3399	0.1446	2.1700e-003		0.0275	0.0275		0.0275	0.0275		433.9180	433.9180	8.3200e-003	7.9600e-003	436.4966
NaturalGas Unmitigated	0.0398	0.3399	0.1446	2.1700e-003		0.0275	0.0275		0.0275	0.0275		433.9180	433.9180	8.3200e-003	7.9600e-003	436.4966

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					
Single Family Housing	3688.3	0.0398	0.3399	0.1446	2.1700e-003		0.0275	0.0275		0.0275	0.0275		433.9180	433.9180	8.3200e-003	7.9600e-003	436.4966
Total		**0.0398**	**0.3399**	**0.1446**	**2.1700e-003**		**0.0275**	**0.0275**		**0.0275**	**0.0275**		**433.9180**	**433.9180**	**8.3200e-003**	**7.9600e-003**	**436.4966**

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					
Single Family Housing	3.6883	0.0398	0.3399	0.1446	2.1700e-003		0.0275	0.0275		0.0275	0.0275		433.9180	433.9180	8.3200e-003	7.9600e-003	436.4966
Total		**0.0398**	**0.3399**	**0.1446**	**2.1700e-003**		**0.0275**	**0.0275**		**0.0275**	**0.0275**		**433.9180**	**433.9180**	**8.3200e-003**	**7.9600e-003**	**436.4966**

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Paint - Residential Interior

Use Low VOC Paint - Residential Exterior

Use only Natural Gas Hearths

Use Low VOC Cleaning Supplies

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.8910	0.6989	3.9175	4.3800e-003		0.0732	0.0732		0.0732	0.0732	0.0000	845.1245	845.1245	0.0224	0.0154	850.2662
Unmitigated	13.3437	0.9549	26.0142	0.0573		3.3811	3.3811		3.3811	3.3811	412.1444	798.5363	1,210.680 7	1.2354	0.0280	1,249.902 5

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	0.1358					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.5682					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	11.5296	0.9129	22.3763	0.0571		3.3611	3.3611		3.3611	3.3611	412.1444	792.0000	1,204.144 4	1.2291	0.0280	1,243.207 9
Landscaping	0.1102	0.0420	3.6379	1.9000e-004		0.0201	0.0201		0.0201	0.0201		6.5363	6.5363	6.3300e-003		6.6947
Total	**13.3437**	**0.9549**	**26.0142**	**0.0573**		**3.3811**	**3.3811**		**3.3811**	**3.3811**	**412.1444**	**798.5363**	**1,210.680 7**	**1.2354**	**0.0280**	**1,249.902 5**

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	0.1358					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.5682					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0769	0.6569	0.2795	4.1900e-003		0.0531	0.0531		0.0531	0.0531	0.0000	838.5882	838.5882	0.0161	0.0154	843.5716
Landscaping	0.1102	0.0420	3.6379	1.9000e-004		0.0201	0.0201		0.0201	0.0201		6.5363	6.5363	6.3300e-003		6.6947
Total	**1.8910**	**0.6989**	**3.9175**	**4.3800e-003**		**0.0732**	**0.0732**		**0.0732**	**0.0732**	**0.0000**	**845.1245**	**845.1245**	**0.0224**	**0.0154**	**850.2662**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 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

19-020 Hobbs GPA CUP TTM 20263

South Coast Air Basin, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Single Family Housing	44.00	Dwelling Unit	6.74	79,200.00	126

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	31
Climate Zone	10			**Operational Year**	2021
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	702.44	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - 44 detached condominium units on 6.74 acres

Construction Phase - Default values used

Off-road Equipment - Default values used

Grading - Default values used

Demolition - Default values used

Trips and VMT - Default values used

On-road Fugitive Dust - Default values used

Construction Off-road Equipment Mitigation - SCAQMD Rule 403 applies

Mobile Land Use Mitigation -

Area Mitigation - No wood fireplace per SCAQMD due to elevation. Low VOC paint per SCAQMD Rule 1113

Table Name	Column Name	Default Value	New Value
tblLandUse	LotAcreage	14.29	6.74

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	4.1653	42.4773	22.3076	0.0404	18.2675	2.1990	20.4664	9.9840	2.0230	12.0071	0.0000	3,908.6326	3,908.6326	1.1974	0.0000	3,935.1971
2021	25.0115	17.9578	17.2482	0.0298	0.2108	0.9610	1.1718	0.0566	0.9035	0.9601	0.0000	2,851.1550	2,851.1550	0.7181	0.0000	2,866.8907
Maximum	**25.0115**	**42.4773**	**22.3076**	**0.0404**	**18.2675**	**2.1990**	**20.4664**	**9.9840**	**2.0230**	**12.0071**	**0.0000**	**3,908.6326**	**3,908.6326**	**1.1974**	**0.0000**	**3,935.1971**

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	4.1653	42.4773	22.3076	0.0404	8.3310	2.1990	10.5300	4.5222	2.0230	6.5452	0.0000	3,908.6326	3,908.6326	1.1974	0.0000	3,935.1971
2021	25.0115	17.9578	17.2482	0.0298	0.2108	0.9610	1.1718	0.0566	0.9035	0.9601	0.0000	2,851.1550	2,851.1550	0.7181	0.0000	2,866.8907
Maximum	**25.0115**	**42.4773**	**22.3076**	**0.0404**	**8.3310**	**2.1990**	**10.5300**	**4.5222**	**2.0230**	**6.5452**	**0.0000**	**3,908.6326**	**3,908.6326**	**1.1974**	**0.0000**	**3,935.1971**

	ROG	**NOx**	**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**	**53.77**	**0.00**	**45.92**	**54.40**	**0.00**	**42.12**	**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	13.3437	0.9549	26.0142	0.0573		3.3811	3.3811		3.3811	3.3811	412.1444	798.5363	1,210.6807	1.2354	0.0280	1,249.9025
Energy	0.0398	0.3399	0.1446	2.1700e-003		0.0275	0.0275		0.0275	0.0275		433.9180	433.9180	8.3200e-003	7.9600e-003	436.4966
Mobile	0.7733	4.0142	10.2716	0.0371	3.1668	0.0309	3.1976	0.8472	0.0288	0.8760		3,778.9549	3,778.9549	0.1888		3,783.6738
Total	**14.1568**	**5.3090**	**36.4304**	**0.0966**	**3.1668**	**3.4395**	**6.6063**	**0.8472**	**3.4374**	**4.2847**	**412.1444**	**5,011.4092**	**5,423.5536**	**1.4325**	**0.0359**	**5,470.0729**

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	1.8910	0.6989	3.9175	4.3800e-003		0.0732	0.0732		0.0732	0.0732	0.0000	845.1245	845.1245	0.0224	0.0154	850.2662
Energy	0.0398	0.3399	0.1446	2.1700e-003		0.0275	0.0275		0.0275	0.0275		433.9180	433.9180	8.3200e-003	7.9600e-003	436.4966
Mobile	0.7736	4.0165	10.2794	0.0372	3.1698	0.0309	3.2006	0.8480	0.0288	0.8769		3,782.3331	3,782.3331	0.1889		3,787.0556
Total	**2.7044**	**5.0553**	**14.3415**	**0.0437**	**3.1698**	**0.1315**	**3.3013**	**0.8480**	**0.1295**	**0.9775**	**0.0000**	**5,061.3756**	**5,061.3756**	**0.2196**	**0.0233**	**5,073.8183**

	ROG	NOx	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	**80.90**	**4.78**	**60.63**	**54.73**	**-0.09**	**96.18**	**50.03**	**-0.09**	**96.23**	**77.19**	**100.00**	**-1.00**	**6.68**	**84.67**	**35.07**	**7.24**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2020	1/28/2020	5	20	
2	Site Preparation	Site Preparation	1/29/2020	2/11/2020	5	10	
3	Grading	Grading	2/12/2020	3/10/2020	5	20	
4	Building Construction	Building Construction	3/11/2020	1/26/2021	5	230	
5	Paving	Paving	1/27/2021	2/23/2021	5	20	
6	Architectural Coating	Architectural Coating	2/24/2021	3/23/2021	5	20	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 10

Acres of Paving: 0

Residential Indoor: 160,380; Residential Outdoor: 53,460; 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
Architectural Coating	Air Compressors	1	6.00	78	0.48
Demolition	Excavators	3	8.00	158	0.38
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Grading	Excavators	1	8.00	158	0.38
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Paving	Pavers	2	8.00	130	0.42
Paving	Rollers	2	8.00	80	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Grading	Graders	1	8.00	187	0.41
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Paving	Paving Equipment	2	8.00	132	0.36
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Building Construction	Welders	1	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
Demolition	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	16.00	5.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	3.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Soil Stabilizer

Replace Ground Cover

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					
Off-Road	3.3121	33.2010	21.7532	0.0388		1.6587	1.6587		1.5419	1.5419		3,747.704 9	3,747.704 9	1.0580		3,774.153 6
Total	**3.3121**	**33.2010**	**21.7532**	**0.0388**		**1.6587**	**1.6587**		**1.5419**	**1.5419**		**3,747.704 9**	**3,747.704 9**	**1.0580**		**3,774.153 6**

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	0.0000	0.0000	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	0.0740	0.0500	0.5544	1.6200e-003	0.1677	1.2800e-003	0.1689	0.0445	1.1800e-003	0.0456		160.9277	160.9277	4.6300e-003		161.0435
Total	**0.0740**	**0.0500**	**0.5544**	**1.6200e-003**	**0.1677**	**1.2800e-003**	**0.1689**	**0.0445**	**1.1800e-003**	**0.0456**		**160.9277**	**160.9277**	**4.6300e-003**		**161.0435**

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	3.3121	33.2010	21.7532	0.0388		1.6587	1.6587		1.5419	1.5419	0.0000	3,747.704 9	3,747.704 9	1.0580		3,774.153 6
Total	**3.3121**	**33.2010**	**21.7532**	**0.0388**		**1.6587**	**1.6587**		**1.5419**	**1.5419**	**0.0000**	**3,747.704 9**	**3,747.704 9**	**1.0580**		**3,774.153 6**

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	0.0000	0.0000	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	0.0740	0.0500	0.5544	1.6200e-003	0.1677	1.2800e-003	0.1689	0.0445	1.1800e-003	0.0456		160.9277	160.9277	4.6300e-003		161.0435
Total	**0.0740**	**0.0500**	**0.5544**	**1.6200e-003**	**0.1677**	**1.2800e-003**	**0.1689**	**0.0445**	**1.1800e-003**	**0.0456**		**160.9277**	**160.9277**	**4.6300e-003**		**161.0435**

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					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	4.0765	42.4173	21.5136	0.0380		2.1974	2.1974		2.0216	2.0216		3,685.1016	3,685.1016	1.1918		3,714.8975
Total	**4.0765**	**42.4173**	**21.5136**	**0.0380**	**18.0663**	**2.1974**	**20.2637**	**9.9307**	**2.0216**	**11.9523**		**3,685.1016**	**3,685.1016**	**1.1918**		**3,714.8975**

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	0.0888	0.0600	0.6653	1.9400e-003	0.2012	1.5300e-003	0.2027	0.0534	1.4100e-003	0.0548		193.1132	193.1132	5.5600e-003		193.2522
Total	**0.0888**	**0.0600**	**0.6653**	**1.9400e-003**	**0.2012**	**1.5300e-003**	**0.2027**	**0.0534**	**1.4100e-003**	**0.0548**		**193.1132**	**193.1132**	**5.5600e-003**		**193.2522**

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					8.1298	0.0000	8.1298	4.4688	0.0000	4.4688			0.0000			0.0000
Off-Road	4.0765	42.4173	21.5136	0.0380		2.1974	2.1974		2.0216	2.0216	0.0000	3,685.1016	3,685.1016	1.1918		3,714.8975
Total	**4.0765**	**42.4173**	**21.5136**	**0.0380**	**8.1298**	**2.1974**	**10.3272**	**4.4688**	**2.0216**	**6.4904**	**0.0000**	**3,685.1016**	**3,685.1016**	**1.1918**		**3,714.8975**

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	0.0888	0.0600	0.6653	1.9400e-003	0.2012	1.5300e-003	0.2027	0.0534	1.4100e-003	0.0548		193.1132	193.1132	5.5600e-003		193.2522
Total	**0.0888**	**0.0600**	**0.6653**	**1.9400e-003**	**0.2012**	**1.5300e-003**	**0.2027**	**0.0534**	**1.4100e-003**	**0.0548**		**193.1132**	**193.1132**	**5.5600e-003**		**193.2522**

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					6.5523	0.0000	6.5523	3.3675	0.0000	3.3675			0.0000			0.0000
Off-Road	2.4288	26.3859	16.0530	0.0297		1.2734	1.2734		1.1716	1.1716		2,872.485 1	2,872.485 1	0.9290		2,895.710 6
Total	**2.4288**	**26.3859**	**16.0530**	**0.0297**	**6.5523**	**1.2734**	**7.8258**	**3.3675**	**1.1716**	**4.5390**		**2,872.485 1**	**2,872.485 1**	**0.9290**		**2,895.710 6**

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	0.0000	0.0000	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	0.0740	0.0500	0.5544	1.6200e-003	0.1677	1.2800e-003	0.1689	0.0445	1.1800e-003	0.0456		160.9277	160.9277	4.6300e-003		161.0435
Total	**0.0740**	**0.0500**	**0.5544**	**1.6200e-003**	**0.1677**	**1.2800e-003**	**0.1689**	**0.0445**	**1.1800e-003**	**0.0456**		**160.9277**	**160.9277**	**4.6300e-003**		**161.0435**

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					2.9486	0.0000	2.9486	1.5154	0.0000	1.5154			0.0000			0.0000
Off-Road	2.4288	26.3859	16.0530	0.0297		1.2734	1.2734		1.1716	1.1716	0.0000	2,872.4851	2,872.4851	0.9290		2,895.7106
Total	**2.4288**	**26.3859**	**16.0530**	**0.0297**	**2.9486**	**1.2734**	**4.2220**	**1.5154**	**1.1716**	**2.6869**	**0.0000**	**2,872.4851**	**2,872.4851**	**0.9290**		**2,895.7106**

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	0.0000	0.0000	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	0.0740	0.0500	0.5544	1.6200e-003	0.1677	1.2800e-003	0.1689	0.0445	1.1800e-003	0.0456		160.9277	160.9277	4.6300e-003		161.0435
Total	**0.0740**	**0.0500**	**0.5544**	**1.6200e-003**	**0.1677**	**1.2800e-003**	**0.1689**	**0.0445**	**1.1800e-003**	**0.0456**		**160.9277**	**160.9277**	**4.6300e-003**		**161.0435**

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	2.1198	19.1860	16.8485	0.0269		1.1171	1.1171		1.0503	1.0503		2,553.0631	2,553.0631	0.6229		2,568.6345
Total	**2.1198**	**19.1860**	**16.8485**	**0.0269**		**1.1171**	**1.1171**		**1.0503**	**1.0503**		**2,553.0631**	**2,553.0631**	**0.6229**		**2,568.6345**

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	0.0174	0.5264	0.1419	1.2400e-003	0.0320	2.6500e-003	0.0346	9.2100e-003	2.5300e-003	0.0117		132.6887	132.6887	9.3300e-003		132.9220
Worker	0.0790	0.0533	0.5913	1.7200e-003	0.1788	1.3600e-003	0.1802	0.0474	1.2600e-003	0.0487		171.6562	171.6562	4.9400e-003		171.7797
Total	**0.0963**	**0.5797**	**0.7333**	**2.9600e-003**	**0.2108**	**4.0100e-003**	**0.2149**	**0.0566**	**3.7900e-003**	**0.0604**		**304.3449**	**304.3449**	**0.0143**		**304.7017**

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	2.1198	19.1860	16.8485	0.0269		1.1171	1.1171		1.0503	1.0503	0.0000	2,553.0631	2,553.0631	0.6229		2,568.6345
Total	**2.1198**	**19.1860**	**16.8485**	**0.0269**		**1.1171**	**1.1171**		**1.0503**	**1.0503**	**0.0000**	**2,553.0631**	**2,553.0631**	**0.6229**		**2,568.6345**

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	0.0174	0.5264	0.1419	1.2400e-003	0.0320	2.6500e-003	0.0346	9.2100e-003	2.5300e-003	0.0117		132.6887	132.6887	9.3300e-003		132.9220
Worker	0.0790	0.0533	0.5913	1.7200e-003	0.1788	1.3600e-003	0.1802	0.0474	1.2600e-003	0.0487		171.6562	171.6562	4.9400e-003		171.7797
Total	**0.0963**	**0.5797**	**0.7333**	**2.9600e-003**	**0.2108**	**4.0100e-003**	**0.2149**	**0.0566**	**3.7900e-003**	**0.0604**		**304.3449**	**304.3449**	**0.0143**		**304.7017**

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	1.9009	17.4321	16.5752	0.0269		0.9586	0.9586		0.9013	0.9013		2,553.3639	2,553.3639	0.6160		2,568.7643
Total	**1.9009**	**17.4321**	**16.5752**	**0.0269**		**0.9586**	**0.9586**		**0.9013**	**0.9013**		**2,553.3639**	**2,553.3639**	**0.6160**		**2,568.7643**

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	0.0148	0.4777	0.1292	1.2300e-003	0.0320	1.0100e-003	0.0330	9.2100e-003	9.6000e-004	0.0102		131.6869	131.6869	8.9500e-003		131.9106
Worker	0.0738	0.0480	0.5438	1.6700e-003	0.1788	1.3200e-003	0.1802	0.0474	1.2200e-003	0.0487		166.1042	166.1042	4.4700e-003		166.2159
Total	**0.0886**	**0.5257**	**0.6730**	**2.9000e-003**	**0.2108**	**2.3300e-003**	**0.2132**	**0.0566**	**2.1800e-003**	**0.0588**		**297.7911**	**297.7911**	**0.0134**		**298.1264**

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	1.9009	17.4321	16.5752	0.0269		0.9586	0.9586		0.9013	0.9013	0.0000	2,553.3639	2,553.3639	0.6160		2,568.7643
Total	**1.9009**	**17.4321**	**16.5752**	**0.0269**		**0.9586**	**0.9586**		**0.9013**	**0.9013**	**0.0000**	**2,553.3639**	**2,553.3639**	**0.6160**		**2,568.7643**

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	0.0148	0.4777	0.1292	1.2300e-003	0.0320	1.0100e-003	0.0330	9.2100e-003	9.6000e-004	0.0102		131.6869	131.6869	8.9500e-003		131.9106
Worker	0.0738	0.0480	0.5438	1.6700e-003	0.1788	1.3200e-003	0.1802	0.0474	1.2200e-003	0.0487		166.1042	166.1042	4.4700e-003		166.2159
Total	**0.0886**	**0.5257**	**0.6730**	**2.9000e-003**	**0.2108**	**2.3300e-003**	**0.2132**	**0.0566**	**2.1800e-003**	**0.0588**		**297.7911**	**297.7911**	**0.0134**		**298.1264**

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	1.2556	12.9191	14.6532	0.0228		0.6777	0.6777		0.6235	0.6235		2,207.2109	2,207.2109	0.7139		2,225.0573
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.2556**	**12.9191**	**14.6532**	**0.0228**		**0.6777**	**0.6777**		**0.6235**	**0.6235**		**2,207.2109**	**2,207.2109**	**0.7139**		**2,225.0573**

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	0.0692	0.0450	0.5098	1.5600e-003	0.1677	1.2400e-003	0.1689	0.0445	1.1400e-003	0.0456		155.7227	155.7227	4.1900e-003		155.8274
Total	**0.0692**	**0.0450**	**0.5098**	**1.5600e-003**	**0.1677**	**1.2400e-003**	**0.1689**	**0.0445**	**1.1400e-003**	**0.0456**		**155.7227**	**155.7227**	**4.1900e-003**		**155.8274**

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	1.2556	12.9191	14.6532	0.0228		0.6777	0.6777		0.6235	0.6235	0.0000	2,207.2109	2,207.2109	0.7139		2,225.0573
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.2556**	**12.9191**	**14.6532**	**0.0228**		**0.6777**	**0.6777**		**0.6235**	**0.6235**	**0.0000**	**2,207.2109**	**2,207.2109**	**0.7139**		**2,225.0573**

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	0.0692	0.0450	0.5098	1.5600e-003	0.1677	1.2400e-003	0.1689	0.0445	1.1400e-003	0.0456		155.7227	155.7227	4.1900e-003		155.8274
Total	**0.0692**	**0.0450**	**0.5098**	**1.5600e-003**	**0.1677**	**1.2400e-003**	**0.1689**	**0.0445**	**1.1400e-003**	**0.0456**		**155.7227**	**155.7227**	**4.1900e-003**		**155.8274**

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	24.7787					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	**24.9976**	**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	0.0138	8.9900e-003	0.1020	3.1000e-004	0.0335	2.5000e-004	0.0338	8.8900e-003	2.3000e-004	9.1200e-003		31.1445	31.1445	8.4000e-004		31.1655
Total	**0.0138**	**8.9900e-003**	**0.1020**	**3.1000e-004**	**0.0335**	**2.5000e-004**	**0.0338**	**8.8900e-003**	**2.3000e-004**	**9.1200e-003**		**31.1445**	**31.1445**	**8.4000e-004**		**31.1655**

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	24.7787					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	**24.9976**	**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	0.0138	8.9900e-003	0.1020	3.1000e-004	0.0335	2.5000e-004	0.0338	8.8900e-003	2.3000e-004	9.1200e-003		31.1445	31.1445	8.4000e-004		31.1655
Total	**0.0138**	**8.9900e-003**	**0.1020**	**3.1000e-004**	**0.0335**	**2.5000e-004**	**0.0338**	**8.8900e-003**	**2.3000e-004**	**9.1200e-003**		**31.1445**	**31.1445**	**8.4000e-004**		**31.1655**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Increase Density

Improve Pedestrian Network

	ROG	NOx	CO	SO2	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	0.7736	4.0165	10.2794	0.0372	3.1698	0.0309	3.2006	0.8480	0.0288	0.8769		3,782.333 1	3,782.333 1	0.1889		3,787.055 6
Unmitigated	0.7733	4.0142	10.2716	0.0371	3.1668	0.0309	3.1976	0.8472	0.0288	0.8760		3,778.954 9	3,778.954 9	0.1888		3,783.673 8

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Single Family Housing	418.88	436.04	379.28	1,420,422	1,421,760
Total	418.88	436.04	379.28	1,420,422	1,421,760

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
Single Family Housing	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Single Family Housing	0.551391	0.043400	0.201050	0.120272	0.016162	0.005864	0.021029	0.030512	0.002059	0.001866	0.004766	0.000706	0.000924

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	0.0398	0.3399	0.1446	2.1700e-003		0.0275	0.0275		0.0275	0.0275		433.9180	433.9180	8.3200e-003	7.9600e-003	436.4966
NaturalGas Unmitigated	0.0398	0.3399	0.1446	2.1700e-003		0.0275	0.0275		0.0275	0.0275		433.9180	433.9180	8.3200e-003	7.9600e-003	436.4966

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					
Single Family Housing	3688.3	0.0398	0.3399	0.1446	2.1700e-003		0.0275	0.0275		0.0275	0.0275		433.9180	433.9180	8.3200e-003	7.9600e-003	436.4966
Total		**0.0398**	**0.3399**	**0.1446**	**2.1700e-003**		**0.0275**	**0.0275**		**0.0275**	**0.0275**		**433.9180**	**433.9180**	**8.3200e-003**	**7.9600e-003**	**436.4966**

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					
Single Family Housing	3.6883	0.0398	0.3399	0.1446	2.1700e-003		0.0275	0.0275		0.0275	0.0275		433.9180	433.9180	8.3200e-003	7.9600e-003	436.4966
Total		**0.0398**	**0.3399**	**0.1446**	**2.1700e-003**		**0.0275**	**0.0275**		**0.0275**	**0.0275**		**433.9180**	**433.9180**	**8.3200e-003**	**7.9600e-003**	**436.4966**

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Paint - Residential Interior

Use Low VOC Paint - Residential Exterior

Use only Natural Gas Hearths

Use Low VOC Cleaning Supplies

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.8910	0.6989	3.9175	4.3800e-003		0.0732	0.0732		0.0732	0.0732	0.0000	845.1245	845.1245	0.0224	0.0154	850.2662
Unmitigated	13.3437	0.9549	26.0142	0.0573		3.3811	3.3811		3.3811	3.3811	412.1444	798.5363	1,210.6807	1.2354	0.0280	1,249.9025

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	0.1358					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.5682					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	11.5296	0.9129	22.3763	0.0571		3.3611	3.3611		3.3611	3.3611	412.1444	792.0000	1,204.1444	1.2291	0.0280	1,243.2079
Landscaping	0.1102	0.0420	3.6379	1.9000e-004		0.0201	0.0201		0.0201	0.0201		6.5363	6.5363	6.3300e-003		6.6947
Total	**13.3437**	**0.9549**	**26.0142**	**0.0573**		**3.3811**	**3.3811**		**3.3811**	**3.3811**	**412.1444**	**798.5363**	**1,210.6807**	**1.2354**	**0.0280**	**1,249.9025**

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	0.1358					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.5682					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0769	0.6569	0.2795	4.1900e-003		0.0531	0.0531		0.0531	0.0531	0.0000	838.5882	838.5882	0.0161	0.0154	843.5716
Landscaping	0.1102	0.0420	3.6379	1.9000e-004		0.0201	0.0201		0.0201	0.0201		6.5363	6.5363	6.3300e-003		6.6947
Total	**1.8910**	**0.6989**	**3.9175**	**4.3800e-003**		**0.0732**	**0.0732**		**0.0732**	**0.0732**	**0.0000**	**845.1245**	**845.1245**	**0.0224**	**0.0154**	**850.2662**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 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

Tentative Tract 20263
Traffic Impact Analysis
City of Yucaipa

Prepared for:

City of Yucaipa
34272 Yucaipa Blvd.
Yucaipa, CA 92399

Craig Heaps
34282 Yucaipa Blvd.
Yucaipa, CA 92399

Prepared by:

Hernandez, Kroone & Associates
234 East Drake Drive
San Bernardino, CA 92408

July 2019

Hernandez, Kroone & Associates
Engineers & Land Surveyors

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1. Executive Summary

Hernandez, Kroone, and Associates has prepared this traffic impact analysis (TIA) to submit to the City of Yucaipa in order to analyze the operational capabilities of the intersections of:

- 5th Street and Wildwood Canyon Road
- 5th Street and Avenue G
- 5th Street and Avenue H
- 5th Street and County Line Road
- New intersection of 5th Street and Private Street A (project)

These intersections were analyzed in order to determine the impacts due to added traffic from the Tentative Tract 20263 Development.

The project is to be constructed on the westerly side of 5th street, south of Wildwood Canyon Road and north of Avenue G, lying northerly adjacent to the Wildwood Creek Channel.

5th Street, Wildwood Canyon Road, Avenue G, Avenue H, and County Line Road are all under jurisdiction of the City of Yucaipa. 5th Street, Wildwood Canyon Road and County Line Road are a part of San Bernardino County Transportation Authority's (SBCTA) Congestion Management Plan's (CMP) network. This TIA has been prepared to the analysis guidelines of the SBCTA CMP – Appendix B "Guidelines for CMP Traffic Impact Analysis Reports in San Bernardino County", as stated in Section 6 "Transportation Network Operation" of City of Yucaipa's General Plan.

A level of service analysis was performed at weekday AM and PM peak hour periods which represent the highest volume of traffic trips during a typical day. The analysis periods are:

- Existing AM and PM Peak Hour – without project traffic
- Opening Year AM and PM Peak Hour – without project traffic
- Opening Year AM and PM Peak Hour – with cumulative
- Opening Year AM and PM Peak Hour – with cumulative plus project traffic
- Future Year AM and PM Peak Hour – without project traffic
- Future Year AM and PM Peak Hour – with project traffic

The City requires a minimum of level of service "C" for intersections. The intersections of 5th Street and Wildwood Canyon Road and 5th Street and Avenue H both did not meet this level of service requirement for all analyzed scenarios, suggesting that they are currently operating below standard. To mitigate the level of service for these two intersections, as well as the others that did not meet the requirement for Future Year scenarios, HKA analyzed mitigation options of adding through lanes, or changing de-facto right turn lanes into through plus right lanes. These additions improved the level of service to meet the minimum requirement. The "Mitigation" section of this report details these efforts and results.

2. Introduction

2.1 Project Description

The proposed development is located in Yucaipa, CA on the westerly side of 5th Street, approximately 700 feet south of Wildwood Canyon Road, and approximately 650 feet north of the Avenue G. The project site lies adjacent to the Wildwood Creek Channel to the north. The project consists of the development of 43 single family housing units on currently vacant land. For access, the project requires the construction of a new intersection with 5th Street, referred to as the intersection of 5th Street and Private Street A for the purposes of this study. The area that this traffic analysis encompasses is all zoned for residential use.

5th Street is a two-lane street running north/south. The speed limit is 35 mph. The street consists of approximately 12-foot lanes with shoulders that range in width from zero (0) to four (4) feet from Wildwood Canyon Road to County Line Road. According to City of Yucaipa's General Plan 5th Street is considered a secondary highway (arterial).

Wildwood Canyon Road and County Line Road are both two-lane streets running east/west and are also considered secondary highways in the City of Yucaipa. Their speed limits are 40 mph and 35mph, respectively. The intersections of Wildwood Canyon Road and County Line Road at 5th Street are both signalized, containing designated left turn and right turn pockets, except on the east/west legs of these intersections where there are de-facto right turn lanes.

Avenue G is a two-way unstriped road, approximately 22 feet wide running east/west. The speed limit is assumed to be 25 mph due to the residential setting, however the speed limit signs are not posted. The intersection at 5th street is a two-way stop-controlled intersection, with the stop signs being on Avenue G. The intersection has no turn pockets in any direction.

Avenue H is a two-lane residential street running east/west. The speed limit is 35 mph. The intersection at 5th Street is an all-way stop controlled intersection with no left turn pockets but has de-facto right turn lanes.

2.2 Purpose of Study

This traffic impact study analyzes the operational effects of the proposed tract development on existing intersections at 5th Street / Wildwood Canyon Road, 5th Street / Avenue G, 5th Street / Avenue H, 5th Street / County Line Road. The study also analyzes a new proposed intersection of 5th Street and Private Street A which would be a road into the development.

2.3 Study Limits

The study limits are confined to the five intersections listed above, located in the Yucaipa, CA. The development is located on 5th Street between Wildwood Canyon Road and Avenue G. **Figure 1** at the end of this section contains the site's location, as well as the lane configurations for the studied intersections.

3. Method of Analysis

3.1 Traffic Analysis Criteria

HKA hired Counts Unlimited Inc. to provide AM and PM peak hour turning movement traffic counts at the intersections of 5th Street with Wildwood Canyon Road, Avenue G, Avenue H, and County Line Road. The AM and PM peak hours used were 7 AM to 9 AM and 4 PM to 6 PM, respectively.

These intersections were analyzed per SBCTA's CMP Appendix B, "Guidelines for CMP Traffic Impact Analysis Reports in San Bernardino County." HKA used a minimum LOS "C" as stated in the City of Yucaipa's General Plan Section 6 under Policy T-2.1. A Synchro analysis was performed on all five intersections to determine levels of service per the Highway Capacity Manual's 6th Edition parameters.

A cumulative project list was provided by the City of Yucaipa and cumulative trips were calculated and distributed by HKA at the study intersections for opening year scenario background traffic volumes.

To analyze the opening year and future traffic, an annual growth factor of 1.5% was used per the City of Yucaipa's Draft EIR Section 5.15 "Existing Traffic Conditions."

3.2 Determination of Project Trips

The project trip generation represents the amount of traffic which is both attracted to and produced by the development. Determining traffic generation for a specific project is therefore based upon forecasting the amount of traffic that is expected to be both attracted to and produced by the specific land uses being proposed for a given development.

The 43 residential unit trips were calculated using the *Institute of Transportation Engineers (ITE) Trip Generation Manual, 10th Edition: Land Use Package 2*. Based on the development's proposed usage, HKA will use Single Family Detached Housing, Code 210 to analyze the trips being generated by the subdivision of 43 dwelling units. The trips generated by the 43 dwelling units, are outlined in **Table 1** below.

Table 1: Project Trips

Land Use		AM Peak Hour		PM Peak Hour	
Proposed	ITE Code	In	Out	In	Out
43 Residential Units	210	8	24	27	16

3.3 Project Trip Distribution

The intersections of Wildwood Canyon Road and County Line Road at 5th Street were analyzed as these two roads provide the best access to Interstate 10. The project trips were distributed primarily westerly down these roads for freeway access for work commutes, or northerly of the 5th Street / Wildwood Canyon Road intersection and southwesterly of the 5th Street / County Line Road intersection for access to nearby commercial areas.

These project distributions were approved by the City of Yucaipa before proceeding with the traffic analysis and can be seen in **Figure 2** at the end of this section. The project trips were multiplied by the trip distribution values to calculate the trip assignments as seen in **Figure 3** at the end of this section.

3.4 Existing Traffic

Existing traffic counts of weekday AM and PM peak hours were collected by Counts Unlimited at the intersections of 5th Street / Wildwood Canyon Road, 5th Street / Avenue G, 5th Street / Avenue H, and 5th Street / County Line Road. The data that was collected on March 12, 2019 can be seen in the Appendix A of this report and the existing turning movements can be seen on **Figure 4** at the end of this section.

3.5 Growth Rate

It is stated in the City of Yucaipa's Draft Environment Impact Report, Section 5.15 "Existing Traffic Conditions" that the annual traffic growth factor is 1.5%. Due to the City's self-proclaimed growth factor percentage, the location of the project, and the variability of developments and growth in the project's vicinity, HKA opted to use the annual growth rate of 1.5% in favor of a traffic model. The growth was compounded annually and was applied to opening year and future year volumes.

3.6 Cumulative Projects

HKA contacted the City of Yucaipa to gather information on the cumulative projects within the City. The City provided an online GIS tool showing the status of developments in the City. From this source, HKA chose projects that would likely have an impact on the traffic volumes entering the studied intersections due to their proximity to the study intersections and the characteristics of their land uses. This resulted in a total of nine cumulative projects being selected as contributors to future traffic volumes at the study intersections. All nine of the chosen cumulative projects are residential developments located within residential zones of the general plan. To determine the cumulative project trips, HKA used the ITE Trip Generation Manual, 10th Edition to determine trips generated by each site and then distributed some of the trips based on proximity and usage type. A complete breakdown of the trip calculations can be seen in the Appendix B of this report.

Table 2: Cumulative Projects

Project	AM In	AM Out	PM In	PM Out
Detached Condominium – MBTK Homes	11	32	36	21
Multifamily Residential – Wayne Simmons	1	5	5	3
Duplex – Amira Boutros	1	2	2	1
Eagle Housing	7	12	14	11
Detached Condominium – Nova Homes	13	38	42	25

Wildwood Meadows	5	16	18	11
Magnolia Garden Condos	20	60	67	40
Apartments – Wayne Simmons	2	6	6	4
Detached Condominium – TTM 19929	7	22	25	15
TOTAL	67	193	215	131

3.7 Opening Year

Opening year for the project was determined to be the year 2021 by the client. The 1.5% growth rate was applied to calculate the opening year volumes, compounded annually. Opening year volumes were analyzed for three different scenarios: opening year with base traffic, opening year with cumulative nearby project traffic, and opening year with cumulative and studied project traffic. **Figures 5, 6,** and **7** at the end of this section summarize the opening year turning movements for each of these scenarios, respectively. The detailed calculations can be found in the Appendix C of this report.

3.8 Future Year

Future year for the project was determined to be the year of 2040 as stated in the CMP. The growth rate of 1.5% was used to calculate the future year volumes. Future year volumes were analyzed for two different scenarios: future year base traffic and future year plus project traffic. **Figures 8** and **9** summarize the future year turning movements for each these scenarios, respectively. The detailed calculations can be seen in the Appendix C of this report.

Lane Configurations

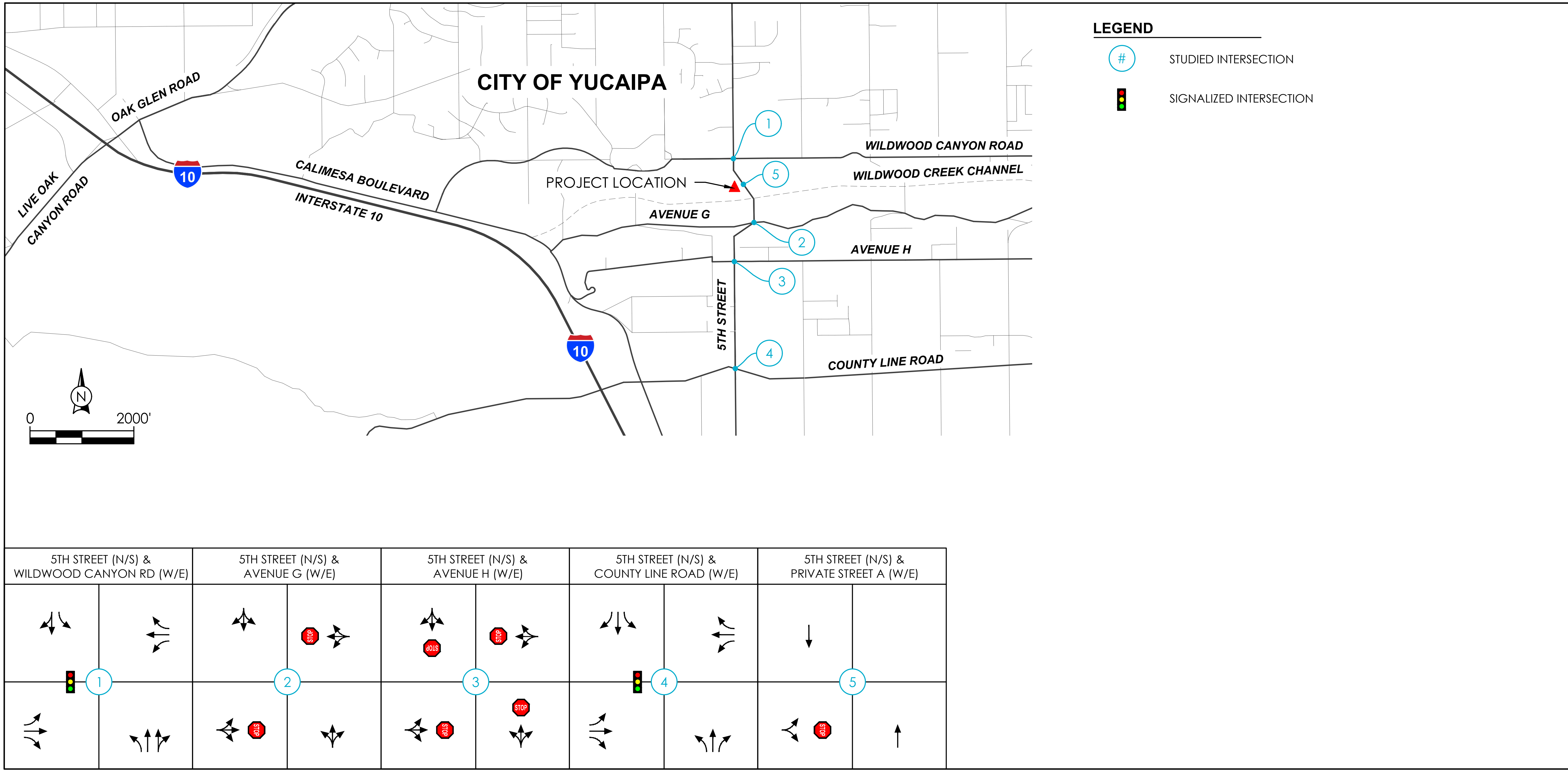

Image Source: County of San Bernardino Geographical Information Systems

Figure 1

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Project Trip Distributions

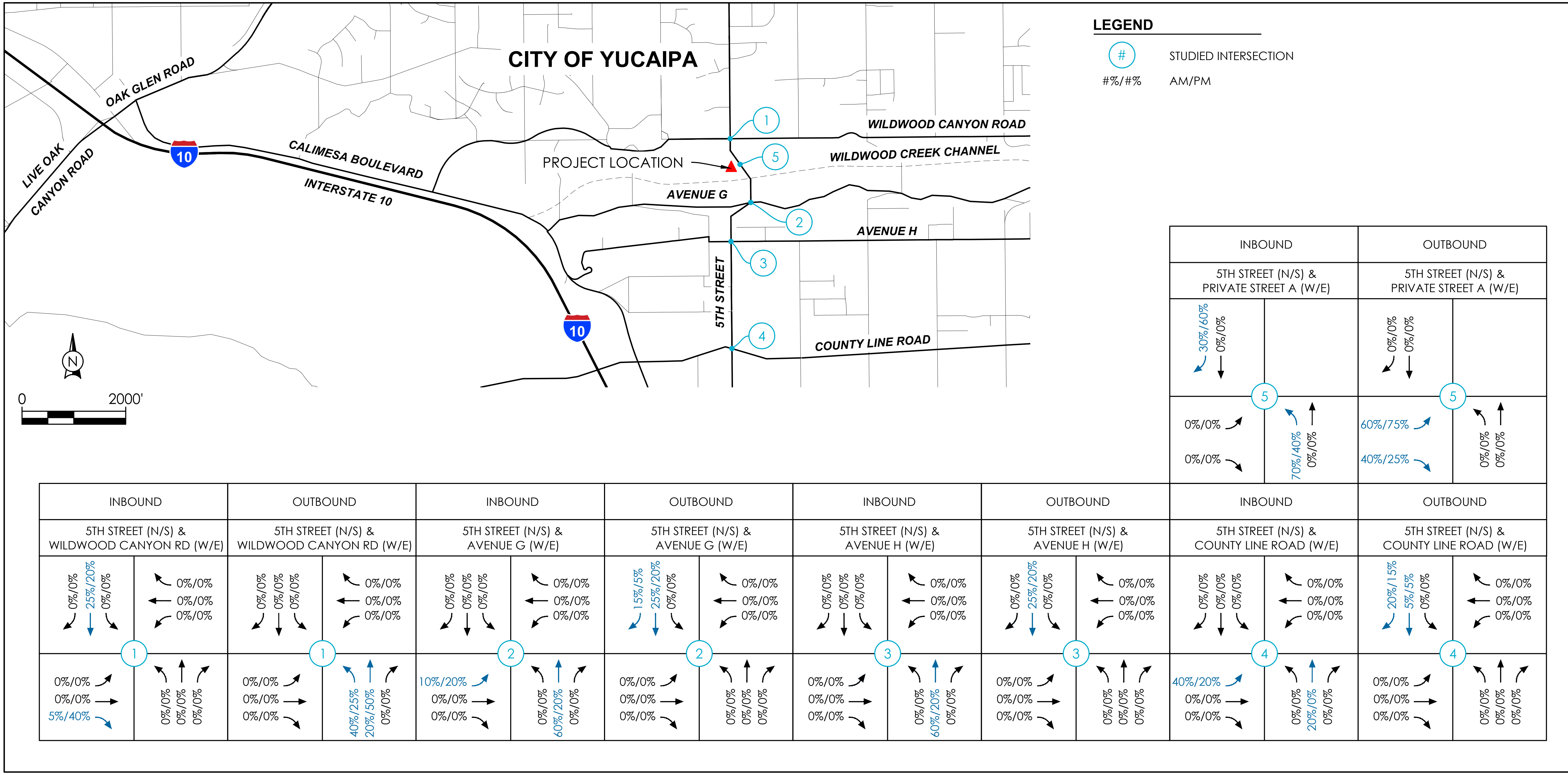

Figure 2

Image Source: County of San Bernardino Geographic Information Services

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Project Trip Assignments

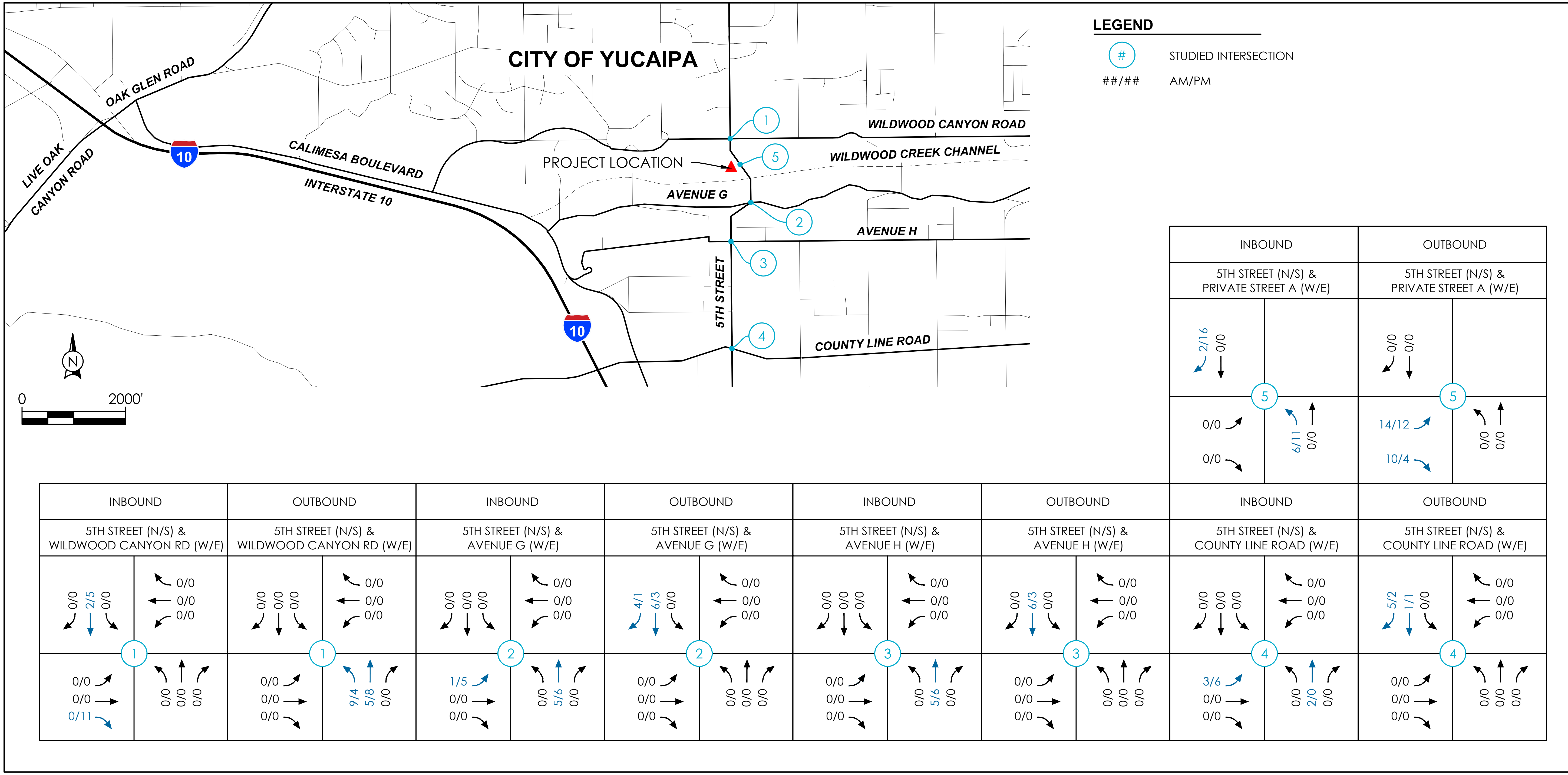
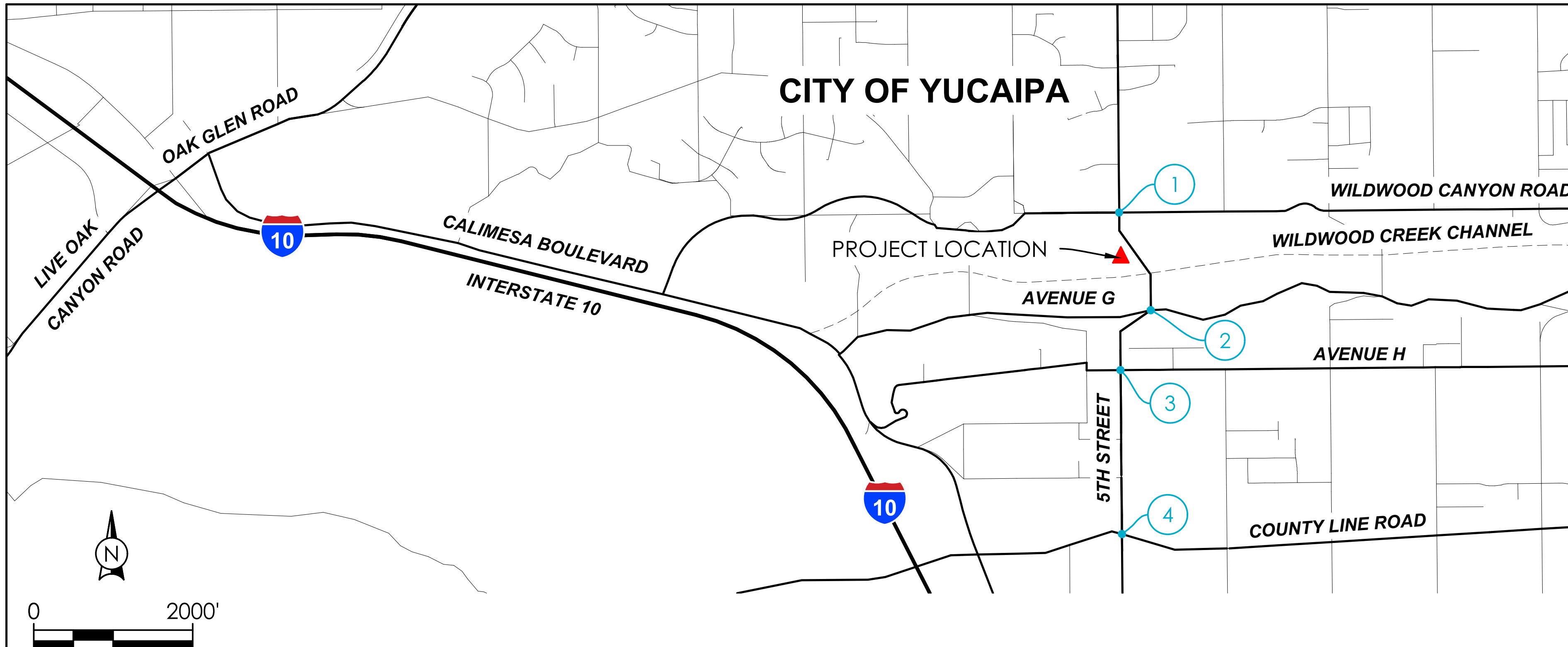


Figure 3

Existing Trip Assignments



LEGEND

#	STUDIED INTERSECTION
###/###	AM/PM

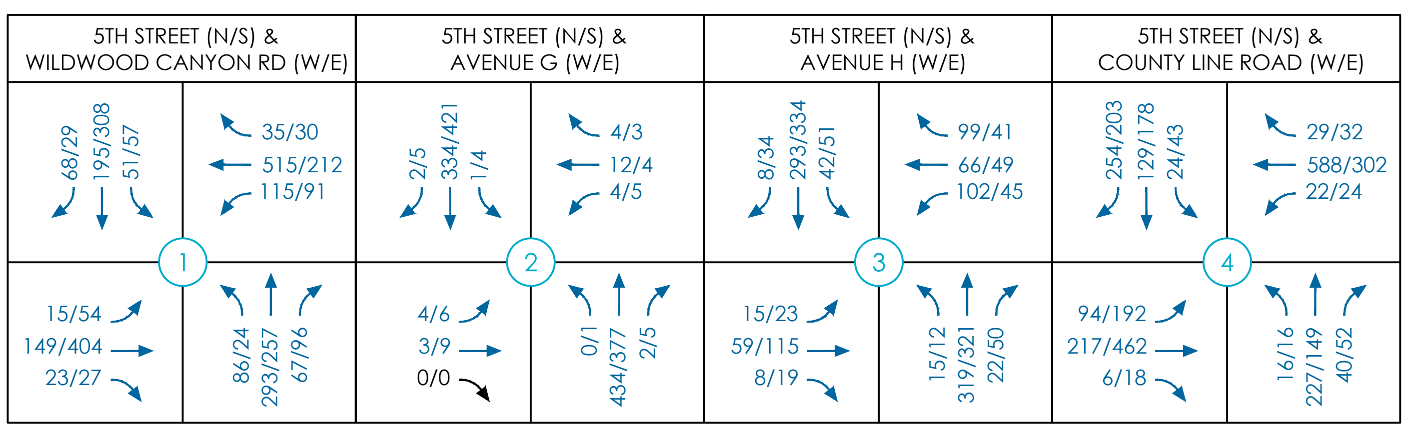


Figure 4

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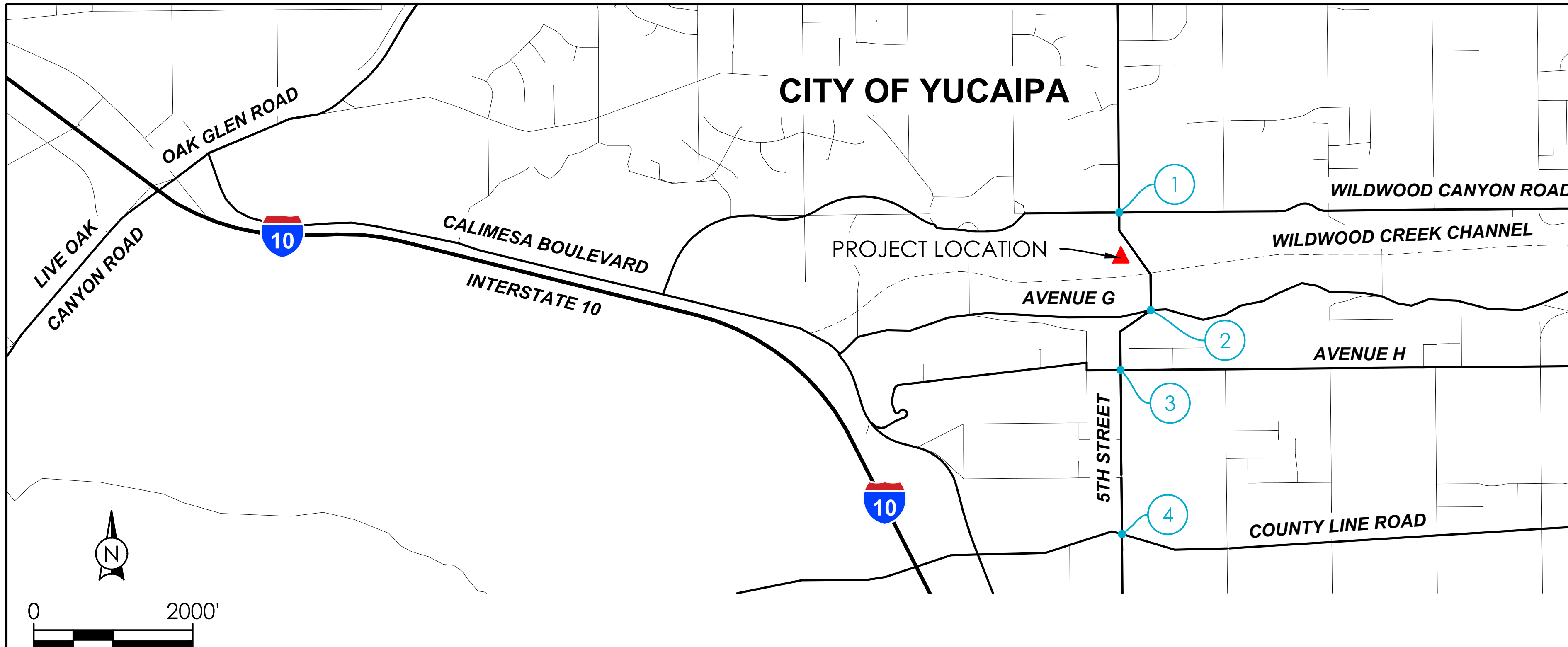
Project Opening Year (2021) Base Traffic Trip Assignments



