DRAFT FOCUSED ENVIRONMENTAL IMPACT REPORT

7Points Industrial Complex Project

January 2020

PREPARED FOR:

City of Woodlake 350 N. Valencia Avenue Woodlake, California 93286



PREPARED BY:



Crawford & Bowen Planning, Inc. 113 N. Church Street, Suite 302 Visalia, CA 93291

Draft Focused Environmental Impact Report

7Points Industrial Complex Project

Prepared for:



City of Woodlake 350 N. Valencia Avenue Woodlake, California 93286 (559) 8564-8776

Contact: Jason Waters, Community Services Director

Prepared by:



Crawford & Bowen Planning, Inc. 113 N. Church Street, Suite 302 Visalia, CA 93291 (559) 840-4414

Contact: Emily Bowen, LEED AP

January 2020

State Clearinghouse Number: 2019090507

TABLE OF CONTENTS

CHAPTER ONE - INTRODUCTION	
1.1 Purpose of EIR	1-1
1.2 Environmental Process	1-2
1.3 EIR Summary	1-3
CHAPTER TWO – PROJECT DESCRIPTION	
2.1 City Overview	2-1
2.2 Objectives	2-1
2.3 Location	2-1
2.4 Setting and Surrounding Land Use	2-1
2.5 Project Description	2-5
2.6 Other Required Approvals	2-6
CHAPTER THREE – ENVIRONMENTAL SETTING, IMPACTS & MITIGATION	
3.1 Transportation	3-1
CHAPTER FOUR – CUMULATIVE IMPACTS	
4.1 – Introduction	4-1
4.2 – Transportation	4-1
CHAPTER FIVE - PROJECT ALTERNATIVES	
5.1 – Introduction	5-1
5.2 – Project Objectives and Significant Impacts	5-1
5.3 – No Project	5-2
CHAPTER SIX – CEQA CONSIDERATIONS	
6.1 – Growth-Inducing Impacts	6-1
6.2 – Irreversible Environmental Changes	6-1
6.3 – Significant and Unavoidable Impacts	6-2
CHAPTER SEVEN – PREPARERS	
7.1 – List of Preparers	7-1
7.2 – Persons and Agencies Consulted	7-1
LIST OF FIGURES	
2.1 – Regional Map	2-3
2.2 – Site Aerial	2-4
2.3 – Site Plan	2-7
3.1 – Project Peak Hours	3-6
3.2 – 2019 Peak Hour Traffic	3-7
3.3 – 2019 + Project Peak Hour Traffic	3-8
3.4 – 2021 Peak Hour Traffic	3-9
3.5 – 2021 + Project Peak Hour Traffic	3-10
3.6 – 2040 Peak Hour Traffic	3-11

3.7 – 2040 + Project Peak Hour Traffic	3-12
LIST OF TABLES	
3.1 – Project Trip Generation	3-4
3.2 – Project Trip Distribution	3-4
3.3 – Roadway ADT & Capacity	3-13
3.4 – Roadway Level of Service	3-13
3.5 – AM Intersection Level of Service	3-15
3.6 – PM Intersection Level of Service	3-16
3.7 – Existing Scenario AM Traffic Signal Warrant Analysis	3-17
3.8 – Future Scenarios AM Traffic Signal Warrant Analysis	3-17
3.9 – Existing Scenario PM Traffic Signal Warrant Analysis	3-18
3.10 – Future Scenarios PM Traffic Signal Warrant Analysis	3-18
3.11 – Future Intersection Improvements and Local Mitigation	3-19
APPENDICES	
A –Notice of Preparation	
B – NOP Comments Received	

C – Traffic Impact Study

Chapter 1 INTRODUCTION

INTRODUCTION

This Focused Environmental Impact Report (EIR) has been prepared on behalf of the City of Woodlake (City) in accordance with the California Environmental Quality Act (CEQA). This chapter outlines the purpose of and overall approach to the preparation of the EIR for the construction and operation of the 7Points Industrial Complex Project (Project). The City of Woodlake is the Lead Agency responsible for ensuring that the proposed Project complies with CEQA.

It is the intent of this EIR to provide the City of Woodlake, decision makers, and the general public with the relevant environmental information to use in considering the required approval for the proposed Project. The City will use this EIR for the discretionary approvals of entitlements required to develop the proposed Project.

1.1 Purpose of EIR

This document is an Environmental Impact Report (EIR) prepared in accordance with the California Environmental Quality Act CEQA of 1970 and CEQA Guidelines, as amended. This EIR has been prepared by the City of Woodlake as the "Lead Agency," in consultation with the appropriate local, regional and state agencies.

The purpose of the EIR is to inform the public generally of the significant environmental effects of the project, identify possible ways to minimize the significant effects, and describe reasonable alternatives that support the objectives of the project. As defined by the CEQA Guidelines, Section 15382, a "significant effect on the environment" is as follows:

"... a substantial, or potentially substantial adverse change in any of the physical conditions within the area affected by the project including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic significance."

An Initial Study was prepared by the City of Woodlake (City) for the Project. The Initial Study determined the Project could have potentially significant impacts in the area of transportation. The City, therefore, determined that an EIR would be required for the project. During the Initial Study/Notice of Preparation public review period, a comment was received with concerns regarding biological resources an as such, biological resources is further analyzed in this document. This EIR is a "Focused EIR" that concentrates on the potentially significant impacts of the project on two environmental issue areas: transportation and biological issues. All other

impact areas were determined to either have no impact or have a less than significant impact (with or without mitigation). This Focused EIR references the Initial Study and Notice of Preparation prepared for the project for all other areas of impact analysis not provided in this Focused EIR (see Appendix A).

1.2 Environmental Process

Notice of Preparation

In accordance with PRC Section 21092 and CEQA Guidelines Section 15082, the City of Woodlake issued a Notice of Preparation (NOP) to inform agencies and the public that an EIR was being prepared and to invite comments on the scope and content of the document. The NOP of the EIR was circulated to the public and public agencies from September 20, 2019 to October 21, 2019 (State Clearinghouse #2019090507) (refer to Appendix A). The City received five comment letters; from the Native American Heritage Commission, the California Department of Food & Agriculture, the Central Valley Regional Water Quality Control Board, the California Department of Fish & Wildlife and the California Department of Transportation. All comments on environmental issues received during the NOP public comment period are considered and addressed in this Draft EIR. Appendix B contains the comment letters submitted during the NOP public comment period.

Public Review of this Draft EIR

This Draft EIR is being circulated for public review and comment for a period of 45 days, from January 1, 2020 to February 14, 2020.

During the public review period, written comments from the public, organizations, and agencies on the Draft EIR content may be submitted to the City of Woodlake. Because of time limits mandated by State law, comments should be provided no later than 5:00 p.m. on February 14, 2020. Please send all comments to:

City of Woodlake Attention: Jason Waters, Community Services Director 350 N. Valencia Ave Woodlake, CA 93286

Telephone: (559) 564-8776

Email: <u>jwaters@ci.woodlake.ca.us</u>

Copies of this Draft EIR are available for public review at the City Administrative Office at 350 N. Valencia Avenue in Woodlake.

Final EIR

Following public review of the Draft EIR, responses to written comments on the Draft EIR will be prepared and any revisions to the Draft EIR will be summarized. The Final EIR will consist of the Draft EIR; a list of persons, organizations, and public agencies commenting on the Draft EIR; comments and responses thereto; and other information, as applicable.

Before approving the proposed Project, the lead agency is required to certify that the EIR has been completed in compliance with CEQA, that the decision-making body reviewed and considered the information in the EIR, and that the EIR reflects the independent judgement of the lead agency.

State law requires that a public agency adopt a monitoring program for mitigation measures that have been incorporated into the approved project to reduce or avoid significant effects on the environment. The purpose of the monitoring program is to ensure compliance with environmental mitigation during project implementation and operation. Since there are potentially significant impacts requiring mitigation associated with the project, a Mitigation Monitoring Program will be included in the project's Final EIR.

1.3 EIR Summary

Project Description Summary

The Project Applicant intends to construct and operate an industrial center that will house various industrial uses allowable by the zone district, including cannabis cultivation and distribution which is allowable with a Conditional Use Permit.

Environmental Impacts and Mitigation Summary

Based on the analysis in this EIR and accompanying Initial Study, the proposed Project would not result in significant and unavoidable impacts. Mitigation measures are required to reduce potential impacts to less than significant and are included in the MMRP.

Alternatives Evaluated

The EIR analyzed the No Project Alternative which would avoid both the adverse and beneficial effects of the Project and it was determined that this alternative would not meet the Project's ovjectives to create an economically sustainable industrial center.

Areas of Controversy

During the environmental review process, the City of Woodlake identified that transportation would be an area of concern. In addition, the Department of Fish and Wildlife submitted a comment during the public review process with concerns regarding impacts to sensitive biological species.

Chapter 2

PROJECT DESCRIPTION

Project Description

2.1 City Overview

The City of Woodlake is located in Tulare County in the southern part of the San Joaquin Valley. Woodlake is 15 miles northeast of Visalia and 20 miles west of Sequoia National Park. Woodlake is bisected by State Route 216 which runs east and west, and State Route 245, which runs north and south. The community is situated five miles north of State Route 198, a major east/west route that connects the coast range with the Sierras. Since incorporation in 1941, the City of Woodlake has grown to an estimated population of 7,891 in 2019.

2.2 Objectives

The following are the primary goals of the City of Woodlake's 7Points Industrial Complex Project (Project):

- To create an economically sustainable industrial complex that will provide business and job opportunities within the City of Woodlake.
- To ensure the provision of services and facilities needed to accommodate planned population densities in the project area.

2.3 Location

The City of Woodlake is located in Tulare County in the southern part of the San Joaquin Valley. The proposed Project is located on the southwest corner of West Ropes Avenue and Mulberry Street on APN 060-170-088. Woodlake is bisected by SR 216 and SR 245 and the City is situated five miles north of SR 198.

2.4 Setting and Surrounding Land Use

The proposed Project site is currently fallow, historically planted in fruit orchards.

Lands surrounding the proposed Project are described as follows:

• North: Rural residential/agricultural.

¹ California Department of Finance. Tables of January 2018 City Population Ranked by Size, Numeric, and Percent Change. http://www.dof.ca.gov/Forecasting/Demographics/Estimates/E-1/. Accessed December 2019.

• South: Vacant.

• East: Agricultural.

• West: Industrial

2.5 Project Description

The Project Applicant intends to construct and operate a 20-acre industrial center that will house various industrial uses allowable by the zone district, including cannabis cultivation, manufacturing, and distribution which is allowable with a Conditional Use Permit.

Project Components

- Constructing and operating an industrial park with buildings ranging from 5,100 to 27,500 square feet each, for a total of up to 335,000 square feet of industrial space.
- Constructing internal access roads, parking spaces and associated landscaping, as detailed on Figure 3 – Site Plan.
- Connecting the Project to the existing City water, wastewater, and stormdrain systems.
- Installation of perimeter security, including lighting and an alarm system, in accordance with Chapter 5.48 of the Woodlake Municipal Code.

Construction will occur in one phase and is anticipated to take up to two years to complete.

Project Operations

The project at full build-out will house 15 individual industrial businesses either allowable within the Light Industrial (ML) Zone District or cannabis businesses allowable with the approval of a Conditional Use Permit. Cannabis businesses could include various aspects of processing, including, but not limited to cultivation, storage, drying, greenhouse space and packaging. It is assumed that the Project at full build-out will employ up to 40 full time staff and will operate from 8am to 5pm, up to seven days per week. According to the Institute of Transportation Engineers (ITE) Trip Generation, 8th Edition, 335,000 square feet of general light industrial space is estimated to generate 2,304 daily vehicle trips.

The facility's electrical needs will continue to be serviced by existing Southern California Edison connections that have been assessed as sufficient for full operation of allowable uses industrial uses, including indoor/mixed light cannabis cultivation.

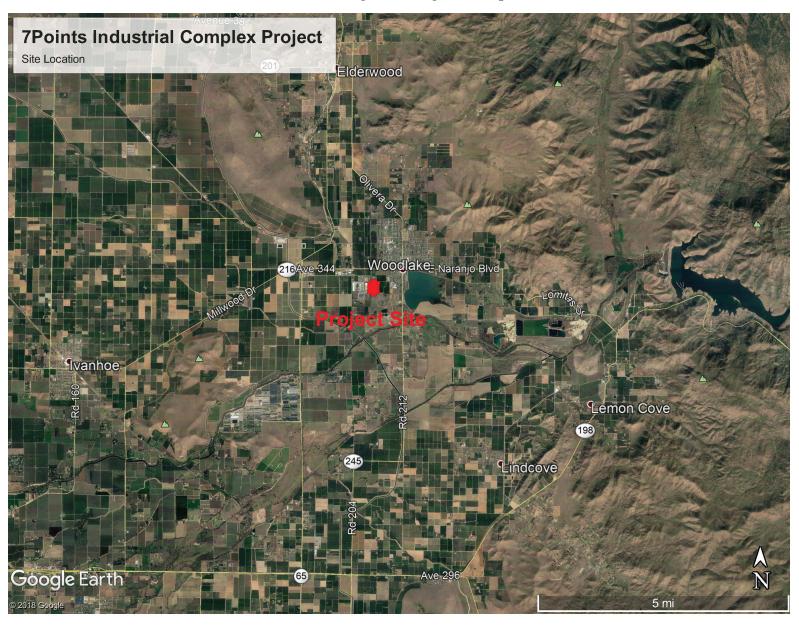


Figure 1 - Regional Map

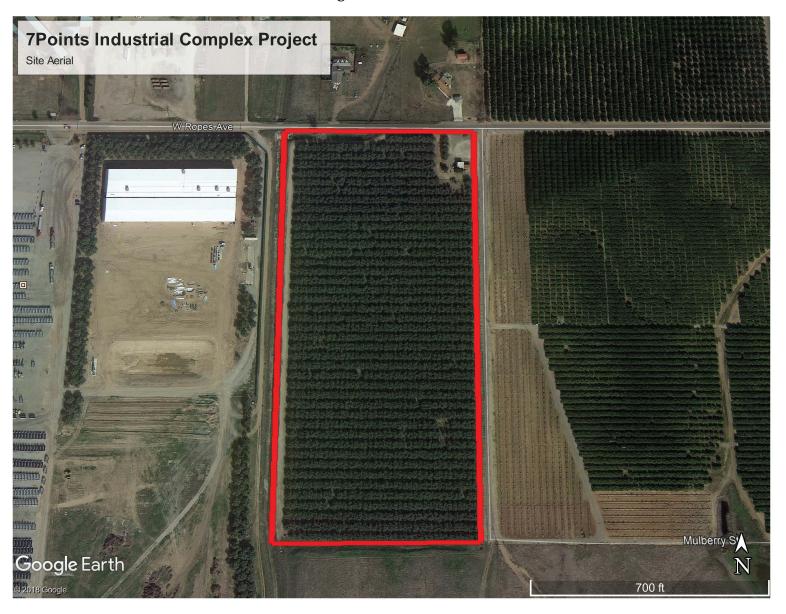


Figure 2 - Site Aerial

Once a business is established, water needs, including cultivation water needs for cannabis will be serviced by an existing on-site well or by connecting to City water, while water for sanitary facilities for the entire complex will come from the City. Stormwater will be kept on-site and wastewater, including sewer use, will be serviced by on-site septic systems.

To accommodate this Project, the following City of Woodlake entitlements are required:

- Tentative Parcel Map to divide the existing parcel into 15 separate parcels
- Conditional Use Permit to operate under a Cannabis Business License (Cultivation, Manufacturing, and Distribution) for cannabis businesses

2.6 Other Required Approvals

The proposed Project would include, but not be limited to, the following regulatory requirements:

- The certification of an Environmental Impact Report by the City of Woodlake
- Approval of a Conditional Use Permit
- Issuance of a license to cultivate, propagate and process commercial cannabis from the California Department of Food and Agriculture
- Coverage under General Waste Discharge Requirements and Waiver of Waste Discharge Requirements for Discharges of Waste Associated with Cannabis Cultivation Activities Order No. WQ 2019-0001-DWQ (the Cannabis General Order), issued by the State Water Resources Control Board.
- Approval of a Stormwater Pollution Prevention Plan by the Central Valley Regional Water Quality Control Board
- Dust Control Plan Approval letter from the San Joaquin Valley Air Pollution Control District
- Compliance with Rule 9510 of the San Joaquin Valley Air Pollution Control District
- Compliance with other federal, state and local requirements

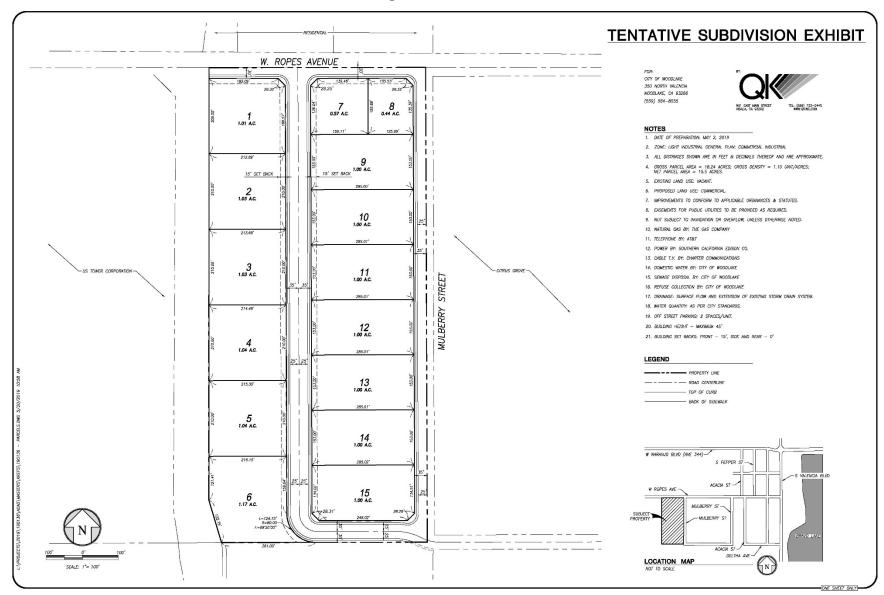


Figure 3 – Site Plan

Chapter 3

ENVIRONMENTAL SETTING, IMPACTS & MITIGATION

Environmental Setting, Impacts & Mitigation

3.1 Biological Resources

Biological Resources were analyzed in the Initial Study/Notice of Preparation and determined to be less than significant with implementation of BIO-1 to reduce impacts to migratory birds (see Appendix A). This section further identifies and discusses potential environmental effects the project may have related to special status species, in response to a comment letter received by the California Department of Fish and Wildlife during the Initial Study/Notice of Preparation public review period (as provided in Appendix B).

Environmental Setting

The proposed Project site is located in a portion of the central San Joaquin Valley that has, for decades, experienced intensive agricultural and urban disturbances. Current agricultural endeavors in the region include dairies, groves, and row crops.

Like most of California, the Central San Joaquin Valley experiences a Mediterranean climate. Warm dry summers are followed by cool moist winters. Summer temperatures usually exceed 90 degrees Fahrenheit, and the relative humidity is generally very low. Winter temperatures rarely raise much above 70 degrees Fahrenheit, with daytime highs often below 60 degrees Fahrenheit. Annual precipitation within the proposed Project site is about 10 inches, almost 85% of which falls between the months of October and March. Nearly all precipitation falls in the form of rain and storm-water readily infiltrates the soils of the surrounding the sites.

Native plant and animal species once abundant in the region have become locally extirpated or have experienced large reductions in their populations due to conversion of upland, riparian, and aquatic habitats to agricultural and urban uses. Remaining native habitats are particularly valuable to native wildlife species including special status species that still persist in the region. According to the Woodlake General Plan, most of the open space in the Woodlake area is dominated by agriculture. Citrus, olives, and grazing land are the dominant uses, which may attract the San Joaquin kit fox and burrowing owls.

The site has historically been utilized to grow olive trees but has recently become fallowed and the trees have been removed. The Project site's surrounding lands consist of industrial facilities, active agriculture and rural residences.

No aquatic or wetland features occur on the proposed Project site; therefore, jurisdictional waters are considered absent from the site.

Regulatory Setting

Federal Migratory Bird Treaty Act of 1918

The Migratory Bird Treaty Act (16 U.S.C. 704)(MBTA) makes it unlawful to "take" (kill, harm, harass, etc.) any migratory bird listed in 50 Code of Federal Regulations 10, including their nests, eggs, or products. Migratory birds include geese, ducks, shorebirds, raptors, songbirds, and many other species.

Federal Endangered Species Act of 1973

Section 3 of the federal Endangered Species Act (ESA) defines an endangered species as any species or subspecies "in danger of extinction throughout all or a significant portion of its range." A threatened species is defined as any species or subspecies of fish, wildlife, or plants "likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range." Threatened or endangered species and their critical habitat are designated through publication of a final rule in the Federal Register. Designated endangered and threatened animal species are fully protected from "take" unless an applicant has an incidental take permit issued by the USFWS under Section 10 or incidental take statement issued under Section 7 of the ESA. A take is defined as the killing, capturing, or harassing of a species. Proposed endangered or threatened species, or their critical habitats, are those for which a proposed regulation, but no final rule, has been published in the Federal Register.

Federal Clean Water Act Section 404, Jurisdictional Waters

The U.S. Army Corps of Engineers (Corps), pursuant to Section 404 of the Clean Water Act regulates discharges into "waters of the United States." While some streams within the Woodlake area meet the definition of waters of the U.S., the nearest ones to the Project site do not meet the criteria for federal jurisdiction set by the U.S. Supreme Court, in that they are not navigable and are not tributary to any navigable waters. In addition, these streams have no connection to interstate commerce outside of the specific uses precluded by the Supreme Court regarding the Migratory Bird amendment. While verification of the lack of jurisdiction should be ascertained with the U.S. Corps of Engineers, there is not federal authority under the Clean Water Act.

California Endangered Species Act

The California Endangered Species Act (CESA) declares that deserving plant or animal species will be given protection by the State because they are of ecological, educational, historical, recreational, aesthetic, economic, and scientific value to the people of the State. CESA establishes that it is State policy to conserve, protect, restore, and enhance endangered species and their habitats. Under State law, plant and animal species may be formally designated as rare, threatened, or endangered through official listing by the California Fish & Wildlife (CDFW) Commission. Listed species are given greater attention during the land use planning process by local governments, public agencies, and landowners than are species that have not been listed.

On private property, endangered plants may also be protected by the Native Plant Protection Act (NPPA) of 1977. Threatened plants are protected by CESA, and rare plants are protected by the NPPA. However, CESA authorizes that "Private entities may take plant species listed as endangered or threatened under the ESA and CESA through a Federal incidental take permit issued pursuant to Section 10 of the ESA, if the CDFG certifies that the incidental take statement or incidental take permit is consistent with CESA."

In addition, the California Environmental Quality Act (CEQA) requires disclosure of any potential impacts on listed species and alternatives or mitigation that would reduce those impacts.

California Environmental Quality Act — Treatment of Listed Plant and Animal Species

ESA and CESA protect only those species formally listed as threatened or endangered (or rare in the case of the State list). Section 15380 of the CEQA Guidelines independently defines "endangered" species of plants or animals as those whose survival and reproduction in the wild are in immediate jeopardy and "rare" species as those who are in such low numbers that they could become endangered if their environment worsens. Therefore, a project normally will have a significant effect on the environment if it will substantially affect a rare or endangered species of animal or plant or the habitat of the species. The significance of impacts to a species under CEQA must be based on analyzing actual rarity and threat of extinction despite legal status or lack thereof.

State of California - Section 1602 of the California Fish and Game Code

Streambeds and other drainages that occur within the Woodlake area are subject to regulation by the CDFW. Please note that although the agency is now called the California Department of Fish & Wildlife, the State Code is still named the California Department of Fish and Game (CDFG) Code. For purposes of this document, these terms are interchangeable. The CDFW considers most drainages to be "streambeds" unless it can be demonstrated otherwise. A stream is defined as a

body of water that flows at least periodically or intermittently through a bed or channel with banks and supports fish or other aquatic life. This includes watercourses having a surface or subsurface flow that supports, or has supported, riparian vegetation. CDFW jurisdiction typically extends to the edge of the riparian canopy, and therefore, usually encompasses a larger area than Corps jurisdiction.

State of California – Porter Cologne Act

The State Water Quality Control Board has ruled after the U.S. Supreme Court decisions to reduce the federal jurisdiction over Waters of the U.S., that the State would require that a Waste Discharge Report be required for any discharge of waste, including fill, into "waters of the state", other than those projects requiring a federal Section 404 permit and the State's Section 401 Certification of the federal permit, under the authority of the Porter Cologne Act. This essentially extends the State's assumption of the NPDES program, by modifying the definition of waste. The Regional Water Quality Control Board is responsible for issuing Waste Discharge Permits.

State of California – Sections 3503, 3503.5, and 3800 of the California Fish and Game Code

These sections of the Fish and Game Code prohibit the "take or possession of birds, their nests, or eggs." Disturbance that causes nest abandonment and/or loss of reproductive effort (killing or abandonment of eggs or young) is considered a "take." Such a take would also violate Federal law protecting migratory birds.

Incidental Take Permits (*i.e.*, Management Agreements) are required from the CDFG for projects that may result in the incidental take of species listed by the State of California as endangered, threatened, or candidate species. The permits require that impacts to protected species be minimized to the extent possible and mitigated to a level of insignificance.

Thresholds of Significance

In accordance with Appendix G of the CEQA Guidelines Initial Study Checklist, a project would be considered to have a significant impact to biological resources if it would:

a. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?

- b. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?
- c. Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?
- d. Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?
- e. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?
- f. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

Impact areas b. through f. have been analyzed in the Initial Study/Notice of Preparation (see Appendix A) and have been determined to have a *less than significant impact* as a result of Project implementation.

Project Impacts and Mitigation Measures

Impact: Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game of the U.S. Fish and Wildlife Service?

Discussion: A discussion of potential impacts to birds protected under the Migratory Bird Treat Act was provided in the Initial Study/Notice of Preparation (see Appendix A) and it was determined that with implementation of BIO-1, potential impacts to protected birds would be less than significant. CDFW recommended additional mitigation measures (see BIO-2, below) to further ensure impacts to protected migratory bird species remain less than significant.

A review of the California Natural Diversity Database (CNDDB) reveals records for two special-status species within the vicinity of the proposed Project area including, but limited to, State Threatened and federally Endangered San Joaquin kit fox (SJKF) (*Vulpes macrotic*

mutica) and the State candidate for listing Crotch bumble bee (CBB) (*Bombus crotchii*).¹ The proposed Project site has recently been planted with an olive orchard; however, trees have been removed and the site is currently fallowed.

SJKF have been documented to occur within the Project vicinity. SJKF den in right-of-ways, vacant lots, etc., and populations can fluctuate over time. SJKF may be attracted to project sites due to the type and level of ground-disturbing activities and the loose, friable soils resulting from intensive ground disturbance. As a result, there is potential for SJKF to occupy or colonize the Project site.

On June 28, 2019, the Fish and Game Commission published findings of its decision to advance CBB to candidacy as endangered. Pursuant to Fish and Game Code section 2074.6, CDFW has initiated a status review report to inform the Commission's decision on whether listing of CBB, pursuant to CESA, is warranted. During the candidacy period, consistent with CEQA Guidelines, section 15380, the status of the CBB as an endangered candidate species under CESA qualifies it as an endangered, rare, or threatened species under CEQA.

CBB have been documented to occur within the vicinity of the proposed Project area.² Suitable CBB habitat includes areas of grasslands and upland scrub that contain requisite habitat elements, such as small mammal burrows. CBB primarily nest in late February through late October underground in abandoned small mammal burrows but may also nest under perennial bunch grasses or thatched annual grasses, under brush piles, in old bird nests, and in dead trees or hollow logs.³ Overwintering sites utilized by CBB mated queens include soft, disturbed soil, or under leaf litter or other debris. Therefore, ground disturbance and vegetation removal associated with Project implementation has the potential to significantly impact local CBB populations. Impacts associated with ground-and vegetation-disturbing activities associated with construction of the Project include loss of foraging plants, changes in foraging behavior, burrow collapse, nest abandonment, reduced nest success, reduced health and vigor of eggs, young and/or queens, in addition to direct mortality.

Project implementation has the potential to impact biological resources; however, implementation of the following mitigation measures would reduce any potential impacts to less than significant.

¹ see CDFW comment letter in Appendix B.

² Ibid.

³ Ibid.

Mitigation Measure:

BIO-2

Migratory Bird surveys: Prior to initiation of construction activities, a qualified biologist should conduct a survey to establish a behavioral baseline of all nests identified in the surveys outlined in BIO-1 (see Appendix A). Once construction begins, a qualified biologist should monitor nests to detect behavioral changes resulting from construction activities. If behavioral changes occur, CDFW recommends the work causing that change cease and CDFW be consulted for additional avoidance and minimization measures. If continuous monitoring of identified nests by a qualified wildlife biologist is not feasible, CDFW recommends a minimum no-disturbance buffer of 250-feet around active nests of non-listed bird species and a 500-foot no-disturbance buffer around active nests of non-listed raptors. These buffers are advised to remain in place until the breeding season has ended or until a qualified biologist has determined the birds have fledged and are no longer reliant upon the next or parental care for survival.

BIO -3

SJKF Surveys: Surveys shall be performed to assess presence and absence of SJKF and/or their dens both on and within 200 feet of the Project site. Pre-construction surveys⁴ shall be performed no less than 14 days and no more than 30 days prior to the beginning of ground-disturbing activities.

BIO-4

SJKF Avoidance: If dens are found during surveys, no-disturbance buffers shall be implemented, in accordance with the USFWS' "Standardized recommendations for protection of the San Joaquin kit fox prior to our during ground disturbance." Specifically, if SJKF are found occupying atypical (i.e. manmade structure) den sites, a 50-foot no-disturbance area is recommended around the occupied den structure. If potential dens are found during surveys, a 50-foot no-disturbance buffer shall be implemented around these dens. A 100-foot no-disturbance buffer shall be implemented if occupied dens are discovered. If a natal or pupping den is found during surveys, consultation with CDFW shall occur.

⁴ Per the U.S. Fish and Wildlife Service "Standardized Recommendations for Protection of the San Joaquin Kit Fox Prior to or During Ground Disturbance." January 2011.

BIO-5

SJKF Take Avoidance: If SJKF are detected, CDFW consultation shall occur, to discuss how to implement the Project and avoid take, or if avoidance is not feasible, to acquire a State Incidental Take Permit, pursuant to Fish and Game Code section 2081(b).

BIO-6

CBB Take Avoidance: All small mammal burrows and thatched/bunch grasses shall be avoided by a minimum of 50 feet to avoid take. If the Project area includes brush piles, unmowed/overgrown areas, dead trees or hollow logs, those areas shall be avoided by a minimum of 50 feet to avoid take. If ground-disturbing activities occur during the overwintering period (October through February), consultation with CDFW shall occur to discuss how to implement Project activities and avoid take. If CBB are detected prior to or during Project implementation, CDFW shall be consulted to discuss how to avoid take.

Level of Significance after Mitigation

With implementation of BIO-1 to protect migratory birds (as discussed in the biological resources analysis in the Initial Study in Appendix A) and BIO-2 through BIO-6, the impacts to migratory birds, SJKF and CBB would be *less than significant*.

3.2 Transportation/Traffic

This section of the DEIR identifies potential impacts of the proposed Project pertaining to transportation in and around the Project vicinity. One IS/NOP comment letter was received pertaining to this topic, from Caltrans. The information presented in this section of the document is largely summarized or directly quoted from the Traffic Study for the Industrial Development at the Southwest Corner of Ropes Avenue & Mulberry Street prepared by Ruettgers & Schuler Civil Engineers.

Environmental Setting

Major roads in the Project area include:

Millwood Drive is generally a north-south roadway that extends north from State Route 216 and provides access to agricultural land uses. In the Project vicinity, it exists as a two-lane roadway with graded shoulders.

Naranjo Boulevard (SR 216) is an east-west arterial that provides access to agricultural, commercial, and residential land uses in Woodlake. In the vicinity of the proposed Project it exists as a two-lane roadway with paved shoulders and a posted speed limit of 55 mph.

Road 196 is a north-south roadway that extends from Millwood Drive to Avenue 336. It provides access to agricultural land uses, and in the vicinity of the proposed Project, it exists as a two-lane roadway with graded shoulders.

Road 204 is a north-south two-lane roadway that extends from Naranjo Boulevard to Avenue 348. It provides access to residential and agricultural land uses.

Ropes Avenue is an east-west roadway that extends from Blair Road to Valencia Boulevard. West of Oaks Street, it proves access to agricultural land use, and east of Oaks Street it provides access to agricultural land use, and east of Oaks Street, it provides access to residential land uses. It exists as a two-lane roadway with curb and gutter adjacent to development. Ropes Avenue is a dedicated roadway for traffic accessing directly to the industrial park from the South.

Valencia Boulevard is a major north-south arterial that extends through the metropolitan region of the City of Woodlake. It exists as a two-lane roadway with curb and gutter and provides access to commercial, residential, and agricultural land uses.

There is one airport in Woodlake; the Woodlake airport, which is a public airport located two miles south of the City. It covers 88 acres and has one runway.

Bus service in the City of Woodlake is accommodated through the City Dial-A-Ride service. It runs in the city limits of Woodlake and some unincorporated areas of Tulare County only. This service is available Monday through Friday from 7am to 3:30pm. Tulare County also offers out of town bus service with multiple locations around the City. The nearest bus stop to the proposed Project is at the corner of N. Cypress Street and SR 216, approximately 0.67 miles east.

There are no established pedestrian or bicycle paths in the City.

Regulatory Setting

Several federal regulations govern transportation issues. They include:

 Title 49, CFR, Sections 171-177 (49 CFR 171-177), governs the transportation of hazardous materials, the types of materials defined as hazardous, and the marking of the transportation vehicles.

- 49 CFR 350-399, and Appendices A-G, Federal Motor Carrier Safety Regulations, address safety considerations for the transport of goods, materials, and substances over public highways.
- 49 CFR 397.9, the Hazardous Materials Transportation Act of 1974, directs the U.S. Department of Transportation to establish criteria and regulations for the safe transportation of hazardous materials.

Thresholds of Significance

In accordance with the CEQA Guidelines, a project impact would be considered significant if the project would:

- Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?
- Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?
- Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?
- Result in inadequate emergency access?

Analysis Methodology

Ruettgers & Schuler Engineering, Inc. prepared a Traffic Impact Study (TIS) (see Appendix C) analyzing potential impacts the proposed Project would have on the existing roadway and transportation system. This was prepared in general conformance with City of Woodlake requirements and *Caltrans Guide for the Preparation of Traffic Impact Studies* dated December 2002. The TIS provides an analysis of the surrounding roadway system and the effects of the proposed 7Points Industrial Complex Project on the existing and planned roadway infrastructure, including potential mitigation measures to reduce Project transportation impacts. Study results are summarized in the text below. For the full text, graphics, and traffic counts, please refer to Appendix C.

Project Impacts and Mitigation Measures

Impact: Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?

Less Than Significant with Mitigation: The information and analysis presented in this section are based on the Traffic Impact Study prepared for the Project which is included as Appendix C and is summarized herein.

Project Information

Project Trip Generation and Design Hour Volumes

The trip generation and design hour volumes shown in Table 3.1 were calculated using the Institute of Transportation Engineers (ITE) Trip Generation, 10th Edition. The ADT, AM and PM peak hour rates, and peak hour directional splits for ITE Land Use Code 110 (General Light Industrial) were used to estimate the project traffic for peak hour of adjacent street traffic.

Daily Trips AM Peak Hour Trips PM Peak Hour Trips General Information ITE Development Variable ADT ADT Rate Out Rate Out In In RATE % Split/ % Split/ Code Type % Split/ % Split/ Trips Trips Trips Trips 110 310 2214 0.92 88% 12% 0.97 12% 88% General Light eq Industrial 1000 sq ft GFA 251 34 36 265 Total 2,214 34 251 36 265

Table 3.1 – Project Trip Generation

Project Trip Distribution and Assignment

The project trip distribution in Table 3.2 represents the most logically traveled routes for traffic accessing the project. Project traffic distribution was estimated based on a review of the potential draw from population centers within the region and the type of land use involved. The City anticipates a significant amount of project traffic to travel along State Route 65 between Woodlake and other towns such as Exeter, Lindsey, Porterville, Visalia, and Tulare. These assumptions were used to distribute project traffic as shown in Figure 3.1.

DirectionPercentRoadwayNorth10%Valencia Blvd (SR 245)South20%Rd 204 / Valencia Blvd (SR 245)East40%Naranjo Blvd (SR 216)

Table 3.2 – Project Trip Distribution

Direction	Percent	Roadway
West	30%	Naranjo Blvd (SR 216)

Existing and Future Traffic

Existing peak hour turn movement volumes were field measured in September 2019 at the study intersections and are shown in Figure 3.2. Existing plus project peak hour volumes are shown in Figure 3.

Annual growth rates of 0.49% to 2.72% were applied to existing traffic volumes to estimate future traffic volumes for the years 2021 and 2040. These growth rates were estimated based on a review of TCAG traffic model data. Opening year peak hour, opening year plus project, future peak hour and future peak hour plus project volumes are shown in Figures 3.4-3.7, respectively.

An investigation was made with the City of Woodlake's Transportation Planning Department to determine if there are any pending projects which would influence future traffic beyond what the TCAG model is predicting. A trip generation table the traffic generated by the cumulative projects is provided in Appendix C. Based on the information given, it is anticipated that the cumulative projects will be completed by 2021. Future peak hour volumes with the cumulative projects added are shown in Figures 3.4 through 3.7. Potential impacts resulting from existing and cumulative traffic generation is considered *less than significant*.

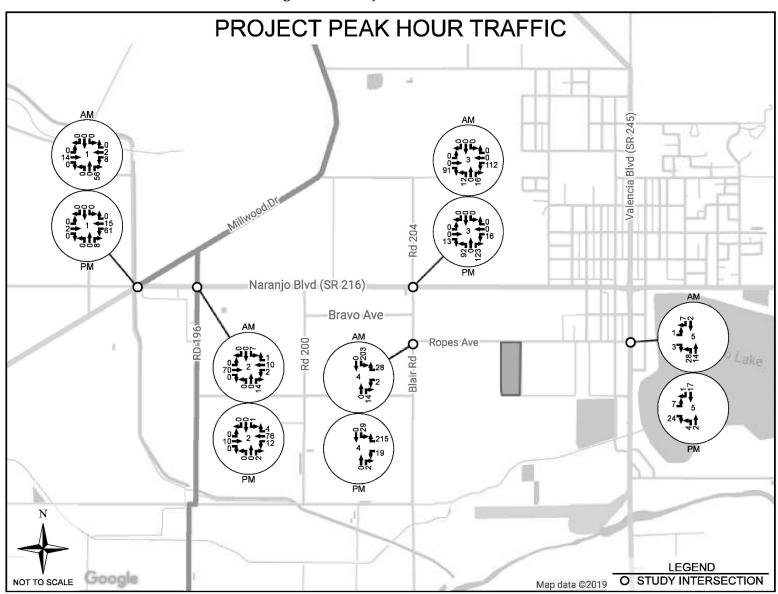


Figure 3.1 – Project Peak Hour Traffic

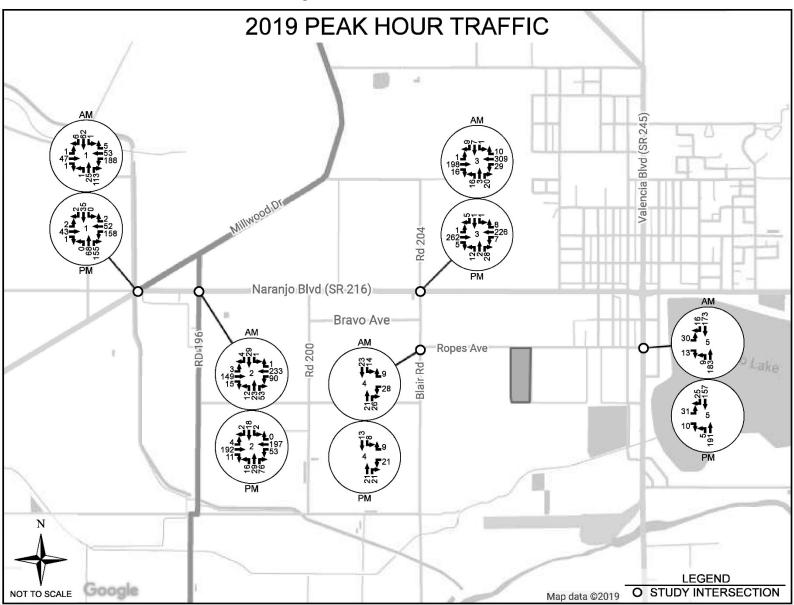


Figure 3.2 – 2019 Peak Hour Traffic

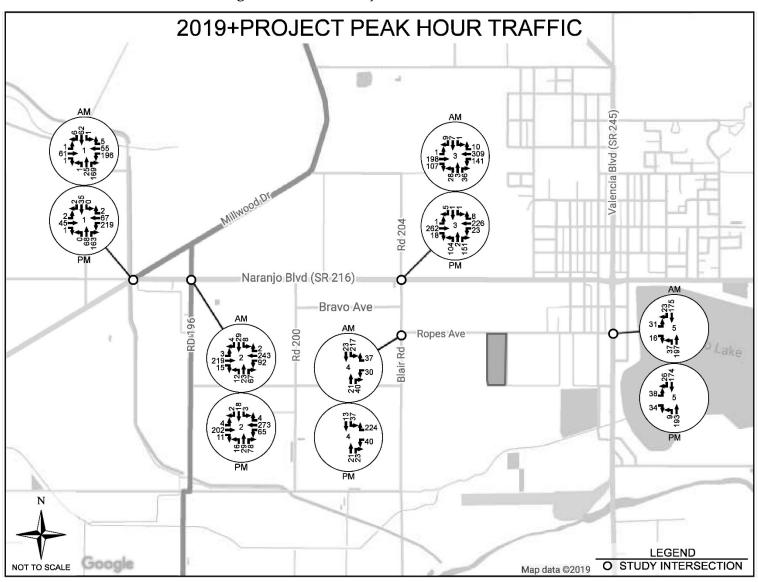


Figure 3.3 – 2019 + Project Peak Hour Traffic

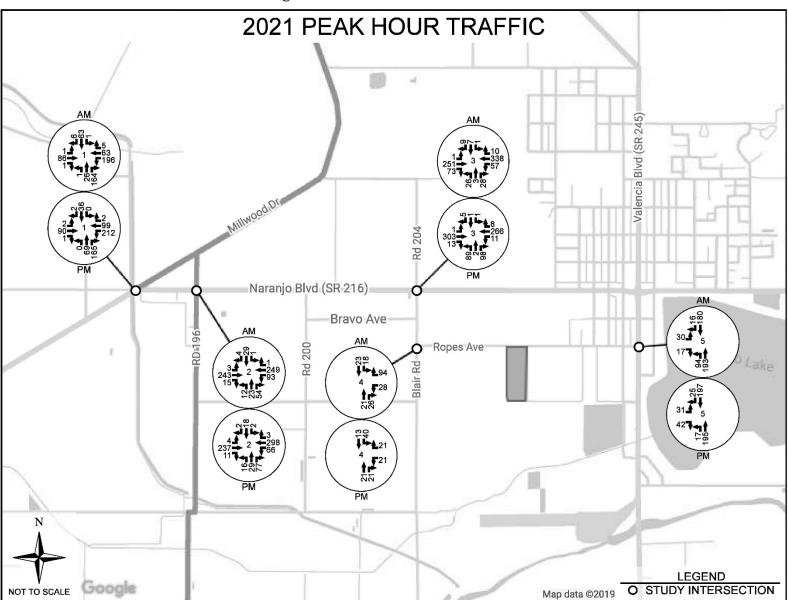


Figure 3.4 – 2021 Peak Hour Traffic

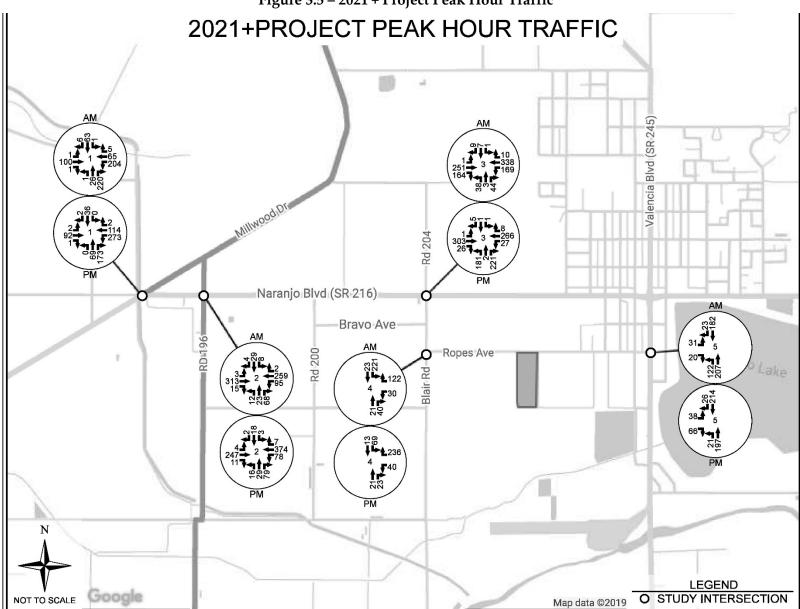


Figure 3.5 – 2021 + Project Peak Hour Traffic

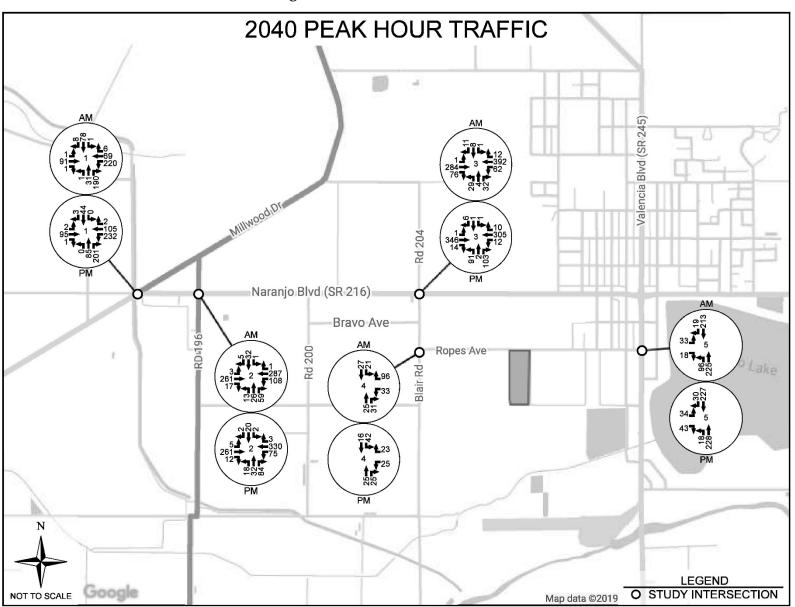


Figure 3.6 – 2040 Peak Hour Traffic

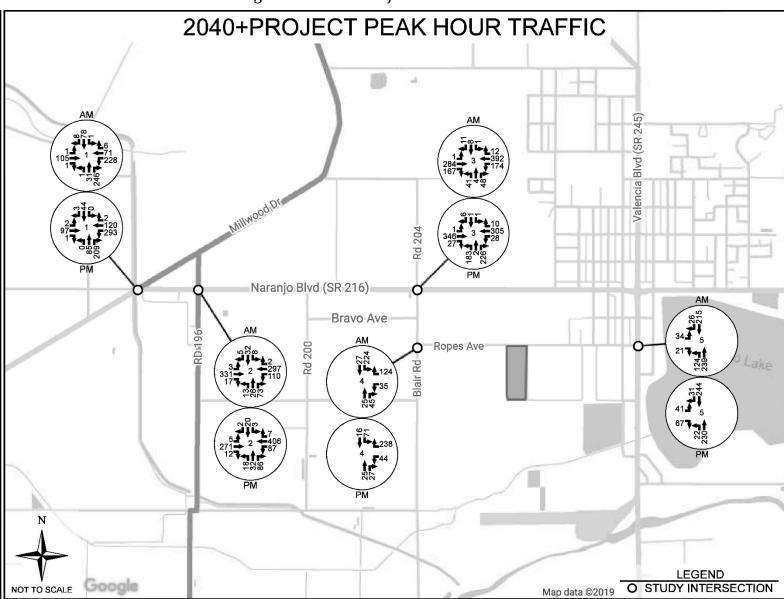


Figure 3.7 – 2040 + Project Peak Hour Traffic

Roadway Analysis

The published ADT information and future projected traffic, as shown in Table 3.3, were used to calculate the volume-to-capacity ratios shown in Table 3.4.

A volume-to-capacity ratio (v/c) of greater than 0.80 corresponds to a LOS of D, as defined in the Highway Capacity Manual. Mitigation is required where project traffic reduces the LOS to below an acceptable level, or where the pre-existing condition of the roadway is below an acceptable level of service and degrades below the pre-existing LOS with the addition of the project.

Table 3.3 - Roadway ADT & Capacity

Street	20191	Project ADT	2021 ADT ²	2021+ Project ²	2040 ADT ²	2040+ Project ²	Existing Capacity	Mitigated Capacity
		71101	ADI	Troject	ADI	Troject	Capacity	Capacity
Naranjo Blvd (SR 216): Millwood Dr to Rd 196	4605²	633	4661	5167	5229	5735	15000	-
Naranjo Blvd (SR 216): Rd 196 to Road 204/Blair Rd	61972	772	6295	6909	7313	7927	15000	-
Naranjo Blvd (SR 216): Rd 204/Blair Rd to Valencia Blvd (SR 245)	53882	1022	5478	6013	6411	6946	15000	-
Ropes Ave: Blair Rd to Mulberry St	590	1795	595	913	649	967	15000	-
Ropes Ave: Mulberry St to Valencia Blvd (SR 245)	710	206	717	1035	783	1101	15000	-
Blair Rd: Ropes Ave to Naranjo Blvd (SR 216)	550	1581	559	1939	657	2037	15000	-
Valencia Blvd (SR 245): Ropes Ave to Naranjo Blvd (SR 216)	68222	140	6946	7221	8242	8517	15000	-

¹2019 Data not available. Data grown out from previous year available year.

²Includes Cumulative Traffic

Table 3.4 - Roadway Level of Service

Street	v/c(Ex) 2019	v/c 2019+Proj	v/c 2021	v/c 2021+Proj		v/c 2040+Proj
Naranjo Blvd (SR 216): Millwood Dr to Rd 196	0.31	0.35	0.31	0.34	0.35	0.38
Naranjo Blvd (SR 216): Rd 196 to Road 204/Blair Rd	0.41	0.46	0.42	0.46	0.49	0.53
Naranjo Blvd (SR 216): Rd 204/Blair Rd to Valencia Blvd (SR 245)	0.36	0.43	0.37	0.40	0.43	0.46
Ropes Ave: Blair Rd to Mulberry St	0.04	0.16	0.04	0.06	0.04	0.06
Ropes Ave: Mulberry St to Valencia Blvd (SR 245)	0.05	0.06	0.05	0.07	0.05	0.07
Blair Rd: Ropes Ave to Naranjo Blvd (SR 216)	0.04	0.14	0.04	0.13	0.04	0.14
Valencia Blvd (SR 245): Ropes Ave to Naranjo Blvd (SR 216)	0.45	0.46	0.46	0.48	0.55	0.57

NOTE: Cumulative traffic from other projects included in all future volumes.

All roadways within the Project scope currently operate at acceptable levels of service and are expected to continue to do so with the addition of project traffic through the future year.

As demonstrated in Table 3.4, no scenario has a volume to capacity ratio of over 0.80 (LOS D) and as such, impacts resulting from LOS degradation are *less than significant*.

Intersection Analysis

A capacity analysis of the study intersections was conducted using Synchro 9 software from Trafficware. This software utilizes the capacity analysis methodology in the Transportation Research Board's 2010 <u>Highway Capacity Manual</u>. The analysis was performed for the following AM and PM traffic scenarios:

- Existing (2019)
- Existing+Project (2019)
- Opening Year (2021)
- Opening Year+Project (2021)
- Future Cumulative (2040)
- Future Cumulative+Project (2040)

Criteria for intersection level of service (LOS) are shown in the tables below.

LOS Service Criteria for Unsignalized Intersections

Average Control Delay (sec/veh)	Level of Servic e	Expected Delay to Minor Street Traffic
≤ 10	A	Little or no delay
> 10 and ≤ 15	В	Short traffic delays
> 15 and ≤ 25	С	Average traffic delays
> 25 and ≤ 35	D	Long traffic delays
> 35 and ≤ 50	Е	Very long traffic delays
> 50	F	Extreme delays

LOS Service Criteria for Signalized Intersections

Volume/Capacity	Control Delay (sec/veh)	Level of Service
< 0.60	≤ 10	A
0.61 - 0.70	$> 10 \text{ and } \le 20$	В
0.71 - 0.80	$> 20 \text{ and } \le 35$	С
0.81 - 0.90	$> 35 \text{ and } \le 55$	D
0.91 - 1.00	$> 55 \text{ and } \le 80$	Е
> 1.0	> 80	F

According to the City of Woodlake Roads Department, the peak hour level of service shall be no lower than LOS "D" for urban areas and LOS "C" for rural areas. Levels of service for the study intersections are presented in Tables 3.5 and 3.6. The intersection peak hour level of service goal for the study intersections is LOS C or better.

Table 3.5 - AM Intersection Level of Service

#	Intersection	Control Type	2019	2019+ Project	2021	2021+ Project	2040	2040+ Project	2040+ Project w/Mitigation ¹
1	Millwood Dr & Naranjo Blvd (SR 216)	AWSC	A	A	A	В	В	В	-
2	Rd 196 & Naranjo Blvd (SR 216)	NB SB	B C	B C	B C	C C	C C	C C	-

#	Intersection	Control Type	2019	2019+ Project	2021	2021+ Project	2040	2040+ Project	2040+ Project w/Mitigation ¹
3	Rd 204 & Naranjo Blvd (SR 216)	NB SB	B B	C C	C C	C C	D (27.6) C	D (28.1) C	В
4	Rd 204 & Ropes Ave	WB	A	A	В	В	В	В	-
5	Valencia Blvd & Ropes Ave	EB	В	В	В	В	В	С	-

 $^{^{1}}$ See Table 3.11 for Mitigation Measures.

Table 3.6 – PM Intersection Level of Service

#	Intersection	Control Type	2019	2019+ Project	2021	2021+ Project	2040	2040+ Project	2040+ Project w/Mitigation ¹
1	Millwood Dr & Naranjo Blvd (SR 216)	AWSC	A	A	В	В	В	В	-
2	Rd 196 & Naranjo Blvd (SR 216)	NB SB	B B	B C	B C	C C	C C	C C	-
3	Rd 204 & Naranjo Blvd (SR 216)	NB SB	B B	C B	C B	F (54.3) B	C B	FE (42.3) B	В
4	Rd 204 & Ropes Ave	WB	A	A	В	В	В	В	-
5	Valencia Blvd & Ropes Ave	EB	В	В	В	В	В	В	-

 $^{^{1}}$ See Table 3.11 for Mitigation Measures.

Traffic Signal Warrant Analysis

Peak hour signal warrants were evaluated for each of the unsignalized intersections within the study area based on the California Manual on Uniform Traffic Control Devices (MUTCD). Peak hour signal warrants assess delay to traffic on the minor street approaches when entering or crossing a major street. Signal warrant analysis results for AM and PM peak hours are shown in Tables 3.7 through 3.10.

It is important to note that a signal warrant defines the minimum condition under which signalization of an intersection might be warranted. Meeting this threshold does not suggest traffic signals are required, but rather, that other traffic factors and conditions be considered in order to determine whether signals are truly justified.

It is also noted that signal warrants do not necessarily correlate with level of service. An intersection may satisfy a signal warrant condition and operate at or above an acceptable level of service, or operate below an acceptable level of service and not meet signal warrant criteria.

Table 3.7 – Existing Scenario AM Traffic Signal Warrant Analysis

			2019		20	19+Project	
,,	T	Major	Minor		Major	Minor	
#	Intersection	Street	Street	Warrant	Street	Street	Warrant
		Total	High	Met	Total	High	Met
		Approach	Approach		Approach	Approach	
		Vol	Vol		Vol	Vol	
1	Millwood Dr at Naranjo Blvd	295	139	NO	309	188	NO
2	Rd 196 at Naranjo Blvd	488	88	NO	555	88	NO
3	Rd 204 at Naranjo Blvd	563	39	NO	648	57	NO
4	Rd 204 at Ropes Ave	84	37	NO	122	47	NO
5	Valencia Blvd at Ropes Ave	381	43	NO	477	47	NO

Table 3.8 – Future Scenarios AM Traffic Signal Warrant Analysis

			2021			2021+Pr	oject		2040			2040+Pr	oject
		Major	Minor		Major	Minor		Major	Minor		Major	Minor	
#	Intersection	Street	Street	Warrant									
		Total	High	Met									
		Approach Vol	Approach Vol		Approach Vol	Approach Vol		Approach Vol	Approach Vol		Approach Vol	Approach Vol	
1	Millwood Dr at	362	198	NO	376	247	NO	398	229	NO	412	278	YES
	Naranjo Blvd												
2	Rd 196 at Naranjo Blvd	617	103	NO	684	103	NO	690	112	NO	757	112	NO
3	Rd 204 at Naranjo Blvd	848	67	NO	933	85	NO	945	75	NO	1030	93	YES
4	Rd 204 at Ropes Ave	301	67	NO	305	152	NO	317	74	NO	321	159	NO
5	Valencia Blvd at	438	47	NO	534	51	NO	508	51	NO	604	55	NO
	Ropes Ave												

Table 3.9 – Existing Scenario PM Traffic Signal Warrant Analysis

			2019		20	19+Project	
.,	T	Major	Minor		Major	Minor	
#	Intersection	Street	Street	Warrant	Street	Street	Warrant
		Total	High	Met	Total	High	Met
		Approach Vol	Approach Vol		Approach Vol	Approach Vol	
1	Millwood Dr at Naranjo Blvd	260	212	NO	321	230	NO
2	Rd 196 at Naranjo Blvd	453	121	NO	538	121	NO
3	Rd 204 at Naranjo Blvd	509	42	NO	521	189	NO
4	Rd 204 at Ropes Ave	63	30	NO	95	42	NO
5	Valencia Blvd at Ropes Ave	378	41	NO	428	73	NO

Table 3.10 - Future Scenarios PM Traffic Signal Warrant Analysis

			2021		20	21+Project			2040		20	40+Project	
		Major	Minor		Major	Minor		Major	Minor		Major	Minor	
#	Intersection	Street	Street	Warrant									
		Total	High	Met									
		Approach Vol	Approach Vol		Approach Vol	Approach Vol		Approach Vol	Approach Vol		Approach Vol	Approach Vol	
1	Millwood Dr at	421	235	NO	484	242	YES	452	287	YES	515	294	YES
	Naranjo Blvd												
2	Rd 196 at Naranjo Blvd	632	124	NO	717	124	NO	698	136	NO	783	136	YES
3	Rd 204 at Naranjo Blvd	619	257	YES	631	404	YES	705	264	YES	717	411	YES
4	Rd 204 at Ropes Ave	264	50	NO	276	82	NO	270	55	NO	282	87	NO
5	Valencia Blvd at Ropes Ave	408	72	NO	458	104	NO	477	76	NO	527	108	NO

All intersections operate with an acceptable level of service during peak hours in the existing year with the addition of project traffic.

In the opening year (2021), all intersections are anticipated to operate at an acceptable level of service. With the addition of project traffic, the intersection Road 204 and Naranjo Boulevard (SR 216) is anticipated to operate below an acceptable level of service, which would be considered a significant impact. All remaining intersections with an acceptable level of service are anticipated to continue to do so in 2040 prior to, and with the addition of project traffic. As such, impacts

would be significant; however, implementation of TRA-1 would reduce impacts to less than significant.

Mitigation Measure:

TRA -1

The Project shall be responsible for paying its fair share cost percentages and/or constructing improvements as detailed in Table 3.11, subject to reimbursement for the costs that are in excess of the Project's equitable responsibility as determined by the City of Woodlake. This shall be itemized and enforced through conditions of approval or a development agreement, at the discretion of the City of Woodlake.

Table 3.11 – Future Intersection Improvements and Local Mitigation

#	Intersection	Total Improvements Required by 2040	Project % Share for Local Mitigation
3	Rd 204 F& Naranjo Blvd (SR 216)	Add Signal	34.32%

Level of Significance after Mitigation

With implementation of TRA-1, the impacts to the effected intersections would be *less than significant*.

Impact: Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?

Less Than Significant Impact: In accordance with the California Environmental Quality Act (CEQA), an evaluation of the average vehicle miles traveled (VMT) for the Project's traffic was conducted.

VMT data was obtained from the Tulare County Association of Governments (TCAG) in order to establish a baseline for daily vehicle miles traveled in the Woodlake area. The data provided by TCAG data is estimated based on Select Zone Analysis conducted for the region for establishing traffic models of existing and future land development projects. Based on household and employment populations in the Woodlake area, as well as travel patterns throughout the region, TCAG data has established the regional average VMT per inbound and outbound trip to be 15.21 miles and 15.31 miles, respectively.

In order to establish the anticipated VMT profile for the proposed light industrial project, an investigation into the employee trips was conducted. The primary factor involved in this evaluation is the location of the project site in relation to the surrounding population centers. The City anticipates a significant amount of traffic will travel between Woodlake and surrounding cities.

Based on the information gathered and the project traffic distribution, 39% of the employees will be traveling from within Woodlake city limits while 43% of employees are anticipated to be traveling from Visalia, Tulare and Hanford and 17% of the employees are anticipated to be traveling from Exeter, Lindsay, and Porterville.

The average trip length for employees traveling from surrounding cities was determined to be approximately 20.77 miles. The average trip length for employees traveling from Woodlake was determined to be approximately 1.50 miles. The combined average trip length for all employees resulted in an average trip length of 13.19 miles.

Based on CEQA Guideline Section 15064.3 subdivision (b), the Project would create a less than significant transportation impact, because the project's VMT is less than the regional average. As previously mentioned, the regional average VMT for inbound and outbound trips as established by TCAG is 15.21 miles and 15.31 miles, respectively. The project's average VMT is anticipated to bring down the regional average, and therefore will not cause a significant transportation impact. Impacts are *less than significant*.

Mitigation Measures: None are required.

Impact: Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment) or result in inadequate emergency access?

Less Than Significant Impact. The Project site has been designed with two point of ingress and egress, at Ropes Avenue and Mulberry Street. The Project will be responsible for construction of internal roadways to City standards. No roadway design features associated with this proposed Project would result in an increase in hazards due to a design feature or be an incompatible use. There are no non-industrial uses (such as farm equipment) associated with the project. The City has reviewed the site layout and determined that the Project provides adequate emergency access. There is a *less than significant impact*.

Mitigation Measures: None are required.

Chapter 4

CUMULATIVE IMPACTS

Cumulative Impacts

4.1 Introduction

Section 15130 of the CEQA Guidelines requires an EIR to discuss cumulative impacts of a proposed project when the project's incremental effect is cumulatively considerable. Cumulative impacts refer to two or more individual effects that, when combined, are considerable or that compound or increase other environmental impacts. The purpose of the cumulative impact analysis is to identify and summarize the environmental impacts of the proposed project in conjunction with existing, approved, and anticipated development in the project area. Since transportation and biological resources are the only potentially significant issues of concern for this project, only the cumulative effects related to transportation and biological resources are evaluated in this analysis.

The CEQA Guidelines allow for the use of two alternative methods to determine the scope of projects for the cumulative impact analysis:

- List Method a list of past, present and probable future projects producing related or cumulative impacts, including, if necessary those projects outside the control of the agency.
- General Plan Projection Method A summary of projections contained in an adopted General Plan, or related planning document, which described or evaluated regional or area wide conditions contributing to the cumulative impact.

The cumulative impacts analyses in this document are based on the General Plan Projection Method from the 2007 Woodlake General Plan (and its EIR) (CEQA Guidelines Section 15130(1)(B)).

4.2 Biological Resources

The cumulative setting for biological resources includes the greater Woodlake region. Development associated with implementation of the Woodlake General Plan would contribute to the ongoing loss of natural and agricultural lands in the area. Cumulative development would result in the conversion of existing habitat to urban uses. The City's General Plan EIR, in addition

to regional, State and federal regulations, includes policies and measures that mitigate impacts to biological resources associated with General Plan buildout.

As described in Section 3.1 Biological Resources, mitigation measures BIO-1 through BIO-6 would reduce all potential impacts to biological resources to less than significant levels. As development occurs in the region, the City will review projects on a case-by-case basis at the time each is considered for approval. Most projects in the region would generally occur within or around urban areas that have either been previously disturbed or are near existing urban development. However, some future projects may occur on undeveloped portions of the City that may result in potentially significant impacts to biological resources. However, these projects would likely be required to implement mitigation measures similar to those for the proposed Project in order to reduce these potential impacts to less than significant levels. Compliance with applicable state and federal permit requirements for these resources would be required for all future projects, which would ensure that these projects would not significantly affect sensitive biological resources or contribute to a cumulatively significant impact to such resources in the area. Implementation of the proposed Project would have a less than significant cumulative impact relative to this environmental topic. As such, impacts to biological resources would be *less than cumulatively considerable*.

4.3 Transportation

The cumulative setting for transportation impacts is the roadway system on and around the Project site, including any roadways or intersections that may be impacted by the Project. A cumulative conditions analysis was performed to identify potential impacts in year 2040. It was determined that the proposed Project would not create new significant impacts on circulation conditions on the local and regional traffic and transportation network, as analyzed and discussed in the Project Traffic Study (Appendix C) and in Section 3.2 Transportation.

The City will require roadway improvements and payment of traffic impact fees as described in Section 3.1. Ultimately, the improvements outlined in mitigation measure TRA-1 will ensure that Project-related traffic impacts will be less than significant. Payment of fees into a program is considered under CEQA to be sufficient for mitigation and as such, impacts would *not be cumulatively considerable*.

Chapter 5

PROJECT ALTERNATIVES

Project Alternatives

5.1 Introduction

CEQA Guidelines Section 15126.6 requires the consideration of a range of reasonable alternatives to the proposed project that could feasibly attain most of the objectives of the proposed project. The Guidelines further require that the discussion focus on alternatives capable of eliminating significant adverse impacts of the project or reducing them to a less-than-significant level, even if the alternative would not fully attain the project objectives or would be more costly. According to CEQA Guidelines, the range of alternatives required in an EIR is governed by the "rule of reason" that requires an EIR to evaluate only those alternatives necessary to permit a reasoned choice. An EIR need not consider alternatives that have effects that cannot be reasonably ascertained and/or are remote and speculative.

5.2 Project Objectives and Significant Impacts

The Project Applicant intends to construct and operate an industrial center that will house various industrial uses allowable by the zone district, including cannabis cultivation and distribution which is allowable with a Conditional Use Permit. The Project objectives are to:

- To create an economically sustainable industrial complex that will provide business and job opportunities within the City of Woodlake.
- To ensure the provision of services and facilities needed to accommodate planned population densities in the project area.

Based on the rule of reason as set forth in the CEQA Guidelines (Section 15126.6), the only alternatives that should be analyzed in the EIR are those that are capable of eliminating or substantially reducing significant adverse environmental impacts. The results of the analysis in this EIR and accompanying IS indicate that the proposed Project would not result in any significant environmental impacts; therefore, no alternative development scenarios are evaluated.

5.3 No Project

CEQA Section 15126.6(e) requires the discussion of the No Project Alternative "to allow decision makers to compare the impacts of approving the proposed project with the impacts of not approving the proposed project." The No Project scenario in this case consists of retaining the property in its original configuration, with no construction or operation of the proposed industrial project. Under this alternative, no new development would occur on the site.

This alternative would avoid both the adverse and beneficial effects of the Project. This alternative would avoid site-disturbance and construction-related impacts associated with construction of the proposed industrial development. The No Project Alternative would avoid the generation of any environmental inpacts; however, none of the impacts of the project are considered significant. This alternative would not meet the Project's objectives to create an economically sustainable industrial center.

Chapter 6

CEQA Considerations

CEQA Considerations

6.1 Growth-Inducing Impacts

CEQA Section 15126 (d) requires that any growth-inducing aspect of a project be addressed in an EIR. This discussion includes consideration of ways in which the proposed Project could directly or indirectly foster economic or population growth with the construction and operation of an industrial complex project in the surrounding area. Projects which could remove obstacles to population growth (such as a major public service expansion) are also considered in this discussion. The proposed Project is the establishment of an industrial complex project. It is consistent with the City of Woodlake's General Plan and Zone District with the approval of a Conditional Use Permit to accommodate the cannabil cultivation and distribution. The proposed Project would create a relatively minor amount of new employment opportunities; however, those positions would likely be readily filled by the existing employment base, given the 8.0% unemployment rate in the Visalia-Porterville Metropolitan statistical area¹. This compares with an unadjusted unemployment rate of 3.7% for California and 3.3% for the nation during the same time period. The proposed Project would not result in significant growth-inducing impacts.

Conclusion: The project would have *less than significant* growth-inducing impacts.

6.2 Irreversible Environmental Changes

Section 15126(f) of the CEQA Guidelines requires that an EIR include a discussion of significant irreversible environmental changes that would result from project implementation. CEQA Section 15126.2(c) identifies irreversible environmental changes as those involving a large commitment of nonrenewable resources or irreversible damage resulting from environmental accidents.

Irreversible changes associated with the project include the use of nonrenewable resources during construction, including concrete, plastic, and petroleum products. During the operational phase of the proposed Project, energy would be used for lighting, heating, cooling, fuel dispensers and

¹ State of California, Employment Development Department, Labor Market Information Division. November 15, 2019. https://www.labormarketinfo.edd.ca.gov/file/lfmonth/visa\$pds.pdf. Accessed 12/19.

other requirements. The use of these resources would not be substantial and would not constitute a significant effect.

Conclusion: The project would have *less than significant* irreversible environmental changes.

6.3 Significant and Unavoidable Impacts

Based on the analysis in this EIR and the accompanying Notice of Preparation and Initial Study (Appendix A), the proposed Project would not result in any significant unavoidable impacts.

Conclusion: There would be *no significant and unavoidable impacts* as a result of proposed Proejct implementation.

Chapter 7 PREPARERS

PREPARERS

7.1 List of Preparers

Crawford & Bowen Planning, Inc. (EIR Consultants)

- Travis Crawford, AICP, Principal Environmental Planner
- Emily Bowen, LEED AP, Principal Environmental Planner

Ruettgers and Schuler Civil Engineering, Inc. (Traffic Impact Analysis)

7.2 Persons and Agencies Consulted

City of Woodlake

- Jason Waters, Community Services Director
- Rebecca Griswold, Planner I

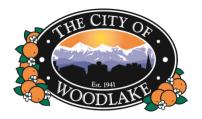
Appendix A

Notice of Preparation

Initial Study

7Points Industrial Complex Project

Prepared for:



City of Woodlake 350 N. Valencia Ave Woodlake, CA 93286 (559) 564-8055

Contact: Jason Waters

Prepared by:



Crawford & Bowen Planning, Inc. 113 N. Church Street, Suite 302 Visalia, CA 93291 (559) 840-4414

Contact: Emily Bowen, LEED AP

TABLE OF CONTENTS

PROJECT INFORMATION	4
Project title	4
Lead agency name and address	4
Contact person and phone number	4
Project location	4
Project sponsor's name/address	7
General plan designation	7
Zoning	7
Project Description	7
Surrounding Land Uses/Existing Conditions	8
Other Public Agencies Involved	10
Tribal Consultation	10
ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED	11
DETERMINATION	11
ENVIRONMENTAL CHECKLIST	13
I. AESTHETICS	13
II. AGRICULTURE AND FOREST RESOURCES	16
III. AIR QUALITY	18
IV. BIOLOGICAL RESOURCES	24
V. CULTURAL RESOURCES	28
VI. ENERGY	31
VII. GEOLOGY AND SOILS	36

	VIII. GREENHOUSE GAS EMISSIONS40)			
	IX. HAZARDS AND HAZARDOUS MATERIALS42	2			
	XII. MINERAL RESOURCES	3			
	XIII. NOISE	1			
	XIV. POPULATION AND HOUSING57	7			
	XV. PUBLIC SERVICES)			
	XVI. RECREATION	1			
	XVII. TRANSPORTATION/	2			
	TRAFFIC	2			
	XVIII. TRIBAL CULTURAL RESOURCES	1			
	XIX. UTILITIES AND SERVICE SYSTEMS	5			
	XX. WILDFIRE	3			
	XXI. MANDATORY FINDINGS OF SIGNIFICANCE70)			
LIS	LIST OF PREPARERS72				
	Persons and Agencies Consulted	2			

PROJECT INFORMATION

This document is the Initial Study for the potential environmental effects of the City of Woodlake's (City) 7Points Industrial Complex Project (Project). The City of Woodlake will act as the Lead Agency for this project pursuant to the California Environmental Quality Act (CEQA) and the CEQA Guidelines. Copies of all materials referenced in this report are available for review in the project file during regular business hours at 350 N. Valencia Avenue, Woodlake, CA 93286.

Project title

7Points Industrial Complex Project

Lead agency name and address

City of Woodlake 350 N. Valencia Avenue Woodlake, CA 93286

Contact person and phone number

Jason Waters, Community Services Director City of Woodlake (559) 564-8055

Project location

The City of Woodlake is located in Tulare County in the southern part of the San Joaquin Valley. The proposed Project is located on the southwest corner of West Ropes Avenue and Mulberry Street on APN 060-170-088. Woodlake is bisected by SR 216 and SR 245 and the City is situated five miles north of SR 198.

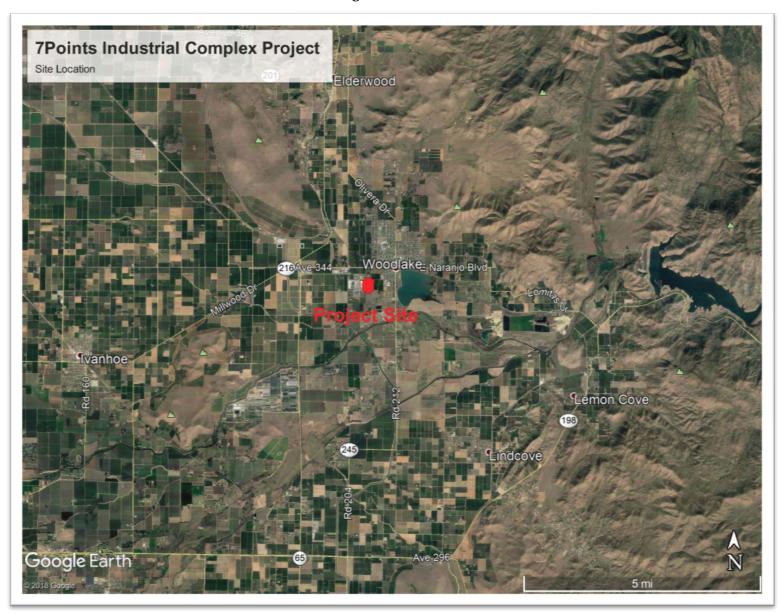


Figure 1 - Location

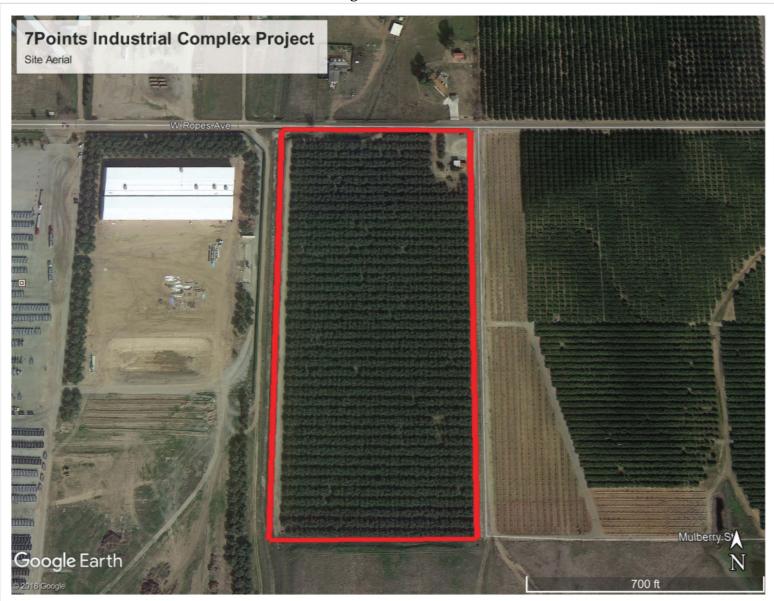


Figure 2 – Site Aerial

Project sponsor's name/address Wayne Bishop, CEO 7Points, LLC 19535 Avenue 344 Woodlake, CA 93286

General plan designation Industrial

Zoning
Light Industrial (ML)

Project Description

The Project Applicant intends to construct and operate a 20-acre industrial center that will house various industrial uses allowable by the zone district, including cannabis cultivation, manufacturing, and distribution which is allowable with a Conditional Use Permit.

Project Components

- Constructing and operating an industrial park with buildings ranging from 5,100 to 27,500 square feet each, for a total of up to 335,000 square feet of industrial space.
- Constructing internal access roads, parking spaces and associated landscaping, as detailed on Figure 3 Site Plan.
- Connecting the Project to the existing City water, wastewater, and stormdrain systems.
- Installation of perimeter security, including lighting and an alarm system, in accordance with Chapter 5.48 of the Woodlake Municipal Code.

Construction will occur in one phase and is anticipated to take up to two years to complete.

Project Operations

The project at full build-out will house 15 individual industrial businesses either allowable within the Light Industrial (ML) Zone District or cannabis businesses allowable with the approval of a Conditional Use Permit.

The facility's electrical needs will continue to be serviced by existing Southern California Edison connections that have been assessed as sufficient for full operation of allowable uses industrial uses, including indoor/mixed light cannabis cultivation.

Once a business is established, water needs, including cultivation water needs for cannabis will be serviced by an existing on-site well or by connecting to City water, while water for sanitary facilities for the entire complex will come from the City. Stormwater will be kept on-site and wastewater, including sewer use, will be serviced by on-site septic systems.

To accommodate this Project, the following entitlements are required:

- Tentative Parcel Map to divide the existing parcel into 15 separate parcels
- Conditional Use Permit to operate under a Cannabis Business License (Cultivation, Manufacturing, and Distribution) for cannabis businesses

Surrounding Land Uses/Existing Conditions

The proposed Project site is currently being utilized for agricultural purposes, specifically olive orchards.

Lands surrounding the proposed Project are described as follows:

- North: Rural residential/agricultural.
- South: Vacant.
- East: Agricultural.
- West: Industrial.

TENTATIVE SUBDIVISION EXHIBIT W. ROPES AVENUE CITY OF WOODLAKE 350 NORTH VALENCIA WOODLAKE, CA 93286 8 0.44 A.C. 0.57 A.C. 1.01 A.C. 2. ZONE: LIGHT INDUSTRIAL GENERAL PLAN: COMMERCIAL INDUSTRIAL 15' SET BACK 8. EASEMENTS FOR PUBLIC UTILITIES TO BE PROVIDED AS REQUIRED. NOT SUBJECT TO INJUNDATION OR OVERFLOW, UNLESS OTHERWISE NOTED. -US TOWER CORPORATION 20. BUILDING HEIGHT - MAXIMUM 45' 21. BUILDING SET BACKS: FRONT - 15', SIDE AND REAR - 0' - PROPERTY LINE - TOP OF CURB BACK OF SIDEWALK W NARANJO BLVD (AVE 344) 15 1.00 A.C. LOCATION MAP

Figure 3 – Conceptual Site Plan

Other Public Agencies Involved

- State of California Native American Heritage Commission
- San Joaquin Valley Air Pollution Control District
- Central Valley Regional Water Quality Control Board

Tribal Consultation

The City of Woodlake has not received any project-specific requests from any Tribes in the geographic area with which it is traditionally and culturally affiliated with or otherwise to be notified about projects in the City of Woodlake.

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

		1		by this project, involving at least checklist on the following pages.
Aesthetics		Agriculture Resources and Forest Resources		Air Quality
Biological Resources		Cultural Resources		Energy
Geology / Soils		Greenhouse Gas Emissions		Hazards & Hazardous Materials
Hydrology / WaterQuality		Land Use / Planning		Mineral Resources
Noise		Population / Housing		Public Services
Recreation		Transportation		Tribal Cultural Resources
Utilities / Service Systems		Wildfire		Mandatory Findings of Significance
DETERMINATION				
On the basis of this initial evalua	ation:			
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 there will not be a significant effect in this case made by or agreed to by the project proponent. A will be prepared.	because revisions in the project have been	
	I find that the proposed project MAY have a sig ENVIRONMENTAL IMPACT REPORT is require		
	I find that the proposed project MAY have a "potentially significant impact" or "potential significant unless mitigated" impact on the environment, but at least one effect 1) has be adequately analyzed in an earlier document pursuant to applicable legal standards, and has been addressed by mitigation measures based on the earlier analysis as described attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must anal only the effects that remain to be addressed.		
I find that although the proposed project could have a significant effect on the environme because all potentially significant effects (a) have been analyzed adequately in an earlier or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have be avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, include revisions or mitigation measures that are imposed upon the proposed project, not further is required.			
M	m Watas	September 20, 2019	
Jason Wat	ers	Date	
Communi	ty Services Director		
City of W	oodlake		

Less than

ENVIRONMENTAL CHECKLIST

	AESTHETICS ould the project:	Potentially Significant Impact	Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
a.	Have a substantial adverse effect on a scenic vista?				
b.	Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?			\boxtimes	
c.	In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and regulations governing scenic quality?				
d.	Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?				

ENVIRONMENTAL SETTING

The City of Woodlake is located on the San Joaquin Valley floor at the western foothills of the Sierra Nevada mountain range. On clear days, the peaks are visible from the majority of the City. The site is located in an industrial and agricultural area with large industrial facilities and citrus orchards dominating the landscape. The proposed Project site is bounded to the north by West Ropes Avenue, to the east by Mulberry Street, to the west by the Wutchumna Ditch Reservoir and other industrial activity, and to the south by vacant land. There are no adopted scenic resources or scenic in the area. State Routes (SR) in the proposed Project vicinity include 216, 245 and 198.

RESPONSES

- a. Have a substantial adverse effect on a scenic vista?
- b. <u>Substantially damage scenic resources</u>, including, but not limited to, trees, rock outcroppings, and <u>historic buildings within a state scenic highway?</u>

c. In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and regulations governing scenic quality?

Less than Significant Impact. The City of Woodlake General Plan does not identify any scenic vistas within the proposed Project area; however, the peaks of the Sierra Nevada mountain range are clearly visible on many days of the year. A scenic vista is generally considered a view of an area that has remarkable scenery or a resource that is indigenous to the area.

The proposed Project is consistent with the existing character and uses of the surrounding area, as other built-up land, including industrial/commercial businesses, are in the neighboring vicinities. As such, Project operations will not degrade the existing visual character of the site. Construction activities may be visible from the adjacent roadside; however, the construction activities will be temporary in nature and will not affect a scenic vista.

There are no state designated scenic highways within the immediate proximity to the Project site. California Department of Transportation Scenic Highway Mapping System identifies SR 198 east of SR 99 as an Eligible State Scenic Highway. This is the closest highway, located approximately 5.2 miles southeast of the Project site; however, the Project site is both physically and visually separated from SR 198 by intervening land uses. In addition, no scenic highways or roadways are listed within the Project area in the City of Woodlake's General Plan or Tulare County's General Plan. Based on the National Register of Historic Places (NRHP) and the City's General Plan, no historic buildings exist on the Project site. The proposed Project would not cause damage to rock outcroppings or historic buildings within a State scenic highway corridor. Any impacts would be considered *less than significant*.

Mitigation Measures: None are required.

¹ California Department of Transportation. California Scenic Highway Mapping System, Tulare County. http://www.dot.ca.gov/hq/LandArch/16_livability/scenic_highways/index.htm. Accessed August 2019.

d. <u>Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?</u>

Less Than Significant Impact. Nighttime lighting is necessary to provide and maintain safe, secure, and attractive environments; however, these lights have the potential to produce spillover light and glare and waste energy, and if designed incorrectly, could be considered unattractive. Light that falls beyond the intended area is referred to as "light trespass." Types of light trespass include spillover light and glare. Minimizing all these forms of obtrusive light is an important environmental consideration. A less obtrusive and well-designed energy efficient fixture would face downward, emit the correct intensity of light for the use, and incorporate energy timers.

Glare results when a light source directly in the field of vision is brighter than the eye can comfortably accept. Squinting or turning away from a light source is an indication of glare. The presence of a bright light in an otherwise dark setting may be distracting or annoying, referred to as discomfort glare, or it may diminish the ability to see other objects in the darkened environment, referred to as disability glare. Glare can be reduced by design features that block direct line of sight to the light source and that direct light downward, with little or no light emitted at high (near horizontal) angles, since this light would travel long distances. Cutoff-type light fixtures minimize glare because they emit relatively low-intensity light at these angles.

