City of Los Banos
At the Crossroads of California

NOTICE OF INTENT TO ADOPT MITIGATED NEGATIVE DECLARATION
AND NOTICE OF PUBLIC MEETING

Mercey Springs Road Apartments
General Plan Amendment #2018-03, Zone Change #2018-03, and Site Plan Review #2018-07

Notice is hereby given that the City of Los Banos has prepared an Initial Study (IS) of environmental effects, and intends to adopt a Mitigated Negative Declaration (MND), for the Mercey Springs Road Apartments Project, Application Nos. GPA #2018-03, ZC #2018-03, and SPR #2018-07. The proposed project consists of a General Plan Amendment and Zone Change to redesignate approximately 5 acres from Low Density Residential to High Density Residential for the development of 96 multi-family residential units. The project site is located on the west side of Mercey Springs Road (SR 165) north of Santa Barbara Street and east of Santa Venetia Street; more specifically identified as Assessor's Parcel Number: 082-030-051.

The IS/MND has analyzed the potential environmental effects of the project in the range of environmental subject areas specified in the California Environmental Quality Act (CEQA) and the CEQA Guidelines. On the basis of this analysis, the IS/MND finds that the project will not involve any significant environmental effects, provided that the mitigation measures described in the IS/MND are implemented. The City will consider the adoption of the Mitigated Negative Declaration, and proposed mitigation measures in a Mitigation Monitoring/Reporting Plan before approval of the proposed improvement project.

Copies of the IS/MND are available for public review at the City of Los Banos City Hall at 520 J Street, Los Banos, California 93635 and at www.losbanos.org.

The City of Los Banos will accept public and agency comments on the IS/MND during a 30-day review period that will begin on January 4, 2019, and end at 5:00 p.m. on February 3, 2019. Comments may be sent to the City of Los Banos, 520 J Street, Los Banos, CA 93635, Attn: Stacy Souza Elms, Community and Economic Development Director or via email at stacy.elms@losbanos.org.

In addition, notice is hereby given that the Los Banos Planning Commission will consider a recommendation to the Los Banos City Council on the IS/MND and Mitigation Monitoring/Reporting Plan for the project at a public meeting scheduled for February 5, 2019, at 7:00 p.m. in the Council Chambers at Los Banos City Hall, 520 J Street, Los Banos, CA 93635.

January 4, 2019

Stacy Souza Elms, Community and Economic Development Director

520 J Street * Los Banos, CA 93635
(209)827-7000
www.losbanos.org

City of Los Banos
At the Crossroads of California

Initial Study/ Mitigated Negative Declaration

Mercey Springs Road Apartments

General Plan Amendment #2018-03, Zone Change #2018-03, and Site Plan Review #2018-07

January 4, 2019

Lead Agency:

City of Los Banos

Community and Economic Development Department

Contact: Stacy Souza Elms, Community and Economic Development Director

City Hall 520 J St.

Los Banos, CA 93635

(209)827-2433

www.losbanos.org

Purpose

The California Environmental Quality Act (CEQA) requires that public agencies document and consider the potential environmental effects of any agency actions that meet CEQA's definition of a "Project". Briefly summarized, a "Project" is an action that has the potential to result in direct or indirect physical changes in the environment. A Project includes the agency's direct activities as well as activities that involve public agency approvals or funding. Guidelines for an agency's implementation of CEQA are found in the "CEQA Guidelines" (Title 14, Chapter 3 of the California Code of Regulations).

Provided that a Project is not found to be exempt from CEQA, the first step in the agency's evaluation of the potential environmental effects of the Project is the preparation of an Initial Study. The purpose of an Initial Study is to determine whether the Project would involve "significant" environmental effects as defined by CEQA and to describe feasible mitigation measures that would be necessary to avoid the significant effects or reduce them to a less than significant level. In the event that the Initial Study does not identify significant effects, or identifies mitigation measures that would reduce all of the significant effects of the Project to a less than significant level, the agency may prepare a Negative Declaration. If this is not the case, the agency must prepare an Environmental Impact Report (EIR); the agency may also decide to proceed directly with the preparation of an EIR without preparation of an Initial Study.

The purpose of this Initial Study and Proposed Mitigated Negative Declaration (IS/MND) is to identify the potential environmental impacts and proposed mitigation measures associated with the proposed Sunset Hills Development Project located within the City of Los Banos, County of Merced.

Pursuant to Section 15367 of the CEQA Guidelines, the City is the Lead Agency in the preparation of this IS/MND, and any additional environmental documentation required for the Project. The City has responsibility for approval or denial of the Project application. The intended use of this document is to provide information to support conclusions regarding the potential environmental impacts of the Project. The IS/MND provides the basis for input from public agencies, organizations, and interested members of the public.

Project Location

The Project site is located within the City of Los Banos, County of Merced. Specifically, the project is located on approximate 5 acres (APN: 082-030-051) on the west side of Mercey Springs Road (SR 165) north of Santa Barbara Street and east of Santa Venetia Street. The uses surrounding the site include:

East: Existing single-family residential dwelling units

South: Church of the Nazarene

West: Existing single-family residential dwelling units

North: Vacant land for future single-family residential dwelling units

Project Description

Mercey Bapaz, LLC (Applicant) is proposing a General Plan Amendment and Zone Change to redesignate approximately 5 acres from Low Density Residential to High Density Residential for the development of 96 multi-family residential units. The proposed parcel will be developed in accordance with Title 9, Chapter 3, Article 8, High Density Residential (R-3) of the Los Banos Municipal Code.

A copy of the proposed project's Site Plan is included as part of this Initial Study as Exhibit A.

Domestic water services will be provided by the City of Los Banos by connecting to an existing eight (8) inch water line located on Mercey Springs Road. Sanitary sewer services will be provided by connecting to the City of Los Banos off of Mercey Springs Road. Storm drain services will be provided by connecting to an existing eighteen (18) inch line located on Mercey Springs Road. Fire hydrants will also be installed in accordance with the City of Los Banos Fire Department standards and specifications. Dry utilities (i.e. gas and electric) will be provided via Pacific Gas and Electric.

The existing site includes disked vacant land. No structures currently exist on the site.

Environmental Determination:

The Lead Agency has prepared an Initial Study, following, which considers the potential environmental effects of the proposed project. The Initial Study shows that there is no substantial evidence, in light of the whole record before the Lead Agency, that the project may have a potentially significant effect on the environment, provided that the following mitigation measures are included in the project.

MITIGATION MEASURES:

The following mitigation measures shall be incorporated into the proposed project:

Mitigation Measure V-1:
In the event of the accidental discovery of recognition of any human remains in any location other than a dedicated cemetery, the following steps shall be taken:

1. There shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains until;
    a. The corner of Merced County is contacted to determine that no investigation of the cause of death is required; and
    b. If the corner determines the remains to be Native American:
        i. The corner shall contact the Native American Heritage Commission within 24 hours.
        ii. The Native American Heritage Commission shall identify the person or persons it believes to be the most likely descended from the deceased Native American.

The most likely descendent may make recommendations to the landowner or the person responsible for the excavation work, for means of treating or disposing of, with

appropriate dignity, the human remains and any associated grave goods as provided in Pubic Resources Code Section 5097.98

Mitigation Measure VIII-1:
Prior to the approval of the proposed project's Improvement Plans and Final Map, the applicant, or project proponent, shall prepare and submit to the City of Los Banos Community and Economic Development Department a Phase 1/Environmental Site Assessment (ESA). The recommendations of the Phase I/ESA shall be incorporated into the proposed project, as deemed necessary by City staff.

Mitigation Measure XVI-1:
Widen Mercey Springs Road (SR 165) to allow the highway to be striped with two through lanes in each direction at the SR 165 / Regency Drive intersection.

Mitigation Measure XVI-2:
Construct sidewalk as part of project frontage improvements and construct an all-weather path along the west side of SR 165 from the limits of the project to Santa Barbara Drive. If required by Caltrans, construct a pedestrian crossing on SR 165.

Mitigation Measure XVI-3:
Locate the southern driveway at a position relative to Regency Drive that is acceptable to Caltrans and the City of Los Banos.

Mitigation Measure XVI-4:
Prohibit northbound left turns into the northern driveway to the satisfaction of Caltrans and the City of Los Banos.

Mitigation Measure XVI-5:
The project shall contribute its fair share to the cost of regional improvements by making frontage improvements and paying adopted traffic impact fees.

Therefore, the Lead Agency proposed to adopt a Mitigated Negative Declaration for the project, in accordance with the provisions of the California Environmental Quality Act (CEQA) and the State CEQA Guidelines.

Stacy Souza Elms,
Community & Economic Development Director

1/3/19
Date

City of Los Banos
520 J Street
Los Banos, CA 93635
(209) 827-7000

Environmental Checklist Form

Project Title
Mercey Springs Road Apartments – GPA #2018-03, ZC #2018-03, and SPR #2018-07

Lead Agency Name and Address
City of Los Banos
520 J Street
Los Banos, CA 93635

Contact Person and Phone Number
Stacy Souza Elms, Community and Economic Development Director
Phone: (209) 827-2433
stacy.elms@losbanos.org

Project Sponsor's Name and Address
Mercy Bapaz, LLC.
115 W. G St., Suite B
Los Banos, CA 93635

Project Location and Setting

The Project site is located within the City of Los Banos, County of Merced. Specifically, the project is located on approximately 5 acres (APN: 082-030-051) on the west side of Mercey Springs Road (SR 165) north of Santa Barbara Street and east of Santa Venetia Street. The uses surrounding the site include:

East: Existing single-family residential dwelling units

South: Church of the Nazarene

West: Existing single-family residential dwelling units

North: Vacant land for future single-family residential dwelling units

Figure 1 - Location Map, provides an illustration of the proposed project's regional location.

Figure 2 – Vicinity Map, provides an illustration of the proposed projects actual site.

The proposed project site has been vacant and undeveloped for over 30 years. Urban development (primarily residential development) has occurred on all four sides of the project site, along with associated street and utility improvements. Topography of the site is relatively flat. There is small vegetation located throughout the project site. This tree and other vegetation will be removed as part of the development of the proposed project. There are no structures located on the project site.

General Plan and Zoning Designations

General Plan: Low Density Residential

Zoning: Low Density Residential (R-1)

Project Description

Mercey Bapaz, LLC (Applicant) is proposing a General Plan Amendment and Zone Change to redesignate approximately 5 acres from Low Density Residential to High Density Residential for the development of 96 multi-family residential units. The proposed parcel will be developed in accordance with Title 9, Chapter 3, Article 8, High Density Residential (R-3) of the Los Banos Municipal Code.

A copy of the proposed project's Site Plan is included as part of this Initial Study as Exhibit A.

Domestic water services will be provided by the City of Los Banos by connecting to an existing eight (8) inch water line located on Mercey Springs Road. Sanitary sewer services will be provided by connecting to the City of Los Banos off of Mercey Springs Road. Storm drain services will be provided by connecting to an existing eighteen (18) inch line located on Mercey Springs Road. Fire hydrants will also be installed in accordance with the City of Los Banos Fire Department standards and specifications. Dry utilities (i.e. gas and electric) will be provided via Pacific Gas and Electric.

The existing site includes disked vacant land. No structures currently exist on the site.

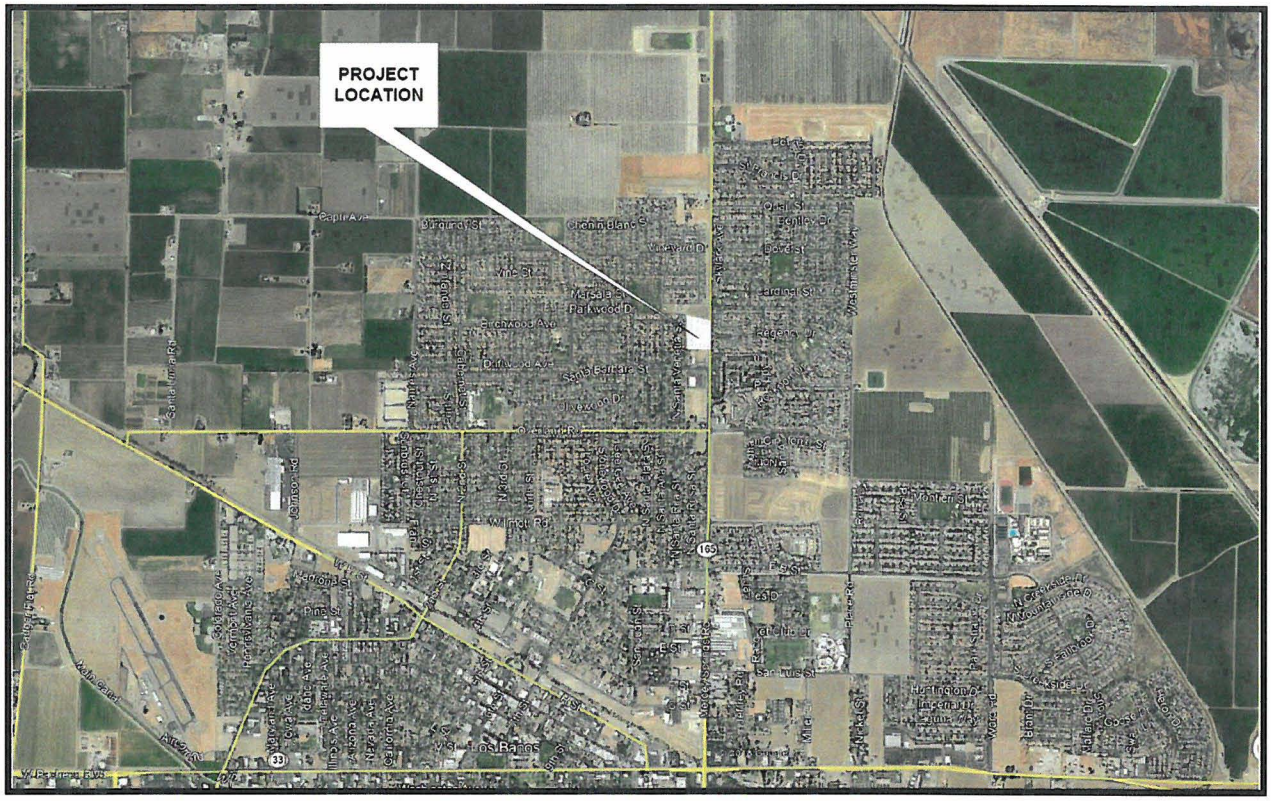


Figure 1 – Location Map

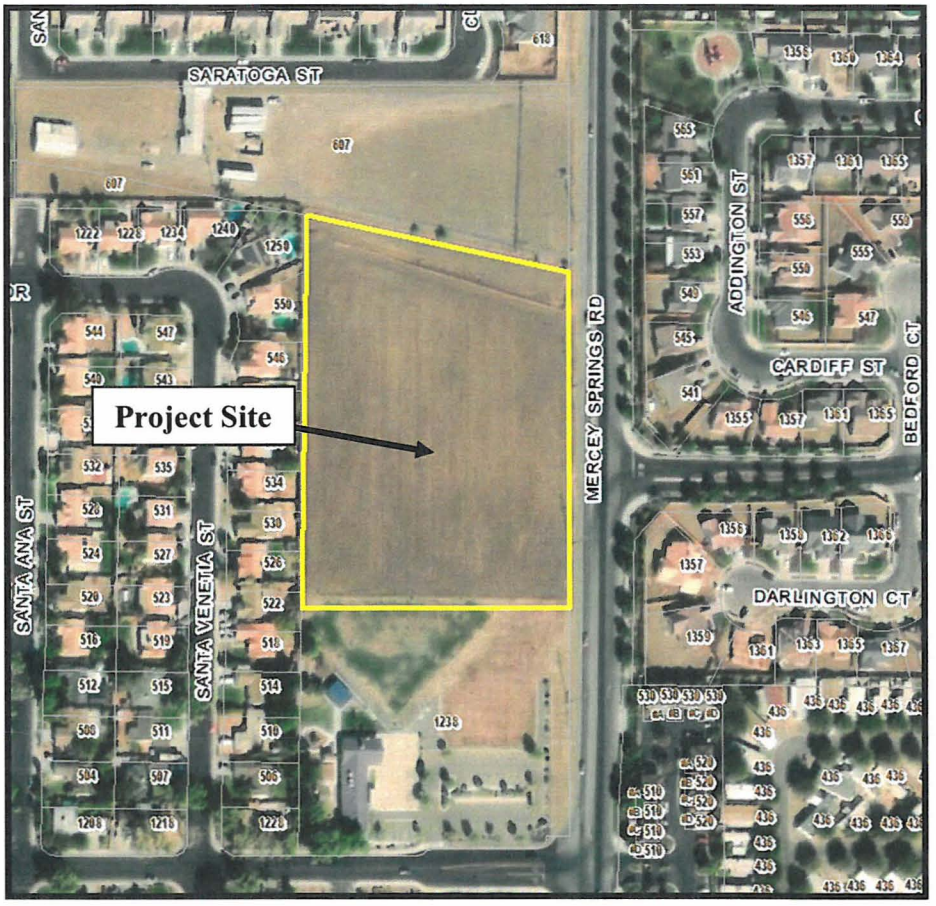


Figure 2 – Vicinity Map

SUMMARY OF ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED: (*Boxes are checked below if the proposed project has the potential to cause significant impacts. If none then "No Significant Impacts" may be checked)*

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

DETERMINATION: (To be completed by the Lead Agency)

On the basis of this initial evaluation:

I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

X I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

I find that although the proposed project could have significant effect on the environment, because all potentially significant effect (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standard, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Stacy Souza Elms

Stacy Souza Elms,
Community & Economic Development Director

1/3/19
Date

EVALUATION OF ENVIRONMENTAL IMPACTS:

Notes:

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

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

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

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

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

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

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

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

6. Information sources for potential impacts (e.g., general plans, zoning ordinances) have been incorporated into the checklist references. Reference to a previously prepared or outside document, where appropriate, includes a reference to the page or pages where the statement is substantiated.

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

8. This initial study format is the format suggested in the 2018 CEQA Guidelines.

9. The explanation of each issue identifies:

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

   b. the mitigation measure identified, if any, to reduce the impact to less than significant

ENVIRONMENTAL REVIEW CHECKLIST: *(A brief answer to all questions is provided)*

	Potentially Significant Impact	Less than Significant w/ Mitigation Incorporated	Less than Significant Impact	No Impact
Categories and Issues:				
I. **Aesthetics. Would the proposal:**				
a. Have a substantial adverse effect on a scenic vista?	☐	☐	☒	☐

Comments: According to the City of Los Banos 2030 General Plan and Environmental Impact Report (EIR), the proposed project area is not considered a scenic vista. Therefore, the proposed project will have a less than significant impact.

b. Substantially damage scenic resources including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☐	☒

Comments: The proposed project is not located on a State designated highway. Based on a review of the California Department of Transportation website (http://www.dot.ca.gov/hq/LandArch/16_livability/scenic_highways/index.htm), the nearest State scenic highway is Interstate 5, between the SR 152 and north to the San Joaquin County line. The proposed project is not located on or adjacent to Interstate 5 or SR 152, and therefore will have no impact to a State scenic highway.

c. Substantially degrade the existing visual character or quality of the site and its surroundings?	☐	☐	☒	☐

Comments: The proposed project is located on an approximately 5 acre vacant site within the City of Los Banos and is currently surrounded by urban development on all four sides. The existing visual character of the proposed project and its surroundings consists of commercial and single-family residential development. The construction of multi-family structures consisting of 96 dwelling units in this area would alter the existing visual character of the project site; however, given that it would be located adjacent to existing residential development within the City limits, it would be considered contextually consistent with surrounding land uses.

d. Create a new source of substantial light or glare, which would adversely affect day or nighttime views in the area?	☐	☐	☒	☐

Comments: Development of the proposed project will include the installation of street lighting and lighting associated with multi-family residential development. As such, the proposed project will result in a new source of light. However, any street lighting installed will be installed in accordance with the City of Los Banos standards and specifications. In addition, the project site is surrounded by existing development on four sides and associated lighting (i.e. street lighting, residential lighting, etc.). Therefore, the proposed project will have a less than significant impact to lighting and glare.

	Potentially Significant Impact	Less than Significant w/ Mitigation Incorporated	Less than Significant Impact	No Impact

Categories and Issues:

II. **Agriculture and Forest Resources** In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts o forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:

a Convert Prime Farmland, Unique Farmland or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring program of the California Resource Agency, to non-agricultural use?	☐	☐	☒	☐

Comments: According to the State of California Department of Conservation Farmland Mapping and Monitoring Program, the proposed project is located on land classified as "Urban and Built-Up Land" and is not located on soils classified as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance. Therefore, the proposed project will have a less than significant impact.

b. Conflict with existing zoning for agricultural use, or a Williamson Act Contract?	☐	☐	☐	☒

Comments: The proposed project is currently zoned Low Density Residential (R-1), the applicant is requesting the adoption of a General Plan Amendment and Zone Change that would allow High Density Residential uses. The project site was evaluated by the City of Los Banos 2030 General Plan/EIR and identified as being "Urban and Built-Up Land", and therefore, is not considered to be agricultural or forest land. In addition, a Williamson Act Contract does not exist for the project site. Therefore, the proposed project will have no impact.

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))?	☐	☐	☒	☐

Comments: Please refer to comment II.b.

d. Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒

Comments: The proposed project is located on existing fallow land, and is surrounded by existing residential land uses to the north, east, west and a place of worship to the south. The project site is not situated on lands considered to be forest land. Therefore, the proposed project will have no impact.

e. Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	☐	☐	☒	☐

Comments: As noted above, the proposed project is located on existing fallow land that is not in production for agricultural crops. The project site is surrounded by existing residential land uses to the north, east, and west, and civic institutional use to the south and it is designated and zoned for urban development by the City of Los Banos 2030 General Plan and the Los Banos Municipal Code. Therefore, the proposed project will have a less than significant impact.

		Potentially Significant Impact	Less than Significant w/ Mitigation Incorporated	Less than Significant Impact	No Impact
Categories and Issues:					
III.	**Air Quality** Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:				
a.	Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☒	☐
b.	Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	☐	☐	☒	☐
c.	Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions, which exceed quantitative thresholds for ozone precursor)?	☐	☐	☒	☐
d.	Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☒	☐
e.	Create objectionable odors affecting a substantial number of people?	☐	☐	☒	☐

Background Discussion:

The proposed project is located in west Merced County, which is a portion of the San Joaquin Valley Air Basin (SJVAB). Air quality management under the federal and state Clean Air Acts is the responsibility of the San Joaquin Valley Air Pollution Control District (SJVAPCD).

The Federal and State governments have adopted ambient air quality standards (AAQS) for the primary air pollutants of concern, known as "criteria" air pollutants. Air quality is managed by the SJVAPCD to attain these standards. Primary standards are established to protect the public health; secondary standards are established to protect the public welfare. The attainment status of the SJVAB for Merced County with respect to the applicable AAQS are shown in the following table.

The SJVAB is considered non-attainment for ozone and particulate matter (PM10 and PM2.5), because the AAQS for the pollutants are sometimes exceeded. The SJVAB is Attainment/Unclassified for carbon monoxide, but select areas, not including the City of Los Banos, are required to abide by adopted carbon monoxide maintenance plans.

The California Air Resources Board (CARB) through the Air Toxics Program is responsible for the identification and control of exposure to air toxics, and notification of people that are subject to significant air toxic exposure. A principal air toxic is diesel particulate matter, which is a component of diesel engine exhaust.

The SJVAPCD has adopted regulations establishing control over air pollutant emissions associated with land development and related activities. These regulations include:

Regulation VIII (Fugitive Dust Rules)
Rule 4101 (Visible Emissions)
Rule 9510 (Indirect Source Review)

SAN JOAQUIN VALLEY FEDERAL AND STATE AAQS ATTAINMENT STATUS

Pollutant	Designation / Classification Federal Standards[a]	State Standards[b]
Ozone, 1-hour	No federal standard[f]	Nonattainment / Severe
Ozone, 8-hour	Nonattainment / Extreme[e]	Nonattainment
PM10	Attainment[c]	Nonattainment
PM2.5	Nonattainment[d]	Nonattainment
Carbon Monoxide	Attainment / Unclassified	Attainment / Unclassified
Nitrogen Dioxide	Attainment / Unclassified	Attainment
Sulfur Dioxide	Attainment / Unclassified	Attainment
Lead (particulate)	No designation	Attainment
Hydrogen Sulfide	No federal standard	Unclassified
Sulfates	No federal standard	Attainment
Visibility-Reducing Particles	No federal standard	Unclassified
Vinyl Chloride	No federal standard	Attainment

[a]See 40 CFR Part 81

[b]See CCR Title 17 Sections 60200-60210
[c]On September 25, 2008, EPA redesignated the San Joaquin Valley to Attainment for the PM10 National AAQS and approved the PM10 Maintenance Plan
[d]The SJV is designated nonattainment for the 1997 PM2.5 NAAQS. EPA designated the SJV as nonattainment for the 2006 PM2.5 on November 13, 2009 (effective December 14, 2009).
[e]Though the SJV was initially classified as serious nonattainment for the 1997 8-hour ozone standard, EPA approved reclassification of the SJV to extreme nonattainment in the Federal Register on May, 2010 (effective June 4, 2010.
[f]Effective June 15, 2005, the EPA revoked the federal 1-hour ozone standard, including associated designations and classifications. EPA has previously classified the SJV as extreme nonattainment for this standard. EPA approved the 2004 Extreme Ozone Attainment Demonstration Plan on March 8, 2010 (effective April 7, 2010). Many applicable requirements for extreme 1-hour ozone nonattainment areas continue to apply to the SJVAB.