LEGEND

STUDIED INTERSECTION

###/### AM/PM

5TH STREET (N/S) & WILDWOOD CANYON RD (W/E)		5TH STREET (N/S) & AVENUE G (W/E)		5TH STREET (N/S) & AVENUE H (W/E)		5TH STREET (N/S) & COUNTY LINE ROAD (W/E)	
70/30 201/317 53/59	36/31 531/218 118/94	2/5 344/434 1/4	4/3 12/4 4/5	8/35 302/344 43/53	102/42 68/50 105/46	262/209 133/183 25/44	30/33 606/311 23/25
1		2		3		4	
15/56 154/416 24/28	89/25 302/265 69/99	4/6 3/9 0/0	0/1 447/388 2/5	15/24 61/118 8/20	15/12 329/331 23/52	97/198 224/476 6/19	16/16 234/154 41/54

Figure 5

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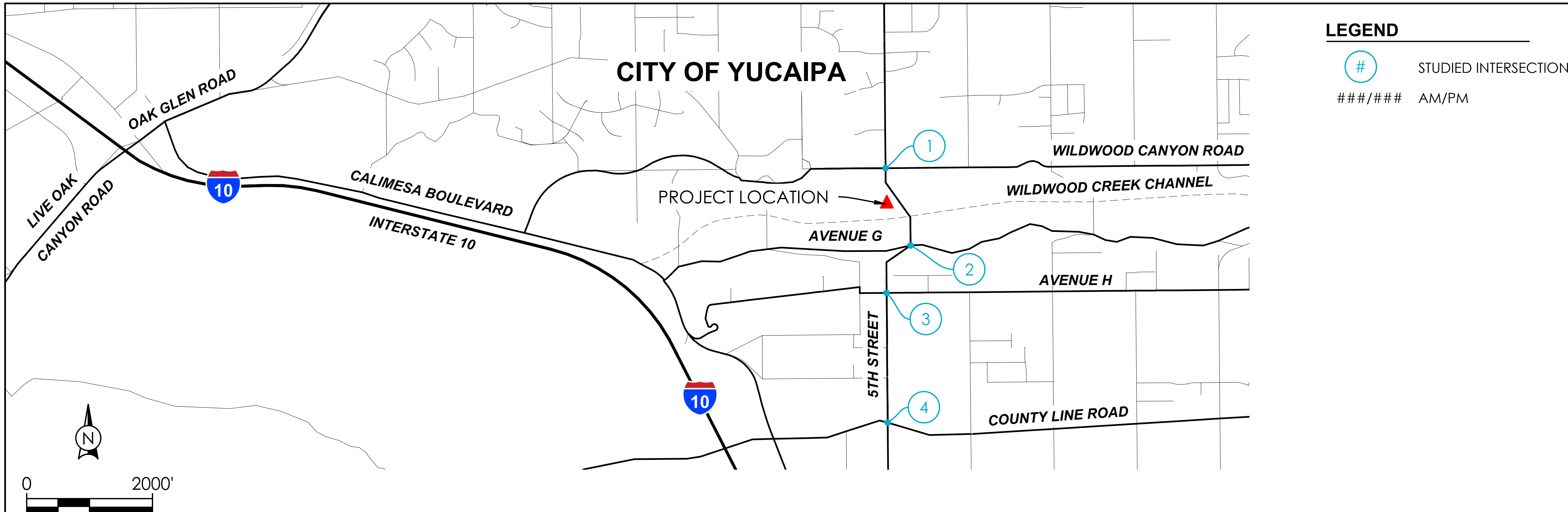
Project Opening Year (2021) Base Traffic + Cumulative Trip Assignments



5TH STREET (N/S) & WILDWOOD CANYON RD (W/E)		5TH STREET (N/S) & AVENUE G (W/E)		5TH STREET (N/S) & AVENUE H (W/E)		5TH STREET (N/S) & COUNTY LINE ROAD (W/E)	
70/30 ↙ 201/317 ↓ 53/59 ↘	↖ 29/31 ← 533/218 ↙ 122/100	3/5 ↙ 352/442 ↓ 1/4 ↘	↖ 4/3 ← 12/4 ↙ 4/5	8/35 ↙ 306/347 ↓ 48/57 ↘	↖ 106/49 ← 68/50 ↙ 109/49	280/224 ↙ 133/183 ↓ 25/44 ↘	↖ 30/35 ← 616/315 ↙ 23/25
1		2		3		4	
15/56 ↗ 154/416 → 29/32 ↘	↖ 95/34 ↑ 302/264 ↗ 71/103	5/7 ↗ 3/9 → 1/1 ↘	↖ 1/3 ↑ 454/400 ↗ 2/5	15/24 ↗ 61/118 → 8/20 ↘	↖ 15/12 ↑ 333/338 ↗ 26/56	107/218 ↗ 228/488 → 6/19 ↘	↖ 16/16 ↑ 234/154 ↗ 41/54

Figure 6

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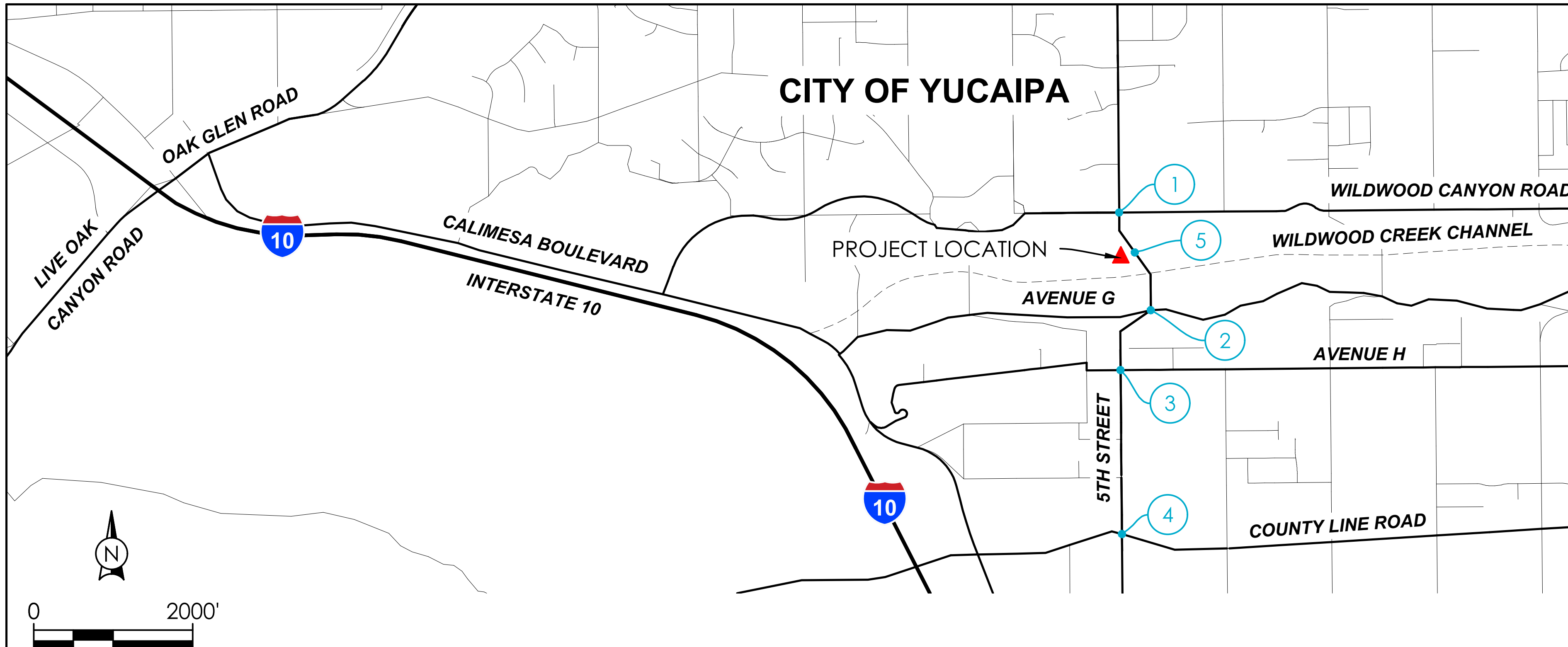
Project Opening Year (2021) Base Traffic + Cumulative + Project Trip Assignments



LEGEND

\# STUDIED INTERSECTION

###/### AM/PM

5TH STREET (N/S) & WILDWOOD CANYON RD (W/E)	5TH STREET (N/S) & AVENUE G (W/E)	5TH STREET (N/S) & AVENUE H (W/E)	5TH STREET (N/S) & COUNTY LINE ROAD (W/E)	5TH STREET (N/S) & PRIVATE STREET A (W/E)
70/30 203/323 53/59	7/6 358/445 1/4	8/35 312/350 48/57	284/227 134/184 25/44	2/16 353/451
36/31 533/218 122/100	4/3 12/4 4/5	106/49 68/50 109/49	30/35 616/315 30/25	
1	2	3	4	5
15/56 154/416 29/43	6/13 3/9 1/1	15/24 61/118 8/20	110/223 228/488 6/19	14/12 10/4
104/38 307/273 71/103	1/3 459/406 2/5	15/12 337/343 26/56	16/16 235/154 41/54	6/11 465/406

Figure 7

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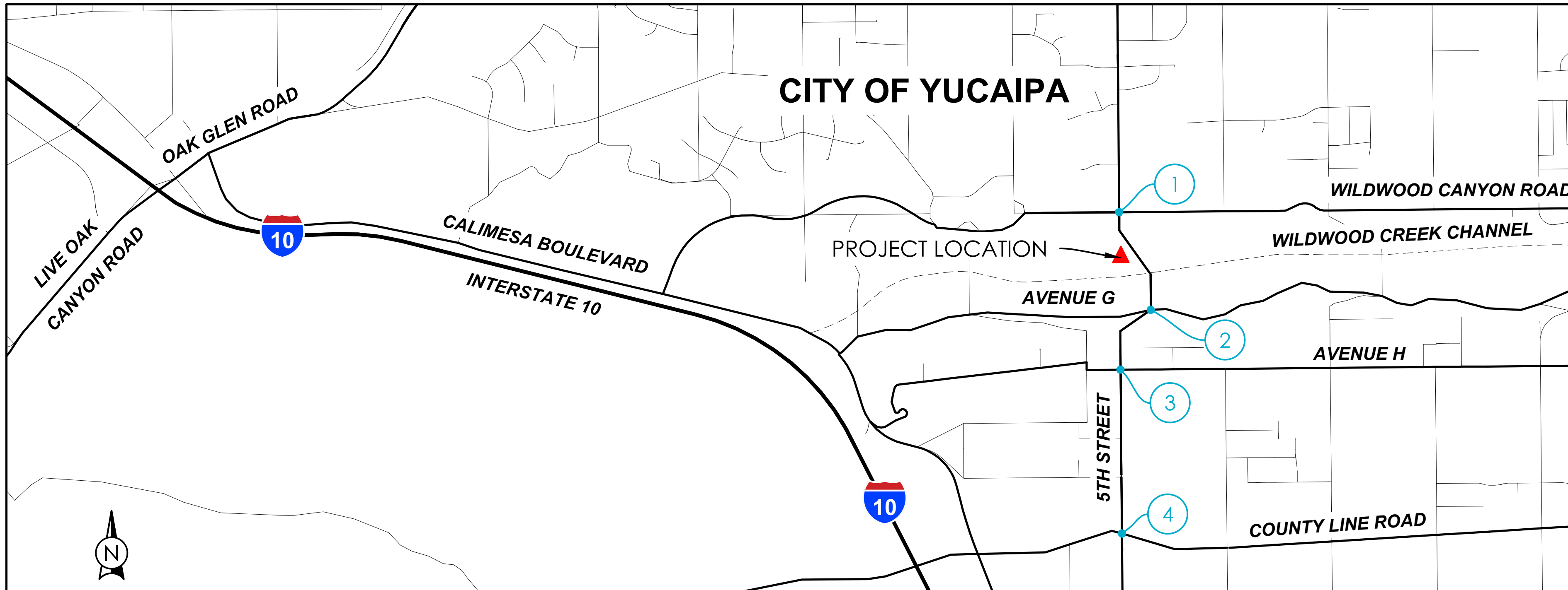
Future Year (2040) Base Traffic Trip Assignments



LEGEND

#	STUDIED INTERSECTION
###/###	AM/PM

5TH STREET (N/S) & WILDWOOD CANYON RD (W/E)		5TH STREET (N/S) & AVENUE G (W/E)		5TH STREET (N/S) & AVENUE H (W/E)		5TH STREET (N/S) & COUNTY LINE ROAD (W/E)	
107/44 278/451 70/78	48/41 704/290 157/124	3/7 472/623 1/5	5/4 16/5 5/7	11/46 406/469 69/108	164/78 90/67 162/73	369/291 182/253 33/59	40/44 847/444 44/39
1		2		3		4	
25/86 204/552 35/41	130/41 428/376 92/131	5/8 4/12 2/3	1/5 633/548 3/7	21/31 81/157 11/26	21/16 448/454 39/90	139/284 317/704 11/28	23/23 313/212 58/82

Figure 8

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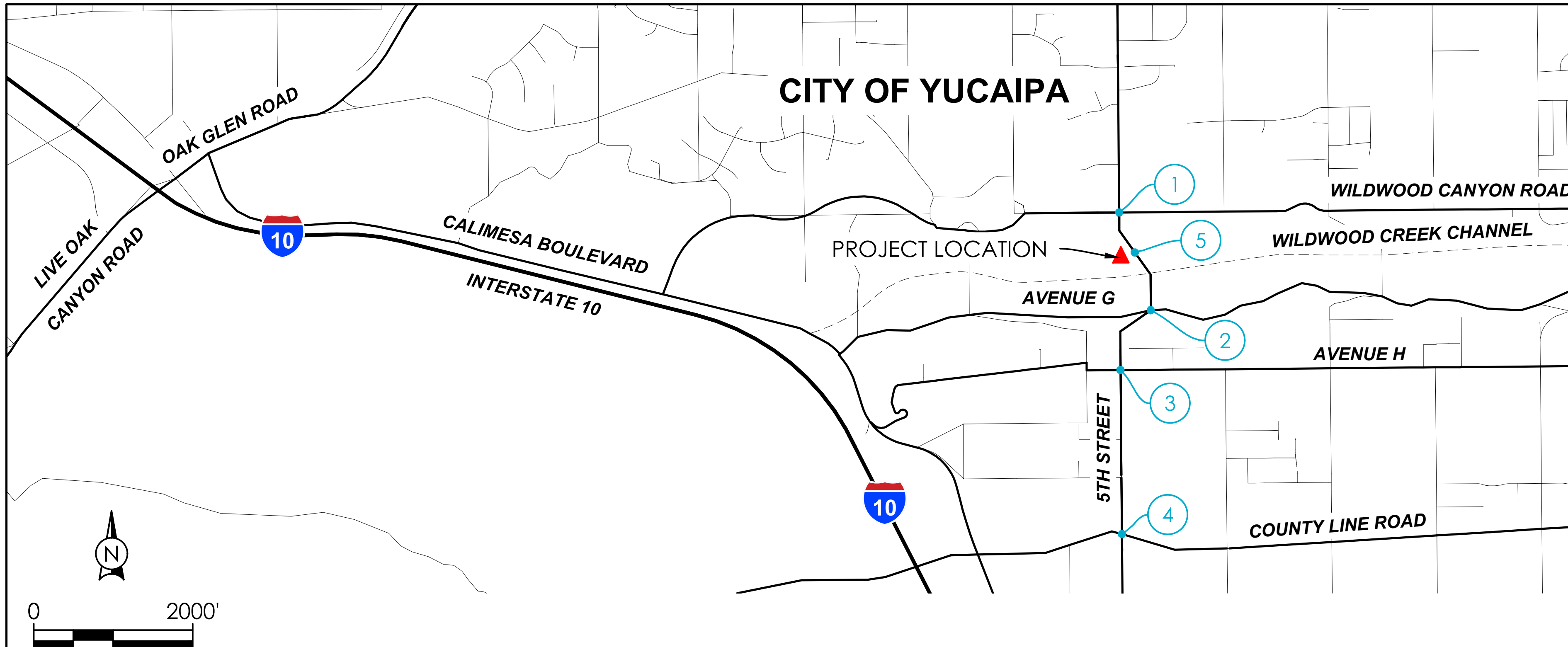
Future Year (2040) Base Traffic + Project Trip Assignments



LEGEND

\# STUDIED INTERSECTION

###/### AM/PM

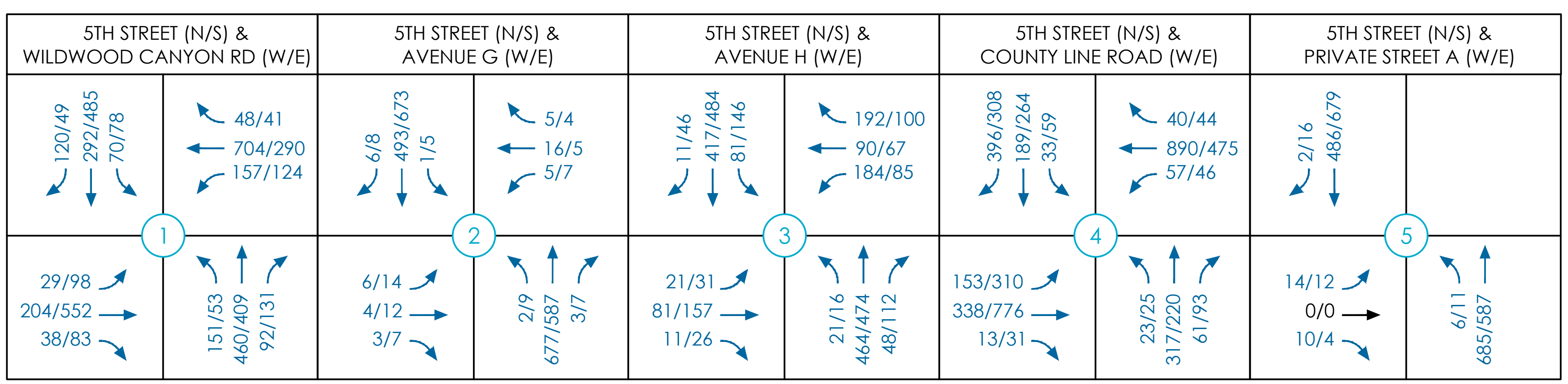


Figure 9

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4. Level of Service Analysis

The level of service analysis was performed using the TrafficWare Synchro Studio 10 software, a widely accepted level of service software program, in accordance with the *Highway Capacity Manual, Sixth Edition* and the *SBCTA CMP, Appendix B, Guidelines for Traffic Impact Analysis Reports (SBCTA CMP)*. LOS "A" is the highest LOS, meaning the intersection is operating very well. LOS "F" is the poorest rating, meaning the longest delay times and highest levels of congestion. The general trend is that higher delay times result in lower LOS's. Tables 3-5 below show the LOS delay criteria for signalized intersections, two-way stop-controlled intersections, and all-way stop-controlled intersections, respectively. These tables were extracted from the *Highway Capacity Manual, 6th Edition.* The *Highway Capacity Manual* requires that stop-controlled intersections be rated based on the major route's left turn movements and the minor route's poorest-rated movements. It also requires that signalized intersections be rated based on control delay and volume-to-capacity ratio; HKA followed these methods when preparing this report.

Table 3: LOS Criteria for Signalized Intersections

Control Delay (s/veh)	LOS by Volume-to-Capacity Ratio[a] ≤1.0	>1.0
≤10	A	F
>10–20	B	F
>20–35	C	F
>35–55	D	F
>55–80	E	F
>80	F	F

Note: [a] For approach-based and intersectionwide assessments, LOS is defined solely by control delay.

Table 4: LOS Criteria for Two-Way Stop-Controlled Intersections

Control Delay (s/veh)	LOS by Volume-to-Capacity Ratio $v/c \leq 1.0$	$v/c > 1.0$
0–10	A	F
>10–15	B	F
>15–25	C	F
>25–35	D	F
>35–50	E	F
>50	F	F

Note: The LOS criteria apply to each lane on a given approach and to each approach on the minor street. LOS is not calculated for major-street approaches or for the intersection as a whole.

Table 5: LOS Criteria for All-Way Stop-Controlled Intersections

Control Delay (s/veh)	LOS by Volume-to-Capacity Ratio[a] $v/c \leq 1.0$	$v/c > 1.0$
0–10	A	F
>10–15	B	F
>15–25	C	F
>25–35	D	F
>35–50	E	F
>50	F	F

Note: [a] For approaches and intersectionwide assessment, LOS is defined solely by control delay.

The peak hour factor (PHF) is the ratio of the amount of traffic handled during the peak hour at the intersection over four times the highest 15-minute period. Existing PHFs were provided in the data collected by Counts Unlimited. HKA used a PHF of 0.95 for opening and future year projections based on the *SBCTA CMP.*

Table 6 summarizes the level of service results. HKA added three cumulative eastbound right turn trips at the 5th Street / Avenue G intersection, to the opening year plus cumulative trips (without project trips) and opening year plus cumulative trips and project trips. This was done due to the fact that the *Highway Capacity Manual* equations do not function as intended when analyzing such small volumes of traffic. The addition of these three trips allowed for these scenarios to be analyzed with the same ratio as the project trip scenarios, thus making the analysis more accurate and yielding more logical results.

Table 6: LOS Results

	Existing Year	Opening Year	Opening Year + Cumulative	Opening Year + Cumulative + Project	Future Year	Future Year + Project
Wildwood Canyon Rd. & 5th St.	D/C	D/D	D/D	D/D	D/D	D/D
Ave. G & 5th St.	C,C/C,C	C,C/C,C	C,C/C,C	C,C/C,C	C,C /D,D	D,D/E,D
Ave. H & 5th St.	E/D	E/F	E/F	F/F	F/F	F/F
County Line Rd. & 5th St.	C/B	C/C	C/C	C/C	D/C	D/D
Private St. A & 5th St.	N/A	N/A	N/A	B/C	N/A	C/D

1. X/X indicates AM/PM LOS
2. X,X indicates Eastbound, Westbound LOS for minor approach on Two-Way Stop-Controlled intersection

5. Mitigation

Two intersections, 5th Street / County Line Road and 5th Street / Private Street A, both met the City's minimum requirement of LOS "C" for all six scenarios studied. The intersection of 5th Street and Avenue G met minimum level of service criteria except for the eastbound approach of the minor stop-controlled street (Avenue G), in which the level of service dropped to a "D" for the Future Year AM and PM Peak Hour without project traffic scenario as well as the Future Year AM and PM Peak Hour with project traffic scenario. Currently, this intersection has one lane in each approach with the left, through, and right movements serviced through the one lane. The addition of another northbound through lane would mitigate the LOS issue, bringing the eastbound approach LOS "D" up to a LOS "C." This results in two northbound lanes, one servicing left and through movements, and the other servicing right and through movements. HKA analyzed this new configuration in the Future Year + Project AM and PM scenarios using Trafficware Synchro, confirming the improvement of level of service and can be seen in Appendix D under "Mitigated Future Year 2040 + Project" reports. A comparison of Future Year + Project results and Mitigated Future Year + Project results can be seen Table 7 below.

The intersections of 5th Street / Wildwood Canyon Road and 5th Street / Avenue H both did not meet the LOS "C" criteria for any scenario analyzed, with the exception of 5th Street / Wildwood Canyon Road achieving a LOS "C" for the Existing PM Peak Hour without project traffic. These intersections are underperforming in existing conditions and require mitigation.

At the intersection of Wildwood Canyon Road and 5th Street, the addition of a through lane in each the eastbound and westbound directions would increase the level of service to an acceptable value. In its current state, both the eastbound and westbound approaches contain a designated left turn pocket, designated right turn pocket, and designated through lane. The mitigation effort would change these designated right turn pockets to through plus right movements. HKA analyzed this new configuration in the Future Year + Project AM and PM scenarios, being the scenarios with highest volumes and delay, using Trafficware Synchro, confirming that the level of service improves from LOS "D" to LOS "C" for both and can be seen in Appendix D under "Mitigated Future Year 2040 + Project" reports.

At the intersection of Avenue H and 5th Street, the addition of a through lane in the each the northbound and southbound directions would increase the level of service to an acceptable value. In its current state, both the northbound and southbound approaches are one lane with de-facto right turns. The mitigation effort would change the de-facto right turns to be through plus right movements, resulting in two lanes, one servicing left and through movements, and the other servicing right and through movements. HKA analyzed this new configuration in the Future Year + Project AM and PM scenarios using Trafficware Synchro, confirming that the level of service improves from LOS "F" to LOS "C" for both and can be seen in Appendix D under "Mitigated Future Year 2040 + Project" reports.

Table 7: LOS Results and Mitigated Results Comparison

	Future Year + Project	Mitigated Future Year + Project
Wildwood Canyon Rd. & 5th St.	**D/D**	**C/C**
Ave. G & 5th St.	**D,C/D,C**	**C,C/C,C**
Ave. H & 5th St.	**F/F**	**C/C**
County Line Rd. & 5th St.	**C/C**	**C/C**
Private St. A & 5th St.	**C/C**	**C/C**

1. X/X indicates AM/PM LOS
2. X,X indicates Eastbound, Westbound LOS for minor approach on Two-Way Stop-Controlled intersection

6. Fair Share

HKA calculated fair-share percentages for each intersection that fails to meet the minimum level of service of LOS "C" in the Future Year 2040 + Project scenario. In Tables 8 and 9 the first column (1) presents the total of existing movements per peak hour per intersection. Column (2) presents the total movements in the opening year or future year, respective of Table, with the growth factor applied. Column (3) presents the total cumulative trips per peak hour per intersection. Column (4) presents the total project trips per peak hour per intersection. Column (5) presents the Project fair share based on the following formula:

Fair Share % (5) = (4) / [(4) + (3) + ((2) – (1))]

*(#) refers to column number

This percentage was calculated for the AM and PM Peak Hours of the Opening Year + Cumulative + Project scenario at the intersections of Wildwood Canyon Road / 5th Street and Avenue H / 5th Street, as these intersections did not meet minimum level of service requirements. For the Future Year + Project scenario the aforementioned intersections were used in the calculation as well as the intersection of Avenue G / 5th Street, as these did not meet the minimum level of service requirement in the future year scenario. The fair share percentages can be seen in Tables 8 and 9 below. Bolded Fair Share Percentage responsibility is based on worse case.

Table 8: Fair-Share Calculations for Opening Year (2021)

Intersection		Opening Year (2021)				
	Total Trips					
		(1) Existing Trips	(2) Opening Year (2021)	(3) Cumulative Trips	(4) Project Trips	(5) Fair Share %
Wildwood Canyon Rd. & 5th St.	**AM** ----- **PM**	1612 ----- 1589	1661 ----- 1637	73 ----- 97	17 ----- 28	12.17% ----- **16.28%**
Ave. H & 5th St.	**AM** ----- **PM**	1048 ------ 1094	1080 ----- 1127	89 ----- 121	11 ----- 9	**8.25%** ----- 5.30%

The Project fair share percentages (worst time period impacted) for the two impacted intersections for Opening Year (2021) + Cumulative + Project are shown below:

- Wildwood Canyon Road & 5th Street 16.28%
- Avenue H & 5th Street 8.25%

Table 9: Fair-Share Calculations for Future Year (2040)

Intersection		Future Year (2040)				
	Total Trips					
		(1) Existing Trips	(2) Future Year (2040)	(3) Cumulative Trips	(4) Project Trips	(5) Fair Share %
Wildwood Canyon Rd. & 5th St.	**AM** ----- **PM**	1612 ----- 1589	2204 ----- 2172	73 ----- 97	17 ----- 28	2.47% ----- **3.98%**
Ave. G & 5th St.	**AM** ----- **PM**	800 ----- 840	1094 ----- 1148	57 ----- 87	15 ----- 15	**4.15%** ----- 3.61%
Ave. H & 5th St.	**AM** ----- **PM**	1048 ------ 1094	1433 ----- 1496	89 ----- 121	11 ----- 9	**2.23%** ----- 1.62%

The Project fair share percentages (worst time period impacted) for the two impacted intersections for Future Year (2021) + Cumulative + Project are shown below:

- Wildwood Canyon Road & 5th Street 3.98%
- Avenue G & 5th Street 4.15%
- Avenue H & 5th Street 2.23%

7. Conclusion

HKA has prepared this traffic study on behalf of the City of Yucaipa to analyze the impact of the Tentative Tract 20263 Development on the intersections of 5th Street / Wildwood Canyon Road, 5th Street / Avenue G, 5th Street / Avenue H, 5th Street / County Line Road, and 5th Street / Private Street A. Level of service impacts were analyzed.

The following scenarios were analyzed for their Level of Service (LOS) in accordance with City standards using the Highway Capacity Manual, 6th Edition:

- Existing AM and PM Peak Hour – without project traffic
- Opening Year AM and PM Peak Hour – without project traffic
- Opening Year AM and PM Peak Hour – with cumulative
- Opening Year AM and PM Peak Hour – with cumulative plus project traffic
- Future Year AM and PM Peak Hour – without project traffic
- Future Year AM and PM Peak Hour – with project traffic

Two of the intersections met the level of service standards required by the City, whereas the others failed in various scenarios and require mitigation. The mitigation suggested requires the addition of through lanes or the change of right lanes to through plus right lanes, depending on the intersection. The Trafficware Synchro analyses were recomputed with these changes and the intersections were brought up to standard. The tabulated results can be seen in Table 7 above, and the Trafficware Synchro reports can be seen in Appendix D.

Appendices

- Appendix A: Existing Data
- Appendix B: Cumulative Projects List
- Appendix C: Calculation Tables
- Appendix D: LOS Reports

Appendix A

Hernandez, Kroone & Associates
Engineers & Land Surveyors

Counts Unlimited
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(951) 268-6268

City of Yucaipa
N/S: 5th Street
E/W: Wildwood Canyon Road
Weather: Clear

File Name : 01_YUC_5th_Wildwood Cyn AM
Site Code : 04519160
Start Date : 3/12/2019
Page No : 1

Groups Printed- Total Volume

	5th Street Southbound				Wildwood Canyon Road Westbound				5th Street Northbound				Wildwood Canyon Road 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
07:00 AM	2	37	16	55	38	131	9	178	18	66	12	96	3	34	2	39	368
07:15 AM	9	43	12	64	35	145	11	191	22	78	16	116	7	35	7	49	420
07:30 AM	21	42	24	87	22	134	5	161	26	90	24	140	2	29	7	38	426
07:45 AM	19	73	16	108	20	105	10	135	20	59	15	94	3	51	7	61	398
Total	51	195	68	314	115	515	35	665	86	293	67	446	15	149	23	187	1612
08:00 AM	16	53	7	76	14	97	7	118	8	45	20	73	8	58	8	74	341
08:15 AM	4	56	7	67	26	91	8	125	8	52	8	68	4	43	4	51	311
08:30 AM	3	36	17	56	17	89	6	112	8	53	10	71	4	39	1	44	283
08:45 AM	3	46	7	56	23	75	10	108	6	51	11	68	5	21	6	32	264
Total	26	191	38	255	80	352	31	463	30	201	49	280	21	161	19	201	1199
Grand Total	77	386	106	569	195	867	66	1128	116	494	116	726	36	310	42	388	2811
Apprch %	13.5	67.8	18.6		17.3	76.9	5.9		16	68	16		9.3	79.9	10.8		
Total %	2.7	13.7	3.8	20.2	6.9	30.8	2.3	40.1	4.1	17.6	4.1	25.8	1.3	11	1.5	13.8	

	5th Street Southbound				Wildwood Canyon Road Westbound				5th Street Northbound				Wildwood Canyon Road 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 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	2	37	16	55	**38**	131	9	178	18	66	12	96	3	34	2	39	368
07:15 AM	9	43	12	64	35	**145**	**11**	**191**	22	78	16	116	**7**	35	**7**	49	420
07:30 AM	**21**	42	**24**	87	22	134	5	161	**26**	**90**	**24**	**140**	2	29	7	38	**426**
07:45 AM	19	**73**	16	**108**	20	105	10	135	20	59	15	94	3	**51**	7	**61**	398
Total Volume	51	195	68	314	115	515	35	665	86	293	67	446	15	149	23	187	1612
% App. Total	16.2	62.1	21.7		17.3	77.4	5.3		19.3	65.7	15		8	79.7	12.3		
PHF	.607	.668	.708	.727	.757	.888	.795	.870	.827	.814	.698	.796	.536	.730	.821	.766	.946

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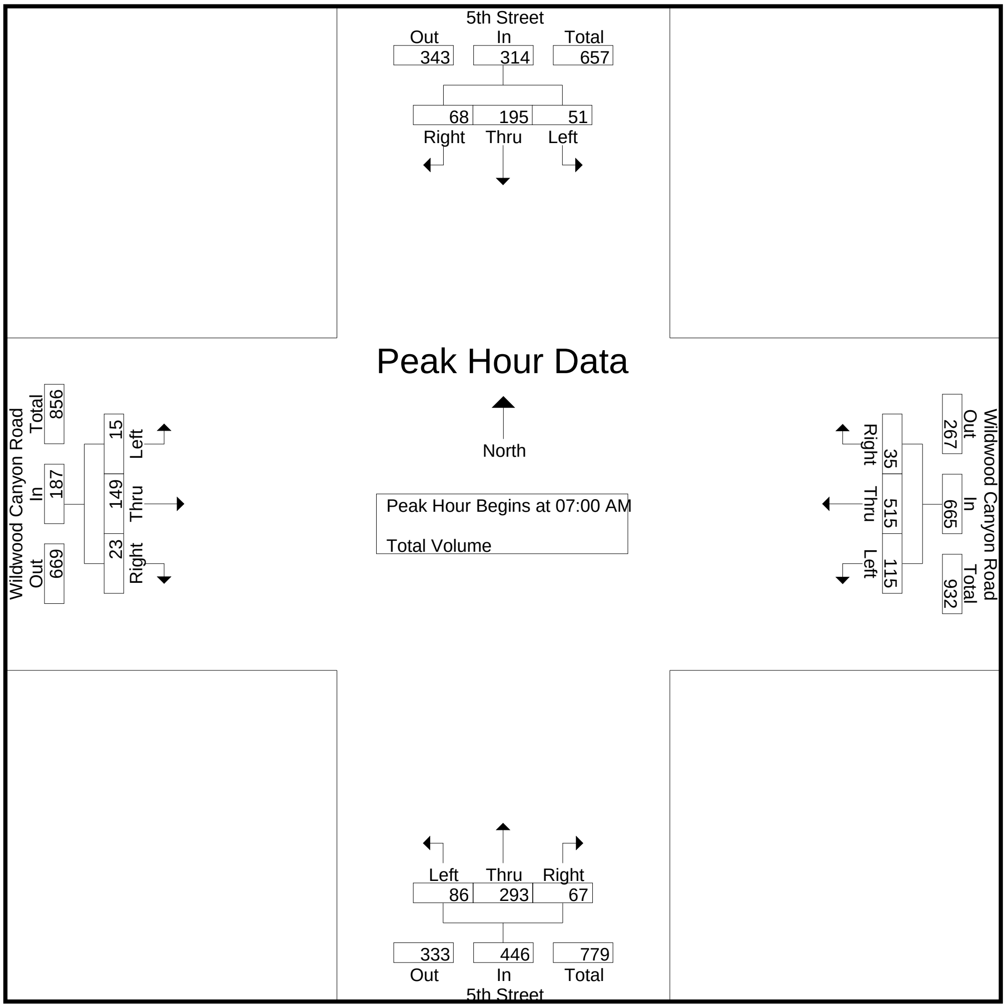

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:00 AM				07:00 AM				07:45 AM			
+0 mins.	**21**	42	**24**	87	**38**	131	9	178	18	66	12	96	3	51	7	61
+15 mins.	19	**73**	16	**108**	35	**145**	**11**	**191**	22	78	16	116	**8**	**58**	**8**	**74**
+30 mins.	16	53	7	76	22	134	5	161	**26**	**90**	**24**	**140**	4	43	4	51
+45 mins.	4	56	7	67	20	105	10	135	20	59	15	94	4	39	1	44
Total Volume	60	224	54	338	115	515	35	665	86	293	67	446	19	191	20	230
% App. Total	17.8	66.3	16		17.3	77.4	5.3		19.3	65.7	15		8.3	83	8.7	
PHF	.714	.767	.563	.782	.757	.888	.795	.870	.827	.814	.698	.796	.594	.823	.625	.777

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File Name : 01_YUC_5th_Wildwood Cyn PM
Site Code : 04519160
Start Date : 3/12/2019
Page No : 1

Groups Printed- Total Volume

	5th Street Southbound				Wildwood Canyon Road Westbound				5th Street Northbound				Wildwood Canyon Road 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
04:00 PM	8	65	8	81	23	63	13	99	7	68	27	102	8	89	8	105	387
04:15 PM	14	60	6	80	17	66	6	89	8	73	16	97	12	88	11	111	377
04:30 PM	18	74	10	102	18	54	6	78	12	67	22	101	7	80	11	98	379
04:45 PM	8	64	12	84	22	51	4	77	2	75	23	100	15	109	7	131	392
Total	48	263	36	347	80	234	29	343	29	283	88	400	42	366	37	445	1535
05:00 PM	16	87	5	108	27	55	10	92	9	66	20	95	9	79	8	96	391
05:15 PM	12	84	5	101	26	61	9	96	6	58	29	93	20	106	9	135	425
05:30 PM	21	73	7	101	16	45	7	68	7	58	24	89	10	110	3	123	381
05:45 PM	8	60	4	72	22	44	5	71	4	80	31	115	18	111	3	132	390
Total	57	304	21	382	91	205	31	327	26	262	104	392	57	406	23	486	1587
Grand Total	105	567	57	729	171	439	60	670	55	545	192	792	99	772	60	931	3122
Apprch %	14.4	77.8	7.8		25.5	65.5	9		6.9	68.8	24.2		10.6	82.9	6.4		
Total %	3.4	18.2	1.8	23.4	5.5	14.1	1.9	21.5	1.8	17.5	6.1	25.4	3.2	24.7	1.9	29.8	

	5th Street Southbound				Wildwood Canyon Road Westbound				5th Street Northbound				Wildwood Canyon Road 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 04:45 PM																	
04:45 PM	8	64	**12**	84	22	51	4	77	2	**75**	23	**100**	15	109	7	131	392
05:00 PM	16	**87**	5	**108**	**27**	55	**10**	92	**9**	66	20	95	9	79	8	96	391
05:15 PM	12	84	5	101	26	**61**	9	**96**	6	58	**29**	93	**20**	106	**9**	**135**	**425**
05:30 PM	**21**	73	7	101	16	45	7	68	7	58	24	89	10	**110**	3	123	381
Total Volume	57	308	29	394	91	212	30	333	24	257	96	377	54	404	27	485	1589
% App. Total	14.5	78.2	7.4		27.3	63.7	9		6.4	68.2	25.5		11.1	83.3	5.6		
PHF	.679	.885	.604	.912	.843	.869	.750	.867	.667	.857	.828	.943	.675	.918	.750	.898	.935

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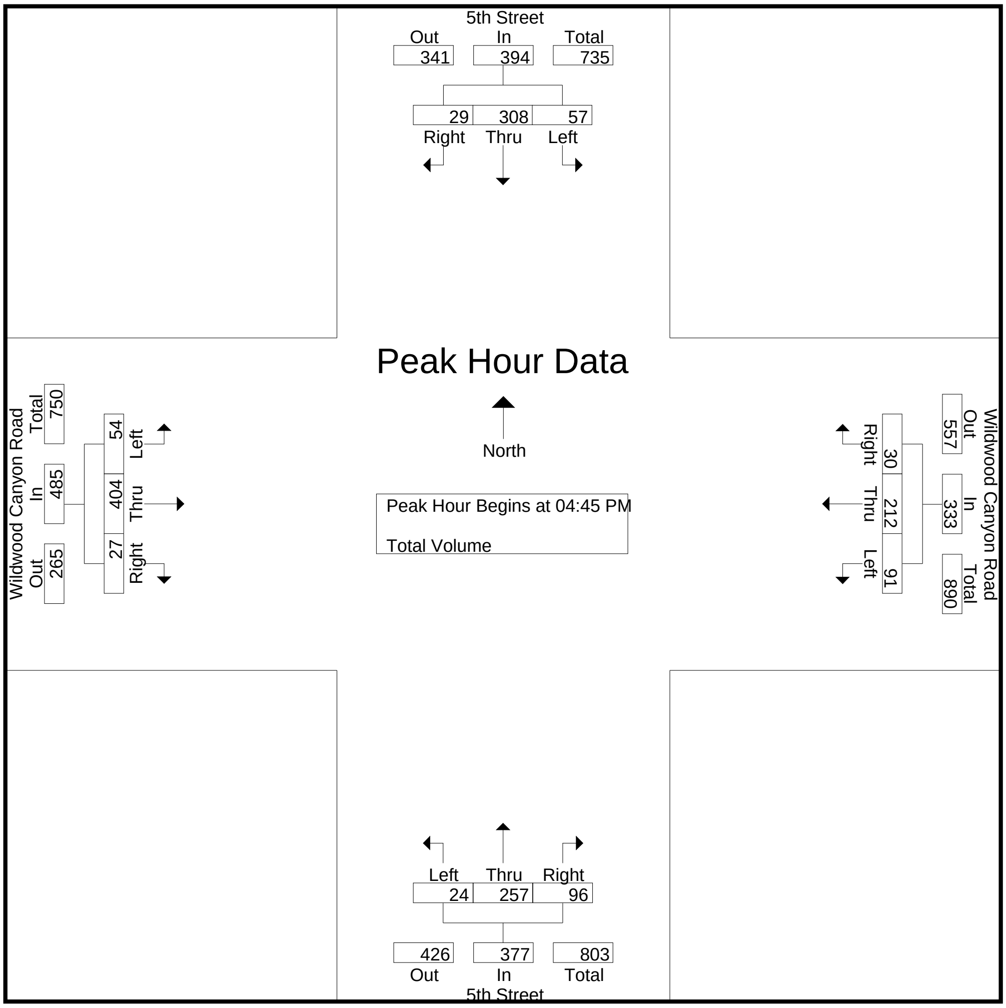

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM				04:00 PM				04:00 PM				05:00 PM			
+0 mins.	**18**	74	10	102	**23**	63	**13**	**99**	7	68	**27**	**102**	9	79	8	96
+15 mins.	8	64	**12**	84	17	**66**	6	89	8	73	16	97	**20**	106	**9**	**135**
+30 mins.	16	**87**	5	**108**	18	54	6	78	**12**	67	22	101	10	110	3	123
+45 mins.	12	84	5	101	22	51	4	77	2	**75**	23	100	18	**111**	3	132
Total Volume	54	309	32	395	80	234	29	343	29	283	88	400	57	406	23	486
% App. Total	13.7	78.2	8.1		23.3	68.2	8.5		7.2	70.8	22		11.7	83.5	4.7	
PHF	.750	.888	.667	.914	.870	.886	.558	.866	.604	.943	.815	.980	.713	.914	.639	.900

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City of Yucaipa
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E/W: Avenue G
Weather: Clear

File Name : 02_YUC_5th_Ave G AM
Site Code : 04519160
Start Date : 3/12/2019
Page No : 1

Groups Printed- Total Volume

	5th Street Southbound				Avenue G Westbound				5th Street Northbound				Avenue G 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
07:00 AM	0	83	1	84	1	1	0	2	0	92	1	93	2	1	0	3	182
07:15 AM	0	84	0	84	1	4	3	8	0	124	0	124	0	1	0	1	217
07:30 AM	0	70	0	70	0	5	0	5	0	137	0	137	1	1	0	2	214
07:45 AM	1	97	1	99	2	2	1	5	0	81	1	82	1	0	0	1	187
Total	1	334	2	337	4	12	4	20	0	434	2	436	4	3	0	7	800
08:00 AM	0	76	0	76	1	0	0	1	0	72	0	72	0	1	2	3	152
08:15 AM	2	85	0	87	0	0	0	0	0	69	0	69	0	2	1	3	159
08:30 AM	0	51	1	52	0	1	2	3	0	69	0	69	0	1	1	2	126
08:45 AM	1	73	1	75	0	0	0	0	0	66	3	69	2	1	0	3	147
Total	3	285	2	290	1	1	2	4	0	276	3	279	2	5	4	11	584
Grand Total	4	619	4	627	5	13	6	24	0	710	5	715	6	8	4	18	1384
Apprch %	0.6	98.7	0.6		20.8	54.2	25		0	99.3	0.7		33.3	44.4	22.2		
Total %	0.3	44.7	0.3	45.3	0.4	0.9	0.4	1.7	0	51.3	0.4	51.7	0.4	0.6	0.3	1.3	

	5th Street Southbound				Avenue G Westbound				5th Street Northbound				Avenue G 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 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	83	**1**	84	1	1	0	2	0	92	**1**	93	**2**	**1**	0	**3**	182
07:15 AM	0	84	0	84	1	4	**3**	**8**	0	124	0	124	0	1	0	1	**217**
07:30 AM	0	70	0	70	0	**5**	0	5	0	**137**	0	**137**	1	1	0	2	214
07:45 AM	**1**	**97**	1	**99**	**2**	2	1	5	0	81	1	82	1	0	0	1	187
Total Volume	1	334	2	337	4	12	4	20	0	434	2	436	4	3	0	7	800
% App. Total	0.3	99.1	0.6		20	60	20		0	99.5	0.5		57.1	42.9	0		
PHF	.250	.861	.500	.851	.500	.600	.333	.625	.000	.792	.500	.796	.500	.750	.000	.583	.922

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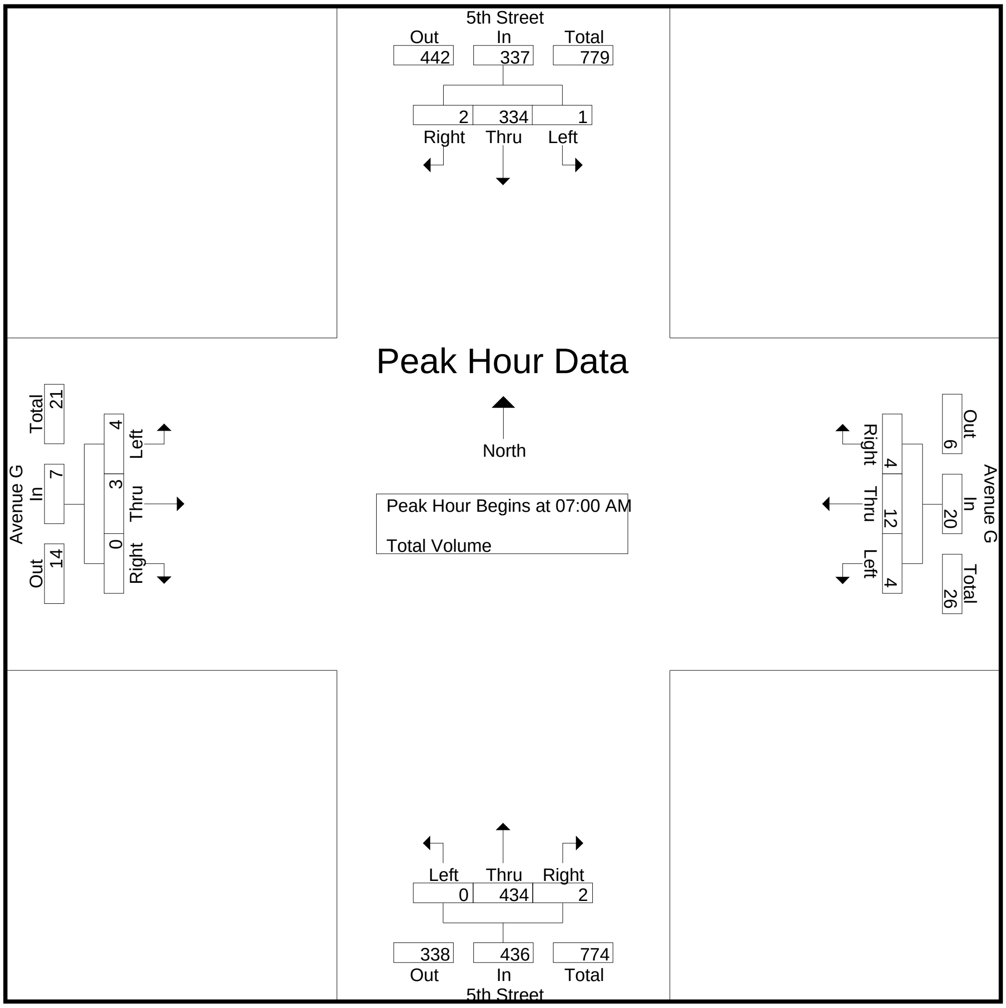

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM				07:00 AM				07:00 AM				08:00 AM			
+0 mins.	0	83	**1**	84	1	1	0	2	0	92	**1**	93	0	1	**2**	**3**
+15 mins.	0	84	0	84	1	4	**3**	**8**	0	124	0	124	0	**2**	1	3
+30 mins.	0	70	0	70	0	**5**	0	5	0	**137**	0	**137**	0	1	1	2
+45 mins.	**1**	**97**	1	**99**	**2**	2	1	5	0	81	1	82	**2**	1	0	3
Total Volume	1	334	2	337	4	12	4	20	0	434	2	436	2	5	4	11
% App. Total	0.3	99.1	0.6		20	60	20		0	99.5	0.5		18.2	45.5	36.4	
PHF	.250	.861	.500	.851	.500	.600	.333	.625	.000	.792	.500	.796	.250	.625	.500	.917

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File Name : 02_YUC_5th_Ave G PM
Site Code : 04519160
Start Date : 3/12/2019
Page No : 1

Groups Printed- Total Volume

	5th Street Southbound				Avenue G Westbound				5th Street Northbound				Avenue G 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
04:00 PM	0	97	0	97	0	2	2	4	0	102	2	104	1	1	1	3	208
04:15 PM	0	87	1	88	0	3	0	3	0	95	0	95	1	0	0	1	187
04:30 PM	0	93	0	93	1	0	1	2	0	99	0	99	1	6	0	7	201
04:45 PM	1	100	0	101	1	1	0	2	0	96	1	97	1	0	0	1	201
Total	1	377	1	379	2	6	3	11	0	392	3	395	4	7	1	12	797
05:00 PM	1	109	5	115	2	1	0	3	0	92	3	95	2	3	0	5	218
05:15 PM	2	119	0	121	1	2	2	5	1	90	1	92	2	0	0	2	220
05:30 PM	2	90	2	94	2	0	0	2	0	94	2	96	2	1	0	3	195
05:45 PM	1	86	2	89	1	0	0	1	0	110	2	112	0	0	0	0	202
Total	6	404	9	419	6	3	2	11	1	386	8	395	6	4	0	10	835
Grand Total	7	781	10	798	8	9	5	22	1	778	11	790	10	11	1	22	1632
Apprch %	0.9	97.9	1.3		36.4	40.9	22.7		0.1	98.5	1.4		45.5	50	4.5		
Total %	0.4	47.9	0.6	48.9	0.5	0.6	0.3	1.3	0.1	47.7	0.7	48.4	0.6	0.7	0.1	1.3	

	5th Street Southbound				Avenue G Westbound				5th Street Northbound				Avenue G 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	0	93	0	93	1	0	1	2	0	**99**	0	**99**	1	**6**	0	**7**	201
04:45 PM	1	100	0	101	1	1	0	2	0	96	1	97	1	0	0	1	201
05:00 PM	1	109	**5**	115	**2**	1	0	3	0	92	**3**	95	**2**	3	0	5	218
05:15 PM	**2**	**119**	0	**121**	1	**2**	**2**	**5**	**1**	90	1	92	2	0	0	2	**220**
Total Volume	4	421	5	430	5	4	3	12	1	377	5	383	6	9	0	15	840
% App. Total	0.9	97.9	1.2		41.7	33.3	25		0.3	98.4	1.3		40	60	0		
PHF	.500	.884	.250	.888	.625	.500	.375	.600	.250	.952	.417	.967	.750	.375	.000	.536	.955