Currently the sources of light in the Project area are from the surrounding industrial and agricultural uses and the vehicles traveling along West Ropes Avenue and Mulberry Street. The Project would include nighttime lighting for building and security, as required by Chapter 5.48 of the Woodlake Municipal Code. Accordance with the Municipal Code will also ensure that outdoor lighting does not produce obtrusive glare onto the public right-of-way or adjoining properties. Lighting fixtures for security would be designed with "cutoff" type fixtures or shielded light fixtures, or a combination of fixture types to cast light downward, thereby providing lighting at the ground level for safety while reducing glare to adjacent properties. Accordingly, the Project would not create substantial new sources of light or glare. Potential impacts are *less than significant*.

Mitigation Measures: None are required.

Less than

RES	AGRICULTURE AND FOREST SOURCES uld the project:	Potentially Significant Impact	Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
a.	Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non- agricultural use?				
b.	Conflict with existing zoning for agricultural use, or a Williamson Act contract?				
c.	Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?				
d.	Result in the loss of forest land or conversion of forest land to non-forest use?				\boxtimes
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				\boxtimes

While the proposed Project site is currently being utilized for agricultural purposes, it is officially designated by the City of Woodlake² as ML (Light Industrial). The Project site is considered *Prime Farmland and Farmland of Statewide Importance*³; however the land is not under the Williamson Act.

RESPONSES

- a. Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?
- b. Conflict with existing zoning for agricultural use, or a Williamson Act contract?
- c. Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?
- d. Result in the loss of forest land or conversion of forest land to non-forest use?
- e. <u>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?</u>

No Impact. The Project site is *Prime Farmland* and *Farmland of Statewide Importance* according to the California Important Farmland Finder, however it is located in an area considered Light Industrial by the City of Woodlake. As such, potential conversion of farmlands on this site have been found to be significant and unavoidable in the Woodlake General Plan, 2008-2028 EIR (Sch#2008101159) and a Statement of Overriding Consideration has been adopted by the City. The Project site is not under the Williamson Act contract. Therefore, no land conversion from Farmland would occur for the Project. The Project is not zoned for forestland and does not propose any zone changes related to forest or timberland. There is *no impact*.

² City of Woodlake General Plan, Zoning Map. http://www.cityofwoodlake.com/wp-content/uploads/2017/11/City-of-Woodlake-Zoning-Map.pdf. Accessed August 2019.

³ Department of Conservation, California Important Farmland Finder. https://maps.conservation.ca.gov/DLRP/CIFF/. Accessed August 2019.

, W o	AIR QUALITY uld the project:	Potentially Significant Impact	Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
a.	Conflict with or obstruct implementation of the applicable air quality plan?				
b.	Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?				
c.	Expose sensitive receptors to substantial pollutant concentrations?				
d.	Result in other emissions (such as those leading to odors or adversely affecting a substantial number of people)?				

The climate of the City of Woodlake and the San Joaquin Valley is characterized by long, hot summers and stagnant, foggy winters. Precipitation is low and temperature inversions are common. These characteristics are conducive to the formation and retention of air pollutants and are in part influenced by the surrounding mountains which intercept precipitation and act as a barrier to the passage of cold air and air pollutants.

The proposed Project lies within the San Joaquin Valley Air Basin, which is managed by the San Joaquin Valley Air Pollution Control District (SJVAPCD or Air District). National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS) have been established for the following criteria pollutants: carbon monoxide (CO), ozone (O₃), sulfur dioxide (SO₂), nitrogen dioxide (NO₂), particulate matter (PM₁₀ and PM_{2.5}), and lead (Pb). The CAAQS also set standards for sulfates, hydrogen sulfide, and visibility.

Air quality plans or attainment plans are used to bring the applicable air basin into attainment with all state and federal ambient air quality standards designed to protect the health and safety of residents within that air basin. Areas are classified under the Federal Clean Air Act as either "attainment", "non-attainment", or "extreme non-attainment" areas for each criteria pollutant based on whether the NAAQS have been achieved or not. Attainment relative to the State standards is determined by the California Air Resources Board (CARB). The San Joaquin Valley is designated as a State and Federal extreme non-attainment area for O3, a State and Federal non-attainment area for PM2.5, a State non-attainment area for PM10, and Federal and State attainment area for CO, SO2, NO2, and Pb.

Standards and attainment status for listed pollutants in the Air District can be found in Table 1. Note that both state and federal standards are presented.

Table 1 - Standards and Attainment Status for Listed Pollutants in the Air District

	Federal Standard	California Standard		
Ozone	0.075 ppm (8-hr avg)	0.07 ppm (8-hr avg) 0.09 ppm (1-hr avg)		
Carbon Monoxide	9.0 ppm (8-hr avg) 35.0 ppm (1-hr avg)	9.0 ppm (8-hr avg) 20.0 ppm (1-hr avg)		
Nitrogen Dioxide	0.053 ppm (annual avg)	0.30 ppm (annual avg) 0.18 ppm (1-hr avg)		
Sulfur Dioxide	0.03 ppm (annual avg) 0.14 ppm (24-hr avg) 0.5 ppm (3-hr avg)	0.04 ppm (24-hr avg) 0.25 ppm (1hr avg)		
Lead	1.5 µg/m3 (calendar quarter) 0.15 µg/m3 (rolling 3-month avg)	1.5 µg/m3 (30-day avg)		
Particulate Matter (PM10)	150 μg/m3 (24-hr avg)	20 μg/m3 (annual avg) 50 μg/m3 (24-hr avg)		
Particulate Matter (PM2.5)	15 µg/m3 (annual avg)	35 μg/m3 (24-hr avg) 12 μg/m3 (annual avg)		

μg/m3 = micrograms per cubic meter

Additional State regulations include:

CARB Portable Equipment Registration Program – This program was designed to allow owners and operators of portable engines and other common construction or farming equipment to register their equipment under a statewide program so they may operate it statewide without the need to obtain a permit from the local air district.

U.S. EPA/CARB Off-Road Mobile Sources Emission Reduction Program – The California Clean Air Act (CCAA) requires CARB to achieve a maximum degree of emissions reductions from off-road mobile sources to attain State Ambient Air Quality Standards (SAAQS); off- road mobile sources include most construction equipment. Tier 1 standards for large compression-ignition engines used in off-road mobile sources went into effect in California in 1996. These standards, along with ongoing rulemaking, address emissions of nitrogen oxides (NOX) and toxic particulate matter from diesel engines. CARB is currently

developing a control measure to reduce diesel PM and NOX emissions from existing off-road diesel equipment throughout the state.

California Global Warming Solutions Act – Established in 2006, Assembly Bill 32 (AB 32) requires that California's GHG emissions be reduced to 1990 levels by the year 2020. This will be implemented through a statewide cap on GHG emissions, which will be phased in beginning in 2012. AB 32 requires CARB to develop regulations and a mandatory reporting system to monitor global warming emissions levels.

RESPONSES

- a. Conflict with or obstruct implementation of the applicable air quality plan?
- b. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?
- c. Expose sensitive receptors to substantial pollutant concentrations?

Less than Significant Impact. Less Than Significant Impact. The proposed Project lies within the San Joaquin Valley Air Basin (SJVAB). At the Federal level, the SJVAB is designated as extreme nonattainment for the 8-hour ozone standard, attainment for PM₁₀ and CO, and nonattainment fort PM_{2.5}. At the State level, the SJVAB is designated as nonattainment for the 8-hour ozone, PM₁₀, and PM_{2.5} standards. Although the Federal 1-hour ozone standard was revoked in 2005, areas must still attain this standard, and the SJVAPCD recently requested an EPA finding that the SJVAB has attained the standard based on 2011-2013 data⁴. To meet Federal Clean Air Act (CAA) requirements, the SJVAPCD has multiple air quality attainment plan (AQAP) documents, including:

- Extreme Ozone Attainment Demonstration Plan (EOADP) for attainment of the 1-hour ozone standard (2004);
- 2007 Ozone Plan for attainment of the 8-hour ozone standard;
- 2007 PM₁₀ Maintenance Plan and Request for Redesignation; and
- 2008 PM_{2.5} Plan.

Because of the region's non-attainment status for ozone, PM_{2.5}, and PM₁₀, if the project-generated emissions of either of the ozone precursor pollutants (ROG or NOx), PM₁₀, or PM_{2.5} were to exceed the

-

⁴ San Joaquin Valley Air Pollution Control District. Guide to Assessing and Mitigating Air Quality Impacts. March 19, 2015. Page 28. http://www.valleyair.org/transportation/GAMAQI 3-19-15.pdf. Accessed July 2019.

SJVAPCD's significance thresholds, then the project uses would be considered to conflict with the attainment plans. In addition, if the project uses were to result in a change in land use and corresponding increases in vehicle miles traveled, they may result in an increase in vehicle miles traveled that is unaccounted for in regional emissions inventories contained in regional air quality control plans.

The annual significance thresholds to be used for the Project for construction and operational emissions are as follows⁵:

- 10 tons per year ROG;
- 10 tons per year NOx;
- 15 tons per year PM₁₀; and
- 15 tons per year PM_{2.5}.

The project will result in both construction emissions and operational emissions as described below.

Short-Term (Construction) Emissions

Site preparation and project construction would involve grading, hauling, and various activities needed to construct the project. During construction, the project could generate pollutants such as hydrocarbons, oxides of nitrogen, carbon monoxide, and suspended PM. A major source of PM would be windblown dust generated during construction activities. Sources of fugitive dust would include disturbed soils at the construction site and trucks carrying uncovered loads of soils. Vehicles leaving the site could deposit dirt and mud on local streets, which could be an additional source of airborne dust after it dries. PM10 emissions would vary from day to day, depending on the nature and magnitude of construction activity and local weather conditions. PM10 emissions would depend on soil moisture, the silt content of soil, wind speed, and the amount of operating equipment. Larger dust particles would settle near the source, while fine particles would be dispersed over greater distances from the construction site. These emissions would be temporary and limited to the immediate area surrounding the construction site.

Operational Emissions

Operational emissions would primarily be generated from vehicles traveling to and from the Facility. According to the CalEEMod trip summary information for general light industry, the proposed Project would generate an average of 2,258 trips per day. There are no substantial stationary emission generators associated with the project.

⁵ San Joaquin Valley Air Control District – Air Quality Threshold of Significance – Criteria Pollutants. http://www.valleyair.org/transportation/0714-GAMAOI-Criteria-Pollutant-Thresholds-of-Significance.pdf. Accessed August 2019.

Total Project Emissions

The estimated annual construction and operational emissions are shown below. The California Emissions Estimator (CalEEMod), Version 2016.3.2, was used to estimate construction and operational (vehicle trips) emissions resulting from the proposed Project. The modeling is based on the square footage of the general light industrial building, construction activities, and project trip generation. The conservative trip estimate generated by CalEEMod was utilized; however, actual project trip generation is expected to be significantly lower (see traffic section of this document for project trip generation information). Modeling results are provided in Table 2 and the CalEEMod output files are provided in Appendix A.

Table 2 - Proposed Project Construction and Operation Emissions

	VOC (ROG) (tons/year)	NO _x (tons/year)	PM ₁₀ (tons/year)	PM _{2.5} (tons/year
Maximum annual construction emissions 2019-2021	1.48	3.51	0.48	0.24
Annual operational emissions	2.28	8.11	2.39	0.68
Annual Threshold of Significance	10	10	15	15
Significant?	No	No	No	No

Source: CalEEMod results (Appendix A). Crawford & Bowen Planning (2019)

As demonstrated in Table 2, estimated construction and operational emissions would not exceed the SJVAPCD's significance thresholds for ROG, NOx, PM₁₀, and PM_{2.5}. As a result, the Project uses would not conflict with emissions inventories contained in regional air quality attainment plans and would not result in a significant contribution to the region's air quality non-attainment status⁶.

Any impacts to air resources would be considered *less than significant*.

Mitigation Measures: None are required.

d. Result in other emissions (such as those leading to odors adversely affecting a substantial number of people?

Less than Significant Impact. The proposed Project is located in an industrial and agricultural portion of the City of Woodlake. During construction, the various diesel-powered vehicles and equipment in use on-site would create localized odors. These odors would be temporary and are not likely to be noticeable

-

⁶ San Joaquin Valley Air Pollution Control District. Guide to Assessing and Mitigating Air Quality Impacts. March 19, 2015. Page 65. http://www.valleyair.org/transportation/GAMAOI 3-19-15.pdf. Accessed August 2019.

for extended periods of time beyond the Project site. The potential for diesel odor impacts is therefore considered less than significant.

Should a cannabis-related business be on-site, in accordance with Chapter 5.48 (N) of the Woodlake Municipal Code, "Cannabis business shall provide a sufficient odor absorbing ventilation and exhaust system so that odor generated inside the facility that is distinctive to its operation is not detected outside the Premises, outside the building housing the Cannabis business, or anywhere on adjacent property of public rights-of-way." As such, the proposed Project and its future tenants are not expected to produce any offensive odors that would result in frequent odor complaints. Any impacts would be *less than significant*.

IV. BIOLOGICA Would the project		Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
directly or thr on any specie sensitive, or sp or regional pla or by the Cal	antial adverse effect, either ough habitat modifications, identified as a candidate, pecial status species in local ans, policies, or regulations, ifornia Department of Fish r U.S. Fish and Wildlife				
riparian habita community ide plans, policies, California Dep	t or other sensitive natural entified in local or regional regulations, or by the artment of Fish and Game d Wildlife Service?				
federally prote Section 404 of t (including, but vernal pool, co	ntial adverse effect on cted wetlands as defined by the Clean Water Act not limited to, marsh, astal, etc.) through direct g, hydrological interruption,				
of any native rewildlife species resident or mig	esident or migratory fish or sor with established native gratory wildlife corridors, use of native wildlife				

e.	Conflict with any local policies or			
	ordinances protecting biological		\square	
	resources, such as a tree preservation	Ш		
	policy or ordinance?			
f.	Conflict with the provisions of an adopted			
	Habitat Conservation Plan, Natural			
	Community Conservation Plan, or other			
	approved local, regional, or state habitat			
	conservation plan?			

The proposed Project site is located in a portion of the central San Joaquin Valley that has, for decades, experienced intensive agricultural and urban disturbances. Current agricultural endeavors in the region include dairies, groves, and row crops.

Like most of California, the Central San Joaquin Valley experiences a Mediterranean climate. Warm dry summers are followed by cool moist winters. Summer temperatures usually exceed 90 degrees Fahrenheit, and the relative humidity is generally very low. Winter temperatures rarely raise much above 70 degrees Fahrenheit, with daytime highs often below 60 degrees Fahrenheit. Annual precipitation within the proposed Project site is about 10 inches, almost 85% of which falls between the months of October and March. Nearly all precipitation falls in the form of rain and storm-water readily infiltrates the soils of the surrounding the sites.

Native plant and animal species once abundant in the region have become locally extirpated or have experienced large reductions in their populations due to conversion of upland, riparian, and aquatic habitats to agricultural and urban uses. Remaining native habitats are particularly valuable to native wildlife species including special status species that still persist in the region. According to the Woodlake General Plan, most of the open space in the Woodlake area is dominated by agriculture. Citrus, olives, and grazing land are the dominant uses, which may attract the San Joaquin kit fox and burrowing owls.

The site currently consists of olive orchards. The Project site's surrounding lands consist of industrial facilities, active agriculture and rural residences.

No aquatic or wetland features occur on the proposed Project site; therefore, jurisdictional waters are considered absent from the site.

RESPONSES

a. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?

Less than Significant Impact with Mitigation Incorporation. The site is currently developed for olive orchards. The site is highly disturbed; however the existing olive trees, along with the few large trees along the perimeter of the Project site may serve as habitat for bird species. Several bird species in the Project area are protected under the Migratory Bird Treaty Act. Migratory birds can typically be seen foraging in fallow fields and grassland habitats and they nest in dense vegetation. The dense tree growth on the site and presence of nearby fields can potentially attract Migratory Birds or other sensitive bird species for nesting or foraging purposes. Construction activities such as excavating, trenching, and grading that disturb a nesting bird on the Project site or immediately adjacent to the construction zone could constitute a significant effect. Implementation of Mitigation Measure BIO-1 will ensure that any impacts remain *less than significant*.

Mitigation Measures:

BIO-1

To the extent practicable, construction shall be scheduled to avoid the nesting season, which extends from February through August. If it is not possible to schedule construction between September and January, a pre-construction clearance survey for nesting birds shall be conducted by a qualified biologist to ensure that no active nests will be disturbed during the implementation of the Project. A pre-construction clearance survey shall be conducted no more than 14 days prior to the start of construction activities. During this survey, the qualified biologist shall inspect all potential nest substrates in and immediately adjacent to the impact areas, including within 250 feet in the case of raptor nests. If an active nest is found close enough to the construction area to be disturbed by these activities, the qualified biologist shall determine the extent of a construction-free buffer to be established around the nest. If work cannot proceed without disturbing the nesting birds, work may need to be halted or redirected to other areas until nesting and fledging are completed or the nest has failed for non-construction related reasons.

b. <u>Have a substantial adverse effect on any riparian habitat or other sensitive natural community</u> identified in local or regional plans, policies, regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?

c. <u>Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?</u>

No Impact. There are no natural waterways, sensitive natural communities, or protected wetlands on the subject site. As such, there is *no impact*.

Mitigation Measures: None are required.

d. <u>Interfere substantially with the movement of any native resident or migratory fish or wildlife species</u> or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

No Impact. There are no natural waterways or natural vegetation on the subject site. There would be *no impact* to native species movement.

Mitigation Measures: None are required.

e. <u>Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?</u>

No Impact. The City of Woodlake's General Plan includes policies for the protection of biological resources. The proposed Project would not conflict with any of the adopted policies. There is *no impact*.

Mitigation Measures: None are required.

f. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

No Impact. The proposed Project site is not within an area set aside for the conservation of habitat or sensitive plant or animal species pursuant to a Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. As such, there is *no impact*.

V. CULTURAL RESOURCES Would the project:		Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact	
a.	Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?				\boxtimes	
b.	Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?					
c.	Disturb any human remains, including those interred outside of formal cemeteries?		\boxtimes			

Archaeological resources are places where human activity has measurably altered the earth or left deposits of physical remains. Archaeological resources may be either prehistoric (before the introduction of writing in a particular area) or historic (after the introduction of writing). The majority of such places in this region are associated with either Native American or Euroamerican occupation of the area. The most frequently encountered prehistoric and early historic Native American archaeological sites are village settlements with residential areas and sometimes cemeteries; temporary camps where food and raw materials were collected; smaller, briefly occupied sites where tools were manufactured or repaired; and special-use areas like caves, rock shelters, and sites of rock art. Historic archaeological sites may include foundations or features such as privies, corrals, and trash dumps.

The prehistoric and historic site records and literature search was completed by the California Historical Resources Information System, Southern San Joaquin Valley Information Center (CHRIS/SSJVIC), California State University Bakersfield (File RS# 19-330, August 26, 2019). Specialized listings for cultural resources consulted by the SSJVIC include the Historic Properties Directory for Tulare County with the most recent updates of the National Register of Historic Places, California Historical Landmarks, and California Points of Historical Interest as well as other evaluations of properties reviewed by the State of California Office of Historic Preservation. Other sources consulted by the SSJVIC include California Inventory of Historic Resources, California Points of Historical Interest, and California Register. In addition, The California History Plan and Five Views: An Ethnic Sites Survey for California, Historic Properties Directory and available local and regional surveys/inventories/historic maps were consulted.

The records search found no recorded cultural resources (including archaeological sites and architectural properties) located within or adjacent to the proposed Project area. This review included cultural resources listed in the National Register of Historic Places, California Register of Historical Resources, California State Landmarks, and the California Points of Historical Interest. None of the archaeological compliance reports on file at the CHRIS/SSJVIC include the project. See Appendix B.

No additional archaeological or historic resources were identified within or near the project site.

RESPONSES

a. <u>Cause a substantial adverse change in the significance of a historical resource pursuant to \$15064.5?</u>

No Impact. As discussed above, no historic resources were identified within or adjacent to the project site. There is *no impact*.

Mitigation Measures: None are required.

- b. <u>Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?</u>
- c. Disturb any human remains, including those interred outside of formal cemeteries?

Less Than Significant Impact With Mitigation. The project area is highly disturbed, consisting of olive orchards. There are no known or visible cultural or archaeological resources, paleontological resources, or human remains that exist on the surface of the project area. Therefore, it is determined that the project has low potential to impact any sensitive resources and no further cultural resources work is required unless project plans change to include work not currently identified in the project description.

Although no cultural or archaeological resources, paleontological resources or human remains have been identified in the project area, the possibility exists that such resources or remains may be discovered during Project site preparation, excavation and/or grading activities. Mitigation Measures CUL – 1 and CUL – 2 will be implemented to ensure that Project will result in *less than significant impacts with mitigation*.

Mitigation Measures:

- CUL 1 Should evidence of prehistoric archeological resources be discovered during construction, the contractor shall halt all work within 25 feet of the find and the resource shall be evaluated by a qualified archaeologist. If evidence of any archaeological, cultural, and/or historical deposits is found, hand excavation and/or mechanical excavation shall proceed to evaluate the deposits for determination of significance as defined by the CEQA guidelines. The archaeologist shall submit reports, to the satisfaction of the City of Fresno, describing the testing program and subsequent results. These reports shall identify any program mitigation that the project proponent shall complete in order to mitigate archaeological impacts (including resource recovery and/or avoidance testing and analysis, removal, reburial, and curation of archaeological resources).
- CUL 2In order to ensure that the proposed project does not impact buried human remains during project construction, the project proponent shall be responsible for on-going monitoring of project construction. Prior to the issuance of any grading permit, the project proponent shall provide the City of Fresno with documentation identifying construction personnel that will be responsible for on-site monitoring. If buried human remains are encountered during construction, further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains shall be halted until the Fresno coroner is contacted and the coroner has made the determinations and notifications required pursuant to Health and Safety Code Section 7050.5. If the coroner determines that Health and Safety Code Section 7050.5(c) require that he give notice to the Native American Heritage Commission, then such notice shall be given within 24 hours, as required by Health and Safety Code Section 7050.5(c). In that event, the NAHC will conduct the notifications required by Public Resources Code Section 5097.98. Until the consultations described below have been completed, the landowner shall further ensure that the immediate vicinity, according to generally accepted cultural or archaeological standards or practices where Native American human remains are located, is not disturbed by further development activity until the landowner has discussed and conferred with the Most Likely Descendants on all reasonable options regarding the descendants' preferences and treatments, as prescribed by Public Resources Code Section 5097.98(b). The NAHC will mediate any disputes regarding treatment of remains in accordance with Public Resources Code Section 5097.94(k). The landowner shall be entitled to exercise rights established by Public Resources Code Section 5097.98(e) if any of the circumstances established by that provision become applicable.

		Less than				
			Significant			
VI.	ENERGY	Potentially Significant	With Mitigation	Less than Significant	No	
Wot	ald the project:	Impact	Incorporation	Impact	Impact	
a.	Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?					
b.	Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?					

California's total energy consumption is second-highest in the nation, but, in 2016, the state's per capita energy consumption ranked 48th, due in part to its mild climate and its energy efficiency programs. In 2017, California ranked second in the nation in conventional hydroelectric generation and first as a producer of electricity from solar, geothermal, and biomass resources while also in 2017, solar PV and solar thermal installations provided about 16% of California's net electricity generation.⁷

Energy usage is typically quantified using the British thermal unit (BTU). As a point of reference, the approximately amounts of energy contained in common energy sources are as follows:

Energy Source	BTUs ⁸
Gasoline	120,429 per gallon
Natural Gas	1,037 per cubic foot
Electricity	3,412 per kilowatt-hour

⁷ U.S. Energy Information Administration. Independent Statistics and Analysis. California Profile Overview. https://www.eia.gov/state/?sid=CA#tabs-1. Accessed August 2019.

⁸ U.S. Energy Information Administration. Energy Units and Calculators Explained. https://www.eia.gov/energyexplained/index.php?page=about_energy_units. Accessed August 2019.

California electrical consumption in 2016 was 7,830.8 trillion BTU⁹, as provided in Table 3, while total electrical consumption by Tulare County in 2017 was 14.530 trillion BTU.¹⁰

Table 3 – 2016 California Energy Consumption¹¹

i abic o	zoro camorna Energy consomption				
End User	BTU of energy consumed (in trillions)	Percentage of total consumption			
Residential	1,384.4	17.7			
Commercial	1,477.2	18.9			
Industrial	1,854.3	23.7			
Transportation	3,114.9	39.8			
Total	7,830.8				

The California Department of Transportation (Caltrans) reports that approximately 25.1 million automobiles, 5.7 million trucks, and 889,024 motorcycles were registered in the state in 2017, resulting in a total estimated 339.8 billion vehicles miles traveled (VMT).¹² Within Tulare County, an estimated 3.7 million vehicle miles were traveled in 2017 for an average of 10,099 miles per day.¹³

Applicable Regulations

California Energy Code (Title 24, Part 6, Building Energy Efficiency Standards)

California Code of Regulations Title 24, Part 6 comprises the California Energy Code, which was adopted to ensure that building construction, system design and installation achieve energy efficiency. The California Energy Code was first established in 1978 by the CEC in response to a legislative mandate to reduce California's energy consumption, and apply to energy consumed for heating, cooling, ventilation, water heating, and lighting in new residential and non-residential buildings. The standards are updated periodically to increase the baseline energy efficiency requirements. The 2013 Building Energy Efficiency Standards focus on several key areas to improve the energy efficiency of newly constructed buildings and additions and alterations to existing buildings and include requirements to enable both demand reductions during critical peak periods and future solar electric and thermal system installations. Although it was not originally intended to reduce greenhouse gas (GHG) emissions, electricity production

⁹ U.S. Energy Information Administration. Independent Statistics and Analysis. California Profile Overview. https://www.eia.gov/state/?sid=CA#tabs-1. Accessed August 2019.

¹⁰ California Energy Commission. Electricity Consumption by County. http://ecdms.energy.ca.gov/elecbycounty.aspx. Accessed August 2019.

¹¹ U.S. Energy Information Administration. Independent Statistics and Analysis. California Profile Overview. https://www.eia.gov/state/?sid=CA#tabs-1. Accessed August 2019.

¹² Caltrans. 2017. California Transportation Quick Facts. http://www.dot.ca.gov/drisi/library/qf/qf2017.pdf. Accessed August 2019.

¹³ Caltrans. 2017. Tulare County Transportation Quick Facts. http://www.dot.ca.gov/drisi/library/qfco/tul/tul2017.pdf. Accessed August 2019.

by fossil fuels results in GHG emissions and energy efficient buildings require less electricity. Therefore, increased energy efficiency results in decreased GHG emissions.

California Green Building Standards Code (Title 24, Part II, CALGreen)

The California Building Standards Commission adopted the California Green Buildings Standards Code (CALGreen in Part 11 of the Title 24 Building Standards Code) for all new construction statewide on July 17, 2008. Originally a volunteer measure, the code became mandatory in 2010 and the most recent update (2019) will go into effect on January 1, 2020. CALGreen sets targets for energy efficiency, water consumption, dual plumbing systems for potable and recyclable water, diversion of construction waste from landfills, and use of environmentally sensitive materials in construction and design, including ecofriendly flooring, carpeting, paint, coatings, thermal insulation, and acoustical wall and ceiling panels. The 2019 CALGreen Code includes mandatory measures for non-residential development related to site development; water use; weather resistance and moisture management; construction waste reduction, disposal, and recycling; building maintenance and operation; pollutant control; indoor air quality; environmental comfort; and outdoor air quality. Mandatory measures for residential development pertain to green building; planning and design; energy efficiency; water efficiency and conservation; material conservation and resource efficiency; environmental quality; and installer and special inspector qualifications.

Clean Energy and Pollution Reduction Act (SB 350)

The Clean Energy and Pollution Reduction Act (SB 350) was passed by California Governor Brown on October 7, 2015, and establishes new clean energy, clean air, and greenhouse gas reduction goals for the year 2030 and beyond. SB 350 establishes a greenhouse gas reduction target of 40 percent below 1990 levels for the State of California, further enhancing the ability for the state to meet the goal of reducing greenhouse gas emissions by 80 percent below 1990 levels by the year 2050.

Renewable Portfolio Standard (SB 1078 and SB 107)

Established in 2002 under SB 1078, the state's Renewables Portfolio Standard (RPS) was amended under SB 107 to require accelerated energy reduction goals by requiring that by the year 2010, 20 percent of electricity sales in the state be served by renewable energy resources. In years following its adoption, Executive Order S-14-08 was signed, requiring electricity retail sellers to provide 33 percent of their service loads with renewable energy by the year 2020. In 2011, SB X1-2 was signed, aligning the RPS target with the 33 percent requirement by the year 2020. This new RPS applied to all state electricity retailers, including publicly owned utilities, investor-owned utilities, electrical service providers, and community choice aggregators. All entities included under the RPS were required to adopt the RPS 20 percent by year 2020 reduction goal by the end of 2013, adopt a reduction goal of 25 percent by the end

of 2016, and meet the 33 percent reduction goal by the end of 2020. In addition, the Air Resources Board, under Executive Order S-21-09, was required to adopt regulations consistent with these 33 percent renewable energy targets.

RESPONSES

- a. Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?
- b. Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

Less Than Significant Impact. The proposed Project includes construction and operation of an industrial center, including fifteen buildings ranging from 5,100 to 27,500 square feet each. The Project would introduce energy usage on a site that is currently demanding minimal energy. By comparison, at buildout, the Project would consume large amounts of energy in both the short-term during Project construction and in the long-term during Project operation.

During construction, the Project would consume energy in two general forms: (1) the fuel energy consumed by construction vehicles and equipment; and (2) bound energy in construction materials, such as asphalt, steel, concrete, pipes, and manufactured or processed materials such as lumber and glass. Title 24 Building Energy Efficiency Standards provide guidance on construction techniques to maximize energy conservation and it is expected that contractors and owners have a strong financial incentive to use recycled materials and products originating from nearby sources in order to reduce materials costs. As such, it is anticipated that materials used in construction and construction vehicle fuel energy would not involve the wasteful, inefficient, or unnecessary consumption of energy.

Operational Project energy consumption would occur for multiple purposes, including but not limited to, building heating and cooling, refrigeration, lighting and electronics. Operational energy would also be consumed during each vehicle trip associated with the proposed use. CalEEMod was utilized to generate the estimated energy demand of the proposed Project, and the results are provided in Table 4 and in Appendix A.

Table 4 – Annual Project Energy Consumption					
Land Use	Electricity Use	Natural Gas Use	Annual Energy Consumption		
	in kWh/year	in kBTU/year	(in Million BTU)		
Light Industry and	3,341,430	5,681,290	17,083		
Parking Lot					

The proposed Project would be required to comply with Title 24 Building Energy Efficiency Standards, which provide minimum efficiency standards related to various building features, including appliances,

water and space heating and cooling equipment, building insulation and roofing, and lighting. Implementation of Title 24 standards significantly increases energy savings, and it is generally assumed that compliance with Title 24 ensures projects will not result in the inefficient, wasteful, or unnecessary consumption of energy.

As discussed in Impact XVII – Transportation/Traffic, the proposed Project would generate approximately 2,258 vehicle trips on weekdays, and an average of 532 vehicle trips on the weekends. The length of these trips and the individual vehicle fuel efficiencies are not known; therefore, the resulting energy consumption cannot be accurately calculated. Adopted federal vehicle fuel standards have continually improved since their original adoption in 1975 and assists in avoiding the inefficient, wasteful, and unnecessary use of energy by vehicles.

As discussed previously, the proposed Project would be required to implement and be consistent with existing energy design standards at the local and state level. The Project would be subject to energy conservation requirements in the California Energy Code and CALGreen. Adherence to state code requirements would ensure that the Project would not result in wasteful and inefficient use of non-renewable resources due to building operation.

Therefore, any impacts are *less than significant*.

	GEOLOGY AND SOILS uld the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
a.	Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:				
	i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.				
	ii. Strong seismic ground shaking?				
	iii. Seismic-related ground failure, including liquefaction?				
	iv. Landslides?				
b.	Result in substantial soil erosion or the loss of topsoil?				
C.	Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?				
d.	Be located on expansive soil, as defined in Table 18-1-B of the most recently adopted Uniform Building Code				

	creating substantial direct or indirect risks to life or property?		
e.	Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?		
f.	Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?		

The City of Woodlake is situated along the western slope of a northwest-trending belt of rocks comprising the Sierra Nevada and within the southern portion of the Cascade Range. The Sierra Nevada geomorphic province is primarily composed of cretaceous granitic plutons and remnants of Paleozoic and Mesozoic metavolcanic and metasedimentary rocks, and Cenozoic volcan and sedimentary rocks.

There are no known active earthquake faults in the City of Woodlake. According to the Woodlake General Plan, the nearest active faults are the San Andreas, 65 miles west; the Owens Valley, 75 miles east; and the White Wolf; 75 miles south.

According to the City's General Plan, much of the Project area has soils with high clay content that can expand and contract as water conditions change.

RESPONSES

- a-i. <u>Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving 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.</u>
- a-ii. Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking?

a-iii. Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving seismic-related ground failure, including liquefaction?

a-iv. Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving landslides?

Less Than Significant Impact. The proposed project site is not located in an earthquake fault zone as delineated by the 1972 Alquist-Priolo Earthquake Fault Zoning Map Act. The nearest known potentially active fault is the Clovis Fault, located over thirty miles northwest of the site. No active faults have been mapped within the project boundaries, so there is no potential for fault rupture. It is anticipated that the proposed Project site would be subject to some ground acceleration and ground shaking associated with seismic activity during its design life. The Project site would be engineered and constructed in strict accordance with the earthquake resistant design requirements contained in the latest edition of the California Building Code (CBC) for seismic zone III, as well as Title 24 of the California Administrative Code, and therefore would avoid potential seismically induced hazards on planned structures. The impact of seismic hazards on the project would be *less than significant*.

Mitigation Measures: None are required.

b. Result in substantial soil erosion or the loss of topsoil?

Less than Significant Impact. The proposed Project will construct and operate an industrial facility with associated improvements. The Project site has a generally flat topography, is in an established urban area and does not include any Project features that would result in soil erosion or loss of topsoil. Therefore, the impact is *less than significant*.

Mitigation Measures: None are required.

c. <u>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?</u>

Less than Significant Impact. As described in Responses (a.iii) and (a.iv) above, the proposed Project would not require a substantial grade change or change in topography. Any impacts would be *less than significant*.

d. <u>Be located on expansive soil</u>, as defined in Table 18-1-B of the most recently adopted Uniform <u>Building Code creating substantial risks to life or property?</u>

Less than Significant Impact. See Responses (c) and (a-ii). The impact is *less than significant*.

Mitigation Measures: None are required.

e. <u>Have soils incapable of adequately supporting the use of septic tanks or alternative waste water</u> disposal systems where sewers are not available for the disposal of waste water?

Less than Significant Impact. The proposed Project includes the installation of a septic system on each parcel with the intent that the parcels will eventually tie into the City wastewater system. The septic systems will be designed to the specifications necessitated by the on-site soils, in compliance with the building code. Any impacts will be *less than significant*.

Mitigation Measures: None are required.

f. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Less Than Significant Impact. As identified in the previous cultural studies perform for the project site, there are no known paleontological resources on or near the site. (See Section V. for more details). Mitigation measures have been added that will protect unknown (buried) resources during construction, including paleontological resources. There are no unique geological features on site or in the area. Therefore, there is a *less than significant impact*.

	Less than				
	Significant				
VIII COFFE II IOLICE CAC EL AICCIOLIC	Potentially	With	Less than		
VIII. GREENHOUSE GAS EMISSIONS	Significant	Mitigation	Significant	No	
Would the project:	Impact	Incorporation	Impact	Impact	
a. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?					
b. Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?					

Various gases in the earth's atmosphere play an important role in moderating the earth's surface temperature. Solar radiation enters earth's atmosphere from space and a portion of the radiation is absorbed by the earth's surface. The earth emits this radiation back toward space, but the properties of the radiation change from high-frequency solar radiation to lower-frequency infrared radiation. GHGs are transparent to solar radiation but are effective in absorbing infrared radiation. Consequently, radiation that would otherwise escape back into space is retained, resulting in a warming of the earth's atmosphere. This phenomenon is known as the greenhouse effect. Scientific research to date indicates that some of the observed climate change is a result of increased GHG emissions associated with human activity. Among the GHGs contributing to the greenhouse effect are water vapor, carbon dioxide (CO₂), methane (CH₄), ozone, Nitrous Oxide (NO₈), and chlorofluorocarbons. Human-caused emissions of these GHGs in excess of natural ambient concentrations are considered responsible for enhancing the greenhouse effect. GHG emissions contributing to global climate change are attributable, in large part, to human activities associated with the industrial/manufacturing, utility, transportation, residential, and agricultural sectors. In California, the transportation sector is the largest emitter of GHGs, followed by electricity generation. Global climate change is, indeed, a global issue. GHGs are global pollutants, unlike criteria pollutants and TACs (which are pollutants of regional and/or local concern). Global climate change, if it occurs, could potentially affect water resources in California. Rising temperatures could be anticipated to result in sea-level rise (as polar ice caps melt) and possibly change the timing and amount of precipitation, which could alter water quality. According to some, climate change could result in more extreme weather patterns; both heavier precipitation that could lead to flooding, as well as more extended drought periods. There is uncertainty regarding the timing, magnitude, and nature of the potential changes to water resources as a result of climate change; however, several trends are evident.

Snowpack and snowmelt may also be affected by climate change. Much of California's precipitation falls as snow in the Sierra Nevada and southern Cascades, and snowpack represents approximately 35 percent of the state's useable annual water supply. The snowmelt typically occurs from April through July; it provides natural water flow to streams and reservoirs after the annual rainy season has ended. As air temperatures increase due to climate change, the water stored in California's snowpack could be affected by increasing temperatures resulting in: (1) decreased snowfall, and (2) earlier snowmelt.

RESPONSES

- a. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?
- b. Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

Less Than Significant Impact. The U.S. Environmental Protection Agency published a rule for the mandatory reporting of greenhouse gases from sources that in general emit 25,000 metric tons or more of carbon dioxide (CO2) per year. As shown in the CalEEMod results (Appendix A), the project will produce the following CO2:

Construction (2019) 358.60 MT/yr

Construction (2020) 766.09 MT/yr

Construction (2021) 3.69 MT/yr

Operation 3,937.36 MT/yr

To be conservative, the CO2 emissions generated in 2020 (766.09 MT/yr) were amortized over 30 years and added to the annual operational emissions, which results in 3,962.90 MT/yr of CO2 emissions. This represents approximately sixteen percent of the reporting threshold. As such, any impacts resulting from conflicting a GHG plan, policy, or regulation, or significantly impacting the environment as a result of project development is considered *less than significant*.

Less than

MA	HAZARDS AND HAZARDOUS ATERIALS ould the project:	Potentially Significant Impact	Significant With Mitigation Incorporation	Less than Significant Impact	No Impac
a.	Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?				
b.	Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?				
c.	Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?				
d.	Be located on a site 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?				
e.	For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?				
f.	Impair implementation of or physically interfere with an adopted emergency				

MA	HAZARDS AND HAZARDOUS TERIALS ald the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
	response plan or emergency evacuation plan?				
g.	Expose people or structures either directly or indirectly to a significant risk of loss, injury or death involving wildland fires?				

The area immediately surrounding the proposed Project consists of industrial, rural residential and agricultural uses. The parcel is currently utilized for olive orchards.

RESPONSES

- a. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?
- b. Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

Less than Significant Impact. This impact is associated with hazards caused by the routine transport, use, or disposal of hazardous materials or through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment. Proposed Project construction activities may involve the use and transport of hazardous materials. These materials may include fuels, oils, mechanical fluids, and other chemicals used during construction. Transportation, storage, use, and disposal of hazardous materials during construction activities would be required to comply with applicable federal, state, and local statutes and regulations. Compliance would ensure that human health and the environment are not exposed to hazardous materials. In addition, the Project would be required to comply with the National Pollutant Discharge Elimination System (NPDES) permit program through the submission and implementation of a Stormwater Pollution Prevention Plan during construction activities to prevent contaminated runoff from leaving the project site. Therefore, no significant impacts would occur during construction activities.

The operational phase of the proposed Project would occur after construction is completed and employees move in to occupy the expanded space on a day-to-day basis. The proposed Project includes land uses that are considered compatible with the surrounding uses. None of these land uses routinely transport, use, or dispose of hazardous materials, or present a reasonably foreseeable release of hazardous materials, with the exception of common commercial grade hazardous materials such as household and commercial cleaners, paint, etc. The proposed Project would not create a significant hazard through the routine transport, use, or disposal of hazardous materials, nor would a significant hazard to the public or to the environment through the reasonably foreseeable upset and accidental conditions involving the likely release of hazardous materials into the environment occur. Therefore, the proposed Project will not create a significant hazard to the public or the environment and any impacts would be *less than significant*.

Mitigation Measures: None are required.

c. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

No Impact. No schools are located within 0.25 mile of the Project site. This condition precludes the possibility of activities associated with the proposed Project exposing schools within a 0.25-mile radius of the project site to hazardous materials. *No impact* would occur.

Mitigation Measures: None are required.

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?

No Impact. The proposed Project site is not located on a list of hazardous materials sites complied pursuant to Government Code Section 65962.5 (Geotracker and DTSC Envirostor databases – accessed in August 2019). There are no hazardous materials sites that impact the Project. As such, *no impacts* would occur that would create a significant hazard to the public or the environment.

¹⁴ California Department of Toxic Substances Control. Envirostor Database. http://www.envirostor.dtsc.ca.gov/public/map/?myaddress=woodlake+ca. Accessed August 2019.

e. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?

Less than Significant Impact. There are no private airstrips in the Project vicinity. The Woodlake Municipal Airport is located 0.8 miles south of the site. The proposed site is located inside the Airport Land Use Plan's Safety Zone 6 (Traffic Pattern Zone). However, the proposed Project does not include residential development, which would require adherence to restrictive development policies provided by the ALUC. The Tulare County Airport Land Use Compatibility Matrix identifies "warehouse, wholesale and distributing" as well as "industrial manufacturing" and "indoor processes" as compatible land uses within Safety Zone 6. Furthermore, the proposed land use would not substantially contribute to the severity of an aircraft accident nor result in a substantial safety hazard for people residing or working in the Project area. Thus, any impacts are *less than significant*.

Mitigation Measures: None are required.

f. <u>Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?</u>

No Impact. The Project will not interfere with any adopted emergency response or evacuation plan. There is *no impact*.

Mitigation Measures: None are required.

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?

No Impact. There are no wildlands on or near the Project site. There is *no impact*.

¹⁵ Tulare County Comprehensive Airport Land Use Plan. December 2012. https://tularecounty.ca.gov/rma/index.cfm/rma-documents/planning-documents/tulare-county-comprehensive-airport-land-use-plan/. Accessed August 2019.

Less than X. HYDROLOGY AND WATER Significant QUALITY Potentially With Less than Significant Significant Mitigation Would the project: Impact Incorporation Impact No Impact a. Violate any water quality standards or waste discharge requirements or \boxtimes otherwise substantially degrade surface or ground water quality? b. Substantially decrease groundwater supplies or interfere substantially with \boxtimes groundwater recharge such that the project may impede sustainable groundwater management of the basin? c. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a Xstream or river or through the addition of impervious surfaces, in a manner which would: Result in substantial erosion or X siltation on- or off- site; ii. substantially increase the rate or amount of surface runoff in a manner \boxtimes which would result in flooding on- or offsite; iii. create or contribute runoff water which would exceed the capacity of \boxtimes existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or \boxtimes iv. impede or redirect flood flows?

QU	HYDROLOGY AND WATER ALITY ald the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
d.	In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?				\boxtimes
e.	Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?				

The City of Woodlake obtains its water supply from a vast aquifer underlying the San Joaquin Valley. The City provides water service to all developed areas within the City and the unincorporated county service area called Wells Tract, which contains approximately 50 residential dwellings.

Water is supplied to the City by five wells that are located in the southern portion of the City; adjacent to the St. Johns River. The yield of city wells ranges from 350 to 1,500 gallons per minute.

RESPONSES

a. <u>Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?</u>

Less Than Significant Impact. The Project has the potential to impact water quality standards and/or waste discharge requirements during construction (temporary impacts) and operation. Impacts are discussed below.

Construction

Although the proposed project site is relatively small in scale, grading, excavation and loading activities associated with construction activities could temporarily increase runoff, erosion, and sedimentation. Construction activities also could result in soil compaction and wind erosion effects that could adversely affect soils and reduce the revegetation potential at construction sites and staging areas.

Three general sources of potential short-term construction-related stormwater pollution associated with the proposed project are: 1) the handling, storage, and disposal of construction materials containing pollutants; 2) the maintenance and operation of construction equipment; and 3) earth moving activities which, when not controlled, may generate soil erosion and transportation, via storm runoff or mechanical equipment. Generally, routine safety precautions for handling and storing construction materials may effectively mitigate the potential pollution of stormwater by these materials. These same types of common sense, "good housekeeping" procedures can be extended to non-hazardous stormwater pollutants such as sawdust and other solid wastes.

Poorly maintained vehicles and heavy equipment leaking fuel, oil, antifreeze, or other fluids on the construction site are also common sources of stormwater pollution and soil contamination. In addition, grading activities can greatly increase erosion processes. Two general strategies are recommended to prevent construction silt from entering local storm drains. First, erosion control procedures should be implemented for those areas that must be exposed. Secondly, the area should be secured to control offsite migration of pollutants. These Best Management Practices (BMPs) would be required in the Stormwater Pollution Prevention Plan (SWPPP) to be prepared prior to commencement of Project construction. When properly designed and implemented, these "good-housekeeping" practices are expected to reduce short-term construction-related impacts to less than significant.

In accordance with the National Pollution Discharge Elimination System (NPDES) Stormwater Program, the Project will be required to comply with existing regulatory requirements to prepare a SWPPP designed to control erosion and the loss of topsoil to the extent practicable using BMPs that the Regional Water Quality Control Board (RWQCB) has deemed effective in controlling erosion, sedimentation, runoff during construction activities. The specific controls are subject to the review and approval by the RWQCB and are an existing regulatory requirement.

Operation

The Central Valley Regional Water Quality Control Board adopted a General Waste Discharge Requirements Order for Discharges of Waste Associated with Medical Cannabis Cultivation Activities (Order No. R5-2015-0113). Any proposed cannabis tenants will be in compliance with the rules and requirements set forth in the Discharge Requirements.

Therefore, any impacts are *less than significant*.

b. <u>Substantially decrease groundwater supplies or interfere substantially with groundwater recharge</u> such that the project may impede sustainable groundwater management of the basin?

Less than Significant Impact. Project demands for groundwater resources in connection with the proposed Project would not substantially deplete groundwater supplies and/or otherwise interfere with groundwater recharge efforts being implemented by the City of Woodlake. The proposed Project is not anticipated to result in additional demands for groundwater resources beyond those considered in the adopted City of Woodlake General Plan. The proposed Project would use a combination of City water for sanitary facilities and an existing on-site water well for any cultivation. Any impacts would be *less than significant*.

Mitigation Measures: None are required.

c. <u>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:</u>

i. result in substantial erosion or siltation on- or offsite;

<u>ii.</u> substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;

<u>iii.</u> create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or

iv. impede or redirect flood flows?

The proposed Project includes changes to the existing stormwater drainage pattern of the area through the installation of new buildings, parking areas, landscaping, and sidewalks. Stormwater will to be directed to the on-site landscaping areas that will serve as stormwater basins. The proposed Project will be required to comply with existing regulatory requirements to prepare a SWPPP which will limit on or offsite erosion or siltation. The Project would not otherwise degrade water quality. The project will have a *less than significant impact*.

- d. In flood hazard, tsunami or seiche zones, risk release of pollutants due to project inundation?
- e. <u>Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?</u>

Less than Significant Impact. The Project is located outside the Flood Inundation Area, defined by the City of Woodlake Special Flood Hazard Area Map. These maps are provided by the Tulare County Multi-Jurisdictional Local Hazard Mitigation Plan¹⁶ (MJLHMP) a compiled by Tulare County, FEMA, USGS, USDA and US Census.

The City of Woodlake is located inside the Terminus Dam inundation area. If the Terminus Dam failed while at full capacity, its floodwaters would arrive in Woodlake within approximately six hours. The Project is located inside the Dam Inundation Area, defined by the City of Woodlake Dam Inundation Area Map. Dam failure has been adequately planned for through the Tulare County MJLHMP, which the proposed Project is required to be in compliance with. The project will not conflict with any water quality control plans or sustainable groundwater management plan. Therefore, any impacts are *less than significant*.

¹⁶ Tulare County Multi-Jurisdictional Local Hazard Mitigation Plan. March, 2018. http://www.dinuba.org/images/2018/Tulare County MJLHMP-COMP-2018.pdf. Accessed August 2019.

			Less than Significant			
,	LAND USE AND PLANNING ald the project:	Potentially Significant Impact	With Mitigation Incorporation	Less than Significant Impact	No Impact	
a.	Physically divide an established community?					
b.	Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?					

The proposed Project site is in the southwestern portion of the City of Woodlake. The Project vicinity is heavily disturbed with industrial, rural residential and agricultural uses. The site is currently being utilized for olive orchards, see Figure 3 – Aerial Map. The site is zoned Light Industrial and the General Plan Land Use Designation is Industrial.

RESPONSES

a. Physically divide an established community?

No Impact. The construction and operation of the Project would not cause any land use changes in the surrounding vicinity nor would it divide an established community, as the industrial use would not change. *No impacts* would occur as a result of this Project.

Mitigation Measures: None are required.

b. <u>Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the General Plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?</u>

No Impact. The proposed Project includes construction and operation of an industrial facility. The facility would be composed of 15 individual buildings, some of which may house cannabis cultivation,

manufacturing, and distribution businesses. This is an allowable use within the existing zone district, with the approval of a Conditional Use Permit for the Cannabis Cultivation, Manufacturing, and Distribution License. The proposed Project will be in accordance with Chapter 5.48 of the Woodlake Municipal Code which allows cannabis businesses and establishes permitting procedures and regulations. There is *no impact*.

	MINERAL RESOURCES ald the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
a.	Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?				
b.	Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?				\boxtimes

ENVIRONMENTAL SETTING

There are no known mineral resources within the planning area and no known mining of mineral resources occurs in the City of Woodlake. The closest significant mineral resources consist of sand and gravel deposits along the St. Johns River southeast of Woodlake, near the Sierra Nevada foothills.¹⁷

RESPONSES

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

No Impact. There are no known mineral resources in the proposed Project area and the site is not included in a State classified mineral resource zones. Therefore, there is *no impact*.

Mitigation Measures: None are required.

¹⁷ City of Woodlake General Plan. Open Space, Parks, Recreation and Conservation Element. Page 7.

			Less than		
	. NOISE uld the project:	Potentially Significant Impact	Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
a.	Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?				
b.	Generation of excessive groundborne vibration or groundborne noise levels?				
c.	For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?				

ENVIRONMENTAL SETTING

The Project site is located within the City of Woodlake in an industrial, rural residential and agricultural area, see Figure 2 – Site Aerial.

RESPONSES

- a. Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?
- b. Generation of excessive groundborne vibration or groundborne noise levels?

Less than Significant Impact.

Short-term (Construction) Noise Impacts

Proposed Project construction related activities will involve temporary noise sources and are anticipated to begin in 2019 and last approximately two years. Typical construction related equipment include graders, trenchers, small tractors and excavators. During the proposed Project construction, noise from construction related activities will contribute to the noise environment in the immediate vicinity. Activities involved in construction will generate maximum noise levels, as indicated in Table 5, ranging from 79 to 91 dBA at a distance of 50 feet, without feasible noise control (e.g., mufflers) and ranging from 75 to 80 dBA at a distance of 50 feet, with feasible noise controls.

Table 5
Typical Construction Noise Levels

Typical Constitution 14050 Let	910
dBA at	50 ft
Without Feasible Noise Control	With Feasible Noise Control
80	75
88	80
88	80
79	75
85	75
85	75
91	75
	dBA at Without Feasible Noise Control 80 88 88 79 85 85

The distinction between short-term construction noise impacts and long-term operational noise impacts is a typical one in both CEQA documents and local noise ordinances, which generally recognize the reality that short-term noise from construction is inevitable and cannot be mitigated beyond a certain level. Thus, local agencies frequently tolerate short-term noise at levels that they would not accept for permanent noise sources. A more severe approach would be impractical and might preclude the kind of construction activities that are to be expected from time to time in urban environments. Most residents of urban areas recognize this reality and expect to hear construction activities on occasion.

In addition, construction activities would not occur between the hours of 10:00 PM and 7:00 AM, in accordance with Woodlake Municipal Code Section 8.24.020, which limits work "between the hours of ten p.m of one day and seven a.m. of the following day..." Further restrictions on construction noise may be placed on the project as determined through the Conditional Use permit process.

Long-term (Operational) Noise Impacts

The primary source of on-going noise from the proposed Project will be from vehicles traveling to and from the site; however, the relatively low number of new trips associated with the project is not likely to

increase the ambient noise levels by a significant amount. In accordance with the Woodlake Municipal Code, commercial cannabis operations shall be subject to the City's noise and nuisance ordinances. Additionally, deliveries to the commercial cannabis business may only take place during regular business hours. As such, any impacts would be *less than significant*.

Mitigation Measures: None are required.

c. For a project located within the vicinity of a private airstrip or an airport land use plan, or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

No Impact. The Project is located within an airport land use plan but is located well outside the CNEL contours. Therefore, there is *no impact*.

Mitigation Measures: None are required.

			Less than		
			Significant		
	. POPULATION AND HOUSING ald the project:	Potentially Significant Impact	With Mitigation Incorporation	Less than Significant Impact	No Impact
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)?				
b.	Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?				

ENVIRONMENTAL SETTING

The City of Woodlake's 2000 population was 6,651 up from the 1990 census figure of 5,678. The State Department of Finance, which provides population projections for cities and counties in California, estimated Woodlake's population to be 7,524 on January 1, 2008.¹⁸

The proposed Project is located in an area dominated by agricultural, rural residential and industrial uses. The nearest residences are within 0.25 miles to the north.

RESPONSESs

- a. <u>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)?</u>
- b. <u>Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?</u>

¹⁸ City of Woodlake General Plan Draft Environmental Impact Report. Page 21.

No Impact. There are no new homes associated with the proposed Project and there are no residential structures currently on-site. The proposed Project would be an industrial operation that would provide new jobs in the Woodlake area, which could be readily filled by the existing employment base, given the City's existing unemployment rates. The proposed Project will not affect any regional population, housing, or employment projections anticipated by City policy documents. There is *no impact*.

Mitigation Measures: None are required.

Less than

XV. PUBLIC SERVICES Would the project:	Impact	Mitigation Incorporation	Significant Impact	No Impact
a. Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
Fire protection?			\boxtimes	
Police protection?			\boxtimes	
Schools?				
Parks?				
Other public facilities?				

ENVIRONMENTAL SETTING

The proposed Project site is located in an area that is already served by public service systems. The City of Woodlake Fire Department provides the city and the surrounding area with fire protection services. The Fire Department is less than one mile east of the proposed Project site. The Woodlake Police Department is also located approximately one mile east of the proposed Project site. The Woodlake Unified School District and Tulare County Office of Education serves the Project area and the City provides several types of parks and other public facilities.

RESPONSES

a. Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:

Fire protection?

Less than Significant Impact. The proposed Project site will continue to be served by the City of Woodlake Fire Department, which is less than one mile east of the proposed Project site. No additional fire personnel or equipment is anticipated, as the site is already served by the Fire Station. The impact is *less than significant*.

Police Protection?

Less than Significant Impact. The proposed Project will continue to be served by the City of Woodlake police department. No additional police personnel or equipment is anticipated. The impact is *less than significant*.

Schools?

No Impact. The direct increase in demand for schools is normally associated with new residential projects that bring new families with school-aged children to a region. The proposed Project does not contain any residential uses. The proposed Project, therefore, would not result in an influx of new students in the Project area and is not expected to result in an increased demand upon District resources and would not require the construction of new facilities. There is *no impact*.

Parks?

No Impact. The Project would not result in an increase in demand for parks and recreation facilities because it would not result in an increase in population. Accordingly, the proposed Project would have *no impacts* on parks.

Other public facilities?

No Impact. The proposed Project is within the land use and growth projections identified in the City's General Plan and other infrastructure studies. The Project, therefore, would not result in increased demand for, or impacts on, other public facilities such as library services. Accordingly, *no impact* would occur.

Mitigation Measures: None are required.

			Less than Significant		
	I. RECREATION uld the project:	Potentially Significant Impact	With Mitigation Incorporation	Less than Significant Impact	No Impact
a.	Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?				
b.	Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?				

ENVIRONMENTAL SETTING

The City of Woodlake currently has two developed park sites and one privately owned park site, located in Olivewood Estates. Willow Court Park, containing 3.91 acres, contains a baseball filed, playground equipment and a low elevation area designated for storm water detention. Miller-Brown Park, containing 6.74 acres, houses playground equipment, picnic arbors, a skate park feature, and a basketball court. A small watercourse traverses the area. In addition to the city's parks, the athletic fields on the campuses of Woodlake's two school districts provide recreational opportunities after school hours.

RESPONSES

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

No Impact. The proposed Project does not include the construction of residential uses and would not directly or indirectly induce population growth. Therefore, the proposed Project would not cause physical deterioration of existing recreational facilities from increased usage or result in the need for new or expanded recreational facilities. The Project would have *no impact* to existing parks.

Mitigation Measures: None are required.

TRA	II. TRANSPORTATION/ AFFIC uld the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
a.	Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	\boxtimes			
b.	Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?				
c.	Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?				
d.	Result in inadequate emergency access?				

ENVIRONMENTAL SETTING

The proposed Project site is located on the southwest corner of West Ropes Avenue and Mulberry Street on APN 060-170-088. Woodlake is bisected by SR 216 and SR 245 and the City is situated five miles north of SR 198. The site is approximately 20 acres and includes construction of 15 buildings with associated improvements as an industrial facility.

RESPONSES

- a. <u>Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?</u>
- b. Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?
- c. <u>Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?</u>

d. Result in inadequate emergency access?

Potentially Significant Impact. The Project Applicant intends to subdivide an existing parcel into 15 different parcels, each with an industrial building and separate address. Each building would range from 5,100 to 27,500 square feet for a total of 330,500 square feet of light industrial space. It is currently unknown what types of businesses would inhabit the 15 different buildings, however typical industrial purposes (including cannabis cultivation, manufacturing, and distribution) are expected. According to the ITE Trip Generation Report, 8th edition, the proposed Project will generate approximately 2,304 calculated daily trips with 321 pm peak trips. Due to the estimated trip generation numbers, the proposed Project may conflict with a program plan, conflict with CEQA Guidelines section 15064.3 or increase hazards to the local roadways; therefore, this impact is *potentially significant*. This topic will be addressed in the Project's forthcoming EIR.

Less than

			Significant		
VV /III TOID A		Potentially Significant	With Mitigation	Less than Significant	No
	AL CULTURAL RESOURCES	Impact	Incorporation	Impact	Impact
Would the p		•	-	•	-
a. Cause a	substantial adverse change in the				
<u> </u>	nce of a tribal cultural resource,				
	in Public Resources Code section				
	either a site, feature, place,				
	landscape that is geographically				
	in terms of the size and scope of				
	scape, sacred place, or object with				
	value to a California Native n tribe, and that is:				
	,				
	ed or eligible for listing in the				
	fornia Register of Historical				
	ources, or in a local register of orical resources as defined in				
	lic Resources Code section				
	0.1(k), or				
	, ,				
	esource determined by the lead				
	ncy, in its discretion and ported by substantial evidence, to				
-	ignificant pursuant to criteria set				
	h in subdivision (c) of Public				
	ources Code section 5024.1. In				
	lying the criteria set forth in				
11	division (c) of the Public				
	ources Code section 5024.1, the				
lead	l agency shall consider the				
	of the resource to a				
0	fornia Native American tribe.			\bowtie	

RESPONSES

- a). Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:
 - i) <u>Listed or eligible for listing in the California Register of Historical Resources</u>, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or
 - ii) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

Less than Significant Impact. A Tribal Cultural Resource (TCR) is defined under Public Resources Code section 21074 as a site, feature, place, cultural landscape that is geographically defined in terms of size and scope, sacred place, and object with cultural value to a California Native American tribe that are either included and that is listed or eligible for inclusion in the California Register of Historic Resources or in a local register of historical resources, or if the City of Woodlake, acting as the Lead Agency, supported by substantial evidence, chooses at its discretion to treat the resource as a TCR. As discussed above, under Section V, Cultural Resources, criteria (b) and (d), no known archeological resources, ethnographic sites or Native American remains are located on the proposed Project site. As discussed under criterion (b) implementation of Mitigation Measure CULT-1 would reduce impacts to unknown archaeological deposits, including TCRs, to a less than significant level. As discussed under criterion (d), compliance with California Health and Safety Code Section 7050.5 would reduce the likelihood of disturbing or discovering human remains, including those of Native Americans.

The Native American Heritage Commission (NAHC) has performed a Sacred Lands File search for sites located on or near the Project site, with negative results. The NAHC also provided a consultation list of tribal governments with traditional lands or cultural places located within the project area. An opportunity has been provided to Native American tribes listed by the Native American Heritage Commission during the CEQA process as required by AB 52. No responses were received by the City in response to the consultation request within the mandatory response timeframes; therefore, this Initial Study has been completed consistent and compliant with AB 52. Any impacts to TCR would be considered *less than significant*.

Mitigation Measures: No additional measures are required.

	. UTILITIES AND SERVICE SYSTEMS ald the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
a.	Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?				
b.	Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?				
C.	Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?				
d.	Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?			\boxtimes	
e.	Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?			\boxtimes	

ENVIRONMENTAL SETTING

The Visalia Landfill plant is approximately 15.5 miles southwest of the proposed Project site, while the Woodlake Wastewater Treatment Plant is located less than one half-mile southeast of the site.

RESPONSES

- a. Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?
- b. <u>Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?</u>
- c. Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?
- d. Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?
- e. <u>Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?</u>

Less than Significant Impact. The proposed Project includes the construction and operation of an industrial facility and associated improvements. The proposed Project would be served by on-site septic for sewage disposal, on-site water well for cultivation, on-site stormwater retention, and by Mid-Valley Disposal for solid waste disposal. The City's water system and solid waste disposal programs have capacity for, or are planned to maintain capacity for, community growth in accordance with the adopted General Plan. Any impacts would be *less than significant*.

Mitigation Measures: None are required.

If l	. WILDFIRE located in or near state responsibility as or lands classified as very high fire ard severity zones, would the project:	Potentially Significant Impact	Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
a.	Substantially impair an adopted emergency response plan or emergency evacuation plan?			\boxtimes	
b.	Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?				
C.	Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?				
d.	Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?				

ENVIRONMENTAL SETTING

Human activities such as smoking, debris burning, and equipment operation are the major causes of wildland fires. Within Tulare County, over 1,029,130 acres (33% of the total area) are classified as "Very High" fire threat and approximately 454,680 acres (15% of the total area) are classified as "High" fire threat. The portion of the county that transitions from the valley floor into the foothills and mountains is characterized by high to very high threat of wildland fires. While the City of Woodlake is nestled at the base of the foothills, the majority of the City is developed into urban uses or in active agriculture, severely

¹⁹ Tulare County General Plan Background Report. February 2010. Page 8-21.

reducing the risk of wildland fire. According to the Tulare County Background Report Figure 8-2, the majority of the City has no threat of wildfire. The proposed Project site is relatively flat in an area actively utilized with primarily industrial and agricultural uses.

RESPONSES

- a. Substantially impair an adopted emergency response plan or emergency evacuation plan?
- b. <u>Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose</u> project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?
- c. Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?
- d. Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?

Less Than Significant Impact. The proposed Project is located in an area developed with industrial and agricultural uses, which precludes the risk of wildfire. The area is flat in nature which would limit the risk of downslope flooding and landslides, and limit any wildfire spread.

To receive building permits, the proposed Project would be required to be in compliance with the adopted emergency response plan. As such, any wildfire risk to the project structures or people would be *less than significant*.

Mitigation Measures: None are required.

SIGNI	MANDATORY FINDINGS OF IFICANCE Ithe project:	Potentially Significant Impact	Significant With Mitigation Incorporation	Less than Significant Impact	No Impact	
de su w po le ar re pl ex	roes the project have the potential to egrade the quality of the environment, abstantially reduce the habitat of a fish or rildlife species, cause a fish or wildlife opulation to drop below self-sustaining evels, threaten to eliminate a plant or mimal community, reduce the number or estrict the range of a rare or endangered lant or animal or eliminate important examples of the major periods of alifornia history or prehistory?					
in cc cc ef vi pa pi	oes the project have impacts that are adividually limited, but cumulatively onsiderable? ("Cumulatively onsiderable" means that the incremental effects of a project are considerable when lewed in connection with the effects of ast projects, the effects of other current projects, and the effects of probable future projects)?					
ef ac	oes the project have environmental fects which will cause substantial dverse effects on human beings, either irectly or indirectly?					

RESPONSES

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?

Less than Significant Impact With Mitigation. The analyses of environmental issues contained in this Initial Study indicate that the proposed Project is not expected to have substantial impact on the environment or on any resources identified in the Initial Study. Mitigation measures have been incorporated in the Project to reduce all potentially significant impacts to *less than significant*.

b. Does the project have impacts that are individually limited, but cumulatively considerable?

("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?

Less than Significant Impact. CEQA Guidelines Section 15064(i) states that a Lead Agency shall consider whether the cumulative impact of a project is significant and whether the effects of the project are cumulatively considerable. The assessment of the significance of the cumulative effects of a project must, therefore, be conducted in connection with the effects of past projects, other current projects, and probable future projects. Due to the nature of the Project and consistency with environmental policies, incremental contributions to impacts are considered less than cumulatively considerable. The proposed Project would not contribute substantially to adverse cumulative conditions, or create any substantial indirect impacts (i.e., increase in population could lead to an increase need for housing, increase in traffic, air pollutants, etc.). The impact is *less than significant*.

c. <u>Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?</u>

Less than Significant Impact With Mitigation. The analyses of environmental issues contained in this Initial Study indicate that the project is not expected to have substantial impact on human beings, either directly or indirectly. Mitigation measures have been incorporated in the Project to reduce all potentially significant impacts to *less than significant*.

LIST OF PREPARERS

Crawford & Bowen Planning, Inc.

- Emily Bowen, LEED AP, Principal Environmental Planner
- Travis Crawford, AICP, Principal Environmental Planner

Persons and Agencies Consulted

City of Woodlake

- Jason Waters, Community Services Director
- Rebecca Griswold, Planner I

California Historic Resources Information System

• Celeste Thomson, Coordinator

Native American Heritage Commission

Andrew Green, Staff Services Analyst

Appendix A

CalEEMod Files

7Points Industrial Subdivision - San Joaquin Valley Unified APCD Air District, Annual

7Points Industrial SubdivisionSan Joaquin Valley Unified APCD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Industrial Park	330.50	1000sqft	7.59	330,500.00	0
Parking Lot	331.00	Space	2.98	132,400.00	0

(lb/MWhr)

1.2 Other Project Characteristics

Urbanization	Rural	Wind Speed (m/s)	2.7	Precipitation Freq (Days)	45
Climate Zone	7			Operational Year	2021
Utility Company					
CO2 Intensity	0	CH4 Intensity	0	N2O Intensity	0

(lb/MWhr)

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

(lb/MWhr)

Table Name	Column Name	Default Value	New Value
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural

2.0 Emissions Summary

CalEEMod Version: CalEEMod.2016.3.2 Page 2 of 34 Date: 7/8/2019 12:33 PM

7Points Industrial Subdivision - San Joaquin Valley Unified APCD Air District, Annual

2.1 Overall Construction <u>Unmitigated Construction</u>

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year					ton	s/yr							MT	/yr		
2019	0.2642	2.4680	1.8063	3.9800e- 003	0.3232	0.1118	0.4350	0.1313	0.1040	0.2353	0.0000	358.5990	358.5990	0.0689	0.0000	360.3207
2020	1.4800	3.5137	3.2820	8.5100e- 003	0.3381	0.1455	0.4836	0.0911	0.1368	0.2278	0.0000	766.0852	766.0852	0.0981	0.0000	768.5383
2021	1.2814	9.2100e- 003	0.0182	4.0000e- 005	2.6700e- 003	5.4000e- 004	3.2000e- 003	7.1000e- 004	5.3000e- 004	1.2400e- 003	0.0000	3.6927	3.6927	1.5000e- 004	0.0000	3.6965
Maximum	1.4800	3.5137	3.2820	8.5100e- 003	0.3381	0.1455	0.4836	0.1313	0.1368	0.2353	0.0000	766.0852	766.0852	0.0981	0.0000	768.5383

Mitigated Construction

	ROG	NOx	СО	SO2	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					ton	s/yr				MT	/yr					
2019	0.2642	2.4680	1.8063	3.9800e- 003	0.3232	0.1118	0.4350	0.1313	0.1040	0.2353	0.0000	358.5987	358.5987	0.0689	0.0000	360.3204
2020	1.4800	3.5137	3.2820	8.5100e- 003	0.3381	0.1455	0.4836	0.0911	0.1368	0.2278	0.0000	766.0849	766.0849	0.0981	0.0000	768.5380
2021	1.2814	9.2100e- 003	0.0182	4.0000e- 005	2.6700e- 003	5.4000e- 004	3.2000e- 003	7.1000e- 004	5.3000e- 004	1.2400e- 003	0.0000	3.6927	3.6927	1.5000e- 004	0.0000	3.6965
Maximum	1.4800	3.5137	3.2820	8.5100e- 003	0.3381	0.1455	0.4836	0.1313	0.1368	0.2353	0.0000	766.0849	766.0849	0.0981	0.0000	768.5380

Page 3 of 34

7Points Industrial Subdivision - San Joaquin Valley Unified APCD Air District, Annual

Date: 7/8/2019 12:33 PM

	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	7-8-2019	10-7-2019	1.6372	1.6372
2	10-8-2019	1-7-2020	1.1700	1.1700
3	1-8-2020	4-7-2020	1.0585	1.0585
4	4-8-2020	7-7-2020	1.0514	1.0514
5	7-8-2020	10-7-2020	1.0635	1.0635
6	10-8-2020	1-7-2021	2.3492	2.3492
7	1-8-2021	4-7-2021	0.6705	0.6705
		Highest	2.3492	2.3492

CalEEMod Version: CalEEMod.2016.3.2 Page 4 of 34 Date: 7/8/2019 12:33 PM

7Points Industrial Subdivision - San Joaquin Valley Unified APCD Air District, Annual

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					ton	s/yr					MT/yr						
Area	1.5324	6.0000e- 005	6.1000e- 003	0.0000		2.0000e- 005	2.0000e- 005		2.0000e- 005	2.0000e- 005	0.0000	0.0118	0.0118	3.0000e- 005	0.0000	0.0126	
Energy	0.0306	0.2785	0.2339	1.6700e- 003		0.0212	0.0212		0.0212	0.0212	0.0000	303.1755	303.1755	5.8100e- 003	5.5600e- 003	304.9772	
Mobile	0.7189	7.8362	7.9443	0.0380	2.3348	0.0351	2.3699	0.6280	0.0332	0.6612	0.0000	3,526.739 0	3,526.739 0	0.2128	0.0000	3,532.059 8	
Waste	,,					0.0000	0.0000		0.0000	0.0000	83.1898	0.0000	83.1898	4.9164	0.0000	206.0991	
Water	,,					0.0000	0.0000		0.0000	0.0000	24.2471	0.0000	24.2471	2.4904	0.0588	104.0310	
Total	2.2819	8.1148	8.1843	0.0397	2.3348	0.0563	2.3910	0.6280	0.0544	0.6824	107.4369	3,829.926 3	3,937.363 2	7.6255	0.0644	4,147.179 7	

CalEEMod Version: CalEEMod.2016.3.2 Page 5 of 34 Date: 7/8/2019 12:33 PM

7Points Industrial Subdivision - San Joaquin Valley Unified APCD Air District, Annual

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					ton	ıs/yr				МТ	/yr					
Area	1.5324	6.0000e- 005	6.1000e- 003	0.0000		2.0000e- 005	2.0000e- 005		2.0000e- 005	2.0000e- 005	0.0000	0.0118	0.0118	3.0000e- 005	0.0000	0.0126
Energy	0.0306	0.2785	0.2339	1.6700e- 003		0.0212	0.0212		0.0212	0.0212	0.0000	303.1755	303.1755	5.8100e- 003	5.5600e- 003	304.9772
Mobile	0.7189	7.8362	7.9443	0.0380	2.3348	0.0351	2.3699	0.6280	0.0332	0.6612	0.0000	3,526.739 0	3,526.739 0	0.2128	0.0000	3,532.059 8
Waste		 				0.0000	0.0000		0.0000	0.0000	83.1898	0.0000	83.1898	4.9164	0.0000	206.0991
Water						0.0000	0.0000		0.0000	0.0000	24.2471	0.0000	24.2471	2.4904	0.0588	104.0310
Total	2.2819	8.1148	8.1843	0.0397	2.3348	0.0563	2.3910	0.6280	0.0544	0.6824	107.4369	3,829.926 3	3,937.363 2	7.6255	0.0644	4,147.179 7

	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

7Points Industrial Subdivision - San Joaquin Valley Unified APCD Air District, Annual

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	7/8/2019	8/2/2019	5	20	
2	Site Preparation	Site Preparation	8/3/2019	8/16/2019	5	10	
3	Grading	Grading	8/17/2019	9/27/2019	5	30	
4	Building Construction	Building Construction	9/28/2019	11/20/2020	5	300	
5	Paving	Paving	11/21/2020	12/18/2020	5	20	
6	Architectural Coating	Architectural Coating	12/19/2020	1/15/2021	5	20	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 75

Acres of Paving: 2.98

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 495,750; Non-Residential Outdoor: 165,250; Striped Parking Area: 7,944 (Architectural Coating – sqft)

OffRoad Equipment

Page 7 of 34 Date: 7/8/2019 12:33 PM
7Points Industrial Subdivision - San Joaquin Valley Unified APCD Air District, Annual

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	2	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	2	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
Grading	Scrapers	2	8.00	367	0.48
Building Construction	Welders	1	8.00	46	0.45

Trips and VMT

CalEEMod Version: CalEEMod.2016.3.2 Page 8 of 34 Date: 7/8/2019 12:33 PM

7Points Industrial Subdivision - San Joaquin Valley Unified APCD Air District, Annual

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	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	194.00	76.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	39.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 **Demolition - 2019**

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					ton	s/yr							МТ	/уг		
	0.0351	0.3578	0.2206	3.9000e- 004		0.0180	0.0180	 	0.0167	0.0167	0.0000	34.6263	34.6263	9.6300e- 003	0.0000	34.8672
Total	0.0351	0.3578	0.2206	3.9000e- 004		0.0180	0.0180		0.0167	0.0167	0.0000	34.6263	34.6263	9.6300e- 003	0.0000	34.8672

CalEEMod Version: CalEEMod.2016.3.2 Page 9 of 34 Date: 7/8/2019 12:33 PM

7Points Industrial Subdivision - San Joaquin Valley Unified APCD Air District, Annual

3.2 Demolition - 2019

<u>Unmitigated Construction Off-Site</u>

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							МТ	/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	9.7000e- 004	7.3000e- 004	7.1300e- 003	2.0000e- 005	1.8600e- 003	1.0000e- 005	1.8800e- 003	5.0000e- 004	1.0000e- 005	5.1000e- 004	0.0000	1.7110	1.7110	5.0000e- 005	0.0000	1.7123
Total	9.7000e- 004	7.3000e- 004	7.1300e- 003	2.0000e- 005	1.8600e- 003	1.0000e- 005	1.8800e- 003	5.0000e- 004	1.0000e- 005	5.1000e- 004	0.0000	1.7110	1.7110	5.0000e- 005	0.0000	1.7123

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					ton	s/yr							MT	/yr		
Off-Road	0.0351	0.3578	0.2206	3.9000e- 004		0.0180	0.0180		0.0167	0.0167	0.0000	34.6263	34.6263	9.6300e- 003	0.0000	34.8671
Total	0.0351	0.3578	0.2206	3.9000e- 004		0.0180	0.0180		0.0167	0.0167	0.0000	34.6263	34.6263	9.6300e- 003	0.0000	34.8671

CalEEMod Version: CalEEMod.2016.3.2 Page 10 of 34 Date: 7/8/2019 12:33 PM

7Points Industrial Subdivision - San Joaquin Valley Unified APCD Air District, Annual

3.2 Demolition - 2019

<u>Mitigated Construction Off-Site</u>

	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/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	9.7000e- 004	7.3000e- 004	7.1300e- 003	2.0000e- 005	1.8600e- 003	1.0000e- 005	1.8800e- 003	5.0000e- 004	1.0000e- 005	5.1000e- 004	0.0000	1.7110	1.7110	5.0000e- 005	0.0000	1.7123
Total	9.7000e- 004	7.3000e- 004	7.1300e- 003	2.0000e- 005	1.8600e- 003	1.0000e- 005	1.8800e- 003	5.0000e- 004	1.0000e- 005	5.1000e- 004	0.0000	1.7110	1.7110	5.0000e- 005	0.0000	1.7123

3.3 Site Preparation - 2019

Unmitigated Construction On-Site

	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/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	0.0217	0.2279	0.1103	1.9000e- 004		0.0120	0.0120		0.0110	0.0110	0.0000	17.0843	17.0843	5.4100e- 003	0.0000	17.2195
Total	0.0217	0.2279	0.1103	1.9000e- 004	0.0903	0.0120	0.1023	0.0497	0.0110	0.0607	0.0000	17.0843	17.0843	5.4100e- 003	0.0000	17.2195

CalEEMod Version: CalEEMod.2016.3.2 Page 11 of 34 Date: 7/8/2019 12:33 PM

7Points Industrial Subdivision - San Joaquin Valley Unified APCD Air District, Annual

3.3 Site Preparation - 2019

<u>Unmitigated Construction Off-Site</u>

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							MT	/yr		
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.8000e- 004	4.4000e- 004	4.2800e- 003	1.0000e- 005	1.1200e- 003	1.0000e- 005	1.1300e- 003	3.0000e- 004	1.0000e- 005	3.0000e- 004	0.0000	1.0266	1.0266	3.0000e- 005	0.0000	1.0274
Total	5.8000e- 004	4.4000e- 004	4.2800e- 003	1.0000e- 005	1.1200e- 003	1.0000e- 005	1.1300e- 003	3.0000e- 004	1.0000e- 005	3.0000e- 004	0.0000	1.0266	1.0266	3.0000e- 005	0.0000	1.0274

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					ton	s/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	0.0217	0.2279	0.1103	1.9000e- 004		0.0120	0.0120		0.0110	0.0110	0.0000	17.0843	17.0843	5.4100e- 003	0.0000	17.2195
Total	0.0217	0.2279	0.1103	1.9000e- 004	0.0903	0.0120	0.1023	0.0497	0.0110	0.0607	0.0000	17.0843	17.0843	5.4100e- 003	0.0000	17.2195

CalEEMod Version: CalEEMod.2016.3.2 Page 12 of 34 Date: 7/8/2019 12:33 PM

7Points Industrial Subdivision - San Joaquin Valley Unified APCD Air District, Annual

3.3 Site Preparation - 2019

<u>Mitigated Construction Off-Site</u>

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							MT	/yr		
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.8000e- 004	4.4000e- 004	4.2800e- 003	1.0000e- 005	1.1200e- 003	1.0000e- 005	1.1300e- 003	3.0000e- 004	1.0000e- 005	3.0000e- 004	0.0000	1.0266	1.0266	3.0000e- 005	0.0000	1.0274
Total	5.8000e- 004	4.4000e- 004	4.2800e- 003	1.0000e- 005	1.1200e- 003	1.0000e- 005	1.1300e- 003	3.0000e- 004	1.0000e- 005	3.0000e- 004	0.0000	1.0266	1.0266	3.0000e- 005	0.0000	1.0274

3.4 Grading - 2019

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					ton	s/yr							MT	/yr		
Fugitive Dust	ii ii				0.1301	0.0000	0.1301	0.0540	0.0000	0.0540	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0711	0.8178	0.5007	9.3000e- 004		0.0357	0.0357		0.0329	0.0329	0.0000	83.5520	83.5520	0.0264	0.0000	84.2129
Total	0.0711	0.8178	0.5007	9.3000e- 004	0.1301	0.0357	0.1658	0.0540	0.0329	0.0868	0.0000	83.5520	83.5520	0.0264	0.0000	84.2129

CalEEMod Version: CalEEMod.2016.3.2 Page 13 of 34 Date: 7/8/2019 12:33 PM

7Points Industrial Subdivision - San Joaquin Valley Unified APCD Air District, Annual

3.4 Grading - 2019
Unmitigated Construction Off-Site

	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/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	1.9400e- 003	1.4500e- 003	0.0143	4.0000e- 005	3.7300e- 003	3.0000e- 005	3.7600e- 003	9.9000e- 004	2.0000e- 005	1.0200e- 003	0.0000	3.4220	3.4220	1.1000e- 004	0.0000	3.4246
Total	1.9400e- 003	1.4500e- 003	0.0143	4.0000e- 005	3.7300e- 003	3.0000e- 005	3.7600e- 003	9.9000e- 004	2.0000e- 005	1.0200e- 003	0.0000	3.4220	3.4220	1.1000e- 004	0.0000	3.4246

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					ton	s/yr							MT	/yr		
Fugitive Dust) 				0.1301	0.0000	0.1301	0.0540	0.0000	0.0540	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0711	0.8178	0.5007	9.3000e- 004		0.0357	0.0357		0.0329	0.0329	0.0000	83.5519	83.5519	0.0264	0.0000	84.2128
Total	0.0711	0.8178	0.5007	9.3000e- 004	0.1301	0.0357	0.1658	0.0540	0.0329	0.0868	0.0000	83.5519	83.5519	0.0264	0.0000	84.2128

CalEEMod Version: CalEEMod.2016.3.2 Page 14 of 34 Date: 7/8/2019 12:33 PM

7Points Industrial Subdivision - San Joaquin Valley Unified APCD Air District, Annual

3.4 Grading - 2019

<u>Mitigated Construction Off-Site</u>

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/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	1.9400e- 003	1.4500e- 003	0.0143	4.0000e- 005	3.7300e- 003	3.0000e- 005	3.7600e- 003	9.9000e- 004	2.0000e- 005	1.0200e- 003	0.0000	3.4220	3.4220	1.1000e- 004	0.0000	3.4246
Total	1.9400e- 003	1.4500e- 003	0.0143	4.0000e- 005	3.7300e- 003	3.0000e- 005	3.7600e- 003	9.9000e- 004	2.0000e- 005	1.0200e- 003	0.0000	3.4220	3.4220	1.1000e- 004	0.0000	3.4246

3.5 Building Construction - 2019

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	0.0791	0.7061	0.5750	9.0000e- 004		0.0432	0.0432		0.0406	0.0406	0.0000	78.7599	78.7599	0.0192	0.0000	79.2396
Total	0.0791	0.7061	0.5750	9.0000e- 004		0.0432	0.0432		0.0406	0.0406	0.0000	78.7599	78.7599	0.0192	0.0000	79.2396

CalEEMod Version: CalEEMod.2016.3.2 Page 15 of 34 Date: 7/8/2019 12:33 PM

7Points Industrial Subdivision - San Joaquin Valley Unified APCD Air District, Annual

3.5 Building Construction - 2019 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	0.0117	0.3243	0.0650	6.8000e- 004	0.0153	2.3400e- 003	0.0176	4.4100e- 003	2.2400e- 003	6.6500e- 003	0.0000	64.2857	64.2857	5.7300e- 003	0.0000	64.4291	
Worker	0.0421	0.0314	0.3091	8.2000e- 004	0.0808	5.7000e- 004	0.0814	0.0215	5.3000e- 004	0.0220	0.0000	74.1311	74.1311	2.2800e- 003	0.0000	74.1882	
Total	0.0537	0.3557	0.3741	1.5000e- 003	0.0961	2.9100e- 003	0.0990	0.0259	2.7700e- 003	0.0286	0.0000	138.4169	138.4169	8.0100e- 003	0.0000	138.6173	

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	0.0791	0.7061	0.5750	9.0000e- 004		0.0432	0.0432		0.0406	0.0406	0.0000	78.7598	78.7598	0.0192	0.0000	79.2395
Total	0.0791	0.7061	0.5750	9.0000e- 004		0.0432	0.0432		0.0406	0.0406	0.0000	78.7598	78.7598	0.0192	0.0000	79.2395

CalEEMod Version: CalEEMod.2016.3.2 Page 16 of 34 Date: 7/8/2019 12:33 PM

7Points Industrial Subdivision - San Joaquin Valley Unified APCD Air District, Annual

3.5 Building Construction - 2019 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					ton	s/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	0.0117	0.3243	0.0650	6.8000e- 004	0.0153	2.3400e- 003	0.0176	4.4100e- 003	2.2400e- 003	6.6500e- 003	0.0000	64.2857	64.2857	5.7300e- 003	0.0000	64.4291
Worker	0.0421	0.0314	0.3091	8.2000e- 004	0.0808	5.7000e- 004	0.0814	0.0215	5.3000e- 004	0.0220	0.0000	74.1311	74.1311	2.2800e- 003	0.0000	74.1882
Total	0.0537	0.3557	0.3741	1.5000e- 003	0.0961	2.9100e- 003	0.0990	0.0259	2.7700e- 003	0.0286	0.0000	138.4169	138.4169	8.0100e- 003	0.0000	138.6173