The SJVAPCD has adopted a CEQA impact analysis guideline titled *Guide for Assessing and Mitigating Air Quality Impacts* (GAMAQI). The GAMAQI is utilized in the following air quality impact analysis where applicable. The GAMAQI establishes impact significance thresholds for the non-attainment pollutant PM10 and precursors to the non-attainment pollutant ozone: reactive organic gases (ROG) and oxides of nitrogen (NOx).

ROG	10 tons/year
NOx	10 tons/year
PM10	15 tons/year

Projects that do not generate emissions in excess of these thresholds are considered to have less than significant air quality impacts. In accordance with Table 5-3(a) of GMAQI, the proposed project is considered a Small Project Analysis Level (SPAL), as it contains less than 390 multi-family units. Because the proposed project qualifies as SPAL, GMAQI notes that it has no possibility of exceeding emission thresholds.

Project construction will be subject to SJVAPCD rules related to control of construction emissions, including the various rules comprising Regulation VIII. The application of these rules to the project will further limit the potential air quality effects of the project.

The project will generate small amounts of new on-road traffic and associated ROG, NOx and PM emissions during project operation. Operation of the project site will not generate any substantial air emissions. As shown in the table below, potential emissions from project operation will be incidental and will not approach the GAMAQI significance thresholds.

Potentially significant emissions related to the construction and operation of land development projects are subject to regulation under SJVAPCD Rule 9510 Indirect Sources. Development associated with the proposed project will exceed the thresholds triggering the requirements of Rule 9510. Therefore, the project proponent will be required to comply with Rule 9510 and conduct an Indirect Source Review (ISR) process with the SJVAPCD.

COMMENTS:

a) The proposed project will not involve any conflict with, or potential to obstruct, implementation of, applicable Air Quality Attainment Plans. As discussed above, project related air emissions will be minor and below the threshold identified in GMAQI. Therefore, the proposed project will have a less than significant impact.

b) Proposed project construction emissions will be minor and short-term, and will not contribute to or cause violation to any air quality standards. The proposed project will not involve any substantial operational emissions. Therefore, the proposed project will have a less than significant impact.

c) The proposed project will result in minor ROG, NOx, and particulate matter emissions during project construction, which will contribute to existing non-attainment status of the SJVAB for ozone and particulate matter. However, in accordance with GMAQI, these emissions are considered to be below the threshold and therefore be less than significant. The proposed project will be required to comply with Rule 9510, and conduct an ISR process with the SJVAPCD. The ISR process will determine the proposed project's actual emission and subsequently, allow for mitigation under Rule 9510. Therefore, the proposed project will have a less than significant impact.

d) Sensitive receptors are defined as facilities that house or attract children, the elderly, people with illnesses, or others who are especially sensitive to the effects of air pollutants. Hospitals, schools, convalescent facilities, and residential areas are examples of sensitive receptors.

The proposed project is located in the vicinity of residential areas as it is surrounded on three sides by existing residential development. However, because the proposed project is considered a Small Project Analysis Level (SPAL) under GMAQI, the proposed project has no possibility of exceeding the emission thresholds and therefore, will have a less than significant impact.

e) The proposed project does not involve any features that will generate odors. Therefore, the proposed project will have a less than significant impact.

	Potentially Significant Impact	Less than Significant w/ Mitigation Incorporated	Less than Significant Impact	No Impact
Categories and Issues:				
IV. **Biological Resources** Would the project:				
a. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulation, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☐	☒	☐

Comments: As noted previously, the proposed project is located on vacant, undisturbed land, and is surrounded by urban development on the north, south, east, and west sides. However, based on a review of the City's 2030 General Plan EIR, and most notably, Figure 3.8-1, the proposed project is not located within any areas known for the potential of containing special status species and or habitats. Therefore, the proposed project will have a less than significant impact.

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?	☐	☐	☐	☒

Comments: Based on the Los Banos 2030 General Plan and EIR, the proposed project is not located within an area known to contain riparian habitat. Most, if not all, of the riparian habitat located within the City is located along Los Banos Creek. The proposed project is not located within, or adjacent to Los Banos Creek. Therefore, the proposed project will have no impact.

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?	☐	☐	☐	☒

Comments: Based on the Los Banos 2030 General Plan and EIR, there are no identified wetlands within the project site. Therefore, the proposed project will have no impact.

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?	☐	☐	☐	☒

Comments: The proposed project is surrounded by existing development on the north, south, east and west sides. New development created as a result of the proposed project would have minimal impacts to wildlife corridors as surrounding urban development already exist. Therefore, the proposed project will have no impact.

e. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☐	☒

Comments: Development of the proposed project will not require the removal of any trees. Therefore, the proposed project will have no impact.

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?	☐	☐	☐	☒

Comments: The City of Los Banos, including the proposed project, is not located within an adopted Habitat Conservation Plan or Natural Community Plan. Therefore, the proposed project will have no impact.

Categories and Issues:	Potentially Significant Impact	Less than Significant w/ Mitigation Incorporated	Less than Significant Impact	No Impact
V. **Cultural Resources** Would the project:				
a. Cause a substantial adverse change in the significance of a historical resource as defined in section 15064.5?	☐	☐	☒	☐

Comments: The proposed project site is currently vacant with ruderal vegetation and does not contain any buildings or structures. Based on a review of the Los Banos 2030 General Plan EIR, there are thirteen (13) historic resource sites within the City's Planning Area, primarily in the downtown area. None of these sites include the proposed project. As such, there are no historic resources or sites as defined by Section 15064.5 of the Government Code within the proposed project area. Therefore, the proposed project will have a less than significant impact.

b. Cause a substantial adverse change in the significance of an archaeological resource pursuant to section 15064.5?	☐	☐	☒	☐

Comments: Based on a review of the Los Banos 2030 General Plan and EIR, the Los Banos Creek area has been identified as a highly sensitive area for potential archaeological sites. The proposed project is not located within the Los Banos Creek area, and therefore, potential impacts to archaeological resources are considered to be minimal. The project site has been disked yearly to reduce potential fire hazards and given the disturbed nature of the project site it would be unlikely that unknown cultural resources would be found on-site during grading and excavation associated with construction and installation of utilities for the new development. Therefore, the proposed project will have a less than significant impact.

c. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☐	☒	☐

Comments: The Los Banos 2030 General Plan and EIR do not identify any unique paleontological resources or sites or unique geologic features within the proposed project area. As noted in the 2030 General Plan, paleontological resources have been typically identified within the Los Banos Creek area. Therefore, the proposed project will have a less than significant impact.

d. Disturb any human remains, including those interred outside of formal cemeteries?	☐	☒	☐	☐

Comments: It is not anticipated that the proposed project will disturb any human remains. However, through development and construction of the proposed project, human remains may be identified, particularly during activities requiring ground disturbance (i.e. grading, trench digging, etc.). As such, the proposed project shall incorporate Mitigation Measure No. V-1, specified below, in accordance with Section 15064.5(e) of the CEQA Guidelines, to reduce any potentially significant impacts to a level of less than significant.

Mitigation Measure V-1: In the event of the accidental discovery of recognition of any human remains in any location other than a dedicated cemetery, the following steps shall be taken:

2. There shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains until;
    a. The corner of Merced County is contacted to determine that no investigation of the cause of death is required; and
    b. If the corner determines the remains to be Native American:
        i. The corner shall contact the Native American Heritage Commission within 24 hours.
        ii. The Native American Heritage Commission shall identify the person or persons it believes to be the most likely descended from the deceased Native American.
        iii. The most likely descendent may make recommendations to the landowner or the person responsible for the excavation work, for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods as provided in Pubic Resources Code Section 5097.98

Categories and Issues:	Potentially Significant Impact	Less than Significant w/ Mitigation Incorporated	Less than Significant Impact	No Impact
VI. **Geology and Soils** Would the project:				
a. Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:	☐	☐	☒	☐
1) 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.	☐	☐	☒	☐
2) Strong seismic ground shaking?	☐	☐	☒	☐
3) Seismic-related ground failure, including liquefaction?	☐	☐	☒	☐
4) Landslides?	☐	☐	☒	☐

Comments: No known earthquake faults traverse the project site. The effects of seismic activity were addressed in the Los Banos General Plan EIR and found to be potentially significant. Implementation of General Plan policies S-I-8 mitigates this potentially significant impact to a less than significant level. Policy S-I-8 requires all new buildings be built according to the seismic requirements of the Uniform Building Code. Therefore, these potential impacts are considered less than significant. No further environmental review is necessary.

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

Comments: Development of the proposed project will include grading of the site to allow for the installation of multi-family residential building units. Thus, said grading would result in the loss of topsoil. However, through the preparation of Improvement Plans, the proposed project will be required to obtain a Grading Permit from the City of Los Banos. The Grading Permit process will ensure the proposed project is graded in accordance with the City of Los Banos Standards and Specifications. Therefore, the proposed project will have a less than significant impact.

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?	☐	☐	☒	☐

Comments: According to the United States Department of Agriculture (USDA) https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx the soils in the area are of the project site are primarily Stanislaus-Dosamigos-Urban land complex on flat or nearly flat ground that may be subject to vertical displacement under seismic or static conditions. Such movement could include settlement, compaction, or liquefaction. Future development on the project site (e.g. single-family dwelling units and access driveways) would implement standard engineering and seismic safety design techniques in conformance with the recommendation of a project specific design level geotechnical investigation as a standard condition of development would reduce potential impacts to less than significant.

d. Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	☐	☐	☒	☐

Comments: As noted above, the soils within the project area are generally Stanislaus-Dosamigos-Urban land complex. The soil is well drained, but has moderate expansion potential. Future development on the project site would be required to follow the recommendations of a project-specific design-level geotechnical investigation as a standard condition of development. Development within the City of Los Banos would require review and approval by the Los Banos Building Department and the City Engineer. Given that the proposed project would be required to conform to the recommendations of the geotechnical report and the requirements of the City of Los Banos, the potential risks associated with expansive soils would be reduced to less than significant levels.

e. Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of waste water?	☐	☐	☐	☒

Comments: The proposed project consists of a General Plan Amendment, Zone Change, and Site Plan Review for the development of 96 multi-family residential units, which will be served by City of Los Banos sanitary sewer system. The use of septic tanks or alternative water systems are not part of the proposed project. Therefore, the proposed project will have no impact.

Categories and Issues:	Potentially Significant Impact	Less than Significant w/ Mitigation Incorporated	Less than Significant Impact	No Impact
VII. **Greenhouse Gas Emissions** Would the project:				
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?	☐	☐	☒	☐

Background Discussion:

Human-generated emissions greenhouse gases (GHGs) are understood to be an important cause of global climate change, which is a subject of increasing scientific, public concern, and government action. Atmospheric concentrations of GHGs that trap heat in the earth's atmosphere and lead to a variety of effects, including increasing temperature, changes in patterns and intensity of weather and various secondary effects resulting from those changes, including potential effects on public health and safety.

California AB 32 identifies global climate change as a "serious threat to the economic well-being, public health, natural resources and the environment of California." As a result, global climate change is an issue that needs to be considered under CEQA.

GHGs include carbon dioxide (CO2), the most abundant GHG, as well as methane, nitrous oxide and other gases, each of which have GHG potential that is several times that of CO2. GHG emissions result from combustion of carbon-based fuels; major GHG sources in California include transportation (40.7%), electric power generation (20.5%), industrial (20.5%), agriculture and forestry (8.3%) and others (8.3%).

The State of California is actively engaged in developing and implementing strategies for reducing GHG emissions. State programs for GHG reduction include a regional cap-and-trade program, new industrial and emission control technologies, alternative energy generation technologies, advanced energy conservation in lighting, heating, cooling and ventilation, reduced-carbon fuels, hybrid and electric vehicles, and other methods of improving vehicle mileage reduction programs. Using these and other strategies, the State's Global Climate Change Scoping Plan, adopted in December 2008, proposes to achieve a 29% reduction in projected business-as-usual emission levels for 2020.

The City of Los Banos 2030 General Plan and EIR includes policies and mitigation measures that reduce the impact level that is less than significant. Policies POSR-I-46, 52, 53, and C-I-4 of the City's 2030 General Plan include measures, that upon implementation, helps reduce the amount of greenhouse gases generated per capita in the City. It is important to note that the proposed project is consistent with the City's 2030 General Plan.

The SJVAPCD adopted a Climate Change Action Plan in 2008, and issued guidance for development project compliance with the plan in 2009. The guidance adopted an approach that relies on the use of Best Performance Standards to reduce GHG emissions. Projects implementing Best Performance Standards would be determined to have a less than cumulatively significant impact. For projects not implementing Best Performance Standards, demonstration of a 29% reduction in GHG emissions from business-as-usual conditions is required to determine that a project would have a less than cumulatively significant impact.

Comments:

VII-a) The proposed project would not generate any substantial greenhouse gas emissions beyond what has previously been identified in the City's 2030 General Plan and EIR. The proposed project is consistent with the 2030 General Plan, and will comply with the Policies noted in the discussion above.

VII-b) The proposed project will not involve any known conflict with any adopted plan, policy, or regulation for reducing greenhouse gas emissions. The City of Los Banos also requires that all buildings conform to the energy conservation requirements of the California Administrative Code Title 24, as well as the California Green Building Standards (CALGreen) code, which includes requirements for energy and water conservation in new construction.

Categories and Issues:	Potentially Significant Impact	Less than Significant w/ Mitigation Incorporated	Less than Significant Impact	No Impact
VIII. **Hazards and Hazardous Material** Would the project:				
a. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☒	☐	☐

Comments: General Plan Amendment, Zone Change, and development of a multi-family residential structures do not typically involve the transport, use, or disposal of hazardous materials. However, the project site was historically used for agricultural purposes over 20 years ago, and as such, there may be hazardous materials within the soil. Therefore, prior to the approval of the proposed project's Improvement Plans and Final Map, the applicant, or project proponent, shall prepare and submit to the City a Phase I/Environmental Site Assessment (ESA). The recommendations of the Phase I/ESA shall be incorporated into the proposed project, as necessary. Therefore, the proposed project will have a less than significant impact with mitigation incorporated. Refer to Mitigation Measure VIII-1, below.

b. Create a significant hazard to the public or the environment through reasonable foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☐	☒	☐

Comments: It is not anticipated that through the General Plan Amendment, Zone Change, and development of the proposed project, foreseeable upset and accident conditions will occur. Development of the proposed project will comply with all Federal, State, and local policies and regulations related to the construction of the proposed project. Therefore, the proposed project will have a less than significant impact.

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

Comments: The proposed project is not located within the quarter mile proximity of an existing or proposed school. However, as noted above in VIII-a, the General Plan Amendment, Zone Change, and development of a multi-family residential do not typically involve the emission of handling of hazardous materials are identified, all Federal, State, and local policies and regulations related to hazardous materials shall be complied with. Therefore, the proposed project will have a less than significant impact.

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 create a significant hazard to the public or the environment?	☐	☐	☐	☒

Comments: Appendix A of the Los Banos 2030 General Plan provides a list of hazardous sites within the City of Los Banos. Based on a review of Appendix A, the proposed project is not located on a site identified as hazardous. Therefore, the proposed project will have no impact.

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

Comments: The Los Banos Municipal Airport is located within the City of Los Banos and is a general aviation facility with a single paved runway 3,800 feet in length. According to the Merced County Airport Land Use Compatibility Plan, adopted June 21, 2012, the proposed project is not located within the airport's "Airport Influence Area". Therefore, the proposed project will have no impact.

f. For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒

Comments: The project site is not located within the vicinity of a private airstrip. Therefore, the proposed project will have no impact.

g. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☒	☐

Comments: The Los Banos Fire Department has reviewed the proposed project, and provided feedback to ensure the proposed project complies with any emergency response plan or emergency evacuation plan. To ensure this compliance, the project proponent will be required to submit for approval to the Los Banos Fire Department the proposed project's Improvement Plans. This approval shall occur prior to the approval and recordation of the proposed project's Final Map. Therefore, the proposed project will have a less than significant impact.

h. Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	☐	☐	☐	☒

Comments: The proposed project is located within an urban area and within the City of Los Banos, and is surrounded by existing development on the north, south, and west sides. As such, no wildlands exist within or adjacent to the proposed project. Therefore, the proposed project will have no impact.

Mitigation Measure VIII-1: Prior to the approval of the proposed project's Improvement Plans, the applicant, or project proponent, shall prepare and submit to the City of Los Banos Community and Economic Development Department a Phase 1/Environmental Site Assessment (ESA). The recommendations of the Phase I/ESA shall be incorporated into the proposed project, as deemed necessary by City staff.

Categories and Issues:	Potentially Significant Impact	Less than Significant w/ Mitigation Incorporated	Less than Significant Impact	No Impact
IX. **Hydrology and Water Quality** Would the project:				
a. Violate any water quality standards or waste discharge requirements?	☐	☐	☒	☐

Comments: The proposed project will not violate any Federal, State, or local water quality standards or waste discharge requirements. Prior to the approval and recordation of the proposed project's Final Map, the Applicant will be required to obtain approval from the City of Los Banos for the project's Improvement Plans. These Improvement Plans include the design of infrastructure (i.e. water, sanitary sewer, storm drainage) required for the proposed project. Review and approval by City staff will ensure the proposed project complies with any applicable water quality standards and waste discharge requirements. Therefore, the proposed project will have a less than significant impact.

b. Substantially deplete groundwater supplies or interfere substantially with ground water recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	☐	☐	☒	☐

Comments: The domestic water infrastructure proposed as part of the proposed project consists of connecting to the City of Los Banos existing domestic water system. According to Section 8.2 of the Los Banos 2030 General Plan, *"the 2008 Urban Water Management Plan estimates that this supply is sufficient to meet City needs through 2030."* Therefore, it is anticipated that the City has sufficient supply to meet the demands of the proposed project. As such, the proposed project will have a less than significant impact.

c. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?	☐	☐	☒	☐

Comments: The proposed project will alter the existing drainage pattern of the site through construction and converting the site from vacant land to urban development. However, the proposed project, and its storm drainage design, will comply with the City's Drainage Design Manual and City Standards and Specifications. Compliance will be ensured through the proposed project's Improvement Plan process. Therefore, the proposed project will have a less than significant impact.

d. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?	☐	☐	☒	☐

Comments: The proposed project will contribute runoff water by adding 96 multi-family residential units and associated improvements (i.e. streets, water, sanitary sewer, storm drainage, etc.). However, through the design of the proposed project's storm drainage system, the project proponent will be required to comply with the Los Banos Drainage Design Manual and the City's Standards and Specifications. Therefore, the proposed project will have a less than significant impact.

e. 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?	☐	☐	☒	☐

Comments: The proposed project will not degrade water quality within the vicinity of the project site. Therefore, the proposed project will have a less than significant impact.

f. Otherwise substantially degrade water quality?	☐	☐	☒	☐

Comments: Please refer to the comments and determination above, for IX-a.

g. Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary of Flood Insurance Rate Map or other flood hazard delineation map?	☐	☐	☐	☒

Comments: Based on a review of FEMA Flood Map No. 06047C0850G, dated December 2, 2008, which includes the proposed project site, the proposed project is not located within a 100-year flood plain. Therefore, the proposed project will have no impact.

h. Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	☐	☐	☐	☒

Comments: Please refer to the comments and determination above, for IX-g.

i. Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	☐	☐	☒	☐

Comments: The proposed project is located within the Planning Area as it defined in the Los Banos 2030 General Plan. According to Section 7.2 of the Los Banos 2030 General Plan, *"three dams close to Los Banos have the potential of inundating portions or the whole of the Planning Area. Flood zone mapping by the U.S. Army Corps of Engineers indicates that all of the Planning Area is located within the San Luis Reservoir dam inundation area. Northern portions of the Planning Area are also located within the Los Banos Detention Reservoir and the Little Panoche Reservoir Dam inundation area."* All three dams are owned by the Bureau of Reclamation, and are inspected regularly for their structural integrity. In response to the potential of inundation by a result of dam failure, the City has adopted General Plan policies, which include coordination with the U.S. Army Corps of Engineers on potential flooding risks, and ensuring that City staff and Emergency Response Services are trained to respond to catastrophic dam failure. Therefore, the proposed project will have a less than significant impact.

j. Inundation by seiche, tsunami, or mudflow?	☐	☐	☐	☒

Comments: The City of Los Banos, including the proposed project, is located approximately sixty-six (66) miles east of the Pacific Ocean. Exposure of future residents within the proposed project to the risk of seiches, tsunami, or mudflows is minimal. Therefore, the proposed project will have no impact.

	Potentially Significant Impact	Less than Significant w/ Mitigation Incorporated	Less than Significant Impact	No Impact
Categories and Issues:				
X. **Land Use and Planning** Would the project:				
a. Physically divide an established community?	☐	☐	☒	☐

Comments: The proposed project is located within the City of Los Banos, which is an urbanized City located along State Route 152 and State Route 165. Specifically, the proposed project is surrounded by existing residential and urban development on the north, south, east, and west sides of the project site. No new streets are proposed to be developed as a result of the proposed development. Therefore, the proposed project would not physically divide the established community, and would have no impact.

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

Comments: The proposed project would be consistent with existing uses in the project vicinity and would not result in substantial land use conflicts with the surrounding residential uses in the area. The project proposes to amend the General Plan to designate the approximate 5 acre project site from Low Density Residential to High Density Residential and Re-Zone the property from Low Density Residential (R-1) to High Density Residential (R-3), which would be consistent with the surrounding area that is primarily a mixture of single-family dwelling units. The High Density Residential Zoning District (R-3) is intended to stabilize and maintain the residential character of the district for multifamily living with substantial space for cooperatively-used facilities and open spaces, which would be consistent with the surrounding area. Thus, the proposed General Plan Amendment to the land use designations and Zone Change would be consistent with the overall intent of the Los Banos 2030 General Plan and the Los Banos Municipal Code.

c. Conflict with any applicable habitat conservation plan or natural community conservation plan?	☐	☐	☐	☒

Comments: The proposed project is not located within an adopted Habitat Conservation Plan or Natural Community Conservation Plan. Therefore, the proposed project will have no impact.

	Potentially Significant Impact	Less than Significant w/ Mitigation Incorporated	Less than Significant Impact	No Impact
Categories and Issues:				
XI. **Mineral Resources** Would the project:				
a. Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	☒
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?	☐	☐	☐	☒

Comments XI-a,b: Section 5.6 of the Los Banos 2030 General Plan, dated July 15, 2009, states, *"According to the Department of Conservation: Mines and Geology, there are no known significant mineral resources located within the Planning Area. The Planning Area contains parts of San Luis Ranch alluvium and Modesto alluvium, known mineral occurrences of underdetermined mineral resources significance. According to the State Office of Mine Reclamation, sand and gravel is currently mined within portions of the Los Banos Creek Fan, located southwest of the Planning Area. Although further exploration of the Planning Area could result in the reclassification of specific localities, no mineral resources have been historically exploited or are being currently exploited commercially within the Planning Area."*

The proposed project is located within the Planning Area as it is defined in the Los Banos 2030 General Plan, and is consistent with the land use designation prescribed by the General Plan. Therefore, as determined in the Los Banos 2030 General Plan, the proposed project will have no impact to mineral resources of Statewide or local importance.