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File Name : 02_YUC_5th_Ave G PM
Site Code : 04519160
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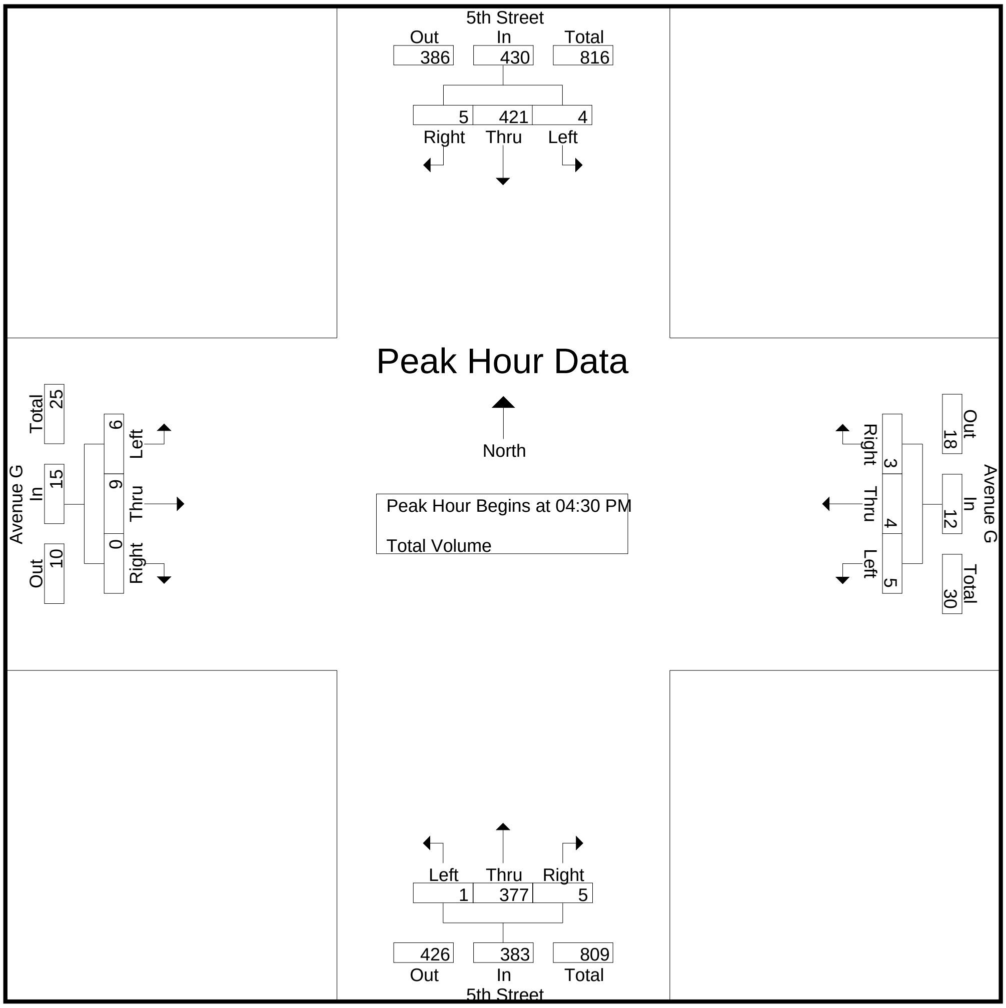
Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM				04:30 PM				04:00 PM				04:30 PM			
+0 mins.	1	100	0	101	1	0	1	2	0	**102**	**2**	**104**	1	**6**	0	**7**
+15 mins.	1	109	**5**	115	1	1	0	2	0	95	0	95	1	0	0	1
+30 mins.	**2**	**119**	0	**121**	**2**	1	0	3	0	99	0	99	**2**	3	0	5
+45 mins.	2	90	2	94	1	**2**	**2**	**5**	0	96	1	97	2	0	0	2
Total Volume	6	418	7	431	5	4	3	12	0	392	3	395	6	9	0	15
% App. Total	1.4	97	1.6		41.7	33.3	25		0	99.2	0.8		40	60	0	
PHF	.750	.878	.350	.890	.625	.500	.375	.600	.000	.961	.375	.950	.750	.375	.000	.536

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Weather: Clear

File Name : 03_YUC_5th_Ave H AM
Site Code : 04519160
Start Date : 3/12/2019
Page No : 1

Groups Printed- Total Volume

	5th Street Southbound				Avenue H Westbound				5th Street Northbound				Avenue H 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
07:00 AM	3	81	2	86	32	16	24	72	1	65	5	71	5	11	2	18	247
07:15 AM	11	78	1	90	24	23	35	82	6	83	6	95	6	11	2	19	286
07:30 AM	7	58	2	67	23	15	21	59	7	113	3	123	1	11	2	14	263
07:45 AM	21	76	3	100	23	12	19	54	1	58	8	67	3	26	2	31	252
Total	42	293	8	343	102	66	99	267	15	319	22	356	15	59	8	82	1048
08:00 AM	21	62	1	84	12	16	16	44	0	54	5	59	3	20	1	24	211
08:15 AM	12	70	3	85	20	20	25	65	3	41	2	46	2	22	1	25	221
08:30 AM	8	43	3	54	19	21	21	61	1	49	5	55	1	18	1	20	190
08:45 AM	2	65	3	70	17	15	14	46	3	53	2	58	1	4	2	7	181
Total	43	240	10	293	68	72	76	216	7	197	14	218	7	64	5	76	803
Grand Total	85	533	18	636	170	138	175	483	22	516	36	574	22	123	13	158	1851
Apprch %	13.4	83.8	2.8		35.2	28.6	36.2		3.8	89.9	6.3		13.9	77.8	8.2		
Total %	4.6	28.8	1	34.4	9.2	7.5	9.5	26.1	1.2	27.9	1.9	31	1.2	6.6	0.7	8.5	

	5th Street Southbound				Avenue H Westbound				5th Street Northbound				Avenue H 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 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	3	**81**	2	86	**32**	16	24	72	1	65	5	71	5	11	**2**	18	247
07:15 AM	11	78	1	90	24	**23**	**35**	**82**	6	83	6	95	**6**	11	2	19	**286**
07:30 AM	7	58	2	67	23	15	21	59	**7**	**113**	3	**123**	1	11	2	14	263
07:45 AM	**21**	76	**3**	**100**	23	12	19	54	1	58	**8**	67	3	**26**	2	**31**	252
Total Volume	42	293	8	343	102	66	99	267	15	319	22	356	15	59	8	82	1048
% App. Total	12.2	85.4	2.3		38.2	24.7	37.1		4.2	89.6	6.2		18.3	72	9.8		
PHF	.500	.904	.667	.858	.797	.717	.707	.814	.536	.706	.688	.724	.625	.567	1.00	.661	.916

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City of Yucaipa
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E/W: Avenue H
Weather: Clear

File Name : 03_YUC_5th_Ave H AM
Site Code : 04519160
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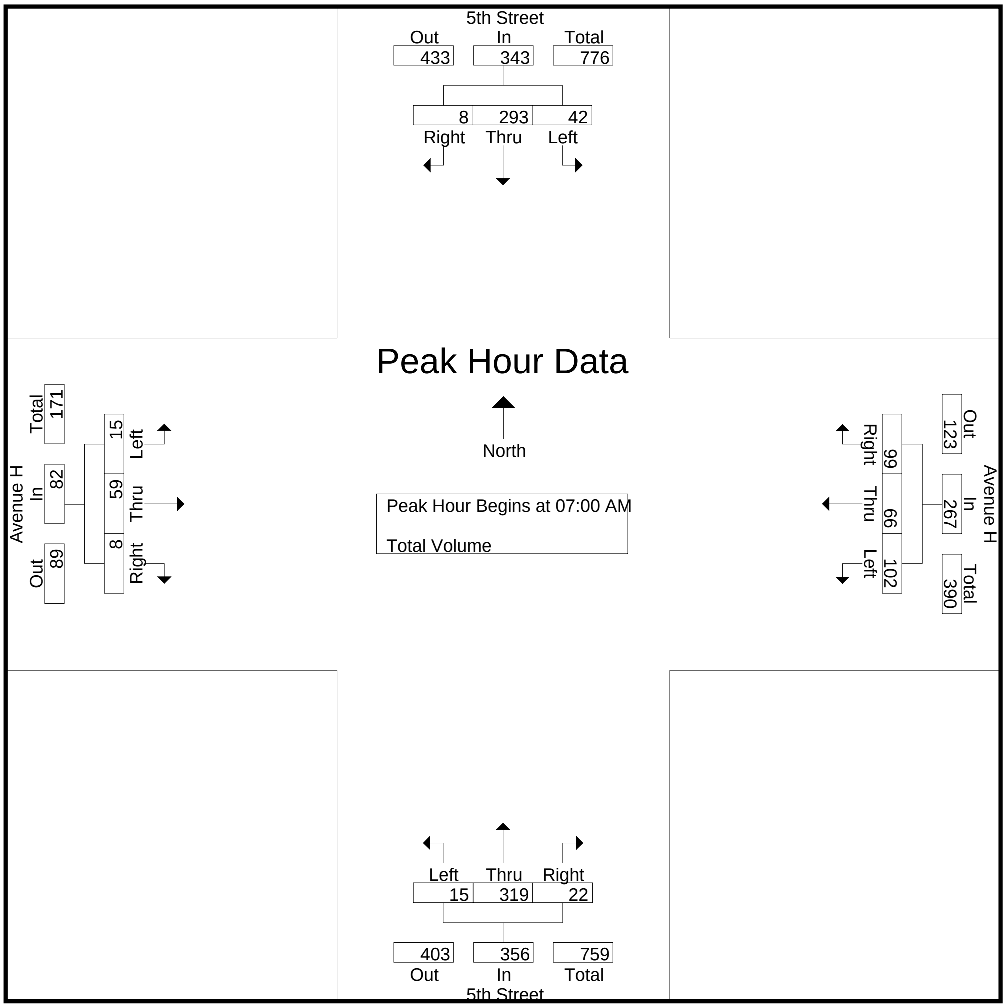

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM				07:00 AM				07:00 AM				07:45 AM			
+0 mins.	3	**81**	2	86	**32**	16	24	72	1	65	5	71	**3**	**26**	**2**	**31**
+15 mins.	11	78	1	90	24	**23**	**35**	**82**	6	83	6	95	3	20	1	24
+30 mins.	7	58	2	67	23	15	21	59	**7**	**113**	3	**123**	2	22	1	25
+45 mins.	**21**	76	**3**	**100**	23	12	19	54	1	58	**8**	67	1	18	1	20
Total Volume	42	293	8	343	102	66	99	267	15	319	22	356	9	86	5	100
% App. Total	12.2	85.4	2.3		38.2	24.7	37.1		4.2	89.6	6.2		9	86	5	
PHF	.500	.904	.667	.858	.797	.717	.707	.814	.536	.706	.688	.724	.750	.827	.625	.806

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Groups Printed- Total Volume

	5th Street Southbound				Avenue H Westbound				5th Street Northbound				Avenue H 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
04:00 PM	12	72	8	92	8	12	8	28	3	91	12	106	5	20	1	26	252
04:15 PM	8	77	8	93	7	20	12	39	3	79	6	88	4	10	5	19	239
04:30 PM	7	77	7	91	11	21	13	45	2	80	9	91	6	33	3	42	269
04:45 PM	16	74	13	103	12	16	9	37	5	83	16	104	7	23	4	34	278
Total	43	300	36	379	38	69	42	149	13	333	43	389	22	86	13	121	1038
05:00 PM	9	96	4	109	8	7	9	24	3	80	13	96	6	33	6	45	274
05:15 PM	19	87	10	116	14	5	10	29	2	78	12	92	4	26	6	36	273
05:30 PM	17	65	11	93	11	15	8	34	2	81	9	92	8	29	4	41	260
05:45 PM	9	70	13	92	6	12	14	32	1	92	16	109	7	32	2	41	274
Total	54	318	38	410	39	39	41	119	8	331	50	389	25	120	18	163	1081
Grand Total	97	618	74	789	77	108	83	268	21	664	93	778	47	206	31	284	2119
Apprch %	12.3	78.3	9.4		28.7	40.3	31		2.7	85.3	12		16.5	72.5	10.9		
Total %	4.6	29.2	3.5	37.2	3.6	5.1	3.9	12.6	1	31.3	4.4	36.7	2.2	9.7	1.5	13.4	

	5th Street Southbound				Avenue H Westbound				5th Street Northbound				Avenue H 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	7	77	7	91	11	**21**	**13**	**45**	2	80	9	91	6	**33**	3	42	269
04:45 PM	16	74	**13**	103	12	16	9	37	**5**	**83**	**16**	**104**	**7**	23	4	34	**278**
05:00 PM	9	**96**	4	109	8	7	9	24	3	80	13	96	6	33	**6**	**45**	274
05:15 PM	**19**	87	10	**116**	**14**	5	10	29	2	78	12	92	4	26	6	36	273
Total Volume	51	334	34	419	45	49	41	135	12	321	50	383	23	115	19	157	1094
% App. Total	12.2	79.7	8.1		33.3	36.3	30.4		3.1	83.8	13.1		14.6	73.2	12.1		
PHF	.671	.870	.654	.903	.804	.583	.788	.750	.600	.967	.781	.921	.821	.871	.792	.872	.984

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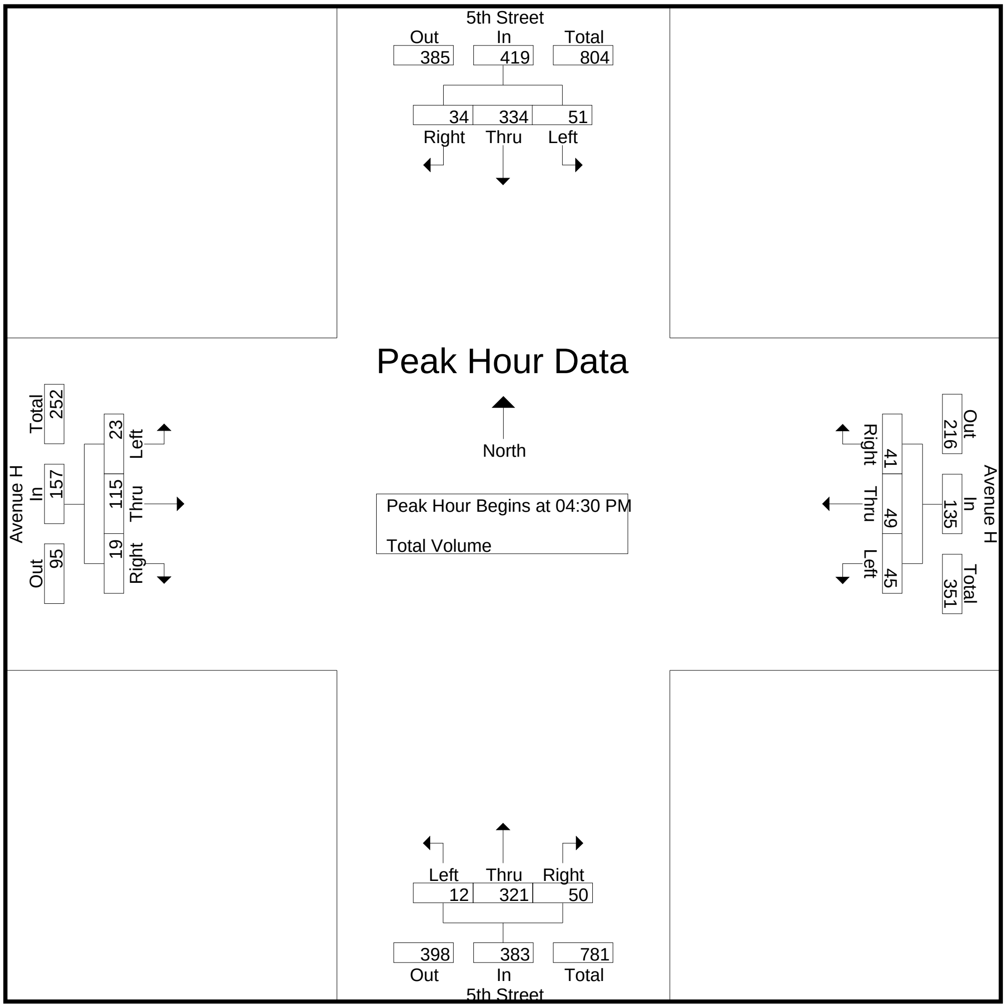

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM				04:00 PM				04:00 PM				05:00 PM			
+0 mins.	16	74	**13**	103	8	12	8	28	3	**91**	12	**106**	6	**33**	**6**	**45**
+15 mins.	9	**96**	4	109	7	20	12	39	3	79	6	88	4	26	6	36
+30 mins.	**19**	87	10	**116**	11	**21**	**13**	**45**	2	80	9	91	**8**	29	4	41
+45 mins.	17	65	11	93	**12**	16	9	37	**5**	83	**16**	104	7	32	2	41
Total Volume	61	322	38	421	38	69	42	149	13	333	43	389	25	120	18	163
% App. Total	14.5	76.5	9		25.5	46.3	28.2		3.3	85.6	11.1		15.3	73.6	11	
PHF	.803	.839	.731	.907	.792	.821	.808	.828	.650	.915	.672	.917	.781	.909	.750	.906

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City of Yucaipa
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Weather: Clear

File Name : 04_YUC_5th_County Line Rd AM
Site Code : 04519160
Start Date : 3/12/2019
Page No : 1

Groups Printed- Total Volume

	5th Street Southbound				County Line Road Westbound				5th Street Northbound				County Line Road 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
07:00 AM	2	33	74	109	9	172	6	187	3	48	4	55	18	39	3	60	411
07:15 AM	6	34	71	111	2	180	8	190	5	70	8	83	26	59	0	85	469
07:30 AM	7	24	53	84	4	134	8	146	7	75	14	96	25	54	0	79	405
07:45 AM	9	38	56	103	7	102	7	116	1	34	14	49	25	65	3	93	361
Total	24	129	254	407	22	588	29	639	16	227	40	283	94	217	6	317	1646
08:00 AM	5	28	42	75	10	115	8	133	3	23	7	33	35	86	2	123	364
08:15 AM	7	28	53	88	7	130	2	139	1	18	8	27	20	90	3	113	367
08:30 AM	6	20	37	63	6	136	7	149	2	24	6	32	26	58	3	87	331
08:45 AM	5	33	58	96	8	92	3	103	1	28	10	39	26	62	1	89	327
Total	23	109	190	322	31	473	20	524	7	93	31	131	107	296	9	412	1389
Grand Total	47	238	444	729	53	1061	49	1163	23	320	71	414	201	513	15	729	3035
Apprch %	6.4	32.6	60.9		4.6	91.2	4.2		5.6	77.3	17.1		27.6	70.4	2.1		
Total %	1.5	7.8	14.6	24	1.7	35	1.6	38.3	0.8	10.5	2.3	13.6	6.6	16.9	0.5	24	

	5th Street Southbound				County Line Road Westbound				5th Street Northbound				County Line Road 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 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	2	33	**74**	109	**9**	172	6	187	3	48	4	55	18	39	**3**	60	411
07:15 AM	6	34	71	**111**	2	**180**	**8**	**190**	5	70	8	83	**26**	59	0	85	**469**
07:30 AM	7	24	53	84	4	134	8	146	**7**	**75**	**14**	**96**	25	54	0	79	405
07:45 AM	**9**	**38**	56	103	7	102	7	116	1	34	14	49	25	**65**	3	**93**	361
Total Volume	24	129	254	407	22	588	29	639	16	227	40	283	94	217	6	317	1646
% App. Total	5.9	31.7	62.4		3.4	92	4.5		5.7	80.2	14.1		29.7	68.5	1.9		
PHF	.667	.849	.858	.917	.611	.817	.906	.841	.571	.757	.714	.737	.904	.835	.500	.852	.877

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City of Yucaipa
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File Name : 04_YUC_5th_County Line Rd AM
Site Code : 04519160
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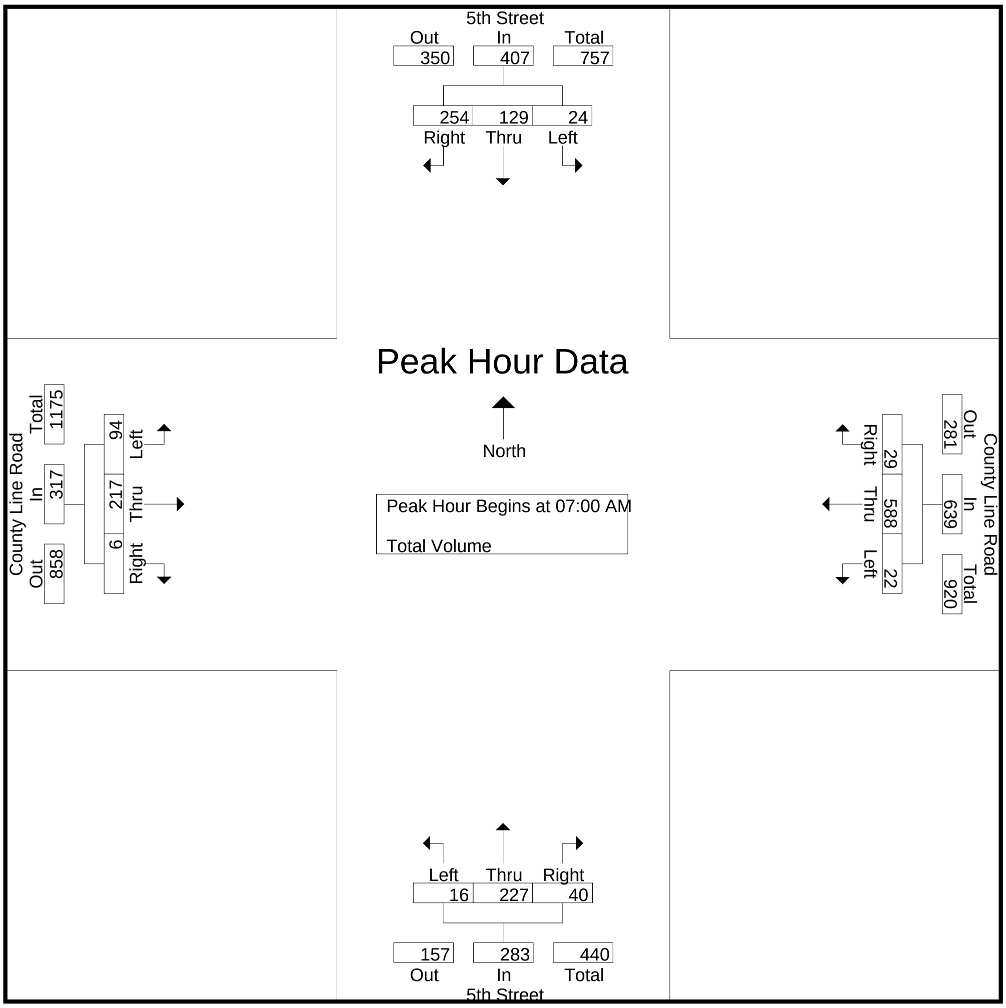

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM				07:00 AM				07:00 AM				07:45 AM			
+0 mins.	2	33	**74**	109	**9**	172	6	187	3	48	4	55	25	65	**3**	93
+15 mins.	6	34	71	**111**	2	**180**	**8**	**190**	5	70	8	83	**35**	86	2	**123**
+30 mins.	7	24	53	84	4	134	8	146	**7**	**75**	**14**	**96**	20	**90**	3	113
+45 mins.	**9**	**38**	56	103	7	102	7	116	1	34	14	49	26	58	3	87
Total Volume	24	129	254	407	22	588	29	639	16	227	40	283	106	299	11	416
% App. Total	5.9	31.7	62.4		3.4	92	4.5		5.7	80.2	14.1		25.5	71.9	2.6	
PHF	.667	.849	.858	.917	.611	.817	.906	.841	.571	.757	.714	.737	.757	.831	.917	.846

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City of Yucaipa
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File Name : 04_YUC_5th_County Line Rd PM
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Groups Printed- Total Volume

	5th Street Southbound				County Line Road Westbound				5th Street Northbound				County Line Road 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
04:00 PM	5	35	49	89	8	67	8	83	6	66	13	85	36	96	4	136	393
04:15 PM	6	39	50	95	13	64	8	85	1	34	16	51	45	104	3	152	383
04:30 PM	13	30	53	96	9	83	5	97	2	39	14	55	47	116	6	169	417
04:45 PM	10	47	43	100	3	80	8	91	3	32	13	48	55	100	6	161	400
Total	34	151	195	380	33	294	29	356	12	171	56	239	183	416	19	618	1593
05:00 PM	7	46	52	105	5	76	12	93	7	42	12	61	38	111	2	151	410
05:15 PM	13	55	55	123	7	63	7	77	4	36	13	53	52	135	4	191	444
05:30 PM	5	38	37	80	14	58	9	81	2	40	6	48	47	138	6	191	400
05:45 PM	2	44	36	82	6	80	6	92	4	58	15	77	42	101	2	145	396
Total	27	183	180	390	32	277	34	343	17	176	46	239	179	485	14	678	1650
Grand Total	61	334	375	770	65	571	63	699	29	347	102	478	362	901	33	1296	3243
Apprch %	7.9	43.4	48.7		9.3	81.7	9		6.1	72.6	21.3		27.9	69.5	2.5		
Total %	1.9	10.3	11.6	23.7	2	17.6	1.9	21.6	0.9	10.7	3.1	14.7	11.2	27.8	1	40	

	5th Street Southbound				County Line Road Westbound				5th Street Northbound				County Line Road 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	**13**	30	53	96	**9**	**83**	5	**97**	2	39	**14**	55	47	116	**6**	169	417
04:45 PM	10	47	43	100	3	80	8	91	3	32	13	48	**55**	100	6	161	400
05:00 PM	7	46	52	105	5	76	**12**	93	**7**	**42**	12	**61**	38	111	2	151	410
05:15 PM	13	**55**	**55**	**123**	7	63	7	77	4	36	13	53	52	**135**	4	**191**	**444**
Total Volume	43	178	203	424	24	302	32	358	16	149	52	217	192	462	18	672	1671
% App. Total	10.1	42	47.9		6.7	84.4	8.9		7.4	68.7	24		28.6	68.8	2.7		
PHF	.827	.809	.923	.862	.667	.910	.667	.923	.571	.887	.929	.889	.873	.856	.750	.880	.941

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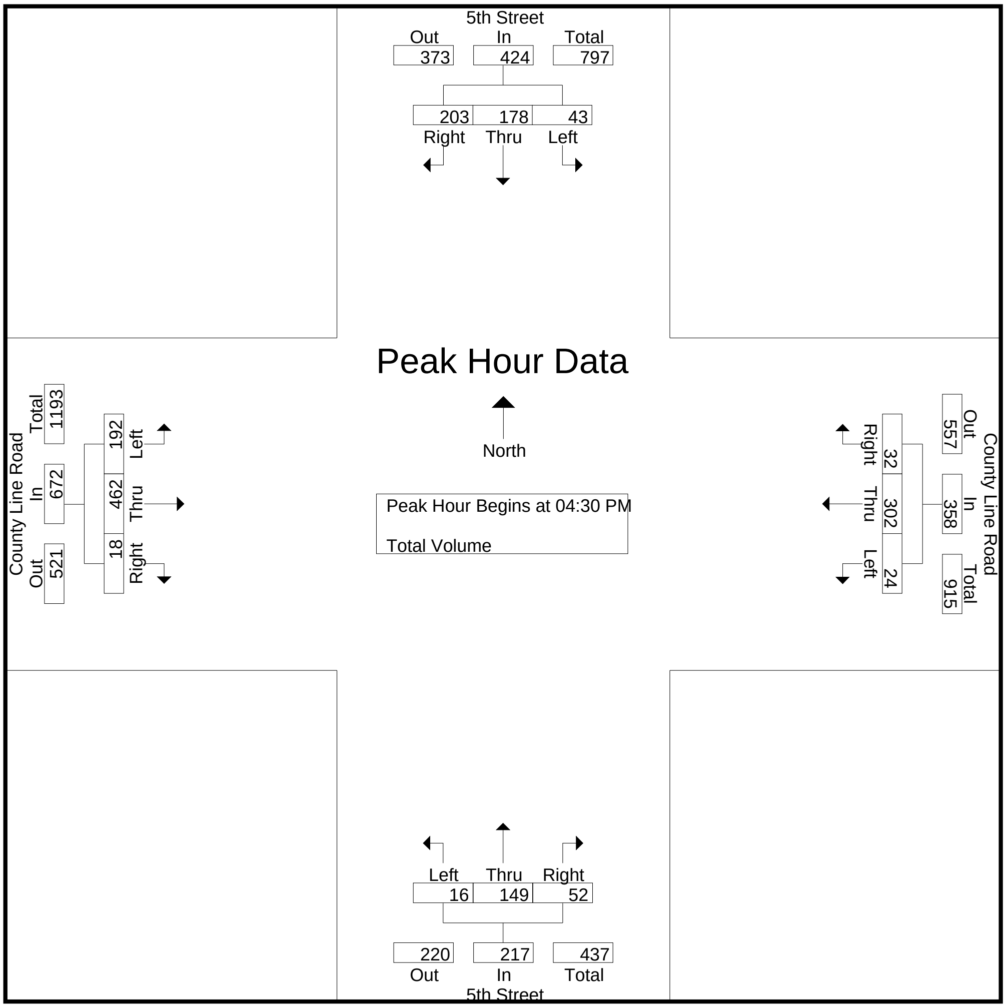


Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM				04:15 PM				04:00 PM				04:45 PM			
+0 mins.	**13**	30	53	96	**13**	64	8	85	**6**	**66**	13	**85**	**55**	100	**6**	161
+15 mins.	10	47	43	100	9	**83**	5	**97**	1	34	**16**	51	38	111	2	151
+30 mins.	7	46	52	105	3	80	8	91	2	39	14	55	52	135	4	**191**
+45 mins.	13	**55**	**55**	**123**	5	76	**12**	93	3	32	13	48	47	**138**	6	191
Total Volume	43	178	203	424	30	303	33	366	12	171	56	239	192	484	18	694
% App. Total	10.1	42	47.9		8.2	82.8	9		5	71.5	23.4		27.7	69.7	2.6	
PHF	.827	.809	.923	.862	.577	.913	.688	.943	.500	.648	.875	.703	.873	.877	.750	.908

Summarized Existing Trips

AM Summary / PM Summary

Intersection 1 — 5th St. & Wildwood Canyon Rd.

AM — EXISITING — Trip Assignment

	Left	Through	Right
North Leg	51	195	68
South Leg	86	293	67
West Leg	15	149	23
East Leg	115	515	35

PM — EXISITING — Trip Assignment

	Left	Through	Right
North Leg	57	308	29
South Leg	24	257	96
West Leg	54	404	27
East Leg	91	212	30

Intersection 2 — 5th St. & Ave. G

AM — Trip Assignment

	Left	Through	Right
North Leg	1	334	2
South Leg	0	434	2
West Leg	4	3	0
East Leg	4	12	4

PM — Trip Assignment

	Left	Through	Right
North Leg	4	421	5
South Leg	1	377	5
West Leg	6	9	0
East Leg	5	4	3

Intersection 3 — 5th St. & Ave. H

AM — Trip Assignment

	Left	Through	Right
North Leg	42	293	8
South Leg	15	319	22
West Leg	15	59	8
East Leg	102	66	99

PM — Trip Assignment

	Left	Through	Right
North Leg	51	334	34
South Leg	12	321	50
West Leg	23	115	19
East Leg	45	49	41

Intersection 4 — 5th St. & County Line Rd.

AM — Trip Assignment

	Left	Through	Right
North Leg	24	129	254
South Leg	16	227	40
West Leg	94	217	6
East Leg	22	588	29

PM — Trip Assignment

	Left	Through	Right
North Leg	43	178	203
South Leg	16	149	52
West Leg	192	462	18
East Leg	24	302	32

Intersection 5 — 5th St. and Private Street A

AM — Trip Assignment

	Left	Through	Right
North Leg	0	333	0
South Leg	0	444	0
West Leg	0	0	0
East Leg	0	0	0

PM — Trip Assignment

	Left	Through	Right
North Leg	0	428	0
South Leg	0	381	0
West Leg	0	0	0
East Leg	0	0	0

*Intersection 5 existing counts are estimated pass by trips, no data collected at this intersection

	Quantity	Unit[1]	AM Peak Hour In	AM Peak Hour Out	AM Peak Hour Total	PM Peak Hour In	PM Peak Hour Out	PM Peak Hour Total	Daily
Tentative Tract Map 20263									
ITE [210 - Single Family Detached Housing]									
Rates	43	DU	0.19	0.56	0.74	0.62	0.37	0.99	9.44
Trips			8	24	32	27	16	43	406
Internal Capture	0	%	0	0	0	0	0	0	0
External Trips			8	24	32	27	16	43	406
Pass-By	0	%	0	0	0	0	0	0	0
Net External Trips			8	24	32	27	16	43	406
Total Project Gross Trips			**8**	**24**	**32**	**27**	**16**	**43**	**406**
Total Project Internal Capture			**0**	**0**	**0**	**0**	**0**	**0**	**0**
Total Project External Trips			**8**	**24**	**32**	**27**	**16**	**43**	**406**
Total Project Pass-By			**0**	**0**	**0**	**0**	**0**	**0**	**0**
Total Project Net External Trips			**8**	**24**	**32**	**27**	**16**	**43**	**406**

[1]TSF = thousand square feet;

Source: Institute of Transportation Engineers *Trip Generation* , 10th Edition

AM Project Trip Distribution/Assignment

Intersection 1 — 5th St. & Wildwood Canyon Rd.

AM - Inbound

Trip Distribution

	Left	Through	Right
North Leg	0%	25%	0%
South Leg	0%	0%	0%
West Leg	0%	0%	5%
East Leg	0%	0%	0%

Trip Assignment

	Left	Through	Right
North Leg	0	2	0
South Leg	0	0	0
West Leg	0	0	0.4
East Leg	0	0	0

AM - Outbound

Trip Distribution

	Left	Through	Right
North Leg	0%	0%	0%
South Leg	40%	20%	0%
West Leg	0%	0%	0%
East Leg	0%	0%	0%

Trip Assignment

	Left	Through	Right
North Leg	0	0	0
South Leg	9.6	4.8	0
West Leg	0	0	0
East Leg	0	0	0

Intersection 2 — 5th St. & Ave. G

AM - Inbound

Trip Distribution

	Left	Through	Right
North Leg	0%	0%	0%
South Leg	0%	60%	0%
West Leg	10%	0%	0%
East Leg	0%	0%	0%

Trip Assignment

	Left	Through	Right
North Leg	0	0	0
South Leg	0	4.8	0
West Leg	0.8	0	0
East Leg	0	0	0

AM - Outbound

Trip Distribution

	Left	Through	Right
North Leg	0%	25%	15%
South Leg	0%	0%	0%
West Leg	0%	0%	0%
East Leg	0%	0%	0%

Trip Assignment

	Left	Through	Right
North Leg	0	6	3.6
South Leg	0	0	0
West Leg	0	0	0
East Leg	0	0	0

Intersection 3 — 5th St. & Ave. H

AM - Inbound

Trip Distribution

	Left	Through	Right
North Leg	0%	0%	0%
South Leg	0%	60%	0%
West Leg	0%	0%	0%
East Leg	0%	0%	0%

Trip Assignment

	Left	Through	Right
North Leg	0	0	0
South Leg	0	4.8	0
West Leg	0	0	0
East Leg	0	0	0

AM - Outbound

Trip Distribution

	Left	Through	Right
North Leg	0%	25%	0%
South Leg	0%	0%	0%
West Leg	0%	0%	0%
East Leg	0%	0%	0%

Trip Assignment

	Left	Through	Right
North Leg	0	6	0
South Leg	0	0	0
West Leg	0	0	0
East Leg	0	0	0

Intersection 4 — 5th St. & County Line Rd.

AM - Inbound

Trip Distribution

	Left	Through	Right
North Leg	0%	0%	0%
South Leg	0%	20%	0%
West Leg	40%	0%	0%
East Leg	0%	0%	0%

Trip Assignment

	Left	Through	Right
North Leg	0	0	0
South Leg	0	1.6	0
West Leg	3.2	0	0
East Leg	0	0	0

AM - Outbound

Trip Distribution

	Left	Through	Right
North Leg	0%	5%	20%
South Leg	0%	0%	0%
West Leg	0%	0%	0%
East Leg	0%	0%	0%

Trip Assignment

	Left	Through	Right
North Leg	0	1.2	4.8
South Leg	0	0	0
West Leg	0	0	0
East Leg	0	0	0

Intersection 5 — 5th St. & Private Street A

AM - Inbound

Trip Distribution

	Left	Through	Right
North Leg	0%	0%	30%
South Leg	70%	0%	0%
West Leg	0%	0%	0%
East Leg	0%	0%	0%

Trip Assignment

	Left	Through	Right
North Leg	0	0	2.4
South Leg	5.6	0	0
West Leg	0	0	0
East Leg	0	0	0

AM - Outbound

Trip Distribution

	Left	Through	Right
North Leg	0%	0%	0%
South Leg	0%	0%	0%
West Leg	60%	0%	40%
East Leg	0%	0%	0%

Trip Assignment

	Left	Through	Right
North Leg	0	0	0
South Leg	0	0	0
West Leg	14.4	0	9.6
East Leg	0	0	0

Intersection 1 — 5th St. & Wildwood Canyon Rd.

PM - Inbound

Trip Distribution

	Left	Through	Right
North Leg	0%	20%	0%
South Leg	0%	0%	0%
West Leg	0%	0%	40%
East Leg	0%	0%	0%

Trip Assignment

	Left	Through	Right
North Leg	0	5.4	0
South Leg	0	0	0
West Leg	0	0	10.8
East Leg	0	0	0

PM - Outbound

Trip Distribution

	Left	Through	Right
North Leg	0%	0%	0%
South Leg	25%	50%	0%
West Leg	0%	0%	0%
East Leg	0%	0%	0%

Trip Assignment

	Left	Through	Right
North Leg	0	0	0
South Leg	4	8	0
West Leg	0	0	0
East Leg	0	0	0

Intersection 2 — 5th St. & Ave. G

PM - Inbound

Trip Distribution

	Left	Through	Right
North Leg	0%	0%	0%
South Leg	0%	20%	0%
West Leg	20%	0%	0%
East Leg	0%	0%	0%

Trip Assignment

	Left	Through	Right
North Leg	0	0	0
South Leg	0	5.4	0
West Leg	5.4	0	0
East Leg	0	0	0

PM - Outbound

Trip Distribution

	Left	Through	Right
North Leg	0%	20%	5%
South Leg	0%	0%	0%
West Leg	0%	0%	0%
East Leg	0%	0%	0%

Trip Assignment

	Left	Through	Right
North Leg	0	3.2	0.8
South Leg	0	0	0
West Leg	0	0	0
East Leg	0	0	0

Intersection 3 — 5th St. & Ave. H

PM - Inbound

Trip Distribution

	Left	Through	Right
North Leg	0%	0%	0%
South Leg	0%	20%	0%
West Leg	0%	0%	0%
East Leg	0%	0%	0%

Trip Assignment

	Left	Through	Right
North Leg	0	0	0
South Leg	0	5.4	0
West Leg	0	0	0
East Leg	0	0	0

PM - Outbound

Trip Distribution

	Left	Through	Right
North Leg	0%	20%	0%
South Leg	0%	0%	0%
West Leg	0%	0%	0%
East Leg	0%	0%	0%

Trip Assignment

	Left	Through	Right
North Leg	0	3.2	0
South Leg	0	0	0
West Leg	0	0	0
East Leg	0	0	0

Intersection 4 — 5th St. & County Line Rd.

PM - Inbound

Trip Distribution

	Left	Through	Right
North Leg	0%	0%	0%
South Leg	0%	0%	0%
West Leg	20%	0%	0%
East Leg	0%	0%	0%

Trip Assignment

	Left	Through	Right
North Leg	0	0	0
South Leg	0	0	0
West Leg	5.4	0	0
East Leg	0	0	0

PM - Outbound

Trip Distribution

	Left	Through	Right
North Leg	0%	5%	15%
South Leg	0%	0%	0%
West Leg	0%	0%	0%
East Leg	0%	0%	0%

Trip Assignment

	Left	Through	Right
North Leg	0	0.8	2.4
South Leg	0	0	0
West Leg	0	0	0
East Leg	0	0	0

Intersection 5 — 5th St. & Private Street A

PM - Inbound

Trip Distribution

	Left	Through	Right
North Leg	0%	0%	60%
South Leg	40%	0%	0%
West Leg	0%	0%	0%
East Leg	0%	0%	0%

Trip Assignment

	Left	Through	Right
North Leg	0	0	16.2
South Leg	10.8	0	0
West Leg	0	0	0
East Leg	0	0	0

PM - Outbound

Trip Distribution

	Left	Through	Right
North Leg	0%	0%	0%
South Leg	0%	0%	0%
West Leg	75%	0%	25%
East Leg	0%	0%	0%

Trip Assignment

	Left	Through	Right
North Leg	0	0	0
South Leg	0	0	0
West Leg	12	0	4
East Leg	0	0	0

Summarized Project Trip Assignment

AM Summary / PM Summary

Intersection 1 — 5th St. & Wildwood Canyon Rd.

AM Summary

Trip Assignment	Left	Through	Right
North Leg	0	2	0
South Leg	9.6	4.8	0
West Leg	0	0	0.4
East Leg	0	0	0

PM Summary

Trip Assignment	Left	Through	Right
North Leg	0	5.4	0
South Leg	4	8	0
West Leg	0	0	10.8
East Leg	0	0	0

Intersection 2 — 5th St. & Ave. G

AM Summary

Trip Assignment	Left	Through	Right
North Leg	0	6	3.6
South Leg	0	4.8	0
West Leg	0.8	0	0
East Leg	0	0	0

PM Summary

Trip Assignment	Left	Through	Right
North Leg	0	3.2	0.8
South Leg	0	5.4	0
West Leg	5.4	0	0
East Leg	0	0	0

Intersection 3 — 5th St. & Ave. H

AM Summary

Trip Assignment	Left	Through	Right
North Leg	0	6	0
South Leg	0	4.8	0
West Leg	0	0	0
East Leg	0	0	0

PM Summary

Trip Assignment	Left	Through	Right
North Leg	0	3.2	0
South Leg	0	5.4	0
West Leg	0	0	0
East Leg	0	0	0

Intersection 4 — 5th St. & County Line Rd.

AM Summary

Trip Assignment	Left	Through	Right
North Leg	0	1.2	4.8
South Leg	0	1.6	0
West Leg	3.2	0	0
East Leg	0	0	0

PM Summary

Trip Assignment	Left	Through	Right
North Leg	0	0.8	2.4
South Leg	0	0	0
West Leg	5.4	0	0
East Leg	0	0	0

Intersection 5 — 5th St. & Private Street A

AM Summary

Trip Assignment	Left	Through	Right
North Leg	0	0	2.4
South Leg	5.6	0	0
West Leg	14.4	0	9.6
East Leg	0	0	0

PM Summary

Trip Assignment	Left	Through	Right
North Leg	0	0	16.2
South Leg	10.8	0	0
West Leg	12	0	4
East Leg	0	0	0

Appendix B

Hernandez, Kroone & Associates
Engineers & Land Surveyors

Cumulative Projects

Project	**Developer**	**# Units**
1. Detached Condominium	MBTK Homes, LLC	57
2. Multi-family Residential	Wayne Simmons	14
3. Duplex	Amira Boutros	4
4. Eagle Housing	City of Yucaipa	96
5. Detached Condominium	Nova Homes	68
6. Wildwood Meadows	Uttampar, Inc	29
7. Magnolia Gardens Condos	Rich Yucaipa III, LLC	108
8. Apartments	Wayne Simmons	18
9. Detached Condominium - TTM 19929		40

	Quantity	Unit[1]	AM Peak Hour In	AM Peak Hour Out	AM Peak Hour Total	PM Peak Hour In	PM Peak Hour Out	PM Peak Hour Total	Daily
Detached Condominium - MBTK Homes									
ITE [210 - Single Family Detached Housing]									
Rates	57	DU	0.19	0.56	0.74	0.62	0.37	0.99	9.44
Trips			11	32	43	36	21	57	538
Internal Capture	0	%	0	0	0	0	0	0	0
External Trips			11	32	43	36	21	57	538
Pass-By	0	%	0	0	0	0	0	0	0
Net External Trips			11	32	43	36	21	57	538
Multifamily Residential - Wayne Simmons									
ITE [220 - Multifamily Housing (Low Rise)]									
Rates	14	DU	0.11	0.35	0.46	0.35	0.21	0.56	7.32
Trips			1	5	6	5	3	8	102
Internal Capture	0	%	0	0	0	0	0	0	0
External Trips			1	5	6	5	3	8	102
Pass-By	0	%	0	0	0	0	0	0	0
Net External Trips			1	5	6	5	3	8	102
Duplex									
ITE [210 - Single Family Detached Housing]									
Rates	4	DU	0.19	0.56	0.74	0.62	0.37	0.99	9.44
Trips			1	2	3	2	1	3	38
Internal Capture	0	%	0	0	0	0	0	0	0
External Trips			1	2	3	2	1	3	38
Pass-By	0	%	0	0	0	0	0	0	0
Net External Trips			1	2	3	2	1	3	38
Eagle Housing									
ITE [252 - Senior Adult Housing-Attached]									
Rates	96	DU	0.07	0.13	0.20	0.14	0.12	0.26	3.70
Trips			7	12	19	14	11	25	355
Internal Capture	0	%	0	0	0	0	0	0	0
External Trips			7	12	19	14	11	25	355
Pass-By	0	%	0	0	0	0	0	0	0
Net External Trips			7	12	19	14	11	25	355
Detached Condominium - Nova Homes									
ITE [210 - Single Family Detached Housing]									
Rates	68	DU	0.19	0.56	0.74	0.62	0.37	0.99	9.44
Trips			13	38	51	42	25	67	642
Internal Capture	0	%	0	0	0	0	0	0	0
External Trips			13	38	51	42	25	67	642
Pass-By	0	%	0	0	0	0	0	0	0
Net External Trips			13	38	51	42	25	67	642

	Quantity	Unit[1]	AM Peak Hour In	AM Peak Hour Out	AM Peak Hour Total	PM Peak Hour In	PM Peak Hour Out	PM Peak Hour Total	Daily
Wildwood Meadows									
ITE [210 - Single Family Detached Housing]									
Rates	29	DU	0.19	0.56	0.74	0.62	0.37	0.99	9.44
Trips			5	16	21	18	11	29	274
Internal Capture	0	%	0	0	0	0	0	0	0
External Trips			5	16	21	18	11	29	274
Pass-By	0	%	0	0	0	0	0	0	0
Net External Trips			5	16	21	18	11	29	274
Magnolia Garden Condos									
ITE [210 - Single Family Detached Housing]									
Rates	108	DU	0.19	0.56	0.74	0.62	0.37	0.99	9.44
Trips			20	60	80	67	40	107	1,020
Internal Capture	0	%	0	0	0	0	0	0	0
External Trips			20	60	80	67	40	107	1,020
Pass-By	0	%	0	0	0	0	0	0	0
Net External Trips			20	60	80	67	40	107	1,020
Arch. Rev. 18 apt.									
ITE [220 - Multifamily Housing (Low Rise)]									
Rates	18	DU	0.11	0.35	0.46	0.35	0.21	0.56	7.32
Trips			2	6	8	6	4	10	132
Internal Capture	0	%	0	0	0	0	0	0	0
External Trips			2	6	8	6	4	10	132
Pass-By	0	%	0	0	0	0	0	0	0
Net External Trips			2	6	8	6	4	10	132
40 Condo Detached									
ITE [210 - Single Family Detached Housing]									
Rates	40	DU	0.19	0.56	0.74	0.62	0.37	0.99	9.44
Trips			7	22	29	25	15	40	378
Internal Capture	0	%	0	0	0	0	0	0	0
External Trips			7	22	29	25	15	40	378
Pass-By	0	%	0	0	0	0	0	0	0
Net External Trips			7	22	29	25	15	40	378
Total Project Gross Trips			**67**	**193**	**260**	**215**	**131**	**346**	**3,479**
Total Project Internal Capture			**0**	**0**	**0**	**0**	**0**	**0**	**0**
Total Project External Trips			**67**	**193**	**260**	**215**	**131**	**346**	**3,479**
Total Project Pass-By			**0**	**0**	**0**	**0**	**0**	**0**	**0**
Total Project Net External Trips			**67**	**193**	**260**	**215**	**131**	**346**	**3,479**

[1]TSF = thousand square feet;

Source: Institute of Transportation Engineers *Trip Generation* , 10th Edition

Appendix C

Hernandez, Kroone & Associates
Engineers & Land Surveyors

Project Number: 19-1006
Name of Project: Craig Heaps - TTM 20263 Traffic Study

AM - Summary

Other Project Trips AM*

Intersection 1 — 5th St. & Wildwood Canyon Rd.

Trip Assignment	Left	Through	Right		Sum
North Leg					0
South Leg	6		2		8
West Leg			5		5
East Leg	4	2			6
					19
Sum	10	2	7	19	

Intersection 2 — 5th St. & Ave. G

Trip Assignment	Left	Through	Right		Sum
North Leg	0	8	1		9
South Leg	1	7	0		8
West Leg	1	0	1		2
East Leg	0	0	0		0
					19
Sum	2	15	2	19	

Intersection 3 — 5th St. & Ave. H

Trip Assignment	Left	Through	Right		Sum
North Leg	5	4	0		9
South Leg	0	4	3		7
West Leg	0	0	0		0
East Leg	4	0	4		8
					24
Sum	9	8	7	24	

Intersection 4 — 5th St. & County Line Rd.

Trip Assignment	Left	Through	Right		Sum
North Leg	0	0	18		18
South Leg	0	0	0		0
West Leg	10	4	0		14
East Leg	0	10	0		10
					42
Sum	10	14	18	42	

Intersection 5 — 5th St. & Private Street A

Trip Assignment	Left	Through	Right		Sum
North Leg	0	10	0		10
South Leg	0	8	0		8
West Leg	0	0	0		0
East Leg	0	0	0		0
					18
Sum	0	18	0	18	

Opening Year (2021) + Other Projects

n = 2

Intersection 1 — 5th St. & Wildwood Canyon Rd.

Trip Assignment	Left	Through	Right		Sum
North Leg	52.54148	200.8939	70.0553		323.4907
South Leg	94.59935	301.8559	71.025075		467.4804
West Leg	15.45338	153.5035	28.695175		197.6521
East Leg	122.4759	532.5659	36.057875		691.0996
					1679.723
Sum	285.0701	1188.819	205.83343	1679.723	

Intersection 2 — 5th St. & Ave. G

Trip Assignment	Left	Through	Right		Sum
North Leg	1.030225	352.0952	3.06045		356.1858
South Leg	1	454.1177	2.06045		457.1781
West Leg	5.1209	3.090675	1		9.211575
East Leg	4.1209	12.3627	4.1209		20.6045
					843.18
Sum	11.27203	821.6662	10.2418	843.18	

Intersection 3 — 5th St. & Ave. H

Trip Assignment	Left	Through	Right		Sum
North Leg	48.26945	305.8559	8.2418		362.3672
South Leg	15.45338	332.6418	25.66495		373.7601
West Leg	15.45338	60.78328	8.2418		84.47845
East Leg	109.083	67.99485	105.99228		283.0701
					1103.676
Sum	188.2592	767.2758	148.14083	1103.676	

Intersection 4 — 5th St. & County Line Rd.

Trip Assignment	Left	Through	Right		Sum
North Leg	24.7254	132.899	279.67715		437.3016
South Leg	16.4836	233.8611	41.209		291.5537
West Leg	106.8412	227.5588	6.18135		340.5813
East Leg	22.66495	615.7723	29.876525		668.3138
					1737.75
Sum	170.7151	1210.091	356.94403	1737.75	

Intersection 4 — 5th St. & County Line Rd.

Trip Assignment	Left	Through	Right		Sum
North Leg	0	353.0649	0		353.0649
South Leg	0	465.4199	0		465.4199
West Leg	0	0	0		0
East Leg	0	0	0		0
					818.4848
Sum	0	818.4848	0	818.4848	

Project Number: 19-1006
Name of Project: Craig Heaps - TTM 20263 Traffic Study

PM - Summary

Other Project Trips PM*

Intersection 1 — 5th St. & Wildwood Canyon Rd.

Trip Assignment	Left	Through	Right		Sum
North Leg					0
South Leg	9		4		13
West Leg			4		4
East Leg	6				6
					23
Sum	15	0	8	23	

Intersection 2 — 5th St. & Ave. G

Trip Assignment	Left	Through	Right		Sum
North Leg	0	8	0		8
South Leg	2	12	0		14
West Leg	1	0	1		2
East Leg	0	0	0		0
					24
Sum	3	20	1	24	

Intersection 3 — 5th St. & Ave. H

Trip Assignment	Left	Through	Right		Sum
North Leg	4	3	0		7
South Leg	0	7	4		11
West Leg	0	0	0		0
East Leg	3	0	7		10
					28
Sum	7	10	11	28	

Intersection 4 — 5th St. & County Line Rd.

Trip Assignment	Left	Through	Right		Sum
North Leg	0	0	15		15
South Leg	0	0	0		0
West Leg	20	12	0		32
East Leg	0	4	2		6
					53
Sum	20	16	17	53	

Intersection 5 — 5th St. & Private Street A

Trip Assignment	Left	Through	Right		Sum
North Leg	0	10	0		10
South Leg	0	13	0		13
West Leg	0	0	0		0
East Leg	0	0			0
					23
Sum	0	23	0	23	

Opening Year (2021) + Other Projects

n = 2

Intersection 1 — 5th St. & Wildwood Canyon Rd.

Trip Assignment	Left	Through	Right		Sum
North Leg	58.72283	317.3093	29.876525		405.9087
South Leg	33.7254	264.7678	102.9016		401.3948
West Leg	55.63215	416.2109	31.816075		503.6591
East Leg	99.75048	218.4077	30.90675		349.0649
					1660.028
Sum	247.8309	1216.696	195.50095	1660.028	

Intersection 2 — 5th St. & Ave. G

Trip Assignment	Left	Through	Right		Sum
North Leg	4.1209	441.7247	5.151125		450.9968
South Leg	3.030225	400.3948	5.151125		408.5762
West Leg	7.18135	9.272025	1		17.45338
East Leg	5.151125	4.1209	3.090675		12.3627
					889.389
Sum	19.4836	855.5125	14.392925	889.389	

Intersection 3 — 5th St. & Ave. H

Trip Assignment	Left	Through	Right		Sum
North Leg	56.54148	347.0952	35.02765		438.6643
South Leg	12.3627	337.7022	55.51125		405.5762
West Leg	23.69518	118.4759	19.574275		161.7453
East Leg	49.36013	50.48103	49.239225		149.0804
					1155.066
Sum	141.9595	853.7543	159.3524	1155.066	

Intersection 4 — 5th St. & County Line Rd.