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					ton	s/yr							MT	/yr		
Off-Road	0.2470	2.2352	1.9629	3.1400e- 003		0.1301	0.1301		0.1224	0.1224	0.0000	269.8256	269.8256	0.0658	0.0000	271.4713
Total	0.2470	2.2352	1.9629	3.1400e- 003		0.1301	0.1301		0.1224	0.1224	0.0000	269.8256	269.8256	0.0658	0.0000	271.4713

CalEEMod Version: CalEEMod.2016.3.2 Page 17 of 34 Date: 7/8/2019 12:33 PM

7Points Industrial Subdivision - San Joaquin Valley Unified APCD Air District, Annual

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					ton	s/yr							МТ	/уг		
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	0.0330	1.0328	0.1951	2.3300e- 003	0.0531	5.4100e- 003	0.0585	0.0153	5.1800e- 003	0.0205	0.0000	221.6722	221.6722	0.0187	0.0000	222.1406
Worker	0.1331	0.0962	0.9555	2.7600e- 003	0.2810	1.9200e- 003	0.2829	0.0747	1.7700e- 003	0.0764	0.0000	249.8124	249.8124	6.9000e- 003	0.0000	249.9848
Total	0.1661	1.1289	1.1506	5.0900e- 003	0.3340	7.3300e- 003	0.3414	0.0900	6.9500e- 003	0.0969	0.0000	471.4846	471.4846	0.0256	0.0000	472.1254

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					ton	s/yr							MT	/yr		
Off-Road	0.2470	2.2352	1.9629	3.1400e- 003		0.1301	0.1301		0.1224	0.1224	0.0000	269.8253	269.8253	0.0658	0.0000	271.4710
Total	0.2470	2.2352	1.9629	3.1400e- 003		0.1301	0.1301		0.1224	0.1224	0.0000	269.8253	269.8253	0.0658	0.0000	271.4710

CalEEMod Version: CalEEMod.2016.3.2 Page 18 of 34 Date: 7/8/2019 12:33 PM

7Points Industrial Subdivision - San Joaquin Valley Unified APCD Air District, Annual

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					ton	s/yr							МТ	/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	0.0330	1.0328	0.1951	2.3300e- 003	0.0531	5.4100e- 003	0.0585	0.0153	5.1800e- 003	0.0205	0.0000	221.6722	221.6722	0.0187	0.0000	222.1406
Worker	0.1331	0.0962	0.9555	2.7600e- 003	0.2810	1.9200e- 003	0.2829	0.0747	1.7700e- 003	0.0764	0.0000	249.8124	249.8124	6.9000e- 003	0.0000	249.9848
Total	0.1661	1.1289	1.1506	5.0900e- 003	0.3340	7.3300e- 003	0.3414	0.0900	6.9500e- 003	0.0969	0.0000	471.4846	471.4846	0.0256	0.0000	472.1254

3.6 Paving - 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					ton	s/yr							MT	/yr		
Off-Road	0.0136	0.1407	0.1465	2.3000e- 004		7.5300e- 003	7.5300e- 003		6.9300e- 003	6.9300e- 003	0.0000	20.0282	20.0282	6.4800e- 003	0.0000	20.1902
Paving	3.9000e- 003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0175	0.1407	0.1465	2.3000e- 004		7.5300e- 003	7.5300e- 003		6.9300e- 003	6.9300e- 003	0.0000	20.0282	20.0282	6.4800e- 003	0.0000	20.1902

CalEEMod Version: CalEEMod.2016.3.2 Page 19 of 34 Date: 7/8/2019 12:33 PM

7Points Industrial Subdivision - San Joaquin Valley Unified APCD Air District, Annual

3.6 Paving - 2020
Unmitigated Construction Off-Site

	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/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	8.8000e- 004	6.4000e- 004	6.3400e- 003	2.0000e- 005	1.8600e- 003	1.0000e- 005	1.8800e- 003	5.0000e- 004	1.0000e- 005	5.1000e- 004	0.0000	1.6580	1.6580	5.0000e- 005	0.0000	1.6591
Total	8.8000e- 004	6.4000e- 004	6.3400e- 003	2.0000e- 005	1.8600e- 003	1.0000e- 005	1.8800e- 003	5.0000e- 004	1.0000e- 005	5.1000e- 004	0.0000	1.6580	1.6580	5.0000e- 005	0.0000	1.6591

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					ton	s/yr							MT	/yr		
Off-Road	0.0136	0.1407	0.1465	2.3000e- 004	! !	7.5300e- 003	7.5300e- 003		6.9300e- 003	6.9300e- 003	0.0000	20.0282	20.0282	6.4800e- 003	0.0000	20.1901
Paving	3.9000e- 003	 			 	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0175	0.1407	0.1465	2.3000e- 004		7.5300e- 003	7.5300e- 003		6.9300e- 003	6.9300e- 003	0.0000	20.0282	20.0282	6.4800e- 003	0.0000	20.1901

CalEEMod Version: CalEEMod.2016.3.2 Page 20 of 34 Date: 7/8/2019 12:33 PM

7Points Industrial Subdivision - San Joaquin Valley Unified APCD Air District, Annual

3.6 Paving - 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					ton	s/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	8.8000e- 004	6.4000e- 004	6.3400e- 003	2.0000e- 005	1.8600e- 003	1.0000e- 005	1.8800e- 003	5.0000e- 004	1.0000e- 005	5.1000e- 004	0.0000	1.6580	1.6580	5.0000e- 005	0.0000	1.6591
Total	8.8000e- 004	6.4000e- 004	6.3400e- 003	2.0000e- 005	1.8600e- 003	1.0000e- 005	1.8800e- 003	5.0000e- 004	1.0000e- 005	5.1000e- 004	0.0000	1.6580	1.6580	5.0000e- 005	0.0000	1.6591

3.7 Architectural Coating - 2020

Unmitigated Construction On-Site

	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							MT	/yr		
Archit. Coating	1.0464					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.0900e- 003	7.5800e- 003	8.2400e- 003	1.0000e- 005		5.0000e- 004	5.0000e- 004	1 1 1	5.0000e- 004	5.0000e- 004	0.0000	1.1490	1.1490	9.0000e- 005	0.0000	1.1512
Total	1.0475	7.5800e- 003	8.2400e- 003	1.0000e- 005		5.0000e- 004	5.0000e- 004		5.0000e- 004	5.0000e- 004	0.0000	1.1490	1.1490	9.0000e- 005	0.0000	1.1512

CalEEMod Version: CalEEMod.2016.3.2 Page 21 of 34 Date: 7/8/2019 12:33 PM

7Points Industrial Subdivision - San Joaquin Valley Unified APCD Air District, Annual

3.7 Architectural Coating - 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					ton	s/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	1.0300e- 003	7.5000e- 004	7.4200e- 003	2.0000e- 005	2.1800e- 003	1.0000e- 005	2.2000e- 003	5.8000e- 004	1.0000e- 005	5.9000e- 004	0.0000	1.9398	1.9398	5.0000e- 005	0.0000	1.9412
Total	1.0300e- 003	7.5000e- 004	7.4200e- 003	2.0000e- 005	2.1800e- 003	1.0000e- 005	2.2000e- 003	5.8000e- 004	1.0000e- 005	5.9000e- 004	0.0000	1.9398	1.9398	5.0000e- 005	0.0000	1.9412

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					ton	s/yr							MT	/yr		
Archit. Coating	1.0464					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.0900e- 003	7.5800e- 003	8.2400e- 003	1.0000e- 005		5.0000e- 004	5.0000e- 004	i i	5.0000e- 004	5.0000e- 004	0.0000	1.1490	1.1490	9.0000e- 005	0.0000	1.1512
Total	1.0475	7.5800e- 003	8.2400e- 003	1.0000e- 005		5.0000e- 004	5.0000e- 004		5.0000e- 004	5.0000e- 004	0.0000	1.1490	1.1490	9.0000e- 005	0.0000	1.1512

CalEEMod Version: CalEEMod.2016.3.2 Page 22 of 34 Date: 7/8/2019 12:33 PM

7Points Industrial Subdivision - San Joaquin Valley Unified APCD Air District, Annual

3.7 Architectural Coating - 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					ton	s/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	1.0300e- 003	7.5000e- 004	7.4200e- 003	2.0000e- 005	2.1800e- 003	1.0000e- 005	2.2000e- 003	5.8000e- 004	1.0000e- 005	5.9000e- 004	0.0000	1.9398	1.9398	5.0000e- 005	0.0000	1.9412
Total	1.0300e- 003	7.5000e- 004	7.4200e- 003	2.0000e- 005	2.1800e- 003	1.0000e- 005	2.2000e- 003	5.8000e- 004	1.0000e- 005	5.9000e- 004	0.0000	1.9398	1.9398	5.0000e- 005	0.0000	1.9412

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					ton	s/yr							MT	/yr		
Archit. Coating	1.2790					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.2000e- 003	8.4000e- 003	0.0100	2.0000e- 005		5.2000e- 004	5.2000e- 004		5.2000e- 004	5.2000e- 004	0.0000	1.4043	1.4043	1.0000e- 004	0.0000	1.4067
Total	1.2802	8.4000e- 003	0.0100	2.0000e- 005		5.2000e- 004	5.2000e- 004		5.2000e- 004	5.2000e- 004	0.0000	1.4043	1.4043	1.0000e- 004	0.0000	1.4067

CalEEMod Version: CalEEMod.2016.3.2 Page 23 of 34 Date: 7/8/2019 12:33 PM

7Points Industrial Subdivision - San Joaquin Valley Unified APCD Air District, Annual

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					ton	s/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	1.1600e- 003	8.1000e- 004	8.2300e- 003	3.0000e- 005	2.6700e- 003	2.0000e- 005	2.6800e- 003	7.1000e- 004	2.0000e- 005	7.2000e- 004	0.0000	2.2884	2.2884	6.0000e- 005	0.0000	2.2899
Total	1.1600e- 003	8.1000e- 004	8.2300e- 003	3.0000e- 005	2.6700e- 003	2.0000e- 005	2.6800e- 003	7.1000e- 004	2.0000e- 005	7.2000e- 004	0.0000	2.2884	2.2884	6.0000e- 005	0.0000	2.2899

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					ton	s/yr							MT	/yr		
Archit. Coating	1.2790				_	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.2000e- 003	8.4000e- 003	0.0100	2.0000e- 005		5.2000e- 004	5.2000e- 004		5.2000e- 004	5.2000e- 004	0.0000	1.4043	1.4043	1.0000e- 004	0.0000	1.4067
Total	1.2802	8.4000e- 003	0.0100	2.0000e- 005		5.2000e- 004	5.2000e- 004		5.2000e- 004	5.2000e- 004	0.0000	1.4043	1.4043	1.0000e- 004	0.0000	1.4067

CalEEMod Version: CalEEMod.2016.3.2 Page 24 of 34 Date: 7/8/2019 12:33 PM

7Points Industrial Subdivision - San Joaquin Valley Unified APCD Air District, Annual

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					ton	s/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	1.1600e- 003	8.1000e- 004	8.2300e- 003	3.0000e- 005	2.6700e- 003	2.0000e- 005	2.6800e- 003	7.1000e- 004	2.0000e- 005	7.2000e- 004	0.0000	2.2884	2.2884	6.0000e- 005	0.0000	2.2899
Total	1.1600e- 003	8.1000e- 004	8.2300e- 003	3.0000e- 005	2.6700e- 003	2.0000e- 005	2.6800e- 003	7.1000e- 004	2.0000e- 005	7.2000e- 004	0.0000	2.2884	2.2884	6.0000e- 005	0.0000	2.2899

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

7Points Industrial Subdivision - San Joaquin Valley Unified APCD Air District, Annual

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							MT	/yr		
Mitigated	0.7189	7.8362	7.9443	0.0380	2.3348	0.0351	2.3699	0.6280	0.0332	0.6612	0.0000	3,526.739 0	3,526.739 0	0.2128	0.0000	3,532.059 8
Unmitigated	0.7189	7.8362	7.9443	0.0380	2.3348	0.0351	2.3699	0.6280	0.0332	0.6612	0.0000	3,526.739 0	3,526.739 0	0.2128	0.0000	3,532.059 8

4.2 Trip Summary Information

	Ave	rage Daily Trip Ra	ate	Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Industrial Park	2,257.32	822.95	241.27	6,121,783	6,121,783
Parking Lot	0.00	0.00	0.00		
Total	2,257.32	822.95	241.27	6,121,783	6,121,783

4.3 Trip Type Information

		Miles			Trip %			Trip Purpos	se %
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
Industrial Park	14.70	6.60	6.60	59.00	28.00	13.00	79	19	2
Parking Lot	14.70	6.60	6.60	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

	Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
	Industrial Park	0.506092	0.032602	0.169295	0.124521	0.019914	0.005374	0.021664	0.110051	0.001797	0.001623	0.005307	0.000969	0.000792
ĺ	Parking Lot	0.506092	0.032602	0.169295	0.124521	0.019914	0.005374	0.021664	0.110051	0.001797	0.001623	0.005307	0.000969	0.000792

CalEEMod Version: CalEEMod.2016.3.2 Page 26 of 34 Date: 7/8/2019 12:33 PM

7Points Industrial Subdivision - San Joaquin Valley Unified APCD Air District, Annual

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					ton	s/yr							MT	/yr		
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Mitigated	0.0306	0.2785	0.2339	1.6700e- 003		0.0212	0.0212		0.0212	0.0212	0.0000	303.1755	303.1755	5.8100e- 003	5.5600e- 003	304.9772
NaturalGas Unmitigated	0.0306	0.2785	0.2339	1.6700e- 003		0.0212	0.0212		0.0212	0.0212	0.0000	303.1755	303.1755	5.8100e- 003	5.5600e- 003	304.9772

CalEEMod Version: CalEEMod.2016.3.2 Page 27 of 34 Date: 7/8/2019 12:33 PM

7Points Industrial Subdivision - San Joaquin Valley Unified APCD Air District, Annual

5.2 Energy by Land Use - NaturalGas <u>Unmitigated</u>

	NaturalGa s 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					ton	s/yr							МТ	/yr		
Industrial Park	5.68129e +006	0.0306	0.2785	0.2339	1.6700e- 003		0.0212	0.0212		0.0212	0.0212	0.0000	303.1755	303.1755	5.8100e- 003	5.5600e- 003	304.9772
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0306	0.2785	0.2339	1.6700e- 003		0.0212	0.0212		0.0212	0.0212	0.0000	303.1755	303.1755	5.8100e- 003	5.5600e- 003	304.9772

Mitigated

	NaturalGa s 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					ton	s/yr							MT	/yr		
Industrial Park	5.68129e +006	0.0306	0.2785	0.2339	1.6700e- 003		0.0212	0.0212		0.0212	0.0212	0.0000	303.1755	303.1755	5.8100e- 003	5.5600e- 003	304.9772
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0306	0.2785	0.2339	1.6700e- 003		0.0212	0.0212		0.0212	0.0212	0.0000	303.1755	303.1755	5.8100e- 003	5.5600e- 003	304.9772

CalEEMod Version: CalEEMod.2016.3.2 Page 28 of 34 Date: 7/8/2019 12:33 PM

7Points Industrial Subdivision - San Joaquin Valley Unified APCD Air District, Annual

5.3 Energy by Land Use - Electricity <u>Unmitigated</u>

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr		МТ	-/yr	
Industrial Park	3.29509e +006	0.0000	0.0000	0.0000	0.0000
Parking Lot	46340	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr		MT	/yr	
Industrial Park	3.29509e +006	0.0000	0.0000	0.0000	0.0000
Parking Lot	46340	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

6.0 Area Detail

6.1 Mitigation Measures Area

CalEEMod Version: CalEEMod.2016.3.2 Page 29 of 34 Date: 7/8/2019 12:33 PM

7Points Industrial Subdivision - San Joaquin Valley Unified APCD Air District, Annual

	ROG	NOx	СО	SO2	Fugitive 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	1.5324	6.0000e- 005	6.1000e- 003	0.0000		2.0000e- 005	2.0000e- 005	i i i	2.0000e- 005	2.0000e- 005	0.0000	0.0118	0.0118	3.0000e- 005	0.0000	0.0126
Unmitigated	1.5324	6.0000e- 005	6.1000e- 003	0.0000		2.0000e- 005	2.0000e- 005	i i	2.0000e- 005	2.0000e- 005	0.0000	0.0118	0.0118	3.0000e- 005	0.0000	0.0126

6.2 Area by SubCategory Unmitigated

	ROG	NOx	СО	SO2	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	0.2325					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.2993					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	5.7000e- 004	6.0000e- 005	6.1000e- 003	0.0000		2.0000e- 005	2.0000e- 005		2.0000e- 005	2.0000e- 005	0.0000	0.0118	0.0118	3.0000e- 005	0.0000	0.0126
Total	1.5324	6.0000e- 005	6.1000e- 003	0.0000		2.0000e- 005	2.0000e- 005		2.0000e- 005	2.0000e- 005	0.0000	0.0118	0.0118	3.0000e- 005	0.0000	0.0126

CalEEMod Version: CalEEMod.2016.3.2 Page 30 of 34 Date: 7/8/2019 12:33 PM

7Points Industrial Subdivision - San Joaquin Valley Unified APCD Air District, Annual

6.2 Area by SubCategory Mitigated

	ROG	NOx	СО	SO2	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					ton	s/yr							MT	/yr		
Architectural Coating	0.2325					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.2993	 	1 1 1			0.0000	0.0000	1 	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	5.7000e- 004	6.0000e- 005	6.1000e- 003	0.0000		2.0000e- 005	2.0000e- 005	1 1 1 1 1	2.0000e- 005	2.0000e- 005	0.0000	0.0118	0.0118	3.0000e- 005	0.0000	0.0126
Total	1.5324	6.0000e- 005	6.1000e- 003	0.0000		2.0000e- 005	2.0000e- 005		2.0000e- 005	2.0000e- 005	0.0000	0.0118	0.0118	3.0000e- 005	0.0000	0.0126

7.0 Water Detail

7.1 Mitigation Measures Water

CalEEMod Version: CalEEMod.2016.3.2 Page 31 of 34 Date: 7/8/2019 12:33 PM

7Points Industrial Subdivision - San Joaquin Valley Unified APCD Air District, Annual

	Total CO2	CH4	N2O	CO2e
Category		МТ	√yr	
		2.4904	0.0588	104.0310
Crimingatou	24.2471	2.4904	0.0588	104.0310

7.2 Water by Land Use <u>Unmitigated</u>

	Indoor/Out door Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal		MT	-/yr	
Industrial Park	76.4281 / 0	24.2471	2.4904	0.0588	104.0310
Parking Lot	0/0	0.0000	0.0000	0.0000	0.0000
Total		24.2471	2.4904	0.0588	104.0310

CalEEMod Version: CalEEMod.2016.3.2 Page 32 of 34 Date: 7/8/2019 12:33 PM

7Points Industrial Subdivision - San Joaquin Valley Unified APCD Air District, Annual

7.2 Water by Land Use

Mitigated

	Indoor/Out door Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal		MT	-/yr	
Industrial Park	76.4281 / 0	24.2471	2.4904	0.0588	104.0310
Parking Lot	0/0	0.0000	0.0000	0.0000	0.0000
Total		24.2471	2.4904	0.0588	104.0310

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e					
		MT/yr							
willigated	83.1898	4.9164	0.0000	206.0991					
Jgatea	83.1898	4.9164	0.0000	206.0991					

7Points Industrial Subdivision - San Joaquin Valley Unified APCD Air District, Annual

8.2 Waste by Land Use <u>Unmitigated</u>

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons		МТ	-/yr	
Industrial Park	409.82	83.1898	4.9164	0.0000	206.0991
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		83.1898	4.9164	0.0000	206.0991

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons		MT	/yr	
Industrial Park	409.82	83.1898	4.9164	0.0000	206.0991
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		83.1898	4.9164	0.0000	206.0991

9.0 Operational Offroad

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

7Points Industrial Subdivision - San Joaquin Valley Unified APCD Air District, Annual

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number	

11.0 Vegetation

Appendix B

Cultural Results

<u>California</u>
<u>H</u>istorical
<u>R</u>esources
<u>I</u>nformation
<u>S</u>ystem



Fresno Kern Kings Madera Tulare Southern San Joaquin Valley Information Center

Record Search 19-330

California State University, Bakersfield

Mail Stop: 72 DOB 9001 Stockdale Highway Bakersfield, California 93311-1022

(661) 654-2289 E-mail: ssjvic@csub.edu Website: www.csub.edu/ssjvic

To: Emily Crawford

Crawford Bowen Planning, Inc. 113 N. Church Street, Suite 302

Visalia, CA 93291

Date: August 26, 2019

Re: City of Woodlake 7Points Industrial Development

County: Tulare

Map(s): Woodlake 7.5'

CULTURAL RESOURCES RECORDS SEARCH

The California Office of Historic Preservation (OHP) contracts with the California Historical Resources Information System's (CHRIS) regional Information Centers (ICs) to maintain information in the CHRIS inventory and make it available to local, state, and federal agencies, cultural resource professionals, Native American tribes, researchers, and the public. Recommendations made by IC coordinators or their staff regarding the interpretation and application of this information are advisory only. Such recommendations do not necessarily represent the evaluation or opinion of the State Historic Preservation Officer in carrying out the OHP's regulatory authority under federal and state law.

The following are the results of a search of the cultural resource files at the Southern San Joaquin Valley Information Center. These files include known and recorded cultural resources sites, inventory and excavation reports filed with this office, and resources listed on the National Register of Historic Places, Historic Property Directory, California State Historical Landmarks, California Register of Historical Resources, California Inventory of Historic Resources, and California Points of Historical Interest. Due to processing delays and other factors, not all of the historical resource reports and resource records that have been submitted to the Office of Historic Preservation are available via this records search. Additional information may be available through the federal, state, and local agencies that produced or paid for historical resource management work in the search area.

PRIOR CULTURAL RESOURCE STUDIES CONDUCTED WITHIN THE PROJECT AREA AND THE ONE-HALF MILE RADIUS

According to the information in our files, there have been no previous cultural resource studies conducted within the project area. There have been nine studies within the one-half mile radius, TU-00409, 00423, 01013, 01196, 01389, 01392, 01445, 01498, and 01813.

KNOWN/RECORDED CULTURAL RESOURCES WITHIN THE PROJECT AREA AND THE ONE-HALF MILE RADIUS

There are no recorded cultural resources within the project area, and it is not known if any exist there. There are three recorded resources within the one-half mile radius, P-54-004034, 004632, and 004875. These resources consist of an historic era ditch and two historic era railroads.

There are no recorded cultural resources within the project area that are listed in the National Register of Historic Places, the California Register of Historical Resources, the California Points of Historical Interest, California Inventory of Historic Resources, or the California State Historic Landmarks.

COMMENTS AND RECOMMENDATIONS

We understand this project consists of construction and operation of an industrial park with up to 15 buildings, for a total of approximately 335,000 square feet of industrial space, on land currently used for agricultural production of olives. Please note that agriculture does not constitute development as it does not destroy cultural resources but merely moves them around within the plow zone. Because a cultural resources study has not been conducted on this property, it is unknown if any cultural resources are present. Therefore, prior to any ground disturbance activities, we recommend the entire project area be survey for cultural resources by a qualified, professional consultant. A list of qualified consultants can be found at www.chrisinfo.org.

We also recommend that you contact the Native American Heritage Commission in Sacramento. They will provide you with a current list of Native American individuals/organizations that can assist you with information regarding cultural resources that may not be included in the CHRIS Inventory and that may be of concern to the Native groups in the area. The Commission can consult their "Sacred Lands Inventory" file in order to determine what sacred resources, if any, exist within this project area and the way in which these resources might be managed. Finally, please consult with the lead agency on this project to determine if any other cultural resource investigation is required. If you need any additional information or have any questions or concerns, please contact our office at (661) 654-2289.

By:

Celeste M. Thomson, Coordinator

Date: August 26, 2019

Please note that invoices for Information Center services will be sent under separate cover from the California State University, Bakersfield Accounting Office.

STATE OF CALIFORNIA GAVIN NEWSOM, Governor

NATIVE AMERICAN HERITAGE COMMISSION

Cultural and Environmental Department 1550 Harbor Blvd., Suite 100

West Sacramento, CA 95691 Phone: (916) 373-3710

Email: nahc@nahc.ca.gov Website: http://www.nahc.ca.gov

September 12, 2019

Emily Bowen Crawford & Bowen Planning, Inc.

VIA Email to: emily@candbplanning.com

RE: City of Woodlake 7Points Industrial Project, Tulare County

Dear Ms. Bowen:

A record search of the Native American Heritage Commission (NAHC) Sacred Lands File (SLF) was completed for the information you have submitted for the above referenced project. The results were <u>negative</u>. However, the absence of specific site information in the SLF does not indicate the absence of cultural resources in any project area. Other sources of cultural resources should also be contacted for information regarding known and recorded sites.

Attached is a list of Native American tribes who may also have knowledge of cultural resources in the project area. This list should provide a starting place in locating areas of potential adverse impact within the proposed project area. I suggest you contact all of those indicated; if they cannot supply information, they might recommend others with specific knowledge. By contacting all those listed, your organization will be better able to respond to claims of failure to consult with the appropriate tribe. If a response has not been received within two weeks of notification, the Commission requests that you follow-up with a telephone call or email to ensure that the project information has been received.

If you receive notification of change of addresses and phone numbers from tribes, please notify me. With your assistance, we can assure that our lists contain current information. If you have any questions or need additional information, please contact me at my email address: Andrew.Green@nahc.ca.gov.

Sincerely,

Andrew Green

Staff Services Analyst

andrew Green.

Attachment



Appendix B

NOP Comments Received

STATE OF CALIFORNIA GAVIN NEWSOM, Governor

NATIVE AMERICAN HERITAGE COMMISSION

Cultural and Environmental Department 1550 Harbor Blvd., Suite 100

West Sacramento, CA 95691 Phone: (916) 373-3710

Email: nahc@nahc.ca.gov Website: http://www.nahc.ca.gov

Governor's Office of Planning & Research

OCT 02 2019

STATE CLEARINGHOUSE

September 24, 2019

Jason Waters Woodlake, City of 350 North Valencia Woodlake, CA 93257

RE: SCH# 2019090507, 7 Points Industrial Complex Project, Tulare County

Dear Mr. Waters:

The Native American Heritage Commission (NAHC) has received the Notice of Preparation (NOP), Draft Environmental Impact Report (DEIR) or Early Consultation for the project referenced above. The California Environmental Quality Act (CEQA) (Pub. Resources Code §21000 et seq.), specifically Public Resources Code §21084.1, states that a project that may cause a substantial adverse change in the significance of a historical resource, is a project that may have a significant effect on the environment. (Pub. Resources Code § 21084.1; Cal. Code Regs., tit.14, §15064.5 (b) (CEQA Guidelines §15064.5 (b)). If there is substantial evidence, in light of the whole record before a lead agency, that a project may have a significant effect on the environment, an Environmental Impact Report (EIR) shall be prepared. (Pub. Resources Code §21080 (d); Cal. Code Regs., tit. 14, § 5064 subd.(a)(1) (CEQA Guidelines §15064 (a)(1)). In order to determine whether a project will cause a substantial adverse change in the significance of a historical resource, a lead agency will need to determine whether there are historical resources within the area of potential effect (APE).

CEQA was amended significantly in 2014. Assembly Bill 52 (Gatto, Chapter 532, Statutes of 2014) (AB 52) amended CEQA to create a separate category of cultural resources, "tribal cultural resources" (Pub. Resources Code §21074) and provides that a project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource is a project that may have a significant effect on the environment. (Pub. Resources Code §21084.2). Public agencies shall, when feasible, avoid damaging effects to any tribal cultural resource. (Pub. Resources Code §21084.3 (a)). AB 52 applies to any project for which a notice of preparation, a notice of negative declaration, or a mitigated negative declaration is filed on or after July 1, 2015. If your project involves the adoption of or amendment to a general plan or a specific plan, or the designation or proposed designation of open space, on or after March 1, 2005, it may also be subject to Senate Bill 18 (Burton, Chapter 905, Statutes of 2004) (SB 18). Both SB 18 and AB 52 have tribal consultation requirements. If your project is also subject to the federal National Environmental Policy Act (42 U.S.C. § 4321 et seq.) (NEPA), the tribal consultation requirements of Section 106 of the National Historic Preservation Act of 1966 (154 U.S.C. 300101, 36 C.F.R. §800 et seq.) may also apply.

The NAHC recommends consultation with California Native American tribes that are traditionally and culturally affiliated with the geographic area of your proposed project as early as possible in order to avoid inadvertent discoveries of Native American human remains and best protect tribal cultural resources. Below is a brief summary of portions of AB 52 and SB 18 as well as the NAHC's recommendations for conducting cultural resources assessments.

Consult your legal counsel about compliance with AB 52 and SB 18 as well as compliance with any other applicable laws.



AB 52

AB 52 has added to CEQA the additional requirements listed below, along with many other requirements:

- 1. Fourteen Day Period to Provide Notice of Completion of an Application/Decision to Undertake a Project: Within fourteen (14) days of determining that an application for a project is complete or of a decision by a public agency to undertake a project, a lead agency shall provide formal notification to a designated contact of, or tribal representative of, traditionally and culturally affiliated California Native American tribes that have requested notice, to be accomplished by at least one written notice that includes:
 - a. A brief description of the project.
 - **b.** The lead agency contact information.
 - **c.** Notification that the California Native American tribe has 30 days to request consultation. (Pub. Resources Code §21080.3.1 (d)).
 - **d.** A "California Native American tribe" is defined as a Native American tribe located in California that is on the contact list maintained by the NAHC for the purposes of Chapter 905 of Statutes of 2004 (SB 18). (Pub. Resources Code §21073).
- 2. Begin Consultation Within 30 Days of Receiving a Tribe's Request for Consultation and Before Releasing a Negative Declaration, Mitigated Negative Declaration, or Environmental Impact Report: A lead agency shall begin the consultation process within 30 days of receiving a request for consultation from a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the proposed project. (Pub. Resources Code §21080.3.1, subds. (d) and (e)) and prior to the release of a negative declaration, mitigated negative declaration or Environmental Impact Report. (Pub. Resources Code §21080.3.1(b)).
 - **a.** For purposes of AB 52, "consultation shall have the same meaning as provided in Gov. Code §65352.4 (SB 18). (Pub. Resources Code §21080.3.1 (b)).
- **3.** <u>Mandatory Topics of Consultation If Requested by a Tribe</u>: The following topics of consultation, if a tribe requests to discuss them, are mandatory topics of consultation:
 - a. Alternatives to the project.
 - b. Recommended mitigation measures.
 - c. Significant effects. (Pub. Resources Code §21080.3.2 (a)).
- **4.** <u>Discretionary Topics of Consultation</u>: The following topics are discretionary topics of consultation:
 - a. Type of environmental review necessary.
 - **b.** Significance of the tribal cultural resources.
 - **c.** Significance of the project's impacts on tribal cultural resources.
 - **d.** If necessary, project alternatives or appropriate measures for preservation or mitigation that the tribe may recommend to the lead agency. (Pub. Resources Code §21080.3.2 (a)).
- 5. Confidentiality of Information Submitted by a Tribe During the Environmental Review Process: With some exceptions, any information, including but not limited to, the location, description, and use of tribal cultural resources submitted by a California Native American tribe during the environmental review process shall not be included in the environmental document or otherwise disclosed by the lead agency or any other public agency to the public, consistent with Government Code §6254 (r) and §6254.10. Any information submitted by a California Native American tribe during the consultation or environmental review process shall be published in a confidential appendix to the environmental document unless the tribe that provided the information consents, in writing, to the disclosure of some or all of the information to the public. (Pub. Resources Code §21082.3 (c)(1)).
- **6.** <u>Discussion of Impacts to Tribal Cultural Resources in the Environmental Document:</u> If a project may have a significant impact on a tribal cultural resource, the lead agency's environmental document shall discuss both of the following:
 - a. Whether the proposed project has a significant impact on an identified tribal cultural resource.
 - **b.** Whether feasible alternatives or mitigation measures, including those measures that may be agreed to pursuant to Public Resources Code §21082.3, subdivision (a), avoid or substantially lessen the impact on the identified tribal cultural resource. (Pub. Resources Code §21082.3 (b)).

- 7. <u>Conclusion of Consultation</u>: Consultation with a tribe shall be considered concluded when either of the following occurs:
 - **a.** The parties agree to measures to mitigate or avoid a significant effect, if a significant effect exists, on a tribal cultural resource; or
 - **b.** A party, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached. (Pub. Resources Code §21080.3.2 (b)).
- 8. Recommending Mitigation Measures Agreed Upon in Consultation in the Environmental Document: Any mitigation measures agreed upon in the consultation conducted pursuant to Public Resources Code §21080.3.2 shall be recommended for inclusion in the environmental document and in an adopted mitigation monitoring and reporting program, if determined to avoid or lessen the impact pursuant to Public Resources Code §21082.3, subdivision (b), paragraph 2, and shall be fully enforceable. (Pub. Resources Code §21082.3 (a)).
- 9. Required Consideration of Feasible Mitigation: If mitigation measures recommended by the staff of the lead agency as a result of the consultation process are not included in the environmental document or if there are no agreed upon mitigation measures at the conclusion of consultation, or if consultation does not occur, and if substantial evidence demonstrates that a project will cause a significant effect to a tribal cultural resource, the lead agency shall consider feasible mitigation pursuant to Public Resources Code §21084.3 (b). (Pub. Resources Code §21082.3 (e)).
- **10.** Examples of Mitigation Measures That, If Feasible, May Be Considered to Avoid or Minimize Significant Adverse Impacts to Tribal Cultural Resources:
 - a. Avoidance and preservation of the resources in place, including, but not limited to:
 - Planning and construction to avoid the resources and protect the cultural and natural context.
 - **ii.** Planning greenspace, parks, or other open space, to incorporate the resources with culturally appropriate protection and management criteria.
 - **b.** Treating the resource with culturally appropriate dignity, taking into account the tribal cultural values and meaning of the resource, including, but not limited to, the following:
 - **i.** Protecting the cultural character and integrity of the resource.
 - ii. Protecting the traditional use of the resource.
 - iii. Protecting the confidentiality of the resource.
 - **c.** Permanent conservation easements or other interests in real property, with culturally appropriate management criteria for the purposes of preserving or utilizing the resources or places.
 - d. Protecting the resource. (Pub. Resource Code §21084.3 (b)).
 - e. Please note that a federally recognized California Native American tribe or a non-federally recognized California Native American tribe that is on the contact list maintained by the NAHC to protect a California prehistoric, archaeological, cultural, spiritual, or ceremonial place may acquire and hold conservation easements if the conservation easement is voluntarily conveyed. (Civ. Code §815.3 (c)).
 - f. Please note that it is the policy of the state that Native American remains and associated grave artifacts shall be repatriated. (Pub. Resources Code §5097.991).
- 11. Prerequisites for Certifying an Environmental Impact Report or Adopting a Mitigated Negative Declaration or Negative Declaration with a Significant Impact on an Identified Tribal Cultural Resource: An Environmental Impact Report may not be certified, nor may a mitigated negative declaration or a negative declaration be adopted unless one of the following occurs:
 - **a.** The consultation process between the tribes and the lead agency has occurred as provided in Public Resources Code §21080.3.1 and §21080.3.2 and concluded pursuant to Public Resources Code §21080.3.2.
 - **b.** The tribe that requested consultation failed to provide comments to the lead agency or otherwise failed to engage in the consultation process.
 - c. The lead agency provided notice of the project to the tribe in compliance with Public Resources Code §21080.3.1 (d) and the tribe failed to request consultation within 30 days. (Pub. Resources Code §21082.3 (d)).

The NAHC's PowerPoint presentation titled, "Tribal Consultation Under AB 52: Requirements and Best Practices" may be found online at: http://nahc.ca.gov/wp-content/uploads/2015/10/AB52TribalConsultation_CalEPAPDF.pdf

SB 18

SB 18 applies to local governments and requires local governments to contact, provide notice to, refer plans to, and consult with tribes prior to the adoption or amendment of a general plan or a specific plan, or the designation of open space. (Gov. Code §65352.3). Local governments should consult the Governor's Office of Planning and Research's "Tribal Consultation Guidelines," which can be found online at: https://www.opr.ca.gov/docs/09 14 05 Updated Guidelines 922.pdf.

Some of SB 18's provisions include:

- 1. <u>Tribal Consultation</u>: If a local government considers a proposal to adopt or amend a general plan or a specific plan, or to designate open space it is required to contact the appropriate tribes identified by the NAHC by requesting a "Tribal Consultation List." If a tribe, once contacted, requests consultation the local government must consult with the tribe on the plan proposal. A tribe has 90 days from the date of receipt of notification to request consultation unless a shorter timeframe has been agreed to by the tribe. (Gov. Code §65352.3 (a)(2)).
- 2. No Statutory Time Limit on SB 18 Tribal Consultation. There is no statutory time limit on SB 18 tribal consultation.
- 3. Confidentiality: Consistent with the guidelines developed and adopted by the Office of Planning and Research pursuant to Gov. Code §65040.2, the city or county shall protect the confidentiality of the information concerning the specific identity, location, character, and use of places, features and objects described in Public Resources Code §5097.9 and §5097.993 that are within the city's or county's jurisdiction. (Gov. Code §65352.3 (b)).
- 4. Conclusion of SB 18 Tribal Consultation: Consultation should be concluded at the point in which:
 - **a.** The parties to the consultation come to a mutual agreement concerning the appropriate measures for preservation or mitigation; or
 - **b.** Either the local government or the tribe, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached concerning the appropriate measures of preservation or mitigation. (Tribal Consultation Guidelines, Governor's Office of Planning and Research (2005) at p. 18).

Agencies should be aware that neither AB 52 nor SB 18 precludes agencies from initiating tribal consultation with tribes that are traditionally and culturally affiliated with their jurisdictions before the timeframes provided in AB 52 and SB 18. For that reason, we urge you to continue to request Native American Tribal Contact Lists and "Sacred Lands File" searches from the NAHC. The request forms can be found online at: http://nahc.ca.gov/resources/forms/

NAHC Recommendations for Cultural Resources Assessments

To adequately assess the existence and significance of tribal cultural resources and plan for avoidance, preservation in place, or barring both, mitigation of project-related impacts to tribal cultural resources, the NAHC recommends the following actions:

- 1. Contact the appropriate regional California Historical Research Information System (CHRIS) Center (http://ohp.parks.ca.gov/?page_id=1068) for an archaeological records search. The records search will determine:
 - a. If part or all of the APE has been previously surveyed for cultural resources.
 - b. If any known cultural resources have already been recorded on or adjacent to the APE.
 - c. If the probability is low, moderate, or high that cultural resources are located in the APE.
 - **d.** If a survey is required to determine whether previously unrecorded cultural resources are present.
- 2. If an archaeological inventory survey is required, the final stage is the preparation of a professional report detailing the findings and recommendations of the records search and field survey.
 - **a.** The final report containing site forms, site significance, and mitigation measures should be submitted immediately to the planning department. All information regarding site locations, Native American human remains, and associated funerary objects should be in a separate confidential addendum and not be made available for public disclosure.
 - **b.** The final written report should be submitted within 3 months after work has been completed to the appropriate regional CHRIS center.

3. Contact the NAHC for:

- **a.** A Sacred Lands File search. Remember that tribes do not always record their sacred sites in the Sacred Lands File, nor are they required to do so. A Sacred Lands File search is not a substitute for consultation with tribes that are traditionally and culturally affiliated with the geographic area of the project's APE.
- **b.** A Native American Tribal Consultation List of appropriate tribes for consultation concerning the project site and to assist in planning for avoidance, preservation in place, or, failing both, mitigation measures.
- **4.** Remember that the lack of surface evidence of archaeological resources (including tribal cultural resources) does not preclude their subsurface existence.
 - a. Lead agencies should include in their mitigation and monitoring reporting program plan provisions for the identification and evaluation of inadvertently discovered archaeological resources per Cal. Code Regs., tit. 14, §15064.5(f) (CEQA Guidelines §15064.5(f)). In areas of identified archaeological sensitivity, a certified archaeologist and a culturally affiliated Native American with knowledge of cultural resources should monitor all ground-disturbing activities.
 - **b.** Lead agencies should include in their mitigation and monitoring reporting program plans provisions for the disposition of recovered cultural items that are not burial associated in consultation with culturally affiliated Native Americans.
 - c. Lead agencies should include in their mitigation and monitoring reporting program plans provisions for the treatment and disposition of inadvertently discovered Native American human remains. Health and Safety Code §7050.5, Public Resources Code §5097.98, and Cal. Code Regs., tit. 14, §15064.5, subdivisions (d) and (e) (CEQA Guidelines §15064.5, subds. (d) and (e)) address the processes to be followed in the event of an inadvertent discovery of any Native American human remains and associated grave goods in a location other than a dedicated cemetery.

If you have any questions or need additional information, please contact me at my email address: Andrew.Green@nahc.ca.gov.

Sincerely,

Andrew Green Staff Services Analyst

andrew Green

cc: State Clearinghouse



October 15, 2019

Jason Waters Community Services Director City of Woodlake 350 North Valencia Avenue Woodlake, CA 93286

Re: CDFA Comments on City of Woodlake Initial Study and Notice of Preparation of an Environmental Impact Report for Evaluating the Proposed 7Points Industrial Complex Project (State Clearinghouse No. 2019090507)

Dear Mr. Waters:

The California Department of Food and Agriculture's (CDFA's) CalCannabis Division (CalCannabis) submits the following comments on the Initial Study (IS) and Notice of Preparation (NOP) for the Environmental Impact Report (EIR) prepared by the City of Woodlake for the 7Points Industrial Complex Project (Proposed Project), located in Woodlake, California.

CDFA is a Responsible Agency with respect to the Proposed Project, with jurisdiction over the issuance of licenses to cultivate, propagate and process commercial cannabis in the State of California. CDFA issues licenses to outdoor, indoor, and mixed-light cannabis cultivators, cannabis nurseries and cannabis processor facilities, where the local jurisdiction authorizes these activities. This authority is pursuant to the Business and Professions Code, Division 10, Chapter 2, Section 26012(2). All commercial cannabis cultivation within the State of California requires a cultivation license from CDFA.

CDFA certified a Programmatic Environmental Impact Report (PEIR) for cannabis activities throughout the state on November 13, 2017. The PEIR can be found at the following link: https://www.cdfa.ca.gov/calcannabis/PEIR.html. For a complete list of all license requirements please visit:



https://static.cdfa.ca.gov/MCCP/document/CDFA%20Final%20Regulation%20Text_011 62019_Clean.pdf.

Background

The City of Woodlake is the Lead Agency on the Proposed Project, a 20-acre industrial center that would house industrial uses allowable by the zone district, including cannabis cultivation. The City of Woodlake allows commercial cannabis cultivation following procurement of a Conditional Use Permit (CUP) and a Commercial Cannabis Regulatory Permit (Regulatory Permit), per Section 5.48.020 of the City's Cannabis Ordinance (Ordinance No. 611). Ordinance No. 611 states, "the Regulatory Permit shall be site specific and shall specifically identify the commercial cannabis activity that will be allowed at that site. No commercial cannabis activity will be allowed unless specifically identified in the Regulatory Permit (Section 5.48.020)."

CDFA Comments and Recommendations

In response to the NOP, CDFA has several general comments and recommendations about the anticipated scope of the EIR and recommendations regarding issues the City should address and consider as part of its preparation of the EIR. In addition, CDFA has several specific comments about the IS that was submitted with the NOP. Both general and specific comments are included below.

General Comments (GCs)

GC 1: Scope of EIR. Neither the IS nor the NOP specifies whether the EIR for the Proposed Project is intended to extend CEQA coverage to any later activities or projects, as defined by the City, by future tenants approved to operate on those individual parcels; or whether the scope of the EIR is intended to be solely for the construction of the 7Points Industrial Complex. As described above, future proposed cannabis cultivation projects are required to procure site-specific City-issued permits (CUPs and Regulatory Permits), as specified under Ordinance No. 611. CDFA requests the City of Woodlake clarify what City-issued permits and approvals are intended to be covered by the Proposed Project EIR.

Note that CDFA requires an annual-license applicant to provide operation-specific evidence of exemption from, or compliance with, CEQA (3 Cal. Code of Regs. § 8102). If a local jurisdiction prepares a site-specific CEQA compliance document, or record of decision for the conclusion that no further CEQA documentation is required, it improves the efficiency with which CDFA can issue annual licenses for projects located within that jurisdiction.

GC 2: Project Description. If the City intends the Proposed Project EIR to cover all cannabis cultivation activities that would take place at the industrial complex, CDFA requests the City provide detailed assumptions for future tenants' proposed cultivation activities as part of the EIR's Project Description. The IS's Project Description very generally discusses that the industrial complex will support the operation of cannabis cultivation businesses, but it does not provide any details about specific cultivation operations and maintenance that would take place at the project site. To the extent these details are known at this time, or provided as an estimation, assumption, and/or worst-case-scenario, the project description should include operation details for cannabis cultivation facilities, including:

- the proposed canopy size of the cultivation operation and the types of operations and cultivation methods that would occur on site;
- the expected number of employees;
- the number of daily trips to and from the site for employee commuting, delivery of materials or supplies, and shipment of product;
- the source and amounts of water to be used for the cultivation facility, including any water efficiency equipment that would be used;
- the types of lighting that would be used;
- the types of odor control methods to be employed;
- the types of hazardous materials that will be used on the cultivation site;
- environmental protection measures that will be incorporated into the future proposed cultivation operation, and whether these measures will be considered Proposed Project mitigation measures or conditions of permit issuance;
- the utilities needed to serve the cultivation facility, including sewer service, and whether such utilities are currently available to serve the site with sufficient capacity for the project; and
- the source (equipment) and amounts of energy expected to be used in operating the cultivation facility, including any energy management and efficiency features incorporated into the Proposed Project.

If the City intends to evaluate both the construction of the facility as well as the cultivation operations that will take place in the facility, the project description should clearly describe the details of both of these elements.

CDFA has attached a memo entitled CEQA Practice Recommendations from CDFA for Cannabis Licensing – Project Description Content, which describes best practices concerning project descriptions. Note that the project description memorandum pertains not only to this EIR, but broadly to all projects, regardless of the type of CEQA document being prepared.

GC3: Analysis of Resource Impacts from Future Tenants. If the City intends for the EIR to cover the cultivation activities of future tenants, it must provide an analysis of impacts specifically resulting from the cultivation operations and maintenance activities that will take place at the site. While several of the CEQA Checklist question responses contain general descriptions of the potential impacts that may result from cultivation, site-specific analysis for future cultivation projects are not provided. As examples, resource impacts may result from energy or water use, greenhouse gas emissions from operations and vehicle traffic, odor impacts, and noise generation.

CEQA requires that Lead Agencies evaluate the environmental impacts of proposed projects and support factual conclusions with substantial evidence. CDFA requests that any analyses of operations and maintenance activities clearly cite the source(s) of the evidence relied upon for each impact discussion. If the City relies upon assumptions or estimates to determine impacts from potential future tenants' activities based on other similar cultivation projects, those assumptions should be clearly described and analyzed. This information would be particularly useful for resource topics, such as air quality, energy, greenhouse gas emissions, and transportation and traffic, where modeling requires baseline assumptions for operational equipment usage, including cannabis ventilation systems, power generators, indoor lighting, and vehicle trips.

GC 4: Subsequent CEQA Analysis/Tiering and Streamlining. If the City anticipates that site-specific CEQA compliance for individual cannabis cultivation projects within the 7Points Industrial Complex would be completed at a later date, CDFA requests that the City of Woodlake indicate how the City intends to complete any subsequent site-specific environmental assessments. This may include subsequent CEQA documents (e.g., IS/NDs, IS/MNDs, and EIRs), addenda to the Proposed Project EIR, and/or determinations that no further documentation would be needed.

CDFA encourages local jurisdictions to use CEQA streamlining options when appropriate. For tenant projects that are not fully covered under the Proposed Project EIR and not exempt from CEQA, CDFA recommends that the City prepare a CEQA document (an addendum, IS/ND, IS/MND, or EIR that tiers from the Proposed Project EIR, as appropriate (i.e., incorporating by reference general discussions and concentrating a later environmental assessment solely on the issues specific to the later project). CDFA recommends that the City of Woodlake prepare Notices of Determination (NODs) and file them with the State Clearinghouse for all subsequent site-specific CEQA documentation, addenda, and/or other later activities approved using CEQA streamlining approaches.

CDFA has attached a memo entitled CEQA Practice Recommendations from CDFA for Cannabis Cultivation Licensing — Tiering and Other Streamlined Site-Specific CEQA Compliance Approaches, which may be useful to the City in considering site-specific CEQA compliance for cultivation projects.

GC 5: Analysis of Site-Specific Resource Impacts. The CDFA PEIR determined that some environmental topics generally fell outside of CDFA's regulatory authority because these topics are regulated by local land use. These include issues such as aesthetics, land use and planning, geology and soils, mineral resources, noise, odors, regional recreational structures and services, compliance with building standards, provisions for police and fire protection, and connections to public utilities (e.g., public water, wastewater, and storm drainage systems). Additionally, there are other topics for which detailed analysis in the CDFA PEIR was not possible because of the statewide nature of the CDFA licensure program. Many of these topics involve the evaluation of site-specific conditions, the details of which were infeasible to identify and evaluate in a statewide PEIR, and the characteristics of which were unknown at the time the PEIR was published (e.g., the locations of new cultivation sites that would be planned and licensed were unknown at the time the PEIR was published).

For these topics, listed below, the CDFA PEIR determined that potential impacts would most appropriately be evaluated in local regulatory program-level documents or site-specific project-level documents. The PEIR, where appropriate, provides more general conclusions regarding the likelihood and types of impacts caused by cannabis cultivation, including the cumulative impacts that would be expected under the statewide CDFA Program.

CDFA requests that the City of Woodlake's Proposed Project EIR, and/or other subsequent environmental analyses completed for tenant activities, evaluate potential impacts of licensed commercial cannabis cultivation activities on the following resource topics at an appropriate site-specific level. Evaluations should include mitigation measures that, when applied to the Proposed Project and later defined tenant cultivation activities, will ensure that the Proposed Project will not result in significant adverse impacts on the environment, as determined necessary.

Aesthetics

 Substantial adverse effects on scenic vistas, scenic resources, or Statedesignated scenic highway, and/or the existing visual character or quality of a site and its surroundings.

Land Use and Planning

 Conflicts with any and all local land use plans, ordinances, policies, and/or resource programs; including but not limited to applicable Habitat Conservation Plans and Natural Community Conservation Plans.

Mineral Resources

- Potential loss of availability of a known mineral resource that would be of value to the region and the residents of the state.
- Potential for the extraction of substantial mineral resources from lands classified by the State as areas that contain mineral resources (Mineral Resource Zone [MRZ]-3).
- Loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan.

Noise

- Exposure of people or residences to excessive noise levels within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport.
- Generation of excessive groundborne vibration or groundborne noise levels.
- Substantial permanent increase in ambient noise levels in the vicinity of a licensed cultivation activities above existing levels.
- Excessive noise for sensitive receptors, and/or resulting in a substantial temporary or periodic increase in ambient noise levels.
- Short-term construction-related impacts to noise (if applicable).
- Long-term operation-related noise impacts resulting from traffic and related changes to existing noise levels.

Odor (Air Quality)

 Create objectionable odors affecting a substantial number of people as a result of cannabis cultivation.

Recreation

 Potential impacts to existing neighborhood and regional parks or other recreational facilities.

Public Services and Utilities

- Exceedance of wastewater treatment requirements, resulting in the need to expand wastewater treatment facilities, or result in a determination by the wastewat er treatment provider that it has inadequate capacity to serve the project.
- Require or result in the construction of new or expanded water treatment and/or stormwater facilities.
- Potential to be served by a landfill with insufficient capacity.

Traffic and Transportation

- Conflict with circulation plans, ordinances, or policies.
- · Conflict with congestion management programs.
- Increase hazards due to a design feature or incompatible uses.

GC 6: Cumulative Impacts. It is important for the Proposed Project EIR to disclose and evaluate potential cumulative impacts of cannabis cultivation. Of particular importance are topics for which the impacts of the Proposed Project may be less than significant, but collectively with other existing and proposed cannabis growing operations, and/or other industrial complexes where it is allowable, and reasonable to predict future cannabis operations may be permitted, would contribute to a significant cumulative impact. These topics include:

- Impacts of groundwater diversions on the health of the underlying aquifer, including impacts on other users, impacts on stream-related resources connected to the aquifer;
- Impacts on terrestrial biological species and habitats, particularly specialstatus species as defined under CEQA;
- Impacts related to noise; and
- Impacts related to air quality and objectionable odors.

Specifically, the EIR should discuss any cumulative impacts that may result from the operation of the Concord Center Industrial Development Project, an industrial center also proposed to house cannabis cultivation and distribution operations, proposed for development on the southwest corner of Road 204 and Avenue 344 (State Route 216) within the City of Woodlake.

GC 7: CDFA Noticing. In order to ensure that the EIR is sufficient for CDFA's needs when it reviews cultivation applications related to the Proposed Project, CDFA requests the City of Woodlake include CDFA in the Reviewing Agencies Checklist for the Proposed Project, and that a copy of the draft EIR be provided to CDFA for comment when complete. This comment applies to all future CEQA documents for cannabis cultivation

projects within the City of Woodlake. Further, CDFA requests that a copy of the final EIR and a signed Notice of Determination be provided to future tenants, so future cannabis applicants can include them with their application package submitted to CDFA. When the City files Initial Studies or EIRs with the State Clearinghouse, CEQA documents should be sent directly to Crystal D'Souza, CDFA staff counsel, at: crystal.dsouza@cdfa.ca.gov.

GC 8: CDFA Regulations. The EIR analysis would benefit from discussion of the protections for environmental resources provided by CDFA's regulations. In particular, the impact analysis should acknowledge the effects of state regulations on reducing the severity of impacts on the following resource topics:

- Aesthetics (See 3 California Code of Regulations §8304(c); §8304(g).)
- Air Quality and Greenhouse Gas Emissions (See §8102(s); §8304(e); §8305; §8306.)
- Biological Resources (See §8102(w); §8102(dd); §8216; §8304(a-c); §8304(g).)
- Cultural Resources (See §8304(d).)
- Hazards and Hazardous Materials (See §8102(q); §8106(a)(3); §8304(f); §8307.)
- Hydrology and Water Quality (See §8102(p); §8102(v); §8102(w); §8102(dd); §8107(b); §8216; §8304(a and b); §8307.)
- Noise (See §8304(e); §8306.)
- Utilities and Service Systems (See §8102(s); §8108; §8308.)
- Energy (See §8102(s); §8305; §8306.)
- Cumulative Impacts (related to the above topics).

Specific Comments

In addition to the general comments provide above, CDFA provides a table on the following page with specific comments regarding the information and analyses provided in the IS. CDFA requests that these comments be addressed in preparing the EIR.

No.	Page No(s).	Resource Topic	IS Text	CDFA Comment
	10	Project	Other Public Agencies	The EIR should list all agencies requiring
		Information	Involved	approval of the Proposed Project, including
			•	CDFA, the California Department of Fish and
				Wildlife, the Regional Water Quality Control
				Board, and the State Water Resources
				Control Board, as applicable. In addition, if
				the Proposed Project will require licenses for
				commercial cannabis manufacturing, the
				California Department of Health should be
				listed as a licensing agency. If the Proposed
		•		Project will require licenses for commercial
		·		cannabis distribution, laboratory testing, retail,
			,	or microbusiness, the Bureau of Cannabis
				Control should be listed as a licensing
				agency. The type of permit or approval
				required from each agency should also be
		,		listed.
	27	IV. Biological	The City of Woodlake's	The EIR should describe the policies that
		Resources (e)	General Plan includes	would be applicable to the Proposed Project
			policies for the	and evaluate whether and how the Proposed
			protection of biological	Project would be consistent with the General
	-		resources.	Plan policies.
က	30	V. Cultural	The archaeologist shall	Mitigation Measures CUL-1 and CUL-2
		Resources	submit reports, to the	require disclosures to the City of Fresno. If
			satisfaction of the City	these are typographical errors, please correct
			of Fresno, describing	them and specify the correct entity for cultural
			the testing program and	resources disclosures.
			subsequent results.	
			[]	

California Department of Food and Agriculture CalCannabis Cultivation Licensing October 15, 2019 – Comments re IS/MND (SCH#2019090507) – 7Points Industrial Complex Project

Comment No.	Page No(s).	Resource Topic	IS Text	CDFA Comment
			Prior to the issuance of	
			any grading permit, the	•
-		-	project proponent shall	
			provide the City of	
		٠	Fresno with	
			documentation	
•			identifying construction	
			personnel that will be	
			responsible for on-site	
•			monitoring.	
4	43	IX. Hazards and	N/A (General Comment	If applicable, the EIR should disclose and
		Hazardous		evaluate the use of hazardous materials such
		Materials		as pesticides for pest management and other
				hazardous materials that may be used on site
				for the operation and maintenance of
				proposed cultivation projects.
5	48	X. Hydrology and	The Central Valley	The CVRWQCB order has been superseded
		Water Quality	Regional Water Quality	by SWRCB General Order WQ 2019-0001-
			Control Board adopted	DWQ. All enrollees under the Central Valley
			a General Waste	Order were required to transition to the
			Discharge	SWRCB Cannabis Cultivation General Order
	-		Requirements Order for	by July 1, 2019.
			Discharges of Waste	
			Associated with Medical	
		-	Cannabis Cultivation	
			Activities (Order No.	
			R5-2015-0113). Any	
	·		proposed cannabis	•
			tenants will be in	•
			compliance with the	

=

California Department of Food and Agriculture CalCannabis Cultivation Licensing October 15, 2019 – Comments re IS/MND (SCH#2019090507) – 7Points Industrial Complex Project

	rage No(s).	Resource Topic	IS Text	CDFA Comment
No.			٠	
		•.	rules and requirements	•
	-		set forth in the	
			Discharge	
			Requirements.	
9	49	X. Hydrology and	The proposed Project is	The EIR should indicate the overdraft status
		Water Quality	not anticipated to result	of the groundwater basin from which the
		•	in additional demands	Proposed Project would draw its water. It
			for groundwater	should also provide an estimate of the
			resources beyond those	amount of groundwater projected to be used
		•	considered in the	in operation of the Proposed Project, and
-		-	adopted City of	provide some evidence for the conclusion that
		-	Woodlake General	activities would not result in a significant
	•		Plan.	impact to groundwater beyond those
				considered in the adopted City of Woodlake
			-	General Plan.
	09	XV. Public	The proposed Project	The State requires indoor cultivation license
		Services	site will continue to be	applicants obtain an attestation that the local
	•		served by the City of	fire department has been notified of the
•			Woodlake Fire	cultivation site. The EIR should disclose
		-	Department, which is	whether the Woodlake Fire Department has
			less than one mile east	been notified of proposed cultivation activities
			of the proposed Project	and/or an attestation may be included as an
			site. No additional fire	attachment that supports the determination
			personnel or equipment	that no additional fire personnel or equipment
		-	is anticipated, as the	would be required for operation.
			site is already served	
		-	by the Fire Station.	
8	63	XVII.	According to the ITE	The EIR should provide underlying
		Transportation	Trip Generation Report,	assumptions considered for daily and peak
		and Traffic	8th edition, the	vehicle trips estimates, including estimates

Ξ

California Department of Food and Agriculture CalCannabis Cultivation Licensing October 15, 2019 – Comments re IS/MND (SCH#2019090507) – 7Points Industrial Complex Project

Comment No.	Page No(s). Resource		Topic IS Text	CDFA Comment
			proposed Project will	used for future tenant operations. The
			generate approximately	analysis should disclose trips estimated for
			2,304 calculated daily	construction and operation phases
			trips with 321 pm peak	separately.
			trips.	
6	. 29	XIX. Utilities and	The City's water system	The EIR should provide supporting evidence,
		Service Systems	and solid waste	such as estimated water and waste disposal
			disposal programs have	requirements for operation of the Proposed
			capacity for, or are	Project, including projected requirements for
			planned to maintain	cannabis cultivation businesses, and known
			capacity for, community	water system and waste disposal capacity to
			growth in accordance	support the impact determination.
			with the adopted	
-			General Plan.	•



Conclusion

CDFA appreciates the opportunity to provide comments on the IS and NOP for the City of Woodlake's forthcoming 7Points Industrial Complex Project EIR. If you require additional information, please contact Kevin Ponce, Senior Environmental Scientist Supervisor, at (916) 263-0801 or via e-mail at kevin.ponce@cdfa.ca.gov.

Sincerely,

Lindsay Rains

Licensing Program Manager

State of California

Memorandum

To: Local Jurisdictions Developing Cannabis

Licensing or Permitting Programs

Date: May 29, 2019

Place: Sacramento

Phone: (916) 263-0801

From: **Department of Food and Agriculture –** 1220 N Street, Suite 400

Sacramento, CA 95814

Subject: CEQA Practice Recommendations from CDFA for Cannabis Licensing -

Project Description Content – Version 2

CDFA Review of CEQA Documents

Before CDFA can grant an annual license for a project permitted by a local jurisdiction, CDFA must make an independent evaluation of the document prepared for the project in compliance with the California Environmental Quality Act (CEQA), or documentation provided by the applicant as evidence of exemption from CEQA. To conduct this evaluation, CDFA must have a complete description of the proposed project that provides information about the project site, including existing conditions and facilities, proposed facilities and improvements (both on and off site), and the construction methods and operations practices of the proposed project.

CDFA can complete its review more quickly and efficiently when applicants provide as much of the information needed by CDFA to complete an independent evaluation of the proposed project as is available. This will translate into faster issuance of licenses for qualified applications.

Project Description Information Requested

When submitting an application for a cultivation license to CDFA, the local jurisdiction or applicant should provide a project description that contains the following information:

 Project Location – Indicate the precise location and boundaries of the proposed project. At a minimum, provide an address and the location of the project on an appropriately scaled map (i.e., one that shows both the specific

- location of the project and enough surrounding area to allow CDFA to understand its general location). CDFA prefers applicants to provide this information on a topographic map or aerial photograph.
- Description of Project Site Provide a premises map and a property diagram showing the location of all existing structures and facilities, and all proposed structures and facilities, labeled so reviewers can distinguish the existing features from proposed features. Applicants may attach the proposed premises and property diagram submitted with their application to satisfy this requirement, provided the diagram delineates those details described above. Also provide the following information about the project site:
 - Description of existing topographic conditions on the project site and surrounding areas (is the project site generally flat, gently sloped, or steeply sloped);
 - Description of current land uses on the project site and any existing buildings and structures;
 - Description of any natural features or habitats on the project site (e.g., wetlands, stream channels, forested areas); and
 - Description of land uses surrounding the project site.
- Required Site Improvements (Construction Activities) The project description should include details of all improvements that will be made to the project property as part of the proposed project. This should include the following information, as relevant:
 - Any new small or accessory structures that will be constructed, including the location (on the premises map), dimensions, purpose, how long their construction is expected to last, and what types of equipment will be used for each;
 - Any modifications or improvements to existing buildings or facilities that will be completed, including the nature of the improvements;
 - Any new facilities, including infrastructure improvements or upgrades, whether those improvements are located on the project site or off site (e.g., extension of water line);
 - Any grading that will be required and the anticipated amounts of cut and fill; and
 - Where construction equipment and materials storage (staging) areas will be located, where appropriate.
- **Description of Project Operations** Provide the following information about project operations:

- Number of employees;
- Number of daily trips for delivery of materials or supplies and shipment of product;
- The source(s) of water for irrigation, processing, and domestic use;
- o The method for treatment of wastewater generated by the project; and
- The source of energy used in operation of the project, and a list of all energy management and efficiency features included in the project.

Should project operation details (e.g., source(s) of water, method(s) for treatment of wastewater, source(s) of energy) be described in other portions of the application and/or attachments, applicants may direct reviewers to where these details have been provided. However, for reviewer efficiency purposes, applicants are encouraged to provide a complete project description that includes those details pertaining to proposed operations.

- Environmental Commitments Describe any environmental commitments regarding project construction or operations that the applicant proposes, including those required by ordinance and any others included voluntarily. Environmental commitments could be related to energy efficiency, water efficiency, noise abatement, lighting, or other aspects of the project that may reduce the impacts of the project on the environment.
- Other Required Permits and Approvals A list of other environmental
 permits that may be required or have been obtained (e.g., annual cultivation
 license from CDFA, water right permit from State Water Resources Control
 Board (SWRCB) for diversion of surface waters, proof of enrollment in
 enrollment in or exemption from either the SWRCB or Regional Water Quality
 Control Board program for water quality protection, Lake or Streambed
 Alteration Agreement from California Department of Fish and Wildlife).

Examples

To assist local jurisdictions, CDFA has provided two examples of project descriptions and maps that meet its needs. Attachment A includes a sample of project description text and maps for an urban site, and Attachment B includes the same for a rural site. In addition, Attachment C is a form which can be used to complete a project description meeting CDFA's needs.

ATTACHMENT A

Example Project Description – Urban Site

Project Description for the Green Times Cannabis Cultivation Licensing Project Submitted to the City of Toledo Valley, California

Project Location

The subject property is a ±0.99-acre developed parcel located at 8711 Older Creek Drive in Toledo Valley, Toledo County, California (Figure 1). The property is on the southeast side of Older Creek Drive, north of Older Creek Road.

Description of Project Site

The project site contains an existing ±12,000-square-foot, flat-roof commercial-industrial warehouse building within the Toledo Valley Business Park, at the site of the former Toledo Valley Army Depot (Figure 2). The main driveway and parking area are on the northeast side of the building. Records indicate the building was constructed in 1990.

The project site is in a heavily developed commercial-industrial area, and the site is relatively flat and almost entirely paved. There is existing landscaping on the street side of the property, including a row of non-native ornamental trees and shrubs. The applicant is not proposing to make changes to this landscaping. The site does not contain any natural vegetation or water bodies.

The site is surrounded by warehouse/industrial development. Farther to the northeast, there are UP Railroad tracks. There is no nearby residential zoning or residential dwellings. The site is not within 600 feet of a K-12 school or a neighborhood park or community park.

The proposed project would be located on a parcel with a general plan designation of Light Industrial and a zoning of Light Industrial. The proposed use is consistent with these designations.

Required Site Improvements and Construction Activities

The applicant proposes to cultivate cannabis within the entirety of the existing building. Cultivation would take place within the main building and would not be visible from the public right-of-way. The applicant proposes principally interior modifications, to be completed primarily using hand-held tools and machinery. However, the following exterior modifications would also be required:

- Construction of one new building that would serve as an auxiliary storage space;
- Installation of a six-foot-high fence, topped with barbed wire, around the entire exterior of the parcel for security, as required by City ordinance;

- Upgrades to utilities and lighting;
- Modification of signage, per City ordinance; and
- Re-striping of parking lot to accommodate required parking spaces, per City ordinance.

Figure 3 provides a site plan of the proposed site improvements. The main entrance will be on the northeast side of the building facing the parking lot area. The exterior of the building is mainly stucco with tan colors. There is an existing monument sign in the front. Modification of this sign to meet City ordinance requirements is proposed.

No grading of the project site would be required. All utility connections are already present on the site; however, the City of Toledo Valley indicates that expansion of the water service would be required to provide irrigation lines to the appropriate portions of the building. Construction of the expanded pipeline would take place entirely within the project parcel.

Some structural improvements may be needed to bring it into compliance with existing California Building Code requirements. These would include installation of fire sprinklers and smoke detectors and upgrading of insulation to meet current standards. Roofing material may be modified to allow the addition of solar panels, as described below.

Construction workers and equipment would be staged in the existing parking area, which is currently striped for 17 existing parking spaces. Following completion of construction, the parking lot would be restriped to allow 19 parking spaces, per City ordinance.

Construction is anticipated to take three weeks and would involve the use of the following equipment:

- 1 Backhoe
- 1 Dump truck
- 1 Water truck

Project Operations

Operations for the proposed project would involve cultivation of cannabis within the existing building. Vendors would access the site from Older Creek Drive and supplies would be brought in through the roll-up door. The operation would employ 7-10 staff on two shifts, 6:00 a.m.-2 p.m. and 2 p.m.-10 p.m., so no employee travel would occur during peak hours.

Project operations are anticipated to generate the following traffic:

• 20 employee work trips (one home-to-work and one work-to-home) per day,

- 5 trips for material and supplies delivery per day, and
- 2 trips for shipment of finished product per day.

Water, wastewater, electricity, and natural gas services are in place to serve the site, along with communications connections and solid waste collection. Services would be obtained from the following providers:

Water: City of Toledo ValleyWastewater: City of Toledo Valley

Electricity: Toledo Valley Municipal Utility District

Natural gas: Public Gas and ElectricSolid waste: United Waste Collection

• Communications: Infinity Telecom Services

Nighttime lighting would be added to the parking area and motion-activated security lighting would be installed at entrances to the building. Security fencing would also be installed around the entire property, with a code-locked gate to control vehicle access.

Environmental Commitments

The applicant would install multiple charcoal filters throughout the building to minimize the impacts of odor created by growing cannabis plants on neighboring land uses. Additionally, carbon filters would be used to continuously scrub the air of offensive odors, where filtered air would undergo a multi-step cleansing process. A filtration system utilizing high-pressure flexi-ducts and industry standard "virgin carbon" filters would be installed to eliminate odor.

The applicant would install solar panels on the roof of the building to generate approximately 50% of the project's energy needs from this renewable source. In addition, the electrical service provider for the site, Toledo Valley Municipal Utility District, obtains 33% of its power from renewable sources.

All exterior lighting would be shielded and directed onto the site, such that the light source cannot be seen by persons on adjacent properties or from the public right-of-way.

Other Required Permits and Approvals

• City of Toledo Valley Business Permit: Per City ordinance, all cannabis-related businesses, in addition to obtaining all required land use approvals under the Planning and Development Code (Title 17), must also obtain a business permit from the City pursuant to City Code Title 5, Chapter 5.150. Among other things, the business permit regulates the final canopy size and requires a final security plan, lighting plan, odor control plan, community relations plan, business plan

- and information on employees and owners for each business permitted by the city.
- California Department of Food and Agriculture Annual Cultivation License:
 Per Business and Professions Code, Division 10, Chapter 2, Section 26012(2),
 the applicant is also required to obtain an annual cultivation license from the
 California Department of Food and Agriculture.
- California Department of Fish and Wildlife: The applicant is required to contact CDFW to determine whether a Lake and Streambed Alteration Agreement is required for the project, and to obtain one if CDFW deems it to be necessary. Attached is a letter from CDFW indicating that the project does not require an LSAA because no surface waters would be affected by the project.
- State Water Resources Control Board/Central Valley Regional Water
 Quality Control Board: The application is required to obtain proof of enrollment
 in or exemption from either the SWRCB or RWQCB program for water quality
 protection. The project has obtained an exemption from the Central Valley
 Regional Water Quality Control Board.

ATTACHMENT B

Example Project Description – Rural Site

Project Description for the Ever Green Growers Cannabis Cultivation Licensing Project -- Submitted to Smith County, California

Project Location

The subject property is a 2.4-acre property located at 12345 Stones Throw Road south of Jonestown, Smith County, California (Figure 1). The property is on the west side of Stones Throw Road, south of Granite Drive. Stones Throw Road intersects with Forest Drive, which provides access to State Route 7 approximately 3 miles northeast of the site.

Description of Project Site

The property contains a house and garage and several smaller accessory structures, such as sheds and a shop (Figure 2). In addition, one 1,000 square-foot commercial building on a concrete-slab foundation, which is permitted for use as a garden nursery, is present at the back of the lot. The parcel gains access from the east side of Stones Throw Drive and has a circular, gravel driveway that allows on-site traffic to access the back (northeast) portion of the lot.

The project area is rural and lightly forested with some smaller landscaping around the residence. The property slopes upward from the road toward the back, where the project facilities would be constructed. Stones Throw Creek, a perennial stream, is located adjacent to the property on the south.

The site is surrounded by rural residential uses. The entire area is zoned Rural Residential: 2 acres. Smith County's rural residential zoning "is intended to encourage local small-scale food production (farming)" (Smith County General Plan Land Use Element). While the project does not entail the farming of food, the scale of the proposed cannabis cultivation is small and thus conforms to the intended use of the General Plan Land Use Designation. The proposed use is also consistent with the RR:2 intended uses.

Water for irrigation and domestic uses on the site is currently provided from an existing well. Wastewater treatment is provided by an existing on-site septic system. The site is not within 600 feet of a K-12 school, a neighborhood park, or a community park.

Required Site Improvements and Construction Activities

The applicant proposes to construct and operate a small, mixed-light medical cannabis cultivation facility. Cultivation would take place within the existing 1,000-square-foot commercial nursery building and another 3,000-square-foot commercial building that

would be constructed on the northeast (back) portion of the site. The following construction activities would be required:

- Delivery and assembly of one 3,000-square-foot prefabricated building on a concrete foundation;
- Interior improvements to both buildings to support cannabis cultivation, including odor-management equipment, heating/ventilation/air conditioning (HVAC) equipment, windows with light-exclusion tarps;
- Installation of utility connections, security fencing, and external security lighting around the building;
- Construction of a new diversion on Stones Throw Creek;
- Construction of a new water diversion from Stones Throw Creek to a new 2,500gallon water storage tank adjacent to the new cultivation building;
- Extension of the wastewater collection system to the new cultivation building;
- Installation of a 2-foot x 3-foot wooden sign at the driveway entrance to the street, in accordance with County ordinance;
- Installation of landscaping around the building;
- Installation of solar panels on the existing residence; and
- Grading and paving of a turnaround area adjoining the existing gravel access drive to accommodate 5 vehicles (2 for employees, 1 for deliveries, 2 for visitors).

Figure 3 provides a site plan of the proposed site improvements. Modifications to the existing building would principally be to the interior of the structure. The new building would be brought to the site disassembled by truck and would be assembled on site and placed on a concrete pad foundation, poured on site.

The project area would require grading to expand the gravel access road into a turnout and parking area, and to level the building site. Engineering calculations indicate that the dirt removed from the northeastern portion of the building site would be used as fill at the southwestern portion, for a net balance of soil on site. All utility services are available at the existing residence; however, a new diversion from Stones Throw Creek would carry water to a new 2,500-gallon water tank adjacent to the new cultivation building to provide irrigation water. The facility would operate on solar power with electrical backup (connected to the residential service). Emergency power would be provided by a diesel generator. No off-site utility improvements would be required because the property extends to the creek. Construction workers and equipment would be staged on the existing parking lot.

Construction is anticipated to take 8-10 weeks and would involve the use of the following equipment:

- 2 flatbed trucks (building delivery)
- 1 forklift
- 1 dozer
- 1 backhoe
- 1 water truck
- 1 concrete mixer

Project Operations

Operations for the proposed project would involve mixed-light cannabis cultivation within the two buildings. The operation would employ 2-4 staff on two shifts, 6:00 a.m.-2 p.m. and 2 p.m.-10 p.m., with variable hours as business requires.

Project operations are anticipated to generate the following traffic:

- 4 employee work trips (one home-to-work and one work-to-home trip per employee) per day,
- 1 trip for material and supplies delivery per day, and
- 8-10 trips per week for shipment of finished product, seasonally (three times per year).

Domestic water, septic system, electricity, and propane services are available to serve the site, along with communications connections and solid waste collection. Services would be obtained from the following providers:

Water: Smith County

Wastewater: onsite septic systemElectricity: Public Gas and Electric

• Propane: Gas-R-Us

• Solid waste: United Waste Collection

Communications: Acme Telecom Services

Nighttime lighting would not be added to the parking area, but motion-activated security lighting would be installed around the buildings. Security fencing would also be installed around the entire property, with a code-locked gate at the turnaround to control vehicle access.

Environmental Commitments

The applicant would install multiple charcoal filters throughout the cultivation building to minimize the impacts of odor created by growing cannabis plants on neighboring land uses, per Smith County regulations.

The applicant would install solar panels on the roof of the existing residence to generate approximately 90% of the project's energy needs from this renewable source. In addition, the electrical service provider for the site, Public Gas and Electric, obtains 50% of its power from renewable sources.

All exterior lighting would be shielded and directed downward onto the site, to comply with Smith County's Dark Sky Ordinance.

Water quality protection measures, per Smith County regulations, would be in place during construction to prevent spills or storm runoff from flowing off the work site. Similar measures would be installed permanently.

Other Required Permits and Approvals

- Smith County Business Permit: Per County ordinance, all cannabis-related businesses, in addition to obtaining all required land use approvals under the Planning and Development Code (Title 17), must also obtain a business permit under County Code Title 5, Chapter 5.150. Among other things, the business permit regulates the final canopy size and requires a final security plan, lighting plan, and odor control plan.
- California Department of Food and Agriculture Annual Cultivation License:
 Per Business and Professions Code, Division 10, Chapter 2, Section 26012(2),
 the applicant is also required to obtain an annual cultivation license from the
 California Department of Food and Agriculture.
- California Department of Fish and Wildlife: The applicant is required to contact CDFW to determine whether a Lake or Streambed Alteration Agreement is required for the project, and to obtain one if CDFW deems it to be necessary. This project will require an LSAA because of the proposed diversion on Stones Throw Creek.
- State Water Resources Control Board/Central Valley Regional Water
 Quality Control Board: The applicant is required to obtain a Small Irrigation Use
 Registration from the State Water Resources Control Board for the proposed
 diversion and storage of water. The application is also required to obtain proof of
 enrollment in or exemption from either the SWRCB or RWQCB program for water
 quality protection. The project applicant has enrolled in the SWRCB's water
 quality protection program.

•	Smith Valley Air Quality Management District: Permit for the operation of the diesel-powered emergency generator.

ATTACHMENT C

Project Description Preparation Form

Lea	ad .	Ag	eı	nc	У
_				_	

Applicant Entity/Business Name:

License Type(s):

Date:

1. Source(s) of Information:

Identify Sources: Indicate the document(s) or other sources of information reviewed to complete this form.

2. Project Location:

Describe Project Location: Provide additional detailed information about the project location, including street address or latitude/longitude; city, county, ZIP code; and nearest cross streets.

Maps Included: Provide location map and premises maps that indicate specific location and surrounding area; topographic or aerial map preferred.

3. Description of Project Site:

General Topographic Features (slopes and other features): Describe topographic features on the project site and surrounding properties.

Natural Features (general vegetation types, presence of streams and wetlands, forested areas): Describe any natural features on the project site.

Existing Land Uses/Zoning: Describe existing land uses and zoning on the project site.

Existing Constructed Features (buildings, facilities, and other improvements): Describe all existing constructed features on the project site.

Surrounding Land Uses (including sensitive uses): Describe land uses on surrounding parcels.

4. Required Site Improvements and Construction Activities:

Site Improvements: Describe any required site improvements, including features contained in required plans such as lighting plan, security plan, neighborhood plan, hazardous materials plan.

Construction Activities:

5. Operation and Maintenance Activities:

Hours of Operation/Work Shifts: Describe hours and shifts.

Number of employees (total and by shift): Describe number of employees.

Estimated Daily Trip Generation: *Identify daily vehicle trips, including work trips, materials delivery, and product shipments.*

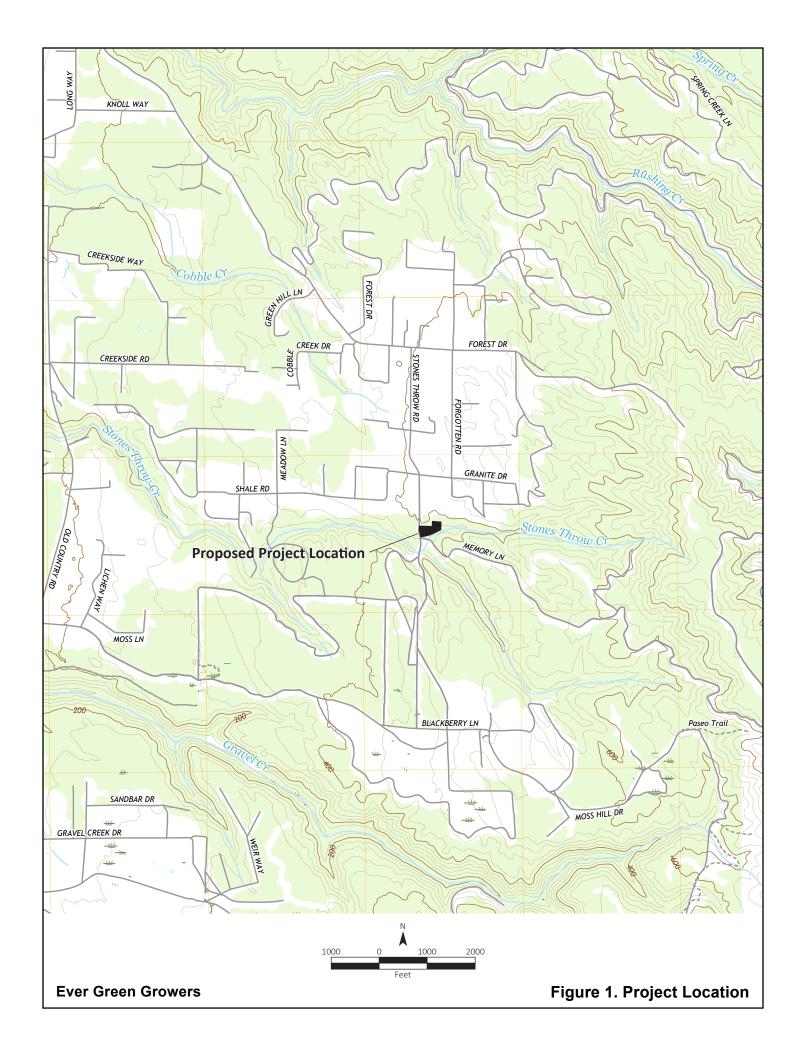
Source(s) of Water: Name all sources of water, and indicate whether a new or amended water right must be obtained from the State Water Resources Control Board.

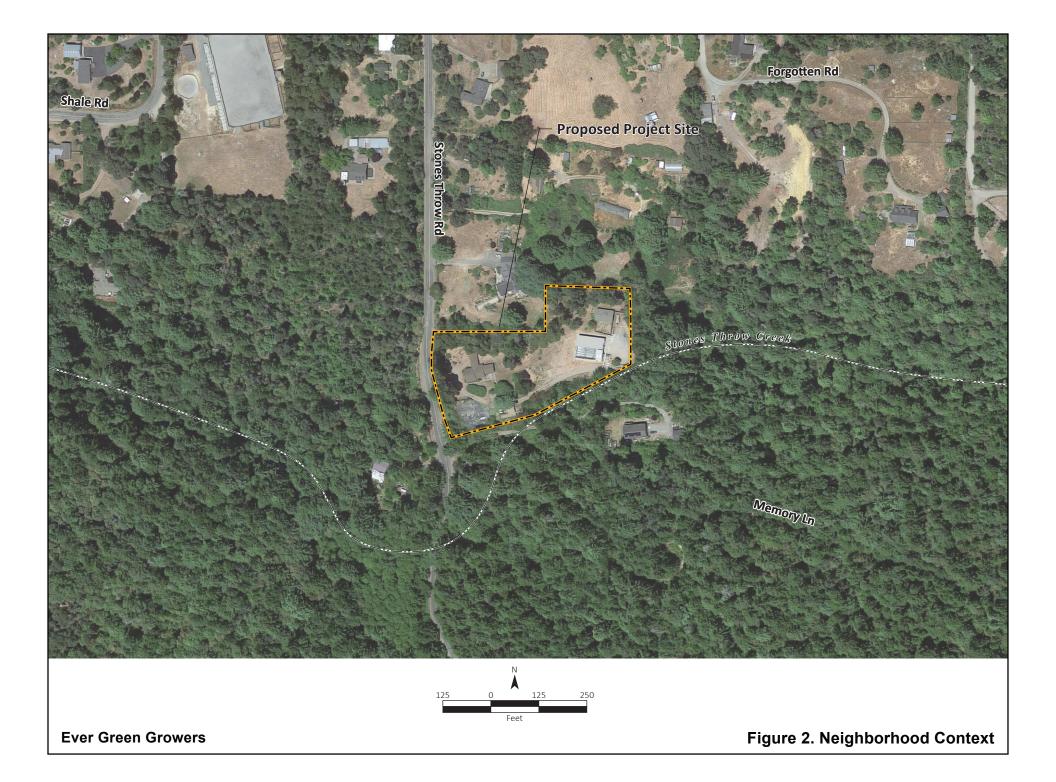
Wastewater Treatment Facilities: Describe facilities for treatment of wastewater (e.g., leach field, City wastewater collection facilities).