	Potentially Significant Impact	Less than Significant w/ Mitigation Incorporated	Less than Significant Impact	No Impact
Categories and Issues:				
XII. **Noise** Would the project:				
a. Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☐	☒	☐

Comments: Within the City of Los Banos, a primary source of noise is vehicle traffic. Under the City of Los Banos 2030 General Plan noise standards, the maximum allowable noise exposure to ground transportation is 60 dB CNEL for outdoor activity areas in residential, transient lodging, medical facilities, and church land uses. These land uses, which include the proposed project (residential), require a maximum allowable noise level of 45 dB CNEL for interior spaces. The proposed project will increase the number of vehicle trips within the project area. However, based on a review of Figure 3.11-3 of the Los Banos 2030 General Plan EIR, the proposed project is not located within an area identified as exceeding the City's General Plan noise standard upon build-out of the City's "Planning Area." Therefore, the proposed project will not exceed the Los Banos General Plan noise standards, and will have a less than significant impact.

b. Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☒	☐

Comments: Construction of the proposed project will expose residence within the surrounding area to groundborne vibration and noise levels. However, that exposure will be temporary, and the project proponent will be required to comply with the Los Banos Noise Control Ordinance, Article 27. Therefore, the proposed project will have a less than significant impact.

c. A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☒	☐

Comments: The Los Banos 2030 General Plan EIR states, *"The future noise contours suggest that even at build-out there is virtually no land, other than directly on the roadways, being exposed to noise levels above 60 dB."* Figure 3.11-3 of the 2030 General Plan EIR further illustrates areas within the City that would be exposed to noise levels above the City's standard. Development of the proposed project will increase noise levels in the project area. However, the proposed project is not located within an area anticipated to generate noise levels above the standard identified in the Los Banos 2030 General Plan. Therefore, the proposed project will have a less than significant impact.

d. A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☒	☐

Comments: Please refer to XII-c for comments and determination.

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

Comments: Figure 3-11.2 of the 2030 General Plan EIR illustrates the existing noise contours as it relates to the airport. The 55 dBA CNEL noise contour line for the airport does not enter the project site, so noise levels from aircraft operations do not exceed standards. Therefore, the proposed project will have no impact.

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

Comments: The project site is not located within the vicinity of a private airstrip. Therefore, no impacts would occur related to noise from a private airstrip.

Categories and Issues:	Potentially Significant Impact	Less than Significant w/ Mitigation Incorporated	Less than Significant Impact	No Impact
XIII **Population and Housing** Would the project:				
a. Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☒	☐

Comments: According to the California Department of Finance (January 1, 2017), the population of Los Banos is 40,986 persons with an average of 3.59 persons per household. The proposed project would enable the future development of 96 multi-family dwelling units within the City of Los Banos. With an average of 3.59 persons per household, the addition of 96 multi-family dwelling units within the City of Los Banos could add up to 345 people to the City. The potential population increase as a result of the project implementation is relatively low. Thus the proposed project would not induce substantial population growth. Therefore, the proposed project will have a less than significant impact.

b. Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

Comments: The proposed project will not require the displacement of existing housing which would necessitate the construction of replacement housing. Therefore, the proposed project will have no impact.

c. Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

Comments: The proposed project site is currently vacant, and at build-out will not displace substantial number of existing housing. Therefore, the proposed project will have no impact.

Categories and Issues:	Potentially Significant Impact	Less than Significant w/ Mitigation Incorporated	Less than Significant Impact	No Impact
XIV. **Public Services**				
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:				
1) Fire protection?	☐	☐	☒	☐
2) Police protection?	☐	☐	☒	☐
3) Schools?	☐	☐	☒	☐
4) Parks?	☐	☐	☒	☐
5) Other public facilities?	☐	☐	☒	☐

Comments: The proposed project consists of a General Plan Amendment, Zone Change, and development of 96 multi-family residential units. The addition of these units and future residents will impact public services such as fire protection, police protection, schools, and parks.

Fire and police protection are provided by the City of Los Banos via the Los Banos Fire Department and Los Banos Police Department. To offset any potential impacts to fire and police services as a result of the proposed project, the proposed project will be required to pay the appropriate Capital Facilities Fees at the time a Building Permit is issued. In addition, as a Condition of Approval for the proposed project, the project will be required to annex into Community Facilities District (CFD) No. 2002-01 (Public Safety Services), which is an annual tax assessed to each new parcel within the proposed project. Therefore, potential impacts to fire and police protection services will be offset by payment of the applicable Capital Facilities Fees and annexing into CFD 2002-01. Therefore, the proposed project will have a less than significant impact.

The proposed project is located within the Los Banos Unified School District (LBUSD). According to LBUSD School Facility Needs Analysis and Justification Study, dated April 2014, the proposed project will generate twenty-four (94) students within the LBUSD. 2030 General Plan Policy LU-I-8 states, *"Require new development to pay its proportionate share of the costs of public infrastructure, services and transportation facilities. This shall include parks, fire, and police stations, schools, utilities, roads, and other needed infrastructure."*

Specifically, based on the Table 1-8, Student Generation Rates, of the LBUSD School Facilities Needs Analysis, the proposed project will generate the following students per grade group:

Grade Group	Single-Family Student Generation Rate	Number of Students Generated by Proposed Project
K-6	0.594	57
7-8	0.163	16
9-12	0.216	21
Total		**94**

According to the LBUSD Boundary Map, these students generated by the proposed will likely attend the following schools:

- R.M. Miano Elementary, which would see an increase of 57 students generated by the proposed project;
- Los Banos Junior High School, which would see an increase of 16 students generated by the proposed project; and,
- Pacheco High School, which would see an increase of 21 students generated by the proposed project.

The LBUSD School Facility Needs Analysis and Justification Study, dated April 2014, states, *"The District's current and projected enrollments are larger than its pupil capacity at the K-6 and 7-8 grade levels. The District, therefore, does not have sufficient capacity to house students generated by future development."*

In addition, as noted above, the Los Banos Unified School District ("District") has prepared and adopted a School Facility Needs

Analysis, and in accordance with Senate Bill 50, has adopted Level II and III impact fees. Resolution No. 15-18, adopted by the District Board on May 10, 2018, established a Level II Fee of $5.98 per square foot for new residential development, and a Level III Fee of $11.96 per square foot. For the proposed project, the District's Level II Fees shall be applied in accordance with Resolution No. 15-18.

Page 4 of Resolution No. 15-18 states, "Additional Mitigation Methods. The fees set forth in this Resolution are not exclusive, and the Board reserves the authority to undertake any and all additional methods to finance school facilities. The Board recognizes that the fees established herein represent the full and complete mitigation on school facilities of impacts related to actions by local government, including but not limited to, the planning, use or development of real property. The Board also reserves the authority to substitute the dedication of land or other property, or other form of a requirement in lieu of the fees levied by this Resolution."

It is also important to note that the LBUSD has acquired property for the development of an elementary school and has plans to expand an existing elementary school. The location of these properties are as follows:

New Elementary School:
APN No. 428-280-007, 008, and 009
16 acres
Located: East B Street/Place Road

In accordance with Resolution No. 15-18, as well as General Plan Policy LU-I-8, the direct impacts to school facilities associated with the proposed project will be mitigated via payment of the Level II impact fees adopted by the LBUSD Board of Education.

The proposed project will impact parks and recreational facilities by adding additional residential units and residents within the City. However, to offset any potential impacts, the developer of the proposed project shall pay the applicable Capital Facilities Fees at the time of building permit issuance. Therefore, the proposed project will have a less than significant impact.

	Potentially Significant Impact	Less than Significant w/ Mitigation Incorporated	Less than Significant Impact	No Impact
Categories and Issues:				
XV. **Recreation**				
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?	☐	☐	☒	☐

Comments: The proposed project will increase the use of existing park facilities in the City of Los Banos. However, as noted previously in this Initial Study, the developer of the proposed project will be required to pay the applicable Capital Facilities Fees, which include park facilities, at the time of building permit issuance. This Capital Facilities Fee is intended to offset impacts of new development to public services, including parks and park facilities. Therefore, the proposed project will have a less than significant impact.

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?	☐	☐	☒	☐

Comments: The proposed project does not consist of the development of new recreational facilities, nor will it necessitate the construction or expansion of existing recreational facilities. As noted above, the developer of the proposed project will be required to pay the applicable Capital Facilities Fee at the time of the building permit issuance. The intent of the Capital Facilities Fee is to offset any potential impacts to public services and facilities, including parks and recreational facilities, as a result of new development. Therefore, the proposed project will have a less than significant impact.

	Potentially Significant Impact	Less than Significant w/ Mitigation Incorporated	Less than Significant Impact	No Impact
Categories and Issues:				
XVI. **Transportation / Traffic:** Would the project:				
a. Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)?	☐	☒	☐	☐

Comments: The City's 2030 General Plan Circulation Element provides the guiding policies and implementing actions associated with transportation in the City. Specifically, Implementing Action C-I-10 of the 2030 General Plan states, "Develop and manage the roadway system to obtain segments as LOS C and intersections at LOS D or better for two hour peak periods (AM and PM) on all major roadways and intersections in Los Banos. This policy does not extend to residential streets (i.e. streets with direct driveway access to homes) or state highways and their intersections, where Caltrans policies apply."

The project is expected to generate 703 daily trips based on standard ITE Trip Generation rates for multi-family residences, with 34 trips generated in the a.m. peak hour and 54 trips occurring in the p.m. peak hour. Project trips were added to existing volume, and it was determined that the addition of project traffic will result in motorists on Regency Drive experiencing delays that are indicative of LOS E in the p.m. peak hour, which exceeds the City's minimum LOS D standard. This change is primarily due to the elimination of the southbound merging lane that is today available for Regency Drive motorists. However, resulting traffic volumes do not reach the level that satisfy peak hour volume warrants. Widening SR 165 to four lanes through the intersection would deliver LOS C conditions but may require some widening beyond the project frontage. The project would generate pedestrians who would need to walk along SR 165 where sidewalk is not available or to cross the highway. The project will address this issue by including sidewalk in its SR 165 frontage improvements and by installing an all-weather path along the west side of SR 165 between the project and Santa Barbara Drive. A crosswalk will be installed if required by Caltrans.

b. Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?	☐	☒	☐	☐

Comments: Please see the comment above in item XVI-a.

c. Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	☐	☐	☐	☒

Comments: The proposed project will not result in the change of air patterns, most notably from the Los Banos Municipal Airport. Therefore, the proposed project will no impact.

d. Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☒	☐

Comments: Street improvements installed as part of the proposed project will be done in accordance with Caltrans and City standards and specifications. As such, hazards due to a design feature are not anticipated to occur. Therefore, the proposed project will have a less than significant impact.

e. Result in inadequate emergency access?	☐	☐	☒	☐

Comments: The proposed project is considered infill on an existing street where the access to multi-family development will be from two (2) points on Mercey Springs Road. The northern driveway is relatively close to the Regency Drive intersection and would result in conflicts between traffic slowing to make a left turn and other northbound through traffic. Prohibiting northbound left turns is recommended at this location. The southern driveway does not appear to align with Regency Drive, and conflict between outbound left turns from each approach may occur. Realigning the driveway is recommended. Therefore, the proposed project will have a less than significant impact.

.

f. Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	☐	☒	☐	☐

Comments: The frontage on Mercey Springs Road currently do not have curb, gutter, and sidewalk, however the development of the curb, gutter and sidewalk shall meet the adopted polices and plans for pedestrian/bicycle access and shall also meet the City of Los Banos Standards. Public transit is located approximately one and a half miles south west of the project site near the frontage of the Los Banos Memorial Hospital and this project site will not decrease the performance or safety of these existing facilities. Therefore, the proposed project will have a less than significant impact.

Mitigation Measure XVI-1: Widen Mercey Springs Road (SR 165) to allow the highway to be striped with two through lanes in each direction at the SR 165 / Regency Drive intersection.

Mitigation Measure XVI-2: Construct sidewalk as part of project frontage improvements and construct an all-weather path along the west side of SR 165 from the limits of the project to Santa Barbara Drive. If required by Caltrans, construct a pedestrian crossing on SR 165.

Mitigation Measure XVI-3: Locate the southern driveway at a position relative to Regency Drive that is acceptable to Caltrans and the City of Los Banos.

Mitigation Measure XVI-4: Prohibit northbound left turns into the northern driveway to the satisfaction of Caltrans and the City of Los Banos.

Mitigation Measure XVI-5: The project shall contribute its fair share to the cost of regional improvements by making frontage improvements and paying adopted traffic impact fees.

Categories and Issues:	Potentially Significant Impact	Less than Significant w/ Mitigation Incorporated	Less than Significant Impact	No Impact
XVII. **Tribal Cultural Resources**				
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:				
1. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or	☐	☐	☒	☐

Comments: Tribal cultural resources are generally defined by Public Resources Code 21074 as sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe. A Sacred Lands File Search, performed by the Native American Heritage Commission (NAHC) for the immediate project area did not indicate the presence of Native American cultural resources in the immediate project area. The project site has been annually disked and is surrounded by existing developments. As such, the proposed project will have a less than significant impact.

2. A resource determined by the lead agency, in its discretion and supported by a substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resource 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.	☐	☐	☒	☐

Comments: The project site is not known to contain any identified Native American tribal cultural resources and is not a known Native American sacred site. The City of Los Banos has not received any letters from any Native American tribes requesting tribal consultation per Public Resources Code, Section 210080.3.1(b) regarding the potential for a Native American tribal cultural resource to be located on or near the project site. A Sacred Lands File Search, performed by the Native American Heritage Commission (NAHC) for the immediate project area failed to indicate the presence of Native American cultural resources in the immediate area. In addition, Mitigation Measure V-1, as previously discussed, would ensure that the proposed project would not cause any substantial adverse changes in the significance of previously unknown tribal cultural resources. Given the results of the NAHC and compliance with Mitigation Measure V-1, impacts related to tribal cultural resources, in accordance with the criteria set forth in Public Resource Code Section 5024.1, would be considered less than significant.

	Potentially Significant Impact	Less than Significant w/ Mitigation Incorporated	Less than Significant Impact	No Impact
Categories and Issues:				
XVIII. **Utilities and Service Systems:** Would the project:				
a. Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	☐	☐	☒	☐

Comments: The proposed project will connect to the City's existing sanitary sewer system. The City has sufficient capacity to accommodate the proposed project and will not exceed any treatment requirements imposed by the Regional Water Quality Control Board. Therefore, the proposed project will have a less than significant impact.

b. Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☒	☐

Comments: The proposed project will connect to the City's existing water and sanitary sewer system. As part of this connection, the proposed project will not be required to increase the size of existing water and sanitary sewer lines in order to serve the project. The City has sufficient capacity in its domestic water and sanitary sewer systems to accommodate development within the proposed project. In addition, the proposed project will be required to pay the applicable Capital Facilities Fees, which include water and sanitary sewer fees, at the time of Building Permit issuance. Therefore, the proposed project will have a less than significant impact.

c. Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☒	☐

Comments: The proposed project will connect to the City's existing storm drainage system via connecting to an existing storm drain line located in Mercey Springs Road. The design and installation of the proposed project's storm drainage system will be done in accordance with the City's Drainage Design Manual, and does not require the construction or expansion of new/existing facilities. Therefore, the proposed project will have a less than significant impact.

d. Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	☐	☐	☒	☐

Comments: It has been determined that there is sufficient water supply capacity available to serve the proposed project. The proposed project does not require the construction of new or expansion of existing facilities.

e. Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☒	☐

Comments: It has been determined that there is sufficient waste water supply capacity available to serve the proposed project. The proposed project does not require the construction of new or expansion of existing facilities.

f. Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	☐	☐	☒	☐

Comments: Solid waste in the City of Los Banos is managed by the Merced County Association of Governments. The majority of the City's solid waste is taken to Billy Wright Landfill and additional waste is taken to Highway 59 Landfill. The City's 2030 General Plan EIR determined that there are sufficient options for expansion or relocation of services to meet the demand created by future growth in Los Banos. Therefore, the proposed project will have a less than significant impact.

g.	Comply with federal, state, and local statutes and regulations related to solid waste?	☐	☐	☒	☐

Comments: The proposed project will comply with all Federal, State, and local statutes and regulations related to solid waste. Therefore, the proposed project will have a less than significant impact.

	Potentially Significant Impact	Less than Significant w/ Mitigation Incorporated	Less than Significant Impact	No Impact
MANDATORY FINDINGS OF SIGNIFICANCE				
a. Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☐	☐	☒	☐

Comments: Finding (a) is checked as "Less Than Significant Impact" on the basis of the proposed project's potential impact on biological resources, as described in Category 4 of this Initial Study. Potential impacts were identified in this issue area but they were identified to be 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)?	☐	☐	☒	☐

Comments: As described in this Initial Study, the potential environmental effects of the proposed project will either be less than significant, or will have no impact at all. Where the proposed project involves potentially significant impacts, these impacts would have a less than significant impact with mitigation measures incorporated.

The potential environmental impacts identified in this Initial Study have been considered in conjunction with each other as to their potential to generate other potentially significant impacts. The various potential environmental impacts of the proposed project will not combine to generate any potentially significant cumulative impacts.

The City of Los Banos 2030 General Plan and EIR comprehensively account for ongoing and foreseeable urban development within the City's "Planning Area" and the cumulative environmental impacts of planned development. Future urban development in Los Banos includes the provision of roads, utilities, schools, and recreational facilities needed to serve City residents and visitors as their demands for urban services increase over time.

The proposed project will contribute to planned urban development in the City of Los Banos, by adding 96 multi-family residential units. The potential environmental impacts associated with the proposed project represent a portion of the environmental consequences of the planned growth and development permitted by the 2030 General Plan. The proposed project may involve a minor addition to the potential environmental impacts identified in the 2030 General Plan EIR, but the proposed project will not result in any substantial contribution to any of the significant cumulative impacts identified in the 2030 General Plan EIR.

c. Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☐	☒	☐

Comments: This Initial Study has considered the potential environmental impacts of the proposed project in the discrete issue areas outlined in the CEQA Environmental Checklist. During the environmental analysis, the potential for the proposed project to result in substantial impacts on human beings in these issue areas, as well as the potential for substantial impacts on human beings to occur outside of these issue areas, was considered, and no other such impacts were identified.

REFERENCES

City of Los Banos 2030 General Plan
City of Los Banos Zoning Ordinance
CEQA

All reference material may be reviewed at the City of Los Banos Community Development Department, 520 J Street, Los Banos, CA 93635.

APPENDIX A
Site Plan

SITE PLAN

1"=30'-0"

PROJECT DATA

Applicant:
MR. SARWI
85 W. "G" STREET
LOS BANOS, CA

Address:
MERCEY SPRINGS ROAD
LOS BANOS, CA

Zoning /Land Use
EXISTING ZONING: xx
APN: 082-030-51 (5 AC)

Building Areas per building and type

Community Building
TOTAL BUILDING AREA = 2,312 SF

Building Type I
8-PLEX 2 STORY BUILDING
FIRST & SECOND FLOOR UNITS
UNIT B1 = 2br/2ba
LIVING = 1,027 sf
PATIO = 66 sf
WH/STO = 17 sf
TOTAL = 1,110 sf x (8)
BLDG AREA = 8,880sf

Building Type II
12-PLEX 2 STORY BUILDING:

FIRST & SECOND FLOOR UNITS
UNIT A1 = 1br/1ba
LIVING = 774 sf
PATIO = 66 sf
WH/STO = 17 sf
TOTAL = 854 sf x (4)
= 3,416

UNIT B1 = 2br/2ba
LIVING = 1,027 sf
PATIO = 66f
WH/STO = 17sf
TOTAL = 1,110 x (4)
= 4,440 sf

UNIT C1 = 3br/2ba
LIVING = 1,274 sf
PATIO = 83 sf
WH/STO = 22 sf
TOTAL = 1,379 sf x (4)
= 5,516 sf
BLDG AREA = 13,372 sf

BUILDING / UNIT MIX COUNT

BUILDING No.	BLDG TYPE	QTY.	1BR/1BA A1	2BR/2BA B1	3BR/2BA C1	DWELLING UNIT CT.
BLDG 1	I	1	0	8	0	8
BLDG 2	II	1	4	4	4	12
BLDG 3	II	1	4	4	4	12
BLDG 4	I	1	0	8	0	8
BLDG 5	I	1	0	8	0	8
BLDG 6	II	1	4	4	4	12
BLDG 7	I	1	0	8	0	8
BLDG 8	I	1	0	8	0	8
BLDG 9	II	1	4	4	4	12
BLDG 10	I	1	0	8	0	8
SUB TOTAL			16	64	16	96
%			17%	66%	17%	100%
DWELLING UNITS PER AC	19.2 D.U. PER AC					

Parking Required:
FOR EACH D.U. WITH 1 BEDROOMS REQUIRE REQUIRES 1.5 STALLS
FOR EACH D.U. WITH 2 OR MORE BEDROOMS REQUIRES 2 STALLS

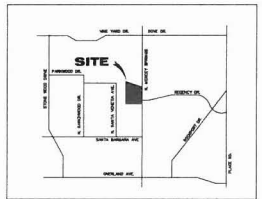
REQUIRED ACCESSIBLE PARKING PER CBC SECTION 1109A.4
PER SECTION 1109A.3 "REQUIRED ACCESSIBLE PARKING"
PROVIDED 2% ACCESSIBLE PARKING OF EACH TYPE:
OPEN STALLS: 187 X .02 = 3.7
(MIN OF 4 STALLS - 4 PROVIDED)

PARKING REQUIRED

UNIT TYPES	UNITS	RATIO	QTY.
1 BRDM	16	1.5	24
2 BRDM	64	2.0	128
3 BRDM	16	2.5	24
TOTAL UNITS	96		
TOTAL PARKING RQ'D			176

PARKING PROVIDED

PARKING TYPE	QTY.
ACCESSIBLE STALLS	2
ACCESSIBLE STALL COVERED	2
OPEN STALLS	91
CARPORTS	89
TOTAL PARKING RQ'D	185
PARKING TO UNIT RATIO	1.93 /DU



Vicinity Map

SJA Design Group
1915 Carollna Ave.
Clovls CA 93611
PH: 559. 593.9692

Mulit-Family Project
xxxx Mercey Springs Road
Los Banos, CA

LICENSED ARCHITECT
Janice K. Bier
C22169
Renewal Date 02/28/19
STATE OF CALIFORNIA

Date: 12.14.18
Drawn By: Susan Jones
Project # 18020

Site Plan

Revisions
⚠ X

SHEET No.
A1.0

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APPENDIX B
TRAFFIC STUDY

TRAFFIC IMPACT ANALYSIS

For

MERCEY SPRINGS ROAD APARTMENTS

Los Banos, CA

Prepared For:

City of Los Banos Community Development Department
520 J Street
Los Banos 93635

Prepared By:

KD Anderson & Associates, Inc.
3853 Taylor Road, Suite G
Loomis, CA 95650
(916) 660-1555

December 26, 2018

4529-23

Mercey Springs Road Apartments.rpt

TRAFFIC IMPACT ANALYSIS FOR
MERCEY SPRINGS ROAD APARTMENTS
Los Banos, CA

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APPENDIX **35**

TRAFFIC IMPACT ANALYSIS FOR
MERCEY SPRINGS ROAD APARTMENTS
Los Banos, CA

INTRODUCTION

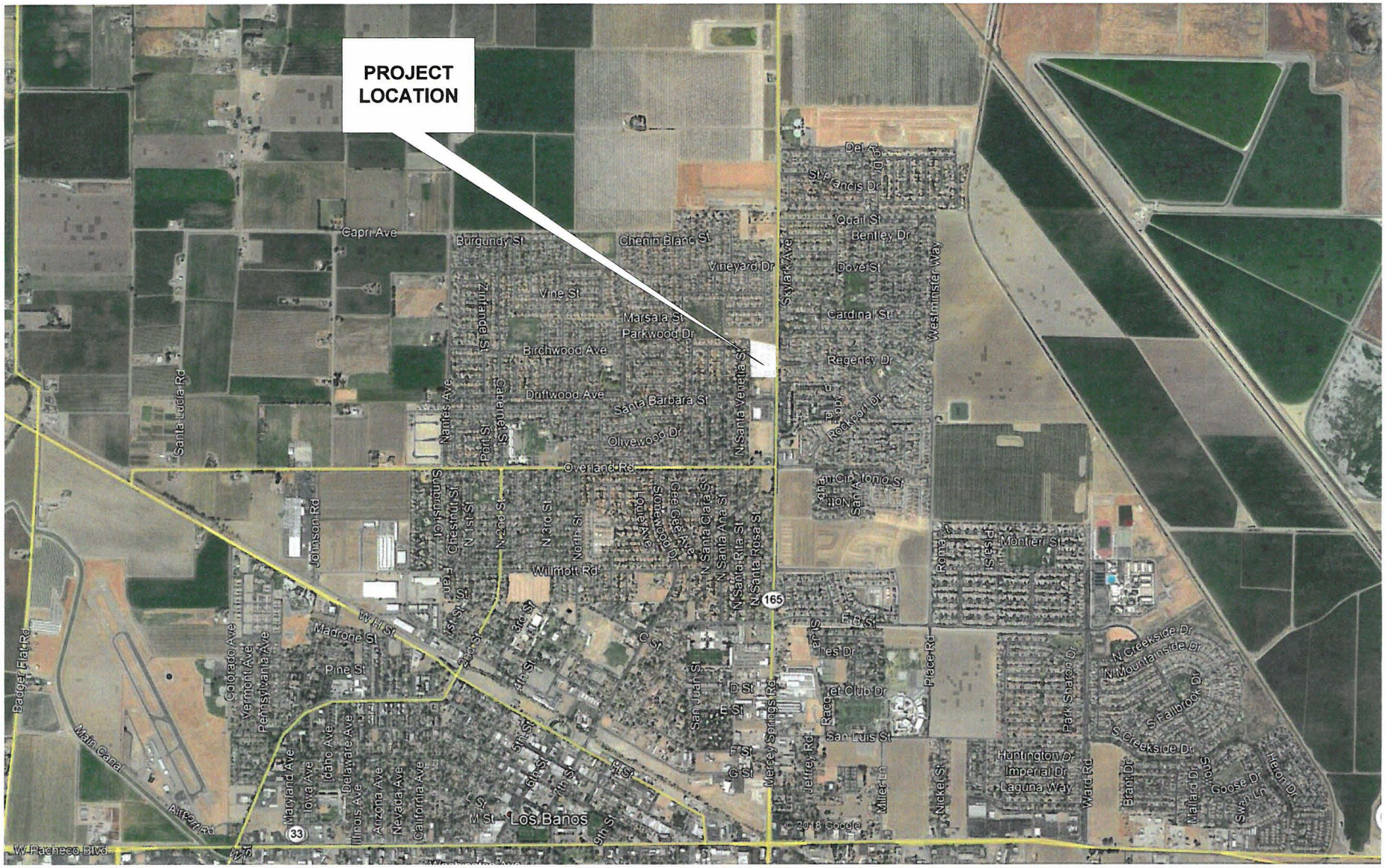
This report summarizes **KD Anderson & Associates** analysis of the potential traffic impacts associated with development of the **Mercey Springs Road Apartments.** Figure 1 displays the location of the 5+/- acre project in the area west of Mercey Springs Road (SR 165) opposite the Regency Drive intersection. The project is comprised of 96 apartments units, as shown in Figure 2.