Trip Assignment	Left	Through	Right		Sum
North Leg	44.29968	183.3801	224.13568		451.8154
South Leg	16.4836	153.5035	53.5717		223.5588
West Leg	217.8032	487.964	18.54405		724.3112
East Leg	24.7254	315.128	34.9672		374.8206
					1774.506
Sum	303.3119	1139.975	331.21863	1774.506	

Intersection 5 — 5th St. & Private Street A

Trip Assignment	Left	Through	Right		Sum
North Leg	0	450.9363	0		450.9363
South Leg	0	405.5157	0		405.5157
West Leg	0	0	0		0
East Leg	0	0	0		0
					856.452
Sum	0	856.452	0	856.452	

Annual Growth Rate: 1.5% per Draft EIR Section 5.15 Page 11

Compounding Growth

Future Trip = Existing Trip (100% + 1.5%)^n OR Future Trip = Existing Trip (1.015)^n

n = number of years

Project Number: 19-1006
Name of Project: Craig Heaps - TTM 20263 Traffic Study

Project Trips AM*

Intersection 1 — 5th St. & Wildwood Canyon Rd.

Trip Assignment	Left	Through	Right	Sum
North Leg	0	2	0	2
South Leg	9.6	4.8	0	14.4
West Leg	0	0	0.4	0.4
East Leg	0	0	0	0
				16.8
Sum	9.6	6.8	0.4	16.8

Intersection 2 — 5th St. & Ave. G

Trip Assignment	Left	Through	Right	Sum
North Leg	0	6	3.6	9.6
South Leg	0	4.8	0	4.8
West Leg	0.8	0	0	0.8
East Leg	0	0	0	0
				15.2
Sum	0.8	10.8	3.6	15.2

Intersection 3 — 5th St. & Ave. H

Trip Assignment	Left	Through	Right	Sum
North Leg	0	6	0	6
South Leg	0	4.8	0	4.8
West Leg	0	0	0	0
East Leg	0	0	0	0
				10.8
Sum	0	10.8	0	10.8

Intersection 4 — 5th St. & County Line Rd.

Trip Assignment	Left	Through	Right	Sum
North Leg	0	1.2	4.8	6
South Leg	0	1.6	0	1.6
West Leg	3.2	0	0	3.2
East Leg	0	0	0	0
				10.8
Sum	3.2	2.8	4.8	10.8

Intersection 5 — 5th St. and Private Street A

Trip Assignment	Left	Through	Right	Sum
North Leg	0	0	2.4	2.4
South Leg	5.6	0	0	5.6
West Leg	14.4	0	9.6	24
East Leg	0	0	0	0
				32
Sum	20	0	12	32

Project Opening Year Base + Other Projects + Project AM

Intersection 1 — 5th St. & Wildwood Canyon Rd.

Trip Assignment	Left	Through	Right	Sum
North Leg	52.54148	202.8939	70.0553	325.4907
South Leg	104.1994	306.6559	71.025075	481.8804
West Leg	15.45338	153.5035	29.095175	198.0521
East Leg	122.4759	532.5659	36.057875	691.0996
				1696.523
Sum	294.6701	1195.619	206.23343	1696.523

Intersection 2 — 5th St. & Ave. G

Trip Assignment	Left	Through	Right	Sum
North Leg	1.030225	358.0952	6.66045	365.7858
South Leg	1	458.9177	2.06045	461.9781
West Leg	5.9209	3.090675	1	10.01158
East Leg	4.1209	12.3627	4.1209	20.6045
				858.38
Sum	12.07203	832.4662	13.8418	858.38

Intersection 3 — 5th St. & Ave. H

Trip Assignment	Left	Through	Right	Sum
North Leg	48.26945	311.8559	8.2418	368.3672
South Leg	15.45338	337.4418	25.66495	378.5601
West Leg	15.45338	60.78328	8.2418	84.47845
East Leg	109.083	67.99485	105.99228	283.0701
				1114.476
Sum	188.2592	778.0758	148.14083	1114.476

Intersection 4 — 5th St. & County Line Rd.

Trip Assignment	Left	Through	Right	Sum
North Leg	24.7254	134.099	284.47715	443.3016
South Leg	16.4836	235.4611	41.209	293.1537
West Leg	110.0412	227.5588	6.18135	343.7813
East Leg	22.66495	615.7723	29.876525	668.3138
				1748.55
Sum	173.9151	1212.891	361.74403	1748.55

Intersection 5 — 5th St. & Private Street A

Trip Assignment	Left	Through	Right	Sum
North Leg	0	353.0649	2.4	355.4649
South Leg	5.6	465.4199	0	471.0199
West Leg	14.4	0	9.6	24
East Leg	0	0	0	0
				850.4848
Sum	20	818.4848	12	850.4848

Project Number: 19-1006
Name of Project: Craig Heaps - TTM 20263 Traffic Study

Project Trips PM*

Intersection 1 — 5th St. & Wildwood Canyon Rd.

Trip Assignment

	Left	Through	Right		Sum
North Leg	0	5.4	0		5.4
South Leg	4	8	0		12
West Leg	0	0	10.8		10.8
East Leg	0	0	0		0
					28.2
Sum	4	13.4	10.8	28.2	

Intersection 2 — 5th St. & Ave. G

Trip Assignment

	Left	Through	Right		Sum
North Leg	0	3.2	0.8		4
South Leg	0	5.4	0		5.4
West Leg	5.4	0	0		5.4
East Leg	0	0	0		0
					14.8
Sum	5.4	8.6	0.8	14.8	

Intersection 3 — 5th St. & Ave. H

Trip Assignment

	Left	Through	Right		Sum
North Leg	0	3.2	0		3.2
South Leg	0	5.4	0		5.4
West Leg	0	0	0		0
East Leg	0	0	0		0
					8.6
Sum	0	8.6	0	8.6	

Intersection 4 — 5th St. & County Line Rd.

Trip Assignment

	Left	Through	Right		Sum
North Leg	0	0.8	2.4		3.2
South Leg	0	0	0		0
West Leg	5.4	0	0		5.4
East Leg	0	0	0		0
					8.6
Sum	5.4	0.8	2.4	8.6	

Intersection 5 — 5th St. and Private Street A

Trip Assignment

	Left	Through	Right		Sum
North Leg	0	0	16.2		16.2
South Leg	10.8	0	0		10.8
West Leg	12	0	4		16
East Leg	0	0	0		0
					43
Sum	22.8	0	20.2	43	

Project Opening Year Base + Other Projects + Project PM

Intersection 1 — 5th St. & Wildwood Canyon Rd.

Trip Assignment

	Left	Through	Right		Sum
North Leg	58.72283	322.7093	29.876525		411.3087
South Leg	37.7254	272.7678	102.9016		413.3948
West Leg	55.63215	416.2109	42.616075		514.4591
East Leg	99.75048	218.4077	30.90675		349.0649
					1688.228
Sum	251.8309	1230.096	206.30095	1688.228	

Intersection 2 — 5th St. & Ave. G

Trip Assignment

	Left	Through	Right		Sum
North Leg	4.1209	444.9247	5.951125		454.9968
South Leg	3.030225	405.7948	5.151125		413.9762
West Leg	12.58135	9.272025	1		22.85338
East Leg	5.151125	4.1209	3.090675		12.3627
					904.189
Sum	24.8836	864.1125	15.192925	904.189	

Intersection 3 — 5th St. & Ave. H

Trip Assignment

	Left	Through	Right		Sum
North Leg	56.54148	350.2952	35.02765		441.8643
South Leg	12.3627	343.1022	55.51125		410.9762
West Leg	23.69518	118.4759	19.574275		161.7453
East Leg	49.36013	50.48103	49.239225		149.0804
					1163.666
Sum	141.9595	862.3543	159.3524	1163.666	

Intersection 4 — 5th St. & County Line Rd.

Trip Assignment

	Left	Through	Right		Sum
North Leg	44.29968	184.1801	226.53568		455.0154
South Leg	16.4836	153.5035	53.5717		223.5588
West Leg	223.2032	487.964	18.54405		729.7112
East Leg	24.7254	315.128	34.9672		374.8206
					1783.106
Sum	308.7119	1140.775	333.61863	1783.106	

Intersection 5 — 5th St. & Private Street A

Trip Assignment

	Left	Through	Right		Sum
North Leg	0	450.9363	16.2		467.1363
South Leg	10.8	405.5157	0		416.3157
West Leg	12	0	4		16
East Leg	0	0	0		0
					899.452
Sum	22.8	856.452	20.2	899.452	

*Copied from 191006 Project Trip Assignment PM Summary

AM Summary

PM Summary

Intersection 1 — 5th St. & Wildwood Canyon Rd.

n=21

AM Summary:

Future Year (2040) Trip Assignment	Left	Through	Right
North Leg	69.71995	266.5763	92.95993
South Leg	117.567	400.5479	91.59287
West Leg	20.50587	203.6916	31.44233
East Leg	157.2117	704.0348	47.84702

PM Summary:

Future Year (2040) Trip Assignment	Left	Through	Right
North Leg	77.9223	421.0538	39.64468
South Leg	32.80939	351.3339	131.2376
West Leg	73.82112	552.2914	36.91056
East Leg	124.4023	289.8163	41.01173

Intersection 2 — 5th St. & Ave. G

AM Summary:

Trip Assignment	Left	Through	Right
North Leg	1.367058	456.5973	2.734116
South Leg	0	593.3031	2.734116
West Leg	5.468231	4.101173	0
East Leg	5.468231	16.40469	5.468231

PM Summary:

Trip Assignment	Left	Through	Right
North Leg	5.468231	575.5313	6.835289
South Leg	1.367058	515.3808	6.835289
West Leg	8.202347	12.30352	0
East Leg	6.835289	5.468231	4.101173

Intersection 3 — 5th St. & Ave. H

AM Summary:

Trip Assignment	Left	Through	Right
North Leg	57.41643	400.5479	10.93646
South Leg	20.50587	436.0914	30.07527
West Leg	20.50587	80.65641	10.93646
East Leg	139.4399	90.22582	135.3387

PM Summary:

Trip Assignment	Left	Through	Right
North Leg	69.71995	456.5973	46.47997
South Leg	16.40469	438.8256	68.35289
West Leg	31.44233	157.2117	25.9741
East Leg	61.5176	66.98583	56.04937

Intersection 4 — 5th St. & County Line Rd.

AM Summary:

Trip Assignment	Left	Through	Right
North Leg	32.80939	176.3505	347.2327
South Leg	21.87293	310.3221	54.68231
West Leg	128.5034	296.6515	8.202347
East Leg	30.07527	803.83	39.64468

PM Summary:

Trip Assignment	Left	Through	Right
North Leg	58.78349	243.3363	277.5127
South Leg	21.87293	203.6916	71.08701
West Leg	262.4751	631.5807	24.60704
East Leg	32.80939	412.8515	43.74585

Intersection 5 — 5th St. and Private Street A

AM Summary:

Trip Assignment	Left	Through	Right
North Leg	0	455.2303	0
South Leg	0	606.9737	0
West Leg	0	0	0
East Leg	0	0	0

PM Summary:

Trip Assignment	Left	Through	Right
North Leg	0	585.1008	0
South Leg	0	520.849	0
West Leg	0	0	0
East Leg	0	0	0

Annual Growth Rate: 1.5% per Draft EIR Section 5.15 Page 11

Compounding Growth

Future Trip = Existing Trip (100% + 1.5%)^^{n} OR Future Trip = Existing Trip (1.015)^^{n}

n = number of years

AM - Summary

Intersection 1 — 5th St. & Wildwood Canyon Rd.

n=21

Future Year 2040 + Project			
Trip Assignment			
	Left	Through	Right
North Leg	69.71995	268.5763	92.95993
South Leg	127.167	405.3479	91.59287
West Leg	20.50587	203.6916	31.84233
East Leg	157.2117	704.0348	47.84702

Intersection 2 — 5th St. & Ave. G

Trip Assignment			
	Left	Through	Right
North Leg	1.367058	462.5973	6.334116
South Leg	0	598.1031	2.734116
West Leg	6.268231	4.101173	0
East Leg	5.468231	16.40469	5.468231

Intersection 3 — 5th St. & Ave. H

Trip Assignment			
	Left	Through	Right
North Leg	57.41643	406.5479	10.93646
South Leg	20.50587	440.8914	30.07527
West Leg	20.50587	80.65641	10.93646
East Leg	139.4399	90.22582	135.3387

Intersection 4 — 5th St. & County Line Rd.

Trip Assignment			
	Left	Through	Right
North Leg	32.80939	177.5505	352.0327
South Leg	21.87293	311.9221	54.68231
West Leg	131.7034	296.6515	8.202347
East Leg	30.07527	803.83	39.64468

Intersection 5 — 5th St. & County Line Rd.

Trip Assignment			
	Left	Through	Right
North Leg	0	455.2303	2.4
South Leg	5.6	606.9737	0
West Leg	14.4	0	9.6
East Leg	0	0	0

PM - Summary

Intersection 1 — 5th St. & Wildwood Canyon Rd.

Future Year 2040 + Project			
Trip Assignment			
	Left	Through	Right
North Leg	77.9223	426.4538	39.64468
South Leg	36.80939	359.3339	131.2376
West Leg	73.82112	552.2914	47.71056
East Leg	124.4023	289.8163	41.01173

Intersection 2 — 5th St. & Ave. G

Trip Assignment			
	Left	Through	Right
North Leg	5.468231	578.7313	7.635289
South Leg	1.367058	520.7808	6.835289
West Leg	13.60235	12.30352	0
East Leg	6.835289	5.468231	4.101173

Intersection 3 — 5th St. & Ave. H

Trip Assignment			
	Left	Through	Right
North Leg	69.71995	459.7973	46.47997
South Leg	16.40469	444.2256	68.35289
West Leg	31.44233	157.2117	25.9741
East Leg	61.5176	66.98583	56.04937

Intersection 4 — 5th St. & County Line Rd.

Trip Assignment			
	Left	Through	Right
North Leg	58.78349	244.1363	279.9127
South Leg	21.87293	203.6916	71.08701
West Leg	267.8751	631.5807	24.60704
East Leg	32.80939	412.8515	43.74585

Intersection 5 — 5th St. & County Line Rd.

Trip Assignment			
	Left	Through	Right
North Leg	0	585.1008	16.2
South Leg	10.8	520.849	0
West Leg	12	0	4
East Leg	0	0	0

Annual Growth Rate: 1.5% per Draft EIR Section 5.15 Page 11

Compounding Growth

Future Trip = Existing Trip (100% + 1.5%)^{n} OR Future Trip = Existing Trip (1.015)^{n}

n = number of years

Appendix D

Hernandez, Kroone & Associates
Engineers & Land Surveyors

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	15	149	23	115	515	35	86	293	67	51	195	68
Future Volume (veh/h)	15	149	23	115	515	35	86	293	67	51	195	68
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1673	1772	1772	1673	1772	1772	1673	1772	1772	1673	1772	1772
Adj Flow Rate, veh/h	28	204	28	151	579	44	104	362	96	84	291	96
Peak Hour Factor	0.54	0.73	0.82	0.76	0.89	0.80	0.83	0.81	0.70	0.61	0.67	0.71
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	100	458	389	295	676	572	149	637	167	143	421	357
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.06	0.26	0.26	0.18	0.38	0.38	0.09	0.24	0.24	0.09	0.24	0.24
Unsig. Movement Delay												
Ln Grp Delay, s/veh	42.7	27.9	22.8	35.6	36.0	16.0	58.7	32.2	32.7	51.3	36.8	26.7
Ln Grp LOS	D	C	C	D	D	B	E	C	C	D	D	C
Approach Vol, veh/h		260			774			562			471	
Approach Delay, s/veh		29.0			34.8			37.3			37.3	
Approach LOS		C			C			D			D	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Case No	2.0	4.0	2.0	3.0	2.0	3.0	2.0	3.0
Phs Duration (G+Y+Rc), s	11.7	23.8	19.3	25.2	12.0	23.5	9.5	35.0
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green (Gmax), s	7.2	19.3	14.8	20.7	7.5	19.0	5.0	30.5
Max Allow Headway (MAH), s	3.8	5.2	3.8	5.0	3.8	4.9	3.8	5.0
Max Q Clear (g_c+I1), s	6.1	11.8	8.8	9.7	7.1	14.0	3.3	26.0
Green Ext Time (g_e), s	0.0	1.6	0.2	0.8	0.0	0.9	0.0	1.6
Prob of Phs Call (p_c)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prob of Max Out (p_x)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Left-Turn Movement Data								
Assigned Mvmt	1		3		5		7	
Mvmt Sat Flow, veh/h	1594		1594		1594		1594	
Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		2640		1772		1772		1772
Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		691		1502		1502		1502
Left Lane Group Data								
Assigned Mvmt	1	0	3	0	5	0	7	0
Lane Assignment	L (Prot)		L (Prot)		L (Prot)		L (Prot)	

Lanes in Grp	1	0	1	0	1	0	1	0
Grp Vol (v), veh/h	84	0	151	0	104	0	28	0
Grp Sat Flow (s), veh/h/ln	1594	0	1594	0	1594	0	1594	0
Q Serve Time (g_s), s	4.1	0.0	6.8	0.0	5.1	0.0	1.3	0.0
Cycle Q Clear Time (g_c), s	4.1	0.0	6.8	0.0	5.1	0.0	1.3	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	143	0	295	0	149	0	100	0
V/C Ratio (X)	0.59	0.00	0.51	0.00	0.70	0.00	0.28	0.00
Avail Cap (c_a), veh/h	143	0	295	0	149	0	100	0
Upstream Filter (I)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Uniform Delay (d1), s/veh	35.0	0.0	29.3	0.0	35.1	0.0	35.8	0.0
Incr Delay (d2), s/veh	16.3	0.0	6.2	0.0	23.5	0.0	6.9	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	51.3	0.0	35.6	0.0	58.7	0.0	42.7	0.0
1st-Term Q (Q1), veh/ln	1.5	0.0	2.5	0.0	1.9	0.0	0.5	0.0
2nd-Term Q (Q2), veh/ln	0.6	0.0	0.5	0.0	1.0	0.0	0.2	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
%ile Back of Q (50%), veh/ln	2.2	0.0	3.0	0.0	2.9	0.0	0.7	0.0
%ile Storage Ratio (RQ%)	0.41	0.00	0.08	0.00	0.47	0.00	0.02	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	229	0	204	0	291	0	579
Grp Sat Flow (s), veh/h/ln	0	1683	0	1772	0	1772	0	1772
Q Serve Time (g_s), s	0.0	9.6	0.0	7.7	0.0	12.0	0.0	24.0
Cycle Q Clear Time (g_c), s	0.0	9.6	0.0	7.7	0.0	12.0	0.0	24.0
Lane Grp Cap (c), veh/h	0	406	0	458	0	421	0	676
V/C Ratio (X)	0.00	0.56	0.00	0.44	0.00	0.69	0.00	0.86
Avail Cap (c_a), veh/h	0	406	0	458	0	421	0	676
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	26.7	0.0	24.8	0.0	27.8	0.0	22.7
Incr Delay (d2), s/veh	0.0	5.6	0.0	3.1	0.0	9.0	0.0	13.2
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	32.2	0.0	27.9	0.0	36.8	0.0	36.0
1st-Term Q (Q1), veh/ln	0.0	3.6	0.0	3.1	0.0	4.8	0.0	9.1
2nd-Term Q (Q2), veh/ln	0.0	0.6	0.0	0.4	0.0	1.1	0.0	2.5

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	4.3	0.0	3.5	0.0	5.9	0.0	11.6
%ile Storage Ratio (RQ%)	0.00	0.71	0.00	0.11	0.00	1.12	0.00	0.29
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		T+R		R		R		R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	229	0	28	0	96	0	44
Grp Sat Flow (s), veh/h/ln	0	1647	0	1502	0	1502	0	1502
Q Serve Time (g_s), s	0.0	9.8	0.0	1.1	0.0	4.2	0.0	1.5
Cycle Q Clear Time (g_c), s	0.0	9.8	0.0	1.1	0.0	4.2	0.0	1.5
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.42	0.00	1.00	0.00	1.00	0.00	1.00
Lane Grp Cap (c), veh/h	0	397	0	389	0	357	0	572
V/C Ratio (X)	0.00	0.58	0.00	0.07	0.00	0.27	0.00	0.08
Avail Cap (c_a), veh/h	0	397	0	389	0	357	0	572
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	26.7	0.0	22.4	0.0	24.8	0.0	15.8
Incr Delay (d2), s/veh	0.0	6.0	0.0	0.4	0.0	1.8	0.0	0.3
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	32.7	0.0	22.8	0.0	26.7	0.0	16.0
1st-Term Q (Q1), veh/ln	0.0	3.6	0.0	0.4	0.0	1.4	0.0	0.5
2nd-Term Q (Q2), veh/ln	0.0	0.7	0.0	0.0	0.0	0.2	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	4.3	0.0	0.4	0.0	1.6	0.0	0.5
%ile Storage Ratio (RQ%)	0.00	0.71	0.00	0.01	0.00	0.31	0.00	0.01
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary		
HCM 6th Ctrl Delay		35.3
HCM 6th LOS		D

Intersection	
Int Delay, s/veh	1.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Vol, veh/h	4	3	0	4	12	4	0	434	2	1	334	2
Future Vol, veh/h	4	3	0	4	12	4	0	434	2	1	334	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	-9	-	-	0	-
Peak Hour Factor	50	75	25	50	60	33	25	79	50	25	86	50
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	8	4	0	8	20	12	0	549	4	4	388	4

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	965	951	390	951	951	551	392	0	0	553	0	0
Stage 1	398	398	-	551	551	-	-	-	-	-	-	-
Stage 2	567	553	-	400	400	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	234	260	658	240	260	534	1167	-	-	1017	-	-
Stage 1	628	603	-	519	515	-	-	-	-	-	-	-
Stage 2	508	514	-	626	602	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	214	259	658	236	259	534	1167	-	-	1017	-	-
Mov Cap-2 Maneuver	214	259	-	236	259	-	-	-	-	-	-	-
Stage 1	628	600	-	519	515	-	-	-	-	-	-	-
Stage 2	477	514	-	619	599	-	-	-	-	-	-	-

Approach	EB	WB	NE	SW
HCM Control Delay, s	21.7	18.8	0	0.1
HCM LOS	C	C		

Minor Lane/Major Mvmt	NEL	NET	NER	EBLn1	WBLn1	SWL	SWT	SWR
Capacity (veh/h)	1167	-	-	227	300	1017	-	-
HCM Lane V/C Ratio	-	-	-	0.053	0.134	0.004	-	-
HCM Control Delay (s)	0	-	-	21.7	18.8	8.6	0	-
HCM Lane LOS	A	-	-	C	C	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.2	0.5	0	-	-

Intersection	
Intersection Delay, s/veh	41.9
Intersection LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	15	59	8	102	66	99	15	319	22	42	293	8
Future Vol, veh/h	15	59	8	102	66	99	15	319	22	42	293	8
Peak Hour Factor	0.62	0.57	1.00	0.80	0.72	0.71	0.54	0.71	0.69	0.50	0.90	0.67
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	24	104	8	128	92	139	28	449	32	84	326	12
Number of Lanes	0	1	1	0	1	1	0	1	1	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	2	2
HCM Control Delay	15.8	17.7	64.5	43.6
HCM LOS	C	C	F	E

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	4%	0%	20%	0%	61%	0%	13%	0%
Vol Thru, %	96%	0%	80%	0%	39%	0%	87%	0%
Vol Right, %	0%	100%	0%	100%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	334	22	74	8	168	99	335	8
LT Vol	15	0	15	0	102	0	42	0
Through Vol	319	0	59	0	66	0	293	0
RT Vol	0	22	0	8	0	99	0	8
Lane Flow Rate	477	32	128	8	219	139	410	12
Geometry Grp	7	7	7	7	7	7	7	7
Degree of Util (X)	0.999	0.06	0.321	0.018	0.522	0.292	0.877	0.023
Departure Headway (Hd)	7.542	6.799	9.053	8.217	8.58	7.54	7.707	6.921
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	487	530	397	435	421	477	471	517
Service Time	5.242	4.499	6.819	5.982	6.334	5.293	5.453	4.666
HCM Lane V/C Ratio	0.979	0.06	0.322	0.018	0.52	0.291	0.87	0.023
HCM Control Delay	68.2	9.9	16.1	11.1	20.4	13.4	44.6	9.8
HCM Lane LOS	F	A	C	B	C	B	E	A
HCM 95th-tile Q	13.3	0.2	1.4	0.1	2.9	1.2	9.3	0.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	94	217	6	22	588	29	16	227	40	24	129	254
Future Volume (veh/h)	94	217	6	22	588	29	16	227	40	24	129	254
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1673	1772	1772	1673	1772	1772	1673	1772	1772	1673	1772	1772
Adj Flow Rate, veh/h	104	261	12	36	717	32	28	299	56	36	152	295
Peak Hour Factor	0.90	0.83	0.50	0.61	0.82	0.91	0.57	0.76	0.71	0.67	0.85	0.86
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	270	803	681	573	803	681	283	497	421	227	497	421
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.07	0.45	0.45	0.07	0.45	0.45	0.28	0.28	0.28	0.28	0.28	0.28
Unsig. Movement Delay												
Ln Grp Delay, s/veh	18.2	13.3	10.5	8.5	31.8	10.7	23.0	26.9	19.3	28.6	21.3	31.7
Ln Grp LOS	B	B	B	A	C	B	C	C	B	C	C	C
Approach Vol, veh/h		377			785			383			483	
Approach Delay, s/veh		14.5			29.9			25.5			28.2	
Approach LOS		B			C			C			C	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Case No		5.0	1.1	3.0		5.0	1.1	3.0
Phs Duration (G+Y+Rc), s		24.0	9.5	36.0		24.0	9.5	36.0
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5
Max Green (Gmax), s		19.5	5.0	31.5		19.5	5.0	31.5
Max Allow Headway (MAH), s		5.0	3.8	5.1		4.4	3.8	5.1
Max Q Clear (g_c+I1), s		12.1	2.8	8.6		14.6	4.3	27.8
Green Ext Time (g_e), s		1.2	0.0	1.5		1.0	0.0	1.7
Prob of Phs Call (p_c)		1.00	1.00	1.00		1.00	1.00	1.00
Prob of Max Out (p_x)		0.00	0.00	0.00		0.00	0.00	0.00
Left-Turn Movement Data								
Assigned Mvmt		5	3			1	7	
Mvmt Sat Flow, veh/h		844	1594			918	1594	
Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		1772		1772		1772		1772
Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1502		1502		1502		1502
Left Lane Group Data								
Assigned Mvmt	0	5	3	0	0	1	7	0
Lane Assignment			LL (Pr/Pm)				LL (Pr/Pm)	

Lanes in Grp	0	1	1	0	0	1	1	0
Grp Vol (v), veh/h	0	28	36	0	0	36	104	0
Grp Sat Flow (s), veh/h/ln	0	844	1594	0	0	918	1594	0
Q Serve Time (g_s), s	0.0	1.9	0.8	0.0	0.0	2.5	2.3	0.0
Cycle Q Clear Time (g_c), s	0.0	6.6	0.8	0.0	0.0	12.6	2.3	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	844	990	0	0	918	638	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	19.5	31.5	0.0	0.0	19.5	31.5	0.0
Perm LT Serve Time (g_u), s	0.0	14.8	24.9	0.0	0.0	9.4	5.7	0.0
Perm LT Q Serve Time (g_ps), s	0.0	1.9	0.2	0.0	0.0	2.5	5.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	1.00	1.00	0.00	0.00	1.00	1.00	0.00
Lane Grp Cap (c), veh/h	0	283	573	0	0	227	270	0
V/C Ratio (X)	0.00	0.10	0.06	0.00	0.00	0.16	0.38	0.00
Avail Cap (c_a), veh/h	0	283	573	0	0	227	270	0
Upstream Filter (I)	0.00	1.00	1.00	0.00	0.00	1.00	1.00	0.00
Uniform Delay (d1), s/veh	0.0	22.3	8.3	0.0	0.0	27.1	14.1	0.0
Incr Delay (d2), s/veh	0.0	0.7	0.2	0.0	0.0	1.5	4.1	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	23.0	8.5	0.0	0.0	28.6	18.2	0.0
1st-Term Q (Q1), veh/ln	0.0	0.3	0.2	0.0	0.0	0.5	0.7	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.0	0.0	0.1	0.3	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	1.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.4	0.3	0.0	0.0	0.6	1.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.03	0.01	0.00	0.00	0.01	0.03	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	299	0	261	0	152	0	717
Grp Sat Flow (s), veh/h/ln	0	1772	0	1772	0	1772	0	1772
Q Serve Time (g_s), s	0.0	10.1	0.0	6.6	0.0	4.7	0.0	25.8
Cycle Q Clear Time (g_c), s	0.0	10.1	0.0	6.6	0.0	4.7	0.0	25.8
Lane Grp Cap (c), veh/h	0	497	0	803	0	497	0	803
V/C Ratio (X)	0.00	0.60	0.00	0.32	0.00	0.31	0.00	0.89
Avail Cap (c_a), veh/h	0	497	0	803	0	497	0	803
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	21.6	0.0	12.2	0.0	19.7	0.0	17.4
Incr Delay (d2), s/veh	0.0	5.3	0.0	1.1	0.0	1.6	0.0	14.4
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	26.9	0.0	13.3	0.0	21.3	0.0	31.8
1st-Term Q (Q1), veh/ln	0.0	3.9	0.0	2.3	0.0	1.8	0.0	9.0
2nd-Term Q (Q2), veh/ln	0.0	0.7	0.0	0.2	0.0	0.2	0.0	3.2

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	4.6	0.0	2.5	0.0	2.0	0.0	12.2
%ile Storage Ratio (RQ%)	0.00	0.32	0.00	0.08	0.00	0.03	0.00	0.34
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		R		R		R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	56	0	12	0	295	0	32
Grp Sat Flow (s), veh/h/ln	0	1502	0	1502	0	1502	0	1502
Q Serve Time (g_s), s	0.0	1.9	0.0	0.3	0.0	12.2	0.0	0.8
Cycle Q Clear Time (g_c), s	0.0	1.9	0.0	0.3	0.0	12.2	0.0	0.8
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Lane Grp Cap (c), veh/h	0	421	0	681	0	421	0	681
V/C Ratio (X)	0.00	0.13	0.00	0.02	0.00	0.70	0.00	0.05
Avail Cap (c_a), veh/h	0	421	0	681	0	421	0	681
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	18.7	0.0	10.5	0.0	22.4	0.0	10.6
Incr Delay (d2), s/veh	0.0	0.7	0.0	0.0	0.0	9.3	0.0	0.1
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	19.3	0.0	10.5	0.0	31.7	0.0	10.7
1st-Term Q (Q1), veh/ln	0.0	0.6	0.0	0.1	0.0	3.9	0.0	0.2
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.0	0.0	1.1	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.7	0.0	0.1	0.0	5.0	0.0	0.3
%ile Storage Ratio (RQ%)	0.00	0.05	0.00	0.00	0.00	0.06	0.00	0.01
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary		
HCM 6th Ctrl Delay		25.8
HCM 6th LOS		C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	54	404	27	91	212	30	24	257	96	57	308	29
Future Volume (veh/h)	54	404	27	91	212	30	24	257	96	57	308	29
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1673	1772	1772	1673	1772	1772	1673	1772	1772	1673	1772	1772
Adj Flow Rate, veh/h	79	439	36	108	244	40	36	299	116	84	346	48
Peak Hour Factor	0.68	0.92	0.75	0.84	0.87	0.75	0.67	0.86	0.83	0.68	0.89	0.60
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	146	519	440	148	521	442	114	665	252	125	506	429
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.09	0.29	0.29	0.09	0.29	0.29	0.07	0.28	0.28	0.08	0.29	0.29
Unsig. Movement Delay												
Ln Grp Delay, s/veh	44.1	38.8	18.3	57.8	23.2	18.3	38.0	23.8	24.3	56.4	29.5	19.0
Ln Grp LOS	D	D	B	E	C	B	D	C	C	E	C	B
Approach Vol, veh/h		554			392			451			478	
Approach Delay, s/veh		38.2			32.2			25.2			33.2	
Approach LOS		D			C			C			C	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Case No	2.0	4.0	2.0	3.0	2.0	3.0	2.0	3.0
Phs Duration (G+Y+Rc), s	10.0	24.0	11.0	25.0	9.5	24.5	10.9	25.1
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green (Gmax), s	5.5	19.5	6.5	20.5	5.0	20.0	6.4	20.6
Max Allow Headway (MAH), s	3.8	5.2	3.8	5.0	3.8	5.0	3.8	5.0
Max Q Clear (g_c+I1), s	5.6	9.4	6.6	18.3	3.5	14.1	5.3	9.9
Green Ext Time (g_e), s	0.0	1.7	0.0	0.6	0.0	1.1	0.0	1.0
Prob of Phs Call (p_c)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prob of Max Out (p_x)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Left-Turn Movement Data								
Assigned Mvmt	1		3		5		7	
Mvmt Sat Flow, veh/h	1594		1594		1594		1594	
Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		2386		1772		1772		1772
Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		906		1502		1502		1502
Left Lane Group Data								
Assigned Mvmt	1	0	3	0	5	0	7	0
Lane Assignment	L (Prot)		L (Prot)		L (Prot)		L (Prot)	

Lanes in Grp	1	0	1	0	1	0	1	0
Grp Vol (v), veh/h	84	0	108	0	36	0	79	0
Grp Sat Flow (s), veh/h/ln	1594	0	1594	0	1594	0	1594	0
Q Serve Time (g_s), s	3.6	0.0	4.6	0.0	1.5	0.0	3.3	0.0
Cycle Q Clear Time (g_c), s	3.6	0.0	4.6	0.0	1.5	0.0	3.3	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	125	0	148	0	114	0	146	0
V/C Ratio (X)	0.67	0.00	0.73	0.00	0.32	0.00	0.54	0.00
Avail Cap (c_a), veh/h	125	0	148	0	114	0	146	0
Upstream Filter (I)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Uniform Delay (d1), s/veh	31.4	0.0	30.9	0.0	30.9	0.0	30.4	0.0
Incr Delay (d2), s/veh	25.1	0.0	26.9	0.0	7.1	0.0	13.7	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	56.4	0.0	57.8	0.0	38.0	0.0	44.1	0.0
1st-Term Q (Q1), veh/ln	1.3	0.0	1.7	0.0	0.5	0.0	1.2	0.0
2nd-Term Q (Q2), veh/ln	0.9	0.0	1.1	0.0	0.2	0.0	0.6	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
%ile Back of Q (50%), veh/ln	2.2	0.0	2.8	0.0	0.8	0.0	1.8	0.0
%ile Storage Ratio (RQ%)	0.42	0.00	0.07	0.00	0.13	0.00	0.05	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	209	0	439	0	346	0	244
Grp Sat Flow (s), veh/h/ln	0	1683	0	1772	0	1772	0	1772
Q Serve Time (g_s), s	0.0	7.2	0.0	16.3	0.0	12.1	0.0	7.9
Cycle Q Clear Time (g_c), s	0.0	7.2	0.0	16.3	0.0	12.1	0.0	7.9
Lane Grp Cap (c), veh/h	0	469	0	519	0	506	0	521
V/C Ratio (X)	0.00	0.45	0.00	0.85	0.00	0.68	0.00	0.47
Avail Cap (c_a), veh/h	0	469	0	519	0	506	0	521
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	20.8	0.0	23.3	0.0	22.2	0.0	20.2
Incr Delay (d2), s/veh	0.0	3.0	0.0	15.6	0.0	7.3	0.0	3.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	23.8	0.0	38.8	0.0	29.5	0.0	23.2
1st-Term Q (Q1), veh/ln	0.0	2.6	0.0	6.2	0.0	4.6	0.0	3.0
2nd-Term Q (Q2), veh/ln	0.0	0.4	0.0	2.2	0.0	1.0	0.0	0.4

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	3.0	0.0	8.4	0.0	5.7	0.0	3.4
%ile Storage Ratio (RQ%)	0.00	0.49	0.00	0.26	0.00	1.08	0.00	0.09
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		T+R		R		R		R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	206	0	36	0	48	0	40
Grp Sat Flow (s), veh/h/ln	0	1609	0	1502	0	1502	0	1502
Q Serve Time (g_s), s	0.0	7.4	0.0	1.2	0.0	1.7	0.0	1.4
Cycle Q Clear Time (g_c), s	0.0	7.4	0.0	1.2	0.0	1.7	0.0	1.4
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.56	0.00	1.00	0.00	1.00	0.00	1.00
Lane Grp Cap (c), veh/h	0	448	0	440	0	429	0	442
V/C Ratio (X)	0.00	0.46	0.00	0.08	0.00	0.11	0.00	0.09
Avail Cap (c_a), veh/h	0	448	0	440	0	429	0	442
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	20.9	0.0	17.9	0.0	18.4	0.0	17.9
Incr Delay (d2), s/veh	0.0	3.4	0.0	0.4	0.0	0.5	0.0	0.4
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	24.3	0.0	18.3	0.0	19.0	0.0	18.3
1st-Term Q (Q1), veh/ln	0.0	2.6	0.0	0.4	0.0	0.5	0.0	0.4
2nd-Term Q (Q2), veh/ln	0.0	0.4	0.0	0.0	0.0	0.1	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	3.0	0.0	0.4	0.0	0.6	0.0	0.5
%ile Storage Ratio (RQ%)	0.00	0.49	0.00	0.01	0.00	0.11	0.00	0.01
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Intersection Summary								
HCM 6th Ctrl Delay		32.5						
HCM 6th LOS		C						

Intersection												
Int Delay, s/veh	1.2											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Vol, veh/h	6	9	0	5	4	3	1	377	5	4	421	5
Future Vol, veh/h	6	9	0	5	4	3	1	377	5	4	421	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	-9	-	-	0	-
Peak Hour Factor	75	38	25	62	50	38	25	95	42	50	88	25
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	8	24	0	8	8	8	4	397	12	8	478	20

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	923	921	488	927	925	403	498	0	0	409	0	0
Stage 1	504	504	-	411	411	-	-	-	-	-	-	-
Stage 2	419	417	-	516	514	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	250	270	580	249	269	647	1066	-	-	1150	-	-
Stage 1	550	541	-	618	595	-	-	-	-	-	-	-
Stage 2	612	591	-	542	535	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	239	266	580	229	265	647	1066	-	-	1150	-	-
Mov Cap-2 Maneuver	239	266	-	229	265	-	-	-	-	-	-	-
Stage 1	547	536	-	615	592	-	-	-	-	-	-	-
Stage 2	593	588	-	513	530	-	-	-	-	-	-	-

Approach	EB	WB	NE	SW
HCM Control Delay, s	20.8	17.6	0.1	0.1
HCM LOS	C	C		

Minor Lane/Major Mvmt	NEL	NET	NER	EBLn1	WBLn1	SWL	SWT	SWR
Capacity (veh/h)	1066	-	-	259	309	1150	-	-
HCM Lane V/C Ratio	0.004	-	-	0.122	0.078	0.007	-	-
HCM Control Delay (s)	8.4	0	-	20.8	17.6	8.2	0	-
HCM Lane LOS	A	A	-	C	C	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.4	0.2	0	-	-

Intersection	
Intersection Delay, s/veh	25.4
Intersection LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	23	115	19	45	49	41	12	321	50	51	334	34
Future Vol, veh/h	23	115	19	45	49	41	12	321	50	51	334	34
Peak Hour Factor	0.82	0.87	0.79	0.80	0.58	0.79	0.60	0.97	0.78	0.67	0.87	0.65
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	28	132	24	56	84	52	20	331	64	76	384	52
Number of Lanes	0	1	1	0	1	1	0	1	1	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	2	2
HCM Control Delay	14.6	13.6	21.2	37.1
HCM LOS	B	B	C	E

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	4%	0%	17%	0%	48%	0%	13%	0%
Vol Thru, %	96%	0%	83%	0%	52%	0%	87%	0%
Vol Right, %	0%	100%	0%	100%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	333	50	138	19	94	41	385	34
LT Vol	12	0	23	0	45	0	51	0
Through Vol	321	0	115	0	49	0	334	0
RT Vol	0	50	0	19	0	41	0	34
Lane Flow Rate	351	64	160	24	141	52	460	52
Geometry Grp	7	7	7	7	7	7	7	7
Degree of Util (X)	0.679	0.111	0.356	0.048	0.319	0.104	0.872	0.088
Departure Headway (Hd)	6.962	6.227	7.999	7.191	8.152	7.183	6.825	6.043
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	519	574	449	496	440	497	529	591
Service Time	4.721	3.986	5.767	4.959	5.92	4.95	4.58	3.797
HCM Lane V/C Ratio	0.676	0.111	0.356	0.048	0.32	0.105	0.87	0.088
HCM Control Delay	23.3	9.8	15.2	10.3	14.7	10.8	40.2	9.4
HCM Lane LOS	C	A	C	B	B	B	E	A
HCM 95th-tile Q	5.1	0.4	1.6	0.2	1.4	0.3	9.5	0.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	192	462	18	24	302	32	16	149	52	43	178	203
Future Volume (veh/h)	192	462	18	24	302	32	16	149	52	43	178	203
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1673	1772	1772	1673	1772	1772	1673	1772	1772	1673	1772	1772
Adj Flow Rate, veh/h	221	537	20	36	332	48	28	167	56	52	220	221
Peak Hour Factor	0.87	0.86	0.88	0.67	0.91	0.67	0.57	0.89	0.93	0.83	0.81	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	499	694	588	350	620	526	290	532	450	355	532	450
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.13	0.39	0.39	0.08	0.35	0.35	0.30	0.30	0.30	0.30	0.30	0.30
Unsig. Movement Delay												
Ln Grp Delay, s/veh	13.3	24.1	11.4	12.0	18.9	13.4	20.5	17.8	15.8	19.7	19.2	21.0
Ln Grp LOS	B	C	B	B	B	B	C	B	B	B	B	C
Approach Vol, veh/h		778			416			251			493	
Approach Delay, s/veh		20.7			17.7			17.6			20.1	
Approach LOS		C			B			B			C	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Case No		5.0	1.1	3.0		5.0	1.1	3.0
Phs Duration (G+Y+Rc), s		22.5	9.5	28.0		22.5	12.0	25.5
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5
Max Green (Gmax), s		18.0	5.0	23.5		18.0	7.5	21.0
Max Allow Headway (MAH), s		4.9	3.8	5.1		4.6	3.8	5.0
Max Q Clear (g_c+I1), s		9.6	2.8	17.9		9.2	7.1	11.0
Green Ext Time (g_e), s		0.7	0.0	1.7		1.5	0.0	1.4
Prob of Phs Call (p_c)		1.00	1.00	1.00		1.00	1.00	1.00
Prob of Max Out (p_x)		0.00	0.00	0.00		0.00	0.00	0.00
Left-Turn Movement Data								
Assigned Mvmt		5	3			1	7	
Mvmt Sat Flow, veh/h		848	1594			1036	1594	
Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		1772		1772		1772		1772
Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1502		1502		1502		1502
Left Lane Group Data								
Assigned Mvmt	0	5	3	0	0	1	7	0
Lane Assignment			LL (Pr/Pm)				LL (Pr/Pm)	

Lanes in Grp	0	1	1	0	0	1	1	0
Grp Vol (v), veh/h	0	28	36	0	0	52	221	0
Grp Sat Flow (s), veh/h/ln	0	848	1594	0	0	1036	1594	0
Q Serve Time (g_s), s	0.0	1.6	0.8	0.0	0.0	2.5	5.1	0.0
Cycle Q Clear Time (g_c), s	0.0	7.6	0.8	0.0	0.0	6.8	5.1	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	848	762	0	0	1036	897	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	18.0	21.0	0.0	0.0	18.0	21.0	0.0
Perm LT Serve Time (g_u), s	0.0	12.0	7.6	0.0	0.0	13.6	12.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	1.6	0.7	0.0	0.0	2.5	2.9	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	1.00	1.00	0.00	0.00	1.00	1.00	0.00
Lane Grp Cap (c), veh/h	0	290	350	0	0	355	499	0
V/C Ratio (X)	0.00	0.10	0.10	0.00	0.00	0.15	0.44	0.00
Avail Cap (c_a), veh/h	0	290	350	0	0	355	499	0
Upstream Filter (I)	0.00	1.00	1.00	0.00	0.00	1.00	1.00	0.00
Uniform Delay (d1), s/veh	0.0	19.8	11.4	0.0	0.0	18.9	10.5	0.0
Incr Delay (d2), s/veh	0.0	0.7	0.6	0.0	0.0	0.9	2.8	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	20.5	12.0	0.0	0.0	19.7	13.3	0.0
1st-Term Q (Q1), veh/ln	0.0	0.3	0.2	0.0	0.0	0.5	1.4	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.1	0.0	0.0	0.1	0.4	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	1.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.3	0.3	0.0	0.0	0.6	1.8	0.0
%ile Storage Ratio (RQ%)	0.00	0.02	0.01	0.00	0.00	0.01	0.06	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	167	0	537	0	220	0	332
Grp Sat Flow (s), veh/h/ln	0	1772	0	1772	0	1772	0	1772
Q Serve Time (g_s), s	0.0	4.4	0.0	15.9	0.0	6.0	0.0	9.0
Cycle Q Clear Time (g_c), s	0.0	4.4	0.0	15.9	0.0	6.0	0.0	9.0
Lane Grp Cap (c), veh/h	0	532	0	694	0	532	0	620
V/C Ratio (X)	0.00	0.31	0.00	0.77	0.00	0.41	0.00	0.54
Avail Cap (c_a), veh/h	0	532	0	694	0	532	0	620
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	16.2	0.0	15.9	0.0	16.8	0.0	15.6
Incr Delay (d2), s/veh	0.0	1.5	0.0	8.2	0.0	2.4	0.0	3.3
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	17.8	0.0	24.1	0.0	19.2	0.0	18.9
1st-Term Q (Q1), veh/ln	0.0	1.6	0.0	5.4	0.0	2.1	0.0	3.2
2nd-Term Q (Q2), veh/ln	0.0	0.2	0.0	1.6	0.0	0.3	0.0	0.6

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	1.8	0.0	7.0	0.0	2.5	0.0	3.7
%ile Storage Ratio (RQ%)	0.00	0.13	0.00	0.23	0.00	0.03	0.00	0.10
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		R		R		R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	56	0	20	0	221	0	48
Grp Sat Flow (s), veh/h/ln	0	1502	0	1502	0	1502	0	1502
Q Serve Time (g_s), s	0.0	1.6	0.0	0.5	0.0	7.2	0.0	1.3
Cycle Q Clear Time (g_c), s	0.0	1.6	0.0	0.5	0.0	7.2	0.0	1.3
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Lane Grp Cap (c), veh/h	0	450	0	588	0	450	0	526
V/C Ratio (X)	0.00	0.12	0.00	0.03	0.00	0.49	0.00	0.09
Avail Cap (c_a), veh/h	0	450	0	588	0	450	0	526
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	15.3	0.0	11.3	0.0	17.2	0.0	13.1
Incr Delay (d2), s/veh	0.0	0.6	0.0	0.1	0.0	3.8	0.0	0.3
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	15.8	0.0	11.4	0.0	21.0	0.0	13.4
1st-Term Q (Q1), veh/ln	0.0	0.5	0.0	0.1	0.0	2.2	0.0	0.4
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.0	0.0	0.5	0.0	0.1
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.6	0.0	0.2	0.0	2.7	0.0	0.4
%ile Storage Ratio (RQ%)	0.00	0.04	0.00	0.01	0.00	0.03	0.00	0.01
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary		
HCM 6th Ctrl Delay		19.5
HCM 6th LOS		B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	15	154	24	118	531	36	89	302	69	53	201	70
Future Volume (veh/h)	15	154	24	118	531	36	89	302	69	53	201	70
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1673	1772	1772	1673	1772	1772	1673	1772	1772	1673	1772	1772
Adj Flow Rate, veh/h	28	211	29	155	597	45	107	373	99	87	300	99
Peak Hour Factor	0.54	0.73	0.82	0.76	0.89	0.80	0.83	0.81	0.70	0.61	0.67	0.71
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	100	454	385	299	676	572	149	633	166	145	421	357
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.06	0.26	0.26	0.19	0.38	0.38	0.09	0.24	0.24	0.09	0.24	0.24
Unsig. Movement Delay												
Ln Grp Delay, s/veh	42.7	28.5	22.9	35.6	38.7	16.1	60.6	33.0	33.4	51.8	37.9	26.8
Ln Grp LOS	D	C	C	D	D	B	E	C	C	D	D	C
Approach Vol, veh/h		268			797			579			486	
Approach Delay, s/veh		29.4			36.8			38.3			38.1	
Approach LOS		C			D			D			D	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Case No	2.0	4.0	2.0	3.0	2.0	3.0	2.0	3.0
Phs Duration (G+Y+Rc), s	11.8	23.7	19.5	25.0	12.0	23.5	9.5	35.0
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green (Gmax), s	7.3	19.2	15.0	20.5	7.5	19.0	5.0	30.5
Max Allow Headway (MAH), s	3.8	5.2	3.8	5.0	3.8	4.9	3.8	5.0
Max Q Clear (g_c+I1), s	6.2	12.2	9.0	10.0	7.2	14.4	3.3	27.2
Green Ext Time (g_e), s	0.0	1.6	0.2	0.8	0.0	0.8	0.0	1.3
Prob of Phs Call (p_c)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prob of Max Out (p_x)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Left-Turn Movement Data								
Assigned Mvmt	1		3		5		7	
Mvmt Sat Flow, veh/h	1594		1594		1594		1594	
Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		2639		1772		1772		1772
Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		692		1502		1502		1502
Left Lane Group Data								
Assigned Mvmt	1	0	3	0	5	0	7	0
Lane Assignment	L (Prot)		L (Prot)		L (Prot)		L (Prot)	

Lanes in Grp	1	0	1	0	1	0	1	0
Grp Vol (v), veh/h	87	0	155	0	107	0	28	0
Grp Sat Flow (s), veh/h/ln	1594	0	1594	0	1594	0	1594	0
Q Serve Time (g_s), s	4.2	0.0	7.0	0.0	5.2	0.0	1.3	0.0
Cycle Q Clear Time (g_c), s	4.2	0.0	7.0	0.0	5.2	0.0	1.3	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	145	0	299	0	149	0	100	0
V/C Ratio (X)	0.60	0.00	0.52	0.00	0.72	0.00	0.28	0.00
Avail Cap (c_a), veh/h	145	0	299	0	149	0	100	0
Upstream Filter (I)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Uniform Delay (d1), s/veh	34.9	0.0	29.3	0.0	35.2	0.0	35.8	0.0
Incr Delay (d2), s/veh	16.9	0.0	6.3	0.0	25.4	0.0	6.9	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	51.8	0.0	35.6	0.0	60.6	0.0	42.7	0.0
1st-Term Q (Q1), veh/ln	1.6	0.0	2.6	0.0	2.0	0.0	0.5	0.0
2nd-Term Q (Q2), veh/ln	0.7	0.0	0.5	0.0	1.1	0.0	0.2	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
%ile Back of Q (50%), veh/ln	2.3	0.0	3.1	0.0	3.0	0.0	0.7	0.0
%ile Storage Ratio (RQ%)	0.43	0.00	0.08	0.00	0.50	0.00	0.02	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	236	0	211	0	300	0	597
Grp Sat Flow (s), veh/h/ln	0	1683	0	1772	0	1772	0	1772
Q Serve Time (g_s), s	0.0	9.9	0.0	8.0	0.0	12.4	0.0	25.2
Cycle Q Clear Time (g_c), s	0.0	9.9	0.0	8.0	0.0	12.4	0.0	25.2
Lane Grp Cap (c), veh/h	0	404	0	454	0	421	0	676
V/C Ratio (X)	0.00	0.58	0.00	0.46	0.00	0.71	0.00	0.88
Avail Cap (c_a), veh/h	0	404	0	454	0	421	0	676
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	26.9	0.0	25.1	0.0	28.0	0.0	23.1
Incr Delay (d2), s/veh	0.0	6.1	0.0	3.4	0.0	9.9	0.0	15.6
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	33.0	0.0	28.5	0.0	37.9	0.0	38.7
1st-Term Q (Q1), veh/ln	0.0	3.8	0.0	3.2	0.0	5.0	0.0	9.6
2nd-Term Q (Q2), veh/ln	0.0	0.7	0.0	0.4	0.0	1.2	0.0	2.9

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	4.5	0.0	3.6	0.0	6.1	0.0	12.5
%ile Storage Ratio (RQ%)	0.00	0.74	0.00	0.11	0.00	1.17	0.00	0.31
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		T+R		R		R		R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	236	0	29	0	99	0	45
Grp Sat Flow (s), veh/h/ln	0	1647	0	1502	0	1502	0	1502
Q Serve Time (g_s), s	0.0	10.2	0.0	1.2	0.0	4.3	0.0	1.5
Cycle Q Clear Time (g_c), s	0.0	10.2	0.0	1.2	0.0	4.3	0.0	1.5
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.42	0.00	1.00	0.00	1.00	0.00	1.00
Lane Grp Cap (c), veh/h	0	395	0	385	0	357	0	572
V/C Ratio (X)	0.00	0.60	0.00	0.08	0.00	0.28	0.00	0.08
Avail Cap (c_a), veh/h	0	395	0	385	0	357	0	572
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	27.0	0.0	22.6	0.0	24.9	0.0	15.8
Incr Delay (d2), s/veh	0.0	6.5	0.0	0.4	0.0	1.9	0.0	0.3
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	33.4	0.0	22.9	0.0	26.8	0.0	16.1
1st-Term Q (Q1), veh/ln	0.0	3.8	0.0	0.4	0.0	1.5	0.0	0.5
2nd-Term Q (Q2), veh/ln	0.0	0.7	0.0	0.0	0.0	0.2	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	4.5	0.0	0.4	0.0	1.7	0.0	0.5
%ile Storage Ratio (RQ%)	0.00	0.74	0.00	0.01	0.00	0.32	0.00	0.01
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary		
HCM 6th Ctrl Delay		36.6
HCM 6th LOS		D

Intersection	
Int Delay, s/veh	1.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Vol, veh/h	4	3	0	4	12	4	0	447	2	1	344	2
Future Vol, veh/h	4	3	0	4	12	4	0	447	2	1	344	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	-9	-	-	0	-
Peak Hour Factor	50	75	25	50	60	33	25	79	50	25	86	50
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	8	4	0	8	20	12	0	566	4	4	400	4

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	994	980	402	980	980	568	404	0	0	570	0	0
Stage 1	410	410	-	568	568	-	-	-	-	-	-	-
Stage 2	584	570	-	412	412	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	224	250	648	229	250	522	1155	-	-	1002	-	-
Stage 1	619	595	-	508	506	-	-	-	-	-	-	-
Stage 2	498	505	-	617	594	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	205	249	648	225	249	522	1155	-	-	1002	-	-
Mov Cap-2 Maneuver	205	249	-	225	249	-	-	-	-	-	-	-
Stage 1	619	592	-	508	506	-	-	-	-	-	-	-
Stage 2	467	505	-	610	591	-	-	-	-	-	-	-