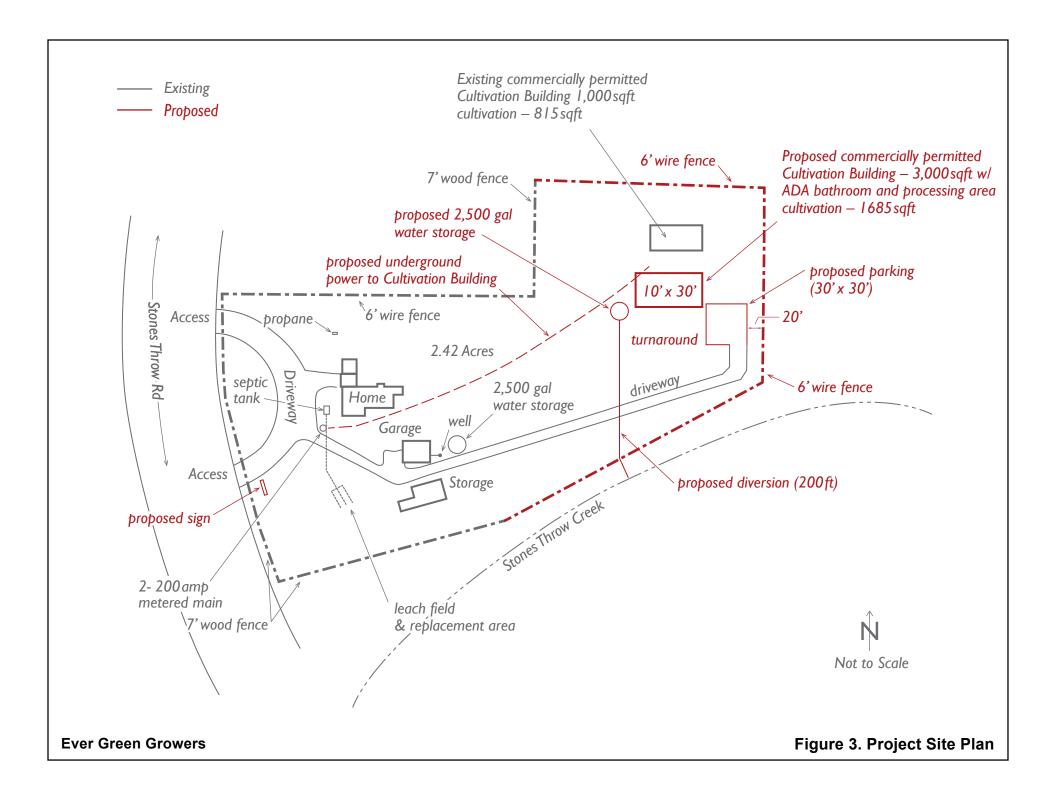
Source(s) of Power: Name all sources of power.

- **6. Environmental Commitments:** List any environmental commitments agreed to by the applicant related to the protection of biological or cultural resources, energy efficiency, water efficiency, noise abatement, lighting, or other aspects of the project that may reduce impacts on the environment.
- **7. Environmental Permits Required** (List all required federal, state, and local permits required):

Agency California Department of Food	Permit	Status
and Agriculture, CalCannabis	Annual Cultivation License	
California Department of Fish and Wildlife	Section 1602 Lake or Streambed Alteration Agreement	
State Water Resources Control Board / Regional Water Quality Control Board	Water quality protection program	







State of California

Memorandum

To : Cities and Counties Issuing Cannabis

Cultivation Permits and Licenses

Date: June 3, 2019

Place: Sacramento

Phone: (916) 263-0801

From : Department of Food and Agriculture -1220 N Street. Suite 400

Sacramento, CA 95814

Subject: CEQA Practice Recommendations from CDFA for Cannabis Licensing -Tiering and Other Streamlined Site-Specific CEQA Compliance Approaches

I. Introduction

Under California's Medicinal and Adult-Use Cannabis Regulation and Safety Act (MAUCRSA), all commercial cannabis cultivation activities within the state require authorization from the California Department of Food and Agriculture's (CDFA's) CalCannabis Licensing Division. CDFA's issuance of an annual cannabis cultivation license is subject to the California Environmental Quality Act (CEQA). (Cal. Code Regs., tit.3, § 8102.)

Before applying to CDFA, most cultivation applicants will have already applied for a local permit or authorization, often triggering CEQA compliance for the local jurisdiction. Because local jurisdictions will usually consider a cannabis cultivation proposal prior to CDFA's consideration, these local jurisdictions usually act as the CEQA lead agency and CDFA will serve as a CEQA responsible agency when it considers issuance of an annual commercial cannabis cultivation license.

When a local jurisdiction prepares a site-specific CEQA compliance document for each cannabis cultivation project for which it issues a permit, and those documents contains the information required by CDFA to issue an annual license, CDFA's license-approval process can proceed expeditiously, which benefits the applicant, the local jurisdiction, and the state.

When CDFA receives an application for a cultivation project that does not include site-specific CEQA compliance documentation, CDFA must act as the CEQA Lead Agency and must either prepare a CEQA document itself or request that the

applicant prepare site-specific analysis. In either event this is likely to significantly delay CDFA's issuance of the state license.

This memorandum is intended to help local lead agencies identify potentially efficient CEQA compliance approaches by providing information about CEQA streamlining strategies and describing the types of circumstances and activities that may qualify for each. To the extent that a local jurisdiction uses these streamlining strategies to comply with CEQA, the local jurisdiction can expedite the cannabis cultivation authorization process. This memorandum should not be considered legal advice: before determining the appropriate CEQA compliance strategy, local jurisdictions should consult with their legal counsel.

II. Scope of this Memorandum

This memorandum covers the following CEQA streamlining strategies:

- Approval of a Site-Specific Activity Fully Covered by a Prior CEQA Document
- Tiering from a Program Environmental Impact Report (EIR)
- Approving Site-Specific Activities Using Addenda

III. Other CDFA CEQA Practice Recommendation Memoranda

CDFA has prepared three other memoranda intended to assist local jurisdictions in complying with CEQA in ways that will facilitate later review by CDFA when issuing annual cannabis cultivation licenses. These are:

- CEQA Practice Recommendations from CDFA for Cannabis Licensing General Recommendations
- CEQA Practice Recommendations from CDFA for Cannabis Licensing Project **Description Content**
- CEQA Practice Recommendations from CDFA for Cannabis Licensing Categorical Exemptions

Because CDFA has prepared a separate document addressing the use of categorical exemptions, that streamlined CEQA-compliance tool is not discussed further in this document.

IV. Streamlining Strategies

A. Approving Site-Specific Activities Fully Covered by a Prior CEQA Document

If the impacts of a site-specific activity have been fully analyzed in a prior CEQA document, such as a program EIR or a program-level IS/ND or IS/MND, then the lead agency need not complete any further CEQA compliance. Alternatively, if a program EIR has comprehensively analyzed environmental impacts of the program, a site-by-site assessment of impacts may not be required if the program will have

similar impacts at each location. (See Ctr. for Biological Diversity v. Dep't of Fish & Wildlife (2015) 234 Cal.App.4th 214, 237.)

1. Description and Basis in Law

Section 15168 of the CEQA Guidelines addresses the preparation and use of program EIRs. Section 15168(c) addresses CEQA compliance for "later activities." It states:

Subsequent activities in the program must be examined in the light of the program EIR to determine whether an additional environmental document must be prepared.

- (1) If a later activity would have effects that were not examined in the program EIR, a new initial study would need to be prepared leading to either an EIR or a negative declaration. That later analysis may tier from the program EIR as provided in Section 15152.
- (2) If the agency finds that pursuant to Section 15162, no subsequent EIR would be required, the agency can approve the activity as being with the scope of the project covered by the program EIR, and no new environmental document would be required. Whether a later activity is within the scope of a program is a factual question that the agency determines based on substantial evidence in the record. Factors that an agency may consider in making that determination include, but are not limited to, consistency of the later activity with the type of allowable land use, overall planned density and building intensity, geographic area analyzed for environmental impacts, and covered infrastructure, as described in the program EIR.
- (3) An agency shall incorporate feasible mitigation measures and alternatives developed in the program EIR into later activities in the program.

Though not addressed by CEQA Guidelines Section 15168, determining whether a later activity fits within the environmental analyses documented in a program-level IS/ND or IS/MND requires review of the same considerations.

2. Benefits

A program EIR or program-level IS/ND or IS/MND, if properly prepared, can simplify the CEQA compliance required for subsequent activities. If the program-level document contains both sufficiently detailed analyses (including a detailed cumulative impact analysis) and sufficiently effective mitigation measures to ensure the avoidance of significant environmental impacts, the lead agency may be able to rely on the program-level document to entirely avoid the need to prepare subsequent documents. This can save the staff time and money, and avoid delays, associated with preparing subsequent CEQA documents, and circulating them for public review.

3. Circumstances When It May be Used

A program-level document can be used to approve a subsequent activity when the program-level document is prepared in a manner that facilitates this process. Section 15168(c)(5) provides the following guidance regarding the required contents of a program EIR to be used to cover subsequent activities. It states:

A program EIR will be most helpful in dealing with subsequent later activities if it provides a description of planned activities that would implement the program and deals with the effects of the program as specifically and comprehensively as possible. With a good and detailed project description and analysis of the program, many subsequent later activities could be found to be within the scope of the project described in the program EIR, and no further environmental documents would be required.

For cannabis cultivation projects, if a program-level document provides information regarding the range of projects that are covered by the analysis (e.g., geographic or size limitations), particularly where such limitations tend to lead to reduced or avoided environmental impacts, subsequent activities fitting within those limitations may be covered as being within the scope of the program-level document approved earlier. For example, limiting cultivation to less than 1 acre of cultivated area, limiting activities to indoor cultivation, or limiting cultivation to geographic areas where impacts would be reduced or eliminated can avoid or minimize certain types of environmental impacts. In addition, if the program-level document specifies assumptions regarding resource usage by subsequent activities (e.g., maximum water use, energy use, wastewater flows) and concludes that impacts related to those resources would be less than significant, then activities fitting within those limitations may be determined to result in less-than-significant impacts and to be covered by the program-level document. Finally, it is very important that, if the program-level document specifies mitigation measures, such measures must be applied to the subsequent activity. Local jurisdictions may document the application of these measures by including them in the permit or decision document issued for individual projects and providing these to the applicant to include with their application to CDFA.

4. Process Requirements

As described in the CEQA Guidelines, there are no process requirements imposed by CEQA for the approval of later activities, as neither the preparation of environmental compliance documents nor any notification or public involvement is required. However, local jurisdictions should note that CEQA Guidelines Section

15168(e) provides some additional instruction regarding public notification, stating that, if at the time that the public agency proposes to approve the subsequent activity by relying on the program EIR, a law other than CEQA requires public notice, the notice for the activity must include a statement that (1) the activity is within the scope of the program approved earlier and (2) the program EIR adequately describes the activity for the purposes of CEQA. Additionally, CDFA recommends that local jurisdictions prepare notices of determination (NODs) and file them with the State Clearinghouse for activities approved in this manner, so that the NOD and any supporting documentation (see 5. Content Requirements below) can be provided to applicants to provide to CDFA as proof of CEQA compliance.

5. Content Requirements

Section 15168(c)(4) of the CEQA Guidelines recommends that:

Where the later activities involve site specific operations, the agency should use a written checklist or similar device to document the evaluation of the site and the activity to determine whether the environmental effects of the operation were within the scope of the program EIR.

CDFA requests that local Lead Agencies prepare such checklists for subsequent activities and provide copies to applicants, for inclusion with their applications to CDFA. This provides documentation for CDFA of the Lead Agency's reasoning in concluding that the proposed activity fits within the analysis covered by the program EIR and that subsequent environmental review is not required.

B. Tiering from a Program EIR

The CEQA Guidelines encourage lead agencies to use tiering, when appropriate, to streamline CEQA compliance for a subsequent project considered following certification of a program EIR. When a lead agency has previously certified a program EIR covering its cannabis program, plan, policy, or ordinance, the agency may rely on the analyses of environmental impacts in that program-level CEQA document and need not repeat these analyses.

If the lead agency can document that the impacts of cannabis permitting projects are sufficiently evaluated in the program EIR, these are considered "subsequent activities" under CEQA, and the lead agency may take advantage of the streamlining strategies discussed above in Section A Approving Site-Specific Activities Fully Covered by a Prior CEQA Document, and above in Section C Approving Site-Specific Activities Using Addenda. Where the lead agency determines that many, though not all, of the impacts of a subsequent activity were covered by the program EIR, because detailed, site-specific information about subsequent projects related to the program may not have been feasible, the subsequent activity should be treated

as a separate project under CEQA, and the lead agency may prepare a focused initial study (IS) or EIR that tiers from the program EIR.

Tiering does not excuse the lead agency from adequately analyzing the reasonably foreseeable significant environmental effects of the program and does not justify deferring such analysis to a later-tier environmental document. However, the level of detail contained in a program EIR need not be greater than that of the program, plan, policy, or ordinance being analyzed.

1. Description and Basis in Law

The CEQA Guidelines define the term "program EIR" and describe the uses and advantages of a program EIR. The relevant portion of Section 15168 states:

- (a) General. A program EIR is an EIR which may be prepared on a series of actions that can be characterized as one large project and are related either:
 - (1) Geographically,
 - (2) As logical parts in the chain of contemplated actions,
 - (3) In connection with issuance of rules, regulations, plans, or other general criteria to govern the conduct of a continuing program, or
 - (4) As individual activities carried out under the same authorizing statutory or regulatory authority and having generally similar environmental effects which can be mitigated in similar ways.

CEQA Guidelines Section 15152 defines tiering and provides details regarding when tiering may be used, how it should be undertaken, and its benefits.

Section 15152(a) defines tiering as "using the analysis of general matters contained in a broader EIR (such as one prepared for a general plan or policy statement) with later EIRs and negative declarations on narrower projects; incorporating by reference the general discussions from the broader EIR; and concentrating the later EIR or negative declaration solely on the issues specific to the later project." It provides the following further guidance:

- (d) Use With Subsequent EIRS and Negative Declarations. A program EIR can be used to simplify the task of preparing environmental documents on later activities in the program. The program EIR can:
 - (1) Provide the basis in an initial study for determining whether the later activity may have any significant effects.

- (2) Be incorporated by reference to deal with regional influences, secondary effects, cumulative impacts, broad alternatives, and other factors that apply to the program as a whole.
- (3) Focus an EIR on a later activity to permit discussion solely of new effects which had not been considered before.

CEQA Guidelines Section 15152 allows lead agencies to use information from a certified program EIR in subsequent 2nd Tier documents, and to limit the analyses in these 2nd Tier documents to: 1) those topics not addressed at a project-specific level in the project EIR, and 2) those impacts that can be substantially reduced by the adoption of site-specific mitigation measures. Section 15168(d) allows the lead agency to rely on the program EIR for the analysis of broad-scale impacts (e.g., regional influences, secondary effects, cumulative impacts, broad alternatives) when preparing 2nd Tier documents for projects that are related to the program. If the program EIR includes site-specific analyses, the subsequent document may rely on those analyses as well. This allows the lead agency to focus the analysis in 2nd Tier documents solely on new effects not previously considered.

A focused IS or EIR may commonly be used when a lead agency determines that:

- the proposed project is subject to CEQA (e.g., a proposed project is not eligible for a statutory or categorical exemption);
- the proposed project is pursuant to, or consistent with, the program, plan, policy, or ordinance evaluated in the program EIR;
- the prior program EIR will be incorporated by reference, where applicable, to the focused IS and subsequent tiered negative declaration (ND), tiered mitigated negative declaration (MND), or tiered EIR; and
- the proposed project may result in new and/or additional impacts that were not previously examined, disclosed, and/or mitigated-for, and the lead agency will be conducting additional preliminary analyses to determine the next appropriate CEQA action required.

2. Benefits of Tiering

CEQA Guidelines Section 15168 lists the following benefits of program EIRs:

- (b) Advantages. Use of a program EIR can provide the following advantages. The program EIR can:
 - (1) Provide an occasion for a more exhaustive consideration of effects and alternatives than would be practical in an EIR on an individual action,

- (2) Ensure consideration of cumulative impacts that might be slighted in a case-by-case analysis,
- (3) Avoid duplicative reconsideration of basic policy considerations,
- (4) Allow the lead agency to consider broad policy alternatives and program wide mitigation measures at an early time when the agency has greater flexibility to deal with basic problems or cumulative impacts,
- (5) Allow reduction in paperwork.

2nd Tier documents (e.g., site-specific EIRs, NDs, and MNDs) may incorporate by reference the general discussions from the program EIR and may focus analyses solely on the issues specific to the later project. A focused IS or EIR enables a lead agency to reduce the time, effort, and cost involved in preparing 2nd Tier documents by eliminating the need to complete certain analyses and by allowing the preparation of shorter documents. CEQA Guidelines Section 15152(d) limits the analysis in 2nd Tier documents to those effects that:

- (1) Were not examined as significant effects on the environment in the prior EIR; or
- (2) Are susceptible to substantial reduction or avoidance by the choice of specific revisions in the project, by the imposition of conditions, or other means.

This approach can eliminate repetitive discussions of effects, greatly reducing the effort involved in preparing the 2nd Tier documents.

Additionally, given the evolving regulatory setting for cannabis businesses and everchanging cannabis cultivation market, a focused IS or EIR provides the lead agency an opportunity to address a changing environmental baseline, and/or changes which may have ensued following the publication of the program EIR.

Another benefit of tiering is that 2nd Tier documents can rely on the cumulative impact analysis in the program EIR, so agencies may not need to conduct any further analysis of cumulative impacts. Separately, the cumulative impact analysis contained in the program EIR may be particularly useful when subsequent individual projects qualify for one or more categorical exemptions. CEQA Guidelines Section 15300.2(b) states:

All exemptions for these classes [of categorically exempt projects] are inapplicable when the cumulative impact of successive projects of the same type in the same place, over time is significant.

While the cumulative impact analysis required for projects otherwise qualifying for a categorical exemption is more narrowly focused than that required for an EIR, the completion of a thorough cumulative impact analysis in a program EIR can be relied upon to demonstrate the lack of cumulative impacts, or the efficacy of ordinance provisions, program-level mitigation measures, or standard environmental protection measures in avoiding significant cumulative impacts. For more information about the analysis of cumulative impacts related to categorical exemptions, please see the memorandum "CEQA Practice Recommendations from CDFA for Cannabis Licensing – Categorical Exemptions," available upon request from CDFA.

3. Strategies for Maximizing the Benefits of Tiering

Lead agencies can take actions when preparing cannabis cultivation ordinances and program EIRs that will facilitate later tiering and minimize the scope of 2nd Tier environmental review.

a. Provide Detailed Analysis in Program EIR

To provide the greatest streamlining benefits, the analyses in the program EIR should be as detailed as possible, given the level of information available at the time the document is prepared. If information about subsequent individual activities or projects is available, analyzing these impacts and adopting mitigation measures to avoid or reduce any significant environmental impacts can simplify the 2nd Tier environmental compliance that may be required. Where a great deal of detail about subsequent individual projects is known, a combined program- and project-level 1st Tier EIR can be prepared which analyzes both the broad impacts of the program as a whole and the specific impacts of individual projects, perhaps eliminating the need to prepare 2nd Tier documents at all for those projects.

b. Incorporate Effective Programmatic Mitigation Measures in Program EIR

The incorporation of program-level mitigation measures that protect environmental resources in a program EIR can provide benefits for subsequent projects that are analyzed in 2nd Tier documents. When such mitigation measures can be demonstrated to eliminate the potential for subsequent projects to result in significant environmental impacts, then 2nd Tier documents can rely on the analysis in the program EIR to provide substantial evidence that the subsequent projects would not contribute to such impacts. For example, a requirement that cannabis cultivation projects obtain 100% of their operating-power needs from renewable sources can simplify analyses of Air Quality, Greenhouse Gas Emissions, and Energy in 2nd Tier documents by avoiding the potential for operations to significantly contribute to criteria air pollutant and greenhouse gas emissions (for those energy

needs) and providing evidence that project operations would not result in the wasteful, inefficient, or unnecessary use of energy.

c. Provide Environmental Protections in Cannabis Ordinance

The inclusion of measures in a cannabis cultivation ordinance that protect environmental resources is another way to simplify the preparation of 2nd Tier documents by essentially incorporating environmental commitments into every individual project and providing substantial evidence that significant environmental impacts would be avoided. Some jurisdictions have elected to include the programlevel mitigation from their program EIR into their ordinance, thus providing protections for a wide range of environmental resources.

4. Process Requirements

CEQA Guidelines Section 15152(g) provides guidance on the mechanics of tiering. It states:

When tiering is used, the later EIRs or negative declarations shall refer to the prior EIR and state where a copy of the prior EIR may be examined. The later EIR or negative declaration should state that the lead agency is using the tiering concept and that it is being tiered with the earlier EIR.

In places where the lead agency intends to incorporate contents from another CEQA document by reference, the reference should also include, where appropriate, a citation to the page or pages from that document where the information is found.

The CEQA process requirements for tiered environmental documents do not differ from those outlined for a standard EIR, IS/MND, or IS/ND in the CEQA Guidelines.

Local lead agencies should provide copies of the tiered EIR, IS/MND, or IS/ND to applicants so they can be provided with their applications to CDFA. A copy of the 1st tier document, or a link to where the 1st tier document can be obtained, should also be provided, so CDFA can examine that document.

5. Content Requirements

As noted above, a focused 2nd Tier document narrows the content of the document to new and/or additional information unique to the proposed project and available to the public at the time of publication of the 2nd Tier document. The focused document may incorporate by reference the following types of information from the program EIR:

- Regulatory and environmental settings,
- Impact evaluations,

- Analyses of alternatives,
- Analyses of cumulative impacts, and
- Supporting evidence for those impact topics previously considered in the program EIR.

All other content requirements for an EIR, IS/ND, or IS/MND also pertain to focused documents.

C. Approving Site-Specific Activities Using Addenda

In some cases, a program EIR or program-level IS/ND or IS/MND may have fully analyzed all impacts of an activity, but changes in circumstances or in the program after the adoption or certification of the program-level document require some changes or additions to the document. In such cases, it may be appropriate to prepare an addendum to the program-level document.

1. Description and Basis in Law

CEQA Guidelines Section 15164 provides that an agency may prepare an addendum to a previously certified program EIR if "some changes or additions are necessary but none of the conditions described in Section 15162 calling for preparation of a subsequent EIR have occurred." For adopted NDs or MNDs, an addendum may be prepared if only "minor technical changes or additions are necessary or none of the conditions described in Section 15162 calling for the preparation of a subsequent EIR or negative declaration have occurred."

2. Benefits

The use of addenda to a program-level document provides a greatly simplified CEQA compliance process for subsequent activities. The preparation of an addendum can be a very simple and relatively inexpensive process (compared to preparation of other types of CEQA documents), saving time and money. In addition, the addendum is an internal document which does not need to be circulated for public review and comment, nor adoption at a public hearing.

Strategies for Maximizing the Benefits of Approval by Addenda

The strategies for maximizing the benefits of approving activities through the use of addenda are the same as those described above under "A. Approving Site-Specific Activities Fully Covered by a Prior CEQA Document."

4. Circumstances When It May be Used

For an addendum to be appropriate, the agency must determine that none of the following conditions described in CEQA Guidelines Section 15162 apply:

- (1) Substantial changes are proposed in the project which will require major revisions of the previous EIR or negative declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects;
- (2) Substantial changes occur with respect to the circumstances under which the project is undertaken which will require major revisions of the previous EIR or negative declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects; or
- (3) New information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time the previous EIR was certified as complete or the negative declaration was adopted, shows any of the following:
 - (A) The project will have one or more significant effects not discussed in the previous EIR or negative declaration;
 - (B) Significant effects previously examined will be substantially more severe than shown in the previous EIR;
 - (C) Mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the project, but the project proponents decline to adopt the mitigation measures or alternatives; or
 - (D) Mitigation measures or alternatives which are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponents decline to adopt the mitigation measure or alternative.

A key consideration in determining whether an addendum may be used is whether "major revisions" to the previous CEQA document would need to be made. Recently a court found that when a project is initially approved by negative declaration, a major revision to the initial negative declaration will necessarily be required if the proposed modification may produce a significant environmental effect that had not previously been studied.1

¹ Friends of the College of San Mateo Gardens v. San Mateo Community College Dist. (2017) 11 Cal.App.5th 596.

5. Process Requirements

There are no process-related requirements for the preparation of addenda in the CEQA Guidelines. Public review of and comment on addenda is not required, and there are no noticing requirements. However, CDFA requests that local jurisdictions provide a copy of the memo-to-file described below to the applicant, so it can be provided to CDFA with the application for a license.

6. Content Requirements

There are no content requirements for the preparation of addenda in the CEQA Guidelines. However, it is good practice for the lead agency to prepare a memo-to-file documenting its decision that the preparation of a subsequent CEQA document is not required and that this documentation addresses the considerations posed in CEQA Guidelines Section 15162, as listed above. Attached to this memo are two Addendum Documentation Forms (one for addenda to IS/NDs and IS/MNDs, and one for addenda to EIRs) which may be helpful to local jurisdictions in documenting their analysis that no further CEQA compliance is required.

* * *

Documentation Form for Addendum to Local Program-Level IS/ND or IS/MND

Lead Agency:	
Applicant Entity/Business Name:	
License Type(s):	
Addendum Preparation Date:	
Lead Agency Preparer:	

This form is intended to assist Lead Agencies to document their decision regarding the suitability of an individual activity for approval using an Addendum to a previously adopted local program-level initial study/mitigated negative declaration (IS/MND) or initial study/negative declaration (IS/ND).

Although this form references a program-level IS/MND prepared by the Lead Agency, it is equally applicable to a program-level IS/ND. A Lead Agency relying on a program-level environmental impact report (EIR) should use the Documentation Form for Addendum to Local Program-Level EIR.

Activity Description:

Insert a brief description of the proposed activity and/or reference where this information is located. (Attach document containing activity description information, if referenced.)

Program-Level IS/MND:

Identify the program-level IS/MND adopted by the Lead Agency that supports the activity approval. (Attach IS/MND or indicate where it can be found.)

Does the activity fit within the program or project analyzed in the program- level IS/MND or constitute a "subsequent activity" to the program analyzed in the document? (If no, the activity is not eligible for description in an Addendum; skip to Eligibility Conclusion.)

If yes, provide details regarding the activity and describe how it fits within the program or project analyzed in the program-level IS/MND or constitutes a "subsequent activity" to the program analyzed in the document. This discussion may be found in the checklist or other written material used to document the evaluation of the site and the activity to determine whether the environmental effects of the activity are within the scope of the program-level document. If that is the case, attach that checklist or other written material, or indicate where it can be found.

2.	Are only minor technical changes or additions to the program-level IS/MND necessary for the document to adequately describe the subsequent activity? (If no, the activity is not eligible for description in an Addendum; skip to Eligibility Conclusion.)
	If yes, describe the changes or additions and why they are considered only minor.
3.	Would the activity result in new environmental effects not described in the program-level IS/MND? (If yes, the activity is not eligible for description in an Addendum; skip to Eligibility Conclusion.) ☐ Yes ☐ No
	If no, indicate the analysis or reasoning leading to the conclusion that the activity would not result in new environmental effects not described in the program-level IS/MND. This discussion may be found in the checklist or other written material used to document the evaluation of the site and the activity to determine whether the environmental effects of the activity are within the scope of the program-level document. If that is the case, attach that checklist or other written material, or indicate where it can be found.
4.	Does the activity involve substantial changes to the program or project analyzed in the program-level IS/MND that will require major revisions to the document due to the identification of new significant environmental effects or a substantial increase in the severity of previously identified significant effects? (If yes, the activity is not eligible for description in an Addendum; skip to Eligibility Conclusion.) Yes No If no, indicate the analysis or reasoning leading to the conclusion that no new significant environmental effects or a substantial increase in the severity of
	previously identified significant effects would result.
5.	Have substantial changes occurred in the circumstances under which the program or project was analyzed in the program-level IS/MND? If so, will these changes require major revisions to the IS/MND due to the identification of new significant environmental effects or a substantial increase in the severity of previously identified significant effects? (If yes, the activity is not
	eligible for description in an Addendum; skip to Eligibility Conclusion.) Yes No If no, describe any changes to the circumstances under which the underlying program or project was analyzed, why they are not considered substantial, and why they would not result in new significant environmental effects or a substantial increase in the severity of previously identified significant effects.

- 6. was not known and could not have been known (with the exercise of reasonable diligence) at the time the IS/MND was adopted, which shows any of the following:
 - The program or project (including the activity that is the subject of the Addendum) will have one or more significant effects not discussed in the previous document; or
 - ii. Mitigation measures or alternatives previously found not to be feasible would in fact be feasible and would substantially reduce one or more significant effects, but the project (or activity) proponents decline to adopt the mitigation measure(s) or alternative(s)?

(If yes, the activity is not eligible for description in an Addendum; skip to Eligibility Conclusion.) □ Yes □ No

If no, indicate whether any new information is available, and if so, why it would not result in any of the outcomes listed above in categories i-ii.

Eligibility Conclusion:

State the Lead Agency's conclusion regarding the eligibility of the activity for description in an Addendum to the previously adopted program-level IS/MND.

- □ Based on information contained in the administrative record, as reflected in the answers provided to Questions 1 through 6 above, only minor technical changes or additions to the document are necessary, none of the conditions described in CEQA Guidelines Section 15162 calling for the preparation of a subsequent EIR or IS/MND have occurred, and the activity fits within the program or project described in the underlying program-level IS/MND. The activity *is eligible* for description in an Addendum to the program-level IS/MND.
- Based on information contained in the administrative record, as reflected in the answers provided to Questions 1 through 6 above, one or more of the conditions described in CEQA Guidelines Section 15162 calling for the preparation of a subsequent EIR or IS/MND have occurred, or the activity does not fit within the program or project described in the underlying program-level IS/MND, or more than minor technical changes or additions to the underlying document are necessary. The activity *is not eligible* for description in an Addendum to the program-level IS/MND.

Documentation Form for Addendum to Local Program-Level EIR

Le	ead Agency:
ΑĮ	pplicant Entity/Business Name:
Li	cense Type(s):
Α	ddendum Preparation Date:
Le	ead Agency Preparer:
	This form is intended to assist Lead Agencies to document their decision regarding the suitability of an individual activity for approval using an Addendum to a previously certified local program-level environmental impact report (EIR). A Lead Agency relying on a program-level initial study/negative declaration (IS/ND) or mitigated negative declaration (IS/MND) should use the Documentation Form for Addendum to Local Program-Level IS/ND or IS/MND.
A	ctivity Description: Insert a brief description of the proposed activity and/or reference where this information is located. (Attach document containing activity description information, if referenced.)
Pı	rogram-Level EIR: Identify the program-level EIR certified by the Lead Agency that supports the activity approval. (Attach EIR or indicate where it can be found.)
1.	Does the activity fit within the program or project analyzed in the program- level EIR or constitute a "subsequent activity" to the program analyzed in the document? (If no, the activity is not eligible for description in an Addendum;
	skip to Eligibility Conclusion.) □ Yes □ No
	If yes, provide details regarding the activity and describe how it fits within the program or project analyzed in the program-level EIR or constitutes a "subsequent activity" to the program analyzed in the document. This discussion may be found in the checklist or other written material used to document the evaluation of the site and the activity to determine whether the environmental effects of the activity are within the scope of the program-level document. If that is the case, attach that checklist or other written material, or indicate where it can be found.
2.	described in the program-level EIR? (If yes, the activity is not eligible for description in an
	Addendum; skip to Eligibility Conclusion.) ☐ Yes ☐ No

If no, indicate the analysis or reasoning leading to the conclusion that the activity would not result in new environmental effects not described in the program-level EIR. This discussion may be found in the checklist or other written material used to document the evaluation of the site and the activity to determine whether the environmental effects of the activity are within the scope of the program-level document. If that is the case, attach that checklist or other written material, or indicate where it can be found.

3. Does the activity involve substantial changes to the program or project analyzed in the program-level EIR that will require major revisions to the document due to the identification of new significant environmental effects or a substantial increase in the severity of previously identified significant effects? (If yes, the activity is not eligible for description in an Addendum; skip to Eligibility Conclusion.)

☐ Yes ☐ No

If no, indicate the analysis or reasoning leading to the conclusion that no new significant environmental effects or a substantial increase in the severity of previously identified significant effects would result.

4. Have substantial changes occurred in the circumstances under which the program or project was analyzed in the program-level EIR? If so, will these changes require major revisions to the EIR due to the identification of new significant environmental effects or a substantial increase in the severity of previously identified significant effects? (If yes, the activity is not eligible for

description in an Addendum; skip to Eligibility Conclusion.)

☐ Yes ☐ No

If no, describe any changes to the circumstances under which the underlying program or project was analyzed, why they are not considered substantial, and why they would not result in new significant environmental effects or a substantial increase in the severity of previously identified significant effects.

- 5. Is new information of substantial importance available, which was not known and could not have been known (with the exercise of reasonable diligence) at the time the EIR was certified, which shows any of the following:
 - The program or project (including the activity that is the subject of the Addendum) will have one or more significant effects not discussed in the previous document;
 - ii. Significant effects previously examined in the EIR will be substantially more severe than shown in the document;
 - iii. Mitigation measures or alternatives previously found not to be feasible would in fact be feasible and would substantially reduce one or more significant effects, but the project (or activity) proponents decline to adopt the mitigation measure(s)

or alternative(s); or

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

(If yes, the activity is not eligible for description in an Addendum; skip to Eligibility Conclusion.) □ Yes □ No

If no, indicate whether any new information is available, and if so, why it would not result in either of the outcomes listed above in categories i-iv.

Eligibility Conclusion:

State the Lead Agency's conclusion regarding the eligibility of the activity for description in an Addendum to the previously certified program-level EIR.

- □ Based on information contained in the administrative record, as reflected in the answers provided to Questions 1 through 5 above, some changes or additions to the document are necessary, but none of the conditions described in CEQA Guidelines Section 15162 calling for the preparation of a subsequent EIR or IS/MND have occurred, and the activity fits within the program or project described in the underlying program-level EIR. The activity is eligible for description in an Addendum to the program-level EIR.
- □ Based on information contained in the administrative record, as reflected in the answers provided to Questions 1 through 5 above, one or more of the conditions described in CEQA Guidelines Section 15162 calling for the preparation of a subsequent EIR or IS/MND have occurred, or the activity does not fit within the program or project described in the underlying program-level EIR, or substantial changes or additions to the underlying document are necessary. The activity *is not eligible* for description in an Addendum to the program-level EIR.



State of California – The Natural Resources Agency DEPARTMENT OF FISH AND WILDLIFE Central Region 1234 East Shaw Avenue Fresno, California 93710 (559) 243-4005



October 18, 2019

www.wildlife.ca.gov

Jason Waters City of Woodlake 350 North Valencia Boulevard Woodlake, California 93257

Subject: Notice of Preparation for the 7 Points Industrial Complex Project (Project) draft Environmental Impact Report (EIR) SCH No. 201909057

Dear Mr. Waters,

The California Department of Fish and Wildlife (CDFW) received a Notice of Preparation from the City of Woodlake for the above-referenced Project pursuant to the California Environmental Quality Act (CEQA) and CEQA Guidelines.¹

Thank you for the opportunity to provide recommendations regarding the activities proposed at the Project area that may affect California fish and wildlife. Likewise, CDFW appreciates the opportunity to provide comments regarding those aspects on the Project that CDFW, by law, may be required to carry out or approve through the exercise of its own regulatory authority under Fish and Game Code.

CDFW ROLE

CDFW is California's **Trustee Agency** for fish and wildlife resources and holds those resources in trust by statue for all the people of the State (Fish & G. Code, §§ 711.7, subd. (a) & 1802; Pub. Resources Code, § 21070; CEQA Guidelines § 15386, subd. (a)). CDFW, in its trustee capacity, has jurisdiction over the conservation, protection, and management of fish, wildlife, native plants, and habitat necessary for biologically sustainable populations of those species (*Id.*, § 1802). Similarly, for purposes of CEQA, CDFW is charged by law to provide, as available, biological expertise during public agency environmental review efforts, focusing specifically on projects and related activities that have the potential to adversely affect fish and wildlife resources.

¹ CEQA is codified in the California Public Resources Code in section 21000 et seq. The "CEQA Guidelines" are found in Title 14 of the California Code of Regulations, commencing with section 15000.

CDFW is also submitting comments as a **Responsible Agency** under CEQA (Pub. Resources Code, § 21069; CEQA Guidelines, § 15381). For example, to the extent implementation of the Project as proposed may result in "take" as defined by State law of any species protected under the California Endangered Species Act (CESA) (Fish & G. Code, § 2050 et seq.), related authorized as provided by the Fish and Game Code will be required.

In this role, CDFW is responsible for providing, as available, biological expertise during public agency environmental review efforts (i.e., CEQA), focusing specifically on project activities that have the potential to adversely affect fish and wildlife resources. CDFW provides recommendations to identify potential impacts and possible measures to avoid or reduce those impacts.

Cannabis Water Use: Water use estimates for cannabis plants are not well established in literature and estimates from published and unpublished sources range between 3.8-liters and 56.8-liters per plant, per day. Based on research and observations made by CDFW in northern California, cannabis grow sites have significantly impacted streams through water diversions resulting in reduced flows and dewatered streams (Bauer et al., 2015). Groundwater use for clandestine cannabis cultivation activities have resulted in lowering the groundwater water table and have impacted water supplies to streams in northern California. CDFW recommends that CEQA documents address the impacts to groundwater and surface water that may occur from Project activities.

Light Pollution: Cannabis cultivation operations often use artificial lighting or "mixed-light" techniques in both greenhouse structures as well as indoor operations to increase yields. Night lighting can disrupt the circadian rhythms of many wildlife species. Many species use photoperiod cues for communication (i.e., bird song; Miller, 2006), determining when to begin foraging (Stone, Jones, & Harris, 2009), behavior thermoregulation (Beiswenger, 1977), and migration (Longcore & Rich, 2004). Even aquatic species can be affected; migration of salmonids can be slowed or halted by the presence of artificial lighting (Tabor, Brown, & Luiting, 2004; Nightingale, Longcore, & Simenstad, 2006). Phototaxis, a phenomenon which results in attraction and movement towards light, can disorient, entrap, and temporarily blind wildlife species that experience it (Longcore & Rich, 2004). CDFW recommends CEQA documents address light pollution in the analysis of impacts.

Water Pollution: Pursuant to Fish and Game Code section 5650, it is unlawful to deposit in, permit to pass into, or place where it can pass into "Waters of the State" any substance or material deleterious to fish, plant life, or bird life, including non-native species. Potential impacts to the wildlife resources that utilize watercourses in the Project area include the following: increased sediment input from road or structure runoff; toxic runoff associated with Project-related activities and implementation; and/or impairment of wildlife movement. The Regional Water Quality Control Board and United

States Army Corps of Engineers also have jurisdiction regarding discharge and pollution to Waters of the State.

Bird Protection: CDFW has jurisdiction over actions with potential to result in the disturbance or destruction of active nest sites or the unauthorized take of birds. Fish and Game Code sections that protect birds, their eggs and nests include sections 3503 (regarding unlawful take, possession or needless destruction of the nest or eggs of any bird), 3503.5 (regarding the take, possession or destruction of any birds-of-prey or their nests or eggs), and 3513 (regarding unlawful take of any migratory nongame bird).

Fully Protected Species: CDFW has jurisdiction over fully protected species of birds, mammals, amphibians, reptiles, and fish pursuant to Fish and Game Code sections 3511, 4700, 5050, and 5515. Take of any fully protected species is prohibited and CDFW cannot authorize their incidental take.

Unlisted Species: Species of plants and animals need not be officially listed as Endangered, Rare, or Threatened (E, R, or T) on any State or Federal list to be considered E, R, or T under CEQA. If a species can be shown to meet the criteria for E, R, or T as specified in the CEQA Guidelines (Cal. Code Regs., tit. 14, Chapter 3, § 15380), CDFW recommends it be fully considered in the environmental analysis for this Project.

PROJECT DESCRIPTION SUMMARY

Proponent: The City of Woodlake

Objective: The Project proponent is seeking a Conditional Use Permit to convert approximately 20 acres of olive orchard to a 20-acre industrial center that will house various industrial uses allowable by the zone district, including cannabis cultivation, manufacturing, and distribution. Project components include:

- Construction and operating an industrial park with buildings ranging from 5,100 to 27,500 square feet each, for a total of up to 335,000 square feet of industrial space.
- Constructing internal access roads, parking spaces and associated landscaping.
- Connecting the Project to the existing City water, wastewater, and storm drain systems.
- Installation of perimeter security, including lighting and an alarm system, in accordance with Chapter 5.48 of the Woodlake Municipal Code.

Location: The Project will take place on the southwest corner of West Ropes Avenue and Mulberry Street in Woodlake, California; Assessor's Parcel Number 060-170-088.

Timeframe: Unspecified.

RECOMMENDATIONS

CDFW offers the following recommendations to assist the City of Woodlake in adequately identifying and/or mitigating the Project's significant, or potentially significant, direct and indirect impacts on fish and wildlife (biological) resources. Editorial comments or other suggestions may also be included to improve the document.

I. Environmental Setting and Related Impact

Would the Project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by CDFW or the United States Fish and Wildlife Service (USFWS)?

Review of the California Natural Diversity Database (CNDDB) reveals records for two special-status species within the vicinity of the Project area including, but not limited to, State Threatened and federally Endangered San Joaquin kit fox (*Vulpes macrotis* mutica) and the State candidate for listing Crotch bumble bee (*Bombus crotchii*) (CDFW, 2019). Review of aerial imagery indicates the site has existing agricultural trees planted. The Project has the potential to impact biological resources. An analysis of potential impacts and recommended mitigation measures summarized by species follows below.

COMMENT 1: San Joaquin Kit Fox (SJKF)

Issue: SJKF have been documented to occur within the vicinity of the Project site (CDFW, 2019). Review of aerial imagery indicates the Project site is composed of agriculture and surrounded by rural residential and agriculture to the north, fallow fields to the south, agriculture to the east, and industrial to the west. SJKF den in right-of-ways, vacant lots, etc., and populations can fluctuate over time. Presence or absence in any one year is not necessarily a reliable predictor of SJKF potential to occur on a site. SJKF may be attracted to project sites due to the type and level of ground-disturbing activities and the loose, friable soils resulting from intensive ground disturbance. As a result, there is potential for SJKF to occupy or colonize the Project site. The Project's Initial Study (IS) does not address SJKF.

Specific impact: Without appropriate avoidance and minimization measures for SJKF, potential significant impacts associated with the Project's construction include

den collapse, inadvertent entrapment, reduced reproductive success, reduction in health and vigor of young, and direct mortality of individuals.

Evidence impact is potentially significant: Habitat loss resulting from agricultural, urban, and industrial development is the primary threat to SJKF (Cypher, Philips, & Kelly, 2013). As a result, Project activities have the potential to significantly impact local populations of SJKF.

Recommended Potentially Feasible Mitigation Measure(s)

To evaluate potential Project-related impacts to SJKF, CDFW recommends conducting the following evaluation of the Project site and including the following mitigation measures in the EIR.

Recommended Mitigation Measure 1: SJKF Surveys

CDFW recommends assessing presence and absence of SJKF and/or their dens by conducting surveys to detect SJKF individuals and their sign, both on and within 200 feet of the Project site. Pre-construction surveys are also recommended, and CDFW advises conducting these surveys at the Project site no less than 14 days and no more than 30 days prior to the beginning of ground-disturbing activities.

Recommended Mitigation Measure 2: SJKF Avoidance

If dens are found during surveys, CDFW recommends implementing no-disturbance buffers, in accordance with USFWS' "Standardized recommendations for protection of the San Joaquin kit fix prior to or during ground disturbance" (2011). Specifically, if SJKF are found occupying atypical (i.e. manmade structure) den sites, a 50-foot no-disturbance is recommended around the occupied den structure. If potential dens are found during surveys, CDFW advises implementing a 50-foot no-disturbance buffer around these structures as well. Consultation with CDFW and implementation of a 100-foot no-disturbance buffer around dens that are used or known to have been used at any time in the past by SJKF, are found during pre-construction surveys. If a natal or pupping den is found during surveys, consultation with CDFW is recommended.

Recommended Mitigation Measure 3: SJKF Take Avoidance

SJKF detection warrants consultation with CDFW to discuss how to implement the Project and avoid take, or if avoidance is not feasible, to acquire a State Incidental Take Permit, pursuant to Fish and Game Code section 2081(b).

COMMENT 2: Crotch Bumble Bee (CBB)

Issue: On June 28, 2019, the Fish and Game Commission published findings of its decision to advance CBB to candidacy as endangered. Pursuant to Fish and Game Code section 2074.6, CDFW has initiated a status review report to inform the Commission's decision on whether listing of CBB, pursuant to CESA, is warranted. During the candidacy period, consistent with CEQA Guidelines, section 15380, the status of the CBB as an endangered candidate species under CESA (Fish & G. Code, § 2050 et seq.) qualifies it as an endangered, rare, or threatened species under CEQA. It is unlawful to import into California, export out of California or take, possess, purchase, or sell within California, CBB and any part or product thereof, or attempt any of those acts, except as authorized pursuant to CESA. Under Fish and Game Code section 86, take means to hunt, pursue, catch, capture, or kill, or to attempt to hunt pursue, catch, capture, or kill. Consequently, take of CBB during the status review period is prohibited unless authorization pursuant to CESA is obtained.

CBB have been documented to occur within the vicinity of the Project area (CDFW, 2019). Suitable CBB habitat includes areas of grasslands and upland scrub that contain requisite habitat elements, such as small mammal burrows. CBB primarily nest in late February through late October underground in abandoned small mammal burrows, but may also nest under perennial bunch grasses or thatched annual grasses, under brush piles, in old bird nests, and in dead trees or hollow logs (Williams, Thorp, Richardson, & Colla, 2014; Hatfield, Jepsen, Thorp, Richardson, & Colla, 2015). Overwintering sites utilized by CBB mated queens include soft, disturbed soil (Goulson, 2010), or under leaf litter or other debris (Williams et al., 2014). Therefore, ground disturbance and vegetation removal associated with Project implementation has the potential to significantly impact local CBB populations.

Specific impact: Without appropriate avoidance and minimization measures for CBB, potentially significant impacts associated with ground- and vegetation-disturbing activities associated with construction of the Project include loss of foraging plants, changes in foraging behavior, burrow collapse, nest abandonment, reduced nest success, reduced health and vigor of eggs, young and/or queens, in addition to direct mortality in violation of Fish and Game Code.

Evidence impact is potentially significant: CBB was once common throughout most of the central and southern California, however, it now appears to be absent from most of it, especially in the central portion of its historic range within California's Central Valley (Hatfield et al., 2014). Analyses by the Xerces Society et al. (2018) suggest there have been sharp declines in relative abundance by 98% and persistence by 80% over the last ten years.

Recommended Potentially Feasible Mitigation Measure(s)

To evaluate potential impacts to CBB associated with the Project, CDFW recommends including the following mitigation measure in the EIR.

Recommended Mitigation Measure 4: CBB Take Avoidance

CDFW recommends that all small mammal burrows and thatched/bunch grasses be avoided by a minimum of 50 feet to avoid take and potentially significant impacts. If the Project area includes brush piles, unmowed/overgrown areas, dead trees, hollow logs, those areas should be avoided by a minimum of 50 feet to avoid take and potentially significant impacts. If ground-disturbing activities will occur during the overwintering period (October through February), consultation with CDFW is warranted to discuss how to implement Project activities and avoid take. Any detection of CBB prior to or during Project implementation warrants consultation with CDFW to discuss how to avoid take.

COMMENT 3: Pesticide Use

Issue: The Project has the potential to temporarily and permanently impact biological resources through the use of pesticides. The United States Environmental Protection Agency (USEPA) regulates pesticides at the Federal level and the California Department of Pesticide Regulation (DPR) regulates pesticides at the State Level. There are currently no pesticides registered specifically for use directly on cannabis. Based on DPR guidance, the only pesticide products not illegal to use on cannabis are those that contain an active ingredient that is exempt from residue-tolerance requirements and (1) registered and labeled for use that is broad enough to include use on cannabis (i.e., unspecified green plants) or (2) exempt from registration requirements as a minimum risk pesticide under Federal Insecticide, Fungicide, and Rodenticide Act section 25(b) and California Code of Regulations, Title 3, section 6147.

Specific impact: Baker (2018) reports the direct effects of pesticides on wildlife include "acute poisoning, immunotoxicity, endocrine disruption, reproductive failure, altered morphology and growth rates, and changes in behavior" (p. 1). Increased anticoagulant rodenticide use has been noted by CDFW staff at clandestine cannabis cultivation sites throughout the State, including the use of illegal rodenticides in endangered species habitat in San Luis Obispo County (D. Hacker, personal communication, March 28, 2017). The use of pesticides, including anticoagulants and their potential for secondary poisoning to native species, is a significant concern. According to Baker (2018), "[p]esticides can indirectly impact wildlife through reduction of food resources and refuges, starvation due to decreased prey availability, hypothermia, and secondary poisoning" (p. 3).

Evidence impact is potentially significant: Wildlife, including beneficial arthropods, birds, mammals, amphibians, reptiles, and fish, can be poisoned by pesticides after exposure to a toxic dose through ingestion, inhalation, or dermal contact (Fleischli, Franson, Thomas, Finley, & Riley, 2004; Pimentel, 2005; Berny, 2007). They can also experience secondary poisoning through feeding on animals that have been directly exposed to the pesticides. Raptors (e.g., hawks and owls) and mammalian carnivores (e.g., fishers) are some of the common victims of secondary poisonings by anticoagulant rodenticides (Mendelssohn & Paz, 1977; Gabriel et al., 2015, 2018). Even non-lethal doses of pesticides can negatively affect wildlife; pesticides can comprise immune systems, cause hormone imbalances, affect reproduction, and alter growth rates of many wildlife species (Pimentel, 2005; Li & Kawada, 2006; Relyea & Diecks, 2008; Baldwin, Spromberg, Collier, & Scholz, 2009).

Recommended Potentially Feasible Mitigation Measures

CDFW recommends the EIR address and fully analyze the use of pesticides, including the risk of secondary poisoning to native species caused by the use of rodenticides. CDFW recommends the EIR include a measure that requires the use of herbicides, rodenticides, or fertilizers on the Project area to be restricted to those approved by USEPA and DPR.

II. Editorial Comments and/or Suggestions

Mitigation Measure BIO-1, page 26.

As currently drafted, Mitigation Measure BIO-1 describes construction, to the extent practicable, shall be scheduled to avoid the nesting season, which extends from February through August. If it is not possible to schedule construction between September and January, a pre-construction clearance survey for nesting birds shall be conducted by a qualified biologist to ensure that no active nests will be disturbed during the implementation of the Project. During the survey, the qualified biologist shall inspect all potential nest substrates in and immediately adjacent to the impact areas, including within 250 feet in the case of raptor nests. If an active nest is found close enough to the construction area to be disturbed by these activities, the qualified biologist shall determine the extent of a construction-free buffer to be established around the nest. If work cannot proceed without disturbing the nesting birds, work may need to be halted or redirected to other areas until nesting and fledging are completed or the nest has failed for non-construction related reasons. CDFW recommends if active nests are located. then all construction work shall be conducted outside a no-disturbance buffer zone to be developed by the project biologist based on the species (i.e., 50-feet for common species and at least 500-feet for raptors and special-status species). CDFW encourages Project implementation occur during the bird non-nesting season. However, if ground-disturbing activities must occur during the breeding season

(February through mid-September), the Project applicant is responsible for ensuring that implementation of the Project does not result in violation of the Migratory Bird Treaty Act or relevant Fish and Game Codes as referenced above.

CDFW recommends that a qualified wildlife biologist conduct preconstruction surveys for active nests no more than 10-days prior to the start of ground disturbance to maximize the probability that nests that could potentially be impacted are detected. CDFW also recommends that surveys cover a sufficient area around the work site to identify nests and determine their status. A sufficient area means any area potentially affected by a project. In addition to direct impacts (i.e., nest destruction), noise, vibration, odors, and movement of workers or equipment could also affect nests. Prior to initiation of construction activities, CDFW recommends a qualified biologist conduct a survey to establish a behavioral baseline of all identified nests. Once construction begins, CDFW recommends a qualified biologist continuously monitor nests to detect behavioral changes resulting from the project. If behavioral changes occur, CDFW recommends the work causing that change cease and CDFW be consulted for additional avoidance and minimization measures.

If continuous monitoring of identified nests by a qualified wildlife biologist is not feasible, CDFW recommends a minimum no-disturbance buffer of 250-feet around active nests of non-listed bird species and a 500-foot no-disturbance buffer around active nests of non-listed raptors. These buffers are advised to remain in place until the breeding season has ended or until a qualified biologist has determined the birds have fledged and are no longer reliant upon the nest or parental care for survival. Variance from these no-disturbance buffers is possible when there is compelling biological or ecological reason to do so, such as when the construction area would be concealed from a nest site by topography. CDFW recommends that a qualified wildlife biologist advise and support any variance from these buffers and notify CDFW in advance of implementing a variance.

NOTIFICATION OF LAKE AND STREAMBED ALTERATION

Business and Professions Code 26060.1 (b)(3) includes a requirement that California Department of Food and Agriculture cannabis cultivation licensees demonstrate compliance with Fish and Game Code section 1602 through written verification from CDFW. CDFW recommends submission of a Lake and Streambed Alteration Notification to CDFW for the proposed Project prior to initiation of any cultivation activities. Please note, CDFW is required to comply with CEQA in the issuance of a Lake or Streambed Alteration Agreement.

ENVIRONMENTAL DATA

CEQA requires that information developed in EIRs and Negative Declarations be incorporated into a database, which may be used to make subsequent or supplemental

environmental determinations (Pub. Resources Code, § 21003, subd. (e)). Accordingly, please report any special-status species and natural communities detected during Project surveys to CNDDB. The CNDDB field survey form can be found at the following link: http://www.dfg.ca.gov/biogeodata/cnddb/pdfs/ CNDDB_FieldSurveyForm.pdf. The completed form can be mailed electronically to CNDDB at the following email address: CNDDB@wildlife.ca.gov. The types of information reported to CNDDB can be found at the following link: http://www.dfg.ca.gov/biogeodata/cnddb/plants_and_animals.asp.

FILING FEES

If it is determined that the Project has the potential to impact biological resources, an assessment of filing fees will be necessary. Fees are payable upon filing of the Notice of Determination by the Lead Agency and serve to help defray the cost of environmental review by CDFW. Payment of the fee is required in order for the underlying project approval to be operative, vested, and final (Cal. Code Regs., tit. 14, § 753.5; Fish & G. Code, § 711.4; Pub. Resources Code, § 21089).

CONCLUSION

CDFW appreciates the opportunity to comment on the Project to assist the City of Woodlake in identifying and mitigating Project impacts on biological resources.

Should you have questions regarding this letter or for further coordination please contact Kelley Aubushon, Senior Environmental Scientist (Specialist), at the address provided on this letterhead, by telephone at (559) 243-8153, or by email at kelley.aubushon@wildlife.ca.gov.

Sincerely.

Julie A. Vance Regional Manager

REFERENCES

- Baker, A. 2018. A review of the potential impacts of cannabis cultivation of fish and wildlife resources. California Department of Fish and Wildlife, Sacramento, California.
- Baldwin, D. H., J. A. Spromberg, T. K. Collier, and N. L. Scholz. 2009. A fish of many scales: Extrapolating sublethal pesticide exposures to the productivity of wild salmon populations. Ecological Applications 19:2004–2015.
- Bauer, S. Olson, J., Cockrill, A., van Hattem, M., Miller, L., Tauzer, M., et al., 2015. Impacts of surface water diversions for marijuana cultivation on aquatic habitat in four northwestern California watersheds. PLoS ONE 10(3): e0120016. doi:10.1371/journal.pone.0120016
- Beiswenger, R. E., 1977. Diet patterns of aggregative behavior in tadpoles of *Bufo americanus*, in relation to light and temperature. Ecology 58:98–108.
- Berny, P. 2007. Pesticides and the intoxication of wild animals. Journal of Veterinary Pharmacology and Therapeutics 30:93–100.
- California Department of Fish and Wildlife (CDFW), 2019. Biogeographic Information and Observation System (BIOS). 2019 https://www.wildlife.ca.gov/Data/BIOS. Accessed September 26, 2019.
- Cypher, B. L., S. E. Phillips, and P.A. Kelly. 2013. Quantity and distribution of suitable habitat for endangered San Joaquin kit foxes: conservation implications. Canid Biology and Conservation 16(7): 25-31.
- Fleischli, M. A., J. C. Franson, N. J. Thomas, D. L. Finley, and W. Riley, Jr. 2004. Avian mortality events in the United States caused by anticholinesterase pesticides: A retrospective summary of national wildlife health center records from 1980 to 2000. Archives of Environmental Contamination and Toxicology 46:542–550.
- Gabriel, M. W., L. V. Diller, J. P. Dumbacher, G. M. Wengert, J. M. Higley, R. H. Poppenga, and S. Mendia. 2018. Exposure to rodenticides in northern spotted and barred owls on remote forest lands in northwestern California: evidence of food web contamination. Avian Conservation and Ecology 13:art2.
- Gabriel, M. W., L. W. Woods, G. M. Wengert, N. Stephenson, J. M. Higley, C. Thompson, S. M. Matthews, R. A. Sweitzer, K. Purcell, R. H. Barrett, S. M. Keller, P. Gaffney, M. Jones, R. Poppenga, J. E. Foley, R. N. Brown, D. L. Clifford, and B. N. Sacks. 2015. Patterns of natural and human-caused mortality factors of a rare forest carnivore, the fisher (*Pekania pennanti*) in California.

- PLoS ONE 10:e0140640.Goulson, D. 2010. Bumblebees: behaviour, ecology, and conservation. Oxford University Press, New York. 317pp.
- Goulson, D. 2010. Bumblebees: behaviour, ecology, and conservation. Oxford University Press, New York. 317pp.
- Hatfield, R, S. Colla, S. Jepsen, L. Richardson, R. Thorp, and S. Foltz Jordan. 2014.

 Draft IUCN assessments for North American *Bombus* spp. for the North

 American IUCN bumble bee specialist group. The Xerces Society for Invertebrate

 Conservation, www.xerces.org, Portland, OR.
- Hatfield, R., Jepsen, S., Thorp, R., Richardson, L. & Colla, S. 2015. Bombus crotchii. The IUCN Red List of Threatened Species. http://dx.doi.org/10.2305/IUCN.UK.2015--2.RLTS.T44937582A46440211.en. Accessed 16 August 2019.
- Li, Q., and T. Kawada. 2006. The mechanism of organophosphorus pesticide-induced inhibition of cytolytic activity of killer cells. Cellular & Molecular Immunology 3:171–178.
- Longcore, T., and C. Rich, 2004. Ecological light pollution Review. Frontiers in Ecology and the Environment 2:191–198.
- Mendelssohn, H., and U. Paz. 1977. Mass mortality of birds of prey caused by Azodrin, an organophosphate insecticide. Biological Conservation 11:163–170.
- Miller, M. W., 2006. Apparent effects of light pollution on singing behavior of American robins. The Condor 108:130–139.
- Nightingale, B., T. Longcore, and C. A. Simenstad. 2006. Artificial night lighting and fishes. Pages 257–276 *in* C. Rich and T. Longcore, editors. Ecological consequences of artificial light at night. Island Press, Washington, D.C., USA.
- Pimentel, D. 2005. Environmental and economic costs of the application of pesticides primarily in the United States. Environment, Development and Sustainability 7:229–252.
- Relyea, R. A., and N. Diecks. 2008. An unforeseen chain of events: lethal effects of pesticides on frogs at sublethal concentrations. Ecological Applications 18:1728–1742.
- Stone, E. L., G. Jones, and S. Harris, 2009. Street lighting disturbs commuting bats. Current Biology 19:1123–1127. Elsevier Ltd.

- Tabor, R. A., G. S. Brown, and V. T. Luiting, 2004. The effect of light intensity on sockeye salmon fry migratory behavior and predation by cottids in the Cedar River, Washington. North American Journal of Fisheries Management 24:128–145.
- USFWS. 2011. Standard recommendations for the protection of the San Joaquin kit fox prior to or during ground disturbance. United States Fish and Wildlife Service, January 2011.
- Williams, P. H., R. W. Thorp, L. L. Richardson, and S. R. Colla. 2014. Bumble bees of North America: an identification guide. Princeton University Press, Princeton, New Jersey. 208pp.
- Xerces Society for Invertebrate Conservation, Defenders of Wildlife, and Center for Food Safety. 2018. A petition to the state of California fish and game commission to list the Crotch bumble bee (*Bombus crotchii*), Franklin's bumble bee (*Bombus franklini*), Suckley cuckoo bumble bee (*Bombus suckleyi*), and western bumble bee (*Bombus occidentalis*) as Endangered under the California Endangered Species Act. October 2018.





Central Valley Regional Water Quality Control Board

23 October 2019

Jason Waters City of Woodlake 350 North Valencia Avenue Woodlake, CA 93286

CERTIFIED MAIL 7019 0700 0002 0112 1368

COMMENTS TO REQUEST FOR REVIEW FOR THE NOTICE OF PREPARATION FOR THE DRAFT ENVIRONMENTAL IMPACT REPORT, 7POINTS INDUSTRIAL COMPLEX PROJECT, SCH#2019090507,TULARE COUNTY

Pursuant to the State Clearinghouse's 20 September 2019 request, the Central Valley Regional Water Quality Control Board (Central Valley Water Board) has reviewed the Request for Review for the Notice of Preparation for the Draft Environmental Impact Report for the 7Points Industrial Complex Project, located in Tulare County.

Our agency is delegated with the responsibility of protecting the quality of surface and groundwaters of the state; therefore our comments will address concerns surrounding those issues.

I. Regulatory Setting

Basin Plan

The Central Valley Water Board is required to formulate and adopt Basin Plans for all areas within the Central Valley region under Section 13240 of the Porter-Cologne Water Quality Control Act. Each Basin Plan must contain water quality objectives to ensure the reasonable protection of beneficial uses, as well as a program of implementation for achieving water quality objectives with the Basin Plans. Federal regulations require each state to adopt water quality standards to protect the public health or welfare, enhance the quality of water and serve the purposes of the Clean Water Act. In California, the beneficial uses, water quality objectives, and the Antidegradation Policy are the State's water quality standards. Water quality standards are also contained in the National Toxics Rule, 40 CFR Section 131.38.

The Basin Plan is subject to modification as necessary, considering applicable laws, policies, technologies, water quality conditions and priorities. The original Basin Plans were adopted in 1975, and have been updated and revised periodically as required, using Basin Plan amendments. Once the Central Valley Water Board has adopted a Basin Plan amendment in noticed public hearings, it must be approved by the State Water Resources Control Board (State Water Board), Office of Administrative Law (OAL) and in some cases, the United States Environmental Protection Agency (USEPA). Basin Plan amendments only become effective after

KARL E. LONGLEY SCD, P.E., CHAIR | PATRICK PULUPA, ESQ., EXECUTIVE OFFICER

they have been approved by the OAL and in some cases, the USEPA. Every three (3) years, a review of the Basin Plan is completed that assesses the appropriateness of existing standards and evaluates and prioritizes Basin Planning issues. For more information on the *Water Quality Control Plan for the Sacramento and San Joaquin River Basins*, please visit our website: http://www.waterboards.ca.gov/centralvalley/water_issues/basin_plans/

Antidegradation Considerations

All wastewater discharges must comply with the Antidegradation Policy (State Water Board Resolution 68-16) and the Antidegradation Implementation Policy contained in the Basin Plan. The Antidegradation Implementation Policy is available on page 74 at:

https://www.waterboards.ca.gov/centralvalley/water_issues/basin_plans/sacsjr_201 805.pdf

In part it states:

Any discharge of waste to high quality waters must apply best practicable treatment or control not only to prevent a condition of pollution or nuisance from occurring, but also to maintain the highest water quality possible consistent with the maximum benefit to the people of the State.

This information must be presented as an analysis of the impacts and potential impacts of the discharge on water quality, as measured by background concentrations and applicable water quality objectives.

The antidegradation analysis is a mandatory element in the National Pollutant Discharge Elimination System and land discharge Waste Discharge Requirements (WDRs) permitting processes. The environmental review document should evaluate potential impacts to both surface and groundwater quality.

II. Permitting Requirements

Cannabis General Order

Pursuant to the State Water Resources Control Board's Cannabis Policy, cannabis cultivation operations must enroll for coverage under General Waste Discharge Requirements and Waiver of Waste Discharge Requirements for Discharges of Waste Associated with Cannabis Cultivation Activities Order No. WQ 2019-0001-DWQ (the Cannabis General Order).

Page 48 of the Initial Study states "The Central Valley Regional Water Quality Control Board adopted a General Waste Discharge Requirements Order for Discharges of Waste Associated with Medical Cannabis Cultivation Activities (Order No. R5-2015-0113). The proposed Project's tenants will be in compliance with the rules and requirements set forth in the Discharge Requirements."

Please note that cannabis cultivation operations are required to obtain coverage under State Water Resources Control Board's General Waste Discharge Requirements and Waiver of Waste Discharge Requirements for Discharges of Waste Associated with Cannabis Cultivation Activities Order No. WQ 2019-0001-DWQ (the statewide Cannabis General Order). The statewide Cannabis General

Order supersedes the Central Valley Regional General Order. The proposed projects tenants must enroll for coverage and comply with the requirements of the statewide Cannabis General Order.

Page 8 of the Initial Study states that "Once a business is established ...wastewater, including sewer use, will be serviced by on-site septic systems". The Cannabis General Order requires indoor cannabis cultivation activities that discharge cultivation operation wastewater to on-site wastewater treatment systems (i.e. septic systems) obtain separate Waste Discharge Requirements from the Water Board. Please see comments related to onsite wastewater treatment systems. For more information on waste discharges to land, visit the Central Valley Water Board website at: http://www.waterboards.ca.gov/centralvalley/water_issues/waste_to_land/index.shtml

The Water Boards Cannabis Cultivation Programs offer an easy to use online Portal for cultivators to apply for Cannabis General Order coverage at: https://public2.waterboards.ca.gov/CGO

Additional information about the Cannabis General Order, Cannabis Small Irrigation Use Registration (SIUR) Program, and Portal can be found at: www.waterboards.ca.gov/cannabis

For questions about the Cannabis General Order, please contact the Central Valley Water Board's Cannabis Permitting and Compliance Unit at: centralvalleysacramento@waterboards.ca.gov or (916) 464-3291.

Construction Storm Water General Permit

Dischargers whose project disturb one or more acres of soil or where projects disturb less than one acre but are part of a larger common plan of development that in total disturbs one or more acres, are required to obtain coverage under the General Permit for Storm Water Discharges Associated with Construction Activities (Construction General Permit), Construction General Permit Order No. 2009-009-DWQ. Construction activity subject to this permit includes clearing, grading, grubbing, disturbances to the ground, such as stockpiling, or excavation, but does not include regular maintenance activities performed to restore the original line, grade, or capacity of the facility. The Construction General Permit requires the development and implementation of a Storm Water Pollution Prevention Plan (SWPPP). For more information on the Construction General Permit, visit the State Water Resources Control Board website at:

http://www.waterboards.ca.gov/water_issues/programs/stormwater/constpermits.sht ml

Waste Discharge Requirements - Discharges to Land

Pursuant to the State Board's Onsite Wastewater Treatment Systems Policy (Policy), the regulation of the septic system for the discharge of domestic wastewater may be regulated under the local agency's management program.

The project proposes to use onsite septic systems for the disposal of comingled domestic and process related wastewaters. Please note that the Policy only covers onsite wastewater treatment systems that receive just domestic wastewater. The discharge of high-strength industrial wastewater to onsite wastewater treatment

systems is generally not eligible for coverage under the Policy. Cannabis cultivation can generate other wastewaters such as irrigation runoff, water treatment effluent, cleaning agents, and wash waters. Discharges of these wastewaters to an onsite wastewater system such as a septic tank and leach field must obtain separate regulatory authorization, such as waste discharge requirements (WDRs), a conditional waiver of WDRs, or other permit mechanism, prior to discharge. The application to obtain WDRs or a conditional waiver of WDRs can take over a year to process and requires that you characterize the wastewater chemistry and volume.

Unless technically justified, domestic wastewater and industrial wastewater should be segregated and treated and disposed of separately (as required per section 4.4.12 of the Water Quality Control Plan for the Tulare Lake Basin).

For more information on waste discharges to land, visit the Central Valley Water Board website at:

http://www.waterboards.ca.gov/centralvalley/water_issues/waste_to_land/index.sht ml

Dewatering Permit

If the proposed project includes construction or groundwater dewatering to be discharged to land, the proponent may apply for coverage under State Water Board General Water Quality Order (Low Risk General Order) 2003-0003 or the Central Valley Water Board's Waiver of Report of Waste Discharge and Waste Discharge Requirements (Low Risk Waiver) R5-2013-0145. Small temporary construction dewatering projects are projects that discharge groundwater to land from excavation activities or dewatering of underground utility vaults. Dischargers seeking coverage under the General Order or Waiver must file a Notice of Intent with the Central Valley Water Board prior to beginning discharge.

For more information regarding the Low Risk General Order and the application process, visit the Central Valley Water Board website at:

http://www.waterboards.ca.gov/board_decisions/adopted_orders/water_quality/200 3/wqo/wqo2003-0003.pdf

For more information regarding the Low Risk Waiver and the application process, visit the Central Valley Water Board website at:

http://www.waterboards.ca.gov/centralvalley/board_decisions/adopted_orders/waivers/r5-2013-0145_res.pdf

If you have questions regarding these comments, please contact me at (916) 464-4812 or Jordan. Hensley @waterboards.ca.gov.

Original Signed by

Jordan Hensley Environmental Scientist

cc: State Clearinghouse unit, Governor's Office of Planning and Research, Sacramento

DEPARTMENT OF TRANSPORTATIONDISTRICT 6

1352 WEST OLIVE AVENUE P.O. BOX 12616 FRESNO, CA 93778-2616 PHONE (559) 488-7396 FAX (559) 488-4088 TTY 711 www.dot.ca.gov



October 25, 2019

06-TUL-216-13.49 NOP / IS 7 POINTS LIGHT-INDUSTRIAL COMPLEX (2)

SENT VIA EMAIL

Mr. Jason Waters Community Services Director City of Woodlake 350 N. Valencia Boulevard; Suite 2 Woodlake, CA 93286

Dear Mr. Waters

Thank you for the opportunity to review the Notice of Preparation (NOP) and Initial Study (IS) for a draft Environmental Impact Report for a proposed Light Industrial Complex (Project). The Project proposed various industrial uses allowed by the zone district, including cannabis cultivation, manufacturing, and distribution which is allowed with a Conditional Use Permit.

A Tentative Subdivision Map will be processed to divide the approximately 20-acre site into 15 lots, ranging in size from .44-acres to 1.17-acre. Each lot will be developed with a building ranging from 5,100 square feet (sf) to 27,500 sf, for a total of 335,000 sf of floor space.

Access to the site is provided from Ropes Avenue via a shared access road to each building lot. The NOP indicates that site improvements and building construction will occur in one phase, anticipated to be completed within 2 years.

The project site is located at the southeast corner of Ropes Avenue and Mulberry Street, approximately ¼ mile south of State Route (SR) 216 and ¾ mile west of SR 245.

The mission of Caltrans is to provide a safe, sustainable, integrated and efficient transportation system to enhance California's economy and livability. The Local Development -Intergovernmental Review (LD-IGR) Program reviews land use projects and plans through the lenses of our mission and state planning priorities of infill, conservation, and travel-efficient development. To ensure a safe and efficient transportation system, we encourage early consultation and coordination with local jurisdictions and project proponents on all development projects that utilize the multimodal transportation network.

Caltrans provides the *following comments* consistent with the State's smart mobility goals that support a vibrant economy and sustainable communities:

 The Transportation/Traffic section of the Initial Study indicates that the project will have potentially significant impacts based on the estimated trip generation numbers. The Initial Study indicated the proposed Project will generate approximately 2,304 daily trips with 321 PM peak trips, based ITE Trip Generation Report, 8th edition. Caltrans concurs with this conclusion. Mr. Jason Waters – NOP/IS - LIGHT INDUSTRIAL COMPLEX October 25, 2019
Page 2

- Caltrans provided comments and recommendations on the Scope for the Project's
 Transportation Impact Study (TIS) in our September 6, 2019 letter. However, the Initial
 Study does not reference that a TIS will be completed rather this impact will be addressed in
 the forthcoming EIR.
- Caltrans recommends that a TIS be completed for the Project to analyze impacts and address mitigation of impacts.
- 4. Alternative transportation policies should be applied to the development. An assessment of multi-modal facilities should be conducted to develop an integrated multi-modal transportation system to serve and help alleviate traffic congestion caused by the project and related development in this area of the City. The assessment should include the following:
 - a. Pedestrian walkways should link this proposal to an internal project area walkway, transit facilities, as well as other walkways in the surrounding area.
 - b. The project should consider bicycles as an alternative mode of transportation and offer internal amenities to encourage bicycle use which should include parking, security, lockers and showers.
 - c. If transit is not available within ¼-mile of the site, transit should be extended to provide services to what will be a high activity center.

If you have any other questions, please call me at (559) 488-7396.

Sincerely,

DAVID DEEL

Associate Transportation Planner Transportation Planning – North

Appendix C

Traffic Impact Study

Project No: 524-10

TRAFFIC STUDY

Industrial Development

Southwest Corner of Ropes Avenue & Mulberry Street
City of Woodlake, CA

Prepared for:

Crawford & Bowen Planning, Inc

October 2019

Prepared by:



1800 30TH STREET, SUITE 260 BAKERSFIELD, CA 93301

Ian J. Parks, RCE 58155



TABLE OF CONTENTS

	<u>P</u> §
INTRODUCTION	Ì
FIGURE 1: VICINITY MAP	2
FIGURE 2: LOCATION MAP	3
FIGURE 3: SITE PLAN	
PROJECT TRIP GENERATION AND DESIGN HOUR VOLUMES	<i>6</i>
TABLE 1: PROJECT TRIP GENERATION	
PROJECT TRIP DISTRIBUTION AND ASSIGNMENT	<i>6</i>
TABLE 2: PROJECT TRIP DISTRIBUTION	6
EXISTING AND FUTURE TRAFFIC	
FIGURE 4: PROJECT PEAK HOUR TRAFFIC	8
FIGURE 5: 2019 PEAK HOUR TRAFFIC	
FIGURE 6: 2019+PROJECT PEAK HOUR TRAFFIC	10
FIGURE 7: 2021 PEAK HOUR TRAFFIC	
FIGURE 8: 2021+PROJECT PEAK HOUR TRAFFIC	12
FIGURE 9: 2040 PEAK HOUR TRAFFIC	
FIGURE 10: 2040+PROJECT PEAK HOUR TRAFFIC	
INTERSECTION ANALYSIS	
TABLE 3a: AM INTERSECTION LOS	16
TABLE 3b: PM INTERSECTION LOS	
TABLE 4a: AM TRAFFIC SIGNAL WARRANT ANALYSIS	18
TABLE 4c: PM TRAFFIC SIGNAL WARRANT ANALYSIS	19
TABLE 4d: PM TRAFFIC SIGNAL WARRANT ANALYSIS	20
ROADWAY CAPACITY ANALYSIS	
TABLE 5: ROADWAY ADT & CAPACITY	21
TABLE 6: ROADWAY LEVEL OF SERVICE	22
VEHICLE MILES TRAVELED (VMT) EVALUATION	22
MITIGATION	24
TABLE 7: FUTURE INTERSECTION IMPROVEMENTS AND LOCAL MITIGATION	
SUMMARY	25
REFERENCES	26
APPENDIX	27

INTRODUCTION

The purpose of this study is to evaluate the potential traffic impact of a light industrial complex on the southwest corner of Ropes Avenue and Mulberry Street in the City of Woodlake, California.

A. Land Use, Site and Study Area Boundaries

The proposed project consists of 310,000 square feet of industrial building space. Based on the City of Woodlake's General Plan, the current land use designation for the project site is Neighborhood Commercial and zoning is Light Industrial (ML).

The scope of the study was developed in association with the City of Woodlake Roads Department and Caltrans. Five unsignalized intersections are included in this study as follows:

- Millwood Drive & Naranjo Boulevard
- Road 196 & Naranjo Boulevard
- Road 204 & Naranjo Boulevard
- Road 204 & Ropes Avenue
- Valencia Boulevard & Ropes Avenue

A vicinity map is presented in Figure 1 and a location map is presented in Figure 2.

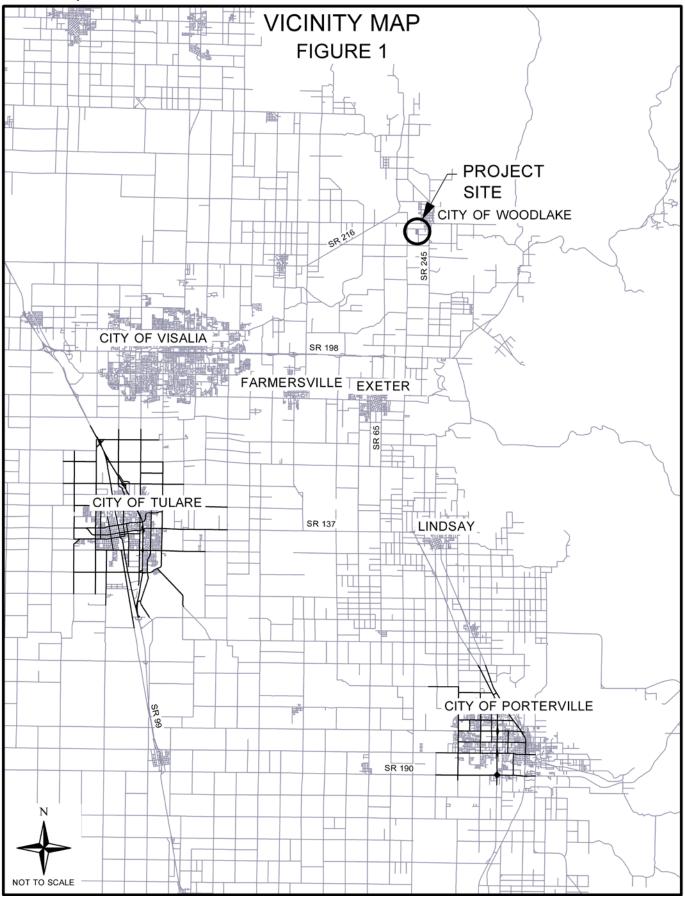
B. Existing Site Uses and Site Access

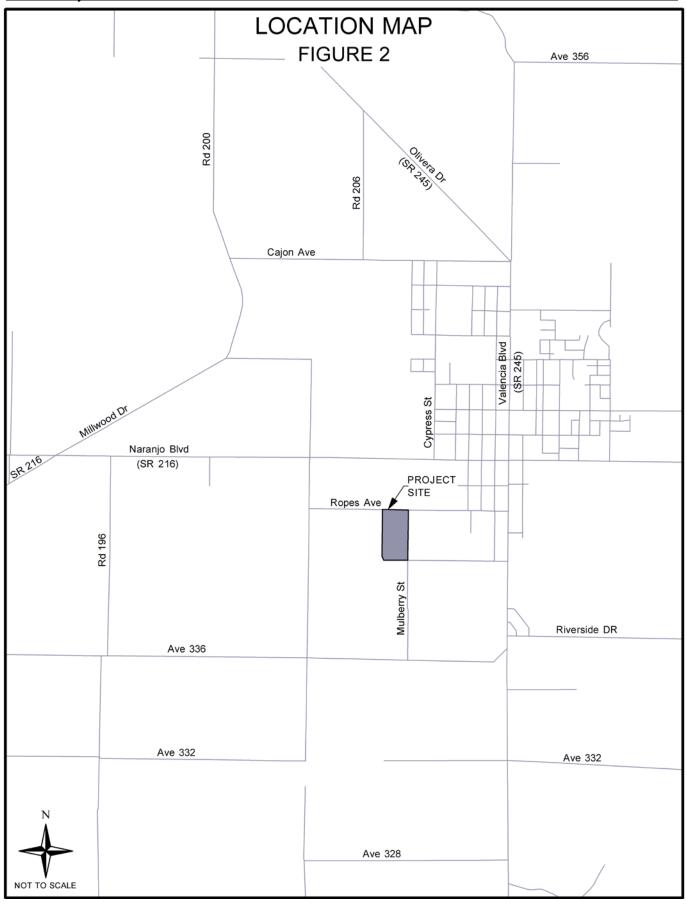
The project site is currently being used for agricultural purposes. Primary access to the project is anticipated from Road 204.

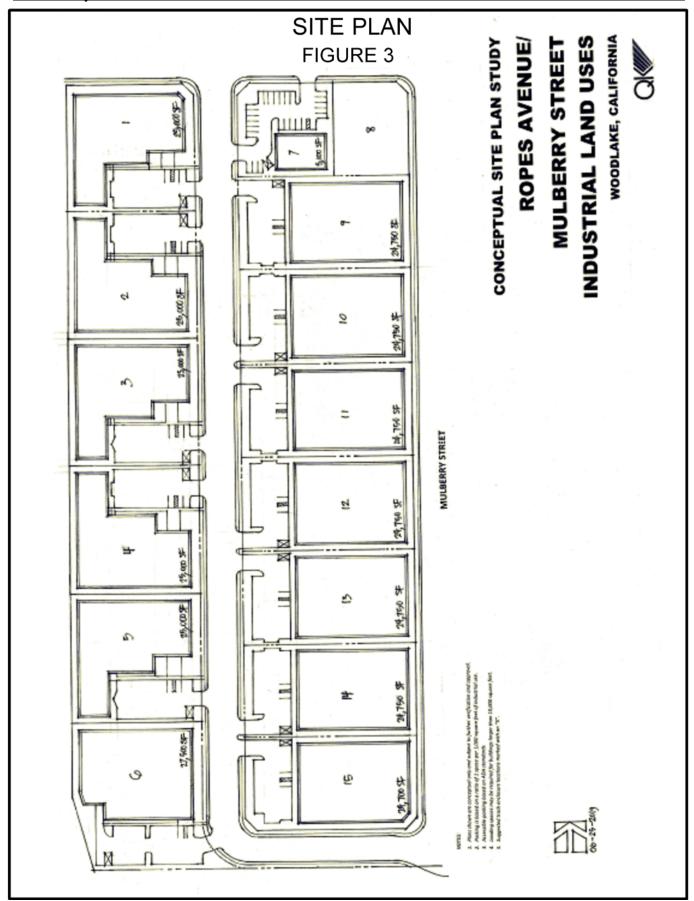
C. Existing Uses in the Vicinity of the Site

Existing land uses in the immediate vicinity of the project include agriculture to the north, south and east and light industrial to the west.









D. Existing Street Descriptions

<u>Millwood Drive</u> is generally a north-south roadway that extends north from State Route 216 and provides access to agricultural land uses. In the vicinity of the project it exists as a two-lane roadway with graded shoulders.

<u>Naranjo Boulevard (SR 216)</u> is an east-west arterial that provides access to agricultural, commercial, and residential land uses in Woodlake. In the vicinity of the project it exists as a two-lane roadway with paved shoulders.

<u>Road 196</u> is a north-south roadway that extends from Millwood Drive to Avenue 336. It provides access to agricultural land uses, and in the vicinity of the project, it exists as a two-lane roadway with graded shoulders.

<u>Road 204</u> is a north-south two-lane roadway that extends from Naranjo Boulevard to Avenue 348. It provides access to residential and agricultural land uses

<u>Ropes Avenue</u> is an east-west roadway that extends from Blair Road to Valencia Boulevard. West of Oaks Street, it provides access to agricultural land use, and east of Oaks Street it provides access to residential land uses. It exists as a two-lane roadway with curb and gutter adjacent to development. Based on information provided by the City of Woodlake Transportation Department, Ropes Avenue is a dedicated roadway for traffic accessing directly to the industrial park from the south.

<u>Valencia Boulevard</u> is a major north-south arterial that extends through the metropolitan region of the City of Woodlake. It exists as a two-lane roadway with curb and gutter and provides access to commercial, residential, and agricultural land uses.

PROJECT TRIP GENERATION AND DESIGN HOUR VOLUMES

The trip generation and design hour volumes shown in Table 1 were calculated using the Institute of Transportation Engineers (ITE) <u>Trip Generation</u>, 10th Edition. The ADT, AM and PM peak hour rates, and peak hour directional splits for ITE Land Use Code 110 (General Light Industrial) were used to estimate the project traffic for peak hour of adjacent street traffic.

Table 1
Project Trip Generation

	General Info	mation	Daily	Trips	AM	Peak Hou	ır Trips	PM Peak Hour Trips			
ITE Code	Development Type	Variable	ADT RATE	ADT	Rate	In % Split/ Trips	Out % Split/ Trips	Rate	In % Split/ Trips	Out % Split/ Trips	
110	General Light	310	eq	2214	0.92	88%	12%	0.97	12%	88%	
	Industrial	1000 sq ft GFA				251	34		36	265	
Total				2,214		251	34		36	265	

PROJECT TRIP DISTRIBUTION AND ASSIGNMENT

The project trip distribution in Table 2 represents the most logically traveled routes for traffic accessing the project. Project traffic distribution was estimated based on a review of the potential draw from population centers within the region and the type of land use involved. The City anticipates a significant amount of project traffic to travel along State Route 65 between Woodlake and other towns such as Exeter, Lindsey, Porterville, Visalia, and Tulare. These assumptions were used to distribute project traffic as shown in Figure 4.

Table 2
Project Trip Distribution

Direction	Percent	Roadway
North	10%	Valencia Blvd (SR 245)
South	20%	Rd 204 / Valencia Blvd (SR 245)
East	40%	Naranjo Blvd (SR 216)
West	30%	Naranjo Blvd (SR 216)

EXISTING AND FUTURE TRAFFIC

Existing peak hour turn movement volumes were field measured in September 2019 at the study intersections and are shown in Figure 5. Existing plus project peak hour volumes are shown in Figure 6.