Study Scope

The purpose of this analysis is to identify potential project specific and cumulative traffic impacts that could accompany implementation of the project. The analysis includes an evaluation of existing circulation conditions in the area based on recent data collected by the consultant. To develop a baseline condition against which the project can be evaluated, an "Existing Plus Approved Projects" traffic volume scenario was created based on information from the City of Los Banos regarding other approved but as yet unconstructed projects. To assess the specific impacts of the Mercey Springs Apartments, the characteristics of the proposed project have been determined, including estimated trip generation, and the directional distribution / assignment of the project traffic. "Existing Plus Project" and "Existing Plus Approved Projects Plus Project" conditions were then evaluated.

To address cumulative impacts this study considers long term conditions occurring in Year 2030 under the Los Banos General Plan. Information contained in the City of Los Banos Transportation Master Plan based on the citywide travel demand forecasting model is the basis for this analysis.

Based on the size of the project and its location in northern Los Banos the analysis focusses on the project access to SR 165 and its impact to the SR 165 / Regency Drive intersection.



KD Anderson & Associates, Inc.
Transportation Engineers
3515-01 RA 12/26/2018

VICINITY MAP

figure 1

SITE PLAN

PROJECT DATA

Applicant
MR. SAPNI
83 W. 'G' STREET
LOS BANOS, CA

Address:
MERCEY SPRINGS ROAD
LOS BANOS, CA

Zoning /Land Use
EXISTING ZONING: xx
APN: 082-030-51 (5 AC)

Building Area

Building Type A1
6-PLEX 2 STORY BUILDING

FIRST FLOOR UNITS
UNIT D1 = 2br/2ba
LIVING = 1,020 sf
PATIO = 78 sf
ENTRY = 36 sf
WH/STO = 18 sf
TOTAL = 1,152 sf x (4)
= 4,608sf

SECOND FLOOR UNITS
UNIT D2 = 2br/2ba
LIVING = 1,020 sf
PATIO = 78 sf
ENTRY = 36 sf
WH/STO = 18 sf
TOTAL = 1,152 sf x (4)
= 4,608sf

TOTAL AREA BUILDING TYPE A1 = 9,216 sf

Building Type B1
12-PLEX 2 STORY BUILDING:

FIRST FLOOR UNITS
UNIT D1 = 2br/2ba
LIVING = 1,020 sf
PATIO = 78 sf
ENTRY = 36 sf
WH/STO = 18 sf
TOTAL = 1,152 sf x (4)
= 4,608sf

UNIT D3 = 3br/2ba
LIVING = 1,240 sf
PATIO = 84 sf
ENTRY = 78 sf
WH/STO = 18 sf
TOTAL = 1,420 sf x (2)
= 2,840sf

SECOND FLOOR UNITS
UNIT D2 = 2br/2ba
LIVING = 1,020 sf
PATIO = 78 sf
ENTRY = 36 sf
WH/STO = 18 sf
TOTAL = 1,152 sf x (4)
= 4,608sf

UNIT D4 = 3br/2ba
LIVING = 1,240 sf
PATIO = 84 sf
ENTRY = 78 sf
WH/STO = 18 sf
TOTAL = 1,425 sf x (2)
= 2,840sf

TOTAL AREA BUILDING TYPE B1 = 14,896 sf

Parking Required
FOR EACH D.U. WITH 1 BEDROOMS REQUIRE REQUIRES 1.5 STALLS
FOR EACH D.U. WITH 2 OR MORE BEDROOMS REQUIRE REQUIRES 2 STALLS

TOTAL STALLS REQUIRED 96 D.U. X 2 = 192 STALLS

REQUIRED ACCESSIBLE PARKING PER CBC SECTION 11B6A.4
PER SECTION 11B6A.3 "REQUIRED ACCESSIBLE PARKING"
PROVIDED 2% ACCESSIBLE PARKING OF EACH TYPE:
OPEN STALLS: 187 X .02 = 3.7
(MIN OF 4 STALLS - 4 PROVIDED)

Parking Provided

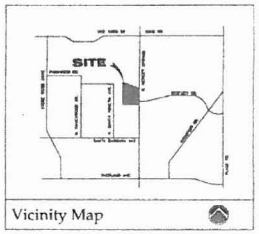
PARKING PROVIDED
ACCESSIBLE STALL = 4 STALL
STANDARD STALLS = 183 STALLS
TOTAL PARKING COUNT = 187 STALLS

BICYCLE PARKING
PER CALGREEN PROVIDED BICYCLE PARKING FOR A TOTAL OF 5% OF PARKING STALL COUNT.

187 STALLS x 5% = 9.3 (REQUIRED 10 BICYCLE PARKING)

BUILDING / UNIT MIX COUNT

BUILDING No.	TYPE	QTY.	2BR/2BA D1	2BR/2BA D2	3BR/2BA D3	3BR/2BA D3	DWELLING UNIT CT.
BLDG 1	A1	1	4	4	0	0	8
BLDG 2	B1	1	4	4	2	2	12
BLDG 3	B1	1	4	4	2	2	12
BLDG 4	A1	1	4	4	0	0	8
BLDG 5	A1	1	4	4	0	0	8
BLDG 6	B1	1	4	4	2	2	12
BLDG 7	A1	1	4	4	0	0	8
BLDG 8	A1	1	4	4	0	0	8
BLDG 9	B1	1	4	4	2	2	12
BLDG 10	A1	1	4	4	0	0	8
SUB TOTAL			40	40	8	8	
TOTAL			80		16		96
%			83%		17%		100%



Vicinity Map

SJA Design Group
1915 Carolina Ave.
Clovis CA 93611
PH: 559. 593.9692

Mulit-Family Project
xxxx Mercey Springs Road
Los Banos, CA

LICENSED ARCHITECT
Janice K. Blair
C22169
Renewal Date: 06/28/19
STATE OF CALIFORNIA

Date: 09.17.18
Drawn By: Susan Jones
Project # 18020

Site Plan

Revisions
1 x

SHEET No.
A1.1

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3515-01 RA 12/26/2018

SITE PLAN

figure 2

EXECUTIVE SUMMARY

- **Project Description.** The proposed project is a 96 unit apartment located on the west side of Mercey Springs Road (SR 165) in the area opposite Regency Drive. The project is proposed with two points of access to SR 165, one generally opposite Regency Drive and another access located roughly 150 feet further north.

- **Existing Setting**. Existing a.m. and p.m. peak hour Levels of Service were determined for the SR 165 / Regency Drive intersection. This intersection is controlled by a side street stop sign, and current Level of Service for motorists waiting to turn onto the state highway is LOS C, which is within the LOS minimum standard adopted by the City of Los Banos. Current traffic volumes fall below the level that would justify a traffic signal based on MUTCD peak hour warrants.

- **Project Impacts.** The project is expected to generate 703 daily trips based on standard ITE Trip Generation rates for multi-family residences, with 34 trips generated in the a.m. peak hour and 54 trips occurring in the p.m. peak hour. Project trips were added to existing volume, and it was determined that the addition of project traffic will result in motorists on Regency Drive experiencing delays that are indicative of LOS E in the p.m. peak hour, which exceeds the City's minimum LOS D standard. This change is primarily due to the elimination of the southbound merging lane that is today available for Regency Drive motorists. However, resulting traffic volumes do not reach the level that satisfy peak hour volume warrants. Widening SR 165 to four lanes through the intersection would deliver LOS C conditions but may require some widening beyond the project frontage.

  The project would generate pedestrians who would need to walk along SR 165 where sidewalk is not available or to cross the highway. The project will address this issue by including sidewalk in its SR 165 frontage improvements and by installing an all-weather path along the west side of SR 165 between the project and Santa Barbara Drive. A crosswalk will be installed if required by Caltrans.

- **Access Design**. The northern driveway is relatively close to the Regency Drive intersection and would result in conflicts between traffic slowing to make a left turn and other northbound through traffic. Prohibiting northbound left turns is recommended at this location.

  The southern driveway does not appear to align with Regency Drive, and conflict between outbound left turns from each approach may occur. Realigning the driveway is recommended.

- **Existing Plus Approved Projects Conditions / Impacts**. in 2018 City of Los Banos staff identified four (4) approved and two (2) pending projects in the eastern Los Banos area that are expected to be developed. These projects will increase the background traffic volume on SR 165 in the area of the proposed project. However, while this additional traffic will increase the length of delays at study intersections, no location will

operate in excess of LOS D if the Mercey Springs Apartments do not proceed, and traffic signal warrants will not be satisfied.

The addition of trips by the Mercey Springs Apartments will incrementally lengthen delays, and the SR 165 / Regency Drive intersection would operate at LOS E in both the a.m. and p.m. peak hours. However, the same improvements required for Existing Plus Project impacts will address these conditions.

- **Cumulative Impacts.** The analysis of long term cumulative conditions been based on information contained in the City's Transportation Master Plan (TMP) and City-Wide Traffic Model. Assuming that improvements contained in the TMP are in place, the volume of traffic on SR 165 in the area of the proposed project will increase by roughly 33% in the future. However, City of Los Banos minimum Level of Service standards will be met with and without the project.

- **Mitigation Measures.** The project should be responsible for the following mitigation measures to address its significant impacts.

  Mitigation 1: Widen Mercey Springs Road (SR 165) to allow the highway to be striped with two through lanes in each direction at the SR 165 / Regency Drive intersection.

  Mitigation 2: Construct sidewalk as part of project frontage improvements and construct an all-weather path along the west side of SR 165 from the limits of the project to Santa Barbara Drive. If required by Caltrans, construct a pedestrian crossing on SR 165.

  Mitigation 3: Locate the southern driveway at a position relative to Regency Drive that is acceptable to Caltrans and the City of Los Banos.

  Mitigation 4: Prohibit northbound left turns into the northern driveway to the satisfaction of Caltrans and the City of Los Banos.

  Mitigation 5: The project shall contribute its fair share to the cost of regional improvements by making frontage improvements and paying adopted traffic impact fees.

EXISTING SETTING

Existing Street System

Regional access to Los Banos is provided by State Route 152 (Pacheco Boulevard) and State Route 165 (Mercey Springs Road). Access to the Mercey Springs Apartments will be via two driveways on SR 165.

The text that follows describes existing facilities. Functionally, study area streets are classified as Arterials, Collectors or Local Streets. The applicable designation is presented in the Los Banos General Plan Circulation Element.

Mercey Springs Road (SR 165). SR 165 is an Arterial road providing north/south circulation to the eastern portion of Los Banos. The highway also provides regional access to the north to SR 99 and the City of Turlock and to the south to an interchange on Interstate 5. Currently Mercey Springs Road is a two-lane road in the vicinity of the project. The road is ultimately planned to be a five-lane facility and construction to this standard has been completed near the SR 152 intersection and in those locations to the north where recent development has occurred. The most recent Caltrans traffic counts reveal that SR 165 carries 14,700 AADT (2017) in the area north of Overland Avenue but drops to 6,600 AADT at Henry Miller Avenue. Trucks comprise 8% of the daily traffic on SR 165. The speed limit on SR 165 is 50 mph in this area.

Regency Drive. Regency Drive is a two-lane collector street that links Mercey Springs Road on the west with Place Road on the east. Regency Drive provides access to the developed residential area north of Overland Drive between Place Road and Mercey Springs Road On-street parking is permitted, and a 25 mph prima facie speed limit exists on Regency Drive. While no current daily traffic volumes are available, based on the volumes occurring during the a.m. and p.m. peak hours, the current daily volume is roughly 2,000 vehicles per day east of Mercey Springs Road.

Existing Study Intersections

The geometric configuration and traffic controls at the study intersections are discussed in the text which follows:

The **Mercey Springs Road (SR 165) / Regency Drive intersection** is controlled by a stop sign on the westbound Regency Drive approach. This intersection has a through lane and right turn lane on the northbound SR 165 approach, and through lane is striped on the southbound approach. Southbound left turns are prohibited by centerline delineators that also create a receiving lane for westbound left turns The Regency Drive approach has separate left turn and right turn lanes. Streetlights exist on the northeast and southeast corners of the intersection. Continuous sidewalks exist on the west side of SR 165, and there is a crosswalk on the east leg of the intersection.

Non - Automotive Circulation

Transit service and facilities in Los Banos include both private and public operations. Private operations are limited to taxi and limo services, while public transportation is provided by Merced County Transit (MCT). The MCT operates both regularly scheduled fixed-route (i.e., The Bus) and Dial-A-Ride (door-to-door) transit services throughout Merced County. In Los Banos the Bus generally follows an east-west route that involves SR 152, I-Street & H Street through the downtown and San Luis Street. This fixed route bus service operates five routes that traverse major nodes in the city. It is available on weekdays between 7 a.m. to 6 p.m. and on Saturday from 9:30 a.m. to 5:30 p.m. There is no service on Sunday. The frequency between buses during both peak and off-peak hours of operation is 30 minutes. The buses have fixed stops along their designated routes but patrons may wave down the bus anywhere along the route to take advantage of transit opportunities. Recently, the MCT has equipped all buses with bike racks to encourage biking. Many of the outlying residential areas are not served by transit.

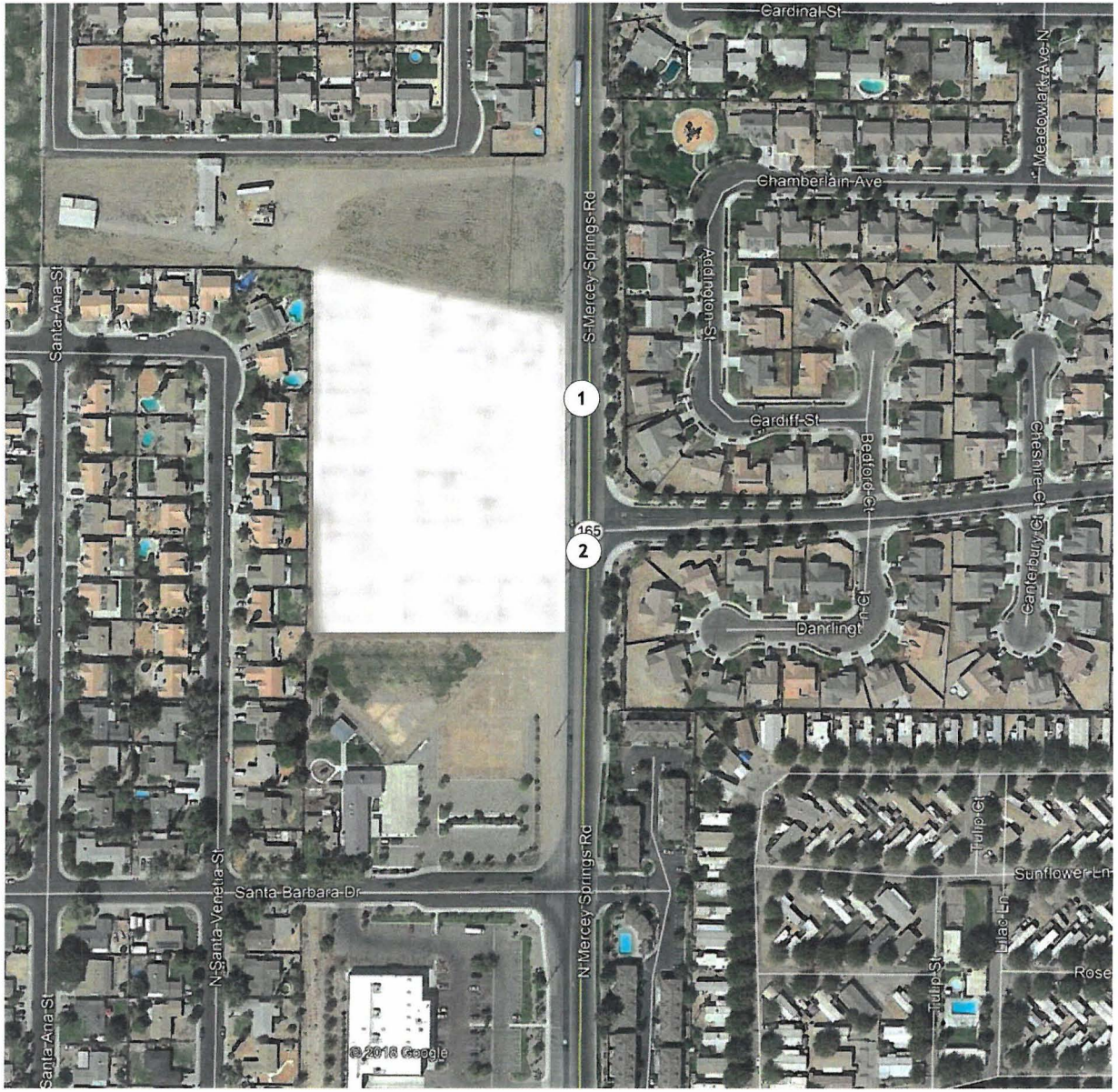
The Dial-A-Ride service is provided by a fleet of 16 vehicles throughout Merced County. In Los Banos, it is reserved for the exclusive use by the elderly (age 60 and older) and the handicapped. All Dial-A-Ride users must register for Dial-A-Ride service and pay the same fare as fixed route users.

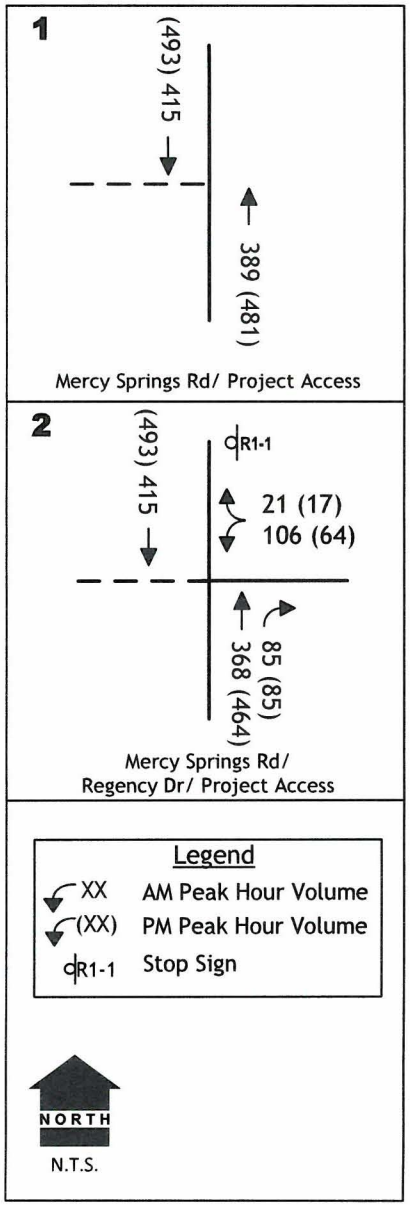
Pedestrian / Bicycle Facilities

Today pedestrian and bicycle facilities are typically developed as new development proceeds. Sidewalk exists along the developed neighborhoods near the project including Regency Drive and the east side of SR 165 but not along the project's frontage.

Existing Vehicular Traffic Volumes

To quantify existing traffic conditions, a.m. and p.m. peak hour traffic counts were made by the consultant in November 2018 at the existing study area intersection. These peak hours were selected as being representative of "Worst Case" background traffic conditions, based on review of daily traffic counts in the City of Los Banos and based on the highest hour of project trip generation. This approach is consistent with the analyses contained in other environmental documents in Los Banos. Figure 3 displays the a.m. and p.m. peak hour vehicular counts at the study intersection.





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EXISTING TRAFFIC VOLUMES AND LANE CONFIGURATIONS

figure 3

Level of Service Calculation

To quantitatively evaluate traffic conditions and to provide a basis for comparison of operating conditions with and without project generated traffic, "Levels of Service" were determined at study area intersection.

"Level-of-Service" (LOS) is a quantitative measure of traffic operating conditions whereby a letter grade "A" through "F" is assigned to an intersection. LOS "A" through "F" represents progressively worsening traffic conditions. The characteristics associated with the various LOS for intersections are presented in Table 1. LOS "E" and "F" are associated with severe congestion and delay and are unacceptable to most motorists. The City of Los Banos strives to maintain Level of Service D, and the minimum LOS "D" standard has been employed for this analysis at major intersections.

TABLE 1
LEVEL OF SERVICE DEFINITIONS

Level of Service	Signalized Intersection	Unsignalized Intersection	Roadway (Daily)
"A"	Uncongested operations, all queues clear in a single-signal cycle. Delay ≤ 10.0 sec	Little or no delay. Delay ≤ 10 sec/veh	Completely free flow.
"B"	Uncongested operations, all queues clear in a single cycle. Delay > 10.0 sec and ≤ 20.0 sec	Short traffic delays. Delay > 10 sec/veh and ≤ 15 sec/veh	Free flow, presence of other vehicles noticeable.
"C"	Light congestion, occasional backups on critical approaches. Delay > 20.0 sec and ≤ 35.0 sec	Average traffic delays. Delay > 15 sec/veh and ≤ 25 sec/veh	Ability to maneuver and select operating speed affected.
"D"	Significant congestions of critical approaches but intersection functional. Cars required to wait through more than one cycle during short peaks. No long queues formed. Delay > 35.0 sec and ≤ 55.0 sec	Long traffic delays. Delay > 25 sec/veh and ≤ 35 sec/veh	Unstable flow, speeds and ability to maneuver restricted.
"E"	Severe congestion with some long standing queues on critical approaches. Blockage of intersection may occur if traffic signal does not provide for protected turning movements. Traffic queue may block nearby intersection(s) upstream of critical approach(es). Delay > 55.0 sec and ≤ 80.0 sec	Very long traffic delays, failure, extreme congestion. Delay > 35 sec/veh and ≤ 50 sec/veh	At or near capacity, flow quite unstable.
"F"	Total breakdown, stop-and-go operation. Delay > 80.0 sec	Intersection blocked by external causes. Delay > 50 sec/veh	Forced flow, breakdown.

Sources: Highway Capacity Manual, 6th Edition.

Levels of Service were calculated for using the methods in the Highway Capacity Manual, 6th Edition (HCM).

Significance Criteria

According to the City of Los Banos General Plan, a traffic impact is considered significant if it renders an unacceptable Level of Service at an intersection. The City has adopted a Level of Service 'D' as its minimum standard. Therefore, a significant impact occurs if a project causes the Level of Service to deteriorate from LOS A-D to LOS E or F.