Approach	EB	WB	NE	SW
HCM Control Delay, s	22.5	19.5	0	0.1
HCM LOS	C	C		

Minor Lane/Major Mvmt	NEL	NET	NER	EBLn1	WBLn1	SWL	SWT	SWR
Capacity (veh/h)	1155	-	-	218	288	1002	-	-
HCM Lane V/C Ratio	-	-	-	0.055	0.139	0.004	-	-
HCM Control Delay (s)	0	-	-	22.5	19.5	8.6	0	-
HCM Lane LOS	A	-	-	C	C	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.2	0.5	0	-	-

Intersection	
Intersection Delay, s/veh	48.1
Intersection LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	15	61	8	105	68	102	15	329	23	43	302	8
Future Vol, veh/h	15	61	8	105	68	102	15	329	23	43	302	8
Peak Hour Factor	0.62	0.57	1.00	0.80	0.72	0.71	0.54	0.71	0.69	0.50	0.90	0.67
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	24	107	8	131	94	144	28	463	33	86	336	12
Number of Lanes	0	1	1	0	1	1	0	1	1	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	2	2
HCM Control Delay	16.2	18.3	76.7	49.3
HCM LOS	C	C	F	E

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	4%	0%	20%	0%	61%	0%	12%	0%
Vol Thru, %	96%	0%	80%	0%	39%	0%	88%	0%
Vol Right, %	0%	100%	0%	100%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	344	23	76	8	173	102	345	8
LT Vol	15	0	15	0	105	0	43	0
Through Vol	329	0	61	0	68	0	302	0
RT Vol	0	23	0	8	0	102	0	8
Lane Flow Rate	491	33	131	8	226	144	422	12
Geometry Grp	7	7	7	7	7	7	7	7
Degree of Util (X)	1.045	0.064	0.328	0.018	0.534	0.303	0.909	0.023
Departure Headway (Hd)	7.657	6.913	9.288	8.452	8.771	7.729	7.862	7.075
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	481	523	390	426	413	468	464	509
Service Time	5.332	4.588	6.988	6.152	6.471	5.429	5.562	4.775
HCM Lane V/C Ratio	1.021	0.063	0.336	0.019	0.547	0.308	0.909	0.024
HCM Control Delay	81.2	10.1	16.5	11.3	21.1	13.8	50.4	9.9
HCM Lane LOS	F	B	C	B	C	B	F	A
HCM 95th-tile Q	15	0.2	1.4	0.1	3	1.3	10.2	0.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	97	224	6	23	606	30	16	234	41	25	133	262
Future Volume (veh/h)	97	224	6	23	606	30	16	234	41	25	133	262
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1673	1772	1772	1673	1772	1772	1673	1772	1772	1673	1772	1772
Adj Flow Rate, veh/h	108	270	12	38	739	33	28	308	58	37	156	305
Peak Hour Factor	0.90	0.83	0.50	0.61	0.82	0.91	0.57	0.76	0.71	0.67	0.85	0.86
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	283	848	719	594	848	719	257	456	386	195	456	386
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.07	0.48	0.48	0.07	0.48	0.48	0.26	0.26	0.26	0.26	0.26	0.26
Unsig. Movement Delay												
Ln Grp Delay, s/veh	17.4	12.2	9.6	7.8	28.3	9.9	24.9	31.2	20.9	31.7	23.2	39.3
Ln Grp LOS	B	B	A	A	C	A	C	C	C	C	C	D
Approach Vol, veh/h		390			810			394			498	
Approach Delay, s/veh		13.6			26.5			29.2			33.7	
Approach LOS		B			C			C			C	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Case No		5.0	1.1	3.0		5.0	1.1	3.0
Phs Duration (G+Y+Rc), s		22.5	9.5	38.0		22.5	9.5	38.0
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5
Max Green (Gmax), s		18.0	5.0	33.5		18.0	5.0	33.5
Max Allow Headway (MAH), s		5.0	3.8	5.1		4.4	3.8	5.1
Max Q Clear (g_c+I1), s		12.9	2.8	8.6		15.6	4.3	28.1
Green Ext Time (g_e), s		0.9	0.0	1.5		0.6	0.0	2.3
Prob of Phs Call (p_c)		1.00	1.00	1.00		1.00	1.00	1.00
Prob of Max Out (p_x)		0.00	0.00	0.00		0.00	0.00	0.00
Left-Turn Movement Data								
Assigned Mvmt		5	3			1	7	
Mvmt Sat Flow, veh/h		833	1594			909	1594	
Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		1772		1772		1772		1772
Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1502		1502		1502		1502
Left Lane Group Data								
Assigned Mvmt	0	5	3	0	0	1	7	0
Lane Assignment			LL (Pr/Pm)				LL (Pr/Pm)	

Lanes in Grp	0	1	1	0	0	1	1	0
Grp Vol (v), veh/h	0	28	38	0	0	37	108	0
Grp Sat Flow (s), veh/h/ln	0	833	1594	0	0	909	1594	0
Q Serve Time (g_s), s	0.0	2.0	0.8	0.0	0.0	2.7	2.3	0.0
Cycle Q Clear Time (g_c), s	0.0	7.0	0.8	0.0	0.0	13.6	2.3	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	833	982	0	0	909	624	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	18.0	33.5	0.0	0.0	18.0	33.5	0.0
Perm LT Serve Time (g_u), s	0.0	13.0	26.9	0.0	0.0	7.1	7.4	0.0
Perm LT Q Serve Time (g_ps), s	0.0	2.0	0.3	0.0	0.0	2.7	5.5	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	1.00	1.00	0.00	0.00	1.00	1.00	0.00
Lane Grp Cap (c), veh/h	0	257	594	0	0	195	283	0
V/C Ratio (X)	0.00	0.11	0.06	0.00	0.00	0.19	0.38	0.00
Avail Cap (c_a), veh/h	0	257	594	0	0	195	283	0
Upstream Filter (I)	0.00	1.00	1.00	0.00	0.00	1.00	1.00	0.00
Uniform Delay (d1), s/veh	0.0	24.0	7.6	0.0	0.0	29.5	13.5	0.0
Incr Delay (d2), s/veh	0.0	0.9	0.2	0.0	0.0	2.2	3.9	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	24.9	7.8	0.0	0.0	31.7	17.4	0.0
1st-Term Q (Q1), veh/ln	0.0	0.4	0.2	0.0	0.0	0.6	0.6	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.0	0.0	0.1	0.3	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	1.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.4	0.3	0.0	0.0	0.7	1.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.03	0.01	0.00	0.00	0.01	0.03	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	308	0	270	0	156	0	739
Grp Sat Flow (s), veh/h/ln	0	1772	0	1772	0	1772	0	1772
Q Serve Time (g_s), s	0.0	10.9	0.0	6.6	0.0	5.0	0.0	26.1
Cycle Q Clear Time (g_c), s	0.0	10.9	0.0	6.6	0.0	5.0	0.0	26.1
Lane Grp Cap (c), veh/h	0	456	0	848	0	456	0	848
V/C Ratio (X)	0.00	0.68	0.00	0.32	0.00	0.34	0.00	0.87
Avail Cap (c_a), veh/h	0	456	0	848	0	456	0	848
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	23.4	0.0	11.2	0.0	21.2	0.0	16.3
Incr Delay (d2), s/veh	0.0	7.8	0.0	1.0	0.0	2.0	0.0	11.9
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	31.2	0.0	12.2	0.0	23.2	0.0	28.3
1st-Term Q (Q1), veh/ln	0.0	4.2	0.0	2.2	0.0	1.9	0.0	8.9
2nd-Term Q (Q2), veh/ln	0.0	1.0	0.0	0.2	0.0	0.3	0.0	2.8

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	5.2	0.0	2.5	0.0	2.2	0.0	11.7
%ile Storage Ratio (RQ%)	0.00	0.36	0.00	0.08	0.00	0.03	0.00	0.33
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		R		R		R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	58	0	12	0	305	0	33
Grp Sat Flow (s), veh/h/ln	0	1502	0	1502	0	1502	0	1502
Q Serve Time (g_s), s	0.0	2.1	0.0	0.3	0.0	13.3	0.0	0.8
Cycle Q Clear Time (g_c), s	0.0	2.1	0.0	0.3	0.0	13.3	0.0	0.8
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Lane Grp Cap (c), veh/h	0	386	0	719	0	386	0	719
V/C Ratio (X)	0.00	0.15	0.00	0.02	0.00	0.79	0.00	0.05
Avail Cap (c_a), veh/h	0	386	0	719	0	386	0	719
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	20.1	0.0	9.6	0.0	24.2	0.0	9.7
Incr Delay (d2), s/veh	0.0	0.8	0.0	0.0	0.0	15.1	0.0	0.1
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	20.9	0.0	9.6	0.0	39.3	0.0	9.9
1st-Term Q (Q1), veh/ln	0.0	0.7	0.0	0.1	0.0	4.3	0.0	0.2
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.0	0.0	1.6	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.8	0.0	0.1	0.0	6.0	0.0	0.3
%ile Storage Ratio (RQ%)	0.00	0.05	0.00	0.00	0.00	0.08	0.00	0.01
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Intersection Summary								
HCM 6th Ctrl Delay		26.3						
HCM 6th LOS		C						

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	56	416	28	94	218	31	25	265	99	59	317	30
Future Volume (veh/h)	56	416	28	94	218	31	25	265	99	59	317	30
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1673	1772	1772	1673	1772	1772	1673	1772	1772	1673	1772	1772
Adj Flow Rate, veh/h	104	570	34	124	245	39	30	327	141	97	473	42
Peak Hour Factor	0.54	0.73	0.82	0.76	0.89	0.80	0.83	0.81	0.70	0.61	0.67	0.71
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	232	620	526	151	530	449	89	523	221	205	532	450
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.15	0.35	0.35	0.09	0.30	0.30	0.06	0.23	0.23	0.13	0.30	0.30
Unsig. Movement Delay												
Ln Grp Delay, s/veh	41.3	49.0	19.7	77.9	28.6	23.1	51.0	38.7	39.8	44.0	49.7	23.1
Ln Grp LOS	D	D	B	E	C	C	D	D	D	D	D	C
Approach Vol, veh/h		708			408			498			612	
Approach Delay, s/veh		46.4			43.0			40.0			46.9	
Approach LOS		D			D			D			D	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Case No	2.0	4.0	2.0	3.0	2.0	3.0	2.0	3.0
Phs Duration (G+Y+Rc), s	16.1	24.9	13.0	36.0	9.5	31.5	17.6	31.4
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green (Gmax), s	11.6	20.4	8.5	31.5	5.0	27.0	13.1	26.9
Max Allow Headway (MAH), s	3.8	5.2	3.8	5.1	3.8	5.0	3.8	5.0
Max Q Clear (g_c+I1), s	7.1	13.8	8.9	29.7	3.6	24.9	7.4	12.1
Green Ext Time (g_e), s	0.1	1.5	0.0	0.7	0.0	0.6	0.1	1.2
Prob of Phs Call (p_c)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prob of Max Out (p_x)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Left-Turn Movement Data								
Assigned Mvmt	1		3		5		7	
Mvmt Sat Flow, veh/h	1594		1594		1594		1594	

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		2305		1772		1772		1772

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		975		1502		1502		1502

Left Lane Group Data								
Assigned Mvmt	1	0	3	0	5	0	7	0
Lane Assignment	L (Prot)		L (Prot)		L (Prot)		L (Prot)	

Lanes in Grp	1	0	1	0	1	0	1	0
Grp Vol (v), veh/h	97	0	124	0	30	0	104	0
Grp Sat Flow (s), veh/h/ln	1594	0	1594	0	1594	0	1594	0
Q Serve Time (g_s), s	5.1	0.0	6.9	0.0	1.6	0.0	5.4	0.0
Cycle Q Clear Time (g_c), s	5.1	0.0	6.9	0.0	1.6	0.0	5.4	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	205	0	151	0	89	0	232	0
V/C Ratio (X)	0.47	0.00	0.82	0.00	0.34	0.00	0.45	0.00
Avail Cap (c_a), veh/h	205	0	151	0	89	0	232	0
Upstream Filter (I)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Uniform Delay (d1), s/veh	36.4	0.0	40.0	0.0	40.9	0.0	35.1	0.0
Incr Delay (d2), s/veh	7.6	0.0	37.8	0.0	10.1	0.0	6.2	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	44.0	0.0	77.9	0.0	51.0	0.0	41.3	0.0
1st-Term Q (Q1), veh/ln	1.9	0.0	2.6	0.0	0.6	0.0	2.0	0.0
2nd-Term Q (Q2), veh/ln	0.4	0.0	1.6	0.0	0.2	0.0	0.4	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
%ile Back of Q (50%), veh/ln	2.4	0.0	4.2	0.0	0.9	0.0	2.4	0.0
%ile Storage Ratio (RQ%)	0.45	0.00	0.11	0.00	0.14	0.00	0.08	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	237	0	570	0	473	0	245
Grp Sat Flow (s), veh/h/ln	0	1683	0	1772	0	1772	0	1772
Q Serve Time (g_s), s	0.0	11.4	0.0	27.7	0.0	22.9	0.0	10.1
Cycle Q Clear Time (g_c), s	0.0	11.4	0.0	27.7	0.0	22.9	0.0	10.1
Lane Grp Cap (c), veh/h	0	382	0	620	0	532	0	530
V/C Ratio (X)	0.00	0.62	0.00	0.92	0.00	0.89	0.00	0.46
Avail Cap (c_a), veh/h	0	382	0	620	0	532	0	530
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	31.3	0.0	28.0	0.0	30.1	0.0	25.7
Incr Delay (d2), s/veh	0.0	7.4	0.0	20.9	0.0	19.6	0.0	2.9
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	38.7	0.0	49.0	0.0	49.7	0.0	28.6
1st-Term Q (Q1), veh/ln	0.0	4.5	0.0	11.0	0.0	9.3	0.0	4.1
2nd-Term Q (Q2), veh/ln	0.0	0.8	0.0	3.6	0.0	2.9	0.0	0.4

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	5.3	0.0	14.6	0.0	12.2	0.0	4.5
%ile Storage Ratio (RQ%)	0.00	0.87	0.00	0.45	0.00	2.32	0.00	0.11
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		T+R		R		R		R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	231	0	34	0	42	0	39
Grp Sat Flow (s), veh/h/ln	0	1596	0	1502	0	1502	0	1502
Q Serve Time (g_s), s	0.0	11.8	0.0	1.4	0.0	1.8	0.0	1.7
Cycle Q Clear Time (g_c), s	0.0	11.8	0.0	1.4	0.0	1.8	0.0	1.7
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.61	0.00	1.00	0.00	1.00	0.00	1.00
Lane Grp Cap (c), veh/h	0	362	0	526	0	450	0	449
V/C Ratio (X)	0.00	0.64	0.00	0.06	0.00	0.09	0.00	0.09
Avail Cap (c_a), veh/h	0	362	0	526	0	450	0	449
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	31.5	0.0	19.5	0.0	22.7	0.0	22.7
Incr Delay (d2), s/veh	0.0	8.3	0.0	0.2	0.0	0.4	0.0	0.4
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	39.8	0.0	19.7	0.0	23.1	0.0	23.1
1st-Term Q (Q1), veh/ln	0.0	4.4	0.0	0.5	0.0	0.6	0.0	0.6
2nd-Term Q (Q2), veh/ln	0.0	0.8	0.0	0.0	0.0	0.1	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	5.2	0.0	0.5	0.0	0.7	0.0	0.6
%ile Storage Ratio (RQ%)	0.00	0.86	0.00	0.02	0.00	0.13	0.00	0.02
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	44.5
HCM 6th LOS	D

Intersection	
Int Delay, s/veh	1.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Vol, veh/h	6	9	0	5	4	3	1	388	5	4	434	5
Future Vol, veh/h	6	9	0	5	4	3	1	388	5	4	434	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	-9	-	-	0	-
Peak Hour Factor	50	75	25	50	60	33	25	79	50	25	86	50
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	12	12	0	10	7	9	4	491	10	16	505	10

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1054	1051	510	1052	1051	496	515	0	0	501	0	0
Stage 1	542	542	-	504	504	-	-	-	-	-	-	-
Stage 2	512	509	-	548	547	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	204	227	563	204	227	574	1051	-	-	1063	-	-
Stage 1	525	520	-	550	541	-	-	-	-	-	-	-
Stage 2	545	538	-	521	517	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	192	221	563	192	221	574	1051	-	-	1063	-	-
Mov Cap-2 Maneuver	192	221	-	192	221	-	-	-	-	-	-	-
Stage 1	522	509	-	547	538	-	-	-	-	-	-	-
Stage 2	527	535	-	498	506	-	-	-	-	-	-	-

Approach	EB	WB	NE	SW
HCM Control Delay, s	24.9	20.2	0.1	0.3
HCM LOS	C	C		

Minor Lane/Major Mvmt	NEL	NET	NER	EBLn1	WBLn1	SWL	SWT	SWR
Capacity (veh/h)	1051	-	-	205	263	1063	-	-
HCM Lane V/C Ratio	0.004	-	-	0.117	0.098	0.015	-	-
HCM Control Delay (s)	8.4	0	-	24.9	20.2	8.4	0	-
HCM Lane LOS	A	A	-	C	C	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.4	0.3	0	-	-

Intersection	
Intersection Delay, s/veh	56.4
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	24	118	20	46	50	42	12	331	52	53	344	35
Future Vol, veh/h	24	118	20	46	50	42	12	331	52	53	344	35
Peak Hour Factor	0.62	0.57	1.00	0.80	0.72	0.71	0.54	0.71	0.69	0.50	0.90	0.67
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	39	207	20	58	69	59	22	466	75	106	382	52
Number of Lanes	0	1	1	0	1	1	0	1	1	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	2	2
HCM Control Delay	22.5	15.3	69	74
HCM LOS	C	C	F	F

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	3%	0%	17%	0%	48%	0%	13%	0%
Vol Thru, %	97%	0%	83%	0%	52%	0%	87%	0%
Vol Right, %	0%	100%	0%	100%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	343	52	142	20	96	42	397	35
LT Vol	12	0	24	0	46	0	53	0
Through Vol	331	0	118	0	50	0	344	0
RT Vol	0	52	0	20	0	42	0	35
Lane Flow Rate	488	75	246	20	127	59	488	52
Geometry Grp	7	7	7	7	7	7	7	7
Degree of Util (X)	1.031	0.144	0.584	0.043	0.32	0.135	1.04	0.1
Departure Headway (Hd)	7.793	7.052	8.906	8.088	9.49	8.505	7.85	7.059
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	469	512	408	445	381	424	464	511
Service Time	5.493	4.752	6.606	5.788	7.19	6.205	5.55	4.759
HCM Lane V/C Ratio	1.041	0.146	0.603	0.045	0.333	0.139	1.052	0.102
HCM Control Delay	78	10.9	23.4	11.2	16.6	12.5	80.8	10.5
HCM Lane LOS	F	B	C	B	C	B	F	B
HCM 95th-tile Q	14.3	0.5	3.6	0.1	1.4	0.5	14.6	0.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	198	476	19	25	311	33	16	154	54	44	183	209
Future Volume (veh/h)	198	476	19	25	311	33	16	154	54	44	183	209
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1673	1772	1772	1673	1772	1772	1673	1772	1772	1673	1772	1772
Adj Flow Rate, veh/h	220	573	38	41	379	36	28	203	76	66	215	243
Peak Hour Factor	0.90	0.83	0.50	0.61	0.82	0.91	0.57	0.76	0.71	0.67	0.85	0.86
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	461	694	588	326	653	553	290	532	450	326	532	450
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.11	0.39	0.39	0.08	0.37	0.37	0.30	0.30	0.30	0.30	0.30	0.30
Unsig. Movement Delay												
Ln Grp Delay, s/veh	14.3	27.2	11.6	12.3	19.0	12.5	20.4	18.7	16.3	21.5	19.0	22.1
Ln Grp LOS	B	C	B	B	B	B	C	B	B	C	B	C
Approach Vol, veh/h		831			456			307			524	
Approach Delay, s/veh		23.1			17.9			18.2			20.8	
Approach LOS		C			B			B			C	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Case No		5.0	1.1	3.0		5.0	1.1	3.0
Phs Duration (G+Y+Rc), s		22.5	9.5	28.0		22.5	10.9	26.6
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5
Max Green (Gmax), s		18.0	5.0	23.5		18.0	6.4	22.1
Max Allow Headway (MAH), s		4.9	3.8	5.1		4.6	3.8	5.0
Max Q Clear (g_c+l1), s		9.5	2.9	19.4		10.8	7.0	12.3
Green Ext Time (g_e), s		0.9	0.0	1.4		1.4	0.0	1.6
Prob of Phs Call (p_c)		1.00	1.00	1.00		1.00	1.00	1.00
Prob of Max Out (p_x)		0.00	0.00	0.00		0.00	0.00	0.00
Left-Turn Movement Data								
Assigned Mvmt		5	3			1	7	
Mvmt Sat Flow, veh/h		835	1594			984	1594	
Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		1772		1772		1772		1772
Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1502		1502		1502		1502
Left Lane Group Data								
Assigned Mvmt	0	5	3	0	0	1	7	0
Lane Assignment			LL (Pr/Pm)				LL (Pr/Pm)	

Lanes in Grp	0	1	1	0	0	1	1	0
Grp Vol (v), veh/h	0	28	41	0	0	66	220	0
Grp Sat Flow (s), veh/h/ln	0	835	1594	0	0	984	1594	0
Q Serve Time (g_s), s	0.0	1.7	0.9	0.0	0.0	3.4	5.0	0.0
Cycle Q Clear Time (g_c), s	0.0	7.5	0.9	0.0	0.0	8.8	5.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	835	725	0	0	984	869	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	18.0	22.1	0.0	0.0	18.0	22.1	0.0
Perm LT Serve Time (g_u), s	0.0	12.2	6.1	0.0	0.0	12.6	11.8	0.0
Perm LT Q Serve Time (g_ps), s	0.0	1.7	1.0	0.0	0.0	3.4	3.5	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	1.00	1.00	0.00	0.00	1.00	1.00	0.00
Lane Grp Cap (c), veh/h	0	290	326	0	0	326	461	0
V/C Ratio (X)	0.00	0.10	0.13	0.00	0.00	0.20	0.48	0.00
Avail Cap (c_a), veh/h	0	290	326	0	0	326	461	0
Upstream Filter (I)	0.00	1.00	1.00	0.00	0.00	1.00	1.00	0.00
Uniform Delay (d1), s/veh	0.0	19.7	11.5	0.0	0.0	20.1	10.8	0.0
Incr Delay (d2), s/veh	0.0	0.7	0.8	0.0	0.0	1.4	3.5	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	20.4	12.3	0.0	0.0	21.5	14.3	0.0
1st-Term Q (Q1), veh/ln	0.0	0.3	0.3	0.0	0.0	0.7	1.4	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.1	0.0	0.0	0.1	0.5	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	1.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.3	0.3	0.0	0.0	0.8	1.9	0.0
%ile Storage Ratio (RQ%)	0.00	0.02	0.01	0.00	0.00	0.01	0.06	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	203	0	573	0	215	0	379
Grp Sat Flow (s), veh/h/ln	0	1772	0	1772	0	1772	0	1772
Q Serve Time (g_s), s	0.0	5.4	0.0	17.4	0.0	5.8	0.0	10.3
Cycle Q Clear Time (g_c), s	0.0	5.4	0.0	17.4	0.0	5.8	0.0	10.3
Lane Grp Cap (c), veh/h	0	532	0	694	0	532	0	653
V/C Ratio (X)	0.00	0.38	0.00	0.83	0.00	0.40	0.00	0.58
Avail Cap (c_a), veh/h	0	532	0	694	0	532	0	653
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	16.6	0.0	16.4	0.0	16.7	0.0	15.2
Incr Delay (d2), s/veh	0.0	2.1	0.0	10.8	0.0	2.3	0.0	3.7
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	18.7	0.0	27.2	0.0	19.0	0.0	19.0
1st-Term Q (Q1), veh/ln	0.0	2.0	0.0	5.9	0.0	2.1	0.0	3.6
2nd-Term Q (Q2), veh/ln	0.0	0.3	0.0	2.1	0.0	0.3	0.0	0.7

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	2.3	0.0	8.0	0.0	2.4	0.0	4.2
%ile Storage Ratio (RQ%)	0.00	0.16	0.00	0.27	0.00	0.03	0.00	0.12
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		R		R		R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	76	0	38	0	243	0	36
Grp Sat Flow (s), veh/h/ln	0	1502	0	1502	0	1502	0	1502
Q Serve Time (g_s), s	0.0	2.2	0.0	0.9	0.0	8.1	0.0	0.9
Cycle Q Clear Time (g_c), s	0.0	2.2	0.0	0.9	0.0	8.1	0.0	0.9
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Lane Grp Cap (c), veh/h	0	450	0	588	0	450	0	553
V/C Ratio (X)	0.00	0.17	0.00	0.06	0.00	0.54	0.00	0.07
Avail Cap (c_a), veh/h	0	450	0	588	0	450	0	553
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	15.5	0.0	11.4	0.0	17.5	0.0	12.3
Incr Delay (d2), s/veh	0.0	0.8	0.0	0.2	0.0	4.6	0.0	0.2
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	16.3	0.0	11.6	0.0	22.1	0.0	12.5
1st-Term Q (Q1), veh/ln	0.0	0.7	0.0	0.3	0.0	2.5	0.0	0.3
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.0	0.0	0.6	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.8	0.0	0.3	0.0	3.1	0.0	0.3
%ile Storage Ratio (RQ%)	0.00	0.05	0.00	0.01	0.00	0.04	0.00	0.01
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Intersection Summary								
HCM 6th Ctrl Delay		20.7						
HCM 6th LOS		C						

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	15	154	29	122	533	29	95	302	71	53	201	70
Future Volume (veh/h)	15	154	29	122	533	29	95	302	71	53	201	70
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1673	1772	1772	1673	1772	1772	1673	1772	1772	1673	1772	1772
Adj Flow Rate, veh/h	28	211	35	161	599	36	114	373	101	87	300	99
Peak Hour Factor	0.54	0.73	0.82	0.76	0.89	0.80	0.83	0.81	0.70	0.61	0.67	0.71
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	100	423	359	327	676	572	149	630	169	145	421	357
Arrive On Green	0.06	0.24	0.24	0.20	0.38	0.38	0.09	0.24	0.24	0.09	0.24	0.24
Sat Flow, veh/h	1594	1772	1502	1594	1772	1502	1594	2626	703	1594	1772	1502
Grp Volume(v), veh/h	28	211	35	161	599	36	114	237	237	87	300	99
Grp Sat Flow(s),veh/h/ln	1594	1772	1502	1594	1772	1502	1594	1683	1645	1594	1772	1502
Q Serve(g_s), s	1.3	8.2	1.5	7.1	25.3	1.2	5.6	10.0	10.2	4.2	12.4	4.3
Cycle Q Clear(g_c), s	1.3	8.2	1.5	7.1	25.3	1.2	5.6	10.0	10.2	4.2	12.4	4.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.43	1.00		1.00
Lane Grp Cap(c), veh/h	100	423	359	327	676	572	149	404	395	145	421	357
V/C Ratio(X)	0.28	0.50	0.10	0.49	0.89	0.06	0.76	0.59	0.60	0.60	0.71	0.28
Avail Cap(c_a), veh/h	100	423	359	327	676	572	149	404	395	145	421	357
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.8	26.3	23.7	28.1	23.1	15.7	35.4	26.9	27.0	34.9	28.0	24.9
Incr Delay (d2), s/veh	6.9	4.2	0.5	5.2	15.9	0.2	30.2	6.1	6.6	16.9	9.9	1.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	3.8	0.5	3.1	12.6	0.4	3.3	4.5	4.5	2.3	6.1	1.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	42.7	30.5	24.3	33.4	39.0	15.9	65.6	33.0	33.6	51.8	37.9	26.8
LnGrp LOS	D	C	C	C	D	B	E	C	C	D	D	C
Approach Vol, veh/h		274			796			588			486	
Approach Delay, s/veh		30.9			36.8			39.6			38.1	
Approach LOS		C			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.8	23.7	20.9	23.6	12.0	23.5	9.5	35.0
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	7.3	19.2	16.4	19.1	7.5	19.0	5.0	30.5
Max Q Clear Time (g_c+I1), s	6.2	12.2	9.1	10.2	7.6	14.4	3.3	27.3
Green Ext Time (p_c), s	0.0	1.6	0.2	0.8	0.0	0.8	0.0	1.2

Intersection Summary	
HCM 6th Ctrl Delay	37.1
HCM 6th LOS	D

Intersection	
Int Delay, s/veh	1.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Vol, veh/h	5	3	7	4	12	4	1	454	2	1	352	3
Future Vol, veh/h	5	3	7	4	12	4	1	454	2	1	352	3
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	-9	-	-	0	-
Peak Hour Factor	50	75	25	50	60	33	25	79	50	25	86	50
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	10	4	28	8	20	12	4	575	4	4	409	6

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1021	1007	412	1021	1008	577	415	0	0	579	0	0
Stage 1	420	420	-	585	585	-	-	-	-	-	-	-
Stage 2	601	587	-	436	423	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	215	241	640	215	240	516	1144	-	-	995	-	-
Stage 1	611	589	-	497	498	-	-	-	-	-	-	-
Stage 2	487	497	-	599	588	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	195	239	640	201	238	516	1144	-	-	995	-	-
Mov Cap-2 Maneuver	195	239	-	201	238	-	-	-	-	-	-	-
Stage 1	608	586	-	495	496	-	-	-	-	-	-	-
Stage 2	454	495	-	566	585	-	-	-	-	-	-	-

Approach	EB	WB	NE	SW
HCM Control Delay, s	15.8	20.5	0.1	0.1
HCM LOS	C	C		

Minor Lane/Major Mvmt	NEL	NET	NER	EBLn1	WBLn1	SWL	SWT	SWR
Capacity (veh/h)	1144	-	-	376	272	995	-	-
HCM Lane V/C Ratio	0.003	-	-	0.112	0.148	0.004	-	-
HCM Control Delay (s)	8.2	0	-	15.8	20.5	8.6	0	-
HCM Lane LOS	A	A	-	C	C	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.4	0.5	0	-	-

Intersection	
Intersection Delay, s/veh	50
Intersection LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	15	61	8	109	68	106	15	333	26	48	306	8
Future Vol, veh/h	15	61	8	109	68	106	15	333	26	48	306	8
Peak Hour Factor	0.62	0.57	1.00	0.80	0.72	0.71	0.54	0.71	0.69	0.50	0.90	0.67
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	24	107	8	136	94	149	28	469	38	96	340	12
Number of Lanes	0	1	1	0	1	1	0	1	1	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	2	2
HCM Control Delay	16.2	18.5	79.9	51.7
HCM LOS	C	C	F	F

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	4%	0%	20%	0%	62%	0%	14%	0%
Vol Thru, %	96%	0%	80%	0%	38%	0%	86%	0%
Vol Right, %	0%	100%	0%	100%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	348	26	76	8	177	106	354	8
LT Vol	15	0	15	0	109	0	48	0
Through Vol	333	0	61	0	68	0	306	0
RT Vol	0	26	0	8	0	106	0	8
Lane Flow Rate	497	38	131	8	231	149	436	12
Geometry Grp	7	7	7	7	7	7	7	7
Degree of Util (X)	1.058	0.072	0.326	0.018	0.543	0.308	0.921	0.023
Departure Headway (Hd)	7.664	6.92	9.352	8.516	8.811	7.763	7.905	7.112
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	477	521	387	423	413	466	462	506
Service Time	5.364	4.62	7.052	6.216	6.511	5.463	5.605	4.812
HCM Lane V/C Ratio	1.042	0.073	0.339	0.019	0.559	0.32	0.944	0.024
HCM Control Delay	85.2	10.2	16.5	11.4	21.5	13.9	52.8	10
HCM Lane LOS	F	B	C	B	C	B	F	A
HCM 95th-tile Q	15.5	0.2	1.4	0.1	3.1	1.3	10.5	0.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	107	228	6	23	616	30	16	234	41	25	133	280
Future Volume (veh/h)	107	228	6	23	616	30	16	234	41	25	133	280
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1673	1772	1772	1673	1772	1772	1673	1772	1772	1673	1772	1772
Adj Flow Rate, veh/h	119	275	12	38	751	33	28	308	58	37	156	326
Peak Hour Factor	0.90	0.83	0.50	0.61	0.82	0.91	0.57	0.76	0.71	0.67	0.85	0.86
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	284	884	749	602	886	751	244	449	380	183	449	380
Arrive On Green	0.07	0.50	0.50	0.07	0.50	0.50	0.25	0.25	0.25	0.25	0.25	0.25
Sat Flow, veh/h	1594	1772	1502	1594	1772	1502	817	1772	1502	909	1772	1502
Grp Volume(v), veh/h	119	275	12	38	751	33	28	308	58	37	156	326
Grp Sat Flow(s),veh/h/ln	1594	1772	1502	1594	1772	1502	817	1772	1502	909	1772	1502
Q Serve(g_s), s	2.6	6.9	0.3	0.8	27.6	0.8	2.2	11.8	2.2	2.9	5.4	15.5
Cycle Q Clear(g_c), s	2.6	6.9	0.3	0.8	27.6	0.8	7.6	11.8	2.2	14.7	5.4	15.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	284	884	749	602	886	751	244	449	380	183	449	380
V/C Ratio(X)	0.42	0.31	0.02	0.06	0.85	0.04	0.11	0.69	0.15	0.20	0.35	0.86
Avail Cap(c_a), veh/h	284	884	749	602	886	751	244	449	380	183	449	380
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	13.9	11.2	9.5	7.5	16.3	9.6	26.0	25.3	21.7	31.9	22.9	26.7
Incr Delay (d2), s/veh	4.5	0.9	0.0	0.2	9.9	0.1	1.0	8.3	0.8	2.5	2.1	21.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	2.6	0.1	0.3	11.9	0.3	0.5	5.7	0.8	0.7	2.4	7.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	18.4	12.1	9.5	7.7	26.2	9.7	27.0	33.6	22.6	34.4	25.0	48.0
LnGrp LOS	B	B	A	A	C	A	C	C	C	C	C	D
Approach Vol, veh/h		406			822			394			519	
Approach Delay, s/veh		13.9			24.6			31.5			40.1	
Approach LOS		B			C			C			D	
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		23.5	9.6	41.9		23.5	9.5	42.0				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s		19.0	5.1	37.4		19.0	5.0	37.5				
Max Q Clear Time (g_c+I1), s		13.8	2.8	8.9		17.5	4.6	29.6				
Green Ext Time (p_c), s		1.0	0.0	1.6		0.4	0.0	3.2				
Intersection Summary												
HCM 6th Ctrl Delay			27.6									
HCM 6th LOS			C									

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	56	416	32	100	218	31	34	264	103	59	317	30
Future Volume (veh/h)	56	416	32	100	218	31	34	264	103	59	317	30
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1673	1772	1772	1673	1772	1772	1673	1772	1772	1673	1772	1772
Adj Flow Rate, veh/h	104	570	39	132	245	39	41	326	147	97	473	42
Peak Hour Factor	0.54	0.73	0.82	0.76	0.89	0.80	0.83	0.81	0.70	0.61	0.67	0.71
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	255	600	509	142	474	402	89	553	244	205	561	476
Arrive On Green	0.16	0.34	0.34	0.09	0.27	0.27	0.06	0.24	0.24	0.13	0.32	0.32
Sat Flow, veh/h	1594	1772	1502	1594	1772	1502	1594	2271	1004	1594	1772	1502
Grp Volume(v), veh/h	104	570	39	132	245	39	41	240	233	97	473	42
Grp Sat Flow(s),veh/h/ln	1594	1772	1502	1594	1772	1502	1594	1683	1591	1594	1772	1502
Q Serve(g_s), s	5.3	28.2	1.6	7.4	10.6	1.8	2.2	11.3	11.7	5.1	22.4	1.8
Cycle Q Clear(g_c), s	5.3	28.2	1.6	7.4	10.6	1.8	2.2	11.3	11.7	5.1	22.4	1.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.63	1.00		1.00
Lane Grp Cap(c), veh/h	255	600	509	142	474	402	89	410	387	205	561	476
V/C Ratio(X)	0.41	0.95	0.08	0.93	0.52	0.10	0.46	0.59	0.60	0.47	0.84	0.09
Avail Cap(c_a), veh/h	255	600	509	142	474	402	89	410	387	205	561	476
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.0	29.0	20.2	40.7	28.0	24.8	41.2	30.0	30.2	36.4	28.7	21.6
Incr Delay (d2), s/veh	4.8	26.1	0.3	59.2	4.0	0.5	16.4	6.0	6.8	7.6	14.3	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.3	15.6	0.6	5.2	4.8	0.7	1.3	5.1	5.0	2.4	11.2	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	38.7	55.1	20.5	100.0	32.0	25.3	57.6	36.1	37.0	44.0	43.0	22.0
LnGrp LOS	D	E	C	F	C	C	E	D	D	D	D	C
Approach Vol, veh/h		713			416			514			612	
Approach Delay, s/veh		50.8			52.9			38.2			41.7	
Approach LOS		D			D			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	16.1	26.4	12.5	35.0	9.5	33.0	18.9	28.6				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	11.6	21.9	8.0	30.5	5.0	28.5	14.4	24.1				
Max Q Clear Time (g_c+I1), s	7.1	13.7	9.4	30.2	4.2	24.4	7.3	12.6				
Green Ext Time (p_c), s	0.1	1.7	0.0	0.1	0.0	1.1	0.1	1.1				
Intersection Summary												
HCM 6th Ctrl Delay			45.9									
HCM 6th LOS			D									

Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Vol, veh/h	7	9	1	5	4	3	3	400	5	4	442	5
Future Vol, veh/h	7	9	1	5	4	3	3	400	5	4	442	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	-9	-	-	0	-
Peak Hour Factor	50	75	25	50	60	33	25	79	50	25	86	50
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	14	12	4	10	7	9	12	506	10	16	514	10

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1094	1091	519	1094	1091	511	524	0	0	516	0	0
Stage 1	551	551	-	535	535	-	-	-	-	-	-	-
Stage 2	543	540	-	559	556	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	191	215	557	191	215	563	1043	-	-	1050	-	-
Stage 1	519	515	-	529	524	-	-	-	-	-	-	-
Stage 2	524	521	-	513	513	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	178	207	557	176	207	563	1043	-	-	1050	-	-
Mov Cap-2 Maneuver	178	207	-	176	207	-	-	-	-	-	-	-
Stage 1	511	504	-	521	516	-	-	-	-	-	-	-
Stage 2	501	513	-	486	502	-	-	-	-	-	-	-

Approach	EB	WB	NE	SW
HCM Control Delay, s	25.1	21.4	0.2	0.3
HCM LOS	D	C		

Minor Lane/Major Mvmt	NEL	NET	NER	EBLn1	WBLn1	SWL	SWT	SWR
Capacity (veh/h)	1043	-	-	209	245	1050	-	-
HCM Lane V/C Ratio	0.012	-	-	0.144	0.105	0.015	-	-
HCM Control Delay (s)	8.5	0	-	25.1	21.4	8.5	0	-
HCM Lane LOS	A	A	-	D	C	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.5	0.3	0	-	-

Intersection	
Intersection Delay, s/veh	61
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	24	118	20	49	50	49	12	338	56	57	347	35
Future Vol, veh/h	24	118	20	49	50	49	12	338	56	57	347	35
Peak Hour Factor	0.62	0.57	1.00	0.80	0.72	0.71	0.54	0.71	0.69	0.50	0.90	0.67
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	39	207	20	61	69	69	22	476	81	114	386	52
Number of Lanes	0	1	1	0	1	1	0	1	1	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	2	2
HCM Control Delay	23.1	15.6	74.6	81.4
HCM LOS	C	C	F	F

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	3%	0%	17%	0%	49%	0%	14%	0%
Vol Thru, %	97%	0%	83%	0%	51%	0%	86%	0%
Vol Right, %	0%	100%	0%	100%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	350	56	142	20	99	49	404	35
LT Vol	12	0	24	0	49	0	57	0
Through Vol	338	0	118	0	50	0	347	0
RT Vol	0	56	0	20	0	49	0	35
Lane Flow Rate	498	81	246	20	131	69	500	52
Geometry Grp	7	7	7	7	7	7	7	7
Degree of Util (X)	1.053	0.157	0.594	0.044	0.335	0.158	1.065	0.102
Departure Headway (Hd)	7.918	7.177	9.039	8.219	9.596	8.602	7.978	7.182
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	463	503	403	438	378	420	460	502
Service Time	5.618	4.877	6.739	5.919	7.296	6.302	5.678	4.882
HCM Lane V/C Ratio	1.076	0.161	0.61	0.046	0.347	0.164	1.087	0.104
HCM Control Delay	84.9	11.2	24.1	11.3	17.1	12.9	88.8	10.7
HCM Lane LOS	F	B	C	B	C	B	F	B
HCM 95th-tile Q	15	0.6	3.7	0.1	1.4	0.6	15.4	0.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	218	488	19	25	315	35	16	154	54	44	183	224
Future Volume (veh/h)	218	488	19	25	315	35	16	154	54	44	183	224
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1673	1772	1772	1673	1772	1772	1673	1772	1772	1673	1772	1772
Adj Flow Rate, veh/h	242	588	38	41	384	38	28	203	76	66	215	260
Peak Hour Factor	0.90	0.83	0.50	0.61	0.82	0.91	0.57	0.76	0.71	0.67	0.85	0.86
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	504	777	658	347	682	578	256	491	416	291	491	416
Arrive On Green	0.13	0.44	0.44	0.08	0.38	0.38	0.28	0.28	0.28	0.28	0.28	0.28
Sat Flow, veh/h	1594	1772	1502	1594	1772	1502	822	1772	1502	984	1772	1502
Grp Volume(v), veh/h	242	588	38	41	384	38	28	203	76	66	215	260
Grp Sat Flow(s),veh/h/ln	1594	1772	1502	1594	1772	1502	822	1772	1502	984	1772	1502
Q Serve(g_s), s	5.5	18.1	0.9	0.9	11.1	1.0	1.9	6.1	2.5	3.8	6.5	9.8
Cycle Q Clear(g_c), s	5.5	18.1	0.9	0.9	11.1	1.0	8.4	6.1	2.5	9.9	6.5	9.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	504	777	658	347	682	578	256	491	416	291	491	416
V/C Ratio(X)	0.48	0.76	0.06	0.12	0.56	0.07	0.11	0.41	0.18	0.23	0.44	0.63
Avail Cap(c_a), veh/h	504	777	658	347	682	578	256	491	416	291	491	416
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	10.0	15.3	10.5	11.4	15.7	12.6	22.8	19.2	17.9	23.2	19.3	20.6
Incr Delay (d2), s/veh	3.2	6.8	0.2	0.7	3.4	0.2	0.9	2.6	1.0	1.8	2.8	6.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	7.6	0.3	0.3	4.5	0.3	0.4	2.6	0.9	1.0	2.8	3.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	13.2	22.1	10.7	12.1	19.1	12.8	23.6	21.8	18.9	25.0	22.2	27.5
LnGrp LOS	B	C	B	B	B	B	C	C	B	C	C	C
Approach Vol, veh/h		868			463			307			541	
Approach Delay, s/veh		19.1			17.9			21.2			25.1	
Approach LOS		B			B			C			C	
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		22.5	9.5	33.0		22.5	13.0	29.5				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s		18.0	5.0	28.5		18.0	8.5	25.0				
Max Q Clear Time (g_c+I1), s		10.4	2.9	20.1		11.9	7.5	13.1				
Green Ext Time (p_c), s		0.9	0.0	2.5		1.3	0.1	1.8				
Intersection Summary												
HCM 6th Ctrl Delay			20.7									
HCM 6th LOS			C									

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	15	154	29	122	533	36	104	307	71	53	203	70
Future Volume (veh/h)	15	154	29	122	533	36	104	307	71	53	203	70
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1673	1772	1772	1673	1772	1772	1673	1772	1772	1673	1772	1772
Adj Flow Rate, veh/h	28	211	35	161	599	45	125	379	101	87	303	99
Peak Hour Factor	0.54	0.73	0.82	0.76	0.89	0.80	0.83	0.81	0.70	0.61	0.67	0.71
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	89	471	399	308	715	606	184	662	174	143	400	339
Arrive On Green	0.06	0.27	0.27	0.19	0.40	0.40	0.12	0.25	0.25	0.09	0.23	0.23
Sat Flow, veh/h	1594	1772	1502	1594	1772	1502	1594	2636	694	1594	1772	1502
Grp Volume(v), veh/h	28	211	35	161	599	45	125	240	240	87	303	99
Grp Sat Flow(s),veh/h/ln	1594	1772	1502	1594	1772	1502	1594	1683	1647	1594	1772	1502
Q Serve(g_s), s	1.5	8.9	1.6	8.2	27.4	1.7	6.8	11.2	11.5	4.7	14.4	4.9
Cycle Q Clear(g_c), s	1.5	8.9	1.6	8.2	27.4	1.7	6.8	11.2	11.5	4.7	14.4	4.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.42	1.00		1.00
Lane Grp Cap(c), veh/h	89	471	399	308	715	606	184	423	414	143	400	339
V/C Ratio(X)	0.32	0.45	0.09	0.52	0.84	0.07	0.68	0.57	0.58	0.61	0.76	0.29
Avail Cap(c_a), veh/h	89	471	399	308	715	606	184	423	414	143	400	339
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.9	27.6	24.9	32.6	24.2	16.5	38.2	29.4	29.5	39.4	32.6	28.9
Incr Delay (d2), s/veh	9.1	3.1	0.4	6.2	11.3	0.2	18.3	5.5	5.8	17.6	12.6	2.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	4.1	0.6	3.6	12.9	0.6	3.5	5.0	5.0	2.5	7.3	1.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	50.0	30.6	25.3	38.8	35.5	16.8	56.5	34.9	35.3	57.0	45.2	31.1
LnGrp LOS	D	C	C	D	D	B	E	C	D	E	D	C
Approach Vol, veh/h		274			805			605			489	
Approach Delay, s/veh		31.9			35.1			39.5			44.4	
Approach LOS		C			D			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	12.6	27.1	21.9	28.4	14.9	24.8	9.5	40.8				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	8.1	22.6	17.4	23.9	10.4	20.3	5.0	36.3				
Max Q Clear Time (g_c+I1), s	6.7	13.5	10.2	10.9	8.8	16.4	3.5	29.4				
Green Ext Time (p_c), s	0.0	1.9	0.2	1.0	0.0	0.8	0.0	2.2				
Intersection Summary												
HCM 6th Ctrl Delay			38.0									
HCM 6th LOS			D									

Intersection	
Int Delay, s/veh	1.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Vol, veh/h	6	3	6	4	12	4	1	459	2	1	358	7
Future Vol, veh/h	6	3	6	4	12	4	1	459	2	1	358	7
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	-9	-	-	0	-
Peak Hour Factor	50	75	25	50	60	33	25	79	50	25	86	50
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	12	4	24	8	20	12	4	581	4	4	416	14

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1038	1024	423	1036	1029	583	430	0	0	585	0	0
Stage 1	431	431	-	591	591	-	-	-	-	-	-	-
Stage 2	607	593	-	445	438	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	209	235	631	210	234	512	1129	-	-	990	-	-
Stage 1	603	583	-	493	494	-	-	-	-	-	-	-
Stage 2	483	493	-	592	579	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	189	233	631	198	232	512	1129	-	-	990	-	-
Mov Cap-2 Maneuver	189	233	-	198	232	-	-	-	-	-	-	-
Stage 1	600	580	-	491	492	-	-	-	-	-	-	-
Stage 2	450	491	-	563	576	-	-	-	-	-	-	-

Approach	EB	WB	NE	SW
HCM Control Delay, s	17.1	20.9	0.1	0.1
HCM LOS	C	C		

Minor Lane/Major Mvmt	NEL	NET	NER	EBLn1	WBLn1	SWL	SWT	SWR
Capacity (veh/h)	1129	-	-	337	267	990	-	-
HCM Lane V/C Ratio	0.004	-	-	0.119	0.15	0.004	-	-
HCM Control Delay (s)	8.2	0	-	17.1	20.9	8.7	0	-
HCM Lane LOS	A	A	-	C	C	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.4	0.5	0	-	-

Intersection	
Intersection Delay, s/veh	52.9
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	15	61	8	109	68	106	15	337	26	48	312	8
Future Vol, veh/h	15	61	8	109	68	106	15	337	26	48	312	8
Peak Hour Factor	0.62	0.57	1.00	0.80	0.72	0.71	0.54	0.71	0.69	0.50	0.90	0.67
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	24	107	8	136	94	149	28	475	38	96	347	12
Number of Lanes	0	1	1	0	1	1	0	1	1	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	2	2
HCM Control Delay	16.3	18.7	84.7	55
HCM LOS	C	C	F	F

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	4%	0%	20%	0%	62%	0%	13%	0%
Vol Thru, %	96%	0%	80%	0%	38%	0%	87%	0%
Vol Right, %	0%	100%	0%	100%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	352	26	76	8	177	106	360	8
LT Vol	15	0	15	0	109	0	48	0
Through Vol	337	0	61	0	68	0	312	0
RT Vol	0	26	0	8	0	106	0	8
Lane Flow Rate	502	38	131	8	231	149	443	12
Geometry Grp	7	7	7	7	7	7	7	7
Degree of Util (X)	1.074	0.073	0.328	0.018	0.546	0.31	0.938	0.023
Departure Headway (Hd)	7.697	6.954	9.418	8.581	8.866	7.817	7.936	7.144
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	477	518	384	420	411	463	460	504
Service Time	5.397	4.654	7.118	6.281	6.566	5.517	5.636	4.844
HCM Lane V/C Ratio	1.052	0.073	0.341	0.019	0.562	0.322	0.963	0.024
HCM Control Delay	90.3	10.2	16.6	11.4	21.7	14	56.2	10
HCM Lane LOS	F	B	C	B	C	B	F	A
HCM 95th-tile Q	16.1	0.2	1.4	0.1	3.2	1.3	11	0.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	110	228	6	30	616	30	16	235	41	25	134	284
Future Volume (veh/h)	110	228	6	30	616	30	16	235	41	25	134	284
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1673	1772	1772	1673	1772	1772	1673	1772	1772	1673	1772	1772
Adj Flow Rate, veh/h	122	275	12	49	751	33	28	309	58	37	158	330
Peak Hour Factor	0.90	0.83	0.50	0.61	0.82	0.91	0.57	0.76	0.71	0.67	0.85	0.86
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	284	884	749	602	886	751	242	449	380	183	449	380
Arrive On Green	0.07	0.50	0.50	0.07	0.50	0.50	0.25	0.25	0.25	0.25	0.25	0.25
Sat Flow, veh/h	1594	1772	1502	1594	1772	1502	812	1772	1502	908	1772	1502
Grp Volume(v), veh/h	122	275	12	49	751	33	28	309	58	37	158	330
Grp Sat Flow(s),veh/h/ln	1594	1772	1502	1594	1772	1502	812	1772	1502	908	1772	1502
Q Serve(g_s), s	2.7	6.9	0.3	1.0	27.6	0.8	2.2	11.8	2.2	2.9	5.5	15.8
Cycle Q Clear(g_c), s	2.7	6.9	0.3	1.0	27.6	0.8	7.7	11.8	2.2	14.7	5.5	15.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	284	884	749	602	886	751	242	449	380	183	449	380
V/C Ratio(X)	0.43	0.31	0.02	0.08	0.85	0.04	0.12	0.69	0.15	0.20	0.35	0.87
Avail Cap(c_a), veh/h	284	884	749	602	886	751	242	449	380	183	449	380
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	13.9	11.2	9.5	7.6	16.3	9.6	26.1	25.3	21.7	32.0	23.0	26.8
Incr Delay (d2), s/veh	4.7	0.9	0.0	0.3	9.9	0.1	1.0	8.4	0.8	2.5	2.2	22.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	2.6	0.1	0.3	11.9	0.3	0.5	5.7	0.8	0.7	2.4	7.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	18.6	12.1	9.5	7.9	26.2	9.7	27.1	33.7	22.6	34.5	25.1	49.3
LnGrp LOS	B	B	A	A	C	A	C	C	C	C	C	D
Approach Vol, veh/h		409			833			395			525	
Approach Delay, s/veh		14.0			24.4			31.6			41.0	
Approach LOS		B			C			C			D	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		23.5	9.6	41.9		23.5	9.5	42.0				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s		19.0	5.1	37.4		19.0	5.0	37.5				
Max Q Clear Time (g_c+I1), s		13.8	3.0	8.9		17.8	4.7	29.6				
Green Ext Time (p_c), s		1.0	0.0	1.6		0.3	0.0	3.2				

Intersection Summary			
HCM 6th Ctrl Delay			27.8
HCM 6th LOS			C

Intersection	
Int Delay, s/veh	0.5

Movement	SET	SER	NWL	NWT	NEL	NER
Lane Configurations						
Traffic Vol, veh/h	353	2	6	465	14	10
Future Vol, veh/h	353	2	6	465	14	10
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	372	2	6	489	15	11

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	374	0	874	373
Stage 1	-	-	-	-	373	-
Stage 2	-	-	-	-	501	-
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	-	-	1184	-	320	673
Stage 1	-	-	-	-	696	-
Stage 2	-	-	-	-	609	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1184	-	318	673
Mov Cap-2 Maneuver	-	-	-	-	318	-
Stage 1	-	-	-	-	691	-
Stage 2	-	-	-	-	609	-