Annual growth rates of 0.49% to 2.72% were applied to existing traffic volumes to estimate future traffic volumes for the years 2021 and 2040. These growth rates were estimated based on a review of TCAG traffic model data. Opening year peak hour, opening year plus project, future peak hour and future peak hour plus project volumes are shown in Figures 7-10, respectively.

An investigation was made with the City of Woodlake's Transportation Planning Department to determine if there are any pending projects which would influence future traffic beyond what the TCAG model is predicting. A trip generation table the traffic generated by the cumulative projects is provided in the attached appendix. Based on the information given, it is anticipated that the cumulative projects will be completed by 2021. Future peak hour volumes with the cumulative projects added are shown in Figures 7 through 10.

INTERSECTION ANALYSIS

A capacity analysis of the study intersections was conducted using Synchro 9 software from Trafficware. This software utilizes the capacity analysis methodology in the Transportation Research Board's 2010 <u>Highway Capacity Manual</u>. The analysis was performed for the following AM and PM traffic scenarios:

- Existing (2019)
- Existing+Project (2019)
- Opening Year (2021)
- Opening Year+Project (2021)
- Future Cumulative (2040)
- Future Cumulative+Project (2040)

Criteria for intersection level of service (LOS) are shown in the tables below.

LEVEL OF SERVICE CRITERIA UNSIGNALIZED INTERSECTION

Average Control Delay (sec/veh)	Level of Service	Expected Delay to Minor Street Traffic
≤ 10	A	Little or no delay
$> 10 \text{ and} \le 15$	В	Short traffic delays
$> 15 \text{ and } \le 25$	С	Average traffic delays
$> 25 \text{ and } \le 35$	D	Long traffic delays
$> 35 \text{ and} \le 50$	E	Very long traffic delays
> 50	F	Extreme delays

LEVEL OF SERVICE CRITERIA SIGNALIZED INTERSECTIONS

Volume/Capacity	Control Delay (sec/veh)	Level of Service
< 0.60	≤ 10	A
0.61 - 0.70	$> 10 \text{ and } \le 20$	В
0.71 - 0.80	$> 20 \text{ and} \le 35$	C
0.81 - 0.90	$> 35 \text{ and} \le 55$	D
0.91 - 1.00	$> 55 \text{ and } \le 80$	Е
> 1.0	> 80	F

According to the City of Woodlake Roads Department, the peak hour level of service shall be no lower than LOS "D" for urban areas and LOS "C" for rural areas. Levels of service for the study intersections are presented in Tables 5a and 5b. The intersection peak hour level of service goal for the study intersections is LOS C or better.

Table 3a AM Intersection Level of Service

#	Intersection	Control Type	2019	2019+ Project	2021	2021+ Project	2040	2040+ Project	2040+ Project w/Mitigation ¹
1	Millwood Dr & Naranjo Blvd (SR 216)	AWSC	A	A	A	В	В	В	-
2	Rd 196 & Naranjo Blvd (SR 216)	NB SB	B C	B C	B C	C C	C C	C C	-
3	Rd 204 & Naranjo Blvd (SR 216)	NB SB	B B	C C	C C	D (27.6) C	C C	D (28.1) C	В
4	Rd 204 & Ropes Ave	WB	A	A	В	В	В	В	-
5	Valencia Blvd & Ropes Ave	EB	В	В	В	В	В	С	-

¹See Table 7 for Mitigation Measures.

Table 3b PM Intersection Level of Service

#	Intersection	Control Type	2019	2019+ Project	2021	2021+ Project	2040	2040+ Project	2040+ Project w/Mitigation ¹
1	Millwood Dr & Naranjo Blvd (SR 216)	AWSC	A	A	В	В	В	В	-
2	Rd 196 & Naranjo Blvd (SR 216)	NB SB	B B	B C	B C	C C	C C	C C	-
3	Rd 204 & Naranjo Blvd (SR 216)	NB SB	B B	C B	C B	F (54.3) B	C B	E (42.3) B	В
4	Rd 204 & Ropes Ave	WB	A	A	В	В	В	В	-
5	Valencia Blvd & Ropes Ave	EB	В	В	В	В	В	В	-

¹See Table 7 for Mitigation Measures.

TRAFFIC SIGNAL WARRANT ANALYSIS

Peak hour signal warrants were evaluated for each of the unsignalized intersections within the study area based on the California Manual on Uniform Traffic Control Devices (MUTCD). Peak hour signal warrants assess delay to traffic on the minor street approaches when entering or crossing a major street. Signal warrant analysis results for AM and PM peak hours are shown in Tables 4a through 4d.

It is important to note that a signal warrant defines the minimum condition under which signalization of an intersection might be warranted. Meeting this threshold does not suggest traffic signals are required, but rather, that other traffic factors and conditions be considered in order to determine whether signals are truly justified.

It is also noted that signal warrants do not necessarily correlate with level of service. An intersection may satisfy a signal warrant condition and operate at or above an acceptable level of service, or operate below an acceptable level of service and not meet signal warrant criteria.

Table 4a – Existing Scenario AM Traffic Signal Warrant Analysis

			2019		20)19+Projec	t
		Major	Minor		Major	Minor	
		Street	Street		Street	Street	
		Total	High		Total	High	
		Approach	Approach	Warrant	Approach	Approach	Warrant
#	Intersection	Vol	Vol	Met	Vol	Vol	Met
1	Millwood Dr at Naranjo Blvd (SR 216)	295	139	NO	309	188	NO
2	Rd 196 at Naranjo Blvd (SR 216)	488	88	NO	555	88	NO
3	Rd 204 at Naranjo Blvd (SR 216)	563	39	NO	648	57	NO
4	Rd 204 at Ropes Ave	84	37	NO	122	47	NO
5	Valencia Blvd (SR 245) at Ropes Ave	381	43	NO	477	47	NO

Table 4b – Future Scenarios AM Traffic Signal Warrant Analysis

			2021		20	021+Projec	t		2040		2	2040+Projec	t
		Major	Minor		Major	Minor		Major	Minor		Major	Minor	
		Street	Street		Street	Street		Street	Street		Street	Street	
		Total	High		Total	High		Total	High		Total	High	
		Approach	Approach	Warrant	Approach	Approach	Warrant	Approach	Approach	Warrant	Approach	Approach	Warrant
#	Intersection	Vol	Vol	Met	Vol	Vol	Met	Vol	Vol	Met	Vol	Vol	Met
1	Millwood Dr at Naranjo Blvd (SR 216)	362	198	NO	376	247	NO	398	229	NO	412	278	YES
2	Rd 196 at Naranjo Blvd (SR 216)	617	103	NO	684	103	NO	690	112	NO	757	112	NO
3	Rd 204 at Naranjo Blvd (SR 216)	848	67	NO	933	85	NO	945	75	NO	1030	93	YES
4	Rd 204 at Ropes Ave	301	67	NO	305	152	NO	317	74	NO	321	159	NO
5	Valencia Blvd (SR 245) at Ropes Ave	438	47	NO	534	51	NO	508	51	NO	604	55	NO

Table 4c – Existing Scenario

PM Traffic Signal Warrant Analysis

			2019		20	019+Projec	t
		Major	Minor		Major	Minor	
		Street	Street		Street	Street	
		Total	High		Total	High	
		Approach	Approach	Warrant	Approach	Approach	Warrant
#	Intersection	Vol	Vol	Met	Vol	Vol	Met
11	Millwood Dr at	260	212	NO	321	230	NO
Ľ	Naranjo Blvd (SR 216)	200	212	110	321	200	110
2	Rd 196 at	453	121	NO	538	121	NO
Ĺ	Naranjo Blvd (SR 216)	100	121	110	000	121	110
3	Rd 204 at	509	42	NO	521	189	NO
Ľ	Naranjo Blvd (SR 216)	000			02.	100	
4	Rd 204 at	63	30	NO	95	42	NO
Ľ	Ropes Ave	00	30	140	33	72	140
5	Valencia Blvd (SR 245) at	378	41	NO	428	73	NO
Ľ	Ropes Ave	370	71	110	720	7.5	140

Table 4d – Future Scenarios PM Traffic Signal Warrant Analysis

			2021		20	021+Projec	t		2040		2	2040+Projec	:t
		Major	Minor		Major	Minor		Major	Minor		Major	Minor	
		Street	Street		Street	Street		Street	Street		Street	Street	
		Total	High		Total	High		Total	High		Total	High	
		Approach	Approach	Warrant	Approach	Approach	Warrant	Approach	Approach	Warrant	Approach	Approach	Warrant
#	Intersection	Vol	Vol	Met	Vol	Vol	Met	Vol	Vol	Met	Vol	Vol	Met
1 1	Millwood Dr at Naranjo Blvd (SR 216)	421	235	NO	484	242	YES	452	287	YES	515	294	YES
12	Rd 196 at Naranjo Blvd (SR 216)	632	124	NO	717	124	NO	698	136	NO	783	136	YES
13	Rd 204 at Naranjo Blvd (SR 216)	619	257	YES	631	404	YES	705	264	YES	717	411	YES
1 4	Rd 204 at Ropes Ave	264	50	NO	276	82	NO	270	55	NO	282	87	NO
5	Valencia Blvd (SR 245) at Ropes Ave	408	72	NO	458	104	NO	477	76	NO	527	108	NO

ROADWAY ANALYSIS

The published ADT information and future projected traffic, as shown in Table 5, were used to calculate the volume-to-capacity ratios shown in Table 6.

A volume-to-capacity ratio (v/c) of greater than 0.80 corresponds to a LOS of D, as defined in the <u>Highway Capacity Manual</u>. Mitigation is required where project traffic reduces the LOS to below an acceptable level, or where the pre-existing condition of the roadway is below an acceptable level of service and degrades below the pre-existing LOS with the addition of the project.

Table 5
Roadway ADT & Capacity

Street	2019 ¹	Project	2021	2021+	2040	2040+	Existing	Mitigated
		ADT	ADT ²	Project ²	ADT^2	Project ²	Capacity	Capacity
Naranjo Blvd (SR 216): Millwood Dr to Rd 196	4605²	633	4661	5167	5229	5735	15000	-
Naranjo Blvd (SR 216): Rd 196 to Road 204/Blair Rd	6197²	772	6295	6909	7313	7927	15000	-
Naranjo Blvd (SR 216): Rd 204/Blair Rd to Valencia Blvd (SR 245)	5388²	1022	5478	6013	6411	6946	15000	ı
Ropes Ave: Blair Rd to Mulberry St	590	1795	595	913	649	967	15000	-
Ropes Ave: Mulberry St to Valencia Blvd (SR 245)	710	206	717	1035	783	1101	15000	1
Blair Rd: Ropes Ave to Naranjo Blvd (SR 216)	550	1581	559	1939	657	2037	15000	- 1
Valencia Blvd (SR 245): Ropes Ave to Naranjo Blvd (SR 216)	6822²	140	6946	7221	8242	8517	15000	- 1

¹2019 Data not available. Data grown out from pervious year available year.

²Includes Cumulative Traffic

Table 6 Roadway Level of Service

Street	v/c(Ex)	v/c	v/c	v/c	v/c	v/c
	2019	2019+Proj	2021	2021+Proj	2040	2040+Proj
Naranjo Blvd (SR 216): Millwood Dr to Rd 196	0.31	0.35	0.31	0.34	0.35	0.38
Naranjo Blvd (SR 216): Rd 196 to Road 204/Blair Rd	0.41	0.46	0.42	0.46	0.49	0.53
Naranjo Blvd (SR 216): Rd 204/Blair Rd to Valencia Blvd (SR 245)	0.36	0.43	0.37	0.40	0.43	0.46
Ropes Ave: Blair Rd to Mulberry St	0.04	0.16	0.04	0.06	0.04	0.06
Ropes Ave: Mulberry St to Valencia Blvd (SR 245)	0.05	0.06	0.05	0.07	0.05	0.07
Blair Rd: Ropes Ave to Naranjo Blvd (SR 216)	0.04	0.14	0.04	0.13	0.04	0.14
Valencia Blvd (SR 245): Ropes Ave to Naranjo Blvd (SR 216)	0.45	0.46	0.46	0.48	0.55	0.57

NOTE: Cumulative traffic from other projects included in all future volumes.

VEHICLE MILES TRAVELED (VMT) EVALUATION

In accordance with the California Environmental Quality Act (CEQA), an evaluation of the average vehicle miles traveled (VMT) for the project's traffic was conducted.

VMT data was obtained from the Tulare County Association of Governments (TCAG) in order to establish a baseline for daily vehicle miles traveled in the Woodlake area. The data provided by TCAG data is estimated based on Select Zone Analysis conducted for the region for establishing traffic models of existing and future land development projects. Based on household and employment populations in the Woodlake area, as well as travel patterns throughout the region, TCAG data has established the regional average VMT per inbound and outbound trip to be 15.21 miles and 15.31 miles, respectively.

In order to establish the anticipated VMT profile for the proposed light industrial project, an investigation into the employee trips was conducted. The primary factor involved in this evaluation is the location of the project site in relation to the surrounding population centers. The City anticipates a significant amount of traffic will travel between Woodlake and surrounding cities.

Based on the information gathered and the project traffic distribution, 39% of the employees will be traveling from within Woodlake city limits while 43% of employees are anticipated to be traveling from

Visalia, Tulare and Hanford and 17% of the employees are anticipated to be traveling from Exeter, Lindsay, and Porterville.

The average trip length for employees traveling from surrounding cities was determined to be approximately 20.77 miles. The average trip length for employees traveling from Woodlake was determined to be approximately 1.50 miles. The combined average trip length for all employees resulted in an average trip length of 13.19 miles.

Based on CEQA Guideline Section 15064.3 subdivision (b), the project would create a less-than-significant transportation impact, because the project's VMT is less than the regional average. As previously mentioned, the regional average VMT for inbound and outbound trips as established by TCAG is 15.21 miles and 15.31 miles, respectively. The project's average VMT is anticipated to bring down the regional average, and therefore will not cause a significant transportation impact.

MITIGATION

Intersection improvements needed by the year 2040 to maintain or improve the operational level of service of the street system in the vicinity of the project is shown in Table 7.

Table 7
Future Intersection Improvements and Local Mitigation

#	Intersection	Total Improvements Required by 2040	Project % Share for Local Mitigation
3	Rd 204 & Naranjo Blvd (SR 216)	Add Signal	34.32%

SUMMARY

This study evaluated the potential traffic impacts of a proposed light industrial complex on the

southwest corner of Ropes Avenue and Mulberry Street in the City of Woodlake.

Intersection Analysis

All intersections operate with an acceptable level of service during peak hours in the existing year with

the addition of project traffic.

In the opening year (2021), all intersections are anticipated to operate at an acceptable level of service.

With the addition of project traffic, the intersection Road 204 and Naranjo Boulevard (SR 216) is

anticipated to operate below an acceptable level of service.

All remaining intersections with an acceptable level of service are anticipated to do so in 2040 prior to,

and with the addition of project traffic.

Roadway Analysis

All roadways within the project scope currently operate at acceptable levels of service and are expected

to continue to do so with the addition of project traffic through the future year.

Vehicle Miles Traveled Evaluation

The average vehicle miles traveled (VMT) is lower than the regional VMT, therefore there are no

impacts.

Conclusion

Based on the City of Woodlake's standards for determining whether project traffic has a significant

impact on intersections and roadways, the mitigation measures identified in Table 7 are anticipated to be

needed in order to reduce the impacts for the listed facilities to less-than-significant levels in the year

2040.

RUETTGERS & SCHULER CIVIL ENGINEERS

REFERENCES

- 1. Annual Traffic Census, Kern COG
- 2. City of Woodlake General Plan, 2014.
- 3. Highway Capacity Manual, Special Report 209, Transportation Research Board
- 4. California Manual on Uniform Traffic Control Devices for Streets and Highways, 2014 Edition, Federal Highway Administration (FHA)
- 5. <u>Trip Generation</u>, 10th Edition, Institute of Transportation Engineers (ITE)



APPENDIX

TRIP GENERATION 524-10 Cumulative Projects

	General Information		Daily	Trips	AM	Peak Hour	Trips	PM I	Peak Hour	Trips
ITE Code	Development Type	Variable	ADT RATE	ADT	Rate	In % Split/ Trips	Out % Split/ Trips	Rate	In % Split/ Trips	Out % Split/ Trips
934	Fast-Food Restaurant w/Drive-Thru	2.175 1000 sq ft GFA	470.95	1024	40.19	51% 45	49% 43	32.67	52% 37	48% 34
941	Quick Lubrication Vehicle Shop	3 1000 sq ft GFA	69.57	209	5.8	75% 13	25% 4	8.7	42% 11	58% 15
820	Shopping Center	5.294 1000 sq ft GLA	eq	815	eq	62% 96	38% 59	eq	48% 30	52% 32
945	Gasoline/Service Station with Convenience Market	8 Vehicle fueling positions	eq	987	eq	51% 28	49% 27	13.99	51% 57	49% 55
sub-total				3,035		182	133		135	136
Adjustments										
Capture		5%		152		9	7		7	7
Pass-by		15%		455		27	20		20	20
Total				2,428		146	106		108	109

Intersection 1 Millwood Dr & Naranjo Blvd



Intersection																
Intersection Delay,	s/veh		9.2													
Intersection LOS			Α													
Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	1	47	1	0	188	53	5	0	1	25	113	0	1	62	6
Future Vol, veh/h	0	1	47	1	0	188	53	5	0	1	25	113	0	1	62	6
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	1	51	1	0	204	58	5	0	1	27	123	0	1	67	7
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0
Approach			EB				WB				NB				SB	
Opposing Approac	h		WB				EB				SB				NB	
Opposing Lanes			1				1				1				1	
Conflicting Approac	ch Lef	t	SB				NB				EB				WB	
Conflicting Lanes L	_eft		1				1				1				1	
Conflicting Approac	ch Rig	ht	NB				SB				WB				EB	
Conflicting Lanes F	Right		1				1				1				1	
HCM Control Delay	/		8.2				10.1				8.3				8.4	
HCM LOS			Α				В				Α				Α	

Lane	NBLn1	EBLn1	WBLn1	SBLn1	
Vol Left, %	1%	2%	76%	1%	
Vol Thru, %	18%	96%	22%	90%	
Vol Right, %	81%	2%	2%	9%	
Sign Control	Stop	Stop	Stop	Stop	
Traffic Vol by Lane	139	49	246	69	
LT Vol	1	1	188	1	
Through Vol	25	47	53	62	
RT Vol	113	1	5	6	
Lane Flow Rate	151	53	267	75	
Geometry Grp	1	1	1	1	
Degree of Util (X)	0.181	0.07	0.345	0.101	
Departure Headway (Hd)	4.314	4.757	4.648	4.832	
Convergence, Y/N	Yes	Yes	Yes	Yes	
Cap	831	750	773	740	
Service Time	2.345	2.802	2.684	2.869	
HCM Lane V/C Ratio	0.182	0.071	0.345	0.101	
HCM Control Delay	8.3	8.2	10.1	8.4	
HCM Lane LOS	Α	Α	В	Α	
HCM 95th-tile Q	0.7	0.2	1.5	0.3	

Intersection																
Intersection Delay,	s/veh		9.5													
Intersection LOS			Α													
Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	1	54	1	0	194	54	5	0	1	25	162	0	1	62	6
Future Vol, veh/h	0	1	54	1	0	194	54	5	0	1	25	162	0	1	62	6
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	1	59	1	0	211	59	5	0	1	27	176	0	1	67	7
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0
Approach			EB				WB				NB				SB	
Opposing Approac	h		WB				EB				SB				NB	
Opposing Lanes			1				1				1				1	
Conflicting Approac	ch Lef	t	SB				NB				EB				WB	
Conflicting Lanes L	_eft		1				1				1				1	
Conflicting Approac	ch Rig	ht	NB				SB				WB				EB	
Conflicting Lanes F	Right		1				1				1				1	
HCM Control Delay	/		8.4				10.6				8.8				8.6	
HCM LOS			Α				В				Α				Α	

Lane	NBLn1	EBL _n 1	WBLn1	SBLn1	
Vol Left, %	1%	2%	77%	1%	
Vol Thru, %	13%	96%	21%	90%	
Vol Right, %	86%	2%	2%	9%	
Sign Control	Stop	Stop	Stop	Stop	
Traffic Vol by Lane	188	56	253	69	
LT Vol	1	1	194	1	
Through Vol	25	54	54	62	
RT Vol	162	1	5	6	
Lane Flow Rate	204	61	275	75	
Geometry Grp	1	1	1	1	
Degree of Util (X)	0.246	0.083	0.365	0.103	
Departure Headway (Hd)	4.339	4.903	4.78	4.949	
Convergence, Y/N	Yes	Yes	Yes	Yes	
Сар	826	726	751	721	
Service Time	2.38	2.962	2.827	3.002	
HCM Lane V/C Ratio	0.247	0.084	0.366	0.104	
HCM Control Delay	8.8	8.4	10.6	8.6	
HCM Lane LOS	Α	Α	В	Α	
HCM 95th-tile Q	1	0.3	1.7	0.3	

Intersection																
Intersection Delay,	s/veh		9.9													
Intersection LOS			Α													
Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	1	93	1	0	198	64	5	0	1	26	171	0	1	63	6
Future Vol, veh/h	0	1	93	1	0	198	64	5	0	1	26	171	0	1	63	6
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	1	101	1	0	215	70	5	0	1	28	186	0	1	68	7
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0
Approach			EB				WB				NB				SB	
Opposing Approach)		WB				EB				SB				NB	
Opposing Lanes			1				1				1				1	
Conflicting Approac	h Lef	t	SB				NB				EB				WB	
Conflicting Lanes Le	eft		1				1				1				1	
Conflicting Approac	h Rig	ht	NB				SB				WB				EB	
Conflicting Lanes Ri	ight		1				1				1				1	
HCM Control Delay			8.9				11.1				9.2				8.8	
HCM LOS			Α				В				Α				Α	

Lane	NBLn1	EBLn1	WBLn1	SBLn1	
Vol Left, %	1%	1%	74%	1%	
Vol Thru, %	13%	98%	24%	90%	
Vol Right, %	86%	1%	2%	9%	
Sign Control	Stop	Stop	Stop	Stop	
Traffic Vol by Lane	198	95	267	70	
LT Vol	1	1	198	1	
Through Vol	26	93	64	63	
RT Vol	171	1	5	6	
Lane Flow Rate	215	103	290	76	
Geometry Grp	1	1	1	1	
Degree of Util (X)	0.268	0.143	0.393	0.108	
Departure Headway (Hd)	4.487	4.974	4.872	5.124	
Convergence, Y/N	Yes	Yes	Yes	Yes	
Cap	796	715	734	694	
Service Time	2.545	3.05	2.936	3.197	
HCM Lane V/C Ratio	0.27	0.144	0.395	0.11	
HCM Control Delay	9.2	8.9	11.1	8.8	
HCM Lane LOS	Α	Α	В	Α	
HCM 95th-tile Q	1.1	0.5	1.9	0.4	

Intersection																
Intersection Delay,	s/veh		10.4													
Intersection LOS			В													
Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	1	100	1	0	204	65	5	0	1	26	220	0	1	63	6
Future Vol, veh/h	0	1	100	1	0	204	65	5	0	1	26	220	0	1	63	6
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	1	109	1	0	222	71	5	0	1	28	239	0	1	68	7
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0
Approach			EB				WB				NB				SB	
Opposing Approach	h		WB				EB				SB				NB	
Opposing Lanes			1				1				1				1	
Conflicting Approac	ch Lef	t	SB				NB				EB				WB	
Conflicting Lanes L	.eft		1				1				1				1	
Conflicting Approac	ch Rig	ht	NB				SB				WB				EB	
Conflicting Lanes F	Right		1				1				1				1	
HCM Control Delay	,		9.2				11.7				9.9				9	
HCM LOS			Α				В				Α				Α	

Lane	NBLn1	EBLn1	WBLn1	SBLn1	
Vol Left, %	0%	1%	74%	1%	
Vol Thru, %	11%	98%	24%	90%	
Vol Right, %	89%	1%	2%	9%	
Sign Control	Stop	Stop	Stop	Stop	
Traffic Vol by Lane	247	102	274	70	
LT Vol	1	1	204	1	
Through Vol	26	100	65	63	
RT Vol	220	1	5	6	
Lane Flow Rate	268	111	298	76	
Geometry Grp	1	1	1	1	
Degree of Util (X)	0.338	0.158	0.415	0.111	
Departure Headway (Hd)	4.53	5.127	5.012	5.254	
Convergence, Y/N	Yes	Yes	Yes	Yes	
Сар	787	691	712	674	
Service Time	2.6	3.226	3.096	3.35	
HCM Lane V/C Ratio	0.341	0.161	0.419	0.113	
HCM Control Delay	9.9	9.2	11.7	9	
HCM Lane LOS	Α	Α	В	Α	
HCM 95th-tile Q	1.5	0.6	2	0.4	

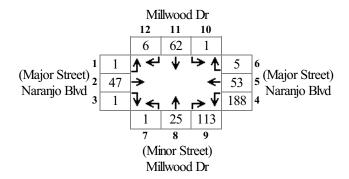
Intersection																
Intersection Delay,	s/veh		11.1													
Intersection LOS			В													
Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	1	117	1	0	222	86	6	0	1	31	197	0	1	78	8
Future Vol, veh/h	0	1	117	1	0	222	86	6	0	1	31	197	0	1	78	8
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	1	127	1	0	241	93	7	0	1	34	214	0	1	85	9
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0
Approach			EB				WB				NB				SB	
Opposing Approach)		WB				EB				SB				NB	
Opposing Lanes			1				1				1				1	
Conflicting Approac	h Lef	t	SB				NB				EB				WB	
Conflicting Lanes Le	eft		1				1				1				1	
Conflicting Approac	h Rig	ht	NB				SB				WB				EB	
Conflicting Lanes Ri	ight		1				1				1				1	
HCM Control Delay			9.6				12.8				10.2				9.5	
HCM LOS			Α				В				В				Α	

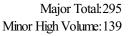
Lane	NBLn1	EBLn1	WBLn1	SBLn1	
Vol Left, %	0%	1%	71%	1%	
Vol Thru, %	14%	98%	27%	90%	
Vol Right, %	86%	1%	2%	9%	
Sign Control	Stop	Stop	Stop	Stop	
Traffic Vol by Lane	229	119	314	87	
LT Vol	1	1	222	1	
Through Vol	31	117	86	78	
RT Vol	197	1	6	8	
Lane Flow Rate	249	129	341	95	
Geometry Grp	1	1	1	1	
Degree of Util (X)	0.327	0.192	0.479	0.145	
Departure Headway (Hd)	4.84	5.336	5.166	5.52	
Convergence, Y/N	Yes	Yes	Yes	Yes	
Cap	747	675	703	653	
Service Time	2.84	3.343	3.166	3.529	
HCM Lane V/C Ratio	0.333	0.191	0.485	0.145	
HCM Control Delay	10.2	9.6	12.8	9.5	
HCM Lane LOS	В	Α	В	Α	
HCM 95th-tile Q	1.4	0.7	2.6	0.5	

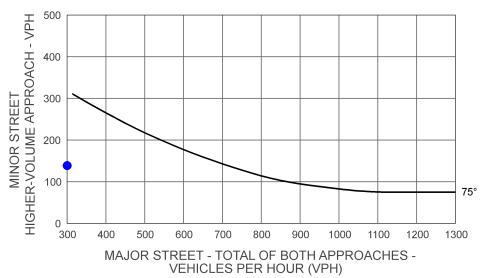
Intersection																
Intersection Delay,	s/veh		11.5													
Intersection LOS	G, 10		В													
N. 4 - 1 - 1 - 1 - 1 - 1	EDIT	EDI	ГОТ	EDD	\A/DLL	MOL	MOT	\\/DD	NDLL	NDI	NDT	NDD	ODLI	ODI	ODT	
Movement	EBU	EBL	EBT	FBK	WBU	WBL	WBI	WBR	NBO	NBL	NBT	NBK	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	1	105	1	0	228	71	6	0	1	31	246	0	1	78	8
Future Vol, veh/h	0	1	105	1	0	228	71	6	0	1	31	246	0	1	78	8
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	1	114	1	0	248	77	7	0	1	34	267	0	1	85	9
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0
Approach			EB				WB				NB				SB	
Opposing Approach	h		WB				EB				SB				NB	
Opposing Lanes	''		1				1				1				1	
Conflicting Approac	ch Lof	+	SB				NB				EB				WB	
Conflicting Lanes L		L	1				1				1				1	
_		L_1	•				'				•				•	
Conflicting Approac		nt	NB				SB				WB				EB	
Conflicting Lanes F	•		1				1				1				1	
HCM Control Delay	′		9.7				13.2				10.9				9.5	
HCM LOS			Α				В				В				Α	

Lane	NBLn1	EBL _n 1	WBLn1	SBLn1	
Vol Left, %	0%	1%	75%	1%	
Vol Thru, %	11%	98%	23%	90%	
Vol Right, %	88%	1%	2%	9%	
Sign Control	Stop	Stop	Stop	Stop	
Traffic Vol by Lane	278	107	305	87	
LT Vol	1	1	228	1	
Through Vol	31	105	71	78	
RT Vol	246	1	6	8	
Lane Flow Rate	302	116	332	95	
Geometry Grp	1	1	1	1	
Degree of Util (X)	0.393	0.177	0.486	0.146	
Departure Headway (Hd)	4.813	5.476	5.278	5.564	
Convergence, Y/N	Yes	Yes	Yes	Yes	
Сар	752	657	686	645	
Service Time	2.813	3.493	3.289	3.594	
HCM Lane V/C Ratio	0.402	0.177	0.484	0.147	
HCM Control Delay	10.9	9.7	13.2	9.5	
HCM Lane LOS	В	Α	В	Α	
HCM 95th-tile Q	1.9	0.6	2.7	0.5	

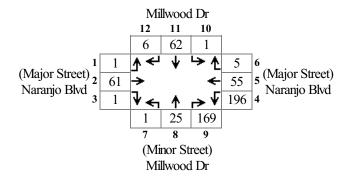
Scenario: AM Existing Intersection #: 1

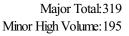


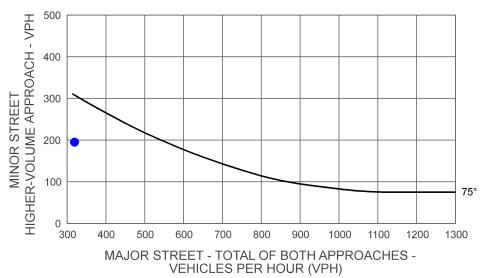




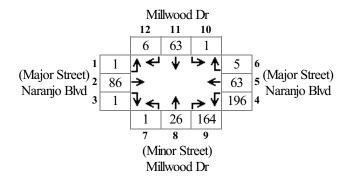
Scenario: AM Existing+Project Intersection #: 1

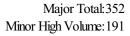


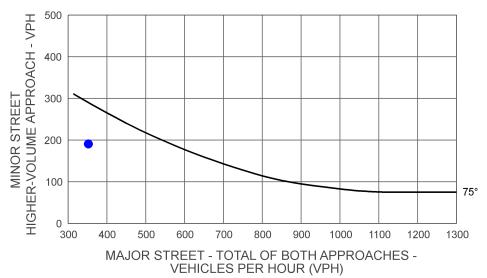




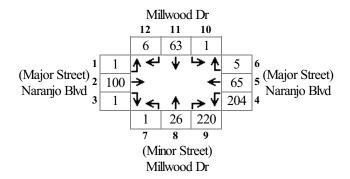
Scenario: AM Future Intersection #: 1



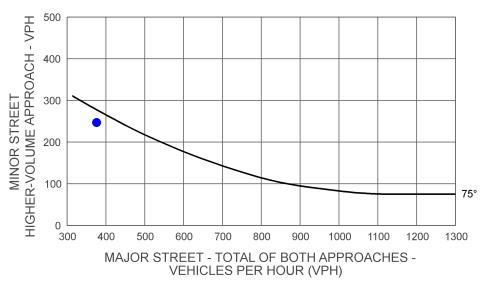




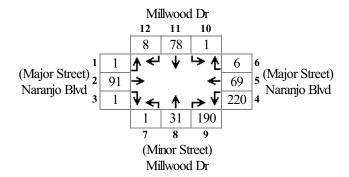
Scenario: AM Future+Project Intersection #: 1

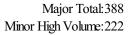


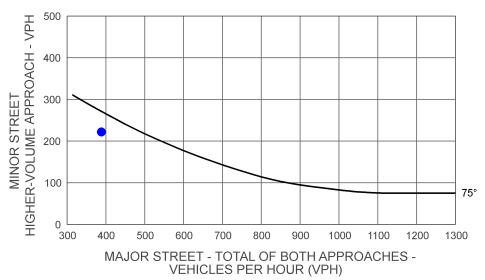
Major Total: 376 Minor High Volume: 247



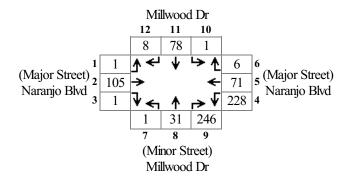
Scenario: AM Future Intersection #: 1

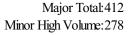


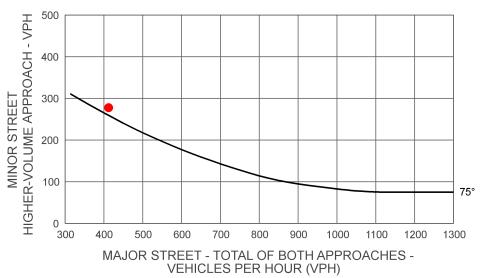




Scenario: AM Future+Project Intersection #: 1







1																
Intersection																
Intersection Delay,	s/veh		9.2													
Intersection LOS			Α													
Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	2	43	1	0	158	52	2	0	0	68	155	0	0	35	2
Future Vol, veh/h	0	2	43	1	0	158	52	2	0	0	68	155	0	0	35	2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	2	47	1	0	172	57	2	0	0	74	168	0	0	38	2
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0
Approach			EB				WB					NB				SB
Opposing Approach	h		WB				EB					SB				NB
Opposing Lanes			1				1					1				1
Conflicting Approac	ch Lef	t	SB				NB					EB				WB
Conflicting Lanes L	.eft		1				1					1				1
Conflicting Approac	ch Rig	ht	NB				SB					WB				EB
Conflicting Lanes F	Right		1				1					1				1
HCM Control Delay	,		8.2				9.9					9				8.2
HCM LOS			Α				Α					Α				Α

Lane	NBLn1	EBLn1	WBLn1	SBLn1	
Vol Left, %	0%	4%	75%	0%	
Vol Thru, %	30%	93%	25%	95%	
Vol Right, %	70%	2%	1%	5%	
Sign Control	Stop	Stop	Stop	Stop	
Traffic Vol by Lane	223	46	212	37	
LT Vol	0	2	158	0	
Through Vol	68	43	52	35	
RT Vol	155	1	2	2	
Lane Flow Rate	242	50	230	40	
Geometry Grp	1	1	1	1	
Degree of Util (X)	0.287	0.067	0.305	0.054	
Departure Headway (Hd)	4.256	4.842	4.763	4.865	
Convergence, Y/N	Yes	Yes	Yes	Yes	
Cap	844	737	754	734	
Service Time	2.284	2.891	2.803	2.908	
HCM Lane V/C Ratio	0.287	0.068	0.305	0.054	
HCM Control Delay	9	8.2	9.9	8.2	
HCM Lane LOS	Α	Α	Α	Α	
HCM 95th-tile Q	1.2	0.2	1.3	0.2	

s/veh		10													
		Α													
EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
0	2	44	1	0	210	62	2	0	0	68	162	0	0	35	2
0	2	44	1	0	210	62	2	0	0	68	162	0	0	35	2
0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
0	2	48	1	0	228	67	2	0	0	74	176	0	0	38	2
0	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0
		EB				WB					NB				SB
1		WB				EB					SB				NB
		1				1					1				1
h Lef	t	SB				NB					EB				WB
eft		1				1					1				1
h Rig	ht	NB				SB					WB				EB
ight		1				1					1				1
		8.4				11					9.4				8.4
		Α				В					۸				Α
	DEBU 0 0.92 2 0 0	BBU EBL 0 2 0 2 0.92 0.92 2 2 0 2 0 0	BBU EBL EBT 0 2 44 0 2 44 0.92 0.92 0.92 2 2 2 0 2 48 0 0 1 EB WB 1 h Left SB eft 1 h Right NB ght 1 8.4	BBU EBL EBT EBR 0 2 44 1 0 2 44 1 0.92 0.92 0.92 0.92 2 2 2 2 0 2 48 1 0 0 1 0 EB WB 1 h Left SB eft 1 h Right NB ght 1 8.4	A EBU EBL EBT EBR WBU 0 2 44 1 0 0 2 44 1 0 0.92 0.92 0.92 0.92 0.92 2 2 2 2 2 2 0 2 48 1 0 0 0 1 0 0 EB WB 1 h Left SB eft 1 h Right NB ght 1 8.4	A EBU EBL EBT EBR WBU WBL 0 2 44 1 0 210 0 2 44 1 0 210 0.92 0.92 0.92 0.92 0.92 0.92 2 2 2 2 2 2 2 2 0 2 48 1 0 228 0 0 1 0 0 0 EB WB 1 h Left SB eft 1 h Right NB ght 1 8.4	BBU EBL EBT EBR WBU WBL WBT 0 2 44 1 0 210 62 0 2 44 1 0 210 62 0.92 0.92 0.92 0.92 0.92 0.92 2 2 2 2 2 2 2 2 2 0 2 48 1 0 228 67 0 0 1 0 0 0 1 EB WB WB EB 1 1 1 h Left SB NB eft 1 1 1 h Right NB SB ght 1 1 1 8.4 11	BBU EBL EBT EBR WBU WBL WBT WBR 0 2 44 1 0 210 62 2 0 2 44 1 0 210 62 2 0.92 0.92 0.92 0.92 0.92 0.92 0.92 2 2 2 2 2 2 2 2 2 2 0 2 48 1 0 228 67 2 0 0 1 0 0 0 1 0 EB WB WB WB BB 1 1 1 h Left SB NB eft 1 1 h Right NB SB ght 1 1 8.4 11	BBU EBL EBT EBR WBU WBL WBT WBR NBU 0 2 44 1 0 210 62 2 0 0 2 44 1 0 210 62 2 0 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 0 0 2 48 1 0 228 67 2 0 0 0 1 0 0 0 1 0 0 0 1 0 0 EB WB WB BB 1 1 1 h Left SB NB eft 1 1 1 h Right NB SB ght 1 1 1 8.4 11	EBU EBL EBT EBR WBU WBL WBT WBR NBU NBL 0 2 44 1 0 210 62 2 0 0 0 2 44 1 0 210 62 2 0 0 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92	EBU EBL EBT EBR WBU WBL WBT WBR NBU NBL NBT 0 2 44 1 0 210 62 2 0 0 68 0 2 44 1 0 210 62 2 0 0 68 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92	EBU EBL EBT EBR WBU WBL WBT WBR NBU NBL NBT NBR 0 2 44 1 0 210 62 2 0 0 68 162 0 2 44 1 0 210 62 2 0 0 68 162 0.92 <	EBU EBL EBT EBR WBU WBL WBT WBR NBU NBL NBT NBR SBU 0 2 44 1 0 210 62 2 0 0 68 162 0 0 2 44 1 0 210 62 2 0 0 68 162 0 0 92 0.92 0.92 0.92 0.92 0.92 0.92 0.92	EBU EBL EBT EBR WBU WBL WBT WBR NBU NBL NBT NBR SBU SBL 0 2 44 1 0 210 62 2 0 0 0 68 162 0 0 0 2 44 1 0 210 62 2 0 0 0 68 162 0 0 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92	EBU EBL EBT EBR WBU WBL WBT WBR NBU NBL NBT NBR SBU SBL SBT 0 2 44 1 0 210 62 2 0 0 68 162 0 0 35 0 2 44 1 0 210 62 2 0 0 68 162 0 0 35 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92

Lane	NBLn1	EBLn1	WBLn1	SBLn1	
Vol Left, %	0%	4%	77%	0%	
Vol Thru, %	30%	94%	23%	95%	
Vol Right, %	70%	2%	1%	5%	
Sign Control	Stop	Stop	Stop	Stop	
Traffic Vol by Lane	230	47	274	37	
LT Vol	0	2	210	0	
Through Vol	68	44	62	35	
RT Vol	162	1	2	2	
Lane Flow Rate	250	51	298	40	
Geometry Grp	1	1	1	1	
Degree of Util (X)	0.307	0.071	0.398	0.057	
Departure Headway (Hd)	4.427	4.969	4.808	5.067	
Convergence, Y/N	Yes	Yes	Yes	Yes	
Cap	810	716	745	703	
Service Time	2.468	3.033	2.857	3.128	
HCM Lane V/C Ratio	0.309	0.071	0.4	0.057	
HCM Control Delay	9.4	8.4	11	8.4	
HCM Lane LOS	Α	Α	В	Α	
HCM 95th-tile Q	1.3	0.2	1.9	0.2	

Intersection																
Intersection Delay,	s/veh		11.1													
Intersection LOS			В													
Movement	EBU	EBL	EBT	FRR	WBU	WBI	WRT	WBR	NRU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	2	91	1	0	221	104	2	0	0	69	166	0	0	36	2
Future Vol, veh/h	0	2	91	1	0	221	104	2	0	0	69	166	0	0	36	2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %		2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	2	99	1	0	240	113	2	0	0	75	180	0	0	39	2
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0
Approach			EB				WB					NB				SB
Opposing Approach	h		WB				EB					SB				NB
Opposing Lanes			1				1					1				1
Conflicting Approac	ch Lef	t	SB				NB					EB				WB
Conflicting Lanes L	.eft		1				1					1				1
Conflicting Approac	ch Rig	ht	NB				SB					WB				EB
Conflicting Lanes F	Right		1				1					1				1
HCM Control Delay	,		9.1				12.6					10.1				8.8
HCM LOS			Α				В					В				Α

Lane	NBLn1	EBLn1	WBLn1	SBLn1	
Vol Left, %	0%	2%	68%	0%	
Vol Thru, %	29%	97%	32%	95%	
Vol Right, %	71%	1%	1%	5%	
Sign Control	Stop	Stop	Stop	Stop	
Traffic Vol by Lane	235	94	327	38	
LT Vol	0	2	221	0	
Through Vol	69	91	104	36	
RT Vol	166	1	2	2	
Lane Flow Rate	255	102	355	41	
Geometry Grp	1	1	1	1	
Degree of Util (X)	0.333	0.145	0.484	0.062	
Departure Headway (Hd)	4.696	5.096	4.902	5.381	
Convergence, Y/N	Yes	Yes	Yes	Yes	
Cap	759	696	729	658	
Service Time	2.763	3.188	2.975	3.478	
HCM Lane V/C Ratio	0.336	0.147	0.487	0.062	
HCM Control Delay	10.1	9.1	12.6	8.8	
HCM Lane LOS	В	Α	В	Α	
HCM 95th-tile Q	1.5	0.5	2.7	0.2	

Intersection																
Intersection Delay, s	s/veh		12.5													
Intersection LOS			В													
Movement I	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	2	92	1	0	273	114	2	0	0	69	173	0	0	36	2
Future Vol, veh/h	0	2	92	1	0	273	114	2	0	0	69	173	0	0	36	2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	2	100	1	0	297	124	2	0	0	75	188	0	0	39	2
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0
Approach			EB				WB					NB				SB
Opposing Approach)		WB				EB					SB				NB
Opposing Lanes			1				1					1				1
Conflicting Approac	h Lef	t	SB				NB					EB				WB
Conflicting Lanes Le	eft		1				1					1				1
Conflicting Approac	h Rig	ht	NB				SB					WB				EB
Conflicting Lanes Ri	ight		1				1					1				1
HCM Control Delay			9.3				14.8					10.7				9.1
HCM LOS			Α				В					В				Α

Lane	NBLn1	EBLn1	WBLn1	SBLn1	
Vol Left, %	0%	2%	70%	0%	
Vol Thru, %	29%	97%	29%	95%	
Vol Right, %	71%	1%	1%	5%	
Sign Control	Stop	Stop	Stop	Stop	
Traffic Vol by Lane	242	95	389	38	
LT Vol	0	2	273	0	
Through Vol	69	92	114	36	
RT Vol	173	1	2	2	
Lane Flow Rate	263	103	423	41	
Geometry Grp	1	1	1	1	
Degree of Util (X)	0.356	0.153	0.581	0.066	
Departure Headway (Hd)	4.866	5.343	4.949	5.715	
Convergence, Y/N	Yes	Yes	Yes	Yes	
Cap	729	675	719	630	
Service Time	2.959	3.347	3.043	3.721	
HCM Lane V/C Ratio	0.361	0.153	0.588	0.065	
HCM Control Delay	10.7	9.3	14.8	9.1	
HCM Lane LOS	В	Α	В	Α	
HCM 95th-tile Q	1.6	0.5	3.8	0.2	

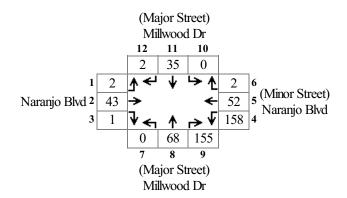
Intersection																
Intersection Delay,	s/veh		12.4													
Intersection LOS			В													
Movement	EBU	EBL	EBT	FRR	WRII	WRI	WBT	WRR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	2	96	1	0	241	110	2	0	0	85	202	0	0	44	3
Future Vol, veh/h	0	2	96	1	0	241	110	2	0	0	85	202	0	0	44	3
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %		2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	2	104	1	0	262	120	2	0	0	92	220	0	0	48	3
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0
Approach			EB				WB					NB				SB
Opposing Approac	h		WB				EB					SB				NB
Opposing Lanes			1				1					1				1
Conflicting Approac	ch Lef	t	SB				NB					EB				WB
Conflicting Lanes L			1				1					1				1
Conflicting Approac	ch Rig	ht	NB				SB					WB				EB
Conflicting Lanes F			1				1					1				1
HCM Control Delay			9.6				14.4					11.5				9.3
HCM LOS			Α				В					В				Α

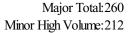
Lane	NBLn1	EBLn1	WBLn1	SBLn1	
Vol Left, %	0%	2%	68%	0%	
Vol Thru, %	30%	97%	31%	94%	
Vol Right, %	70%	1%	1%	6%	
Sign Control	Stop	Stop	Stop	Stop	
Traffic Vol by Lane	287	99	353	47	
LT Vol	0	2	241	0	
Through Vol	85	96	110	44	
RT Vol	202	1	2	3	
Lane Flow Rate	312	108	384	51	
Geometry Grp	1	1	1	1	
Degree of Util (X)	0.418	0.164	0.553	0.081	
Departure Headway (Hd)	4.949	5.47	5.193	5.723	
Convergence, Y/N	Yes	Yes	Yes	Yes	
Cap	733	657	698	626	
Service Time	2.949	3.486	3.201	3.754	
HCM Lane V/C Ratio	0.426	0.164	0.55	0.081	
HCM Control Delay	11.5	9.6	14.4	9.3	
HCM Lane LOS	В	Α	В	Α	
HCM 95th-tile Q	2.1	0.6	3.4	0.3	

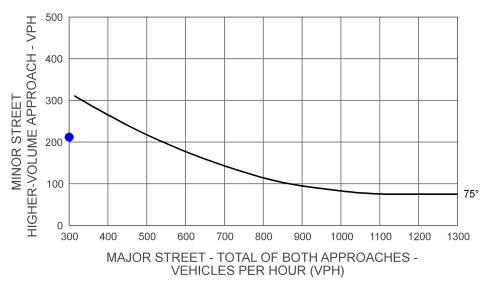
Intersection																
Intersection Delay,	s/veh		14.6													
Intersection LOS			В													
Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	2	97	1	0	293	120	2	0	0	85	209	0	0	44	3
Future Vol, veh/h	0	2	97	1	0	293	120	2	0	0	85	209	0	0	44	3
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %		2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	2	105	1	0	318	130	2	0	0	92	227	0	0	48	3
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0
Approach			EB				WB					NB				SB
Opposing Approach	h		WB				EB					SB				NB
Opposing Lanes	''		1				1					1				1
Conflicting Approac	ch I ef	t	SB				NB					EB				WB
Conflicting Lanes L			1				1					1				1
Conflicting Approac		ht	NB				SB					WB				EB
Conflicting Lanes F			1				1					1				1
HCM Control Delay	•		9.9				17.9					12.4				9.6
HCM LOS			Α.				C					В				Α
. IOW LOO			• • •													, ,

Lane	NBLn1	EBLn1	WBLn1	SBLn1	
Vol Left, %	0%	2%	71%	0%	
Vol Thru, %	29%	97%	29%	94%	
Vol Right, %	71%	1%	0%	6%	
Sign Control	Stop	Stop	Stop	Stop	
Traffic Vol by Lane	294	100	415	47	
LT Vol	0	2	293	0	
Through Vol	85	97	120	44	
RT Vol	209	1	2	3	
Lane Flow Rate	320	109	451	51	
Geometry Grp	1	1	1	1	
Degree of Util (X)	0.455	0.17	0.659	0.085	
Departure Headway (Hd)	5.121	5.645	5.262	5.982	
Convergence, Y/N	Yes	Yes	Yes	Yes	
Cap	703	634	686	597	
Service Time	3.16	3.693	3.294	4.036	
HCM Lane V/C Ratio	0.455	0.172	0.657	0.085	
HCM Control Delay	12.4	9.9	17.9	9.6	
HCM Lane LOS	В	Α	С	Α	
HCM 95th-tile Q	2.4	0.6	5	0.3	

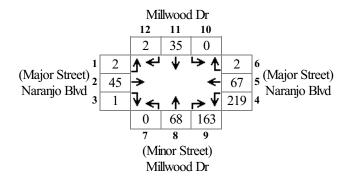
Scenario: PM Existing Intersection #:1



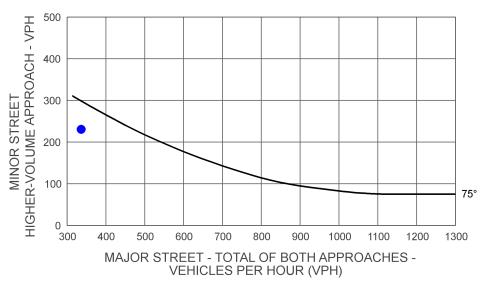




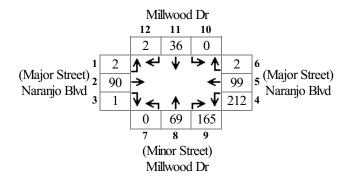
Scenario: PM Existing+Project Intersection #:1

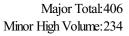


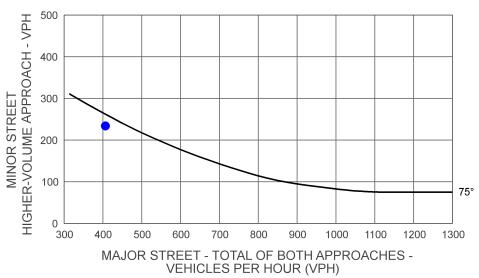
Major Total:336 Minor High Volume:231



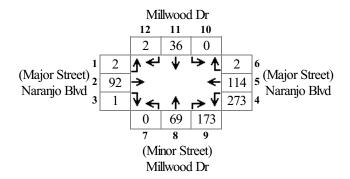
Scenario: PM Future Intersection #: 1



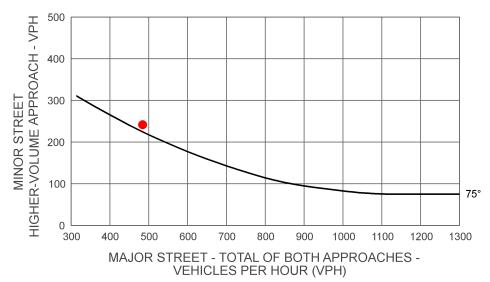




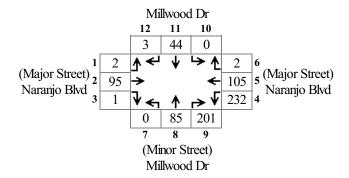
Scenario: PM Future+Project Intersection #: 1

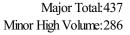


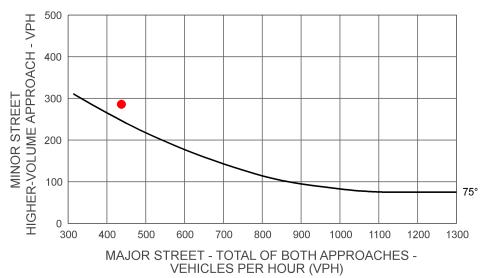
Major Total:484 Minor High Volume:242



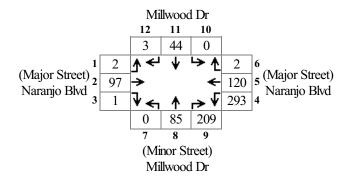
Scenario: PM Future Intersection #: 1



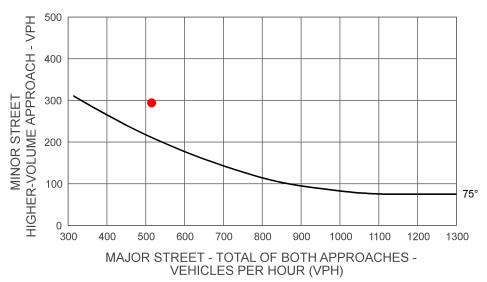




Scenario: PM Future+Project Intersection #: 1



Major Total: 515 Minor High Volume: 294



Traffic Study 524-10

Intersection 2 Rd 196 & Naranjo Blvd



Intersection												
Int Delay, s/veh 3.	8											
The Delay, 5/ veri	O O											
Movement	EBL		EBR		WBT		NBL	NBT	NBR	SBL	SBT	
Traffic Vol, veh/h	0	149	15	90	233	1	12	23	53	1	29	0
Future Vol, veh/h	0	149	15	90	233	1	12	23	53	1	29	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control		Free		Free	Free		Stop		Stop	Stop	Stop	
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage	, # -	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	162	16	98	253	1	13	25	58	1	32	0
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	254	0	0	178	0	0	635	620	170	660	627	254
Stage 1	-	-	-	-	_	-	170	170	_	449	449	-
Stage 2	-	_	-	-	_	_	465	450	_	211	178	_
Critical Hdwy	4.12											
-	7.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	4.12	-	-	7.12 6.12		6.22		6.52 5.52	6.22
Critical Hdwy Stg 1 Critical Hdwy Stg 2							6.12			6.12		6.22 - -
Critical Hdwy Stg 2	-					-	6.12	5.52 5.52	-	6.12	5.52 5.52	-
Critical Hdwy Stg 2 Follow-up Hdwy	- -	- -	- -	- -	- -	-	6.12 6.12	5.52 5.52	-	6.12 6.12	5.52 5.52	-
Critical Hdwy Stg 2	- - 2.218	- - -	- - -	- - 2.218	- - -	- - -	6.12 6.12 3.518	5.52 5.52 4.018	- - 3.318	6.12 6.12 3.518	5.52 5.52 4.018	- - 3.318
Critical Hdwy Stg 2 Follow-up Hdwy Pot Cap-1 Maneuver Stage 1	- 2.218 1311	- - - -	- - - -	- - 2.218 1398	- - -	- - - -	6.12 6.12 3.518 391	5.52 5.52 4.018 404	- 3.318 874	6.12 6.12 3.518 376	5.52 5.52 4.018 400	- - 3.318 785
Critical Hdwy Stg 2 Follow-up Hdwy Pot Cap-1 Maneuver	- 2.218 1311 -	- - - -	- - - -	- 2.218 1398 -	- - -	- - - -	6.12 6.12 3.518 391 832	5.52 5.52 4.018 404 758	- 3.318 874 -	6.12 6.12 3.518 376 589	5.52 5.52 4.018 400 572	- - 3.318 785
Critical Hdwy Stg 2 Follow-up Hdwy Pot Cap-1 Maneuver Stage 1 Stage 2	- 2.218 1311 -	- - - -	- - - -	- 2.218 1398 -	- - - -	- - - -	6.12 6.12 3.518 391 832	5.52 5.52 4.018 404 758	- 3.318 874 -	6.12 6.12 3.518 376 589	5.52 5.52 4.018 400 572	- - 3.318 785
Critical Hdwy Stg 2 Follow-up Hdwy Pot Cap-1 Maneuver Stage 1 Stage 2 Platoon blocked, % Mov Cap-1 Maneuver	- 2.218 1311 - -	- - - - -	- - - - -	- 2.218 1398 - -	- - - - -	- - - -	6.12 6.12 3.518 391 832 578	5.52 5.52 4.018 404 758 572	- 3.318 874 - -	6.12 6.12 3.5184 376 589 791	5.52 5.52 4.018 400 572 752	- 3.318 785 - -
Critical Hdwy Stg 2 Follow-up Hdwy Pot Cap-1 Maneuver Stage 1 Stage 2 Platoon blocked, % Mov Cap-1 Maneuver Mov Cap-2 Maneuver	2.218 1311 - - 1311	-		2.218 1398 - - 1398	- - - - -	- - - - -	6.12 6.12 3.518 391 832 578	5.52 5.52 4.018 404 758 572	3.318 874 - -	6.12 6.12 3.518 376 589 791	5.52 5.52 4.018 400 572 752	- 3.318 785 - -
Critical Hdwy Stg 2 Follow-up Hdwy Pot Cap-1 Maneuver Stage 1 Stage 2 Platoon blocked, % Mov Cap-1 Maneuver	2.218 1311 - - 1311	-	-	2.218 1398 - - 1398	- - - - -	- - - - -	6.12 6.12 3.518 391 832 578 343	5.52 5.52 4.018 404 758 572 371 371	3.318 874 - - 874	6.12 6.12 3.518 376 589 791 312 312	5.52 5.52 4.018 400 572 752 367 367	- 3.318 785 - -
Critical Hdwy Stg 2 Follow-up Hdwy Pot Cap-1 Maneuver Stage 1 Stage 2 Platoon blocked, % Mov Cap-1 Maneuver Mov Cap-2 Maneuver Stage 1	2.218 1311 - - 1311 -	- - - - - - -	-	2.218 1398 - - 1398 -	- - - - -	- - - - -	6.12 6.12 3.518 391 832 578 343 343 832	5.52 5.52 4.018 404 758 572 371 371 758	3.318 874 - - 874 -	6.12 6.12 3.518 376 589 791 312 312 589	5.52 5.52 4.018 400 572 752 367 367 525	- 3.318 785 - - 785 -
Critical Hdwy Stg 2 Follow-up Hdwy Pot Cap-1 Maneuver Stage 1 Stage 2 Platoon blocked, % Mov Cap-1 Maneuver Mov Cap-2 Maneuver Stage 1 Stage 2	2.218 1311 - - 1311 - -	- - - - - - -	-	2.218 1398 - - 1398 - -	- - - - -	- - - - -	6.12 6.12 3.518 391 832 578 343 343 832 499	5.52 5.52 4.018 404 758 572 371 371 758	3.318 874 - - 874 -	6.12 6.12 3.518 376 589 791 312 312 589 714	5.52 5.52 4.018 400 572 752 367 367 525	- 3.318 785 - - 785 -
Critical Hdwy Stg 2 Follow-up Hdwy Pot Cap-1 Maneuver Stage 1 Stage 2 Platoon blocked, % Mov Cap-1 Maneuver Mov Cap-2 Maneuver Stage 1 Stage 2 Approach	- 2.218 1311 - - 1311 - - -	- - - - - - -	-	- 2.218 1398 - - 1398 - - -	- - - - -	- - - - -	6.12 6.12 3.518 391 832 578 343 343 832 499	5.52 5.52 4.018 404 758 572 371 371 758	3.318 874 - - 874 -	6.12 6.12 3.518 376 589 791 312 312 589 714	5.52 5.52 4.018 400 572 752 367 367 525	- 3.318 785 - - 785 -
Critical Hdwy Stg 2 Follow-up Hdwy Pot Cap-1 Maneuver Stage 1 Stage 2 Platoon blocked, % Mov Cap-1 Maneuver Mov Cap-2 Maneuver Stage 1 Stage 2	2.218 1311 - - 1311 - -	- - - - - - -	-	2.218 1398 - - 1398 - -	- - - - -	- - - - -	6.12 6.12 3.518 391 832 578 343 343 832 499	5.52 5.52 4.018 404 758 572 371 371 758	3.318 874 - - 874 -	6.12 6.12 3.518 376 589 791 312 312 589 714	5.52 5.52 4.018 400 572 752 367 367 525	- 3.318 785 - - 785 -

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	558	1311	-	-	1398	-	-	365
HCM Lane V/C Ratio	0.171	-	-	-	0.07	-	-	0.089
HCM Control Delay (s)	12.8	0	-	-	7.8	0	-	15.8
HCM Lane LOS	В	Α	-	-	Α	Α	-	С
HCM 95th %tile Q(veh)	0.6	0	-	_	0.2	-	-	0.3

-												
Intersection												
Int Delay, s/veh 3.	7											
, , , , , ,												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Vol, veh/h	0	206	15	92	241	1	12	23	53	1	29	0
Future Vol, veh/h	0	206	15	92	241	1	12	23	53	1	29	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage	e, # -	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2		2	2	2	2	2	2
Mvmt Flow	0	224	16	100	262	1	13	25	58	1	32	0
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	263	0	0	240	0	0	710	695	232	736	703	263
Conflicting Flow All Stage 1	263 -	0	0	240	0	0	710 232	695 232	232	736 463	703 463	263 -
							232 478	232 463	-			263 - -
Stage 1	-	-	-	-	-	-	232 478	232	-	463	463 240	263 - - 6.22
Stage 1 Stage 2	- -	- -	- -	-	- -	-	232 478	232 463 6.52	-	463 273 7.12	463 240	- -
Stage 1 Stage 2 Critical Hdwy Critical Hdwy Stg 1 Critical Hdwy Stg 2	- 4.12 -	- - -	- - -	- 4.12 -	- - -	- - -	232 478 7.12 6.12	232 463 6.52	- - 6.22	463 273 7.12 6.12	463 240 6.52	- -
Stage 1 Stage 2 Critical Hdwy Critical Hdwy Stg 1 Critical Hdwy Stg 2 Follow-up Hdwy	- 4.12 - - 2.218	- - -	- - -	- 4.12 - - 2.218	- - -	- - -	232 478 7.12 6.12	232 463 6.52 5.52 5.52 4.018	- 6.22 - -	463 273 7.12 6.12 6.12 3.518	463 240 6.52 5.52 5.52 4.018	- 6.22 -
Stage 1 Stage 2 Critical Hdwy Critical Hdwy Stg 1 Critical Hdwy Stg 2 Follow-up Hdwy Pot Cap-1 Maneuver	- 4.12 -	- - - -	- - -	- 4.12 -	- - - -	- - - -	232 478 7.12 6.12 6.12 3.518	232 463 6.52 5.52 5.52 4.018 366	- 6.22 - -	463 273 7.12 6.12 6.12	463 240 6.52 5.52 5.52 4.018 362	- 6.22 -
Stage 1 Stage 2 Critical Hdwy Critical Hdwy Stg 1 Critical Hdwy Stg 2 Follow-up Hdwy Pot Cap-1 Maneuver Stage 1	- 4.12 - - 2.218	- - - -	- - - -	- 4.12 - - 2.218	- - - -	- - - -	232 478 7.12 6.12 6.12 3.518 348 771	232 463 6.52 5.52 5.52 4.018 366 713	- 6.22 - - 3.318	463 273 7.12 6.12 6.12 3.518 335 579	463 240 6.52 5.52 5.52 4.018 362 564	- 6.22 - - 3.318
Stage 1 Stage 2 Critical Hdwy Critical Hdwy Stg 1 Critical Hdwy Stg 2 Follow-up Hdwy Pot Cap-1 Maneuver Stage 1 Stage 2	- 4.12 - - 2.218 1301	- - - - -	- - - -	4.12 - - 2.218 1327	- - - - -	- - - - -	232 478 7.12 6.12 6.12 3.518	232 463 6.52 5.52 5.52 4.018 366	- 6.22 - - 3.318 807	463 273 7.12 6.12 6.12 3.518 335	463 240 6.52 5.52 5.52 4.018 362	- 6.22 - - 3.318
Stage 1 Stage 2 Critical Hdwy Critical Hdwy Stg 1 Critical Hdwy Stg 2 Follow-up Hdwy Pot Cap-1 Maneuver Stage 1 Stage 2 Platoon blocked, %	- 4.12 - 2.218 1301 -	- - - - -	-	2.218 1327 -	-	-	232 478 7.12 6.12 6.12 3.518 348 771 568	232 463 6.52 5.52 5.52 4.018 366 713 564	6.22 - - 3.318 807 -	463 273 7.12 6.12 6.12 3.518 335 579 733	463 240 6.52 5.52 5.52 4.018 362 564 707	- 6.22 - - 3.318 776 -
Stage 1 Stage 2 Critical Hdwy Critical Hdwy Stg 1 Critical Hdwy Stg 2 Follow-up Hdwy Pot Cap-1 Maneuver Stage 1 Stage 2 Platoon blocked, % Mov Cap-1 Maneuver	- 4.12 - - 2.218 1301	- - - - -	-	4.12 - - 2.218 1327	-	-	232 478 7.12 6.12 6.12 3.518 348 771 568	232 463 6.52 5.52 5.52 4.018 366 713 564	- 6.22 - - 3.318 807 -	463 273 7.12 6.12 6.12 3.518 335 579 733	463 240 6.52 5.52 5.52 4.018 362 564 707	- 6.22 - - 3.318
Stage 1 Stage 2 Critical Hdwy Critical Hdwy Stg 1 Critical Hdwy Stg 2 Follow-up Hdwy Pot Cap-1 Maneuver Stage 1 Stage 2 Platoon blocked, % Mov Cap-1 Maneuver Mov Cap-2 Maneuver	- 4.12 - 2.218 1301 -	- - - - - -	-	2.218 1327 -	-	-	232 478 7.12 6.12 6.12 3.518 348 771 568	232 463 6.52 5.52 5.52 4.018 366 713 564 334 334	6.22 - - 3.318 807 -	463 273 7.12 6.12 6.12 3.518 335 579 733	463 240 6.52 5.52 5.52 4.018 362 564 707 330 330	- 6.22 - - 3.318 776 -
Stage 1 Stage 2 Critical Hdwy Critical Hdwy Stg 1 Critical Hdwy Stg 2 Follow-up Hdwy Pot Cap-1 Maneuver Stage 1 Stage 2 Platoon blocked, % Mov Cap-1 Maneuver Mov Cap-2 Maneuver Stage 1	- 4.12 - 2.218 1301 - - 1301	- - - - - -	-	4.12 - - 2.218 1327 - -	-	-	232 478 7.12 6.12 6.12 3.518 348 771 568 301 301 771	232 463 6.52 5.52 5.52 4.018 366 713 564 334 713	- 6.22 - - 3.318 807 - - 807	463 273 7.12 6.12 6.12 3.518 335 579 733 274 274 579	463 240 6.52 5.52 5.52 4.018 362 564 707 330 514	- 6.22 - - 3.318 776 -
Stage 1 Stage 2 Critical Hdwy Critical Hdwy Stg 1 Critical Hdwy Stg 2 Follow-up Hdwy Pot Cap-1 Maneuver Stage 1 Stage 2 Platoon blocked, % Mov Cap-1 Maneuver Mov Cap-2 Maneuver	- 4.12 - 2.218 1301 - - 1301	-		4.12 - - 2.218 1327 - -	-	-	232 478 7.12 6.12 6.12 3.518 348 771 568	232 463 6.52 5.52 5.52 4.018 366 713 564 334 334	- 6.22 - - 3.318 807 - - 807	463 273 7.12 6.12 6.12 3.518 335 579 733	463 240 6.52 5.52 5.52 4.018 362 564 707 330 330	- 6.22 - 3.318 776 - - 776 -
Stage 1 Stage 2 Critical Hdwy Critical Hdwy Stg 1 Critical Hdwy Stg 2 Follow-up Hdwy Pot Cap-1 Maneuver Stage 1 Stage 2 Platoon blocked, % Mov Cap-1 Maneuver Mov Cap-2 Maneuver Stage 1	- 4.12 - - 2.218 1301 - - 1301	-		4.12 - - 2.218 1327 - - 1327	-	-	232 478 7.12 6.12 6.12 3.518 348 771 568 301 301 771	232 463 6.52 5.52 5.52 4.018 366 713 564 334 713	- 6.22 - - 3.318 807 - - 807 -	463 273 7.12 6.12 6.12 3.518 335 579 733 274 274 579	463 240 6.52 5.52 5.52 4.018 362 564 707 330 514	- 6.22 - 3.318 776 - - 776 -
Stage 1 Stage 2 Critical Hdwy Critical Hdwy Stg 1 Critical Hdwy Stg 2 Follow-up Hdwy Pot Cap-1 Maneuver Stage 1 Stage 2 Platoon blocked, % Mov Cap-1 Maneuver Mov Cap-2 Maneuver Stage 1	- 4.12 - - 2.218 1301 - - 1301	-		4.12 - - 2.218 1327 - - 1327	-	-	232 478 7.12 6.12 6.12 3.518 348 771 568 301 301 771	232 463 6.52 5.52 5.52 4.018 366 713 564 334 713	- 6.22 - - 3.318 807 - - 807 -	463 273 7.12 6.12 6.12 3.518 335 579 733 274 274 579	463 240 6.52 5.52 5.52 4.018 362 564 707 330 514	- 6.22 - 3.318 776 - - 776 -
Stage 1 Stage 2 Critical Hdwy Critical Hdwy Stg 1 Critical Hdwy Stg 2 Follow-up Hdwy Pot Cap-1 Maneuver Stage 1 Stage 2 Platoon blocked, % Mov Cap-1 Maneuver Mov Cap-2 Maneuver Stage 1 Stage 2	- 4.12 - 2.218 1301 - - 1301 -	-		- 4.12 - 2.218 1327 - - 1327 -	-	-	232 478 7.12 6.12 6.12 3.518 348 771 568 301 301 771 486	232 463 6.52 5.52 5.52 4.018 366 713 564 334 713	- 6.22 - - 3.318 807 - - 807 -	463 273 7.12 6.12 6.12 3.518 335 579 733 274 274 579 657	463 240 6.52 5.52 5.52 4.018 362 564 707 330 514	- 6.22 - - 3.318 776 -

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	505	1301	-	-	1327	-	-	328
HCM Lane V/C Ratio	0.189	-	-	-	0.075	-	-	0.099
HCM Control Delay (s)	13.8	0	-	-	7.9	0	-	17.2
HCM Lane LOS	В	Α	-	-	Α	Α	-	С
HCM 95th %tile Q(veh)	0.7	0	-	-	0.2	-	-	0.3

Intersection												
	4											
, , , , , , , , , , , , , , , , , , ,												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Vol, veh/h	0	256	15	93	251	2	12	23	68	8	29	0
Future Vol, veh/h	0	256	15	93	251	2	12	23	68	8	29	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage	e, # -	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	278	16	101	273	2	13	25	74	9	32	0
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	275	0	0	295	0	0	778	763	286	812	771	274
Conflicting Flow All Stage 1	275 -	0	0	295 -	0	0	778 286	763 286	286 -	812 476	771 476	274 -
9	275 - -								286 - -			274 - -
Stage 1	275 - - 4.12			-		-	286	286 477	-	476	476 295	- -
Stage 1 Stage 2	- -	- -	-	- -	-	-	286 492	286 477	-	476 336 7.12	476 295	- -
Stage 1 Stage 2 Critical Hdwy	- -	- -	-	- -	-	-	286 492 7.12	286 477 6.52 5.52	-	476 336 7.12 6.12	476 295 6.52	- -
Stage 1 Stage 2 Critical Hdwy Critical Hdwy Stg 1	- -	- -	-	- -	-	-	286 492 7.12 6.12	286 477 6.52 5.52 5.52	- 6.22 -	476 336 7.12 6.12	476 295 6.52 5.52 5.52	- 6.22 -
Stage 1 Stage 2 Critical Hdwy Critical Hdwy Stg 1 Critical Hdwy Stg 2	- 4.12 -	- - - -	- - - -	- 4.12 - -	- - -	- - - -	286 492 7.12 6.12 6.12	286 477 6.52 5.52 5.52	- 6.22 -	476 336 7.12 6.12 6.12	476 295 6.52 5.52 5.52	- 6.22 -
Stage 1 Stage 2 Critical Hdwy Critical Hdwy Stg 1 Critical Hdwy Stg 2 Follow-up Hdwy	- 4.12 - - 2.218	- - - - -	- - - -	- 4.12 - - 2.218	- - -	- - - -	286 492 7.12 6.12 6.12 3.518	286 477 6.52 5.52 5.52 4.018	- 6.22 - - 3.318	476 336 7.12 6.12 6.12 3.518	476 295 6.52 5.52 5.52 4.018	- 6.22 - - 3.318
Stage 1 Stage 2 Critical Hdwy Critical Hdwy Stg 1 Critical Hdwy Stg 2 Follow-up Hdwy Pot Cap-1 Maneuver	- 4.12 - - 2.218 1288	- - - - -	- - - - -	- 4.12 - - 2.218 1266	- - - - -	- - - - -	286 492 7.12 6.12 6.12 3.518 314	286 477 6.52 5.52 5.52 4.018 334	- 6.22 - - 3.318 753	476 336 7.12 6.12 6.12 3.518 298	476 295 6.52 5.52 5.52 4.018 331	- 6.22 - - 3.318 765
Stage 1 Stage 2 Critical Hdwy Critical Hdwy Stg 1 Critical Hdwy Stg 2 Follow-up Hdwy Pot Cap-1 Maneuver Stage 1	- 4.12 - - 2.218 1288	- - - - -	- - - - -	4.12 - - 2.218 1266	- - - - -	- - - - - -	286 492 7.12 6.12 6.12 3.518 314 721	286 477 6.52 5.52 5.52 4.018 334 675 556	6.22 - - - 3.318 753	476 336 7.12 6.12 6.12 3.518 298 570	476 295 6.52 5.52 5.52 4.018 331 557 669	- 6.22 - - 3.318 765
Stage 1 Stage 2 Critical Hdwy Critical Hdwy Stg 1 Critical Hdwy Stg 2 Follow-up Hdwy Pot Cap-1 Maneuver Stage 1 Stage 2	- 4.12 - - 2.218 1288		-	4.12 - - 2.218 1266	-	-	286 492 7.12 6.12 6.12 3.518 314 721	286 477 6.52 5.52 5.52 4.018 334 675 556	6.22 - - - 3.318 753	476 336 7.12 6.12 6.12 3.518 298 570	476 295 6.52 5.52 5.52 4.018 331 557 669	- 6.22 - - 3.318 765
Stage 1 Stage 2 Critical Hdwy Critical Hdwy Stg 1 Critical Hdwy Stg 2 Follow-up Hdwy Pot Cap-1 Maneuver Stage 1 Stage 2 Platoon blocked, %	- 4.12 - - 2.218 1288 -	-	-	- 4.12 - - 2.218 1266 -	-	-	286 492 7.12 6.12 6.12 3.518 314 721 558 268	286 477 6.52 5.52 5.52 4.018 334 675 556 303 303	- 6.22 - - 3.318 753 -	476 336 7.12 6.12 6.12 3.518 298 570 678	476 295 6.52 5.52 5.52 4.018 331 557 669 300 300	- 6.22 - - 3.318 765 -
Stage 1 Stage 2 Critical Hdwy Critical Hdwy Stg 1 Critical Hdwy Stg 2 Follow-up Hdwy Pot Cap-1 Maneuver Stage 1 Stage 2 Platoon blocked, % Mov Cap-1 Maneuver Mov Cap-2 Maneuver Stage 1	- 4.12 - - 2.218 1288 -	-	-	- 4.12 - - 2.218 1266 - -	-	-	286 492 7.12 6.12 3.518 314 721 558 268 268 721	286 477 6.52 5.52 5.52 4.018 334 675 556 303 303 675	- 6.22 - - 3.318 753 -	476 336 7.12 6.12 6.12 3.518 298 570 678 234 234	476 295 6.52 5.52 5.52 4.018 331 557 669 300 300 505	- 6.22 - - 3.318 765 - - 765
Stage 1 Stage 2 Critical Hdwy Critical Hdwy Stg 1 Critical Hdwy Stg 2 Follow-up Hdwy Pot Cap-1 Maneuver Stage 1 Stage 2 Platoon blocked, % Mov Cap-1 Maneuver Mov Cap-2 Maneuver	- 4.12 - 2.218 1288 - - 1288	-		- 4.12 - - 2.218 1266 - -	-		286 492 7.12 6.12 6.12 3.518 314 721 558 268	286 477 6.52 5.52 5.52 4.018 334 675 556 303 303 675	- 6.22 - 3.318 753 - - 753	476 336 7.12 6.12 6.12 3.518 298 570 678 234 234	476 295 6.52 5.52 5.52 4.018 331 557 669 300 300	- 6.22 - - 3.318 765 - - 765
Stage 1 Stage 2 Critical Hdwy Critical Hdwy Stg 1 Critical Hdwy Stg 2 Follow-up Hdwy Pot Cap-1 Maneuver Stage 1 Stage 2 Platoon blocked, % Mov Cap-1 Maneuver Mov Cap-2 Maneuver Stage 1	- 4.12 - 2.218 1288 - - 1288	-		- 4.12 - - 2.218 1266 - -	-		286 492 7.12 6.12 3.518 314 721 558 268 268 721	286 477 6.52 5.52 5.52 4.018 334 675 556 303 303 675	- 6.22 - 3.318 753 - - 753	476 336 7.12 6.12 6.12 3.518 298 570 678 234 234	476 295 6.52 5.52 5.52 4.018 331 557 669 300 300 505	- 6.22 - - 3.318 765 - - 765
Stage 1 Stage 2 Critical Hdwy Critical Hdwy Stg 1 Critical Hdwy Stg 2 Follow-up Hdwy Pot Cap-1 Maneuver Stage 1 Stage 2 Platoon blocked, % Mov Cap-1 Maneuver Mov Cap-2 Maneuver Stage 1	- 4.12 - 2.218 1288 - - 1288	-		- 4.12 - - 2.218 1266 - -	-		286 492 7.12 6.12 3.518 314 721 558 268 268 721	286 477 6.52 5.52 5.52 4.018 334 675 556 303 303 675	- 6.22 - 3.318 753 - - 753	476 336 7.12 6.12 6.12 3.518 298 570 678 234 234	476 295 6.52 5.52 5.52 4.018 331 557 669 300 300 505	- 6.22 - - 3.318 765 - - 765
Stage 1 Stage 2 Critical Hdwy Critical Hdwy Stg 1 Critical Hdwy Stg 2 Follow-up Hdwy Pot Cap-1 Maneuver Stage 1 Stage 2 Platoon blocked, % Mov Cap-1 Maneuver Mov Cap-2 Maneuver Stage 1 Stage 2	- 4.12 - 2.218 1288 - - 1288 - -	-		- 4.12 - 2.218 1266 - - 1266	-		286 492 7.12 6.12 3.518 314 721 558 268 268 721 474	286 477 6.52 5.52 5.52 4.018 334 675 556 303 303 675	- 6.22 - 3.318 753 - - 753	476 336 7.12 6.12 6.12 3.518 298 570 678 234 234 570 589	476 295 6.52 5.52 5.52 4.018 331 557 669 300 300 505	- 6.22 - 3.318 765 - 765

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	488	1288	-	-	1266	-	-	283
HCM Lane V/C Ratio	0.229	-	-	-	0.08	-	-	0.142
HCM Control Delay (s)	14.6	0	-	-	8.1	0	-	19.8
HCM Lane LOS	В	Α	-	-	Α	Α	-	С
HCM 95th %tile Q(veh)	0.9	0	-	-	0.3	-	-	0.5

Intersection												
Int Delay, s/veh 3.	.9											
3,												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Vol, veh/h	0	313	15	95	259	2	12	23	68	8	29	0
Future Vol, veh/h	0	313	15	95	259	2	12	23	68	8	29	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control		Free	Free		Free		Stop		Stop	Stop		
RT Channelized	-		None	-	-	None	-		None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage	e, # -	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	340	16	103	282	2	13	25	74	9	32	0
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	284	0	0	357	0	0		838	348	887	846	283
Conflicting Flow All Stage 1	284	0	0	357 -	0	0	853 348	838 348	348	887 489	846 489	283
Stage 1	284 - -						853		348 - -			283 - -
	284 - - 4.12			-		-	853 348	348 490	-	489	489 357	- -
Stage 1 Stage 2	- -	- -	-	- -	-	-	853 348 505	348 490	-	489 398 7.12	489 357	- -
Stage 1 Stage 2 Critical Hdwy	- -	- -	-	- -	-	-	853 348 505 7.12	348 490 6.52 5.52	-	489 398 7.12 6.12	489 357 6.52	- -
Stage 1 Stage 2 Critical Hdwy Critical Hdwy Stg 1	- -	- -	-	- -	-	-	853 348 505 7.12 6.12	348 490 6.52 5.52 5.52	- 6.22 -	489 398 7.12 6.12	489 357 6.52 5.52 5.52	- 6.22 -
Stage 1 Stage 2 Critical Hdwy Critical Hdwy Stg 1 Critical Hdwy Stg 2	- 4.12 -	- - - -	- - -	- 4.12 - -	- - - -	- - -	853 348 505 7.12 6.12 6.12	348 490 6.52 5.52 5.52	- 6.22 -	489 398 7.12 6.12 6.12	489 357 6.52 5.52 5.52	- 6.22 -
Stage 1 Stage 2 Critical Hdwy Critical Hdwy Stg 1 Critical Hdwy Stg 2 Follow-up Hdwy	- 4.12 - - 2.218	- - - -	- - - -	- 4.12 - - 2.218	- - - -	- - - -	853 348 505 7.12 6.12 6.12 3.518	348 490 6.52 5.52 5.52 4.018	- 6.22 - - 3.318	489 398 7.12 6.12 6.12 3.518	489 357 6.52 5.52 5.52 4.018	- 6.22 - - 3.318
Stage 1 Stage 2 Critical Hdwy Critical Hdwy Stg 1 Critical Hdwy Stg 2 Follow-up Hdwy Pot Cap-1 Maneuver	- 4.12 - - 2.218 1278	- - - - -	- - - -	- 4.12 - - 2.218 1202	- - - - -	- - - -	853 348 505 7.12 6.12 6.12 3.518	348 490 6.52 5.52 5.52 4.018 302	- 6.22 - - 3.318 695	489 398 7.12 6.12 6.12 3.518 265	489 357 6.52 5.52 5.52 4.018 299	- 6.22 - - 3.318 756
Stage 1 Stage 2 Critical Hdwy Critical Hdwy Stg 1 Critical Hdwy Stg 2 Follow-up Hdwy Pot Cap-1 Maneuver Stage 1	- 4.12 - - 2.218 1278	- - - - -	- - - -	4.12 - - 2.218 1202	- - - - -	-	853 348 505 7.12 6.12 6.12 3.518 279 668	348 490 6.52 5.52 5.52 4.018 302 634	6.22 - - 3.318 695	489 398 7.12 6.12 6.12 3.518 265 561	489 357 6.52 5.52 5.52 4.018 299 549	- 6.22 - - 3.318 756
Stage 1 Stage 2 Critical Hdwy Critical Hdwy Stg 1 Critical Hdwy Stg 2 Follow-up Hdwy Pot Cap-1 Maneuver Stage 1 Stage 2	- 4.12 - - 2.218 1278		-	4.12 - - 2.218 1202	-	-	853 348 505 7.12 6.12 6.12 3.518 279 668	348 490 6.52 5.52 5.52 4.018 302 634	6.22 - - 3.318 695	489 398 7.12 6.12 6.12 3.518 265 561	489 357 6.52 5.52 5.52 4.018 299 549	- 6.22 - - 3.318 756
Stage 1 Stage 2 Critical Hdwy Critical Hdwy Stg 1 Critical Hdwy Stg 2 Follow-up Hdwy Pot Cap-1 Maneuver Stage 1 Stage 2 Platoon blocked, %	- 4.12 - - 2.218 1278 -	-		- 4.12 - - 2.218 1202 -	-	-	853 348 505 7.12 6.12 6.12 3.518 279 668 549	348 490 6.52 5.52 5.52 4.018 302 634 549	6.22 - - 3.318 695 -	489 398 7.12 6.12 6.12 3.518 265 561 628	489 357 6.52 5.52 5.52 4.018 299 549 628	- 6.22 - - 3.318 756 -
Stage 1 Stage 2 Critical Hdwy Critical Hdwy Stg 1 Critical Hdwy Stg 2 Follow-up Hdwy Pot Cap-1 Maneuver Stage 1 Stage 2 Platoon blocked, % Mov Cap-1 Maneuver Mov Cap-2 Maneuver Stage 1	- 4.12 - - 2.218 1278 -	-		- 4.12 - - 2.218 1202 - -	-	-	853 348 505 7.12 6.12 6.12 3.518 279 668 549 235 235 668	348 490 6.52 5.52 5.52 4.018 302 634 549 271 271 634	6.22 - - 3.318 695 -	489 398 7.12 6.12 3.518 265 561 628 203 203 561	489 357 6.52 5.52 5.52 4.018 299 549 628 269 269 493	- 6.22 - - 3.318 756 - - 756
Stage 1 Stage 2 Critical Hdwy Critical Hdwy Stg 1 Critical Hdwy Stg 2 Follow-up Hdwy Pot Cap-1 Maneuver Stage 1 Stage 2 Platoon blocked, % Mov Cap-1 Maneuver Mov Cap-2 Maneuver	- 4.12 - 2.218 1278 - - 1278	-		- 4.12 - - 2.218 1202 - - 1202	-		853 348 505 7.12 6.12 6.12 3.518 279 668 549 235 235	348 490 6.52 5.52 5.52 4.018 302 634 549 271 271	6.22 - - 3.318 695 - -	489 398 7.12 6.12 3.518 265 561 628 203 203 561	489 357 6.52 5.52 5.52 4.018 299 549 628 269 269	- 6.22 - - 3.318 756 - - 756
Stage 1 Stage 2 Critical Hdwy Critical Hdwy Stg 1 Critical Hdwy Stg 2 Follow-up Hdwy Pot Cap-1 Maneuver Stage 1 Stage 2 Platoon blocked, % Mov Cap-1 Maneuver Mov Cap-2 Maneuver Stage 1	- 4.12 - 2.218 1278 - - 1278	-		- 4.12 - - 2.218 1202 - - 1202	-		853 348 505 7.12 6.12 6.12 3.518 279 668 549 235 235 668	348 490 6.52 5.52 5.52 4.018 302 634 549 271 271 634	6.22 - - 3.318 695 - -	489 398 7.12 6.12 3.518 265 561 628 203 203 561	489 357 6.52 5.52 5.52 4.018 299 549 628 269 269 493	- 6.22 - 3.318 756 - 756
Stage 1 Stage 2 Critical Hdwy Critical Hdwy Stg 1 Critical Hdwy Stg 2 Follow-up Hdwy Pot Cap-1 Maneuver Stage 1 Stage 2 Platoon blocked, % Mov Cap-1 Maneuver Mov Cap-2 Maneuver Stage 1	- 4.12 - 2.218 1278 - - 1278	-		- 4.12 - - 2.218 1202 - - 1202	-		853 348 505 7.12 6.12 6.12 3.518 279 668 549 235 235 668	348 490 6.52 5.52 5.52 4.018 302 634 549 271 271 634	6.22 - - 3.318 695 - -	489 398 7.12 6.12 3.518 265 561 628 203 203 561	489 357 6.52 5.52 5.52 4.018 299 549 628 269 269 493	- 6.22 - - 3.318 756 - - 756
Stage 1 Stage 2 Critical Hdwy Critical Hdwy Stg 1 Critical Hdwy Stg 2 Follow-up Hdwy Pot Cap-1 Maneuver Stage 1 Stage 2 Platoon blocked, % Mov Cap-1 Maneuver Mov Cap-2 Maneuver Stage 1 Stage 2	- 4.12 - 2.218 1278 - - 1278 - -	-		- 4.12 - 2.218 1202 - - 1202 - -	-		853 348 505 7.12 6.12 6.12 3.518 279 668 549 235 235 668 461	348 490 6.52 5.52 5.52 4.018 302 634 549 271 271 634	6.22 - - 3.318 695 - -	489 398 7.12 6.12 3.518 265 561 628 203 203 561 539	489 357 6.52 5.52 5.52 4.018 299 549 628 269 269 493	- 6.22 - - 3.318 756 - - 756