The City of Los Banos has not adopted a formal policy regarding the significance of project impacts when background conditions already exceed the minimum LOS D standard. For this analysis it is assumed that a 5.0 second increase in delay, which is used by many communities, is an applicable standard of significance for intersections controlled by traffic signals or an all-way stop, or on an approach to an intersection controlled by a side street stop sign.

At unsignalized intersections controlled by side street stop signs, a traffic impact can be considered "adverse but not significant" if the LOS standard is exceeded but the projected traffic does not satisfy peak hour volume traffic signal warrants. Under these conditions, the only means to completely alleviate delays to stop controlled vehicles would be to install an all-way stop, traffic signal or roundabout. However, the unmet signal warrants would imply that the reduction in delay for the stop-controlled vehicles may not justify the new delays that would be incurred by the major street traffic (which is not stopped). Under these circumstances, installation of a signal may not be recommended and the substandard LOS for stop-controlled vehicles would be considered an "adverse but not significant" impact.

Improvement Implementation Guidelines

The extent to which particular traffic controls may be needed at intersections can be determined quantitatively.

Peak Hour Traffic Signal Warrants. The extent to which a traffic signal is an applicable traffic control device at a particular location is assessed based on the traffic signal warrant criteria contained in the *California Manual of Uniform Traffic Control Devices (MUTCD).* While nine separate warrants are considered in a complete warrant evaluation, based on available information this analysis is limited to consideration of the status of Warrant 3 Peak Hour Volumes.

Current Peak Hour Traffic Conditions

Levels of Service (LOS) were calculated at existing study intersections (Refer to Appendix for calculation worksheets) under "Existing" conditions. Current LOS at the study intersection are presented in Table 2. As shown, with the current configuration the Mercey Springs Road (SR 165) / Regency Drive intersection yields LOS C during both peak hours.

TABLE 2
EXISTING PEAK HOUR INTERSECTION LEVELS OF SERVICE

Location	Control	AM Peak Hour		PM Peak Hour	
		Average Delay	LOS	Average Delay	LOS
SR 165 / Regency Drive Westbound approach	Westbound Stop	17.2	C	17.7	C

Level of Service at unsignalized intersections is indicative of "worst case" conditions on side street approach

BOLD Values exceed the LOS D standard

Status of Improvement Criteria. Current peak hour traffic volumes at the study intersection were compared to traffic signal warrants to determine whether traffic signals might be appropriate today. These volumes are presented in Table 3. As indicated, this intersection carries volumes that are below the level that satisfies traffic signal warrants for an intersection with a two-lane side street approach.

Because SR 165 is a state highway, the route to implanting intersection improvements goes through Caltrans, in terms of design, funding and schedule for installation. Current Caltrans police requires that an ***Intersection Control Evaluation (ICE)*** be prepared when it is determined that traffic on the state highway needs to be stopped. That assessment would consider the feasibility of all-way stop control, traffic signals or a roundabout intersection. Depending on circumstances, Caltrans may participate in the cost of intersection improvements.

TABLE 3
EXISTING PEAK HOUR TRAFFIC SIGNAL WARRANTS

Intersection	Peak Hour Volumes					
	AM Peak Hour			PM Peak Hour		
	Major	Minor	Warrant Met?	Major	Minor	Warrant Met?
SR 165 / Regency Drive	868	127	No	1,042	81	No

Note: satisfaction of peak hour warrants indicates that a traffic signal may be justified but is not necessarily the preferred traffic control strategy at a particle location. Intersections on state highways require further analysis under Caltrans *Intersection Control Evaluation (ICE)* guidelines.

PROJECT CHARACTERISTICS

The characteristics of the development in the plan area are discussed in this report section.

Trip Generation

To quantify the amount of vehicular traffic generated by the project daily and a.m. / p.m. peak hour trip generation rates presented in the Institute of Transportation Engineers (ITE) publication Trip Generation 10th Edition (2012) were employed. These rates are presented in Table 4. This table also summarizes trip generation estimates for the project. As noted, the Mercey Springs Apartments are projected to generate 703 daily trips, with 34 trips in the a.m. peak hour and 54c trips in the p.m. peak hour.

TABLE 4
TRIP GENERATION RATES

		Trip Rates / Forecasts						
			AM Peak Hour			PM Peak Hour		
Land Use	**Unit**	**Daily**	**% In**	**% Out**	**Rate**	**% In**	**% Out**	**Rate**
Multiple Family Residential	du's	7.32	23%	77%	0.46	63%	37%	0.56
Mercey Springs Apartments	96 du's	703	10	34	44	34	20	54

Trip Distribution and Assignment

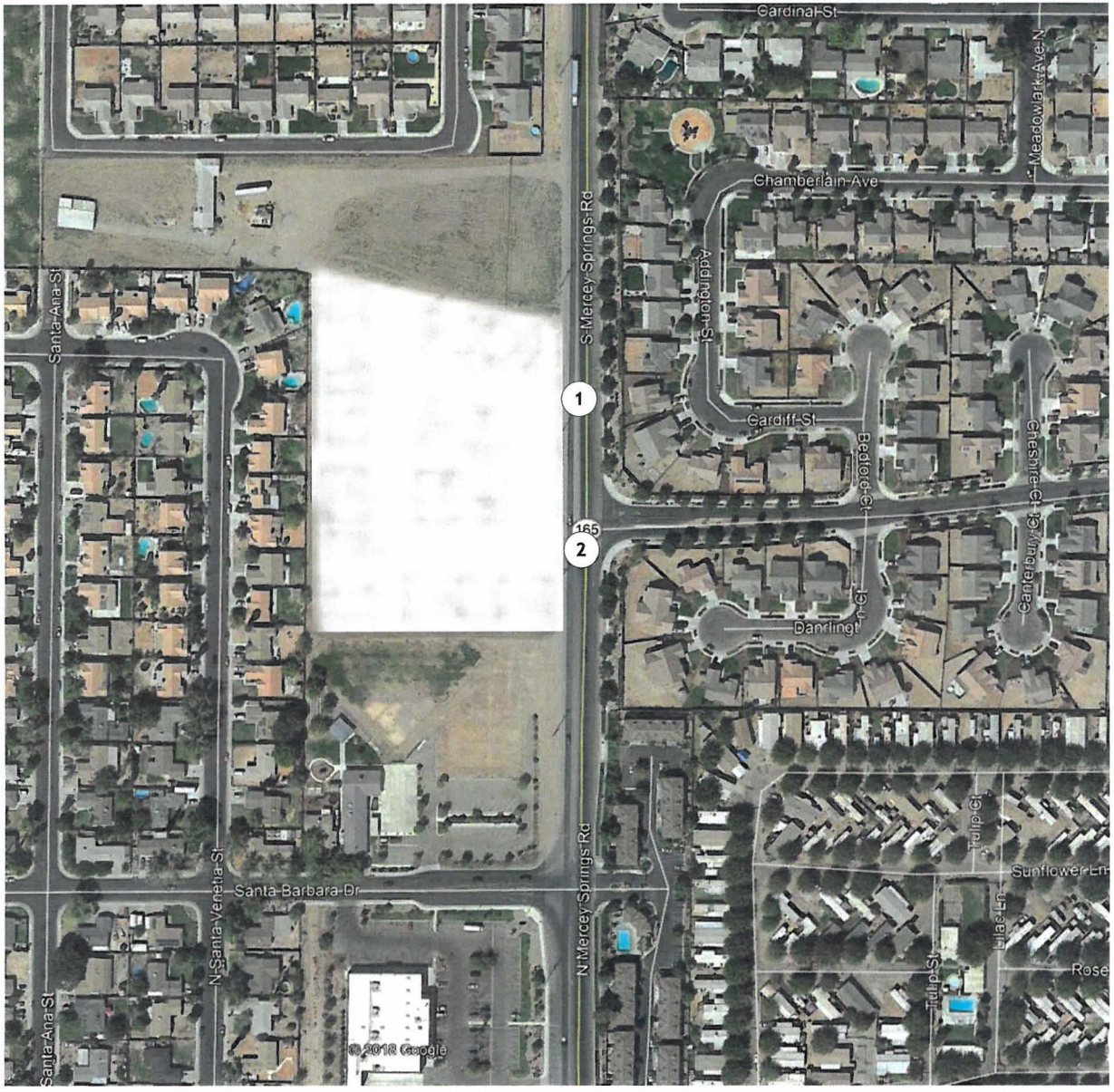
The distribution of project trips will reflect the distribution of employment, shopping and schools in the Los Banos area. For this analysis, project trip distribution was based on the location of complimentary land uses, existing travel patterns and the General Plan traffic model distribution, as presented in Table 5. Locally, a key issue is the school attendance areas for children living in Mercey Springs Apartments. Under current Los Banos Unified School District (LBUSD) policies, the project site is served by Los Banos Junior High located south of the site and Pacheco High School located to the east. LBUSD is pursuing plans for a new elementary school on Place Road north of B Street. This analysis assumes that Mercey Springs Apartments could attend that school if it is developed.

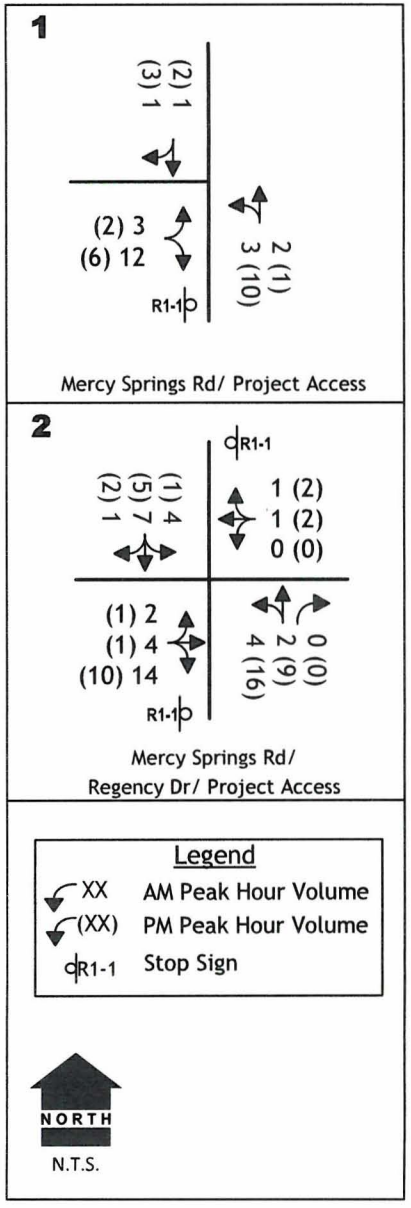
TABLE 5
DIRECTIONAL TRIP DISTRIBUTION

Direction	Route	Percentage of Project Trips	
		AM Peak Hour	PM Peak Hour / Daily
North	Mercey Springs Road (SR 165) north of Regency Drive	15%	15%
East	Regency Drive east of SR 165	25%	10%
South	Mercey Springs Road (SR 165) south of Regency Dr	60%	75%
Total		**100%**	**100%**

Trip Assignment

Using the trip generation and distribution assumptions described above, the trips generated by development in the project were assigned to the study area street system assuming full access at each driveway as planned. The division of trips between the two driveways would reflect the location of parking onsite and location of the driveway relative to the path of arrival and departure. Figure 4 presents project trips assuming that this access is available.





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PROJECT ONLY TRAFFIC VOLUMES AND LANE CONFIGURATIONS

figure 4

EXISTING PLUS PROJECT IMPACTS

Existing Plus Project Volumes

Figure 5 presents the sum of current traffic volumes and project trips with two access points as proposed.

Anticipated Improvements. Development in the project area will be expected to complete frontage improvements on SR 165 as has been required of other development and are consistent with City of Los Banos requirements for all new development in the community. It is expected that SR 165 would be widened to its ultimate ½ width, including sidewalks. The project will need to create left turn lanes at its access onto SR 165.

Existing Plus Project Impacts Based on Level of Service

Table 6 compares current and Existing Plus Project Levels of Service at study area intersections during the a.m. and p.m. peak hours respectively. As shown, because the southbound merging lane will be eliminated, the length of delays for westbound traffic waiting on Regency Drive will lengthen, and the Level of Service would drop to LOS E in the p.m. peak hour. LOS E does not satisfy the City's minimum LOS D standard.

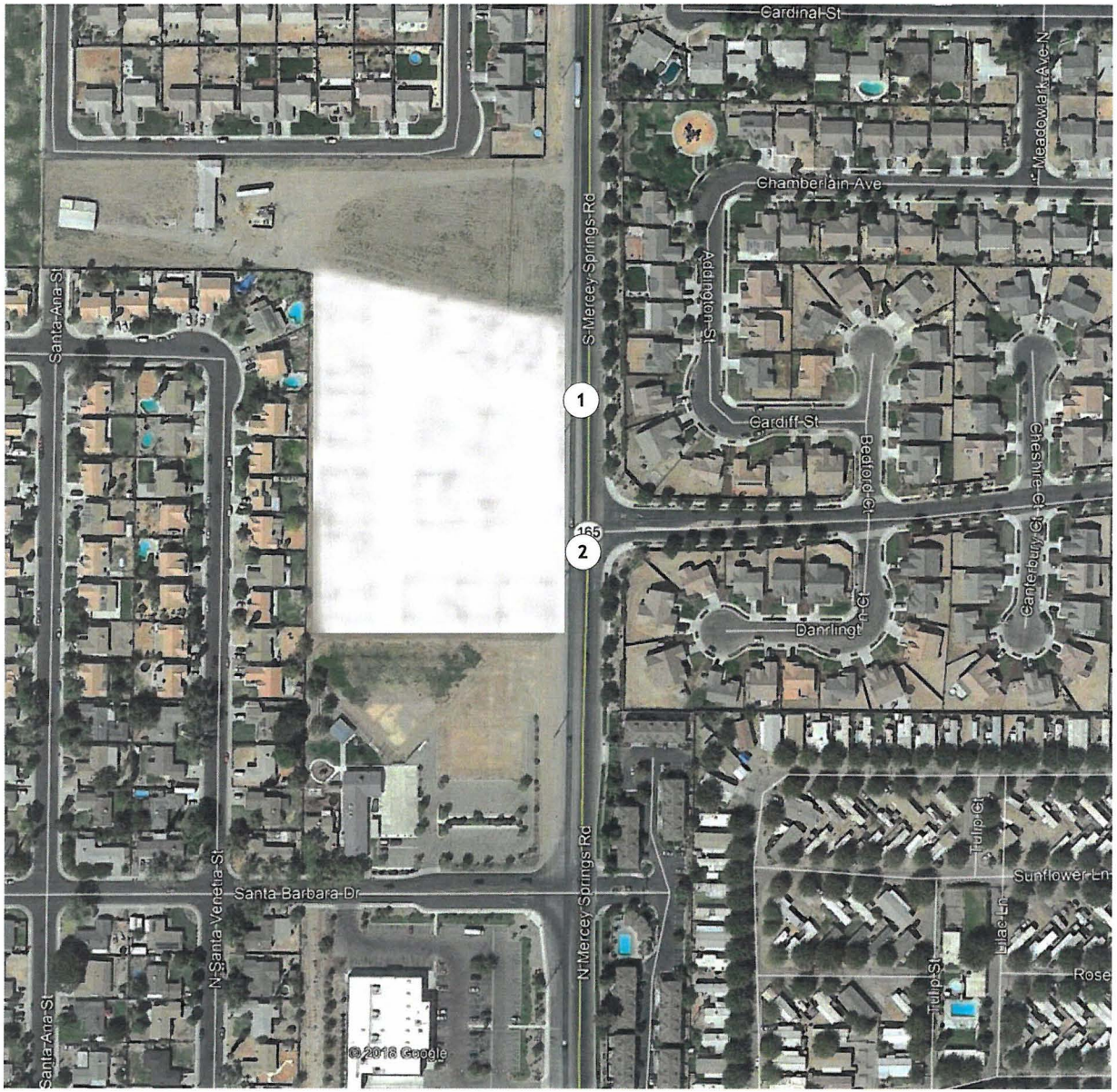
The nature of improvements that may be installed to improve the Level of Service has been evaluated. The City's *Transportation Master Plan (TMP)* addresses long term improvements that were expected to be needed at intersections on SR 165. The TMP assumes that SR 165 will be a four-lane facility in the area north of Santa Barbara Drive but does not indicate that specific intersection improvements will be constructed at the Mercey Springs Road / Regency Drive intersection.

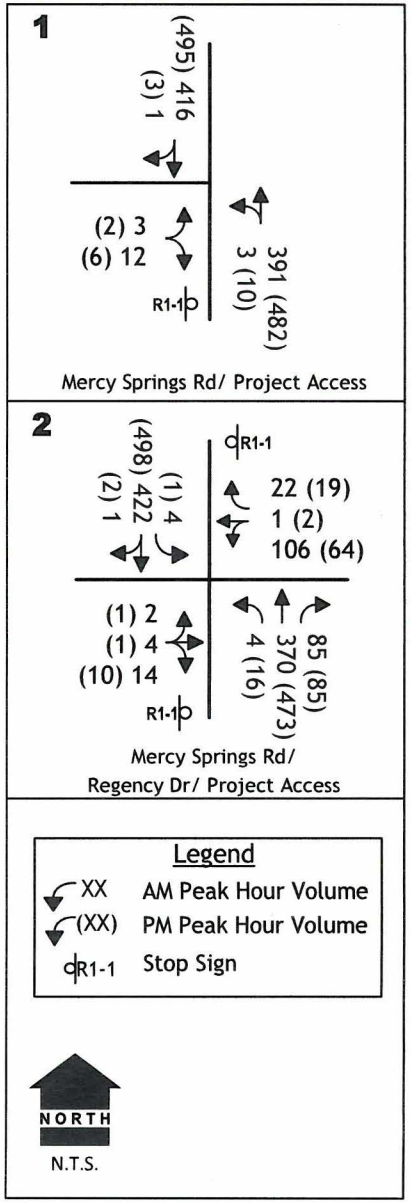
Because SR 165 has been widened to its ultimate width on the east side of the street, the project's frontage improvements would result in a section that would be wide enough to provide two through lanes in each direction. The westbound approach would operate at LOS C with a four-lane SR 165.

Implementing four-lane SR 165 is, however, complicated by the absence of west side widening in the area between the project and the Santa Barbara Drive intersection. The Church of the Nazarene has not widened their frontage, which extends for roughly 350 feet. The highway would need to be widened in this area to create a four-lane section.

Existing Plus Project Impacts based on Traffic Signal Warrants

Table 7 identifies peak hour traffic volumes at un-signalized study area intersections with the project and notes whether peak hour warrants volume levels are reached. As shown, no additional locations carry peak hour volumes that satisfy warrants as a result of the project.





EXISTING PLUS PROJECT
TRAFFIC VOLUMES AND LANE CONFIGURATIONS

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figure 5

TABLE 6
EXISTING PLUS PROJECT PEAK HOUR INTERSECTION LEVELS OF SERVICE

		AM Peak Hour				PM Peak Hour			
		Existing		Existing Plus Project		Existing		Existing Plus Project	
Location	**Control**	**Average Delay (sec/veh)**	**LOS**	**Average Delay (sec/veh)**	**LOS**	**Average Delay (sec/veh)**	**LOS**	**Average Delay (sec/veh)**	**LOS**
SR 165 / North Access									
Eastbound approach	Eastbound Stop	-	-	12.6	B	-	-	14.6	B
SR 165 / Regency Drive									
Westbound approach	Westbound Stop /	17.2	C	32.6	D			**36.6**	**E**
Eastbound approach	Eastbound Stop	-	-	14.6	B	17.7	C	14.9	B
WITH 4 LANE SR 165	Westbound Stop /							23.6	C
	Eastbound Stop							12.5	B

Level of Service at unsignalized intersections is indicative of "worst case" conditions on side street approach

BOLD Values exceed the LOS D standard **HIGHLIGHTED** values are a significant impact

KDA

TABLE 7
EXISTING PLUS PROJECT PEAK HOUR TRAFFIC SIGNAL WARRANTS

Intersection	Peak Hour Volumes					
	AM Peak Hour			PM Peak Hour		
	Major	Minor	Warrant Met?	Major	Minor	Warrant Met?
SR 165 / North Access	811	15	No	990	8	No
SR 165 / Regency Drive	886	129	No	1,075	85	No

Note: satisfaction of peak hour warrants indicates that a traffic signal may be justified but is not necessarily the preferred traffic control strategy at a particle location. Intersections on state highways require further analysis under Caltrans *Intersection Control Evaluation (ICE)* guidelines.

Impact to Alternative Transportation Modes

Pedestrians / Bicycles. As with any residential development the Mercey Springs Road Apartments will generate new pedestrian and bicycle trips on the study area circulation system. The project will likely generate 25 to 30 students, and some may walk or ride bicycles to area schools. While the project will construct sidewalks as part of its SR 165 frontage improvements, a gap will exist in the area between the project and Santa Barbara Drive. This deficiency could create possible conflicts between pedestrians and motor vehicles, and an all-weather path is needed in this area.

The project will also result in some pedestrians crossing SR 165 at the Regency Drive intersection. Under the California Vehicle Code (CVC) a legal pedestrian crossing exists at every intersection regardless of the presence of a crosswalk. Review of other unsignalized intersections along SR 165 through Los Banos indicates that there are no crosswalks at Santa Barbara Avenue or at Willmott Road. The only marked crosswalks on SR 165 exists at the Scripps Drive intersection where a path to Los Banos High School created concentrated pedestrian demand. Thus, while Caltrans will consider the need for a crosswalk or other enhancement as part of their encroachment permit review, it does not appear such features will be needed.

Transit. The project site is within the service area for Dial-A-Ride service, but is located about a mile from the closest location on The Bus route (i.e., SR 165 / San Luis Street. While the project could germinate some persons who would be inclined to use transit service, the number of potential riders is unlikely to cause MCT to determine a need to alter existing routes. Because Dial-A Ride is available, the project's impact to transit service is not significant.

Impacts / Mitigation Recommendations

Impact T-1: The project will result in Level of Service at the Mercey Springs Road / Regency Drive intersection that exceeds the City of Los Banos minimum LOS D standard.

Mitigation 1: Widen Mercey Springs Road (SR 165) to allow the highway to be striped with two through lanes in each direction at the intersection.

Issues. This work would require widening along the project frontage and may require widening in the areas beyond the project frontage.

Significance after Mitigation. The intersection operation will satisfy the minimum LOS D standard, and the resulting impact is not significant

Impact T-2: the project may result in pedestrians walking along the west side of SR 165 where no sidewalks are present and may create pedestrian activity across SR 165.

Mitigation 2: Construct sidewalk as part of project frontage improvements and construct an all-

weather path along the west side of SR 165 from the limits of the project to Santa Barbara Drive. If required by Caltrans, construct a pedestrian crossing on SR 165

Issues. Caltrans will determine the need for a pedestrian crossing.

Significance after Mitigation. Safe pedestrian access will be available, and the resulting impact is not significant.

PROJECT ACCESS DESIGN

This portion of the impact analysis considers issues associated with the site access layout and design. The key issues that have been considered are:

1. Offset distance between the southern project access and the Regency Drive intersection, and
2. The distance between the northern access and the Regency Drive intersection
3. The distance between the southern driveway and the Santa Barbara Drive intersection

Driveway Offset

Typical engineering practice places driveways on opposite side of a street either directly across or far enough apart to minimize conflicts between concurrent turning movements. Many local jurisdictions adopt minimum standards for off-set intersection spacing. Typically spacing on local and collector streets is 150 feet, while a 240 foot minimum is common on Arterial streets.

In this case the southern driveway appears to be roughly 30 feet from Regency Drive measured center line to centerline. At this position there would be no conflicts between northbound vehicles turning into the project and southbound vehicles turning onto Regency Drive. However, vehicles turning left out of the Mercey Springs Road Apartments would occupy the same location in the roadway as vehicles turning left from Regency Drive. While the volume of traffic turning left form the project is not expected to be great, conflicts could occasionally occur.

This issue could be addressed by:

1. Moving the southern driveway to align with Regency Drive
2. Moving the southern driveway to meet typical arterial spacing standards
3. Prohibiting outbound left turns from the southern driveway

Distance between Northern Driveway and Regency Drive.

The median area between the northern driveway and the Regency Drive intersection will be shared by northbound motorists turning into the site and southbound motorist turning onto Regency Drive. The adequacy of this situation is dependent on the deceleration characteristics of both traffic streams and the length of queue waiting to make the turn. Caltrans Highway Design Manual (HDM) guidelines suggest that space be available in left turn lanes to

accommodate deceleration to a stop outside of the flow of through traffic, although some accommodation for slowing in the through lane can be allowed (i.e., up to 20 mph). HDM Table 405.2B indicates that 435 feet is needed to decelerate from 50 mph, while 235 feet is needed to decelerate from 30 mph if the 20 mph allowance is permitted. The HDM suggest that at unsignalized intersections a minimum of space for two waiting vehicles should be provided (i.e., 50 feet).