Approach	SE	NW	NE
HCM Control Delay, s	0	0.1	14.4
HCM LOS			B

Minor Lane/Major Mvmt	NELn1	NWL	NWT	SET	SER
Capacity (veh/h)	408	1184	-	-	-
HCM Lane V/C Ratio	0.062	0.005	-	-	-
HCM Control Delay (s)	14.4	8.1	0	-	-
HCM Lane LOS	B	A	A	-	-
HCM 95th %tile Q(veh)	0.2	0	-	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	56	416	43	100	218	31	38	273	103	59	323	30
Future Volume (veh/h)	56	416	43	100	218	31	38	273	103	59	323	30
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1673	1772	1772	1673	1772	1772	1673	1772	1772	1673	1772	1772
Adj Flow Rate, veh/h	104	570	52	132	245	39	46	337	147	97	482	42
Peak Hour Factor	0.54	0.73	0.82	0.76	0.89	0.80	0.83	0.81	0.70	0.61	0.67	0.71
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	232	600	509	151	510	432	89	622	266	152	551	467
Arrive On Green	0.15	0.34	0.34	0.09	0.29	0.29	0.06	0.27	0.27	0.10	0.31	0.31
Sat Flow, veh/h	1594	1772	1502	1594	1772	1502	1594	2296	983	1594	1772	1502
Grp Volume(v), veh/h	104	570	52	132	245	39	46	245	239	97	482	42
Grp Sat Flow(s),veh/h/ln	1594	1772	1502	1594	1772	1502	1594	1683	1595	1594	1772	1502
Q Serve(g_s), s	5.4	28.2	2.1	7.4	10.3	1.7	2.5	11.2	11.5	5.3	23.2	1.8
Cycle Q Clear(g_c), s	5.4	28.2	2.1	7.4	10.3	1.7	2.5	11.2	11.5	5.3	23.2	1.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.62	1.00		1.00
Lane Grp Cap(c), veh/h	232	600	509	151	510	432	89	456	432	152	551	467
V/C Ratio(X)	0.45	0.95	0.10	0.88	0.48	0.09	0.52	0.54	0.55	0.64	0.87	0.09
Avail Cap(c_a), veh/h	232	600	509	151	510	432	89	456	432	152	551	467
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.1	29.0	20.4	40.2	26.5	23.4	41.3	28.0	28.1	39.2	29.3	22.0
Incr Delay (d2), s/veh	6.2	26.1	0.4	46.4	3.2	0.4	20.1	4.5	5.0	18.6	17.4	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	15.6	0.8	4.7	4.6	0.6	1.5	4.9	4.8	2.8	12.0	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	41.3	55.1	20.8	86.6	29.7	23.8	61.4	32.5	33.1	57.8	46.7	22.4
LnGrp LOS	D	E	C	F	C	C	E	C	C	E	D	C
Approach Vol, veh/h		726			416			530			621	
Approach Delay, s/veh		50.7			47.2			35.3			46.8	
Approach LOS		D			D			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	13.1	28.9	13.0	35.0	9.5	32.5	17.6	30.4				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	8.6	24.4	8.5	30.5	5.0	28.0	13.1	25.9				
Max Q Clear Time (g_c+I1), s	7.3	13.5	9.4	30.2	4.5	25.2	7.4	12.3				
Green Ext Time (p_c), s	0.0	2.1	0.0	0.1	0.0	0.9	0.1	1.2				
Intersection Summary												
HCM 6th Ctrl Delay			45.4									
HCM 6th LOS			D									

Intersection	
Int Delay, s/veh	2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Vol, veh/h	13	9	6	5	4	3	3	406	5	4	445	6
Future Vol, veh/h	13	9	6	5	4	3	3	406	5	4	445	6
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	-9	-	-	0	-
Peak Hour Factor	50	75	25	50	60	33	25	79	50	25	86	50
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	26	12	24	10	7	9	12	514	10	16	517	12

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1106	1103	523	1116	1104	519	529	0	0	524	0	0
Stage 1	555	555	-	543	543	-	-	-	-	-	-	-
Stage 2	551	548	-	573	561	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	188	211	554	185	211	557	1038	-	-	1043	-	-
Stage 1	516	513	-	524	520	-	-	-	-	-	-	-
Stage 2	519	517	-	505	510	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	175	203	554	164	203	557	1038	-	-	1043	-	-
Mov Cap-2 Maneuver	175	203	-	164	203	-	-	-	-	-	-	-
Stage 1	508	502	-	516	512	-	-	-	-	-	-	-
Stage 2	496	509	-	461	499	-	-	-	-	-	-	-

Approach	EB	WB	NE	SW
HCM Control Delay, s	24.4	22.3	0.2	0.2
HCM LOS	C	C		

Minor Lane/Major Mvmt	NEL	NET	NER	EBLn1	WBLn1	SWL	SWT	SWR
Capacity (veh/h)	1038	-	-	247	234	1043	-	-
HCM Lane V/C Ratio	0.012	-	-	0.251	0.11	0.015	-	-
HCM Control Delay (s)	8.5	0	-	24.4	22.3	8.5	0	-
HCM Lane LOS	A	A	-	C	C	A	A	-
HCM 95th %tile Q(veh)	0	-	-	1	0.4	0	-	-

Intersection	
Intersection Delay, s/veh	63.9
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	24	118	20	49	50	49	12	343	56	57	350	35
Future Vol, veh/h	24	118	20	49	50	49	12	343	56	57	350	35
Peak Hour Factor	0.62	0.57	1.00	0.80	0.72	0.71	0.54	0.71	0.69	0.50	0.90	0.67
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	39	207	20	61	69	69	22	483	81	114	389	52
Number of Lanes	0	1	1	0	1	1	0	1	1	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	2	2
HCM Control Delay	23.4	15.7	79.3	84.4
HCM LOS	C	C	F	F

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	3%	0%	17%	0%	49%	0%	14%	0%
Vol Thru, %	97%	0%	83%	0%	51%	0%	86%	0%
Vol Right, %	0%	100%	0%	100%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	355	56	142	20	99	49	407	35
LT Vol	12	0	24	0	49	0	57	0
Through Vol	343	0	118	0	50	0	350	0
RT Vol	0	56	0	20	0	49	0	35
Lane Flow Rate	505	81	246	20	131	69	503	52
Geometry Grp	7	7	7	7	7	7	7	7
Degree of Util (X)	1.07	0.155	0.597	0.044	0.336	0.158	1.075	0.102
Departure Headway (Hd)	7.939	7.198	9.079	8.259	9.644	8.65	8.006	7.21
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	460	502	401	436	375	418	458	500
Service Time	5.639	4.898	6.779	5.959	7.344	6.35	5.706	4.91
HCM Lane V/C Ratio	1.098	0.161	0.613	0.046	0.349	0.165	1.098	0.104
HCM Control Delay	90.2	11.2	24.4	11.3	17.1	13	92.1	10.7
HCM Lane LOS	F	B	C	B	C	B	F	B
HCM 95th-tile Q	15.6	0.5	3.7	0.1	1.5	0.6	15.7	0.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	223	488	19	25	315	35	16	154	54	44	184	227
Future Volume (veh/h)	223	488	19	25	315	35	16	154	54	44	184	227
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1673	1772	1772	1673	1772	1772	1673	1772	1772	1673	1772	1772
Adj Flow Rate, veh/h	248	588	38	41	384	38	28	203	76	66	216	264
Peak Hour Factor	0.90	0.83	0.50	0.61	0.82	0.91	0.57	0.76	0.71	0.67	0.85	0.86
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	497	777	658	347	709	601	255	491	416	291	491	416
Arrive On Green	0.12	0.44	0.44	0.08	0.40	0.40	0.28	0.28	0.28	0.28	0.28	0.28
Sat Flow, veh/h	1594	1772	1502	1594	1772	1502	819	1772	1502	984	1772	1502
Grp Volume(v), veh/h	248	588	38	41	384	38	28	203	76	66	216	264
Grp Sat Flow(s),veh/h/ln	1594	1772	1502	1594	1772	1502	819	1772	1502	984	1772	1502
Q Serve(g_s), s	5.8	18.1	0.9	0.9	10.8	1.0	1.9	6.1	2.5	3.8	6.5	10.0
Cycle Q Clear(g_c), s	5.8	18.1	0.9	0.9	10.8	1.0	8.4	6.1	2.5	9.9	6.5	10.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	497	777	658	347	709	601	255	491	416	291	491	416
V/C Ratio(X)	0.50	0.76	0.06	0.12	0.54	0.06	0.11	0.41	0.18	0.23	0.44	0.63
Avail Cap(c_a), veh/h	497	777	658	347	709	601	255	491	416	291	491	416
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	10.3	15.3	10.5	11.1	14.9	12.0	22.8	19.2	17.9	23.2	19.4	20.6
Incr Delay (d2), s/veh	3.6	6.8	0.2	0.7	3.0	0.2	0.9	2.6	1.0	1.8	2.9	7.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	7.6	0.3	0.3	4.4	0.3	0.4	2.6	0.9	1.0	2.8	4.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	13.9	22.1	10.7	11.8	17.9	12.2	23.7	21.8	18.9	25.0	22.2	27.8
LnGrp LOS	B	C	B	B	B	B	C	C	B	C	C	C
Approach Vol, veh/h		874			463			307			546	
Approach Delay, s/veh		19.3			16.9			21.2			25.3	
Approach LOS		B			B			C			C	
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		22.5	9.5	33.0		22.5	12.0	30.5				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s		18.0	5.0	28.5		18.0	7.5	26.0				
Max Q Clear Time (g_c+I1), s		10.4	2.9	20.1		12.0	7.8	12.8				
Green Ext Time (p_c), s		0.9	0.0	2.5		1.3	0.0	1.9				
Intersection Summary												
HCM 6th Ctrl Delay			20.5									
HCM 6th LOS			C									

Intersection	
Int Delay, s/veh	0.4

Movement	SET	SER	NWL	NWT	NEL	NER
Lane Configurations						
Traffic Vol, veh/h	451	16	12	425	12	4
Future Vol, veh/h	451	16	12	425	12	4
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	475	17	13	447	13	4

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	492	0	957	484
Stage 1	-	-	-	-	484	-
Stage 2	-	-	-	-	473	-
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	-	-	1071	-	286	583
Stage 1	-	-	-	-	620	-
Stage 2	-	-	-	-	627	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1071	-	281	583
Mov Cap-2 Maneuver	-	-	-	-	281	-
Stage 1	-	-	-	-	610	-
Stage 2	-	-	-	-	627	-

Approach	SE	NW	NE
HCM Control Delay, s	0	0.2	16.8
HCM LOS			C

Minor Lane/Major Mvmt	NELn1	NWL	NWT	SET	SER
Capacity (veh/h)	323	1071	-	-	-
HCM Lane V/C Ratio	0.052	0.012	-	-	-
HCM Control Delay (s)	16.8	8.4	0	-	-
HCM Lane LOS	C	A	A	-	-
HCM 95th %tile Q(veh)	0.2	0	-	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	21	204	31	157	704	48	118	401	92	70	267	93
Future Volume (veh/h)	21	204	31	157	704	48	118	401	92	70	267	93
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1772	1870	1870	1772	1870	1870	1772	1870	1870	1772	1870	1870
Adj Flow Rate, veh/h	22	215	33	165	741	51	124	422	97	74	281	98
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	94	578	490	313	821	696	159	661	151	128	395	335
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.06	0.31	0.31	0.19	0.44	0.44	0.09	0.23	0.23	0.08	0.21	0.21
Unsig. Movement Delay												
Ln Grp Delay, s/veh	46.5	26.1	22.2	39.3	38.6	14.8	70.2	38.6	39.0	58.1	43.4	32.1
Ln Grp LOS	D	C	C	D	D	B	E	D	D	E	D	C
Approach Vol, veh/h		270			957			643			453	
Approach Delay, s/veh		27.3			37.4			44.9			43.3	
Approach LOS		C			D			D			D	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Case No	2.0	4.0	2.0	3.0	2.0	3.0	2.0	3.0
Phs Duration (G+Y+Rc), s	11.3	25.2	21.2	32.3	13.0	23.5	9.5	44.0
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green (Gmax), s	6.8	20.7	16.7	27.8	8.5	19.0	5.0	39.5
Max Allow Headway (MAH), s	3.8	5.2	3.8	5.0	3.8	4.8	3.8	5.1
Max Q Clear (g_c+I1), s	5.8	14.0	9.9	10.1	8.5	14.6	3.1	35.1
Green Ext Time (g_e), s	0.0	1.7	0.2	1.1	0.0	0.8	0.0	2.0
Prob of Phs Call (p_c)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prob of Max Out (p_x)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Left-Turn Movement Data								
Assigned Mvmt	1		3		5		7	
Mvmt Sat Flow, veh/h	1688		1688		1688		1688	

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		2874		1870		1870		1870

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		655		1585		1585		1585

Left Lane Group Data								
Assigned Mvmt	1	0	3	0	5	0	7	0
Lane Assignment	L (Prot)		L (Prot)		L (Prot)		L (Prot)	

Lanes in Grp	1	0	1	0	1	0	1	0
Grp Vol (v), veh/h	74	0	165	0	124	0	22	0
Grp Sat Flow (s), veh/h/ln	1688	0	1688	0	1688	0	1688	0
Q Serve Time (g_s), s	3.8	0.0	7.9	0.0	6.5	0.0	1.1	0.0
Cycle Q Clear Time (g_c), s	3.8	0.0	7.9	0.0	6.5	0.0	1.1	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	128	0	313	0	159	0	94	0
V/C Ratio (X)	0.58	0.00	0.53	0.00	0.78	0.00	0.23	0.00
Avail Cap (c_a), veh/h	128	0	313	0	159	0	94	0
Upstream Filter (I)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Uniform Delay (d1), s/veh	40.2	0.0	33.1	0.0	39.8	0.0	40.7	0.0
Incr Delay (d2), s/veh	17.8	0.0	6.2	0.0	30.4	0.0	5.8	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	58.1	0.0	39.3	0.0	70.2	0.0	46.5	0.0
1st-Term Q (Q1), veh/ln	1.5	0.0	3.2	0.0	2.6	0.0	0.5	0.0
2nd-Term Q (Q2), veh/ln	0.6	0.0	0.5	0.0	1.3	0.0	0.2	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
%ile Back of Q (50%), veh/ln	2.2	0.0	3.7	0.0	4.0	0.0	0.6	0.0
%ile Storage Ratio (RQ%)	0.42	0.00	0.09	0.00	0.65	0.00	0.02	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	260	0	215	0	281	0	741
Grp Sat Flow (s), veh/h/ln	0	1777	0	1870	0	1870	0	1870
Q Serve Time (g_s), s	0.0	11.9	0.0	8.1	0.0	12.6	0.0	33.1
Cycle Q Clear Time (g_c), s	0.0	11.9	0.0	8.1	0.0	12.6	0.0	33.1
Lane Grp Cap (c), veh/h	0	409	0	578	0	395	0	821
V/C Ratio (X)	0.00	0.63	0.00	0.37	0.00	0.71	0.00	0.90
Avail Cap (c_a), veh/h	0	409	0	578	0	395	0	821
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	31.2	0.0	24.3	0.0	33.0	0.0	23.5
Incr Delay (d2), s/veh	0.0	7.3	0.0	1.8	0.0	10.4	0.0	15.1
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	38.6	0.0	26.1	0.0	43.4	0.0	38.6
1st-Term Q (Q1), veh/ln	0.0	4.9	0.0	3.4	0.0	5.5	0.0	13.4
2nd-Term Q (Q2), veh/ln	0.0	0.8	0.0	0.3	0.0	1.1	0.0	3.4

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	5.7	0.0	3.7	0.0	6.6	0.0	16.8
%ile Storage Ratio (RQ%)	0.00	0.95	0.00	0.12	0.00	1.27	0.00	0.42
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		T+R		R		R		R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	259	0	33	0	98	0	51
Grp Sat Flow (s), veh/h/ln	0	1752	0	1585	0	1585	0	1585
Q Serve Time (g_s), s	0.0	12.0	0.0	1.3	0.0	4.7	0.0	1.7
Cycle Q Clear Time (g_c), s	0.0	12.0	0.0	1.3	0.0	4.7	0.0	1.7
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.37	0.00	1.00	0.00	1.00	0.00	1.00
Lane Grp Cap (c), veh/h	0	403	0	490	0	335	0	696
V/C Ratio (X)	0.00	0.64	0.00	0.07	0.00	0.29	0.00	0.07
Avail Cap (c_a), veh/h	0	403	0	490	0	335	0	696
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	31.3	0.0	22.0	0.0	29.9	0.0	14.6
Incr Delay (d2), s/veh	0.0	7.7	0.0	0.3	0.0	2.2	0.0	0.2
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	39.0	0.0	22.2	0.0	32.1	0.0	14.8
1st-Term Q (Q1), veh/ln	0.0	4.9	0.0	0.5	0.0	1.7	0.0	0.6
2nd-Term Q (Q2), veh/ln	0.0	0.9	0.0	0.0	0.0	0.2	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	5.8	0.0	0.5	0.0	1.9	0.0	0.6
%ile Storage Ratio (RQ%)	0.00	0.95	0.00	0.02	0.00	0.37	0.00	0.02
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	39.5
HCM 6th LOS	D

Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Vol, veh/h	5	4	0	5	16	5	0	593	3	1	457	3
Future Vol, veh/h	5	4	0	5	16	5	0	593	3	1	457	3
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	-9	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	4	0	5	17	5	0	624	3	1	481	3

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1122	1112	483	1113	1112	626	484	0	0	627	0	0
Stage 1	485	485	-	626	626	-	-	-	-	-	-	-
Stage 2	637	627	-	487	486	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	183	209	584	186	209	484	1079	-	-	955	-	-
Stage 1	563	552	-	472	477	-	-	-	-	-	-	-
Stage 2	465	476	-	562	551	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	170	209	584	183	209	484	1079	-	-	955	-	-
Mov Cap-2 Maneuver	170	209	-	183	209	-	-	-	-	-	-	-
Stage 1	563	551	-	472	477	-	-	-	-	-	-	-
Stage 2	444	476	-	557	550	-	-	-	-	-	-	-

Approach	EB	WB	NE	SW
HCM Control Delay, s	25.5	22.9	0	0
HCM LOS	D	C		

Minor Lane/Major Mvmt	NEL	NET	NER	EBLn1	WBLn1	SWL	SWT	SWR
Capacity (veh/h)	1079	-	-	185	228	955	-	-
HCM Lane V/C Ratio	-	-	-	0.051	0.12	0.001	-	-
HCM Control Delay (s)	0	-	-	25.5	22.9	8.8	0	-
HCM Lane LOS	A	-	-	D	C	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.2	0.4	0	-	-

Intersection	
Intersection Delay, s/veh	52.8
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	21	81	11	139	90	135	21	436	30	57	401	11
Future Vol, veh/h	21	81	11	139	90	135	21	436	30	57	401	11
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	22	85	12	146	95	142	22	459	32	60	422	12
Number of Lanes	0	1	1	0	1	1	0	1	1	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	2	2
HCM Control Delay	15.3	19.1	67.3	73
HCM LOS	C	C	F	F

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	5%	0%	21%	0%	61%	0%	12%	0%
Vol Thru, %	95%	0%	79%	0%	39%	0%	88%	0%
Vol Right, %	0%	100%	0%	100%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	457	30	102	11	229	135	458	11
LT Vol	21	0	21	0	139	0	57	0
Through Vol	436	0	81	0	90	0	401	0
RT Vol	0	30	0	11	0	135	0	11
Lane Flow Rate	481	32	107	12	241	142	482	12
Geometry Grp	7	7	7	7	7	7	7	7
Degree of Util (X)	1.007	0.06	0.273	0.027	0.566	0.297	1.019	0.022
Departure Headway (Hd)	7.71	6.964	9.467	8.625	8.776	7.733	7.755	6.939
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	476	517	382	418	415	468	472	517
Service Time	5.41	4.664	7.167	6.325	6.476	5.433	5.455	4.669
HCM Lane V/C Ratio	1.011	0.062	0.28	0.029	0.581	0.303	1.021	0.023
HCM Control Delay	71.1	10.1	15.7	11.6	22.3	13.7	74.5	9.8
HCM Lane LOS	F	B	C	B	C	B	F	A
HCM 95th-tile Q	13.5	0.2	1.1	0.1	3.4	1.2	13.9	0.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	129	297	8	30	804	40	22	310	55	33	176	347
Future Volume (veh/h)	129	297	8	30	804	40	22	310	55	33	176	347
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1772	1870	1870	1772	1870	1870	1772	1870	1870	1772	1870	1870
Adj Flow Rate, veh/h	136	313	8	32	846	42	23	326	58	35	185	365
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	278	982	832	626	970	822	221	456	386	170	456	386
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.07	0.52	0.52	0.06	0.52	0.52	0.24	0.24	0.24	0.24	0.24	0.24
Unsig. Movement Delay												
Ln Grp Delay, s/veh	21.6	11.7	9.1	7.6	27.6	9.6	29.9	36.9	24.6	37.6	28.1	63.5
Ln Grp LOS	C	B	A	A	C	A	C	D	C	D	C	E
Approach Vol, veh/h		457			920			407			585	
Approach Delay, s/veh		14.6			26.1			34.8			50.7	
Approach LOS		B			C			C			D	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Case No		5.0	1.1	3.0		5.0	1.1	3.0
Phs Duration (G+Y+Rc), s		24.0	9.5	46.5		24.0	10.0	46.0
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5
Max Green (Gmax), s		19.5	5.0	42.0		19.5	5.5	41.5
Max Allow Headway (MAH), s		5.0	3.8	5.1		4.4	3.8	5.1
Max Q Clear (g_c+I1), s		14.8	2.6	9.6		20.1	4.9	33.8
Green Ext Time (g_e), s		0.9	0.0	1.9		0.0	0.0	3.6
Prob of Phs Call (p_c)		1.00	1.00	1.00		1.00	1.00	1.00
Prob of Max Out (p_x)		0.00	0.00	0.00		0.00	0.00	0.00
Left-Turn Movement Data								
Assigned Mvmt		5	3			1	7	
Mvmt Sat Flow, veh/h		812	1688			947	1688	
Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		1870		1870		1870		1870
Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1585		1585		1585		1585
Left Lane Group Data								
Assigned Mvmt	0	5	3	0	0	1	7	0
Lane Assignment		LL (Pr/Pm)				LL (Pr/Pm)		

Lanes in Grp	0	1	1	0	0	1	1	0
Grp Vol (v), veh/h	0	23	32	0	0	35	136	0
Grp Sat Flow (s), veh/h/ln	0	812	1688	0	0	947	1688	0
Q Serve Time (g_s), s	0.0	2.0	0.6	0.0	0.0	2.8	2.9	0.0
Cycle Q Clear Time (g_c), s	0.0	8.6	0.6	0.0	0.0	15.6	2.9	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	812	1003	0	0	947	593	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	19.5	41.5	0.0	0.0	19.5	41.5	0.0
Perm LT Serve Time (g_u), s	0.0	12.9	34.4	0.0	0.0	6.7	9.7	0.0
Perm LT Q Serve Time (g_ps), s	0.0	2.0	0.2	0.0	0.0	2.8	9.5	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	1.00	1.00	0.00	0.00	1.00	1.00	0.00
Lane Grp Cap (c), veh/h	0	221	626	0	0	170	278	0
V/C Ratio (X)	0.00	0.10	0.05	0.00	0.00	0.21	0.49	0.00
Avail Cap (c_a), veh/h	0	221	626	0	0	170	278	0
Upstream Filter (I)	0.00	1.00	1.00	0.00	0.00	1.00	1.00	0.00
Uniform Delay (d1), s/veh	0.0	29.0	7.5	0.0	0.0	34.8	15.6	0.0
Incr Delay (d2), s/veh	0.0	0.9	0.2	0.0	0.0	2.7	6.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	29.9	7.6	0.0	0.0	37.6	21.6	0.0
1st-Term Q (Q1), veh/ln	0.0	0.4	0.2	0.0	0.0	0.6	1.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.0	0.0	0.1	0.5	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	1.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.4	0.2	0.0	0.0	0.8	1.5	0.0
%ile Storage Ratio (RQ%)	0.00	0.03	0.01	0.00	0.00	0.01	0.05	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	326	0	313	0	185	0	846
Grp Sat Flow (s), veh/h/ln	0	1870	0	1870	0	1870	0	1870
Q Serve Time (g_s), s	0.0	12.8	0.0	7.6	0.0	6.6	0.0	31.8
Cycle Q Clear Time (g_c), s	0.0	12.8	0.0	7.6	0.0	6.6	0.0	31.8
Lane Grp Cap (c), veh/h	0	456	0	982	0	456	0	970
V/C Ratio (X)	0.00	0.72	0.00	0.32	0.00	0.41	0.00	0.87
Avail Cap (c_a), veh/h	0	456	0	982	0	456	0	970
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	27.7	0.0	10.8	0.0	25.4	0.0	16.9
Incr Delay (d2), s/veh	0.0	9.2	0.0	0.9	0.0	2.7	0.0	10.7
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	36.9	0.0	11.7	0.0	28.1	0.0	27.6
1st-Term Q (Q1), veh/ln	0.0	5.4	0.0	2.8	0.0	2.8	0.0	11.7
2nd-Term Q (Q2), veh/ln	0.0	1.2	0.0	0.2	0.0	0.3	0.0	2.9

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00	
%ile Back of Q (50%), veh/ln	0.0	6.6	0.0	3.0	0.0	3.1	0.0	14.6	
%ile Storage Ratio (RQ%)	0.00	0.46	0.00	0.10	0.00	0.04	0.00	0.41	
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0	
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Right Lane Group Data									
Assigned Mvmt	0	12	0	14	0	16	0	18	
Lane Assignment		R		R		R		R	
Lanes in Grp	0	1	0	1	0	1	0	1	
Grp Vol (v), veh/h	0	58	0	8	0	365	0	42	
Grp Sat Flow (s), veh/h/ln	0	1585	0	1585	0	1585	0	1585	
Q Serve Time (g_s), s	0.0	2.3	0.0	0.2	0.0	18.1	0.0	1.0	
Cycle Q Clear Time (g_c), s	0.0	2.3	0.0	0.2	0.0	18.1	0.0	1.0	
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00	
Lane Grp Cap (c), veh/h	0	386	0	832	0	386	0	822	
V/C Ratio (X)	0.00	0.15	0.00	0.01	0.00	0.94	0.00	0.05	
Avail Cap (c_a), veh/h	0	386	0	832	0	386	0	822	
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00	
Uniform Delay (d1), s/veh	0.0	23.7	0.0	9.1	0.0	29.7	0.0	9.5	
Incr Delay (d2), s/veh	0.0	0.8	0.0	0.0	0.0	33.8	0.0	0.1	
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Control Delay (d), s/veh	0.0	24.6	0.0	9.1	0.0	63.5	0.0	9.6	
1st-Term Q (Q1), veh/ln	0.0	0.8	0.0	0.1	0.0	6.5	0.0	0.3	
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.0	0.0	3.6	0.0	0.0	
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00	
%ile Back of Q (50%), veh/ln	0.0	0.9	0.0	0.1	0.0	10.1	0.0	0.4	
%ile Storage Ratio (RQ%)	0.00	0.06	0.00	0.00	0.00	0.13	0.00	0.01	
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0	
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Intersection Summary									
HCM 6th Ctrl Delay		31.4							
HCM 6th LOS		C							

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	74	552	37	124	290	41	33	351	131	78	421	40
Future Volume (veh/h)	74	552	37	124	290	41	33	351	131	78	421	40
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1772	1870	1870	1772	1870	1870	1772	1870	1870	1772	1870	1870
Adj Flow Rate, veh/h	78	581	39	131	305	43	35	369	138	82	443	42
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	188	655	555	178	644	546	94	587	217	191	540	458
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.11	0.35	0.35	0.11	0.34	0.34	0.06	0.23	0.23	0.11	0.29	0.29
Unsig. Movement Delay												
Ln Grp Delay, s/veh	43.9	44.0	19.7	62.5	25.6	20.2	52.0	38.1	38.9	44.1	42.9	23.8
Ln Grp LOS	D	D	B	E	C	C	D	D	D	D	D	C
Approach Vol, veh/h		698			479			542			567	
Approach Delay, s/veh		42.6			35.2			39.3			41.6	
Approach LOS		D			D			D			D	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Case No	2.0	4.0	2.0	3.0	2.0	3.0	2.0	3.0
Phs Duration (G+Y+Rc), s	14.7	25.3	14.0	36.0	9.5	30.5	14.5	35.5
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green (Gmax), s	10.2	20.8	9.5	31.5	5.0	26.0	10.0	31.0
Max Allow Headway (MAH), s	3.8	5.2	3.8	5.1	3.8	5.0	3.8	5.0
Max Q Clear (g_c+l1), s	6.1	14.0	8.8	28.4	3.8	21.9	5.9	13.5
Green Ext Time (g_e), s	0.1	1.7	0.0	1.2	0.0	1.1	0.0	1.7
Prob of Phs Call (p_c)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prob of Max Out (p_x)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Left-Turn Movement Data								
Assigned Mvmt	1		3		5		7	
Mvmt Sat Flow, veh/h	1688		1688		1688		1688	
Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		2542		1870		1870		1870
Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		937		1585		1585		1585
Left Lane Group Data								
Assigned Mvmt	1	0	3	0	5	0	7	0
Lane Assignment	L (Prot)		L (Prot)		L (Prot)		L (Prot)	

Lanes in Grp	1	0	1	0	1	0	1	0
Grp Vol (v), veh/h	82	0	131	0	35	0	78	0
Grp Sat Flow (s), veh/h/ln	1688	0	1688	0	1688	0	1688	0
Q Serve Time (g_s), s	4.1	0.0	6.8	0.0	1.8	0.0	3.9	0.0
Cycle Q Clear Time (g_c), s	4.1	0.0	6.8	0.0	1.8	0.0	3.9	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	191	0	178	0	94	0	188	0
V/C Ratio (X)	0.43	0.00	0.74	0.00	0.37	0.00	0.42	0.00
Avail Cap (c_a), veh/h	191	0	178	0	94	0	188	0
Upstream Filter (I)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Uniform Delay (d1), s/veh	37.2	0.0	39.0	0.0	41.0	0.0	37.3	0.0
Incr Delay (d2), s/veh	6.9	0.0	23.5	0.0	11.0	0.0	6.7	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	44.1	0.0	62.5	0.0	52.0	0.0	43.9	0.0
1st-Term Q (Q1), veh/ln	1.6	0.0	2.7	0.0	0.7	0.0	1.6	0.0
2nd-Term Q (Q2), veh/ln	0.4	0.0	1.2	0.0	0.3	0.0	0.3	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
%ile Back of Q (50%), veh/ln	2.0	0.0	3.9	0.0	1.0	0.0	1.9	0.0
%ile Storage Ratio (RQ%)	0.38	0.00	0.10	0.00	0.17	0.00	0.06	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	256	0	581	0	443	0	305
Grp Sat Flow (s), veh/h/ln	0	1777	0	1870	0	1870	0	1870
Q Serve Time (g_s), s	0.0	11.7	0.0	26.4	0.0	19.9	0.0	11.5
Cycle Q Clear Time (g_c), s	0.0	11.7	0.0	26.4	0.0	19.9	0.0	11.5
Lane Grp Cap (c), veh/h	0	411	0	655	0	540	0	644
V/C Ratio (X)	0.00	0.62	0.00	0.89	0.00	0.82	0.00	0.47
Avail Cap (c_a), veh/h	0	411	0	655	0	540	0	644
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	31.1	0.0	27.6	0.0	29.8	0.0	23.1
Incr Delay (d2), s/veh	0.0	7.0	0.0	16.4	0.0	13.1	0.0	2.5
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	38.1	0.0	44.0	0.0	42.9	0.0	25.6
1st-Term Q (Q1), veh/ln	0.0	4.8	0.0	11.1	0.0	8.5	0.0	4.8
2nd-Term Q (Q2), veh/ln	0.0	0.8	0.0	3.0	0.0	2.0	0.0	0.4

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	5.6	0.0	14.1	0.0	10.5	0.0	5.3
%ile Storage Ratio (RQ%)	0.00	0.93	0.00	0.43	0.00	2.00	0.00	0.13
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		T+R		R		R		R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	251	0	39	0	42	0	43
Grp Sat Flow (s), veh/h/ln	0	1702	0	1585	0	1585	0	1585
Q Serve Time (g_s), s	0.0	12.0	0.0	1.5	0.0	1.7	0.0	1.6
Cycle Q Clear Time (g_c), s	0.0	12.0	0.0	1.5	0.0	1.7	0.0	1.6
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.55	0.00	1.00	0.00	1.00	0.00	1.00
Lane Grp Cap (c), veh/h	0	393	0	555	0	458	0	546
V/C Ratio (X)	0.00	0.64	0.00	0.07	0.00	0.09	0.00	0.08
Avail Cap (c_a), veh/h	0	393	0	555	0	458	0	546
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	31.2	0.0	19.5	0.0	23.4	0.0	19.9
Incr Delay (d2), s/veh	0.0	7.7	0.0	0.2	0.0	0.4	0.0	0.3
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	38.9	0.0	19.7	0.0	23.8	0.0	20.2
1st-Term Q (Q1), veh/ln	0.0	4.7	0.0	0.5	0.0	0.6	0.0	0.6
2nd-Term Q (Q2), veh/ln	0.0	0.8	0.0	0.0	0.0	0.1	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	5.6	0.0	0.6	0.0	0.7	0.0	0.6
%ile Storage Ratio (RQ%)	0.00	0.92	0.00	0.02	0.00	0.13	0.00	0.02
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary		
HCM 6th Ctrl Delay		40.0
HCM 6th LOS		D

Intersection	
Int Delay, s/veh	0.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		✣			✣			✣			✣	
Traffic Vol, veh/h	8	12	0	7	5	4	1	515	7	5	576	7
Future Vol, veh/h	8	12	0	7	5	4	1	515	7	5	576	7
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	-9	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	8	13	0	7	5	4	1	542	7	5	606	7

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1172	1171	610	1174	1171	546	613	0	0	549	0	0
Stage 1	620	620	-	548	548	-	-	-	-	-	-	-
Stage 2	552	551	-	626	623	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	169	193	494	169	193	538	966	-	-	1021	-	-
Stage 1	476	480	-	521	517	-	-	-	-	-	-	-
Stage 2	518	515	-	472	478	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	163	191	494	160	191	538	966	-	-	1021	-	-
Mov Cap-2 Maneuver	163	191	-	160	191	-	-	-	-	-	-	-
Stage 1	476	477	-	520	516	-	-	-	-	-	-	-
Stage 2	508	514	-	456	475	-	-	-	-	-	-	-

Approach	EB	WB	NE	SW
HCM Control Delay, s	27.8	23.9	0	0.1
HCM LOS	D	C		

Minor Lane/Major Mvmt	NEL	NET	NER	EBLn1	WBLn1	SWL	SWT	SWR
Capacity (veh/h)	966	-	-	179	207	1021	-	-
HCM Lane V/C Ratio	0.001	-	-	0.118	0.081	0.005	-	-
HCM Control Delay (s)	8.7	0	-	27.8	23.9	8.5	0	-
HCM Lane LOS	A	A	-	D	C	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.4	0.3	0	-	-

Intersection	
Intersection Delay, s/veh	67.2
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	31	157	26	62	70	56	16	439	68	70	457	46
Future Vol, veh/h	31	157	26	62	70	56	16	439	68	70	457	46
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	33	165	27	65	74	59	17	462	72	74	481	48
Number of Lanes	0	1	1	0	1	1	0	1	1	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	2	2
HCM Control Delay	18.6	15.6	57.9	110.7
HCM LOS	C	C	F	F

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	4%	0%	16%	0%	47%	0%	13%	0%
Vol Thru, %	96%	0%	84%	0%	53%	0%	87%	0%
Vol Right, %	0%	100%	0%	100%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	455	68	188	26	132	56	527	46
LT Vol	16	0	31	0	62	0	70	0
Through Vol	439	0	157	0	70	0	457	0
RT Vol	0	68	0	26	0	56	0	46
Lane Flow Rate	479	72	198	27	139	59	555	48
Geometry Grp	7	7	7	7	7	7	7	7
Degree of Util (X)	0.982	0.132	0.471	0.059	0.342	0.13	1.162	0.091
Departure Headway (Hd)	7.727	6.986	9.049	8.232	9.379	8.401	7.542	6.754
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	474	516	402	438	386	429	483	530
Service Time	5.427	4.686	6.749	5.932	7.079	6.101	5.286	4.497
HCM Lane V/C Ratio	1.011	0.14	0.493	0.062	0.36	0.138	1.149	0.091
HCM Control Delay	65	10.7	19.6	11.4	16.9	12.4	119.5	10.2
HCM Lane LOS	F	B	C	B	C	B	F	B
HCM 95th-tile Q	12.6	0.5	2.4	0.2	1.5	0.4	20	0.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	262	632	25	33	413	44	22	204	71	59	243	278
Future Volume (veh/h)	262	632	25	33	413	44	22	204	71	59	243	278
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1772	1870	1870	1772	1870	1870	1772	1870	1870	1772	1870	1870
Adj Flow Rate, veh/h	276	665	26	35	435	46	23	215	75	62	256	293
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	473	733	621	301	623	528	274	561	476	336	561	476
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.14	0.39	0.39	0.08	0.33	0.33	0.30	0.30	0.30	0.30	0.30	0.30
Unsig. Movement Delay												
Ln Grp Delay, s/veh	16.6	34.3	11.4	13.6	23.7	14.1	20.9	18.6	16.1	21.2	19.7	23.9
Ln Grp LOS	B	C	B	B	C	B	C	B	B	C	B	C
Approach Vol, veh/h		967			516			313			611	
Approach Delay, s/veh		28.7			22.2			18.2			21.9	
Approach LOS		C			C			B			C	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Case No		5.0	1.1	3.0		5.0	1.1	3.0
Phs Duration (G+Y+Rc), s		22.5	9.5	28.0		22.5	13.0	24.5
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5
Max Green (Gmax), s		18.0	5.0	23.5		18.0	8.5	20.0
Max Allow Headway (MAH), s		4.9	3.8	5.1		4.5	3.8	5.0
Max Q Clear (g_c+I1), s		10.1	2.7	22.1		11.5	8.0	14.1
Green Ext Time (g_e), s		0.9	0.0	0.6		1.6	0.0	1.4
Prob of Phs Call (p_c)		1.00	1.00	1.00		1.00	1.00	1.00
Prob of Max Out (p_x)		0.00	0.00	0.00		0.00	0.00	0.00
Left-Turn Movement Data								
Assigned Mvmt		5	3			1	7	
Mvmt Sat Flow, veh/h		813	1688			1032	1688	
Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		1870		1870		1870		1870
Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1585		1585		1585		1585
Left Lane Group Data								
Assigned Mvmt	0	5	3	0	0	1	7	0
Lane Assignment			LL (Pr/Pm)				LL (Pr/Pm)	

Lanes in Grp	0	1	1	0	0	1	1	0
Grp Vol (v), veh/h	0	23	35	0	0	62	276	0
Grp Sat Flow (s), veh/h/ln	0	813	1688	0	0	1032	1688	0
Q Serve Time (g_s), s	0.0	1.4	0.7	0.0	0.0	3.0	6.0	0.0
Cycle Q Clear Time (g_c), s	0.0	8.1	0.7	0.0	0.0	8.5	6.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	813	713	0	0	1032	866	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	18.0	20.0	0.0	0.0	18.0	21.0	0.0
Perm LT Serve Time (g_u), s	0.0	11.3	3.4	0.0	0.0	12.5	7.9	0.0
Perm LT Q Serve Time (g_ps), s	0.0	1.4	0.9	0.0	0.0	3.0	6.1	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	1.00	1.00	0.00	0.00	1.00	1.00	0.00
Lane Grp Cap (c), veh/h	0	274	301	0	0	336	473	0
V/C Ratio (X)	0.00	0.08	0.12	0.00	0.00	0.18	0.58	0.00
Avail Cap (c_a), veh/h	0	274	301	0	0	336	473	0
Upstream Filter (I)	0.00	1.00	1.00	0.00	0.00	1.00	1.00	0.00
Uniform Delay (d1), s/veh	0.0	20.3	12.9	0.0	0.0	20.0	11.4	0.0
Incr Delay (d2), s/veh	0.0	0.6	0.8	0.0	0.0	1.2	5.2	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	20.9	13.6	0.0	0.0	21.2	16.6	0.0
1st-Term Q (Q1), veh/ln	0.0	0.2	0.2	0.0	0.0	0.7	1.8	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.1	0.0	0.0	0.1	0.7	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	1.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.3	0.3	0.0	0.0	0.8	2.4	0.0
%ile Storage Ratio (RQ%)	0.00	0.02	0.01	0.00	0.00	0.01	0.08	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	215	0	665	0	256	0	435
Grp Sat Flow (s), veh/h/ln	0	1870	0	1870	0	1870	0	1870
Q Serve Time (g_s), s	0.0	5.5	0.0	20.1	0.0	6.7	0.0	12.1
Cycle Q Clear Time (g_c), s	0.0	5.5	0.0	20.1	0.0	6.7	0.0	12.1
Lane Grp Cap (c), veh/h	0	561	0	733	0	561	0	623
V/C Ratio (X)	0.00	0.38	0.00	0.91	0.00	0.46	0.00	0.70
Avail Cap (c_a), veh/h	0	561	0	733	0	561	0	623
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	16.6	0.0	17.2	0.0	17.0	0.0	17.4
Incr Delay (d2), s/veh	0.0	2.0	0.0	17.1	0.0	2.7	0.0	6.4
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	18.6	0.0	34.3	0.0	19.7	0.0	23.7
1st-Term Q (Q1), veh/ln	0.0	2.1	0.0	7.2	0.0	2.5	0.0	4.5
2nd-Term Q (Q2), veh/ln	0.0	0.3	0.0	3.5	0.0	0.4	0.0	1.1

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	2.4	0.0	10.7	0.0	2.9	0.0	5.6
%ile Storage Ratio (RQ%)	0.00	0.17	0.00	0.36	0.00	0.04	0.00	0.16
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		R		R		R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	75	0	26	0	293	0	46
Grp Sat Flow (s), veh/h/ln	0	1585	0	1585	0	1585	0	1585
Q Serve Time (g_s), s	0.0	2.1	0.0	0.6	0.0	9.5	0.0	1.2
Cycle Q Clear Time (g_c), s	0.0	2.1	0.0	0.6	0.0	9.5	0.0	1.2
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Lane Grp Cap (c), veh/h	0	476	0	621	0	476	0	528
V/C Ratio (X)	0.00	0.16	0.00	0.04	0.00	0.62	0.00	0.09
Avail Cap (c_a), veh/h	0	476	0	621	0	476	0	528
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	15.4	0.0	11.3	0.0	18.0	0.0	13.7
Incr Delay (d2), s/veh	0.0	0.7	0.0	0.1	0.0	5.9	0.0	0.3
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	16.1	0.0	11.4	0.0	23.9	0.0	14.1
1st-Term Q (Q1), veh/ln	0.0	0.7	0.0	0.2	0.0	3.1	0.0	0.4
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.0	0.0	0.8	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.8	0.0	0.2	0.0	3.8	0.0	0.4
%ile Storage Ratio (RQ%)	0.00	0.05	0.00	0.01	0.00	0.05	0.00	0.01
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	24.2
HCM 6th LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	21	204	32	157	704	48	127	405	92	70	269	93
Future Volume (veh/h)	21	204	32	157	704	48	127	405	92	70	269	93
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1772	1870	1870	1772	1870	1870	1772	1870	1870	1772	1870	1870
Adj Flow Rate, veh/h	22	215	34	165	741	51	134	426	97	74	283	98
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	94	557	472	313	800	678	178	694	157	128	395	335
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.06	0.30	0.30	0.19	0.43	0.43	0.11	0.24	0.24	0.08	0.21	0.21
Unsig. Movement Delay												
Ln Grp Delay, s/veh	46.5	27.1	23.0	39.3	42.6	15.4	64.2	36.7	37.1	58.1	43.6	32.1
Ln Grp LOS	D	C	C	D	D	B	E	D	D	E	D	C
Approach Vol, veh/h		271			957			657			455	
Approach Delay, s/veh		28.1			40.6			42.5			43.5	
Approach LOS		C			D			D			D	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Case No	2.0	4.0	2.0	3.0	2.0	3.0	2.0	3.0
Phs Duration (G+Y+Rc), s	11.3	26.2	21.2	31.3	14.0	23.5	9.5	43.0
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green (Gmax), s	6.8	21.7	16.7	26.8	9.5	19.0	5.0	38.5
Max Allow Headway (MAH), s	3.8	5.2	3.8	5.0	3.8	4.8	3.8	5.1
Max Q Clear (g_c+I1), s	5.8	14.0	9.9	10.2	8.9	14.7	3.1	35.8
Green Ext Time (g_e), s	0.0	1.9	0.2	1.1	0.0	0.8	0.0	1.3
Prob of Phs Call (p_c)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prob of Max Out (p_x)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Left-Turn Movement Data								
Assigned Mvmt	1		3		5		7	
Mvmt Sat Flow, veh/h	1688		1688		1688		1688	
Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		2880		1870		1870		1870
Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		650		1585		1585		1585
Left Lane Group Data								
Assigned Mvmt	1	0	3	0	5	0	7	0
Lane Assignment	L (Prot)		L (Prot)		L (Prot)		L (Prot)	

Lanes in Grp	1	0	1	0	1	0	1	0
Grp Vol (v), veh/h	74	0	165	0	134	0	22	0
Grp Sat Flow (s), veh/h/ln	1688	0	1688	0	1688	0	1688	0
Q Serve Time (g_s), s	3.8	0.0	7.9	0.0	6.9	0.0	1.1	0.0
Cycle Q Clear Time (g_c), s	3.8	0.0	7.9	0.0	6.9	0.0	1.1	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	128	0	313	0	178	0	94	0
V/C Ratio (X)	0.58	0.00	0.53	0.00	0.75	0.00	0.23	0.00
Avail Cap (c_a), veh/h	128	0	313	0	178	0	94	0
Upstream Filter (I)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Uniform Delay (d1), s/veh	40.2	0.0	33.1	0.0	39.1	0.0	40.7	0.0
Incr Delay (d2), s/veh	17.8	0.0	6.2	0.0	25.1	0.0	5.8	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	58.1	0.0	39.3	0.0	64.2	0.0	46.5	0.0
1st-Term Q (Q1), veh/ln	1.5	0.0	3.2	0.0	2.8	0.0	0.5	0.0
2nd-Term Q (Q2), veh/ln	0.6	0.0	0.5	0.0	1.2	0.0	0.2	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
%ile Back of Q (50%), veh/ln	2.2	0.0	3.7	0.0	4.0	0.0	0.6	0.0
%ile Storage Ratio (RQ%)	0.42	0.00	0.09	0.00	0.67	0.00	0.02	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	261	0	215	0	283	0	741
Grp Sat Flow (s), veh/h/ln	0	1777	0	1870	0	1870	0	1870
Q Serve Time (g_s), s	0.0	11.8	0.0	8.2	0.0	12.7	0.0	33.8
Cycle Q Clear Time (g_c), s	0.0	11.8	0.0	8.2	0.0	12.7	0.0	33.8
Lane Grp Cap (c), veh/h	0	428	0	557	0	395	0	800
V/C Ratio (X)	0.00	0.61	0.00	0.39	0.00	0.72	0.00	0.93
Avail Cap (c_a), veh/h	0	428	0	557	0	395	0	800
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	30.4	0.0	25.1	0.0	33.0	0.0	24.4
Incr Delay (d2), s/veh	0.0	6.4	0.0	2.0	0.0	10.6	0.0	18.2
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	36.7	0.0	27.1	0.0	43.6	0.0	42.6
1st-Term Q (Q1), veh/ln	0.0	4.9	0.0	3.5	0.0	5.5	0.0	13.7
2nd-Term Q (Q2), veh/ln	0.0	0.8	0.0	0.3	0.0	1.2	0.0	4.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	5.6	0.0	3.8	0.0	6.7	0.0	17.8
%ile Storage Ratio (RQ%)	0.00	0.93	0.00	0.12	0.00	1.28	0.00	0.45
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		T+R		R		R		R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	262	0	34	0	98	0	51
Grp Sat Flow (s), veh/h/ln	0	1753	0	1585	0	1585	0	1585
Q Serve Time (g_s), s	0.0	12.0	0.0	1.4	0.0	4.7	0.0	1.7
Cycle Q Clear Time (g_c), s	0.0	12.0	0.0	1.4	0.0	4.7	0.0	1.7
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.37	0.00	1.00	0.00	1.00	0.00	1.00
Lane Grp Cap (c), veh/h	0	423	0	472	0	335	0	678
V/C Ratio (X)	0.00	0.62	0.00	0.07	0.00	0.29	0.00	0.08
Avail Cap (c_a), veh/h	0	423	0	472	0	335	0	678
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	30.5	0.0	22.7	0.0	29.9	0.0	15.2
Incr Delay (d2), s/veh	0.0	6.6	0.0	0.3	0.0	2.2	0.0	0.2
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	37.1	0.0	23.0	0.0	32.1	0.0	15.4
1st-Term Q (Q1), veh/ln	0.0	4.9	0.0	0.5	0.0	1.7	0.0	0.6
2nd-Term Q (Q2), veh/ln	0.0	0.8	0.0	0.0	0.0	0.2	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	5.7	0.0	0.5	0.0	1.9	0.0	0.6
%ile Storage Ratio (RQ%)	0.00	0.93	0.00	0.02	0.00	0.37	0.00	0.02
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Intersection Summary								
HCM 6th Ctrl Delay		40.2						
HCM 6th LOS		D						

Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Vol, veh/h	6	4	0	5	16	5	0	598	3	1	463	6
Future Vol, veh/h	6	4	0	5	16	5	0	598	3	1	463	6
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	-9	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	6	4	0	5	17	5	0	629	3	1	487	6

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1134	1124	490	1125	1126	631	493	0	0	632	0	0
Stage 1	492	492	-	631	631	-	-	-	-	-	-	-
Stage 2	642	632	-	494	495	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	180	205	578	182	205	481	1071	-	-	951	-	-
Stage 1	558	548	-	469	474	-	-	-	-	-	-	-
Stage 2	463	474	-	557	546	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	167	205	578	179	205	481	1071	-	-	951	-	-
Mov Cap-2 Maneuver	167	205	-	179	205	-	-	-	-	-	-	-
Stage 1	558	547	-	469	474	-	-	-	-	-	-	-
Stage 2	442	474	-	552	545	-	-	-	-	-	-	-

Approach	EB	WB	NE	SW
HCM Control Delay, s	26.2	23.4	0	0
HCM LOS	D	C		

Minor Lane/Major Mvmt	NEL	NET	NER	EBLn1	WBLn1	SWL	SWT	SWR
Capacity (veh/h)	1071	-	-	180	223	951	-	-
HCM Lane V/C Ratio	-	-	-	0.058	0.123	0.001	-	-
HCM Control Delay (s)	0	-	-	26.2	23.4	8.8	0	-
HCM Lane LOS	A	-	-	D	C	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.2	0.4	0	-	-

Intersection	
Intersection Delay, s/veh	54.2
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	21	81	11	139	90	135	21	441	30	57	407	11
Future Vol, veh/h	21	81	11	139	90	135	21	441	30	57	407	11
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	22	85	12	146	95	142	22	464	32	60	428	12
Number of Lanes	0	1	1	0	1	1	0	1	1	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	2	2
HCM Control Delay	15.3	19.2	67.5	76.5
HCM LOS	C	C	F	F

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	5%	0%	21%	0%	61%	0%	12%	0%
Vol Thru, %	95%	0%	79%	0%	39%	0%	88%	0%
Vol Right, %	0%	100%	0%	100%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	462	30	102	11	229	135	464	11
LT Vol	21	0	21	0	139	0	57	0
Through Vol	441	0	81	0	90	0	407	0
RT Vol	0	30	0	11	0	135	0	11
Lane Flow Rate	486	32	107	12	241	142	488	12
Geometry Grp	7	7	7	7	7	7	7	7
Degree of Util (X)	1.007	0.06	0.272	0.027	0.569	0.294	1.032	0.022
Departure Headway (Hd)	7.725	6.979	9.493	8.651	8.793	7.75	7.754	6.969
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	472	516	381	416	412	466	474	517
Service Time	5.425	4.679	7.193	6.351	6.493	5.45	5.454	4.669
HCM Lane V/C Ratio	1.03	0.062	0.281	0.029	0.585	0.305	1.03	0.023
HCM Control Delay	71.2	10.1	15.7	11.6	22.5	13.6	78.1	9.8
HCM Lane LOS	F	B	C	B	C	B	F	A
HCM 95th-tile Q	13.5	0.2	1.1	0.1	3.4	1.2	14.4	0.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	133	297	8	30	804	40	22	312	55	33	178	352
Future Volume (veh/h)	133	297	8	30	804	40	22	312	55	33	178	352
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1772	1870	1870	1772	1870	1870	1772	1870	1870	1772	1870	1870
Adj Flow Rate, veh/h	140	313	8	32	846	42	23	328	58	35	187	371
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	278	982	832	626	970	822	219	456	386	168	456	386
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.07	0.52	0.52	0.06	0.52	0.52	0.24	0.24	0.24	0.24	0.24	0.24
Unsig. Movement Delay												
Ln Grp Delay, s/veh	22.1	11.7	9.1	7.6	27.6	9.6	30.0	37.2	24.6	37.7	28.1	66.7
Ln Grp LOS	C	B	A	A	C	A	C	D	C	D	C	E
Approach Vol, veh/h		461			920			409			593	
Approach Delay, s/veh		14.8			26.1			35.0			52.8	
Approach LOS		B			C			C			D	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Case No		5.0	1.1	3.0		5.0	1.1	3.0
Phs Duration (G+Y+Rc), s		24.0	9.5	46.5		24.0	10.0	46.0
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5
Max Green (Gmax), s		19.5	5.0	42.0		19.5	5.5	41.5
Max Allow Headway (MAH), s		5.0	3.8	5.1		4.4	3.8	5.1
Max Q Clear (g_c+I1), s		14.9	2.6	9.6		20.5	5.0	33.8
Green Ext Time (g_e), s		0.9	0.0	1.9		0.0	0.0	3.6
Prob of Phs Call (p_c)		1.00	1.00	1.00		1.00	1.00	1.00
Prob of Max Out (p_x)		0.00	0.00	0.00		0.00	0.00	0.00
Left-Turn Movement Data								
Assigned Mvmt		5	3			1	7	
Mvmt Sat Flow, veh/h		806	1688			945	1688	
Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		1870		1870		1870		1870
Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1585		1585		1585		1585
Left Lane Group Data								
Assigned Mvmt	0	5	3	0	0	1	7	0
Lane Assignment			LL (Pr/Pm)				LL (Pr/Pm)	