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	441	1278	-	-	1202	-	-	251
HCM Lane V/C Ratio	0.254	-	-	-	0.086	-	-	0.16
HCM Control Delay (s)	15.9	0	-	-	8.3	0	-	22.1
HCM Lane LOS	С	Α	-	-	Α	Α	-	С
HCM 95th %tile Q(veh)	1	0	-	-	0.3	-	-	0.6

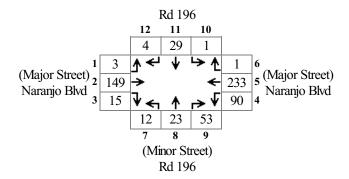
Intersection												
Int Delay, s/veh 4.	3											
The Boldy, or von												
	EDI	БОТ	EDD	MAN	WDT	\4/DD	NDI	NDT	NDD	ODI	ODT	000
Movement	EBL		EBR		WBT		NBL	NBT	NBR	SBL		SBR
Traffic Vol, veh/h	0	289	17	108	309	2	13	26	73	8	32	0
Future Vol, veh/h	0	289	17	108	309	2	13	26	73	8	32	0
Conflicting Peds, #/hr	_ 0	_ 0	_ 0	_ 0	_ 0	_ 0	0	0	0	0	0	0
Sign Control		Free			Free		Stop		Stop	Stop		
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage		0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	314	18	117	336	2	14	28	79	9	35	0
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	338	0	0	333	0	0	912	896	323	949	905	337
Stage 1	-	-	-	-	-	-	323	323	-	572	572	-
Stage 2	-	-	-	-	_	_	589	573	_	377	333	
Critical Hdwy					_	-	000	010	_	311	333	_
	4.12	-	-	4.12	-	-	7.12		6.22		6.52	6.22
Critical Hdwy Stg 1	4.12	-	-	4.12 -				6.52		7.12		6.22
Critical Hdwy Stg 1 Critical Hdwy Stg 2					-	-	7.12 6.12	6.52	6.22	7.12 6.12	6.52	6.22
, ,	-				-	- -	7.12 6.12	6.52 5.52 5.52	6.22	7.12 6.12	6.52 5.52 5.52	-
Critical Hdwy Stg 2	-	- -	- -	- -	- - -	- - -	7.12 6.12 6.12	6.52 5.52 5.52	6.22	7.12 6.12 6.12	6.52 5.52 5.52	-
Critical Hdwy Stg 2 Follow-up Hdwy	- - 2.218	- - -	- - -	- - 2.218	- - -	- - -	7.12 6.12 6.12 3.518	6.52 5.52 5.52 4.018	6.22 - - 3.318	7.12 6.12 6.12 3.518	6.52 5.52 5.52 4.018	- - 3.318
Critical Hdwy Stg 2 Follow-up Hdwy Pot Cap-1 Maneuver Stage 1	- 2.218 1221	- - - -	- - - -	- - 2.218 1226	- - - -	- - - -	7.12 6.12 6.12 3.518 255	6.52 5.52 5.52 4.018 280	6.22 - - 3.318 718	7.12 6.12 6.12 3.518 240	6.52 5.52 5.52 4.018 276	- - 3.318 705
Critical Hdwy Stg 2 Follow-up Hdwy Pot Cap-1 Maneuver Stage 1 Stage 2	- 2.218 1221 -	- - - -	- - - -	- 2.218 1226 -	- - - -	- - - -	7.12 6.12 6.12 3.518 255 689	6.52 5.52 5.52 4.018 280 650	6.22 - - 3.318 718	7.12 6.12 6.12 3.518 240 505	6.52 5.52 5.52 4.018 276 504	- - 3.318 705
Critical Hdwy Stg 2 Follow-up Hdwy Pot Cap-1 Maneuver Stage 1 Stage 2 Platoon blocked, %	- 2.218 1221 -	- - - -	- - - -	- 2.218 1226 -	- - - - -	- - - -	7.12 6.12 6.12 3.518 255 689	6.52 5.52 5.52 4.018 280 650	6.22 - - 3.318 718	7.12 6.12 6.12 3.518 240 505	6.52 5.52 5.52 4.018 276 504	- - 3.318 705
Critical Hdwy Stg 2 Follow-up Hdwy Pot Cap-1 Maneuver Stage 1 Stage 2 Platoon blocked, % Mov Cap-1 Maneuver	- 2.218 1221 - -	- - - - -	- - - - -	- 2.218 1226 - -		- - - - -	7.12 6.12 6.12 3.518 255 689 494	6.52 5.52 5.52 4.018 280 650 504	6.22 - - 3.318 718 - -	7.12 6.12 6.12 3.518 240 505 644	6.52 5.52 5.52 4.018 276 504 644	- 3.318 705 - -
Critical Hdwy Stg 2 Follow-up Hdwy Pot Cap-1 Maneuver Stage 1 Stage 2 Platoon blocked, % Mov Cap-1 Maneuver Mov Cap-2 Maneuver	- 2.218 1221 - - 1221	-		- 2.218 1226 - - 1226	- - - - - -	- - - - -	7.12 6.12 6.12 3.518 255 689 494	6.52 5.52 5.52 4.018 280 650 504	6.22 - - 3.318 718 - - 718	7.12 6.12 6.12 3.5184 240 505 644	6.52 5.52 5.52 4.018 276 504 644 243	- 3.318 705 - -
Critical Hdwy Stg 2 Follow-up Hdwy Pot Cap-1 Maneuver Stage 1 Stage 2 Platoon blocked, % Mov Cap-1 Maneuver Mov Cap-2 Maneuver Stage 1	- 2.218 1221 - - 1221	-	-	- 2.218 1226 - - 1226	- - - - - -	- - - - -	7.12 6.12 6.12 3.518 255 689 494 207 207	6.52 5.52 5.52 4.018 280 650 504 247 247	6.22 - - 3.318 718 - - 718	7.12 6.12 6.12 3.518 240 505 644 177	6.52 5.52 5.52 4.018 276 504 644 243 243	- 3.318 705 - -
Critical Hdwy Stg 2 Follow-up Hdwy Pot Cap-1 Maneuver Stage 1 Stage 2 Platoon blocked, % Mov Cap-1 Maneuver Mov Cap-2 Maneuver	- 2.218 1221 - - 1221 -	- - - - - - -	-	2.218 1226 - - 1226 -	- - - - - -	- - - - -	7.12 6.12 6.12 3.518 255 689 494 207 207 689	6.52 5.52 5.52 4.018 280 650 504 247 247 650	6.22 - - 3.318 718 - - 718 -	7.12 6.12 6.12 3.518 240 505 644 177 177 505	6.52 5.52 5.52 4.018 276 504 644 243 243 445	- 3.318 705 - - 705 -
Critical Hdwy Stg 2 Follow-up Hdwy Pot Cap-1 Maneuver Stage 1 Stage 2 Platoon blocked, % Mov Cap-1 Maneuver Mov Cap-2 Maneuver Stage 1 Stage 2	- 2.218 1221 - - 1221 - -	- - - - - - -	-	2.218 1226 - - 1226 - -	- - - - - -	- - - - -	7.12 6.12 6.12 3.518 255 689 494 207 207 689 402	6.52 5.52 5.52 4.018 280 650 504 247 247 650	6.22 - - 3.318 718 - - 718 -	7.12 6.12 6.12 3.518 240 505 644 177 177 505 548	6.52 5.52 5.52 4.018 276 504 644 243 243 445	- 3.318 705 - - 705 -
Critical Hdwy Stg 2 Follow-up Hdwy Pot Cap-1 Maneuver Stage 1 Stage 2 Platoon blocked, % Mov Cap-1 Maneuver Mov Cap-2 Maneuver Stage 1 Stage 2 Approach	- 2.218 1221 - - 1221 - - -	- - - - - - -	-	- 2.218 1226 - - 1226 - - - WB	- - - - - -	- - - - -	7.12 6.12 6.12 3.518 255 689 494 207 207 689 402	6.52 5.52 5.52 4.018 280 650 504 247 247 650	6.22 - - 3.318 718 - - 718 -	7.12 6.12 6.12 3.5184 240 505 644 177 177 505 548	6.52 5.52 5.52 4.018 276 504 644 243 243 445	- 3.318 705 - - 705 -
Critical Hdwy Stg 2 Follow-up Hdwy Pot Cap-1 Maneuver Stage 1 Stage 2 Platoon blocked, % Mov Cap-1 Maneuver Mov Cap-2 Maneuver Stage 1 Stage 2	- 2.218 1221 - - 1221 - -	- - - - - - -	-	2.218 1226 - - 1226 - -	- - - - - -	- - - - -	7.12 6.12 6.12 3.518 255 689 494 207 207 689 402	6.52 5.52 5.52 4.018 280 650 504 247 247 650	6.22 - - 3.318 718 - - 718 -	7.12 6.12 6.12 3.518 240 505 644 177 177 505 548	6.52 5.52 5.52 4.018 276 504 644 243 243 445	- 3.318 705 - - 705 -

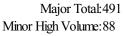
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	415	1221	-	-	1226	-	-	226
HCM Lane V/C Ratio	0.293	-	-	-	0.096	-	-	0.192
HCM Control Delay (s)	17.2	0	-	-	8.2	0	-	24.7
HCM Lane LOS	С	Α	-	-	Α	Α	-	С
HCM 95th %tile Q(veh)	1.2	0	-	-	0.3	-	-	0.7

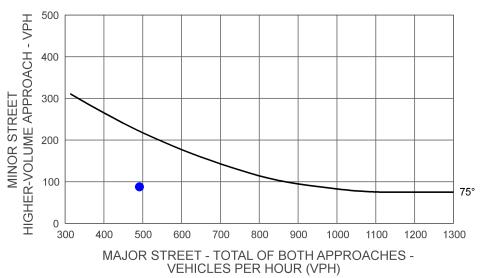
Intersection												
Int Delay, s/veh 4.	.5											
, , , , , ,												
Movement	EBL	EBT	EBR	WRI	WRT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Vol, veh/h	0	331	17	110	297	2	13	26	73	8	32	0
Future Vol, veh/h	0	331	17	110	297	2	13	26	73	8	32	
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control		Free	Free		Free	Free	Stop		Stop	Stop		Stop
RT Channelized	-	_	None	-	_	None	-		None	-		None
Storage Length	-	-	-	-	-	-	_	-	-	-	-	-
Veh in Median Storage	e, # -	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	
Mvmt Flow	0	360	18	120	323	2	14	28	79	9	35	0
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	325	0	0	378	0	0	949	933	369	986	941	324
Conflicting Flow All Stage 1	325	0	0	378 -	0	0 -	949 369	933 369	369	986 563	941 563	324 -
•		_								563 423	563 378	-
Stage 1	-	-	-	-	-	-	369 580	369	-	563 423 7.12	563 378 6.52	-
Stage 1 Stage 2 Critical Hdwy Critical Hdwy Stg 1	-	-	-	-	- -	-	369 580 7.12 6.12	369 564 6.52 5.52	-	563 423 7.12 6.12	563 378 6.52 5.52	-
Stage 1 Stage 2 Critical Hdwy Critical Hdwy Stg 1 Critical Hdwy Stg 2	- - 4.12	- - -	- - -	- - 4.12 -	- - -	- - -	369 580 7.12 6.12	369 564 6.52	- - 6.22	563 423 7.12 6.12 6.12	563 378 6.52 5.52 5.52	- 6.22 -
Stage 1 Stage 2 Critical Hdwy Critical Hdwy Stg 1 Critical Hdwy Stg 2 Follow-up Hdwy	- 4.12 - - 2.218	- - -	- - -	4.12 - - - 2.218	- - -	- - -	369 580 7.12 6.12	369 564 6.52 5.52 5.52 4.018	- 6.22 - -	563 423 7.12 6.12	563 378 6.52 5.52 5.52 4.018	- 6.22 - - 3.318
Stage 1 Stage 2 Critical Hdwy Critical Hdwy Stg 1 Critical Hdwy Stg 2 Follow-up Hdwy Pot Cap-1 Maneuver	- 4.12 -	- - - -	- - -	- - 4.12 -	- - - -	- - - -	369 580 7.12 6.12 6.12 3.518 240	369 564 6.52 5.52 5.52 4.018 266	- 6.22 - -	563 423 7.12 6.12 6.12 3.518 227	563 378 6.52 5.52 5.52 4.018 263	- 6.22 - - 3.318
Stage 1 Stage 2 Critical Hdwy Critical Hdwy Stg 1 Critical Hdwy Stg 2 Follow-up Hdwy Pot Cap-1 Maneuver Stage 1	- 4.12 - - 2.218	- - - - -	- - - -	4.12 - - - 2.218	- - - -	- - - -	369 580 7.12 6.12 6.12 3.518 240 651	369 564 6.52 5.52 5.52 4.018 266 621	- 6.22 - - 3.318	563 423 7.12 6.12 6.12 3.518 227 511	563 378 6.52 5.52 5.52 4.018 263 509	- 6.22 - - 3.318
Stage 1 Stage 2 Critical Hdwy Critical Hdwy Stg 1 Critical Hdwy Stg 2 Follow-up Hdwy Pot Cap-1 Maneuver Stage 1 Stage 2	4.12 - - 2.218 1235	- - - - -	- - - - -	4.12 - 2.218 1180	- - - - -	- - - - -	369 580 7.12 6.12 6.12 3.518 240	369 564 6.52 5.52 5.52 4.018 266	- 6.22 - - 3.318 677	563 423 7.12 6.12 6.12 3.518 227	563 378 6.52 5.52 5.52 4.018 263	- 6.22 - - 3.318
Stage 1 Stage 2 Critical Hdwy Critical Hdwy Stg 1 Critical Hdwy Stg 2 Follow-up Hdwy Pot Cap-1 Maneuver Stage 1 Stage 2 Platoon blocked, %	4.12 - - 2.218 1235 -	-	-	4.12 - - 2.218 1180 -	-	-	369 580 7.12 6.12 6.12 3.518 240 651 500	369 564 6.52 5.52 5.52 4.018 266 621 508	6.22 - - 3.318 677 -	563 423 7.12 6.12 6.12 3.518 227 511 609	563 378 6.52 5.52 5.52 4.018 263 509 615	6.22 - - 3.318 717 -
Stage 1 Stage 2 Critical Hdwy Critical Hdwy Stg 1 Critical Hdwy Stg 2 Follow-up Hdwy Pot Cap-1 Maneuver Stage 1 Stage 2 Platoon blocked, % Mov Cap-1 Maneuver	4.12 - - 2.218 1235	-	-	4.12 - 2.218 1180	-	-	369 580 7.12 6.12 6.12 3.518 240 651 500	369 564 6.52 5.52 5.52 4.018 266 621 508	6.22 - - - 3.318 677	563 423 7.12 6.12 6.12 3.518 227 511 609	563 378 6.52 5.52 5.52 4.018 263 509 615	- 6.22 - - 3.318
Stage 1 Stage 2 Critical Hdwy Critical Hdwy Stg 1 Critical Hdwy Stg 2 Follow-up Hdwy Pot Cap-1 Maneuver Stage 1 Stage 2 Platoon blocked, % Mov Cap-1 Maneuver Mov Cap-2 Maneuver	4.12 - - 2.218 1235 -	-	-	4.12 - - 2.218 1180 -	-	-	369 580 7.12 6.12 6.12 3.518 240 651 500	369 564 6.52 5.52 5.52 4.018 266 621 508 233 233	6.22 - - 3.318 677 - - 677	563 423 7.12 6.12 6.12 3.518 227 511 609	563 378 6.52 5.52 5.52 4.018 263 509 615 230 230	6.22 - - 3.318 717 -
Stage 1 Stage 2 Critical Hdwy Critical Hdwy Stg 1 Critical Hdwy Stg 2 Follow-up Hdwy Pot Cap-1 Maneuver Stage 1 Stage 2 Platoon blocked, % Mov Cap-1 Maneuver Mov Cap-2 Maneuver Stage 1	- 4.12 - 2.218 1235 - - 1235	-	-	4.12 - - 2.218 1180 - -	-	-	369 580 7.12 6.12 6.12 3.518 240 651 500	369 564 6.52 5.52 5.52 4.018 266 621 508 233 233 621	6.22 - 3.318 677 - - 677	563 423 7.12 6.12 6.12 3.518 227 511 609 165 165 511	563 378 6.52 5.52 5.52 4.018 263 509 615 230 230 446	- 6.22 - 3.318 717 - - 717
Stage 1 Stage 2 Critical Hdwy Critical Hdwy Stg 1 Critical Hdwy Stg 2 Follow-up Hdwy Pot Cap-1 Maneuver Stage 1 Stage 2 Platoon blocked, % Mov Cap-1 Maneuver Mov Cap-2 Maneuver	4.12 - - 2.218 1235 - - 1235	-	-	4.12 - - 2.218 1180 - -	-	-	369 580 7.12 6.12 6.12 3.518 240 651 500	369 564 6.52 5.52 5.52 4.018 266 621 508 233 233	6.22 - - 3.318 677 - - 677	563 423 7.12 6.12 6.12 3.518 227 511 609	563 378 6.52 5.52 5.52 4.018 263 509 615 230 230	6.22 - - 3.318 717 -
Stage 1 Stage 2 Critical Hdwy Critical Hdwy Stg 1 Critical Hdwy Stg 2 Follow-up Hdwy Pot Cap-1 Maneuver Stage 1 Stage 2 Platoon blocked, % Mov Cap-1 Maneuver Mov Cap-2 Maneuver Stage 1	- 4.12 - 2.218 1235 - - 1235	-	-	4.12 - - 2.218 1180 - -	-	-	369 580 7.12 6.12 6.12 3.518 240 651 500	369 564 6.52 5.52 5.52 4.018 266 621 508 233 233 621	6.22 - 3.318 677 - - 677	563 423 7.12 6.12 6.12 3.518 227 511 609 165 165 511	563 378 6.52 5.52 5.52 4.018 263 509 615 230 230 446	- 6.22 - 3.318 717 - - 717
Stage 1 Stage 2 Critical Hdwy Critical Hdwy Stg 1 Critical Hdwy Stg 2 Follow-up Hdwy Pot Cap-1 Maneuver Stage 1 Stage 2 Platoon blocked, % Mov Cap-1 Maneuver Mov Cap-2 Maneuver Stage 1 Stage 2 Approach	- 4.12 - 2.218 1235 - - 1235 - - -	-	-	- 4.12 - 2.218 1180 - - 1180 - - WB	-	-	369 580 7.12 6.12 6.12 3.518 240 651 500 192 192 651 404	369 564 6.52 5.52 5.52 4.018 266 621 508 233 233 621	6.22 - 3.318 677 - - 677	563 423 7.12 6.12 6.12 3.518 227 511 609 165 165 511 513	563 378 6.52 5.52 5.52 4.018 263 509 615 230 230 446	- 6.22 - 3.318 717 - - 717
Stage 1 Stage 2 Critical Hdwy Critical Hdwy Stg 1 Critical Hdwy Stg 2 Follow-up Hdwy Pot Cap-1 Maneuver Stage 1 Stage 2 Platoon blocked, % Mov Cap-1 Maneuver Mov Cap-2 Maneuver Stage 1 Stage 2	- 4.12 - 2.218 1235 - - 1235 - -	-	-	- 4.12 - 2.218 1180 - - 1180	-	-	369 580 7.12 6.12 6.12 3.518 240 651 500 192 192 651 404	369 564 6.52 5.52 5.52 4.018 266 621 508 233 233 621	6.22 - 3.318 677 - - 677	563 423 7.12 6.12 6.12 3.518 227 511 609 165 165 511 513	563 378 6.52 5.52 5.52 4.018 263 509 615 230 230 446	- 6.22 - 3.318 717 - - 717

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	390	1235	-	-	1180	-	-	213
HCM Lane V/C Ratio	0.312	-	-	-	0.101	-	-	0.204
HCM Control Delay (s)	18.4	0	-	-	8.4	0	-	26.2
HCM Lane LOS	С	Α	-	-	Α	Α	-	D
HCM 95th %tile Q(veh)	1.3	0	-	-	0.3	-	-	0.7

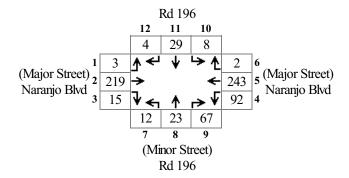
Scenario: AM Existing Intersection #:2

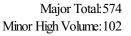


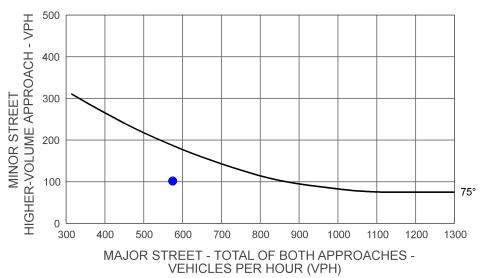




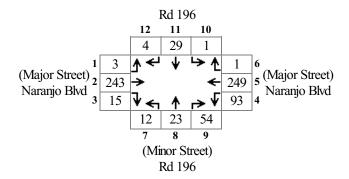
Scenario: AM Existing+Project Intersection #:2

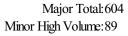


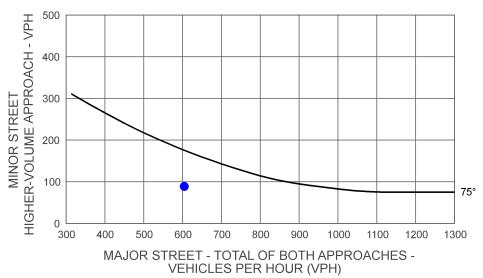




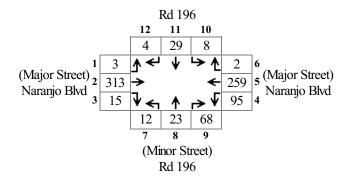
Scenario: AM Future Intersection #:2

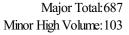


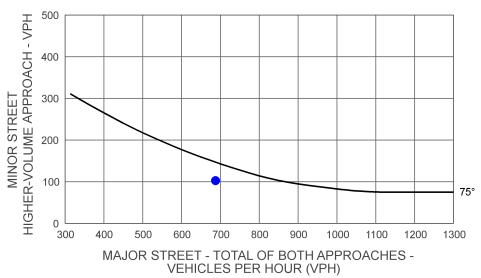




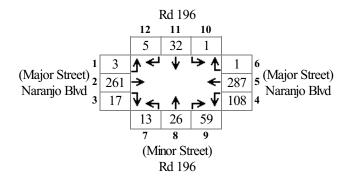
Scenario: AM Future+Project Intersection #:2

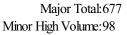


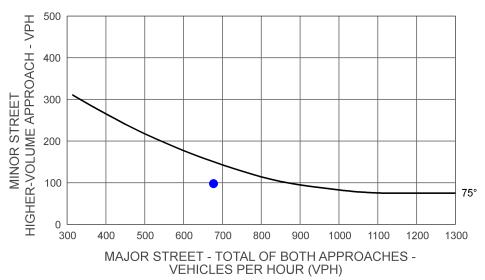




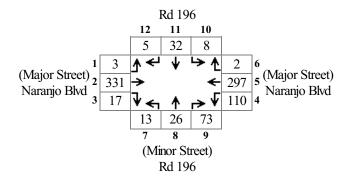
Scenario: AM Future Intersection #:2

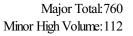


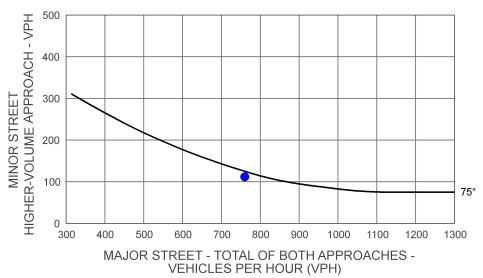




Scenario: AM Future+Project Intersection #:2







Intersection												
	.8											
, ,												
Movement	EBL	EBT	EBR	WDI	WDT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Vol, veh/h	0	192	11	53	197	0	16	29	76	2	18	0
Future Vol, veh/h	0	192	11	53	197		16	29	76	2	18	0
	0		0			0	0	29	76	0	0	0
Conflicting Peds, #/hr		0 Free		0	0 Free	0	· ·					
Sign Control							Stop		Stop	Stop		Stop
RT Channelized	-		None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage		0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2		2	2	2	2	2	
Mvmt Flow	0	209	12	58	214	0	17	32	83	2	20	0
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	214	0	0	221	0	0	554	544	215	601	550	214
Stage 1												
- 10.90 .	-	-	-	-	-	-	215	215	-	329	329	-
Stage 2	-	-	-	-	- -	-	215 339	215 329	-	329 272	329 221	- -
	- 4.12			- 4.12			339		-	272	221	- 6.22
Stage 2		-	-		-	-	339 7.12	329	-	272 7.12	221	
Stage 2 Critical Hdwy	4.12	-	- -	4.12	- -	-	339 7.12 6.12	329 6.52	- 6.22	272 7.12 6.12	221 6.52	6.22
Stage 2 Critical Hdwy Critical Hdwy Stg 1	4.12	-	- -	4.12	- -	-	339 7.12 6.12	329 6.52 5.52 5.52	- 6.22 - -	272 7.12 6.12	221 6.52 5.52 5.52	6.22 - -
Stage 2 Critical Hdwy Critical Hdwy Stg 1 Critical Hdwy Stg 2	4.12 - -	-	- - -	4.12 - -	- - -	-	339 7.12 6.12 6.12	329 6.52 5.52 5.52	- 6.22 - -	272 7.12 6.12 6.12	221 6.52 5.52 5.52	6.22 - - 3.318
Stage 2 Critical Hdwy Critical Hdwy Stg 1 Critical Hdwy Stg 2 Follow-up Hdwy	4.12 - - 2.218	- - -	- - - -	4.12 - - 2.218	- - -	- - - -	339 7.12 6.12 6.12 3.518	329 6.52 5.52 5.52 4.018	6.22 - - 3.318	272 7.12 6.12 6.12 3.518	221 6.52 5.52 5.52 4.018	6.22 - - 3.318
Stage 2 Critical Hdwy Critical Hdwy Stg 1 Critical Hdwy Stg 2 Follow-up Hdwy Pot Cap-1 Maneuver	4.12 - - 2.218 1356	- - -	- - - -	4.12 - - 2.218 1348	- - -	- - - -	339 7.12 6.12 6.12 3.518 443	329 6.52 5.52 5.52 4.018 446	6.22 - - 3.318 825	272 7.12 6.12 6.12 3.518 412	221 6.52 5.52 5.52 4.018 443	6.22 - - 3.318
Stage 2 Critical Hdwy Critical Hdwy Stg 1 Critical Hdwy Stg 2 Follow-up Hdwy Pot Cap-1 Maneuver Stage 1	4.12 - - 2.218 1356 -	- - - - -	- - - - -	4.12 - - 2.218 1348	- - - -	- - - - -	339 7.12 6.12 6.12 3.518 443 787	329 6.52 5.52 5.52 4.018 446 725	6.22 - - 3.318 825 -	272 7.12 6.12 6.12 3.518 412 684	221 6.52 5.52 5.52 4.018 443 646	6.22 - - 3.318 826 -
Stage 2 Critical Hdwy Critical Hdwy Stg 1 Critical Hdwy Stg 2 Follow-up Hdwy Pot Cap-1 Maneuver Stage 1 Stage 2	4.12 - - 2.218 1356 -	- - - - -	- - - - -	4.12 - - 2.218 1348	- - - -	- - - - -	339 7.12 6.12 6.12 3.518 443 787	329 6.52 5.52 5.52 4.018 446 725	6.22 - - 3.318 825 -	272 7.12 6.12 6.12 3.518 412 684	221 6.52 5.52 5.52 4.018 443 646	6.22 - - 3.318 826 -
Stage 2 Critical Hdwy Critical Hdwy Stg 1 Critical Hdwy Stg 2 Follow-up Hdwy Pot Cap-1 Maneuver Stage 1 Stage 2 Platoon blocked, % Mov Cap-1 Maneuver	4.12 - - 2.218 1356 -	-	-	4.12 - - 2.218 1348 - -	-	-	339 7.12 6.12 6.12 3.518 443 787 676	329 6.52 5.52 5.52 4.018 446 725 646	- 6.22 - - 3.318 825 -	272 7.12 6.12 6.12 3.518 412 684 734	221 6.52 5.52 5.52 4.018 443 646 720	6.22 - - 3.318 826 -
Stage 2 Critical Hdwy Critical Hdwy Stg 1 Critical Hdwy Stg 2 Follow-up Hdwy Pot Cap-1 Maneuver Stage 1 Stage 2 Platoon blocked, %	4.12 - - 2.218 1356 - - 1356	-	-	4.12 - - 2.218 1348 - - 1348	-	-	339 7.12 6.12 6.12 3.518 443 787 676	329 6.52 5.52 5.52 4.018 446 725 646	- 6.22 - - 3.318 825 - - 825	272 7.12 6.12 6.12 3.518 412 684 734	221 6.52 5.52 5.52 4.018 443 646 720	6.22 - - 3.318 826 - - 826
Stage 2 Critical Hdwy Critical Hdwy Stg 1 Critical Hdwy Stg 2 Follow-up Hdwy Pot Cap-1 Maneuver Stage 1 Stage 2 Platoon blocked, % Mov Cap-1 Maneuver Mov Cap-2 Maneuver Stage 1	4.12 - - 2.218 1356 - - 1356	-	-	4.12 - - 2.218 1348 - - 1348	-	-	339 7.12 6.12 6.12 3.518 443 787 676	329 6.52 5.52 5.52 4.018 446 725 646 424 424	- 6.22 - 3.318 825 - - 825	272 7.12 6.12 6.12 3.518 412 684 734 337 337	221 6.52 5.52 5.52 4.018 443 646 720 421 421	6.22 - - 3.318 826 - - 826 -
Stage 2 Critical Hdwy Critical Hdwy Stg 1 Critical Hdwy Stg 2 Follow-up Hdwy Pot Cap-1 Maneuver Stage 1 Stage 2 Platoon blocked, % Mov Cap-1 Maneuver Mov Cap-2 Maneuver	4.12 - - 2.218 1356 - - 1356	-	-	4.12 - - 2.218 1348 - - 1348 -	-	-	339 7.12 6.12 6.12 3.518 443 787 676 411 411	329 6.52 5.52 5.52 4.018 446 725 646 424 424 725	- 6.22 - - 3.318 825 - - 825 -	272 7.12 6.12 6.12 3.518 412 684 734 337 337 684	221 6.52 5.52 5.52 4.018 443 646 720 421 421 614	6.22 - - 3.318 826 - - 826 -
Stage 2 Critical Hdwy Critical Hdwy Stg 1 Critical Hdwy Stg 2 Follow-up Hdwy Pot Cap-1 Maneuver Stage 1 Stage 2 Platoon blocked, % Mov Cap-1 Maneuver Mov Cap-2 Maneuver Stage 1 Stage 2	4.12 - - 2.218 1356 - - 1356 - -	-	-	4.12 - - 2.218 1348 - - 1348 - -	-	-	339 7.12 6.12 6.12 3.518 443 787 676 411 411 787 622	329 6.52 5.52 5.52 4.018 446 725 646 424 424 725	- 6.22 - - 3.318 825 - - 825 -	272 7.12 6.12 6.12 3.518 412 684 734 337 337 684 632	221 6.52 5.52 5.52 4.018 443 646 720 421 421 614	6.22 - - 3.318 826 - - 826 -
Stage 2 Critical Hdwy Critical Hdwy Stg 1 Critical Hdwy Stg 2 Follow-up Hdwy Pot Cap-1 Maneuver Stage 1 Stage 2 Platoon blocked, % Mov Cap-1 Maneuver Mov Cap-2 Maneuver Stage 1 Stage 2 Approach	4.12 - 2.218 1356 - - 1356 - -	-	-	4.12 - - 2.218 1348 - - 1348 - -	-	-	339 7.12 6.12 6.12 3.518 443 787 676 411 411 787 622	329 6.52 5.52 5.52 4.018 446 725 646 424 424 725	- 6.22 - - 3.318 825 - - 825 -	272 7.12 6.12 6.12 3.518 412 684 734 337 337 684 632	221 6.52 5.52 5.52 4.018 443 646 720 421 421 614	6.22 - - 3.318 826 - - 826 -
Stage 2 Critical Hdwy Critical Hdwy Stg 1 Critical Hdwy Stg 2 Follow-up Hdwy Pot Cap-1 Maneuver Stage 1 Stage 2 Platoon blocked, % Mov Cap-1 Maneuver Mov Cap-2 Maneuver Stage 1 Stage 2	4.12 - - 2.218 1356 - - 1356 - -	-	-	4.12 - - 2.218 1348 - - 1348 - -	-	-	339 7.12 6.12 6.12 3.518 443 787 676 411 411 787 622	329 6.52 5.52 5.52 4.018 446 725 646 424 424 725	- 6.22 - - 3.318 825 - - 825 -	272 7.12 6.12 6.12 3.518 412 684 734 337 337 684 632	221 6.52 5.52 5.52 4.018 443 646 720 421 421 614	6.22 - - 3.318 826 - - 826

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	607	1356	-	-	1348	-	-	411
HCM Lane V/C Ratio	0.217	-	-	-	0.043	-	-	0.053
HCM Control Delay (s)	12.6	0	-	-	7.8	0	-	14.2
HCM Lane LOS	В	Α	-	-	Α	Α	-	В
HCM 95th %tile Q(veh)	0.8	0	-	-	0.1	-	-	0.2

Intersection												
Int Delay, s/veh 3.	7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Vol, veh/h	0	200	11	65	259	3	16	29	76	2	18	0
Future Vol, veh/h	0	200	11	65	259	3	16	29	76	2	18	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage	,# -	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	217	12	71	282	3	17	32	83	2	20	0
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flour All	005	_		000								
Conflicting Flow All	285	0	0	229	0	0	657	649	223	704	653	283
Stage 1	285	-	0	229	0	0	657 223	649 223	223	704 424	653 424	283 -
•	285 - -			- - -					223 - -			283 - -
Stage 1	285 - - 4.12			-		-	223	223 426	223 - - 6.22	424	424	- -
Stage 1 Stage 2	- -	- -	-	-	-	-	223 434	223 426	-	424 280 7.12	424 229	- -
Stage 1 Stage 2 Critical Hdwy	- -	- -	-	-	-	-	223 434 7.12	223 426 6.52 5.52	-	424 280 7.12 6.12	424 229 6.52	- -
Stage 1 Stage 2 Critical Hdwy Critical Hdwy Stg 1	- -	- -	-	-	-	- - -	223 434 7.12 6.12	223 426 6.52 5.52 5.52	- 6.22 -	424 280 7.12 6.12	424 229 6.52 5.52 5.52	- 6.22 -
Stage 1 Stage 2 Critical Hdwy Critical Hdwy Stg 1 Critical Hdwy Stg 2	- 4.12 -	- -	- - -	- 4.12 - -	- - - -	- - -	223 434 7.12 6.12 6.12	223 426 6.52 5.52 5.52	- 6.22 -	424 280 7.12 6.12 6.12	424 229 6.52 5.52 5.52	- 6.22 -
Stage 1 Stage 2 Critical Hdwy Critical Hdwy Stg 1 Critical Hdwy Stg 2 Follow-up Hdwy	- 4.12 - - 2.218	- -	- - - -	- 4.12 - - 2.218	- - - -	- - - -	223 434 7.12 6.12 6.12 3.518	223 426 6.52 5.52 5.52 4.018	- 6.22 - - 3.318	424 280 7.12 6.12 6.12 3.518	424 229 6.52 5.52 5.52 4.018	- 6.22 - - 3.318
Stage 1 Stage 2 Critical Hdwy Critical Hdwy Stg 1 Critical Hdwy Stg 2 Follow-up Hdwy Pot Cap-1 Maneuver	- 4.12 - - 2.218 1277	- - - - -	- - - -	- 4.12 - - 2.218 1339	- - - - -	- - - -	223 434 7.12 6.12 6.12 3.518 378	223 426 6.52 5.52 5.52 4.018 389	- 6.22 - - 3.318 817	424 280 7.12 6.12 6.12 3.518 352	424 229 6.52 5.52 5.52 4.018 387	- 6.22 - - 3.318
Stage 1 Stage 2 Critical Hdwy Critical Hdwy Stg 1 Critical Hdwy Stg 2 Follow-up Hdwy Pot Cap-1 Maneuver Stage 1	- 4.12 - - 2.218 1277	- - - - -	- - - -	- 4.12 - - 2.218 1339	- - - - -	-	223 434 7.12 6.12 6.12 3.518 378 780	223 426 6.52 5.52 5.52 4.018 389 719	6.22 - - - 3.318 817 -	424 280 7.12 6.12 6.12 3.518 352 608	424 229 6.52 5.52 5.52 4.018 387 587	- 6.22 - - 3.318
Stage 1 Stage 2 Critical Hdwy Critical Hdwy Stg 1 Critical Hdwy Stg 2 Follow-up Hdwy Pot Cap-1 Maneuver Stage 1 Stage 2	- 4.12 - - 2.218 1277		-	- 4.12 - - 2.218 1339	-	-	223 434 7.12 6.12 6.12 3.518 378 780	223 426 6.52 5.52 5.52 4.018 389 719	6.22 - - - 3.318 817 -	424 280 7.12 6.12 6.12 3.518 352 608	424 229 6.52 5.52 5.52 4.018 387 587	- 6.22 - - 3.318
Stage 1 Stage 2 Critical Hdwy Critical Hdwy Stg 1 Critical Hdwy Stg 2 Follow-up Hdwy Pot Cap-1 Maneuver Stage 1 Stage 2 Platoon blocked, %	- 4.12 - - 2.218 1277 -	-	-	- 4.12 - - 2.218 1339 -	-		223 434 7.12 6.12 6.12 3.518 378 780 600	223 426 6.52 5.52 5.52 4.018 389 719 586	6.22 - - 3.318 817 -	424 280 7.12 6.12 6.12 3.518 352 608 727	424 229 6.52 5.52 5.52 4.018 387 587 715	- 6.22 - - 3.318 756 -
Stage 1 Stage 2 Critical Hdwy Critical Hdwy Stg 1 Critical Hdwy Stg 2 Follow-up Hdwy Pot Cap-1 Maneuver Stage 1 Stage 2 Platoon blocked, % Mov Cap-1 Maneuver	- 4.12 - - 2.218 1277 -	-	-	- 4.12 - - 2.218 1339 - -	-	-	223 434 7.12 6.12 6.12 3.518 378 780 600	223 426 6.52 5.52 5.52 4.018 389 719 586	6.22 - - 3.318 817 -	424 280 7.12 6.12 6.12 3.518 352 608 727	424 229 6.52 5.52 5.52 4.018 387 587 715	- 6.22 - - 3.318 756 -
Stage 1 Stage 2 Critical Hdwy Critical Hdwy Stg 1 Critical Hdwy Stg 2 Follow-up Hdwy Pot Cap-1 Maneuver Stage 1 Stage 2 Platoon blocked, % Mov Cap-1 Maneuver Mov Cap-2 Maneuver	- 4.12 - 2.218 1277 - - 1277	-		- 4.12 - - 2.218 1339 - - 1339	-		223 434 7.12 6.12 6.12 3.518 378 780 600	223 426 6.52 5.52 5.52 4.018 389 719 586 364 364	- 6.22 - 3.318 817 - - 817	424 280 7.12 6.12 6.12 3.518 352 608 727 281	424 229 6.52 5.52 5.52 4.018 387 715 363 363	- 6.22 - - 3.318 756 - - 756
Stage 1 Stage 2 Critical Hdwy Critical Hdwy Stg 1 Critical Hdwy Stg 2 Follow-up Hdwy Pot Cap-1 Maneuver Stage 1 Stage 2 Platoon blocked, % Mov Cap-1 Maneuver Mov Cap-2 Maneuver Stage 1	- 4.12 - 2.218 1277 - - 1277	-		- 4.12 - - 2.218 1339 - - 1339	-		223 434 7.12 6.12 6.12 3.518 378 780 600 345 345 780	223 426 6.52 5.52 5.52 4.018 389 719 586 364 719	- 6.22 - - 3.318 817 - - 817 -	424 280 7.12 6.12 3.518 352 608 727 281 281 608	424 229 6.52 5.52 5.52 4.018 387 715 363 363 550	- 6.22 - - 3.318 756 - - 756
Stage 1 Stage 2 Critical Hdwy Critical Hdwy Stg 1 Critical Hdwy Stg 2 Follow-up Hdwy Pot Cap-1 Maneuver Stage 1 Stage 2 Platoon blocked, % Mov Cap-1 Maneuver Mov Cap-2 Maneuver Stage 1	- 4.12 - 2.218 1277 - - 1277	-		- 4.12 - - 2.218 1339 - - 1339	-		223 434 7.12 6.12 6.12 3.518 378 780 600 345 345 780	223 426 6.52 5.52 5.52 4.018 389 719 586 364 719	- 6.22 - - 3.318 817 - - 817 -	424 280 7.12 6.12 3.518 352 608 727 281 281 608	424 229 6.52 5.52 5.52 4.018 387 715 363 363 550	- 6.22 - 3.318 756 - 756
Stage 1 Stage 2 Critical Hdwy Critical Hdwy Stg 1 Critical Hdwy Stg 2 Follow-up Hdwy Pot Cap-1 Maneuver Stage 1 Stage 2 Platoon blocked, % Mov Cap-1 Maneuver Mov Cap-2 Maneuver Stage 1 Stage 2	- 4.12 - 2.218 1277 - - 1277 -	-		- 4.12 - - 2.218 1339 - - 1339 - -	-		223 434 7.12 6.12 6.12 3.518 378 780 600 345 345 780 542	223 426 6.52 5.52 5.52 4.018 389 719 586 364 719	- 6.22 - - 3.318 817 - - 817 -	424 280 7.12 6.12 3.518 352 608 727 281 281 608 625	424 229 6.52 5.52 5.52 4.018 387 715 363 363 550	- 6.22 - 3.318 756 - 756

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	552	1277	-	-	1339	-	-	353
HCM Lane V/C Ratio	0.238	-	-	-	0.053	-	-	0.062
HCM Control Delay (s)	13.6	0	-	-	7.8	0	-	15.9
HCM Lane LOS	В	Α	-	-	Α	Α	-	С
HCM 95th %tile Q(veh)	0.9	0	-	-	0.2	-	-	0.2

Intersection												
	.6											
, ,												
Movement	EBL	EBT	EBR	WDI	WBT	WDD	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Vol, veh/h	0	239	11	66	312	4	16	29	79	3	18	0
Future Vol, veh/h	0	239	11		312		16	29	79	3	18	0
	0		0	66		4	0	29	79	0	0	0
Conflicting Peds, #/hr		0 Free		0	0 Free	0	•					
Sign Control							Stop		Stop	Stop		Stop
RT Channelized	-		None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage		0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	260	12	72	339	4	17	32	86	3	20	0
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	343	0	0	272	0	0	761	753	266	809	757	341
Stage 1	-	-	-	-	-	-	266	266	-	485	485	-
Stage 2	-	-	_	_	_		495	487	_	324	272	_
Critical Hdwy					_	-	700	701		324	212	-
,	4.12	-	-	4.12	-	-		6.52			6.52	
Critical Hdwy Stg 1	4.12 -	-	-					6.52		7.12		
•		- - -		4.12	-	-	7.12 6.12	6.52	6.22	7.12 6.12	6.52	6.22
Critical Hdwy Stg 1		- - -		4.12	-	-	7.12 6.12	6.52 5.52 5.52	6.22	7.12 6.12	6.52 5.52 5.52	6.22
Critical Hdwy Stg 1 Critical Hdwy Stg 2	- -	- - - -	-	4.12 - -	- - -	-	7.12 6.12 6.12	6.52 5.52 5.52	6.22	7.12 6.12 6.12	6.52 5.52 5.52	6.22
Critical Hdwy Stg 1 Critical Hdwy Stg 2 Follow-up Hdwy	- - 2.218	- - -	- - -	4.12 - - 2.218	- - -	- - -	7.12 6.12 6.12 3.518	6.52 5.52 5.52 4.018	6.22 - - 3.318	7.12 6.12 6.12 3.518	6.52 5.52 5.52 4.018	6.22 - - 3.318
Critical Hdwy Stg 1 Critical Hdwy Stg 2 Follow-up Hdwy Pot Cap-1 Maneuver	- 2.218 1216	- - -	- - - -	4.12 - - 2.218 1291	- - -	- - - -	7.12 6.12 6.12 3.518 322	6.52 5.52 5.52 4.018 339	6.22 - - 3.318 773	7.12 6.12 6.12 3.518 299	6.52 5.52 5.52 4.018 337	6.22 - - 3.318
Critical Hdwy Stg 1 Critical Hdwy Stg 2 Follow-up Hdwy Pot Cap-1 Maneuver Stage 1	- 2.218 1216 -	- - - -	- - - -	4.12 - - 2.218 1291	- - - -	- - - -	7.12 6.12 6.12 3.518 322 739	6.52 5.52 5.52 4.018 339 689	6.22 - - 3.318 773 -	7.12 6.12 6.12 3.518 299 563	6.52 5.52 5.52 4.018 337 552	6.22 - - 3.318 701 -
Critical Hdwy Stg 1 Critical Hdwy Stg 2 Follow-up Hdwy Pot Cap-1 Maneuver Stage 1 Stage 2	- 2.218 1216 -	- - - -	- - - -	4.12 - - 2.218 1291	- - - -	- - - -	7.12 6.12 6.12 3.518 322 739	6.52 5.52 5.52 4.018 339 689	6.22 - - 3.318 773 -	7.12 6.12 6.12 3.518 299 563	6.52 5.52 5.52 4.018 337 552	6.22 - - 3.318 701 -
Critical Hdwy Stg 1 Critical Hdwy Stg 2 Follow-up Hdwy Pot Cap-1 Maneuver Stage 1 Stage 2 Platoon blocked, % Mov Cap-1 Maneuver	- 2.218 1216 -	- - - - -	- - - - -	4.12 - - 2.218 1291 -	- - - - -	- - - -	7.12 6.12 6.12 3.518 322 739 556	6.52 5.52 5.52 4.018 339 689 550	6.22 - - 3.318 773 -	7.12 6.12 6.12 3.518 299 563 688	6.52 5.52 5.52 4.018 337 552 685	6.22 - - 3.318 701 -
Critical Hdwy Stg 1 Critical Hdwy Stg 2 Follow-up Hdwy Pot Cap-1 Maneuver Stage 1 Stage 2 Platoon blocked, %	2.218 1216 - - 1216	-		4.12 - 2.218 1291 - - 1291	- - - - -	-	7.12 6.12 6.12 3.518 322 739 556	6.52 5.52 5.52 4.018 339 689 550	6.22 - - 3.318 773 - - 773	7.12 6.12 6.12 3.518 299 563 688	6.52 5.52 5.52 4.018 337 552 685	6.22 - - 3.318 701 -
Critical Hdwy Stg 1 Critical Hdwy Stg 2 Follow-up Hdwy Pot Cap-1 Maneuver Stage 1 Stage 2 Platoon blocked, % Mov Cap-1 Maneuver Mov Cap-2 Maneuver	2.218 1216 - - 1216	-	-	4.12 - 2.218 1291 - - 1291	- - - - -	-	7.12 6.12 6.12 3.518 322 739 556	6.52 5.52 5.52 4.018 339 689 550 316 316	6.22 - - 3.318 773 - - 773	7.12 6.12 6.12 3.518 299 563 688 233 233	6.52 5.52 5.52 4.018 337 552 685 314 314	6.22 - - 3.318 701 - - 701 -
Critical Hdwy Stg 1 Critical Hdwy Stg 2 Follow-up Hdwy Pot Cap-1 Maneuver Stage 1 Stage 2 Platoon blocked, % Mov Cap-1 Maneuver Mov Cap-2 Maneuver Stage 1	- 2.218 1216 - - 1216 -	- - - - - -	-	4.12 - 2.218 1291 - - 1291 -	- - - - -	-	7.12 6.12 6.12 3.518 322 739 556 291 291 739	6.52 5.52 5.52 4.018 339 689 550 316 316 689	6.22 - - 3.318 773 - - 773 -	7.12 6.12 6.12 3.518 299 563 688 233 233 563	6.52 5.52 5.52 4.018 337 552 685 314 314 514	6.22 - - 3.318 701 - - 701 -
Critical Hdwy Stg 1 Critical Hdwy Stg 2 Follow-up Hdwy Pot Cap-1 Maneuver Stage 1 Stage 2 Platoon blocked, % Mov Cap-1 Maneuver Mov Cap-2 Maneuver Stage 1 Stage 2	2.218 1216 - - 1216 - -	- - - - - -	-	4.12 - 2.218 1291 - 1291 - -	- - - - -	-	7.12 6.12 6.12 3.518 322 739 556 291 291 739 498	6.52 5.52 5.52 4.018 339 689 550 316 316 689	6.22 - - 3.318 773 - - 773 -	7.12 6.12 6.12 3.518 299 563 688 233 233 563 584	6.52 5.52 5.52 4.018 337 552 685 314 314 514	6.22 - - 3.318 701 -
Critical Hdwy Stg 1 Critical Hdwy Stg 2 Follow-up Hdwy Pot Cap-1 Maneuver Stage 1 Stage 2 Platoon blocked, % Mov Cap-1 Maneuver Mov Cap-2 Maneuver Stage 1 Stage 2 Approach	- 2.218 1216 - - 1216 - - -	- - - - - -	-	4.12 - 2.218 1291 - - 1291 - - -	- - - - -	-	7.12 6.12 6.12 3.518 322 739 556 291 291 739 498	6.52 5.52 5.52 4.018 339 689 550 316 316 689	6.22 - - 3.318 773 - - 773 -	7.12 6.12 6.12 3.518 299 563 688 233 233 563 584	6.52 5.52 5.52 4.018 337 552 685 314 314 514	6.22 - - 3.318 701 - - 701 -
Critical Hdwy Stg 1 Critical Hdwy Stg 2 Follow-up Hdwy Pot Cap-1 Maneuver Stage 1 Stage 2 Platoon blocked, % Mov Cap-1 Maneuver Mov Cap-2 Maneuver Stage 1 Stage 2	2.218 1216 - - 1216 - -	- - - - - -	-	4.12 - 2.218 1291 - 1291 - -	- - - - -	-	7.12 6.12 6.12 3.518 322 739 556 291 291 739 498	6.52 5.52 5.52 4.018 339 689 550 316 316 689	6.22 - - 3.318 773 - - 773 -	7.12 6.12 6.12 3.518 299 563 688 233 233 563 584	6.52 5.52 5.52 4.018 337 552 685 314 314 514	6.22 - - 3.318 701 - - 701 -

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	498	1216	-	-	1291	-	-	299
HCM Lane V/C Ratio	0.271	-	-	-	0.056	-	-	0.076
HCM Control Delay (s)	14.9	0	-	-	8	0	-	18
HCM Lane LOS	В	Α	-	-	Α	Α	-	С
HCM 95th %tile Q(veh)	1.1	0	-	-	0.2	-	-	0.2

-												
Intersection												
	.6											
2 c.a.y, c. rc	. •											
Movement	EBL	EBT	EBR	WDI	WDT	WBR	NBL	NBT	NBR	SBL	CDT	SBR
Traffic Vol, veh/h	0	247	11	78	374		16	29	79	3	18	
Future Vol, veh/h	0	247	11	76 78	374		16	29	79	3	18	
Conflicting Peds, #/hr	0	247	0	78 0	0	0	0	29	79	0	0	
•		Free	•			Free						
Sign Control RT Channelized	Free		None			None	Stop		Stop None	Stop		Stop None
	-		None -	-	-	None -	-	-	None -	-	-	None
Storage Length	-		_	-	-		-	-		-	-	-
Veh in Median Storage	•	0	-	-	0	-	-	0	-	-	0	
Grade, %	-	0	-	-	0	-	-	0	-	-	0	
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	
Heavy Vehicles, %	2	2	2	2	2		2	2	2	2	2	
Mvmt Flow	0	268	12	85	407	8	17	32	86	3	20	0
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	414	0	0	280	0	0	864	858	274	913	860	410
Stage 1	-	-	-	-	-	-	274	274	-	580	580	-
Stage 2	-	-	-	-	-	-	590	584	-	333	280	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
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	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1145	-	-	1283	-	-	274	294	765	254	294	642
Stage 1	-	-	-	-	-	-	732	683	-	500	500	-
Stage 2	-	-	-	-	-	-	494	498	-	681	679	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1145	-	-	1283	-	-	242	269	765	192	269	642
Mov Cap-2 Maneuver	-	-	-	-	-	_	242	269	-	192	269	-
Stage 1	-	-	-	-	-	-	732	683	-	500	457	-
Stage 2	_	-	-	-	-	-	432	455	-	577	679	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0			1.4			16.5			20.6		
	-											
HCM LOS							С			С		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	447	1145	-	-	1283	-	-	254
HCM Lane V/C Ratio	0.302	-	-	-	0.066	-	-	0.09
HCM Control Delay (s)	16.5	0	-	-	8	0	-	20.6
HCM Lane LOS	С	Α	-	-	Α	Α	-	С
HCM 95th %tile Q(veh)	1.3	0	-	-	0.2	-	-	0.3

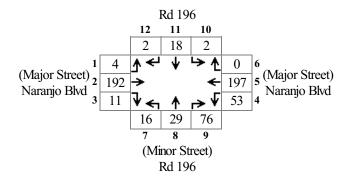
Intersection												
Int Delay, s/veh 3.	.9											
J.												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Vol, veh/h	0	263	12	75	344	4	18	32	86	3	20	0
Future Vol, veh/h	0	263	12	75	344	4	18	32	86	3	20	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	_	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage	e, # -	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	286	13	82	374	4	20	35	93	3	22	0
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	378	0	0	299	0	0	842	833	292	896	838	376
Stage 1	-	-	-	-	-	-	292	292	-	539	539	-
Stage 2	-	-	-	-	-	-	550	541	-	357	299	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
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	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1180	-	-	1262	-	-	284	304	747	261	302	670
Stage 1	-	-	-	-	-	-	716	671	-	527	522	-
Stage 2	-	-	-	-	-	-	519	521	-	661	666	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1180	-	-	1262	-	-	250	279	747	194	277	670
Mov Cap-2 Maneuver	-	-	-	-	-	-	250	279	-	194	277	-
Stage 1	-	-	-	-	-	-	716	671	-	527	479	-
Stage 2	-	-	-	-	-	-	455	478	-	548	666	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0			1.4			16.8			20.2		
HCM LOS							С			С		

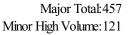
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	451	1180	-	-	1262	-	-	262
HCM Lane V/C Ratio	0.328	-	-	-	0.065	-	-	0.095
HCM Control Delay (s)	16.8	0	-	-	8.1	0	-	20.2
HCM Lane LOS	С	Α	-	-	Α	Α	-	С
HCM 95th %tile Q(veh)	1.4	0	-	-	0.2	-	-	0.3

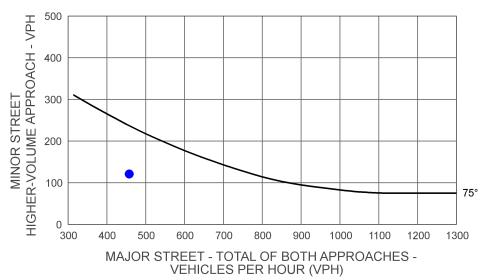
Intersection												
Int Delay, s/veh 4.	1											
The Bolay, or voir	•											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Vol, veh/h	0	271	12	87	406	7	18	32	86	3	20	0
Future Vol, veh/h	0	271	12	87	406	7	18	32	86	3	20	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	
Sign Control	Free				Free	Free	Stop	Stop		Stop	Stop	
RT Channelized	-		None	-	_	None	-		None	-		None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage	, # -	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	295	13	95	441	8	20	35	93	3	22	0
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	449	0	0	308	0	0	946	939	301	999	942	445
Stage 1	-	-	-	-	-	-	301	301	-	634	634	-
Stage 2	-	-	-	-	-	-	645	638	-	365	308	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
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	2.218	-	-	2.218	-	-	3.518			3.518		
Pot Cap-1 Maneuver	1111	-	-	1253	-	-	241	264	739	222	263	613
Stage 1	-	-	-	-	-	-	708	665	-	467	473	-
Stage 2	-	-	-	-	-	-	461	471	-	654	660	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1111	-	-	1253	-	-	207	237	739	159	236	613
Mov Cap-2 Maneuver	-	-	-	-	-	-	207	237	-	159	236	-
Stage 1	-	-	-	-	-	-	708	665	-	467	425	-
Stage 2	-	-	-	-	-	-	393	423	-	541	660	-
										00		
Approach	EB			WB			NB			SB		
Approach HCM Control Delay, s HCM LOS	EB 0			1.4			19.1 C			23.3 C		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	402	1111	-	-	1253	-	-	222
HCM Lane V/C Ratio	0.368	-	-	-	0.075	-	-	0.113
HCM Control Delay (s)	19.1	0	-	-	8.1	0	-	23.3
HCM Lane LOS	С	Α	-	-	Α	Α	-	С
HCM 95th %tile Q(veh)	1.7	0	-	-	0.2	-	-	0.4

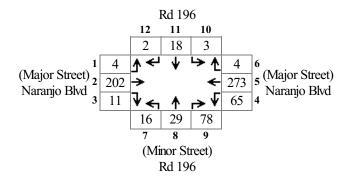
Scenario: PM Existing Intersection #:2

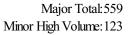


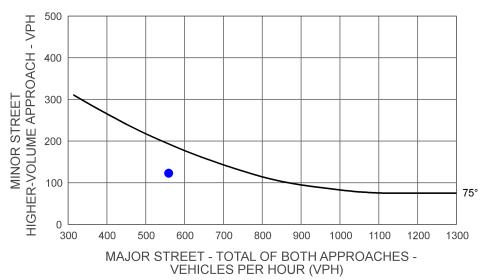




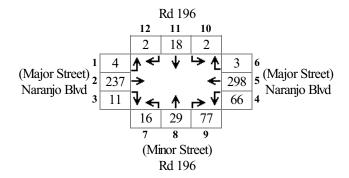
Scenario: PM Existing+Project Intersection #:2

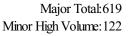


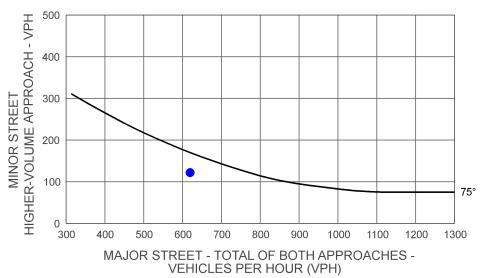




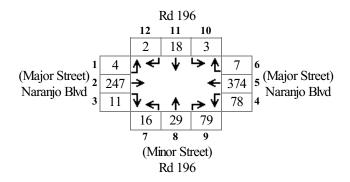
Scenario: PM Future Intersection #: 2

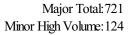


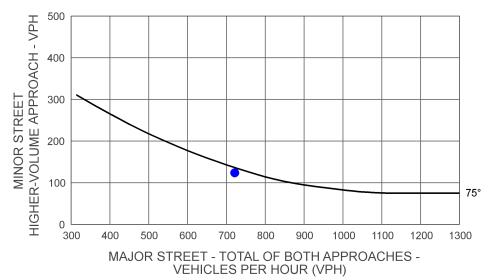




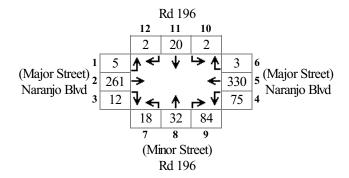
Scenario: PM Future+Project Intersection #: 2

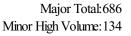


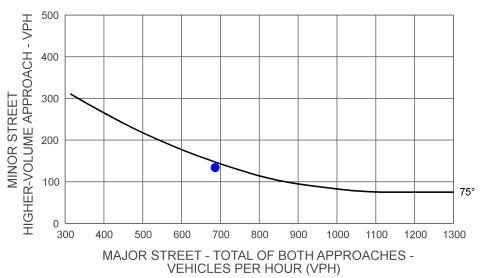




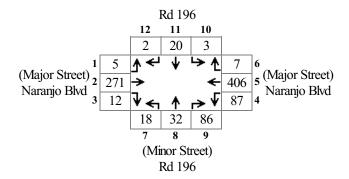
Scenario: PM Future Intersection #: 2

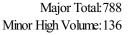


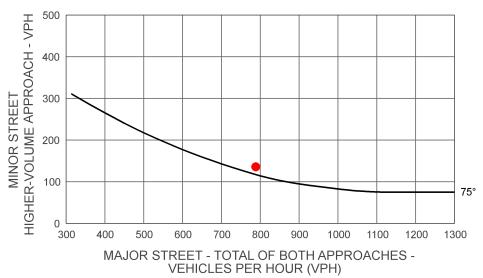




Scenario: PM Future+Project Intersection #: 2







Traffic Study 524-10

Intersection 3 Rd 204 & Naranjo Blvd



Intersection												
	.5											
, and a second of the second o												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Vol, veh/h	1	198	16	29	309	10	16	3	20	1	7	9
Future Vol, veh/h	1	198	16	29	309	10	16	3	20	1	7	9
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control					Free		Stop	Stop	Stop	Stop	Stop	
RT Channelized	-		None	-		None	-		None	-		None
Storage Length	-	_	_	-	_	_	-	_	_	-	_	_
Veh in Median Storage	e.# -	0	_	-	0	-	-	0	-	-	0	-
Grade, %	-	0	_	-	0	_	-	0	_	-	0	_
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	1	215	17	32	336	11	17	3	22	1	8	10
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	347	0	0	233	0	0	639	636	224	643	639	341
Stage 1	J 4 1	-	-	200	-	-	226	226	-	404	404	J 4 I
Stage 2		_	_	_	_	_	413	410		239	235	_
Critical Hdwy	4.12	_	_	4.12	_	_	7.12		6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	7.12	_	_	7.12	_	_		5.52	-	6.12		0.22
Critical Hdwy Stg 2	_	_	_	_	_	_		5.52	_		5.52	_
Follow-up Hdwy	2.218	_	_	2.218	_	_	3.518		3 318	3.518		3 318
Pot Cap-1 Maneuver	1212	_	_	1335	_	_	389	395	815	386	394	701
Stage 1	-	-	-	-	-	-	777	717	-	623	599	-
Stage 2	_	_	_	_	_	_	616	595	_	764	710	_
Platoon blocked, %		-	_		-	-						
Mov Cap-1 Maneuver	1212	_	_	1335	_	_	369	383	815	364	382	701
I						_	369	383	_	364	382	_
Mov Cap-2 Maneuver	-	_	-		_							
Mov Cap-2 Maneuver Stage 1	-	- -	- -	- -	_	_	776	716	-	622	581	-
Stage 1	- - -	- - -		- -	- -	-	776	716	-			- -
•	- - -	- - -		- - -	- -	-		716	-		581	-
Stage 1	- - - EB	-		- - - WB	-	-	776	716	-		581	-
Stage 1 Stage 2	-	- - -		-	- -	-	776 581	716	-	739	581	-
Stage 1 Stage 2 Approach	- EB	-		- WB	-	-	776 581 NB	716	-	739 SB	581	-

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	515	1212	-	-	1335	-	-	501
HCM Lane V/C Ratio	0.082	0.001	-	-	0.024	-	-	0.037
HCM Control Delay (s)	12.6	8	0	-	7.8	0	-	12.5
HCM Lane LOS	В	Α	Α	-	Α	Α	-	В
HCM 95th %tile Q(veh)	0.3	0	-	-	0.1	-	-	0.1

Intersection												
Int Delay, s/veh 2.	.1											
5, 5, 75												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Vol, veh/h	1	198	73	57	309	10	26	3	28	1	7	9
Future Vol, veh/h	1	198	73	57	309	10	26	3	28	1	7	9
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage	e, # -	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	1	215	79	62	336	11	28	3	30	1	8	10
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	347	0	0	295	0	0	731	728	255	739	762	341
Stage 1	-	-	-	-	-	-	257	257	-	465	465	-
Stage 2	-	-	-	-	-	-	474	471	-	274	297	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
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	2.218	-	-	2.218	-	_	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1212	-	-	1266	-	-	337	350	784	333	335	701
Stage 1	-	-	-	-	-	-	748	695	-	578	563	-
Stage 2	-	-	-	-	-	-	571	560	-	732	668	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1212	-	-	1266	-	-	311	328	784	303	314	701
Mov Cap-2 Maneuver	-	-	-	-	-	-	311	328	-	303	314	-
Stage 1	-	-	-	-	-	-	747	694	-	577	529	-
Stage 2	-	-	-	-	-	-	521	526	-	700	667	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0			1.2			14.4			13.5		
HCM LOS							В			В		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	444	1212	-	-	1266	-	-	442
HCM Lane V/C Ratio	0.14	0.001	-	-	0.049	-	-	0.042
HCM Control Delay (s)	14.4	8	0	-	8	0	-	13.5
HCM Lane LOS	В	Α	Α	-	Α	Α	-	В
HCM 95th %tile Q(veh)	0.5	0	-	-	0.2	-	-	0.1

Intersection												
Int Delay, s/veh 3.1	1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Vol, veh/h	1	251	107	141	338	10	28	3	36	1	7	9
Future Vol, veh/h	1	251	107	141	338	10	28	3	36	1	7	9
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage,	, # -	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	1	273	116	153	367	11	30	3	39	1	8	10
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	378	0	0	389	0	0	1021	1018	331	1033	1070	373
Conflicting Flow All Stage 1	378 -	0	0	389	0	0	1021 333	1018 333	331	1033 679	1070 679	373
	378 - -	0 - -	*		0 - -				331 - -			373 - -
Stage 1	378 - - 4.12	-	-	-	-	-	333	333 685	-	679	679	-
Stage 1 Stage 2	-	-	-	-	- -	-	333 688 7.12	333 685	-	679 354	679 391 6.52	-
Stage 1 Stage 2 Critical Hdwy	- - 4.12	- - -	- - -	- - 4.12	- - -	- - -	333 688 7.12 6.12	333 685 6.52	- - 6.22	679 354 7.12 6.12	679 391 6.52	- - 6.22
Stage 1 Stage 2 Critical Hdwy Critical Hdwy Stg 1	- - 4.12 -	- - -	- - - -	- - 4.12 -	- - -	- - -	333 688 7.12 6.12	333 685 6.52 5.52 5.52	- 6.22 -	679 354 7.12 6.12	679 391 6.52 5.52 5.52	- 6.22 -
Stage 1 Stage 2 Critical Hdwy Critical Hdwy Stg 1 Critical Hdwy Stg 2	- 4.12 -	- - -	- - -	- - 4.12 -	- - - -	- - -	333 688 7.12 6.12 6.12	333 685 6.52 5.52 5.52	- 6.22 -	679 354 7.12 6.12 6.12	679 391 6.52 5.52 5.52	- 6.22 -
Stage 1 Stage 2 Critical Hdwy Critical Hdwy Stg 1 Critical Hdwy Stg 2 Follow-up Hdwy	- 4.12 - - 2.218	- - -	- - - -	- 4.12 - - 2.218	- - - - -	- - - -	333 688 7.12 6.12 6.12 3.518	333 685 6.52 5.52 5.52 4.018	- 6.22 - - 3.318	679 354 7.12 6.12 6.12 3.518	679 391 6.52 5.52 5.52 4.018	- 6.22 - - 3.318
Stage 1 Stage 2 Critical Hdwy Critical Hdwy Stg 1 Critical Hdwy Stg 2 Follow-up Hdwy Pot Cap-1 Maneuver	- 4.12 - - 2.218	- - -	- - - -	- 4.12 - - 2.218	- - - - -	- - - - -	333 688 7.12 6.12 6.12 3.518 215	333 685 6.52 5.52 5.52 4.018 237	- 6.22 - - 3.318	679 354 7.12 6.12 6.12 3.5184 211	679 391 6.52 5.52 5.52 4.018 221	- 6.22 - - 3.318
Stage 1 Stage 2 Critical Hdwy Critical Hdwy Stg 1 Critical Hdwy Stg 2 Follow-up Hdwy Pot Cap-1 Maneuver Stage 1	- 4.12 - - 2.218 1180	-	- - - - -	4.12 - - 2.218 1170	-	- - - - -	333 688 7.12 6.12 6.12 3.518 215 681	333 685 6.52 5.52 5.52 4.018 237 644	- 6.22 - - 3.318 711	679 354 7.12 6.12 6.12 3.518 211 441	679 391 6.52 5.52 5.52 4.018 221 451	- 6.22 - - 3.318
Stage 1 Stage 2 Critical Hdwy Critical Hdwy Stg 1 Critical Hdwy Stg 2 Follow-up Hdwy Pot Cap-1 Maneuver Stage 1 Stage 2	- 4.12 - - 2.218 1180	-	-	4.12 - - 2.218 1170	-	-	333 688 7.12 6.12 6.12 3.518 215 681 436	333 685 6.52 5.52 5.52 4.018 237 644 448	- 6.22 - - 3.318 711	679 354 7.12 6.12 6.12 3.518 211 441 663	679 391 6.52 5.52 5.52 4.018 221 451 607	- 6.22 - - 3.318
Stage 1 Stage 2 Critical Hdwy Critical Hdwy Stg 1 Critical Hdwy Stg 2 Follow-up Hdwy Pot Cap-1 Maneuver Stage 1 Stage 2 Platoon blocked, %	- 4.12 - - 2.218 1180 -	-	-	- 4.12 - - 2.218 1170 -	-	-	333 688 7.12 6.12 6.12 3.518 215 681 436	333 685 6.52 5.52 5.52 4.018 237 644 448	6.22 - - 3.318 711 -	679 354 7.12 6.12 6.12 3.518 211 441 663	679 391 6.52 5.52 5.52 4.018 221 451 607	6.22 - - 3.318 673 -
Stage 1 Stage 2 Critical Hdwy Critical Hdwy Stg 1 Critical Hdwy Stg 2 Follow-up Hdwy Pot Cap-1 Maneuver Stage 1 Stage 2 Platoon blocked, % Mov Cap-1 Maneuver	- 4.12 - 2.218 1180 - - 1180	-	-	- 4.12 - - 2.218 1170 -	-	-	333 688 7.12 6.12 6.12 3.518 215 681 436	333 685 6.52 5.52 5.52 4.018 237 644 448 197 197 643	- 6.22 - - 3.318 711 - - 711	679 354 7.12 6.12 6.12 3.518 211 441 663 172 172 441	679 391 6.52 5.52 5.52 4.018 221 451 607 184 184 376	- 6.22 - 3.318 673 - -
Stage 1 Stage 2 Critical Hdwy Critical Hdwy Stg 1 Critical Hdwy Stg 2 Follow-up Hdwy Pot Cap-1 Maneuver Stage 1 Stage 2 Platoon blocked, % Mov Cap-1 Maneuver Mov Cap-2 Maneuver	- 4.12 - 2.218 1180 - - 1180	-	-	- 4.12 - - 2.218 1170 -	-	-	333 688 7.12 6.12 6.12 3.518 215 681 436	333 685 6.52 5.52 5.52 4.018 237 644 448 197 197	- 6.22 - 3.318 711 - - 711	679 354 7.12 6.12 6.12 3.518 211 441 663	679 391 6.52 5.52 5.52 4.018 221 451 607 184 184	6.22 - 3.318 673 - -
Stage 1 Stage 2 Critical Hdwy Critical Hdwy Stg 1 Critical Hdwy Stg 2 Follow-up Hdwy Pot Cap-1 Maneuver Stage 1 Stage 2 Platoon blocked, % Mov Cap-1 Maneuver Mov Cap-2 Maneuver Stage 1	- 4.12 - 2.218 1180 - - 1180	-	-	- 4.12 - - 2.218 1170 -	-	-	333 688 7.12 6.12 6.12 3.518 215 681 436 179 179 680	333 685 6.52 5.52 5.52 4.018 237 644 448 197 197 643	- 6.22 - - 3.318 711 - - 711	679 354 7.12 6.12 6.12 3.518 211 441 663 172 172 441	679 391 6.52 5.52 5.52 4.018 221 451 607 184 184 376	- 6.22 - 3.318 673 - -
Stage 1 Stage 2 Critical Hdwy Critical Hdwy Stg 1 Critical Hdwy Stg 2 Follow-up Hdwy Pot Cap-1 Maneuver Stage 1 Stage 2 Platoon blocked, % Mov Cap-1 Maneuver Mov Cap-2 Maneuver Stage 1	- 4.12 - 2.218 1180 - - 1180	-	-	- 4.12 - - 2.218 1170 -	-	-	333 688 7.12 6.12 6.12 3.518 215 681 436 179 179 680	333 685 6.52 5.52 5.52 4.018 237 644 448 197 197 643	- 6.22 - - 3.318 711 - - 711	679 354 7.12 6.12 6.12 3.518 211 441 663 172 172 441	679 391 6.52 5.52 5.52 4.018 221 451 607 184 184 376	- 6.22 - 3.318 673 - -

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	301	1180	-	-	1170	-	-	297
HCM Lane V/C Ratio	0.242	0.001	-	-	0.131	-	-	0.062
HCM Control Delay (s)	20.7	8.1	0	-	8.5	0	-	17.9
HCM Lane LOS	С	Α	Α	-	Α	Α	-	С
HCM 95th %tile Q(veh)	0.9	0	-	-	0.5	-	-	0.2

20.7

С

2.5

HCM Control Delay, s

HCM LOS

0

17.9

С

Intersection												
Int Delay, s/veh 4.	1											
2 5.33, 6, 75	•											
Movement	EBL	EBT	EBR	WPI	WBT	WED	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Vol, veh/h	1	251	164	169	338	10	38	3	44	<u> </u>	7	9
Future Vol, veh/h	1	251	164	169	338	10	38	3	44	1	7	9
Conflicting Peds, #/hr	0	231	0	0	0	0	0	0	0	0	0	0
Sign Control			Free		Free		Stop		~	Stop	Stop	
RT Channelized	-		None	-		None	- -		None	- -		None
Storage Length	_	_	-	<u>-</u>	_	-	_	_	-	_	_	-
Veh in Median Storage		0	_	_	0	_	_	0	_	_	0	_
Grade, %	-	0		_	0	_	_	0	_	_	0	_
Peak Hour Factor	92	92		92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	1	273	178	184	367	11	41	3	48	1	8	10
N.A. ' (N.C.				14:0			N 41 4			N.E. 0		
Major/Minor	Major1	_	_	Major2	_		Minor1			Minor2		
Conflicting Flow All	378	0		451	0	0		1110	362	1130		373
Stage 1	-	-	-	-	-	-	364	364	-	740	740	-
Stage 2	-	-		-	-	-	749	746	-	390	453	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12		6.22			6.22
Critical Hdwy Stg 1	-	-		-	-	-		5.52	-		5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-		5.52	-		5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518			3.518		
Pot Cap-1 Maneuver	1180	-	-	1109	-	-	186	209	683	181	187	673
Stage 1	-	-	-	-	-	-	655	624	-	409	423	-
Stage 2	-	-	-	-	-	-	404	421	-	634	570	-
Platoon blocked, %	4.400	-	-	4.400	-	-	4.40	405	200	400	4.40	070
Mov Cap-1 Maneuver	1180	-	-	1109	-	-	148	165	683	139	148	673
Mov Cap-2 Maneuver	-	-		-	-	-	148	165	-	139	148	-
Stage 1	-	-	-	-	-	-	654	623	-	409	334	-
Stage 2	-	-	-	-	-	_	307	333	-	586	569	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0			2.9			27.6			20.5		
110141.00										_		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	250	1180	-	-	1109	-	-	250
HCM Lane V/C Ratio	0.37	0.001	-	-	0.166	-	-	0.074
HCM Control Delay (s)	27.6	8.1	0	-	8.9	0	-	20.5
HCM Lane LOS	D	Α	Α	-	Α	Α	-	С
HCM 95th %tile Q(veh)	1.6	0	-	-	0.6	-	-	0.2

D

HCM LOS

С

Intersection												
Int Delay, s/veh 3.	.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Vol, veh/h	1	284	110	146	392	12	31	4	40	1	8	11
Future Vol, veh/h	1	284	110	146	392	12	31	4	40	1	8	11
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage	e, # -	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	1	309	120	159	426	13	34	4	43	1	9	12
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	439	0	0	428	0	0	1131	1128	368	1145	1180	433
Stage 1	-	-	-	-	-	-	371	371	-	750	750	-
Stage 2	_											
Critical Hdwy		-	-	-	-	-	760	757	-	395	430	-
Offical Flawy	4.12	-	-	- 4.12	- -	-	760 7.12	757 6.52		395 7.12		6.22
Critical Hdwy Stg 1	4.12 -										430 6.52	- 6.22 -
•		-	-	4.12	-	-	7.12 6.12	6.52	6.22	7.12	430 6.52 5.52	- 6.22 - -
Critical Hdwy Stg 1		-	- -	4.12	-	-	7.12 6.12	6.52 5.52 5.52	6.22	7.12 6.12	430 6.52 5.52 5.52	-
Critical Hdwy Stg 1 Critical Hdwy Stg 2	- -	- - -	- - -	4.12 - -	- - -	- - -	7.12 6.12 6.12	6.52 5.52 5.52	6.22	7.12 6.12 6.12	430 6.52 5.52 5.52	-
Critical Hdwy Stg 1 Critical Hdwy Stg 2 Follow-up Hdwy	- - 2.218	- - -	- - -	4.12 - - 2.218	- - -	- - -	7.12 6.12 6.12 3.518	6.52 5.52 5.52 4.018	6.22 - - 3.318	7.12 6.12 6.12 3.518	430 6.52 5.52 5.52 4.018	- - 3.318
Critical Hdwy Stg 1 Critical Hdwy Stg 2 Follow-up Hdwy Pot Cap-1 Maneuver	- - 2.218	- - -	- - - -	4.12 - - 2.218 1131	- - -	- - - -	7.12 6.12 6.12 3.518 181	6.52 5.52 5.52 4.018 204	6.22 - - 3.318 677	7.12 6.12 6.12 3.518 177	430 6.52 5.52 5.52 4.018 190	- - 3.318
Critical Hdwy Stg 1 Critical Hdwy Stg 2 Follow-up Hdwy Pot Cap-1 Maneuver Stage 1	- - 2.218	- - - - -	- - - -	4.12 - - 2.218 1131	- - -	- - - -	7.12 6.12 6.12 3.518 181 649	6.52 5.52 5.52 4.018 204 620	6.22 - - 3.318 677	7.12 6.12 6.12 3.518 177 403	430 6.52 5.52 5.52 4.018 190 419	- - 3.318
Critical Hdwy Stg 1 Critical Hdwy Stg 2 Follow-up Hdwy Pot Cap-1 Maneuver Stage 1 Stage 2	- - 2.218	- - - - -	- - - - -	4.12 - - 2.218 1131	- - -	- - - -	7.12 6.12 6.12 3.518 181 649	6.52 5.52 5.52 4.018 204 620	6.22 - - 3.318 677	7.12 6.12 6.12 3.518 177 403	430 6.52 5.52 5.52 4.018 190 419	- - 3.318
Critical Hdwy Stg 1 Critical Hdwy Stg 2 Follow-up Hdwy Pot Cap-1 Maneuver Stage 1 Stage 2 Platoon blocked, %	- 2.218 1121 - -	- - - - -	- - - - -	4.12 - - 2.218 1131 -	-	- - - - -	7.12 6.12 6.12 3.518 181 649 398	6.52 5.52 5.52 4.018 204 620 416	6.22 - - 3.318 677 -	7.12 6.12 6.12 3.518 177 403 630	430 6.52 5.52 5.52 4.018 190 419 583	- 3.318 623 - -
Critical Hdwy Stg 1 Critical Hdwy Stg 2 Follow-up Hdwy Pot Cap-1 Maneuver Stage 1 Stage 2 Platoon blocked, % Mov Cap-1 Maneuver	2.218 1121 - - 1121	- - - - -	-	4.12 - - 2.218 1131 - - 1131	- - - - - -	-	7.12 6.12 6.12 3.518 181 649 398	6.52 5.52 5.52 4.018 204 620 416	6.22 - - 3.318 677 - -	7.12 6.12 6.12 3.5184 177 403 630	430 6.52 5.52 5.52 4.018 190 419 583	- 3.318 623 - -
Critical Hdwy Stg 1 Critical Hdwy Stg 2 Follow-up Hdwy Pot Cap-1 Maneuver Stage 1 Stage 2 Platoon blocked, % Mov Cap-1 Maneuver Mov Cap-2 Maneuver	2.218 1121 - - 1121	- - - - -	-	4.12 - - 2.218 1131 - - 1131	- - - - - -	-	7.12 6.12 6.12 3.518 181 649 398 146	6.52 5.52 5.52 4.018 204 620 416 166	6.22 - - 3.318 677 - - 677	7.12 6.12 6.12 3.518 177 403 630 139	430 6.52 5.52 5.52 4.018 190 419 583 155 341	- 3.318 623 - -
Critical Hdwy Stg 1 Critical Hdwy Stg 2 Follow-up Hdwy Pot Cap-1 Maneuver Stage 1 Stage 2 Platoon blocked, % Mov Cap-1 Maneuver Mov Cap-2 Maneuver Stage 1	2.218 1121 - - 1121	- - - - -	-	4.12 - - 2.218 1131 - - 1131	- - - - - -	-	7.12 6.12 6.12 3.518 181 649 398 146 146 648	6.52 5.52 5.52 4.018 204 620 416 166 166 619	6.22 - - 3.318 677 - - 677	7.12 6.12 6.12 3.518 177 403 630 139 139 403	430 6.52 5.52 5.52 4.018 190 419 583 155 341	- 3.318 623 - -
Critical Hdwy Stg 1 Critical Hdwy Stg 2 Follow-up Hdwy Pot Cap-1 Maneuver Stage 1 Stage 2 Platoon blocked, % Mov Cap-1 Maneuver Mov Cap-2 Maneuver Stage 1	2.218 1121 - - 1121	- - - - -	-	4.12 - 2.218 1131 - - 1131 - - -	- - - - - -	-	7.12 6.12 6.12 3.518 181 649 398 146 146 648 310	6.52 5.52 5.52 4.018 204 620 416 166 166 619	6.22 - - 3.318 677 - - 677	7.12 6.12 6.12 3.518 177 403 630 139 139 403	430 6.52 5.52 5.52 4.018 190 419 583 155 341	- 3.318 623 - -
Critical Hdwy Stg 1 Critical Hdwy Stg 2 Follow-up Hdwy Pot Cap-1 Maneuver Stage 1 Stage 2 Platoon blocked, % Mov Cap-1 Maneuver Mov Cap-2 Maneuver Stage 1 Stage 2	- 2.218 1121 - - 1121 - -	- - - - -	-	4.12 - 2.218 1131 - 1131 - -	- - - - - -	-	7.12 6.12 6.12 3.518 181 649 398 146 146 648 310	6.52 5.52 5.52 4.018 204 620 416 166 166 619	6.22 - - 3.318 677 - - 677	7.12 6.12 6.12 3.5184 177 403 630 139 139 403 585	430 6.52 5.52 5.52 4.018 190 419 583 155 341	- 3.318 623 - -