In this case the length of the median area between the northern access and Regency Drive would be roughly 140 feet. At the deceleration rates suggested by Caltrans a vehicle turning in either direction would need to use the entire area, and motorists turning into the site would need to slow to 15 to 20 mph as the leave the Regency Drive intersection. While the extent of permissible access will ultimately be determined by Caltrans as part of their encroachment permit process, it is reasonable to expect that left turns would need to be prohibited at the northern driveway to avoid potential conflicts between projects trips and through traffic on SR 165.

The option of moving the northern driveway to the north to lengthen the deceleration distance was considered. A driveway at the northern property line would be about 100 feet further north and would provide about 240 feet of separation. As noted above, the combination of minimum storage and deceleration from 50 mph is 485 feet, while the distance is 285 feet for deceleration from 30 mph. In this case the available distance after the driveway was moved would be still reman less than the distance noted under HDM guidelines.

Distance between Southern Access and Santa Barbara Drive

A similar review was conducted for the area between the southern access and Santa Barbara Drive. In this area northbound left turns into the project site would share space with southbound vehicles turning left into the condominiums that take access via the extension of Santa Barbara Drive. In this case, the available storage between driveway as proposed and Santa Barbara Drive in about 480 feet, with the distance increasing to about 510 feet if the access aligned with Regency Drive.

As noted above, the combination of minimum storage and deceleration from 50 mph is 485 feet, while the distance is 285 feet for deceleration from 30 mph. In this case the available distance would be adequate for the limited amount of traffic at each location.

Impacts / Access Mitigation Recommendations:

Impact T-3: The project as designed would result in potential conflicts between traffic turning left from Regencey Drive and vehicles turning left out of the project.

Mitigation 3: Locate the southern driveway at a position relative to Regency Drive that is acceptable to Caltrans and the City of Los Banos

Significance after Mitigation. By eliminating potential conflicts this impact is not significant.

Impact T-4: The project as designed could result in conflicts between vehicle slowing to turn left at the north driveway and other northbound through traffic on SR 165.

Mitigation 4: Prohibit northbound left turns into the northern driveway to the satisfaction of Caltrans and the City of Los Banos

Issues. Prohibiting left turns into the site may also require prohibiting outbound left turns onto SR 165 at this location. Design details would need to be determined in consultation with Caltrans.

Significance after Mitigation. With this mitigation conflicts are eliminated and this impact is not significant.

EXISTING PLUS OTHER APPROVED / PENDING PROJECTS CONDITIONS

This analysis section considers the relative impacts of Mercey Springs Road Apartments within the context of traffic growth created by other approved or pending development projects in eastern Los Banos.

Approved / Pending Projects

Land Use / Trip Generation. The status of other development projects in Los Banos was discussed with Planning Department staff. Table 8 identifies the approved / pending projects included in this analysis, and their location is referenced in Figure 6.

TABLE 8
APPROVED / PENDING PROJECTS

Development	Status	Quantity	Trip Generation		
			Daily	AM Peak Hour	PM Peak Hour
Southpointe	Approved	510 SFR	4,855	383	510
Racquet Club Estates	Approved	24 SFR 6 MFR	235	21	28
San Luis Estates	Approved	25 SFR	238	19	25
Los Banos Memory Care	Approved	164 beds	377	23	36
Sunrise Ranch	Pending	197 SFR	1,875	148	197
Place Road Elementary School	Pending	825 students	1,320	661	124
Total			8,900	1,255	920

As noted, these projects could generate 8,900 daily trips, with 1,255 trips in the a.m. peak hour and 920 trips in the p.m. peak hour. However, the share of the trips generated by these projects

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that will be added to the study area streets is relatively low. Because the new elementary school's attendance area is generally east of SR 165, it would serve some residents already living in the study area with children attending schools west of SR 165, and not all of its trips would be "new."

Circulation System Improvements. This analysis assumes that the identified approved projects make no improvements the study area circulation system. However, other improvements beyond the immediate study area will be made. For example, Southpointe will extend Overland Avenue easterly across Place Road and Ward Street northerly beyond Pacheco High School to a connection within the project site. That measure will create an alternative route to Pacheco High School.

EPAP Impacts

EPAP Impacts Traffic Volumes. The amount of traffic associated with each project, as well as its trip distribution and assignment assumptions were identified, and peak hour trips were assigned to the study area intersections. Figure 7 identifies Existing Plus Approved / Pending volumes.

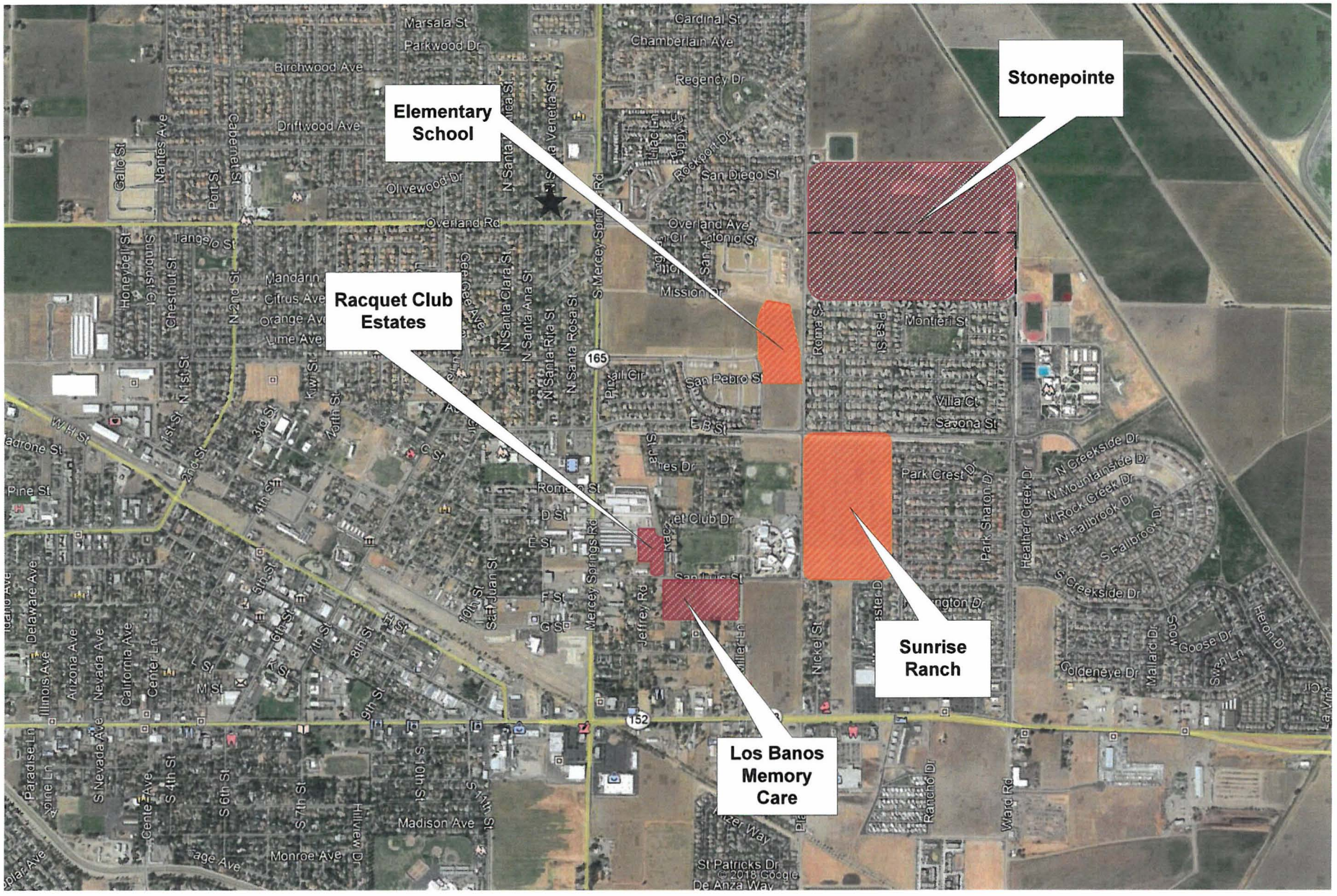
EPAP Plus Project Traffic Volumes. The trips associated with the Mercey Springs Apartments were superimposed onto the baseline EPAP volumes to create the EPAP Plus Project volumes shown in Figure 8.

EPAP and EPAP Plus Project Levels of Service. Resulting Levels of Service under these conditions are compared in Table 9.

As noted, if the Mercey Springs Road Apartments are not developed then background traffic volumes will increase and delays will become longer at study area intersections. Without the project Level of Service will remain within the minimum LOS D standard.

The addition of project traffic will result in the SR 165 / Regency Drive intersection operating with a deficient Level of Service (i.e., LOS E) in both the a.m. peak hour and p.m. peak hour. While this is a significant impact, the same mitigation identified for Existing Plus Project impacts will address this issue.

EPAP Traffic Signal Warrants. As noted in Table 10, no intersection carries traffic volumes that satisfy peak hour volume requirements.



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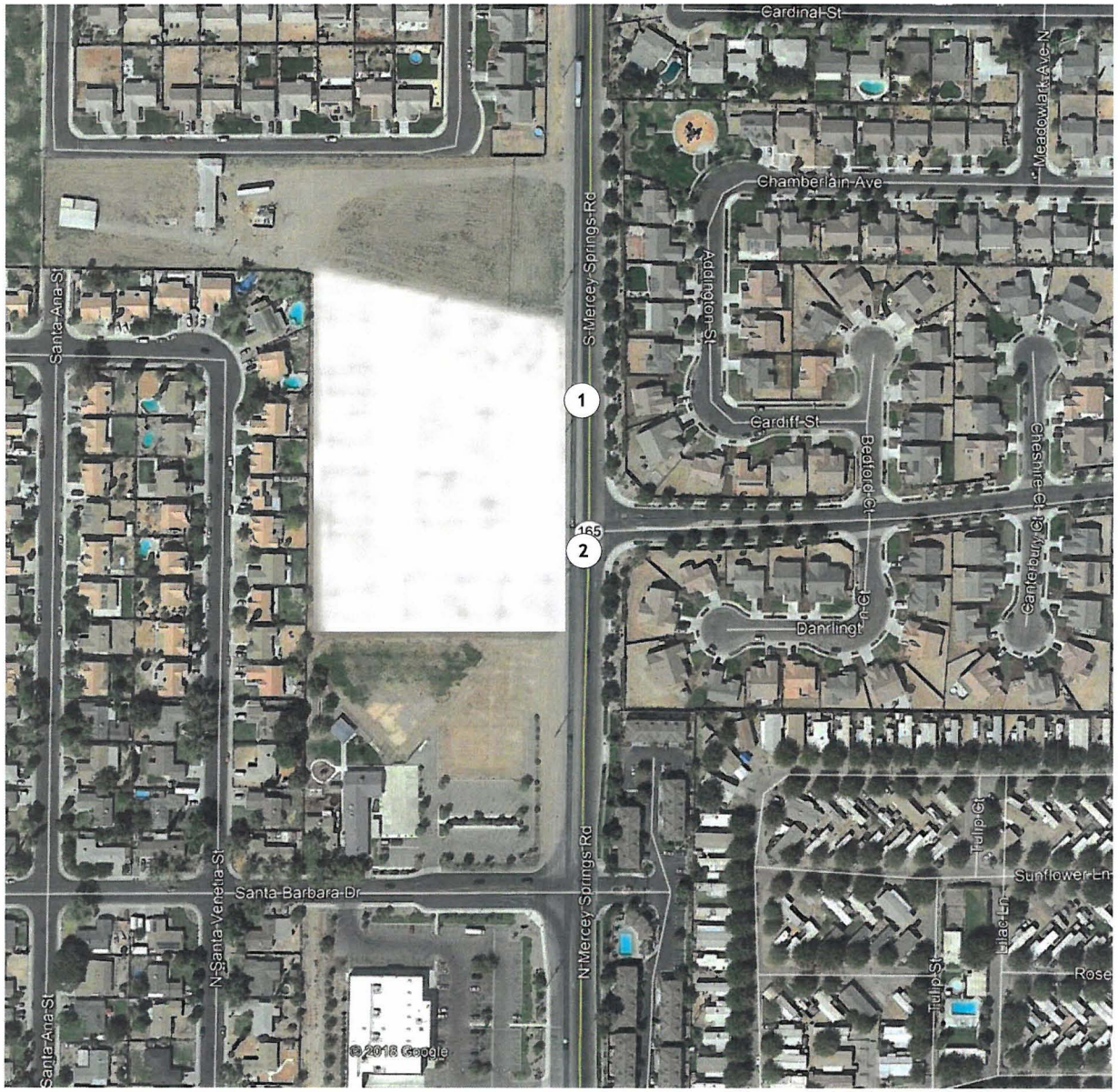
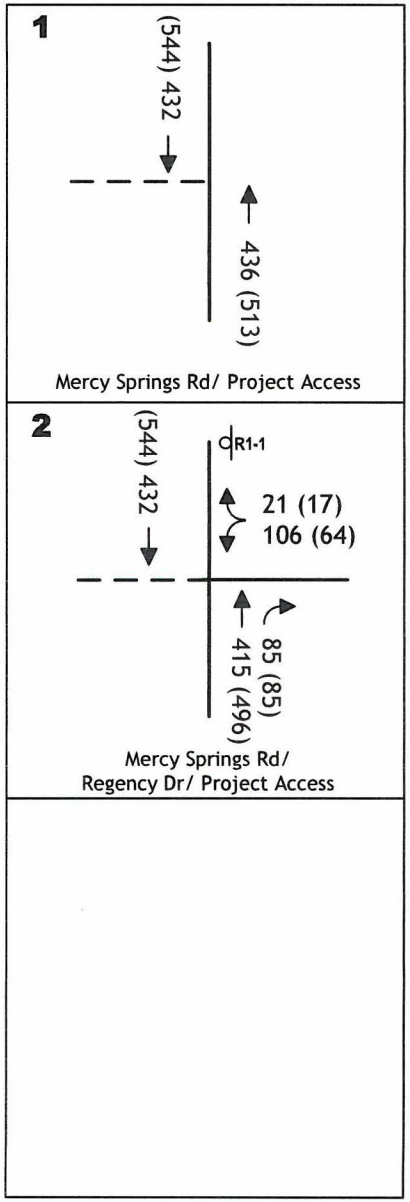
APPROVED AND PENDING PROJECTS

figure 6





EXISTING PLUS APPROVED/PENDING PROJECTS TRAFFIC VOLUMES AND LANE CONFIGURATIONS

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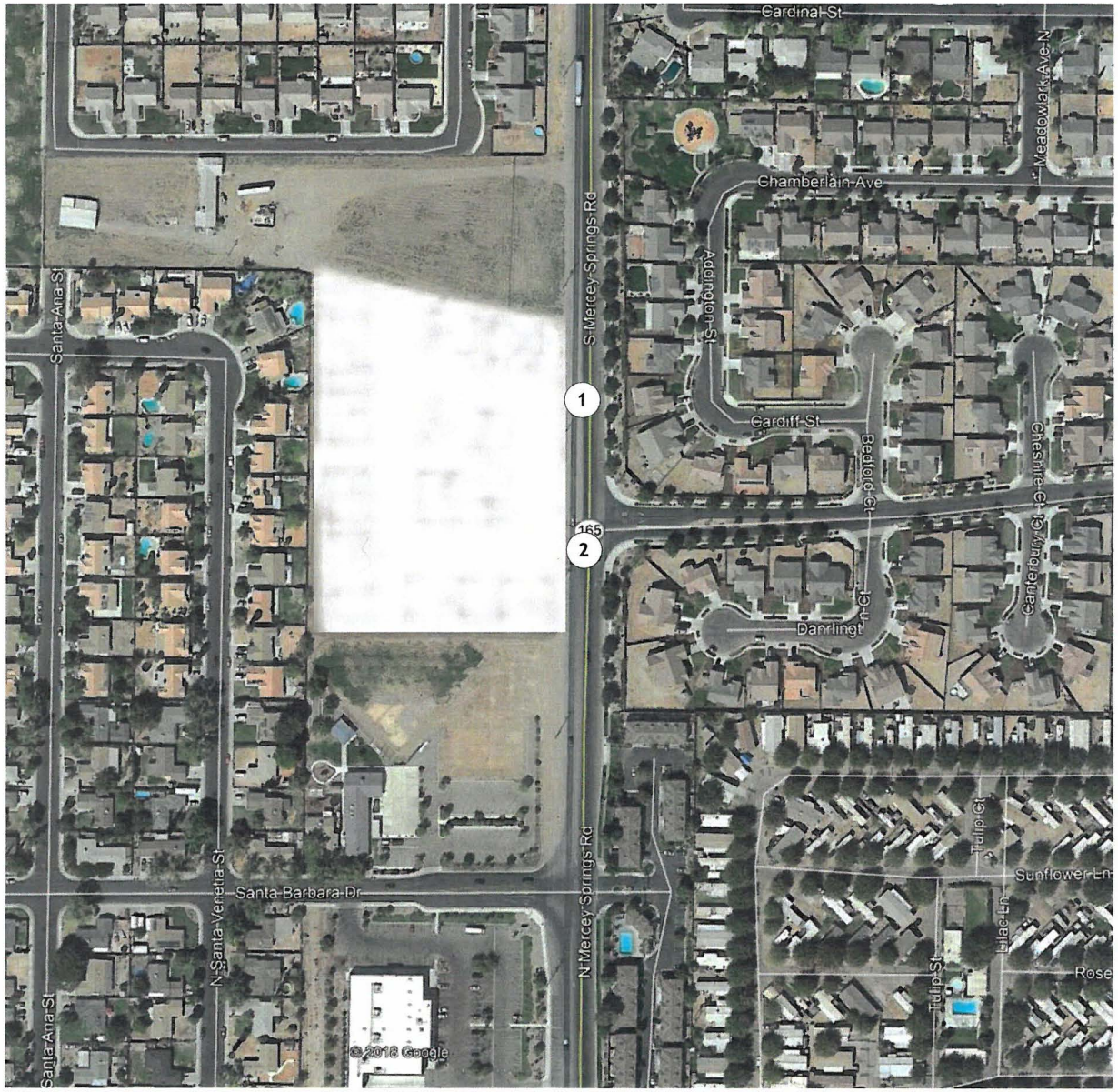
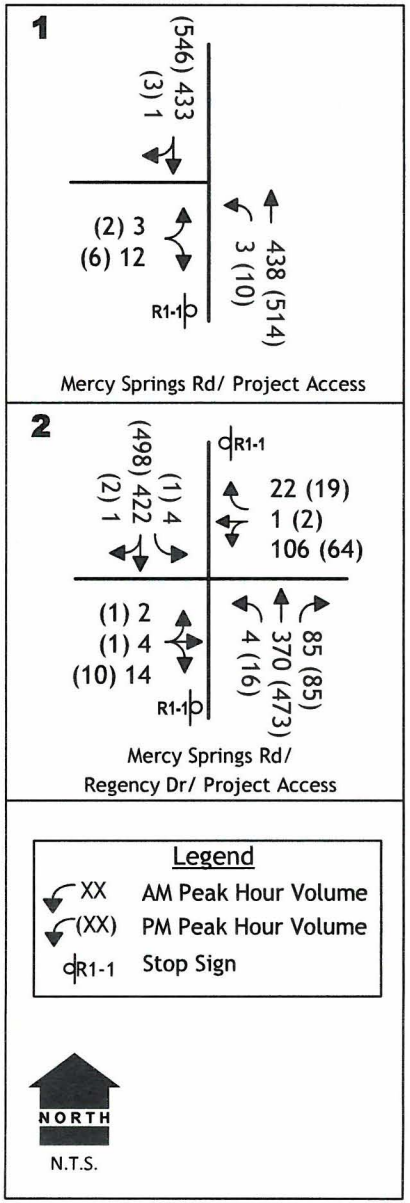
figure 7





EPAP PLUS PROJECT
TRAFFIC VOLUMES AND LANE CONFIGURATIONS

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figure 8

TABLE 9
EXISTING PLUS APPROVED / PENDING PROJECTS PLUS MERCEY SPRINGS ROAD APARTMENTS
PEAK HOUR INTERSECTION LEVELS OF SERVICE

		AM Peak Hour				PM Peak Hour			
		Existing Plus Approved / Pending Projects		EPAP Plus Project		Existing Plus Approved / Pending Projects		EPAP Plus Project	
Location	**Control**	**Average Delay (sec/veh)**	**LOS**	**Average Delay (sec/veh)**	**LOS**	**Average Delay (sec/veh)**	**LOS**	**Average Delay (sec/veh)**	**LOS**
SR 165 / North Access	Eastbound Stop								
Eastbound approach		-	-	13.0	B	-	-	15.6	C
SR 165 / Regency Drive	Westbound Stop / Eastbound Stop								
Westbound approach		18.5	C	**39.7**	**E**	19.2	C	**46.4**	**E**
Eastbound approach		-	-	15.5	C	-	-	16.1	C
WITH 4 LANE SR 165	Westbound Stop / Eastbound Stop			24.1	C			26.6	D
				13.6	B			13.2	B

Level of Service at unsignalized intersections is indicative of "worst case" conditions on side street approach

BOLD Values exceed the LOS D standard **HIGHLIGHTED** values are a significant impact

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TABLE10
EXISTING PLUS APPROVED PROJECTS PLUS PROJECT PEAK HOUR TRAFFIC SIGNAL WARRANTS

Intersection	Peak Hour Volumes					
	AM Peak Hour			PM Peak Hour		
	Major	Minor	Warrant Met?	Major	Minor	Warrant Met?
SR 165 / North Access	875	15	No	1,073	8	No
SR 165 / Regency Drive	950	129	No	1,158	85	No

Note: satisfaction of peak hour warrants indicates that a traffic signal may be justified but is not necessarily the preferred traffic control strategy at a particle location. Intersections on state highways require further analysis under Caltrans *Intersection Control Evaluation (ICE)* guidelines.

CUMULATIVE TRAFFIC IMPACTS

The relative traffic impacts of the proposed project have also been assessed within the context of future traffic conditions that account for long term development in Los Banos. This analysis assumes Year 2030 conditions with completion of the Los Banos Bypass as forecast in the City's Transportation Master Plan based on development of the community under the current General Plan.

Methodology

The City of Los Banos' regional travel demand forecasting model was employed to create the traffic volumes presented in the Transportation Master Plan, and those volumes are the basis for cumulative analysis contained in other traffic studies. However, the traffic model itself is not available, and it is necessary to interpolate volumes at locations that were not addressed by the Master Plan or for other scenarios.

This analysis makes use of pm peak hour traffic volume forecasts for the SR 165 / Santa Barbara Drive intersection. Comparison of current p.m. peak hour volumes on Mercey Springs Road with the Master Plan forecasts indicates that the volume between Regency Drive and Santa Barbara Drive increases by 33% but in the future the directionality is slightly greater to the north due to the Bypass. These factors were applied to current a.m. and p.m. volumes and the number of southbound left turns was estimated at the Regency Drive intersection based on an applicable share of the total volume occurring on Regency Drive. The trips associated with the Mercey Springs Road Apartments were then added to the future background volumes.