Lanes in Grp	0	1	1	0	0	1	1	0
Grp Vol (v), veh/h	0	23	32	0	0	35	140	0
Grp Sat Flow (s), veh/h/ln	0	806	1688	0	0	945	1688	0
Q Serve Time (g_s), s	0.0	2.0	0.6	0.0	0.0	2.8	3.0	0.0
Cycle Q Clear Time (g_c), s	0.0	8.7	0.6	0.0	0.0	15.7	3.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	806	1003	0	0	945	593	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	19.5	41.5	0.0	0.0	19.5	41.5	0.0
Perm LT Serve Time (g_u), s	0.0	12.8	34.4	0.0	0.0	6.6	9.7	0.0
Perm LT Q Serve Time (g_ps), s	0.0	2.0	0.2	0.0	0.0	2.8	9.7	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	1.00	1.00	0.00	0.00	1.00	1.00	0.00
Lane Grp Cap (c), veh/h	0	219	626	0	0	168	278	0
V/C Ratio (X)	0.00	0.11	0.05	0.00	0.00	0.21	0.50	0.00
Avail Cap (c_a), veh/h	0	219	626	0	0	168	278	0
Upstream Filter (I)	0.00	1.00	1.00	0.00	0.00	1.00	1.00	0.00
Uniform Delay (d1), s/veh	0.0	29.1	7.5	0.0	0.0	34.9	15.7	0.0
Incr Delay (d2), s/veh	0.0	1.0	0.2	0.0	0.0	2.8	6.4	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	30.0	7.6	0.0	0.0	37.7	22.1	0.0
1st-Term Q (Q1), veh/ln	0.0	0.4	0.2	0.0	0.0	0.6	1.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.0	0.0	0.1	0.5	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	1.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.4	0.2	0.0	0.0	0.8	1.5	0.0
%ile Storage Ratio (RQ%)	0.00	0.03	0.01	0.00	0.00	0.01	0.05	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	328	0	313	0	187	0	846
Grp Sat Flow (s), veh/h/ln	0	1870	0	1870	0	1870	0	1870
Q Serve Time (g_s), s	0.0	12.9	0.0	7.6	0.0	6.7	0.0	31.8
Cycle Q Clear Time (g_c), s	0.0	12.9	0.0	7.6	0.0	6.7	0.0	31.8
Lane Grp Cap (c), veh/h	0	456	0	982	0	456	0	970
V/C Ratio (X)	0.00	0.72	0.00	0.32	0.00	0.41	0.00	0.87
Avail Cap (c_a), veh/h	0	456	0	982	0	456	0	970
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	27.7	0.0	10.8	0.0	25.4	0.0	16.9
Incr Delay (d2), s/veh	0.0	9.4	0.0	0.9	0.0	2.7	0.0	10.7
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	37.2	0.0	11.7	0.0	28.1	0.0	27.6
1st-Term Q (Q1), veh/ln	0.0	5.4	0.0	2.8	0.0	2.8	0.0	11.7
2nd-Term Q (Q2), veh/ln	0.0	1.2	0.0	0.2	0.0	0.3	0.0	2.9

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	6.6	0.0	3.0	0.0	3.2	0.0	14.6
%ile Storage Ratio (RQ%)	0.00	0.46	0.00	0.10	0.00	0.04	0.00	0.41
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		R		R		R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	58	0	8	0	371	0	42
Grp Sat Flow (s), veh/h/ln	0	1585	0	1585	0	1585	0	1585
Q Serve Time (g_s), s	0.0	2.3	0.0	0.2	0.0	18.5	0.0	1.0
Cycle Q Clear Time (g_c), s	0.0	2.3	0.0	0.2	0.0	18.5	0.0	1.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Lane Grp Cap (c), veh/h	0	386	0	832	0	386	0	822
V/C Ratio (X)	0.00	0.15	0.00	0.01	0.00	0.96	0.00	0.05
Avail Cap (c_a), veh/h	0	386	0	832	0	386	0	822
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	23.7	0.0	9.1	0.0	29.9	0.0	9.5
Incr Delay (d2), s/veh	0.0	0.8	0.0	0.0	0.0	36.8	0.0	0.1
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	24.6	0.0	9.1	0.0	66.7	0.0	9.6
1st-Term Q (Q1), veh/ln	0.0	0.8	0.0	0.1	0.0	6.6	0.0	0.3
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.0	0.0	4.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.9	0.0	0.1	0.0	10.6	0.0	0.4
%ile Storage Ratio (RQ%)	0.00	0.06	0.00	0.00	0.00	0.14	0.00	0.01
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Intersection Summary								
HCM 6th Ctrl Delay		32.1						
HCM 6th LOS		C						

Intersection	
Int Delay, s/veh	0.5

Movement	SET	SER	NWL	NWT	NEL	NER
Lane Configurations						
Traffic Vol, veh/h	455	2	6	607	14	10
Future Vol, veh/h	455	2	6	607	14	10
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	479	2	6	639	15	11

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	481	0	1131	480
Stage 1	-	-	-	-	480	-
Stage 2	-	-	-	-	651	-
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	-	-	1082	-	225	586
Stage 1	-	-	-	-	622	-
Stage 2	-	-	-	-	519	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1082	-	223	586
Mov Cap-2 Maneuver	-	-	-	-	223	-
Stage 1	-	-	-	-	616	-
Stage 2	-	-	-	-	519	-

Approach	SE	NW	NE
HCM Control Delay, s	0	0.1	18.1
HCM LOS			C

Minor Lane/Major Mvmt	NELn1	NWL	NWT	SET	SER
Capacity (veh/h)	301	1082	-	-	-
HCM Lane V/C Ratio	0.084	0.006	-	-	-
HCM Control Delay (s)	18.1	8.3	0	-	-
HCM Lane LOS	C	A	A	-	-
HCM 95th %tile Q(veh)	0.3	0	-	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	74	552	48	124	290	41	37	359	131	78	426	40
Future Volume (veh/h)	74	552	48	124	290	41	37	359	131	78	426	40
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1772	1870	1870	1772	1870	1870	1772	1870	1870	1772	1870	1870
Adj Flow Rate, veh/h	78	581	51	131	305	43	39	378	138	82	448	42
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	188	655	555	159	623	528	94	702	253	137	561	476
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.11	0.35	0.35	0.09	0.33	0.33	0.06	0.27	0.27	0.08	0.30	0.30
Unsig. Movement Delay												
Ln Grp Delay, s/veh	43.9	44.0	20.0	76.0	26.6	20.9	54.1	31.9	32.4	57.8	40.3	23.0
Ln Grp LOS	D	D	B	E	C	C	D	C	C	E	D	C
Approach Vol, veh/h		710			479			555			572	
Approach Delay, s/veh		42.2			39.6			33.7			41.5	
Approach LOS		D			D			C			D	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Case No	2.0	4.0	2.0	3.0	2.0	3.0	2.0	3.0
Phs Duration (G+Y+Rc), s	11.8	29.2	13.0	36.0	9.5	31.5	14.5	34.5
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green (Gmax), s	7.3	24.7	8.5	31.5	5.0	27.0	10.0	30.0
Max Allow Headway (MAH), s	3.8	5.2	3.8	5.0	3.8	5.0	3.8	5.0
Max Q Clear (g_c+l1), s	6.2	13.5	8.9	28.4	4.0	21.8	5.9	13.7
Green Ext Time (g_e), s	0.0	2.3	0.0	1.2	0.0	1.3	0.0	1.7
Prob of Phs Call (p_c)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prob of Max Out (p_x)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Left-Turn Movement Data								
Assigned Mvmt	1		3		5		7	
Mvmt Sat Flow, veh/h	1688		1688		1688		1688	
Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		2560		1870		1870		1870
Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		922		1585		1585		1585
Left Lane Group Data								
Assigned Mvmt	1	0	3	0	5	0	7	0
Lane Assignment	L (Prot)		L (Prot)		L (Prot)		L (Prot)	

Lanes in Grp	1	0	1	0	1	0	1	0
Grp Vol (v), veh/h	82	0	131	0	39	0	78	0
Grp Sat Flow (s), veh/h/ln	1688	0	1688	0	1688	0	1688	0
Q Serve Time (g_s), s	4.2	0.0	6.9	0.0	2.0	0.0	3.9	0.0
Cycle Q Clear Time (g_c), s	4.2	0.0	6.9	0.0	2.0	0.0	3.9	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	137	0	159	0	94	0	188	0
V/C Ratio (X)	0.60	0.00	0.82	0.00	0.42	0.00	0.42	0.00
Avail Cap (c_a), veh/h	137	0	159	0	94	0	188	0
Upstream Filter (I)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Uniform Delay (d1), s/veh	39.9	0.0	40.0	0.0	41.1	0.0	37.3	0.0
Incr Delay (d2), s/veh	17.9	0.0	36.0	0.0	13.0	0.0	6.7	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	57.8	0.0	76.0	0.0	54.1	0.0	43.9	0.0
1st-Term Q (Q1), veh/ln	1.7	0.0	2.8	0.0	0.8	0.0	1.6	0.0
2nd-Term Q (Q2), veh/ln	0.7	0.0	1.6	0.0	0.3	0.0	0.3	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
%ile Back of Q (50%), veh/ln	2.4	0.0	4.4	0.0	1.2	0.0	1.9	0.0
%ile Storage Ratio (RQ%)	0.46	0.00	0.11	0.00	0.19	0.00	0.06	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	261	0	581	0	448	0	305
Grp Sat Flow (s), veh/h/ln	0	1777	0	1870	0	1870	0	1870
Q Serve Time (g_s), s	0.0	11.2	0.0	26.4	0.0	19.8	0.0	11.7
Cycle Q Clear Time (g_c), s	0.0	11.2	0.0	26.4	0.0	19.8	0.0	11.7
Lane Grp Cap (c), veh/h	0	488	0	655	0	561	0	623
V/C Ratio (X)	0.00	0.53	0.00	0.89	0.00	0.80	0.00	0.49
Avail Cap (c_a), veh/h	0	488	0	655	0	561	0	623
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	27.8	0.0	27.6	0.0	29.0	0.0	23.9
Incr Delay (d2), s/veh	0.0	4.2	0.0	16.4	0.0	11.3	0.0	2.7
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	31.9	0.0	44.0	0.0	40.3	0.0	26.6
1st-Term Q (Q1), veh/ln	0.0	4.6	0.0	11.1	0.0	8.5	0.0	4.9
2nd-Term Q (Q2), veh/ln	0.0	0.6	0.0	3.0	0.0	1.8	0.0	0.5

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	5.2	0.0	14.1	0.0	10.2	0.0	5.4
%ile Storage Ratio (RQ%)	0.00	0.85	0.00	0.43	0.00	1.95	0.00	0.14
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		T+R		R		R		R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	255	0	51	0	42	0	43
Grp Sat Flow (s), veh/h/ln	0	1704	0	1585	0	1585	0	1585
Q Serve Time (g_s), s	0.0	11.5	0.0	1.9	0.0	1.7	0.0	1.7
Cycle Q Clear Time (g_c), s	0.0	11.5	0.0	1.9	0.0	1.7	0.0	1.7
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.54	0.00	1.00	0.00	1.00	0.00	1.00
Lane Grp Cap (c), veh/h	0	468	0	555	0	476	0	528
V/C Ratio (X)	0.00	0.55	0.00	0.09	0.00	0.09	0.00	0.08
Avail Cap (c_a), veh/h	0	468	0	555	0	476	0	528
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	27.9	0.0	19.6	0.0	22.7	0.0	20.6
Incr Delay (d2), s/veh	0.0	4.5	0.0	0.3	0.0	0.4	0.0	0.3
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	32.4	0.0	20.0	0.0	23.0	0.0	20.9
1st-Term Q (Q1), veh/ln	0.0	4.5	0.0	0.7	0.0	0.6	0.0	0.6
2nd-Term Q (Q2), veh/ln	0.0	0.6	0.0	0.1	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	5.1	0.0	0.7	0.0	0.7	0.0	0.6
%ile Storage Ratio (RQ%)	0.00	0.84	0.00	0.02	0.00	0.13	0.00	0.02
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	39.5
HCM 6th LOS	D

Intersection												
Int Delay, s/veh	1.1											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Vol, veh/h	14	12	0	7	5	4	1	521	7	5	579	8
Future Vol, veh/h	14	12	0	7	5	4	1	521	7	5	579	8
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	-9	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	15	13	0	7	5	4	1	548	7	5	609	8

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1181	1180	613	1184	1181	552	617	0	0	555	0	0
Stage 1	623	623	-	554	554	-	-	-	-	-	-	-
Stage 2	558	557	-	630	627	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	167	190	492	166	190	533	963	-	-	1015	-	-
Stage 1	474	478	-	517	514	-	-	-	-	-	-	-
Stage 2	514	512	-	470	476	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	161	188	492	156	188	533	963	-	-	1015	-	-
Mov Cap-2 Maneuver	161	188	-	156	188	-	-	-	-	-	-	-
Stage 1	473	474	-	516	513	-	-	-	-	-	-	-
Stage 2	504	511	-	454	472	-	-	-	-	-	-	-

Approach	EB	WB	NE	SW
HCM Control Delay, s	29.9	24.3	0	0.1
HCM LOS	D	C		

Minor Lane/Major Mvmt	NEL	NET	NER	EBLn1	WBLn1	SWL	SWT	SWR
Capacity (veh/h)	963	-	-	172	203	1015	-	-
HCM Lane V/C Ratio	0.001	-	-	0.159	0.083	0.005	-	-
HCM Control Delay (s)	8.7	0	-	29.9	24.3	8.6	0	-
HCM Lane LOS	A	A	-	D	C	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.6	0.3	0	-	-

Intersection	
Intersection Delay, s/veh	69
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	31	157	26	62	67	56	16	444	68	70	460	46
Future Vol, veh/h	31	157	26	62	67	56	16	444	68	70	460	46
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	33	165	27	65	71	59	17	467	72	74	484	48
Number of Lanes	0	1	1	0	1	1	0	1	1	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	2	2
HCM Control Delay	18.6	15.5	60.4	112.8
HCM LOS	C	C	F	F

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	3%	0%	16%	0%	48%	0%	13%	0%
Vol Thru, %	97%	0%	84%	0%	52%	0%	87%	0%
Vol Right, %	0%	100%	0%	100%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	460	68	188	26	129	56	530	46
LT Vol	16	0	31	0	62	0	70	0
Through Vol	444	0	157	0	67	0	460	0
RT Vol	0	68	0	26	0	56	0	46
Lane Flow Rate	484	72	198	27	136	59	558	48
Geometry Grp	7	7	7	7	7	7	7	7
Degree of Util (X)	0.994	0.133	0.471	0.059	0.335	0.13	1.168	0.091
Departure Headway (Hd)	7.718	6.978	9.061	8.243	9.412	8.427	7.538	6.75
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	475	517	400	437	384	428	485	530
Service Time	5.418	4.678	6.761	5.943	7.112	6.127	5.285	4.497
HCM Lane V/C Ratio	1.019	0.139	0.495	0.062	0.354	0.138	1.151	0.091
HCM Control Delay	67.8	10.7	19.6	11.5	16.8	12.4	121.7	10.2
HCM Lane LOS	F	B	C	B	C	B	F	B
HCM 95th-tile Q	13	0.5	2.4	0.2	1.4	0.4	20.2	0.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	268	632	25	33	413	44	22	204	71	59	244	280
Future Volume (veh/h)	268	632	25	33	413	44	22	204	71	59	244	280
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1772	1870	1870	1772	1870	1870	1772	1870	1870	1772	1870	1870
Adj Flow Rate, veh/h	282	665	26	35	435	46	23	215	75	62	257	295
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	478	733	621	301	605	512	273	561	476	336	561	476
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.15	0.39	0.39	0.08	0.32	0.32	0.30	0.30	0.30	0.30	0.30	0.30
Unsig. Movement Delay												
Ln Grp Delay, s/veh	16.6	34.3	11.4	13.8	25.1	14.5	20.9	18.6	16.1	21.2	19.7	24.0
Ln Grp LOS	B	C	B	B	C	B	C	B	B	C	B	C
Approach Vol, veh/h		973			516			313			614	
Approach Delay, s/veh		28.6			23.4			18.2			21.9	
Approach LOS		C			C			B			C	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Case No		5.0	1.1	3.0		5.0	1.1	3.0
Phs Duration (G+Y+Rc), s		22.5	9.5	28.0		22.5	13.6	23.9
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5
Max Green (Gmax), s		18.0	5.0	23.5		18.0	9.1	19.4
Max Allow Headway (MAH), s		4.9	3.8	5.1		4.5	3.8	5.0
Max Q Clear (g_c+I1), s		10.1	2.8	22.1		11.6	8.0	14.3
Green Ext Time (g_e), s		0.9	0.0	0.6		1.6	0.1	1.2
Prob of Phs Call (p_c)		1.00	1.00	1.00		1.00	1.00	1.00
Prob of Max Out (p_x)		0.00	0.00	0.00		0.00	0.00	0.00
Left-Turn Movement Data								
Assigned Mvmt		5	3			1	7	
Mvmt Sat Flow, veh/h		811	1688			1032	1688	
Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		1870		1870		1870		1870
Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1585		1585		1585		1585
Left Lane Group Data								
Assigned Mvmt	0	5	3	0	0	1	7	0
Lane Assignment			LL (Pr/Pm)				LL (Pr/Pm)	

Lanes in Grp	0	1	1	0	0	1	1	0
Grp Vol (v), veh/h	0	23	35	0	0	62	282	0
Grp Sat Flow (s), veh/h/ln	0	811	1688	0	0	1032	1688	0
Q Serve Time (g_s), s	0.0	1.4	0.8	0.0	0.0	3.0	6.0	0.0
Cycle Q Clear Time (g_c), s	0.0	8.1	0.8	0.0	0.0	8.5	6.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	811	713	0	0	1032	866	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	18.0	19.4	0.0	0.0	18.0	21.0	0.0
Perm LT Serve Time (g_u), s	0.0	11.3	3.4	0.0	0.0	12.5	7.1	0.0
Perm LT Q Serve Time (g_ps), s	0.0	1.4	0.8	0.0	0.0	3.0	6.7	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	1.00	1.00	0.00	0.00	1.00	1.00	0.00
Lane Grp Cap (c), veh/h	0	273	301	0	0	336	478	0
V/C Ratio (X)	0.00	0.08	0.12	0.00	0.00	0.18	0.59	0.00
Avail Cap (c_a), veh/h	0	273	301	0	0	336	478	0
Upstream Filter (I)	0.00	1.00	1.00	0.00	0.00	1.00	1.00	0.00
Uniform Delay (d1), s/veh	0.0	20.3	13.0	0.0	0.0	20.0	11.3	0.0
Incr Delay (d2), s/veh	0.0	0.6	0.8	0.0	0.0	1.2	5.3	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	20.9	13.8	0.0	0.0	21.2	16.6	0.0
1st-Term Q (Q1), veh/ln	0.0	0.2	0.2	0.0	0.0	0.7	1.7	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.1	0.0	0.0	0.1	0.7	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	1.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.3	0.3	0.0	0.0	0.8	2.4	0.0
%ile Storage Ratio (RQ%)	0.00	0.02	0.01	0.00	0.00	0.01	0.08	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	215	0	665	0	257	0	435
Grp Sat Flow (s), veh/h/ln	0	1870	0	1870	0	1870	0	1870
Q Serve Time (g_s), s	0.0	5.5	0.0	20.1	0.0	6.7	0.0	12.3
Cycle Q Clear Time (g_c), s	0.0	5.5	0.0	20.1	0.0	6.7	0.0	12.3
Lane Grp Cap (c), veh/h	0	561	0	733	0	561	0	605
V/C Ratio (X)	0.00	0.38	0.00	0.91	0.00	0.46	0.00	0.72
Avail Cap (c_a), veh/h	0	561	0	733	0	561	0	605
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	16.6	0.0	17.2	0.0	17.0	0.0	17.9
Incr Delay (d2), s/veh	0.0	2.0	0.0	17.1	0.0	2.7	0.0	7.2
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	18.6	0.0	34.3	0.0	19.7	0.0	25.1
1st-Term Q (Q1), veh/ln	0.0	2.1	0.0	7.2	0.0	2.5	0.0	4.6
2nd-Term Q (Q2), veh/ln	0.0	0.3	0.0	3.5	0.0	0.4	0.0	1.2

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	2.4	0.0	10.7	0.0	3.0	0.0	5.8
%ile Storage Ratio (RQ%)	0.00	0.17	0.00	0.36	0.00	0.04	0.00	0.16
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		R		R		R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	75	0	26	0	295	0	46
Grp Sat Flow (s), veh/h/ln	0	1585	0	1585	0	1585	0	1585
Q Serve Time (g_s), s	0.0	2.1	0.0	0.6	0.0	9.6	0.0	1.2
Cycle Q Clear Time (g_c), s	0.0	2.1	0.0	0.6	0.0	9.6	0.0	1.2
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Lane Grp Cap (c), veh/h	0	476	0	621	0	476	0	512
V/C Ratio (X)	0.00	0.16	0.00	0.04	0.00	0.62	0.00	0.09
Avail Cap (c_a), veh/h	0	476	0	621	0	476	0	512
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	15.4	0.0	11.3	0.0	18.1	0.0	14.1
Incr Delay (d2), s/veh	0.0	0.7	0.0	0.1	0.0	6.0	0.0	0.3
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	16.1	0.0	11.4	0.0	24.0	0.0	14.5
1st-Term Q (Q1), veh/ln	0.0	0.7	0.0	0.2	0.0	3.1	0.0	0.4
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.0	0.0	0.8	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.8	0.0	0.2	0.0	3.9	0.0	0.4
%ile Storage Ratio (RQ%)	0.00	0.05	0.00	0.01	0.00	0.05	0.00	0.01
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Intersection Summary								
HCM 6th Ctrl Delay		24.4						
HCM 6th LOS		C						

Intersection	
Int Delay, s/veh	0.4

Movement	SET	SER	NWL	NWT	NEL	NER
Lane Configurations						
Traffic Vol, veh/h	585	16	11	521	12	4
Future Vol, veh/h	585	16	11	521	12	4
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	616	17	12	548	13	4

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	633	0	1197	625
Stage 1	-	-	-	-	625	-
Stage 2	-	-	-	-	572	-
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	-	-	950	-	205	485
Stage 1	-	-	-	-	534	-
Stage 2	-	-	-	-	565	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	950	-	201	485
Mov Cap-2 Maneuver	-	-	-	-	201	-
Stage 1	-	-	-	-	524	-
Stage 2	-	-	-	-	565	-

Approach	SE	NW	NE
HCM Control Delay, s	0	0.2	21.5
HCM LOS			C

Minor Lane/Major Mvmt	NELn1	NWL	NWT	SET	SER
Capacity (veh/h)	235	950	-	-	-
HCM Lane V/C Ratio	0.072	0.012	-	-	-
HCM Control Delay (s)	21.5	8.8	0	-	-
HCM Lane LOS	C	A	A	-	-
HCM 95th %tile Q(veh)	0.2	0	-	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	21	204	32	157	704	48	127	405	92	70	269	93
Future Volume (veh/h)	21	204	32	157	704	48	127	405	92	70	269	93
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1772	1870	1870	1772	1870	1870	1772	1870	1870	1772	1870	1870
Adj Flow Rate, veh/h	22	215	34	165	741	51	134	426	97	74	283	98
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	94	917	143	313	1443	99	178	694	157	128	395	335
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.06	0.30	0.30	0.19	0.43	0.43	0.11	0.24	0.24	0.08	0.21	0.21
Unsig. Movement Delay												
Ln Grp Delay, s/veh	46.5	24.9	24.9	39.3	21.4	21.3	64.2	36.7	37.1	58.1	43.6	32.1
Ln Grp LOS	D	C	C	D	C	C	E	D	D	E	D	C
Approach Vol, veh/h		271			957			657			455	
Approach Delay, s/veh		26.6			24.4			42.5			43.5	
Approach LOS		C			C			D			D	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Case No	2.0	4.0	2.0	4.0	2.0	3.0	2.0	4.0
Phs Duration (G+Y+Rc), s	11.3	26.2	21.2	31.3	14.0	23.5	9.5	43.0
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green (Gmax), s	6.8	21.7	16.7	26.8	9.5	19.0	5.0	38.5
Max Allow Headway (MAH), s	3.8	5.2	3.8	5.2	3.8	4.8	3.8	5.1
Max Q Clear (g_c+l1), s	5.8	14.0	9.9	6.8	8.9	14.7	3.1	16.5
Green Ext Time (g_e), s	0.0	1.9	0.2	1.3	0.0	0.8	0.0	4.9
Prob of Phs Call (p_c)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prob of Max Out (p_x)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Left-Turn Movement Data								
Assigned Mvmt	1		3		5		7	
Mvmt Sat Flow, veh/h	1688		1688		1688		1688	
Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		2880		3081		1870		3373
Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		650		480		1585		232
Left Lane Group Data								
Assigned Mvmt	1	0	3	0	5	0	7	0
Lane Assignment	L (Prot)		L (Prot)		L (Prot)		L (Prot)	

Lanes in Grp	1	0	1	0	1	0	1	0
Grp Vol (v), veh/h	74	0	165	0	134	0	22	0
Grp Sat Flow (s), veh/h/ln	1688	0	1688	0	1688	0	1688	0
Q Serve Time (g_s), s	3.8	0.0	7.9	0.0	6.9	0.0	1.1	0.0
Cycle Q Clear Time (g_c), s	3.8	0.0	7.9	0.0	6.9	0.0	1.1	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	128	0	313	0	178	0	94	0
V/C Ratio (X)	0.58	0.00	0.53	0.00	0.75	0.00	0.23	0.00
Avail Cap (c_a), veh/h	128	0	313	0	178	0	94	0
Upstream Filter (I)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Uniform Delay (d1), s/veh	40.2	0.0	33.1	0.0	39.1	0.0	40.7	0.0
Incr Delay (d2), s/veh	17.8	0.0	6.2	0.0	25.1	0.0	5.8	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	58.1	0.0	39.3	0.0	64.2	0.0	46.5	0.0
1st-Term Q (Q1), veh/ln	1.5	0.0	3.2	0.0	2.8	0.0	0.5	0.0
2nd-Term Q (Q2), veh/ln	0.6	0.0	0.5	0.0	1.2	0.0	0.2	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
%ile Back of Q (50%), veh/ln	2.2	0.0	3.7	0.0	4.0	0.0	0.6	0.0
%ile Storage Ratio (RQ%)	0.42	0.00	0.09	0.00	0.67	0.00	0.02	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	261	0	123	0	283	0	390
Grp Sat Flow (s), veh/h/ln	0	1777	0	1777	0	1870	0	1777
Q Serve Time (g_s), s	0.0	11.8	0.0	4.7	0.0	12.7	0.0	14.5
Cycle Q Clear Time (g_c), s	0.0	11.8	0.0	4.7	0.0	12.7	0.0	14.5
Lane Grp Cap (c), veh/h	0	428	0	529	0	395	0	760
V/C Ratio (X)	0.00	0.61	0.00	0.23	0.00	0.72	0.00	0.51
Avail Cap (c_a), veh/h	0	428	0	529	0	395	0	760
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	30.4	0.0	23.8	0.0	33.0	0.0	18.9
Incr Delay (d2), s/veh	0.0	6.4	0.0	1.0	0.0	10.6	0.0	2.5
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	36.7	0.0	24.9	0.0	43.6	0.0	21.4
1st-Term Q (Q1), veh/ln	0.0	4.9	0.0	1.9	0.0	5.5	0.0	5.6
2nd-Term Q (Q2), veh/ln	0.0	0.8	0.0	0.2	0.0	1.2	0.0	0.5

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	5.6	0.0	2.1	0.0	6.7	0.0	6.1
%ile Storage Ratio (RQ%)	0.00	0.93	0.00	0.06	0.00	1.30	0.00	0.15
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		T+R		T+R		R		T+R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	262	0	126	0	98	0	402
Grp Sat Flow (s), veh/h/ln	0	1753	0	1784	0	1585	0	1829
Q Serve Time (g_s), s	0.0	12.0	0.0	4.8	0.0	4.7	0.0	14.5
Cycle Q Clear Time (g_c), s	0.0	12.0	0.0	4.8	0.0	4.7	0.0	14.5
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.37	0.00	0.27	0.00	1.00	0.00	0.13
Lane Grp Cap (c), veh/h	0	423	0	531	0	335	0	782
V/C Ratio (X)	0.00	0.62	0.00	0.24	0.00	0.29	0.00	0.51
Avail Cap (c_a), veh/h	0	423	0	531	0	335	0	782
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	30.5	0.0	23.9	0.0	29.9	0.0	18.9
Incr Delay (d2), s/veh	0.0	6.6	0.0	1.1	0.0	2.2	0.0	2.4
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	37.1	0.0	24.9	0.0	32.1	0.0	21.3
1st-Term Q (Q1), veh/ln	0.0	4.9	0.0	2.0	0.0	1.7	0.0	5.8
2nd-Term Q (Q2), veh/ln	0.0	0.8	0.0	0.2	0.0	0.2	0.0	0.5
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	5.7	0.0	2.1	0.0	1.9	0.0	6.3
%ile Storage Ratio (RQ%)	0.00	0.94	0.00	0.07	0.00	0.38	0.00	0.16
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	33.5
HCM 6th LOS	C

Intersection												
Int Delay, s/veh	0.7											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Vol, veh/h	6	4	0	5	16	5	0	598	3	1	463	6
Future Vol, veh/h	6	4	0	5	16	5	0	598	3	1	463	6
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	-9	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	6	4	0	5	17	5	0	629	3	1	487	6

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	815	1124	490	1125	1126	316	493	0	0	632	0	0
Stage 1	492	492	-	631	631	-	-	-	-	-	-	-
Stage 2	323	632	-	494	495	-	-	-	-	-	-	-
Critical Hdwy	7.33	6.53	6.23	7.33	6.53	6.93	4.13	-	-	4.13	-	-
Critical Hdwy Stg 1	6.13	5.53	-	6.53	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.53	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.519	4.019	3.319	3.519	4.019	3.319	2.219	-	-	2.219	-	-
Pot Cap-1 Maneuver	282	205	577	171	204	681	1069	-	-	949	-	-
Stage 1	558	547	-	436	473	-	-	-	-	-	-	-
Stage 2	664	473	-	556	545	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	262	205	577	168	204	681	1069	-	-	949	-	-
Mov Cap-2 Maneuver	262	205	-	168	204	-	-	-	-	-	-	-
Stage 1	558	546	-	436	473	-	-	-	-	-	-	-
Stage 2	635	473	-	551	544	-	-	-	-	-	-	-

Approach	EB	WB	NE	SW
HCM Control Delay, s	21	23.2	0	0
HCM LOS	C	C		

Minor Lane/Major Mvmt	NEL	NET	NER	EBLn1	WBLn1	SWL	SWT	SWR
Capacity (veh/h)	1069	-	-	236	225	949	-	-
HCM Lane V/C Ratio	-	-	-	0.045	0.122	0.001	-	-
HCM Control Delay (s)	0	-	-	21	23.2	8.8	0	-
HCM Lane LOS	A	-	-	C	C	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.4	0	-	-

Intersection	
Intersection Delay, s/veh	17.5
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	21	81	11	139	90	135	21	441	30	57	407	11
Future Vol, veh/h	21	81	11	139	90	135	21	441	30	57	407	11
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	22	85	12	146	95	142	22	464	32	60	428	12
Number of Lanes	0	1	1	0	1	1	0	2	0	0	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	2	2
HCM Control Delay	13.9	17.3	18	18.1
HCM LOS	B	C	C	C

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	9%	0%	21%	0%	61%	0%	22%	0%
Vol Thru, %	91%	88%	79%	0%	39%	0%	78%	95%
Vol Right, %	0%	12%	0%	100%	0%	100%	0%	5%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	242	251	102	11	229	135	261	215
LT Vol	21	0	21	0	139	0	57	0
Through Vol	221	221	81	0	90	0	204	204
RT Vol	0	30	0	11	0	135	0	11
Lane Flow Rate	254	264	107	12	241	142	274	226
Geometry Grp	7	7	7	7	7	7	7	7
Degree of Util (X)	0.522	0.532	0.256	0.025	0.542	0.279	0.569	0.459
Departure Headway (Hd)	7.389	7.259	8.567	7.735	8.089	7.057	7.475	7.326
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	488	496	419	462	446	509	483	490
Service Time	5.144	5.014	6.332	5.499	5.841	4.809	5.232	5.083
HCM Lane V/C Ratio	0.52	0.532	0.255	0.026	0.54	0.279	0.567	0.461
HCM Control Delay	18	18	14.3	10.7	20.1	12.5	19.7	16.2
HCM Lane LOS	C	C	B	B	C	B	C	C
HCM 95th-tile Q	3	3.1	1	0.1	3.2	1.1	3.5	2.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	133	297	8	30	804	40	22	312	55	33	178	352
Future Volume (veh/h)	133	297	8	30	804	40	22	312	55	33	178	352
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1772	1870	1870	1772	1870	1870	1772	1870	1870	1772	1870	1870
Adj Flow Rate, veh/h	140	313	8	32	846	42	23	328	58	35	187	371
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	278	982	832	626	970	822	219	456	386	168	456	386
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.07	0.52	0.52	0.06	0.52	0.52	0.24	0.24	0.24	0.24	0.24	0.24
Unsig. Movement Delay												
Ln Grp Delay, s/veh	22.1	11.7	9.1	7.6	27.6	9.6	30.0	37.2	24.6	37.7	28.1	66.7
Ln Grp LOS	C	B	A	A	C	A	C	D	C	D	C	E
Approach Vol, veh/h		461			920			409			593	
Approach Delay, s/veh		14.8			26.1			35.0			52.8	
Approach LOS		B			C			C			D	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Case No		5.0	1.1	3.0		5.0	1.1	3.0
Phs Duration (G+Y+Rc), s		24.0	9.5	46.5		24.0	10.0	46.0
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5
Max Green (Gmax), s		19.5	5.0	42.0		19.5	5.5	41.5
Max Allow Headway (MAH), s		5.0	3.8	5.1		4.4	3.8	5.1
Max Q Clear (g_c+I1), s		14.9	2.6	9.6		20.5	5.0	33.8
Green Ext Time (g_e), s		0.9	0.0	1.9		0.0	0.0	3.6
Prob of Phs Call (p_c)		1.00	1.00	1.00		1.00	1.00	1.00
Prob of Max Out (p_x)		0.00	0.00	0.00		0.00	0.00	0.00
Left-Turn Movement Data								
Assigned Mvmt		5	3			1	7	
Mvmt Sat Flow, veh/h		806	1688			945	1688	
Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		1870		1870		1870		1870
Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1585		1585		1585		1585
Left Lane Group Data								
Assigned Mvmt	0	5	3	0	0	1	7	0
Lane Assignment			LL (Pr/Pm)				LL (Pr/Pm)	

Lanes in Grp	0	1	1	0	0	1	1	0
Grp Vol (v), veh/h	0	23	32	0	0	35	140	0
Grp Sat Flow (s), veh/h/ln	0	806	1688	0	0	945	1688	0
Q Serve Time (g_s), s	0.0	2.0	0.6	0.0	0.0	2.8	3.0	0.0
Cycle Q Clear Time (g_c), s	0.0	8.7	0.6	0.0	0.0	15.7	3.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	806	1003	0	0	945	593	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	19.5	41.5	0.0	0.0	19.5	41.5	0.0
Perm LT Serve Time (g_u), s	0.0	12.8	34.4	0.0	0.0	6.6	9.7	0.0
Perm LT Q Serve Time (g_ps), s	0.0	2.0	0.2	0.0	0.0	2.8	9.7	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	1.00	1.00	0.00	0.00	1.00	1.00	0.00
Lane Grp Cap (c), veh/h	0	219	626	0	0	168	278	0
V/C Ratio (X)	0.00	0.11	0.05	0.00	0.00	0.21	0.50	0.00
Avail Cap (c_a), veh/h	0	219	626	0	0	168	278	0
Upstream Filter (I)	0.00	1.00	1.00	0.00	0.00	1.00	1.00	0.00
Uniform Delay (d1), s/veh	0.0	29.1	7.5	0.0	0.0	34.9	15.7	0.0
Incr Delay (d2), s/veh	0.0	1.0	0.2	0.0	0.0	2.8	6.4	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	30.0	7.6	0.0	0.0	37.7	22.1	0.0
1st-Term Q (Q1), veh/ln	0.0	0.4	0.2	0.0	0.0	0.6	1.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.0	0.0	0.1	0.5	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	1.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.4	0.2	0.0	0.0	0.8	1.5	0.0
%ile Storage Ratio (RQ%)	0.00	0.03	0.01	0.00	0.00	0.01	0.05	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	328	0	313	0	187	0	846
Grp Sat Flow (s), veh/h/ln	0	1870	0	1870	0	1870	0	1870
Q Serve Time (g_s), s	0.0	12.9	0.0	7.6	0.0	6.7	0.0	31.8
Cycle Q Clear Time (g_c), s	0.0	12.9	0.0	7.6	0.0	6.7	0.0	31.8
Lane Grp Cap (c), veh/h	0	456	0	982	0	456	0	970
V/C Ratio (X)	0.00	0.72	0.00	0.32	0.00	0.41	0.00	0.87
Avail Cap (c_a), veh/h	0	456	0	982	0	456	0	970
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	27.7	0.0	10.8	0.0	25.4	0.0	16.9
Incr Delay (d2), s/veh	0.0	9.4	0.0	0.9	0.0	2.7	0.0	10.7
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	37.2	0.0	11.7	0.0	28.1	0.0	27.6
1st-Term Q (Q1), veh/ln	0.0	5.4	0.0	2.8	0.0	2.8	0.0	11.7
2nd-Term Q (Q2), veh/ln	0.0	1.2	0.0	0.2	0.0	0.3	0.0	2.9

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	6.6	0.0	3.0	0.0	3.2	0.0	14.6
%ile Storage Ratio (RQ%)	0.00	0.46	0.00	0.10	0.00	0.04	0.00	0.41
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		R		R		R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	58	0	8	0	371	0	42
Grp Sat Flow (s), veh/h/ln	0	1585	0	1585	0	1585	0	1585
Q Serve Time (g_s), s	0.0	2.3	0.0	0.2	0.0	18.5	0.0	1.0
Cycle Q Clear Time (g_c), s	0.0	2.3	0.0	0.2	0.0	18.5	0.0	1.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Lane Grp Cap (c), veh/h	0	386	0	832	0	386	0	822
V/C Ratio (X)	0.00	0.15	0.00	0.01	0.00	0.96	0.00	0.05
Avail Cap (c_a), veh/h	0	386	0	832	0	386	0	822
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	23.7	0.0	9.1	0.0	29.9	0.0	9.5
Incr Delay (d2), s/veh	0.0	0.8	0.0	0.0	0.0	36.8	0.0	0.1
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	24.6	0.0	9.1	0.0	66.7	0.0	9.6
1st-Term Q (Q1), veh/ln	0.0	0.8	0.0	0.1	0.0	6.6	0.0	0.3
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.0	0.0	4.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.9	0.0	0.1	0.0	10.6	0.0	0.4
%ile Storage Ratio (RQ%)	0.00	0.06	0.00	0.00	0.00	0.14	0.00	0.01
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Intersection Summary								
HCM 6th Ctrl Delay		32.1						
HCM 6th LOS		C						

Intersection	
Int Delay, s/veh	0.5

Movement	SET	SER	NWL	NWT	NEL	NER
Lane Configurations						
Traffic Vol, veh/h	455	2	6	607	14	10
Future Vol, veh/h	455	2	6	607	14	10
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	479	2	6	639	15	11

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	481	0	1131	480
Stage 1	-	-	-	-	480	-
Stage 2	-	-	-	-	651	-
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	-	-	1082	-	225	586
Stage 1	-	-	-	-	622	-
Stage 2	-	-	-	-	519	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1082	-	223	586
Mov Cap-2 Maneuver	-	-	-	-	223	-
Stage 1	-	-	-	-	616	-
Stage 2	-	-	-	-	519	-

Approach	SE	NW	NE
HCM Control Delay, s	0	0.1	18.1
HCM LOS			C

Minor Lane/Major Mvmt	NELn1	NWL	NWT	SET	SER
Capacity (veh/h)	301	1082	-	-	-
HCM Lane V/C Ratio	0.084	0.006	-	-	-
HCM Control Delay (s)	18.1	8.3	0	-	-
HCM Lane LOS	C	A	A	-	-
HCM 95th %tile Q(veh)	0.3	0	-	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	74	552	48	124	290	41	37	359	131	78	426	40
Future Volume (veh/h)	74	552	48	124	290	41	37	359	131	78	426	40
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1772	1870	1870	1772	1870	1870	1772	1870	1870	1772	1870	1870
Adj Flow Rate, veh/h	78	581	51	131	305	43	39	378	138	82	448	42
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	188	1157	101	159	1044	146	94	702	253	137	561	476
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.11	0.35	0.35	0.09	0.33	0.33	0.06	0.27	0.27	0.08	0.30	0.30
Unsig. Movement Delay												
Ln Grp Delay, s/veh	43.9	25.9	25.9	76.0	23.4	23.4	54.1	31.9	32.4	57.8	40.3	23.0
Ln Grp LOS	D	C	C	E	C	C	D	C	C	E	D	C
Approach Vol, veh/h		710			479			555			572	
Approach Delay, s/veh		27.9			37.8			33.7			41.5	
Approach LOS		C			D			C			D	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Case No	2.0	4.0	2.0	4.0	2.0	3.0	2.0	4.0
Phs Duration (G+Y+Rc), s	11.8	29.2	13.0	36.0	9.5	31.5	14.5	34.5
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green (Gmax), s	7.3	24.7	8.5	31.5	5.0	27.0	10.0	30.0
Max Allow Headway (MAH), s	3.8	5.2	3.8	5.1	3.8	5.0	3.8	5.2
Max Q Clear (g_c+I1), s	6.2	13.5	8.9	14.5	4.0	21.8	5.9	8.5
Green Ext Time (g_e), s	0.0	2.3	0.0	3.5	0.0	1.3	0.0	1.9
Prob of Phs Call (p_c)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prob of Max Out (p_x)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Left-Turn Movement Data								
Assigned Mvmt	1		3		5		7	
Mvmt Sat Flow, veh/h	1688		1688		1688		1688	

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		2560		3305		1870		3131

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		922		290		1585		437

Left Lane Group Data								
Assigned Mvmt	1	0	3	0	5	0	7	0
Lane Assignment	L (Prot)		L (Prot)		L (Prot)		L (Prot)	

Lanes in Grp	1	0	1	0	1	0	1	0
Grp Vol (v), veh/h	82	0	131	0	39	0	78	0
Grp Sat Flow (s), veh/h/ln	1688	0	1688	0	1688	0	1688	0
Q Serve Time (g_s), s	4.2	0.0	6.9	0.0	2.0	0.0	3.9	0.0
Cycle Q Clear Time (g_c), s	4.2	0.0	6.9	0.0	2.0	0.0	3.9	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	137	0	159	0	94	0	188	0
V/C Ratio (X)	0.60	0.00	0.82	0.00	0.42	0.00	0.42	0.00
Avail Cap (c_a), veh/h	137	0	159	0	94	0	188	0
Upstream Filter (I)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Uniform Delay (d1), s/veh	39.9	0.0	40.0	0.0	41.1	0.0	37.3	0.0
Incr Delay (d2), s/veh	17.9	0.0	36.0	0.0	13.0	0.0	6.7	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	57.8	0.0	76.0	0.0	54.1	0.0	43.9	0.0
1st-Term Q (Q1), veh/ln	1.7	0.0	2.8	0.0	0.8	0.0	1.6	0.0
2nd-Term Q (Q2), veh/ln	0.7	0.0	1.6	0.0	0.3	0.0	0.3	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
%ile Back of Q (50%), veh/ln	2.4	0.0	4.4	0.0	1.2	0.0	1.9	0.0
%ile Storage Ratio (RQ%)	0.46	0.00	0.11	0.00	0.19	0.00	0.06	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	261	0	312	0	448	0	172
Grp Sat Flow (s), veh/h/ln	0	1777	0	1777	0	1870	0	1777
Q Serve Time (g_s), s	0.0	11.2	0.0	12.5	0.0	19.8	0.0	6.4
Cycle Q Clear Time (g_c), s	0.0	11.2	0.0	12.5	0.0	19.8	0.0	6.4
Lane Grp Cap (c), veh/h	0	488	0	622	0	561	0	592
V/C Ratio (X)	0.00	0.53	0.00	0.50	0.00	0.80	0.00	0.29
Avail Cap (c_a), veh/h	0	488	0	622	0	561	0	592
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	27.8	0.0	23.1	0.0	29.0	0.0	22.1
Incr Delay (d2), s/veh	0.0	4.2	0.0	2.9	0.0	11.3	0.0	1.2
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	31.9	0.0	25.9	0.0	40.3	0.0	23.4
1st-Term Q (Q1), veh/ln	0.0	4.6	0.0	5.0	0.0	8.5	0.0	2.6
2nd-Term Q (Q2), veh/ln	0.0	0.6	0.0	0.5	0.0	1.8	0.0	0.2

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	5.2	0.0	5.5	0.0	10.2	0.0	2.8
%ile Storage Ratio (RQ%)	0.00	0.86	0.00	0.17	0.00	1.98	0.00	0.07
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		T+R		T+R		R		T+R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	255	0	320	0	42	0	176
Grp Sat Flow (s), veh/h/ln	0	1704	0	1818	0	1585	0	1792
Q Serve Time (g_s), s	0.0	11.5	0.0	12.5	0.0	1.7	0.0	6.5
Cycle Q Clear Time (g_c), s	0.0	11.5	0.0	12.5	0.0	1.7	0.0	6.5
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.54	0.00	0.16	0.00	1.00	0.00	0.24
Lane Grp Cap (c), veh/h	0	468	0	636	0	476	0	597
V/C Ratio (X)	0.00	0.55	0.00	0.50	0.00	0.09	0.00	0.30
Avail Cap (c_a), veh/h	0	468	0	636	0	476	0	597
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	27.9	0.0	23.1	0.0	22.7	0.0	22.2
Incr Delay (d2), s/veh	0.0	4.5	0.0	2.8	0.0	0.4	0.0	1.3
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	32.4	0.0	25.9	0.0	23.0	0.0	23.4
1st-Term Q (Q1), veh/ln	0.0	4.5	0.0	5.1	0.0	0.6	0.0	2.6
2nd-Term Q (Q2), veh/ln	0.0	0.6	0.0	0.5	0.0	0.0	0.0	0.2
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	5.1	0.0	5.6	0.0	0.7	0.0	2.9
%ile Storage Ratio (RQ%)	0.00	0.85	0.00	0.17	0.00	0.13	0.00	0.07
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	34.7
HCM 6th LOS	C

Intersection	
Int Delay, s/veh	0.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Vol, veh/h	14	12	0	7	5	4	1	521	7	5	579	8
Future Vol, veh/h	14	12	0	7	5	4	1	521	7	5	579	8
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	-9	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	15	13	0	7	5	4	1	548	7	5	609	8

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	902	1180	613	1184	1181	278	617	0	0	555	0	0
Stage 1	623	623	-	554	554	-	-	-	-	-	-	-
Stage 2	279	557	-	630	627	-	-	-	-	-	-	-
Critical Hdwy	7.33	6.53	6.23	7.33	6.53	6.93	4.13	-	-	4.13	-	-
Critical Hdwy Stg 1	6.13	5.53	-	6.53	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.53	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.519	4.019	3.319	3.519	4.019	3.319	2.219	-	-	2.219	-	-
Pot Cap-1 Maneuver	245	190	492	155	189	720	961	-	-	1013	-	-
Stage 1	473	477	-	485	513	-	-	-	-	-	-	-
Stage 2	705	511	-	469	475	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	236	188	492	146	187	720	961	-	-	1013	-	-
Mov Cap-2 Maneuver	236	188	-	146	187	-	-	-	-	-	-	-
Stage 1	472	473	-	484	512	-	-	-	-	-	-	-
Stage 2	692	510	-	453	471	-	-	-	-	-	-	-

Approach	EB	WB	NE	SW
HCM Control Delay, s	24.6	24.8	0	0.1
HCM LOS	C	C		

Minor Lane/Major Mvmt	NEL	NET	NER	EBLn1	WBLn1	SWL	SWT	SWR
Capacity (veh/h)	961	-	-	211	199	1013	-	-
HCM Lane V/C Ratio	0.001	-	-	0.13	0.085	0.005	-	-
HCM Control Delay (s)	8.8	0	-	24.6	24.8	8.6	0	-
HCM Lane LOS	A	A	-	C	C	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.4	0.3	0	-	-

Intersection	
Intersection Delay, s/veh	19.1
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	31	157	26	62	67	56	16	444	68	70	460	46
Future Vol, veh/h	31	157	26	62	67	56	16	444	68	70	460	46
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	33	165	27	65	71	59	17	467	72	74	484	48
Number of Lanes	0	1	1	0	1	1	0	2	0	0	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	2	2
HCM Control Delay	17.1	14.3	19.3	21.1
HCM LOS	C	B	C	C

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	7%	0%	16%	0%	48%	0%	23%	0%
Vol Thru, %	93%	77%	84%	0%	52%	0%	77%	83%
Vol Right, %	0%	23%	0%	100%	0%	100%	0%	17%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	238	290	188	26	129	56	300	276
LT Vol	16	0	31	0	62	0	70	0
Through Vol	222	222	157	0	67	0	230	230
RT Vol	0	68	0	26	0	56	0	46
Lane Flow Rate	251	305	198	27	136	59	316	291
Geometry Grp	7	7	7	7	7	7	7	7
Degree of Util (X)	0.514	0.609	0.459	0.057	0.325	0.125	0.648	0.577
Departure Headway (Hd)	7.381	7.178	8.342	7.533	8.626	7.653	7.385	7.145
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	489	501	431	474	416	467	489	503
Service Time	5.14	4.937	6.105	5.296	6.394	5.42	5.144	4.905
HCM Lane V/C Ratio	0.513	0.609	0.459	0.057	0.327	0.126	0.646	0.579
HCM Control Delay	17.7	20.6	18	10.8	15.5	11.5	22.8	19.3
HCM Lane LOS	C	C	C	B	C	B	C	C
HCM 95th-tile Q	2.9	4	2.4	0.2	1.4	0.4	4.5	3.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	268	632	25	33	413	44	22	204	71	59	244	280
Future Volume (veh/h)	268	632	25	33	413	44	22	204	71	59	244	280
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1772	1870	1870	1772	1870	1870	1772	1870	1870	1772	1870	1870
Adj Flow Rate, veh/h	282	665	26	35	435	46	23	215	75	62	257	295
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	478	733	621	301	605	512	273	561	476	336	561	476
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.15	0.39	0.39	0.08	0.32	0.32	0.30	0.30	0.30	0.30	0.30	0.30
Unsig. Movement Delay												
Ln Grp Delay, s/veh	16.6	34.3	11.4	13.8	25.1	14.5	20.9	18.6	16.1	21.2	19.7	24.0
Ln Grp LOS	B	C	B	B	C	B	C	B	B	C	B	C
Approach Vol, veh/h		973			516			313			614	
Approach Delay, s/veh		28.6			23.4			18.2			21.9	
Approach LOS		C			C			B			C	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Case No		5.0	1.1	3.0		5.0	1.1	3.0
Phs Duration (G+Y+Rc), s		22.5	9.5	28.0		22.5	13.6	23.9
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5
Max Green (Gmax), s		18.0	5.0	23.5		18.0	9.1	19.4
Max Allow Headway (MAH), s		4.9	3.8	5.1		4.5	3.8	5.0
Max Q Clear (g_c+l1), s		10.1	2.8	22.1		11.6	8.0	14.3
Green Ext Time (g_e), s		0.9	0.0	0.6		1.6	0.1	1.2
Prob of Phs Call (p_c)		1.00	1.00	1.00		1.00	1.00	1.00
Prob of Max Out (p_x)		0.00	0.00	0.00		0.00	0.00	0.00
Left-Turn Movement Data								
Assigned Mvmt		5	3			1	7	
Mvmt Sat Flow, veh/h		811	1688			1032	1688	
Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		1870		1870		1870		1870
Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1585		1585		1585		1585
Left Lane Group Data								
Assigned Mvmt	0	5	3	0	0	1	7	0
Lane Assignment			LL (Pr/Pm)				LL (Pr/Pm)	

Lanes in Grp	0	1	1	0	0	1	1	0
Grp Vol (v), veh/h	0	23	35	0	0	62	282	0
Grp Sat Flow (s), veh/h/ln	0	811	1688	0	0	1032	1688	0
Q Serve Time (g_s), s	0.0	1.4	0.8	0.0	0.0	3.0	6.0	0.0
Cycle Q Clear Time (g_c), s	0.0	8.1	0.8	0.0	0.0	8.5	6.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	811	713	0	0	1032	866	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	18.0	19.4	0.0	0.0	18.0	21.0	0.0
Perm LT Serve Time (g_u), s	0.0	11.3	3.4	0.0	0.0	12.5	7.1	0.0
Perm LT Q Serve Time (g_ps), s	0.0	1.4	0.8	0.0	0.0	3.0	6.7	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	1.00	1.00	0.00	0.00	1.00	1.00	0.00
Lane Grp Cap (c), veh/h	0	273	301	0	0	336	478	0
V/C Ratio (X)	0.00	0.08	0.12	0.00	0.00	0.18	0.59	0.00
Avail Cap (c_a), veh/h	0	273	301	0	0	336	478	0
Upstream Filter (I)	0.00	1.00	1.00	0.00	0.00	1.00	1.00	0.00
Uniform Delay (d1), s/veh	0.0	20.3	13.0	0.0	0.0	20.0	11.3	0.0
Incr Delay (d2), s/veh	0.0	0.6	0.8	0.0	0.0	1.2	5.3	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	20.9	13.8	0.0	0.0	21.2	16.6	0.0
1st-Term Q (Q1), veh/ln	0.0	0.2	0.2	0.0	0.0	0.7	1.7	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.1	0.0	0.0	0.1	0.7	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	1.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.3	0.3	0.0	0.0	0.8	2.4	0.0
%ile Storage Ratio (RQ%)	0.00	0.02	0.01	0.00	0.00	0.01	0.08	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	215	0	665	0	257	0	435
Grp Sat Flow (s), veh/h/ln	0	1870	0	1870	0	1870	0	1870
Q Serve Time (g_s), s	0.0	5.5	0.0	20.1	0.0	6.7	0.0	12.3
Cycle Q Clear Time (g_c), s	0.0	5.5	0.0	20.1	0.0	6.7	0.0	12.3
Lane Grp Cap (c), veh/h	0	561	0	733	0	561	0	605
V/C Ratio (X)	0.00	0.38	0.00	0.91	0.00	0.46	0.00	0.72
Avail Cap (c_a), veh/h	0	561	0	733	0	561	0	605
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	16.6	0.0	17.2	0.0	17.0	0.0	17.9
Incr Delay (d2), s/veh	0.0	2.0	0.0	17.1	0.0	2.7	0.0	7.2
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	18.6	0.0	34.3	0.0	19.7	0.0	25.1
1st-Term Q (Q1), veh/ln	0.0	2.1	0.0	7.2	0.0	2.5	0.0	4.6
2nd-Term Q (Q2), veh/ln	0.0	0.3	0.0	3.5	0.0	0.4	0.0	1.2

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	2.4	0.0	10.7	0.0	3.0	0.0	5.8
%ile Storage Ratio (RQ%)	0.00	0.17	0.00	0.36	0.00	0.04	0.00	0.16
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		R		R		R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	75	0	26	0	295	0	46
Grp Sat Flow (s), veh/h/ln	0	1585	0	1585	0	1585	0	1585
Q Serve Time (g_s), s	0.0	2.1	0.0	0.6	0.0	9.6	0.0	1.2
Cycle Q Clear Time (g_c), s	0.0	2.1	0.0	0.6	0.0	9.6	0.0	1.2
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Lane Grp Cap (c), veh/h	0	476	0	621	0	476	0	512
V/C Ratio (X)	0.00	0.16	0.00	0.04	0.00	0.62	0.00	0.09
Avail Cap (c_a), veh/h	0	476	0	621	0	476	0	512
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	15.4	0.0	11.3	0.0	18.1	0.0	14.1
Incr Delay (d2), s/veh	0.0	0.7	0.0	0.1	0.0	6.0	0.0	0.3
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	16.1	0.0	11.4	0.0	24.0	0.0	14.5
1st-Term Q (Q1), veh/ln	0.0	0.7	0.0	0.2	0.0	3.1	0.0	0.4
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.0	0.0	0.8	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.8	0.0	0.2	0.0	3.9	0.0	0.4
%ile Storage Ratio (RQ%)	0.00	0.05	0.00	0.01	0.00	0.05	0.00	0.01
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	24.4
HCM 6th LOS	C

Intersection	
Int Delay, s/veh	0.4

Movement	SET	SER	NWL	NWT	NEL	NER
Lane Configurations						
Traffic Vol, veh/h	585	16	11	521	12	4
Future Vol, veh/h	585	16	11	521	12	4
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	616	17	12	548	13	4

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	633	0	1197	625
Stage 1	-	-	-	-	625	-
Stage 2	-	-	-	-	572	-
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	-	-	950	-	205	485
Stage 1	-	-	-	-	534	-
Stage 2	-	-	-	-	565	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	950	-	201	485
Mov Cap-2 Maneuver	-	-	-	-	201	-
Stage 1	-	-	-	-	524	-
Stage 2	-	-	-	-	565	-

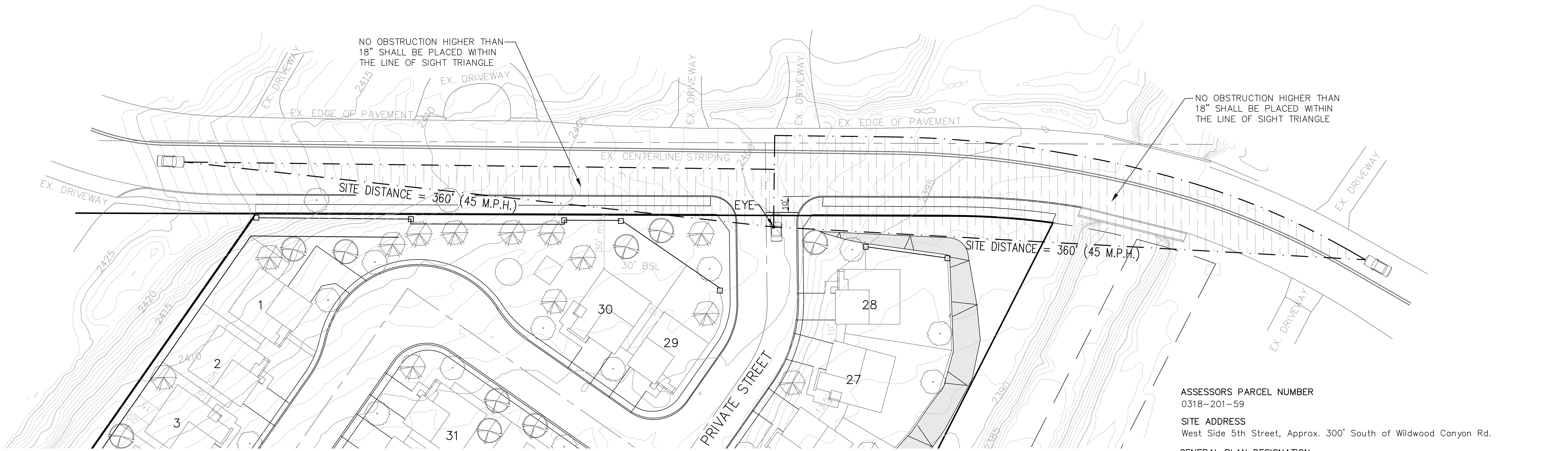
Approach	SE	NW	NE
HCM Control Delay, s	0	0.2	21.5
HCM LOS			C

Minor Lane/Major Mvmt	NELn1	NWL	NWT	SET	SER
Capacity (veh/h)	235	950	-	-	-
HCM Lane V/C Ratio	0.072	0.012	-	-	-
HCM Control Delay (s)	21.5	8.8	0	-	-
HCM Lane LOS	C	A	A	-	-
HCM 95th %tile Q(veh)	0.2	0	-	-	-

CITY OF YUCAIPA, CALIFORNIA

TENTATIVE TACT NO. 20263
STOPPING SIGHT DISTANCE EXHIBIT
INTERSECTION AT 5TH STREET

REPRESENTATIVE	APPLICANT	OWNER
Custom Land Development 34282 Yucaipa Blvd., Suite 205 Yucaipa, CA 92399 (909) 500-7603	RC Hobbs Conmpany, Inc 1428 E. Chapman Ave. Orange, CA 92866	JODA Corp. 17408 Chatsworh St., Suite 110 Granada Hills, CA 91344



5TH STREET

SCALE: 1"=30'

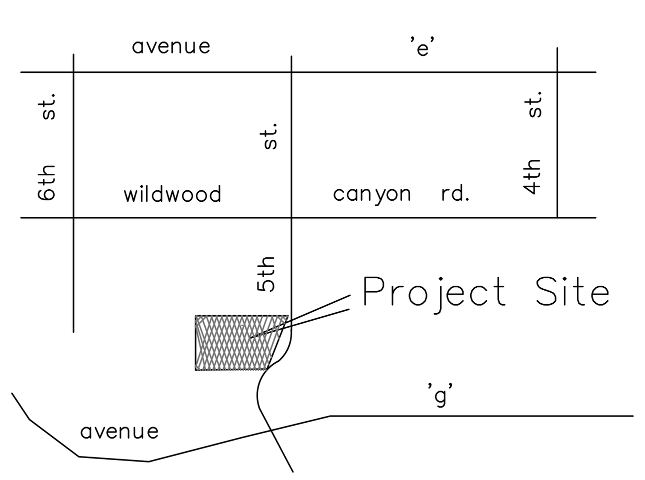
30 0 30 60 90

SIGHT DISTANCE NOTES:

POSTED SPEED: 35 MPH

DESIGN SPEED: 45 MPH

REQUIRED STOPPING SIGHT DISTANCE PER CHAPTER 200 "GEOMETRIC DESIGN AND STRUCTURE STANDARDS" OF THE CALTRANS HIGHWAY DESIGN MANUAL: 360 FEET



Vicinity Map

ASSESSORS PARCEL NUMBER
0318-201-59

SITE ADDRESS
West Side 5th Street, Approx. 300' South of Wildwood Canyon Rd.