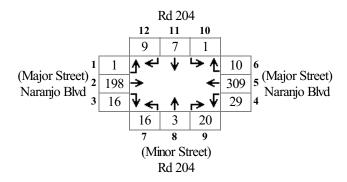
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	254	1121	-	-	1131	-	-	262
HCM Lane V/C Ratio	0.321	0.001	-	-	0.14	-	-	0.083
HCM Control Delay (s)	25.7	8.2	0	-	8.7	0	-	20
HCM Lane LOS	D	Α	Α	-	Α	Α	-	С
HCM 95th %tile Q(veh)	1.3	0	-	-	0.5	_	-	0.3

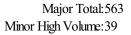
Intersection												
Int Delay, s/veh 4.	8											
= 0.0.) , 0. 10.1												
Movement	EBL	EBT	EBR	WBI	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Vol, veh/h	1	284	167	174	392	12	41	4	48	1	8	11
Future Vol, veh/h	1	284	167	174	392	12	41	4	48	1	8	11
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-		None	-		None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage	e, # -	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	1	309	182	189	426	13	45	4	52	1	9	12
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	439	0	0	490	0	0	1223	1219	399	1241	1303	433
Conflicting Flow All Stage 1	439 -	0	0	490 -	0	0	1223 402	1219 402	399	1241 811	1303 811	433
•												433 - -
Stage 1	-	-	-	-	-	-	402	402 817	-	811	811 492	433 - - 6.22
Stage 1 Stage 2	- -	- -	- -	-	-	-	402 821	402 817 6.52	-	811 430	811 492	- -
Stage 1 Stage 2 Critical Hdwy	- - 4.12	- - -	- - -	- - 4.12	- - -	- - -	402 821 7.12 6.12	402 817 6.52	- - 6.22	811 430 7.12 6.12	811 492 6.52	- -
Stage 1 Stage 2 Critical Hdwy Critical Hdwy Stg 1	- 4.12 - - 2.218	- - -	- - -	- 4.12 - - 2.218	- - -	- - -	402 821 7.12 6.12	402 817 6.52 5.52 5.52 4.018	- 6.22 - - 3.318	811 430 7.12 6.12	811 492 6.52 5.52 5.52 4.018	- 6.22 - -
Stage 1 Stage 2 Critical Hdwy Critical Hdwy Stg 1 Critical Hdwy Stg 2 Follow-up Hdwy Pot Cap-1 Maneuver	- 4.12 -	- - - -	- - - -	- 4.12 - -	- - - -	- - -	402 821 7.12 6.12 6.12	402 817 6.52 5.52 5.52 4.018 180	- 6.22 - - 3.318	811 430 7.12 6.12 6.12 3.518 152	811 492 6.52 5.52 5.52 4.018 161	- 6.22 - -
Stage 1 Stage 2 Critical Hdwy Critical Hdwy Stg 1 Critical Hdwy Stg 2 Follow-up Hdwy Pot Cap-1 Maneuver Stage 1	- 4.12 - - 2.218	- - - - -	- - - -	- 4.12 - - 2.218	- - - -	- - - -	402 821 7.12 6.12 6.12 3.518 156 625	402 817 6.52 5.52 5.52 4.018 180 600	- 6.22 - - 3.318	811 430 7.12 6.12 6.12 3.518 152 373	811 492 6.52 5.52 5.52 4.018 161 393	- 6.22 - - 3.318
Stage 1 Stage 2 Critical Hdwy Critical Hdwy Stg 1 Critical Hdwy Stg 2 Follow-up Hdwy Pot Cap-1 Maneuver Stage 1 Stage 2	- 4.12 - - 2.218 1121	- - - - -	- - - -	- 4.12 - - 2.218 1073	- - - - -	- - - -	402 821 7.12 6.12 6.12 3.518 156	402 817 6.52 5.52 5.52 4.018 180	- 6.22 - - 3.318 651	811 430 7.12 6.12 6.12 3.518 152	811 492 6.52 5.52 5.52 4.018 161	- 6.22 - - 3.318 623
Stage 1 Stage 2 Critical Hdwy Critical Hdwy Stg 1 Critical Hdwy Stg 2 Follow-up Hdwy Pot Cap-1 Maneuver Stage 1 Stage 2 Platoon blocked, %	- 4.12 - - 2.218 1121	- - - - -	-	- 4.12 - - 2.218 1073 -	-	-	402 821 7.12 6.12 6.12 3.518 156 625 369	402 817 6.52 5.52 5.52 4.018 180 600 390	6.22 - - 3.318 651 -	811 430 7.12 6.12 6.12 3.518 152 373	811 492 6.52 5.52 5.52 4.018 161 393 548	- 6.22 - - 3.318 623 -
Stage 1 Stage 2 Critical Hdwy Critical Hdwy Stg 1 Critical Hdwy Stg 2 Follow-up Hdwy Pot Cap-1 Maneuver Stage 1 Stage 2 Platoon blocked, % Mov Cap-1 Maneuver	- 4.12 - - 2.218 1121	- - - - -	-	- 4.12 - - 2.218 1073	-	-	402 821 7.12 6.12 6.12 3.518 156 625 369	402 817 6.52 5.52 5.52 4.018 180 600 390	6.22 - - - 3.318 651	811 430 7.12 6.12 6.12 3.518 152 373 603	811 492 6.52 5.52 5.52 4.018 161 393 548	- 6.22 - - 3.318 623
Stage 1 Stage 2 Critical Hdwy Critical Hdwy Stg 1 Critical Hdwy Stg 2 Follow-up Hdwy Pot Cap-1 Maneuver Stage 1 Stage 2 Platoon blocked, % Mov Cap-1 Maneuver Mov Cap-2 Maneuver	- 4.12 - 2.218 1121 -	-	-	- 4.12 - - 2.218 1073 -	- - - - - -	-	402 821 7.12 6.12 6.12 3.518 156 625 369 119	402 817 6.52 5.52 5.52 4.018 180 600 390 138 138	6.22 - - 3.318 651 -	811 430 7.12 6.12 6.12 3.518 152 373 603	811 492 6.52 5.52 5.52 4.018 161 393 548 123	- 6.22 - - 3.318 623 -
Stage 1 Stage 2 Critical Hdwy Critical Hdwy Stg 1 Critical Hdwy Stg 2 Follow-up Hdwy Pot Cap-1 Maneuver Stage 1 Stage 2 Platoon blocked, % Mov Cap-1 Maneuver Mov Cap-2 Maneuver Stage 1	- 4.12 - 2.218 1121 - - 1121	-	-	- 4.12 - 2.218 1073 - -	- - - - - -	-	402 821 7.12 6.12 6.12 3.518 156 625 369 119 119	402 817 6.52 5.52 5.52 4.018 180 600 390 138 138 599	- 6.22 - - 3.318 651 - -	811 430 7.12 6.12 3.518 152 373 603 112 112 373	811 492 6.52 5.52 5.52 4.018 161 393 548 123 123 301	- 6.22 - - 3.318 623 -
Stage 1 Stage 2 Critical Hdwy Critical Hdwy Stg 1 Critical Hdwy Stg 2 Follow-up Hdwy Pot Cap-1 Maneuver Stage 1 Stage 2 Platoon blocked, % Mov Cap-1 Maneuver Mov Cap-2 Maneuver	- 4.12 - 2.218 1121 - - 1121	-		- 4.12 - 2.218 1073 - -	- - - - - -	-	402 821 7.12 6.12 6.12 3.518 156 625 369 119	402 817 6.52 5.52 5.52 4.018 180 600 390 138 138	- 6.22 - - 3.318 651 - - 651	811 430 7.12 6.12 6.12 3.518 152 373 603	811 492 6.52 5.52 5.52 4.018 161 393 548 123	- 6.22 - - 3.318 623 - - 623 -
Stage 1 Stage 2 Critical Hdwy Critical Hdwy Stg 1 Critical Hdwy Stg 2 Follow-up Hdwy Pot Cap-1 Maneuver Stage 1 Stage 2 Platoon blocked, % Mov Cap-1 Maneuver Mov Cap-2 Maneuver Stage 1	- 4.12 - 2.218 1121 - - 1121	-		- 4.12 - 2.218 1073 - - 1073	- - - - - -	-	402 821 7.12 6.12 6.12 3.518 156 625 369 119 119	402 817 6.52 5.52 5.52 4.018 180 600 390 138 138 599	- 6.22 - - 3.318 651 - - 651 -	811 430 7.12 6.12 3.518 152 373 603 112 112 373	811 492 6.52 5.52 5.52 4.018 161 393 548 123 123 301	- 6.22 - - 3.318 623 - - 623 -
Stage 1 Stage 2 Critical Hdwy Critical Hdwy Stg 1 Critical Hdwy Stg 2 Follow-up Hdwy Pot Cap-1 Maneuver Stage 1 Stage 2 Platoon blocked, % Mov Cap-1 Maneuver Mov Cap-2 Maneuver Stage 1	- 4.12 - 2.218 1121 - - 1121	-		- 4.12 - 2.218 1073 - - 1073	- - - - - -	-	402 821 7.12 6.12 6.12 3.518 156 625 369 119 119	402 817 6.52 5.52 5.52 4.018 180 600 390 138 138 599	- 6.22 - - 3.318 651 - - 651 -	811 430 7.12 6.12 3.518 152 373 603 112 112 373	811 492 6.52 5.52 5.52 4.018 161 393 548 123 123 301	- 6.22 - 3.318 623 - - 623 -
Stage 1 Stage 2 Critical Hdwy Critical Hdwy Stg 1 Critical Hdwy Stg 2 Follow-up Hdwy Pot Cap-1 Maneuver Stage 1 Stage 2 Platoon blocked, % Mov Cap-1 Maneuver Mov Cap-2 Maneuver Stage 1 Stage 2	- 4.12 - 2.218 1121 - - 1121 -	-		- 4.12 - 2.218 1073 - - 1073 -	- - - - - -	-	402 821 7.12 6.12 6.12 3.518 156 625 369 119 119 624 270	402 817 6.52 5.52 5.52 4.018 180 600 390 138 138 599	- 6.22 - - 3.318 651 - - 651 -	811 430 7.12 6.12 3.518 152 373 603 112 112 373 550	811 492 6.52 5.52 5.52 4.018 161 393 548 123 123 301	- 6.22 - - 3.318 623 -

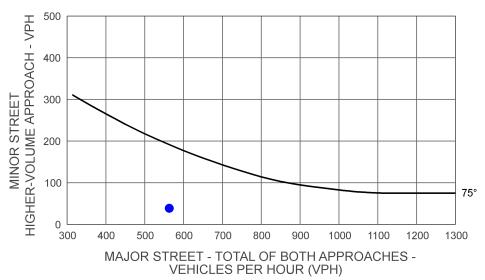
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	208	1121	-	-	1073	-	-	218
HCM Lane V/C Ratio	0.486	0.001	-	-	0.176	-	-	0.1
HCM Control Delay (s)	37.7	8.2	0	-	9.1	0	-	23.3
HCM Lane LOS	E	Α	Α	-	Α	Α	-	С
HCM 95th %tile Q(veh)	2.4	0	-	-	0.6	-	-	0.3

Movement		•		_		—	•	•	•		_	ī	7	
Lane Configurations			→	¥	₹			7)	ı	7	_	*	•	
Traffic Volume (veh/h) 1 284 167 174 392 12 41 4 48 1 8 11 Future Volume (veh/h) 1 284 167 174 392 12 41 4 48 1 8 11 Future Volume (veh/h) 1 284 167 174 392 12 41 4 48 1 8 11 Number 7 4 14 3 8 8 18 5 2 12 1 6 16 Initial Q (Qb), veh 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		EBL		EBR	WBL		WBR	NBL		NBR	SBL		SBR	
Future Volume (veh/h) 1 284 167 174 392 12 41 4 48 1 6 16 16														
Number	` ,													
Initial Q (Qb), veh	` ,										-			
Ped-Bike Adj(A_pbT)														
Parking Bus, Adj	` ,		0			0			0			0		
Adj Sat Flow, veh/h/ln Adj Sat Flow, veh/h/ln Adj Sat Flow, veh/h/ln Adj Sat Flow, veh/h/ln Adj Row Rate, veh/h 1 309 182 189 426 13 45 4 52 1 9 12 Adj No. of Lanes 0 1 0 0 1 0 0 1 0 0 1 0 Peak Hour Factor 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92	- · · · · · · ·													
Adj Flow Rate, veh/h 1 309 182 189 426 13 45 4 52 1 9 12 Adj No. of Lanes 0 1 0 0 1 0 0 1 0 0 1 0 0 1 0 0 1 0 0 1 0 0 1 0 0 1 0 0 1 0 0 1 0 0 1 0 0 1 0 0 1 0 0 1 0 0 1 0 0 1 0 1 0 1 0 1 0 1 0 1 0	. ,													
Adj No. of Lanes 0 1 0 0 1 0 0 1 0 0 1 0 0 1 0 0 1 0 0 1 0 0 1 0 0 1 0 0 1 0 0 1 0 0 1 0	•													
Peak Hour Factor 0.92 0.93											-			
Percent Heavy Veh, % 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	•		-			-							_	
Cap, veh/h 30 752 442 308 657 20 196 31 195 37 187 231 Arrive On Green 0.68 0.68 0.68 0.68 0.68 0.68 0.68 0.25 0.25 0.25 0.25 0.25 0.25 Sat Flow, veh/h 0 1101 647 394 962 29 612 123 780 23 746 922 Grp Volume(v), veh/h 492 0 0 628 0 0 101 0 0 0 122 0 0 Grp Sat Flow(s), veh/h/ln 1748 0 0 1384 0 0 1514 0 0 1691 0 0 Q Serve(g_s), s 0.0 0.0 0.0 18.1 0.0 0.0 3.6 0.0 0.0 0.0 0.0 0.0 Cycle Q Clear(g_c), s 14.9 0.0 0.3 33.0 0.0 0.0 6.1 0.0 0.0 1.2 0.0 0.0 Cycle Q Clear(g_c), veh/h 1225 0 0 985 0 0 422 0 0 0 454 0 0 V/C Ratio(X) Avail Cap(c_a), veh/h 1225 0 0 985 0 0 422 0 0 0 454 0 0 HCM Platoon Ratio 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0														
Arrive On Green 0.68 0.68 0.68 0.68 0.68 0.68 0.25 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00	•													
Sat Flow, veh/h 0 1101 647 394 962 29 612 123 780 23 746 922 Grp Volume(v), veh/h 492 0 0 628 0 0 101 0 0 22 0 0 Grp Sat Flow(s), veh/h/ln 1748 0 0 1384 0 0 1514 0 0 1691 0 0 Q Serve(g_s), s 0.0 0.0 0.0 18.1 0.0 0.0 3.6 0.0 0.0 0.0 0.0 Cycle Q Clear(g_c), s 14.9 0.0 0.0 33.0 0.0 0.0 6.1 0.0 0.0 0.0 0.0 Prop In Lane 0.00 0.037 0.30 0.02 0.45 0.51 0.05 0.55 Lane Grp Cap(c), weh/h 1225 0 0 985 0 0 422 0 0 454 0 0 V/C Ratio(X) 0.40 0.00 0.00 0.00 0.00 0.00 0.00 0.00	•													
Grp Volume(v), veh/h 492 0 0 628 0 0 101 0 22 0 0 Grp Sat Flow(s), veh/h/ln 1748 0 0 1384 0 0 1514 0 0 1691 0 0 Q Serve(g_s), s 0.0 0.0 0.0 18.1 0.0 0.0 3.6 0.0 0.0 0.0 0.0 Cycle Q Clear(g_c), s 14.9 0.0 0.0 33.0 0.0 0.0 6.1 0.0 0.0 0.0 0.0 Prop In Lane 0.00 0.37 0.30 0.02 0.45 0.51 0.05 0.55 Lane Grp Cap(c), veh/h 1225 0 0 985 0 0 422 0 0 454 0 0 V/C Ratio(X) 0.40 0.00 0.00 0.64 0.00 0.00 0.24 0.00 0.05 0.00 0.00 Avail Cap(c_a), veh/h 1225 0 0 985 0 0 422 0 0 454 0														
Grp Sat Flow(s), veh/h/ln 1748 0 0 1384 0 0 1514 0 0 1691 0 0 Q Serve(g_s), s 0.0 0.0 0.0 18.1 0.0 0.0 3.6 0.0 <td>Sat Flow, veh/h</td> <td>0</td> <td>1101</td> <td>647</td> <td></td> <td>962</td> <td>29</td> <td>612</td> <td>123</td> <td>780</td> <td></td> <td>746</td> <td>922</td> <td></td>	Sat Flow, veh/h	0	1101	647		962	29	612	123	780		746	922	
Q Serve(g_s), s	. ,			0					0	0		0	0	
Cycle Q Clear(g_c), s	Grp Sat Flow(s), veh/h/ln	1748	0	0	1384	0	0	1514	0	0	1691	0	0	
Prop In Lane 0.00 0.37 0.30 0.02 0.45 0.51 0.05 0.55 Lane Grp Cap(c), veh/h 1225 0 0 985 0 0 422 0 0 454 0 0 V/C Ratio(X) 0.40 0.00 0.00 0.64 0.00 0.00 0.24 0.00 0.00 0.00 0.00 Avail Cap(c_a), veh/h 1225 0 0 985 0 0 422 0 0 454 0 0 HCM Platoon Ratio 1.00 1	Q Serve(g_s), s	0.0	0.0	0.0	18.1	0.0	0.0	3.6	0.0	0.0	0.0	0.0	0.0	
Lane Grp Cap(c), veh/h 1225 0 0 985 0 0 422 0 0 454 0 0 V/C Ratio(X) 0.40 0.00 0.00 0.64 0.00 0.00 0.24 0.00 0.00 0.05 0.00 0.00 Avail Cap(c_a), veh/h 1225 0 0 985 0 0 422 0 0 454 0 0 HCM Platoon Ratio 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0	Cycle Q Clear(g_c), s	14.9	0.0	0.0	33.0	0.0	0.0	6.1	0.0	0.0	1.2	0.0	0.0	
V/C Ratio(X) 0.40 0.00 0.00 0.64 0.00 0.00 0.24 0.00 0.00 0.05 0.00 0.00 Avail Cap(c_a), veh/h 1225 0 0 985 0 0 422 0 0 454 0 0 HCM Platoon Ratio 1.00 </td <td>Prop In Lane</td> <td>0.00</td> <td></td> <td>0.37</td> <td>0.30</td> <td></td> <td>0.02</td> <td>0.45</td> <td></td> <td>0.51</td> <td>0.05</td> <td></td> <td>0.55</td> <td></td>	Prop In Lane	0.00		0.37	0.30		0.02	0.45		0.51	0.05		0.55	
Avail Cap(c_a), veh/h 1225 0 0 985 0 0 422 0 0 454 0 0 HCM Platoon Ratio 1.00	Lane Grp Cap(c), veh/h	1225	0	0	985	0	0	422	0	0	454	0	0	
HCM Platoon Ratio 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00	V/C Ratio(X)	0.40	0.00	0.00	0.64	0.00	0.00	0.24	0.00	0.00	0.05	0.00	0.00	
Upstream Filter(I) 0.96 0.00 0.00 1.00 0.00 1.00 0.00 1.00 0	Avail Cap(c_a), veh/h	1225	0	0	985	0	0	422	0	0	454	0	0	
Uniform Delay (d), s/veh	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	
Incr Delay (d2), s/veh 0.9 0.0 0.0 3.2 0.0 0.0 1.3 0.0 0.0 0.2 0.0 0.0 Initial Q Delay(d3),s/veh 0.0	Upstream Filter(I)	0.96	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	
Initial Q Delay(d3),s/veh 0.0 <t< td=""><td>Uniform Delay (d), s/veh</td><td>8.4</td><td>0.0</td><td>0.0</td><td>11.3</td><td>0.0</td><td>0.0</td><td>36.0</td><td>0.0</td><td>0.0</td><td>34.2</td><td>0.0</td><td>0.0</td><td></td></t<>	Uniform Delay (d), s/veh	8.4	0.0	0.0	11.3	0.0	0.0	36.0	0.0	0.0	34.2	0.0	0.0	
%ile BackOfQ(50%),veh/ln 7.4 0.0 0.0 13.1 0.0 0.0 2.9 0.0 0.0 0.6 0.0 0.0 LnGrp Delay(d),s/veh 9.3 0.0 0.0 14.4 0.0 0.0 37.3 0.0 0.0 34.4 0.0 0.0 LnGrp LOS A B D C Approach Vol, veh/h 492 628 101 22 Approach Delay, s/veh 9.3 14.4 37.3 34.4 Approach LOS A B D C Timer 1 2 3 4 5 6 7 8	Incr Delay (d2), s/veh	0.9	0.0	0.0	3.2	0.0	0.0	1.3	0.0	0.0	0.2	0.0	0.0	
LnGrp Delay(d),s/veh 9.3 0.0 0.0 14.4 0.0 0.0 37.3 0.0 0.0 34.4 0.0 0.0 LnGrp LOS A B D C Approach Vol, veh/h 492 628 101 22 Approach Delay, s/veh 9.3 14.4 37.3 34.4 Approach LOS A B D C Timer 1 2 3 4 5 6 7 8	Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
LnGrp LOS A B D C Approach Vol, veh/h 492 628 101 22 Approach Delay, s/veh 9.3 14.4 37.3 34.4 Approach LOS A B D C Timer 1 2 3 4 5 6 7 8	%ile BackOfQ(50%),veh/ln	7.4	0.0	0.0	13.1	0.0	0.0	2.9	0.0	0.0	0.6	0.0	0.0	
Approach Vol, veh/h 492 628 101 22 Approach Delay, s/veh 9.3 14.4 37.3 34.4 Approach LOS A B D C Timer 1 2 3 4 5 6 7 8	LnGrp Delay(d),s/veh	9.3	0.0	0.0	14.4	0.0	0.0	37.3	0.0	0.0	34.4	0.0	0.0	
Approach Delay, s/veh 9.3 14.4 37.3 34.4 Approach LOS A B D C Timer 1 2 3 4 5 6 7 8	LnGrp LOS	Α			В			D			С			
Approach Delay, s/veh 9.3 14.4 37.3 34.4 Approach LOS A B D C Timer 1 2 3 4 5 6 7 8	Approach Vol, veh/h		492			628			101			22		
Approach LOS A B D C Timer 1 2 3 4 5 6 7 8														
	• • •													
	Timer	1	2	3	4	5	6	7	8					
	Assigned Phs													
Phs Duration (G+Y+Rc), s 34.0 86.0 86.0	_				-									
Change Period (Y+Rc), s 4.0 4.0 4.0 4.0	,													
Max Green Setting (Gmax), s 30.0 82.0 30.0 82.0	` ,													
Max Q Clear Time (g. c+l1), s 8.1 16.9 3.2 35.0	<u> </u>													
Green Ext Time (p_c), s 0.4 5.9 0.4 5.9	(62)													
Intersection Summary	Intersection Summary													
HCM 2010 Ctrl Delay 14.6				14.6										
HCM 2010 LOS B	•													

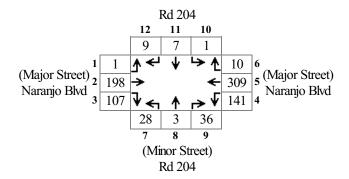
Scenario: AM Existing Intersection #:3

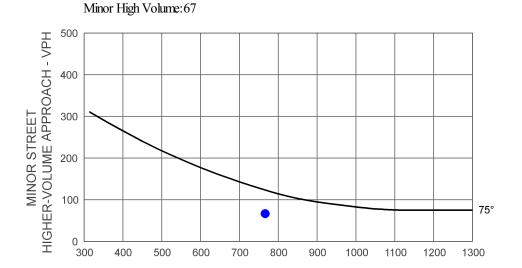






Scenario: AM Existing+Project Intersection #:3

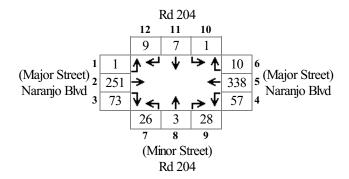


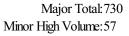


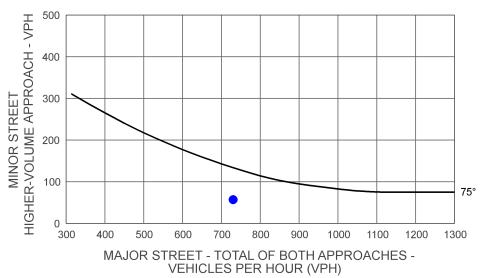
MAJOR STREET - TOTAL OF BOTH APPROACHES - VEHICLES PER HOUR (VPH)

Major Total: 766

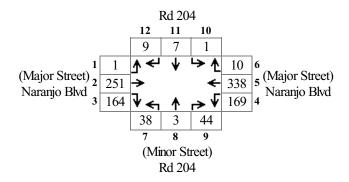
Scenario: AM Future Intersection #:3

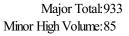


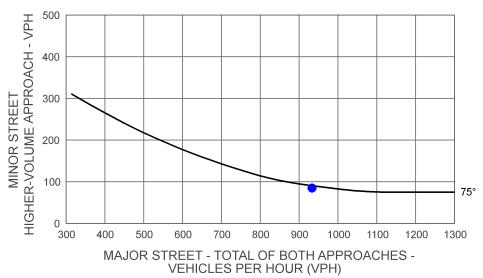




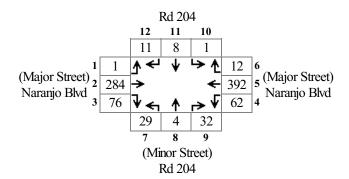
Scenario: AM Future+Project Intersection #:3

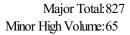


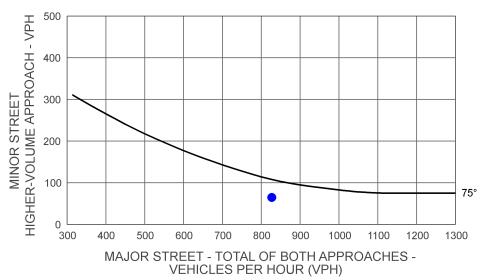




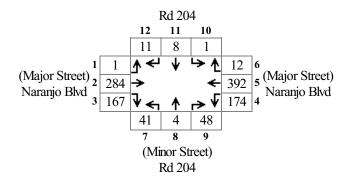
Scenario: AM Future Intersection #:3

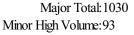


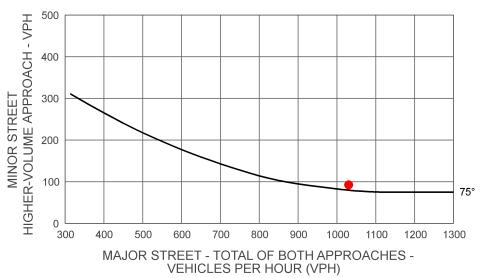




Scenario: AM Future+Project Intersection #:3







Intersection												
Int Delay, s/veh 1.	1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Vol, veh/h	1	262	5	7	226	8	12	2	28	1	1	5
Future Vol, veh/h	1	262	5	7	226	8	12	2	28	1	1	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage,	# -	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	
Mvmt Flow	1	285	5	8	246	9	13	2	30	1	1	5
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	254	0	0	290	0	0	558	560	288	571	557	250
Stage 1	-	-	-	-	-	-	290	290	-	265	265	-
Stage 2	-	-	-	-	-	-	268	270	-	306	292	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
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	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1311	-	-	1272	-	-	440	437	751	432	439	789
Stage 1	-	-	-	-	-	-	718	672	-	740	689	-
Stage 2	-	-	-	-	-	-	738	686	-	704	671	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1311	-	-	1272	-	-	433	434	751	410	435	789
Mov Cap-2 Maneuver	-	-	-	-	-	-	433	434	-	410	435	-
Stage 1	-	-	-	-	-	-	717	671	-	739	684	_
Stage 2	-	-	-	-	-	-	727	681	-	673	670	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0			0.2			11.5			10.8		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	603	1311	-	-	1272	-	-	632
HCM Lane V/C Ratio	0.076	0.001	-	-	0.006	-	-	0.012
HCM Control Delay (s)	11.5	7.7	0	-	7.8	0	-	10.8
HCM Lane LOS	В	Α	Α	-	Α	Α	-	В
HCM 95th %tile Q(veh)	0.2	0	-	-	0	-	-	0

В

HCM LOS

В

Intersection												
Int Delay, s/veh 4.	3											
inc Boldy, Green												
Movement	EBL	CDT	EBR	WPI	WBT	W/DD	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Vol, veh/h	1	262	13	11	226	8	89	2		<u> </u>	1	5
Future Vol, veh/h	1	262	13	11	226	8	89	2		1	1	5
Conflicting Peds, #/hr	0	202		0	220	0	09	0		0	0	
Sign Control			Free		Free	~	Stop		Stop			
RT Channelized	riee -		None	riee -		None	Stop -		None	310p -		Stop None
	_	-	None	-	-		-	-	None	-	-	None
Storage Length		-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage	,# -	0	-	-	0	-	-	0		-	0	-
Grade, %	-	0		-	0		-	0		-		-
Peak Hour Factor	92	92	92	92	92	92	92 2	92 2		92 2	92	92
Heavy Vehicles, %	2	2		2	2	2		2			2	2
Mvmt Flow	1	285	14	12	246	9	97	2	107	1	1	5
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	254	0	0	299	0	0	571	572	292	622	575	250
Stage 1	-	-	-	-	-	-	294	294	-	274	274	-
Stage 2	-	-	-	-	-	-	277	278	-	348	301	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
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	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1311	-	-	1262	-	-	432	430	747	399	429	789
Stage 1	-	-	-	-	-	-	714	670	-	732	683	-
Stage 2	-	-	-	-	-	-	729	680	-	668	665	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1311	-	-	1262	-	-	424	425	747	338	424	789
Mov Cap-2 Maneuver	-	-	-	-	-	-	424	425	-	338	424	-
Stage 1	-	-	-	-	-	-	713	669	-	731	675	-
Stage 2	-	-	-	-	-	-	715	673	-	570	664	-
Approach	EB			WB			NB			SB		
	0			0.4			15.5			11.1		
HCM Control Delay, s	U			0.4			10.5			11.1		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	547	1311	-	-	1262	-	-	601
HCM Lane V/C Ratio	0.376	0.001	-	-	0.009	-	-	0.013
HCM Control Delay (s)	15.5	7.7	0	-	7.9	0	-	11.1
HCM Lane LOS	С	Α	Α	-	Α	Α	-	В
HCM 95th %tile Q(veh)	1.7	0	-	-	0	-	-	0

С

HCM LOS

В

Intersection												
Int Delay, s/veh 6.	5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Vol, veh/h	1	303	18	23	266	8	104	2	151	1	1	5
Future Vol, veh/h	1	303	18	23	266	8	104	2	151	1	1	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage	e, # -	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	1	329	20	25	289	9	113	2	164	1	1	5
Major/Minor	Major1			Major2			Minor1			Minor		
Majoritimio	iviajoi i			Major2			IVIITIOLI			Minor2		
Conflicting Flow All	298	0	0	349	0	0	688	689	339	767	694	293
		0	0		0	0 -		689 341	339		694 343	293
Conflicting Flow All				349			688		339	767		293 - -
Conflicting Flow All Stage 1				349 -		-	688 341	341 348	339 - - 6.22	767 343	343	- -
Conflicting Flow All Stage 1 Stage 2	298 - -	- -	-	349 - -	-	-	688 341 347	341 348	-	767 343 424 7.12	343 351	- -
Conflicting Flow All Stage 1 Stage 2 Critical Hdwy	298 - -	- -	-	349 - -	-	-	688 341 347 7.12	341 348 6.52 5.52	-	767 343 424 7.12 6.12	343 351 6.52	- -
Conflicting Flow All Stage 1 Stage 2 Critical Hdwy Critical Hdwy Stg 1	298 - -	- -	-	349 - -	-	- - - -	688 341 347 7.12 6.12	341 348 6.52 5.52 5.52	- 6.22 -	767 343 424 7.12 6.12	343 351 6.52 5.52 5.52	- 6.22 -
Conflicting Flow All Stage 1 Stage 2 Critical Hdwy Critical Hdwy Stg 1 Critical Hdwy Stg 2	298 - - 4.12 -	- -	- - -	349 - - 4.12 -	-	- - -	688 341 347 7.12 6.12 6.12	341 348 6.52 5.52 5.52	- 6.22 -	767 343 424 7.12 6.12 6.12	343 351 6.52 5.52 5.52	- 6.22 -
Conflicting Flow All Stage 1 Stage 2 Critical Hdwy Critical Hdwy Stg 1 Critical Hdwy Stg 2 Follow-up Hdwy	298 - - 4.12 - - 2.218	- -	- - - -	349 - - 4.12 - - 2.218	-	- - - -	688 341 347 7.12 6.12 6.12 3.518	341 348 6.52 5.52 5.52 4.018	- 6.22 - - 3.318	767 343 424 7.12 6.12 6.12 3.518	343 351 6.52 5.52 5.52 4.018	- 6.22 - - 3.318
Conflicting Flow All Stage 1 Stage 2 Critical Hdwy Critical Hdwy Stg 1 Critical Hdwy Stg 2 Follow-up Hdwy Pot Cap-1 Maneuver	298 - 4.12 - 2.218 1263	- - - - -	- - - -	349 - - 4.12 - - 2.218 1210	- - - - -	- - - -	688 341 347 7.12 6.12 6.12 3.518	341 348 6.52 5.52 5.52 4.018 369	- 6.22 - - 3.318 703	767 343 424 7.12 6.12 6.12 3.518	343 351 6.52 5.52 5.52 4.018 366	- 6.22 - - 3.318
Conflicting Flow All Stage 1 Stage 2 Critical Hdwy Critical Hdwy Stg 1 Critical Hdwy Stg 2 Follow-up Hdwy Pot Cap-1 Maneuver Stage 1	298 - 4.12 - - 2.218 1263	- - - - -	- - - -	349 - 4.12 - 2.218 1210	- - - - -	-	688 341 347 7.12 6.12 6.12 3.518 360 674	341 348 6.52 5.52 5.52 4.018 369 639	6.22 - - - 3.318 703	767 343 424 7.12 6.12 6.12 3.518 319 672	343 351 6.52 5.52 5.52 4.018 366 637	- 6.22 - - 3.318
Conflicting Flow All Stage 1 Stage 2 Critical Hdwy Critical Hdwy Stg 1 Critical Hdwy Stg 2 Follow-up Hdwy Pot Cap-1 Maneuver Stage 1 Stage 2	298 - 4.12 - - 2.218 1263		-	349 - 4.12 - 2.218 1210	-	-	688 341 347 7.12 6.12 6.12 3.518 360 674	341 348 6.52 5.52 5.52 4.018 369 639	6.22 - - - 3.318 703	767 343 424 7.12 6.12 6.12 3.518 319 672	343 351 6.52 5.52 5.52 4.018 366 637	- 6.22 - - 3.318
Conflicting Flow All Stage 1 Stage 2 Critical Hdwy Critical Hdwy Stg 1 Critical Hdwy Stg 2 Follow-up Hdwy Pot Cap-1 Maneuver Stage 1 Stage 2 Platoon blocked, %	298 - - 4.12 - - 2.218 1263 -	-		349 - 4.12 - 2.218 1210 -	-	-	688 341 347 7.12 6.12 6.12 3.518 360 674 669	341 348 6.52 5.52 5.52 4.018 369 639 634	- 6.22 - - 3.318 703 -	767 343 424 7.12 6.12 6.12 3.518 319 672 608	343 351 6.52 5.52 5.52 4.018 366 637 632	- 6.22 - - 3.318 746 -
Conflicting Flow All Stage 1 Stage 2 Critical Hdwy Critical Hdwy Stg 1 Critical Hdwy Stg 2 Follow-up Hdwy Pot Cap-1 Maneuver Stage 1 Stage 2 Platoon blocked, % Mov Cap-1 Maneuver Mov Cap-2 Maneuver Stage 1	298 - 4.12 - 2.218 1263 - 1263	-		349 - 4.12 - 2.218 1210 - 1210	-	-	688 341 347 7.12 6.12 6.12 3.518 360 674 669 349 349 673	341 348 6.52 5.52 5.52 4.018 369 639 634	- 6.22 - - 3.318 703 -	767 343 424 7.12 6.12 6.12 3.518 319 672 608	343 351 6.52 5.52 5.52 4.018 366 637 632 356 356 621	- 6.22 - - 3.318 746 -
Conflicting Flow All Stage 1 Stage 2 Critical Hdwy Critical Hdwy Stg 1 Critical Hdwy Stg 2 Follow-up Hdwy Pot Cap-1 Maneuver Stage 1 Stage 2 Platoon blocked, % Mov Cap-1 Maneuver Mov Cap-2 Maneuver	298 - - 4.12 - - 2.218 1263 - - 1263	-		349 - 4.12 - 2.218 1210 - 1210	-	-	688 341 347 7.12 6.12 6.12 3.518 360 674 669 349 349	341 348 6.52 5.52 5.52 4.018 369 639 634 359 359	- 6.22 - 3.318 703 - - 703	767 343 424 7.12 6.12 6.12 3.518 319 672 608	343 351 6.52 5.52 5.52 4.018 366 637 632 356 356	- 6.22 - - 3.318 746 - - 746
Conflicting Flow All Stage 1 Stage 2 Critical Hdwy Critical Hdwy Stg 1 Critical Hdwy Stg 2 Follow-up Hdwy Pot Cap-1 Maneuver Stage 1 Stage 2 Platoon blocked, % Mov Cap-1 Maneuver Mov Cap-2 Maneuver Stage 1	298 - - 4.12 - - 2.218 1263 - - 1263	-		349 - 4.12 - 2.218 1210 - 1210	-	-	688 341 347 7.12 6.12 6.12 3.518 360 674 669 349 349 673	341 348 6.52 5.52 5.52 4.018 369 639 634 359 359 638	- 6.22 - - 3.318 703 - - 703 -	767 343 424 7.12 6.12 6.12 3.518 319 672 608	343 351 6.52 5.52 5.52 4.018 366 637 632 356 356 621	- 6.22 - - 3.318 746 - - 746
Conflicting Flow All Stage 1 Stage 2 Critical Hdwy Critical Hdwy Stg 1 Critical Hdwy Stg 2 Follow-up Hdwy Pot Cap-1 Maneuver Stage 1 Stage 2 Platoon blocked, % Mov Cap-1 Maneuver Mov Cap-2 Maneuver Stage 1	298 - - 4.12 - - 2.218 1263 - - 1263	-		349 - 4.12 - 2.218 1210 - 1210	-	-	688 341 347 7.12 6.12 6.12 3.518 360 674 669 349 349 673	341 348 6.52 5.52 5.52 4.018 369 639 634 359 359 638	- 6.22 - - 3.318 703 - - 703 -	767 343 424 7.12 6.12 6.12 3.518 319 672 608	343 351 6.52 5.52 5.52 4.018 366 637 632 356 356 621	- 6.22 - - 3.318 746 - - 746
Conflicting Flow All Stage 1 Stage 2 Critical Hdwy Critical Hdwy Stg 1 Critical Hdwy Stg 2 Follow-up Hdwy Pot Cap-1 Maneuver Stage 1 Stage 2 Platoon blocked, % Mov Cap-1 Maneuver Mov Cap-2 Maneuver Stage 1 Stage 2	298 - - 4.12 - - 2.218 1263 - - 1263	-		349 - 4.12 - 2.218 1210 - 1210 - -	-	-	688 341 347 7.12 6.12 6.12 3.518 360 674 669 349 349 673 646	341 348 6.52 5.52 5.52 4.018 369 639 634 359 359 638	- 6.22 - - 3.318 703 - - 703 -	767 343 424 7.12 6.12 6.12 3.518 319 672 608 239 239 671 464	343 351 6.52 5.52 5.52 4.018 366 637 632 356 356 621	- 6.22 - - 3.318 746 - - 746

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	496	1263	-	-	1210	-	-	511
HCM Lane V/C Ratio	0.563	0.001	-	-	0.021	-	-	0.015
HCM Control Delay (s)	21.2	7.9	0	-	8	0	-	12.2
HCM Lane LOS	С	Α	Α	-	Α	Α	-	В
HCM 95th %tile Q(veh)	3.4	0	-	-	0.1	-	-	0

Int Delay, s/veh 21.3 21.3 21.3 22.1 22.1 22.1 22.1 22.1 22.1 23.2 24.1 24.1 22.1 24													
Int Delay, s/veh 21.3	Intersection												
Movement EBL EBT EBR WBL WBT WBR NBL NBT NBR SBL SBT Traffic Vol, veh/h 1 303 26 27 266 8 181 2 221 1 1 Future Vol, veh/h 1 303 26 27 266 8 181 2 221 1 1 Conflicting Peds, #/hr 0 <td< td=""><td></td><td>3</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></td<>		3											
Traffic Vol, veh/h 1 303 26 27 266 8 181 2 221 1 1 Future Vol, veh/h 1 303 26 27 266 8 181 2 221 1 1 Conflicting Peds, #/hr 0													
Traffic Vol, veh/h 1 303 26 27 266 8 181 2 221 1 1 1 Future Vol, veh/h 1 303 26 27 266 8 181 2 221 1 1 1 Future Vol, veh/h 1 303 26 27 266 8 181 2 221 1 1 1 Conflicting Peds, #/hr 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 Sign Control Free Free Free Free Free Free Free Stop Stop Stop Stop Stop Stop Stop Stop	Movement	EDI	EDT	EDD	WDI	WDT	WDD	NDI	NDT	NDD	CDI	CDT	CDD
Future Vol, veh/h													
Conflicting Peds, #hr 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	· ·	•					•				•	•	5
Sign Control Free Free Free Free Free Free Free Free	,	•									•		5
RT Channelized - None - None - None - None - None - None Storage Length				•	_							_	0
Storage Length - - - - - - - - - - - - - - - - 0 - - 0 - - 0 - - 0 - - 0 - - 0 0 - 0 - - 0 0 - 0 0 - 0 0 0 0 - 0 0 - 0								•			•		
Veh in Median Storage, # - 0 - - 0 - - 0 - - 0 - - 0 - 0 - 0 - 0 - 0 - 0 - 0 - 0 - 0 - 0 - 0 - 0 - 0 - 0 - 0 - 0 - 0 0 - 0 0 - 0 0 - 0 0 - 0 - 0 0 - 0 1 2 2 2 2 <td></td> <td>-</td> <td>-</td> <td>None</td> <td>-</td> <td>-</td> <td>None</td> <td>-</td> <td>-</td> <td>None</td> <td>-</td> <td>-</td> <td>None</td>		-	-	None	-	-	None	-	-	None	-	-	None
Grade, % - 0 0 0 0 0 Peak Hour Factor 92 92 92 92 92 92 92 92 92 92 92 92 92		-	-	-	-	-	-	-	-	-	-	-	-
Peak Hour Factor 92		,# -		-	-		-	-		-	-		-
Heavy Vehicles, % 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2													-
Mymt Flow 1 329 28 29 289 9 197 2 240 1 1 Major/Minor Major1 Major2 Minor1 Minor2 Conflicting Flow All 298 0 0 358 0 0 701 703 343 819 712 Stage 1 - - - - - - 346 346 - 352 352 Stage 2 - - - - - - 355 357 - 467 360 Critical Hdwy 4.12 - - 4.12 - 7.12 6.52 6.22 7.12 6.52 6.22 7.12 6.52 6.12 5.52 6.12 5.52 Critical Hdwy Stg 1 - - - - 6.12 5.52 - 6.12 5.52 Critical Hdwy Stg 2 - - - - 6.12 5.52 - 6.12 <t< td=""><td></td><td>~-</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>92</td></t<>		~-											92
Major/Minor Major 1 Major 2 Minor 1 Minor 2 Conflicting Flow All 298 0 0 358 0 0 701 703 343 819 712 Stage 1 - - - - - 346 346 - 352 352 Stage 2 - - - - - 355 357 - 467 360 Critical Hdwy 4.12 - - 4.12 - 7.12 6.52 6.22 7.12 6.52 Critical Hdwy Stg 1 - - - - 6.12 5.52 - 6.12 5.52 Critical Hdwy Stg 2 - - - - 6.12 5.52 - 6.12 5.52 Critical Hdwy Stg 2 - - - - 6.12 5.52 - 6.12 5.52 Follow-up Hdwy 2.218 - 2.218 <td>Heavy Vehicles, %</td> <td>2</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>2</td> <td></td> <td>2</td>	Heavy Vehicles, %	2									2		2
Conflicting Flow All 298 0 0 358 0 0 701 703 343 819 712 Stage 1 346 346 - 352 352 Stage 2 355 357 - 467 360 Critical Hdwy 4.12 4.12 7.12 6.52 6.22 7.12 6.52 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 2.218 2.218 3.518 4.018 3.318 3.518 4.018 3 Pot Cap-1 Maneuver 1263 - 1201 - 353 362 700 294 358 Stage 1 670 635 - 665 632 Stage 2 662 628 - 576 626 Platoon blocked, %	Mvmt Flow	1	329	28	29	289	9	197	2	240	1	1	5
Conflicting Flow All 298 0 0 358 0 0 701 703 343 819 712 Stage 1 346 346 - 352 352 Stage 2 355 357 - 467 360 Critical Hdwy 4.12 4.12 7.12 6.52 6.22 7.12 6.52 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 2.218 2.218 3.518 4.018 3.318 3.518 4.018 3 Pot Cap-1 Maneuver 1263 - 1201 - 353 362 700 294 358 Stage 1 670 635 - 665 632 Stage 2 662 628 - 576 626 Platoon blocked, %													
Conflicting Flow All 298 0 0 358 0 0 701 703 343 819 712 Stage 1 346 346 - 352 352 Stage 2 355 357 - 467 360 Critical Hdwy 4.12 4.12 7.12 6.52 6.22 7.12 6.52 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 2.218 2.218 3.518 4.018 3.318 3.518 4.018 3 Pot Cap-1 Maneuver 1263 - 1201 - 353 362 700 294 358 Stage 1 670 635 - 665 632 Stage 2 662 628 - 576 626 Platoon blocked, %	Major/Minor												
Stage 1 - - - - - 352 352 Stage 2 - - - - - 355 357 - 467 360 Critical Hdwy 4.12 - - 4.12 - 7.12 6.52 6.22 7.12 6.52 6 6.52 6.22 7.12 6.52 6 6.52 6 6.22 7.12 6.52 6 6.52 6 6.52 6 6.22 7.12 6.52 6 6 6.12 5.52 5.52 6.12 5.52 6 6.12 5.52 6 6.12 5.52 6 6.12 5.52 6 6.12 5.52 6 6.12 5.52 6 6.12 5.52 6 6.12 5.52 6 6.12 5.52 6 6.12 5.52 6 6.12 5.52 6 6.12 5.52 6 6.12 5.52 6 6.12 5.52 6 6.12 5.52 6 6.12 5.52 6 6.12 5.52 6<	iviajui/iviii iui	Major1			Major2			Minor1			Minor2		
Stage 2 - - - - - 355 357 - 467 360 Critical Hdwy 4.12 - - 4.12 - - 7.12 6.52 6.22 7.12 6.52 6 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 2.218 - - 2.218 - - 3.518 4.018 3.318 3.518 4.018 3 Pot Cap-1 Maneuver 1263 - 1201 - 353 362 700 294 358 Stage 1 - - - - 662 628 - 576 626 Platoon blocked, % -			0	0		0	0		703	343		712	293
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 2.218 2.218 3.518 4.018 3.318 3.518 4.018 3.70 Pot Cap-1 Maneuver 1263 1201 353 362 700 294 358 Stage 1 670 635 - 665 632 Stage 2 662 628 - 576 626 Platoon blocked, %	Conflicting Flow All					0		701			819		293
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 2.218 - - 2.218 - - 3.518 4.018 3.318 3.518 4.018 3 Pot Cap-1 Maneuver 1263 - 1201 - - 353 362 700 294 358 Stage 1 - - - - 662 628 - 576 626 Platoon blocked, % -	Conflicting Flow All Stage 1	298	-	-	358 -	-	-	701 346	346	-	819 352	352	293
Follow-up Hdwy 2.218 2.218 3.518 4.018 3.318 3.518 4.018 3. Pot Cap-1 Maneuver 1263 1201 353 362 700 294 358 Stage 1 670 635 - 665 632 Stage 2 662 628 - 576 626 Platoon blocked, %	Conflicting Flow All Stage 1 Stage 2	298 - -	-	-	358 - -	- -	-	701 346 355	346 357	-	819 352 467	352 360	-
Pot Cap-1 Maneuver 1263 - - 1201 - - 353 362 700 294 358 Stage 1 - - - - 670 635 - 665 632 Stage 2 - - - - - 662 628 - 576 626 Platoon blocked, % -	Conflicting Flow All Stage 1 Stage 2 Critical Hdwy	298 - -	- - -	- - -	358 - -	- - -	- - -	701 346 355 7.12	346 357 6.52	-	819 352 467 7.12	352 360 6.52	-
Pot Cap-1 Maneuver 1263 - 1201 - - 353 362 700 294 358 Stage 1 - - - - 670 635 - 665 632 Stage 2 - - - - - 662 628 - 576 626 Platoon blocked, % -	Conflicting Flow All Stage 1 Stage 2 Critical Hdwy Critical Hdwy Stg 1	298 - - 4.12	- - -	- - -	358 - - 4.12 -	- - -	- - -	701 346 355 7.12 6.12	346 357 6.52 5.52	- 6.22 -	819 352 467 7.12 6.12	352 360 6.52 5.52	-
Stage 1 - - - - - 665 632 Stage 2 - - - - - 662 628 - 576 626 Platoon blocked, % - <t< td=""><td>Conflicting Flow All Stage 1 Stage 2 Critical Hdwy Critical Hdwy Stg 1 Critical Hdwy Stg 2</td><td>298 - - 4.12 -</td><td>- - - -</td><td>- - -</td><td>358 - - 4.12 -</td><td>- - - -</td><td>- - -</td><td>701 346 355 7.12 6.12 6.12</td><td>346 357 6.52 5.52 5.52</td><td>- 6.22 -</td><td>819 352 467 7.12 6.12 6.12</td><td>352 360 6.52 5.52 5.52</td><td>- 6.22 -</td></t<>	Conflicting Flow All Stage 1 Stage 2 Critical Hdwy Critical Hdwy Stg 1 Critical Hdwy Stg 2	298 - - 4.12 -	- - - -	- - -	358 - - 4.12 -	- - - -	- - -	701 346 355 7.12 6.12 6.12	346 357 6.52 5.52 5.52	- 6.22 -	819 352 467 7.12 6.12 6.12	352 360 6.52 5.52 5.52	- 6.22 -
Stage 2 662 628 - 576 626 Platoon blocked, %	Conflicting Flow All Stage 1 Stage 2 Critical Hdwy Critical Hdwy Stg 1 Critical Hdwy Stg 2 Follow-up Hdwy	298 - - 4.12 - - 2.218	- - - -	- - - -	358 - - 4.12 - - 2.218	- - - - -	- - - -	701 346 355 7.12 6.12 6.12 3.518	346 357 6.52 5.52 5.52 4.018	- 6.22 - - 3.318	819 352 467 7.12 6.12 6.12 3.518	352 360 6.52 5.52 5.52 4.018	- 6.22 -
Platoon blocked, %	Conflicting Flow All Stage 1 Stage 2 Critical Hdwy Critical Hdwy Stg 1 Critical Hdwy Stg 2 Follow-up Hdwy Pot Cap-1 Maneuver	298 - - 4.12 - - 2.218 1263	- - - - -	- - - - -	358 - - 4.12 - - 2.218 1201	- - - - -	- - - - -	701 346 355 7.12 6.12 6.12 3.518	346 357 6.52 5.52 5.52 4.018 362	- 6.22 - - 3.318 700	819 352 467 7.12 6.12 6.12 3.518	352 360 6.52 5.52 5.52 4.018 358	- 6.22 - - 3.318
·	Conflicting Flow All Stage 1 Stage 2 Critical Hdwy Critical Hdwy Stg 1 Critical Hdwy Stg 2 Follow-up Hdwy Pot Cap-1 Maneuver Stage 1	298 - - 4.12 - - 2.218 1263	- - - - -	-	358 - 4.12 - 2.218 1201	- - - - -	- - - - -	701 346 355 7.12 6.12 6.12 3.518 353 670	346 357 6.52 5.52 5.52 4.018 362 635	6.22 - - 3.318 700	819 352 467 7.12 6.12 6.12 3.518 294 665	352 360 6.52 5.52 5.52 4.018 358 632	- 6.22 - - 3.318
	Conflicting Flow All Stage 1 Stage 2 Critical Hdwy Critical Hdwy Stg 1 Critical Hdwy Stg 2 Follow-up Hdwy Pot Cap-1 Maneuver Stage 1 Stage 2	298 - - 4.12 - - 2.218 1263	-	-	358 - 4.12 - 2.218 1201	-	-	701 346 355 7.12 6.12 6.12 3.518 353 670	346 357 6.52 5.52 5.52 4.018 362 635	6.22 - - 3.318 700	819 352 467 7.12 6.12 6.12 3.518 294 665	352 360 6.52 5.52 5.52 4.018 358 632	- 6.22 - - 3.318
•	Conflicting Flow All Stage 1 Stage 2 Critical Hdwy Critical Hdwy Stg 1 Critical Hdwy Stg 2 Follow-up Hdwy Pot Cap-1 Maneuver Stage 1 Stage 2 Platoon blocked, %	298 - - 4.12 - - 2.218 1263 - -	-	-	358 - 4.12 - 2.218 1201 -	-	-	701 346 355 7.12 6.12 6.12 3.518 353 670 662	346 357 6.52 5.52 5.52 4.018 362 635 628	6.22 - - 3.318 700 -	819 352 467 7.12 6.12 6.12 3.518 294 665 576	352 360 6.52 5.52 5.52 4.018 358 632 626	- 6.22 - - 3.318
·	Conflicting Flow All Stage 1 Stage 2 Critical Hdwy Critical Hdwy Stg 1 Critical Hdwy Stg 2 Follow-up Hdwy Pot Cap-1 Maneuver Stage 1 Stage 2 Platoon blocked, % Mov Cap-1 Maneuver	298 - - 4.12 - - 2.218 1263 - - 1263	-	-	358 - 4.12 - 2.218 1201 - -	-	-	701 346 355 7.12 6.12 6.12 3.518 353 670 662	346 357 6.52 5.52 5.52 4.018 362 635 628	6.22 - - 3.318 700 - - 700	819 352 467 7.12 6.12 6.12 3.518 294 665 576	352 360 6.52 5.52 5.52 4.018 358 632 626	- 6.22 - - 3.318 746 -
Stage 2 637 610 - 377 625	Conflicting Flow All Stage 1 Stage 2 Critical Hdwy Critical Hdwy Stg 1 Critical Hdwy Stg 2 Follow-up Hdwy Pot Cap-1 Maneuver Stage 1 Stage 2 Platoon blocked, % Mov Cap-1 Maneuver Mov Cap-2 Maneuver	298 - - 4.12 - - 2.218 1263 - - 1263	-	-	358 - 4.12 - 2.218 1201 - -	-	-	701 346 355 7.12 6.12 6.12 3.518 353 670 662 342 342	346 357 6.52 5.52 5.52 4.018 362 635 628 351 351	6.22 - - 3.318 700 - - 700	819 352 467 7.12 6.12 6.12 3.518 294 665 576	352 360 6.52 5.52 5.52 4.018 358 632 626 347 347	- 6.22 - - 3.318 746 -
July 2	Conflicting Flow All Stage 1 Stage 2 Critical Hdwy Critical Hdwy Stg 1 Critical Hdwy Stg 2 Follow-up Hdwy Pot Cap-1 Maneuver Stage 1 Stage 2 Platoon blocked, % Mov Cap-1 Maneuver Mov Cap-2 Maneuver Stage 1	298 - - 4.12 - - 2.218 1263 - - 1263	-	-	358 - 4.12 - 2.218 1201 - -	-	-	701 346 355 7.12 6.12 6.12 3.518 353 670 662 342 342 669	346 357 6.52 5.52 5.52 4.018 362 635 628 351 351 634	6.22 - - 3.318 700 - - 700	819 352 467 7.12 6.12 6.12 3.518 294 665 576 188 188 664	352 360 6.52 5.52 5.52 4.018 358 632 626 347 347 614	- 6.22 - - 3.318 746 -

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0.7	54.3	12.8
HCM LOS			F	В

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	475	1263	-	-	1201	-	-	470
HCM Lane V/C Ratio	0.924	0.001	-	-	0.024	-	-	0.016
HCM Control Delay (s)	54.3	7.9	0	-	8.1	0	-	12.8
HCM Lane LOS	F	Α	Α	-	Α	Α	-	В
HCM 95th %tile Q(veh)	10.8	0	-	-	0.1	-	-	0

Intersection												
Int Delay, s/veh 7.6	3											
, .												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Vol, veh/h	1	346	19	24	305	10	106	2	156	1	1	6
Future Vol, veh/h	1	346	19	24	305	10	106	2	156	1	1	6
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control		Free	Free		Free	Free	Stop	Stop		Stop	Stop	
RT Channelized	-		None	-	-	None	-		None			None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage,	# -	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	1	376	21	26	332	11	115	2	170	1	1	7
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	342	0	0	397	0	0	782	784	386	863	788	337
Stage 1	-	-	-	-	-	-	389	389	-	389	389	001
Stage 2												
- ta-ge =	_	_	_	_	_	_			_			_
Critical Hdwv	- 4.12	-	-		-		393	395	6.22	474	399	6.22
Critical Hdwy Critical Hdwy Stg 1	- 4.12 -	- - -	- -	- 4.12 -	- -	-	393 7.12	395 6.52	6.22	474 7.12	399 6.52	6.22
Critical Hdwy Stg 1	4.12 -	- - -	- - -		- - -	-	393 7.12 6.12	395 6.52 5.52	- 6.22 -	474 7.12 6.12	399 6.52 5.52	6.22
Critical Hdwy Stg 1 Critical Hdwy Stg 2	4.12 - - 2.218	- - - -			- - -	-	393 7.12	395 6.52 5.52 5.52	-	474 7.12 6.12	399 6.52 5.52 5.52	- -
Critical Hdwy Stg 1	-	-	-	4.12 - -	- -	- - - -	393 7.12 6.12 6.12	395 6.52 5.52 5.52	-	474 7.12 6.12 6.12	399 6.52 5.52 5.52	- -
Critical Hdwy Stg 1 Critical Hdwy Stg 2 Follow-up Hdwy Pot Cap-1 Maneuver	- - 2.218	-	- - -	4.12 - - 2.218	- -	- - - -	393 7.12 6.12 6.12 3.518	395 6.52 5.52 5.52 4.018	- - 3.318	474 7.12 6.12 6.12 3.518	399 6.52 5.52 5.52 4.018	- - 3.318
Critical Hdwy Stg 1 Critical Hdwy Stg 2 Follow-up Hdwy	- 2.218 1217	- - -	- - - -	4.12 - - 2.218 1162	- - -	- - - -	393 7.12 6.12 6.12 3.518 312	395 6.52 5.52 5.52 4.018 325	- 3.318 662	474 7.12 6.12 6.12 3.518 275	399 6.52 5.52 5.52 4.018 323	- - 3.318 705
Critical Hdwy Stg 1 Critical Hdwy Stg 2 Follow-up Hdwy Pot Cap-1 Maneuver Stage 1	- 2.218 1217 -	- - - -	- - - -	4.12 - - 2.218 1162	- - -	- - - - -	393 7.12 6.12 6.12 3.518 312 635	395 6.52 5.52 5.52 4.018 325 608	- 3.318 662 -	474 7.12 6.12 6.12 3.518 275 635	399 6.52 5.52 5.52 4.018 323 608	- - 3.318 705
Critical Hdwy Stg 1 Critical Hdwy Stg 2 Follow-up Hdwy Pot Cap-1 Maneuver Stage 1 Stage 2	- 2.218 1217 -	- - - - -	- - - -	4.12 - - 2.218 1162	- - - - -		393 7.12 6.12 6.12 3.518 312 635	395 6.52 5.52 5.52 4.018 325 608	- 3.318 662 -	474 7.12 6.12 6.12 3.518 275 635	399 6.52 5.52 5.52 4.018 323 608	- - 3.318 705
Critical Hdwy Stg 1 Critical Hdwy Stg 2 Follow-up Hdwy Pot Cap-1 Maneuver Stage 1 Stage 2 Platoon blocked, %	- 2.218 1217 - -	- - - - -	- - - -	4.12 - - 2.218 1162 -	- - - - -	-	393 7.12 6.12 6.12 3.518 312 635 632	395 6.52 5.52 5.52 4.018 325 608 605	- 3.318 662 - -	474 7.12 6.12 6.12 3.518 275 635 571	399 6.52 5.52 5.52 4.018 323 608 602	- 3.318 705 - -
Critical Hdwy Stg 1 Critical Hdwy Stg 2 Follow-up Hdwy Pot Cap-1 Maneuver Stage 1 Stage 2 Platoon blocked, % Mov Cap-1 Maneuver	- 2.218 1217 - -	- - - - -	- - - -	4.12 - - 2.218 1162 - - 1162	- - - - -	-	393 7.12 6.12 6.12 3.518 312 635 632	395 6.52 5.52 5.52 4.018 325 608 605	- 3.318 662 - -	474 7.12 6.12 6.12 3.518 275 635 571	399 6.52 5.52 5.52 4.018 323 608 602 314	- 3.318 705 - -
Critical Hdwy Stg 1 Critical Hdwy Stg 2 Follow-up Hdwy Pot Cap-1 Maneuver Stage 1 Stage 2 Platoon blocked, % Mov Cap-1 Maneuver Mov Cap-2 Maneuver	- 2.218 1217 - - 1217	-	-	4.12 - - 2.218 1162 - - 1162	- - - - -	-	393 7.12 6.12 6.12 3.518 312 635 632 301 301	395 6.52 5.52 5.52 4.018 325 608 605 316 316	3.318 662 - - 662	474 7.12 6.12 6.12 3.518 275 635 571 199 199 634	399 6.52 5.52 5.52 4.018 323 608 602 314 314	- 3.318 705 - - 705
Critical Hdwy Stg 1 Critical Hdwy Stg 2 Follow-up Hdwy Pot Cap-1 Maneuver Stage 1 Stage 2 Platoon blocked, % Mov Cap-1 Maneuver Mov Cap-2 Maneuver Stage 1	- 2.218 1217 - - 1217	-	-	4.12 - - 2.218 1162 - - 1162	- - - - -	-	393 7.12 6.12 6.12 3.518 312 635 632 301 301 634	395 6.52 5.52 5.52 4.018 325 608 605 316 316 607	3.318 662 - - 662	474 7.12 6.12 6.12 3.518 275 635 571 199 199 634	399 6.52 5.52 5.52 4.018 323 608 602 314 314 591	- 3.318 705 - - 705
Critical Hdwy Stg 1 Critical Hdwy Stg 2 Follow-up Hdwy Pot Cap-1 Maneuver Stage 1 Stage 2 Platoon blocked, % Mov Cap-1 Maneuver Mov Cap-2 Maneuver Stage 1	- 2.218 1217 - - 1217	-	-	4.12 - - 2.218 1162 - - 1162	- - - - -	-	393 7.12 6.12 6.12 3.518 312 635 632 301 301 634	395 6.52 5.52 5.52 4.018 325 608 605 316 316 607	3.318 662 - - 662	474 7.12 6.12 6.12 3.518 275 635 571 199 199 634	399 6.52 5.52 5.52 4.018 323 608 602 314 314 591	- 3.318 705 - - 705
Critical Hdwy Stg 1 Critical Hdwy Stg 2 Follow-up Hdwy Pot Cap-1 Maneuver Stage 1 Stage 2 Platoon blocked, % Mov Cap-1 Maneuver Mov Cap-2 Maneuver Stage 1 Stage 2	- 2.218 1217 - - 1217 - -	-	-	4.12 - - 2.218 1162 - - 1162 - -	- - - - -	-	393 7.12 6.12 6.12 3.518 312 635 632 301 301 634 608	395 6.52 5.52 5.52 4.018 325 608 605 316 316 607	3.318 662 - - 662	474 7.12 6.12 6.12 3.518 275 635 571 199 199 634 423	399 6.52 5.52 5.52 4.018 323 608 602 314 314 591	- 3.318 705 - - 705

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	444	1217	-	-	1162	-	-	478
HCM Lane V/C Ratio	0.646	0.001	-	-	0.022	-	-	0.018
HCM Control Delay (s)	26.8	8	0	-	8.2	0	-	12.7
HCM Lane LOS	D	Α	Α	-	Α	Α	-	В
HCM 95th %tile Q(veh)	4.5	0	-	-	0.1	-	-	0.1

Intersection												
Int Delay, s/veh 33.	2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Vol, veh/h	1	346	27	28	305	10	183	2	226	1	1	6
Future Vol, veh/h	1	346	27	28	305	10	183	2	226	1	1	6
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free		Free	Free		Stop			Stop	Stop	
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage	,# -	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	1	376	29	30	332	11	199	2	246	1	1	7
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	342	0	0	405	0	0	795	796	391	915	806	337
Stage 1	-	-	-	-	-	-	393	393	-	398	398	-
Stage 2	-	-	-	-	-	-	402	403	-	517	408	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
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	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0.7	91	13.4
HCM LOS			F	В

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	423	1217	-	-	1154	-	-	438
HCM Lane V/C Ratio	1.056	0.001	-	-	0.026	-	-	0.02
HCM Control Delay (s)	91	8	0	-	8.2	0	-	13.4
HCM Lane LOS	F	Α	Α	-	Α	Α	-	В
HCM 95th %tile Q(veh)	14.5	0	-	-	0.1	-	-	0.1

Pot Cap-1 Maneuver

Stage 1

Stage 2

Mov Cap-2 Maneuver

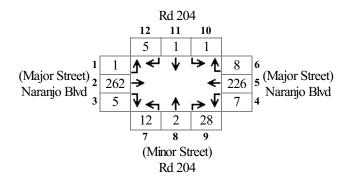
Stage 1

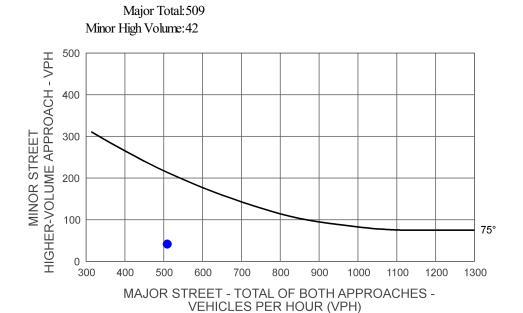
Stage 2

Platoon blocked, % Mov Cap-1 Maneuver

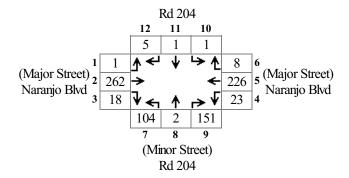
	•		_		_	4	_	•		Ι.	ı	.)
		→	•	•			7	ı		*	+	*
Movement	EBL	EBT	EBR	WBL		WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4			4			4			4	
Traffic Volume (veh/h)	1	346	27	28	305	10	183	2	226	1	1	6
Future Volume (veh/h)	1	346	27	28	305	10	183	2	226	1	1	6
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1750	1863	1750	1750	1863	1750	1750	1863	1750	1750	1863	1750
Adj Flow Rate, veh/h	1	376	29	30	332	11	199	2	246	1	1	7
Adj No. of Lanes	0	1	0	0	1	0	0	1	0	0	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	40	512	39	68	495	16	447	25	507	120	138	745
Arrive On Green	0.30	0.30	0.30	0.30	0.30	0.30	0.61	0.61	0.61	0.61	0.61	0.61
Sat Flow, veh/h	1	1707	131	82	1649	53	637	41	829	123	225	1219
Grp Volume(v), veh/h	406	0	0	373	0	0	447	0	0	9	0	0
Grp Sat Flow(s), veh/h/ln	1839	0	0		0		1507	0	0	1567	0	0
Q Serve(g s), s	0.0	0.0	0.0	0.0	0.0	0.0	11.9	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	17.8	0.0	0.0	16.3	0.0	0.0	14.4	0.0	0.0	0.2	0.0	0.0
Prop In Lane	0.00	,	0.07	0.08	,	0.03	0.45		0.55	0.11	,.,	0.78
Lane Grp Cap(c), veh/h	592	0	0.07	578	0	0.00	979	0		1002	0	0.70
V/C Ratio(X)	0.69	0.00	0.00	0.65	0.00	0.00	0.46	0.00	0.00	0.01	0.00	0.00
Avail Cap(c_a), veh/h	592	0.00	0.00	578	0.00	0.00	979	0.00	0.00	1002	0.00	0.00
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)	0.98	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	28.3	0.0	0.0	27.6	0.0	0.0	9.5	0.0	0.0	6.8	0.0	0.0
Incr Delay (d2), s/veh	6.2	0.0	0.0	5.5	0.0	0.0	1.5	0.0	0.0	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.0	0.0	0.0	9.0	0.0	0.0	6.4	0.0	0.0	0.0	0.0	0.0
LnGrp Delay(d),s/veh	34.5	0.0	0.0	33.1	0.0	0.0	11.1	0.0	0.0	6.9	0.0	0.0
LnGrp LOS	34.3 C	0.0	0.0	33. I	0.0	0.0	В	0.0	0.0	0.9 A	0.0	0.0
Approach Vol, veh/h		406			373			447		,,	9	
Approach Delay, s/veh		34.5			33.1			11.1			6.9	
Approach LOS		C			C			В			Α	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		59.0		31.0		59.0		31.0				
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0				
Max Green Setting (Gmax), s		55.0		27.0		55.0		27.0				
Max Q Clear Time (g c+I1), s		16.4		19.8		2.2		18.3				
Green Ext Time (p_c), s		1.9		1.9		1.9		2.1				
Intersection Summary												
HCM 2010 Ctrl Delay			25.4									
HCM 2010 LOS			C									
			9									

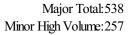
Scenario: PM Existing Intersection #:3

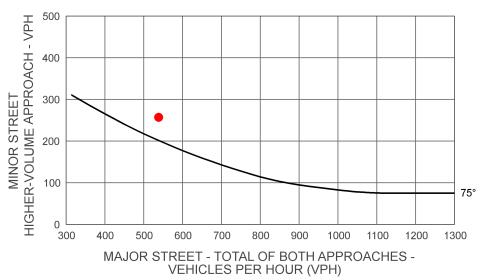




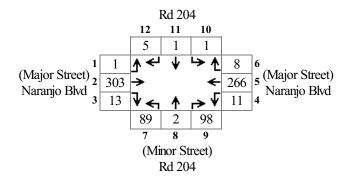
Scenario: PM Existing+Project Intersection #:3

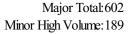


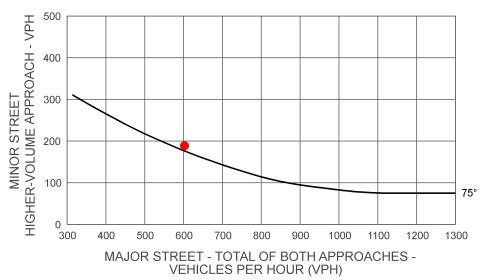




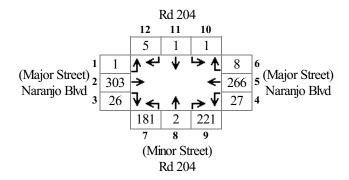
Scenario: PM Future Intersection #:3

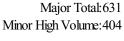


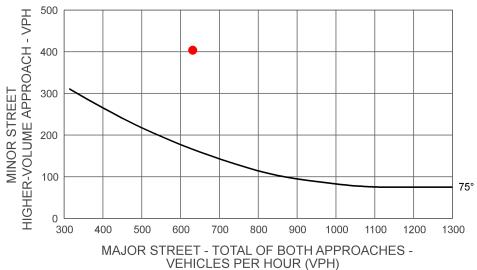




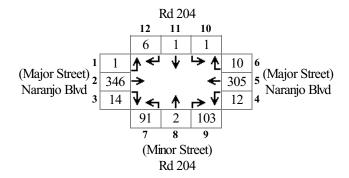
Scenario: PM Future+Project Intersection #:3

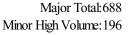


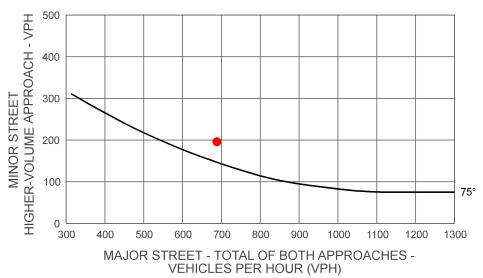




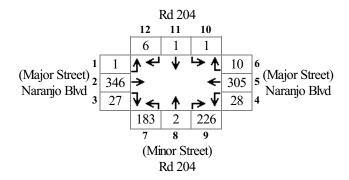
Scenario: PM Future Intersection #:3

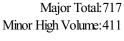


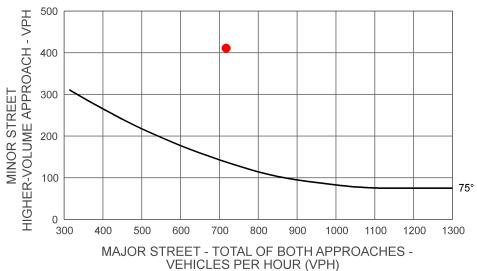




Scenario: PM Future+Project Intersection #:3







Traffic Study 524-10

Intersection 4 Rd 204 & Robes Ave



							-
Intersection							
Int Delay, s/veh 3	.6						
3 /							
N.A	MAIDI	WDD	NDT	NDD	ODI	ODT	
Movement	WBL	WBR		NBR		SBT	
Traffic Vol, veh/h	28	9	21	26	14	23	
Future Vol, veh/h	28	9	21	26	14	23	
Conflicting Peds, #/hr	0	0	_ 0	_ 0	_ 0	_ 0	
Sign Control	Stop	Stop	Free			Free	
RT Channelized	-	None	-	None	-	None	
Storage Length	0	-	-	-	-	-	
Veh in Median Storage		-	0	-	-	0	
Grade, %	0	-	0	-	-	0	
Peak Hour Factor	92	92	92	92	92	92	
Heavy Vehicles, %	2	2	2	2	2		
Mvmt Flow	30	10	23	28	15	25	
Major/Minor	Minor1		Major1		Major2		
Conflicting Flow All	92	37	0	0	51	0	
Stage 1	37	-	-	-	_	-	
Stage 2	55	-	_	_	_	_	
Critical Hdwy	6.42	6.22	-	_	4.12	_	
Critical Hdwy Stg 1	5.42	_	_	_	_	_	
Critical Hdwy Stg 2	5.42	_	_	_	-	_	
Follow-up Hdwy	3.518	3.318	_	_	2.218	_	
Pot Cap-1 Maneuver	908	1035	-	_	1555	_	
Stage 1	985	-	-	-	-	-	
Stage 2	968	-	-	_	-	_	
Platoon blocked, %			_	-		-	
Mov Cap-1 Maneuver	899	1035	_	_	1555	_	
Mov Cap-2 Maneuver	899	-	_	_	-	_	
Stage 1	985	-	-	_	-	-	
Stage 2	958	-	_	_	-	_	
A	WD		MD		CD.		
Approach	WB		NB		SB		
HCM Control Delay, s	9.1		0		2.8		
HCM LOS	Α						

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	929	1555	-
HCM Lane V/C Ratio	-	-	0.043	0.01	-
HCM Control Delay (s)	-	-	9.1	7.3	0
HCM Lane LOS	-	-	Α	Α	Α
HCM 95th %tile Q(veh)	-	-	0.1	0	-

Intersection							
Int Delay, s/veh	6						
THE BOILDY, 3/ VOIT	O .						
Movement	WBL	WBR	NBT	NBR	SBL	SBT	
Traffic Vol, veh/h	28	94	21	26	18	23	
Future Vol, veh/h	28	94	21	26	18	23	
Conflicting Peds, #/hr	0	0	0	0	0	0	
Sign Control	Stop	Stop	Free	Free	Free	Free	
RT Channelized	-	None	-	None	-	None	
Storage Length	0	-	-	-	-	-	
Veh in Median Storage	e, # 0	-	0	-	-	0	
Grade, %	0	-	0	-	-	0	
Peak Hour Factor	92	92	92	92	92	92	
Heavy Vehicles, %	2	2	2	2	2	2	
Mvmt Flow	30	102	23	28	20	25	
Major/Minor	Minor1		Major1		Major2		
Conflicting Flow All	101	37	0	0	51	0	
Stage 1	37	-	-	-	-	-	
Stage 2	64	-	-	_	_	_	
Critical Hdwy	6.42	6.22	_	_	4.12	_	
Critical Hdwy Stg 1	5.42	-	-	_	-	_	
Critical Hdwy Stg 2	5.42	_	_	_	_	_	
Follow-up Hdwy	3.518	3.318	-	_	2.218	_	
Pot Cap-1 Maneuver	898	1035	_	_	1555	_	
Stage 1	985	-	_	_	-	_	
Stage 2	959	_	_	_	_	_	
Platoon blocked, %	000		_	_		_	
Mov Cap-1 Maneuver	886	1035	_	_	1555	_	
Mov Cap-2 Maneuver	886	-	-	_	-	_	
Stage 1	985	-	-	_	_	_	
Stage 2	947	_	_	_	_	_	
J 50 L	J 11						
Approach	WB		NB		SB		
HCM Control Delay, s	9.2		0		3.2		
HCM LOS	9.2 A		U		3.2		
HOIVI LOS	А						

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	997	1555	-
HCM Lane V/C Ratio	-	-	0.133	0.013	-
HCM Control Delay (s)	-	-	9.2	7.3	0
HCM Lane LOS	-	-	А	Α	Α
HCM 95th %tile Q(veh)	-	-	0.5	0	-

Movement WBL WBR NBT NBR SBL SB	Intersection						
Movement WBL WBR NBT NBR SBL SBT Traffic Vol, veh/h 30 37 21 40 217 23 Future Vol, veh/h 30 37 21 40 217 23 Conflicting Peds, #/hr 0 0 0 0 0 0 0 0 Sign Control Stop Stop Free		.7					
Traffic Vol, veh/h 30 37 21 40 217 23 Future Vol, veh/h 30 37 21 40 217 23 Conflicting Peds, #/hr 0 0 0 0 0 0 0 Sign Control Stop Stop Free Free Free Free Free Free RT Channelized - None - None - None Storage Length 0 - <t< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>							
Future Vol, veh/h 30 37 21 40 217 23 Conflicting Peds, #/hr 0 0 0 0 0 0 0 0 Sign Control Stop Stop Free Free Free Free RT Channelized - None - None - None Storage Length 0	Movement	WBL	WBR	NBT	NBR	SBL	SBT
Conflicting Peds, #/hr 0 0 0 0 0 0 Sign Control Stop Stop Free	Traffic Vol, veh/h	30	37	21	40	217	23
Sign Control Stop Stop Free Round Allone Storage Length 0 - 0 - - 0 0 - 0 0 6 0 0 6 0 0 0 0 0 0 9 92 <td>Future Vol, veh/h</td> <td>30</td> <td>37</td> <td>21</td> <td>40</td> <td>217</td> <td>23</td>	Future Vol, veh/h	30	37	21	40	217	23
RT Channelized - None - None - None Storage Length 0 - - - - - - - - - - - - - - - 0 - - 0 - - 0 - - 0 - - 0 0 - 0 0 - 0 0 - 0 0 - 0 0 - 0 0 - 0 0 - 0 0 - 0 0 - 0 0 - 2	Conflicting Peds, #/hr	0	0	0	0	0	0
Storage Length 0 - - - - - - - - - - - - 0 - - 0 - - 0 - - 0 - - 0 0 - 0 0 - 0 0 - 0 0 Peak Hour Factor 92	Sign Control	Stop	Stop	Free	Free	Free	Free
Veh in Median Storage, # 0 - 0 - - 0 Grade, % 0 - 0 - - 0 Peak Hour Factor 92 92 92 92 92 92 Heavy Vehicles, % 2 <td< td=""><td>RT Channelized</td><td>-</td><td>None</td><td>-</td><td>None</td><td>-</td><td>None</td></td<>	RT Channelized	-	None	-	None	-	None
Grade, % 0 - 0 - - 0 Peak Hour Factor 92 93 93 93 93 93 93 93 93 93 93 93 93 94 92 92 94 92	Storage Length	0	-	-	-	-	-
Grade, % 0 - 0 - - 0 Peak Hour Factor 92 93 93 93 93 93 93 93 93 93 93 93 92 94 92 92	Veh in Median Storage	e, # 0	-	0	-	-	0
Heavy Vehicles, % 2			-	0	-	-	0
Mymt Flow 33 40 23 43 236 25 Major/Minor Minor1 Major1 Major2 Conflicting Flow All 542 45 0 0 66 0 Stage 1 45 - - - - - - Stage 2 497 - - - - - - Critical Hdwy 6.42 6.22 - - 4.12 - Critical Hdwy Stg 1 5.42 - - - - - Critical Hdwy Stg 2 5.42 - - - - - Critical Hdwy Stg 2 5.42 - - - - - Follow-up Hdwy 3.518 3.318 - - 2.218 - Pot Cap-1 Maneuver 501 1025 - - 1536 - Stage 2 611 - - - - - -	Peak Hour Factor	92	92	92	92	92	92
Major/Minor Minor1 Major1 Major2 Conflicting Flow All 542 45 0 0 66 0 Stage 1 45 -	Heavy Vehicles, %	2	2	2	2	2	2
Conflicting Flow All 542 45 0 0 66 0 Stage 1 45 - <t< td=""><td>Mvmt Flow</td><td>33</td><td>40</td><td>23</td><td>43</td><td>236</td><td>25</td></t<>	Mvmt Flow	33	40	23	43	236	25
Conflicting Flow All 542 45 0 0 66 0 Stage 1 45 - <t< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>							
Stage 1 45 -<	Major/Minor	Minor1		Major1		Major2	
Stage 2 497 -	Conflicting Flow All	542	45	0	0	66	0
Critical Hdwy 6.42 6.22 - - 4.12 - Critical Hdwy Stg 1 5.42 - - - - - Critical Hdwy Stg 2 5.42 - - - - - Follow-up Hdwy 3.518 3.318 - - 2.218 - Pot Cap-1 Maneuver 501 1025 - - 1536 - Stage 1 977 - - - - - Stage 2 611 - - - - - Platoon blocked, % - - - - - - Mov Cap-1 Maneuver 423 1025 - - 1536 - Mov Cap-2 Maneuver 423 - - - - -	Stage 1	45	-	-	-	-	-
Critical Hdwy Stg 1 5.42 - - - - Critical Hdwy Stg 2 5.42 - - - - Follow-up Hdwy 3.518 3.318 - - 2.218 - Pot Cap-1 Maneuver 501 1025 - - 1536 - Stage 1 977 - - - - - Stage 2 611 - - - - - Platoon blocked, % - - - - - - Mov Cap-1 Maneuver 423 1025 - - 1536 - Mov Cap-2 Maneuver 423 - - - - - -	Stage 2	497	-	-	-	-	-
Critical Hdwy Stg 2 5.42 - <td>Critical Hdwy</td> <td>6.42</td> <td>6.22</td> <td>-</td> <td>-</td> <td>4.12</td> <td>-</td>	Critical Hdwy	6.42	6.22	-	-	4.12	-
Follow-up Hdwy 3.518 3.318 - 2.218 - Pot Cap-1 Maneuver 501 1025 - 1536 - Stage 1 977 Stage 2 611 Platoon blocked, % Mov Cap-1 Maneuver 423 1025 - 1536 - Mov Cap-2 Maneuver 423	Critical Hdwy Stg 1	5.42	-	-	-	-	-
Pot Cap-1 Maneuver 501 1025 - - 1536 - Stage 1 977 - - - - - Stage 2 611 - - - - - Platoon blocked, % - - - - - Mov Cap-1 Maneuver 423 1025 - - 1536 - Mov Cap-2 Maneuver 423 - - - - - -	Critical Hdwy Stg 2	5.42	-	-	-	-	-
Stage 1 977 - - - - - Stage 2 611 - - - - Platoon blocked, % - - - - Mov Cap-1 Maneuver 423 1025 - - 1536 - Mov Cap-2 Maneuver 423 - - - - - -	Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Stage 2 611 - - - - Platoon blocked, % - - - - Mov Cap-1 Maneuver 423 1025 - - 1536 - Mov Cap-2 Maneuver 423 - - - - - -	Pot Cap-1 Maneuver	501	1025	-	-	1536	-
Platoon blocked, % - - - - Mov Cap-1 Maneuver 423 1025 - - 1536 - Mov Cap-2 Maneuver 423 - - - - - -	Stage 1	977	-	-	-	-	-
Mov Cap-1 Maneuver 423 1025 - - 1536 - Mov Cap-2 Maneuver 423 - - - - -	Stage 2	611	-	-	-	-	-
Mov Cap-2 Maneuver 423	Platoon blocked, %			-	-		-
	Mov Cap-1 Maneuver	423	1025	-	-	1536	-
Stage 1 977	Mov Cap-2 Maneuver	423	-	-	-	-	-
ouge i oii	Stage 1	977	-	-	-	-	-
Stage 2 516	Stage 2	516	-	-	-	-	-
Approach WB NB SB							
HCM Control Delay, s 11.5 0 7	-			0		7	
HCM LOS B	HCM LOS	В					