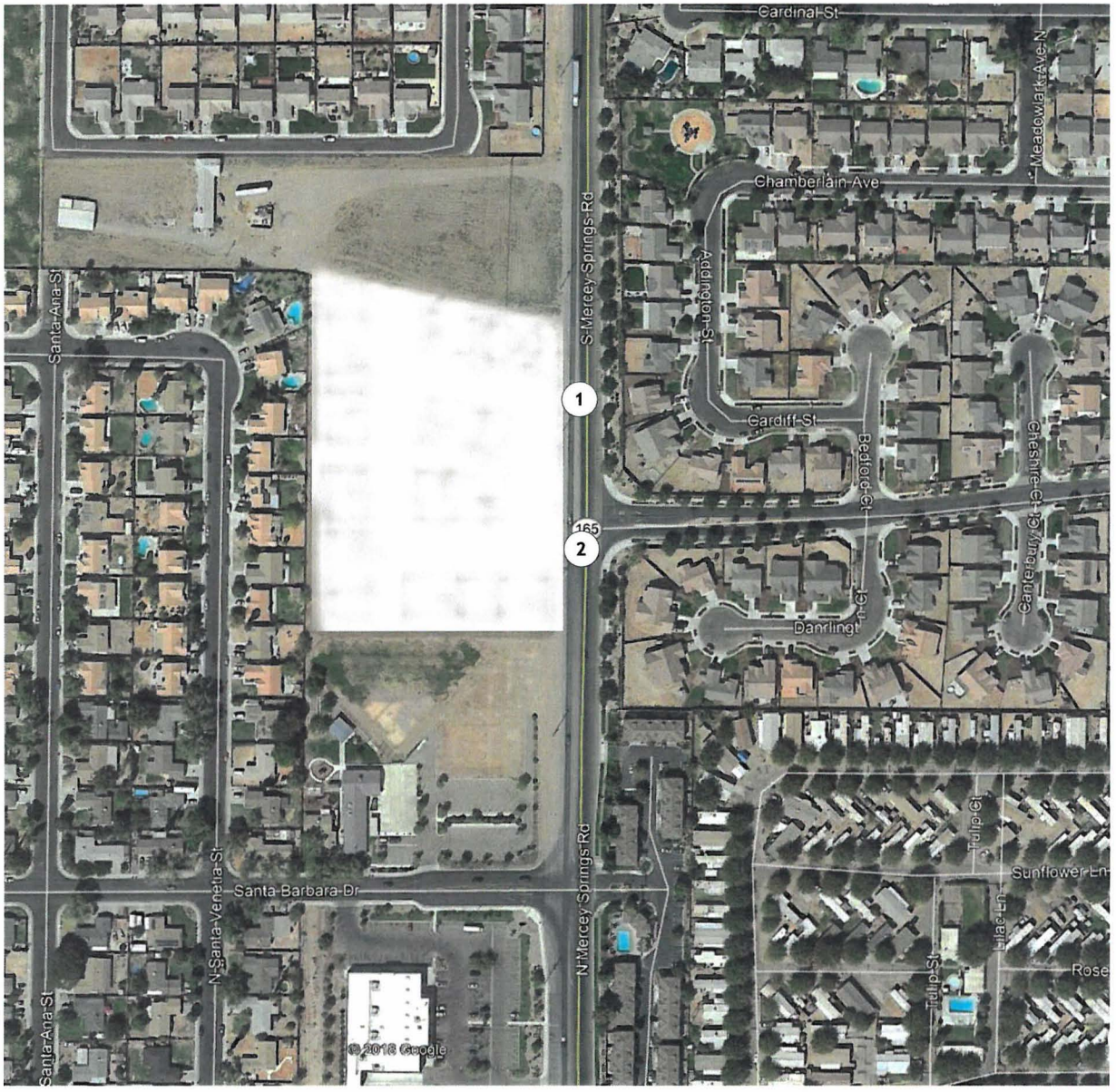
Traffic Volume Forecasts

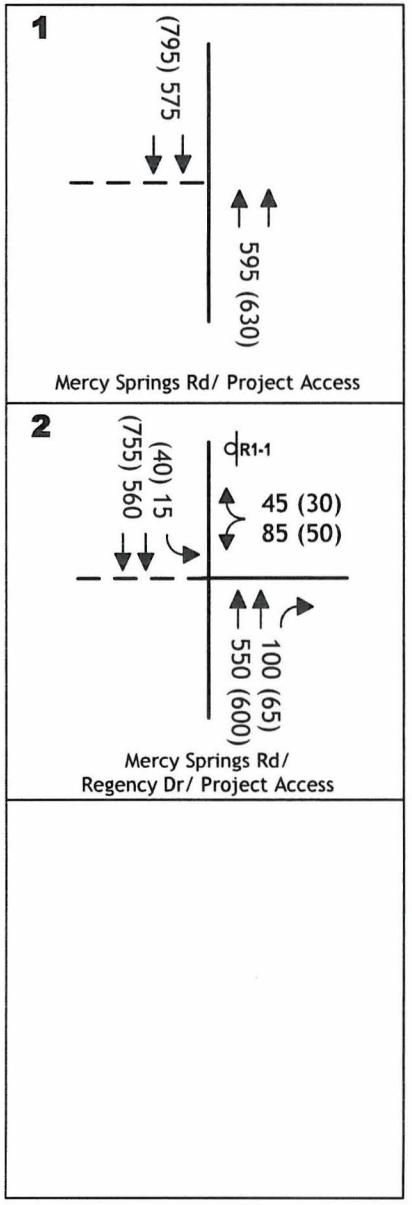
Figures 9 and 10 present the resulting Cumulative No Project and Cumulative Plus Project traffic volumes.

Cumulative Circulation System Improvements

The City of Los Banos General Plan and City of Los Banos Transportation Master Plan both include appreciable regional circulation system improvements that have been assumed in other environmental documents. These include the SR 152 Los Banos Bypass and the extension of Pioneer Road from SR 165 to Ward Road. Locally, SR 165 is assumed to be a four-lane facility from the Pioneer Road intersection north through Los Banos. Place Road is assumed to be completed north and south of SR 152, and Ward Road will connect with Overland Avenue.

Local improvements to study area intersections that are identified in the Transportation Master Plan have been assumed and include a traffic signal at the Mercey Springs Road / Santa Barbara Drive intersection.





CUMULATIVE BASE
TRAFFIC VOLUMES AND LANE CONFIGURATIONS

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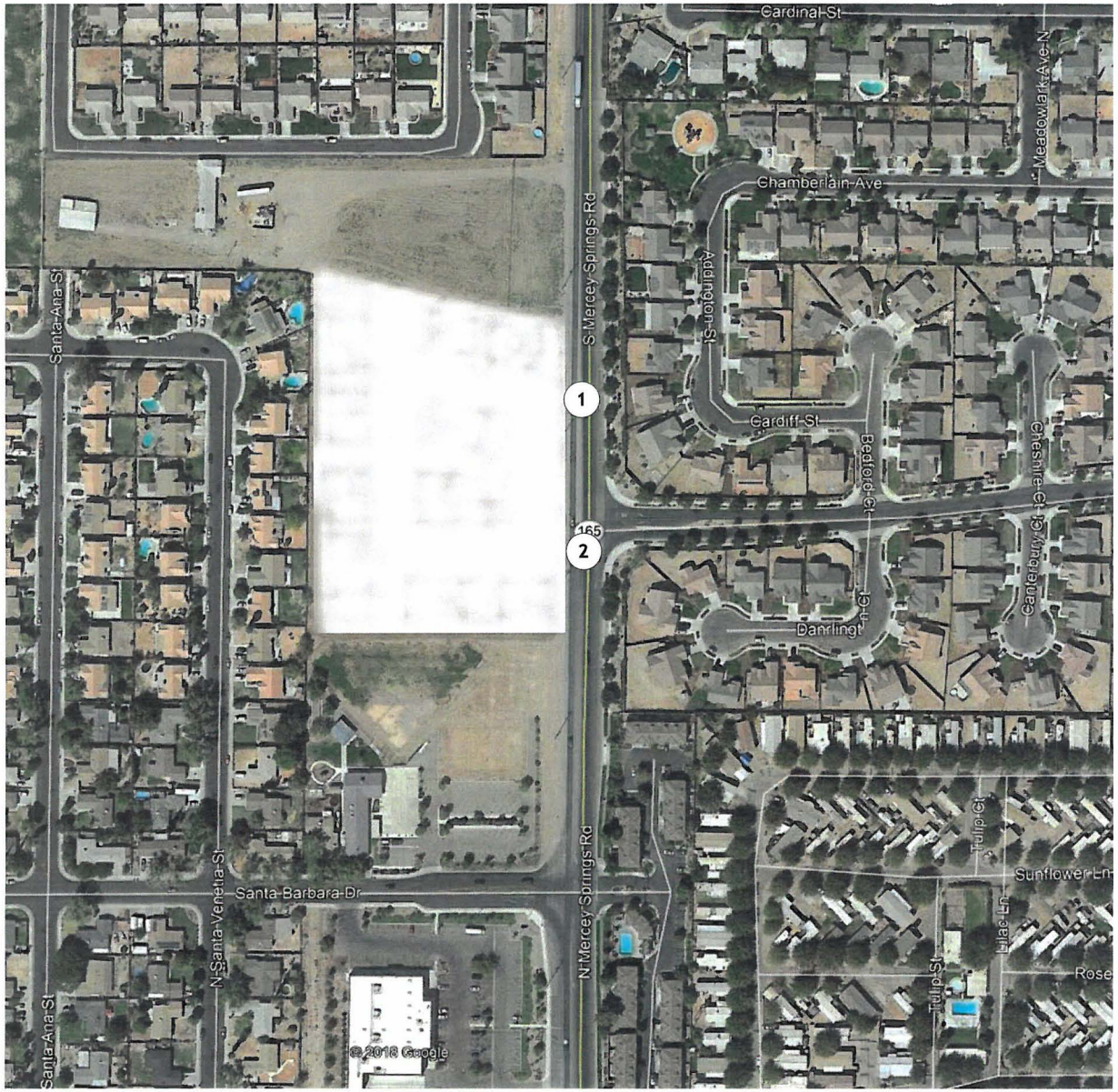
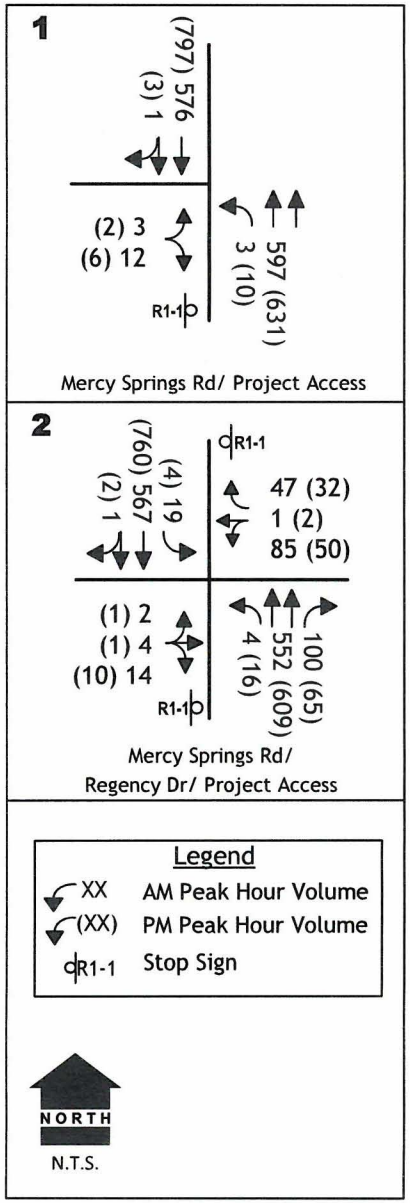
figure 9





EPAP PLUS PROJECT
TRAFFIC VOLUMES AND LANE CONFIGURATIONS

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figure 10

Cumulative Traffic Impacts

Study area intersection Levels of Service assuming cumulative traffic volumes and planned improvements are noted in Table 11.

Cumulative No Project Conditions. As shown, if anticipated improvements are constructed then the SR 165 / Regency Drive intersection will operate with Levels of Service that satisfy the LOS D minimum. However, volume of traffic forecast at the intersection would satisfy the volume requirement of Warrant 3 (peak hour warrants) under "rural" conditions (i.e., >40 mph), as noted in Table 12.

Other factors would need to be considered prior to making a decision to install a traffic signal at this location. In this case, the total length of side street delays would be 0.7 vehicle hours, which fall below the 5.0 vehicle hour threshold included in Warrant 3 (Figure 4C-101). In addition, the presence of the planned traffic signal at the SR 165 / Santa Barbara Drive intersection would result in very short spacing between two signalized intersections, which can result in queueing that extends through an adjoining intersection. As a result, a traffic signal is unlikely to be recommended. Should forecast traffic conditions occur in the future, the City of Los Banos and Caltrans would need to pursue an ICE report to determine the applicable intersection control strategy.

Cumulative Plus Project Conditions. If the proposed project proceeds then the length of delays at study intersections would increase incrementally. However, projected traffic conditions would remain within the minimum LOS D threshold, and the project's impacts would not be significant under that metric. The project would increase traffic volume at the SR 165 / Regency Drive intersection slightly, but this minor increase would not change the conclusions regarding traffic signal warrants. While the project will contribute its fair share to the cost of regional circulation system improvements by paying adopted traffic impact fees and installing frontage improvements on SR 165, no additional mitigation is warranted.

Impact / Mitigation Recommendations

Impact T-5: The project will incrementally add traffic to streets through Los Banos and contribute to the need for regional circulation improvements

Mitigation 5: The project shall contribute its fair share to the cost of regional improvements by making frontage improvements and paying adopted traffic impact fees.

Significance after Mitigation. With this mitigation the project's cumulative impacts is not significant.

TABLE 11
CUMULATIVE PLUS PROJECT PEAK HOUR INTERSECTION LEVELS OF SERVICE

		AM Peak Hour				PM Peak Hour			
		Cumulative Base		Cumulative Plus Project		Cumulative Base		Cumulative Plus Project	
Location	**Control**	**Average Delay (sec/veh)**	**LOS**	**Average Delay (sec/veh)**	**LOS**	**Average Delay (sec/veh)**	**LOS**	**Average Delay (sec/veh)**	**LOS**
SR 165 / North Access									
Eastbound approach	Eastbound Stop	-	-	12.7	B	-	-	15.6	C
SR 165 / Regency Drive									
Westbound approach	Westbound Stop / Eastbound Stop	17.6	C	18.5	E	18.8	C	20.6	C
Eastbound approach		-	-	17.6	C	-	-	18.5	C

Level of Service at unsignalized intersections is indicative of "worst case" conditions on side street approach

BOLD Values exceed the LOS D standard **HIGHLIGHTED** values are a significant impact

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TABLE 12
CUMULATIVE PLUS PROJECT PEAK HOUR TRAFFIC SIGNAL WARRANTS

Intersection	Peak Hour Volumes					
	AM Peak Hour			PM Peak Hour		
	Major	Minor	Warrant Met?	Major	Minor	Warrant Met?
SR 165 / North Access	1,177	15	No	1,441	8	No
SR 165 / Regency Drive	1,493	132	**Yes**[1]	1,493	84	No

[1] Meets volume requirement but not delay requirement.

Note: satisfaction of peak hour warrants indicates that a traffic signal may be justified but is not necessarily the preferred traffic control strategy at a particle location. Intersections on state highways require further analysis under Caltrans *Intersection Control Evaluation (ICE)* guidelines.

APPENDIX

KD ANDERSON & ASSOCIATES, INC.

(916) 660-1555

xxx

Los Banos
All Vehicles & Uturns On Unshifted
Bikes & Peds On Bank 1
Nothing On Bank 2

File Name : Hwy 165-Mercey Springs Drive & Regency Drive
Date : 12/11/2018

Unshifted Count = All Vehicles & Uturns

	Highway 165 Southbound					Regency Drive Westbound					Hwy 165 Northbound					Regency Drive Eastbound						
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total	Uturns Total
7:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:00	0	86	0	0	86	16	0	2	0	18	0	97	19	0	116	0	0	0	0	0	220	0
16:15	0	98	0	0	98	12	0	0	0	12	0	113	29	0	142	0	0	0	0	0	252	0
16:30	0	116	0	0	116	16	0	3	0	19	0	113	19	0	132	0	0	0	0	0	267	0
16:45	0	136	0	0	136	14	0	2	0	16	0	112	16	0	128	0	0	0	0	0	280	0
Total	0	436	0	0	436	58	0	7	0	65	0	435	83	0	518	0	0	0	0	0	1019	0
17:00	0	138	0	0	138	14	0	5	0	19	0	130	22	0	152	0	0	0	0	0	309	0
17:15	0	103	0	0	103	20	0	7	0	27	0	109	28	0	137	0	0	0	0	0	267	0
17:30	0	117	1	0	118	8	0	1	0	9	0	100	17	0	117	0	0	0	0	0	244	0
17:45	0	114	0	0	114	15	0	3	0	18	0	87	28	0	115	0	0	0	0	0	247	0
Total	0	472	1	0	473	57	0	16	0	73	0	426	95	0	521	0	0	0	0	0	1067	0
Grand Total	0	908	1	0	909	115	0	23	0	138	0	861	178	0	1039	0	0	0	0	0	2086	0
Apprch %	0.0%	99.9%	0.1%	0.0%		83.3%	0.0%	16.7%	0.0%		0.0%	82.9%	17.1%	0.0%		0.0%	0.0%	0.0%	0.0%			
Total %	0.0%	43.5%	0.0%	0.0%	43.6%	5.5%	0.0%	1.1%	0.0%	6.6%	0.0%	41.3%	8.5%	0.0%	49.8%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	

AM PEAK HOUR	Highway 165 Southbound					Regency Drive Westbound					Hwy 165 Northbound					Regency Drive Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 08:45 to 09:45																					
Peak Hour For Entire Intersection Begins at 08:45																					
8:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App Total	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%		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

NOON PEAK	Highway 165 Southbound					Regency Drive Westbound					Hwy 165 Northbound					Regency Drive Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 12:00 to 13:00																					
Peak Hour For Entire Intersection Begins at 12:00																					
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App Total	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%		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

PM PEAK HOUR	Highway 165 Southbound					Regency Drive Westbound					Hwy 165 Northbound					Regency Drive Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 16:30 to 17:30																					
Peak Hour For Entire Intersection Begins at 16:30																					
16:30	0	116	0	0	116	16	0	3	0	19	0	113	19	0	132	0	0	0	0	0	267
16:45	0	136	0	0	136	14	0	2	0	16	0	112	16	0	128	0	0	0	0	0	280
17:00	0	138	0	0	138	14	0	5	0	19	0	130	22	0	152	0	0	0	0	0	309
17:15	0	103	0	0	103	20	0	7	0	27	0	109	28	0	137	0	0	0	0	0	267
Total Volume	0	493	0	0	493	64	0	17	0	81	0	464	85	0	549	0	0	0	0	0	1123
% App Total	0.0%	100.0%	0.0%	0.0%		79.0%	0.0%	21.0%	0.0%		0.0%	84.5%	15.5%	0.0%		0.0%	0.0%	0.0%	0.0%		
PHF	.000	.893	.000	.000	.893	.800	.000	.607	.000	.750	.000	.892	.759	.000	.903	.000	.000	.000	.000	.000	.909

Hwy 165-Mercey Springs Drive & Regency Drive

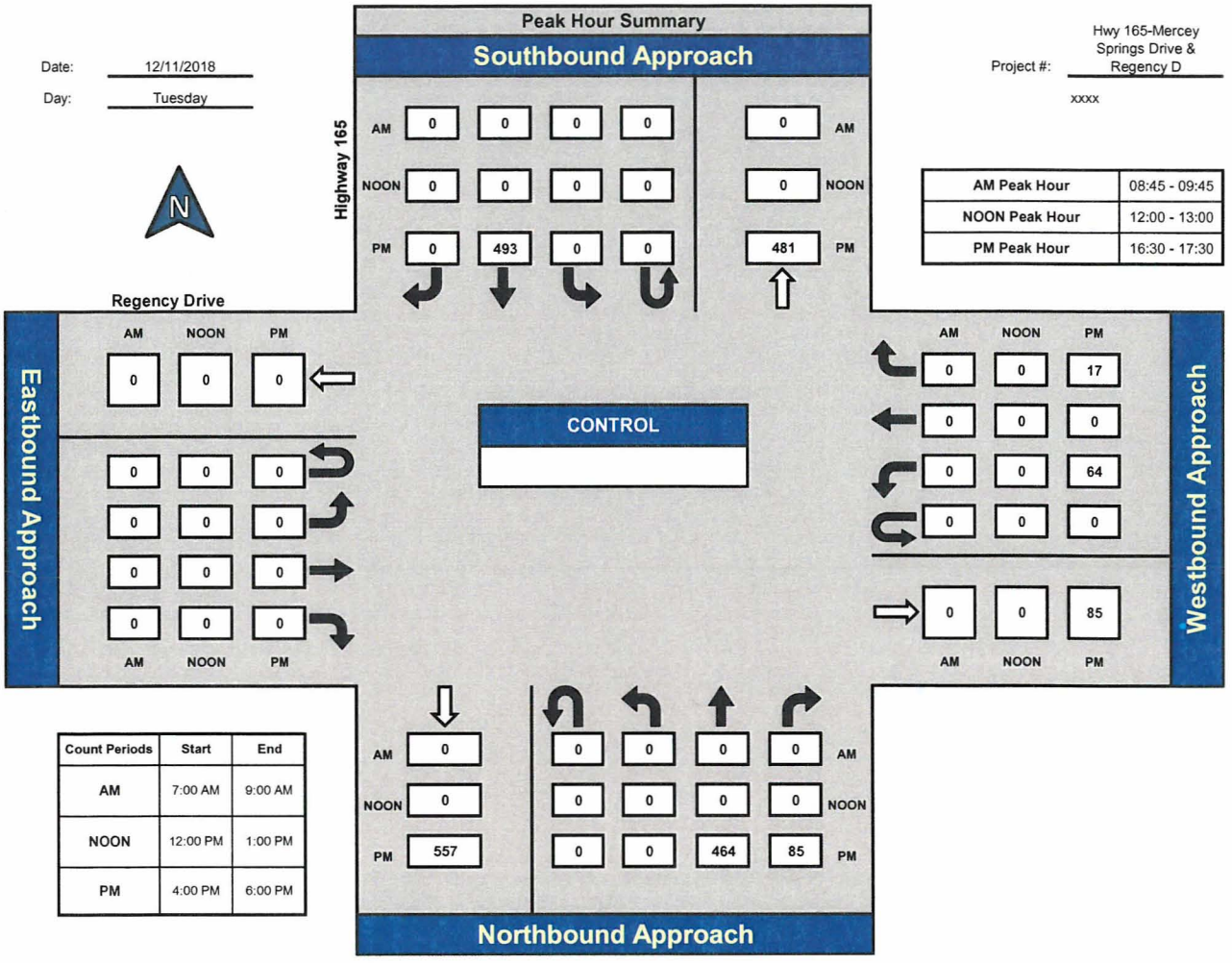
Date: 12/11/2018

Day: Tuesday

Project #: Hwy 165-Mercey Springs Drive & Regency D

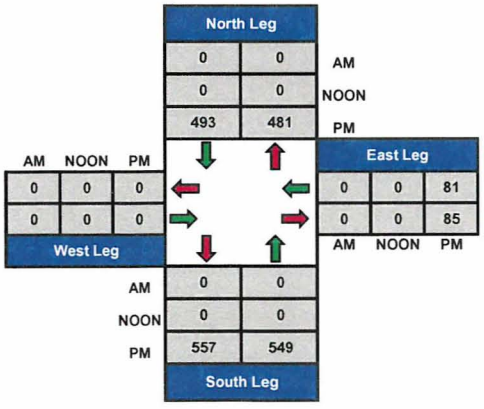
xxxx

AM Peak Hour	08:45 - 09:45
NOON Peak Hour	12:00 - 13:00
PM Peak Hour	16:30 - 17:30

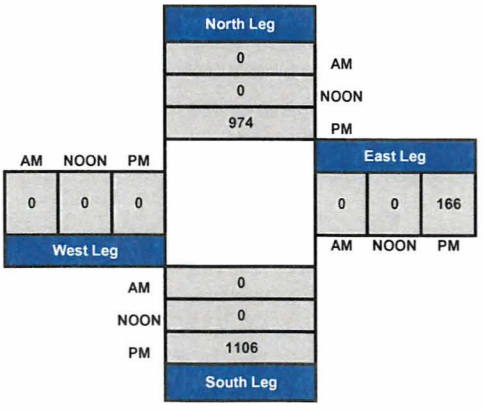


Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON	12:00 PM	1:00 PM
PM	4:00 PM	6:00 PM

Total Ins & Outs



Total Volume Per Leg



Intersection	
Int Delay, s/veh	2.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	106	0	21	0	368	85	0	415	0
Future Vol, veh/h	0	0	0	106	0	21	0	368	85	0	415	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	96	100	-	300	-	-	-
Veh in Median Storage, #	-	0	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	87	87	87	87	87	87	87	87	87	87	87	87
Heavy Vehicles, %	2	2	2	2	2	2	2	8	2	2	8	2
Mvmt Flow	0	0	0	122	0	24	0	423	98	0	477	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	961	998	477	900	900	423	477	0	0	521	0	0
Stage 1	477	477	-	423	423	-	-	-	-	-	-	-
Stage 2	484	521	-	477	477	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	236	244	588	259	278	631	1085	-	-	1045	-	-
Stage 1	569	556	-	609	588	-	-	-	-	-	-	-
Stage 2	564	532	-	569	556	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	227	244	588	259	278	631	1085	-	-	1045	-	-
Mov Cap-2 Maneuver	227	244	-	387	388	-	-	-	-	-	-	-
Stage 1	569	556	-	609	588	-	-	-	-	-	-	-
Stage 2	542	532	-	569	556	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	17.2	0	0
HCM LOS	A	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1085	-	-	-	387	631	1045	-	-
HCM Lane V/C Ratio	-	-	-	-	0.315	0.038	-	-	-
HCM Control Delay (s)	0	-	-	0	18.5	10.9	0	-	-
HCM Lane LOS	A	-	-	A	C	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	-	1.3	0.1	0	-	-