GENERAL PLAN DESIGNATION
Existing: RM-72c (multi-family residential-7,200 sf min. lot size)
RL-2.5 (Rural Residential-2.5 ac. min. lot size)
Proposed: RM-72c (multi-family residential-7,200 sf min. lot size)

PROPOSED PROJECT
Amend the General Land Use Map from RL-2.5 to RM-72c on a portion of the site and develop a multi-family residential project consiting of 44, 2 story single family detached units and record a one-lot subdivision for condominium purposes.

STATISTICAL SUMMARY

Lot Area (Gross):	299,693 s.f.	6.88 ac.
Lot Area (Net):	261,170 s.f.	5.99 ac.
Total Dwelling Units:	44	
Gross Density:	6.47 d.u.'s/ac	

CITY OF YUCAIPA
STOPPING SIGHT DISTANCE EXHIBIT
TENTATIVE TACT NO. 20263
5TH STREET
BETWEEN WILDWOOD CANYON RD & AVENUE G

REGISTERED PROFESSIONAL ENGINEER BERNHARD K. MAYER NO. 36866 Exp. 6-30-20 CIVIL STATE OF CALIFORNIA

DESIGNED BY:	DRAWN BY:	CHECKED BY:
J.B.M.	B.A.M.	B.K.M.

PLAN PREPARED UNDER THE SUPERVISION OF:

10/09/19

BERNHARD K. MAYER R.C.E. 36866 DATE

SITETECH INC.
8061 CHURCH ST. HIGHLAND CA 92346 PO BOX 592
PH: (909) 864-3180 FAX: (909) 864-0850

RECOMMENDED FOR APPROVAL BY: ________ DATE: ________

APPROVED BY: ________ DATE: ________
FERMIN G. PRECIADO, CITY ENGINEER

JOB NO. DRAWING NO.

SHEET NO. 1 OF 1

CITY OF YUCAIPA BUILDING AND SAFETY DEPARTMENT

PHASE I CULTURAL RESOURCES ASSESSMENT OF THE 6.8 ACRE CREEKSIDE COLLECTION PROJECT SITE (TTM 20263) LOCATED IMMEDIATELY NORTHWEST OF THE INTERSECTION OF 5th STREET AND THE YUCAIPA CREEK FLOOD CONTROL CHANNEL, CITY OF YUCAIPA, SAN BERNARDINO COUNTY

by

Robert S. White
Archaeological Associates
P.O. Box 180
Sun City, CA, 92586

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archaeological_associates@hotmail.com

for

RC Hobbs Company, Inc.
C/O
Mr. Jeff Kreidel
Premium Land Development
34282 Yucaipa Blvd. Suite 207
Yucaipa, CA 92399

Total Acreage: 6.8
APN 0318-201-59

South ½ of the Northeast ¼ of Section 11, Township 2 South, Range 2 West, SBBM
Yucaipa 7.5' USGS Topographic Quadrangle (1996)

February, 2019

KEYWORDS: Phase I Survey, City of Yucaipa, Yucaipa Creek, San Bernardino County.

CERTIFICATION: I hereby certify that the statements furnished above and in the attached exhibits present the data and information required for this report, and that the facts, statements, and information presented are true and correct to the best of my knowledge and belief.

Robert S. White
Principal Investigator

NATIONAL ARCHAEOLOGICAL DATA BASE INFORMATION

Author:	Robert S. White
Consulting Firm:	Archaeological Associates P.O. Box 180 Sun City, CA 92586 Tel (951) 244-1783 Fax (949) 244-0084 archaeological_associates@hotmail.com
Report Date:	February, 2019
Report Title:	Phase I Cultural Resources Assessment of the 6.8 Acre Creekside Collection Project Site (TTM 20263) Located Immediately Northwest of the Intersection of 5th Street and the Yucaipa Creek Flood Control Channel, City of Yucaipa, San Bernardino County
Prepared for:	RC Hobbs Company, Inc. **C/O** Jeff Kreidel Premium Land Development 34282 Yucaipa Blvd. Suite 207 Yucaipa, CA 92399
USGS Quadrangle:	*Yucaipa* 7.5', California (1996)
Study Area:	6.8 acres total: (APN 0318-201-59) located in the S ½ of the NE ¼ of Section 11, Township 2 South, Range 2 West, SBBM.
Keywords:	Phase I Cultural Resources Assessment, City of Yucaipa, Yucaipa Creek, San Bernardino County, CA **Negative Results**

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MANAGEMENT SUMMARY

At the request of Premium Land Development, and on behalf of RC Hobbs Company, Inc., Archaeological Associates has undertaken a Phase I Cultural Resources Assessment of the 6.8 acre Creekside Collection residential project site as shown on TTM 20263 (APN 0318-201-59). The study area is located at the northwest corner of 5th Street and the Yucaipa Creek flood control channel, City of Yucaipa, San Bernardino County. Presently, project proponents desire to develop the property with single-family residences.

The purpose of this study was to identify all potentially significant cultural resources situated within the boundaries of the study area. This information is needed since adoption of the proposed development plan could result in adverse effects upon locations of archaeological or historical importance. All field notes, background research and photographs are in the possession of Archaeological Associates.

The results of the records search conducted at the South Central Coastal Information Center (SCCIC) at California State University, Fullerton indicated that the property had not been previously surveyed for cultural resources. Additionally, no prehistoric or historic archaeological sites or isolates have been recorded within the boundaries of the study area. The results of the field survey were equally as negative as no prehistoric or historic finds of any kind were made. Consequently, no additional work in conjunction with cultural resources is recommended including monitoring of any future earth-disturbing activities.

In the event that human remains are encountered during the course of any future development, California State Law (*Health and Safety Code Section 7050.5 and Section 5079.98 of the Public Resources Code*) states that no further earth disturbance shall occur at the location of the find until the San Bernardino County Coroner has been notified. If the remains are determined to be prehistoric, the Coroner will notify the Native American Heritage Commission (NAHC), which will determine and notify a Most Likely Descendant (MLD).

I. INTRODUCTION

The following report was written for the RC Hobbs Company, Inc. by Archaeological Associates. It describes the results of a Phase I Cultural Resources Assessment of 6.8 acres of vacant land as shown on Tentative Tract Map 20263. The study area is located in the City of Yucaipa immediately west of 5th Street and north of the Yucaipa Creek flood control channel. Presently, 43 single-family residences and retention basin are planned for the Creekside Collection project.

The purpose of this undertaking was to identify all potentially significant cultural resources situated within the study area. This information is needed since adoption of a future development plan could result in adverse effects upon locations of archaeological or historical importance. Our assessment consisted of: (1) records searches conducted to determine whether any previously recorded historic or prehistoric material is present within the project footprint, (2) archival research, and (3) a field reconnaissance intended to identify any previously unrecorded cultural resources,

The archaeological records search was performed by Robert S. White. The intensive survey of the property was conducted by Robert S. White (Principal Investigator), and Susan Klein (surveyor). The study was conducted in accordance with the California Environmental Quality Act (CEQA), as amended in 2015, which includes criteria for eligibility to the California Register of Historical Resources (CRHR). This report was prepared according to the *Archaeological Resource Management Reports (ARMR): Recommended Contents and Format* contained within the States Preservation Planning Bulletin Number 4(a) (California Department of Parks and Recreation 1989).

II. SETTING

A. Study Area Location

Regionally, the study area is situated on the northwesterly edge of the San Gorgonio Pass in the Yucaipa Valley, San Bernardino County. The core of Yucaipa lies approximately 1-mile to the northeast, Calimesa ½-mile to the south. The Crafton Hills lay 2-miles to the northwest (fig. 1). More specifically, the study area abuts a mobile home park on the west, City of Yucaipa Fire Station No.1 and residential development on the north, 5th Street on the east and a channelized section of Yucaipa Creek on the south. Legally, the subject property lies in the South ½ of the Northeast ¼ of Section 11, Township 2 South, Range 2 West, San Bernardino Base Meridian as shown on a portion of the USGS *Yucaipa* 7.5' Topographic Quadrangle (fig. 2).

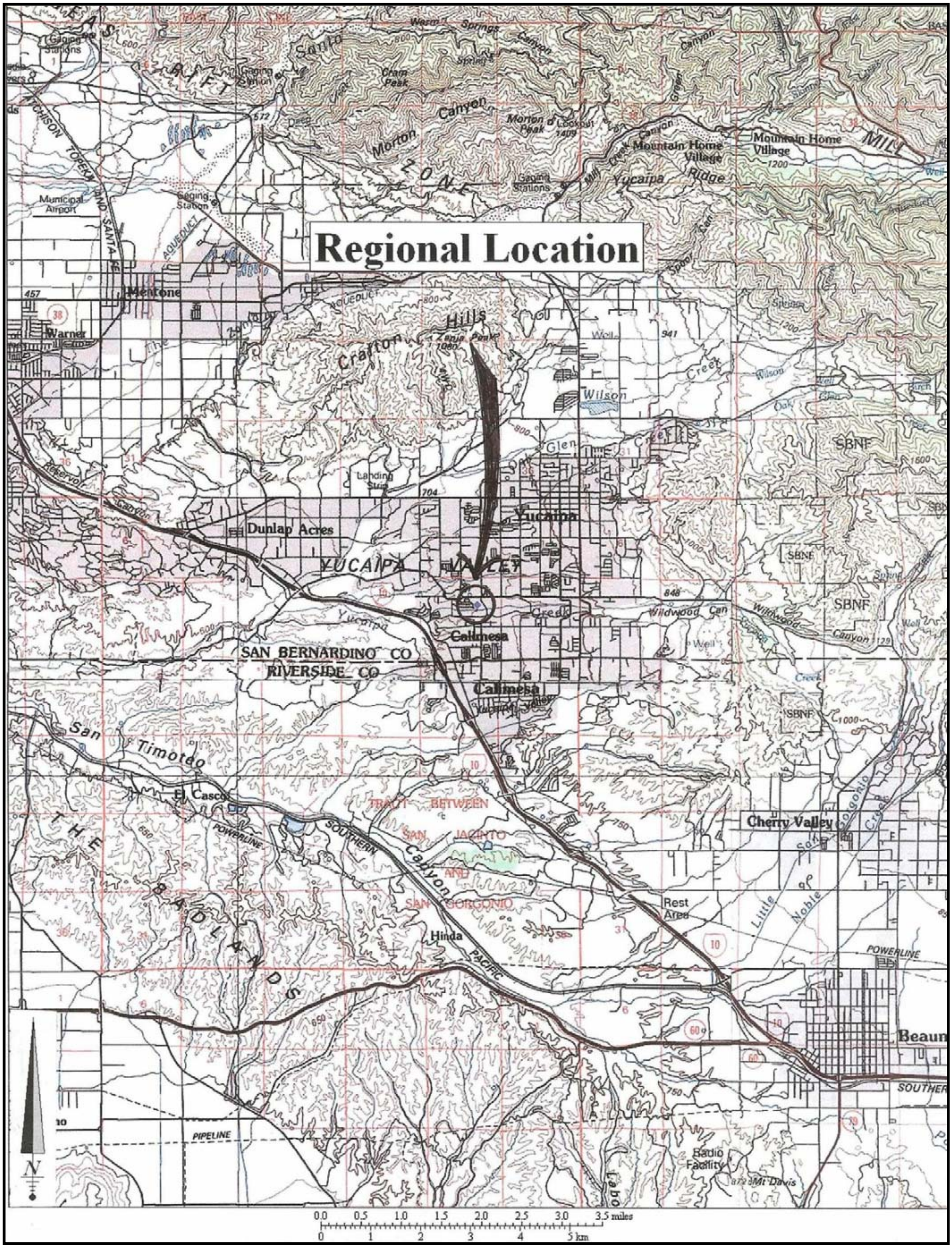

Figure 1. Regional location of the project area as indicated on a portion of the USGS *San Bernardino* 1:100,000 scale Topographic Map (1982).

B. Natural Setting

The San Gorgonio Pass comprises the readily identifiable geographical territory that separates the Coachella Valley from the San Jacinto and Moreno Valleys. Located at the geologic junction of the Transverse Ranges (San Bernardino Mountains) on the north and the Peninsular Ranges (San Jacinto Mountains) on the south, it is one of the regions most distinctive areas. For the most part, the pass comprises an east-west oriented lowland covered by both recent and older alluvial fan deposits mainly derived from the San Bernardino Mountains.

Two, prominent high peaks, Mount San Gorgonio at 11,485-feet and Mount San Jacinto at 10,831-feet tower above the area. Water originating from the San Bernardino Mountains is drained to points west of the pass via the south fork of the Santa Ana River. To points east of the pass, water is conveyed by the San Gorgonio River into the Whitewater River.

The project area is situated in a region of the County where the climate comprises warm summers and cool to cold winters. Topographically, study area comprises a gentle, southerly exposed slope that levels as one nears the Yucaipa Creek flood control channel. Elevations range from a maximum of 2,420 feet above mean sea level in the far northeast property corner to a minimum of approximately 2,378 in the extreme southwest corner. Drainage is generally to the south.

Other than a new cover crop of winter grasses, exotic weeds and forbes, on-site vegetation is sparse due to regular weed abatement. No native sage scrub species were observed. Fauna encountered were limited to ravens, crows, and a lone Redtail hawk. Soils comprise clayey loam that contains small angular stones and occasional cobbles. Sandy loam/gravel containing small, stream rolled pebbles and cobbles can be found along the breadth of the southern property margin.

No bedrock exposures or sources of natural surface water were encountered anywhere within study area. No running or pooled water was present in the adjoining flood control channel at time of the field survey. Disturbance within the parcel is minimal. Areas of disturbance comprise: 1) sanitary sewer easements along the southern and western property boundaries, and 2) the aforementioned sandy loam and gravel that have been spread along the southern project margin. The origin of the material likely stems from a clean-out of the adjoining creek channel and comprises only a thin layer of clean fill. In no way did the nature of the disturbance adversely hinder the performance of the field reconnaissance.

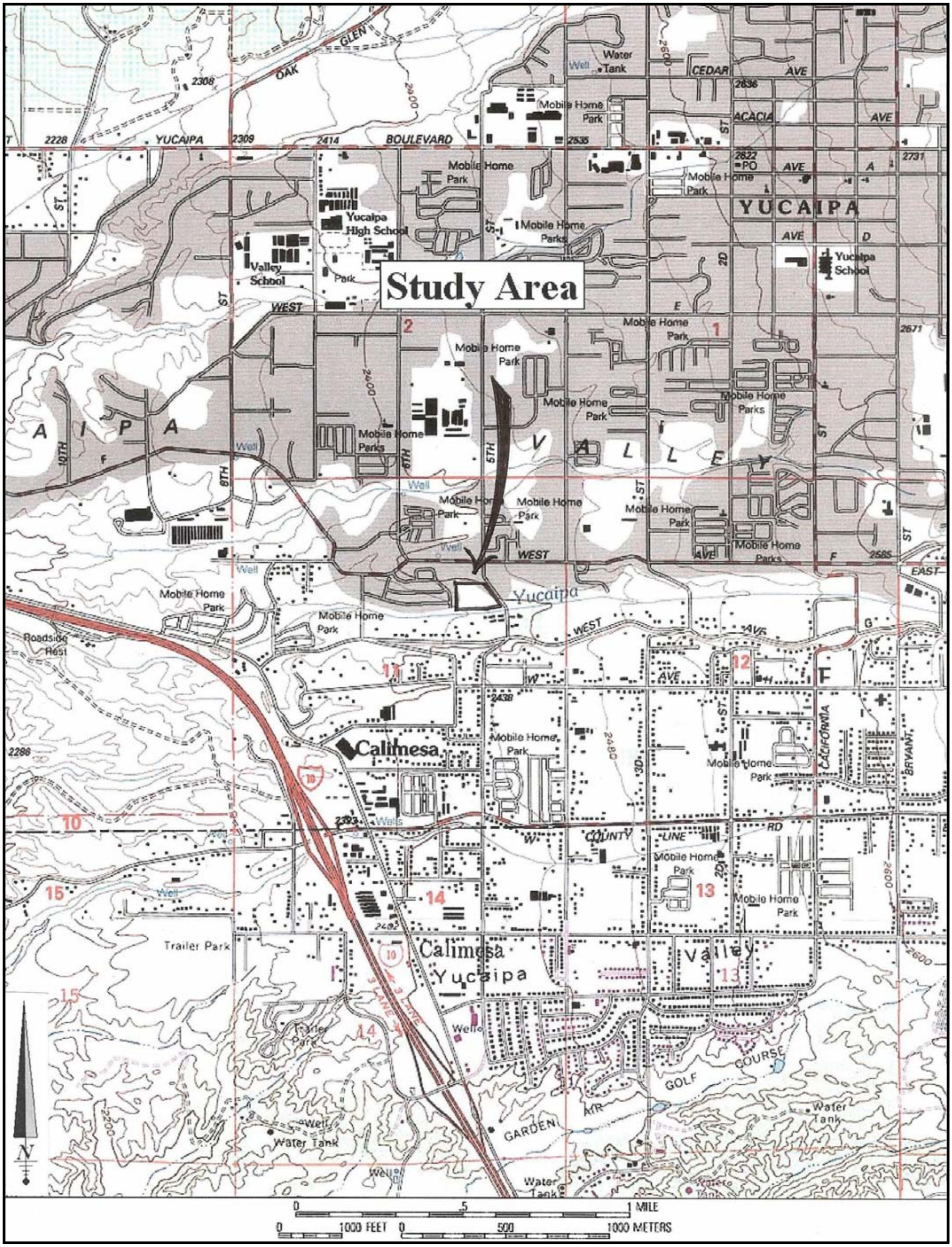

Figure 2. Study area plotted on a portion of the *Yucaipa* 7.5' USGS Topographic Quadrangle (1996).

C. Prehistoric Occupation of the San Gorgonio Pass

While prehistoric man may have been present in California from the earliest days of the Holocene epoch (circa 10,000 years ago), there is no indication that he frequented the area of the San Gorgonio pass prior to Late Prehistoric times (beginning circa 1,000 A.D.). The Serrano or "Mountaineers" occupied the San Bernardino Mountains, portions of the high desert, and San Timoteo Canyon to the west of the San Gorgonio Pass during this period while the Pass Cahuilla are said to have inhabited at least the eastern half of the Pass. Serrano boundaries extended north from the Yucaipa Valley, eastward from the Cajon Pass to Twentynine Palms, and south of the Victorville area encompassing the transitional mountain and desert floor. The reader may find ethnographic accounts of the Serrano in a number of works including Kroeber (1925), Strong (1929), Johnston (1965) and Bean and Smith (1978). Strong, who was probably as reliable an authority on the subject, regarded the territorial affiliation of the Pass as an insoluble problem:

> That the Pass division of the Cahuilla occupied the San Gorgonio Pass has been generally accepted, but in a recent work Kroeber changed his opinion giving the region in question to the Serrano...This was done in accord with the findings of Benedict [1924] who worked on the Morongo Reservation near Banning in 1922...This general region, due to the breaking down of the culture, the assembling of all dialectic groups on one reservation, and the lack of any tribal unity, is the most complex in southern California. (Strong 1929:10).

It has been suggested that the Highland Springs settlement was the Serrano village of *"Akvat* or *Akavat*" (Anonymous 1972:3-2). This suggestion appears to find its roots in a map published by Kroeber (1925:Plate 57) which shows the village of "*Aka-va-t*" at the eastern end of San Timoteo Canyon northwest of Banning. Tom Hughes (1938) seems also to have regarded Highland Springs as a Serrano site as does Johnston who sums up the situation admirably:

> Indians: Riv-90 [Highland Springs Resort]. There is a set of bedrock mortars here bearing a plaque erected by Guy C. Bogart, late Beaumont sponsor, promoter, and historian. Two lineages are given for this spot by three different anthropologists. Bean [1960] lists the Aekit Wanakik [Cahuilla]. Benedict [1924] and Kroeber [1925] both give Pavukuyam Serrano. The two latter name the place Akvat and Akavat respectively. This probably represents another case of

Figure 3. Study area as shown on aerial photograph

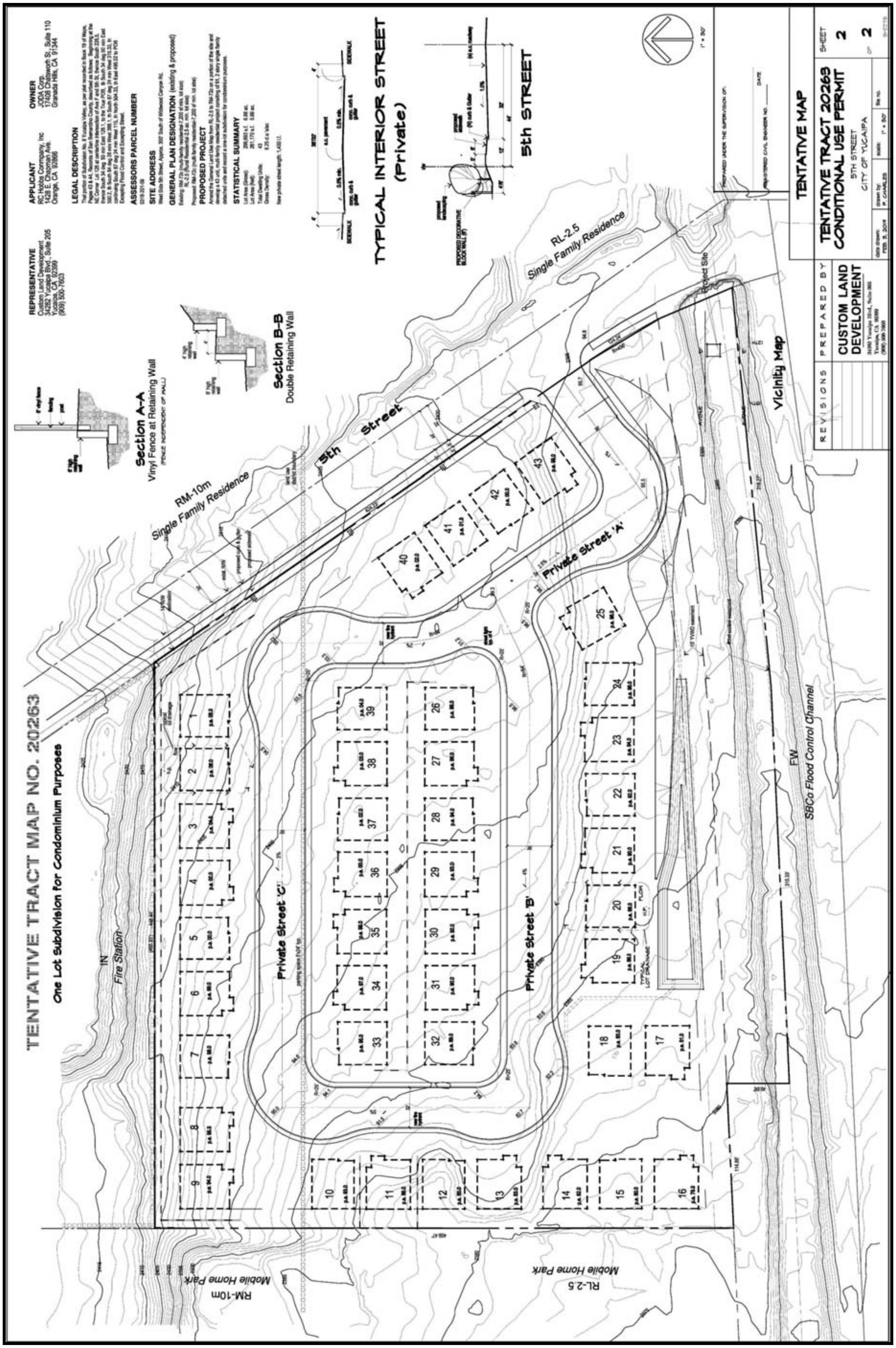

Figure 4. Study area as shown on TTM 20263

> Serrano and Cahuilla Indians living side by side; other like situations are Banning Water Canyon and Mission Creek. (Johnston 1957).

Like all of the prehistoric southern Californians, the Serrano were hunters and gatherers:

> The primary vegetable staples varied with hamlet locality: acorns and pinon nuts for groups living in the foothills [such as Highland Springs]; honey mesquite, cacti fruits, for those living in or near the desert. These principal foods were supplemented by various other roots, bulbs, shoots, and seeds, particularly chia (*Salvia columbariae*)... (Bean and Smith 1978:571).

Game animals included deer, rabbits, mountain sheep, and various birds and small rodents. These were hunted with bow and arrow, rabbit stick, traps, nets, etc. Because of the critical importance of water availability, most villages were located near springs or watercourses--a fact explaining the probable presence of a Serrano camp at Highland Springs.

Serrano villages were small, probably rarely exceeding fifty individuals. Structures were shared by members of individual families and usually comprised circular domed willow frames covered with tule thatching (ibid.). Houses each had a central fire-pit but were probably used principally for sleeping and storage. Day-to-day activities were carried out outside or under ramadas. Besides the houses, a typical Serrano village would have included a ceremonial house, sweathouses, and granaries for acorn storage.

The Serrano never existed as a "tribe" in the political sense, inter-village bonds depending upon ceremonial and social connections:

> All bonds between the [Serrano] groups were of a purely ceremonial nature, and there appears to have been no sort of tribal or political union between them...It is therefore erroneous to speak of such a mythical thing as a Serrano "tribe", for none such existed within historic times, and there is no reason to believe that it ever did. (Strong 1929:14).

It is not known when the Serrano first encountered the Spanish though Pedro Fages visited Serrano territory as early as 1772. This visit would have had negligible effect upon Serrano culture. Bean and Smith postulate that the establishment of an *asistencia* at Redlands around 1819 may have comprised the first influential contact (Bean and Smith 1978:573; *asistencias* were small satellite outposts set up by the central missions to serve outlying areas).

The Serrano living at *Akvat* may have had their first contact with the whites when a Father Gorgonio visited the area prior to 1812 or later when Pauline Weaver and Daniel Sexton first began lumbering operations. Further discussion of these subjects follows below.

D. Historical Overview

1. Early History of San Gorgonio Pass

The earliest Spanish explorers may not have even known of the existence of the San Gorgonio Pass, Anza's interior route between northern Mexico and Alta California having passed to the south. However, the Yuma massacre of 1781 rendered Anza's route dangerous and by the early 1820's the new Mexican government was investigating the possibility of using the San Gorgonio Pass as an alternative (Bancroft 1886:ii, 508). According to Quimby (1975:6) the San Gabriel Mission had set up a station at Banning Water Canyon as early as 1821 and cattle were being raised there in 1823 when the Romero Expedition came through the Pass to explore it as an alternative to Anza's inland route to Alta California.

It is possible that one Spaniard, a Father Gorgonio, was living in the Pass prior to 1812. The papers of a Ms. Ada G. Elder, who gathered stories about the early history of the Pass, stated that:

> ... Doctor Wellwood Murray, an early settler of the Pass and Palm Springs, told Miss Elder that a priest from San Juan Capistrano traveled up the Santa Ana River, through San Timoteo Canyon, and up Singleton Canyon into the Pass where he administered to the Indians. This priest was named Father Gorgonio and the Pass seems to have taken its name from him. He was killed in 1812 so the early date of his influence can be seen. Her paper also reports adobe walls standing on what is now Highland Springs, with no specific facts known as to their origin. (Johnston 1977:95).

On the other hand, Gudde (1965:271) states that in 1824 San Gorgonio was a cattle ranch for the Mission San Gabriel, and that it was named for "Gorgonius, a third-century martyr, whose feast day is September 9." In any event, the adobe walls were said to have been present when the Smith family settled Highland Springs in 1854. The adobe may have belonged to Father Gorgonio as stated by Miss Elder--in this case it would have represented an outpost of the Mission San

Gabriel, or it may have been connected with Weaver's development of the Rancho San Gorgonio (Johnston 1977:1).

2. Pauline Weaver

The first Anglos definitely known to have settled in the Pass were Daniel Sexton and Pauline Weaver who arrived about 1842. Sexton came to the Pass from San Bernardino to start a lumbering business concentrated on what later became Weaver's Rancho San Gorgonio. He hired Indian labor for 25 cents a day and sold his product to Isaac Williams, well-known owner of the Rancho Santa Ana del Chino. Sexton is remembered most for a Fourth of July celebration which he sponsored in 1842:

> Upon being asked by the Indians whether Americans engaged in any annual public celebrations, Sexton had decided to acquaint them with Independence Day...Reportedly highlighting the occasion with a diverse array of events including an opening prayer, a flag-raising ceremony, Indians songs and dances, and two barrels of whiskey, the day's celebration eventually degenerated into a drunken orgy bearing little resemblance to the educational type of program the Indians had requested. (McAdams 1955:53).
>
> The climax of this fiesta was the flying of the first American Flag to fly in California. Rumor has it he [Sexton] made the flag from his wife's petticoats. (Quimby 1975:6).

Weaver was no less colorful a figure than Sexton. Apparently born Powell Weaver in White County, Tennessee, he was the son of an English Settler while his mother was said to have been Cherokee. The Mexicans called him "Paulino" and the Indians called him "Pauline", the latter becoming his best known name. He was a trapper, farmer, lumberman, prospector, and explorer who is said to have been the first white man to settle in Arizona. He eventually moved to California and settled in the San Gorgonio Pass region west of Noble Creek. More specifically, the 1857 General Land Office Plat Map for Township 2 South, Range 1 West shows Weaver's house in Section 27 adjacent to a creek known today as Little San Gorgonio Creek. It seems probable that he and Sexton may have worked together for a while as both were acquainted with Isaac Williams (who had also been a trapper).

In 1853, the Congress of the United States authorized the United States Army to conduct a land survey to find the most favorable route for a railroad between the Mississippi River and the

Pacific Ocean. While on their way from San Bernardino to the Colorado Desert, the party of engineers led by Lt. R.S. Williamson, passed through the San Gorgonio Pass. On November 13, 1853, Weaver's rancho was visited by the survey party and the following notes were taken by Mr. W.P. Blake, geologist for the expedition:

> ...The ascent continued very gradual; at length a short hill brought us to the edge of a broad and gently sloping plain, upon which an adobe house is built. This, although partly in ruins, was occupied by Mr. Weaver, well known as an experienced mountaineer. He is the claimant of a large rancho at this place. The presence of fruit trees and other evidences of cultivation showed that the rancho had been in use for many years, and it is said that the occupants have several times been driven away by the Indians. The situation of this rancho, and the house, is such as one would least expect, being at the summit of the pass. (Blake 1856:90).

3. Stagecoach Activities in the San Gorgonio Pass

In September of 1857, John Butterfield was awarded the U.S. Mail contract and began studying possible stage routes to Los Angeles. The citizens of San Bernardino were very anxious to have the stage from Yuma, Arizona pass through San Gorgonio Pass en route to their city. They elected Isaac Smith to the state legislature on a platform favoring the route, and not surprisingly, Smith Ranch was regarded as an excellent potential way-station. In an attempt to get Butterfield to run his stages to San Bernardino, the County Supervisors had Smith, Stephen M. St. John, and Alfred Bybee lay out a county road between San Bernardino and the southeast corner of the county. Unofficially, this route was known as "the Smith Survey." However, despite the efforts of Smith and the citizenry of San Bernardino, Butterfield decided to use the southern route through Warner's Pass (Johnston 1977:105ff.)

Fortunately, the setback was a temporary one. On September 6, 1862, David Alexander's (Colorado Stage and Express Line) first Concord stagecoach traveled from Los Angeles to La Paz, Arizona via the Bradshaw Trail (Johnston 1957; 1977:133). In the San Gorgonio Pass, the stage stop known as "Smith's Station" was established on the Smith Ranch (Highland Springs Resort). The stop provided fresh horses, food, and presumably a place to sleep for stagecoach passengers. Mr. Jim Banks served as proprietor of Smith's Station between 1862-1876 (Johnston 1977:205).

According to Holmes (1912:180), it took from 18-20 hours to reach the Smith Ranch from the initial starting point in Los Angeles.

Smith's Station had hardly opened for business when the Superintendent of the Colorado Stage and Express Line, Warren Hall and his leading driver, Henry Wilkinson were murdered. Upon arriving at Smith's Station on the 29th of October, Wilkinson was greeted by Superintendent Hall. Shortly thereafter, the two men discovered that the stage's express box containing $1,200. was missing. They immediately accused a company hostler by the name of Gordon of robbing the stage:

> Wilkinson and his shotgun guard took the suspect up an oak-filled canyon just north of the ranch. They planned to extort a confession by hanging the suspect by the neck, not quite to the point of fatality. After actually raising Gordon off the ground once or twice Wilkinson sent the guard back after Hall, as the suspect would not confess. (Johnston 1977:134).

Gordon subsequently drew a knife with which he attacked both Wilkinson and Hall before escaping. Shortly following the melee, Smith and others found the two men dead from their wounds. Smith is reported to have used the front door of his house to transport both bodies back to the ranch; the blood stains on which were visible for years thereafter. After surrendering to San Bernardino's sheriff, Gordon was later acquitted of the crime on the grounds of self-defense. Although absolved of the murders of Wilkinson and Hall, Gordon's luck finally ran out some years later. He was reported to have been hanged in Montana for the killing of sheepmen.

Other stage stops in the Pass were located on the Gilman Ranch in neighboring Banning and at Whitewater. At the Gilman Ranch (formerly the Noble Ranch), the old adobe home of Jose Pope served as the stage station. It was owned by James M. Gilman who later married Martha Smith (daughter of Isaac Smith). The Whitewater Station, was established in 1860 by Frank Smith (son of Isaac Smith). Smith erected a shack then later an adobe that served as the stage station. Water for the station was conveyed through a ditch dug by Smith to the Whitewater River. It was here on his son's Whitewater ranch in 1878 that Isaac Smith himself met his demise as a result of a gunshot wound inflicted during an Indian altercation (Holmes 1912:179f.; Johnston 1977:119).

III. RESEARCH ORIENTATION

A. Introduction

Much of the historic data pertaining to the San Gorgonio Pass and the project vicinity was drawn from literature housed at the Beaumont, Banning and Riverside Public Libraries. Tom Hughes' *History of Banning and San Gorgonio Pass* was published in 1938 and seems to be the first published history of the Pass. Other noted works include Holme's *History of Riverside County* (1912), Gabbert's *History of Riverside City and County* (1935), Gunther's *Riverside County, California, Place Names: Their Origins and Their Stories* (1984), and Quimby's *History of the Potrero Ranch and its Neighbors* (1975). Francis J. Johnston's *The Bradshaw Trail* (1977) is an excellent reference on the history of the Bradshaw and Arizona stage line which passed through the area. However, perhaps the most complete and useful document on the Pass' history is the Master's thesis of H.E. McAdams entitled *Early History of the San Gorgonio Pass: Gateway to California* (1955).

B. Research Goals

The goals of our research were to identify known locations of potential significance resources situated within the study area. Our hypotheses were as follows:

(1) Prehistoric sites may be found almost anywhere but are generally located in areas that offered access to water and plant resources. In this area, due to particularly arid conditions, sources of permanent or semi-permanent water would have offered the best chance for settlement or seasonal encampments. Thus, within the pass itself, the topographic transition zones from the lowlands to the mountains/foothills would be considered higher probability than the valley floor. This would hold true not only for the presence of dependable sources of water, but also the diverse communities of flora and the animals they would attract. Ideally, oak groves or seasonal water courses lined with oak trees would have been most attractive for gathering and processing sites. Granitic boulders and outcrops were also commonly utilized as milling stations for vegetal foodstuffs and to a lesser extent rock shelters and rock art sites.

(2) Historic sites in the region would most likely be associated with early ranching, fruit growing and general farming activities. Lacking standing structures, remains of these homesteads and farmsteads typically comprises concrete, river cobble or adobe structure foundations, irrigation systems and trash scatters. However, not all debris scatters (e.g. tin can, glass, crockery) can be

connected to a particular home or farmstead. In many instances, isolated scatters of dumped historic debris represent nothing more that illicitly discarded rubbish.

IV. ARCHIVAL RESEARCH METHODS

A. Cultural Resources Records Search

An in-person records search of the study area was conducted by Robert S. White at the South Central Coastal Information Center (SCCIC), California State University, Fullerton on January 15, 2019. The search entailed a review of all previously recorded prehistoric and historic archaeological sites situated on or within a one-mile radius of the project area. Additionally, the National Register of Historic Places (NRHP), California Historical Landmarks (CHL), California Points of Historical Interest (CPHI), and the Office of Historic Preservation's Directory of Properties (DOP) were reviewed for the purpose of identifying any historic properties.

1. Previously Recorded Prehistoric and Historic Resources Within the Study Area

The results of the search indicated that no prehistoric or historic archaeological resources (sites, structures, isolates) have been previously recorded within the boundaries of the subject property.

2. Previously Recorded Archaeological Sites/Isolates Within a One-Mile Radius

The results of the search indicated that four prehistoric sites and one prehistoric isolate have been previously recorded within a one-mile radius of the subject property. Table 1 below summarizes the sites and isolate. The closest prehistoric site to the study area is SBR-428 located approximately 1000 feet to the west. First recorded in 1934, SBR-428 was characterized as a destroyed campsite purported to have contained groundstone and lithics (Smith 1934). In 2016 a thorough investigation of the site location was undertaken for the City of Yucaipa Low Water Replacement Project, Sixth Place at Wildwood Creek. Despite a thorough survey and limited subsurface testing, no vestiges of the site could be found (Hogan, Stosel & Jacquemain 2016).

Table 1. Archaeological Sites/Isolates within a One-mile Radius.

Site Number (CA-RIV-) or (33-)	**Site Description**
SBR-428	Possible campsite comprising a lithics and groundstone scatter, site apparently destroyed by development. Closest recorded prehistoric site to the study area.
36-002624	Lithic Scatter.
36-012602	Large lithics and groundstone scatter, probable residential use.
36-012606	Sparse lithics scatter.
36-020183	Isolate-biface fragment

3. Previously Recorded Historic Structures/Features Within a One-Mile Radius

Outside the study area, two historic features have been recorded within a one-mile radius. SBR-10822H is described as drainage feature comprising a concrete headwall and 18 feet of riveted steel pipe. It is believed to date from the 1930s to the 1940s. It is located approximately ½ to the west-northwest (Ballester 2002). The second feature, 36-012608, is described as a small, partially destroyed pump house with the pump engine in place. It is believed to date from the early to mid 20th century. It is located 9/10 mile to the west-southwest (Kile & Gothar 2006).

4. Heritage Properties

No listed National Register of Historic Places (NRHP), California Historical Landmarks (CHL), or California Points of Historical Interest (CPHI) have been recorded within the study area nor within a one-mile radius.

5. Previous Surveys

The results of the search indicated that the study area has not been previously surveyed for cultural resources. Outside the property, approximately 20% of the surrounding one-mile search radius has been investigated. These studies comprise small acreage surveys (40 acres or less), wireless sites, and linear projects (roads and utilities). The closest survey to the study area lies immediately to the north on the grounds of Yucaipa Fire Station No. 1. The survey was for a wireless site that occupied approximately 1/10 acre. The results of the cultural resources assessment were completely negative (EarthTouch, Inc. 2009).

B. Historic Map Research

In addition to the records search, numerous historic General Land Office (GLO) and Geological Survey (USGS) maps of Yucaipa and the surrounding region were inspected. These maps are on file with one or more of the following entities: Bureau of Land Management, Map Room of the Science Library at UC Riverside, the USGS TopoView Historic Topographic Map Database, and the California Historic Topographic Map Collection housed in Special Collections at the Merriam Library at California State University, Chico. These included:

GLO Map of Township No. 2 South Range No. 2 West San Bernardino Meridian
Surveyed 1853-1871, Examined and Approved August 26, 1871

GLO Map of Township No. 2 South Range No. 2 West San Bernardino Meridian
Surveyed 1853-1879, Examined and Approved April 26, 1880

GLO Map of Township No. 2 South Range No. 2 West San Bernardino Meridian
Surveyed 1880-1883, Examined and Approved June 28, 1883

GLO Map of Township No. 2 South Range No. 2 West San Bernardino Meridian, California
Surveyed 1896, Examined and Approved February 3, 1897

Southern California Sheet No.1, 1:250,000, 1901 reprinted 1948, Surveyed 1893-1900

1954 San Bernardino 1:125,000

1954 San Bernardino 1:125,000, revised 1959

1901 *Redlands 15*' USGS Topographic Quadrangle, surveyed 1898-1899.

1954 *Redlands* 15' USGS Topographic Quadrangle

1954 *Yucaipa* 7.5' USGS Topographic Quadrangle

1967 *Yucaipa* 7.5' USGS Topographic Quadrangle

1967 *Yucaipa* 7.5' USGS Topographic Quadrangle, photorevised 1973.

1967 *Yucaipa* 7.5' USGS Topographic Quadrangle, photorevised 1988.

A review of these maps was performed for the purpose of identifying locations of potential historical resources. The results of the map research indicated that the property has always comprised vacant land. Furthermore, it does not appear that it was ever planted in trees or vines. Additionally, Yucaipa Creek is depicted on all the GLO, 15' and 7.5' maps although it is not always labeled as such on the very early maps.

C. Land Patents

Archival research also included a review of land patents on file with the Bureau of Land Management (BLM) in Sacramento. The subject property lies in the South ½ of the Northeast ¼ of Section 11, Township 2 South, Range 2 West, San Bernardino Base Meridian. Office records indicate that a serial land patent for 6,410.05 acres was issued to the State of California on September 24, 1872. The patent includes the entirety of Section 11. The land patent was granted under the authority of the September 4, 1841:Grant-Certain Land to State (5 Stat.453). It is recorded as Accession No./BLM Serial Nr: CACAAA 080618. It does not appear that anyone constructed a dwelling within the study area in conjunction with this patent.

V. FIELD SURVEY

A field reconnaissance of the study area was conducted by Robert S. White (Principal Investigator), and Susan R. Klein on January 22, 2019. The pedestrian survey began in the southwest corner of the property and proceeded in an easterly direction. Surface visibility over the majority of the study area was very good, varying between 85 and 100% as the winter grass had yet to obscure the surface.

The survey was conducted by walking parallel transects spaced at 5-10 meter intervals across the property. Meandering transects were used when obstacles or terrain rendered parallel transects impractical. By employing these techniques, a thorough survey of the study area was accomplished

VI. REPORT OF FINDINGS

A. Prehistoric Resources

The results of the records search conducted at the South Central Coastal Information Center failed to identify any prehistoric resources within the boundaries of the study area. The results of the field study were also negative. No prehistoric resources of any kind were identified during the course of the investigation.

B. Historic Resources

The results of the records search indicated that no historic archaeological sites or historic buildings had been previously recorded within the project area. No historic resources of any kind were identified during the course of the investigation.

VII. MANAGEMENT CONSIDERATIONS

A. Prehistoric and Historic Resources

The results of the records search and field study were negative for the presence of prehistoric and historic resources within the project area. Therefore, no further work in conjunction with prehistoric or historic resources is warranted or recommended including monitoring of earth disturbing activities connected with future develop.

B. Discovery of Human Remains

In the event that human remains are encountered during the course of any future development, California State Law (*Health and Safety Code Section 7050.5 and Section 5079.98 of the Public Resources Code*) states that no further earth disturbance shall occur at the location of the find until the San Bernardino County Coroner has been notified. If the remains are determined to be prehistoric, the Coroner will notify the Native American Heritage Commission (NAHC), which will determine and notify a Most Likely Descendant (MLD).

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Plate I. Top: Looking northwest across study area from the southeast property corner. **Bottom:** Southeasterly view across property from the northwest corner.

Plate II. Top: Looking southwest across study area from the northeast corner. **Bottom:** Looking east along the Yucaipa Creek flood control channel from the southwest property corner.

Plate III. Top: Looking north along the western project boundary from the southwest property corner. **Bottom:** Looking north along the eastern project boundary from the southwest property corner

APPENDIX A: Personnel Qualifications

RÉSUMÉ OF

ROBERT S. WHITE

Principal, Archaeological Associates

Mr. White has been affiliated with Archaeological Associates since 1983. Starting in 1991 he became the firm's Director and in 2013, Principal. Mr. White has extensive experience in many aspects of cultural resource management, including but not limited to, project administration, field survey, excavation, lab analysis, land survey and cartography, archival research, budgeting, planning, and report writing/production. In those jurisdictions requiring professional certification, Mr. White is certified by the Counties of Riverside, Orange, and Ventura to conduct all phases of archaeological investigation.

Since 1983, Mr. White has conducted well over 500 prehistoric and historic archaeological investigations in Riverside, San Bernardino, Los Angeles, Orange, Kern, San Diego, Imperial, Sonoma, and Inyo Counties. Additionally, in concert with colleague Dr. David Van Horn, they have pioneered innovative techniques that revolutionized data recovery programs on large, low-density archaeological sites.

EDUCATION

B.A., Liberal Studies (emphasis in Anthropology), California State University Long Beach, 1987

A.A., Liberal Arts, Los Angeles Harbor College, 1977

PROFESSIONAL HISTORY

Joined Archaeological Associates in 1983
1991 to 2013, Director of Archaeological Associates
2013 to Present, Principal of Archaeological Associates
Riverside County Approved Archaeologist #164
Orange County Approved Archaeologist

PROFESSIONAL AFFILIATIONS

American Committee for the Preservation of Archaeological Collections (ACPAC)
Pacific Coast Archaeological Society.

PUBLICATIONS

Van Horn, David, Laura S. White, and Robert S. White
2005 The Prehistory of Gretna Green, a Site in Northern San Diego County, pp. 145-168 IN: Onward and Upward! Papers in honor of Clement W. Meighan (Keith L. Johnson, editor). Stansbury Publishing, Chico.

White, R.S.
1991 Prehistoric Fire-Making Techniques of California and Western Nevada. Pacific Coast Archaeological Society Quarterly, Vol. 27, No. 1, pp. 27-38.

Van Horn, D.M. and R.S. White
1986 Some Techniques for Mechanical Excavation in Salvage Archaeology. Journal of Field Archaeology, 13:239-244.

TRAINING

Tortoise Awareness Training. Joshua Tree, San Bernardino County (September, 2008).

SB 18 Consultation Seminar. Riverside (December, 2005). Offered through the Governor's Office of Planning and research et. al.

* 1987 B.A. in Liberal Studies with emphasis in Anthropology, California State University, Long Beach.
* 1977 A.A. Degree in Liberal Arts, Los Angeles Harbor College.
* Riverside County Certified Archaeologist #164
* Orange County Certified Archaeologist
* Over 30 years of full-time experience conducting cultural resource management projects in southern California.

APPENDIX B: Records Search Results

CULTURAL RESOURCES RECORDS SEARCH

On January 15, 2019, an in-person cultural resources records search was conducted by Robert S. White at the South Central Coastal Information Center (SCCIC) housed at California State University, Fullerton. Consequently, there is no official letter from the Information Center to attach here. The in-person search included a review of all previously recorded prehistoric and historic archaeological sites situated within a one-mile radius of the study area. Additionally, the National Register of Historic Places (NRHP), California Register of Historical Resources (CRHR), California Historical Landmarks (CHL), California Points of Historical Interest (CPHI), and the California Directory of Properties (DOP, aka the Historic Resources Inventory [HRI]) were reviewed for the purpose of identifying any historic properties. Copies of site record forms were obtained for those resources situated within a one-mile radius of the project. Pertinent archaeological reports were also were reviewed and all relevant information was incorporated into the study.