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	626	1536	-
HCM Lane V/C Ratio	-	-	0.116	0.154	-
HCM Control Delay (s)	-	-	11.5	7.8	0
HCM Lane LOS	-	-	В	Α	Α
HCM 95th %tile Q(veh)	-	-	0.4	0.5	-

Intersection						
	.3					
,						
	MACDI	14/55	NDT	NDD	0.01	0DT
Movement	WBL	WBR		NBR		SBT
Traffic Vol, veh/h	30	122	21	40	221	23
Future Vol, veh/h	30	122	21	40	221	23
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free			Free
RT Channelized	_	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage	e, # 0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	33	133	23	43	240	25
Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	550	45	0	0	66	0
Stage 1	45	-	-	_	-	_
Stage 2	505	-	_	_	_	_
Critical Hdwy	6.42	6.22	_	_	4.12	_
Critical Hdwy Stg 1	5.42	-	-	_	-	_
Critical Hdwy Stg 2	5.42	_	_	_	_	_
Follow-up Hdwy	3.518	3.318	_	_	2.218	_
Pot Cap-1 Maneuver	496	1025	-	_	1536	_
Stage 1	977	-	-	_	-	_
Stage 2	606	_	_	_	_	_
Platoon blocked, %	300	_		_		_
Mov Cap-1 Maneuver	418	1025		_	1536	_
Mov Cap-1 Maneuver	418	1025		_	1000	_
Stage 1	977	_			_	_
Stage 1	510	-	-	<u>-</u>	-	_
Stage 2	310		-	_	_	-
Approach	WB		NB		SB	
HCM Control Delay, s	10.7		0		7	
HCM LOS	В					

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	797	1536	-
HCM Lane V/C Ratio	-	-	0.207	0.156	-
HCM Control Delay (s)	-	-	10.7	7.8	0
HCM Lane LOS	-	-	В	Α	Α
HCM 95th %tile Q(veh)	-	-	0.8	0.6	-

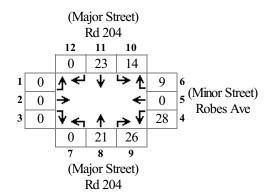
							•
Intersection							
Int Delay, s/veh 6	5.7						_
3 /							
Mariana	WDI	WDD	NDT	NDD	CDI	CDT	
Movement	WBL	WBR		NBR		SBT	_
Traffic Vol, veh/h	35	39	25	45	220	27	
Future Vol, veh/h	35	39	25	45	220	27	
Conflicting Peds, #/hr	0	0	_ 0	_ 0	_ 0	_ 0	
Sign Control	Stop	Stop	Free			Free	
RT Channelized	-	None	-	None	-	None	
Storage Length	0	-	-	-	-	-	
Veh in Median Storage		-	0	-	-	0	
Grade, %	0	-	0	-	-	0	
Peak Hour Factor	92	92	92	92	92	92	
Heavy Vehicles, %	2	2	2	2	2	2	
Mvmt Flow	38	42	27	49	239	29	
Major/Minor	Minor1		Major1		Major2		
Conflicting Flow All	560	52	0	0	76	0	
Stage 1	52	-	-	_	-	_	
Stage 2	508	-	-	-	-	-	
Critical Hdwy	6.42	6.22	-	_	4.12	_	
Critical Hdwy Stg 1	5.42	-	-	-	-	-	
Critical Hdwy Stg 2	5.42	-	-	-	-	-	
Follow-up Hdwy	3.518	3.318	-	-	2.218	-	
Pot Cap-1 Maneuver	489	1016	-	-	1523	_	
Stage 1	970	-	-	-	-	-	
Stage 2	604	-	-	-	-	-	
Platoon blocked, %			_	-		-	
Mov Cap-1 Maneuver	411	1016	-	-	1523	_	
Mov Cap-2 Maneuver	411	-	-	-	-	-	
Stage 1	970	-	-	-	-	-	
Stage 2	507	-	-	-	-	-	
Approach	WB		NB		SB		
HCM Control Delay, s	11.9		0		7		
HCM LOS	В				•		

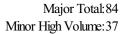
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	599	1523	-
HCM Lane V/C Ratio	-	-	0.134	0.157	-
HCM Control Delay (s)	-	-	11.9	7.8	0
HCM Lane LOS	-	-	В	Α	Α
HCM 95th %tile Q(veh)	-	-	0.5	0.6	-

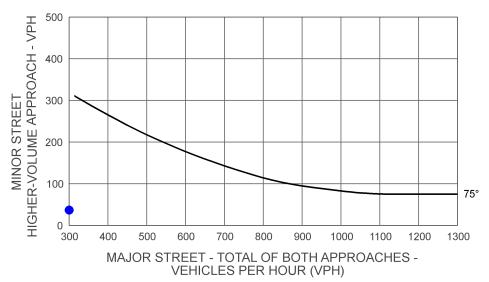
							-
Intersection							
	`.3						_
, , , , , , , , , , , , , , , , , , ,							
	VA/DI	MOD	NDT	NDD	ODI	ODT	Ξ
Movement	WBL	WBR		NBR		SBT	
Traffic Vol, veh/h	35	124	25	45	224	27	
Future Vol, veh/h	35	124	25	45	224	27	
Conflicting Peds, #/hr	0	0	0	0	0	0	
Sign Control	Stop	Stop	Free			Free	
RT Channelized	-	None	-	None	-	None	
Storage Length	0	-	-	-	-	-	
Veh in Median Storage	e, # 0	-	0	-	-	0	
Grade, %	0	-	0	-	-	0	
Peak Hour Factor	92	92	92	92	92	92	
Heavy Vehicles, %	2	2	2	2	2		
Mvmt Flow	38	135	27	49	243	29	
Major/Minor	Minor1		Major1		Major2		
Conflicting Flow All	568	52	0	0	76	0	
Stage 1	52	-	-	_	_	_	
Stage 2	516	_	-	_	-	_	
Critical Hdwy	6.42	6.22	-	_	4.12	_	
Critical Hdwy Stg 1	5.42	_	-	_	-	_	
Critical Hdwy Stg 2	5.42	_	_	_	-	_	
Follow-up Hdwy	3.518	3.318	_	-	2.218	_	
Pot Cap-1 Maneuver	484	1016	-	_	1523	_	
Stage 1	970	-	_	-	-	_	
Stage 2	599	_	_	_	_	_	
Platoon blocked, %	200		_	_		_	
Mov Cap-1 Maneuver	406	1016	-	_	1523	_	
Mov Cap-2 Maneuver	406	-	-	-	-	_	
Stage 1	970	_	_	_	_	_	
Stage 2	502	-	_	_	_	_	
Approach	WB		NB		SB		
	11.1		0		7		
HCM Control Delay, s HCM LOS	11.1 B		U		/		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	763	1523	-
HCM Lane V/C Ratio	-	-	0.227	0.16	-
HCM Control Delay (s)	-	-	11.1	7.8	0
HCM Lane LOS	-	-	В	Α	Α
HCM 95th %tile Q(veh)	-	-	0.9	0.6	-

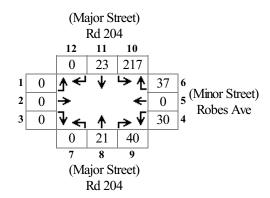
Scenario: AM Existing Intersection #:4

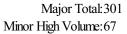


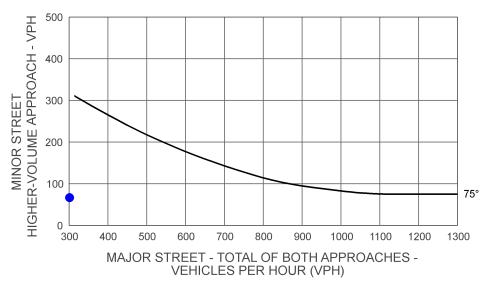




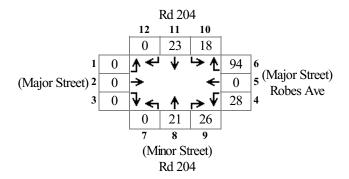
Scenario: AM Existing+Project Intersection #:4

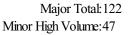


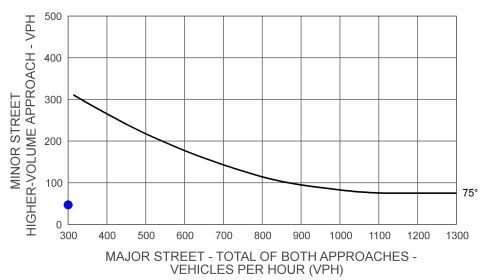




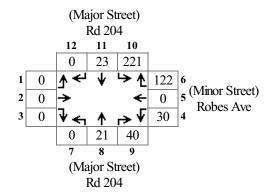
Scenario: AM Future Intersection #:4

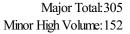


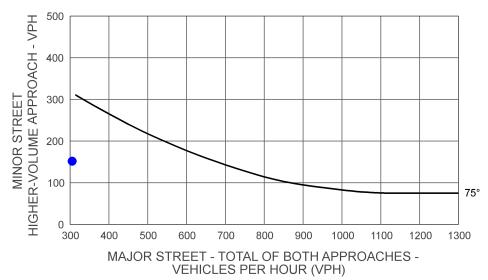




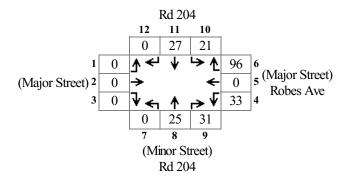
Scenario: AM Future+Project Intersection #:4

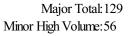


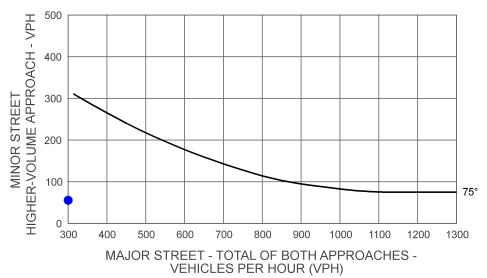




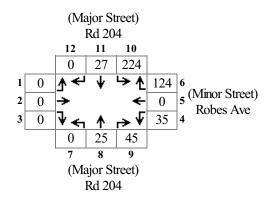
Scenario: AM Future Intersection #:4

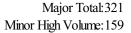


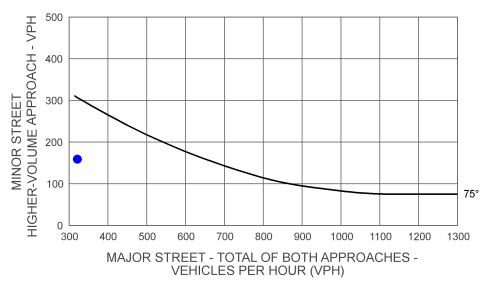




Scenario: AM Future+Project Intersection #:4







Intersection							
	.5						
N 4	WDI	WDD	NDT	NDD	ODI	ODT	
Movement	WBL	WBR		NBR		SBT	
Traffic Vol, veh/h	21	9	21	21	8	13	
Future Vol, veh/h	21	9	21	21	8	13	
Conflicting Peds, #/hr	0	0	0	0	0	0	
Sign Control	Stop	Stop	Free			Free	
RT Channelized	-	None	-	None	-	None	
Storage Length	0	-	-	-	-	-	
Veh in Median Storage		-	0	-	-	0	
Grade, %	0	-	0	-	-	0	
Peak Hour Factor	92	92	92	92	92	92	
Heavy Vehicles, %	2	2	2	2	2	2	
Mvmt Flow	23	10	23	23	9	14	
Major/Minor	Minor1		Major1		Major2		
Conflicting Flow All	66	34	0	0	46	0	
Stage 1	34	-	-	_	_	_	
Stage 2	32	_	_	-	_	-	
Critical Hdwy	6.42	6.22	_	_	4.12	_	
Critical Hdwy Stg 1	5.42	-	_	_	_	-	
Critical Hdwy Stg 2	5.42	_	-	_	-	_	
Follow-up Hdwy	3.518	3.318	-	_	2.218	-	
Pot Cap-1 Maneuver	939	1039	-	_	1562	_	
Stage 1	988	-	_	_	-	-	
Stage 2	991	-	-	_	_	_	
Platoon blocked, %			-	_		_	
Mov Cap-1 Maneuver	933	1039	-	_	1562	_	
Mov Cap-2 Maneuver	933	-	-	_	-	_	
Stage 1	988	-	-	_	<u>-</u>	_	
Stage 2	985	-	_	_	_	_	
Cayo Z	500						
A	14/0		N.		- 07		
Approach	WB		NB		SB		
HCM Control Delay, s	8.9		0		2.8		
HCM LOS	Α						

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	962	1562	-
HCM Lane V/C Ratio	-	-	0.034	0.006	-
HCM Control Delay (s)	-	-	8.9	7.3	0
HCM Lane LOS	-	-	Α	Α	Α
HCM 95th %tile Q(veh)	-	-	0.1	0	-

Interception						
Intersection	E					
Int Delay, s/veh	5					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Traffic Vol, veh/h	21	21	21	21	40	13
Future Vol, veh/h	21	21	21	21	40	13
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage	e, # 0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	23	23	23	23	43	14
Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	135	34	0	0	46	0
Stage 1	34	-	-	-	-	-
Stage 2	101	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	859	1039	-	-	1562	-
Stage 1	988	-	-	-	-	-
Stage 2	923	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	835	1039	-	-	1562	-
Mov Cap-2 Maneuver	835	-	-	-	-	-
Stage 1	988	-	-	-	-	-
Stage 2	897	-	-	-	-	-
Approach	WB		NB		SB	
HCM Control Delay, s	9.1		0		5.6	
HCM LOS	Α					

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	926	1562	-
HCM Lane V/C Ratio	-	-	0.049	0.028	-
HCM Control Delay (s)	-	-	9.1	7.4	0
HCM Lane LOS	-	-	А	Α	Α
HCM 95th %tile Q(veh)	-	-	0.2	0.1	-

-							
Intersection							
	3.1						
= 5.5.7, 5.75							
Movement	WBL	WBR		NBR		SBT	
Traffic Vol, veh/h	40	224	21	23	37	13	
Future Vol, veh/h	40	224	21	23	37	13	
Conflicting Peds, #/hr	0	0	0	0	0	0	
Sign Control	Stop	Stop	Free			Free	
RT Channelized	-	None	-	None	-	None	
Storage Length	0	-	-	-	-	-	
Veh in Median Storage	e, # 0	-	0	-	-	0	
Grade, %	0	-	0	-	-	0	
Peak Hour Factor	92	92	92	92	92	92	
Heavy Vehicles, %	2	2	2	2	2		
Mvmt Flow	43	243	23	25	40	14	
Major/Minor	Minor1		Major1		Major2		
Conflicting Flow All	130	35	0	0	48	0	
Stage 1	35	-	-	-	-	_	
Stage 2	95	_	_	_	-	-	
Critical Hdwy	6.42	6.22	_	_	4.12	_	
Critical Hdwy Stg 1	5.42	_	_	_	-	-	
Critical Hdwy Stg 2	5.42	_	-	_	-	_	
Follow-up Hdwy	3.518	3.318	_	-	2.218	_	
Pot Cap-1 Maneuver	864	1038	-	_	1559	_	
Stage 1	987	-	_	-	-	-	
Stage 2	929	_	-	_	-	_	
Platoon blocked, %			-	-		_	
Mov Cap-1 Maneuver	842	1038	_	_	1559	_	
Mov Cap-2 Maneuver	842	-	-	-	-	-	
Stage 1	987	-	-	_	-	_	
Stage 2	905	_	_	_	-	_	
Approach	WB		NB		SB		
	10		0		5.5		
HCM Control Delay, s	10		U		5.5		
HCM LOS	В						

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	1003	1559	-
HCM Lane V/C Ratio	-	-	0.286	0.026	-
HCM Control Delay (s)	-	-	10	7.4	0
HCM Lane LOS	-	-	В	Α	Α
HCM 95th %tile Q(veh)	-	-	1.2	0.1	-

							-
Intersection							
Int Delay, s/veh 8	.3						_
•							
N. 4	MAIDI	WDD	NDT	NDD	ODI	ODT	
Movement	WBL	WBR		NBR	SBL	SBT	_
Traffic Vol, veh/h	40	236	21	23	69	13	
Future Vol, veh/h	40	236	21	23	69	13	
Conflicting Peds, #/hr	0	0	_ 0	_ 0	_ 0	_ 0	
Sign Control	Stop	Stop	Free			Free	
RT Channelized	-	None	-	None	-	None	
Storage Length	0	-	-	-	-	-	
Veh in Median Storage		-	0	-	-	0	
Grade, %	0	-	0	-	-	0	
Peak Hour Factor	92	92	92	92	92	92	
Heavy Vehicles, %	2	2	2	2	2		
Mvmt Flow	43	257	23	25	75	14	
Major/Minor	Minor1		Major1		Major2		
Conflicting Flow All	199	35	0	0	48	0	
Stage 1	35	-	-	-	_	-	
Stage 2	164	-	-	_	-	-	
Critical Hdwy	6.42	6.22	-	-	4.12	-	
Critical Hdwy Stg 1	5.42	-	-	-	-	-	
Critical Hdwy Stg 2	5.42	-	-	-	-	-	
Follow-up Hdwy	3.518	3.318	-	_	2.218	-	
Pot Cap-1 Maneuver	790	1038	-	-	1559	-	
Stage 1	987	-	-	-	-	-	
Stage 2	865	-	-	-	-	-	
Platoon blocked, %			-	-		-	
Mov Cap-1 Maneuver	752	1038	-	-	1559	-	
Mov Cap-2 Maneuver	752	-	-	-	-	-	
Stage 1	987	-	-	_	-	-	
Stage 2	823	-	-	-	-	-	
- U							
Approach	WB		NB		SB		
HCM Control Delay, s	10.3		0		6.2		
HCM LOS	10.3 B		U		0.2		
	В						

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	984	1559	-
HCM Lane V/C Ratio	-	-	0.305	0.048	-
HCM Control Delay (s)	-	-	10.3	7.4	0
HCM Lane LOS	-	-	В	Α	Α
HCM 95th %tile Q(veh)	-	-	1.3	0.2	-

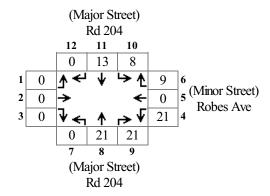
Intersection						
	.1					
, , , , , ,						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Traffic Vol, veh/h	44	226	25	27	39	16
Future Vol, veh/h	44	226	25	27	39	16
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage	e, # 0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	48	246	27	29	42	17
Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	144	42	0	0	57	0
Stage 1	42	-	-	-	-	-
Stage 2	102	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	849	1029	-	-	1547	-
Stage 1	980	-	-	-	-	-
Stage 2	922	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	826	1029	-	-	1547	-
Mov Cap-2 Maneuver	826	-	-	-	-	-
Stage 1	980	-	-	-	-	-
Stage 2	897	-	-	-	-	-
Approach	WB		NB		SB	
HCM Control Delay, s	10.2		0		5.2	
HCM LOS	В					

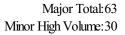
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	989	1547	-
HCM Lane V/C Ratio	-	-	0.297	0.027	-
HCM Control Delay (s)	-	-	10.2	7.4	0
HCM Lane LOS	-	-	В	Α	Α
HCM 95th %tile Q(veh)	-	-	1.2	0.1	-

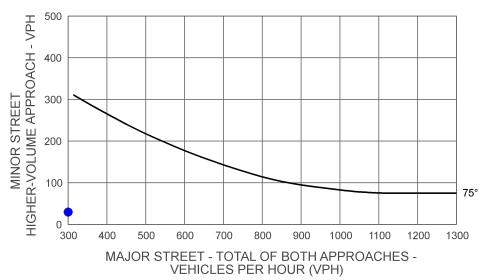
Intersection							
Int Delay, s/veh 8	.2						
N. 4	MDI	WDD	NDT	NDD	ODI	ODT	
Movement	WBL	WBR	NBT		SBL	SBT	
Traffic Vol, veh/h	44	238	25	27	71	16	
Future Vol, veh/h	44	238	25	27	71	16	
Conflicting Peds, #/hr	0	0	0	_ 0	_ 0	_ 0	
Sign Control	Stop	Stop	Free			Free	
RT Channelized	-	None	-	None	-	None	
Storage Length	0	-	-	-	-	-	
Veh in Median Storage		-	0	-	-	0	
Grade, %	0	-	0	-	-	0	
Peak Hour Factor	92	92	92	92	92	92	
Heavy Vehicles, %	2	2	2	2	2	2	
Mvmt Flow	48	259	27	29	77	17	
Major/Minor	Minor1		Major1		Major2		
Conflicting Flow All	214	42	0	0	57	0	
Stage 1	42	-	-	-	_	-	
Stage 2	172	-	-	_	-	-	
Critical Hdwy	6.42	6.22	-	-	4.12	-	
Critical Hdwy Stg 1	5.42	-	-	_	-	-	
Critical Hdwy Stg 2	5.42	-	-	-	-	-	
Follow-up Hdwy	3.518	3.318	-	_	2.218	-	
Pot Cap-1 Maneuver	774	1029	-	-	1547	-	
Stage 1	980	-	-	-	-	-	
Stage 2	858	-	-	-	-	-	
Platoon blocked, %			_	-		-	
Mov Cap-1 Maneuver	735	1029	-	-	1547	-	
Mov Cap-2 Maneuver	735	-	-	-	-	-	
Stage 1	980	-	-	-	-	-	
Stage 2	815	-	-	-	-	-	
Approach	WB		NB		SB		
HCM Control Delay, s	10.4		0		6.1		
TION CONTINUIDEIAV. S							
HCM LOS	10.4 B		U		0.1		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	969	1547	-
HCM Lane V/C Ratio	-	-	0.316	0.05	-
HCM Control Delay (s)	-	-	10.4	7.4	0
HCM Lane LOS	-	-	В	Α	Α
HCM 95th %tile Q(veh)	-	-	1.4	0.2	-

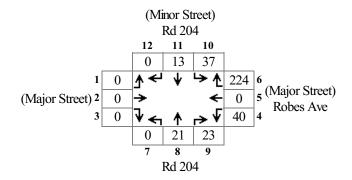
Scenario: PM Existing Intersection #:4

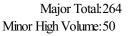


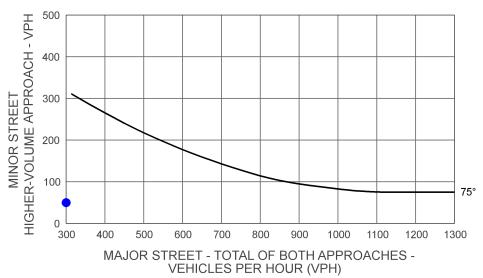




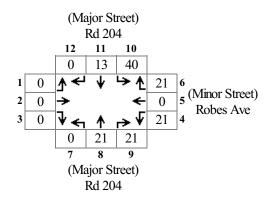
Scenario: PM Existing+Project Intersection #:4

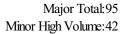


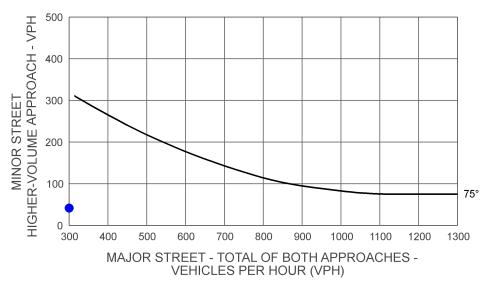




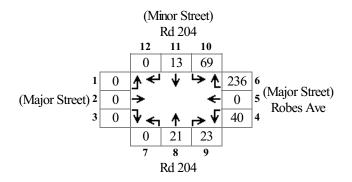
Scenario: PM Future Intersection #:4

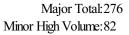


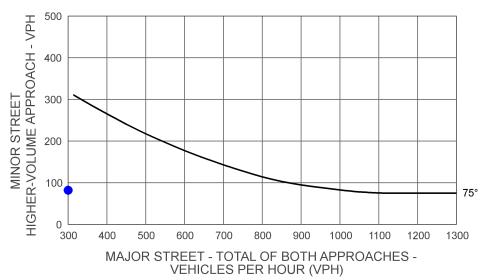




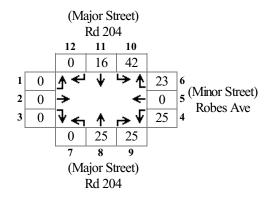
Scenario: PM Future+Project Intersection #:4

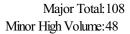


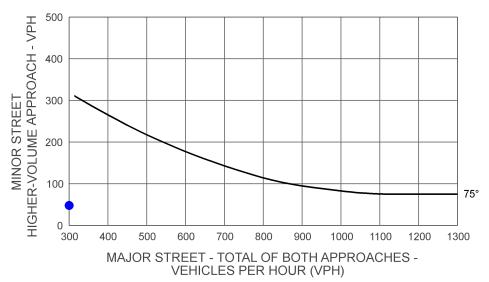




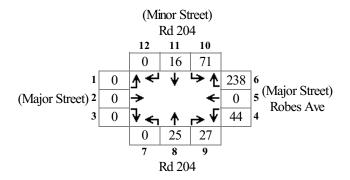
Scenario: PM Future Intersection #:4

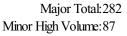


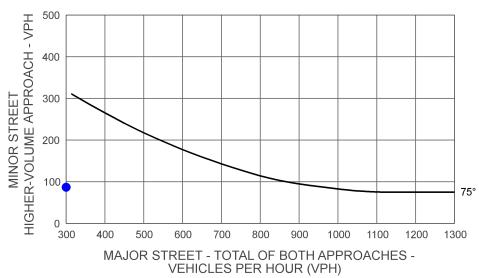




Scenario: PM Future+Project Intersection #:4







Traffic Study 524-10

Intersection 5 Valencia Blvd & Robes Ave



Int Delay, s/veh
Movement EBL EBR NBL NBT SBT SBR
Traffic Vol, veh/h 30 13 9 183 173 16 Future Vol, veh/h 30 13 9 183 173 16 Conflicting Peds, #/hr 0 0 0 0 0 0 Sign Control Stop Stop Free Free Free Free Ree Ree
Traffic Vol, veh/h 30 13 9 183 173 16 Future Vol, veh/h 30 13 9 183 173 16 Conflicting Peds, #/hr 0 0 0 0 0 0 Sign Control Stop Stop Free Free Free Free Ree Ree
Traffic Vol, veh/h 30 13 9 183 173 16 Future Vol, veh/h 30 13 9 183 173 16 Conflicting Peds, #/hr 0 0 0 0 0 0 Sign Control Stop Stop Free Free Free Free Ree Ree
Future Vol, veh/h 30 13 9 183 173 16 Conflicting Peds, #/hr 0 0 0 0 0 0 0 0 Sign Control Stop Stop Free Free Free Free Free RT Channelized - None - None - None - None Storage Length 0
Conflicting Peds, #/hr 0 0 0 0 0 0 Sign Control Stop Stop Free Free Free Free RT Channelized - None -
Sign Control Stop Stop Free Free Free Free RT Channelized - None - None - None Storage Length 0 0 0 0 Veh in Median Storage, # 0 0 0 0 0 0 Grade, % 0 0 0 0 0 0 Peak Hour Factor 92<
RT Channelized - None - None - None Storage Length 0
Storage Length 0 -
Veh in Median Storage, # 0 - - 0 0 - Grade, % 0 - - 0 0 - Peak Hour Factor 92 92 92 92 92 92 Heavy Vehicles, % 2 3 3 14 10 199 188 17 17 10 10 188 17 17 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10
Grade, % 0 - - 0 0 - Peak Hour Factor 92 92 92 92 92 Heavy Vehicles, % 2 3
Peak Hour Factor 92
Heavy Vehicles, % 2
Mymt Flow 33 14 10 199 188 17 Major/Minor Minor2 Major1 Major2 Conflicting Flow All 415 197 205 0 - 0 Stage 1 197 - - - - - Stage 2 218 - - - - - Critical Hdwy 6.42 6.22 4.12 - - - Critical Hdwy Stg 1 5.42 - - - - - Critical Hdwy Stg 2 5.42 - - - - - Follow-up Hdwy 3.518 3.318 2.218 - - - Pot Cap-1 Maneuver 594 844 1366 - - - Stage 1 836 - - - - - Platoon blocked, % - - - - - Mov Cap-2 Maneuver 589 <td< td=""></td<>
Major/Minor Minor2 Major1 Major2 Conflicting Flow All 415 197 205 0 - 0 Stage 1 197 -
Conflicting Flow All 415 197 205 0 - 0 Stage 1 197 - - - - - - Stage 2 218 - <t< td=""></t<>
Conflicting Flow All 415 197 205 0 - 0 Stage 1 197 - - - - - - Stage 2 218 - <t< td=""></t<>
Stage 1 197 - - - - - Stage 2 218 - - - - - Critical Hdwy 6.42 6.22 4.12 - - - Critical Hdwy Stg 1 5.42 - - - - - Critical Hdwy Stg 2 5.42 - - - - - Follow-up Hdwy 3.518 3.318 2.218 - - - Pot Cap-1 Maneuver 594 844 1366 - - - Stage 1 836 - - - - - Platoon blocked, % - - - - - Mov Cap-1 Maneuver 589 844 1366 - - - Mov Cap-2 Maneuver 589 - - - - - Stage 1 836 - - - - - - Stage 1 836 - - - - - - -
Stage 2 218 - - - - - Critical Hdwy 6.42 6.22 4.12 - - - Critical Hdwy Stg 1 5.42 - - - - - Critical Hdwy Stg 2 5.42 - - - - - Follow-up Hdwy 3.518 3.318 2.218 - - - Pot Cap-1 Maneuver 594 844 1366 - - - Stage 1 836 - - - - - Stage 2 818 - - - - - Mov Cap-1 Maneuver 589 844 1366 - - - Mov Cap-2 Maneuver 589 - - - - - Stage 1 836 - - - - - - - Stage 1 836 - - - - - - - - - - - - - -
Critical Hdwy 6.42 6.22 4.12 - - - Critical Hdwy Stg 1 5.42 - - - - - Critical Hdwy Stg 2 5.42 - - - - - Follow-up Hdwy 3.518 3.318 2.218 - - - Pot Cap-1 Maneuver 594 844 1366 - - - Stage 1 836 - - - - - Stage 2 818 - - - - - Platoon blocked, % - - - - - Mov Cap-1 Maneuver 589 844 1366 - - - Mov Cap-2 Maneuver 589 - - - - - Stage 1 836 - - - - -
Critical Hdwy Stg 1 5.42
Critical Hdwy Stg 2 5.42 - - - - Follow-up Hdwy 3.518 3.318 2.218 - - Pot Cap-1 Maneuver 594 844 1366 - - Stage 1 836 - - - - Stage 2 818 - - - - Platoon blocked, % - - - - Mov Cap-1 Maneuver 589 844 1366 - - - Mov Cap-2 Maneuver 589 - - - - - Stage 1 836 - - - - - -
Follow-up Hdwy 3.518 3.318 2.218
Pot Cap-1 Maneuver 594 844 1366
Stage 1 836 -
Stage 2 818 - - - - - Platoon blocked, % - - - - - Mov Cap-1 Maneuver 589 844 1366 - - - Mov Cap-2 Maneuver 589 - - - - - Stage 1 836 - - - - -
Platoon blocked, % - - - - Mov Cap-1 Maneuver 589 844 1366 - - - Mov Cap-2 Maneuver 589 - - - - - - Stage 1 836 - - - - - - -
Mov Cap-1 Maneuver 589 844 1366 - - - Mov Cap-2 Maneuver 589 - - - - - - Stage 1 836 - - - - - -
Mov Cap-2 Maneuver 589
Stage 1 836
Otana 0 044
Stage 2 811
Approach EB NB SB
HCM Control Delay, s 11 0.4 0
HCM LOS B

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1366	-	648	-	-
HCM Lane V/C Ratio	0.007	-	0.072	-	-
HCM Control Delay (s)	7.7	0	11	-	-
HCM Lane LOS	Α	Α	В	-	_
HCM 95th %tile Q(veh)	0	-	0.2	-	-

Intersection						
Int Delay, s/veh 2	.6					
-						
Movement	EBL	EBR	NBL	NBT	SBT	SBB
	30	17	94		177	16
Traffic Vol, veh/h				190		
Future Vol, veh/h	30	17	94	190	177	16
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free		Free	
RT Channelized	-	None		None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage		-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	33	18	102	207	192	17
Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	612	201	210	0	-	0
Stage 1	201	-	-	-	-	-
Stage 2	411	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	_	-	-	-
Critical Hdwy Stg 2	5.42	-	_	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	456	840	1361	-	-	-
Stage 1	833	-	-	-	-	-
Stage 2	669	-	-	-	-	_
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	417	840	1361	-	-	-
Mov Cap-2 Maneuver	417	_	-	-	-	-
Stage 1	833	-	-	-	-	-
Stage 2	612	_	-	-	-	-
<u> </u>						
Approach	EB		NB		SB	
HCM Control Delay, s	12.8		2.6		0	
HCM LOS	12.0 B		2.0		U	
I IOIVI LOS	Б					

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1361	-	510	-	-
HCM Lane V/C Ratio	0.075	-	0.1	-	-
HCM Control Delay (s)	7.9	0	12.8	-	-
HCM Lane LOS	Α	Α	В	-	-
HCM 95th %tile Q(veh)	0.2	-	0.3	-	-

Intersection						
	1.7					
, .						
Movement	EBL	EBR	NBL	NBT	SBT	
Traffic Vol, veh/h	31	16	37	200	178	
Future Vol, veh/h	31	16	37	200	178	
Conflicting Peds, #/hr	. 0	0	0	0	0	
Sign Control	Stop	Stop	Free	Free	Free	Fre
RT Channelized	-	None	- 1	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storag	e, # 0	-	_	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	34	17	40	217	193	25
Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	504	206	218	0	-	0
Stage 1	206	-	-	-	-	-
Stage 2	298	-	_	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	_	-	_	_
Critical Hdwy Stg 2	F 40					
Orthodr Flawy Olg 2	5.42	-	-	-	-	-
Follow-up Hdwy	5.42 3.518	- 3.318	- 2.218	-	-	- -
				- - -	- - -	- - -
Follow-up Hdwy	3.518	3.318	2.218	-	- - - -	-
Follow-up Hdwy Pot Cap-1 Maneuver	3.518 528	3.318 835	2.218 1352	-	- - - - -	- -
Follow-up Hdwy Pot Cap-1 Maneuver Stage 1	3.518 528 829	3.318 835 -	2.218 1352 -	- - -	- - - - -	- - -
Follow-up Hdwy Pot Cap-1 Maneuver Stage 1 Stage 2	3.518 528 829	3.318 835 -	2.218 1352 -	- - -	- - - - - -	- - -
Follow-up Hdwy Pot Cap-1 Maneuver Stage 1 Stage 2 Platoon blocked, %	3.518 528 829 753	3.318 835 - -	2.218 1352 - -	- - - -	- - - - - - -	- - -
Follow-up Hdwy Pot Cap-1 Maneuver Stage 1 Stage 2 Platoon blocked, % Mov Cap-1 Maneuver	3.518 528 829 753	3.318 835 - - 835	2.218 1352 - - 1352	- - - - -	- - - - - - - -	- - - - -
Follow-up Hdwy Pot Cap-1 Maneuver Stage 1 Stage 2 Platoon blocked, % Mov Cap-1 Maneuver Mov Cap-2 Maneuver	3.518 528 829 753 510 510	3.318 835 - - 835	2.218 1352 - - 1352	- - - - -	- - - - - - - -	- - - - -
Follow-up Hdwy Pot Cap-1 Maneuver Stage 1 Stage 2 Platoon blocked, % Mov Cap-1 Maneuver Mov Cap-2 Maneuver Stage 1	3.518 528 829 753 510 510 829	3.318 835 - - 835 -	2.218 1352 - - 1352 -	-	- - - - - - - -	- - - -
Follow-up Hdwy Pot Cap-1 Maneuver Stage 1 Stage 2 Platoon blocked, % Mov Cap-1 Maneuver Mov Cap-2 Maneuver Stage 1 Stage 2 Approach	3.518 528 829 753 510 510 829 727	3.318 835 - - 835 -	2.218 1352 - - 1352 - - -	-	- - - - - - - - - SB	- - - - -
Follow-up Hdwy Pot Cap-1 Maneuver Stage 1 Stage 2 Platoon blocked, % Mov Cap-1 Maneuver Mov Cap-2 Maneuver Stage 1 Stage 2	3.518 528 829 753 510 510 829 727	3.318 835 - - 835 -	2.218 1352 - - 1352 - -	-	- - - - - - - - - - SB	- - - - -

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1352	-	588	-	_
HCM Lane V/C Ratio	0.03	-	0.087	-	-
HCM Control Delay (s)	7.7	0	11.7	-	-
HCM Lane LOS	Α	Α	В	-	_
HCM 95th %tile Q(veh)	0.1	-	0.3	-	-

Movement EBL EBR NBL NBT SBT SBR Traffic Vol, veh/h 31 20 122 207 182 23 23 24 207 182 23 23 24 207 23 24 24 24 25 25 25 24 24	Intersection						
Movement EBL EBR NBL NBT SBT SBR		.9					
Traffic Vol, veh/h 31 20 122 207 182 23 Future Vol, veh/h 31 20 122 207 182 23 Conflicting Peds, #/hr 0 0 0 0 0 0 0 0 0 Sign Control Stop Stop Free Free Free Free Free Free Free Fre							
Future Vol, veh/h 31 20 122 207 182 23 Conflicting Peds, #/hr 0 0 0 0 0 0 0 0 0 0 0 0 Sign Control Stop Stop Free Free Free Free Free Free Free Fre	Movement	EBL	EBR	NBL	NBT	SBT	SBR
Conflicting Peds, #/hr 0 0 0 0 0 0 Sign Control Stop Stop Free Free	Traffic Vol, veh/h	31	20	122	207	182	23
Sign Control Stop Stop Free Free Free Free Free Free RT Channelized - None - None - None Storage Length 0 0 0 Veh in Median Storage, # 0 0 0 0 Grade, % 0 0 0 0 0 Peak Hour Factor 92 92	Future Vol, veh/h	31	20	122	207	182	23
RT Channelized - None - None - None Storage Length 0	Conflicting Peds, #/hr	0	0	0	0	0	0
Storage Length 0	Sign Control	Stop	Stop	Free	Free	Free	Free
Weh in Median Storage, # 0 - - 0 0 - Grade, % 0 - - 0 0 - - 0 0 - - 0 0 - - 0 0 - - 0 0 - - 0 0 - - 0 2 92	RT Channelized	-	None	-	None	-	None
Grade, % 0 - - 0 0 - Peak Hour Factor 92	Storage Length	0	-	-	-	-	-
Grade, % 0 - - 0 0 - Peak Hour Factor 92	Veh in Median Storage	e, # 0	-	_	0	0	-
Heavy Vehicles, % 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	Grade, %		-	-	0	0	-
Myrnt Flow 34 22 133 225 198 25 Major/Minor Minor2 Major1 Major2 Conflicting Flow All 700 210 223 0 - 0 Stage 1 210 - - - - - - - Stage 2 490 -	Peak Hour Factor	92	92	92	92	92	92
Major/Minor Minor2 Major1 Major2 Conflicting Flow All 700 210 223 0 - 0 Stage 1 210 -	Heavy Vehicles, %	2	2	2	2	2	2
Conflicting Flow All 700 210 223 0 - 0 Stage 1 210 -	Mvmt Flow	34	22	133	225	198	25
Conflicting Flow All 700 210 223 0 - 0 Stage 1 210 -							
Stage 1 210 -	Major/Minor	Minor2		Major1		Major2	
Stage 2 490 -	Conflicting Flow All	700	210	223	0	-	0
Critical Hdwy 6.42 6.22 4.12 - - - - Critical Hdwy Stg 1 5.42 - - - - - - Critical Hdwy Stg 2 5.42 - - - - - - Follow-up Hdwy 3.518 3.318 2.218 - - - - Pot Cap-1 Maneuver 405 830 1346 - - - - - Stage 1 825 - <t< td=""><td>Stage 1</td><td>210</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td></t<>	Stage 1	210	-	-	-	-	-
Critical Hdwy Stg 1 5.42 - - - - Critical Hdwy Stg 2 5.42 - - - - Follow-up Hdwy 3.518 3.318 2.218 - - - Pot Cap-1 Maneuver 405 830 1346 - - - Stage 1 825 - - - - - Stage 2 616 - - - - - Platoon blocked, % - - - - - Mov Cap-1 Maneuver 359 830 1346 - - - Stage 1 825 - - - - - Stage 2 546 - - - - - Approach EB NB NB NB HCM Control Delay, s 13.9 3 0	Stage 2	490	-	-	-	-	-
Critical Hdwy Stg 2 5.42 - <td>Critical Hdwy</td> <td>6.42</td> <td>6.22</td> <td>4.12</td> <td>-</td> <td>-</td> <td>-</td>	Critical Hdwy	6.42	6.22	4.12	-	-	-
Follow-up Hdwy 3.518 3.318 2.218	Critical Hdwy Stg 1	5.42	-	-	-	-	-
Pot Cap-1 Maneuver 405 830 1346 - - - Stage 1 825 - - - - Stage 2 616 - - - - Platoon blocked, % - - - - Mov Cap-1 Maneuver 359 830 1346 - - - Mov Cap-2 Maneuver 359 - - - - - - Stage 1 825 - - - - - - Stage 2 546 - - - - - - Approach EB NB NB NB HCM Control Delay, s 13.9 3 0	Critical Hdwy Stg 2	5.42	-	-	-	-	-
Stage 1 825 -	Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Stage 2 616 -	Pot Cap-1 Maneuver	405	830	1346	-	-	-
Platoon blocked, %	Stage 1	825	-	-	-	-	-
Mov Cap-1 Maneuver 359 830 1346 - - - Mov Cap-2 Maneuver 359 - - - - - Stage 1 825 - - - - - Stage 2 546 - - - - - Approach EB NB SB HCM Control Delay, s 13.9 3 0	Stage 2	616	-	-	-	-	-
Mov Cap-2 Maneuver 359 -	Platoon blocked, %				-	-	-
Stage 1 825 - - - - - Stage 2 546 - - - - - - Approach EB NB SB HCM Control Delay, s 13.9 3 0	Mov Cap-1 Maneuver	359	830	1346	-	-	-
Stage 2 546 -	Mov Cap-2 Maneuver	359	-	-	-	-	-
Approach EB NB SB HCM Control Delay, s 13.9 3 0	Stage 1	825	-	-	-	-	-
HCM Control Delay, s 13.9 3 0	Stage 2	546	-	-	-	-	-
HCM Control Delay, s 13.9 3 0							
	Approach						
HCM LOS B	HCM Control Delay, s			3		0	
	HCM LOS	В					

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1346	-	462	-	-
HCM Lane V/C Ratio	0.099	-	0.12	_	-
HCM Control Delay (s)	8	0	13.9	-	-
HCM Lane LOS	Α	Α	В	-	-
HCM 95th %tile Q(veh)	0.3	-	0.4	-	-

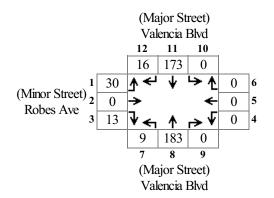
Intersection						
Int Delay, s/veh 1	.7					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Traffic Vol, veh/h	34	17	39	232	211	26
Future Vol, veh/h	34	17	39	232	211	26
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage	e, # 0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	37	18	42	252	229	28
Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	580	243	258	0	-	0
Stage 1	243	-	-	-	-	-
Stage 2	337	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	477	796	1307	-	-	-
Stage 1	797	-	-	-	-	-
Stage 2	723	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	459	796	1307	-	-	-
Mov Cap-2 Maneuver	459	-	-	-	-	-
Stage 1	797	-	-	-	-	-
Stage 2	696	-	-	-	-	-
Approach	EB		NB		SB	
HCM Control Delay, s	12.5		1.1		0	
HCM LOS	В					

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1307	-	534	-	-
HCM Lane V/C Ratio	0.032	-	0.104	-	-
HCM Control Delay (s)	7.8	0	12.5	-	-
HCM Lane LOS	Α	Α	В	-	-
HCM 95th %tile Q(veh)	0.1	-	0.3	-	-

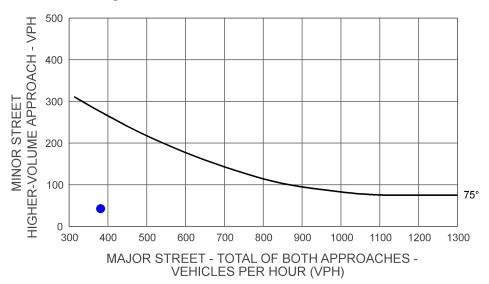
Intersection							
Int Delay, s/veh 2	.8						
Movement	EBL	EBR	NBL	NBT	SBT	SBR	
Traffic Vol, veh/h	34	21		239	215	26	
Future Vol, veh/h	34	21		239	215	26	
Conflicting Peds, #/hr	0	0	0	0	0	0	
Sign Control	Stop	Stop	Free		Free	_	
RT Channelized	-	None		None		None	
Storage Length	0	-	-	-	-	-	
Veh in Median Storage	e, # 0	-	-	0	0	-	
Grade, %	0	-	-	0	0	_	
Peak Hour Factor	92	92	92	92	92	92	
Heavy Vehicles, %	2	2	2	2	2	2	
Mvmt Flow	37	23	135	260	234	28	
Major/Minor	Minor2		Major1		Major2		
Conflicting Flow All	777	248	262	0	-	0	
Stage 1	248	-	-	-	_	-	
Stage 2	529	-	-	-	-	-	
Critical Hdwy	6.42	6.22	4.12	_		-	
Critical Hdwy Stg 1	5.42	-	-	_	-	-	
Critical Hdwy Stg 2	5.42	-	-	-	-	_	
Follow-up Hdwy	3.518	3.318	2.218	-	-	-	
Pot Cap-1 Maneuver	365	791	1302	-	-	-	
Stage 1	793	-	-	-	-	-	
Stage 2	591	-	-	-	-	-	
Platoon blocked, %				-	-	-	
Mov Cap-1 Maneuver	321	791	1302	-	-	-	
Mov Cap-2 Maneuver	321	-	-	-	-	-	
Stage 1	793	-	-	-	-	-	
Stage 2	519	-	-	-	-	-	
Approach	EB		NB		SB		
HCM Control Delay, s	15.1		2.8		0		
HCM LOS	С						

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1302	-	415	-	-
HCM Lane V/C Ratio	0.104	-	0.144	-	-
HCM Control Delay (s)	8.1	0	15.1	-	-
HCM Lane LOS	Α	Α	С	-	-
HCM 95th %tile Q(veh)	0.3	-	0.5	-	-

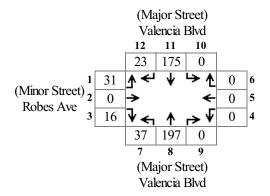
Scenario: AM Existing Intersection #:5



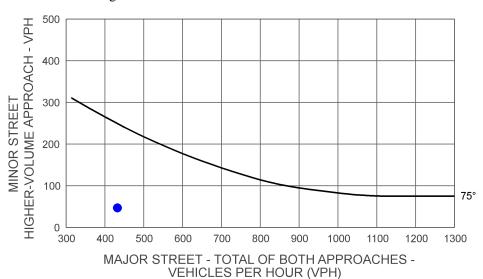
Major Total: 381 Minor High Volume: 43



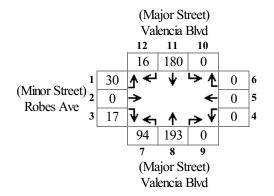
Scenario: AM Existing+Project Intersection #:5



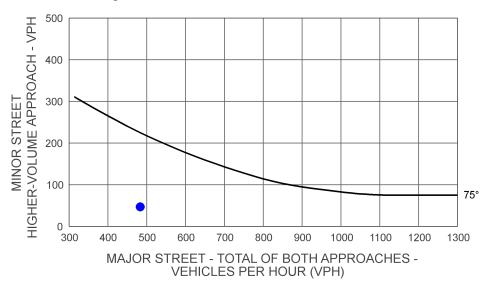
Major Total:432 Minor High Volume:47



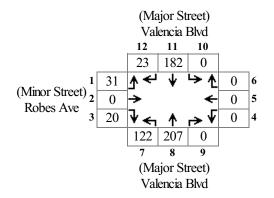
Scenario: AM Future Intersection #:5



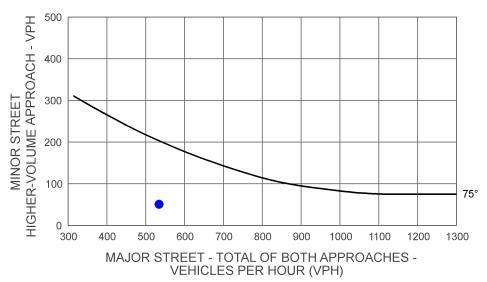
Major Total: 483 Minor High Volume: 47



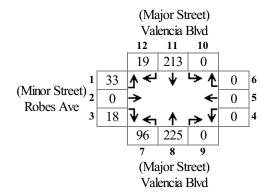
Scenario: AM Future+Project Intersection #:5



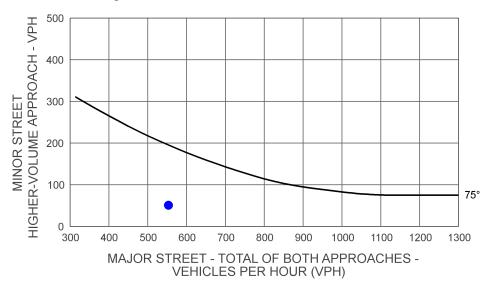
Major Total: 534 Minor High Volume: 51



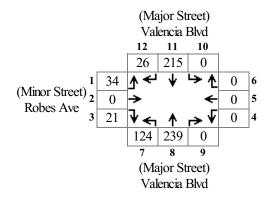
Scenario: AM Future Intersection #:5



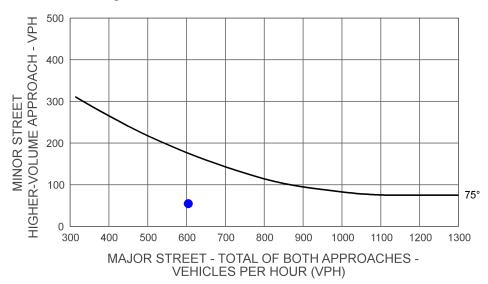
Major Total: 553 Minor High Volume: 51



Scenario: AM Future+Project Intersection #:5



Major Total: 604 Minor High Volume: 55



Intersection						
	.2					
. = 5.5., 5.15.1						
M	EDI	EDD	ND	NDT	ODT	ODD
Movement	EBL	EBR	NBL			SBR
Traffic Vol, veh/h	31	10		191	157	25
Future Vol, veh/h	31	10	5	191	157	25
Conflicting Peds, #/hr		0	0	0	0	0
Sign Control	Stop	Stop	Free		Free	
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage		-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	34	11	5	208	171	27
Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	402	184	198	0	-	0
Stage 1	184	-	-	-	-	-
Stage 2	218	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	_
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	604	858	1375	-	-	-
Stage 1	848	-	-	-	-	-
Stage 2	818	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	602	858	1375	-	-	-
Mov Cap-2 Maneuver	602	-	-	-	-	-
Stage 1	848	-	-	-	-	-
Stage 2	815	-	-	-	-	-
<u> </u>						
Approach	EB		NB		SB	
HCM Control Delay, s			0.2		0	
HCM LOS	В		U.Z		J	
. IOW LOO						

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1375	-	649	-	-
HCM Lane V/C Ratio	0.004	-	0.069	-	-
HCM Control Delay (s)	7.6	0	11	-	-
HCM Lane LOS	Α	Α	В	-	-
HCM 95th %tile Q(veh)	0	-	0.2	-	-

Intersection						
	.9					
,	-					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Traffic Vol, veh/h	31	42	17	192	194	25
Future Vol, veh/h	31	42	17	192	194	25
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage	e, # 0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	34	46	18	209	211	27
Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	470	224	238	0	-	0
Stage 1	224	-	-	-	-	-
Stage 2	246	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	552	815	1329	-	-	-
Stage 1	813	-	-	-	-	-
Stage 2	795	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	544	815	1329	-	-	-
Mov Cap-2 Maneuver	544	-	-	-	-	-
Stage 1	813	-	-	-	-	-
Stage 2	783	-	-	-	-	-
	, 00					
Approach	EB		NB		SB	
Approach HCM Control Delay, s HCM LOS			NB 0.6		SB 0	

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1329	-	673	-	-
HCM Lane V/C Ratio	0.014	-	0.118	-	-
HCM Control Delay (s)	7.7	0	11.1	-	-
HCM Lane LOS	Α	Α	В	-	_
HCM 95th %tile Q(veh)	0	-	0.4	-	-

•						
Intersection						
	.8					
<u>.</u>						
Movement	EBL	EBR	NBL	NBT	SBT	CDD
Traffic Vol, veh/h	38	34	9	196	177	26
Future Vol, veh/h	38	34	9	196	177	26
Conflicting Peds, #/hr	0	0	_ 0	_ 0	_ 0	_ 0
Sign Control	Stop	Stop	Free		Free	
RT Channelized	-	None		None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage		-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	41	37	10	213	192	28
Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	440	207	221	0	-	0
Stage 1	207	-	_	_	-	-
Stage 2	233	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	_	-	-	-	_
Critical Hdwy Stg 2	5.42	-	-	_	-	_
Follow-up Hdwy	3.518	3.318	2.218	-	_	-
Pot Cap-1 Maneuver	574	833	1348	_	-	_
Stage 1	828	-	-	-	_	-
Stage 2	806	-	-	_	-	_
Platoon blocked, %				-	_	_
Mov Cap-1 Maneuver	569	833	1348	-	-	_
Mov Cap-2 Maneuver	569	-	-	-	_	_
Stage 1	828	-	-	-	-	_
Stage 2	800	_	_	_	_	_
2.6.30 =	- 500					
Approach	EB		NB		SB	
	11.1		0.3		0	
HCM Control Delay, s HCM LOS	11.1 B		0.3		0	

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1348	-	669	-	-
HCM Lane V/C Ratio	0.007	-	0.117	-	-
HCM Control Delay (s)	7.7	0	11.1	-	-
HCM Lane LOS	Α	Α	В	-	-
HCM 95th %tile Q(veh)	0	-	0.4	-	-

Intersection						
Int Delay, s/veh 2	2.5					
•						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Traffic Vol, veh/h	38	66	21	197	214	26
Future Vol, veh/h	38	66	21	197	214	26
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free		Free	
RT Channelized	- -	None		None		None
Storage Length	0	-	_	-	_	-
Veh in Median Storage		_	_	0	0	_
Grade, %	0	_	_	0	0	_
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mymt Flow	41	72	23	214	233	28
Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	507	247	261	0	iviajoi 2	0
Stage 1	247	Z41	201	-	-	U
Stage 1	260	-	-	_	-	<u>-</u>
Critical Hdwy	6.42	6.22	4.12	_	-	_
Critical Hdwy Stg 1	5.42	0.22	4.12	_	<u>-</u>	
Critical Hdwy Stg 2	5.42	_	_	_	_	_
Follow-up Hdwy	3.518	3.318	2.218	_		_
Pot Cap-1 Maneuver	525	792	1303	_	-	_
Stage 1	794	-	-	_	_	_
Stage 2	783	_	_	_	-	_
Platoon blocked, %	. 00			-	-	-
Mov Cap-1 Maneuver	515	792	1303	_	-	_
Mov Cap-2 Maneuver	515	-	-	-	-	-
Stage 1	794	-	-	-	-	-
Stage 2	767	-	-	-	-	-
Approach	EB		NB		SB	
HCM Control Delay, s	11.6		0.8		0	
HCM LOS	В		3.3			

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1303	-	662	-	-
HCM Lane V/C Ratio	0.018	-	0.171	-	-
HCM Control Delay (s)	7.8	0	11.6	-	-
HCM Lane LOS	Α	Α	В	-	-
HCM 95th %tile Q(veh)	0.1	-	0.6	-	-

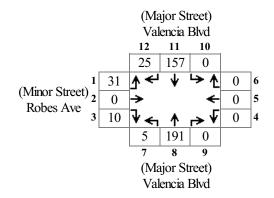
Movement EBL EBR NBL NBT SBT SBR Traffic Vol, veh/h 41 35 10 229 207 31 210 229 207 31 210 229 207 31 200 201 31 200 200 207 31 200 200 207 31 200	Intersection						
Allowerment EBL EBR NBL NBT SBT SBR Traffic Vol, veh/h 41 35 10 229 207 31 31 329 207 31 31 329 207 31 31 329 207 31 31 329 207 31 31 329 207 31 31 329 207 31 31 329 207 31 31 329 207 31 31 329 207 31 31 329 207 31 31 329 207 31 31 329 329 32 32 32 32 32		.7					
Traffic Vol, veh/h 41 35 10 229 207 31 5	, , , , , , , , , , , , , , , , , , ,	-					
Future Vol, veh/h 41 35 10 229 207 31 Conflicting Peds, #/hr 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Movement	EBL	EBR	NBL	NBT	SBT	SBR
Future Vol, veh/h 41 35 10 229 207 31 Conflicting Peds, #/hr 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Traffic Vol, veh/h	41	35	10	229	207	31
Sign Control Stop Stop Free Free Free Free Free RT Channelized - None -	Future Vol, veh/h	41	35	10	229	207	31
None	Conflicting Peds, #/hr	0	0	0	0	0	0
Agior/Minor Minor2 Major1 Major2 Conflicting Flow All 513 242 259 0 - 0 Stage 1 242 - 0 - 0 Critical Hdwy Stg 1 5.42 - 0 Critical Hdwy Stg 2 5.42 - 0 Critical Hdwy Stg 3 5.42 - 0 Critical Hdwy Stg 2 5.42 - 0 Critical Hdwy Stg 3 5.42 - 0 Critical Hdwy Stg 3 5.42 - 0 Critical Hdwy Stg 4 5.42 - 0 Critical Hdwy Stg 5 5.42 - 0 Critical Hdwy Stg 6 5.42 - 0 Critical Hdwy Stg 7 5.42 - 0 Critical Hdwy Stg 8 5.42 - 0 Critical Hdwy Stg 9 5.42 - 0 C	Sign Control	Stop	Stop	Free	Free	Free	Free
Weh in Median Storage, # 0 - - 0 0 - - 0 0 - - 0 0 - - 0 0 - - 0 0 - - 0 0 - - 0 0 - - 0 0 - - 0 0 - - 0 2 92	RT Channelized	-	None	-	None	-	None
Grade, % 0 - - 0 0 - Peak Hour Factor 92	Storage Length	0	-	-	-	-	-
Grade, % 0 - - 0 0 - Peak Hour Factor 92	Veh in Median Storage	e, # 0	-	-	0	0	-
Reavy Vehicles, % 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	Grade, %		-	-	0	0	-
Major/Minor Minor2 Major1 Major2 Conflicting Flow All 513 242 259 0 - 0 Stage 1 242	Peak Hour Factor	92	92	92	92	92	92
Major/Minor Minor2 Major1 Major2 Conflicting Flow All 513 242 259 0 - 0 Stage 1 242 - - - - - - Stage 2 271 -	Heavy Vehicles, %	2	2	2	2	2	2
Conflicting Flow All 513 242 259 0 - 0 Stage 1 242 -	Mvmt Flow	45	38	11	249	225	34
Conflicting Flow All 513 242 259 0 - 0 Stage 1 242 -							
Stage 1 242 - - - - - - - - - - - - - - - - - - - - - - - - - - - <th< td=""><td>Major/Minor</td><td>Minor2</td><td></td><td>Major1</td><td></td><td>Major2</td><td></td></th<>	Major/Minor	Minor2		Major1		Major2	
Stage 2 271 -	Conflicting Flow All	513	242	259	0	-	0
Critical Hdwy 6.42 6.22 4.12 - - - - Critical Hdwy Stg 1 5.42 - - - - - - Critical Hdwy Stg 2 5.42 - - - - - - Collow-up Hdwy 3.518 3.318 2.218 - - - - Pot Cap-1 Maneuver 521 797 1306 - - - - - Stage 1 798 - <t< td=""><td>Stage 1</td><td>242</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td></t<>	Stage 1	242	-	-	-	-	-
Critical Hdwy Stg 1 5.42	Stage 2	271	-	-	-	-	-
Critical Hdwy Stg 2 5.42 - - - - - - - - - - - - - - - - - - - - - - - - </td <td>Critical Hdwy</td> <td>6.42</td> <td>6.22</td> <td>4.12</td> <td>-</td> <td>-</td> <td>-</td>	Critical Hdwy	6.42	6.22	4.12	-	-	-
Follow-up Hdwy 3.518 3.318 2.218	Critical Hdwy Stg 1	5.42	-	-	-	-	-
Pot Cap-1 Maneuver 521 797 1306 Stage 1 798	Critical Hdwy Stg 2	5.42	-	-	-	-	-
Stage 1 798 -	Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Stage 2 775 -	Pot Cap-1 Maneuver	521	797	1306	-	-	-
Platoon blocked, %	Stage 1	798	-	-	-	-	-
Mov Cap-1 Maneuver 516 797 1306 - <td>Stage 2</td> <td>775</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td>	Stage 2	775	-	-	-	-	-
Mov Cap-2 Maneuver 516 -	Platoon blocked, %				-	-	-
Stage 1 798 -	Mov Cap-1 Maneuver	516	797	1306	-	-	-
Stage 2 767 -	Mov Cap-2 Maneuver	516	-	-	-	-	-
Approach EB NB SB HCM Control Delay, s 11.7 0.3 0	Stage 1	798	-	-	-	-	-
HCM Control Delay, s 11.7 0.3 0	Stage 2	767	-	-	-	-	-
HCM Control Delay, s 11.7 0.3 0							
• *	Approach						
HCM LOS B	HCM Control Delay, s			0.3		0	
	HCM LOS	В					

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1306	-	616	-	-
HCM Lane V/C Ratio	0.008	-	0.134	-	-
HCM Control Delay (s)	7.8	0	11.7	-	-
HCM Lane LOS	Α	Α	В	-	-
HCM 95th %tile Q(veh)	0	-	0.5	-	-

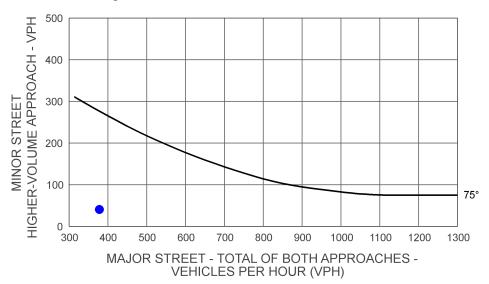
Intersection						
Int Delay, s/veh 2	.4					
•						
Movement	EBL	EBR	NBL	NBT	CDT	SBR
Traffic Vol, veh/h	41	67		230	244	31
Future Vol, veh/h	41	67	22	230	244	31
Conflicting Peds, #/hr	0	0	_ 0	_ 0	_ 0	_ 0
Sign Control	Stop	Stop	Free		Free	
RT Channelized	-	None		None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage		-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	45	73	24	250	265	34
Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	580	282	299	0	-	0
Stage 1	282	-	_	-	-	-
Stage 2	298	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	_	-	-	-	_
Critical Hdwy Stg 2	5.42	-	_	_	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	477	757	1262	-	-	-
Stage 1	766	-	-	-	_	-
Stage 2	753	_	_	_	-	_
Platoon blocked, %				-	_	-
Mov Cap-1 Maneuver	467	757	1262	-	-	_
Mov Cap-2 Maneuver	467	-	-	-	_	-
Stage 1	766	_	_	_	<u>-</u>	_
Stage 2	736	_	_	_	_	_
Cago 2	700					
Approach	EB		NB		SB	
HCM Control Delay, s	12.3		0.7		0	
HCM LOS	12.3 B		0.7		U	
I IOIVI LOS	Б					

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1262	-	613	-	-
HCM Lane V/C Ratio	0.019	-	0.192	-	-
HCM Control Delay (s)	7.9	0	12.3	-	-
HCM Lane LOS	Α	Α	В	-	-
HCM 95th %tile Q(veh)	0.1	-	0.7	-	-

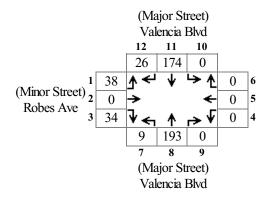
Scenario: PM Existing Intersection #:5



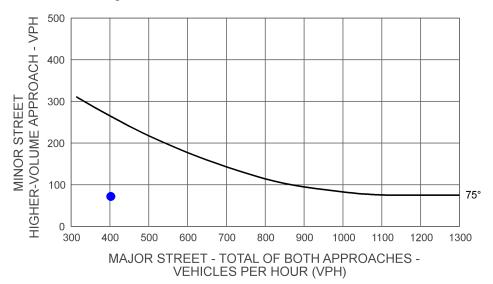
Major Total: 378 Minor High Volume: 41



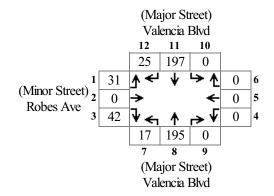
Scenario: PM Existing+Project Intersection #:5



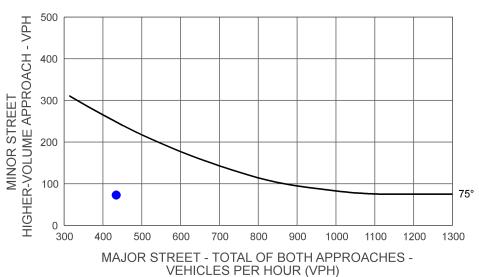
Major Total: 402 Minor High Volume: 72



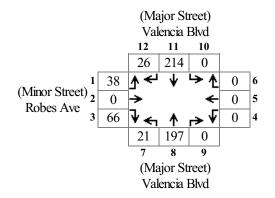
Scenario: PM Future Intersection #:5

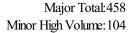


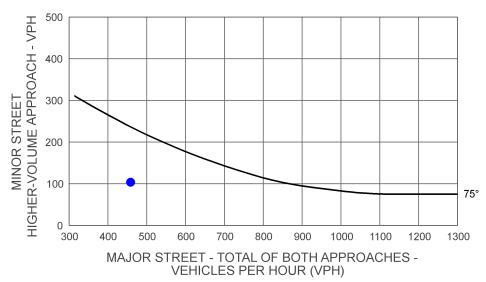
Major Total:434 Minor High Volume:73



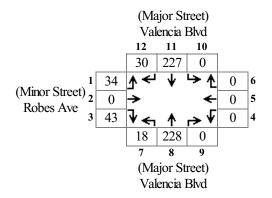
Scenario: PM Future+Project Intersection #:5

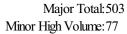


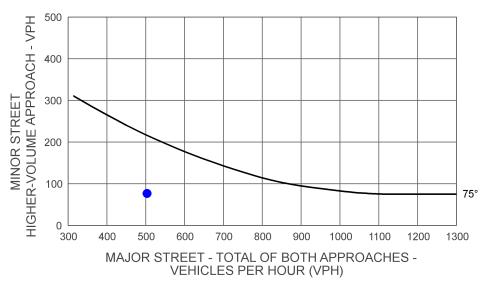




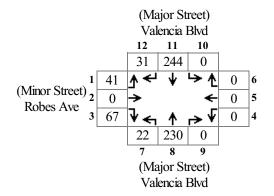
Scenario: PM Future Intersection #:5



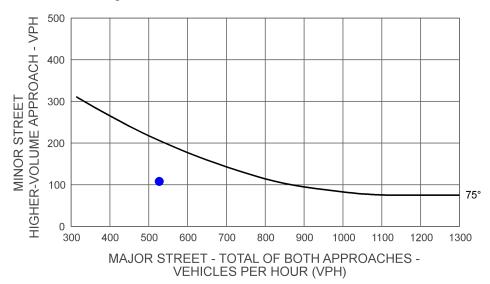




Scenario: PM Future+Project Intersection #:5



Major Total: 527 Minor High Volume: 108



Traffic Study 524-09

Vehicle Turn Movement Data

North/South: Millwood Drive

East/West: Naranjo Boulevard (SR 216)

Date: 9/4/2019

City: Woodlake, CA

Ī		Southbound	1		Westbound	1		Northbound	1		Eastbound		1
	1	2	3	4	5	6	7	8	9	10	11	12	T
Lanes:	R	Т	L	R	T	L	R	T	L	R	Т	L	Totals:
	_	•	_				•		_				4-0
7:30	1	21	0	0	11	62	36	4	0	0	17	0	152
7:45	0	8	1	1	11	41	45	7	1	1	13	0	129
8:00	3	18	0	0	12	48	15	5	0	0	10	0	111
8:15	2	15	0	4	19	37	17	9	0	0	7	1	111
Total Volume:	6	62	1	5	53	188	113	25	1	1	47	1	503
Approach %	9%	90%	1%	2%	22%	76%	81%	18%	1%	2%	96%	2%	000
Approuon 70	770	7070	1 70	2 /0	22 /0	7070	0170	1070	1 70	270	7070	2 /0	
Peak Hr Begin:	7:30	1											
PHV	6	62	1	5	53	188	113	25	1	1	47	1	503
PHF		0.784			0.842			0.656			0.721		0.827
													_
		Southbound	1	Westbound			Northbound			Eastbound			
	1	2	3	4	5	6	7	8	9	10	11	12	Totals:
Lanes:	R	Т	L	R	T	L	R	T	L	R	T	L	Totals.
16:30	1	8	0	1	20	38	42	15	0	1	14	1	141
	1	8 12				38 39	42 39	15 21		1		1	130
16:45	1		0	1	8				0	0	9	0	
17:00	0	7	0	0	9	43	36	11	0	0	9	1	116
17:15	0	8	0	0	15	38	38	21	0	0	11	0	131
				ı			1			ı	1	ı	
Total Volume:	2	35	0	2	52	158	155	68	0	1	43	2	518
Approach %	5%	95%	0%	1%	25%	75%	70%	30%	0%	2%	93%	4%	

North/South: Rd 196

East/West: Naranjo Boulevard (SR 216)

2

Date:

9/4/2019

City: Woodlake, CA

		0 11 1	•	Westhound Northhound Fasthound									1
		Southbound			Westbound			Northbound			Eastbound		
	1	2	3	4	5	6	7	8	9	10	11	12	Totals:
Lanes:	R	T	L	R	T	L	R	T	L	R	T	L	
	_							_					
7:30	0	16	0	0	71	23	20	4	1	2	51	0	188
7:45	0	2	0	1	51 	25	18	11	2	7	54	0	171
8:00	0	4	1	0	57	18	8	2	3	2	22	0	117
8:15	0	7	0	0	54	24	7	6	6	4	22	0	130
		1	1	ī								1	•
Total Volume:	0	29	1	1	233	90	53	23	12	15	149	0	606
Approach %	0%	97%	3%	0%	72%	28%	60%	26%	14%	9%	91%	0%	
		-											
Peak Hr Begin:	7:30												
PHV	0	29	1	1	233	90	53	23	12	15	149	0	606
PHF		0.469		0.862				0.710			0.672		0.806
-													-
		Southbound	1	Westbound			Northbound			Eastbound			
	1	2	3	4	5	6	7	8	9	10	11	12	Totals:
Lanes:	R	T	L	R	T	L	R	T	L	R	T	L	Totals.
16:30	0	5	1	0	53	17	19	6	6	2	49	0	158
16:45	0	3	1	0	46	9	19	8	3	4	53	0	146
17:00	0	4	0	0	49	13	17	4	3	2	46	0	138
17:15	0	6	0	0	49	14	21	11	4	3	44	0	152
Total Volume:	0	18	2	0	197	53	76	29	16	11	192	0	594
Approach %	0%	90%	10%	0%	79%	21%	63%	24%	13%	5%	95%	0%	

Approach %

71%

14%

14%

3%

94%

3%

67%

5%

29%

98%

2%

0%

Rd 204

3

North/South: East/West:

Naranjo Boulevard (SR 216)

Date:

9/4/2019

City: Woodlake, CA

Ī		Southbound	1		Westbound			Northbound	ı		Eastbound		1
	1	2	3	4	5	6	7	8	9	10	11	12	
Lanes:	R	T	L	R	T	L	R	T	L	R	T	L	Totals:
Laries.	K		L	K	'	L	K	ı	L	K	ı	L	
7:30	1	4	1	2	95	8	6	1	0	2	75	0	195
7:45	6	1	0	3	75	11	5	1	2	6	73	0	183
8:00	0	1	0	2	71	7	6	0	5	5	25	0	122
8:15	2	1	0	3	68	3	3	1	9	3	25	1	119
Total Volume:	9	7	1	10	309	29	20	3	16	16	198	1	619
Approach %	53%	41%	6%	3%	89%	8%	51%	8%	41%	7%	92%	0%	
Peak Hr Begin:	7:30												
PHV	9	7	1	10	309	29	20	3	16	16	198	1	619
PHF		0.607			0.829			0.750			0.680		0.794
•													•
		Southbound	1	Westbound			Northbound			Eastbound			
	1	2	3	4	5	6	7	8	9	10	11	12	Totals:
Lanes:	R	T	L	R	T	L	R	T	L	R	T	L	Totals.
16:30	0	0	0	3	63	1	7	1	4	2	63	1	145
16:45	3	0	1	0	47	4	4	1	4	1	69	0	134
17:00	1	1	0	3	54	1	9	0	2	2	67	0	140
17:15	1	0	0	2	62	1	8	0	2	0	63	0	139
Total Volume:	5	1	1	8	226	7	28	2	12	5	262	1	558
rotal volume:	ິນ	l		0	220	1	20		12	ິນ	202		၁၁၀

North/South: Valencia Boulevard (State Route 245)

East/West: Naranjo Boulevard (SR 216)

9/4/2019 Date:

City: Woodlake, CA

1	ı		Southbound	1		Westbound	1		Northbound	1		Eastbound		1
Lanes: R											10			
7:45 8:00 17 33 17 11 26 22 12 24 7 9 16 11 205 8:15 18 41 15 328 8:00 8:15 18 17 5 8 24 16 7 23 10 3 17 11 26 22 12 24 7 9 16 11 205 8:15 18 17 12 160 Total Volume: 75 101 53 45 169 80 70 139 47 36 100 53 968 Approach % 33% 44% 23% 15% 57% 27% 27% 27% 54% 18% 19% 53% 28% Peak Hr Begin: 7:30 PHV 75 101 53 45 169 80 70 139 47 36 100 53 968 Approach % 18% 19% 53% 28% PHF 0.854 0.721 0.736 0.639 0.736 Southbound Westbound Northbound Eastbound 1 2 3 4 5 6 7 8 9 10 11 12 Totals Lanes: R T L R T L R T L Totals 16:30 21 22 8 11 27 18 21 54 13 10 25 34 264 16:45 18 14 14 12 33 16 18 35 8 12 33 25 238 17:00 12 31 11 3 27 14 7 33 7 9 24 31 209	Lanes:													Totals:
7:45 8:00 17 33 17 11 26 22 12 24 7 9 16 11 205 8:15 18 41 15 328 8:00 8:15 18 17 5 8 24 16 7 23 10 3 17 11 26 22 12 24 7 9 16 11 205 8:15 18 17 12 160 Total Volume: 75 101 53 45 169 80 70 139 47 36 100 53 968 Approach % 33% 44% 23% 15% 57% 27% 27% 27% 54% 18% 19% 53% 28% Peak Hr Begin: 7:30 PHV 75 101 53 45 169 80 70 139 47 36 100 53 968 Approach % 18% 19% 53% 28% PHF 0.854 0.721 0.736 0.639 0.736 Southbound 1 2 3 4 5 6 7 8 9 10 11 12 Totals Lanes: R T L R T L R T L Totals 16:30 21 22 8 11 27 18 21 54 13 10 25 34 264 16:45 18 14 14 14 12 33 16 18 35 8 12 33 25 238 17:00 12 31 11 3 27 14 7 33 7 9 24 31 209														
7:45 8:00 17 33 17 11 26 22 12 24 7 9 16 11 205 8:15 18 41 15 328 8:00 8:15 18 17 5 8 24 16 7 23 10 3 17 11 26 22 12 24 7 9 16 11 205 8:15 18 17 12 160 Total Volume: 75 101 53 45 169 80 70 139 47 36 100 53 968 Approach % 33% 44% 23% 15% 57% 27% 27% 27% 54% 18% 19% 53% 28% Peak Hr Begin: 7:30 PHV 75 101 53 45 169 80 70 139 47 36 100 53 968 Approach % 18% 19% 53% 28% PHF 0.854 0.721 0.736 0.639 0.736 Southbound 1 2 3 4 5 6 7 8 9 10 11 12 Totals Lanes: R T L R T L R T L Totals 16:30 21 22 8 11 27 18 21 54 13 10 25 34 264 16:45 18 14 14 14 12 33 16 18 35 8 12 33 25 238 17:00 12 31 11 3 27 14 7 33 7 9 24 31 209														
8:00	7:30	20	23	13	12	57	16	25	47	15	6	26	15	275
Southbound Westbound Northbound Eastbound Totals R T L R T L R T L R T L R T L R T L R T L R T L R T L R T L R T L R T L R T L R T L R T L R T L R T L R T L R T L R T R T R R R R R R	7:45	20	28	18	14	62	26	26	45	15	18	41	15	328
Total Volume: 75	8:00	17	33	17	11	26	22	12	24	7	9	16	11	205
Approach % 33% 44% 23% 15% 57% 27% 27% 54% 18% 19% 53% 28%	8:15	18	17	5	8	24	16	7	23	10	3	17	12	160
Approach % 33% 44% 23% 15% 57% 27% 27% 54% 18% 19% 53% 28%														
Peak Hr Begin: 7:30														
Peak Hr Begin: 7:30														
Peak Hr Begin: 7:30 PHV 75 101 53 45 169 80 70 139 47 36 100 53 968 PHF 0.854 0.721 0.736 0.639 0.738			101	53	45	169	80	70	139	47	36	100	53	968
PHV 75 101 53 45 169 80 70 139 47 36 100 53 968 PHF	Approach %	33%	44%	23%	15%	57%	27%	27%	54%	18%	19%	53%	28%	
PHV 75 101 53 45 169 80 70 139 47 36 100 53 968 PHF Southbound Westbound Northbound Eastbound 1 2 3 4 5 6 7 8 9 10 11 12 Totals Lanes: R T L R			-											
PHF 0.854 0.721 0.736 0.639 0.738														
Southbound Westbound Northbound Eastbound		75	1	53	45	l	80	70	l	47	36	1	53	
1 2 3 4 5 6 7 8 9 10 11 12 Totals Lanes: R T L	PHF		0.854			0.721			0.736			0.639		0.738
1 2 3 4 5 6 7 8 9 10 11 12 Totals Lanes: R T L														
Lanes: R T L														
Lanes: R T L S 3 3 3 <td></td> <td></td> <td></td> <td>3</td> <td>4</td> <td>5</td> <td>6</td> <td></td> <td></td> <td>9</td> <td></td> <td></td> <td>12</td> <td>Totals:</td>				3	4	5	6			9			12	Totals:
16:45 18 14 14 12 33 16 18 35 8 12 33 25 238 17:00 12 31 11 3 27 14 7 33 7 9 24 31 209	Lanes:	R	T	L	R	T	L	R	T	L	R	T	L	
16:45 18 14 14 12 33 16 18 35 8 12 33 25 238 17:00 12 31 11 3 27 14 7 33 7 9 24 31 209														
16:45 18 14 14 12 33 16 18 35 8 12 33 25 238 17:00 12 31 11 3 27 14 7 33 7 9 24 31 209	17.20	21	22	0	11	27	10	21	E 4	12	10	25	2.4	27.4
17:00 12 31 11 3 27 14 7 33 7 9 24 31 209														
17:15 23 33 13 10 32 14 16 47 10 16 28 28 270														
	17:15	23	33	13	10	32	14	10	47	10	10	28	28	270
Total Volume: 74 100 46 36 119 62 62 169 38 47 110 118 981	Total Volume:	74	100	46	36	119	62	62	169	38	47	110	118	981
Approach % 34% 45% 21% 17% 55% 29% 23% 63% 14% 17% 40% 43%			.		<u> </u>			<u> </u>						

Location ID: North/South:

Rd 204

5

East/West: Ropes Avenue

Date: 9

9/4/2019

City: Woodlake, CA

		0 11 1	•		Westbound Northbound Eastbound								_
		Southbound			Westbound					- 10	Eastbound		
	1	2	3	4	5	6	7	8	9	10	11	12	Totals:
Lanes:	R	T	L	R	T	L	R	T	L	R	T	L	
		_			_			_		_	_	_	
7:30	0	9	2	1	0	9	4	7	0	0	0	0	32
7:45	0	7	5	1	0	3	8	5	0	0	0	0	29
8:00	0	5	3	2	0	9	9	7	0	0	0	0	35
8:15	0	2	4	5	0	7	5	2	0	0	0	0	25
T 1 1 1 2 1			4.	1 0	1 6	0.0	l o.	0.1			1 0		404
Total Volume:	0	23	14	9	0	28	26	21	0	0	0	0	121
Approach %	0%	62%	38%	24%	0%	76%	55%	45%	0%	0%	0%	0%	
F		7											
Peak Hr Begin:	7:30			1	1			1		1	1	ī	_
PHV	0	23	14	9	0	28	26	21	0	0	0.000	0	121
PHF		0.771		0.771				0.734			0.864		
											-		
		Southbound		Westbound			Northbound			Eastbound			
	1	2	3	4	5	6	7	8	9	10	11	12	Totals:
Lanes:	R	T	L	R	T	L	R	T	L	R	T	L	
16:30	0	9	4	1	0	4	5	4	0	0	0	0	27
16:45	0	1	2	1	0	5	4	5	0	0	0	0	18
17:00	0	3	1	4	0	9	4	7	0	0	0	0	28
17:15	0	0	1	3	0	3	8	5	0	0	0	0	20
Total Volume:	0	13	8	9	0	21	21	21	0	0	0	0	93
Approach %	0%	62%	38%	30%	0%	70%	50%	50%	0%	0%	0%	0%	

North/South: Valencia Boulevard (State Route 245)

6

East/West: Ropes Avenue City: Woodlake, CA

9/4/2019

Date:

		Southbound	1		Westbound	1		Northbound	1		Eastbound		1
	1	2	3	4	5	6	7	8	9	10	11	12	
Lanes:	R	T	L	R R	T	L	R	T		R	T	L L	Totals:
Lanes.	К	ļ.	L	К	I	L	К	ı	L	К	l	L	
7:30	3	40	0	0	0	0	0	48	1	3	0	11	106
7:45	6	47	0	0	0	0	0	63	1	2	0	12	131
8:00	4	54	0	0	0	0	0	33	3	2	0	4	100
8:15	3	32	0	0	0	0	0	39	4	6	0	3	87
0.10	ŭ	02	Ū	Ü	Ū	Ū	Ū	0,	•	Ü	Ü	Ū	0,
Total Volume:	16	173	0	0	0	0	0	183	9	13	0	30	424
Approach %	8%	92%	0%	0%	0%	0%	0%	95%	5%	30%	0%	70%	
		•	•	•	•	•	•	•	•	•	•	•	•
Peak Hr Begin:	7:30												
PHV	16	173	0	0	0	0	0	183	9	13	0	30	424
PHF		0.815		0.000				0.750			0.768		0.809
													_
		Southbound	1	Westbound			Northbound			Eastbound			
	1	2	3	4	5	6	7	8	9	10	11	12	Totals:
Lanes:	R	T	L	R	T	L	R	T	L	R	T	L	Totals.
	_									_		_	
16:30	7	44	0	0	0	0	0	56	1	6	0	7	121
16:45	6	29	0	0	0	0	0	54	1	1	0	8	99
17:00	7	43	0	0	0	0	0	32	2	2	0	10	96
17:15	5	41	0	0	0	0	0	49	1	1	0	6	103
Total Volume:	25	157	0	0	0	0	0	191	5	10	0	31	419
Approach %	14%	86%	0%	0%	0%	0%	0%	97%	3%	24%	0%	76%	417
Approacti //	I + /0	0070	0 /0	0 /0	0 /0	0 /0	0 /0	7 1 70	J /0	Z + /0	0 /0	7 0 70	