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	389	415	0
Future Vol, veh/h	0	0	0	389	415	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	2	2	2	8	8	2
Mvmt Flow	0	0	0	447	477	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	924	477	477	0	-	0
Stage 1	477	-	-	-	-	-
Stage 2	447	-	-	-	-	-
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	299	588	1085	-	-	-
Stage 1	624	-	-	-	-	-
Stage 2	644	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	299	588	1085	-	-	-
Mov Cap-2 Maneuver	299	-	-	-	-	-
Stage 1	624	-	-	-	-	-
Stage 2	644	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1085	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	0	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	-	-	-

Intersection	
Int Delay, s/veh	1.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	64	0	17	0	464	85	0	493	0
Future Vol, veh/h	0	0	0	64	0	17	0	464	85	0	493	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	96	100	-	300	-	-	-
Veh in Median Storage, #	-	0	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	87	87	87	87	87	87	87	87	87	87	87	87
Heavy Vehicles, %	2	2	2	2	2	2	2	8	2	2	8	2
Mvmt Flow	0	0	0	74	0	20	0	533	98	0	567	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1159	1198	567	1100	1100	533	567	0	0	631	0	0
Stage 1	567	567	-	533	533	-	-	-	-	-	-	-
Stage 2	592	631	-	567	567	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	173	186	523	190	212	547	1005	-	-	951	-	-
Stage 1	508	507	-	531	525	-	-	-	-	-	-	-
Stage 2	493	474	-	508	507	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	167	186	523	190	212	547	1005	-	-	951	-	-
Mov Cap-2 Maneuver	167	186	-	324	332	-	-	-	-	-	-	-
Stage 1	508	507	-	531	525	-	-	-	-	-	-	-
Stage 2	475	474	-	508	507	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	17.7	0	0
HCM LOS	A	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1005	-	-	-	324	547	951	-	-
HCM Lane V/C Ratio	-	-	-	-	0.227	0.036	-	-	-
HCM Control Delay (s)	0	-	-	0	19.3	11.8	0	-	-
HCM Lane LOS	A	-	-	A	C	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	-	0.9	0.1	0	-	-

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	481	493	0
Future Vol, veh/h	0	0	0	481	493	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	2	2	2	8	8	2
Mvmt Flow	0	0	0	553	567	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1120	567	567	0	-	0
Stage 1	567	-	-	-	-	-
Stage 2	553	-	-	-	-	-
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	228	523	1005	-	-	-
Stage 1	568	-	-	-	-	-
Stage 2	576	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	228	523	1005	-	-	-
Mov Cap-2 Maneuver	228	-	-	-	-	-
Stage 1	568	-	-	-	-	-
Stage 2	576	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1005	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	0	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	-	-	-

Intersection	
Int Delay, s/veh	4.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	2	4	14	106	1	22	4	370	85	4	422	1
Future Vol, veh/h	2	4	14	106	1	22	4	370	85	4	422	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	96	100	-	300	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	87	87	87	87	87	87	87	87	87	87	87	87
Heavy Vehicles, %	2	2	2	2	2	2	2	8	2	2	8	2
Mvmt Flow	2	5	16	122	1	25	5	425	98	5	485	1

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	993	1029	486	941	931	425	486	0	0	523	0	0
Stage 1	496	496	-	435	435	-	-	-	-	-	-	-
Stage 2	497	533	-	506	496	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	224	234	581	243	267	629	1077	-	-	1043	-	-
Stage 1	556	545	-	600	580	-	-	-	-	-	-	-
Stage 2	555	525	-	549	545	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	213	232	581	231	264	629	1077	-	-	1043	-	-
Mov Cap-2 Maneuver	213	232	-	231	264	-	-	-	-	-	-	-
Stage 1	553	542	-	597	577	-	-	-	-	-	-	-
Stage 2	529	522	-	527	542	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	14.7	32.6	0.1	0.1
HCM LOS	B	D		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1077	-	-	394	231	629	1043	-	-
HCM Lane V/C Ratio	0.004	-	-	0.058	0.532	0.04	0.004	-	-
HCM Control Delay (s)	8.4	-	-	14.7	37	11	8.5	-	-
HCM Lane LOS	A	-	-	B	E	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.2	2.8	0.1	0	-	-

Intersection	
Int Delay, s/veh	2.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	1	1	10	64	2	19	16	473	85	1	498	2
Future Vol, veh/h	1	1	10	64	2	19	16	473	85	1	498	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	96	100	-	300	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	87	87	87	87	87	87	87	87	87	87	87	87
Heavy Vehicles, %	2	2	2	2	2	2	2	8	2	2	8	2
Mvmt Flow	1	1	11	74	2	22	18	544	98	1	572	2

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1216	1253	573	1161	1156	544	574	0	0	642	0	0
Stage 1	575	575	-	580	580	-	-	-	-	-	-	-
Stage 2	641	678	-	581	576	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	158	172	519	172	197	539	999	-	-	943	-	-
Stage 1	503	503	-	500	500	-	-	-	-	-	-	-
Stage 2	463	452	-	499	502	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	148	169	519	165	193	539	999	-	-	943	-	-
Mov Cap-2 Maneuver	148	169	-	165	193	-	-	-	-	-	-	-
Stage 1	494	502	-	491	491	-	-	-	-	-	-	-
Stage 2	434	444	-	486	501	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	14.9	36.6	0.2	0
HCM LOS	B	E		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	999	-	-	376	166	539	943	-	-
HCM Lane V/C Ratio	0.018	-	-	0.037	0.457	0.041	0.001	-	-
HCM Control Delay (s)	8.7	-	-	14.9	43.7	12	8.8	-	-
HCM Lane LOS	A	-	-	B	E	B	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.1	2.1	0.1	0	-	-

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	2	6	10	482	495	3
Future Vol, veh/h	2	6	10	482	495	3
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	-	100	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	2	7	11	554	569	3

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1147	571	572	0	-	0
Stage 1	571	-	-	-	-	-
Stage 2	576	-	-	-	-	-
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	220	520	1001	-	-	-
Stage 1	565	-	-	-	-	-
Stage 2	562	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	218	520	1001	-	-	-
Mov Cap-2 Maneuver	218	-	-	-	-	-
Stage 1	559	-	-	-	-	-
Stage 2	562	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	14.6	0.2	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1001	-	386	-	-
HCM Lane V/C Ratio	0.011	-	0.024	-	-
HCM Control Delay (s)	8.6	-	14.6	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Intersection	
Int Delay, s/veh	2.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	106	0	21	0	415	85	0	432	0
Future Vol, veh/h	0	0	0	106	0	21	0	415	85	0	432	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	96	100	-	300	-	-	-
Veh in Median Storage, #	-	0	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	87	87	87	87	87	87	87	87	87	87	87	87
Heavy Vehicles, %	2	2	2	2	2	2	2	8	2	2	8	2
Mvmt Flow	0	0	0	122	0	24	0	477	98	0	497	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1035	1072	497	974	974	477	497	0	0	575	0	0
Stage 1	497	497	-	477	477	-	-	-	-	-	-	-
Stage 2	538	575	-	497	497	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	210	220	573	231	252	588	1067	-	-	998	-	-
Stage 1	555	545	-	569	556	-	-	-	-	-	-	-
Stage 2	527	503	-	555	545	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	201	220	573	231	252	588	1067	-	-	998	-	-
Mov Cap-2 Maneuver	201	220	-	362	366	-	-	-	-	-	-	-
Stage 1	555	545	-	569	556	-	-	-	-	-	-	-
Stage 2	505	503	-	555	545	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	18.5	0	0
HCM LOS	A	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1067	-	-	-	362	588	998	-	-
HCM Lane V/C Ratio	-	-	-	-	0.337	0.041	-	-	-
HCM Control Delay (s)	0	-	-	0	19.9	11.4	0	-	-
HCM Lane LOS	A	-	-	A	C	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	-	1.5	0.1	0	-	-

Intersection	
Int Delay, s/veh	1.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	64	0	17	0	496	85	0	544	0
Future Vol, veh/h	0	0	0	64	0	17	0	496	85	0	544	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	96	100	-	300	-	-	-
Veh in Median Storage, #	-	0	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	87	87	87	87	87	87	87	87	87	87	87	87
Heavy Vehicles, %	2	2	2	2	2	2	2	8	2	2	8	2
Mvmt Flow	0	0	0	74	0	20	0	570	98	0	625	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1254	1293	625	1195	1195	570	625	0	0	668	0	0
Stage 1	625	625	-	570	570	-	-	-	-	-	-	-
Stage 2	629	668	-	625	625	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	149	163	485	163	186	521	956	-	-	922	-	-
Stage 1	473	477	-	506	505	-	-	-	-	-	-	-
Stage 2	470	456	-	473	477	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	143	163	485	163	186	521	956	-	-	922	-	-
Mov Cap-2 Maneuver	143	163	-	297	309	-	-	-	-	-	-	-
Stage 1	473	477	-	506	505	-	-	-	-	-	-	-
Stage 2	452	456	-	473	477	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	19.2	0	0
HCM LOS	A	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	956	-	-	-	297	521	922	-	-
HCM Lane V/C Ratio	-	-	-	-	0.248	0.038	-	-	-
HCM Control Delay (s)	0	-	-	0	21.1	12.2	0	-	-
HCM Lane LOS	A	-	-	A	C	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	-	1	0.1	0	-	-

Intersection	
Int Delay, s/veh	5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	2	4	14	106	1	22	4	417	85	4	439	1
Future Vol, veh/h	2	4	14	106	1	22	4	417	85	4	439	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	96	100	-	300	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	87	87	87	87	87	87	87	87	87	87	87	87
Heavy Vehicles, %	2	2	2	2	2	2	2	8	2	2	8	2
Mvmt Flow	2	5	16	122	1	25	5	479	98	5	505	1

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1067	1103	506	1015	1005	479	506	0	0	577	0	0
Stage 1	516	516	-	489	489	-	-	-	-	-	-	-
Stage 2	551	587	-	526	516	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	200	211	566	217	241	587	1059	-	-	996	-	-
Stage 1	542	534	-	561	549	-	-	-	-	-	-	-
Stage 2	519	497	-	535	534	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	189	209	566	206	239	587	1059	-	-	996	-	-
Mov Cap-2 Maneuver	189	209	-	206	239	-	-	-	-	-	-	-
Stage 1	539	531	-	558	546	-	-	-	-	-	-	-
Stage 2	493	495	-	513	531	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	15.5	39.7	0.1	0.1
HCM LOS	C	E		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1059	-	-	367	206	587	996	-	-
HCM Lane V/C Ratio	0.004	-	-	0.063	0.597	0.043	0.005	-	-
HCM Control Delay (s)	8.4	-	-	15.5	45.5	11.4	8.6	-	-
HCM Lane LOS	A	-	-	C	E	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.2	3.4	0.1	0	-	-

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	3	12	3	438	433	1
Future Vol, veh/h	3	12	3	438	433	1
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	-	100	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	2	2	2	8	8	2
Mvmt Flow	3	14	3	503	498	1

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1008	499	499	0	-	0
Stage 1	499	-	-	-	-	-
Stage 2	509	-	-	-	-	-
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	267	572	1065	-	-	-
Stage 1	610	-	-	-	-	-
Stage 2	604	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	266	572	1065	-	-	-
Mov Cap-2 Maneuver	266	-	-	-	-	-
Stage 1	608	-	-	-	-	-
Stage 2	604	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	13	0.1	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1065	-	465	-	-
HCM Lane V/C Ratio	0.003	-	0.037	-	-
HCM Control Delay (s)	8.4	-	13	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Intersection	
Int Delay, s/veh	3.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	1	1	10	64	2	19	16	505	85	1	549	2
Future Vol, veh/h	1	1	10	64	2	19	16	505	85	1	549	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	96	100	-	300	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	87	87	87	87	87	87	87	87	87	87	87	87
Heavy Vehicles, %	2	2	2	2	2	2	2	8	2	2	8	2
Mvmt Flow	1	1	11	74	2	22	18	580	98	1	631	2

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1311	1348	632	1256	1251	580	633	0	0	678	0	0
Stage 1	634	634	-	616	616	-	-	-	-	-	-	-
Stage 2	677	714	-	640	635	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	136	151	480	148	172	514	950	-	-	914	-	-
Stage 1	467	473	-	478	482	-	-	-	-	-	-	-
Stage 2	443	435	-	464	472	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	127	148	480	141	169	514	950	-	-	914	-	-
Mov Cap-2 Maneuver	127	148	-	141	169	-	-	-	-	-	-	-
Stage 1	458	473	-	469	473	-	-	-	-	-	-	-
Stage 2	414	427	-	451	472	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	16.1	46.4	0.2	0
HCM LOS	C	E		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	950	-	-	338	142	514	914	-	-
HCM Lane V/C Ratio	0.019	-	-	0.041	0.534	0.042	0.001	-	-
HCM Control Delay (s)	8.9	-	-	16.1	56.2	12.3	8.9	-	-
HCM Lane LOS	A	-	-	C	F	B	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.1	2.6	0.1	0	-	-

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	2	6	10	514	546	3
Future Vol, veh/h	2	6	10	514	546	3
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	-	100	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	2	7	11	591	628	3

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1243	630	631	0	-	0
Stage 1	630	-	-	-	-	-
Stage 2	613	-	-	-	-	-
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	193	482	951	-	-	-
Stage 1	531	-	-	-	-	-
Stage 2	541	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	191	482	951	-	-	-
Mov Cap-2 Maneuver	191	-	-	-	-	-
Stage 1	525	-	-	-	-	-
Stage 2	541	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	15.6	0.2	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	951	-	349	-	-
HCM Lane V/C Ratio	0.012	-	0.026	-	-
HCM Control Delay (s)	8.8	-	15.6	-	-
HCM Lane LOS	A	-	C	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Intersection	
Int Delay, s/veh	1.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	85	0	45	0	550	100	15	560	0
Future Vol, veh/h	0	0	0	85	0	45	0	550	100	15	560	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	96	100	-	300	100	-	-
Veh in Median Storage, #	-	0	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	87	87	87	87	87	87	87	87	87	87	87	87
Heavy Vehicles, %	2	2	2	2	2	2	2	8	2	2	8	2
Mvmt Flow	0	0	0	98	0	52	0	632	115	17	644	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	994	1425	322	988	1310	316	644	0	0	747	0	0
Stage 1	678	678	-	632	632	-	-	-	-	-	-	-
Stage 2	316	747	-	356	678	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	199	134	674	201	158	680	937	-	-	857	-	-
Stage 1	408	450	-	435	472	-	-	-	-	-	-	-
Stage 2	670	418	-	634	450	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	181	131	674	198	155	680	937	-	-	857	-	-
Mov Cap-2 Maneuver	181	131	-	319	279	-	-	-	-	-	-	-
Stage 1	408	441	-	435	472	-	-	-	-	-	-	-
Stage 2	619	418	-	621	441	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	17.6	0	0.2
HCM LOS	A	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	937	-	-	-	319	680	857	-	-
HCM Lane V/C Ratio	-	-	-	-	0.306	0.076	0.02	-	-
HCM Control Delay (s)	0	-	-	0	21.2	10.7	9.3	-	-
HCM Lane LOS	A	-	-	A	C	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	-	1.3	0.2	0.1	-	-

Intersection	
Int Delay, s/veh	1.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	50	0	30	0	600	65	40	755	0
Future Vol, veh/h	0	0	0	50	0	30	0	600	65	40	755	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	96	100	-	300	-	-	-
Veh in Median Storage, #	-	0	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	87	87	87	87	87	87	87	87	87	87	87	87
Heavy Vehicles, %	2	2	2	2	2	2	2	8	2	2	8	2
Mvmt Flow	0	0	0	57	0	34	0	690	75	46	868	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1305	1725	434	1216	1650	345	868	0	0	765	0	0
Stage 1	960	960	-	690	690	-	-	-	-	-	-	-
Stage 2	345	765	-	526	960	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	118	88	570	137	98	651	772	-	-	844	-	-
Stage 1	276	333	-	401	444	-	-	-	-	-	-	-
Stage 2	644	410	-	503	333	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	103	79	570	126	88	651	772	-	-	844	-	-
Mov Cap-2 Maneuver	103	79	-	251	201	-	-	-	-	-	-	-
Stage 1	276	298	-	401	444	-	-	-	-	-	-	-
Stage 2	610	410	-	450	298	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	18.8	0	0.5
HCM LOS	A	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	772	-	-	-	251	651	844	-	-
HCM Lane V/C Ratio	-	-	-	-	0.229	0.053	0.054	-	-
HCM Control Delay (s)	0	-	-	0	23.6	10.8	9.5	-	-
HCM Lane LOS	A	-	-	A	C	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	-	0.9	0.2	0.2	-	-

Intersection	
Int Delay, s/veh	2.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	2	4	14	85	1	46	4	552	100	19	567	1
Future Vol, veh/h	2	4	14	85	1	46	4	552	100	19	567	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	96	100	-	300	100	-	-
Veh in Median Storage, #	-	0	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	87	87	87	87	87	87	87	87	87	87	87	87
Heavy Vehicles, %	2	2	2	2	2	2	2	8	2	2	8	2
Mvmt Flow	2	5	16	98	1	53	5	634	115	22	652	1

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1025	1456	327	1017	1341	317	653	0	0	749	0	0
Stage 1	697	697	-	644	644	-	-	-	-	-	-	-
Stage 2	328	759	-	373	697	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	189	129	669	192	151	679	930	-	-	856	-	-
Stage 1	398	441	-	428	466	-	-	-	-	-	-	-
Stage 2	659	413	-	620	441	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	170	125	669	178	146	679	930	-	-	856	-	-
Mov Cap-2 Maneuver	170	125	-	302	269	-	-	-	-	-	-	-
Stage 1	396	430	-	426	464	-	-	-	-	-	-	-
Stage 2	603	411	-	583	430	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	17.6	18.5	0.1	0.3
HCM LOS	C	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	930	-	-	309	302	679	856	-	-
HCM Lane V/C Ratio	0.005	-	-	0.074	0.327	0.078	0.026	-	-
HCM Control Delay (s)	8.9	-	-	17.6	22.6	10.7	9.3	-	-
HCM Lane LOS	A	-	-	C	C	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.2	1.4	0.3	0.1	-	-

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	3	12	3	597	576	1
Future Vol, veh/h	3	12	3	597	576	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	2	2	2	8	8	2
Mvmt Flow	3	14	3	686	662	1

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1012	332	663	0	-	0
Stage 1	663	-	-	-	-	-
Stage 2	349	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	236	664	922	-	-	-
Stage 1	474	-	-	-	-	-
Stage 2	685	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	235	664	922	-	-	-
Mov Cap-2 Maneuver	235	-	-	-	-	-
Stage 1	472	-	-	-	-	-
Stage 2	685	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	12.7	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	922	-	486	-	-
HCM Lane V/C Ratio	0.004	-	0.035	-	-
HCM Control Delay (s)	8.9	0	12.7	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Intersection	
Int Delay, s/veh	1.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	1	1	10	50	2	32	16	609	65	41	760	2
Future Vol, veh/h	1	1	10	50	2	32	16	609	65	41	760	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	96	100	-	300	-	-	-
Veh in Median Storage, #	-	0	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	87	87	87	87	87	87	87	87	87	87	87	87
Heavy Vehicles, %	2	2	2	2	2	2	2	8	2	2	8	2
Mvmt Flow	1	1	11	57	2	37	18	700	75	47	874	2

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1356	1780	438	1268	1706	350	876	0	0	775	0	0
Stage 1	969	969	-	736	736	-	-	-	-	-	-	-
Stage 2	387	811	-	532	970	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	108	81	567	125	90	646	766	-	-	837	-	-
Stage 1	272	330	-	377	423	-	-	-	-	-	-	-
Stage 2	608	391	-	499	330	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	91	71	567	109	78	646	766	-	-	837	-	-
Mov Cap-2 Maneuver	91	71	-	228	185	-	-	-	-	-	-	-
Stage 1	266	294	-	368	413	-	-	-	-	-	-	-
Stage 2	557	382	-	434	294	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	18.5	20.6	0.2	0.5
HCM LOS	C	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	766	-	-	281	226	646	837	-	-
HCM Lane V/C Ratio	0.024	-	-	0.049	0.264	0.057	0.056	-	-
HCM Control Delay (s)	9.8	-	-	18.5	26.6	10.9	9.6	-	-
HCM Lane LOS	A	-	-	C	D	B	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.2	1	0.2	0.2	-	-

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	2	6	10	631	797	3
Future Vol, veh/h	2	6	10	631	797	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	2	2	2	8	8	2
Mvmt Flow	2	7	11	725	916	3

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1303	460	919	0	-	0
Stage 1	918	-	-	-	-	-
Stage 2	385	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	152	548	738	-	-	-
Stage 1	349	-	-	-	-	-
Stage 2	657	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	148	548	738	-	-	-
Mov Cap-2 Maneuver	148	-	-	-	-	-
Stage 1	340	-	-	-	-	-
Stage 2	657	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	16.3	0.3	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	738	-	327	-	-
HCM Lane V/C Ratio	0.016	-	0.028	-	-
HCM Control Delay (s)	10	0.1	16.3	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Intersection	
Int Delay, s/veh	3.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	2	4	14	106	1	22	4	417	85	4	439	1
Future Vol, veh/h	2	4	14	106	1	22	4	417	85	4	439	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	96	100	-	300	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	87	87	87	87	87	87	87	87	87	87	87	87
Heavy Vehicles, %	2	2	2	2	2	2	2	8	2	2	8	2
Mvmt Flow	2	5	16	122	1	25	5	479	98	5	505	1

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	766	1103	253	754	1005	240	506	0	0	577	0	0
Stage 1	516	516	-	489	489	-	-	-	-	-	-	-
Stage 2	250	587	-	265	516	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	292	210	746	298	240	761	1055	-	-	993	-	-
Stage 1	510	533	-	529	548	-	-	-	-	-	-	-
Stage 2	732	495	-	717	533	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	279	208	746	285	238	761	1055	-	-	993	-	-
Mov Cap-2 Maneuver	279	208	-	285	238	-	-	-	-	-	-	-
Stage 1	507	530	-	526	545	-	-	-	-	-	-	-
Stage 2	703	493	-	692	530	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	13.6	24.1	0.1	0.1
HCM LOS	B	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1055	-	-	443	284	761	993	-	-
HCM Lane V/C Ratio	0.004	-	-	0.052	0.433	0.033	0.005	-	-
HCM Control Delay (s)	8.4	-	-	13.6	27	9.9	8.6	-	-
HCM Lane LOS	A	-	-	B	D	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.2	2.1	0.1	0	-	-

Intersection	
Int Delay, s/veh	2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	1	1	10	64	2	19	16	505	85	1	549	2
Future Vol, veh/h	1	1	10	64	2	19	16	505	85	1	549	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	96	100	-	300	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	87	87	87	87	87	87	87	87	87	87	87	87
Heavy Vehicles, %	2	2	2	2	2	2	2	8	2	2	8	2
Mvmt Flow	1	1	11	74	2	22	18	580	98	1	631	2

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	961	1348	317	934	1251	290	633	0	0	678	0	0
Stage 1	634	634	-	616	616	-	-	-	-	-	-	-
Stage 2	327	714	-	318	635	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	211	150	679	221	171	707	946	-	-	910	-	-
Stage 1	434	471	-	445	480	-	-	-	-	-	-	-
Stage 2	660	433	-	668	471	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	199	147	679	213	168	707	946	-	-	910	-	-
Mov Cap-2 Maneuver	199	147	-	213	168	-	-	-	-	-	-	-
Stage 1	426	471	-	437	471	-	-	-	-	-	-	-
Stage 2	624	425	-	654	471	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	13.2	26.6	0.2	0
HCM LOS	B	D		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	946	-	-	452	211	707	910	-	-
HCM Lane V/C Ratio	0.019	-	-	0.031	0.36	0.031	0.001	-	-
HCM Control Delay (s)	8.9	-	-	13.2	31.3	10.3	9	-	-
HCM Lane LOS	A	-	-	B	D	B	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.1	1.5	0.1	0	-	-